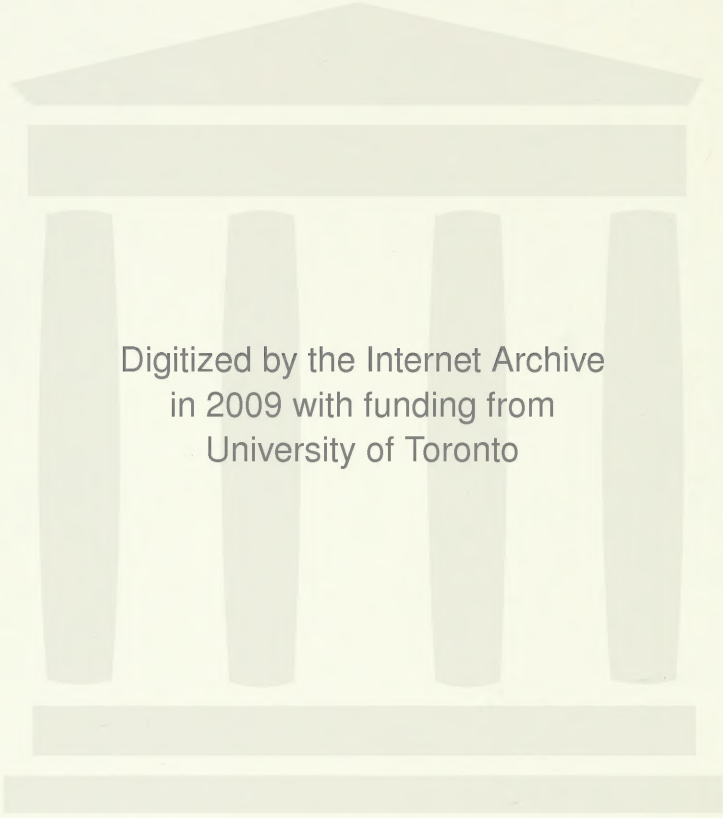

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INDEX TO VOLUME II FOR 1894.

A.

Abattoirs, public, and the public health, 958
Abdominal section, the treatment of uterine fibroids by, 118; lymphangiectasis of the omentum treated by, 532; three cases of intussusception treated by, 1237
Aberdeen, visit of the Duke of York to, 326
Aberystwith, nursing at the workhouse infirmary of, 202, 209
Aborigines, the medical practice of, 1439
Abrahain, Dr. P. S., vegetable hair parasites, 688; on acne vulgaris, 691; on diphtheria, 1312; the thyroid treatment of skin disease, 1367
Abscess of antrum after influenza complicating polypi, 127, 348; tropical of liver, dysentery and, 127, 446, 559, 621, 731; appendicular bursting into abdominal cavity, 531; of the liver, 811; lower molar, 866, 1107, 1219, 1351; cerebral, 922; subdiaphragmatic communicating with right pleura, 987; mastoid and thrombosis of lateral sinus, 1114
Abuse of out-patient hospital departments, 43, 228
Académie de Médecine of Paris, the library of, 380; on cycling and its dangers, 726; on the serum treatment of diphtheria, 933; on the climate of Madagascar, 1001; prizes of the, 1510
Academy, Royal, of Medicine in Ireland, list of officers of, 1010
——— Royal of Medicine in Ireland, Section of Obstetrics, specimens 1368; president's address, 1369; Rotunda Hospital report, *ib*
——— Royal of Medicine in Ireland, Section of Pathology, iron deposits in pernicious anæmia, 1115; tuberculous iritis, *ib.*; melanotic tumour of eye, death from secondary growths, *ib.*; spontaneous fracture of the clavicle, *ib.*
——— Royal of Medicine in Ireland, Section of Surgery, president's address, 1315; operations for cancer of the jaws and tongue, *ib.*
Accidents, Alpine, 1494
Accrington, proposed cottage hospital for, 991
Acetanilide, drawbacks of, 1444
Acids, action of on secretions of the body, 71
Acland, Sir H., proposed memorial to, 1493
Acne vulgaris, the etiology and treatment of, 688
Acromegaly, case of, 1110
Acromion process, separate, simulating fracture, 16
Act, Employers' Liability and accidents to farm servants, 736
—— Infectious Disease (Notification), duties of medical officers of health under, 567; summonses under the, 1408
Actinomycosis, case of, extensively involving the skin, 1108
Acts, Lunacy, the defects of the, 999
—— Medical, proposed amendment of, 229, 1271, 1456
—— Vaccination, magistrates and the enforcement of, 452
Acworth, Mr. W. M., small-pox in London 613 (684); aërial diffusion of, 731
Addison's disease. *See* Disease
Address, presidential, at Bristol by Dr. E. Long-Fox, 237, 266, 279; in Medicine, at Bristol, by Sir T. Grainger Stewart, 242, 266, 282; in Surgery, at Bristol, by Dr. E. Greig Smith, 249, 267, 329; at the opening of the Section of Medicine, by Dr. F. T. Roberts, 253; at the opening of the Section of Obstetric Medicine and Gynæcology, by Dr. J. G. Swayne, 255; at the opening of the Section of Psychology, by Dr. G. F. Blandford, 256; at the opening of the Section of Laryngology and Otology, by Dr. P. McBride, 260; at the opening of the Section of Dermatology, by Dr. A. J. Harrison, 262; in Public Medicine, at Bristol, by Sir C. A. Cameron, 263; at the opening of the Section of Public Medicine, by Dr. W. H. Corfield, 301, 336; at the opening of the Section of Diseases of Children, by Dr. W. H. Dickinson, 401; at the opening of the Section of Pathology, by Dr. G. S. Woodhead, 629; at the opening of the Section of Surgery, by Dr. W. Mitchell Banks, 858
Adenoma, of the tongue, 921: congenital cystic of kidney, 1049
Adulteration of food, 19
Advertisements, indecent quack, 604; hospital, 1064, 1208
Advertising, the uncertainties of, 56
Aërated Bread Company, *Punch's* motto for, 963
Aetiologie der Idiotie (Zur), Dr. H. Piper, *rev.*, 1373
Africa, British Central, the climate of, 1328
Agar-agar, the filtration of, 951
Agriculture and Pasteurism, 790
Ague, brassfounders', 1133
Aitken, Dr. D. W., the function of the appendix, 1415
Alabaster *v.* Harness, 446, 1345
Albrecht, Dr. H., Handbuch der praktischen Gewerbehygiene, *rev.*, 813, 1433
Alcohol, mortality from, 56; and the health of the army in India, 551; and climate, 609; in workhouses, 736; as a Medicine, Dr. F. C. Coley, *rev.*, 814; prize essays on, 1415
Alcoholism in Switzerland, 806
Aldershot, the sanitary condition of, 891, 1390; the sewage farm at, 1129
Alexander, Dr. F. W., seizure of tinned food, 1461
——— Dr. W. (Dundonald), presentation to, 109
——— Dr. W. (Liverpool), enterectomy for gangrene of bowels, 1314; removal of large sarcoma from the neck, 1370; amputation at the hip-joint for sarcoma, *ib*
Algiers, a Practical Guide to, Dr. G. W. Harris, *rev.*, 1181; antitoxin treatment of diphtheria at, 1340; a Pasteur Institute at, 1347
Alkalies, action of on secretions of the body, 71
Allbutt, Professor T. C., on nerves and modern life, 1194
Allfrey, Dr. C. H. our out-patient departments, 43
Allgemeine Perkussionslehre, Dr. H. Hughes, *rev.*, 1180
Alpine accidents, 1494
——— Climates for Consumption, Dr. H. J. Hardwicke, *rev.*, 1181
Althaus, Dr. J., nosophobia and hypochondriasis, 810; the feeding of fevers, 951
Altitudes, high, work at, 689
Alvarenga prize, award of, 1215; the next award of, 1511
Ambulance arrangements on railways, 1008; provision of for the wounded in war, 1391
——— instruction of needed, 456
Ambulances, British Army, 291, 561
America. *See* United States
Ametropia and blepharitis, the association of, 593
Ammonia, poisoning by, 510
Amœba, the, the biology of, 670
Amœbæ and dysentery, 1130
Amputation by district medical officer, 680
Amusia, 1441
Anæmia, the causation of, 113; pernicious, iron deposits in, 1115; bone marrow in, 1205; pernicious, subdural hæmorrhage in, 1309; with flagellated protozoa in the blood, 1371
Anæsthesia, the discovery of, 792, 927; a new method of producing, 1012
Anæsthetics, local, 455; deaths under, 655, 765, 820, 877, 1073, 1139, 1319, 1397; the origin of the term 898; payment for administration of in poor-law practice, 1086, 1151, 1195; discussion at Leeds and West Riding Medico-Chirurgical Society, 1370
Analyses of water, the interpretation of, 362
Anarchism, a medical student charged with, 897; the cure for, 944
Anarchists, antivaccinators and anti-Pasteurists, 432
Anastomosis of the small intestine, a successful case of, 1103, 1112
Anatomy and physiology in the Middle Ages, 1248
Anderson *v.* Gorrie and others, 328
——— Dr. A., the treatment of anthrax in man, 684
——— Dr. A. J., mortality from alcohol, 56
——— Mrs. E. G., pyrexia and its treatment, 1097
——— Dr. J., presentation to, 791
——— Dr. R. J., the zoological muse, 1287
——— Dr. T. Mct., the use of antipyrin in large doses, 1227
Andriezen, Dr. W. L., on the prevention of insanity, 519; neurasthenia and its treatment, 525; the status of assistant medical officers in asylums, 526; ataxia and the diseases of which it is a symptom, 1292
Aneurysm of the basilar artery, 869; intracranial, in young subjects unaffected with syphilis or malignant endocarditis, *ib.*; pulsatile congenital cyst simulating, 1240; femoral, enucleation of, 1455
Aneurysms of arteries of the extremities, treatment of by extirpation of the sac, 1114
Animals, pain in, 208
Ankyloblepharon, complete, 1113
Annual, the Medical and Practitioners' Index, *rev.*, 132; of the Universal Medical Sciences Dr. C. E. Sajous, *rev.*, 1433
Annuitants, longevity of, 1347
Anomaly, a legal, 1403, 1512
Anthrax, a case of, 69; the law concerning, 207; in man, 292, 456, 684; in London, 380
Anthropology, criminal, 42; Sir W. H. Flower on, 320
"Anti-diphtheritic," (the), 537
Antifad Society, wanted an, 676
Antipyrin, use of in large doses, 1227; as an analgesic, 1416
Antiseptics, the Use of in Midwifery, Dr. R. Boxall, *rev.*, 814
Antitoxin, diphtheria treated by, 125, 180, 326, 368, 376, 439, 513, 542, 545, 610, 655, 667, 725, 739, 771, 778, 820, 826, 828, 843, 889, 931, 941, 947, 1002, 1007, 1012, 1070, 1122, 1197, 1269, 1320, 1338, 1393, 1400, 1452, 1492, 1499; in tetanus, 579, 581, 675, 725, 934, 1178; the supply of in London, 1063; a supply of for provincial hospitals, 1251, 1332, 1452; German criticism of the treatment of diphtheria by, 1357; Behring's, the preparation of, 1393; the basis of the treatment of diphtheria by, 1393; the anti-science protest, 1394; bacteriological examination for the Local Government Board, *ib.*; 80 cases of diphtheria treated by, 1417; a patent applied for, 1447; the supply of, 1452; the strength and dosage of, *ib*
"Antitoxine," 1350, 1414
Antitoxins, treatment of tetanus by, 1433
Antivaccination petition, a, 1423
Antivaccinators, the arguments of, 554
Antivivisection rhymer, a, 683
Antrum, abscess of after influenza complicating polypi, 127, 348; excision of the malleus as a preliminary to opening the, 1167
Anus, imperforate, operation nine months after birth, recovery, 366
Anxiety as a cause of granular kidney, 1091, 1219
Apoplexy, a singular attack of, 549
Apothecaries' Hall, Ireland, regulations as to diplomas, 475
——— Society of London, the Calendar of, 32; pass lists, 106, 232, 449, 735, 847, 959, 1286, 1509; prizes in botany, 232; regulations as to diplomas, 468; the diploma of, 980; and the restoration of names to the "Register," 1403, 1512
Appendicitis, operation for, 71
Appendix vermiformis, abscess of bursting into abdominal cavity, 531; removal of, 923; with concretions, 1178; the function of the, 1415, 1511
Appointment, a salable, 167
Appointments, hospital, 386, 444, 558, 621, 675, 684; Poor-law medical, the tenure of, 1276

Archæologica medica, 1134, 1436
Arloing, M., the etiology of cancer, 670
Arm, "tennis" or "golf," 291
Arnison, Obituary, Bacteriological Society v., 161
Army, British, the debate on the estimates for, 32, 47, 287; the medical service of in war, 44; promotion and appointments in the medical staff of, 45, 103, 160, 287, 389, 447, 514, 561, 622, 733, 788, 845, 899, 952, 1016, 1082, 1147, 1209, 1279, 1344, 1406; sanitation in the, 45; the new titles for warrant medical officers, *ib.*; the soldier's rations, *ib.*; medical military titles, 46, 562, 899; promotions and appointments in the reserve of, 103, 389, 448, 561, 899, 952, 1017, 1209, 1344, 1507; military notes, 103; substantive rank, *ib.*; the foreign roster, 104; married medical officers, *ib.*; field medical transport, *ib.*; proposed extension of age of administrative officers, 161; the disuse of official titles, *ib.*; wearing swords in the hospitals, 287, 392; ambulances of, 291, 561; substantive rank and salutes, 287, 392; books on wounds by the new bullet, 287; successful candidates for medical staff of, 390, 501; Mr. Gibson Bowles's question on the medical staff, 391; the medical division of War Office, 391, 733, 1017, 1344, 1460; the army medical service in Parliament, 391; transport for medical service, *ib.*; seconding of brigade surgeons, 392; medical officers in the Crimea, *ib.*; examination of surgeon-captains for promotion, *ib.*; the military scandal at Birr, 392, 448; extension of age clauses, 447, 561, 562, 623, 733, 734, 1460; the Army Medical Service and Indian Medical Service, 448; regulations for candidates for the medical staff of, 499; leave for study, 623; union of the medical staff and of the Indian Medical Service, 677; midwifery and, 632; visiting cards, 733; the new army corps, *ib.*; army medical reliefs, 733; the annual report of the Veterinary Department of, 788; medical officers and military titles, 773; widows' pensions, 788; a question for discussion, 899; article 347, Warrant, Army Medical Service, *ib.*; a correction, *ib.*; medical officers and sanitary question, 48; a suggestion in promotion in medical staff of, 953; the depôt and training school, Medical Staff Corps, 1016; army medical officers and cholera epidemics, 1017; an interesting surgical case in military practice and its sequel, 1082; combatant or non-combatant, 1146; the present position of the medical staff of, *ib.*; attendance on a deceased officer, 1209; organisation of the medical staff of, 1344; employment of retired medical officers, 1345; a reproach to the, 1406; retrenchment in the medical staff of, *ib.*; "first aid" in the, *ib.*; our immature soldiers, 1460; refusal of leave, *ib.*; selection versus seniority, 1505; American observations on the medical department of, 1506
——— Indian, the India Office and brigade surgeons, 32; promotions and appointments in the medical staff of, 45, 160, 287, 389, 448, 514, 561, 677, 733, 788, 845, 952, 1017, 1147, 1279, 1344, 1460; the adjutant slight, 161; the Army Medical Service in, *ib.*; successful candidates for medical staff of, 390, 501; annual report of the Sanitary Commissioner with the Government of India, 391; Indian apothecaries, 392, 562; the principal medical officer in India, 448, 1280; the Army Medical Service and Indian Medical Service, 448; regulations for candidates for the medical staff of, 499; salaries of the medical service of, 505; alcohol and the health of, 551; pay of surgeon-captain in, 562; medical changes in, 622; hospital assistants, 623; union of the medical staff of and the Army Medical Service, 677; appointment to stations, 734, 898; ambulance class in, 788; the medical board, India Office, 899; enlistment of Eurasians, *ib.*; medical reserves for the East, *ib.*; assistant surgeons in, 944; the presidency of the Indian Medical Board, 1017; field hospitals in, *ib.*; the reorganisation scheme for, 1209; the secretary to the principal medical officer, *ib.*; the medical staff in, *ib.*; the organisation of the army corps of, 1344
——— Russian, medical organisation of, 554
——— United States, annual report of the Medical Department of, 1460; health of the, 1465
Arnison, Dr., the antitoxin treatment of diphtheria, 611; immunity in infectious diseases, *ib.*
Arsenic, administration of, 922; hypodermic use of in chorea, 1176; splenic leucocythæmia treated by, 1240; in glycerine, 1468
Artery, pulmonary, incompetence of, 7; basilar, aneurysm of, 869; pulmonary, stenosis and endoarteritis of, a cause of embolic pneumonia and chronic intermittent fever, 1099
Arthritis, incipient tuberculous, the value of bursal enlargements as indications of, 412; senile rheumatic, treatment of by forcible movements, 972
Artisans, science books for, 291; rates of mortality in block dwellings for, 613
Ascites of some cases of heart disease, the pathology of, 1313
Ashby, Dr. R., scurvy rickets, 1178
Ashmead, Dr. A. S., preventive inoculation of immunised scarlet fever blood serum, 167
Ashwell, Mr. H. G., the education of pauper children, 387
Assam, sanitary progress in, 791; an epidemic of yaws in, 945
Assistants, proposed association of, 1215; qualified and dispensaries, 1278
Association, American Medical, annual meeting of, 109
——— Banbury Friendly Society's Medical, the medical officer of, 455
——— British, for the Advancement of Science, meeting of at Oxford, 320; president's address at, *ib.*; address on anthropology, *ib.*
——— British Laryngological and Rhinological, cases, 366; follicular tonsillitis, *ib.*; list of officers, etc., 961
ASSOCIATION, BRITISH MEDICAL, list of authors and others who have presented books to the library of, 21, 708; arrangements for annual meeting at Bristol, 41; and unqualified practice, 44; programme of annual meeting, 76, 133, 223; notices of motion at annual meeting, 138, 228; grants in aid of scientific research, 221; leading article on Bristol meeting, 265; the pathological museum, 268; exhibition of human crania, *ib.*; medical and surgical antiquities, 269; annual museum of food and drugs, 269, 414; service in the cathedral, *ib.*; temperance and vivisection at, 270; proceedings of sections at, 270, 271; foreign visitors, 271, 282; luncheon, 271; conversazione, *ib.*; third general meeting of members, 275; retirement of president, *ib.*; installation of new president, *ib.*; vote of thanks to retiring president, *ib.*; medical aid associations, 278; registration of midwives, 280; the Middlemore prize, 282; excursions from Bristol, 318; the annual meeting of in 1895, 324, 331; third general meeting, 332; annual dinner, 331; concluding general meeting, 336; an ethical section, *ib.*; vote of thanks, 337; list of members present at the annual meeting, 343; garden parties at the annual meeting of, 376; the Mayor of Bristol's reception at the annual meeting of, 379; the arrangements at the annual meeting, 388; and its work, 399; the visit of to Bath, 439; new Branches of the, 885; the annual meeting of in London, 999, 1272; programme of annual meeting (1895), 1250; and the JOURNAL (1895), 1255
——— Council, report of, 181, 273; proceedings of, 222, 381, 383, 1079; list of attendances at, 382
——— Anæsthetics Committee, report of, 199, 330
——— Committee on Children, report of, 197, 330
——— Legislation for Inebriates Committee, report of, 193, 330
——— Medical Charities Committee, report of, 193, 330
——— Parliamentary Bills Committee, registration of midwives, 138; Local Government (Scotland) Bill, *ib.*; Factories and Workshops Bill, *ib.*; amendment of Medical Acts, 139, 1005; infant mortality and factory labour, 139, 1005; barrack school mortality, 139; report of, 183, 279; barrack schools, 1005; cholera at Hardwar and Mecca fairs, *ib.*; vaccination, *ib.*; vote of thanks, *ib.*; deputation of to Home Secretary, 1125, 1135
——— Payment of Railway Fares Committee, report of, 187, 282
——— Committee on Questions affecting General Practitioners, notice by, 1128
——— Railway Servants' and Mariners' Eyesight Committee, report of, 200, 330
——— Scientific Grants Committee, report of, 188, 329; grants in aid of scientific research, 221
——— Therapeutic Committee, report of, 200, 330
——— Aberdeen Banff, and Kincardine Branch, annual meeting, 1077; confirmation of minutes, *ib.*; report of council, *ib.*; treasurer's balance sheet, *ib.*; election of officers, *ib.*; summer meeting, 1895, *ib.*; president's address, 1078; hospital visit and pathological demonstration, *ib.*; votes of thanks, *ib.*; annual dinner, *ib.*; new members, 1276; communications, *ib.*
ASSOCIATION, BRITISH MEDICAL, Adelaide and South Australia Branch, annual meeting of, 895; specimens, *ib.*; confirmation of minutes, *ib.*; Mr. Trott's letter, *ib.*; report of council, *ib.*; treasurer's report, *ib.*; election of officers, *ib.*; president's address, *ib.*; installation of new president, *ib.*; vote of thanks, *ib.*
——— Bath and Bristol Branch, annual meeting of, 219; new members, 219, 1341; installation of new president, 219; report of council, *ib.*; election of officers, *ib.*; vote of thanks, *ib.*; alteration of rules, *ib.*; annual dinner, *ib.*; registration of midwives, 228; communications, 1142, 1341; amendment of Medical Acts, 1341
——— Bermuda Branch, confirmation of minutes, 1503; new members, *ib.*; school hours in Bermuda, *ib.*; exhibits, *ib.*
——— Birmingham and Midland Counties Branch, new members, 946, 1276; specimens, 946, 1178; paper, 946; adhesive pleurisy following severe burn, 1178; epileptiform convulsions, *ib.*; nodular swelling on each clavicle, *ib.*; hairy moles, *ib.*; absence of complexus, *ib.*; vermiform appendix with concretion, *ib.*; communications, 1276
——— Border Counties Branch, registration of midwives, 284; annual meeting, *ib.*; report of council, *ib.*; election of officers, *ib.*; future meetings, *ib.*; Local Government (Scotland) Bill, *ib.*; installation of new president, *ib.*; president's address, *ib.*; dinner, 284, 1011; conjoint meeting of with North of England Branch, 1011; communications, *ib.*
——— British Guiana Branch, the British Institute of Preventive Medicine, 673; new members, 673, 1503; auditors, 673; mode of election of president, *ib.*; infantile convulsions and malaria, *ib.*; specimens, *ib.*; annual dinner, 1503; election of officers, *ib.*
——— Cape of Good Hope Branch, annual general meeting, 1503; reports of secretary and treasurer, *ib.*; condition and work of the branch, *ib.*; election of officers, *ib.*; president's address, *ib.*
——— Cork and South of Ireland Branch, annual meeting, 1204; Poor-law superannuation, etc., *ib.*; election of officers, *ib.*
——— Deccan Branch, minutes, 785; formal recognition of, *ib.*; election of officers, *ib.*; place of meeting, *ib.*; vote of thanks, *ib.*
——— Devon and Cornwall Branch, registration of midwives, 79
——— Dorset and West Hants Branch, new members, 98, 894; discussion, 98; communications, 98, 894; next meeting, 98, 895; Sir J. C. Bucknill, 98; dinner, 98, 895; election of officers, 894; British Medical Benevolent Fund, 895; abnormal pregnancy and parturition, *ib.*
——— Dundee and District Branch, registration of midwives, 1399; proposed outdoor maternity charity, *ib.*; amendment of Medical Acts, *ib.*; exhibits, *ib.*
——— East Anglian Branch, council meeting, 728; general meeting, *ib.*; new by-laws, *ib.*; Epsom College, *ib.*; registration of midwives, *ib.*; Dr. Anderson's case, *ib.*; proposed ethical section, *ib.*; papers, *ib.*; entertainments, *ib.*; special meeting of, 1455; confirmation of minutes, *ib.*; amendment of Medical Acts, *ib.*
——— Edinburgh Branch, registration of midwives, 28; annual meeting of, 40; treasurer's statement, *ib.*; office bearers, *ib.*; new members, *ib.*; order of business, *ib.*; Parliamentary Bills Committee reports, *ib.*; British Medical Benevolent Fund, *ib.*; case of Dr. Allan, *ib.*; summer country meeting, *ib.*; conjoint meeting with Stirling, Kinross, and Clackmannan Branch, 220; communication, *ib.*; dinner, *ib.*
——— Gibraltar Branch, inaugural meeting of, 895; president's address, *ib.*; communications, *ib.*; votes of thanks, *ib.*

ASSOCIATION, BRITISH MEDICAL, Gloucestershire Branch, confirmation of minutes, 1456; presidential address, *ib.*; vote of thanks, *ib.*

——— Halifax, Nova Scotia, Branch, annual meeting, 1078; report of council, *ib.*; election of officers, *ib.*; new members, 1204, 1276; Civil Rights Defence Committee, 1204, 1276; communications, 1204, 1276, 1400; diphtheria antitoxin, 1204; proposed alteration of day of meeting, 1276; the Antitoxin Committee, *ib.*

——— Lancashire and Cheshire Branch, annual meeting, 38, 896; luncheon, 38; installation of new president, *ib.*; vote of thanks to retiring president, 39; president's address, *ib.*; report of council, *ib.*; election of officers, *ib.*; next annual meeting, *ib.*; adjournment of meeting, *ib.*; dinner, *ib.*; meeting of at Stockport to elect representatives on council, etc., 154; new officers, 896; registration of midwives, 896, 952, 1015, 1080, 1145, 1208; proposed addition to rules, 896; proposed adjournment of meeting, *ib.*; councillors and the training of midwives, *ib.*; withdrawal of motions, *ib.*; Anderson appeal fund, *ib.*

——— Malta and Mediterranean Branch, confirmation of minutes, 220; diagnosis between enteric fever and the remittent fever of the Mediterranean, with a note on Ehrlich's urine test, *ib.*; Malta fever, 673; votes of thanks, *ib.*; Malta harbours and Mediterranean fevers, 1457

——— Metropolitan Counties Branch, annual meeting, 38; report of council, *ib.*; treasurer's report, *ib.*; election of officers, *ib.*; annual meeting of the Association in 1895, *ib.*; installation of new president and votes of thanks, *ib.*; president's address, *ib.*; amendment of the Medical Acts, 38, 204; dinner, 38

——— Metropolitan Counties Branch, Herts District, communications, 219; election of officers, 1398; next meeting, *ib.*

——— Metropolitan Counties Branch, North London District, communications, 1077; paper, *ib.*

——— Midland Branch, Lincolnshire District, amendment of Medical Acts, 1341; the registration of midwives, *ib.*; communications, *ib.*; luncheon, *ib.*

——— North of England Branch, annual meeting, 220; installation of new president, *ib.*; report of council, *ib.*; next annual meeting, *ib.*; vote of thanks to retiring president, *ib.*; election of officers, *ib.*; annual dinner, *ib.*; conjoint meeting of with Border Counties Branch, 1011; communications, *ib.*; dinner, *ib.*

——— North of Ireland Branch, registration of midwives, 284; annual meeting, 285; confirmation of minutes, 285, 1011; secretary's report and treasurer's statement, 285; election of officebearers, *ib.*; communications, 285, 1011; luncheon, 285; visits to places of interest, *ib.*; president's address, 1011; motion as to discussions, *ib.*; new member, 1012

——— North Wales Branch, registration of midwives, 370; annual meeting of, 141; new members, *ib.*; report of council, *ib.*; places of meeting in 1895, *ib.*; election of officers, *ib.*; congratulation to Sir John Williams, *ib.*; amendment of Medical Acts, *ib.*; president's address, *ib.*; diet of quarrymen, *ib.*; communications, *ib.*; dinner, *ib.*

——— Northern Counties of Scotland Branch, president-elect, 1203; president's address, *ib.*; notification of phthisis, *ib.*; dinner, *ib.*

——— Oxford and District Branch, annual meeting, 220; confirmation of minutes, 220, 1077; installation of new president, 220; new members, *ib.*; report of treasurer and council, *ib.*; next annual meeting, *ib.*; election of officers, *ib.*; vote of thanks to retiring president, *ib.*; Civil Rights Defence Committee, 1077; communications, *ib.*

——— Perthshire Branch, annual meeting, 1078; confirmation of minutes, *ib.*; election of officers, *ib.*; amendment of Medical Acts, *ib.*; medical aid associations, *ib.*; summer meeting, *ib.*; communications, *ib.*; dinner, *ib.*

——— Queensland Branch, inauguration of, 375; first meeting of, 441; officers and council, *ib.*; new members, *ib.*; communications, *ib.*

ASSOCIATION, BRITISH MEDICAL, Reading and Upper Thames Branch, annual meeting, 285; election of officers, *ib.*; the British Medical Association and the profession, *ib.*; visit to Broadmoor, *ib.*; dinner, *ib.*

——— Shropshire and Mid-Wales Branch, registration of midwives, 79; annual meeting, 98; vote of thanks to retiring president, *ib.*; officers and council, *ib.*; new members, *ib.*; amendment of Medical Acts, *ib.*; the Walker prize, *ib.*; president's address, *ib.*; clinical cases, *ib.*; dinner, *ib.*

——— Southern Branch, South-East Hants District, communications, 1203; the Civil Rights Defence Committee, *ib.*; presentation to Dr. J. Ward Cousins, *ib.*; resolutions, *ib.*

——— South-Eastern Branch, East Kent District, election of chairman, 673, 1275; archæological paper and excursion, 673; conjoint meeting of with West Kent District, 1275; confirmation of minutes, *ib.*; the British Medical Association and abuses affecting the medical profession, *ib.*; communications, *ib.*

——— South-Eastern Branch, East Sussex District, the wants of the general practitioner, 785; communications, 1341

——— South-Eastern Branch, West Kent District, confirmation of minutes, 1142, 1275; next meeting, 1142; new member, *ib.*; communications, 1142, 1275; dinner, 1142; conjoint meeting of with East Kent District, 1275; the British Medical Association and abuses affecting the medical profession, *ib.*; election of chairman, *ib.*

——— South-Eastern Branch, West Surrey District, confirmation of minutes, 947; spring meeting, *ib.*; communications, *ib.*; dinner, *ib.*

——— South Indian and Madras Branch, meetings of, 1075; annual meeting, *ib.*

——— South Midland Branch, luncheon, 842; confirmation of minutes, *ib.*; new members, *ib.*; alteration of rule, *ib.*; abuses, etc., in the profession, 843; Anderson appeal case, *ib.*; penal clauses of, Medical Act, *ib.*; cases, *ib.*; visit to cathedral, *ib.*; votes of thanks, *ib.*

——— South Wales and Monmouthshire Branch, annual meeting, 98; address, *ib.*; report of council, *ib.*; donation, 98, 1011; new members, 98, 1011; vote of thanks to retiring president, 98; election of officers, *ib.*; amendment of Medical Acts, 98, 1011; proposed alteration of rule, 99; sporadic cretinisms, *ib.*; meetings, 1011; Midwives' Registration Association, scheme, *ib.*; cases, of the British Medical Association and unqualified practice, *ib.*; exhibits, *ib.*; dinner, *ib.*

——— South-Western Branch, annual meeting of, 155; installation of new president, *ib.*; president's address, *ib.*; report of council, *ib.*; next annual meeting, *ib.*; election of officers, *ib.*; communications, *ib.*; dinner, *ib.*; diagnosis of cerebral tumours, 1340; vote of thanks, 1341

——— Staffordshire Branch, new members, 1399; amendment of Medical Acts, *ib.*; cases and specimens, *ib.*; papers, 1400

——— Stirling, Kinross and Clackmannan Branch, registration of midwives, 28; annual meeting of, 40; confirmation of minutes, *ib.*; treasurer's report, *ib.*; report of council, *ib.*; election of office bearers, *ib.*; next meeting, *ib.*; joint meeting with the Edinburgh Branch, 40, 280; British Medical Benevolent Fund, *ib.*; payment of railway fares to members of Parliamentary Bills Committee, *ib.*; amendment of penal clauses of Medical Act, *ib.*; Local Government Bill for Scotland, *ib.*; president's address, 41; annual dinner, *ib.*; communications, *ib.*; excursions, *ib.*; dinner, *ib.*

——— Sydney and New South Wales Branch, new members and visitors, 673; papers, *ib.*; confirmation of minutes, 947, 1204, 1400; resignation of a member of council, 947; presentation for library, *ib.*; new members, 947, 1204, 1400; correspondence, 947, 1204, 1400; deaths of members, 1204; new buildings of Sydney Hospital, *ib.*; Medical Bill, *ib.*; new councillor, *ib.*; the library, 1400; incorporation of the Branch, *ib.*

——— Thames Valley Branch, new members, 1275; communications, *ib.*

ASSOCIATION, BRITISH MEDICAL, West Somerset Branch, registration of midwives, 28; annual meeting of, 39; installation of new president, *ib.*; vote of thanks, *ib.*; conmunication of minutes, 39, 1011; new members, 39, 1011; report of council, 39; election of officers and council, *ib.*; future meetings, *ib.*; president's address, *ib.*; amendment of Medical Acts, 40; dinner, 40, 1011; specimens, 1011; modern methods of wound treatment, *ib.*; vote of thanks, *ib.*; invitation to meetings of the Bath and Bristol Branch, *ib.*

Association, British Medical Temperance, conversazione of, 1413; prize essays on alcohol, 1415

——— of British Postal Medical Officers, [illegible]

——— [illegible] Medical Graduates, [illegible]

——— [illegible] objects of, 608

——— Durham University Medical Graduates, annual meeting and list of officers, 233

——— of Fellows of the Royal College of Surgeons of England, meeting of committee of, 945

——— Forfarshire Medical, annual meeting of, 53

——— the Hamilton for Providing Trained Male Nurses, annual report of, 794

——— Irish Medical Schools' Graduates,' summer dinner of, 69; annual provincial meeting of, 328; autumn dinner of, 1138, 1279, 1328; the presidency of, 1415

——— London and Manchester Medical Assurance, the medical department of, 167, 236, 292, 399, 1467

——— Marine Biological, the labours of, 33

——— Medical Officers [illegible]ools, measles, German measles, and infectious rose rash, 1131

——— Medico-Psychological, Great Britain and Ireland, prize essays of, 1166; meeting of Scotch Division of, 1166; meeting of, 1315

——— Metropolitan Provident, progress of, 165

——— Midwives Registration, annual report of, 904

——— of Military Surgeons of the United States, The Proceedings of the Fourth Annual Meeting of 1894, rev., 1432

——— Provident, of Warehousemen, Travellers, and Clerks, and its medical officers, 146, 348, 444

——— of Registered Medical Women, opening of winter session of, 1024

——— Royal British Nurses, meeting of, [illegible]; drill of, 55; the lecturers of, 1081; manuals of, 1090; the work of, 1145, 1207, 1277, 1343

——— Sanitary of Scotland, congress of in Glasgow, 541

——— United Kingdom Police Surgeons, first general meeting of, 512

——— Volunteer Medical, report on [illegible] Nursing, and the Bedford guardians, 37

Associations, Medical Aid and the Royal College of Physicians of Ireland, 348, 675; Medical Aid and "nucleuses," 884; Medical Aid, advertisements of, 831; friendly societies, medical, 850

Assurance (health), 207

Asthma, effect of climatic changes on, 55

Astigmatism, mixed, remarks on, 596

Asylum, the private, 773

——— Brentwood Lunatic, small-pox at, 19

——— Carlow District, assistant medical officership of, 680

——— Carmarthen Lunatic, appointments at, 108, 161, 396

——— Craig House, Edinburgh, opening of, 904

——— Derby Borough Lunatic, annual report, 19

——— Matonga Leper, opening of new wing of, 791

——— Mullingar Lunatic, the undermanning of the medical staff of, 1132

——— Richmond District Lunatic, an epidemic, 767, 776, 838, 881, 892, 940, 1015, 1127; overcrowding at, 1196

——— Royal Hants County, instruction at, 490

——— Worcester City and County, beer in, 1194

Asylums, lunatic, in India, 144; assistant medical officers in, 167, 525, 684, 738; beer in, 664, 942, 1194; Lunatic, their Organisation and Management, Dr. C. Mercier, *rev.*, 871; private lunatic, 1062, 1440; and politics, 1216
Ataxia and the diseases of which it is a symptom, 1289; hereditary case of, with necropsy, 1294; tabes dorsalis without, 1311
Athletics, in French schools, 91; as a mental training, 1064
Atkinson, Dr. T. R., cooking by gas, 1350
Atlas of Cystophotography, Dr. M. Nitze, *rev.*, 871; of Diseases of the Skin, Dr. H. R. Crocker, *rev.*, 924
Atropine and morphine, 1459
Attendants, nurses and, 1191
Auld, Dr. A. G., on the effect of thyroid extract in exophthalmic goitre and psoriasis, 11; a further report on the suprarenal gland and the causation of Addison's disease, 745
Avart-Lawrence, Dr. A. E., on the induction of labour, 1422; on extrauterine gestation, 1424
Australia, climate for a consumptive in, 347, 390; the opium vice in, 397; vaccination in, 434
Austria, vaccination in, 397; antitoxin treatment of diphtheria in, 933; medical practitioners in, 1510
Avcyron, the savage of, 722
Awoyama, Professor, the health of, 1002
Axis tractor, a, 20, 538

B.

Baber, Mr. C., adenoma of tongue, 921
Babies, the instincts and habits of, 1264
Baby farms and creches, 274
Bacillus, a remarkable chromogenic and pathogenic, 742
——— of plague, the, 369
——— of tubercle, effect of creasote on the virulence of, 841
Bacilli, typhoid, alleged sporulation of, 1415
Bacteria, thermophilic, 644; and ice creams, 1068
Bacteriology, the study of, 570; of hospital bed cases, 776; books for study of, 850; in its practical aspects, 1050; in Russia, 1465
Baginsky, Professor, on the antitoxin treatment of diphtheria, 1458
Bags, aseptic midwifery, 1246
Bailey, Dr. C. F., pay wards at the Great Northern Central Hospital, 1459
——— Mr. R. C., a modification of the operation of circular enterorrhaphy, 65
Baillie, Mr. W. H., death of, 1498
Bakehouse, soiled linen in a, 1214
Bakehouses, the London County Council and, 87; the regulation of, 146; and bakers, 679; the sanitary condition of, 1067; bakers' views on, 1192
Baker, Dr. S. J., treatment of sweating feet, 850
Bakers and bakehouses, 679
Baking, does it sterilise a loaf? 355
Baldwin, Mr. F. B. J., St. John Ambulance work, 1031
Ball, Mr. C. B., The Rectum and Anus, their Diseases and Treatment, *rev.*, 872
——— Dr. J. B., on diphtheria, 1312
Ballance, Mr. C. A., subcortical central cerebral tumour treated by operation, 1241
Ballantyne, Dr. J. W., Teratologia, *rev.*, 534
Bambus, Dr. S. C., typhoid fever at Athens, 613
Bampton, Dr., suppression of urine, 1370
Banana flour (sun-dried), 650
Bancroft, Dr. J., obituary notice of, 395
Banks, Dr. W. M., on the love of novelty, 858
Banning, Dr. R. J., the question of medical titles, 870
Bantock, Dr. G. G., the Medical Defence Union, Limited, 1219
Barcelona, the anatomy school at, 1152
Barclay, Mr. W. M., treatment of injuries of the spine and spinal cord, 912
Barker, Mr. A. E., three cases of intussusception treated by abdominal section, 1237
——— Surgeon-Lieutenant-Colonel F. C., suprapubic lithotomy, 14
——— Mr. J. T., the antitoxin treatment of diphtheria, 778
Barling, Mr. H. G., operative treatment of perforating ulcer of the stomach and intestines, 864; treatment of injuries of the spine and spinal cord, 911; renal calculus, 988
Barlow, Dr. T., on infantile scurvy and its relation to rickets, 1029, 1085; primary atrophy of muscles of limbs and trunk, 1109
Barnes, Dr. F., renotification, 1151
——— Dr. F., Chelsea Hospital for Women, 675
——— Mr. J. W., superannuation allowances to Poor-law medical officers, 1145
——— Dr. R., on the induction of labour, 1419, 1422
Barnett, Mrs. S. A., The Making of the Body, *rev.*, 812
Baron, Dr. B. J., four cases of labyrinthine disease treated by pilocarpin, 1236
Barr, Dr. J., on functional diseases of the heart, 1042; pyrexia and its treatment, 1096
——— Dr. T., suppurative otitis media, 1158; on the care of the ear during the course of the exanthemata, 1164; excision of the malleus as a preliminary operation to opening the antrum in cases of suppuration from the attic and antrum, 1167
Barrack schools *See* Schools
Barron, Dr., on rabies, 1179; anæmia, with flagellated protozoa in the blood, 1371
Bartels, Dr. Max, on the medical practices of aborigines, 1439
Barton Regis, the nursing at the workhouse infirmary of, 766, 879, 885
Basements, sewage flooded, 1486
Bass, Mr. F., instrument for raising the upper eyelid, 75
Bate, Mr. G. H., small-pox and notification, 233
Bateman, Dr. A. G., Dr. Jameson, C.B., 1080
——— Sir F., the criminal responsibility of the insane, 352; the prevention of insanity, 521
Bath, nursing and administration at the workhouse at, 26, 29, 56, 111, 167, 601, 712, 739, 851; visit of the British Medical Association to, 439; the baths of, 514; the guardians of and their medical officer, 609
Bath treatment, mechanical aids to, 1231
Bathers, a word in season to, 102, 370
Batterbury, Dr. R. L., economy in vaccine lymph, 808
Battersea, a university settlement in, 5
Bavaria, cremation in, 519
Beach, Dr. F., the prevention of insanity, 522; defects and diseases of school children, 529; idiots and imbeciles children, 1343
Beadles, Dr. C., malignant disease involving the hypophysis cerebri, 1430
Beards, the blessedness of, 1193, 1287
Beat transfer, an easy test for true and spurious pulse tension, 749, 852
Beattie, Mr. T., death under chloroform, 820
Beaumont, Mr. W. M., the soldier's red coat as a cause of renal hyperæsthesia, 584
Bedford, the nursing at the workhouse infirmary of, 372, 509, 851; the guardians of and their master, 1187, 1319
Beef-tea, the making of, 1414
Beer in asylums, 665, 942, 1194
Beevor, Dr. C. E., subcortical central cerebral tumour treated by operation, 1241
Behring and Virchow, 947, 1012
Belgium, vaccination in, 344; antitoxin treatment of diphtheria in, 1073, 1124, 1270, 1340; medical legislators in, 1247
Bell, Dr. B., retained menses with perforation into bladder, 130
——— J. H., woolsorters' disease, 1406
Bellamy and Pollock memorial, the, 1286
Benda, Dr., on the antitoxin treatment of diphtheria, 1457
Bennet, Dr. J. H., unveiling of bust of, 1445
Bennett, Dr. C. H., on diphtheria, 1312
——— Dr. F. W., immobility of the left vocal cord, 921; on deaf-mutism, 1167; St. John ambulance work, 1202, 1343; treatment of stenosis of the larynx, 1483
——— Mr. S., the surgery paper at the London M.B., 1351
Benson, Mr. A., monocular asteroid hyalitis, 70; tuberculous iritis, 1115
——— Mr. H. T., presentation to, 480
Bentley, Mr. J. M., pyrexia and its treatment, 1099; a few practical hints for invalids on the maintenance of health in the climate of Egypt, 1300
Bequests, 11, 120, 143, 754, 763, 806, 832, 836, 893, 960, 1004, 1051, 1347, 1384
Berars, sanitation in the, 1152
Berger, Mr. P., biographical notice of, 233; bicycle accident to, 749
Bergh, Dr. R. S., Vorlesungen über die Zelle und die einfachen Gewebe, *rev.*, 924
Bergmann, v., the antitoxin treatment of diphtheria, 1400
Beri-beri in Dublin, 767, 776, 836, 881, 892, 940, 950, 1015, 1127; Krankheit (die), Dr. B. Scheube, *rev.*, 813; in the port of London, 845; in South Africa, 950
Berlin, correspondence from, 729, 843, 947, 1012, 1143, 1275, 1320; a primer of hygiene, 844; workmen's dinners, *ib.*; examination of hotel joints in, 957; return of Professor Leyden to, 1143; an epidemic of dysentery in Silesia, *ib.*; overlying and the German law, *ib.*; doctors and the right of way in the streets, 1275; death from tattooing, *ib.*
Bernard, C., statue to, 431
Berry, Dr. R. A., function of the vermiform appendix, 1511
——— Mr. W., the Lancashire and Cheshire Branch and the registration of midwives, 1080
Bertapaglia on the ligature of arteries, 1087
Bertillon system to be adopted in England, 547
Bethnal Green, nursing in the union infirmary of, 809
Better late than never, 851
Bevan, Dr. R., a protest from Romney Marsh, 572
Beveridge, Staff-Surgeon H. T. S., obituary notice of, 959
Bibliographie des klinischen Helminthologie, Dr. J. C. Huber, *rev.*, 814
Bidder, Professor F. H., death of, 625
Biddle, Mr. D., youngest England, 821, 1027
——— Mr. H. G., the antitoxin treatment of diphtheria, 779
Biddle, Surgeon-General G., on the venomous bites of some kinds of gadflies, 400
Biggs, Mr., on his defence, 151
——— Dr. H. M., treatment of diphtheria in New York, 360
Biguami, Malaria and the Parasites of Malarial Fever, *rev.*, 811
Bilharziakrankheit (Ueber), Dr. L. Rutimeyer, *rev.*, 1244
Bill, Midwives' Registration, meeting of medical men at Lancaster about, 736
Billings, Dr. J. S., report to the International Congress of Hygiene and Demography on diphtheria, 578; Hospitals, Dispensaries, and Nursing, *rev.*, 1433
Billroth, Professor, v., memorial to, 87; pension to widow of, 326; the letters of, 828
Binz, Dr. C., Grundzüge der Arzneimittellehre, *rev.*, 1052
Biological stations, new, 739
Birkenhead, notification of measles in, 954
Birmingham, small-pox and vaccination at, 26, 328; sanitary circumstances in, 639, 1022, 1086
Birr, the military scandal at, 392, 448
Birrell, Mr. D. A., American and Parisian Massage Company, 580
Bishop Auckland, nursing, etc., at the workhouse infirmary of, 80, 90
Bismuth in rhinorrhœa, 455
Bitartrate of lithia (granular, effervescing), 762
Black, Mr. T. F., pay wards at the Great Northern Central Hospital, 1403
Blackader, Dr. A. T., treatment of stenosis of the larynx, 1481
Blackburn, Government report on nursing at, 1188
"Black death" in India, 790
Blackheath, epidemic of milk scarlatina at, 324
Bladder, urinary, two cases of uncomplicated intraperitoneal rupture of, 121; two cases of tumour of occurring in children, 128; retained menses with perforation into, 130; urinary, intraperitoneal rupture of, laparotomy, etc., 968; male, rupture of successfully treated by abdominal section and suture, 978; rupture of prostatic neck of, 1109
Blake, Dr. E. T., Myxœdema, Cretinism, and the Goitres, with some of their Relations, *rev.*, 1431
——— Mr. H., on the prevention of insanity, 520
Blandford, Dr. G. F., the prevention of insanity, 256; neurasthenia and its treatment, 525
Blaney, Dr. T., statue to, 650
Blaxall, Dr. F., a bacteriological investigation of the suppurative car discharge occurring as a complication in scarlet fever, 116; thermophilic bacteria, 644
Blenkins, Deputy Inspector General G. E., obituary notice of, 789
Blepharitis and ametropia, the association of, 593
Blind, the, seen through blind eyes, M. de la Sizeranne on, 1191
Blinding of the Retina by Direct Sunlight: a Study in Prognosis based upon Accidents incurred during the Observation of Solar Eclipses, Dr. G. Mackay, *rev.*, 925
Blindness in France, 789; and tobacco, 1132
Block dwellings (artisans'), rates of mortality in, 613
Bloemfontein, the climate of, 399
Blofield, nursing in the workhouse infirmary of, 1186, 1192, 1318
Blood, method of increasing and diminishing the coagulability of the, 59; changes produced in by uric acid, 113; transfusion of and possible claims for damages, 435; malarial, on the nature and significance of the crescentic and flagellated bodies in, 1306; anæmia, with flagellated protozoa in the, 1371

Bloxam, Mr. J. A., calculi, 1112
Boake, Dr. S., presentation to, 1465
Board, the Local Government, and cholera and diarrhœa notification, 147; deputation to on barrack schools, 148, 149, 211, 236; the annual report of the medical department of, 510, 541; plural appointments under, 567; the medical department of the, 720; and the examinations of sanitary inspectors, 1130; and the early diagnosis of diphtheria, 1346; bacteriological examination of diphtheria for the, 1394; the model by-laws of the, 1508
——— Local Government for Ireland, the annual report of, 536
——— Local Government for Scotland, the constitution of, 90; the medical membership of, 507; appointments to the, 667
——— Metropolitan Asylums, the ambulance steamers of, 568; antitoxin treatment of diphtheria at the hospitals of, 1122, 1270; summary of work of for 1894, 1494
Boarding out of pauper children, 609, 627, 884, 1002; isolation and, 883, 954
Bodington, Mrs., hereditary insanity in modern history, 963
Body, The Making of the, Mrs. S. A. Barnett, *rev.*, 812
Bokai, Professor, the antitoxin treatment of diphtheria, 1123
Bokenham, Mr. T. J., on the use of certain drugs of recent introduction in ophthalmology, 597
Bolton, Dr. J. S., the prevention of insanity, 522
Bombay, lunatic asylums in, 1463
Bonafoux, Dr., death of, 1259
Bond, Dr. F. T., on diphtheria and insanitation, 316; the filtration of potable water, 354; origin and spread of enteric fever, 355; the etiology of typhoid fever, 951
Bonds and contracts not to practise, 345
Bone, hydatids in, 640
——— marrow, splenic leucocythæmia treated with, 1238
Bones, fœtal, fracture of during delivery, 13
Bones, Mr. A. A., the new pharmacy, 1206
Bonesetter, action against a for slander, 1494
Book-keeping, medical, new system of, 705, 1416
Books, library and infectious disease, 1388, 1390, 1505
Bordeaux, congresses at, 824; the medical faculty of, 1308
Boston, correspondence from, 730; the annual meeting of Massachusetts State Medical Society, 730; the new buildings of the McLean Lunatic Hospital, *ib.*; the Association of Trained Nurses, *ib.*; hard times for nurses, *ib.*; the registry for nurses, *ib.*
Botany, books on, 1026
Bottle (poison), 20
Bowel, enterectomy for gangrene of, 1324
Bowels, obstruction of caused by an incompletely reduced left inguinal hernia, 1393
Bowlby, Mr., on Scott's disease, 1111; epitheliomatous cyst of neck, 1175; swelling of left side of larynx with paralysis and atrophy of left half of tongue and soft palate, 1311; tuberculous disease of soft palate, larynx, pharynx, and lungs, *ib.*
Bowles, Dr. R. L., the management of eczema, 648; the influence of solar rays on the skin, 694, 696
——— Mr. T. G., on "army doctors," 100
Boxall, Mr. F., hip-joint disease, 1155
——— Dr. R., the public, the medical profession, and the medical charities, 755; The Use of Antiseptics in Midwifery, *rev.*, 814; on the induction of labour, 1422
Boy, aged 11, primary sarcoma of lung in, 532
Boyce, Dr. R. W., the fungus foot disease of India, 638; on rabies, 1179
Boycotting the nurses, 207, 338
Bradbury, Dr. J. B., an inaugural lecture on pharmacology and therapeutics, 935
Bradford, small-pox and vaccination at, 164; nursing at the workhouse infirmary of, 547; the proposed throat, eye, and ear institution for paying patients at, 1397
Bradford, Dr. J. R., intracranial aneurysm in young subjects unaffected with syphilis or malignant endocarditis, 869
Braidwood, Dr. F. M., the medical services in war, 44; the holy well at Shirehampton, 159
Brains, dried pathological, 1485
Brainsford, Dr. C., death of, 568
Braintree, the workhouse infirmary of, 931
Braithwaite, Dr., on atrophy with collapse (cirrhosis), fibroid degeneration, and angioma of the ovaries, 1116
Bramwell, Dr. B., note on the staining and mounting of tube casts and other organic urinary deposits, 8; thyroid extract in lupus, 71
Branfoot, Surgeon-Lieutenant-Colonel A. M., a case of symphysiotomy, 1363
Brass, copper, and zinc works, the hygiene of, 1324
Brassfounders' ague, 1133
Braye, Mr. J., "the Health Congress," 229
Bread, cholera and, 786; meal germ, 815
Breakfast, temperance, at Bristol, 163
Breast, recurrent cancer of, 1177; axillary, carcinoma of a, 1309
Breath, typhoid fever communicated by, 1353
Brennan, Mr. J. R. M., exhumation after fourteen years' burial, 1237
Brewis, Dr., fibroid uterus, 130
Bride, Dr. J. G., the antitoxin treatment of diphtheria, 779
Brierley, Mr. J. B., midwives registration, 388; the Lancashire and Cheshire Branch and the registration of midwives, 1145
Briggs, Dr. E. A., death of, 230
——— H., vaginal hysterectomy for cancer of uterus, 1304
Brighton, sanitary progress at, 108; hospital Sunday at, 1023
Bristol, small-pox and vaccination at, 438; nursing at the workhouse infirmary of, 671, 739
Bristow, Mr. T., death of, 230
British Guiana, quacker in, 1139
Broadstairs, proposed convalescent home for children at, 507
Brockwell, Mr. J., obituary notice of, 106
Bronner, Dr. A., notes of a case of sympathetic ophthalmia of the right eye which showed itself eighteen days after a kick in the left eye, 70; on intratympanic injections in the treatment of chronic dry catarrh of the middle ear, 805; cystic fibroma of the left vocal cord, 921; epithelioma of the epiglottis, *ib.*; pachydermia laryngis with perichondritis of arytenoid cartilage, 1311; papillary conjunctivitis, 1429
Brook, Mr. W. F., the Griffiths fund, 112; treatment of stenosis of the larynx, 1481
Broom, Dr. J., on acne vulgaris, 691
Brown, Mr. A. S., Madeira and the Canary Islands, *rev.*, 929
——— Mr. G., does baking sterilise a loaf? 355
——— (Bacup), the Lancashire and Cheshire Branch and the registration of midwives, 1015
——— Dr. J. (Wandsworth), presentation to, 346
——— Mr. R. P., diphtheria at the Royal Naval School, 386
Browne, Mr. H. L., a case of anthrax, 69; the modern development of the germ theory, 176
——— Sir J. C., emotional expression, 887
——— Mr. L., on cremation, 314; diphtheria and insanitation, 314, 317; the notification of sore throat and the prevention of diphtheria, 903; suppurative otitis media, 1161; the antitoxin treatment of diphtheria, 1295, 1428
——— Dr. R., neurasthenia and its treatment, 524
Brunton, Dr. T. L., the Harveian oration on modern developments of Harvey's work, 853
Bryant, Mr. T., on quack medicines, 960; on professional education, 1195; the Beaven Rake memorial, 1268
Brydon, Dr. J., chloroform during sleep, 531
Buchner, Professor, immunity in infectious diseases, 611
Buck, Dr. A., Reference Handbook of the Medical Sciences, *rev.*, 73
Buckmaster, Dr. G. A., the bearing of Hindu pilgrimages on cholera, 209; diphtheria and insanitation, 316; the filtration of potable water, 354; origin and spread of enteric fever, 855
Bucknill, Sir J. C., the memorial to, 375
Billow, v., the brain of, 839
Bulgaria, the medical profession in, 397
Bulkley, Dr. L. D., Syphilis in the Innocent, *rev.*, 870
Bull, Dr. E. G., a warning, 683
Bullet wound of the parietal lobe, 1110
Bunch, Mr. F. V., obituary notice of, 841
Burglar, a bacteriological, 960
Burial and uncertified deaths, the law as to, 675
Burn, severe, adhesive pleurisy following, 1178
Burnet, Mr. R. W., pay wards at the Great Northern Hospital, 1291
Burns, cold, 795
Burns, Dr. D., the London Temperance Hospital, 732
Burrell, Dr. H. L., a consideration of, 168; cases of fracture of the spine, 940
Burroughs and Wellcome, Messrs., thyroid gland tabloids in obesity, 55
Burton, Mr. E. T., lemon juice as a hæmostatic, 1048
Burton-Fanning, Dr. F. W., on whooping-cough, 1087; antitoxin treatment of [illegible], 72
Bury, Dr. J. S., Clinical Medicine, *rev.*, 779
Bush, Mr. J. P., ovariotomy in a patient in her 85th year, 67
Bushong, Dr. C. H., Modern Gynæcology, *rev.*, 960
Butlin, Mr. H. T., trephining for traumatic epilepsy, 1110
Butter and typhoid infection, 570; as the vehicle of tuberculous infection, 1445
Buxton, A Guide to the Use of the Mineral Waters of, Dr. W. H. Robertson, *rev.*, 1117; the natural mineral waters of, their indications and modes of application, 1392
Buxton, Mr. E., presentation to, 1023; St. John Ambulance work, 1207
Byers, Dr. J. W., on the induction of labour, 1422
Byrth of Mankynd (the) otherwyse named the Woman's Boke, 1436

Cadell, Mr. F., case of chancre of lower lip, 68
——— Miss I., hospital appointments for women, 1415
Cæcum, opening the for intestinal obstruction, 1142
Cagney, Dr. J., on diphtheria, 1312; a disclaimer, 1415
Caiger, Dr. F. F., antitoxin treatment of diphtheria, 1484
Caird, Mr., the treatment of ununited fractures by passive congestion, 1115
Caisson disease. *See* Disease
Calculi, urethral, 922, biliary, 988; removal of, 1112
Calculus, vesical, 65 cases of operation for, 980; renal, 988
Calcutta, the health of in 1893, 1411
Calf vaccine, 205; alleged poisoning by in Canada, 585
Calvert, Dr. W. H., morphine and atropine, 1459
Cameron, Sir C., the health of, 883
——— Sir C. A., sanitary science and the prevention of zymotic disease, 293, 399; Hindu pilgrimages and their bearing on cholera, 309
——— Dr. J. S., ventilation of sewers, 307; diarrhœa in 1893, 317; correction of death-rates for trades, 445
——— Dr. M., on the induction of labour, 1421
Campbell, Dr. A. W., degenerations consequent on experimental lesions of the cerebellum, 641
——— Mr. C., the Lancashire and Cheshire Branch and the registration of midwives, 1015; recurrent cancer of breast, 1177; the treatment of respiratory affections by means of large medicinal injections through the larynx, 1233, 1442
——— Dr. H., on functional diseases of the heart, 1064; the mechanical treatment of heart disease, 1101; acromegaly, 1110
——— Dr. W. M., midwives registration and the Lancashire and Cheshire Branch, 952, 1208; circumcision, 1351
Canada, reward for fecundity in, 456; alleged calf vaccine poisoning in, 585; injection of tuberculin in cattle in, 1215
Canary claret, 1434
Cancer, an experimental investigation into the causation of, 836; and phagocytosis, 839; the etiology of, 670; uterine in India, 1002; tubercle and, 1027; the treatment of by injections of iodine and carbolic acid, 1093; recurrence of breast, 1177; of uterus, vaginal hysterectomy for, 1304; of the jaws and tongue, operations for, 1315; axillary, 1405, 1504
Candidates, parliamentary questions for, 159
Canterbury, the nursing at the workhouse infirmary of, 880, 1183, 1502
Cape Colony, report of the Public Health Department of, 791; the medical council of, 1328
Capsule, suprarenal, fibro-adenoma of, 869
Carbolic acid, poisoning by, 774, 877, 918; and iodine, treatment of cancer by injections of, 1093
Carcinoma of an axillary breast, 1309; primary of the body of the uterus, vaginal hysterectomy for, 1306
Card, Mr. A. H., 80 cases of diphtheria treated with antitoxin, 1417
Card of a fourpenny dispensary, 292
Cardiocentesis, a successful case of, 1368
Cardiff, the medical school of, 1260
Caries, spinal, the treatment of and its results by laminectomy, 698
Carmichael, Dr. J., the treatment and complications of whooping-cough, 403
Carmody, Professor P., bacteriological examination of water supplies, 622

Carnot, President, and his surgeons, 34
Carriage, an interchangeable, 707
Carter, Dr. A. H., antipyretic effects of external applications of guaiacol, 6
——— Dr. H. F., death of, 680
——— Dr. R. W., deaths under chloroform, 765, 1073
——— Dr. W., administration of arsenic, 922
Cartilages, semilunar, of knee, displacement of, 16
Cast, decidual, the importance of as evidence of extrauterine gestation, 1111
Cataract, lamellar, the association of with rickets, 1112
——— extractions, on the good effects of dressing one eye only after, 588
Catarrh, chronic dry, of the middle ear, intratympanic injections in the treatment of, 805
"Catarrhus," 1370
Catechism (A) of Hygiene and Sanitary Science. Dr. P. Hehir, *rev.*, 71
Cathcart, Mr. C. W., operation for appendicitis, 71; surgical economy in hospitals, *ib.*
Catheter case, an aseptic, 1434
Caton, Dr., two cases of lead poisoning, 1371
Catley Abbey mineral water, the, 537
Cattle, treatment of disease in, 347; and tuberculosis, 1196
Cattle, Dr., the causation of cancer, 638
Caudwell, Mr. E., the antitoxin treatment of diphtheria, 389
Cave, Dr. E. J., three cases of intestinal obstruction treated by laparotomy, 66
Cecly, Mr. R. W., hospital appointments, 386
Celli, Professor, the biology of the amœba: dysentery, 670
Cellulitis, following Mules's operation, 597; puerperal pelvic from phlebitis, 1113; artificial, in the treatment of certain urinary diseases, 1365; plastic of orbit, five cases of, 1428
Census, the new quinquennial, 337
Cephalalgia, post-influenzal, two cases of ending fatally, 126
Cerebellum, degenerations consequent on experimental lesions of the, 640
Certificates, medical, in court, 94; special in pauper practice, 289; false medical, 720; medical and jurors's excuses, 898; diplomas and nurses, 957; invalid vaccination, 1022; school, 1083, 1344, 1404; massage, 1351; to midwifery and sick nurses, 1467
Cervix uteri. *See* Uterus
Cesspools in villages, 1508
Ceylon, the climate of, 1218, 1286
Chabot, Dr., leave of absence to, 1151
Chalfont, the epileptic colony at, 87, 380, 1063, 1196; a visit to the colony at, 1502
Chancre of lower lip, case of, 68
Chantemesse, Dr., the hygiene of drinking water, 671
Chapin, Dr. H. D., on whooping-cough, 406; a plan of infantile measurements, 703
Chaplin, Dr. A., Fibroid Diseases of the Lungs, including Fibroid Phthisis, *rev.*, 1051; fœtid expectoration treated by inhalations of coal tar creasote vapour, 1177
Chapman, Mr. A., Income Tax: How to get it Refunded, *rev.*, 763
——— Dr. C. W., water filters, a suggestion, 1405
——— Dr. P. M., on functional diseases of the heart, 1039
——— Mr. R. B., Chelsea Hospital for Women, the late medical staff, 1343
Charcot, an international memorial to, 43, 86, 140
Charcot's disease. *See* Disease
Charity, medical, 1391
——— organisation and medicine, 666
Chatham, proposed extension of the Royal Naval Hospital at, 45
Cheatle, Dr. A., aural auscultation tube, 649
Cheltenham, the guardians of and vaccination, 1193
Chemistry and the authenticity of relics, 1259: Organic, Dr. W. H. Perkin and F. S. Kipping, *rev.*, 1432
Chemists, careless supply of poisons by, 94; medical practitioners and the shops of, 1415
Chester, nursing, etc., in the workhouse infirmary of, 146, 150, 264, 549, 1122
Chesterfield, proposed medical hospital at, 582
Chester-le Street, nursing at the workhouse infirmary of, 851
Chesterton, refusal to admit the British Medical Journal Commissioner to the infirmary of, 931
Cheyne, Mr. W. W., excision of scapula, 1109
Chicago, correspondence from, 100, 674, 1205, 1275; endowment of a Davis chair of medicine in the North-Western University Medical School, 100; a holiday book, *ib.*; the American Medical Association, 674; Dr. J. B. Murphy on intestinal anastomosis, *ib.*; visit of M. Latude, *ib.*; a case of acromegaly, *ib.*; opening of the medical session, 1205; the public health in August, *ib.*; food exhibition, *ib.*; bone marrow in pernicious anæmia, *ib.*; new isolation hospital, arrangements and cost, 1275; a low general death-rate and high infant mortality, *ib.*; factory inspection, *ib.*
Chicken-pox at 64 years of age, 1288
Chiene, Professor, unilateral enlargement of cranial bones, 71; the flap method of operating, 741
Child, 18 months old, diphtherial laryngitis in a, tracheotomy, recovery, 125; case of multiple neuritis in a, 407; young, perforation of typhoid ulcer in a, 809; infecting mother with primary syphilis, 1236
Childhood, some of the characters of disease in, 401
Children, twenty-five, 35; two cases of tumour of bladder in, 128; exceptional and reformatory schools, 147; pauper, deputation to the Local Government Board on, 148, 149; pauper, the education of, 887; treatment of tuberculous disease of the joints in, 408; feeble minded, discussion on points connected with the education of, 508; school, defects and diseases of, 529; workhouse, the teeth of, 548; pauper, boarding out of, 609, 627, 884, 1002; the feeding of, 664, 1091; the study of diseases of and its place in the medical curriculum, 698; young, a detail in the treatment of harelip, and other operations on the face in, 809; the weight of, 956; maintenance of in isolation hospitals, 954; unvaccinated in public schools, 1063; young, etc., a successful method of examining the larynx in, 1171, 1276; pauper imbecile, 1206, 1343, an epidemic of paralysis in, 1233; stillborn, midwives and, 1325; rate supported, 1382
China, medicine in, 148; tea from, 605; medical education in, 616
Chisel, removal of an aural exostosis by after detachment of the auricle, 867
Chisolm, Dr. J. J., on the good effects of dressing one eye only after cataract extractions, 588; the diagnosis and treatment of ophthalmia, 592
Chloral hydrate, poisoning by one ounce of, recovery, 987
Chlorine water in certain diseases of the eye, 71
Chloroform, discussion on at the Royal Medical and Chirurgical Society, 14, 33; case of tolerance of, 68; deaths under, 88, 205, 434, 549, 606, 728, 765, 795, 877; administration of in India, 102; during sleep, 531, 738; percentage of with the open method, 1026; administration of "the usual way," 1512
Chlorosis in the male, 123; case of treated by red marrow tabloids, 1308
Cholera, preventive inoculation against in India, 24, 207, 616, 775, 1247; the spread of, 37, 97, 154, 217, 340, 381, 456, 496, 656, 727, 777; notification of in India, 87; reappearance of at St. Petersburg and Cronstadt, 89; precautions against at Grimsby, 97; the Local Government Board on notification of, 147; precautions against in Scotland, 154; leading article on, 203; the spread of in Russia, 217; port expenses of, 206; the seasons and sites of Hindu pilgrimages in Bengal and their bearing on, 307, 907; inviting the, 435, 565, 624, 679; precautions against, 437; Dr. Metchnikoff on, 612; Mr. E. Hart, on the etiology of, *ib.*; waterborne, 665; Professor Koch on, 729; and bread, 788; the spread of by water, 801; the survey of, 956; and flies, 1388; pilgrims and, 1496
——— prospects, 141
Chondro-sarcoma of the humerus, 1309
Chorea, hypodermic use of arsenic in, 1176
Christchurch, the sanitary state of, 435
Christie, Dr. W. L., the antitoxin treatment of diphtheria, 1001
Christmas at the hospitals, 1493
——— Books, Christmas Cards, and Diaries, *rev.*, 1244
Church, the, and cremation, 719
Churchill, Lord R., the illness of, 1498
Churton, Dr., multiple neuritis fatal on the sixth day, 987, 1031
Ciliary body, the secretory function of the, 595
Circumcision, 1288, 1351, 1511
Cistern, the domestic as a place of burial, 1263
Cisterns, home, 375, 1052
Civil Rights Committee. *See* Committee
Claims, overdue, 1282
Clam bouillon, 1431
Claremont, Mr. C. C., payment for administration of anæsthetics, 1151
Clark, Sir A., theory and treatment of "renal inadequacy," 164; Fibroid Diseases of the Lungs including Fibroid Phthisis, *rev.*, 1051
——— Dr. F. W., the ventilation of sewers, 210, 306
Clarke, Dr. E., the relation of some occupations to eyesight, 584; the association of blepharitis and ametropia, 593
——— Mr. J., the pathology of variola and vaccinia, 236; variola and vaccinia, 869; repair of divided tendon, 1430
——— Dr. J. M., ataxia and the diseases of which it is a symptom, 1294; a case of Friedreich's disease or hereditary ataxy, with necropsy, *ib.*
Clavicle, nodular, swellings on each, 1178
Clay, Mr. J., obituary notice of, 52
Clemow, Dr. A. H. W., the antitoxin treatment of diphtheria, 1428
——— Dr. F., the spread of cholera by water, 801
Climate, alcohol and, 609; for early phthisis, 682; of Cornwall, 683
Cline's splints, 1286, 1350
Club, Aberdeen University (London), half-yearly dinner of, 1260
——— rates, low, 1350, 1511
——— surgeons, tenure of office of, 831
Clubs, benefit, payments by, 738; and friendly societies in the south of Ireland, 1254, 1322, 1342, 1398, 1451
Clutton, the board of guardians of and the press, 1188, 1318
Clutton, Mr., dislocation of the head of the humerus with fracture of surgical neck, 1112
Cnyrim, Dr. V., the antitoxin treatment of diphtheria, 1176
Coal tar creasote vapour, fœtid expectorations treated by inhalations of, 1176
Coats, Dr. J., two cases of uncomplicated intraperitoneal rupture of the bladder, 121; fundamental conceptions as to the characteristics and embodiments of life, with special reference to pathology, 983
Coca wine, 1052, 1216
Cocaine, death under, 809; in labour, 1427
Co-education, medical, 795
Cockade, the, 1414
Cole, Dr. R. H., neurasthenia and its treatment, 525
Colenso, Dr. R. J., poisoning by one ounce of chloral hydrate, recovery, 987
Coley, Dr. F. C., Alcohol as a Medicine, *rev.*, 814
College, Anderson's Medical, Glasgow, instruction at, 484; instruction in dentistry at, 504
——— the Chinese Imperial Medical, 616
——— Firth, Sheffield, the medical faculty of, 481; opening address at, 757; opening of winter session at, 783
——— King's, London, the medical faculty of, 477; fees at, 486; opening of winter session at, 782
——— Livingstone, the report of, 1024
——— Marischal, Aberdeen, gift to, 201
——— Mason, Birmingham, the medical faculty of, 480; fees at, 486; instruction in dentistry at, 503; opening of winter session at, 783; annual dinner of, 1347
——— Medical for Women, Edinburgh, instruction at, 483
——— of Medicine, University of Durham, appointments and scholarships at, 481; fees at, 486; opening of winter session at, 783; opening of session at, 1075
——— Muirhead, for Women, Glasgow, proposed, 1389
——— Owens, Manchester, the medical department of, 481; fees at, 486; instruction in dentistry at, 504; opening of session and new buildings at, 948, 1075
——— Queen Margaret, Glasgow, proposed residential hall in connection with, 505
——— Queen's, Belfast, Government grant to, 432; instruction at, 484
——— Queen's, Cork, instruction at, 485
——— Queen's, Galway, instruction at, 485
——— Royal Medical Benevolent, Epsom, changes, etc., at, 143; founder's day at, 872
——— Royal, of Physicians of Edinburgh, regulations as to diplomas, 471
——— Royal, of Physicians in Ireland and medical aid associations, 348, 675; regulations as to diplomas, 474; officers of, 959; pass list, 1509
——— Royal, of Physicians of London, comitia of, 286, 995; regulations as to diplomas, 468; Harvey's day at, 886; pass lists, 1020; extraordinary comitia of, 1438
——— Royal, of Surgeons of Edinburgh, pass lists, 343, 1084; regulations as to diplomas, 472; regulations for licence in dental surgery, 502

College, Royal, of Surgeons of England, council election of, 28, 86; exhibition at the museum of, 87, 97; annual meeting of Fellows of, 95; the council of and the issue of voting papers, 100; regulations for meetings of Members of, 163; the presidency, etc., of, 165; lectures at, *ib.*; pass lists, 342, 1148, 1211, 1463; regulations as to diplomas, 468; regulations for licence in dental surgery, 502; the Calendar of, 777; the annual report of, 886; the disciplinary powers of the, 897; the quarterly court of, 991; the annual meeting of, 950, 995; lectures at the, 1127; dates of examination, 1148; examiners at, *ib.*; meeting of council of, 1438; the Fellows of, 1447, 1496
——— Royal, of Surgeons in Ireland, examiners of, 18; regulations as to diplomas, 475; regulations for licence in dental surgery, 502; Schools of Surgery, 959; fellowship examination, *ib.*; opening of session at, 1074; pass lists, 1280, 1509
——— Royal, of Surgeons in Ireland and Apothecaries' Hall of Ireland, Conjoint Examining Board of, regulations as to diplomas, 474
——— Royal Veterinary, opening address at, 758
——— St. Mungo's, Glasgow, instruction at, 484
——— University, Bristol, the medical faculty of, 480; fees at, 486; instruction in dentistry at, 561; prize-giving, etc., at, 1195
——— University, Dundee, the chair of chemistry at, 163; instruction at, 484
——— University, Liverpool, munificent donation to, 87; the medical faculty of, 480; fees at 486; instruction in dentistry at, 501
——— University, London, the medical faculty of, 479; fees at, 486; opening address at, 756; opening of winter session at, 782
——— University of South Wales and Monmouthshire, the medical faculty of, 481; progress, etc., of the medical faculty of, 1260
——— Yorkshire, Leeds, the new buildings of, 433; appointments at, 468; the medical department of, 480; fees at, 486; the new medical school of, 763; opening of new medical school of, 823; opening of winter session at, 936
Colleges, Royal, of Physicians and Surgeons, Edinburgh, and the Faculty of Physicians and Surgeons, Glasgow, Conjoint Examining Board of, pass lists, 231, 343, 1041, 1346; regulations as to medical and surgical diplomas, 471; regulations for diplomas in public health, 496
——— Royal of Physicians and Surgeons in Ireland Conjoint Examining Board of, regulations as to diplomas, 474; regulations for diplomas in public health, 497
——— Royal of Physicians of London and Surgeons of England, Conjoint Examining Board of, pass lists, 18, 106, 342, 392, 449, 901, 959, 1019; regulations as to medical and surgical diplomas, 467; institutions from which certificates are accepted by, 490; regulations for diplomas in public health, 495; and the preparation of antitoxic serum, 1500
——— university grants to, 115
Colles, supposed exception to the law of, 1236, 1312, 1404, 1505
Collier, Dr. H., nursing at the Great Yarmouth Workhouse, 1187
Collins, Mr. E. T., the association of lamellar cataract with rickets, 1112
Colman, Dr., on diphtheria, 1312
Colonial medical services, regulations for admission to, 500
Colonies, government hospitals and pay hospitals in, 1249
Colony, an epileptic, 87, 380, 1063, 1196; a visit to, 1502
Colston Societies. *See* Societies.
Comforts, medical, 91
Commission, Gresham University, "minutes" of, 144
——— on Opium, the report of, 510, 603, 1327
——— Royal, on Tuberculosis in Cattle, the report of, 775
——— Royal, on Vaccination, the report of, 770, 828, 1127
——— Scottish Universities, extension of powers of, 1419
Commissioners in Lunacy, the annual report of, 371
Commissionership, Scottish, in Lunacy, candidates for, 1323
Committee on Barrack Schools, appointment of, 327; members of, 438, 1062; the instruction to, 510; hints for consideration of, 602; meeting of, 998, 1063
——— Civil Rights Defence, appeals of, 218, 440, 1474
Committee on Inebriety for Scotland, appointment of, 33; meetings of, 87, 1254
Compend of General Pathology and Morbid Anatomy, Dr. H. N. Hall, *rev.*, 1181
Competition downward, 682
Complexus, absence of, 1178
"Comptroller of private business" in the House of Commons, 217
Comte de Chambord, was he poisoned? 92
Conant, Dr., athletics as a mental training, 1064
Congestion, passive, treatment of ununited fractures by, 1115
Congress of American Physicians and Surgeons, meeting of, 53
——— Church, meeting of, 848
——— of the French Association for the Advancement of Science, opening meeting of, 346
——— French, of Internal Medicine, date and place of meeting of, 215; subjects of discussion at, 582
——— French, of Surgery, date and place of meeting of, etc., 499
——— German, of Scientists and Medical Practitioners, proposed medico-historical exhibition at, 109
——— the "Health," 229
——— Indian Medical, progress of, 553; the programme, etc., of, 720; sections at, 784; delegates to, 1010; typhoid fever at, 1088; tours in connection with, 1247; attendance, etc., at, 1445; opening of, 1497
——— Intercolonial Medical of Australasia, date, place of meeting, and sections at, 1068; sections and officers of, 1497
——— International of Applied Chemistry, meeting of, 453
——— International of Hygiene and Demography, official communication *re*, 140; the tropical section of, 431; opening of, 552; the care of the sick and the hygiene of the home, *ib.*; backward and exceptional children, *ib.*; small-pox precautions in London, *ib.*; diphtheria, 573; cholera and water supplies, 553; sanitation in India, *ib.*; reports to on diphtheria, 573, 578, 610; proceedings at, 608; the antitoxin treatment of diphtheria, 610; immunity in infectious diseases, 611; cholera, 612; urban typhoid and water supply, *ib.*; visit to the Voluntary Salvage Society, 613; disease and water supply, *ib.*; small-pox in London, *ib.*; ratios of mortality in artisans' block dwellings, *ib.*; house sanitation at the, 667; the international military medical committee, 670; the etiology of cancer, *ib.*; the biology of the amœba dysentery, *ib.*; the hygiene of drinking water, 671; cremation, *ib.*; the expenses of, 800
——— International Medical to be held at Moscow in 1896, 271; proposed volunteer guides for, 453
——— International Obstetrical, date and place of meeting, etc., of, 440
——— Italian of Chemistry and Pharmacy, date and place of meeting of, 107
——— Ophthalmological, date and place of meeting of, 265; meeting of, 325, 375
——— the Sanitary Institute at Liverpool, meeting of, 723, 767
Conjunctiva, osteoma of the, 1429
Conjunctivitis, pupillary, 1426
Conolly, Dr. J., dazzling of the antrum, 348
Constantinople, antitoxin treatment of diphtheria in, 1270
Consultants, difficulties of, 676
Consumption, The Hygienic Prevention of, Dr. J. E. Squire, *rev.*, 72; the contagiousness of, 346; the infectiousness of, 691
Constumptives, hospital for in Scotland, 606; the expatriation of, 665
Convulsions, epileptiform, 1178
Cooke, Mr. C. J., Plymouth Workhouse and the guardians, 951
Cooking by electricity, 53; by gas, 1350
Coombs, Dr. C., microphone stethoscopes, 1186; Chine's spirits, *ib.*
Copaiba, pemphigoid eruption following the administration of, 1108
Copeman, Dr. S. M., researches on vaccinia, 157; on the pathology of vaccinia, 631
Corbett, Dr., the case of, 161
Cord, left renal, immobility of, 921; cystic fibroma of the, *ib.*
——— spinal, syphilis of the, 1310
Cordeiro, Dr. A. de C., death of, 107
Cordes, Dr. A., late pregnancy, 1218
Corea, the sanitary state of, 1150
Corfield, Dr. W. H., remarks on the vital statistics of 1893, 201, 303; the ventilation of sewers, 30; on cremation, 314; on diphtheria and insanitation, 317; on small-pox, 360
Cork, hospital Saturday at, 1002
Cornish, surgeon-General, the pathology of vaccinia, 636
Cornwall, sanitation in, 565; climate of, 683
Coroners and the medical profession, 431; for London, new scheme for, 1086, 1214
Corrections, 852
Coryza caseosa, 1172
Cottage system, the. *See* Boarding out.
Cotterell, Mr. E., supposed exception to Colles's law, 1343
Cotterill, Mr., operation for tumour of frontal lobe, 1114; method of trephining, 1115
Couch, the "Farringdon," 537; an improved consulting room, 762
Cough, rupture of both tympanic membranes by, 88
Council, General Medical. *See* Medical
Councils, the new, 1414
County Council of London and bakehouses, 87; new scheme for London coroners, 1086, 1214; and "one man, one job," 1196
Coupland, Mr. W. H., enemata rashes, 867
Courtney, Mr. W. M., hypertrophy of the spleen and liver with complications, the result of malarial cachexia, death, 366
Cousins, Dr. J. Ward, the operative treatment of perforating ulcer of the stomach and intestines, 861
Couturier, Mr. H., death of, 625
Coventry, small-pox at, 18; the provident dispensary at, 816, 1018, 1215, 1345; Hospital Saturday Fund at, 1124
"Covering," midwives, 1350; death certificates and unqualified practitioners, *ib.*; medical missionaries and, 1414
Cow-catcher, the future of the, 1512
Crab, Dr. J., pay wards at the Great Northern Central Hospital, 1276, 1342
Cranium, unilateral enlargement of bones of, 71
Cream and typhoid infection, 570, 613
Creasote, effect of on the virulence of the tubercle bacillus, 611
Crèches and baby farms, 274
Cremation and death registration, 310; its progress at home and abroad and the medical responsibilities which it entails, 311; first of a European in India, 393; in Bavaria, 519; at Liverpool, 551; at the International Congress of Hygiene, etc., 671; information as to, 683; the Church and, 719; in Paddington, 960; progress of, 1288; disposal of the ashes after, 1350; in Manchester, 1465
Cremator, a new, 925
Cretinism, the thyroid treatment of, 1112
Crime done by the insane, trial for, 1390; divorce and the law, 1449
Crimea, medical officers in the, 392
Cripps, Mr. H., a successful case of anastomosis of the small intestine, 1103, 1112
Crocker, Dr. H. R., on lupus, 549; on acne vulgaris, 691; Atlas of Diseases of the Skin, *rev.*, 924
Crocq, Professor, on anarchism, 944
Cronstadt, disappearance of cholera at, 89
Croom, Dr. J. H., antiseptic vaginal douching, 130
Crookshank, Professor, the evidence of before the Royal Commission on Vaccination, 81, 157, 229, 618
Cross, Mr. F. R., empyema of the nasal accessory sinuses, 1240
——— Mr. W. C. H., the criminal responsibility of the insane, 353
Crossley, Sir S., gives seaside home for Colchester Asylum for Idiots, 847
Croydon, nursing at the workhouse infirmary of, 884; hospital extension at, 943
Cruises, winter, in the Mediterranean, 1442
Cuba, leprosy in, 1510
Cullen, Dr. W. L., what drowning feels like, 941
Cullingworth, Dr. C. J., three cases of pelvic inflammation, attended with abscess of the ovary, with clinical remarks, 810; a case of advanced extrauterine gestation, 1422, 1425
Culture, general, and the scientific habit, 753
"Cures," rival, 112
Cureton, Mr. E., books for M.D. Brux., 1286
Curriculum, the medical, 457; the medical and the study of children's disease, 693; propcsed addition to, 763
Curvature, spinal, exercises for, 235
Cycle of life, the, 176
Cycling and its dangers, 726, 845, 934
Cyclists, lady, 35
Cyst of broad ligament, 130; epitheliomatous of neck, 1175; in the thyroid gland, removal, 1231; pulsatile congenital simulating aneurysm, 1240; sanguineous connected with the pancreas, 1362; hydatid of the orbit, 1429

Cysts, papillomatous, 988; ovarian, axial rotation of, 1314
Czar of Russia, the health of, 776, 829, 880, 946, 1001; the case of as a clinical picture, 1091; the death of, 1091, 1063; necropsy on the, 1129, 1205; the origin of the illness of, 1194; the embalming of, 1402; the funeral of, *ib*

D.

Dabbs, Dr. G. H. R., cocaine in labour, 1427
"Dagonet" on kissing as a sanitary sin, 456
Dalby, Sir W., the pleasures of medicine and surgery, 819
Danger, a new, 509
Daniel, Dr. J., appendicular abscess bursting into abdominal cavity during examination, operation, recovery, 551
Danielsson, Dr. C., death of, 324; proposed memorial to, 848
Darlington, the nursing at the workhouse infirmary of, 325, 339
Darwinism and syncope, 1287
Davey, Mr. N. F., the blessedness of beards, 1287
Davidson, Dr. P., the antitoxin treatment of diphtheria, 1393
Davies, Dr. D. S., ventilation of sewers, 307; the bearing of Hindu pilgrimages on cholera, 309; on diphtheria and insanitation, 316; on diarrhœa in 1893, 318; does baking sterilise a loaf? 355; on small-pox, 360
——— Dr. E. T., on the induction of labour, 1422
——— Mr. P. E., death under chloroform, 821
——— Dr. S., ventilation of sewers, 306
Davoren, Surgeon-Captain V., a new treatment of guinea-worm, 918
Davy, Dr. F. A., iodide of potassium in hypertrophy of the prostate, 68
Deaconess's hospital, a, 961
Deaf, the education of the, 1219
Deaf-mutism, 669; Dr. H. Mygind, *rev.*, 990; Mr. H. W. Hubbard, *rev.*, 1117; as a clinical study, 1165
Dean of Lichfield, the, and "the Massage Hospitals," 1341
Dean, Mr. H. P., a case of recovery from tetanus in which antitoxin was injected, 597
De'Ath, Dr. G., sanitary protection of milk traffic, 1036, 1208
Death, of Dr. A. M. Gemma, 107; Dr. A. de C. Cordeiro, *ib.*; Dr. G. de Grandmont, *ib.*; Dr. A. G. Fenwick, 180; Dr. J. P. Fairman, *ib.*; Dr. J. Ivett, *ib.*; Dr. A. Langlois, *ib.*; Mr. T. Bristow, 230; Dr. W. P. Nesbitt, *ib.*; Dr. E. A. Briggs, *ib.*; Dr. C. Danielssen, 324; Dr. M. Lessona, 395; Dr. C. P. Lowell, *ib.*; Mr. H. Weekes, 452; Dr. H. Goudé, 453; Dr. B. Rake, 507; Dr. L. Warnots, 568; Dr. C. Brainsford, *ib.*; the determination of the cause of, 570; from hydrophobia in 1893, 605; Mr. P. Duncan, 625; Professor F. H. Bidder, *ib.*; Mr. G. Wilson, *ib.*; Dr. H. Couturier, *ib.*; Brigade-Surgeon H. Mitchell, 680; Dr. H. F. Carter, *ib.*; in the football field, 719; Dr. Myaki, 721; Dr. H. Hoffmann, 734; Dr. O. Fraentzel, 735; Dr. H. Ingersoll, 739; following vaccination, 807; 807; under carbonic acid gas, 808; Dr. M. Rossbach, 902; Mr. R. W. Savage, *ib.*; Signor F. Gasco, 938; Dr. W. L. Emmerson, 946; Dr. A. J. Desormeaux, *ib.*; Mrs. M. Luxon, *ib.*; Dr. Hansell, 1016; Dr. A. Legroux, 1023; Dr. L. Mauthner, *ib.*; from hydrophobia, 1023; Dr. K. Oergel, 1024; Dr. T. W. Kyle, 1149; M. L. Figuier, *ib.*; Dr. W. Cassell, *ib.*; Mr. C. Johnson, *ib.*; Dr. Bonafoux, 1259; Deputy Surgeon-General E. H. Roberts, 1281; Dr. W. Moore, 1328; Dr. W. B. Hunter, 1411; Dr. P. Faure, 1462; Mr. C. B. Wilson, *ib.*; Dr. S. Ilford, *ib.*; Dr. J. B. White, *ib.*; Dr. F. A. Flückiger, *ib.*; Sir E. Lechmere, 1485; Mr. R. L. Stevenson, 1492; Mr. W. H. Baillie, 1498
Death-certification, 1153
Death-rate, a low, 1067
Death-rates, Mr. G. H. Fosbroke on, 170; over-corrected, 379; correction of for trades, 1
Death registration and medical officers of health, 1115
Deaths under chloroform, 88, 205, 434, 549, 606, 728, 765, 795, 820, 877; in the profession abroad, 107, 160, 395, 453, 568, 735, 789, 902, 946, 1023, 1149, 1212, 1281, 1462, 1509; in cyclists, 625; under anæsthetics, 655, 765, 820, 877, 1073, 1139, 1319, 1397; from tetanus in Great Britain, 672; under chloroform and burial, the law as to, 675; from wild animals and snakes in India, 1065
Decoy duck, the doctor as, 1351
Deformities of the lower extremities, treatment of, 406
De Grandmont, Dr. G., death of, 107
Degrees, foreign, 326
De la Sizeranne, M., the blind seen through blind eyes, 1191
Delay, the folly of, 565
De Letamend, Dr. G., La Verità sulle Aberrazione e i Delitti nell' Ordine sessuale, *rev.*, 17
Dembo, Dr. J. A., The Jewish Method of Slaughter, *rev.*, 1432
Demetriades, Dr. L., fracture by hawksbill forceps in extraction, 1414
Democracy and vaccination, 103, 1451
Dentistry and the public health, 1326
Dentists and medical practitioners, 516
Denton, Dr. W., memoir of, 1131
Denys, Professor, immunity in infectious diseases, 611
Deodoriser, a, for watercloseets, 1416
Deputations to Local Government Board on barrack schools, 21, 237; to Home Secretary by Parliamentary Bills Committee, 1125, 1135
Derbyshire, isolation hospital scheme for, 164
Dermatology, the germ theory in, 262
Dermoid, post-rectal, 1430
De Santi, Mr. P., papilloma of nasal septum in association with rodent ulcer in a man, aged 84, 1341
Desmemetitis, the pathology of, 595
Deschanel, M. A. P., Elementary Treatise on Natural Philosophy, *rev.*, 813
De Schweinitz, Dr., the relation of some occupations to eyesight, 594
Desormeaux, Dr. A. J., death of, 946
Diabetes, a new departure in, 3, 61, 85; pancreatic, suggestions for the treatment of, 126; treated with extract and by grafts of sheep's pancreas, 1303
Diabetics, flour, bread, and biscuits for, 1434
Diachylon plaster, the application of, 906
Diagnosis mistaken, 1; Medical, a Practical Treatise on, by H. Musser, *rev.*, 1244
Diagrams for lectures, 235
Diaries, etc., 1244, 1316, 1412
Diarrhœa, the Local Government Board on the notification of, 147; in 1893, 317; the notification of, 551
Dickinson, Dr. T. V., Chelsea Hospital for Women, 443
——— Dr. W. H., on some of the characters of disease in childhood, 401
Dickson, Dr. W., obituary notice of, 1148
Dictionary (An Illustrated) of Medicine, Biology, and Allied Sciences, Dr. G. M. Gould, *rev.*, 704
Diphtheria, metropolitan, increasein, 24; treated by antitoxin, 125, 180, 326, 368, 376, 439, 513, 542, 545, 610, 655, 667, 725, 739, 771, 778, 820, 826, 828, 843, 889, 931, 941, 947, 1002, 1007, 1012, 1070, 1122, 1197, 1269, 1320, 1338, 1393, 1400, 1452, 1491, 1499; in elementary schools, 144; and insanitation, 314; treatment of in New Zealand, 324; at the Royal Naval School, Eltham, 388, 560; and drains, 452; reports to the International Congress of Hygiene and Demography on, 573, 578; the bacteriological diagnosis of, 666, 738, 1059, 1067; at Hawarden, 715; in London, 719; subscriptions in aid of the serum treatment, 763; the epidemic of in London, 770; the duration of contagion in, 786; prevention of spread of in schools, 830; and the notification of sore throat, 907, 963, 1024; an historical case of, 940, 1193; in Poplar, 956; and the Local Government Board, 998; and speaking tubes, *ib.*; at Plaistow, 1023; discussion on at the West London Medico-Chirurgical Society, 1157, 1312; the Local Government Board and the early diagnosis of, 1346; the treatment of, 1360; German criticism of the antitoxin treatment of, 1387; the nature of and the basis of the antitoxic treatment, 1393; bacteriological examination for the Local Government Board, 1394; scarlet fever as a, 1413, eighty cases of treated by antitoxin, 1417; the bacteriological diagnosis of, 1452; the death-rate of, 1453
——— chart, a, 1453
Diplomas, certificates, and nurses, 957; the illegal use of, 1511
Disclaimer, a, 1417
Disease, and Race, Jadroo, *rev.*, 133; the personal factor in, 171; zymotic, the prevention of and sanitary science, 293; forecasting of, 609; and water supply, 613; infectious, works on, 637; pawned clothes and, 679; spread of by infected milk, 956, 1468; and floods, 1194; and intemperance, 1379; infectious, library books and, 1338, 1390, 1505; malignant, involving the hypophysis cerebri, 1409
——— Addison's, the causation of, 745, 897
——— caisson, the treatment of, 1132, 1206
——— Charcot's, case of, 1111; case of with perforating ulcer of the foot in a tabetic patient, 1235
——— Friedreich's, with necropsy, 1294
Disease, Graves's, and nasal polypi, 1110
——— woolsorter's, case of, 999; conveyance of, 1145, 1207, 1277, 1406
Diseases, infectious, immunity in, 611; contagious of animals, the suppression of, 758; of the Throat and Nose, Dr. F. De Havilland Hall, *rev.*, 758; of the Throat, Nose and Ear, Dr. P. McBride, *rev.*, *ib.*; epidemic, seasonal prevalence of, 1385; tropical, ignorance of, 1421
Disguises, lampoons and, 1497
Disinfectants, non-poisonous, the advantage of, 796; Whalley's, 815
Disinfecting apparatus, 1350
Disinfection, 550; chance, 999
Disinfectors, steam, 1467
Dispensaries as commercial speculations, 208; the era of, 1263; and qualified assistants, 1278; medical attendance at, 1346, 1509
Dispensary, a fourpenny card of, 292
——— ——— doctors (Irish), holidays for, 156; payment of locum tenens for, 790
Distichiasis, a new operation for, 79
Distoma Ringeri in America, 56
District councils, the sanitary duties of, 1324
Diuretics, some modern, 1190
Dix, Dr., pension to, 1151
Dobie, Dr. W., rider's thigh, 1350
Dobson, Mr. N. C., the operative treatment of perforating ulcer of the stomach and intestines, 885
Doctor (the police), magistrates and, 33; the, as a decoy duck, 1351
Doctors and doorkeepers, 669; cheap and pay hospitals, 1006, 1131; of millionaires, 1028
——— Irish Dispensary. *See* Dispensary
Dogs, venereal disease in, 794
Dolan, Dr., hospitals of the State, 83
Donations, 53, 78, 87, 108, 680, 806, 807, 903, 960, 968, 1051, 1347, 1509
Donelan, Dr. J., lymphadenoma with obstructed breathing, 1311
Donovan, Dr. W., epidemic muscular rheumatism, 780
Doorkeepers, doctors and, 669
Douching, antiseptic vaginal, 130
Douglas, Dr. C. E., the antitoxin treatment of tetanus, 434
Down, Mr. P. L., death under chloroform, 606
Downham Market, nursing at the workhouse infirmary of, 1435, 1447
Downie, Dr. J. W., Clinical Manual for the Study of Diseases of the Throat, *rev.*, 758; suppurative otitis media, 1181; on the care of the ear during the course of the exanthemata, 1163, 1165
Dowse, Dr. T. S., disclaimer from as to massage certificates, 1200
Doyne, Mr., the diagnosis and treatment of ophthalmia, 993
"Dr.," the title of, 906
Drage, Dr. L., the Lancashire and Cheshire Branch and the registration of midwives, 1080
Drainage, sanitary, a new system of, 1374
Drains, house, the disconnection of, 163; diphtheria and, 452
Drake-Brockman, Brigade-Surgeon-Lieutenant-Colonel, the diagnosis and treatment of ophthalmia, 592; filaria oculi humani, 921
Drapes, Dr., insanity in Ireland, 1392
Drasche, Dr. A., urban typhoid fever and water supply, 612, 721
Dressings, antiseptic, 873
Drewitt, Dr. F. D., perforation of typhoid ulcer in a young child, 809; on diphtheria, 1177
Drinks, cheap temperance, 200, 400, 683, 739, intoxicating temperance, 716
Drowning, 573; what it feels like, 823, 941
Drunk or dying? 247
Drysdale, Dr. C. R., the contagiousness of phthisis, 1236
Dublin, small-pox at, 19, 395, 436, 1127, 1148; death from hydrophobia in, 605; report on the hospitals of, 716; beri-beri in, 767, 776, 836, 881, 892, 940, 950, 1015, 1127; small-pox in, 998; small-pox and revaccination in, 1261; medical education in, 1351
Dudfield, Dr., increase of salary of, 1261; on diphtheria, 1312
Duffy, Dr. P. J., circumcision, 1511
Duke of York, visit of to Aberdeen, 326
Duke, Mr. E., treatment of sweating feet, 754; circumcision, 1288
Dukes, Dr. C., a word in season to bathers, 102
Dunbar, Dr. Eliza W., the treatment of psoriasis, 697
Duncan, Dr. T., death of, 625
——— Dr. W., Chelsea Hospital for Women, 561
Dunn, Mr. H. P., the council of the Royal College of Surgeons and the issue of voting papers, 109

Dunn, Mr. S. S., treatment of rectal gonorrhœa of females, 1032
Duodenum, treatment of perforative ulcer of, 914; laparotomy in ulceration of the, 920
Duplay, Dr., the etiology of cancer, 870
Durno, Dr. L., a case of diphtheria laryngitis in a child 18 months old in which tracheotomy was followed by recovery, 125
Dust of London, the, 1446
Dustcart, an improved, 1134
Dwellings, artisans' and residential flats, 790
Dwyer, Mr. H. de B., hospital appointments, 386
Dying or drunk? 547
Dynamics of Life, the, Dr. W. R. Gowers, *rev.*, 1372
Dymott, Dr. D. F., the suppression of syphilis, 448
Dysentery and tropical abscess of liver, 127, 446, 559, 621, 731; and amœbæ, 1130
Dysmenorrhœa and marriage, 571
Dyspepsia, The Common Forms of, in Women, Dr. R. Saundby, *rev.*, 536

E.

Eagle, Mr. H. F. C., unqualified practice and the British Medical Association, 44
Ear, a bacteriological investigation into the suppurative discharge from occurring as a complication of scarlet fever, 116; middle, intratympanic injections in the treatment of chronic dry catarrh of the, 805; on the care of the during the course of the exanthemata, 1163
East End, the sanitary condition of the, 1391
East London, the water supply of, 660, 788
Eastbourne, nursing at the workhouse infirmary of, 902
Eastes, Dr. T., diphtheria cured by antitoxin, 125, 439, 1484; treatment of stenosis of the larynx, 1481
Eau de-cologne tipplers, 719
Eaux Bonnes et Eaux Chaudes, *rev.*, 872
Eccles, Dr., on diphtheria, 1117
Eczema, the management of, 649, 739; following typhoid fever, 1410
Eden, Dr. T. W., the Chelsea Hospital for Women, 385
Edge, Surgeon-Captain J. S., chicken-pox at 64 years of age, 1288
Edgren, Professor, on amusia, 1441
Edinburgh, unusually low death-rate in, 164, 289; small-pox in, 289, 394, 1066, 1127, 1199, 1338; the university hall at, 508, 513; health of, 790; opening of the winter session at, 838; the fever hospital of, 903; opening of a deaconess's hospital at, 961; small-pox and vaccination in, 1465
Edmunds, Dr. J., the boiling point of milk, 677
Education, physical, 53; of pauper children, 387; medical, the cost of a, 458; medical in London, 756; medical and medical ethics, 787
Edzell, a Scottish paradise, 850
Egypt, medical, education in, 37; sanitation in, 291, 1009; a few practical hints for invalids on the maintenance of health in the climate of, 1300
Electricity, cooking by, 53; heating by, some novel applications, 1117
Element, the alleged new, 508, 1389, 1446
Ellaby, Dr. Charlotte, the diagnosis and treatment of ophthalmia, 592
Elliott, Dr. C., on whooping-cough, 405
Ellis, Mr. T. S., Sir William Stokes on flat foot, 1405
Eltham, closing of the naval schools at, 272; diphtheria at the, 386, 560; the sanitary condition of the naval schools at, 962
Elvy, Mr. F., mental distress as a cause of granular kidney, 1219
Emily, Dr., a new treatment of guinea worm, 23
Emin Pasha, letter from, 1218
Emmerson, Dr. W. L., death of, 946
Emol-kelcet, 707
Emperor, German. *See* German
Empyema of the nasal accessory sinuses, diagnosis and treatment of, 1355
Enemata, scarlet rash after, 12, 867
England, and Wales, lunacy in, 216; youngest, 82, 951, 1027
Enterectomy for gangrene of bowel, 1314
Enterorrhaphy, circular, a modification of the operation of, 85
Epidemics, increasing, in schools, 36; the causes of, 773
Epiglottis, epithelioma of the, 921
Epileptics, a colony for, 87, 280, 1063, 1196; farm colonies for, 1000; homes for, 1026; the diet of, 1451; a visit to the colony for, 1502
Epilepsy, traumatic, trephining for, 1110; of from three to four years' standing, recovery, 1285; in Livonia, 1347; traumatic, 1435
Epiphysitis, acute septic, 1175
Epithelioma of the epiglottis, 921
Erisman, Professor, on the fight of man against death, 943
Erysipelas, pruritus after, 1286
Erythema nodosum, four cases of, occurring in one family in ten months, 16
Essex, small-pox in, 91
Ether drinking in France, 960
Ethics, medical, instruction in, 1404
Eucalyptus, useless against malaria, 1372
Eulenburg, Dr. A. Real-Encyclopädie der gesammten Heilkunde, *rev.*, 1116
Evans, Dr. A., the aerial convection of small-pox, 356, 360
——— Mr. H. L., a case of traumatic tetanus which recovered under antitoxin injections, 581
——— Dr. M. E., oil stoves, 1091
——— Mr. M. G., application for umbilical hernia, 291
Eve, Mr. F., treatment of tuberculous disease of the joints in children, 408
Evershed, Dr. A. R., on the induction of labour, 1422
Evesham, abolishment of charges at infectious hospital of, 146; water supply in the union of, 850
Ewart, Dr. J., the portrait of, 839
——— Dr. W., the beat transfer, an easy test for true and spurious pulse tension, 749, 852
Ewens, Mr. J., on whooping-cough, 406; treatment of some deformities of the lower extremities, 681; treatment of tuberculous disease of joints in children, 411; the study of children's disease, 688
Examen et Séméiotique du Cœur, Dr. P. Merklen, *rev.*, 1116
Exanthemata, the care of the ear during the course of, 1163
Excursions from Bristol, 318
Exhumation after fourteen years' burial, 1237
Exostosis, aural, removal of, by the chisel after detachment of the auricle, 867
"Expandum" portiolio, the, 815
Expectoration, a mechanical aid to, 795; fœtid treated by inhalations of coal tar creasote vapour, 1177
Expression, emotional, 887
Eye, chlorine water in certain diseases of the, 71; a few rules facilitating diagnosis of paralysis of the muscles of, 585; melanotic tumour of, death from secondary growths, 1115; an artificial for shrunken sockets, 1454, 1434; artificial, formation of a new socket for, 1229
Eyelid, upper, instrument for raising, 75
Eye movements, an experimental investigation of, 588
Eyes, the importance of maintaining equal, rotations of after operations on the ocular
Eye [illegible] of some occupations to,
[illegible]

F

Factories and workshops, the Blue Book on, 82; sanitary inspection of 551; at the Trades Congress, 809
Factory labour and infant mortality, 1383
——— legislation and female workers, 142
Faculty of Physicians and Surgeons, Glasgow, regulations as to diplomas, 472; regulations for licences in the naval surgery, 502; the presi[illegible] 1127; pass lists, 1408
Fagge, Dr. T., oil stoves, 1219
Fairman, Dr. J. P., death of, 160
Fairs, small-pox and, 33
Falmouth, opening of hospital at, 109; nursing at the workhouse infirmary of, 816, 8[illegible]
Falsehoods, 1[illegible]
Family ate[illegible]
Far East, the [illegible]
Farm colonies for epileptics, 1000
——— servants, the Employers' Liability Act and accidents to, 736
Farquharson, Dr. R., as "comptroller of private business" in the House of Commons, 217
Farrar, Dr. J., a new and speedy method of di[illegible] a rigid os in parturition, 1111
——— Dr. K., death following vaccination, 807
Faure, Dr. P., death of, 1402
Fawcett, Dr. J., the value of piperazin as a solvent of uric acid stones in urine, 1426
——— Surgeon-Lieutenant-Colonel W. J., death under chloroform, 134
Fawsitt, Dr. T., presentation to, 1347
Farrer, Sir J., the Beaven Rake memorial, 1208; the retirement of, 1259
Feats of peril [illegible] feats of daring, 1259
Fecundity, rewards for in Canada, 456
Fee for certification of district lunatics, 344; extra for fractured leg, 567; for lunacy certi[illegible] on magistrate's order, 1346
Fees for notification, 566, 567; club, 571; mid[illegible] liability for, 627; doctors', 663; phy[illegible], 721; for visit to supposed lunatic, 903; for double notification of diphtheria, *ib.*; life assurance, 1090; coroners', 1260; for noti[illegible] and assistants, 1282; coroners' and medical officers of workhouses, 1461; penny, at public charities, 1464; for medical wi[illegible] 1467
Feet, hereditary malformation of the, 8; sweat[illegible] treatment of, 627, 852, 738, 794, 850
Fens, a protest from the, 627
Fenton, Dr. W. H., the Chelsea Hospital for Women, 385, 1014
Fenwick, Dr. A. G., death of, 160
——— Mr. E. H., recto-vesical tuberculous fistula, 922; rupture of prostatic neck of bladder, 1109; artificial cellulitis in the treat[illegible] of certain urinary diseases, 1365
——— Dr. G. E., obituary notice of, 159
——— Dr. S., Outlines of Medical Treat[illegible], *rev.*, 20
——— Dr. W. S., Outlines of Medical Treat[illegible], *rev.*, 20; fatal form of tetany associated with chronic dilatation of the stomach, 870
Fergus, Dr. F., deaths under chloroform, 726
Ferguson, Mr. J., scarlatina and measles co[illegible] in the same person, 988
——— Dr. J. H., Handbook of Obstetric Nursing, *rev.*, 925
——— Dr. R. B., Aids to the Mathematics of Hygiene, *rev.*, 872
——— Dr. W. B. O., thyroid feeding in exophthalmic goitre, 907
Fergusson, A., the sentence on, 1259, 1419
——— Dr. H., cyst of broad ligament, 130
Ferraby, Mr. G. A., presentation to, 1465
Ferris and Co.'s Medical Visiting List and Ledger, *rev.*, 814
Fessler, Dr. J., Festigheit der menschlichen Gelenke, *rev.*, 1117
Festigheit der menschlichen Gelenke, Dr. J. Fessler, *rev.*, 1117
Festiniog, nursing in the workhouse infirmary of, 508, 907
Fever, chronic intermittent, stenosis and endo-arteritis of the pulmonary artery a cause of, 1099
——— enteric (waterborne) at Worthing in 1873-72; at Poona, 271; origin and spread of, 354; milk, cream, butter, and infection of, 570; waterborne and bread-nurture [illegible] 599; urban and water supply, 612, 721; cream compounds and, 613; waterborne in India, 790; the etiology of, 787, 863; ice cream and, 829; and school secession, 847; laryngeal stenosis supervening on, 922; waterborne in Mid-Renfrew, 943; and pump water, 1022; eczema following, 1110; epidemic at Ne[illegible] 1129, 1327, 1391; and watercress, 1261; of a peculiarly virulent type communicated by the b[illegible]
——— malarial, plasmodia of, 16
——— Malta, [illegible]ss on, 161; a suggestion,
——— puerperal, Dr. C. W. Hol[illegible]es on the contagiousness of, 885
[illegible] into the suppurative ear discharge occurring as a complication of, 116; preventive inoculation of inactivated blood serum in, 167, 202; notification of relapse of, 567; and measles coexisting in the same person, 988, 1218, 1288; epidemic of at Hucknall Torkard, 1022; scarlet, perforation of soft palate in, 1030; as a sequel to diphtheria, 1415
[illegible] e, 99, 175
Fevers, the feeding of, 951
Fibro-adenoma of suprarenal capsule, 869
Fibromes, anal, unusually large, 876
Field, Mr. G., the prognosis of chroni[illegible] non-[illegible]otitis media with imperforate membrane, 1137
Fielding, Dr. L., on whooping-cough, 403
Fincher, M., death of, 1143
Fiji, pernicious anæmia in, 1152
Filaria loa, case of in which the parasite was removed from under the conjunctiva, 920
——— oculi humani, 921
Filters (water), the relative efficiency in the prevention of infective disease, 1053, 1118, 1182, 1375, 1486; a suggestion as to 1165; experi[illegible]ments on in Edinburgh, 1425

Filtration of potable water, 353
Finegan, Dr. A., the prevention of insanity, 521
Fink, Surgeon-Captain G. H., the diagnosis and treatment of ophthalmia, 583
Firbaugh, Mrs. E. M., The Physician's Wife, *rev.*, 72
Firth, Surgeon-Captain R. H., Hygiene, *rev.*, 990
Fish, sewage-fed, 108
Fisher, Mr. G., treatment of sweating feet. 794
——— Dr. T., sanguineous cyst connected with the pancreas, 1362
Fistula, recto-vesical tuberculous, 868 (922)
Flap method of operating (the), 741
Flat-foot, Sir W. Stokes on, 1224, 1405
Flats, residential, and artisans' dwellings, 790
Fleas, a plague of, 1414
Flegg (East and West), nursing at the workhouse infirmary of, 1121, 1127
Fletcher, Mr. T., a deodoriser for water closets, 1416
Flies and cholera, 1388
Fligg, Mr. W., Dr. Jameson, C.B., 1206
Floods and disease, 1194
Florence, antitoxin treatment of diphtheria in, 1073
Flour, bread and biscuits for diabetics, 1434
Flower, Sir W. H., on anthropology, 320
Flückiger, Dr. F. A., death of, 1462
Fodor, Professor, immunity in infectious diseases, 611
Fœtus, fracture of bones of during delivery, 13
Food, adulteration of, 19; how the health of infants is influenced by, 792
Foods, invalid, 630; poisonous, 725
Football, the unnecessary dangers of, 605; and bodily development, 669; death at, 719; the killed and wounded at, 886; lady, 1323
Forbes, Dr. C., the new pharmacy, 1081; case of chlorosis treated by red marrow tabloids, 1308; syringes for injecting antitoxin, 1453
Forceps, midwifery, 516; self-retaining aural polypus, 1246; aseptic midwifery, 1374; hawk-bill, fracture by in extraction, 1414
Forecasting of disease, 609
Foresters' Insurance Society. *See* Society
Formol as a hardening agent, 1429
Forselles, Dr. A., Die durch eitrige Mittelohrentzündung verursachte Lateralsinus-Thrombose und deren operative Behandlung, *rev.*, 1432
Forshaw, Mr. C. F., the medical profession and freemasonry, 168
Fosbroke, Mr. G. H., on death-rates, 170
Foster, Dr. B., the marriage of syphilitics, 794
——— Professor M. Physiology for Beginners, *rev.*, 1243
——— Sir W., on dentistry and the public health, 1326
Fowler, Dr. T., the antitoxin treatment of diphtheria, 542, 1007
Fox, Dr. B., the prevention of insanity, 521
——— Dr. E. Long, the medical man and the State, 237
——— Mr. J. T., How to Use the Baths, Strathpeffer Spa, *rev.*, 1117
——— Dr. T. C., a case of mycosis (granuloma) fungoides with a premycosic stage of universal dermatitis, 692; the function of the coil glands, 694
——— Dr. W., plates of diseases of the lungs, 206
Foxwell, Dr., adhesive pleurisy following severe burn, 1178; epileptiform convulsions, *ib.*; "catarrhus," 1370
Fracture, separate acromion process simulating, 16
Fractures, ununited, treatment of by passive congestion, 1115
Fraentzel, Professor O., death of, 735
"Frame food" preparations, 762
France, athletics in the schools of, 91; typhus fever in, 99, 155; first aid in, 99; medical men in the Chamber and senate of, 112, 827; medical practice in, 504; rabies in, 540; infant mortality in, 559; school colonies in, 606; blindness in, 739; the antitoxin treatment of diphtheria in, 828, 933, 1073, 1124, 1199, 1270, 1454; drunkenness in, 947; ether drinking in, 960; proposed Minister of Health for, 1230; the plethora of medical students in, 1465
Frankland, Professor P., Micro-organisms in Water, *rev.*, 871
——— Mrs. P., Micro-organisms in Water, *rev.*, 871
Franks, Mr. K., the operative treatment of perforating ulcer of the stomach and intestines, 865; on a case of simple stenosis of the œsophagus treated by œsophagectomy, 973; and fibroids, unually large, 975
for cataract on, 715, 915
Fraser, Surgeon-General J., obituary notice of, 1212
Fraser, Mr. M. F. A., Chinese medicines, a new field for the pharmacologist, 168
Freeman, Mr. J., deaths under anæsthetics, 877
Freemasonry, the medical profession and, 168
Freer, Mr. E. L., treatment of tuberculous disease of the joints in children, 412
Frenchwomen and the medical profession, 453
Friedreich's disease. *See* Disease
Frog, The, an Introduction to Anatomy, Histology, and Embryology, Dr. A. M. Marshall, *rev.*, 814
Froude, Mr., the illness of, 1002
Fruit fad, the, 770
Fund, the Anderson, subscriptions to, 218, 440, 1027. *See also* Committee, Civil Rights
——— the Griffiths, subscriptions to, 112
——— Hospital Saturday, amount of, 625, 1016
——— Hospital Sunday, awards of, 346; annual meeting of, 1448
——— the Nightingale, report of, 904
——— Royal National Pension for Nurses, officers of, 660
——— the Tait, subscriptions to, 236
Fungus foot disease of India, 638
Fyffe, Dr. N., on whooping-cough, 406
——— Dr. W. K., the effect of creasote on the virulence of the tubercle bacillus, 641

G.

Gadflies, on the venomous bites of some kinds of, 400, 571, 684
Gairdner, Dr. W. T., on Oliver Wendell Holmes, 948
Gall stones, the localisation of and the various operations for, 988; formation, etc., of, 1312
Galloway, Dr. J., the bacteriological diagnosis of diphtheria, 1452
Gamgee, Mr. A., death from pneumothorax after tracheotomy, 1405
Ganglion, lenticular, a case of probable disease of the, 596
Gangrene, of vulva following labour, 13; acute emphysematous, amputation through the shoulder-joint for, recovery, 975; accidental of vulva, 1108; of bowel, enterectomy for, 1314
Gardner, Surgeon-Major, the case of, 380, 562
——— Dr. W. T., climate for a consumptive in Australia, 399
Garrigues, Dr. H. J. A., Textbook of the Diseases of Women, *rev.*, 760
Garrod, Dr., the thyroid treatment of cretinism, 1112
Garson, Dr. J. H. R., concurrent vaccination and measles, 964
Gas, cooking by, 1350
Gasco, Signor F., death of, 938
Gaseous applications to wounds, 1236, 1415
Gastrostomy for the removal of foreign bodies, 989
Gastro-enterostomy, case of, 1310
Gaya, M. Haffkine's method at, 637, 653
Gemma, Dr. A. M., death of, 107
General Medical Council. *See* Medical
Geneva Convention, the, and the transport of wounded, 43
Genitals, external, swelling of in pregnancy, 1050
Gentle, Dr. D., appointed member of the legislative council of British Honduras, 787
Germ theory, the modern development of, 176; in dermatology, 262
German Emperor, vaccination and children of, 144
Germany, antitoxin treatment of diphtheria in, 1073, 1123; the 1874 law of vaccination in, 1213, 1270
Gestation, extrauterine, the importance of a decidual cast as evidence of, 1111; advanced extrauterine case of, 1422
Geysers, the use and abuse of, 547
Gibbes, Dr. C. C., presentation to, 1510
Gibbon, Dr. S., resigns medical officership of Holborn District, 431
Gibson, Dr. G. A., on functional diseases of the heart, 1040
Giles, Dr. A. E., temperature after delivery in relation to the duration of labour, 70; the Chelsea Hospital for Women, 385
——— Brigade-Surgeon-Lieutenant-Colonel P., volunteer medical service, 418
Gillespie, Dr. A. L., the action of acids and alkalies and of some other drugs on the secretions of the body, 71
Ginger beer, recipe for, 1511
Girls, feeble-minded, homes for, 850; school for, 1444
Gironde, dinner of the doctors of, 56
Gladstone, Mr., the health of, 205; the operation
Glaister, Dr. J., Dr. William Smellie and his contemporaries, *rev.*, 1243
Gland, suprarenal, a further report on the and the causation of Addison's disease, 745, 897
Glanders and mallein, 91, 1133; the new order as to, 1215
Glasgow, hospital Sunday in, 680, 1153; the sewage precipitation scheme at, 679; opening of the medical schools at, 935; school epidemics in, 938; the medical societies of, *ib.*; infectious disease in, 1151; practical charity in, 1251
Glissan, Mr. R. J., tracheotomy for foreign body in the larynx, 68
Glycerine, arsenic in, 1468
Glynn, Dr. T. R., on rabies, 1179
Godfrey, Dr. C. A., treatment of nasal polypi, 55
——— Mr. F., the antitoxin treatment of diphtheria, 955
Godlee, Mr., nodules of doubtful nature, 1110
Goitre, exophthalmic, effect of thyroid extract on, 11, 157; thyroid feeding in, 907
Goldie, Mr. J. O., epidemic muscular rheumatism, 823
Golding-Bird, Mr., congenital pulsatile cyst simulating aneurysm, 1240; post-rectal dermoid, 1430; antitoxin treatment of diphtheria, 1483
Golgi, Dr. C., Untersuchungen über den feineren Bau des centralen und peripherischen Nervensystems, *rev.*, 535
Gonorrhœa, rectal, of females, treatment of, 1092
Goodall, Dr. E., on the prevention of insanity, 520; the status of assistant medical officers in asylums, 526
——— Dr. E. W., the antitoxin treatment of diphtheria, 725; perforation of the soft palate in scarlet fever, 1050; 80 cases of diphtheria treated by antitoxin, 1417, 1485
Goodell, Dr. W., death of, 1149
Goodenough, Dr. W. H., an axis tractor, 20
Goodhart, Dr. J. F., On Common Neuroses, *rev.*, 132
Goodman, Dr. R. N., infantile vaccination, 559
Goodsall, Mr., opening the cæcum for intestinal obstruction, 1142
Gordon, Dr. W., ataxia and the diseases of which it is a symptom, 1293
Gorham, Dr. J. J., the registration of midwives, 156
Gorrie and others, Anderson v., 328
Gottstein, Dr., on the antitoxin treatment of diphtheria, 1457
Goude, Dr. H., death of, 453
Gould, Mr. A. P., the operative treatment of perforative ulcer of the stomach and intestines, 859, 868; suture of the urethra after rupture and external urethrotomy, 1310
——— Dr. G. M., the relation of some occupations to eyesight, 584; low degrees of eyestrain a source of systemic disturbances, 853
charity organisation and medicine, 666; An Illustrated Dictionary of Medicine, Biology, and Allied Sciences, *rev.*, 704
Gout and its Relations to Diseases of the Liver and Kidneys, Dr. R. Roose, *rev.*, 925
Gowers, Dr. W. R., on mistaken diagnosis, 1; shorthand in medicine, 230, 1403; on silver and syphilis, 1221; The Dynamics of Life, *rev.*, 1372
Grand old men of medicine, 1446
Grant, Dr. C. G., tannic acid in nasal polypi, 571
——— Dr. J. D., suppurative otitis media, 1169; on the better appreciation of Rinné's test, the screech difference, 1165; on deaf-mutism, 1167; laryngeal paralysis in chronic nervous disease, 1171; method of examining the larynx in children, 1171; turbinal varix, 1172; empyema of the nasal accessory sinuses, 1360
——— Surgeon-Captain E., The Indian Manual of Hygiene, *rev.*, 17
Graphic Temperance Reader (The), Dr. B. W. Richardson, *rev.*, 761
Graves, Dr., melanotic tumour of eye, death from secondary growths, 1115
Graves's disease. *See* Disease
Gray, Mr. A., hospitals for the working classes, 102
——— Dr. E. B., shorthand in medicine, 230
Great Yarmouth, the salary of the medical officer of the workhouse of, 452; nursing at the workhouse infirmary of, 1059, 1064, 1187
Greenhill, Dr. W. A., obituary notice of, 734
Greenock, opening of a new eye infirmary at, 396
Greenway, Dr. H., the therapeutic value of ice in ophthalmic surgery, 795
Greenwood, Mr. C. C., the Provident Association of Warehousemen, Travellers, and Clerks, 348

Griffith, Mr. J., criticism of recent views as to the secretory function of the ciliary body, 595
——— Dr. W. S. A., the importance of a decidual cast as evidence of extrauterine gestation, 1111
Griffiths, Dr. T. D., presentation to, 326
Grimsby, precautions against cholera at, 97
Grindon, Mr. F. J., epidemic muscular rheumatism, 723
Gripper, Dr., on whooping cough, 406
Groin, primary malignant disease of the glands of the, 1175
Grundzüge der Arzneimittellehre, Dr. C. Binz, *rev.*, 1052
Guaiacol, antipyretic effects of external applications of, 6
Guardians (women), 1261; county, the election of, 1318; the election of, 1323; the election of and vaccination, 1468
Gubb, Dr. A. S., the duration of contagion in diphtheria, 786
Guillotine for papillomata and small growths, 1415
Guinea-worm, a new treatment of, 23, 918
Gunboat, the, as a sanitary agent, 1389
Gynæcology, modern, Dr. C. H. Bushong, *rev.*, 980

H.

Hackney, the Local Government Board inquiry into the scandal at the workhouse schools of, 87, 377, 680
Haddon, Dr. J., mental disturbance as a cause of herpes zoster, 1108; the antitoxin treatment of diphtheria, 1310, 1454
Hadley, Dr. W. J., Fibroid Diseases of the Lungs including Fibroid Phthisis, *rev.*, 1051
Haeckel, Professor E., awarded Linnean gold medal, 374
Hæmatocele, intraperitoneal, 129
Hæmatoma of vulva, 918
"Hæmoferrum," 1246
Hæmorrhage after amputation of the hip, 676; arterial, 844; perirenal, 1049; traumatic meningeal, operation for, 1114; recurrent and severe after the operation for cleft palate, 1174; subdural in pernicious anæmia, 1309; subdural in scurvy, 1430
Hæmostatic, lemon juice as a, 1048
Haffkine, M., the method of cholera inoculation of, 24, 607, 653, 775, 1247
Haig, A., the causation of anæmia and the blood changes produced by uric acid, 113; direct introduction of uric acid into the body, its bearing on the prevention and treatment of disease 1297
Hair parasites, vegetable, the present position of the question of, 685
Hairs, superfluous, removal of, 570
Hall, University, Edinburgh, 508, 513
Hall, Mr., on whooping-cough, 406
——— Dr. A. W., the bites of gadflies, 571
——— Dr. B. W., obituary notice of, 959
——— Dr. F. de H., the antitoxin treatment of diphtheria, 515; Diseases of the Throat and Nose, *rev.*, 758; chronic tuberculosis of larynx, 921; late inherited syphilis, 1112
——— Dr. H. N., A Compend of General Pathology and Morbid Anatomy, *rev.*, 1181
Halle-a-S., new convalescent home for, 980
Hamburg and its helpers, 133
Hamilton, Mr. R., antitoxin treatment of diphtheria, 1338
——— Mr. R. J., orbital neuralgia, 1371
Hammer-toe, the causation and treatment of, 571
Handbills, antivaccination, 1559
Handbook (Reference), of the Medical Sciences, Dr. A. Buck, *rev.*, 73; (Students' Introductory) of Systematic Botany, Mr. J. W. Oliver, *rev.*, 131 The Sanitary Inspector's, Mr. A. Taylor, *rev.*, 533; of Obstetric Nursing, Drs. F. W. N. Haultain and J. H. Ferguson, *rev.*, 925
Handbuch der praktischen Gewerbehygiene, Dr. H. Albrecht, *rev.*, 813, 1433; der Arzneimittellehre, Drs. H. Nothnagel and M. J. Rossbach, *rev.*, 925
Handford, Dr. H., on functional diseases of the heart, 1041
Hands, hereditary malformation of the, 8
Hankin, Mr., typhoid fever and cream compounds, 613
Hansell, Dr., death of by drowning, 1046
Hansemann, Dr., on the antitoxin treatment of diphtheria, 1320
Hardie, Dr., the forecasting of disease, 609
Hardman, Dr. W., desirable improvements in hypodermic syringes, 11; temperance drinks, 409; carbolic acid poisoning, 867; ginger beer, 1511
Hardwicke, Dr. W. W., a new system of medical book-keeping, 795, 1416
Hardwicke, Dr. H. J., Alpine Climates for Consumptives, *rev.*, 1181
Hardy, Mr. H. N., a gigantic abuse, 228
Harelip and other operations about the face in young children, a detail in the treatment of, 808
Harness, Alabaster v., 448, 1345
——— case, the, 1041
Harris, Dr. A. E., rabies, 1178
——— Dr. G. W., A Practical Guide to Algiers, *rev.*, 1181
——— Dr. T., the pathology of the ascites in some cases of heart disease, 1313; dry mouth or xerostomia, 1314
Harrison, Mr. A. J., the germ theory in dermatology, 2; the treatment of psoriasis, 697
——— Mr. R., treatment of injuries of the spine and spinal cord, 913
Harrisson, Mr. D., the operative treatment of perforating ulcer of the stomach and intestines, 865; treatment of injuries of the spine and spinal cord, 912
Harrogate, the Mineral Waters of, Dr. A. Roberts, *rev.*, 761
Harsant, Dr., on deaf mutism, 1167
Hart, Mr. Ernest, proposed collective investigation into the practice of quacks, 95, 153, 1271; vote of thanks to from Society of Medical Officers of Health for Scotland, 158; on cremation, 314; the criminal responsibility of the insane, 352; the etiology of cholera, 612; the new serum treatment of diphtheria, 889; and Charles Reade on private lunatic asylums, 1440; on the medical profession in India, 1169
Hartlepools, the hospital at, 115, 273
Hartridge, Mr. G., medical education in London, 756; osteoma of the conjunctiva, 1429
Harvey, the modern developments of the work of, 853
——— Professor, bust of for Marischal College, 1048
Haslam, Dr. W. D., artificial nail curette, 537
——— Dr. W. F., the operative treatment of perforating ulcer of the stomach and intestines, 865
Hassall, Dr. A. H., memorial to, 885
Hastings, healthy, 956
Hatch, Surgeon-Major W. H., the treatment of injuries of the spine and spinal cord, 913
Haultain, Dr. F. W. N., Handbook of Obstetric Nursing, *rev.*, 925
Havelock, Dr. J. G., acute religious mania, 130
Haverfordwest, the nursing at the workhouse of, 56, 111, 880
Havre, the Loprévost Dispensary at, 99
Hawaii, diphtheria at, 715
Hawkins, Dr. F., perineal hæmorrhage, 1049
——— Dr. F. B., obituary notice of, 1410
——— Dr. H. P, antitoxin treatment of diphtheria, 1183
——— Mr. Justice, on the administration of ether, 142
Hayden, Dr. H. W., Liverpool Victoria Friendly Legal Society, 570
Hayes, Mr. H. W. McC., a case of opium poisoning, 807
Haynes, Dr. S., chloroform during sleep, 738
Head, condition of the membrana tympani in some injuries to the, 981; symmetrical labial herpes of the, a fall on the, 1427
Headache, menstrual, 130
Headley, Dr. B., puerperal pelvic cellulitis from phlebitis, 1113
Health and the State, 956
——— assurance, 207
——— resorts, notes on, 929
Heardon, Mr. F. C., the Carmarthen asylum, 396
Hearne, Mr. E. C., Medical Attendance Assurance Society, 1505
Heart, functional diseases of the, 1041; irregular after influenza, 1042; the treatment of chronic diseases of by baths and gymnastics as practised at Nauheim, 1045; the mechanical treatment of disease of, 1101; The Treatment of Chronic Diseases of by Baths and Exercises according to the Method of Dr. Schott, Dr. W. B. Thorne, *rev.*, 1181; the pathology of the ascites in some cases of disease of, 1313; case of traumatic rupture of the, 1427
Heath, Dr. R., pyrexia and its treatment, 1099
Heaton, Mr. G., nodular swellings on each clavicle, 1178
Hehir, Dr. P., A Catechism of Hygiene and Sanitary Science, *rev.*, 71
Heilung (die) der chronischen Lungenschwindsucht durch Entwickelung von Kohlensäure im Magen, Dr. H. Weber, *rev.*, 923
Hellier, Dr., osteomalacia, 989
Helmholtz, Professor, the health of, 568; obituary notice of, 824
Hemp drugs and insanity in India, 108
Hendon, the alleged outbreak of small-pox in the workhouse at, 828
Henry, Dr. J. P., scarlatina and measles in the same patient, 1288
Hepburn, Mr. M. L., the treatment of caisson disease, 1266
Hereditary in relation to disease, 676; influence of in phthisis, 1364
Herman, Dr. G. E., on the change in size of the cervical canal during menstruation, 70; Difficult Labour, *rev.*, 1431
Hernia, umbilical, appliance for, 231; in pregnancy, 516; strangulated ventral, 868; strangulated in the aged, radical cure during operation for, 971; incompletely reduced left inguinal, obstruction of the bowels caused by, 1363
Hero, a medical, 1024
Herpes, symmetrical labial following a fall on the head, 1427
——— zoster, mental disturbance as a cause of, 887, 1108
Herringham, Dr. W. P., sclerodermia, 1109; idiopathic dilatation of the sigmoid flexure, 1240; subdural hæmorrhage in pernicious anæmia, 1309; leucocythæmia and enlargement of the spleen, 1351; the antitoxin treatment of diphtheria, 1428
Heubner, Professor O., the antitoxin treatment of diphtheria, 810
Hewlett, Dr. R. T., bacteriology in its practical aspects, 1050
Higuet, Dr., on health and the State, 956
Hill, Dr. G. W., on diphtheria, 1312
——— Dr. W., suppurative otitis media, 1061; turbinal varix, 1172; empyema of the nasal accessory sinuses, 1360
Hime, Dr. T. W., does baking sterilise a loaf? 355; on small-pox, 380; the pathology of vaccination, 636
Hinckley, small-pox and vaccination at, 652
Hinton, Nurse, testimonial to, 765
Hip, spontaneous dislocation of, 1111
Hip-joint, amputation at the, by Furneaux Jordan's method, 42; hæmorrhage after amputation of the, 676; treatment of disease of, 1090, 1155; amputation at the for sarcoma, 1376
Hippeau, M. P., Une Visite à l'Hôpital International, *rev.*, 1116
Hirsch, Dr., return of to St. Petersburg, 1445
——— Mr. C. T. W., fracture of leg, fat embolism, death, 13
Hoax, a, 1286
Hoffmann, Dr. H., death of, 734
Holidays, long and short school hours, 93; autumn in England, 549
Holland, students at the universities of, 210; antitoxin treatment of diphtheria in, 1199, 1270, 1451
Holmes, Dr. O. W., Mr. Ernest Hart on, 833; obituary notice of, 839; on the contagiousness of puerperal fever, 885; Dr. W. T. Gairdner on, 948
——— Mr. T., elected treasurer of St. George's Hospital, 1323
Holtom, Mr. C., the holy well at Shirehampton, 229
Home for inebriates, 850; for feeble-minded girls, *ib.*; for epileptics, 1026; a Healthy, Dr. F. Vacher, *rev.*, 1052
——— British, for Incurables, Streatham, opening of new buildings of, 52
——— Secretary, the, and the Hospital for Women, Chelsea, 771, 881; deputation of, to Parliamentary Bills Committee to, 1125, 1277
Homes, consumptive, for the West of Scotland, 1347
Homœopathy, the humours of, 661
Hong-Kong, the plague at, 32, 89, 148, 201, 423, 539, 580, 786, 841; gallantry at, 562; special correspondence from, 786, 844; influenza at, 786, 841; opening of the port of, 844; a Chinese bacteriologist at, 1040
Hood, Dr. D., on diphtheria, 1177
Hooper, Dr., on the induction of labour, 1422
——— Dr. D., hospital appointments, 144, 621
Hôpital des Enfants Malades, management of infectious diseases at, 1076
——— International, une Visite à l', M. P. Hippeau, *rev.*, 1116
Hopkinson, Dr., on whooping-cough, 406
Horder, Mr. T. G., proposed amendment of the Medical Acts, 229; the annual meetings, 386; the practice of quacks, proposed collective investigation, 590

Horse, books on the, 906
Horsley, Professor V., gets hon. M.D., from University of Halle, 324; gets Royal Society medals, 1189
Horton, Mr. F., hospital appointments, 386
Hoskyn, Dr. D. T., presentation to, 1388
Hospice des Enfants Assistés, management of infectious diseases at, 993
Hospital, cost of a, 55
——— Addenbrooke's, Cambridge, the surgeoncy of, 772, 1019; the assistant surgeoncy of, 1258
——— Alexandra, Woodhall Spa, opening of Clarence ward at, 511
——— Charing Cross, post-graduate lectures at, 473; the medical school of, 476; fees at, 486; opening of the winter session at, 751; entrance scholarships at, 841; students' dinner of, 1024
——— for Children, East London, Shadwell, instruction at, 487
——— for Children, North Eastern, instruction at, 487
——— City of Dublin, instruction at, 485
——— City of London for Diseases of the Chest, instruction at, 488
——— for Consumption, Brompton, instruction at, 488
——— Corbett, Stourbridge, annual meeting of, 396
——— County, Lincoln, instruction at, 489
——— Dental, Edinburgh, instruction at, 504; new buildings for, 1448
——— Dental, of London, exhibition of pictures in aid of funds of, 53; instruction at, 503; annual dinner of, 1347; the rebuilding fund of, 1509
——— Dental, National, instruction at, 503; students at, 936; annual dinner of, 1326
——— Devon and Exeter, instruction at, 489; instruction in dentistry at, 504; proposed enlargement of, 1121
——— Dufferin Victoria, to be rebuilt, 547
——— Eye, Ear, and Throat, Cork, to be rebuilt, 19
——— Fever, London, opening of nurses' home in connection with, 19
——— General, Birmingham, laying foundation stone of, 599
——— General, Nottingham, instruction at, 489
——— Great Northern Central, instruction at, 487; pay wards at, 663, 738, 771, 940, 1126, 1201, 1275, 1342, 1403, 1458, 1505
——— Guy's, distribution of prizes, etc., at, 36; the medical school of, 476; fees at, 486; instruction in dentistry at, 503; opening of winter session at, 782; entrance scholarships at, 792
——— Jervis Street, Dublin, instruction at, 485
——— Jessop, Sheffield, instruction at, 488
——— Kama, Bombay, the first physicianship of, 346
——— Kent and Canterbury, instruction at, 489
——— Kimberley, management of, 108
——— London, appointments at, 461; the medical school of, 477; fees at, 486; opening of winter session at, 782; improvements at, 783; entrance scholarships at, 841; the "Pharmacopœia" of, *rev.*, 872
——— Lying-in, Queen Charlotte's, instruction at, 487
——— the Massage, and the Dean of Lichfield, 1341
——— Mater Misericordiæ, Dublin, instruction at, 485
——— Meath, Dublin, opening address at, 836
——— Metropolitan, Jewish patients at the, 1464
——— Middlesex, the medical school of, 478; fees at, 486; convalescent home for, 557; opening address at, 755
——— Miller, the history of, 1263
——— National Orthopædic, evening attendance for out-patients at, 52
——— Norfolk and Norwich, instruction at, 489
——— Northern, Liverpool, instruction at, 488
——— Ophthalmic, Cork, the building fund of, 1153
——— Queen's Jubilee, the charges against, 888
——— Rotunda, Dublin, instruction at, 485
——— Royal Albert, Devonport, instruction at, 489
——— Royal, Belfast, new buildings at, 480; new women's operation room for, 1147
Hospital Royal Bethlem, instruction at, 487
——— Royal Ear, Frith Street, instruction at, 488
——— Royal Eye, Manchester, instruction at, 488
——— Royal London Ophthalmic, instruction at, 487
——— Royal National for Consumption, Ventnor, consulting physicians to, 1347
——— Royal Portsmouth, instruction at, 489
——— Royal Southern, Liverpool, instruction at, 488; dinner of, 1412
——— Royal United, Bath, instruction at, 488
——— Royal Westminster Ophthalmic, instruction at, 487
——— St. Bartholomew's, the medical school of, 475; fees at, 486; new operating theatre for, *ib.*; appointments at, 491; the ophthalmic surgeoncy of, 665, 722; changes in the staff of, 763; opening of the winter session at, 781; improvements at, 783; entrance scholarships at, 841; the museum of, 942; antitoxin treatment scholarships at, 963; distribution of prizes at, 1024; the treasurership of, 1323
——— St. Mary's, the medical school of, 477; fees at, 486; opening address at, 753; opening of the winter session at, 782; entrance scholarships at, 841
——— St. Mary's, Manchester, instruction at, 488
——— St. Peter's, instruction at, 488
——— St. Thomas's, the medical school of, 478; fees at, 486; appointments at, *ib.*; opening address at, 755; opening of the winter session at, 782; improvements at, 784; pay patients at, 835; entrance scholarships at, 841
——— St. Vincent's, Dublin, instruction at, 485; opening of session at, 893
——— Seamen's, Greenwich, instruction at, 487
——— Seamen's, Las Palmas, Grand Canary, report of, 1464
——— for Sick Children, Glasgow, instruction at, 488
——— for Sick Children, Great Ormond Street, instruction at, 487
——— for Sick Children, Newcastle, instruction at, 488
——— for Sick Children, Pendlebury, instruction at, 488
——— Sir Patrick Dun's, appointments at, 485
——— Steevens's, Dublin, instruction at, 485
——— Sussex County, instruction at, 489
——— Swansea, instruction at, 490
——— Temperance, London, instruction at, 487; the "coming of age" of, 732, 830
——— Throat and Ear, Central London, instruction at, 488
——— Throat and Ear, Newcastle-on-Tyne, the circular of, 1437, 1498
——— University College, the boarding of house physicians and house surgeons at, 1023
——— West London, Hammersmith, instruction at, 487
——— Westminster, the medical school of, 479; fees at, 486; opening address at, 756; opening of winter session at, 783
——— Wolverhampton and Staffordshire, instruction at, 490
——— for Women, Chelsea, report of committee of inquiry on, 153; resignation of medical staff of, 216, 324; leading articles on, 321, 431, 997, 1258; the new staff of, 381, 561; explanations from the staff of, 385, 443, 620, 675; the non-re-elected staff of, 443, 513; the consulting physicianship and surgeoncy of, 568, 609, 945, 1014; and the Home Secretary, 771, 884; special meeting of governors of, 825; resignation of board of management and medical staff of, 1063, 1128; election of new board of management of, 1272; the late medical staff of, 1343; the reconstruction of, 1451
——— for Women, Soho Square, instruction at, 487
Hospitals, the abuse of out-patient departments of, 33, 228; of the State, 83, 766; for the working classes, 102; isolation, the need for, 289; appointments at, 386, 444, 558, 621, 675, 684; of the State and the inspectors of the Poor-law Board, 429; isolation, the cost of, 452; small-pox, the ventilation of, 667, 794; in fact and in fiction, 824; charity, paying patients in, 926; isolation, maintenance of children in, 954; pay and cheap doctors, 1006, 1134; isolation, compulsory provision of, 1026; Government and pay in the colonies, 1249; municipal infectious, the returns of, 1282; infectious, visiting medical officers to, 1346; Dissenters and Nursing, Drs. J. S. Billings and H. M. Hurd, *rev.*, 1433; medical representatives on the governing bodies of, 1467; Christmas at the, 1493
Hospitals Adelaide Medical and Surgical, Dublin, instruction at, 485
——— Fever and Small-pox of the Metropolitan Asylums Board, instruction at, 487
——— Richmond, Whitworth, and Hardwicke, instruction at, 485
House ownership for the working classes, 19
——— sanitation at the Hygienic Congress, 667
Houses, overcrowding of on land, 775; uninhabitable and their tenants, 943
Houston, Dr. A. C., the pollution of deep wells, 1326
Hubbard, Dr. H. W., deaf-mutism, 669; Deaf-Mutism, *rev.*, 1117
Huber, Dr. J. C., Bibliographie der klinischen Helminthologie, *rev.*, 814
Hucknall Torkard, epidemic of scarlatina at, 1022
Huddersfield, debate of guardians of as to admission of BRITISH MEDICAL JOURNAL'S Commissioner to the workhouse of, 992
Hughes, Dr. D. W., the antitoxin treatment of diphtheria, 780
——— Dr. H., Allgemeine Perkussionslehre, *rev.*, 1180
Hulke, Mr. J. W., Irish Medical Schools' and Graduates' Association, 1279
Humerus, the treatment of injuries of the lower end of the, 965, 968; dislocation of the head of with fracture of the surgical neck, 1112; chondro-sarcoma of the, 1309; dislocation of by muscular action, 1426
Humphreys, Mr. F. K., desirable improvements in hypodermic syringes, 163; proposed registration of midwives, 229
Humphry, Sir G. M., the health of, 32; resigns the surgeoncy of Addenbrooke's hospital, 772
——— Mr. L., plasmodia of malarial fever, 16
Hungary, antitoxin treatment of diphtheria in, 1274
Hunt, Dr. J. M., two cases of sarcoma of larynx a year after operation, 1314
Hunter, Dr. W. B., death of, 1411
Hurd, Dr. H. M., Hospitals, Dispensaries and Nursing, *rev.*, 1433
Hutcheson, Dr. G., Hindu pilgrimages and cholera, 907
Hutchinson, Mr. F., cases of traumatic rupture of heart, 1427
——— Mr. J., the Beaven Rake memorial, 1208; supposed exception to Colles' law, 1342
——— Mr. J. jun., the treatment of injuries of the lower end of the humerus, 965
Hutinel, M., and the management of infectious diseases of children in Paris, 993
Hyalitis, monocular asteroid, 70
Hydatid Disease, Dr. J. D. Thomas, *rev.*, 1433
Hydatids in bone, 640
Hyde, Dr. S., the natural mineral waters of Buxton, their indications and modes of application, 1302
Hydrocele, five cases of in the female, 179; the radical cure for, 989; radical cure of, 1371
Hydrophobia, death from in Dublin, 605; the Pasteur treatment of, 964; death from, 1023
Hydrotherapy, modern, its relation to general therapeutics, 1304
Hygiene, the Indian Manual of, Surgeon-Captain E. Grant, *rev.*, 17; Practical Methods of, Professor K. B. Lehmann, *rev.*, 533; Aids to the Mathematics of, Dr. R. B. Ferguson, *rev.*, 872; Professor J. L. Notter and Surgeon-Captain R. H. Firth, *rev.*, 990
Hyoscine hydrobromate in ophthalmology, 598
Hyperpyrexia, case of, 68; case of with death in fifteen hours, 1048
Hypnotism and hysteria, 935
Hypochondriasis and nosophobia, 810
Hypochondrium, right, the anatomy of the, relating especially to operations for gall-stones, 968
Hypophysis, malignant disease involving, 1430; tumours of the, *ib.*
Hyrtl, Dr. J., death of, 160
Hysterectomy, vaginal, for cancer of uterus, 1314; vaginal for primary carcinoma of the body of the uterus, 1369
Hysteria and hypnotism, 935

I.

Iadroo, Disease and Race, *rev.*, 133
Ice, the therapeutic value of in ophthalmic surgery, 596, 795
——— creams and typhoid, 829; and bacteria, 1068
Iceland, researches on leprosy in, 715, 941, 1324
Ices, contaminated, 34
Idiocy in Livonia, 1347
Idiots, institution for, 682; the management of in Paris, 928
Idleness, compulsory, 1196
Ilfracombe, the sanitary condition of, 395
Ilkeston, the health officership at, 393, 433
Ilford, Dr. S., death of, 1462
Illingworth, Dr. C. R., anthrax in man, 456; the antitoxin treatment of diphtheria, 739
"Illiteracy" of medical students, 769
Imbeciles, pauper, 1127, 1206, 1342
Imbecility, the borderland of, 1264
Immunity in infectious diseases, 611
Ince, Dr. J., hospital appointments, 675
Income Tax, How to get it Refunded, Mr. A. Chapman, *rev.*, 761; assessment to, 794, 852, 906, 1080, 1219, 1287, 1350
Incubator, an improvised, 1465
India, preventive inoculation against cholera in, 24, 607, 653, 775, 1247; notification of cholera in, 87; administration of chloroform in, 102; hemp drugs and insanity in, 108; lunatic asylums in, 144; books on the fevers of, 235; domestic medicine in, 738; waterborne typhoid in, 794; "black death" in, *ib.*; female practitioners in, *ib.*; the Factories Act in, 791; Mahomedan munificence, *ib.*; native ladies and the medical profession, *ib.*; leprosy in, 883; "assistant surgeons" in, 944; uterine cancer in, 1002; nursing in, 1026; deaths from wild animals and snakes in, 1065; the National Health Society's medical department for, 1152; Mr. Ernest Hart on the medical profession in, 1469
——— Office, the, and brigade-surgeons, 32
Inebriates, wards for, 287; legal guardianship for, 370; retreats for, 832; homes for, 850; report on retreats for, 1606
Inebriety, cures for, 398, 906
Infancy, the protection of, 929
Infants, coroner's inquests on in Sydney, 648; how the health of is influenced by food, 702; a plan of measurements of, 703; a milk food for, 705; the protection of lives of, 1325; mortality of and factory labour, 1383
Infarcts in the liver, 1459
Infirmary, Anglesey and Carnarvonshire, re-opening of, 1347
——— for Children, Liverpool, instruction at, 488
——— Eye and Ear, Liverpool, instruction at, 488
——— General Gloucester and Gloucestershire Eye institution, instruction at, 489
——— General, Leeds, alteration in staff of, 87
——— General, Northampton, instruction at, 489
——— General, Sheffield, proposed addition to, 108
——— Glasgow Eye, instruction at, 489
——— Glasgow Western, instruction at, 489
——— North Staffordshire, instruction at, 490
——— Royal, Aberdeen, the ophthalmic surgeoncy at, 732
——— Royal, Derbyshire, opening of, 109; instruction at, 489
——— Royal, Dundee and lady students, 939
——— Royal, Edinburgh, instruction in, 482; cost of beds in, 1181; kitchen concert at, 1497
——— Royal, Glasgow, instruction in dentistry at, 504
——— Royal, Newcastle-on-Tyne, increase in staff of, 1048; appointments at, 1215
——— Royal South Hants, instruction at, 498
——— St. George-in-the-East, epidemic skin disease at, 688
——— St. Marylebone, epidemic skin disease at, 652
——— Staffordshire General, instruction at, 498
——— West of England Eye, instruction at, 498
——— and Dispensary, Bradford, instruction at, 488
Inflammation, pelvic, attended with abscess of the ovary, three cases of, 810
Influenza, Sir T. G. Stewart on the nature and treatment of, 242; irregular heart after, 1042; in London, 1498
Ingersoll, Dr. H., death of, 789
Inhaler, a simple, 537
Inheritance. *See* Heredity
Inquests, coroner's, on infants in Sydney, 648
Insane, in workhouses, 992, 1192; trial for crime done by, 1390
——— criminal responsibility of. *See* Insanity
Insanity, the plea of in criminal cases, 33, 88, 324, 349, 427, 444, 740; metropolitan, 82; and hemp drugs in India, 108; the prevention of, 256; discussion on the prevention of at Bristol, 519; pathology of, 549; in New South Wales, 704; the difficulties of prognosis in, 870; books on, 906; hereditary in modern history, 963; in Ireland, 1392. *See also* Lunacy
Inspection of workhouse infirmaries, 159, 378, 547; and inspector, 544
Inspector, the modest, 376; and inspection, 544
Institute, British, of Preventive Medicine, annual meeting of, 35; the London County Council and, 273; exhibition of bacteria by at the Bristol meeting, 325; gets the Berridge bequest, 507; and the supply of diphtheria antitoxin, 1122, 1197
——— British, of Public Health, the "congress" of, 1461
——— of Certificated Sanitary Inspectors, meeting of, 1465
——— of Chemistry, results of examinations at, 1023
——— Imperial, a science laboratory for, 200
——— Medical Electrical, Limited, registration of, 964
——— Sanitary, arrangements for the congress of, 453; annual meeting of Western Branch of, 514; meeting of congress of at Liverpool, 723; lectures at, 1025; results of examinations by, 1384, 1451
Institution, Lord Mayor Treloar, opening of sessions of, 841; cyst of thyroid, 922; urethral calculi, *ib.*; cerebral abscess, *ib.*; removal of vermiform appendix, *ib.*; administration of arsenic, *ib.*; meeting of, 1050; chronic tetanus treated by antitoxin, 1173; rabies, *ib.*; two cases of sarcoma of larynx a year after operation, 1311; enterectomy for gangrene, *ib.*; case of successful Porro's operation, *ib.*; vaginal hysterectomy for cancer, *ib.*; removal of large sarcoma from [illegible], two cases of amputation at the hip-joint for sarcoma, *ib.*; two cases of lead poisoning, 1371; anæmia with flagellated protozoa in the blood, *ib.*; orbital neuralgia, *ib.*; radical cure of hydrocele, *ib.*
——— Queen Victoria Nursing, Wolverhampton, annual report of, 240
——— Royal, the endowment of molecular physical research at, 94
Insuction at leaky joints, 790
Insurance File, the, *rev.*, 1052
Intemperance and disease, 1319
Interceptor, Sykes's patent, 707
Intestine, small, a successful case of anastomosis of the, 1103, 1112
Intoxicants, supply of to paupers, 491
Intubation in the treatment of chronic stenosis of the larynx, 1178
Intussusception, a remarkable case of, 123; case of, with sloughing of intestine and recovery, 121; case of, 811; three cases of treated by abdominal section, 1237
Invalids, specialities for, 1434
Inversion and taxis in intestinal obstruction, 1174, 1511
Investigation, scientific, and the public, 35
Iodide of potassium, urticaria following the administration of, 12; in hypertrophy of the prostate, 68
Iodine and carbolic acid, treatment of cancer by injections of, 1091
Ireland, vaccination irregularities in, 314; vaccination in, 598, 1461; conference *re* workhouse infirmaries in, 660; holidays in, 661; lunacy in, 789; the workhouses of and union infirmary surgeons, 1031; clubs and friendly societies in the south of, 1251, 1322, 1312, 1395, 1451; insanity in, 1392
Iritis, tuberculous, 1115
Iron, deposits of in pernicious anæmia, 1115
——— jelloids, 873
Isaac, Dr. G. W., a consulting-room thief, 571
Isaphghul, 1467, 1511
Isdell, Dr. F., lower molar abscess, 1351; symmetrical labial herpes following a blow on the head, 1427
Isolation and boarding out, 883, 954; compulsory notification minus, 1281
Italy, the death-rate in, 566; vital statistics in, 735; small-pox and vaccination in, 891; antitoxic treatment of diphtheria in, 1124, 1199, 1454; malaria in, 1458

J.

Jackson, Dr. J. [illegible] Liberia, 1177
——— Dr. J. Hughlings, [illegible]
Jacob, Dr. A. H., the tenure of Poor-law medical appointments, 1276
Jacobson, Mr., bullet wound of the parietal lobe, 1110
James, Mr. W. D., a case of congenital xanthoma multiplex, 805
Jameson, Dr. L. S., made C.B., 883; proposed dinner to, 1080, 1144, 1206, 1445; arrival of in England, 1191
——— Dr. A., rare cases of skin disease, 71
Japan, medicine in, 295; the government of and the health of its soldiers, 903; medical member of Parliament in, 1152
Jaundice, acute infantile, kerato-malacia in, 47
Jaw, right upper, resection of with both common carotids, 1238
Jaws, operations for cancer of, 131
Jefferies, Mr. H., the management of eczema, 618
Jelloids (iron), 573
Jenks, memorial scholarship, award of, 1066
Jenner, Dr. E., gratitude to, 572; dispersal of the collection of relics of, 1412
——— Sir W., presentation of Moxon medal to, 886
Jessett, Mr. C. B., treatment of uterine myomata, 921
Jessop, Deputy-Surgeon-General C. M., dysentery and tropical liver abscess, 127 (235); infant mortality in France, 559; treatment of threadworms, 738; loss of taste, 850; the inmate of Ceylon, 1286; on William Salmon as the anticipator of Brown-Séquard
Jewish Method of Slaughter (ine). Dr. J. A. Dembo, *rev.*, 1432
Jex-Blake, Dr. Sophia, presentation to, 1088
Johnson, Mr. C., death of, 1149
——— Sir G., Sir Andrew Clark's theory and treatment of [illegible]
——— Dr. G. J. [illegible] prolonged excessive light on [illegible]
Johnston, Dr. H. [illegible] ar biter experiments, 1495
——— Dr. J., presentation to, 792; scarlatina and measles coexisting in the same person, 1218
——— Dr. R. McK., suppurative otitis media, 1161; on the care of the ear during the exanthemata, 1161; on deaf-mutism, 1167
——— Dr. S., on medical and surgical progress, 811
Joints, treatment of tuberculous disease in children, 103
——— leaky, insuction at, 790
Jolting as a therapeutic agent, 1392
Jones, Dr. H. M., the Irish Medical Schools' and Graduates Association, 1115
——— Dr. H. R., how the health of infants is influenced by their food, 702; youngest English, 951
——— Mr. R., treatment of some of the deformities of the lower extremities, 467; treatment of tuberculous disease of the joints in children, 412; amputation through the shoulder-joint for acute emphysematous gangrene, recovery, 975
Jordan, Dr. F. W., the notification of sore throat, 1026; tetanus, 1399; diphtheria, *ib.*
Joulings, American, 109, 165, 297, 453, 951, 1284, 1515
Journal, British Medical, reprints from, 112, 1052; the, 1895, 1275
Journalists and quacks, 852, 906
Juler, Mr. H., diagnosis and treatment of ophthalmia, 589, 983
Jurisprudence (Medical), the Principles and Practice of, Dr. A. S. Taylor, *rev.*, 74
Jurors, the excuses and medical certificates of, 898

K.

Keetley, Mr. C. B., treatment of injuries of the spine and spinal cord, 941
Keighley, nursing at the workhouse infirmary of, 650, 862, 712, 851
Keiller, Mr. A. J., marriage, legitimate and illegitimate, 445
Keith, Messrs. S. and G. E., Textbook of Abdominal Surgery, *rev.*, 1090
Kelly, Mr. C. A., on the venomous bites of some kinds of gadflies, 684
——— Mr. T. G., St. John Ambulance work, 1145, 1177
Kelynack, Dr. T. N., pathological considerations on surgical interference for perforative ulcer of the stomach and duodenum, 914
Kemp, Dr. W. G., ventilation of sewers, 306; pyrexia and its treatment, 1099

Kendall, Surgeon-Major B., the law as to burial and uncertified deaths, 675
—— Mr. H. W., death under chloroform, 1073
Kent, Mr. A. F., the histology of the vaccine vesicle, 633
Kenwood, Mr. H. R., origin and spread of enteric fever, 354; the filtration of potable water, *ib.*; library books and infectious disease, 1506
Kerato-malacia in acute infantile jaundice, 597
Kerr, Dr. J., medical certificates in school attendance cases, 1104
—— Dr. N., neurasthesia and its treatment, 525
Kesteven, Dr., the antitoxin treatment of diphtheria, 1428
Key, Dr. A. C., pruritus after erysipelas, 1286
Kidderminster, nursing at the workhouse infirmary of, 931, 1188, 1318
Kidney, granular, anxiety as a cause of, 1001, 1219; congenital cystic adenoma of, 1049; tumours of the, *ib.*; (?) Wolffian adenoma of the, 1049
Kidneys, cystic disease of the, 1309
Kilkenny, the guardians of and their medical officer, 205
Kimberley Hospital. *See* Hospital
King of Italy, the health of, 1258
King, Dr. H. W., the antitoxin treatment of diphtheria, 549
—— Surgeon-Lieutenant-Colonel W. G., vaccination scarifier, 649
King's Lynn, the water supply of, 1495
Kingzett, Mr. C. T., disinfection by sulphur dioxide, 796
Kipping, Dr. F. S., Organic Chemistry, *rev.*, 1432
Kirk, Dr., cases of tetanus in chloroform, 68; deaths under chloroform, 877, 1319
Kissing as a sanitary sin, 273, 456
Kitasato, Professor, presentation to, 1127
Klebs, Dr. E., Die causale Behandlung der Tuberculose, *rev.*, 923
Klein, Dr. E., the etiology of typhoid fever, 797; on the preparation of Behring's antitoxin serum, 1393
Knaggs, Mr. R. H. E., fracture of the skull and lightning stroke, 1236
Knapp, Dr. H., dressing one eye in cataract extractions, 589; the diagnosis and treatment of ophthalmia, 592; the pathology of descemetitis, 596; suppurative otitis media, 1161; excision of the malleus as a preliminary to opening the antrum, 1168; empyema of the nasal accessory sinuses, 1360
Knee, displacement of semilunar cartilages of, 16
Knee-joint, an affection of simulating dislocation of the semilunar cartilage, 809; obscure disease of the, 1509
Koch, Professor, on cholera, 729
Körte, Dr., on the antitoxin treatment of diphtheria, 1457
Kola nut, the history of the, 1087
Krantz, Professor, lymphangiectasis of the omentum treated by abdominal section, 532
Kyle, Mr. T. W., death of, 1149

L.

Laborde, Dr. T. E., Le Traitement Physiologique de la Mort: les Tractions Rhythmées de la Langue, *rev.*, 131
Labour, gangrene of the vulva following, 13; temperature after delivery in relation to the duration of, 70; first, unusually rapid, 347; discussion on the induction of at Bristol, 1419; cocaine in, 1427; Difficult, Dr. G. E. Herman, *rev.*, 1431
Labyrinth, four cases of disease of treated by pilocarpin, 1296
Lactic acid, tests for, 55
Lady cyclists, 33
—— doctors in Ireland, 938
—— football, 1323
Lagrange, Dr. F., La Médication par l'Exercice, *rev.*, 534
Lake, Mr. R., tonsillar mycosis, 921; lupus treated with thyroid extract, 922; on diphtheria, 1312
Lakeman, Mr., on the inspection of workshops, 1128
Lambeth, overcrowding in the workhouse at, 1188; the matronship of the workhouse of, 1384, 1501
Laminectomy in spinal caries, 699, 1232
Lamp, red, qualification by, 1260
Lampoons and disguises, 1497
Lancashire, hospital accommodation in, 1087
Lancaster, Dr. E. Le C., the Griffiths Fund, 112
Lanchester, the nursing at the workhouse infirmary of, 428, 436, 651
Landerer, Dr. A., the treatment of injuries of the lower end of the humerus, 968
Landolt, Dr., relation of some occupations to eyesight, 584; a few rules facilitating the diagnosis of paralysis of the ocular muscles, 585; diagnosis and treatment of strabismus, 587
Lane, Captain G. B., house cisterns, 1052
—— Mr. W. A., tuberculous disease of the perineum, prostate, ischio-rectal fossa, and rectum, 1109; a year's experience of the use of sulphur in surgery, 1239; supernumerary testes, 1241
Langlois, Dr. A., death of, 160
Language, a universal for medicine, 716
Lansdale, Dr. A., hospital appointments, 386
Laparotomy, three cases of intestinal obstruction treated by, 66; in ulceration of the duodenum, 920
Laryngitis, diphtherial, in a child 18 months old, tracheotomy, recovery, 125
Laryngology, rhinology, and otology, recent advances in, 260
Larynx, tracheotomy for foreign body in the, 68; chronic tuberculosis of, 321; stenosis of supervening on typhoid fever, 922; paralysis of in chronic nervous disease, 1170; a successful method of examining and removing growths from in children, 1171, 1276; malignant disease of, 1175; the treatment of respiratory affections by means of large medicinal injections through the, 1238, 1412; two cases of sarcoma of a year after operation, 1314; the treatment of acute stenosis of, 1475; intubation in stenosis of, 1478
Latin as a universal language for medicine, 716
Lateralsinus-Thrombose (die durch eitrige Mittelohrentzündung verursachte), und deren operative Behandlung, Dr. A. Forselles, *rev.*, 1432
Lattey, Dr. W., removal of nitrate of silver stains, 291; microphone stethoscope, 1218
Lauder, Dr. T., obituary notice of, 734
Laundry exhibition, the, 1151
Laveran, Dr. A., Paludism, *rev.*, 924
Law, The, of District and Parish Councils, Mr. J. Lithiby, *rev.*, 814
Lawford, Mr. A. R., the use of chlorine water in certain diseases of the eye, 71; hydatid cyst of the orbit, 1423
Lawrence, Mr., on diphtheria, 1312
Lawrence-Hamilton, Mr. J., sewage-fed fish, 108
Lawrie, Surgeon-Lieutenant-Colonel E., on chloroform, 14
—— Dr. M., case of splenic leucocythæmia treated by bone marrow, 1238
Lawson, Mr. G., five cases of plastic cellulitis of orbit, 1428
Laxfield (Suffolk), anomalous (pneumonia) illness at, 1022
Layard, Sir H., the health of, 32
Lead in drinking water, 111
—— poisoning, chronic, by fumes, 436; an uncommon source of, 519; in public water supplies, 957; and lead works, 963; industrial, 1128; two cases of, 1371
—— works and lead poisoning, 963
Leader, Dr. C. R., popular medical superstitions, 1028
LEADING ARTICLES:—The workhouse infirmary at Bath, 601, 29; pauper palace schools, 30; the India Office and brigade-surgeons, 32; the physiology of the carbo-hydrates and the pathology of diabetes, 85; the College of Surgeons election, 86; cholera prospects, 141; factory legislation and female workers, 142; Indian Medical Service, 143; the Royal Medical Benevolent College, 143; the present position of the Gresham University scheme, 203; the cholera, *ib.*; the annual meeting at Bristol, 265; the president's address, 266; the address in medicine, *ib.*; the address in surgery, 267; the Chelsea Hospital for Women, 321, 451, 997, 1258; barrack pauper schools, 322; the universities and the professions, 323; drowning, 373; are we degenerating? *ib.*; the hospitals of the State and the inspectors of the Poor-law Board, 429; the medical curriculum, 457; the cost of a medical education, 458; the barrack schools inquiry (boarding out), 506; the antitoxin treatment of diphtheria, 545; autumn holidays, 546, 659; the Barrack Schools Commission in, 602; English cholera administration, central and local, 657; poisonous and edible mushrooms, 658; the epidemic skin disease in London, 713; barrack schools (their alternatives), 714; "illiteracy" of medical students, 769; the hospitals of the State, *ib.*; the bitter cry of London as a teaching medical centre, 825, 882, 1189; the antitoxin treatment of diphtheria, 826; beri-beri in Ireland, 881; the parish councils and sanitary reform, 937; our fighting marine at home and abroad, *ib.*; the medical profession and the new guardians, 1061; private lunatic asylums, 1062; deputation to the Home Secretary, 1125; medical advice gratis, a new departure, 1126; studies in therapeutics, 1190, 1444; "the blind seen through blind eyes," 1191; the British Medical Association and the JOURNAL (1895), 1255; the University of Wales, 1256; shorthand in medicine, 1257; the General Medical Council, 1321; clubs and friendly societies in the south of Ireland, 1322; the Royal Botanic Society of London, 1385; seasonal prevalence of epidemic diseases, *ib.*; German criticism on the diphtheria antitoxin treatment, 1387; rate-supported hospitals and the new boards of guardians, 1443; ignorance of tropical diseases, 1491; the discussion on the treatment of diphtheria by antitoxin at the Clinical Society, 1492; "the increasing nervousness of our times," 1478
League, an antituberculosis, aims and methods of, 34
Leah, Mr. T., instruction in medical ethics, 1504
Leadbitter, Sir E., death of, 1165
Lecture, the Bradshaw, on infantile scurvy and its relation to rickets, by Dr. T. Barlow, 1029; on James Syme, etc., by Professor O. Pemberton, 1398
Lectures, the Croonian, on a new departure on diabetes, by Dr. F. W. Pavy, 3, 61; on Human and Animal Psychology, Dr. W. Wundt, *rev.*, 1243; on Genito-Urinary Diseases, Dr. J. C. O. Will, *rev.*, 1316
Leeds, opening of union infirmary nurses home at, 1501
Lee-Metford. *See* Rifle
Leeper, Mr. R. R., Irish workhouses and union infirmary surgeons, 1081
Lees, Mr. W., the antitoxin treatment of diphtheria, 1071
Leg, fracture of, fat embolism, death, 13
Legroux, Dr. A., death of, 1023
Lehmann, Professor K. B., Methods of Practical Hygiene, *rev.*, 533
Lehrbuch der Geburtshülfe, Dr. Max Runge, *rev.*, 761
Leicester, small-pox and vaccination at, 151, 509, 572; the water supply of, 768
Leith and its medical officer and sanitary inspector, 107; public health affairs at, 289; adoption of Infectious Disease (Notification) Act at, 506; resignation of the sanitary inspector of, 790; appointment of sanitary inspector at, 957
Leloir, Dr. H., lupus, its etiology, pathology, and relation to other forms of tegumentary tuberculosis, 517
Lemon juice as a hæmostatic, 1048, 1218
Lens, crystalline, some phases of opacity and luxation of the, 589
Le Page, Dr., an axis tractor, 538
Leprosy in the United States, 75; in Russia, 498; researches on in Iceland, 715, 941, 1324; in India, 883; in Cuba, 1510
Lésions de l'Endocarde chez les Tuberculeux, Dr. P. Teissier, *rev.*, 536
Lessona, Dr. M., death of, 395
Leucocythæmia, splenic, case of treated by bone marrow, 1238; splenic, treated by arsenic and the inhalation of oxygen, 1240; and enlargement of the spleen, 1351
Leukæmia (Die Behandlung der), Dr. H. Vehsemeyer, *rev.*, 74
Lewers, Dr. A. H. N., vaginal hysterectomy for primary carcinoma of the body of the uterus, 1366
Lewis, Mr. F. K., a case of hyperpyrexia, 68
—— Dr. L., hospital appointments, 356, 559
Lewisham, opening of new infirmary at, 903
Leyden, Professor, decoration of, 1068
Leyton, opening of new children's and general hospital at, 1465
Libraries, books from and infectious disease, 1338, 1390, 1505
Library of the British Medical Association, list of authors and others who have presented books to, 21, 708; of the Académie de Médecine of Paris, 580
Lichfield, Dean of. *See* Dean
Life, fundamental conceptions as to the characteristics and embodiment of with special reference to pathology, 983; long, the secret of, 1130
—— assurance and medical aid, 1218, 1351
—— insurance, books on medical examination for, 758; examinations for, 850; infant, 958
Ligament, broad, cyst of, 130
Lightning stroke, fracture of the skull and, 1236
Lima, Dr. J. F. da S., Pathologia Historica e Geographica, e Nosologia das Boubas do Maculo e Dracontiase no Brazil, *rev.*, 1181
Lindsay, Dr. J. A., on functional diseases of

the heart, 1040; pyrexia and its treatment, 1036
Linen, soiled, in a bakehouse, 1214
Lip, lower, case of chancre of, 88
Liskeard, the nursing at the workhouse infirmary of, 508, 682
Lister, Sir J., testimonial to, 786
—— Mr. S. R., death under chloroform, 88
Liston, Dr. R., preventive inoculation of immunised scarlet fever blood serum, 202
LITERARY NOTES—Hygiène de la Educacion, 28; Christian Doctor's letter, ib.; Curtice's Newspaper Index, ib.; Oriental Manuscript in the University of Liége, ib.; Jahrbuch der practischen Medicin, contributors to, 84; Dr. O. Wendell Holmes's villains, ib.; Boileau as a woman hater, ib.; Memoirs of Larrey, ib.; Dr. Major Greenwood on the personal responsibility of judges, 320; Der Kleine Accoucheur, 389; Memoir of Sir A. Clark, 396; Dry Methods of Sanitation (Poore), ib.; ancient trusses, ib.; letter of Heine, ib.; centenary of birth of F. Puccinotti, ib.; letter from Carlyle on the priest and physician, 556; Dr. Oliver Wendell Holmes on his 85th birthday, 557; Professor Romanes on Charles Darwin, ib.; Sydenham on the healing art, 712; Power, of Bowerth, on ovariotomy, ib.; medical journals in the United States, 768; The Phonographic Quarterly Review, 816; Dr. T. Oliver on the diet and wages of English workmen, 817; Mr. H. Spencer on Weissmannism, ib.; M. M. Baudoin on contemporary medical novelists, ib.; Mr. Ernest Hart on cholera and the Sultan, ib.; Mr. Ernest Hart on the "Eternal Gullible," ib.; a bird-loved suburb of London, 1141; why the Army Medical Service is not contented, ib.; teratological research on Chaldea, ib.; memoir of Gimbernat, ib.; Dr. Peter Horsocks on his Alpine adventures, 1202; the "Broad Arrow" on army medical officers' grievances, ib.; the germ of "serotherapy," ib.; Dr. R. Agostini on dipitheria inoculation, 1203; Charcot on Zola, etc., 1282; the first thesis for the degree of medicine in the Paris faculty, ib.; unpublished poem of Dr. O. W. Holmes, 1283; change of publisher of "Practitioner," ib.; Smollett on the arts of professional life, ib.; Dr. Conan Doyle in America, 1320; death of Dr. John Chapman, 1384; William Sharpe as an anticipator of Brown-Séquard, ib.; Boglan's history of the great plague, 1455; discount charged to authors, ib.; Dr. O. W. Holmes on Alma Mater, ib.; remarks on Laënnec, ib.; letter of Dr. O. H. Holmes on contagiousness of puerperal fever, 1502
Lithiby, Mr. J., The Law of Parish and District Councils, 1744
Lithotomy, suprapubic, 14
Little, Dr. E., aerial diffusion of small-pox, 897
—— Dr. J. F., the bitter cry of London as a teaching medical centre, 949
—— Dr. W. J., obituary notice of, 106
Littlewood, Mr. H., a detail in the treatment of hæmic and other operations on the face in young children, 808; treatment of aneurysms of arteries of the extremities by extirpation of the sac, 1114
Liver, case of acute yellow atrophy of, 69; dysentery and tropical abscess of, 127, 446, 559, 621, 751; hypertrophy of, 366; abscess of the, 811; infarcts in the, 1430
Liverpool, cremation at, 551; correspondence from, 844; hospital Sunday fund at, 1124
Livingston, Mr. J. L., epilepsy of from three to four years' standing, recovery, 1287
Livonia, idiocy and epilepsy in, 1347
Llanidloes, the medical officership of, 164
Lloyd, Mr. J., treatment of injuries of the spine and spinal cord, 913; the localisation and the various operations for gall stones, 988
Loaf, is it sterilised by baking? 355
Lobe parietal, bullet wound of the, 1110; frontal, operations for tumour of, 1114
Lockwood, Mr. C. B., the surgical treatment of diffuse septic peritonitis, with cases, 919
—— Mr. F., on microbes, 941
Lodging houses, infectious disease in, 958
Lodgings, seaside, 272
Loeffler, Professor F., report to the International Congress of Hygiene and Demography on diphtheria, 578
London, the university question in, 36; health administration in, 89; lunacy in, 205, 551; small-pox in, 273; post-graduate study in, 492; the public health of, 555; small-poxin, 613; university reform in, 662; diphtheria in, 719, 780; the bitter cry of as a teaching medical centre, 825, 882, 949, 1189; second hand water for, 883; the local government of, 939; the small lungs of, 1000; the dust of, 1446; influenza in, 1498
London and Manchester Assurance Corporation, Limited. See Association
Longhurst, Dr. A. T., a warning, 516
Longstaff, Dr., the overcrowding of houses on land, 775
Longton, hospital Saturday at, 960
Lord Coleridge on medical treatment, 1388
Lord Methuen on ambulance provision for the wounded in war, 1391
Love, ——, suppurative otitis media, 1161
deaf-mutism as a clinical study, 1165, 1167
Lovell, Dr. C. P., death of, 395
Lowe, Mr. T. P., the treatment of senile rheumatic arthritis by forcible movement, 972; low degrees of eye strain a source of systemic disturbance, 1107; treatment of stenosis of the larynx, 1108
Lucas, Mr. A., a mother infected with primary syphilis from her own syphilitic child, 1236; supposed exception to Colles's law, 1595
Luckock, Rev. H. M. See Dean of Lichfield
Lucky numbers, 56
Lunacy, in the metropolis, 205, 551; in England and Wales, 216; certification of and workhouse patients, 233; in Ireland, 758; the decrease of, 1153 See also Insanity
Lunatics, accommodation for at Okehampton, 906; in workhouses, 992, 1192, 1468; the care of, 1129
Lung, primary sarcoma of in a boy aged 11, 532
Lungli, 815
Lungs, Dr. Wilson Fox's plates of diseases of, 206
Lunn, Dr. W. J., obituary notice of, 841
Lupus, thyroid extract in, 71, 922; discussion on at Bristol, 517
Luxon, Mrs. M., death of, 946
Lyes, the effects of the experiments of, 571
Lyddon, Dr. R., damp walls a nuisance, 162
Lymphangiectasis of the omentum treated by abdominal section, 532
Lyndon, Dr., on whooping-cough, 406
Lyons, compulsory notification at, 519; the medical faculty of, 568
Lys, Dr. H. G., the new pharmacy, 1504

M.

McArdle, Mr. S. J., introductory address at St. Vincent's Hospital, 893
McBride, Dr. P., recent advances in laryngology, rhinology, and otology, 260; Diseases of the Throat, Nose, and Ear, rev., 758; coryza caseosa, 1172
McCarthy, Mr. J. McC., medical organisation and remuneration, 177
MacCombie, Dr., antitoxin treatment of diphtheria, 1484
Macdonald, Dr. A. G., much too zealous inspectors, 1282
—— Dr. G., turbinal varix, 1172; empyema of the nasal accessory sinuses, 1358
—— Dr. W., swelling of external genitals in pregnancy, 1090
McDonnell, Dr., tabes dorsalis without ataxia, 1251
McElligott, Mr. M. G., conjoint, true, and molar pregnancy, 808
McFadyean, Dr. J., the suppression of the contagious diseases of animals, 758
Macfadyen, Dr. A., the biology of the ringworm organism, 845; thermophilic bacteria, 844
McGillivray, Mr., the duration of some occupations to eyesight, 585; the diagnosis and treatment of ophthalmia, 593; the therapeutic value of ice in ophthalmic surgery, 596
McGill's operation or suprapubic prostatectomy, 63
McHardy, Dr. T., epidemic muscular rheumatism, 240
McIlraith, Dr. C. H., a case of accessory thyroid gland projecting into the mouth, 1251
MacIlwaine, Mr. S. W., hæmatoma of vulva, 918
Mackay, Dr. G., Blinding of the Retina by Direct Sunlight; a Study in Prognosis based upon Accidents incurred during the observation of Solar Eclipses, rev., 925
Mackenzie, Dr. D., Darwinism and syncope, 1287
—— Dr. H. W. G., thyroid treatment in obesity and exophthalmic goitre, 157; subdiaphragmatic abscess communicating with right pleura, 987
—— Dr. L. A., presentation to, 346
—— Dr. L., Hindu pilgrimages in Bengal and their bearing on cholera, 308; on cremation, 314; diphtheria and insanitation, 316
—— Dr. S., the management of eczema, 648; the etiology and treatment of acne vulgaris, 688, 691; the treatment of psoriasis, 697
Mackey, Dr. E., case of multiple neuritis in a child, with remarks, 407
MacLachlan, Mr. D., case of double penis, 964
Maclachlan, Dr. J. T., antitoxin treatment of diphtheria, 933 (1008)
Maclagan, Dr. H. G., vaccination scarifier, 782
Maclaren, Dr. R., operative treatment of perforative ulcer of the stomach and intestines, 863; lower molar abscess, 866
Maclean, Surgeon-General W. C., Mr. Gibson Bowles on "army doctors," 100
Macleod, Dr. N., dysentery and tropical liver abscess, 751
MacMunn, Dr. C. A., Addison's disease, 897
McNamara, Dr. J., suggestions for the treatment of pancreatic diabetes, 126; deaths from chloroform, 795
McNicoll, Mr. R., obituary notice of, 1022
Macphail, Dr. A., a preliminary note on an epidemic of paralysis in children, 1253
Macrae, Surgeon-Major R., Haffkine's inoculation for cholera in India, 607, 653; cholera and flies, 1388
Macready, Mr. J., pay wards at the Great Northern Central Hospital, 1201
Macvean, Mr. N., The English Riviera, rev., 991
McWeeney, Dr. E. J., the causation of cancer, 638; on a remarkable chromogenic and pathogenic bacillus, perhaps identical with B. chromo-aromaticus (Galtier), 742
Madagascar, the climate of, 1001
Madden, Dr. T. M., on the induction of labour, 1421
Madeira and the Canary Islands, Mr. A. S. Brown, rev., 929
Madge, Dr. H. M., obituary notice of, 841
Madness. See Insanity
Magenerweiterung (Der atonische) und ihre Behandlung, Dr. C. Wegele, rev., 20
Magistrates, medical, 31, 466, 630, 945, 1196, 1431, 1500; and the public doctor, 33; and the enforcement of the Vaccination Acts, 452
Magnan, M. V., La Paralysie Générale, rev., 536
Mahomed, Mr. A. G., should there be a civil medical service for Great Britain? 309; pyrexia and its treatment, 1099
Maidlow, Mr. W. H., death under chloroform, 494
Maillot, Dr. F. C., proposed statue to, 1347
Malaria and the Parasites of Malarial Fevers, Marchiafava and Bignami and Mannaberg, rev., 811; on the nature and significance of the crescentic and flagellated bodies in the blood in, 1306; eucalyptus useless against, 1452; in Italy, 1488
—— chart, a, 1252
Male, chlorosis in the, 123
Mallein and glanders, 91, 1133
Malleus, excision of the as a preliminary to opening the antrum, 1167
Malta, fever and invaliding at, 44
—— fever. See Fevers
Mamma, "dispersible," tumours of the, 972
Manchester, correspondence from, 844, 897; munificent gift to hospitals of, 897; the water supply of, ib.; small pox and vaccination in in 1893, 1007; cremation in, 1465
Mania, acute religious, 130
Mannaberg, Malaria and the Parasites of Malarial Fevers, rev., 811
Manson, Dr. P., a malaria chart, 1252; on the nature and significance of the crescentic and flagellated bodies in malarial blood, 1306
Manual of Hygiene, Mr. J. W. Wallis, rev., 133; Clinical for the Study of Diseases of the Throat, Dr. J. Swain Bowtile, rev., 758; A Practical of Mental Medicine, Dr. E. Regis, rev., 1180; of Therapeutics, Dr. A. A. Stevens, rev., 1574
Mapother, Dr. E. D., the management of cerebral, 647
Marchiafava, Malaria and the Parasites of Malarial Fevers, rev., 811
Margate, financial condition of the sea-bathing infirmary at, 164
Marine, our fighting at home and abroad, 937
Marquis of Salisbury, presidential address to British Association, 320
Marriage of syphilitics, 784
Marseilles, Pasteurism at, 583
Marsh, Mr. H., infantile scurvy in surgical practice, 1229; obscure diseases of the knee-joint, 1309
—— Mr. N. P., antitoxin treatment of diphtheria, 1386
Marshall, Dr. A. M., The Frog, an Introduction to Anatomy, Histology, and Embryology, rev., 814; Biological Lectures and Addresses delivered by, rev., 925
—— Mr. C. D., formol as a hardening agent, 182
—— Dr. C. F. [illegible] Lectures and Addresses delivered by the late Arthur Milnes Marshall, M.D., rev., 925; deaths under chloroform, 1139; function of the vermiform appendix, 1511

Marshall, the late Mr. J., presentation of bust of to General Medical Council, 1259
——— Dr. J. J. de Z., presentation to, 23
Martin, Mr. C., vermiform appendix with concretions, 1178
——— Dr. C. F., a note on chlorosis in the male, 123
——— Dr. J. W., medical education and medical ethics, 757
Martyrs, medical, 1391
Marylebone, vaccination and small-pox in, 822, 1319; a report showing the effect of vaccination on the recent epidemic of small-pox in, 567
Marza wines, 649
Mason, Dr., diarrhœa in 1893, 318
Massage, treatment of obesity by, 55; immoral establishments for, 88, 145, 148, 291, 378; scandal, "Truth" on, 235; legitimate and illegitimate, 445; the market for overstocked, 938; reports of BRITISH MEDICAL JOURNAL Commissioner on, 1063, 1069, 1140, 1199
——— Company (American and Parisian), 377, 560
Masson, Dr. G. B., case of strychnine poisoning, 808
Matron, the trained *v.* the untrained, 1381, 1501
Maulhner, Dr. L., death of, 1023
May, Mr. L. J., pay wards at the Great Northern Central Hospital, 1342; penny fees at public charities, 1464
Mayors, medical, 1124, 1215
Measham, Dr. F. A., A Synopsis of Clinical Surgery during the service of Samuel H. Pinkerton, M.D., Surgeon to the Holy Cross Hospital, *rev.*, 75
Measles, the compulsory notification of, 274; and scarlatina coexisting in the same person, 868, 1218, 1288; notification of in Birkenhead, 954; concurrent with vaccination of, 954, 1028, 1156, 1219; German measles and infectious rose rash, 1131
Measurements, infantile, a plan of, 703
Mecca, the Indian pilgrims to, 168; the pilgrims to, 283; the pilgrimage to, 627
Mediastinum, growth in the, 988
"Medical aid business," the, 1027
——— attendance, parochial, 1346
——— Council (General) the annual advertisement of as to registration, 325; regulations of as to registration and education of medical students, 462; regulations for diplomas, etc., in public health, 494; regulations as to dental diplomas, 502; and immorality, 570; president's address, 1265; Mr. Marshall's bust, 1267; bacteriology and professional study, *ib.*; Apothecaries' Hall Ireland, *ib.*; illegal use of diplomas, *ib.*; amendment of the Medical Act, *ib.*; foreign preliminary examination, *ib.*; dental regulations, 1268; the Conjoint Board's Examination, *ib.*; registrars and the "Medical Register," *ib.*; disciplinary powers of universities, *ib.*; final examination, 1329; University of Edinburgh, *ib.*; University of Glasgow, *ib.*; misleading certificate to midwives, 1331; penal cases, 1331, 1332, 1334, 1337; midwifery diploma, 1334; registration of medical students, 1335; report of Pharmacopœia Committee, 1336; report of Students' Registration Committee, 1337; late registration, *ib.*; premature publication, *ib.*; restoration of names to the "Register," 1342, 1403, 1512; Congreve's balsamic elixir, 1382; newspaper reports, *ib.*; the minutes of, 1388
——— defence and organisation, 147
——— ethics. *See* Ethics
——— man, the, and the State, 237
——— officers, district, as parish councillors, 957; annual re-election of, 958; election of, 1087; the appointment of, 1408; criticism of treatment of patients by, *ib.*
——— officers of health and private practice, 92; insecurity of tenure of, 236; duties of under the Notification Act, 567; and public elementary schools, 878; qualifications of, 968; and their right of entry, 1151; personal visits by, 1153, 1282; the salaries of, 1261; and death registration, 1415
——— officers, Poor-law, superannuation allowances to, 1145, 1201
——— officers, workhouse, the salaries of, 452; instructions to by committee of guardians, 587; qualification of, 847; regulations for, 903
——— organisation and remuneration, 177
——— superintendents, Poor-law, superannuation of, 1390
——— treatment, Lord Coleridge on, 1388
——— service, proposed civil for Great Britain, 209
Médication, La, par L'Exercice, Dr. F. Lagrange, *rev.*, 594
Medicine, The Theory and Practice of, Dr. J. Y. Whittaker, *rev.*, 16; in China, 148; in Japan, 208; shorthand in, 230, 399, 455, 571, 1226, 1257, 1403; breadth of view in, 253; sculpture as a handmaid of, 397; psychological instruction in, 497; charity organisation and, 666; a universal language for, 716; as a profession, 753; as a career, 756; Clinical, Dr. J. S. Bury, *rev.*, 759; practice of in the Middle Ages, 1075; The Theory and Practice of, Dr. F. T. Roberts, *rev.*, 1316; grand old men of, 1446
——— man, conjurer, hypnotist, and doctor, 1189
Medicines, Chinese, a new field for the pharmacologist, 168
MEDICO-ETHICAL.—Competition for medical appointments, 46; a friendly societies medical association, *ib.*; supersession, 46, 182; circulars for children, 47; unqualified assistants and the question of covering, 104; change of address, *ib.*; who is responsible? *ib.*; an inconsiderate patient, 162, 678; fourpenny dispensaries, 162; newspaper puffs and advertisements, *ib.*; unprofessional conduct, 231; a delicate question, 231, 427; competition for medical appointments, 310; medication difficulties, *ib.*; an objectionable circular, 345; advertising, *ib.*; touting cards, 388; consultations and the subsequent cure of patients, *ib.*; friendly visits," 389; testimonials to tradesmen, *ib.*; stores and covering, *ib.*; general distribution of testimonials, 446; a supplanted practitioner, *ib.*; senior students and unqualified practice, 448; a curious complaint, 678, 900; St. John Ambulance lectures, 678; dentists and the visit of ceremony, *ib.*; coroners and doctors, 732; messages will be attended to, *ib.*; fee cards, *ib.*; a card, 787; attendance on families of medical men, *ib.*; substitute midwifery fees, 846, 1200; the Coventry Provident Dispensary, 846, 1018, 1345; consulting and general practitioners, 846, 1083, 1345; a local directory, 846; changing the doctor, *ib.*; a dissatisfied patient, *ib.*; a clue map, *ib.*; the ladies' friend, 900, 1019; another card, 900; holiday substitutes, *ib.*; absent friends, 901; surgery or dispensary, 953; midwifery substitutes, *ib.*; dentists and anæsthetists, 1018; the puff paragraphic, 1019; dispensary touting, 1082; a card advertisement, 1083, 1503; a benefit society, *ib.*; a supposed midwifery emergency, *ib.*; irregular consultations, 1084, 1345; signboards, 1084; an inconsiderate patient, 1047; professional secrecy, 1046; a new kind of midwife, 1210; unqualified assistants, 1210, 1279, 1460; visits of ceremony, *ib.*; consultation with qualified assistant, 1279, 1345; consultations, 1280; dispensary advertisements, 1345; an elastic introduction, 1407; club appointments, *ib.*; dispensary advertisements, 1460; the "Philanthropist" on paying patients, 1507; cards and advertisements, 1508; midwifery substitutes, *ib.*; "calling" by a newcomer, *ib.*; M.B.'s and the title of "Dr.," *ib.*; free attendance on medical students, *ib.*
MEDICO-LEGAL:—Action for libel by a midwife, 46; the Harness case, 104, 1345; wholesale chemists and unqualified medical practitioners, 104; Pharmaceutical Society *v.* Armson, 181; unqualified assistants and club practice, 162; damp walls, a nuisance, *ib.*; doctors' shops, *ib.*; an anxious mother, 163; legal birth and infanticide, *ib.*; medical evidence at inquests, 231; certificates in lunacy, 231, 564; bonds and contracts not to practise, 345; the admission of patients to small-pox hospitals, *ib.*; medical herbalists, *ib.*; employed and employed, *ib.*; guardians and pauper lunatics, 388; Irish dispensary medical officers and certificates in lunacy, 389; fees to medical witnesses, *ib.*; club fees, 389, 678; Alabaster *v.* Harness, 446; Wallsall Friendly Society and their doctor, *ib.*; prosecutions of quacks, *ib.*; house-surgeons and coroners' fees, 447; contracts not to practise, 447, 732, 1209, 1407; medical certificates for school children, 562, 623; illegal certificate of death, 563; Scarborough friendly societies and their medical officers, *ib.*; the "child's blessing," *ib.*; "no post-mortem," *ib.*; club tariffs, *ib.*; termination of contract with club medical officer, *ib.*; honorary officers of cottage hospitals and coroners' fees, 564; locum tenens and coroners' fees, *ib.*; the title of "Dr.," 564, 953; coroners' inquests, *ib.*; the treatment of lunatics, 623; payment of locum tenens, *ib.*; medical clubs in Australia, 677; unregulated midwifery, *ib.*; homœopathic medicines and the stamp duty, 732; narcotic soothing syrup, *ib.*; midwife's advertisement, *ib.*; salary of assistant dismissed for disobedience, 733; assistant practising in or near district of late employer, *ib.*; recovery of fees, *ib.*; vaccination grants and division of profits, *ib.*; adulterated drugs and spurious pharmaceutical preparations, 787; charge against a midwife, *ib.*; soda water, *ib.*; reception of lunatics as private patients, *ib.*; certification of pauper lunatics, *ib.*; use and power in prescriptions, *ib.*; recovery of midwifery fee, 787, 899; unqualified practice in South Africa, 846; liability for medical treatment of an illegitimate child, *ib.*; poison in "patent" (secret) medicines, 900; liability of police for fees, *ib.*; partnership accounts 901; the sale of poisons, 953; jurors and coroner's inquests, *ib.*; quacks and medical certificates, 1018; informal summonses to inquests, *ib.*; recovery of charges, 1019; an unfortunate case, 1082; doctors and societies, 1083; a death in childbirth, *ib.*; Irish dispensary medical officers and consultation, an important decision, *ib.*; school certificates, *ib.*; locum tenens and infectious disease, *ib.*; charge of negligence, verdict for the medical attendant, *ib.*; principal and assistant, 1147; lunacy certificates, *ib.*; practitioners and bonesetters, *ib.*; unqualified assistants, *ib.*; midwifery fees, 1210; the holding of inquests, *ib.*; prescribing chemists, *ib.*; the law of charitable uses in the colonies, 1279; partnership agreements, 1280; contracts with patients, *ib.*; non-attendant patients, *ib.*; a long bill, *ib.*; club arrears, *ib.*; police cases in Scotland, 1345; assistants and coroners' fees, 1407; partnership acts, *ib.*; prescriptions, *ib.*; medical evidence at inquests, *ib.*; purchase of practice, *ib.*; seizure of tinned food, 1461; assistants and legal fees, 1507; agreements with unlicensed practitioners, 1508; foreign degrees, *ib.*; receipt of fees by locum tenens, *ib.*
Mediterranean, winter cruises in the, 1442
Melbourne, correspondence from, 41, 1113; the British Pharmacopœia and Australian proprietary drugs, 41; annual report on the health of, *ib.*; criminal anthropology, 42; amputation at the hip-joint by Furneaux Jordan's method, *ib.*; further experiences with tuberculin as a diagnostic and therapeutic agent, *ib.*; adenoma of the ovary, *ib.*; presentation to Dr. J. E. Neild, 1143; a medico-legal case, *ib.*; Dr. Wolfe's ophthalmological clinic, *ib.*
Membrana tympani, the condition of in some head injuries, 981
Menstruation, the change of size of the cervical canal during, 70
Mental training in medical study, 750
Menzies, Surgeon J. D., a report on some recent cases of "malignant" Indian syphilis treated with thyroid extract, 1
Mercier, Dr. C., the criminal responsibility of the insane, 351; the prevention of insanity, 521; the status of assistant medical officers in asylums, 525; Lunatic Asylums, their Organisation and Management, *rev.*, 871
Merklen, Dr. P., Examen et Sémeiotique Cœur, *rev.*, 761
Merry, Rev. W., the medical profession and public opinion, 755
Mesquita, Dr. S. B., hospital appointments, 386
Metchinkoff, Dr. E., immunity in infectious diseases, 611; on cholera, 612
Methylated spirit drinking, 718
Metric system, the, in pharmacy, 260
Mickle, Dr. W. J., neurasthenia and its treatment, 524; the education of feeble-minded children, 531
Microbes, fossil, 432; murder by, 795; the Solicitor General on, 941; from sewer ventilating shafts, 1026
Middle Ages, anatomy and physiology in the, 1248
Mid-Renfrew, waterborne typhoid in, 943
Midwifery in the army, 682
Midwives, registration of, 28, 79, 101, 154, 156, 228, 229, 284, 370, 386, 792, 873, 952, 1015, 1080, 1145, 1208; and stillborn children, 1325; "covering" of, 1350; and syphilis, 1388
Migrainin, the composition of, 963
Militia appointments and promotions in medical staff of, 103, 390, 622, 788, 1017, 1082, 1147; the medical staff of, 622, 733, 900, 1344, 1407
Milk and typhoid infection, 570; Professor Soxhlet and the sterilisation of, 628; the boiling point of, 677; infected, spread of disease by, 956, 1408; sanitary protection of the traffic in, 1066, 1146, 1208; unsweetened condensed, 1246
——— food for infants, 705
——— jug, a "tell tale," 815
——— scarlatina, epidemic of at Blackheath,

Miller, Mr., thrombosis of lateral sinus, 71
—— Dr. A., obituary notice of, 344
Milligan, Dr. W., suppurative otitis media, 1162; excision of the ossicula auditus in chronic suppurative otitis media, 1168; turbinal varix, 1172; empyema of the nasal accessory sinuses, 1361
Millionaires and their doctors, 1028
Milne, Mr. J. B., hyperpyrexia, death in 15 hours, 1048
Missionaries, medical, and covering, 1414
Mitchell, Sir A., the retirement of, 1253
—— —— Brigade-Surgeon H., death of, 680
—— —— Dr. J. Weir. *See* Weir-Mitchell
—— Dr. T., scarlet fever as a sequel to diphtheria, 1413
Mitchinson, Surgeon-Lieutenant-Colonel, prosecution to, 1344
Mitford and Launditch, nursing at the workhouse infirmary of, 1495, 1500
Modlin, Dr. J. G., the Liverpool Victoria Legal Friendly Society, 627
Moir, Mr. E. W., the treatment of caisson disease, 1132
Mole, fleshy, 1178
Monaco, medicine at, 165
Mond, Mr. L., and the endowment of molecular physical research, 94
Monks, medical, in New York, 1219
Mooney, Mr. J. J., of carbolic acid poisoning, 986
Moore, Dr. E. H., cocaine in labour, 1127
—— —— Dr. L., Welsbach burners, 1286
—— Dr. W. W., death of, 1326; obituary notice of, 1409
Moreton, Dr. J. E., parish councils and paid officers, 1152
Morgan, M., on whooping-cough, 406
—— Mr. G., the antitoxin treatment of diphtheria, 543; varicella bullosa, 701
Morison, Mr. R., operative treatment of perforating ulcer of the stomach and intestines, 861; the anatomy of the right hypochondrium and special reference to operations for gall stones, 968; on gall stones, 1312
Moritz, Dr., pyoktanin in malignant growths, 1177
Morocco, small-pox in, 1495
Morphine and atropine, 1459
Morphinomania in the medical profession, 551; in Paris, 988
Morris, Mr. M., the management of eczema, 845; on acne vulgaris, 891
Morticolia, 863
Mortimer, Dr. J. D., anthrax in man, 292
Morton, Mr. A. S., Refraction of the Eye, etc., *rev.*, 1052
—— —— Mr. C. A., a case of sarcoma of the testis, 680; primary malignant disease of the glands of the groin, 1177
Mortuaries in London, 1191
Mother infected with primary syphilis from her own syphilitic child, 1236
Motion, Mr. J. R., barrack schools inquiry, 950
Mott, Dr. F. W., on cerebellar degenerations, 642; the pathology of a case of amyotrophic lateral sclerosis, *ib.*
Moullin, Dr. C. W. M., Sprains, their Consequence and Treatment, *rev.*, 20; on the treatment of enlargement of the prostate by removal of the testes, 976
Mouth, accessory thyroid gland projecting into the, 1234; ulcers, 1374
Muchleck, Dr., antitoxin treatment of diphtheria, 1270
Muir, Mr. R. D., hospital appointments, 386
Mules, Dr. P. H., the antitoxin treatment of diphtheria, 1339
Mules's operation, cellulitis following, 397
Mumby, Dr. B. H., on diphtheria and insanitation, 316
Munro, Dr. A. C., Scotch Health Bills in the House, 158
Murder by microbes, 795
Murderers, a collection of, 87
Murdoch, Dr. B., croupous rhinitis, 71
—— —— Mr. C., pay wards at the Great Northern Central Hospital, 1505
Murphy, Dr. J., rupture of male bladder successfully treated by abdominal section and suture, 978; a successful case of splenectomy, 979; on the induction of labour, 1421; Inversion and taxis in the hysterical obstruction, 1511
—— Mr. S. F., seasonal prevalence of epidemic diseases, 1385
Murray, Mr. R. W., treatment of deformities of lower extremities, 407; the treatment of rickety deformities by means of osteoclasis, 413; cerebral abscess, 922; antitoxin treatment of diphtheria, 1396
Muscles, paradoxical contraction of under induction coil stimulation, 1040; of limbs and trunk, primary atrophy of, 1103
Muse, the zoological, 1287
Museum, the annual, 414
Mushrooms, edible and poisonous, 658; books on, 1026
Muskett, Mr. P. E., Prescribing and Treatment in the Diseases of Women and Children, *rev.*, 990
Mussels, poisoning by, 960
Musser, Dr. J. H., A Practical Treatise on Medical Diagnosis, *rev.*, 1244
Myaki, Dr., death of, 721
Mycosis (granuloma) fungoides, a case of, with a premycotic stage of universal dermatitis, 692; a case of, 690; tonsillar, 921
Myeloid cells in malignant disease, 1049
Mygind, Dr. H., Deaf-mutism, *rev.*, 990
Myomata, uterine, treatment of, 921
Myrtle, Dr. A. S., the management of eczema, 848
Myxœdema, Cretinism, and the Goitres, with some of their Relations, Dr. E. T. Blake, *rev.*, 1431

N.

Nail curette, artificial, 537
Nairne, Dr. S., extrauterine gestation, 130
Nancy, foreign lady students of medicine at, 941
Napier, Dr. A. D. L., Chelsea Hospital for Women, 443, 620
Napper, Mr. A., an improved system of ventilation, 706; obituary notice of, 1211
Nash, Mrs. L. F., inversion of uterus due to fibroma, spontaneous reinversion after removal, 168
—— Mr. W. G., four cases of erythema nodosum occurring in one family within ten months, 16
"Nature," the fiftieth volume of, 1262
Naubeim, the treatment at, 906; the treatment of chronic diseases of the heart by baths and gymnastics as practised at, 1045
Navy, Royal, promotions and appointments in the medical staff of, 103, 160, 230, 389, 427, 514, 561, 622, 677, 733, 788, 845, 899, 952, 1016, 1082, 1279, 1344, 1406, 1460, 1507; regulations for candidates for the medical staff of, 499; the visiting cards of medical officers of, 900; temperance in the, 1017; nursing and the medical service of, *ib.*; successful candidates for medical staff of, 1209; physical fitness of candidates for medical staff of, 1286
Neale, Dr. R., the use of tannin for nasal polypi, 738; concurrent vaccination and measles, 1156; lemon juice as a hæmostatic, 1218; gaseous applications to mycoses, 1415
Neck, epithelioma tous cyst of, 1175; removal of large sarcoma from, 1370
Needs, Mr. J. T., sewer ventilation, air in sewers, 303; on the movement of air in sewers, 304
Neil, Dr. J., shorthand in medicine, 230
Neild, J. R., presentation to, 1143
Neilson, Dr., presentation to, 109, 892
Nerves, cranial, the central connections and relations of 643; and modern life, Professor T. C. Allbutt on, 1191
Nesbitt, Dr. W. P., death of, 230
Netley, close of session at, 340; pass lists at, 390
Neuralgia, orbital, 1371
Neurasthenia and its treatment, discussion on at Bristol, 522; the saddle and, 1351
Neuritis (Sciatic), its Pathology and Treatment, Mr. R. Simpson, *rev.*, 133; multiple in a child, 407; multiple, fatal on the sixth day, 987, 989; peripheral, hypodermic injections of strychnine in, 1425
Neuroses, common, Dr. J. F. Goodhart, *rev.*, 132
Neve, Dr. E. F., clinical remarks on 65 cases of operation for vesical calculus, 980
New South Wales, insanity in, 791; the Medical Bill in, 1152; the slaughtering of cattle in, *ib.*; the subsidised hospitals in, 1437
"New woman," the, a new light on, 548
New York, the Pasteur Institute at, 778; medical monks in, 1219
New Zealand, correspondence from, 99; the medical school at Dunedin, *ib.*; the medical congress at Napier, *ib.*; the sanitary accommodities of a lady mayor, *ib.*; the centre of the St. John Ambulance Association at, *ib.*; deaths of Dr. Henry and Dr. Patrick, *ib.*
Newell, Dr. P., "tennis" or "golf" arm, 291
Newington, Mr. C. W. H., the antitoxin treatment of diphtheria, 1128
Newman, Dr. D., antitoxin treatment of diphtheria, 1483
Newport, I.W., typhoid fever at, 1066, 1129, 1327, 1391
Newquay as a holiday resort, 206; the water supply of, 507
Newsholme, Dr. A., rates of mortality in artisans' block dwellings, 613
Newton, Dr. J., epidemic muscular rheumatism, 692
Newton, the nursing at the workhouse infirmary of, 880
Newton Abbott and the village mason, 144; the scandals at the workhouse of, 209, 371, 882, 851; separate beds for children at the workhouse of, 1362
Nicholson, Mr. R. H. B., perforative ulcer of stomach treated by laparotomy, stitching, and washing out, 982, 1426
Nile reservoirs, 210
Nitrate of silver, removal of stains of, 291
Nitze, Dr. M., Atlas of Cystophotography, *rev.*, 781
Nodules of doubtful nature, 1110
Nolan, Dr. M. J., the insane in workhouses, 1192
"Non-combatants" in action, 1127
Noot, Dr. R. H., the criminal responsibility of the insane, 353
Norman, Dr. C., on the prevention of insanity, 520; the status of assistant medical officers in asylums, 526
Norris, Mr. G., the criminal responsibility of the insane, 353
North, Dr. T., cycling and its dangers, 845
Northrup, Dr. W. P., apparatus for prolonged artificial forcible respiration, 987; the treatment of acute laryngeal stenosis, 1037
Norway, Mr. N. E., climate of Cornwall, 683
Norwell, Mr. J. S., hereditary malformation of the hands and feet, with operation on one subject, 1
Nose, cystic polypi of the, 1365
Nosophobia and hypochondriasis, 810
Notes, Literary, 28, 83, 320, 386, 556, 656, 712, 768, 816, 936, 996, 1087, 1141, 1202, 1258, 320, 1384, 1441
Nothnagel, Dr. H., Handbuch der Arzneimittellehre, 1141
Notification of infectious disease, 147, 395, 903; of small-pox, 233; personal attendance and, 586; the cost of, 624; statement of charges for, 679; dual, 679, 736; anomalies of, 735; of successive cases in the same house, 736; and school attendance, 790; compulsory, the cost of, 903; compulsory minus isolation, 1281; and removal, 1282
Notter, Professor J. L., ventilation of sewers, 307; Hindu pilgrimages and their bearing on cholera, 366; on examination, 384; on diphtheria and insanitation, 3[illegible]; purification of potable water, 383, 354; origin and spread of enteric fever, 355; Hygiene, *rev.*, 936
Nottingham, vaccination at, 624; small-pox and vaccination in 1893, 626
Noyades, the, in France in 1794, 722
"Nucleuses" and medical aid societies, 784
Nurse, a courageous, 765; trained, what is a?
Nurses, soldier, 144; boycotting the, 207, 309; the supply of, 828; certificates and diplomas of, 957; Poor-law advertisements for, 1009; a uniform training for, 1088; and attendants, 1161; lectures for, 1496
Nursing at provincial workhouses and infirmaries, 24, 29, 56, 80, 90, 111, 146, 160, 167, 202, 209, 264, 272, 325, 339, 367, [illegible] 78, 397, 428, 436, 508, 543, [illegible] 628, 650, 681, 693, 698, 671, 682, 716, 744, 841, 851, 864, 766, 772, 794, 800, 810, 830, 861, 1[illegible] 1084, [illegible] 492, 1195, 1317, 1330, 1388, [illegible] in India, 1026; pauper in [illegible] Wards
Nuttall, Dr., immunity in infectious diseases, 1[illegible]
Nyland, Mr. T., Report on the Social Condition of the People, *rev.*, 872

O.

Obesity, thyroid tabloids in, 42, 55, 101, 157; treatment of by massage, 55; dietetic treatment of, 1[illegible]
Obituary notice of, Mr. J. Clay, 52; Dr. W. J. Little, 108; Mr. J. Brockwell, *ib.*; Dr. G. E. Fenwick, 159; Mr. J. C. Smith, 230; Dr. A. Miller, 344, Dr. J. Bancroft, 385; Professor Rollet, 452; Dr. B. N. Baker, 567; Mr. T. Odell, 568; Professor von Helmholtz, 624; Dr. W. A. Greenhill, 734; Dr. W. D. Lauder, *ib.*; Deputy-Inspector-General G. E. Blenkins, 780; Dr. O. W. Holmes, 839; Mr. F. V. Bunch, 844; Dr. W. J. Lunn, *ib.*; Dr. H. M. Madge, *ib.*; Inspector-General Mark Style, 902; Dr. B. W. Hall, 959; Staff-Surgeon H. T. S. Beveridge, *ib.*; Mr. C. E. Thompson, 1022; Mr. R. McNicoll, *ib.*; Dr. O. Sturges, 1084; Mr. W. J. Roeckel, 1055; Mr. A. Napper, 1211; Surgeon-General J. Fraser, 1212; Dr. W. W. Moore, 1409; Dr. F. B.

Hawkins, 1410; Dr. W. Walker, 1411; Dr. J. W. Taylor, *ib.*; Mr. P. W. Rowe, 1462; Mr. J. Wilkes, *ib.*
Obstetrical problem, an, 1260
Obstruction, intestinal, three cases of treated by laparotomy, 66; intestinal inversion and taxis in, 1174; of the bowels caused by an incompletely reduced inguinal hernia, 1363
O'Callaghan, Mr. R., the operative treatment of perforating ulcer of the stomach and intestines, 865; improved thermo-cautery, 873; radical cure during operation for strangulated hernia in the aged, with some practical remarks thereon, 971
O'Connor, Mr. E. M. H., a remarkable case of intussusception, 123
Ocular. *See* Eye
Odell, Mr. T., obituary notice of, 568
Oergel, Dr. K., death of, 1024
Œsophagus, polypoid tumour of, 869; simple stenosis of treated by œsophagectomy, 973; stricture of the, 1368
Œuvre, Ophtalmologiques de Thomas Young, M. Tscherning. *rev.*, 871
Offices, multiple sanitary, 233
Official, permanent, what is a? 1262
Ogilvie, Dr. G., supposed exception to Colles's law, 1404
Ogle, Dr. C., infarcts in the liver, 1430
Ogston, Dr. A., formation of a new socket for an artificial eye, 1228
O'Hagan, Mr. J., J., accidental gangrene of vulva, 1108
Okehampton, nursing at the workhouse infirmary of, 739; accommodation for lunatics at, 906
Oldham, the nursing at the workhouse infirmary of, 376
Oliphant, Dr., fibrous diaphragm in vagina, 130
Oliver, Dr. J., on a peculiar crackling (emphysematous) sensation in the vaginal canal, 805
——— Mr. J. W., The Student's Introductory Handbook of Systematic Botany. *rev.*, 131
——— Dr. T., incompetency of the pulmonary artery, 7
Ollier, Dr. L., Régénération des Os et Résections sous-periostées, *rev.*, 20; decoration of 28
Omentum, lymphangiectasis of treated by abdominal section, 532
Openshaw, Mr. T. H., hospital advertisements, 1208; compression of skull, 1310
Operate when in doubt, 87
Operations, mutilating, on old subjects, 1108
Ophthalmia, sympathetic of the right eye, which showed itself 18 days after a kick in the left eye, 70; the diagnosis of the three chief forms of—the purulent, the catarrhal, and the granular, 589; school, 792; history of an outbreak of in a good class boarding school, 1104
Ophthalmology, European in Persia, 539; use of certain new drugs in, 597
Opium, abuse of in Australia, 395; the report on by the BRITISH MEDICAL JOURNAL, 510, 516, 572, 683, 851; a case of poisoning by, 807
Oration, the Harveian, 853
Orbit, five cases of plastic cellulitis of, 1428; hydatid cysts of the, 1429
Ord, Dr. W., subdural hæmorrhage in scurvy, 1430
Ormerod, Dr. J. A., ataxia and the diseases of which it is a symptom, 1289
Orr, Dr. F. L., beri-beri in Dublin, 950
Orth, Professor J., Pathologisch-anatomische Diagnostik nebst Anleitung zur Ausführung von Obductionen sowie von pathologisch-histologischen Untersuchungen, *rev.*, 534
Os, rigid in parturition, a new and speedy method of dilating, 1111
Osler, Dr. W., pyrexia and its treatment, 1097
Ossicula auditus, excision of the in chronic suppurative otitis media, 1168
Osteoclasis, the treatment of ricketty deformities by means of, 413, 560
Osteoma of the conjunctiva, 1429
Osteomalacia, case of, 989
Otitis, 649
Otitis media, chronic non-suppurative, with imperforate membrane, the prognosis of, 1157; chronic suppurative, excision of the ossicula auditus in, 1168
"Outbreak" of disease, what is it? 88
Outlines of Medical Treatment, Drs. S. and W. S. Fenwick, *rev.*, 20
Ovaries, atrophy with collapse (cirrhosis), fibroid degeneration, and angioma of, 111
Ovariotomy on a patient in her 85th year, 67; in general surgical practice, 976
Ovary, adenoma of, 42
Owen, Dr. I., mental training in medical study, 750
Oxygen, splenic leucocythæmia treated by inhalation of, 1240

P.

Paddington, cremation in, 960
Paget, Sir J., inaugural address to the Abernethean Society, 874; the Beaven Rake memorial, 1208
——— Mr. S., strangulated ventral hernia, 363; recto-vesical tuberculous fistula, *ib.*; malignant disease of larynx, 1175; acute septic epiphysitis, *ib.*
Paignton, the water supply of, 509
Pain in animals, 208
Palate, soft, perforation of in scarlet fever, 1056; cleft, recurrent and severe hæmorrhage after the operation for, 1174; tumour of the, 1430
Paludism, Dr. A. Laveran, *rev.*, 924
Panas, Dr. Ph., Traité des Maladies des Yeux, *rev.*, 73
Pancreas, sheep's, notes on diabetes treated with extract and by grafts of, 1303; sanguineous cyst connected with the, 1362
Pancreatitis, acute, 869
Papillomata and small growths, guillotine for, 1415
Paralysie Générale (La), Drs. V. Magnan and P. Sérieux, *rev.*, 536
Paralysis, of the ocular muscles, a few rules facilitating the diagnosis of, 585; infantile, the morbid anatomy of, 643; in children, an epidemic of, 1233
Paris, correspondence from, 41, 99, 155, 228, 384, 442, 557, 617, 674, 728, 843, 896, 947, 1012, 1080, 1143, 1204, 1274, 1320, 1401, 1504; general news from, 41, 155, 385, 558, 618, 729, 843, 896, 947, 1080, 1143, 1204, 1274, 1320, 1401, 1504; the Congress of Public Assistance at Lyons, 1274; new Chemists and Druggists Bill, *ib.*; hospital patients and their prayers, *ib.*; accidents at the funeral of the late President, *ib.*; the Hospital for Sick Children, *ib.*; pseudo-tuberculosis caused by aspergillus, 99; hospital organisation, *ib.*; congress for the protection of infantile life, *ib.*; hospital dressers and the law courts, *ib.*; the late M. Carnot, 155; ringworm, *ib.*; hospitals and the Pari Mutuel, *ib.*; illegal practice of medicine, *ib.*; the water supply of, 228; medical aid for deep sea fishermen, *ib.*; French hospital at Constantinople, *ib.*; new names for the streets of, 348; the disinfection of rooms, 384; the birth of private initiative in France, *ib.*; the operating theatre at La Pitié, *ib.*; the Hydrotherapeutical Congress, 442; the Congress of Dermatology and Syphilography, *ib.*; the slaughtering of animals, *ib.*; the Furtado-Heine Dispensary, *ib.*; statistics of infant mortality, *ib.*; typhoid fever, *ib.*; typhus and its propagation, *ib.*; army dressing pack, *ib.*; rabies, *ib.*; propagation of typhus, 557; Dr. Lucas-Championnière on bicycling, *ib.*; food for the tropics, *ib.*; the Lyons hospitals and private initiative, 558; examinations and brain trouble, *ib.*; disinfecting for tetanus, *ib.*; a public-spirited municipal councillor, *ib.*; deaths from dysentery, *ib.*; the exhibition at of 1900, 605; wealthy provincial hospitals, 617; certification of lunacy, *ib.*; Caserio's body, *ib.*; anthrax and the disinfection of hides, *ib.*; tariff for the disinfection of houses, *ib.*; hydrophobia and stray dogs, *ib.*; poisoning by crayfish and by mushrooms, 618; smoke abatement in, 627; the alleged tainted food, 674; sanitary degrees, *ib.*; entomology and jurisprudence, *ib.*; law and medicine, 728; improvements in ambulance stretchers, 729; the hereditary influence of alcohol, *ib.*; bicycling for women, *ib.*; asylums for drunkards, *ib.*; unhealthy houses, *ib.*; poisonous lobsters, *ib.*; free medical assistance, 730; Exhibition in favour of Dr. Lafitte, 785; charges for disinfection, *ib.*; the treatment of idiots, *ib.*; the feeding of infants, *ib.*; Dr. Yersin on the plague at Hong Kong, *ib.*; anthropometry as the criminal's safeguard, 843; cigarette cramp, *ib.*; a doctor punished for a false certificate, *ib.*; consanguinity of parents and disease in the offspring, 896; punishment for unqualified practice, *ib.*; medical students and military service, *ib.*; the Saint-Paul prize for a cure for diphtheria, *ib.*; athletic sports at the International Exhibition of 1900, *ib.*; the management of idiots in, 928; Congress of the French Surgical Association, 947; medico-military manœuvres, *ib.*; the management of infectious diseases of children in, 993, 1075; morphinomania in, 998; proposed inquiry as to lunatic asylums, 1012; overcrowding in, *ib.*; the cost of medical aid, *ib.*; free from small-pox, *ib.*; the case of Dr. Lafitte, *ib.*; a "dermographic" malingerer, *ib.*; unveiling the statue of Claude Bernard, *ib.*; professeurs agrégés, 1080; opening of the dental school at, *ib.*; the universal exhibition of 1890 and athletics, *ib.*; the new pharmacy law, 1143; the suppression of local fairs, *ib.*; antivaccination feeling at Mazarguis, *ib.*; the French Congress of Internal Medicine, *ib.*; the Commission on unhealthy dwellings, *ib.*; first aid in French towns, 1204; extra-academic teaching in, *ib.*; sterilised milk and long voyages, 1205; Professor Raymond at the Salpêtrière, 1274; paying patients in the hospitals of, *ib.*; the Association Médicale Mutuelle de la Seine, *ib.*; medical assistance in rural districts, *ib.*; changes in the staff of the hospitals of, 1275; medical assistance and the sick poor, 1320; insufficient accommodation in the medical schools of, 1401; epidemics in France and Algiers, *ib.*; "frigotherapy," *ib.*; preservation of biscuits, *ib.*; goats and their milk, *ib.*; serotherapy, *ib.*; the new Pharmacy Bill, 1402; provident societies and medical men, *ib.*; medical officers of the army and navy and the notification of disease, *ib.*; new diphtheria services in the hospitals of, 1504; cheap dwellings, *ib.*; sanitary improvements in, *ib.*; the protection of infants, *ib.*; baths in the schools of, *ib.*; meeting of medical syndicates, *ib.* proposed asylums for inebriates, *ib.*
Parish Councils and sanitary reform, 937; and paid officers, 1152, 1194; the sanitary duties of, 1324
Park, Dr. W. H., made a mandarin, 177
Parker, Mr. C. A., disease of tongue and soft palate (for diagnosis), 1311; Post-nasal Growths, *rev.*, 1433
——— Mr. R., chronic tetanus treated by antitoxin, 1178
——— Dr. W., pay wards at the Great Northern Central Hospital, 1458
Parkin, Dr. A., the treatment of spinal caries and its results by laminectomy, 699
PARLIAMENT:—Newton Abbott Workhouse, 47; the army medical establishments, *ib.*; the medical profession and the Notice of Accidents Bill, 105; prevention of rabies, *ib.*; food adulteration, *ib.*; fever at Malta, *ib.*; cholera precautions, 163; habitual drunkards, *ib.*; canine rabies, 232; the massage question, *ib.*; precautions against cholera in Ireland, *ib.*; the pauper children inquiry, 345, 388, 511; medical examination of military candidates, 388, 450; Mr. Hopwood and vaccination, 450; Chelsea Hospital for Women, *ib.*; the BRITISH MEDICAL JOURNAL reports on infirmaries of provincial workhouses, 511
Parrott, Mr. T. G., St. John ambulance work, 1145
Part, Mr., on diphtheria, 1312
Partnership, terms of, 516; arrangements for 1218
Pasteur, M., patients for, 498, 960; the health of, 1447
Pasteurism in Roumania, 55; in Vienna, 375; at Marseilles, 583; at New York, 770; and agriculture, 790
Patents, the medical profession and, 732
Pathologica Historica e Geographica, e Nosologia das Boubas do Maculo e Dracontiase no Brazil, Dr. J. F. da S. Lima, *rev.*, 1181
Pathologie (Die) und Therapie der Nierenkrankheiten. Dr. S. Rosenstein, *rev.*, 74; und Therapie der Perityphlitis, Dr. sonnenburg, *rev.*, 814
Pathologish - anatomische Diagnostik nebst Anleitung zür Ausführung von Obductionen sowie von pathologisch-histologischen Untersuchungen, Dr. J. Orth, *rev.*, 534
Pathology of insanity, 549; the racial factor, 721
Patient, a hospital, 1028
Patients, general hospital, temporary mental disorders in, 1325, 1343, 1389
Patterson, Dr. J., antitoxin treatment of diphtheria, 1395
Paul, Mr. F. T., carcinoma of an axillary breast, 1309; two cases of sarcoma of larynx a year after operation, 1314; amputation at the hip-joint for sarcoma, 1670; axillary cancer, 1501
——— Dr. J. E., acute pancreatitis, 869
Paupers, supply of intoxicants to, 491; infectious sick and sanitary authorities, 1281; reports of official neglect or ill-treatment of, 1318
Pavy, Dr. F. W., on a new departure in diabetes, 3, 61; the Beaven Rake memorial, 1208
Pawned clothes and disease, 679
Payn, Mr. J., on a medical man as a companion, 765

Payne Dr. J. F., On Seborrhœa and its Consequences, *rev.*, 133; on acne vulgaris, 691
Peachey, Mr. G. C., the new pharmacy, 1206, 1504
Pearse, Mr. F., the management of eczema, 848; on the induction of labour, 1422
Peculiar People, the, 1247
Pecl, Mr., Mr. Shaw Lefevre and, 1063
Pegler, Dr. L. H., suppurative otitis media, 1182
Pemberton, Professor O., the Bradshaw lecture, 1398
Pemphigus, acute (?) a case of, 1427
Penberthy, Professor, pain in animals, 208; woolsorters' disease, 1207
Penis, double, case of, 984
Pensions, under the Civil List, 32
Penzance, nursing at the workhouse infirmary of, 1501
People, Report on the Social Condition of the, Mr. T. Nyland, *rev.*, 872
Pepsin, Dike's, 650
Percussing the professor, 1153
Perculeur, a simple, 707
Peritonitis, pelvic, 130; diffuse septic, the surgical treatment of, 919
Perkin, Dr. W. H., jun., Organic Chemistry, *rev.*, 1432
Permewan, Dr. W., suppurative otitis media, 1183; laryngeal paralysis in chronic nervous disease, 1179
Perris, Mr. G. H., infant mortality a disappointment, 1277
Perry, Dr. M., a protest from the fens, 627
Persia, European ophthalmology in, 539
Peterborough, refusal to admit BRITISH MEDICAL JOURNAL commissioner to workhouse of, 992
Phagocytosis, cancer and, 639
Pharmaceutical specialities, 1245
Pharmacology and therapeutics, Dr. J. B. Bradbury on, 915
"Pharmacopœia," the British and Australian indigenous drugs, 11; the British, proposed extension of, 375; the British and Imperial needs, 656, 726; the British, revision of the, 1326, 1350
Pharmacy, the metric system in, 260; the new, 1013, 1081, 1144, 1206, 1218, 1278, 1405, 1504
Phenacetin, drawbacks of, 1444
Philipps, Dr. S. K., on the prevention of insanity, 520; the status of assistant medical officers in asylums, 684, 738
Phillips, Mr. C. M., gangrene of the vulva following labour, 13
——— Mr. E. P., nursing at Haverfordwest Workhouse, 141
——— Mr. J. A., the antitoxin treatment of diphtheria, 1072
——— Dr. W. F., health assurance, 267
Philosophy, Natural, Elementary Treatise on, M. A. P. Deschanel, *rev.*, 813
Philpots, Dr. J. R., microphone stethoscope, 1350
Phlebitis, puerperal pelvic cellulitis from, 1113
Phosphorus poisoning, the prevention of, 668
Photomicrography, Practical, Mr. A. Pringle, *rev.*, 367
Phthisis, notification of, 108, 888; chronic, winter climate for, 167; early climate for, 682; the serum treatment of, 718, 886; the contagiousness of, 1250, 1415; the influence of heredity on, 1364, 1512; home for patient suffering from, 1414
Physician, the title of, 570, 682, 850
Physician's Wife (The), Mrs. E. M. Firebaugh, *rev.*, 72
Physiology for Beginners, Professor M. Foster and Dr. L. E. Shore, *rev.*, 1243; and anatomy in the Middle Ages, 1248
Picric acid, a saturated solution of, 570
Pierse, Mr. T., Irish dispensary doctors, 156
Pigments, urinary, 455
Pilgrimages, Hindu, in Bengal, their seasons and sites and their bearing on epidemic cholera, 307, 907
Pilgrim ships, the overcrowding of, 805
Pilgrims and cholera, 1496
Pills, Carter's "little liver," 1511
Pilocarpin, four cases of labyrinthine disease treated by, 1256
Pilules and pellets, 1263
Piper, Dr. H., Zur Aetiologie der Idiotie, *rev.*, 1373
Piperazin, 850; the value of as a solvent of uric acid stones in urine, 1426
Pitt-Lewis, Mr. G., the criminal responsibility of the insane, 427, 441
Placards for infected apartments, 1017
Placenta prævia complicated by double pneumonia, 167
Plague, the, at Hong Kong, 32, 89, 148, 201, 423, 539, 560, 786; the microbe of, 324; the bacillus of, 369; in the East, 615; racial immunity to, 1392
Plaistow, diphtheria at, 1023
Plant world, the, 56
Plants, misunderstood, 908
Plasmodia of malarial fever, 16
Pleurisy, adhesive, following severe burn, 1178
Plymouth, nursing at the workhouse infirmary of, 538, 548, 682, 853, 1122; the workhouse and guardians of, 951
Pneumonia, contagious, three cases of, 125; double, placenta prævia complicated by, 167; embolic, stenosis and endoarteritis of the pulmonary artery a case of, 1099
Pneumothorax, death from after tracheotomy, 1405
Pocketbook, the Health Officer's, Dr. E. F. Willoughby, *rev.*, 533
Poisoning, accidental, 94; by ammonia, 510; by carbolic acid, 774, 867, 918; by opium, 807; by strychnine, 808, 1156; by mussels, 960; by one ounce of chloral hydrate, recovery, 987
Poisons, careless supply of by chemists, 94; illegal sale of, 515
Polak, Dr. J., disease and water supply, 613
Politics, and asylums, 1216; and pilules, 1263
Pollock and Bellamy memorial, the, 1091, 1246
Polypi, nasal, treatment of 55; tannic acid in 571, 738; nasal, Graves's disease and, 1110; cystic of the nose, 1365
Pook, Mr. W. J., a plague of fleas, 1414
Poona, enteric fever at, 274
Poor-law annual expenditure, 395
Pope, the, health of, 1498
Pope, Dr. C., on diphtheria, 1177, 1312
——— Dr. F. M., pyrexia and its treatment, 1098
Poplar, diphtheria in, 956
Population, student medical, 1446
Porro's operation, successful case of, 1314
Port of London, the sanitary authority of, 395
Portfolio, the "expandum," 815
Portland Town, the outbreak of small-pox at, 440
Portugal, notification of infectious diseases in, 109; medical graduation in, 709; antitoxin treatment of diphtheria in, 1121
Postal orders, warning as to, 1468
Post-graduate study, 492; vacation courses, 690; course, the London, 772, 830
Post-nasal Growths, Mr. C. A. Parker, *rev.*, 1433
Potter, Dr. G. W., pay wards at the Great Northern Central Hospital, 1275
Pouch, pharyngeal, 1431
Powell, Dr. R. D., on functional diseases of the heart 1094; pyrexia and its treatment, 1097
——— Dr. W. W., a warning, 628
Power, Mr. D'A., treatment of tuberculous disease of the joints in children, 411; on the value of bursal enlargements as indications of incipient tuberculous arthritis, 412; an experimental investigation into the causation of cancer, 638; recurrent and severe hæmorrhage after the operation for cleft palate, 1174
Practice, unqualified, and the British Medical Association, 44; the perils and responsibilities of, 1128
Practitioner, general, no promotion for the, 740, 808; the trials and blessings of, 968
Practitioners, British, abroad, 841; female in India, 790; medical and chemists' shops, 1415
Pregnancy, tubal, the diagnosis of before rupture of the tube, 291, 456; hernia in, 516; conjoint true, and molar, 808; late, 1090, 1218; swelling of external genitals in, 1090
Prescribing and Treatment in the Diseases of Women and Children, Mr. P. E. Muskett, *rev.*, 990
Prescriptions, select and pharmaceutical notes, 1250
Presentation to Dr. J. J. de Z. Marshall, 23; Dr. E. S. Tait, 89; Dr. Neilson, 109, 802; Dr. W. Alexander, 109; Dr. B. Rogers, 139; Dr. T. D. Griffiths, 326; Dr. J. A. Mackenzie, *ib.*; Dr. J. Brown, *ib.*; Dr. Slader, 436; Dr. and Mrs. Wilmot, 440; Dr. H. T. Benson, 680; Dr. J. Anderson, 791; Mr F. H. Ward, *ib.*; Dr. J. Johnston, 792; Dr. Waters, 856; Dr. J. Shives, 986; Mr. Joseph White, 998; Mr. E. Buxton, 1023; Dr. Sophia Jex Blake, 1098; Dr E. Wills, 1117; Dr. Kitasato, 1127; Dr. J. E. Neild, 1143; Dr. A. Ransome, 1152; Professor Zakharin, 1258; Surgeon-Lieutenant-Colonel Mitchinson, 1344; Dr. D. T. Hoskyn, 1388; Dr. S. Boake, 1465; Mr. G. A. Ferraby, *ib.*; Professor W. R. Smith, *ib.*; Dr. C. C. Gibbes, 1510
Press, the lay, and epidemic skin disease, 1091, 1331
Prichard, Mr. A., and the Bristol Eye Dispensary, 269
Priestley, Dr. James, case of acute pemphigus (?), 1427
Priestley, Dr. Joseph, some lessons to be learnt from an epidemic of small-pox in an ill-vaccinated community, 358
——— Sir W., honours to, 1199
Prifysgol Cymru (*See* University of Wales)
Primer of Hygiene, Dr. E. S. Reynolds, *rev.*, 1244
Pringle, Mr. A., Practical Photomicrography, *rev.*, 367
——— Dr. J. J., case of actinomycosis involving the skin extensively, 1108
——— Brigade Surgeon-Lieutenant-Colonel R., Professor Crookshank's evidence before the Vaccination Commission, 137; ventilation of sewers, 307; the seasons and sites of Hindu pilgrimages in Bengal, and their bearing on epidemic cholera, 307, 309; on cremation, 314; on diphtheria and insanitation, 316; diarrhœa in 1893, 318; the storage of rain water for potable purposes, 354; the filtration of potable waters, *ib.*; the aerial convection of small-pox, 380; notes on an outbreak of bubonic plague in the British Ghurwal Himalayas in 1894, 361
Prison Medical Service, regulations for admission to, 500
Prize essays, 167, 795, 1156, 1415, 1449, 1509, 1511
——— the Riberi, 738
Problem, an obstetrical, 1260
Profession, the medical, and patents, 732; the medical, the public and the medical charities, 754; the medical and public opinion, *ib.*
Professor a, and small-pox, 90; percussing the, 1153
Prostate, iodide of potassium in hypertrophy of, 88; treatment of enlargement of by removal of the testes, 927
Prostatectomy, suprapubic, or McGill's operation, 63
Pruritus ani, treatment of, 347, 455, 1236; after erysipelas, 1286
Pseudo consultants, 580
Psoriasis, effects of thyroid extract in 11; the treatment of, 697
Public, the, scientific investigation and, 35
——— body or institution, what is a? 1151
——— health, health of English towns, 18, 107, 163, 232, 289, 341, 394, 451, 564, 623, 678, 735, 789, 847, 902, 954, 1021, 1086, 1150, 1215, 1281, 1346, 1407, 1461; health of Scotch towns, 18, 107, 163, 233, 289, 344, 394, 452, 565, 623, 678, 735, 790, 847, 903, 954, 1022, 1086, 1151, 1215, 1281, 1346, 1407, 1461; vital statistics of London district, 288, 1020; the Registrar-General's quarterly return, 289, 1020; English urban mortality, 393, 955; zymotic mortality in London, 450, 1149; instruction and laboratory classes in, 497; the and the weather, 504; a string of questions, 679; public abbatoirs and, 958; books on chemistry and bacteriology for the diploma in, 1026
Pudding powder, Remy's, 706
Pudsey, lead poisoning at, 1509
Puffin Island, report of biological station at, 221
Pulse tension, true and spurious, the best transfer as an easy test for, 749
Pump water and typhoid fever, 1022
Punishment, corporal, 1068; remedial or penal? 1250; capital, modes of, 1327
Punjab, the asylums in the, 1464
Pupilage, 516
Puzey, Mr. C., on arterial hæmorrhage, 844
Pye-Smith, Dr., cystic disease of the kidneys, 1309
Pyoktanin in malignant growths, 1177
Pyrenees, the thermal stations of the, 928
Pyrexia and its treatment, 1093

Q.

Quackery, the spirit of, within the pale of the profession, 179; in British Guiana, 1439
Quacks, proposed collective investigation into the practices of, 95, 153, 360, 1271; and journalists, 852, 906
Quain's Elements of Anatomy, Messrs. E. D. Schäfer and G. D. Thane, *rev.*, 760
Quarantine, the abolition of, 435; the troubles of, 660
——— farming as speculation, 775
Queen's English, the, science and, 942
Questions for parliamentary candidates, 159
Quetta, the health of, 961, 1460

R.

Rabagliati, Dr., on extrauterine gestation, 1424
Rabies in France, 540; test animal for, 626
Radford, Mr. W. H., dispensary advertisement, 1461
Radius, greenstick fracture of the, 235
Rae, Mr. R., temperance breakfast at Bristol, 193

Railway employees, temperance of, 583
Railways, ambulance arrangements in, 1008
Rake, Dr. B., death of, 507; obituary notice of, 567; the colonial papers on, 883; proposed memorial to, 1208
Ramon y Cajal, Dr. S., Les Nouvelles Idées sur la Structure du Système Nerveux, *rev.*, 74
Rangoon, the lunatic asylum at, 1281
Ransome, Dr. A., presentation to, 1152
Rash, scarlet, after enemata, 12, 867
Rates, liability for, 55
Rattray, Dr. J. M., on functional diseases of the heart, 1042
Rauschke, Mr. R., appliance for umbilical hernia, 291
Raven, Mr. T. F., thyroid treatment in obesity, 158
R.C.M.P.C.V.S., 1494
Reade, Mr. C., and private lunatic asylums, 1440
Reading, nursing at the workhouse infirmary, 1317
Real-Encyclopädie der Gesammte Heilkunde, Dr. A. Eulenburg, *rev.*, 1116
Rectum (The) and the Anus, their Diseases and Treatment, Mr. C. B. Ball, *rev.*, 872
Red Cross, the, in the Far East, 715
Reddick, Mr. A., a warning, 1467
Reform, the need for, 387
Refraction of the Eye, etc., Mr. A. S. Morton, *rev.*, 1052
Régénération des Os et Résections sous-periostées, Dr. L. Ollier, *rev.*, 20
Regis, Dr. E., A Practical Manual of Mental Medicine, *rev.*, 1180
Registration of midwives, 28, 79, 101, 154, 156, 228, 229, 324, 370, 388, 782, 873, 952, 1015, 1080, 1145, 1208
Reid, Surgeon-Captain J. M., the antitoxin treatment of diphtheria, 1007
Reinhardt, Dr. A. H., the prodromal rash of small-pox, 1219
Relic, an Etruscan, 796
Relics, chemistry and the authenticity of, 1259
Remfry, Dr., remarks on fœtal retroflexion, with report on a specimen, 70
Removal and notification, 1252
Remy's pudding powder, 706
"Renal inadequacy," Sir Andrew Clark's theory and treatment of, 169
Renant, Dr., the history and development of animal vaccination, 1077
Rennie, Dr. A., the plague in the East, 615
——— Surgeon-Major S. J., dysentery and tropical liver abscess, 146; waterborne and bread-nurtured typhoid infection, 599
Renotification, 1151
Research, Dr. R. R., the proposed registration of midwives, 101 (156)
Reprints from the British Medical Journal, 112, 1052
Research, molecular physical, the endowment of, 94
Respiration, prolonged artificial forcible, apparatus for, 687
Respiratory affections, the treatment of by means of large medicinal injections through the larynx, 1253
Retroflexion, fœtal, remarks on, with report on a specimen, 70
Reynolds, Dr. E. S., Primer of Hygiene, *rev.*, 1244
Rheumatism, seaside resorts for, 55; epidemic muscular, 651, 723, 780, 823
Rhinorrhœa, bismuth in, 455
Rhodes, Dr. G. M., nursing in workhouse infirmaries, 387, 571
——— Dr. J. W., the boarding out of pauper children, 627
Riberi prize, the, 738
Rice, Dr. E., tannic acid in nasal polypi, 571
——— Mr. R., the antitoxin treatment of diphtheria, 891
Richards, Dr. W., proposed memorial to, 904
Richardson, Dr. B. W., The Graphic Temperance Reader, *rev.*, 761
——— Dr. G., the heredity of phthisis, 1512
Rickets, intantile, scurvy and its relation to, 1029, 1065; the association of lamellar cataract with, 1112
Rider's thigh, 1356
Rifle, Lee-Metford, gunshot injuries from the, 918
Ring, Mr. G. R., spread of infectious disease by tramps, 156
Ringer, Dr. S., the antitoxin treatment of diphtheria, 1499
Ringwood, Dr., gets pension, 736
Ringworm organism, the biology of the, 643
Rinné's test, a better appreciation of, 1165
Risley, Dr. R. S., the relation of some occupations to eyesight, 584
Riviera, the English, Messrs. N. Macvean and L. Williams, *rev.*, 991
Rivington, Mr. W., proposed dinner to, 960
Roberts, Dr. A., The Harrogate Mineral Waters, *rev.*, 761
——— Mr. C., the deputation on infant mortality and death certification, 1278
——— Deputy Surgeon-General E. H., death of, 1281
——— Dr. F. T., breadth of view in medicine, 253; on functional diseases of the heart, 1042; pyrexia and its treatment, 1099; The Theory and Practice of Medicine, *rev.*, 1316
——— Dr. H. L., the present position of the question of vegetable hair parasites, 685; on acne vulgaris, 691; the treatment of psoriasis, 697
——— Dr. J., the management of eczema, 648
——— Dr. J. L., questions for parliamentary candidates, 159
Robertson, Dr. D. A., case of filaria loa in which the parasite was removed from under the conjunctiva, 920
——— Dr. J., on rabies, 1179
——— Dr. W. H., A Guide to the Use of the Buxton Mineral Waters, *rev.*, 1117
Robinson, Surgeon-Lieutenant-Colonel T., the treatment of cancer by injections of iodine and carbolic acid, 1091
Robson, Mr. A. W. M., prostatectomy or McGill's operation, 63; ovariotomy in general surgical practice, 976; gastrostomy for the removal of foreign bodies, 989
Roche, Dr. A., pawned clothes and disease, 679; mental disturbance as a cause of herpes zoster, 867
Roeckel, Dr. W. J., obituary notice of, 1035
Rogers, Dr. B. M. H., presentation to, 130; antitoxin treatment of diphtheria, 1269
——— Surgeon-Major J. G., on Egyptian sanitation, 1009
Rolleston, Mr. H. D., fibro-adenoma of suprarenal capsule, 869; pharyngeal pouch, 1431
Rollet, Professor, obituary notice of, 452
Romanes, Professor, posthumous work of, 1272
Rome, hygienic exhibition in, 79; ancient, a fashionable physician on, 820; antitoxin treatment of diphtheria in, 1073
Romney Marsh, a protest from, 572
Roose, Dr. R., and its Relations to Diseases of the Liver and Kidneys, *rev.*, 925
Rosenstein, Dr. S., Die Pathologie und Therapie des Nierenkrankheiten, *rev.*, 74
Rossbach, Dr. M., death of, 992; Handbuch der Arzneimittellehre, *rev.*, 925
Rotch, Dr. W. B., on whooping-cough, 405; the study of children's diseases and its place in the medical curriculum, 698
Roumania, Pasteurism in, 55
Round, J. G., the case of, 432
Roux, M., the antitoxin treatment of diphtheria, 610; at the Institut Pasteur, 931; honours to, 1208
Rowe, Mr. W. P., obituary notice of, 1462
Rowland, Dr. F. M., two obscure cases of postdiphtheritic cephalalgia ending fatally, 126
Rubinstein, death of, 1402
Ruffer, Dr. M. A., the pathology of vaccinia, 636
Rumboll, Mr., on anæsthetics, 1370
Runge, Dr. Max, Lehrbuch der Gebertshülfe, *rev.*, 1180
Russell, Dr. J. B., uninhabitable houses, 943
——— Dr. J. S. R., an experimental investigation of eye movements, 588; degenerations consequent on experimental lesions of the cerebellum, 640
——— Mr. T. B., the uncertainties of advertising, 56
——— Dr. W., the causation of cancer, 638
Russia, universities in, 388; leprosy in, 498; medical education for women in 616; medical journals in, 1037; bacteriology in, 1465; opening of leper colony in, 1490
Rutimeyer, Dr. L., Ueber Bilharziakrankheit, *rev.*, 1244

S

Saddle, the, and neurasthenia, 1351
St. Luke's, the medical officership of, 956
St. Petersburg, reappearance of cholera at, 89; correspondence from, 224, 674, 948, 1205, 1402; the 12th International Medical Congress, 228; medical conference in Saratof, *ib.*; a bicentenary, *ib.*; new chemical laboratory in the St. Petersburg University, 674; proposed School of Medicine for Women in St. Petersbury, with power to grant diplomas, *ib.*; factors which determine the age of which menstruation commences in Russian women, *ib.*; decline of cholera in St. Petersburg and increase of cholera in the provinces, *ib.*; ether or chloroform, 948; mortality in abdominal sections, *ib.*; viburnum prunifolium in threatened abortion, *ib.*; the 6th Pirogoff Congress, *ib.*; new biological laboratory in St. Petersburg, *ib.*; the late Emperor Alexander, result of the necropsy, 1205; the death of Rubinstein, 1402; Professor Zakharin's return to Moscow, *ib.*; the embalming of the late Emperor, *ib.*; the funeral ceremonial at the burial of the late Emperor, *ib.*
St. Winifred's well, the miracles of, 829
Sajous, Dr. C. E., Annual of the Universal Medical Sciences, *rev.*, 1432
Salisbury, Marquis of. *See* Marquis
Salt and Sons, Messrs., artificial eye for shrunken socket, 1434
Samaritan, the good, 1325, 1388
Sanctuary, Dr. T., the advantage of non-poisonous disinfectants, 796
Sanitary authorities and the pauper infectious sick, 1281
——— inspectors, duties of, 957; proposed new examining boards for, 1130; much too zealous, 1282
——— science and the prevention of disease, 293
Sanitation afloat, 437
——— Sunday, 20, 109
Sansom, Dr. A., on a provident association and its medical officers, 444; on functional diseases of the heart, 1040; irregular heart after influenza, 1042; deaths under anæsthetics, 1397
Sarcoma, primary, of lung in a boy aged 11, 532; of the testis, 930; large, removal of from neck, 1370; two cases of amputation at the hip-joint for, *ib.*
Sargent, Surgeon-Major A., inversion and taxis in intestinal obstruction, 1174
Saundby, Dr. R., an international monument to Charcot, 43; The Common Forms of Dyspepsia in Women, *rev.*, 536; dysentery and tropical liver abscess, 621
Savage of Aveyron, the, 722
Savage, Dr. G. C., diagnosis and treatment of strabismus, 587
——— Dr. G. H., the criminal responsibility of the insane, 353; neurasthenia and its treatment 522, 525
——— Mr. R. W., death of, 502
Savill, Dr. T. D., the function of the coil glands, 694; epidemic skin disease and the lay press, 1091, 1351
Scapula, excision of, 1109
Scarlet fever and Scarlatina. *See* Fever, scarlet
Scanlon, Dr. W. G., antipyrin as an analgesic, 1416
Scatchard, Dr., inefficient results of infantile vaccination, 566
Schacht, Dr. F. F., Chelsea Hospital for Women, 513
Schäfer, Dr. E. A., Quain's Elements of Anatomy, 1
Scheube, Dr. B., Die Beri-beri Krankheit, *rev.*, 813
Schleich, Dr., a new method of producing anæsthesia, 1012
Schneider, Dr. S., appointed physician to the Shah, 99
School, short hours at and long holidays, 93; for girls, 1414
——— attendance, notification and, 799
——— boards and vaccination, 540
——— Cooke's Medical, instruction at, 479
——— Medicine, Catholic University, inauguration at, 481; fees at, 486
——— of Medicine, Edinburgh, instruction at, 482; opening session at, 802
——— of Medicine for Women, Edinburgh, inauguration at, 1161
——— Medicine for Women, London, clinical instruction at, 479; fees at, 488; opening address at, 753; improvements at, 783; entertainment by students of, 1462
——— of Physic in Ireland, instruction at, 484; fees at, 486
——— Volunteer Ambulance, distribution of prizes at, 1406
Schools, pauper-palace, 30, 322; increasing epidemics in, 36; Manual Instruction in, Mr. C. B. Shuttleworth, *rev.*, 75; reformatory and exceptional children, 147; pauper palace, deputation to Local Government Board on, 148, 149, 211, 236; medical, opening of the, 497; barrack the inquiry into, 508, 511, 950; elementary, medical officers to, 564; barrack, their alternatives, 714; medical, entries at the, 830, 893; prevention of spread of diphtheria in, 830; public elementary and medical officers of health, 878; the medical and sanitary inspection of, 1450

Schools of Surgery, Dublin, instruction at, 454
——— fees at, 466
Science and the Queen's English, 942
Scissors, combination pocket, 1246
Sclerodermia, case of, 1109
Sclerosis, amyotrophic lateral, the pathology of a case of, 642
Scopolamine in ophthalmology, 597
Scotland, small-pox in, 19, 184; precautions against cholera in, 154; post-graduate study in, 492; hospitals for consumptives in, 606, 680, 1244, 1347; the public health of, 956; proposed university court for, 1192
Scott, Dr. J. A., iron deposits in pernicious anæmia, 1115
——— Mr. K., the treatment of trachoma or granular conjunctivitis, 591; complete ankyloblepharon, 1113 (1351)
Sculpture as a handmaid of medicine, 397
Scurvy, infantile, and its relation to rickets, 1029, 1065; infantile in surgical practice, 1229; and scurvy rickets, 1178; subdural hæmorrhage in, 1430
Seaford, financial condition of the convalescent home at, 168
Seaton, Dr. E., report to the International Congress of Hygiene and Demography on diphtheria, 573
Sebor rhœa and its Consequences, Dr. J. F. Payne, *rev.*, 133
Sedgwick, Dr. L. W., the personal factor in disease, 171
Semmelweiss, the international memorial to, 140, 433
Semon, Dr. F., laryngeal paralysis in chronic nervous disease, 1175; examining the larynx in children, *ib.*; turbinal curls, 1172; treatment of stenosis of the larynx, 1481
Sensations, autumnal, 719
Sequeira, Mr. G. W., urticaria following the administration of iodide of potassium, 12; pemphigoid eruption following the administration of copaiba, 1168
Séreux, Dr. P., La Paralysie Générale, *rev.*, 536
Serum, asses' treatment of phthisis by, 718, 887. *See also* Antitoxin
Sewage, treatment of by precipitation, 956; a new method of treatment of, 1374; the disposal of, 1504
Sewergas and small-pox, 92; Dr. J. McG. Smith on, 724; some views on, 730
Sewers, ventilation of, 210; ventilation of, air in, 303; movement of air in, 344; main, ventilations of, 903; microbes from the ventilating shafts of 1026
Sewill, Mr. J. S., lower molar abscess, 1167
Shattock, Mr. S. G., (?) Wolffian adenoma of kidney, 1176; tumour of the palate, 1430
Shaw, Dr. R. H., Cline's splints, 1286
Shaw Lefevre, Mr., deputation to on barrack schools, 211, 236; and Mr. Peel, 1063
Shaw-Mackenzie, Dr. J. A., Chelsea Hospital for Women, 443
Sheen, Dr. A., the registration of midwives, 154; antitoxin treatment of tetanus, 675
——— Dr. A. W., death under chloroform, 606
Sheffield, the death-rate of, 53; correspondence from, 442; uncertified births at, *ib.*; the health of, *ib.*; cottage homes for pauper children at, 1282
She-wolf, the, in sheep's clothing, 1193, 1259
Sheild, Mr. M., laparotomy in ulceration of the duodenum, 920
Shield, volunteer ambulance challenge, competition for, 591
Shipping on the Thames, medical inspection of, 1150, 1257
Ships, pilgrim, the overcrowding of, 695
Shirehampton, the holy well at, 150, 229
Shives, Dr. J., presentation to, 386
Shore, Dr. L. E., Physiology for Beginners, *rev.*, 1243
Short, Dr., mediastinal growth, 988
Shorthand in medicine, 230, 309, 455, 571, 1226, 1257, 1463
Shoulder-joint, amputation through for acute emphysematous gangrene, recovery, 975
Shuttleworth, Mr. C. B., Manual Instruction in Schools, *rev.*, 75
——— Dr. G. E., the prevention of insanity, 520; the education of feeble-minded children, 528, 531
Sigmoid flexure, idiopathic dilatation of, 1240
Silk, Dr. J. F. W., testimonial to Sir J. Lister, 786
Silver and syphilis, 1221
Simla, the, launching of, 903
Simpson, surgeon-Captain D., resection of right upper jaw, with ligature of both common carotids, 1238
Simpson, Dr. J. B., the antitoxin treatment of diphtheria, 1070
——— Mr. R., Sciatic Neuritis, its Pathology and Treatment, *rev.*, 133
Sims, Dr. J. M., statue to, 86, 792; unveiling of statue to, 1066
Sinclair, Dr., on extrauterine gestation, 1425
Sinus, lateral, thrombosis of, 71
Sinuses, nasal accessory, the diagnosis and treatment of empyema of the, 1355
Siphon, the familiar, 740
Skerritt, Dr. E. M., pyrexia and its treatment, 1098
Skin, rare cases of disease of, 71; epidemic disease of in London infirmaries, 550, 606, 652, 697, 713; influence of solar rays on the, 694; epidemic disease of and the lay press, 1091, 1351; the thyroid treatment of disease of, 1367
Skull, fracture of the and lightning stroke, 1236; compression of, 1310
Slade-King, Dr., the ventilation of sewers, 306; the vaccination question in small-pox, 360
Slader, Dr., presentation to, 436
Sleep, chloroform during, 531, 738
Sleeplessness, 719
Sloan, Dr., a successful case of cardicentesis, 1369
Small-pox, at Coventry, 18; in Dublin, 19, 395, 436, 1127, 1418; in Scotland, 19, 184; and vaccination, 26, 551, 164, 328, 438, 652; and fairs, 33; cost of, 35, 596, 847; tramps and, 55; a professor and, 90; in Essex, 91; and sewer gas, 92; aërial convection of, 108, 356, 731, 897, 908; and vaccination at Leicester, 151; and vaccination at Bradford, 164; failure to diagnose, 175; and notification in Edinburgh, 288, 394, 1069, 1127, 1199, 1338, 1408; in London, 273, 613; some lessons to be learnt from an epidemic of in an ill-vaccinated community, 358; infectiousness of, *ib.*; the outbreak of at Portland Town, 440; neglect to notify a case of, 506; cost of an epidemic of, 631; and vaccination in Switzerland, 700; and vaccination in Marylebone, 822, 927, 1319; and vaccination in Italy, 834; and vaccination in Nottingham in 1893, 926; the diagnosis of, 957; in Dublin, 998; and vaccination in Manchester, 1007; and vaccination in West Ham in 1893, 1149, 1212; the prodromal rash of, 1210; and revaccination in Dublin, 1260; epidemic of at Willenhall, 1284; and vaccination in Edinburgh and district, 1465; in an unvaccinated community, 1495
Smellie, Dr. William, and his Contemporaries, Dr. J. Glaister, *rev.*, 1243
Smith, Surgeon-Major C., the case of, 1017
——— Dr. F. J., hypodermic use of arsenic in chorea, 1176; syphilis of the spinal cord, 1310
——— Dr. H., on the induction of labour, 1121
——— Dr. H. R., death under ether, 655
——— Mr. J. C., obituary notice of, 239
——— Dr. J. Greig, the art of the surgeon, 249
——— Dr. J. McG., on sewer gas, 724
——— Mr. Joseph, the annual meeting of the Royal College of Surgeons, 950
——— Dr. LI. G., five cases of hydrocele in the female, 179
——— Mr. N., treatment of tuberculous disease of the joints in children, 411; on spinal caries, 704; treatment of injuries of the spine and spinal cord, 913; Spinal Caries, *rev.*, 923; cycling and its dangers, 954; a case of caries of the spine causing compression of the cord relieved by laminectomy, 1252
——— Dr. R. S., on functional diseases of the heart, 1040; pyrexia and its treatment, 1098; stenosis and endoarteritis of the pulmonary artery a cause of embolic pneumonia and chronic intermittent fever, 1099
——— Dr. W., neurasthenia and its treatment, 524
——— Dr. W. Ramsay, hereditary malformation of hands and feet with operation on one subject, 8
——— Dr. W. Robert, presentation to, 1465
Smyth, Surgeon-Major J., the administration of chloroform in India, 103
Snakebite, strychnine in, 784
Snell, Mr. E., gaseous applications to wounds, 1145
——— Mr. S., the relation of some occupations to eyesight, 582; history of an outbreak of ophthalmia in a good-class boarding school, with remarks, 1104
Snellen, Dr. H., the pathology of descemetitis, 993
Snow, Dr. H., a word in season to bathers, 370; cancer and phagocytosis, 639; the "dispersible" tumours of the mamma, 972; myeloid cells in malignant disease, 1049; pyrexia and its treatment, 1099; chondro-sarcoma of the humerus, 1369
Societies, so-called provident, 55, 111; medical aid and licentiates, 291; medical, the winter session of the, 770
——— Colston, annual dinner of, 1152
Society, Abernethian, inaugural address to, 474
——— of Anæsthetists, list of officers of, 960
——— Antifad, wanted a, 676
——— Antiopiate, formation of in New York, 960
——— of Apothecaries of London. *See* Apothecaries
——— Australian Health and its work, 724
——— Charity Organisation and the sick in provincial workhouses, 1194
——— Clinical, of London, aneurysm of the basilar artery, 869; intracranial aneurysm of young subjects unaffected with syphilis or malignant endocarditis, *ib.*; acute pancreatitis, *ib.*; fatal form of tetany associated with chronic dilatation of the stomach, 870; tuberculous lymphangitis following inoculation of finger, *ib.*; the Society's new volume of "Transactions," *ib.*; subdiaphragmatic abscess communicating with right pleura, 987; multiple neuritis, fatal on the sixth day, *ib.*; poisoning by one ounce of chloral hydrate, recovery, *ib.*; rupture of the stomach, 870; tuberculous lymphangitis following inoculation of finger, *ib.*; the Society's new volume of "Transactions," *ib.*; subdiaphragmatic abscess communicating with right pleura, 987; multiple neuritis, fatal on the sixth day, *ib.*; poisoning by one ounce of chloral hydrate, recovery, *ib.*; rupture of the stomach, 870; tuberculous disease of the peritoneum, prostate, ischio-rectal fossa and rectum, *ib.*; primary atrophy of muscles of limbs and trunk, *ib.*; trephining for traumatic epilepsy, 1110; bullet wound of the parietal lobe, the operation of, 1111; typhoid fever, *ib.*; acromegaly, *ib.*; Graves's disease and nasal polypi, *ib.*; nodules of doubtful nature, *ib.*; Charcot's disease, 1111; spontaneous dislocation of hip, *ib.*; pulsatile congenital cyst simulating aneurysm, 1240; idiopathic dilatation of the sigmoid flexure, *ib.*; splenic leucocythæmia treated with arsenic and inhalation of oxygen, *ib.*; supernumerary testes, 1241; discussion on diphtheria antitoxic serum: a report on a series of 80 cases, 1428, 1483, 1492
——— Clinical, of Manchester, cases, 989, 1314; radical cure of hydrocele, 989; Traube's sign, 1311; dry mouth, or xerodermia, *ib.*
——— Clinical, Newcastle-on-Tyne, meeting of, 1431
——— Clinical, North-West London, meeting of, 1180
——— Dermatological of Great Britain and Ireland, officers of, 792
——— Epidemiological, of London, annual dinner of, 80
——— Glasgow Dental Students', meeting of, 1125, 1436
——— Gynæcological, British, specimens, 129, 532, 921, 1113; intraperitoneal hæmatocele, 129; lymphangiectasis of the omentum treated by abdominal section, 532; treatment of uterine myomata, 921; puerperal pelvic cellulitis from pneumia, 1113
——— Harveian of London, cases, 988, 1347; bacteriology in its practical aspects, 1050; obscure diseases of the knee-joint, 1309; suture of the urethra after rupture and external urethrotomy, 1310; abscess of the liver, 1347; the thyroid treatment of skin disease, 1367
——— Hunterian, president's address, 1176; hypodermic use of arsenic in chorea, *ib.*; fœtid expectoration treated by inhalations of coal tar creasote vapour, 1177; syphilis of spinal cord, 1310; compression of skull, *ib.*; gastro-enterostomy, *ib.*; tabes dorsalis without ataxia, 1311
——— Independent Order of Foresters Insurance fees of, 1091
——— Laryngological, of London, adenoma of the tongue, 921; immobility of the left vocal cord, *ib.*; cystic fibroma of the left vocal cord, *ib.*; epithelioma of the epiglottis, *ib.*; chronic tuberculosis of larynx, *ib.*; tonsilar mycosis, *ib.*; lupus treated with thyroid extract, 922; tonsillar new growth, *ib.*; laryngeal stenosis supervening on typhoid fever, *ib.*; swelling of the left side of larynx, with paralysis and atrophy of left half of tongue and soft palate, 1311; tuberculous disease of soft palate, larynx, pharynx, and lungs, *ib.*; pachydermia laryngis with perichondritis of arytenoid cartilage, *ib.*; lymphadenoma with obstructed breathing, *ib.*; congenital fistula of the neck, *ib.*; papilloma of nasal septum in association with rodent ulcer in a man aged 84, *ib.*; disease of tongue and soft palate (for diagnosis), *ib.*; epithelioma or pachydermia of the vocal cord, *ib.*

Society Liverpool Victoria Friendly Legal, the medical officerships of, 570, 627
——— London and Manchester Assurance. *See* Association
——— Medical Attendance Assurance, objects, etc., of, 1392; the medical officerships of, 1505
——— Medical Berlin, the antitoxin treatment of diphtheria, 1320, 1400, 1457
——— Medical, Bournemouth, annual meeting of, 990; meeting of, 1179
——— Medical, Cambridge, case, 16; four cases of erythema nodosum occurring in one family within ten months, *ib.*; plasmodia of malarial fever, *ib.*; meeting of, 1315
——— Medical, Grant College, Bombay, report of for 1893, 1004
——— Medical, Kidderminster, specimens and cases, 130, 811; paper, 130, 811; intussusception, 811; abscess of the liver, *ib.*
——— Medical, of London, president's address, 810; nosophobia and hypochondriasis, *ib.*; laparotomy in ulceration of the duodenum, 920; opening the cæcum for intestinal obstruction, 1012; anastomosis of the small intestine, *ib.*; late inherited syphilis, *ib.*; dislocation of head of humerus with fracture of surgical neck, *ib.*; the thyroid treatment of cretinism, *ib.*; calculi, *ib.*; subcortical central cerebral tumour treated by operation, 1241; artificial cellulitis in the treatment of certain urinary diseases, 1165; a case of cystic polypi of the nose, *ib.*
——— Medical, Manchester, recurrent cancer of breast, 1177; erysipelas in relation to malignant growths, *ib.*; scurvy rickets, 1178; cases, 1369; tetanus, *ib.*; diphtheria, *ib.*
——— Medical, Midland, renal calculus, 988; biliary calculi, *ib.*; mediastinal growth, *ib.*; papillomatous cysts, *ib.*; the localisation of and the various operations for gall stones, *ib.*; cases, 1313, 1369; specimens, 1313; axial rotation of ovarian cystic tumour, 1314; "catarrhus," 1370
——— Medical Missionary, Edinburgh, meeting of, 1251
——— Medical, Newport, inaugural meeting and list of officers, 93
——— Medical, Northumberland and Durham, cases, 922, 1312; specimens, 922; list of officers, 990; gall stones, 1312
——— of Medical Officers of Health, annual meeting of, 934; meeting of, 1242
——— of Medical Phonographers, formation of, 1226, 1350
——— Medical Protection, London and Counties, the West End Division of, 931
——— Medical Sickness Annuity, and Life Assurance, meeting of executive committee of, 24; quarterly meeting of, 140, 1064; annual meeting of, 338; monthly meeting of, 655, 1271, 1453; the founders of, 731
——— Medical, Torquay, list of officers of, 903
——— Medical, Ulster, annual meeting and list of officers, 454; meeting of, 1372
——— Medical, Wigan, meeting of, 1372
——— Medical, York, address by Sir J. Crichton Browne to, 867; banquet of, 904
——— Medico-Chirurgical, Aberdeen, meeting of, 1083, 1315
——— Medico-Chirurgical, Bradford, president's address, 811; papers, *ib.*; specimens, *ib.*; meeting of, 1116, 1371
——— Medico-Chirurgical, Bristol, annual meeting and list of officers, 961; meeting of, 1180
——— Medico-Chirurgical, Edinburgh, cases, 16, 1114, 1368; specimens, 16, 71, 1368; separate acromion process simulating fracture, 16; displacement of semilunar cartilages of the knee, *ib.*; thrombosis of lateral sinus, 71; rare cases of skin disease, *ib.*; operation for appendicitis, *ib.*; unilateral enlargement of cranial bones, *ib.*; thyroid extract in lupus, *ib.*; the action of acids and alkalies and of some other drugs on the secretions of the body, *ib.*; surgical economy in hospitals, *ib.*; physics of an aneurysm, *ib.*; croupous rhinitis, *ib.*; operation for tumour of frontal lobe, 1114; operation for traumatic meningeal hæmorrhage, *ib.*; method of trephining, 1115; the treatment of ununited fracture by passive congestion, *ib.*; officers, etc., *ib.*; exhibits, 1368; electrical theory of the physiology of vision, *ib.*; stricture of the œsophagus, *ib.*; a successful case of cardicentesis, *ib.*
——— Medico-Chirurgical, Leeds and West Riding, president's address, 980; osteomalacia, *ib.*; acute peripheral neuritis partly due to lead, *ib.*; gastrotomy for the removal of foreign bodies, *ib.*; cases and specimens, *ib.*; aneurysm affecting four arteries in the same patient, 1114; treatment of aneurysms of arteries of the extremities by extirpation of the sac, *ib.*; mastoid abscess and thrombosis of lateral sinus, *ib.*; suppression of urine, 1370; anæsthetics, *ib.*
Society Medico-Chirurgical, Nottingham, meeting of, 989, 1179, 1242, 1431
——— Medico-Chirurgical, Sheffield, meeting of, 989, 1179, 1242, 1371
——— Medico-Chirurgical, West Kent, meeting of, 1179
——— Medico-Chirurgical, West London, president's address, 870; the difficulties of prognosis in insanity, *ib.*; discussion on diphtheria, 1177, 1312; meeting of, 1371
——— National Health, training lectures of, 346
——— Obstetrical, Edinburgh, specimens, 130; extrauterine gestation, *ib.*; retained menses with perforation into bladder, *ib.*; fibrous diaphragm in vagina, *ib.*; acute religious mania, *ib.*; pelvic peritonitis, *ib.*; fibroid uterus, *ib.*; cyst of broad ligament, *ib.*; menstrual headache, *ib.*; antiseptic vaginal douching, *ib.*; dinner, *ib.*; meeting of, 1242
——— Obstetrical of London, specimens, 70, 810, 1111; remarks on foetal retroflexion with report on a specimen, 70; temperature after delivery in relation to the duration of labour, *ib.*; on the change in size in the cervical canal during menstruation, *ib.*; three cases of pelvic inflammation attended with abscess of the ovary, with clinical remarks, 810; a new and speedy method of filling a retroflexed pavilion uterus, 1111; atrophy with collapse (cirrhosis), fibroid degeneration, and angioma of the ovaries, *ib.*; the importance of a decidual cast as evidence of extrauterine gestation, *ib.*; vaginal hysterectomy for primary carcinoma of the body of the uterus, 1366
——— Obstetrical and Gynæcological, Glasgow, list of officers of, 1023; meeting of, 1050
——— Obstetrical and Gynæcological, Italian, meeting of, 1024
——— Ophthalmological of the United Kingdom, a new operation for trichiasis and distichiasis, 70; monocular asteroid hyalitis, *ib.*; notes of a case of sympathetic ophthalmia of the right eye which showed itself eighteen days after a kick in the left eye, *ib.*; the use of chlorine water in certain diseases of the eye, 71; card specimens, 71, 921, 1429; case of filaria loa in which the parasite was removed from under the conjunctiva, 920; filaria oculi humani, 921; the association of lamellar cataract and rickets, 1012; complex myochoriobiepharon, 1113; cases, *ib.*; five cases of plastic cellulitis of orbit, 1428; hydatid cyst of the, 1429; osteoma of the conjunctiva, *ib.*; formol as a hardening agent, *ib.*; papillary conjunctivitis, *ib.*
——— Orthopædic, British, meeting of, 1088
——— Pathological, of London, strangulated ventral hernia, 868; recto-vesical tuberculous fistula, *ib.*; fibro-adenoma of suprarenal capsule, 869; polypoid tumour of the œsophagus, *ib.*; variola and vaccinia, *ib.*; card specimens, 869, 1050; myeloid cells in malignant disease, 1049; perirenal hæmorrhage, *ib.*; congenital cystic disease of the kidneys, *ib.*; tuberculosis of the kidney, *ib.*; perforation of soft palate in scarlet fever, 1050; mediastinal tumour, *ib.*; malignant disease of the larynx, 1175; acute septic epiphysitis, *ib.*; primary malignant disease of the glands of the groin, etc., *ib.*; epitheliomatous cyst of neck, *ib.*; (?) Wolffian adenoma of the kidney, 1176; subdural hæmorrhage in pernicious anæmia, 1309; carcinoma of an axillary breast, *ib.*; cystic disease of the kidneys, *ib.*; chondro-sarcoma of the humerus, *ib.*; tumours of the palate, 1430; postrectal dermoid, *ib.*; malignant disease involving the hypophysis cerebri, *ib.*; tumour of the hypophysis, *ib.*; subdural hæmorrhage in scurvy, *ib.*; infarcts in the liver, *ib.*; repair of divided tendon, *ib.*; pharyngeal pouch, 1431
——— Pathological, Manchester, meeting of and list of officers, 1180; intermedullary spinal tumour, 1313; the pathology of the ascites in some cases of heart disease, *ib.*; cases and specimens, 1313, 1485; traumatic epilepsy, 1485; dried pathological brains, *ib.*; enucleation of femoral aneurysm, *ib*
——— Pathological, Reading, and the suppression of quack remedies, 960
——— Pharmaceutical of Great Britain *v.* Armson, 161
——— Pharmaceutical, Scottish, opening of new hall, etc., of, 1337
——— for the Prevention of Cruelty to Children, the work of, 432
Society for the Relief of Widows and Orphans of Medical Men, quarterly court of, 165, 904
——— Royal Botanic of London, claims to public recognition of, 1385; mode of procedure for joining, 1459
——— Royal Medical, Edinburgh, meeting of, 998; presidents of, 1153
——— Royal Microscopical, meeting of, 1408
——— Royal, New South Wales, prizes of, 167
——— Royal Medical and Chirurgical, discussion on chloroform, 14; the surgical treatment of diffuse septic peritonitis, with successful cases, 919; a case of actinomycosis involving the skin extensively, 1108; the treatment of respiratory affections by means of large medicinal injections through the larynx, 1238; a year's experience of the use of sulphur in surgery, 1239; the influence of heredity in phthisis, 1304; improvements in dealing with papers, etc., 1446
——— Royal Microscopical, meeting of, 1117
——— for the Study of Inebriety, quarterly meeting of, 848
Socket, new, for an artificial eye formation of, 1228, 1374, 1434
Solar. *See* Sun
Solazzi, 1434
Soldier nurses, 144
Sonnenburg, Dr., Pathologie und Therapie der Perityphlitis, *rev.*, 814
South Africa as a health resort, 1263
South Shields, the nursing at the workhouse infirmary of, 880
Southam, Mr. F. A., two cases of tumour of bladder in children, 128; radical cure for hydrocele, 989
Southwark, the death-rate of, 19
Sowerby, Mr. W., the Royal Botanic Society of London, 1459
Soxhlet, Professor, and the sterilisation of milk, 628
Spain, an insult to the medical profession in, 56; women and the medical profession in, 654; the medical profession in, 992; antitoxin treatment of diphtheria in, 1199
Speaking tubes, diphtheria and, 998
Specialism, legitimate and illegitimate, 112
Specialities, pharmaceutical, 1215
Spencer, Dr. H. R., medicine as a career, 756
Spicer, Dr. S., medicine as a profession, 753; tonsillar new growth, 922; laryngeal stenosis supervening on typhoid fever, *ib.*; Graves's disease and nasal polypi, 1110; a successful method of examining the larynx and removing laryngeal growths in very young, nervous, or unmanageable children, 1171, 1276; turbinal varix, 1172; on diphtheria, 1312; the surgical treatment of chronic empyema of the antrum maxillare, 1359
Spinal Caries, Mr. N. Smith, *rev.*, 923
——— cord. *See* Cord
Spine, the treatment of caries of, and its results by laminectomy, 699, 1232; and spinal cord treatment of injuries of the 909; intramedullary tumour of, 1313
Spleen, hypertrophy of, 366; leucocythæmia and enlargement of, 1351
Splenectomy, notes of a successful case of, 979
Splints, Cline's, 1286, 1334
Sprains, their Consequence and Treatment, Dr. C. W. M. Moullin, *rev.*, 90
Squib a damp electioneering, 1449
Squire, Dr. J. E., The Hygienic Prevention of Consumption, *rev.*, 72; the influence of heredity in phthisis, 1364; the contagiousness of phthisis, 1415
Stack, Dr. J. J., aërial convection of small-pox, 909
Staining and mounting of tube casts and other urinary deposits, S, 235
Starr, Dr. L., An American Textbook of the Diseases of Children, *rev.*, 812
State, the, and the medical man, 237; and health, 956
Stead, Mr. W. T., on doctors, 1497
Steam disinfectors, 1467
Steele, Mr. E. A. T, the antitoxin treatment of diphtheria, 1339
——— Dr. W. C., hospital appointments, 386, 558
Steell, Dr. G., Traube's sign, 1314
Stellwag von Carion, Professor, the retirement of, 382
Stenosis, acute laryngeal, the treatment of, 1457
Stephens, Mr. E., cremation and death registration, 316
Stephenson, Mr. J. B., varicella bullosa, 1049
——— Dr. O. T., the antitoxin treatment of diphtheria, 1459
——— Mr. S., the diagnosis and treatment of ophthalmia, 592; cellulitis following Mules's operation, 597; an unusual complication of trachoma, 918
Sterling, Mr. R., on whooping-cough, 406

Stethoscope, the "Reliance," 991; microphone, 1218, 1350
Stevens, Dr. A. A., A Manual of Therapeutics, *rev.*, 1374
——— Dr. G. T., relation of some occupations to eyesight, 584; the importance of maintaining equal rotations of the eyes after operations of the ocular muscles, 586
Stevenson, Mr. R. L., and the medical profession, 1448; the death of, 1492
——— Brigade-Surgeon Lieutenant-Colonel W. F., the transport of wounded and the Geneva Convention, 43
Stewart, Sir T. Grainger, on the nature and treatment of influenza, 242; pyrexia and its treatment, 1098
——— Mr. W. R. H., congenital fistula of the neck, 1241
Still, Dr. G. F., diphtheria treated by antitoxin, 180
Stockport, the water supply of, 311; nursing at the workhouse infirmary of, 764, 772, 851, 880, 930
Stockton, the board of guardians of and the BRITISH MEDICAL JOURNAL Commission, 91
Stodart-Walker, Dr. A., hypodermic injections of strychnine in three cases of peripheral neuritis, cures, 1425
Stoddart, Mr. F. W., the filtration of potable water, 354
Stoke upon-Trent, nursing at the union infirmary of, 931
Stoker, Dr. G., gaseous applications to wounds, 1236
——— Mr. W. T., opening address at Royal College of Surgeons in Ireland, 1074
Stokes, Sir W., the ethics of operative surgery, 836; the fifth year, 888; treatment of injuries of the spine and spinal cord, 913; remarks on flat-foot, 1224, 1405; operations for cancer of the jaws and tongue, 1315
Stomach, fatal form of tetany associated with dilatation of, 870; treatment of perforating ulcer of, 859, 911; perforative ulcer of treated by laparotomy, stitching, and washing out, 982, 1426
Stone, Fleet-Surgeon J. N., a case of acute yellow atrophy of liver, 69
Stone broth, 771
Stookes, Dr. A., the registration of midwives, 156
Store prices, 1146
Story, Mr., melanotic tumour of eye, death from secondary growths, 1115
Stoves, oil, 516, 1091, 1219; gas cooking, 1091, 1156
Strabismus, diagnosis and treatment of, 587
Strachan, Mr. H., imperforate anus, operation nine months after birth, recovery, 366
Strahan, Dr. S. A. K., the suicide epidemic, 795
Stratford-on-Avon, out-patients at the hospital of, 1016
Strathpeffer Spa, How to Use the Baths at, Mr. J. T. Fox, *rev.*, 1117
Stretcher exercise (St. John Ambulance), 55
Stretton, Mr. J. L., intussusception, 811; abscess of the liver, *ib.*
Struthers, Professor, separate acromion process simulating fracture, 16
Strychnine, in snake bite, 781; poisoning by, 808, 1156; hypodermic injections of in peripheral neuritis, 1425
Student, the medical, 773
Students, dental, the mechanical training of, 435; Turkish, secret societies among, 781; medical and their tailors, 991
Sturge, Mr. H. H., the dispute in the Medical Defence Union and the new Medical Defence Association, 230
——— Miss Mary D., general culture of the scientific habit, 753
Sturges, Dr. O., obituary notice of, 1081; proposed memorial to, 1323, 1495
Style, Inspector-General M., obituary notice of, 902
Suckling, irregular and prolonged, 115
"Suicide epidemic," the, 614, 795; in a workhouse infirmary, 1381
Sulphur in surgery, a year's experience of the use of, 1239
——— dioxide, disinfection by, 796
Sun, influence of the rays of on the skin, 691
Sunday, sanitation, 20, 109
Superannuation of Poor-law medical superintendents, 1390
Superstitions, some popular, 807; popular medical, 1028
Surgeon, the art of the, 249; the title of, 1388
Surgery, life-saving, 818; operative, the ethics of, 836; the decay of as a science, 874, 882; a year's experience of the use of sulphur in, 1239
Surgical appliances supplied to paupers, medical officer's charges for, 198
——— question, a, 235
Surveyor, Dr. N. F., the tungus-foot disease of India, 638
Sutcliffe, Mr. A., case of intussusception with sloughing of intestine and recovery, 124
Sutherland, Dr. H., the difficulties of prognosis in insanity, 870
Sutter, Mr. R. R., death under chloroform, 606
Sutton, Mr. R. R., the antitoxin treatment of diphtheria, 1339
Swaffham, the nursing at the workhouse infirmary of, 930, 939, 1187
Swain, Mr. P., the treatment of uterine fibroids by abdominal section, 118
Swayne, Dr. J. G., address at opening of Section of Obstetric Medicine and Gynæcology at Bristol, 255
Switzerland, students at the universities of, 210; smallpox and vaccination in, 790; alcoholism in, 806
Sydenham, unveiling of statue of, 377, 712
Sydney, coroner's inquests on infants at, 648
Sykes, Dr. J. F. J., increase in metropolitan diphtheria, 21
Sykes's patent interceptor, 707
Symes, Professor J., Pemberton on, 1398
Symmers, Dr. W. St. C., the filtration of agar-agar, 951
Symonds, Mr. C. J., gastro-enterostomy, 1310; epithelioma or pachydermia of the vocal cord, 1311; the diagnosis and treatment of empyema of the nasal accessory sinuses, 1355
Symphysiotomy, a case of, 1393
Sympson, Dr. E. M., on whooping-cough, 405; treatment of sweating feet, 738
Syncope and Darwinism, 1287
Synopsis, a, of Clinical Surgery during the Service of Samuel H. Pinkerton, M.D., Surgeon to the Holy Cross Hospital. Dr. F. A. Peaehum, *rev.*, 75
Syphilis, "malignant" Indian treated with thyroid extract, 12; the suppression of, 448; in the Innocent, Dr. L. D. Bulkley, *rev.*, 870; late inherited, 1112; silver and, 1221; primary, a mother infected with from her own syphilitic child, 1236; of the spinal cord, 1310; midwives and, 1388
Syphilitics, marriage of, 794
Syringe, the Vonda, ladies', 399
Syringes, hypodermic, desirable improvements in, 44, 168; for injecting antitoxin, 1453
Système Nerveux (Les Nouvelles Idées sur la Structure du), Dr. S. Ramon y Cajal, *rev.*, 74

T

Tabes dorsalis without ataxia, 1311
Tabloids (thyroid) in obesity, 42, 55; tea, 75; red marrow chlorosis treated by, 1308
Tailors of medical students, 864
Tait, Dr. E. S., preparation to, 89
——— Mr. L., the diagnosis of tubal pregnancy before rupture of the tube, 291
Tamar (the) sanitary condition of, 1017
Tannic acid in nasal polypi, 571, 738
Targett, Mr. J. H., hydatids in bone, 640; polypoid tumour of œsophagus, 869; tumours of the kidney, 1049; tumour of the hypophysis, 1430
Taste, loss of, 850
Taylor, Mr. A., The Sanitary Inspector's Handbook, *rev.*, 533
——— Dr. A. S., The Principles and Practice of Medical Jurisprudence, *rev.*, 74
——— the late Mr. W., 1492
——— Mr. E. W., temporary mental disorder in general hospital patients, 1343
——— Mr. F., splenic leucocythæmia treated by arsenic and the inhalation of oxygen, 1240
——— Dr. G. G. S., on acne vulgaris, 691; a case of mycosis fungoides, 693; the treatment of psoriasis, 697
——— Mr. H., vaccination and democracy, 103; temperance drinks, 400; public abattoirs and the public health, 958
——— Mr. J. N., strychnine poisoning, 1156
——— Dr. J. W., obituary notice of, 1411
——— Mr. J. W., intrapetromeal hæmatocele, 129; the diagnosis of tubal pregnancy before rupture of the tube, 456; the Medical Sickness, Annuity, and Life Assurance Society, 731; on the induction of labour, 1421
——— Mr. S. J., the relation of some occupations to eyesight, 585; a case of probable disease of the lenticular ganglion, 596; removal of an aural exostosis by the chisel after detachment of the auricle, 867
——— Dr. W. C. E., obstruction of the bowels caused by an incompletely reduced left inguinal hernia, 136
Taxis and inversion in intestinal obstruction, 1174, 1511
Tea, tabloids of, 75; evils of drinking, 93; from China, 605; for invalids and persons of weak digestion, 762; cheap, 942, 1068
Tees, floating hospital on the, 1412
Teeth of workhouse children, 548
Teissier, Dr. P., Des Lésions de l'Endocarde chez les Tuberculeux. *rev.*, 536
Telephone, taking a to bed, 963
Temperance of railway employees, 883
Temperature after delivery in relation to the duration of labour, 70; taking the, 906
Temperatures, high, 604
Tents as a means of relieving our crowded hospital wards, 102
Teratologia, Dr. J. W., Ballantyne, *rev.*, 534
Testes, treatment of enlargement of the prostate by removal of, 976
Testimonials for proprietary remedies, 55; general distribution of, 679
Testis, sarcoma of, 989; supernumerary, 1241
Tetanus, treatment of by antitoxin, 433, 579, 581, 675, 725, 934, 1178; deaths from in Great Britain, 672
Tetany, fatal form of associated with dilatation of the stomach, 870
Textbook of Abdominal Surgery, Messrs. S. and G. E. Keith, *rev.*, 760; of the Diseases of Women, Dr. H. J. Garrigues, *rev.*, 761; An American, of the Diseases of Children, Dr. L. Starr, *rev.*, 812
Thames, medical inspection of shipping on the, 1130, 1207
Thane, Mr. G. D., Quain's Elements of Anatomy, *rev.*, 760
Theobald, Mrs., jubilee of, 274
Therapeutics, studies in, 1190, 1440
Thermo-cautery improved, 873
Thermometers, case and protection for, 1117
Thetford, nursing at the workhouse infirmary of, 991, 1000, 1188, 1381
Thief, a consulting room, 571
Thigh, rider's, 1350
Thomas, Dr. C. W., treatment of sweating feet, 738
——— Mr. G. D., London coroners, 1214
——— Mr. H., absence of complexus, 1178
——— Dr. J. D., Hydatid Disease, *rev.*, 1133
——— Mr. J. L., the condition of the membrana tympani, in severe head injuries, 981
——— Mr. W. T., cyst of thyroid, 922, 1231; urethral calculi, *ib.*; radical cure of hydrocele, 1371
Thompson, Mr. A. G., qualified assistants and dispensaries, 1278
——— Mr. C. E., obituary notice of, 1022
——— Dr. E. S., the education of the deaf, 1219
——— Sir H., cremation, its progress at home and abroad and the medical responsibilities which it entails, 311
——— Dr. J. C., diagnosis and treatment of strabismus, 587; observations on some phases of opacity and luxation of the crystalline lens, 589; the diagnosis and treatment of ophthalmia, 593
——— Mr. J. T., the relation of some occupations to eyesight, 581; kerato-malacia in acute infantile jaundice, 597
Thomson, Mr. A., operation for traumatic meningeal hæmorrhage, 1114
——— Dr. G., a word in season to bathers, 370
——— Surgeon-Major S. J., the plague at Hong Kong, 560
Thorburn, Mr. W., traumatic epilepsy, 1485; enucleation of femoral aneurysm, *ib.*
Thorne, Dr. W. B., The Treatment of Chronic Diseases of the Heart by Baths and Exercises according to the Method of Dr. Schott, *rev.*, 1181
Thorner, Dr. E., the therapeutic use of tuberculin, 668
Thornton, Mr. B., three cases of contagious pneumonia, 125
Thread worms, treatment of, 637, 738
Thresh, Dr. J. C., the interpretation of water analyses, 362
Throat, sore, the notification of and diphtheria, 907, 993, 1029
Thrombosis, of lateral sinus, 71; of lateral sinus, mastoid abscess and, 1114
Thursfield, Dr. W. N., the notification of phthisis, 888
Thyroid gland, effect of extract of in exophthalmic goitre and psoriasis, 11, 157; "malignant" Indian syphilis treated by, 12; extract of in lupus, 71, 922; feeding on in exophthalmic goitre, 907; cyst of, 922; treatment of ere

tinism by, 1112; cyst in the, removal, 1231; accessory, projecting through the mouth, 1234; treatment of skin disease by, 1367
Thyroid tabloids in obesity, 42, 55, 101, 157
Tibbits, Dr. H., letter from on the Massage Hospital, 1201
Time indicator (medicine), 649
Tipperary, outbreak of fever at, 1017
Tirard, Dr. N., antitoxin treatment of diphtheria, 1484
Tobacco and blindness, 1132
Todd, Mr. A., abscess of antrum after influenza complicating polypi, 127
Torok, Dr., the etiology of cancer, 670
Tongue, adenoma of the, 921; operations for cancer of the, 1315
——— cloths, 815
Tonsil, mycosis of, 921; new growth in, 922
Tonsillitis, follicular, 360
Toothbrushes for workhouse children, 960
Totnes, a coroner's inquest at the union workhouse of, 107; the medical officer of the workhouse of, 1060
Touting agents, 907
——— dispensary, 739
Towels, roller, the dangers of, 1286
Towers-Smith, Mr. W., thyroid tabloids in obesity, 101; the dietetic treatment of obesity, 621
Tracheotomy for foreign body in the laryux, 68; successful for diphtherial laryngitis in a child 18 months old, 125; death from pneumothorax after, 1405
Trachoma, the treatment of, 591; an unusual complication of, 918
Trades, correction of death-rates for, 445
Traite, des Maladies des Yeux, Dr. P. Panas, *rev.*, 73; des Malaoies de la Grossesse, et des Suites des Couches, Dr. Ch Vinay, *rev.*, 1181
Traitement (Le) Physiologique de la Mort, les Tractions Rhythmées de la Langue, Dr. T. V. Laborde, *rev.*, 131
Tramps and small-pox, 55; spread of infectious disease by, 92, 156, 202, 209, 624, 828, 956; the medical examination of, 990
Transformer of medical cauteries, 537
Transvaal, medical practice in the, 1219
Traube's sign, 1314
Travers, Dr. W., Chelsea Hospital for Women, 513
Trephining for traumatic epilepsy, 1110; method of, 1115
Trevelyan, Dr. B., placenta prævia complicated by double pneumonia, 167
——— Dr. E. F., the morbid anatomy of infantile paralysis, 643; dried pathological brains, 1485
Trichiasis, a new operation for, 70
Tropacocaine in ophthalmology, 598
Truro, the nursing at the workhouse infirmary of, 710, 717, 851
Tscherning, M., Œuvres Ophtalmologiques de Thomas Young, *rev.*, 871
Tube, aural auscultation, 649
Tube casts and other urinary deposits, the staining and mounting of, 8
Tubercle and cancer, 1027
——— bacillus. *See* Bacillus.
Tuberculin as a diagnostic and therapeutic agent, 42; the therapeutic use of, 668
Tuberculose, Die causale Behandlung der, Dr. E. Klebs, *rev.*, 923
Tuberculosis, the notification of, 832; chronic of larynx, 921; the channels of infection in, 944; of perineum, prostate, ischio-rectal fossa and rectum, 1109; and cattle, 1196
Tuke, Dr. Hack, the prevention of insanity, 521
——— Dr. J. B., the criminal responsibility of the insane, 353; the prevention of insanity, 522
——— Dr. S., the prevention of insanity, 522
Tumour of bladder in children, two cases of, 128; polypoid of œsophagus, 869; of frontal lobe, operation for, 1114; melanotic of eye, death from secondary growths, 1115; subcortical, central cerebral, treated by operation, 1241; intramedullary spinal, 1313; of the palate, 1430; of the hypophysis, *ib.*
Tumour, "dispersible" of mamma, 972; of the kidney, 1049
Tunis, a vaccine station at, 544; vaccination in, 847
Turkey, female medical practitioners in, 832
Turner, Dr. A., on the central connections and relations of certain cranial nerves, 643
——— Mr. C. B., an affection of the knee-joint simulating dislocation of the semilunar cartilage, 803
——— Dr. D., physics of an aneurysm, 71; electrical theory of the physiology of vision, 1368
Turner, Dr. G., the antitoxin treatment of diphtheria, 1428
——— Dr. J. S., the cycle of life, 176
——— Dr. L., displacement of semilunar cartilages of knee, 16
Tweedy, Dr., on the induction of labour, 1422
Twining, Miss L., the inspection of workhouses, 159; the aged poor in workhouses, 880, pauper imbeciles, 1200
Tympanum, rupture of both membranes of by cough, 68
Tynemouth, Waugh *v.* Corporation of, 218
Typhoid antitoxin, a 1284
——— fever. *See* Fever enteric
Typhus fever. *See* Fever
Tyson, Dr. W. J., on functional diseases of the heart, 1041; pyrexia and its treatment, 1098
Tyler, Dr. P., osteoclasis, 590

U.

Ulcer, typhoid, perforation of in a young child, 809; perforative of the stomach and intestines, treatment of, 859, 914; perforative of stomach treated by laparotomy, stitching and washing out, 982, 1426
Ulceration of the duodenum, laparotomy in, 920
Ulloa, Dr. J. J., appointed Secretary of Interior at Costa Rica, 165
Underclothing, woollen or cotton, 1132
Union, Medical Defence, successful progress of, 109; the dispute in the and the new Medical Defence Association, 230; special general meeting of, 780; meetings in provinces of, 848; subscription to funds of, 1219
United States, leprosy in the, 75; distoma Ringeri in, 95; a national department of public health for, 107
Universities, the and the professions, 323; Russian, students at, 388; German, students at, 1199
University of Aberdeen, examiners at, 163; the qualifications and appointments of university professors at, *ib.*; conferment of degrees at, 286; regulations as to medical and surgical degrees, 470; instruction at, 482; regulations for diplomas in public health, 496; opening of the winter session at, 936, 1075
——— of Brussels, the rectorship of, 233
——— the chair of anatomy at, 321; the M.D degree at, 326; degrees for practitioners at, 493; books for the M.D. degree of, 1286
——— of Cambridge, regulations as to medical and surgical degrees, 464; regulations for diplomas in public health, 494; pass lists, 846, 1463, 1509; pharmacology, *ib.*; examiners for medical degrees, 958; General Medical Council, 958, 1148; entry of medical students, 958; dates of examinations at, 1019; degrees, 1019, 1148; elections to university council, 1034; pathology, 1148; delegates to Indian Medical Congress, 1210; clinical teaching, 1346; State medicine, *ib.*; appointments, *ib.*; Walsingham medal, 1408; medical examinations, *ib.*; medical acts, *ib.*; books for the D.P.H. of, 1414; physiological psychology, 1463; physical training, *ib.*
——— of Dorpat. *See* University of Jurjeff
——— of Dublin, pass lists, 18, 1509; regulations as to medical and surgical degrees, 472; regulations for diploma in State medicine, 497
——— of Durham, regulations as to medical and surgical degrees, 466; degrees for practitioners at, 493; regulations for diplomas and degrees in public health, 495; pass lists, 678, 735; conferring of degrees at, 901; award of gold medal at, 959; women and, 1259, 1412
——— of Edinburgh, pass lists, 105, 231, 285, 341, 901, 958; regulations as to medical and surgical degrees, 469; instruction at, 482; regulations for degrees in public health, 496; and medical degrees for women, 883, 898, 939; meeting of general council of, 1019; award of Sibbald scholarship, 1084; office bearers in the University Union of, 1408
——— of Ghent, the rectorship of, 1048
——— of Glasgow, the first lady graduates at, 205; pass lists, 231, 958; conferring of degrees at, 286; regulations as to medical and surgical degrees, 470; instruction at, 483; regulations for diplomas in public health, 496; inaugural lecture of chair of pathology, 983; graduation ceremony, 1148; practical physiology in, 1195
——— of Graz, the rectorship of, 210
——— Gresham, the present position of the scheme for, 203
——— of Halle, the chair of hygiene at, 681
——— of Innsbruck, students in the medical faculty at, 784
University of Jurjeff, the "official" language of, 764
——— of Lemberg, opening of faculty of medicine at, 1039
——— of London and the Gresham Commission, 36; pass lists, 449, 1210, 1408, 1463; regulations as to medical and surgical degrees, 465; degrees for practitioners at, 493; regulations for degrees in sanitary science, 495; London medical schools at, 1280; the surgery paper at the M.B. examination of, 1287, 1351
——— of Montpellier, the medical faculty of, 1246
——— of Munich, the chair of hygiene in, 440
——— of Nancy, foreign and lady students at, 1465
——— of Oxford, regulations as to medical and surgical degrees, 463; regulations for diplomas in public health, 495; the Regius professor of medicine at, 1019; dates of examination for the M.B., 1084
——— of Pennsylvania, conferment of medical degrees at, 109
——— Royal of Ireland, pass lists, 392, 789, 847; regulations as to medical and surgical degrees, 473; regulations for diploma in sanitary science, 497
——— of St. Andrews, pensions of principals at, 163; regulations as to medical and surgical degrees, 470; degrees for practitioners at, 493; new scholarship at, 735; repeal of stamp duty on M.D. degrees at, *ib.*
——— of Utrecht, the chair of surgery at, 1465
——— Victoria, degree-day at, 18; pass lists, 286; regulations as to medical and surgical degrees, 465; regulations for diploma in sanitary science, 495
——— of Vienna, medical students at, 792; the chair of surgery at, 998; the chair of ophthalmology at, 1465
——— of Wales, meeting of University court of, 1129; progress of, 1256; information as to, 1467
——— of Warsaw, celebration of twenty-fifth anniversary of foundation of, 101; the rectorship of, 1461
Unna, Dr., on lupus, 519; the management of eczema, 648; on acne vulgaris, 691; the function of the coil glands, 694; influence of solar rays on the skin, 696; epidemic skin disease, 695; demonstrations, *ib.*
Untersuchungen über den feineren Bau des centralen und peripherischen Nervensystems, Dr. C. Golgi, *rev.*, 535
Urethra, suture of the after rupture and external urethrotomy, 1310
Uric acid, blood changes produced by, 113; direct introduction of into the body, its bearing on the prevention and treatment of disease, 1297; the value of piperazin as a solvent of stones of in urine, 1426
Urine, frothy, 399; suppression of, 1370; the value of piperazin as a solvent of uric acid stones in, 1426
Urticaria following the administration of iodide of potassium, 12
Uruguay, antitoxin treatment of diphtheria in, 1073
Uterus, on the change in size of the cervical canal of during menstruation, 70; the treatment of fibroids of by abdominal section, 118; fibroid, 130; inversion of due to fibroma, spontaneous reinversion after removal, 1168; vaginal hysterectomy for cancer of, 1314; vaginal hysterectomy for carcinoma of the body of the, 1366

V.

Vaccination and small-pox, 26, 151, 164, 328, 438, 652; and democracy, 103, 1451; successful grants for, 109, 346, 448, 568, 894, 1285, 1408; and German Emperor's children, 144; in Belgium, 344; irregularities in in Ireland, *ib.*; infantile, inefficient results of, 379, 566, 808; in Austria, 397; in Australia, 434; facts about, 450; by a nurse, *ib.*; school boards and, 540; infantile, 589; in Ireland, 566, 1461; during small-pox epidemics, *ib.*; statistics of, 614, 627, 724; at Nottingham, 624; and small-pox in Switzerland, 700; death following, 807; and small-pox in Marylebone, 822, 927, 1319; and small-pox in Italy, 834; in Tunis, 847; and small pox at Nottingham in 1893, 926; concurrent with measles, 964, 1028, 1156, 1219; and small-pox in Manchester, 1007; compulsory, maximum age for, 1026; and small-pox in West Ham in 1893, 1149, 1212; popular literature of, 1155; instruments for, 1156; proposed celebration of centenary of in Germany, 1192; the position of guardians in relation to, 1193; the German

law of 1874 on, 1213; and small-pox in Edinburgh and district, 1465; and the guardians elections, 1468
Vaccination scarifier, 849, 762, 794
Vaccinators, 20
Vaccine (calf), 205; the pathology of, 235; lymph, economy in, 805
——— vesicle, the history of the, 633 (794)
Vaccinia, researches on, 157; discussion on at Bristol, 631; and variola, 869
Vacher, Dr. F., A. Healthy Home, *rev.*, 1052
Vadokter, Mr. J. O., Cline's splints, 1286
Vagina, fibrous diaphragm in, 130; antiseptic douching of, *ib.*; a peculiar crackling (emphysematous), sensation in the canal of, 805
Vagrancy and Vagrants. *See* Tramps
Varicella bullosa, 701, 1049
Variola, the pathology of, 236; and vaccinia, 869
——— vaccinia and the nature of vaccine lymph, 633
Varix, aneurysmal of the left internal carotid artery and the cavernous sinus, 806; turbinal, 1171
Vehsemeyer, Dr. S., Die Behandlung der Leukämie, *rev.*, 74
Ventilation of sewers, 210; of small-pox hospitals, 667; an improved system of, 708; of main sewers, 903
Verdon, Dr., watercress and enteric fever, 1241
Verità (La) sulle Aberrazione e i Delitti nell' Ordine sessuale, Dr. G. de Letamendi, *rev.*, 17
Vermiform appendix. *See* Appendix
Vests, woollen, 1117
Vezier, Dr., plucky rescue by, 712
Victoria Park, proposed introduction of deer in, 291
Vienna, Pasteurism in, 375; gift of £50,000 by Baron A. de Rothschild to the hospitals of, 669
Vignol, Dr. A., treatment of sweating feet, 627
Villages, cesspools in, 1508
Villemin, the monument to, 828
Vimbos (beef force), 815
Vinay, Dr. Ch., Traité des Maladies de la Grossesse et des Suites des Couches, *rev.*, 1131
Vinegar (wine), 1475
Vines, Dr. C. S., epidemic muscular rheumatism, 723; beri-beri in the Port of London, 845
Viquerat, Dr., treatment of tuberculosis by asses' serum, 718, 887
Virchow, and Behring, 917, 1012; on the antitoxin treatment of, diphtheria, 1400
Vision, electrical theory of the physiology of, 1369
Vivisection and the School Board, 1191
Voigt, Dr., on small-pox, 360; on variola vaccinia and the nature of calf lymph, 633, 636
Volunteer Medical Staff Corps, promotions and appointments in, 103, 390, 448, 501, 622, 677, 733, 788, 858, 1017, 1200, 1259, 1341, 1406, 1460; proposed organisation of, 448, 622, 788; retirement of medical officers of, 677; decoration of officers of, 788; competition for challenge shield, 1345
Volunteers, retirement of, 46, 161
Vomiting, obstinate, in infancy, 571
Vorlesungen über die Zelle und die einfachen Gewebe, *rev.*, 924
Vulva, gangrene of following labour, 13; hæmatoma of, 918; accidental gangrene of, 1108

W.

Waite, Dr. H., guillotine for papillomata and small growths, 1414
Wakefield, nursing at the workhouse infirmary of, 367, 378, 571, 628, 668, 711, 794, 845
Wakeling, Dr. T. G., the antitoxin treatment of diphtheria, 1008
Waldo, Dr. H., on lupus, 519; on acne vulgaris, 691; a case of Charcot's joint disease with perforating ulcer of the foot in a tabetic patient, 1235; ataxia and the diseases of which it is a symptom, 1293
Walford, Dr. E., on cremation, 311; diarrhœa in 1893, 318
Walker, Mr. H. S., mastoid abscess and thrombosis of lateral sinus, 1114
——— Mr. H. U., the antitoxin treatment of diphtheria, 368, 376, 439
——— Mr. J. C., the new pharmacy, 1144
——— Dr. J. W., the spirit of quackery within the pale of the profession, 179
——— Dr. N., on lupus, 518; the function of the coil glands, 694
——— Dr. W., obituary notice of, 1411
Wall, Dr. A. J., the late Mr. D. Taylor, 112
Wallace, Dr. A., case of successful Porro's operation, 1314
——— Mr. D., structure of the œsophagus, 1368
Wallis, Mr. J. W., A Manual of Hygiene, *rev.*, 133
——— Surgeon-Major K. S., gunshot injuries from the Lee-Metford rifle, 919
Walsh, Dr. D., scarlet rash after enemata, 12; cholera and bread, 746
Walter, Mr. John, on subscribers' privileges, 1191
Walters, Dr. J., concurrent vaccination and measles, 1249
Waltham Cross, opening of new hospital at, 1153
War, the medical services in, 44
Ward, Mr. F. H., presentation to, 791
Warden, Dr., on deaf-mutism, 1167
Wardle, Mr. M., inefficient results of infantile vaccination, 808
Wards, hospital, the decoration of, 400
Warning, a, 628, 683, 738, 1091, 1467; heeded, 1219
Warnots, Dr. L., death of, 868
Wart, umbilical treatment of, 1090
Washbourn, Dr. J. W., 80 cases of diphtheria treated by antitoxin, 1417
Washington, antitoxin treatment of diphtheria at, 1339, 1485
Watch, the "M.D.," 707
Water, potable, the filtration of, 353; the interpretation of the analyses of, 382; the bacteriological examination of, 622; drinking, the hygiene of, 671; the spread of cholera by, 841; second hand, for London, 883; the sterilisation of, 1055
Watercloset, the two-gallon flush for, 566; a deodoriser, 1416
Watercress and enteric fever, 1241
Water mains, power of sanitary authority to lay, 161
Water pressure accumulators, 873
Water supply, urban, typhoid fever and, 612, 721; disease and, 613
Water supplies, public, lead poisoning in, 957; rural, *ib.*
Waterloo, hospital returns following, 1134
Waters, Mr. E. E., tents as a means of relieving overcrowded hospital wards, 102; presentation to, 846
Wathen, Mr. H., the treatment of psoriasis, 697
Watson, Mr. W. S., a new operation for trichiasis and distichiasis, 70; a case of cystic polypi of the nose, 1365
Watt, Dr. T., inefficient results of infantile vaccination, 806
Waugh *v.* Corporation of Tynemouth, 218
Waylen, Mr J. S. A., the antitoxin treatment of diphtheria, 389
Weather, the, and the public health, 804
Weatherly, Dr. L. A., the criminal responsibility of the insane, 349
Weber, Dr. Hermann, offers prize for essay on tuberculous consumption, 1449
——— Dr. Hugo, Die Heilung der chronischen Lungenschwindsucht durch Entwickelung von Tuberculose im Magen, *rev.*, 923
Weekes, Mr. H., death of, 452
Wegele, Dr. C., Die atonische Magenerweiterung und ihre Behandlung, *rev.*, 20
Weir Mitchell, Dr. J., address to students at Netley, 340; the treatment of, 1090
Wells, deep, the pollution of, 1328
Wells, Mr. T. P. G., newspaper shops and advertisements, 162
Welsbach burners, 1218, 1286
Welsford, Dr. A. G., rupture of the tympanic membranes by cough, 63; medical defence and organisation, 147
West, Mr R. W., primary sarcoma of lung in a boy, aged 11, 23
——— Dr. W. S., death under chloroform, 205
West Ham, small-pox and vaccination in, 1149, 1212
Weston, Dr. G. H., spread of disease by infected milk, 1408
Wethered, Dr. F. J., the treatment of chronic diseases of the heart by baths and gymnastics as practised at Nauheim, 1015
Wetherell, Dr. J. A., beri-beri, 950
Whait, Dr. J. R., an improved consulting room couch, 762
Whitby, Dr. C. J., modern hydrotherapy, its relation to general therapeutics, 1304
White, Dr. A. C., antitoxin treatment of diphtheria, 1270
——— Mr. F. F., the need for reform, 387; major operations on old subjects, 1108
——— Mr. J., presentation to, 998
——— Dr. J. B., death of, 1462
——— Mr. J. H., the antitoxin treatment of diphtheria, 542
——— Dr. W. H., intracranial aneurysm in young subjects unaffected with syphilis or malignant endocarditis, 889; pyrexia and its treatment, 1083, 1099; eczema following typhoid fever, 1110
Whiteford, Mr. C. H., intraperitoneal rupture of urinary bladder, laparotomy, suture of bladder, 868
Whittaker, Dr. J. Y., The Theory and Practice of Medicine, *rev.*, 16
Whooping-cough, the treatment and complications of, 403
Wiglesworth, Dr. J., stabbed by a lunatic, 337, 378; the prevention of insanity, 521; the education of feeble-minded children, 531
Wild, Jonathan, the skeleton of, 1328
Wilkes, Mr. J., obituary notice of, 1462
——— Mr. R., lower molar abscess, 1219
Wilks, Dr. S., the Beaven Rake memorial, 1208
Will, Dr. J. C. O., Lectures on Genito-Urinary Diseases, *rev.*, 1316
Willenhall, epidemic of small-pox at, 1281
Willett, Mr. E., the origin of the term "anæsthetics," 808; congenital cystic adenoma of kidney, etc., 1049; spontaneous dislocation of hip, 1111
Williams, Dr. D., ataxia and the diseases of which it is a symptom, 1293
——— Dr. John, made a baronet, 141
——— Dr. J. R., some popular superstitions, 807
——— Mr. J. T., hæmorrhage after amputation of the hip, 676
——— Mr. L., The English Riviera, *rev.*, 991
——— Dr. P. W., on functional diseases of the heart, 1041; notes on diabetes treated with extract and by grafts of sheep's pancreas, 1303; typhoid fever of a peculiarly virulent type communicated by the breath, 1353
——— Mr. W. R., inheritance in relation to disease, 676; tubercle and cancer, 1027; axillary cancer, 1405
Williams-Freeman, Dr. J. P., the antitoxin treatment of diphtheria, 820
Williamson, Mr. G. E., aneurysmal varix of the left internal carotid artery and the cavernous sinus, 806
——— Dr. R. T., intramedullary spinal tumour, 1313
Willoughby, Dr. E. F., The Health Officers Pocket-book, *rev.*, 533
Wills, Dr. E., presentation to, 1117
Wilmot, Dr. and Mrs., presentation to, 440
Wilson, Dr. C. B., death of, 1422
——— Mr. G., death of, 825
——— Dr. J. J., dislocation of the humerus by muscular action, 1426
——— Dr. M., the application of diachylon plaster, 806
——— Dr. T., papillomatous cysts, 988; fleshy mole, 1178; axial rotation of ovarian cysts, 1344
Wine, adulteration of, 567
Wines, Marza, 649; coca, 1052
Wingrave, Dr. W. H. W., turbinal varix, 1171, 1172; self-retaining aural polypus forceps, 1246
Withington (Lancs.) nursing at the workhouse infirmary of, 1389, 1388
Witwatersrand, small-pox tax in 1152
Wolfe, Dr., the ophthalmological clinic of, 1143
Wolfenden, Mr. S., follicular tonsillitis, 386; on diphtheria, 1177
Wolff, Professor M., on the antitoxin treatment of diphtheria, 1457
Wolstenholme, Dr. R. H., the "medical aid business," 1027
Women, the higher education of, 346; the medical education of, 490; degrees, diplomas, and schools for, 491; medical education for in Russia, 816; medical degrees for in Edinburgh, 883, 898; and the University of Durham, 1259, 1412; as guardians, 1261; hospital appointments for, 1415
Wood, Dr., on whooping-cough, 406
——— Dr. E. W., the relative efficiency of water filters in the prevention of infective disease, 1053, 1118, 1182, 1375, 1486
——— Dr. T. O., the prevention of insanity, 522
Wood Green, laying foundation stone of cottage hospital at, 514
Woodcock, Mr. H. de C., a new pharmacy, 1145
Woodhead, Dr. G. S., the bacillus of plague, 389; some pathological problems of the day, 629; the pathology of vaccinia, 635; the tuneus-foot disease of India, 639; on cerebellar degenerations, 642; morbid anatomy of infantile paralysis, 643; effect of creasote on the virulence of the tubercle bacillus, 645; the channels of infection in tuberculosis, 944; the relative efficiency of water filters in the prevention of infective disease, 1053, 1118, 1182, 1375, 1486; the nature of diphtheria and the basis of the antitoxic treatment, 1393; antitoxin treatment of diphtheria, 1485

Woods, Dr. H., pay wards at the Great Northern Central Hospital, 1201, 1342, 1459
——— Dr. J. C., personal visits by medical officers of health, 1282
Wooldridge, Dr., memorial tablet to, 1127
Woolsorters' disease. *See* Disease
Work at high altitudes, 680
Workhouses, provincial, nursing at, 28, 29, 56, 80, 90, 111, 146, 150, 167, 202, 209, 264, 272, 325, 330, 367, 372, 376, 378, 387, 428, 494, 508, 511, 538, 547, 548, 549, 571, 598, 600, 601, 607, 628, 650, 651, 662, 668, 671, 682, 710, 711, 717, 739, 764, 766, 772, 794, 809, 816, 830, 831, 845, 851, 879, 880, 883, 885, 930, 939, 981, 992, 1000, 1059, 1064, 1121, 1127, 1186, 1192, 1195, 1317, 1380, 1388, 1435, 1447, 1495, 1500; inspection of, 159, 378, 547; alcohol in, 736; attendants at, 931; insane persons in, 992, 1192, 1408; Irish, and union infirmary surgeons, 1081; Irish, pauper nursing in, 1194
Working classes, house-ownership for the, 19
Workplaces, sanitary condition of, 1027
Workshops, the inspection of, 1128
Worsley, Mr. R. C., case of strychnine poisoning, 808
Worswick, Dr. F. H., dispensary touting, 739
Worthing, waterborne typhoid at in 1893, 152
Wounded, the transport of and the Geneva convention, 43; in war, ambulance provision for, 1391
Wounds, gaseous applications to, 1236, 1415
Wray, Mr. C., the relation of some occupations to eyesight, 585; diagnosis and treatment of strabismus, 587; remarks on mixed astigmatism, 596
Wrexham, nursing at the workhouse infirmary of, 264, 272
Wright, Dr. A. E., methods of increasing and diminishing the coagulability of the blood, 57
——— Mr. C. J., on the induction of labour, 1422; on extrauterine gestation, 1425
Wundt, Dr. W., Lectures on Human and Animal Psychology, *rev.*, 1243
Wurzburg, proposed establishment of sanatorium for tuberculous patients at, 165

X.

Xanthoma multiplex, 805
Xerostomia or dry mouth, 1314

Y.

Yalu, the naval engagement at, 721
Yarmouth. *See* Great Yarmouth
Yaws, epidemic of in Assam, 945
Yeo, Dr. I. B., antitoxin treatment of diphtheria, 1394, 1428
Yeomanry, disbandment of regiment of, 161; promotions and appointments in medical staff of, 390, 1260
Yorke-Davies, Dr. N. E., thyroid tabloids in obesity, 42, 158
Young, Mr. H. S. S., a legal anomaly, 1404
—— Dr. P. A., pelvic peritonitis, 130
—— —— Dr. R. J. E., menstrual headache, 130
Younge, Surgeon-Major G. H., dysentery and tropical liver abscess, 621; Malta fever, a suggestion, 1145
Youngest England, 821, 951, 1027

Z.

Zakharin, Professor, presentation to, 1258
Zoology, books on, 738

INDEX TO THE EPITOME FOR VOLUME II FOR 1894.

The Figures in this Index refer to the Number of the Paragraph NOT the Page.

A.

Abdomen, the incision in surgery of the, 318
Abdominal section and subsequent pregnancies, 95; bacteriological examinations during, 359; the cause of thirst following, 397
Abductors of the vocal cords, paralysis of in the course of tertiary syphilis, 257
Abel, wound diphtheria due to Loeffler's bacillus, 8; the diphtheria bacillus, 309
Abortion at the fifth month, placenta prævia in, 171
Abscess, pelvic, treatment of, 322; acute retropharyngeal, 378; acute retropharyngeal, etiology of in young children and sucklings, 290; multiple in infants put out to nurse, 407; thyroid, 411
Abscesses, "fixed" in otology, 418
Acetone in the stomach contents, 239
Acromegaly, 60, 476
Actinomycosis and myxœdema, 395
Adhesions, painful peritoneal, 294
Aizelius, urticaria pigmentosa, 293
Alberti, perforation of uterus by curette, prolapse of intestine, recovery after operation, 229
Albumen preparations, the surgical uses of, 451
Albuminuria phosphaturic and glycerine phosphates, 23
Alcohol, intraparenchymatous injections of in inoperable cancer of the uterus, 252
Alessandri, the effects of chloroform on the organism, especially the kidneys, 232
Alexander, chloroform and forceps, 267
Alm, cancer of the kidney, 296
Amylene hydrate, 307
Aneurysm, renal, 288; latent of the aorta, a new and distinguishing sign of, 372
Angerer, thyroid extract in cachexia thyreopriva, 117
Angina, rheumatic, 65; in man, avian diphtheria and, 255
Angioma, cavernous, of ovary, 184
Animals, transmission of human cancer to, 263
Anker, lead poisoning, 103
Anthrax in man, 49, 412; serum treatment of, 77
Antipyretic, true, the properties of a, 230
Antipyrin as a vesical analgesic, 179
Antisepsis in obstetric practice, 151
Antitoxin, treatment of tetanus by, 214, 431, 485; Tizzoni's, 250; treatment of diphtheria by, 362, 408, 426
Anus, artificial, after removal of appendages, enterorrhaphy, 379; artificial, treatment of, 402
Aorta, a new and distinguishing sign of latent aneurysm of, 372; abdominal aneurysm of, 393
Aphasia, motor, after influenza, 331
Apocynum cannabinum as a cardiokinetic and diuretic, 229
Apoplexy, cerebral, the temperature in, 23
Appendicitis, incision for, 109; obliterans, 262; 84 cases of, 295; glycosuria complicating, 351
Appendix vermiformis, perforation of, 71
Armaignac, spontaneous cure of traumatic detachment of the retina, 126
Arnold, acromegaly, 60
Arnozan, treatment of icterus gravis, 101
Aron, the forceps and meddlesome midwifery, 357
Arsenic, the urine in chronic poisoning by, 492
Arteries, catheterisation of, 242
Artery, superior mesenteric, thrombosis of, 47
Arthritis complicating acute pneumonia, 491
Ascarides, hystero-epilepsy due to, 259
Ascites, chylous, 123
Atresia of digestive tracts, 219
Audebert, moribund women at term, how to save the fœtus, 319
Australia, symphysiotomy in, 15

B.

Baatz, nephritis from beta-naphthol injections, 273, 505
Babes, v., the nerves in pseudo-hypertrophic paralysis, 274
Bacilli of tubercle in the nasal cavities of healthy men, 85
Bacillus, Loeffler's, wound diphtheria due to, 8; pyogenic, treatment of enteric fever by killed cultures of, 115; of glanders, some biological properties of the, 234; of diphtheria, 309; of tetanus, 454; typhoid, rapid detection of, 490
Bacteriology of healthy conjunctiva, 311
Backer, post-mortem Cæsarean section, child saved, 76
Bäumler, treatment of empyema in tuberculous patients, 453
Baginsky, summer diarrhœa and the sterilisation of milk, 370
Bajardi, operation for congenital dislocation of the patella, 439
Balade, ulceration of the tongue in hysteria, 197
Baldry, hysterectomy in diseases of the uterine appendages, 215
Ballet, syphilis simulating amyotrophic lateral sclerosis, 475
Banholzer, the blood in pulmonary stenosis, 20
Banti, typhoid septicæmia and pseudo-typhoid infection, 474
Baracz, intestinal surgery, 66
Barendt, gallanol in psoriasis, 215
Bartoszewicz, external application of guaiacol in fever, 384
Barwald, bismuth loretin, 271
Basedow's disease. *See* Disease
Batashoff, epithelima of the lip in a child, 317
Baths (salt) in osteomalacia, 484
Baudrey, laceration of recto-vaginal septum in labour, perineum intact, 182
Bauer, antitoxin in tetanus, 485
Baumgarten, epistaxis, 350
Bayer, glycosuria caused by nasal obstruction, 277
Beck, v., surgery of the stomach, 398
Beco, uræmic pericarditis, 349
Bellamy, R., trional in delirium tremens, 287
Belliard, acute retropharyngeal abscess, 378
Bendersky, examination of internal organs, 236
Bergonié, pressure palsy from walking on stilts, 416
Berkley, the pituitary body and the nerve elements therein, 489
Beta-naphthol, nephritis from injections of, 273, 505
Beyer, tuberculosis of the Fallopian tube, 443
Bidder, old primiparæ, 356
Biedert, the feeding of infants, 471
Binaud, removal of tuberculous appendages followed by tuberculous meningitis, 131
Biniodide of mercury as an antiseptic, 389
Bismuth loretin, 271
Bladder, removal of stone from the, 48; urinary regeneration of the, 205; excision of the for epithelioma, 208
Blagoveshtchensky, influence of erysipelas on cholera, 258
Blaschko, intravenous sublimate injections in syphilis, 502
Blepharitis, ciliary, treatment of, 189
Blindness, transitory, in uræmia, 185
Blood, the, in pulmonary stenosis, 20; influence of injection of into the albumen of the egg on the development of the embryo, 41; the and massage, 55; and tissues, bacteriological examination of, 61
Blood serum, toxicity of in puerperal eclampsia, 119
Blum, bismuth loretin, 271
Bogdan, a new symptom of cancer, 183
Bogusz, spermin, 251
Bohland, preservation of organised sediments in the urine, 43
Boinet, transmission of human cancer to animals, 233; virulence of the pus in salpingitis, 455
Boise, the cause of thirst following abdominal section, 397
Boldt, palliative treatment of uterine cancer, 73
Bolshesdsky, biniodide of mercury, 389
Bonauti, antitoxin treatment of tetanus, 214
Bond, treatment of vesico-vaginal fistula, 499
Bonnet, uncontrollable vomiting of pregnancy, 466
Bonome, some biological properties of the glanders bacillus, 234
Bordier, electrical treatment of exophthalmic goitre, 396; pressure palsy from walking on stilts, 416
Bose, Morton's disease, 50; fever and erythema

Copies of the Index to the Epitome, with Title-page, for binding in separate form, can be had on application to the Office, 429, Strand, W.C.

from intestinal toxæmia, 201; external applications of guaiacol, 468
Bothe, tolysal, 199
Boulay paralysis of the abductors of the vocal cords in the course of tertiary syphilis, 257
Bourgeois, conjunctival autoplasty in fistula of the cornea, 169
Bradford, congenital dislocation of hip, 297
Brain, injury to the, 84; the cortical cells of in insanity, 139; operative treatment of subcortical tumours of the, 315
Braun, relaxation of sacro-iliac synchondrosis, 129
Brens, true cystic myoma, 152
Brill, external use of guaiacol as an antipyretic, 486
Brissaud, chlorate of sodium in cancer of the stomach, 160
Broca, extirpation of spina bifida, 375
Brösc, cancer of ovary communicating with cæcum, 481
Bromoform in whooping-cough, 118
Bruit de diable, 184
Bruns, treatment of goitre by thyroid feeding, 344
Bruttan, coiling of funis round fœtus, 383
Buccal mucous membrane, a reflex of excited by sulphuric ether, 472
Buchner, immunity, 59; the serum treatment of diphtheria, 426
Budin, sterilised milk for infants, 78; suckling and sterilised milk, 246
Bue, accidental hæmorrhage in labour, 192
Buswell, treatment of enteric fever with killed culture of B. pyocyaneus, 115

C.

Cachexia strumipriva, 346
——— thyreopriva, thyroid extract in, 117
Cactus grandiflorus in heart disease, 249
Cæcum, cancer of ovary communicating with, 481
Cæsarean section (post-mortem), child saved, 76; or craniotomy in country practice, 111; multiple, 113; after death, 406; performed by mistake, 446
Calculi, urinary, examination of, 70
Canal, alimentary, two primary carcinomata in the, 5
Cancer, extirpation of the larynx for, 7; complicating fibroid uterus, 10; of cervix in a uterus bicornis, with atresia vaginæ and pyometra, 52; visceral, pyoktanin in, 58; uterine, palliative treatment of, 73; treatment of, 79; primary of Fallopian tube, 96, 302; of the stomach, chlorate of sodium in, 160; of the body of the uterus, 174; a new symptom of, 183; human, transmission of to animals, 233; inoperable, of the uterus, intraparenchymatous injections of alcohol in, 282; inoculability of, 290; of the kidney, 296; of the pregnant uterus, 298; contagiousness of, 310; of ovary communicating with cæcum, 481; mammary, thorough extirpation of, 497
Cantharidinate of potassium, 450
Carbonelli, anatomical results of symphysiotomy, 173
Carcinoma, the etiology of, 160; vaginal hysterectomy for, 485
Carcinomata, two primary in the alimentary canal, 5
Cardiogram, the human, 142
Carpenter, bromoform in whooping-cough, 118
Carstens, the incision in abdominal surgery, 318
Carter, the pathology and treatment of uræmia, 270
Casoti, cocaine as a means of stopping the secretion of milk, 327
Cataract, dislocated into the anterior chamber, and subsequent glaucoma, 260
Catgut, sterilisation of, 224
Cathelineau, mercurial inunction, 136
Catheter, a new form of for use in suprapubic cystotomy, 420
Catheterisation of arteries, 242
Cecil, splenectomy, 353
Cerebellum, glio-sarcoma of the, 314
Chambard, chloralose, 16
Chamberlent, toxicity of the blood serum in puerperal eclampsia, 119
Chaput, gonorrhœal peritonitis, 12; treatment of artificial anus, 462
Charles, triplet pregnancy, fœtus papyraceus, 444
Chavasse, sterilised milk for infants, 78
Child, aged 11, hysteria and phantom tumour in a, 14; epithelioma of the lip in a, 317
Childbed, disadvantages of ovariotomy in, 381
Children, sea air in disease in, 216; treatment of seborrhœic eczema in, 306; intestinal obstruction in, 330; young, etiology of acute retropharyngeal abscess in, 380
Chloral hydrate in hæmoptysis, 40
Chloralose, 16, 176, 288; in the treatment of night sweats, 248; some bad effects of, 252
Chlorate of sodium in cancer of the stomach, 160
Chloroform (salicylid), 38; anæsthesia from, injections of sulphate of spartein as a preliminary to, 231; the effect of on the organism, especially the kidneys, 232; and forceps, 267
Chlorosis, free hydrochloric acid in the stomach in, 86; physio-pathology of, 161
Cholera, cranberry juice in, 19; influence of erysipelas on, 238; spermin in, 272; saline injections in, 388; serum treatment of, 409; and pregnancy, 500
——— vibrio. *See* Vibrio
Cirincione, cataract dislocated into the anterior chamber and consecutive glaucoma, 263
Claus, migraine, 392
Clavicle, treatment of fracture of by suture, 142
Coal tar in dermatological practice, 429
Cocaine, dangers of, 155; as a means of stopping the secretion of milk, 327; mechanism of death under the influence of, 427
Colic, pancreatic, 2
Collaudon, "fixed abscesses" in otology, 418
Comby, the relation between rickets and laryngeal spasm, 436
Conception, fibroids and, 283; in the puerperium, 404
Condamin, pelvic hæmatocele, 421
Conjunctiva, healthy, bacteriology of, 311
Convulsions, infantile, massage in, 57
Cor adiposum, 121
Cord, spinal, localisations of lesions in the, 87; surgery of the, 125; spinal, in divers' palsy, 368; the diagnosis of tumour of, 437
——— umbilical, spontaneous intrauterine laceration of, 170; coils and knots on the, 284; coiling of round fœtus, 383
Cords, vocal, paralysis of the abductors in the course of tertiary syphilis, 257
Cornea, conjunctival autoplasty in fistula of the, 169
Councilman, thrombosis of the superior mesenteric artery, 47
Courtney, two primary carcinomata in the alimentary canal, 5
Coxwell, dysphemia (stammering), 459
Cramer, the ulnar phenomenon, 165
Cranberry juice in cholera, 19
Craniotomy or Cæsarean section in country practice, 111
Creasote, inunctions of in fever, 37
Cullerre, uræmic insanity consecutive to traumatic stricture, 218
Cunningham, trephining for Jacksonian epilepsy, 110
Cyst, hydatid in hernial sac, 280
Cystotomy, suprapubic, a new form of catheter for use in, 420

D.

Damieno, antitoxin treatment of diphtheria, 408
Damourette, diseases of sucklings caused by galactophoritis, 98
Dana, the temperature in cerebral apoplexy, 23
D'Annona, experimental section of the fifth nerve, 333; resection of the trigeminus, 477
Davis, restoration of intestinal continuity without mechanical devices, 334
Deaf-mutism, 415
Death, early, cause of after operations on the intestines, 130; under the influence of cocaine, the mechanism of, 427
Decidua, malignant disease of after hydatid mole, 380
Deciduosarcoma of uterus, 447
Dehio, embolism of the abdominal aorta, 393
Delagénière, undeveloped right half of genito-urinary tract in an adult, 484
Delirium tremens, trional in, 287
Delivery, in uterus duplex, 36; the forceps in, 149
Dementia, tabes going on to, 83
De Micheli, glio-sarcoma of the cerebellum, 314
Demoulin, perforation of the vermiform appendix, 71
Dermoids, ovarian, can they be diagnosed? 465
De Santis, male hysteria associated with moral insanity, 186
De Tullio, treatment of syphilitic dyspepsia, 80
Deuschle, trional, 116
Diabetes, early symptoms of, 105
Diarrhœa, summer, and the sterilisation of milk, 370
Diazo reaction, diagnostic value of the, 203
Digestive tracts, atresia of, 210
Digitoxin, 195
Dilatation, rapid, in urethral stricture, 335
Diphtheria, treatment of, 134, 153, 269; petroleum and pyoktanin in, 175; avian, and angina in man, 255; menthol in, 304; antitoxin in, 362, 408, 426; faucial, local treatment of, 363; "salaktol" in, 470
Diplœ, venous tumour of the, 207
Disease, early visceral in syphilis, 313
——— Basedow's. *See* Disease, Graves's
——— Graves's, the pathology of, 22; and the thyroid gland, 369; sheep's thyroid in, 386
——— Ménière's, hypodermic injection of pilocarpin in, 293
——— Morton's, study of, 50
Dittel, v., delivery in uterus duplex, 36
Diuretin, 343
Divers' palsy. *See* Palsy
Diverticulum of the œsophagus, 355
Dixon, Mary, anatomy of Fallopian tubes, 75
Djamboe, 156
Doderlein, puerperal eclampsia, 74
Dohrn, rupture of uterus and vagina, 425
Dolder, craniotomy v. Cæsarean section in county practice, 111
Dollinger, new operation for the removal of enlarged cervical glands, 260
Donner, statical electricity in eczema, 39
Duba, malarial pseudo-tuberculosis, 493
Duboisin as a hypnotic, 308
Duclert, degenerative changes in the mammary gland, 465
Ducloux, avian diphtheria and angina in man, 255
Dulles, treatment of hydrophobia, 326
Dumont, puerperal infection from the intestine, 210
Duodenum, pseudo-diverticulum of, 107
Dyspepsia, syphilitic, treatment of, 80
Dysphemia (stammering), 459
Dystocia from tumour in fœtus, 340

E.

Ear, middle, inflammation of in infants, 106
Eastmann, sterilisation of catgut, 224
Eberhart, enterocele vaginalis complicating prolapse of posterior vaginal wall, 133
Echinococcus of the ovary, 337
Eclampsia, puerperal, 74, 400; toxicity of the blood serum in, 119; treatment of, 321
Eczema, statical electricity in, 39; seborrhœic, treatment of in children, 306
Ehrl, hysterical gangrene, 45
Electricity, statical in eczema, 39; in exophthalmic goitre, 346; in migraine, 387; in the treatment of skin diseases, 498
Elephantiasis following extirpation of lymphatic glands, 92
Emanuel, tubercle of the uterus, 32
Embolism of the abdominal aorta, 393
Embryo, influence of injection of blood into the albumen of the egg in the development of, 41
Emmerich, serum treatment of anthrax, 77; treatment by erysipelas serum, 137
Empyema in tuberculous patients, treatment of, 453
Endocarditis, tuberculous, 42
Endometritis, gonorrhœal, 13
Englisch, a new form of catheter for use in suprapubic cystotomy, 420
Engstrom, lactation, atrophy of uterus, 288
Enteralgia, 162
Enterocele vaginalis complicating prolapse of postero-vaginal wall, 133
Epidemic, an unusual, 376
Epilepsy, Jacksonian, trephining for, 110; ophthalmoscopic changes in, 237; the treatment of, 324; the relationship of the infracortical ganglia in, 411
Epiphyses, traumatic separation of the, 67
Epistaxis, treatment of, 350
Epithelioma, excision of the bladder for, 208; cylindrical, transmissibility of, 254; of the lip of a child, 317
Ergot, in night sweats of phthisis, 17
Erysipelas serum, treatment by, 137; influence of on cholera, 238
Erythema, from intestinal toxæmia, 201; after three successive deliveries, 225
Essad, treatment of ciliary blepharitis, 189
Ether narcosis, 286
Eulenburg, Basedow's disease and the thyroid gland, 369
Evensen, hypnotics in mental disease, 135
Everke, operations on uterus and ovaries in pregnancy, 128

F.

Fabre-Domergue, treatment of cancer, 79
Faceache, referred, 312
Fagari, action of the air on poisons, 159
"Fat-milk" infants' food, 364

Fats of human milk, 34
Favism, 373
Favus, treatment of, 501
Fedoroff, the action of tetanus antitoxin, 431
Fehling, post-partum hæmorrhage, 31
Feige, treatment of diphtheria, 269
Fenger, surgery of the ureter, 279
Féré, influence on the development of the embryo of the injection of blood into the albumen of the egg, 41
Fernwald, v., hysterectomy for rupture of uterus, 320
Ferrari, the human cardiogram, 142
Ferratin, 198
Feulard, treatment of seborrhœic eczema in children, 306
Fever, inunctions of guaiacol and creasote in, 37; from intestinal toxæmia, 201; external application of guaiacol in, 384
—— enteric, treatment of by killed cultures of B. pyocyaneus, 115; experimental, produced by the typhoid toxin, 181, 200
—— puerperal and influenza, 150
Fibroid, large, two pregnancies in a patient with a, 480
Fibroids, uterine, the heart and, 212; and the uterine muscular tissue, 247; and conception, pregnancy, and labour, 283
Fistula, umbilical, due to extrauterine pregnancy, 151; of the cornea, conjunctival autoplasty in, 169; vesico-vaginal, treatment of, 496
Flemming, chloralose, 176
Fœtus, in utero, 40 days after term, 35; effect of deficient liquor amnii on, 112; how to save the in moribund women at term, 319; dystocia from tumour in, 340; coiling of funis round, 383; infected with tuberculosis at delivery, 424; papyraceus in triplet pregnancy, 441
Forbes, removal of stone from the bladder, 48
Forceps, the, in delivery, 149; chloroform and, 267; the and meddlesome midwifery, 357
Formic aldehyde in ringworm, 503
Foxwell, A., iodoform in tuberculous phthisis, 198
Fracture, faulty union of near the upper end of humerus, 417
Frederick, relations of renal insufficiency to surgical operations, 376
Frees, laparotomy in tuberculous peritonitis, 438
Freymuth, serum treatment of cholera, 409
Fuller, persistent urethral discharges, 89
Funis. *See* Cord, umbilical
Funke, spontaneous intrauterine laceration of cord, 170
Furunculosis, the treatment of, 385

G.

Gaertig, erythema after three successive deliveries, 225
Gärtner, "fat-milk" infants' food, 364
Galactophoritis, diseases of sucklings caused by, 98
Galezowski, hereditary ocular syphilis, 496
Gallanol in psoriasis, 215
Ganglia, intracortical, the relationship of in epilepsy, 411
Ganglion, Gasserian, removal of, 27, 460
Gangolphe, artificial anus after removal of appendages, enterorrhaphy, 379
Gangrene, dry, of nervous origin, 44; hysterical, 45
Gardner, the treatment of hydatid disease, 495
Gaudier, hæmatoma of the sterno-mastoid, 68
Gawronsky, microbes in the female urethra, 445
Gebhard, traumatic hæmatothorax, danger of Schultze's artificial respiration, 467
Genito-urinary tract, undeveloped right half of in adult, 484
Gerhardt, accessorius spasm, 26
Germani, malakin, 178
Geuer, cancer complicating fibroid uterus, 10: puerperal clampsia, 400
Girl, aged 15, mollities ossium in a, 423
Giusti, antitoxin treatment of tetanus, 214
Gland, mammary degenerative changes in the, 463
Glanders bacillus. *See* Bacillus
Glands, mammary, compression of the, 69; lymphatic, persistent œdema and elephantiasis following extirpation of, 92; enlarged cervical, new operation for the removal of, 240
Glasgow, a new and distinguishing sign of latent aneurysm of the aorta, 372
Glio-sarcoma of the cerebellum, 314
Glycerine, injections of as an oxytocic, 53
—— phosphates, phosphaturic albuminuria and, 25
Glycosuria from taking thyroid extract, 99; early syphilitic, 163; caused by nasal obstruction, 277; complicating appendicitis, 351
Goelet, ligation of the base of the broad ligaments per vaginam for fibroids of the uterus, 172
Goitre, treatment of by thyroid feeding, 344; exophthalmic, electrical treatment of, 366
Goldberg, hæmatoma of vulva after delivery, 193
Goldenbach, ergot in night sweats of phthisis, 17
Goldschieder, surgery of the spinal cord, 125
Gorianshy, cranberry juice in cholera, 19
Gottlieb, petroleum and pyoktanin in diphtheria, 175
Grassow, disadvantages of ovariotomy in childbed, 561
Gratia, inoculability of cancer, 290
Graves's disease. *See* Disease
Grawitz, lysidin, 365
Gron, hypertrophy of the pituitary body and myxœdema, 189
Gruber, conception in the puerperium, 404
Guaiacol, inunctions of in fever, 37; external application of in fever, 384; external applications of, 468; external use of as an antipyretic, 486
Guelliot, contagiousness of cancer, 310
Guéniot, multiple Cæsarean section, 113
Gueur, Cæsarean section after death, 406
Guinard, can ovarian dermoids be diagnosed? 465

H.

Hæmatocele, pelvic, 72, 421
Hæmatological studies, 3
Hæmatoma of the sterno-mastoid, 68; of vulva after delivery, 193
Hæmato-thorax, traumatic, danger of Schultze's artificial respiration, 467
Hæmoptysis, chloral hydrate in, 40; fatal in removal of appendages, 339
Hæmorrhage, post-partum, 31; methods of restraining in amputation of the upper extremity, 187; accidental in labour, 192
Hæmorrhoids, the operative treatment of, 243
Hæmostasis, uterine, scalding steam as a, 401
Hahn, jejunostomy, 90; renal aneurysm, 188; surgery of the stomach, 374
Halstead, thorough extirpation of mammary cancer, 497
Harmack, amylene hydrate, 307
Hartmann, inflammation of the middle ear in infancy, 106; torsion of pedicle in chronic disease of uterine appendages, 360
Hayem, lesions of the stomach, 507
Haynes, R. W., dangers of cocaine, 155
Head, referred headache and faceache, 312
Headache, referred, 312
Heart, the, and uterine fibroids, 212; cactus grandiflorus, disease of, 249
Heller, pharyngotherapy, 425
Hellin, the physiology of twin pregnancy, 405
Helminthiasis in the sick, 141
Hennequin, operative treatment of old fracture of the lower extremity of the radius, 399
Hennig, the heart and uterine fibroids, 212
Henrotay, antisepsis in obstetric practice, 61
Herhold, treatment of diffuse purulent peritonitis, 336
Hernandez, cancer of the pregnant uterus, 298
Hernia, gangrenous, 9; in the linea alba, 190; radical cure of, 316: of uterus, pregnancy, spontaneous premature delivery, 341
Herniotomy, internal, 145
Herrold, injury to the brain, 84
Herzfeld, congenital rickets not "fœtal rickets," 11
Hills, the urine in chronic arsenical poisoning, 192
Hip, congenital dislocation of, 297
Holmeier, fibroids and conception, pregnancy and labour, 283
Hofmokl, pelvic hæmatocele, 72
Holzmann, pancreatic colic, 2
Homans, malignant stenosis, 168
Honzel, extrauterine pregnancy at tenth month placenta inserted on intestine, 323
Hübener, Tizzoni's antitoxin, 250
Hugel, chamboe, 156
Hughes, the pathology and treatment of uræmia, 270
Humerus, faulty union of fracture near the upper end of, 417
Hydatid disease, 222; the treatment of, 495
—— of the lung, 348
Hydrochloric acid (free) in the stomach in chlorosis, 86; estimation of in the stomach contents, 458
Hydronephrosis, traumatic, 28
Hydrophobia, treatment of, 326
Hypnotics in mental disease, 135
Hysterectomy, supravaginal, 93; vaginal and myoma, 132; in diseases of the uterine appendages, 245; for rupture of uterus, 320 vaginal for carcinoma, 483
Hysteria and phantom tumour in a child, aged 11, 14; male, associated with moral insanity, 186; traction of the tongue in, 197
Hystero-epilepsy due to ascarides, 259

I.

Icterus gravis, treatment of, 101
Immunity, 59
Incision, the, in abdominal surgery, 318
Infants, sterilised milk for, 78; inflammation of the middle ear in, 106; put out to nurse, multiple abscess in, 407; the feeding of, 471
Infarcts, hæmorrhagic in uterus, 211
Infection, puerperal, from the intestine, 210
Inflammation, cryptogenic of the urinary organs, 158
Influenza, bacteriolrgy of, 21; puerperal fever and, 150; bulbar palsy and motor aphasia after, 331
Ingilherri, bacteriological examination of blood and tissues, 61
Insanity, urinary confusional, 46; the cortical cells in, 139; moral, male hysteria associated with, 186; uræmic, consecutive to traumatic stricture, 218
Intestine, puerperal infection from the, 210; restoration of continuity of without mechanical devices, 334
Intubation in pertussis, 56
Inunction, mercurial, 136
Iodoform in tuberculous phthisis, 196
Iritis, tuberculous, 91
Iron, the dietetic significance of, 140
Israel, J., extirpation of primary sarcoma of the liver, 223

J.

Jaggard, effect of deficient liquor amnii in the fœtus, 112
James, W. D., glycosuria from taking thyroid extract, 99
Janssen, subnormal temperatures of the body, 473
Jayle, cause of early death after operations on external organs, 130
Jejunostomy, 90
Josserand, physical signs of acute pericarditis, 434

K.

Kahlden, v., acute anteris poliomyelitis, 292
Kastursky, menthol in diphtheria, 304
Keen, removal of Gasserian ganglion, 27; methods of controlling hæmorrhage in amputation of the upper extremity, 187
Keiffer, placenta prævia in abortion at the fifth month, 171
Kertész, a case of cervical rib, 167
Kidney, and ureter, excision of, 29: the, of pregnancy, 285; cancer of the, 296; relation of surgical operations to insufficiency of, 376
Kleinwachter, abdominal section and subsequent pregnancies, 95; fibroid disease and uterine muscular tissue, 247
Klien, malignant disease of decidua after hydatid mole, 380
Klippel, the urine in general paralysis of the insane, 457
Kobert, the dietetic significance of iron, 140
Kockel, tuberculosis of the human placenta in relation to congenital tuberculosis, 410
Kohler, actinomycosis and myxœdema, 395
König, diverticulum of the œsophagus, 355
Koerte, antitoxin in treatment of diphtheria, 408
Koneff, hystero-epilepsy due to ascarides, 259
Koplick, etiology of acute retropharyngeal abscesses in young children and sucklings, 300
Koschier, cervical lordosis, with laryngeal pressure ulcers, 238
Kossel, antitoxin treatment of diphtheria, 408
Kostuerin, methylene blue in noma, 328
Kraurosis vulvæ, 300, 338
Kraus, treatment of enteric fever by killed cultures of B. pyocyaneus, 115
Kravkoff, inunctions of guaiacol and creasote in fever, 37
Küster, operative treatment of gastric ulcer, 206

L.

Labbé, electricity in migraine, 367
Labit, hypodermic injections of pilocarpin in Ménière's disease, 253
Labour, accidental hæmorrhage in, 192; fibroids and, 283
Labusquière, rupture of uterus in practice, 2

Lachowicz, bacteriology of healthy conjunctiva, 314
Lactation, atrophy of uterus, 268
Lactophenin, 303, 452
Laminectomy, two cases of, 6; for fractured spine, 494
Langlois, injection of sulphate of spartein as a preliminary to chloroform anæsthesia, 231
Lannois, two primary carcinomata in the alimentary canal, 5
Lantos, gonorrheal endometritis, 13
Laparotomy in tuberculous peritonitis, 438
Laryngectomy by a new method, 140
Larynx, extirpation of for cancer, 7; total extirpation of the, 124; the relation between rickets and spasm of, 421
Lasch, early visceral disease in syphilis, 313
Lead, poisoning by, 103
Leech extract and thrombosis, 120
Lefour, puerperal fever and influenza, 150
Lehmann, tuberculosis of the placenta, 54; congenital tuberculosis, 144; tuberculosis at delivery, lymphosarcoma, 421
Leidy, glycosuria complicating appendicitis, 351
Leistikow, treatment of leukoplakia, 342; coal tar in dermatological practice, 429
Lejars, faulty union of fracture near the upper end of the humerus, 417
L'Hoest, chloralose, 288
Lenhoff, hernia into the linea alba, 190
Lens, extraction of the in high degrees of myopia, 147
Leonte, supravaginal hysterectomy, 93
Lermoyez, postnasal growths of tuberculous nature, 229
Leroux, sea air in disease in children, 216
Leubuscher, the vagus and the secretion of acid by the stomach, 204
Leukoplakia, treatment of, 342
Levene, phloridzin glycosuria, 329
Levy, resection of the cardiac end of the stomach, 166
Levin, cryptogenic inflammation of the urinary organs, 158; anthrax in man, 412
Lieti, treatment of eclampsia, 321
Ligaments, broad, ligation of per vaginam for fibroids of uterus, 172
Lindemann, effects of sea air, 487
Lip, epithelioma of the in a child, 317
Liquor amnii (deficient), effect of on the fœtus, 112
Liver, action of the on poisons, 159; puerperal and acute atrophy of, 191; extirpation of a primary sarcoma of, 223; wounds of the, 281
Lloyd, localisation of lesions in the cord, 87
Loeffler, local treatment of faucial diphtheria, 303
Loeffler's bacillus. *See* Bacillus
Loewenberg, treatment of furunculosis, 385
Loir, avian diphtheria and angina in man, 255
Londe, torticollis and lumbago, 371
Lordosis, cervical, with laryngeal pressure ulcers, 238
Loviot, coils and knots in the funis, 281; Cæsarean section performed by mistake, 446
Luc, suppuration of frontal sinus, 240
Ludwig, changes in the milk and colostrum in diseases of pregnant women, 213
Lumbago and torticollis, 371
Lunge, hydatid of the, 348
Lunz, puerperal polyneuritis, 456
Lupus, thiosinamin in, 18
Lymph, the action of on pathogenic microbes, 433
Lyonnet, rapid detection of the typhoid bacillus, 490
Lysidin, 365

M.

McBurney, incision for appendicitis, 190
McCosh, gangrenous hernia, 9
McDonald, appendicitis, 295
Maffucci, infective embryonal pathology, 506
Malbaum, pyoktanin in visceral cancer, 58
Malakin, 178; in acute articular rheumatism, 430
Malaria, picrate of ammonium in, 325
Malthe, myoma and cancer of the body of the uterus, 174
Man, anthrax in, 49, 412; angina in and avian diphtheria, 255
Mandowsky, parotid tumours, 261
Mangiagalli, vaginal hysterectomy for carcinoma, 483
Manoury, cystic tumour of uterus, 382
Maragliano, cachexia strumipriva, 345
Marckwald, cavernous angioma of ovary, 111
Markwald, poisoning by potassic chlorate, 104
Martin, kraurosis vulvæ, 300
Masius, digitoxin, 195
Massage and the blood, 55; in infantile convulsions, 57
Massen, dystocia from tumour in fœtus, 340
Maurange, injections of sulphate of spartein as a preliminary to chloroform anæsthesia, 231
Maurel, mechanism of death under the influence of cocaine, 427
Measles and pregnancy, 63
Meconium, the significance and etiology of the premature discharge of, 501
Mendel, paralysis of the abductors of the vocal cords in the course of tertiary syphilis, 257
Menge, deciduosarcoma of uterus, 447
Ménière's disease. *See* Disease
Meningitis, tuberculous, following removal of tuberculous appendages, 131
Menol, *See* Mirge
Menthol in diphtheria, 304
Mercury, inunction with, 136
Mermann, aseptic midwifery without internal disinfection, 244
Meslay, mollities ossium in a girl aged 15, 423
Metchnikoff, artificial variation of the cholera virus, 192
Methylene blue in noma, 328
Metrorrhagia, fatal, in purpura, 448
Meunier, arthritis complicating acute pneumonia, 391
Meyer, hypertrophy of prostate, 127; tannigen, 177; amylene hydrate, 307; resection of the œsophagus, 478
Microbes, pathogenic, the action of lymph on, 433; in the female urethra, 415
Microcephaly, 64
Midwifery, aseptic, without internal disinfection, 244; meddlesome, the forceps and, 357
Mierzynski, estimation of hydrochloric acid in the stomach contents, 458
Migraine, electricity in, 367; forms of, 392
Mikhailoff, cactus grandiflorus in heart disease, 249
Milk, human, fats of, 34; sterilised for infants, 78; changes in in diseases of pregnant women, 213; sterilised, suckling and, 246; cocaine as a means of stopping the secretion of, 327; summer diarrhœa and the sterilisation of, 370
Miller, excision of the wrist joint, 241
——— N. F., atresia of digestive tracts, 219
Mind, hypnotics in disease of the, 135
Mitchell, massage and the blood, 55
Mocli, the treatment of epilepsy, 324
Moizard, hysteria and phantom tumour in a child aged 11, 14
Mole, hydatid, malignant disease of the decidua after, 380
Mollities ossium, excretion of earthy salts in, 358; in a girl aged 15, 423
Mongour, traumatic pneumonia, 435
Montagnon, malakin in acute articular rheumatism, 430
Montano, favism, 373
Monte, intestinal obstruction in children, 330
Morphine, taken overdosed in a, 463
Moran, transmissibility of cylindrical epithelioma, 254
Morestin, duplicity of ureters in a female subject, 501
Morotti, rapid dilatation in urethral stricture, 385
Morris, why patients recover from tuberculosis of the peritoneum after operation, 351
Morton's disease. *See* Disease
Moschcles, examination of urinary calculi, 70
Mouisset, tuberculous endocarditis, 12
Müller, anthrax in man, 49; an unusual epidemic, 276
Murri, physio-pathology of chlorosis, 161
Myoma and vaginal hysterectomy, 132; true cystic, 152; of the body of the uterus, 174
Myomectomy during pregnancy, 33
Myopia, extraction of the lens in high degrees of, 147
Myxœdema and hypertrophy of the pituitary body, 180; actinomycosis and, 395

N.

Naggy, the cortical cells in insanity, 130
Nasal. *See* Nose
Nephritis from beta-naphthol injections, 273, 505
Nerve, fifth, experimental section of the, 333; inferior dental, neuralgia of treated by resection of the nerve, 336
Nerves, the, in pseudo-hypertrophic paralysis, 274
Neuber, internal herniotomy, 145
Neumann, excretion of earthy salts in mollities, 358
Neuralgia of the inferior dental nerve treated by resection of the nerve, 336
Neurasthenia, circular, 235; paludal, 291
Nicaise, peritubal peritoneal adhesions, 244
Nimier, surgery of the pancreas, 188
Nissen, diagnostic value of the diazo reaction, 246
Noma, methylene blue in, 328
Nose of healthy men, tubercle bacilli in the cavities of, 85

O.

Obstetrics, antisepsis in, 51
Obstruction, intestinal in children, 330; intestinal following operations in which the peritoneal cavity is opened, 419
Oddo, circular neurasthenia, 235; the urine in infantile tetany, 275
Œdema, persistent, following extirpation of lymphatic glands, 92
Œsophagitis gangrænosa, 164
Œsophagotomy, intrathoracic, 352
Œsophagus, diverticulum of the, 355; resection of the, 478
Oliver, ophthalmoscopic changes in epilepsy and general paralysis of the insane, 237
Onychogenic tabes going on to dementia, 83
Oppenheimer, the serum treatment of diphtheria, 426
Orakhovatz, umbilical fistula due to extra-uterine pregnancy, 151
Organs, internal, cause of early death after operations on, 139; urinary, cryptogenic inflammation of the, 158; internal, examination of, 236
Osswald, free hydrochloric acid in the stomach in chlorosis, 86
Osteomalacia, salt baths in, 464
Oudin, electricity in the treatment of skin diseases, 469
Oui, neglected shoulder presentation, 488
Ovaries, operations on in pregnancy, 128; supernumerary, the origin of, 422
Ovariotomy, disadvantages of in childbed, 361; in a morphine taker, 463
Ovary, cavernous angioma of, 111; echinococcus of the, 337; cancer of communicating with cæcum, 181
Ozenne, mucous polypus and racemose sarcoma of cervix, 194

P.

Pagano, the action of lymph on pathogenic microbes, 433
Page, ruptured ureter, 30
Pal, chloral hydrate in hæmoptysis, 40
Palsy, bulbar, after influenza, 331; divers', the spinal cord in, 368; pressure from walking on stilts, 416
Panas, dry gangrene of nervous origin, 11
Pancreas, surgery of the, 188
Panowski, diuretin, 343
Parachlorphenol, 154; as a disinfectant of tuberculous sputa, 387
Paralysis, general of the insane at puberty, 4, 202; agitans, pathological anatomy of, 81, 488; general of the insane, ophthalmoscopic changes in, 237; of the abductors of the vocal cords in the course of tertiary syphilis, 257; pseudo-hypertrophic, the nerves in, 274; general of the insane, the urine in, 457
Patella, operations for congenital dislocation of, 339
Pathology, infective embryonal, 506
Pediculi, torsion of in chronic disease of uterine appendages, 360
Pelezer, salt baths in osteomalacia, 464
Pelzer, glycerine injections as an oxytocic, 53
Penrose, bacteriological examination during abdominal section, 359; tuberculosis of the Fallopian tube, 443
Percy-Pride of mercury in whooping-cough, 289
Pericarditis, uræmic, 349; acute, physical signs of, 434
Perier, multiple abscess in infants put out to nurse, 107
Peritoneum, why patients recover from tuberculosis of after operation, 351
Peritonitis, gonorrheal, 12; purulent, diffuse, treatment of, 336; tuberculous, laparotomy in, 438; general, cure of by medical treatment, 449
Péron, mollities ossium in a girl aged 15, 423
Pershing, acromegaly, 476
Pertussis, intubation in, 56
Petroleum in diphtheria, 175
Petteruti, apocynum cannabinum as a cardiokinetic and diuretic, 229; cantharidinate of potassium, 450
Pfeiffer, the diagnosis of tumour of the spinal cord, 437
Pharyngotherapy, 428
Phloridzin glycosuria, 329
Phthisis, ergot in night sweats of, 17; tuberculous, iodoform in, 196
Picrate of ammonium in malaria, 325

Pielecke, the bacteriology of influenza, 21
Pietkiewicz, œsophagitis gangrænosa, 164
Pilcher, pseudo-diverticulum of duodenum, 107; venous tumour of the diploë, 207
Pills, a new coating for, 305
Pilocarpin, hypodermic injections of in Ménière's disease, 253
Pinna, the attenuating power of sea water, 217
Pituitary body, hypertrophy of and myxœdema, 180; the and the nerve elements therein, 189
Placenta, tuberculosis of, 54; normally situated, premature detachment of, 266; inserted on intestine in extrauterine pregnancy, 323; human tuberculosis of in relation to congenital tuberculosis, 410
——— previa in abortion at the fifth month, 171
Pneumonia, traumatic, 435; acute arthritis complicating, 491
Poehl, spermin in cholera, 272
Poisoning by lead, 103; by potassic chlorate, 104; by terchloride of gold, 122
Poisons, action of the liver on, 159
Poliomyelitis, acute anterior, 202
Polyneuritis, puerperal, 456
Polypus, mucous of cervix, 194
Polyuria in chronic pulmonary tuberculosis, 394
Popoff, hæmorrhagic, infarcts in uterus, 211; picrate of ammonium in malaria, 325
Poppert, ether narcosis, 286
Porter, uropenital tuberculosis, 479
Posner, cryptogenic inflammation of the urinary organs, 158
Post-nasal growths of tuberculous nature, 220
Postnikoff, excision of the kidney and ureter, 29
Potarca, intrathoracic œsophagotomy, 352
Potassic chlorate, poisoning by, 104
Pottevin, formic aldehyde in ringworm, 503
Pregnancies, two, in a patient with a large fibroid, 480
Pregnancy, myomectomy during, 33; measles and, 63; abdominal section and, 95; operations on uterus and ovaries in, 128; extrauterine, umbilical fistula due to, 151; extrauterine, elimination of the fœtus per rectum, 227; eleven months', spontaneous delivery, 228; fibroids and, 283; the kidney of, 285; extrauterine at tenth month, placenta inserted on intestine, 323; twin, the physiology of, 405; triplet, fœtus papyraceus, 444; cholera and, 500
Primiparæ, old, 356
Prostate, hypertrophy of, 127
Prudden, concurrent infections in pulmonary tuberculosis, 82
Pseudo-tabes, 278
Pseudo-tuberculosis, malarial, 493
Psoriasis, gallanol in, 215
Puberty, general paralysis of the insane at, 4, 202
Puerperal fever. *See* Fever
Puerperium, conception in the, 404
Purpura, fatal metrorrhagia in, 448
Pus, microscopic examination of during operations on appendages, 97; virulence of the in salpingitis, 455
Pylorus, diagnosis of tumours of, 182
Pyoktanin, in visceral cancer, 58; in diphtheria, 175

Q.

Quénu, removal of appendages and fatal hæmoptysis, 339

R.

Radius, operative treatment of old fracture of the lower extremity of, 399
Rafin, neuralgia of the inferior dental nerve treated by resection of the nerve, 396
Raesohoff, thyroid abscess, 441
Rash, scarlatiniform, periarthritis, 413
Raubitschek, perchloride of mercury in whooping cough, 289
Recto-vaginal septum, laceration of in labour, 482
Redlich, pathological anatomy of paralysis agitans, 81, 488
Reed, radical cure of hernia, 316; kraurosis vulvæ, 338
Rehn, treatment of whooping-cough, 451
Reinhold, the bacteriology of Graves's disease, 22; the thyroid treatment, 157
Remy, measles and pregnancy, 63
Renal. *See* Kidney
Rendu, differential diagnosis between pulmonary syphilis and pulmonary tuberculosis, 332
Répin, sterilisation of catgut, 224
Resnikoff, eleven months' pregnancy, spontaneous delivery, 228; fatal metrorrhagia in purpura, 448
Retina, spontaneous cure of traumatic detachment of 126
Revilliod, cure of general peritonitis by medical treatment, 449
Revolver wound of skull, 264
Reymond, torsion of pedicle in chronic disease of uterine appendages, 360
Rheumatism, chronic, 62; acute articular, malakin in, 430; acute, staphylococci and, 432
Rib, cervical, a case of, 167
Ricard, recurrent dislocation of the shoulder, 88
Richardson, removal of the Gasserian ganglion, 460
——— B. W., the properties of a true antipyretic, 230
Rickets, congenital not "fœtal," 11; and laryngeal spasm the relation between, 436
Ricketts, ovariotomy in a morphine taker, 403
Riedel, persistent œdema and elephantiasis following extirpation of lymphatic glands, 92
Riggs, laminectomy, 6
Riley, a study of the temperature sense, 391
Ringworm, formic aldehyde in, 503
Rivière, on a streptothrix found in a case of cerebral abscess and suppurating renal infarct, 345
Robin, phosphaturic albuminuria and glycerine phosphates, 25; torticollis and lumbago, 371; polyuria in chronic pulmonary tuberculosis, 394
Rocaz, scarlatiniform rash, periarthritis, 413
Rohé, intestinal obstruction following operations in which the peritoneal cavity is opened, 419
Roos, rheumatic angina, 65
Rosanoff, hernia of uterus, pregnancy, spontaneous premature delivery, 341
Rosenberg, treatment of leukoplakia, 342
Rosenheim, diagnosis of pyloric tumours, 182
Ross, J., hydatid disease, 222
Rossa, the significance and etiology of the premature discharge of meconium, 301
Roth, lactophenin, 303
Rothmann, transitory blindness in uræmia, 185
Rothwell, symphysiotomy in Australia, 15
Routier, treatment of fracture of the clavicle by suture, 442
Ruge, myoma and vaginal hysterectomy, 132
Ruppel, the fats of human milk, 34
Ruppolt, the origin of supernumerary ovaries, 422

S.

Sacaze, chloralose in the treatment of night sweats, 248; staphylococci and acute rheumatism, 432
Sacharjin, chronic rheumatism, 62
Sänger, vulvitis pruriginosa, 94; primary cancer of Fallopian tube, 96; suppuration of rudimentary second vagina during labour, 381
Sahli, leech extract and thrombosis, 120
Saiki, general paralysis of the insane at puberty, 4, 202
"Salaktol" in diphtheria, 170
Saline injections in cholera, 388
Salpingitis, virulence of the pus in, 455
Salrazes, on a streptothrix found in a case of cerebral abscess and suppurating renal infarct, 345
Salts, earthy, excretion of in mollities, 358
Saltzer, laminectomy for fractured spine, 494
Sanarelli, experimental typhoid fever produced by the typhoid toxin, 181, 200
Sander, helminthiasis in the sick, 141
Sanna, ruvitis of cervix, 124; primary of liver, extirpation of, 224
Sarles, the urine in infantile tetany, 275
Savalieff, acetone in the stomach contents, 239
Schäfer, the vagus and secretion of acid by the stomach, 204
Schimmelbusch, infection of fresh wounds, 138
Schippers, antitoxin treatment of diphtheria, 362
Schleich, the surgical uses of albumen preparations, 461
Schmid, the forceps in delivery, 149
Schmidt, chloroform, 38
Schmorl, tuberculosis of the human placenta in relation to congenital tuberculosis, 410
Schott, cor adiposum, 121
Schreiber, puerperal and acute atrophy of liver, 191; sciatica, 221
Schultze, cholera and pregnancy, 500
Schultze, echinococcus of the ovary, 337; dangers of the artificial respiration of, 407
Schumann, massage in infantile convulsions, 57
Schwarz, grafting the ureters into the urethra and regeneration of the urinary bladder, 205
Sciatica, 221; revolver wound of skull, 264
Sclerosis, so-called amyotrophic lateral, 24; amyotrophic lateral, syphilis simulating, 475
Sea air in disease in children, 216; effects of 487
Sea water, the attenuating power of, 217
See, G., ferratin, 198
Seglas, primary confusional insanity, 46
Senator, so-called amyotrophic sclerosis, 24
Senn, appendicitis obliterans, 262
Septicæmia, typhoid, and pseudo-typhoid infection, 474
Septum, recto vaginal, laceration of in labour, perineum intact, 482
Serum, treatment of anthrax by, 77; treatment of cholera by, 409. *See also* Antitoxin
Serum albumen in the urine, tests for, 1
Serveaux, the urine in general paralysis of the insane, 457
Severeneau, catheterisation of arteries, 242
Seydel, complicated depressed fracture of skull 377
Sharples, the spinal cord in diver's palsy, 504
Shock, skin disease following, 414
Shoulder, recurrent dislocation of the, 88
Shoulder presentation neglected, 198
Sick, helminthiasis in the, 141
Simon, tympanitic resonance, 143
Sinus, frontal, suppuration of, 240
Skin, disease of following shock, 414; electricity in treatment of disease of, 469
Skiridin, duboisin as a hypnotic, 308
Skull, revolver wound of, 264; complicated depressed fracture of the, 377
Smirnow, treatment of diphtheria, 153
Smith, E., hydatid cyst in hernial sac, 280
Somma, apocynum cannabinum as a cardiokinetic and diuretic, 229
Soulier, a reflex of the buccal mucous membrane excited by sulphuric ether, 472
Spannocchi, extraction of the pregnancy, elimination of fœtus per rectum, 227
Spasm, accessorius, 26
Spengler, parachlorphenol as a disinfectant of tuberculous sputa, 387
Spermin, 251; in cholera, 272
Spina bifida, extirpation of, 375
Spine, surgery of the, 146; fractured, laminectomy for, 494
Splenectomy case of, 353
Sputa, tuberculous, parachlorphenol as a disinfectant of, 387
Staphylococci and acute rheumatism, 432
Stavely, myomectomy during pregnancy, 33
Steam, scalding, as a uterine hæmostatic, 401
Stein, H., enteralgia, 162
Stembo, bulbar palsy and motor aphasia after influenza, 331
Stenosis, malignant, 168
Sterno-mastoid, hæmatoma of the, 68
Stevenson, poisoning by terchloride of gold, 122
Stewart, tests for serum albumen in the urine, 1
Stilts, pressure palsy from walking on, 116
Stomach, free hydrochloric acid in the in chlorosis, 86; chlorate of sodium in cancer of the, 100; resection of the cardiac end of the, 166; the vagus and secretion of acid by the, 204; action in the contractions of the, 239; surgery of the, 374, 398; estimation of hydrochloric acid in the contents of, 458; lesions of the stomach, 507
Stone, removal of from the bladder, 48
Strauss, tubercle bacilli in the nasal cavities of healthy men, 85; lactophenin, 452
Streptothrix found in a cerebral abscess and suppurating renal infarct, 345
Stricture, traumatic, uræmic insanity secondary to, 218
Sublimate, intravenous injections of in syphilis, 502
Suckling and sterilised milk, 246
Sucklings, diseases of caused by galactophorilis, 56
Sulphuric ether, a reflex of the buccal mucous membrane excited by, 472
Suppuration of frontal sinus, 240
Surgery, intestinal, 66
Suture, treatment of fracture of the clavicle by, 442
Swain, laryngectomy by a new method, 440
Sweats (night) of phthisis, ergot in, 17; (night) chloralose in the treatment of, 248
Symphysiotomy, in Australia, 15; anatomical results of, 173; in private practice, 265
Synchondrosis, sacro-iliac, relaxation of, 129
Syphilis, tertiary, paralysis of the abductors of the vocal cords in the course of, 257; early visceral disease in, 313; pulmonary and pulmonary tuberculosis, differential diagnosis between, 332; etiology of, 347; simulating amyotrophic lateral sclerosis, 475; hereditary ocular, 496; intravenous injections of sublimate in, 502

Szenes, deaf-mutism, 415
Szmurlo, parachlorphenol, 154

T.

Tabes going on to dementia, 83
Tannigen, 177
Tarnier, fœtus in utero forty days after term, 35; retroversion of gravid uterus, 402
Taub, intubation in pertussis, 56
Tchistrakoff, early syphilitic glycosuria, 163
Temesvary, degenerative changes in the mammary gland, 463
Temperature, the, in cerebral apoplexy, 23
Temperature sense, a study of the, 391
Temperatures, subnormal of the body, 473
Tendo Achillis phenomenon, the, 256
Terchloride of gold, poisoning by, 122
Tetanus, antitoxin treatment of, 214, 485
——— antitoxin, the action of, 431
——— bacillus. *See* Bacillus
Tetany, infantile, the urine in, 275
Thiercelin, cause of early death after operations on the internal organs, 130
Thiosinamin in lupus, 18
Thirst, following abdominal section, the cause of, 397
Thompson, microcephaly, 64
Thrombosis of the superior mesenteric artery, 47; leech extract and, 120
Thyroid gland, glycosuria from taking extract of, 99; in cachexia thyreopriva, 117; treatment by extract of, 157; treatment of goitre by feeding on, 344; Basedow's disease and, 508; sheep's in Graves's disease, 386; abscess of, 441
Tolysal, 199
Tongue, traction of the in hysteria, 197
Torticollis and lumbago, 371
Touvenaint, some bad effects of chloralose, 252
Toxæmia, intestinal fever and erythema from, 201
Toxin typhoid, experimental typhoid fever produced by, 181
Trantenroth, the kidney of pregnancy, 285
Trephining for Jacksonian epilepsy, 110
Triantaphyllides, paludal neurasthenia, 291
Trigeminus, resection of the, 477
Trinkler, the operative treatment of hæmorrhoids, 242
Trional effects of, 116; in delirium tremens, 287
Tschistowitsch, hæmatological studies, 3
Tubby, traumatic separation of the epiphyses, 67
Tube, Fallopian, primary cancer of, 96, 302; tuberculosis of the, 443
Tubercle of the uterus, 32
——— bacilli. *See* Bacilli
Tuberculosis of the placenta, 54; pulmonary, concurrent infections in, 82; congenital, 144; puimonary and pulmonary syphilis, differential diagnosis between, 332; of the peritoneum, why patients recover after operations for, 354; chronic pulmonary, polyuria in, 394; of the human placenta in relation to congenital tuberculosis, 410; at delivery, fœtus infected, 424; of the Fallopian tube, 443; urogenital, 479
Tubes, Fallopian, anatomy of, 75; treatment of distension of the, 240
Tuffier, primary cancer of Fallopian tube, 302
Tumour, cystic, of uterus, 382; of the spinal cord, the diagnosis of, 437
Tumours, pyloric, diagnosis of, 182; parotid, 203; subcortical of brain, operative treatment of, 315
Tympanitic resonance, 143

U.

Ulcer, gastric, operative treatment of, 206
Ulcers, laryngeal pressure and cervical lordosis, 238
Ulnar phenomenon, the, 185
Unschuld, diabetes, 105
Uræmia, transitory blindness in, 185; the pathology and treatment of, 270
Ureter and kidney, excision of, 29; ruptured, 30; surgery of the, 279
Ureters, grafting of the into the urethra and regeneration of the urinary bladder, 205; duplicity of in a female subject, 501
Urethra, persistent discharges from, 89; rapid dilatation in stricture of, 335; female, microbes in the, 445
Urine, tests for serum albumen in the, 1; preservation of organised sediments in the, 43; the, in infantile tetany, 275; the, in general paralysis of the insane, 457; the, in chronic arsenical poisoning, 192
Urticaria pigmentosa, 293
Uterus, fibroid, cancer complicating, 10; tubercle of the, 32; fœtus in forty days after term, 35; duplex, delivery in, 36; bicornis, cancer of cervix in, 52; palliative treatment of cancer of, 73; microscopic examination of pus during operations on appendages of, 97; operation on in pregnancy, 128; removal of tuberculous appendages of followed by tuberculous meningitis, 131; ligation of the broad ligaments per vaginam for fibroids of, 172; myoma and cancer of the body of the, 174; mucous polypus and racemose sarcoma of cervix of, 194; perforation of by curette, prolapse of intestine, recovery after operation, 209; hæmorrhagic infarcts in, 211; the heart and fibroids of, 212; rupture of in practice, 226; hysterectomy in diseases of the appendages of, 245; fibroid disease and the muscular tissue of, 247; atrophy of in lactation, 268; intraparenchymatous injections of alcohol in inoperable cancer of, 282; pregnant, cancer of, 288; hysterectomy for rupture of, 320; removal of appendages of, fatal hæmoptysis, 339; hernia of, pregnancy, spontaneous premature delivery, 341; torsion of pedicle in chronic disease of appendages of, 360; artificial anus after removal of appendages of, enterorrhaphy, 378; cystic tumour of, 382; gravid, retroversion of the, 402; and vagina, rupture of 425; deciduosarcoma of, 447

V.

Vacher, extraction of the lens in high degrees of myopia, 147
Vagina, enterocele vaginalis complicating prolapse of posterior wall of, 133; rudimentary second, suppuration of during labour, 381; and uterus, rupture of, 425
Vagus, the, and secretion of acid by the stomach, 204
Van Hook, W., divided vas deferens, 148
Van Hoorn, thiosinamin in lupus, 18; the treatment of furunculosis, 385
Van Niessen, the etiology of carcinoma, 160
——— etiology of syphilis, 347
Vas deferens, divided, 148
Vermiform appendix. *See* Appendix
Verneuil, compression of the mammary glands, 69
Verstraeten, bruit de diable, 184
Vespa, hydatid of the lung, 348
Vibrio of cholera, artificial variation of, 102
Vierordt, operative treatment of subcortical brain tumours, 315
Vigneron, antipyrin as a vesical analgesic, 179
Vignes, tuberculous iritis, 91
Vincenzi, the tetanus bacillus, 454
Virchow, extirpation of the larynx for cancer 7; total extirpation of the larynx, 124
Vogel, treatment of pelvic abscess, 322
Voisin, sheep's thyroid in Graves's disease, 386
Vomiting, uncontrollable of pregnancy, 466
Vulliet, intraparenchymatous injections of alcohol in inoperable cancer of the uterus, 282
Vulva, hæmatoma of after delivery, 193
——— kraurosis of, 300, 338
Vulvitis, pruriginosa, 94

W.

Wagner, traumatic hydronephrosis, 28
Waldstein, a new pill coating, 305
Wallé, "salaktol" in diphtheria, 470
Wallich, symphysiotomy in private practice 265
Walton, removal of the Gasserian ganglion, 469
Weigen, treatment of diphtheria, 134
Weir, excision of the bladder for epithelioma, 208
Weiss, chylous ascites, 123
——— O., v., premature detachment of normally situated placenta, 266
Weisz, pseudo-tabes, 278
Welander, skin disease following shock, 414
Wertheim, microscopic examination of pus in operations on appendages, 97
Whooping-cough, bromoform in, 118; perchloride of mercury in, 289; treatment of, 451
Wieting, the relationship of the intracortical ganglia in epilepsy, 411
Williams, H., saline injections in cholera, 388
Wolff, total extirpation of the larynx, 124
Women pregnant, changes in the milk and colostrum in diseases of, 213; moribund at term, how to save the fœtus, 319
Wound diphtheria due to Loeffler's bacillus, 8
Wounds, fresh, infection of, 138
Wrist-joint, excision of the, 241
Wyeth, surgery of the spine, 116

Z.

Zacharin, scalding steam as a uterine hæmostatic, 401
Zeidler, wounds of the liver, 281
Ziehen, the tendo Achillis phenomenon, 256
Zinsser, treatment of favus, 504

ILLUSTRATIONS.

PAGE

Hereditary Malformation of the Hands and Feet, Messrs. W. R. Smith and J. S. Norwell (Five Figures) 10
Fracture of Leg, Fat Embolism, Death, Mr. C. T. W. Hirsch ... 14
Poison Bottle 20
A New Departure in Diabetes, Dr. F. W. Pavy (Five Figures) ... 61, 62
A Modification of the Operation of Circular Enterorrhaphy, Mr. R. C. Bailey (Three Figures) 65
Instrument for Raising the Upper Eyelid, Mr. F. Bass 75
A Remarkable Case of Intussusception, Mr. E. M. H. O'Connor ... 124
Tumour of Bladder in Child, Mr. F. A. Southam 129
The Comptroller of Private Business in the House of Commons ... 217
Sewer Ventilation, Mr. J. T. Neech 304
Movement of Air in Sewers, Mr. J. T. Neech 305
The Bacillus of Plague (Four Figures) 369, 370
The Glass Works, Kennedy Town (The Plague in Hong Kong) ... 425
The Farringdon Couch 537
Artificial Nail Curette, Dr. W. D. Haslam 537
Transformer for Medical Cauteries 537
Some Phases of Opacity and Luxation of the Crystalline Lens, Dr. L. S. Thompson 589
The Chinese Imperial Medical College (Two Figures) 616
Vaccination Scarifier, Surgeon-Lieutenant-Colonel W. G. King ... 649
Aural Auscultation Tube, Dr. A. Cheatle 649
An Improved System of Ventilation, Mr. A. Napper 706
Sykes's Patent Interceptor 707
The "M.D." Watch 707
A Simple Perceuteur 707
A Remarkable Chromogenic and Pathogenic Bacillus, Dr. E. J. M'Weeney (Two Figures) 743
A Further Report on the Suprarenal Gland and the Causation of Addison's Disease, Dr. A. G. Auld (Eight Figures) ... 747, 748, 749
The Beat Transfer, an easy Test for true and spurious Pulse Tension, Dr. W. Ewart 749
An Improved Consulting Room Couch, Dr. J. R. Whait (Three Figures) 762
Yorkshire College, Leeds: the New Medical School 763
The Etiology of Typhoid Fever, Dr. E. Klein (Six Figures) 798, 799
Aneurysmal Varix of the left internal Carotid Artery and the Cavernous Sinus, Mr. G. E. Williamson 806
The Expandum Portfolio 815
Plate Glass Operating Table 818
Semicircular Glass Table for Instruments 819
Bell glass Irrigator 819
Portrait of Dr. Oliver Wendell Holmes 839
Removal of an aural Exostosis by the Chisel after Detachment of the Auricle, Mr. S. J. Taylor 867
Water Pressure Accumulators (Two Figures) 873

PAGE

Improved Thermo-cautery, Mr. R. O'Callaghan (Three Figures) ... 873
The Treatment of Injuries of the Lower End of the Humerus, Mr. J. Hutchinson, jun. (Three Figures) 965, 966
The Anatomy of the Right Hypochondrium, relating especially to Operations for Gall Stones, Mr. R. Morison (Five Figures) 968, 969, 970
Rupture of Male Bladder treated by Abdominal Section and Suture, Dr. J. Murphy 978
The Condition of the Membrana Tympani in some Head Injuries, Mr. J. Lynn Thomas (Five Figures) 982
The Reliance Stethoscope (Two Figures) 991
Professor Hutinel's "boxes" at the Hospice des Enfants Assistés, Paris 994
Professor Grancher's Wire Screen, Hôpital des Enfants Malades, Paris 1076
Wire Food Basket used at Hôpital des Enfants Malades, Paris ... 1076
An Artificial Eye for Shrunken Socket, Mr. Salt 1117
The Relative Efficiency of Water Filters, Drs. G. S. Woodhead and G. E. C. Wood (Seven Figures) ... 1182, 1183, 1185, 1375, 1377, 1486
Remarks on Flat Foot, Sir W. Stokes (Eleven Figures) ... 1224, 1225, 1226
Formation of a New Socket for an Artificial Eye, Dr. A. Ogston (Three Figures) 1228, 1229
Cyst in the Thyroid Gland, Removal, Cure, Mr. W. T. Thomas (Two Figures) 1231
A Case of Caries of the Spine Causing Compression of the Cord, relieved by Laminectomy, Mr. Noble Smith (Five Figures) ... 1232
Notes on a Case of Accessory Thyroid Gland projecting into the Mouth, Mr. C. H. McIlraith (Two Figures) 1234
A Case of Charcot's Joint Disease, with Perforating Ulcer of the Foot in a Tabetic Patient, Dr. H. Waldo (Two Figures) ... 1235
Combination Pocket Scissors 1246
Self-retaining Aural Polypus Forceps, Mr. V. H. W. Wingrave ... 1246
Aseptic Midwifery Bags (Two Figures) 1246
Anticholera Inoculation in India 1247
Anatomy and Physiology in the Middle Ages 1248
A Malaria Chart, Dr. P. Manson (Coloured Plate) between 1252 and 1253
A Case of Friedreich's Disease, or Hereditary Ataxy, with Necropsy Dr. J. Michell Clarke (Seven Figures) 1296
On the Nature and Significance of the Crescentic and Flagellated Bodies in Malarial Blood, Dr. P. Manson (Three Figures) 1306, 1307
A Case of Sanguineous Cyst connected with the Pancreas, Dr. T. Fisher 1362
Aseptic Midwifery Forceps 1374
Portrait of Dr. W. W. Moore 1409
Amusia, Professor Edgren 1441
The Treatment of Acute Laryngeal Stenosis, Dr. W. P. Northrup (Three Figures) 1475, 1477, 1478

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A POST-GRADUATE LECTURE
ON
MISTAKEN DIAGNOSIS.

Delivered in the National Hospital for the Paralysed and Epileptic.

By W. R. GOWERS, M.D., F.R.S.,

Physician to the Hospital; Consulting Physician to University College Hospital.

GENTLEMEN,—It is always a pleasant thing to be right, but it is generally a much more useful thing to be wrong. If you are right, all that you do, as a rule, is to confirm your previous opinion, your previous habits of reasoning, and your previous self-esteem. But if you are wrong you generally gain in knowledge and gain perception of the way in which your method of diagnosis needs improvement, and the influence on self-esteem is not likely to do you harm. At least that is my own experience, and I think I have observed it confirmed in others. But the result is dependent on deliberate effort. There is a strong temptation to smooth down error, and it is very easy not to gain from it its precious lesson. It is more easy to fancy that there is some accidental cause for the mistake than frankly to perceive that it is a fault. But if you make a deliberate effort to realise and to face in your own mind the mistake you have made, to discern its cause, and to employ this perception as far as you can to remove the cause and prevent a like mistake in the future—if you do this, almost every error becomes one of the precious experiences of your practical life.

Yet you will note that I have not said this quite absolutely. I said it is "generally" more useful to be wrong, that "almost" every error is useful. As a matter of fact, there are errors you cannot avoid. Beware, however, of thinking that any individual instance of error is of that character. The chances are great that it is not, that it might have been avoided, and they are considerable that it will be avoided in the future as a consequence of its occurrence. At least I hope so.

Still, there are cases in which error is inevitable. I should like to mention to you an instance which illustrates the conditions on which the relation depends. But this is not the chief subject I desire to bring before you. My chief object is to seize the opportunity afforded me by the courtesy of a private patient and his desire to be useful—the opportunity of illustrating avoidable mistakes by an example almost perfect in its character, almost unique in its features, and seldom equalled in the variety and importance of the instruction it affords. The case is indeed full of important lessons, and it is one the like of which, I venture to say, not one of you is likely to have seen before or is likely to see again.

But, first let me say a few words about inevitable errors. There is a patient in the hospital at this moment whom I cannot show you now, but whose case is an example of mistakes that must be. I saw him first about two months ago, at the commencement of his illness. I then made a diagnosis, of the correctness of which I felt assured, and which I am now certain was wrong. Yet if I saw a like case to-morrow with the same symptoms, with all the knowledge I have gained from this case, I should make the same diagnosis, that which proved to be wrong; and the chances are fifty to one, or more, that it would be right. Why, in this instance, was it wrong? Because all diagnosis that rests on reasoning is a matter of probability; only that which is simple observation is certain. The probability may be great, or may be only that of a slight preponderance of the balance of evidence, but wherever inference comes in there is no certainty. Remember that inference plays a part which you can discern only by an effort, in a large part of diagnosis. You think you observe the presence of consolidation of the lung or of pleural effusion. You do nothing of the kind. You infer its existence from certain physical signs. I remember an incident which illustrates the risk of error thus involved. A skilled physician gave orders to his house-physician that a surgeon should be called in to tap a chest, one side of which was full of fluid. When the surgeon came he took notice of the chest before plunging in his trocar, and, being a man of a thoroughly scientific mind and used to observation, he was struck by the fact that there was no enlargement of the chest. Although he was a surgeon, he percussed carefully, and found that every other sign of pleural effusion was present except enlargement of the side. He declined to tap. A little later the patient died, and the lung was found to be a solid mass of cancer. That was a case of incomplete observation, but it illustrates the fact that even a condition like pleural effusion, which you seem to observe, is really recognised by complex inference, and if either the process of reasoning or the observation is deficient, conclusion may be wrong.

To return now to the case I mentioned. The patient is a man of 48 years. I saw him a few hours after he had been seized with hemiplegia, which had come on in a few minutes. Such a sudden onset means a vascular lesion, the rupture or closure of an artery. The onset had occurred without any loss of consciousness and without prodromata. There was no sign of degeneration or of kidney disease. The ophthalmoscopic appearances were normal. The hemiplegia was complete; but the entire absence of any loss of consciousness made it distinctly unlikely to be hæmorrhage: and the facts that there was no tension in the pulse, and that there was a perfectly normal heart free from hypertrophy, made rupture of a vessel still more improbable. The absence of kidney disease made atheroma, at that age, most improbable, common as it is at a later time in life. No source of embolism could be found. As an almost invariable rule the source of an embolus can be discovered soon after the onset; if no source can be found the process may safely be excluded. When no evidence of any other cause of arterial occlusion can be discovered, and there is no condition to cause the rare spontaneous thrombosis in a healthy vessel, syphilitic arterial disease is probable. It is the condition left by the exclusion of others, and it can very seldom be excluded. I came, therefore, to the conclusion that it was a case of syphilitic arterial disease leading to the sudden formation of clot in a branch coming off from the diseased part of the artery. But not only could syphilis not be excluded in this case: there was a history of it. The patient was perfectly conscious and able to talk, and gave me a history of syphilis more than twenty years ago; an intimate friend, moreover, told me of a further history of syphilis as recently as eight years ago. Under these circumstances the diagnosis of syphilitic arterial disease and thrombosis was the proper diagnosis, and treatment was arranged accordingly.

The patient was admitted here a short time afterwards, and, instead of improving as he should have done, he has got worse. By "improving" I mean in the general cerebral symptoms, not necessarily improvement in the hemiplegia. You cannot by treatment restore the lumen of the vessel or the tissue destroyed by necrotic softening. The treatment is capable only of influencing the morbid process in the wall, and

not its consequence. Not only has the hemiplegia continued unchanged, as would be compatible with the diagnosis, but the general cerebral symptoms have become gravely worse; his mental state has become increasingly dull, weakness of the sixth nerves has developed, and, although the optic discs were perfectly normal when I saw him, optic neuritis has developed with a rapidity and to a degree of intensity that I think I have never seen before. It is certain that he is suffering from a tumour of the brain which is not syphilitic, and in some way by pressing on an artery has led to the sudden formation of clot in the vessels or in a branch. This must have been the process by which the cause of the symptoms we now see caused the sudden attack.

Of course I need hardly add that he was treated by iodide of potassium in full doses, and soon afterwards mercury was added and pushed just to the degree of affecting the gums; yet not only without improvement, but with the contrary. I may incidentally add that the mercury was pushed to the degree of affecting the gums, because, unless you see indications by the gums that there is enough mercury in the blood to act upon the tissues, the presumption is that the mercury is eliminated so fast that there is not enough in the blood to act upon the syphilitic tissue.

Such a combination of symptoms is seldom met with; but we do occasionally meet with a combination of symptoms which illustrates the same rule—that the diagnosis which it is right to make is wrong in fact.

I remember another instance of inevitable error in diagnosis, which I will briefly mention. An old woman, aged 60, was admitted in profound stupor and with indications of bilateral hemiplegia and irregular damage to the cranial nerves. This state had come on so suddenly we had no doubt that there was occlusion of the basilar artery. She was 60, and presented signs of degeneration: therefore thrombosis in a branch of an atheromatous artery was probable. But she had also mitral constriction, the cardiac lesion which of all others is most prone to cause embolism. Embolism of the basilar artery, curiously enough, has been thought to be impossible, because the artery is larger than either of those by which the blood reaches it, but manifestly a plug may pass through one of the vertebrals which cannot pass through either of the posterior cerebral arteries, which are smaller than the vertebrals. As a matter of fact, I have seen a distinct embolus in the anterior extremity of the basilar. Therefore embolism was also probable, for no age excludes it. The patient died, and was found to have syphilitic disease of the basilar, perfectly characteristic. This we had no reason to suspect. It is another instance of a case in which a correct diagnosis was impossible, and error was inevitable. From such cases only the general lesson can be learnt, that accuracy is occasionally impossible; we can only be right in nineteen cases by being wrong in the twentieth. It is well to realise this. But remember that in practice we have to treat that which is only probable as if it were certain. We could not treat two-thirds of our cases properly without doing this. But always discern the degree of probability, and if the probability is low, reduce or modify your treatment so as to do as much good as you can, if your opinion is right, without certainly doing harm if your opinion is wrong. You will find that this principle is applicable to many and various contingencies.

And now we pass to the case which I want especially to make the subject of your attention to-day. The patient is a man who first consulted me on February 9th, complaining of numbness in his hands and feet, with pains and twitching of the muscles, which were increased when he walked. These symptoms were of three years' duration and had gradually become worse. They began after over-work. He had sharp momentary pains in both feet, sometimes in the toes, sometimes in the soles, and sometimes in the balls of the feet—not much in the legs, and none in the arms. There was no trace of knee-jerk; although there was a little complaint of unsteadiness, he could stand, with his eyes shut, fairly well. There was no inco-ordination in the hands, and no deficiency in their sensitiveness. The pupils acted to light. He had had slight brief double vision. There was diminution in sexual power but no difficulty in micturition. These symptoms, especially the loss of the knee-jerk and the sharp pains, afforded a strong presumption of tabes. Inquiry after the common antecedent of tabes gave no evidence of it, but did not enable it to be absolutely excluded. He came late one morning, after I had finished my work, and I had no time to examine the state of sensibility upon the legs; I made a note that it was to be examined next time I saw him. I generally refuse to see a patient unless there is adequate time for investigation, but it is not easy to resist the urgent desire for an interview when a patient has come from a distance. I made the diagnosis of probable tabes, and ordered him a mixture containing belladonna, quinine, and arsenic. He came again, about five weeks afterwards, saying that he was about the same. The pains were a little less, but the other symptoms were still troublesome. I then proceeded to do what I had not been able to do on the first interview—to test his sensibility.

Among the many aphorisms I heard from the lips of the greatest bedside teacher whom any living person remembers, was one that flashed across my mind when, to test sensation, the patient's skin was bared. I remember hearing Sir William Jenner once say: "Gentlemen, more mistakes are made, many more, by not looking than by not knowing." To my astonishment, almost to my consternation, I saw that the skin presented everywhere the characteristic pigmentation produced by arsenic. It was a case of arsenical poisoning simulating tabes. And I had prescribed arsenic for him! Before his illness, and during its first year, he was by occupation an oil and colour merchant, handling papers of various tints, and all sorts of pigments, many no doubt containing arsenic. He had also during the first year he began to suffer taken a tonic mixture containing arsenic; but he did not take this long enough for it to do more than intensify the poisoning, which had no doubt been the result of his occupation. He had been exposed for many years; and it is probable that during the two years which elapsed between the development of his symptoms and the time I saw him, that which I did others had done. Arsenic had been given him to cure his symptoms.

I need hardly say that I changed the prescription. He has not, however, improved. I gave him iodide of potassium, which seems to have a definite action in eliminating arsenic from the system; but the course of his symptoms during the last three months is curious; they have rather increased than lessened, and especially the condition of the skin that I will show you in a moment, has become more intense. Unless there is some continued cause of arsenical poisoning, and we cannot discover it in any way, I think the iodide of potassium must have been eliminating the arsenic from the tissues to such an extent as to increase the amount in the blood to a degree that has further irritated the damaged structures.

Before, however, we examine the skin, let me remind you that the nerve symptoms in arsenical poisoning are most important. In acute poisoning they are met with after the acute symptoms have subsided: they come on gradually, and for a time increase. The arsenic taken in during the acute poisoning seems to enter into the nutrition of the nerve elements and gradually to derange their function and their structure. In chronic poisoning there is a gradual interference with function.

This fact, that arsenic passing into the nerve structures, perhaps partly in place of phosphorus, should first gradually modify their function, is not surprising. Function depends upon the release of force—nerve force—by chemical combinations; and the amount of nerve energy latent in complex compounds, released when simpler compounds are formed, depends upon the constituents; so also does the readiness with which it is evolved and the kind of stimulus that excites the release. But the change in nutrition which at first disturbs function, in greater degree, changes the structure, and leads even to disintegration of the substance of the nerve elements. As a fact, this is what arsenic and other metallic poisons do. Their action presents certain features which you should always bear in mind. They reach the structures by the blood. The structures on the two sides have bilateral symmetry in intimate constitution as in outward form, and that involves a similar susceptibility on the two sides. Hence it is that these poisons produce symptoms that are bilaterally symmetrical.

Moreover, they produce symptoms which are limited

according to function. There we have a mystery, and yet it is a mystery we must recognise as an indication of fact. Function must be related to the chemical and molecular constitution of the nerve elements. The difference in susceptibility to different forms of force must depend on atomic constitution and molecular arrangement. We cannot conceive that the nerve endings in the skin which produce a nerve impulse on the slightest touch are quite the same in constitution as those which produce a nerve impulse when warmth is applied. We cannot believe that the same kind of structure can subserve the susceptibility to the massive motion of a touch or to the wave motion, only a little less frequent than the waves of light, which constitutes heat. And that difference, we can understand, is equal or greater in the motor and sensory terminal structures on which toxic influences for the most part primarily act. This enables us to understand why it is that poisons act specially upon structures with certain functions, and should even act first on one set of sensory nerves and not on another set. So we have, from different poisons, different effects upon the nerves, and we have also different effects from the same poison, probably dependent on the fact that it enters the blood in a somewhat different form, or with greater or less rapidity, and thus is assimilated by and deranges certain structures rather than others. Thus we have, from arsenic, palsy of the extensors of the arms and feet, as we have from alcohol. We have sometimes a perfect simulation of tabes, ataxy, muscular anæsthesia, and loss of knee-jerk, in consequence of the preponderant affection of the afferent muscle nerves, and sometimes we have chiefly sensory cutaneous symptoms, although scarcely ever without loss of the knee-jerk. Remember, that loss of the knee-jerk only indicates affection of the afferent muscle nerves, and that we know that the impairment of these nerves has many causes. To all toxic influences they seem specially susceptible.

Hence, I beg you to remember, above all things, as a practical rule, that whenever you have bilateral disturbance of the peripheral nerves, symmetrical, with a distinct limitation to function, sensory or motor, it is almost certainly due to a blood state. There is reason to believe that the degenerations which may appear to constitute an exception are really due to a blood poison. Many are the cases in which the recognition of that fact will save from grave error.

In the nerve symptoms of this patient there is little more for you to observe than I have told you, but if you ascertain for yourselves the absence of the knee-jerk, the fact may be more securely fixed in your mind, and it cannot be too surely held. But, as regards the cutaneous symptoms, there is a picture for you to study such as you will not see again. This arsenical pigmentation is so characteristic that the moment I saw it I was sure of its nature, but I never like my own certainty to be without corroboration if it is outside my own special region. So I sent the case to Dr. Radcliffe Crocker, and he is also absolutely certain. He has seen, he said, one more intense case, and he has kindly allowed me to show you a plate from his *Atlas*, which illustrates it.

I have myself become familiar with the pigmentation that is caused by arsenic because I have often seen it in the cases of epilepsy. I have also seen it in well-marked form, in a lady whose love for working on muslins led her to their continuous handling, and she preferred æsthetic tints. The result was that she began to suffer from pains that were ascribed to gout, until there came progressive palsy of the extensor muscles of arms and feet. This showed a toxic influence, by the symmetry and limitation I have mentioned. Then the pigmentation was discerned, although, I believe, chemical analysis had already made certain the cause. But the troublesome pustular eruption which bromide causes in most persons can only be prevented, or kept down to insignificant degree, by arsenic. No other drug, no modification of the way or form in which bromide is given, has any influence. Some patients are peculiarly prone to the rash, and have to take the drug for a long time; they have to take arsenic also. A slight degree of pigmentation is often produced in such cases. It has, therefore, several times happened to me that I have had to put to the patient the two evils, and say, "Which will you have, the spots or the pigmentation?" There is no other help for it: they must have one or the other. They always choose the pigmentation. It does not, however, increase to a really serious degree in such cases, and I have not met with any other symptoms of chronic arsenical poisoning in consequence of the use of arsenic to prevent the bromide rash.

If you observe carefully the skin of this patient, you will see that the pigmentation begins as small round spots which seem to increase in size and coalesce, but leave small rounded areas of unpigmented skin. These appear whiter than normal, perhaps only by contrast. The pigmentation is abundant everywhere, but extreme on the neck, front and back of the trunk, arms, and thighs. For the most part it appears a simple deposit of pigment, dark brown in tint. But in many places you will observe small round spots of congestion, of the same size, which suggest that, at least when the process is going on actively, congestion may be the first part of the process. Moreover, in the neck, where the skin has been subjected to habitual friction, the pigmentation is so intense as to be practically continuous, and with it so much congestion is combined as to give the pigmented area a reddish or purplish-brown aspect. The congestion is also conspicuous on the hands, and there, on the palms especially, the spots are attended with distinct elevation. Indeed, where the epidermis is thick, there are minute raised elevations, at which no indication of congestion or pigmentation can be discerned.

The great fact is the pigmentation, at first essentially punctate or in small spots. It is that that is so characteristic. You will at once understand how important it is to be able at once to recognise a sign so distinctive and so significant. You cannot note the state too carefully. Once firmly fixed in the visual memory, it will not be lost. It is seldom easy to retain an image securely from a single opportunity of inspection, but this condition is one, I think, which you are not likely to mistake when you see it again. You may have some other opportunity of observing a similar condition. You probably will have such if you carefully examine the skin of patients who have been, for long, taking arsenic with bromide. But the story of the origin of this patient's illness suggests that a careful inspection of the skin of a number of men employed in shops where paints and papers are sold might afford an inquiring student opportunities of observing the pigmentation, which would be beneficial not to himself alone. It is certain that the change in the skin may long precede any other symptom.

Having helped you so far, gentlemen, I must now ask you to help yourselves. Observe, also, what I have not mentioned, the bilateral symmetry of the rash, a feature that you will recognise, from what I have said, to be inevitable. Connect it with the bilateral pains and loss of knee-jerk, and fix these features of limitation and symmetry in your minds in association with the toxic cause. For a moment, indeed, forget what the cause here is; forget the precise character of the symptoms, in order that the general facts of combined functional limitation and bilateral symmetry may stand out more clearly in your view, as landmarks which, whenever and wherever they are seen, will always guide you surely.

THE CROONIAN LECTURES

ON

A NEW DEPARTURE IN DIABETES.

Delivered before the Royal College of Physicians of London.

By F. W. PAVY, M.D., LL.D., F.R.S., F.R.C.P.,
Consulting Physician to, and formerly Lecturer on Physiology and on the Practice of Medicine at Guy's Hospital.

[*Special Abstract Report.*]

LECTURE III.

AMOUNT OF SUGAR IN THE BLOOD.

After recapitulating briefly the arguments of the two opening lectures, Dr. Pavy proceeded to state the result of his investigations as to the amount of sugar in the blood under normal conditions. This he said was in the general circulation very small. The results from upwards of 100 determinations of the amount of sugar present under natural conditions in various animals showed a range of from about 0.6 to 1.0, or a little over 1.0, per 1,000. The cupric-oxide reducing power

found to exist was ordinarily that of glucose, and when not so was only slightly below it.

Blood at the Moment of, and after, Death.

Dog.	Sugar per 1,000 expressed as glucose.	
	Before Sulphuric Acid.	After Sulphuric Acid.
Blood from the cavities of the heart ligatured and excised instantly after death	0.650	0.676
Blood afterwards collected from the chest	2.150	2.237

The blood from the heart was obtained from its cavities after immediate ligature of the great vessels as soon as the chest was opened. The amount of sugar it contained was to be considered a normal constituent, and a similar amount was to be found in the blood of the vessels in all parts of the body with one significant exception—the portal vein. The blood collected from the chest after death contained admixture, and did not represent the condition of systemic blood.

Fluctuations in the Amount of Sugar in the Portal Blood.

Whereas the amount of sugar in the blood of the systemic circulation was constant, or nearly constant, that in the portal blood presented notable fluctuations in relation to food. In a fasting dog the amount of sugar in the portal blood was pretty nearly the same as in the blood of the general circulation. In the rabbit this was found not to be the case, the reason being that in a rabbit kept without food the process of digestion of the last meal went on very slowly, so that at the end of 24, or even 48 hours, the stomach still contained undigested food. Consequently even after these periods absorption was still going on, a fact which accounted for the greater proportion of sugar in the portal blood than in the blood of the general circulation, even when the animals had fasted for some time.

Portal Blood.—*Amount and Nature of Sugar after Stated Periods of Fasting.*

Animal.	Duration of Fast.	Sugar per 1,000 expressed as Glucose.		Cupric-Oxide reducing Power of the Sugar present in Relation to that of Glucose at 100.
		Before Sulphuric Acid.	After Sulphuric Acid.	
Dog ...	48 hours, nearly	0.580	0.643	90
Dog ...	,, ,,	0.666	0.710	94
Rabbit...	24 hours, fully	1.583	1.733	91
Rabbit...	,, ,,	2.454	2.499	98
Rabbit...	,, ,,	2.244	2.244	100

The analytical results showed that the kind of sugar found in the portal blood, whether after fasting or after a diet of animal or of starchy food, was one possessing a cupric-oxide reducing power below that of glucose as a rule, and sometimes considerably below. The amount of sugar found in the portal blood after animal food was contrasted with that found after starchy food in tables from which the following are extracts. From these it would be seen, not only that the amount of sugar in the portal blood after a starchy diet was larger than after a meat diet, but that the sugar was different in kind, being further from glucose and nearer to maltose. This would appear from a comparison of the third column of figures, which gave the cupric-oxide reducing power of the sugar present to that of glucose at 100.

Portal Blood.—*Amount and Nature of Sugar after Diets Stated.*

Animal.	Hours after Last Meal.	Sugar per 1,000 expressed as Glucose.		Cupric-Oxide reducing Power of the Sugar present in Relation to that of Glucose at 100.
		Before Sulphuric Acid.	After Sulphuric Acid.	
Animal Food.				
Dog ...	4	1.117	1.340	83
,, ...	4	0.893	1.087	82
,, ...	6½	0.633	0.683	93
,, ...	5½	0.593	0.660	90
Cat ...	5	0.851	1.139	77
,, ...	5	0.675	0.779	87
Starchy Food.				
Dog ...	3½	1.183	1.477	80
,, ...	2	0.977	1.100	89
,, ...	1	0.968	1.277	76
Rabbit.	Short	1.407	1.707	82
,, ...	2	2.587	3.234	80
,, ...	3	2.346	2.878	82
,, ...	4	1.630	2.085	78
,, ...	4½ to 5	3.665	4.102	89
,, ...	5 to 5½	1.461	1.657	88
,, ...	5 to 5½	1.693	1.698	99
Maltose injected into stomach.				
Dog ...	25 min.	1.600	2.200	72

To ascertain if cane sugar passed as such into the portal blood, it was necessary in the process of analysis to use citric instead of sulphuric acid. The inference from the results given in the following table was that carbo-hydrate from ingested cane sugar reached the portal blood as glucose, and not in the state of cane sugar.

Portal Blood.—*Amount and Nature of Sugar after Injection of Cane Sugar.*

Animal.	Minutes after Meal.	Sugar per 1,000 expressed as Glucose.	
		Before Citric Acid.	After Citric Acid.
Dog ...	30	1.333	1.333
,, ...	30	2.113	2.113

Sugar in the Blood of the Systemic Circulation.

If the fluctuations in the amount of sugar observed in the portal blood were transmitted on to the general circulation sugar would be passed in considerable quantities in the urine after each meal. According to the glycogenic doctrine sugar derived from the liver reached the systemic capillaries, and was there destroyed or utilised in some way which had not been explained. As a matter of experimental observation, however, it did not thus disappear. A series of eleven observations, made some years ago by Dr. Pavy on the amount of sugar in the blood on the arterial and on the venous side of the capillaries, revealed a difference of only 0.003 per 1,000; the excess was on the side of the arterial blood, but results so closely agreeing afforded no tangible evidence that the sugar of the blood was destroyed in its passage through the systemic capillaries.

Positive Evidence against the Glycogenic Doctrine.

The negative evidence against the glycogenic doctrine had been shown to be strong: (1) The liver at death was not more saccharine than other organs of the body; (2) the blood flowing from the liver was not more saccharine than that flowing to it, but the contrary; (3) there was no evidence of destruction of sugar in the systemic capillaries. Positive evidence against the theory could be advanced also. The kidney contained the same kind of blood as the other organs of the body supplied by the general circulation, and it was a most delicate and sensitive indicator of the amount of sugar in the blood. Though the quantity was small, there could

no longer be any question that sugar was a constant constituent in urine. Osazone crystals could be got from the urine of healthy men and animals, and the sugar was recoverable from these crystals.[1] The amount of sugar in healthy urine was in correspondence with that in healthy blood. If the amount of sugar in the blood were increased the amount of sugar in the urine was increased to a corresponding extent. The condition of the urine as to sugar therefore represented the condition of the blood as to sugar.

THE KIDNEYS AND THE EXCRETION OF SUGAR.

It had been asserted that the kidneys had a point of tolerance as to sugar in the blood, that is, that if the proportion of sugar in the blood was below a certain amount it was not passed off by the urine. The proportion had even been stated, and it was asserted that sugar first appeared in the urine when the quantity in the system exceeded 1 gramme per kilogramme of body weight. Dr. Pavy's experiments failed to support this proposition of Bernard's as to the tolerating capacity of the system for a certain amount of sugar. On the contrary, the results, as shown by the table which follows, were such as might naturally be looked for after the introduction of a diffusible substance, such as sugar, into the blood. There was in fact a notable rise in the amount of sugar in the blood at once, a fall in the amount after half an hour, and a still further fall after an hour, but at the same time a large amount of sugar was passed off by the urine. This rise in the amount of sugar in the urine was observed after the injection (into the jugular vein) of an amount of glucose equal to 0.5 gramme per kilogramme of body weight, not less distinctly than after the similar injection of 1 gramme per kilogramme of body weight, though the actual quantity was less. In a similar manner the injection of lævulose was followed by an increase in the amount of sugar first in the the blood and then in the urine.

Amount of Sugar in the Blood and Urine at stated Intervals after Injection of Sugar into the Jugular Vein.

Animal.	Interval after Injection.	Cardiac Blood. Sugar per 1,000 expressed as Glucose. Before Sulphuric Acid.	Cardiac Blood. Sugar per 1,000 expressed as Glucose. After Sulphuric Acid.	Urine. Sugar per 1,000 expressed as Glucose. Before Sulphuric Acid.	Urine. Sugar per 1,000 expressed as Glucose. After Sulphuric Acid.
		1 g. glucose per kilo. of body weight.			
Rabbit	At once	5.050	5.000		
,,	30 mins.	2.450	2.763		
,,	60 ,,	1.460	1.666	55.160	55.160
,,	90 ,,	1.243	1.533	11.370	21.150
		0.5 g. glucose per kilo. of body weight.			
,,	At once	2.380	2.548		
,,	30 mins.	1.573	1.573		
,,	60 ,,	1.890	1.370	11.370	17.860
		1 g. lævulose per kilo. of body weight.[2]			
,,	At once	4.387	3.787	3.571	6.250
,,	30 mins.	2.523	2.577	97.402	71.091
,,	60 ,,	1.893	1.800	37.037	35.333
,,	90 ,,	1.603	1.517	30.303	25.900

An examination of these experimental results showed that even small amounts of sugar in the general circulation were not tolerated, but were passed off by the urine, and further that the sugar in the urine was of a different nature to that injected. If glucose were injected subcutaneously (in the rabbit) it was excreted by the kidney in a form possessed of a lower cupric-oxide reducing power than glucose. A possible source of fallacy in the experiment might be the presence of "animal gum" in the urine, but experiments devised with the object of precipitating the animal gum gave results which revealed the same kind of difference, thus rendering it evident that the sugar present in the urine had in realit a lower cupric-oxide reducing power than glucose. It was a sugar of this type which existed in healthy urine, whereas in diabetes the sugar present was glucose.

Nature and Amount of Sugar in the Urine after the Subcutaneous Injection of 1 g. Glucose per Kilo. of Body Weight.

Animal.	Sugar by 1,000 expressed as Glucose. Before Sulphuric Acid.	Sugar by 1,000 expressed as Glucose. After Sulphuric Acid.	Cupric-Oxide reducing Power of the Sugar eliminated in Relation to that of Glucose at 100.
Rabbit...	48.08	67.79	73
,, ...	19.84	51.89	38
,, ...	39.68	94.46	42
,, ...	34.72	69.44	50
,, ...	21.74	35.72	61
,, ...	10.41	19.23	54
,, ...	48.78	110.85	44

The urine was obtained from the bladder about two hours after the injection.

THE URINE AND BLOOD IN DIABETES.

The phenomena observed in diabetes presented a further illustration of the fact that the condition of the urine was representative of that of the blood. A certain amount of sugar was always present in the blood, and therefore in the urine. If the amount of sugar in the blood were increased, that in the urine rose also. Sugar present in the blood to the amount of 2 per 1,000 represented a strongly saccharine state of the urine. These points were illustrated by the following analyses of the amount of sugar in the blood and in the urine of four cases of diabetes. Cases I, II, and III were examples of the severe form of diabetes; Case IV was of a milder type, and the amount of sugar passed under a partially-restricted diet was less than that passed under a restricted diet in the other cases.

Comparative States of the Blood and Urine in Diabetes.

Case.	Date.	Diet.	Urine Sugar per 1,000 Parts.	Blood Sugar per 1,000 Parts.
I	Jan. 5	Mixed	109.91	5.763
II	,, 8	Mixed	94.08	5.545
	,, 28	Restricted	61.84	2.926
III	June 8	Mixed	93.39	4.970
	July 20	Restricted	45.49	2.789
IV	March 9	Partially	48.11	1.848
	June 28	Restricted	31.76	1.543

If the liver permitted the blood of the general circulation to present the fluctuating condition observed in the portal blood, or if it poured sugar into the blood, as was said, then there would be a condition of diabetes. The liver, in fact, did exactly the reverse of what it was supposed to do under the glycogenic theory; its function was, in fact, to prevent carbo-hydrate reaching the tissues in a free state.

A UNIVERSITY SETTLEMENT IN BATTERSEA.—On June 24th—the anniversary of the laying of the foundation stone of the present building—a number of old Caians in London visited the Caius Mission and Settlement in Battersea. During the past two years over £2,000 has been contributed, and with this sum the buildings already erected have been paid for and ground for future extension acquired. The work of the Mission is carried on under the direction of the Warden, the Rev. W. B. L. Hopkins, by members of Caius College, as a rule medical students who have left Cambridge for London, and are willing to give up part of their spare time to forward the purpose of the Mission, which, over and above religious instruction, includes weekday meetings for lectures, debates, ambulance, nursing, and musical classes.

[1] Specimens of such crystals from the urine of man, the horse, and other animals were shown at the conclusion of the fourth lecture.

[2] The fall in the amount of sugar occasioned by boiling with sulphuric acid was in harmony with the known property of lævulose to be more easily destroyed or lost by the action of heat and acids than dextrose.

ANTIPYRETIC EFFECTS OF EXTERNAL APPLICATIONS OF GUAIACOL.

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Among the latest and most efficient antipyretics external applications of guaiacol deserve an important place. It seems that Dr. Sciolla[1] was the first to whom the idea occurred of employing guaiacol in this way. His observations attracted considerable attention, especially in France, and further communications have appeared from Drs. Bard,[2] Guinard,[3] Robillard,[4] Solis-Cohen,[5] Lépine,[6] Stolzenburg,[7] Da Costa,[8] Linossier and Lannois,[9] and others. From these observations there is no doubt that guaiacol has energetic properties as an antipyretic.

The following remarks are based upon 114 personal trials of the drug made upon 13 cases (febrile phthisis 9, acute pneumonia 2, healthy persons 2). Eight observations were made on normal temperatures: in the remaining 106 the temperature ranged from 99° to 103°. Pure guaiacol was used sixty-eight times: creasote (containing about 90 per cent. of guaiacol) forty-six times. The liquid drug was rubbed into the axilla at 5 or 6 P.M., the quantity usually employed being ʒj, but in a few instances only ʒss was used.

The temperature was reduced in 104 instances. There was no reduction in ten instances, but in five of these the temperature was normal at the time of application. The action of guaiacol was distinctly more energetic than that of creasote. With guaiacol the temperature fell 6° twice (in the same case), from 5° to 6° eight times, from 4° to 5° nine times, and from 3° to 4° thirteen times. With creasote the temperature fell once 5.2°, once 3.2°, and from 2° to 3° nine times. The lowest point to which the temperature fell was 96° three times, 96° to 97° ten times, 97° to 98° thirty-two times. The lower temperatures were obtained in every instance by guaiacol. The fall usually began at once, but occasionally there was a slight rise of temperature for the first hour, after which the fall was abrupt. The shortest time occupied in reaching the minimum temperature was one hour, the longest time was five hours, and the average time was about three hours. As a rule, after reaching the minimum, the temperature rose again abruptly to a point sometimes above, and sometimes below, what it was previously to the application. In two cases of phthisis the mean daily temperature was persistently reduced, and in one of these the temperature became practically normal under the continued use of the drug.

In addition to the fall of temperature other phenomena were pretty constantly observed. A short time after the application the skin of the part began to smart and burn, sometimes only very slightly, while in some few so severely that it was compared to burning with a hot iron. The smarting almost invariably passed off in the course of an hour, but when the application had been repeated for several nights in succession it sometimes caused mild superficial inflammation followed by slight desquamation of the cuticle. Inflammatory trouble was, however, quite exceptional: it more often occurred with creasote than guaiacol, and quickly subsided on suspending the application for two or three nights.

Marked general sweating was almost invariable: it was often copious, and occasionally so profuse as to saturate the bed clothes. The sweating was not always proportionate to the fall of temperature, although this was the rule: on six occasions there was a marked fall in temperature with very little if any sweating: on one occasion the temperature did not fall at all (but rose 1.8°) and yet there was sweating; while on three occasions (normal temperature) there was neither fall of temperature nor sweating.

When the temperature fell below normal, there were symptoms of collapse, but only once to a serious extent. In these cases there was always very profuse sweating, an indescribable sense of sinking, and occasionally a feeling of nausea. Apart from the actual danger of collapse, the symptoms are extremely distressing to the patient, and under such circumstances the applications should either be discontinued or repeated with much smaller doses.

The abrupt rise of temperature after its reduction has already been referred to. When the fall was considerable, and especially when the minimum reached was below normal, this abrupt rebound of fever was very commonly associated with shivering, and sometimes with a decided rigor. In every instance it was found that the temperature was rising rapidly during the rigor. This symptom cannot therefore be regarded as a sign of collapse, but probably is the result of nervous shock brought about by sudden invasion of fever, such as we are familiar with at the outset of all acute specific diseases which begin abruptly.

The frequency both of the pulse and respirations was reduced as the temperature fell, but not to an extent greater than would be accounted for by the diminished fever.

The quantity of urine secreted was greatly increased, with a corresponding fall in specific gravity, and both an absolute and a relative diminution of solid constituents. As the fever returned, the urine gradually recovered its previous character. Lannois and Linossier state that after the external application of 2 grammes of guaiacol, elimination of the drug by the kidney began in a quarter of an hour, reaching its maximum from one and a-half to four hours, then decreasing rapidly for six or seven hours, till at the end of twenty-four hours only a trace was observed in the urine. They state that no less than 55.5 per cent. of the amount applied may be eliminated in the urine. This shows that the drug really enters and passes through the system.

I do not propose in the present communication to deal with the therapeutic uses of external applications of guaiacol in any detail, but the observations above recorded suggest the following considerations:

1. That used in this way guaiacol is a valuable addition to our list of trustworthy antipyretics; and though the tendency of recent experience is greatly to restrict the usefulness of this class of remedies, yet whenever the employment of an antipyretic is indicated guaiacol offers advantages which deserve attention.

2. That, by virtue of its diaphoretic effects, it may possibly be of value as an eliminant in adynamic conditions arising from the retention within the system of toxic substances.

3. That, by reason of its antimicrobic properties and the large amount of the drug which can in this way be introduced into the system, it is likely to be of service as an internal antiseptic, especially in the treatment of phthisis.

It should be pointed out that for therapeutic purposes smaller quantities of the drug are desirable than those employed in this investigation. Probably ♏20 to ♏30 would be generally sufficient. For continued use smaller doses would be desirable than when used to meet a temporary and urgent indication.

What is the explanation of the antipyretic effect of guaiacol applied externally? At present no certain answer can be given to this question. To some extent it turns upon the answer to another question: does guaiacol so applied enter the system, and, if so, does it enter it in any considerable proportion? Bard and Guinard say that it does not appear in the urine, and is not absorbed, and accordingly attribute the effects to a reflex action on the nerve centres through the peripheral nerve endings. They further say that exactly analogous results were obtained in rabbits, when a liquid preparation of mustard was substituted for guaiacol. It seems hard to believe that this view is correct, otherwise how is it that creasote, which is so much more irritating than guaiacol, has such a much feebler antipyretic effect? Also, the purer the preparation of guaiacol the less is the local irritation, and yet the greater is its antipyretic effect.

If the observations of Lannois, already quoted, on the large elimination of the drug in the urine are to be trusted, it seems far more reasonable to suppose that this action of guaiacol is due to its internal effects after absorption. Moreover, we find that everything that facilitates absorption increases the effect of the drug—*cæteris paribus*. Whether the drug acts directly upon the central nervous heat centres or whether it acts upon them indirectly by some neutralising effect on the fever-producing toxins there is as yet no evidence to show.

It is impossible to disregard altogether the antipyretic

effect of the sweating which so generally attends these applications of guaiacol. But since there is no regular relation between the intensity of sweating and the fall in temperature, and since sweating is occasionally absent though the temperature falls, it seems clear that we must look elsewhere for a complete solution of the problem.

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INCOMPETENCE OF THE PULMONARY ARTERY.

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CARDIOGRAPHERS are agreed that diseased conditions of the orifice of the pulmonary artery developed after birth are uncommon. This applies, not only to lesions that narrow the mouth of the vessel, but particularly to those that allow of regurgitation of blood into the right ventricle. Constantin Paul maintains that incompetency of the valves of the pulmonary artery is of all cardiac lesions the rarest. Few authors have written much about reflux through these valves. Huchard and Walshe make no mention of it. Sansom in his classic work gives an interesting summary of the bibliography of the subject, and states that "a murmur of diastolic rhythm having its origin at the orifice of the pulmonary artery is very rare." As a small contribution to the literature of this interesting affection I give in detail the following case:

S. S., aged 60, married, was admitted into the Newcastle Infirmary August 28th, 1890, complaining of shortness of breath and swelling of feet and legs. She has had a comfortable home, but has had to work hard. There is nothing of importance in the family history. She had typhus (?) fever at the age of 9 years. There is no history of rheumatic fever. Patient considers that her illness dates from four years ago, when she caught a severe cold. This was followed by shortness of breath, which has never since entirely left her. She is badly nourished, is sallow and cyanosed. Urine has a specific gravity of 1014, is alkaline, and contains albumen. Tongue moist and coated; bowels are regular. Pulse 76, is rather incompressible; the artery feels hard. The movements of the chest are restrained. There is an increased area of cardiac dulness; it extends from the nipple line to 1½ inch beyond the right border of the sternum. The apex beat is diffused; it is displaced downwards and outwards to the left 2 inches below the nipple. Over the apex a systolic murmur is heard, followed by a loud ringing and accentuated second sound. Down the middle of the sternum and to the left of it a systolic murmur is heard, louder and more grating in character than a similar murmur which can be heard over the aortic area. Along the left border of the sternum a diastolic murmur of fairly long duration is detected. The veins of the neck are extremely distended, and are seen to collapse during deep inspiration. Pressure upwards, with the hand driven firmly but gently under the right costal arch, increases the venous distension in the neck. Under this procedure the jugular veins would almost immediately pass from the size of a penholder to that of one's little finger. There is edema of feet.

Under rest in bed and treatment patient regained health to such an extent that she was able to return to her duties as an office cleaner. She left the infirmary on October 1st, 1890.

On March 10th of the following year she was readmitted, complaining of a recurrence of her old symptoms, which again subsided under treatment. She left the infirmary, but returned on June 26th, the dyspnœa having become aggravated, cyanosis being more marked, and emaciation more advanced. There was little or no cough. It is noted that there is very extensive pulsation over the cardiac area, and that it affects principally the right side of the heart. The superficial veins in the neck are widely distended. Over the aortic area there is a systolic murmur, followed by a well-marked second sound. Over the xiphoid cartilage is heard a double murmur, whilst over the seat of the pulmonary artery there is a well-marked systolic murmur, followed by a diastolic murmur. There is a soft mitral systolic at the apex; here the second sound is healthy. Small crepitation, with diminished respiratory murmur, is detected at the base of the left lung, back and front. Pulse varies from 90 to 100; it is small and jerky; the radial arteries are hard and tortuous. Urine, specific gravity 1016, acid and albuminous. Liver dulness is slightly enlarged. By degrees the dulness in the left chest increased, and with it the dyspnœa passed into orthopnœa. The patient is only able to sleep resting on her knees and elbows. The symptoms gradually increased in severity; fluid began to accumulate, too, in the abdomen.

On August 6th we tapped the left chest, drawing off 52 ounces of serum. This gave great relief to her breathing. Patient could now lie in the recumbent position, and she slept comfortably. Gradually, however, the fluid reaccumulated in the pleural cavity; the breathing again became difficult, but nothing would induce her to have the chest tapped. The pulse became irregular, and the quantity of urine diminished to 10 ounces daily. As the illness drew to its close she became rather rambling and delirious, but never acutely so. A very profuse epistaxis came on on August 18th—over a pint of blood being lost before the bleeding was restrained. Two days subsequently there was again epistaxis. Her pulse now rose to 140, and within forty-eight hours of the second epistaxis she died completely exhausted.

Post mortem a considerable quantity of fluid was found in the left pleural cavity. Beyond being compressed, the left lung presented nothing abnormal. The right lung was congested and œdematous. The heart was enlarged to almost twice its normal size, the enlargement affecting particularly the right side. A branch of the left coronary artery in the interventricular groove was atheromatous, and a portion of it was seen to be firmly plugged by a white fibrinous thrombus. The aortic valve was competent, and its segments were healthy seen from above. The pulmonary artery was incompetent. The myocardium appeared to be healthy except at the apex, where the wall was very thin. Lying firmly attached to it internally was an old laminated greyish-white clot. The aorta was slightly dilated. The pulmonary artery was widely dilated; it was from one-fourth to one-third as wide again as it ought to be. The aortic valves seen from below were quite healthy. Those of the pulmonary artery, when again tested with water, did not fall closely together, but allowed the liquid to escape. On closer examination the defect was observed to be due to the presence of thickened patches on two of the segments, which had caused them to shrivel. Mitral and tricuspid valves were healthy. A fairly deep ulcer, the size of a threepenny piece, was found at the beginning of the descending aorta. On the surface of the liver was a large patch of thickened capsule, the size of a five-shilling piece; it had all the characters of cicatricial tissue (? specific). The liver on section was nutmeggy. The kidneys were enlarged; in the left was a cyst, the size of a small nut, with gelatinous contents. Both kidneys were irregular in shape, and granular. The capsule was adherent, and the cortex was diminished. The other abdominal viscera were healthy.

Apart from congenital heart disease, lesions of the orifice of the pulmonary artery are extremely rare. Now and again they are met with in the course of ulcerative endocarditis. Under most circumstances the diagnosis of pulmonary insufficiency is a matter of difficulty. In the case reported it was suspected on the grounds that the diastolic murmur was located over the pulmonary artery, and conveyed down the left side of the sternum to the apex of the right ventricle; that the second sound heard over the aortic area was healthy and quite distinct; that the pulse was hard and incompressible, and not the collapsing pulse of aortic regurgitation. There was just some doubt, however, in my own mind in regard to making the diagnosis of pulmonary regurgitation absolute, and it arose from the possibility of there being some cardiac adhesions which might have given a twist to the heart in its long axis, thus altering the positions of the orifices of the large vessels arising from the base of the heart relative to their normally corresponding points on the surface.

It is noted in my case that the pulmonary artery was widely dilated. Hope, in his *Diseases of the Heart*, reports a similar case. There was no stenosis of the orifice, a point of some interest when viewed in the light of a strong statement by Dr. Michel Peter of Paris. In the brief paragraph devoted to lesions of the pulmonary artery in his *Maladies du Cœur* he says "we have seen *apropos* of lesions of the aortic orifice that the most common lesion was insufficiency, and that stenosis indicated a stage further advanced in the evolution of chronic endocarditis. It seems, on the contrary, that insufficiency of the pulmonary orifice is only an exaggerated product of the lesion which has caused narrowing of this orifice." As a clinical and anatomical entity Peter says stenosis of the pulmonary artery is well known, but there are very few examples of insufficiency without stenosis. I am using the word "stenosis" here in the sense of very distinct narrowing, such as would cause obstruction to the onward flow of the blood. With this meaning attached to the word there was in the above case no stenosis. The diastolic murmur was well heard over the seat of the pulmonary artery and down the left of the sternum, a circumstance I again allude to, for it must be admitted that during the course of many cases of chronic endocarditis there must occur pulmonary regurgitation so slight as not to give rise to murmur. In fact, this is one of the points that Duroziez lays considerable stress upon, and which he regards as one of the reasons why pulmonary incompetence is not recognised during life. It is the absence of a diastolic murmur. As this remark applies more or less to all forms of valvular disease, we cannot assign to it the importance claimed for it by Duroziez. Bramwell, whilst admitting the rarity of pulmonary incompetence, gives an excellent summary of the symptomatology of the disease. My own case fully confirms what he says of the seat and convection of the diastolic murmur, and of the effect of the lesion upon the right side of the heart and the venous system. The right ventricle was dilated and hyper-

trophied, and during life the veins in the neck would occasionally stand out like tubes the thickness of one's little finger. The pulse at first was rather hard and incompressible, later on small and jerky, whilst towards the end of life it became very rapid and small, but never to any extent irregular. Taken in conjunction with my remarks upon the distended right chambers of the heart and the venous system generally, the two attacks of profuse epistaxis are worthy of notice.

NOTE ON THE STAINING AND MOUNTING OF TUBE CASTS AND OTHER ORGANIC URINARY DEPOSITS.

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The interesting paper by Dr. Harris in the British Medical Journal of June 23rd leads me to publish the following note, which was written several years ago, on the staining and mounting of tube casts and other organic urinary deposits. It will be seen that the method is simple, and that no apparatus, other than the ordinary clinical appliances in every-day use, is required. The results are eminently satisfactory, and the preparations permanent.

The Staining of Tube Casts.

The detection of tube casts when the urine is copious, the deposit scanty, and the tube casts few and far between is, as everyone knows, a matter of considerable difficulty, and one which involves (when the ordinary method of examination is employed) the expenditure of considerable time and trouble. And yet it is just in those cases in which the detection of the casts is most difficult (cases of polyuria, with scanty deposit and a small amount of albumen), that the presence or absence of tube casts is of the greatest importance for the purposes of diagnosis.

The recognition of tube casts under such circumstances is greatly facilitated by the use of staining reagents. Picro-carmine is the stain which I chiefly use. The method which I adopt is as follows:

1. An ordinary conical urine glass is filled with equal parts of urine and an aqueous solution of boracic acid and set aside until the deposit settles.

2. The deposit is then drawn off by means of a pipette and transferred to an ordinary test tube in which a small quantity (half a drachm is quite sufficient) of picro-carmine solution has been previously placed.

3. The urine and staining fluid are then thoroughly mixed by inverting the test tube two or three times, the end being, of course, closed by the thumb.

4. The test tube containing the urine and staining fluid is then set aside to stand for twenty-four hours.

5. The deposit, which has by that time settled at the bottom of the test tube, is then drawn off by a very fine-mouthed pipette (most of the pipettes used for clinical purposes are far too large in the mouth),[1] placed on a slide, covered, and examined under a low power.

If any tube casts are present they are very easily detected by this method.

When a cast is detected with the low power, it should be carefully brought to the centre of the field: the high power should then be applied, and the structure of the cast more carefully studied.

If there is reason to suspect the presence of amyloid degeneration of the kidney, a solution of methyl violet may be used instead of picro-carmine; for in some cases of waxy disease of the kidney, the tube casts give, with methyl violet, the characteristic rose-pink reaction.

Permanent Preparations.

In order to bring out the fine details of tube casts, which have been stained in the manner described above, and in order to preserve them as permanent preparations, they may be mounted in Farrant's solution.

The procedure which I adopt is as follows:—

1. A small test tube—one of the small glass tubes, in which Messrs. Burroughs and Wellcome pack their specimen tabloids, answers the purpose admirably—is filled three-quarters full with Farrant's solution.

2. The stained deposit from the test tube containing the mixture of urine and picro-carmine solution is drawn off by means of a fine-mouthed pipette, and transferred to the small test tube which contains the Farrant's solution.

3. The small test tube is then securely corked, inverted two or three times in order that the coloured urine containing the stained deposit and the Farrant's solution may be thoroughly mixed, and set aside to stand until the tube casts or other urinary deposits have settled to the bottom.

4. In the course of three or four days a minute drop of the deposit, which is of course mixed with a certain amount of Farrant's solution, is drawn from the bottom of the test tube by means of a very fine-mouthed pipette, placed on a slide, covered and examined by the microscope.

5. The preparation may, in the course of a few days, be sealed in the ordinary manner, if it is desired to preserve it as a permanent preparation.

If the preparation mounted in this manner is overstained with the picro-carmine solution (that is, when the mounting fluid as well as the deposit is coloured) the deposit which has collected at the bottom of the small tube should be drawn into the pipette and transferred to a second small tube containing fresh Farrant's solution. The deposit which settles in this second small test tube is, after it has settled, then drawn off and mounted in the ordinary manner. The tube casts stained in this way and mounted in a perfectly transparent and unstained medium make beautiful microscopical preparations, their minute characters can be studied with the highest powers of the microscope.

Any organic urinary deposits may of course be stained, mounted, and preserved in the same manner.

[1] The best pipette is, I find, a narrow glass tube which has been drawn out to a fine point; the end then broken off and heated in the flame of a spirit lamp so as to round off the edges. A pipette with as small an orifice as may be desired can be made by anyone for himself in this way in the course of a few minutes.

HEREDITARY MALFORMATION OF THE HANDS AND FEET; WITH OPERATION ON ONE SUBJECT.

By W. RAMSAY SMITH, M.B., C.M., B.Sc.Edin.,
Late Senior Assistant to the Professor of Natural History, Edinburgh University; Demonstrator of Anatomy, Edinburgh School of Medicine; and Examiner to the Royal College of Physicians, Edinburgh.
Rhyl, N. Wales;
AND
J. STEWART NORWELL, B.Sc.,
Thomson Scholar in Medicine, University of Edinburgh.

In April, 1894, a boy, aged 15 years, with malformed hands and feet, was brought by his father to Dr. Smith, on account of pain and difficulty in walking, due to the malformation of the feet. The case was of more than merely passing interest on account of the persistency and consistency with which the malformation had affected several generations. It will be well to begin by giving an account of the structure of the boy's hands, then to compare them with the father's hands; afterwards to describe the malformation in the feet, and to give the history of these malformations so far as it can be traced through various generations.

Condition of the Boy's Hands.

The malformation in the boy's hands affects the middle and ring fingers. The right hand shows these fingers webbed to the tip. The conjoined nails exhibit a slightly elevated ridge running from the lunule and ending at a notch in front; and at the tip of the conjoined fingers there is a small linear depression running from the nail notch to the palmar surface of the tip. These are the only indications of separation of the digits. Each digit has the usual number of phalanges. The ring finger has its first phalanx rather shorter than normal; the second phalanx is articulated to it at an obtuse angle, the distal end of the first phalanx forming thus a

rounded protuberance like the stump of an amputated digit. The terminal phalanx is jointed to the second phalanx also at an angle, the tip being directed towards the little finger. The middle finger has the first and second phalanges of the normal size. The first interphalangeal joint is not easily made out, owing to the small amount of movement at it; the two phalanges being like a long bony rod. The third phalanx is jointed at an angle to the second phalanx; the tips of the two terminal phalanges of the ring and middle fingers being thus brought close together. There is a considerable space between the first phalanges of the two fingers. This we find occupied by a nodule of bone articulating with the head of the fourth metacarpal at the metacarpo-phalangeal joint, and running downwards and outwards to be attached to the middle of the shaft of the first phalanx of the middle finger.

The left hand differs from the right in the following respects: There is no well marked angle at the first phalangeal joint of the ring finger. The first phalanx is normal in size. The tip of the terminal phalanx of the middle finger comes to lie in front of the tip of the corresponding phalanx of the ring finger. This disposition of the bones has affected the external configuration of the tips of these fingers, the tip of the middle finger looking as if it were twisted in front of the ring finger, while the nails, which in the right hand lie in the same plane, form in the left a well-marked angle with one another. An extra nodule of bone between the heads of the metacarpals exists in this hand also, though it is not so large as in the other; it is attached to the head of the second metacarpal, and runs downwards and outwards to the middle of the shaft of the first phalanx of the ring finger. On the palmar aspect there is another extra bone; it lies under the head of, and to the inner side of, the fourth metacarpal bone, and runs downwards parallel to the first phalanx of the ring finger almost to the first phalangeal joint; it is distinctly, but not freely, movable on the bones it lies in contact with. The small amount of movement obtained may be due to the difficulty of grasping the bone through the palmar fascia and soft tissues. The thumb, index, and little fingers are normal, except for a webbing of the little finger to the ring finger as far downwards as to the first interphalangeal joint.

Condition of the Father's Hands.

The father's hands show the same main features of malformation as the son's. In the right hand the phalanges are not articulated to each other at so great an angle as in the boy's hand; the bones of the two fingers are also more closely approximated, while the terminal phalanges are bent, not to the ulnar side, as in the boy's hand, but to the radial. There appears to be no accessory bone between the head of the fourth metacarpal and the first phalanx of the middle finger. It is also worthy of mention that, owing to contraction of the palmar tissues in front of the first phalangeal joints of the index and little fingers, these digits cannot be fully extended. This condition is most marked in the index finger of the right hand, and might be partly accounted for by the nature of the man's occupation of labourer.

The left hands of both father and son are almost identical in form. The web between the ring and little finger in the father's hand is carried lower down. The first and second phalanges of the middle finger are represented by one long slender bone, there being no joint corresponding to the first phalangeal joint, as in the boy's hand. The bones of the middle and ring fingers are approximated more closely in the father's hand, bringing the terminal phalanx of the middle finger more in front of the corresponding phalanx of the ring finger.

As regards movement in the malformed fingers, in the hands of both father and son a slight amount of flexion can be produced in the terminal phalangeal joints, but not by voluntary muscular effort. The metacarpo-phalangeal joints can be flexed almost as far as normal, but flexion requires more exertion than usual. Both father and son are unconscious of any inconvenience arising from the malformation of the fingers. They can perform all the work of individuals with ordinary hands.

Condition of the Boy's Feet.

Each foot has six toes. The second and third toes of both are webbed almost to the first interphalangeal joints, the fifth and sixth toes up to the nail; the fourth toe being comparatively free. Each toe is normal in size, and has the usual number and disposition of the phalanges, with the exception of the great toe, which is larger than normal. The fourth toe is superimposed on the fifth toe, this condition being more marked in the left foot. The sixth toe of each foot, as far as we can make out by manual examination, possesses only two phalanges, a not uncommon condition of the normal little toe.

On the right the sixth toe, and to a less extent the fifth also, has become rotated inwards, so as to bring the nail in contact with the ground in the act of standing or walking. This causes great pain. In order to avoid this pain he everts and rotates the foot outwards, so as to lift this toe from the ground, and throw the weight of the body on the front part of the great toe, which he crosses as far as possible over the fore part of the foot. He also keeps the foot well arched to further raise the sixth toe from the ground. This method of walking has resulted in the formation of a well-marked bunion at the upper and inner side of the metatarso-phalangeal joint of the great toe, and in hypertrophy of the bones in its neighbourhood. The displacement of the fourth digit is doubtless caused by the use of boots too narrow for the abnormally broad foot. The boots were always bought several sizes larger for him than the length of the foot necessitated, and even then the upper of the boot had to be cut close to the sole on the outer side to allow greater ease to the toes. It had also to be cut over the bunion. The first phalanx of the third toe of the left foot is hypertrophied on the upper surface at the proximal end, similarly to the corresponding bone of the great toe of the right foot.

The manner of articulation of the extra toe on each foot cannot well be made out. On the right side this toe seems to be articulated to the outer part of the head of the fifth metatarsal bone. On the left side there is either an extra metatarsal (a depression can be felt, but its nature is uncertain) or the fifth metatarsal is broadened out at the extremity so as to allow articulation of the phalanges of the fifth and sixth toes side by side.

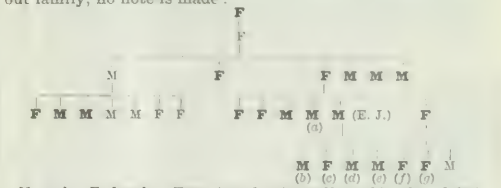
The boy, though in good health now, suffered when young from rickets, and this disease has left its mark on the thorax, in some slight enlargements of the condyles of the humerus, and in curvature of the tibiæ.

Condition of the Father's Feet.

The father's feet show almost exactly the same peculiarities as the boy's with this exception, that the great toes, instead of being large, are even smaller than normal. He walks without any inconvenience.

Family History.

The genealogical table appended gives the history of the malformation so far as we could investigate it. Where the members are unmarried, or where, if married, they are without family, no note is made:



M=male; F=female. Heavy type denotes malformed hands and feet; light type denotes normal hands and feet.

E. J., the boy's father.

(*a*) Had both supernumerary toes removed by operation; both hands are "exactly like" E. J.'s right.

(*b*) Boy operated on by Dr. Ramsay Smith; his hand shows some minor differences from the father's as noted above.

(*c*, *d*, *e*) All died young, and all had the same malformation of the hands as E. J.

(*c*, *f*, *g*) Have both hands "exactly like" E. J.'s right.

One interesting point in this record is that malformation of the hands is always associated with malformation of the feet; in no instance is there a malformation of the hands alone or of the feet alone; and the malformation, so far as can be ascertained, shows very little variation.

Another point is that it seems to go very much in the female line. It missed a generation in E. J.'s grandmother,



Fig. 1.—Boy's hands.

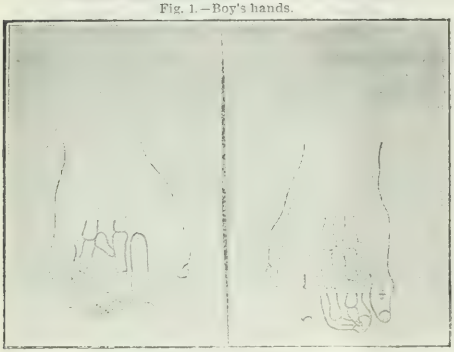


Fig. 2.—Boy's hands.



Fig. 3.—Father's hands.

but all her children had it save one, and three out of seven of that one's children had it. Again, all F. J.'s brothers and sisters had it; but, on the other hand, he has transmitted it to his whole family of four, while his sister has transmitted it to only two of a family of three. Looking at the genealogical table as a whole, one is struck by the firm hold that



Fig. 4.—Boy's right foot after operation.



Fig. 5.—Boy's left foot.

the abnormality has taken of the family, twenty one out of twenty eight being malformed.

Another fact that ought to be recorded in this connection

is that E. J.'s wife was previously married, and had borne children by her first husband. Inasmuch as, in such circumstances the wife has had impressed upon her certain features of her former husband, it is somewhat remarkable to find that all the children she has borne by her second husband inherit the malformation possessed by him.

NOTE ON THE OPERATION. BY DR. RAMSAY SMITH.

The case was suitable for operation. The foot was becoming deformed, and walking was difficult and painful, on account of the boy's efforts to keep the supernumerary toe off the ground, or from pressing on the sole of the boot. In choosing the method of amputation several things had to be considered. In the first place, the fifth and sixth toes were united as far forwards as to the nails. This put the oval method of amputation out of account, unless I had made the incision on the outer aspect of the foot, a proceeding that had obvious disadvantages. In the second place the condition of the skin on parts of the supernumerary toe had to be considered—parts were hard and horny, and otherwise undesirable to have in a flap. On the whole I thought it best to use a Λ-shaped incision, and to preserve a flap from the outer part of the supernumerary toe. With this end in view I made the knife enter between the fifth and sixth toes, passed it backwards, keeping the edge well outwards, as far as the articulation with the metatarsal; then, having dislocated the bone, I turned the edge of the knife forwards, keeping it well inwards, and cut towards the front. By this method the tissues were dissected very perfectly from the phalanges of the toe I was removing, thus leaving as much tissue as possible on the outer aspect of the fifth toe and in the flap; this at most was not much, but it included all the fibrous tissue of the part. I united the flap with the side of the foot by five catgut sutures placed deeply. The operation was done under strictly aseptic conditions, and the wound healed without any complication. The result of this method of operating is that the cicatrix has a course from behind forwards along the dorsal surface of the foot, then along the upper outer face of the fifth toe and downwards to the under surface of that toe, whence it passes back a little way. This avoids having any part of the cicatrix on the point of pressure on the sole of the foot, and leaves the contour of the foot exactly as if no supernumerary toe had ever existed.

I did not interfere with the left foot: there was not the same urgent necessity. I had for several reasons to perform the first operation as expeditiously as possible; besides, the surroundings of the patient were very unfavourable to good results, and it seemed easier to keep one wound aseptic than two; and, lastly, I wished to see the result of the first operation in order to find out if the method could be improved upon in amputation of the toe of the other foot.

The boy was able to walk in about a fortnight. A photograph taken nineteen days after the operation, and several days after the boy had been walking in boots, shows the appearance of the cicatrix at that date. I have placed alongside of the foot the amputated toe which, although somewhat altered by being preserved in spirit, gives an idea of its comparative size. The left foot, which was almost identical with the right, is shown for the purpose of comparison.

ON THE EFFECT OF THYROID EXTRACT IN EXOPHTHALMIC GOITRE AND IN PSORIASIS.

BY A. G. AULD, M.D.,
Assistant Physician to the Glasgow Royal Infirmary.

THE following brief notes of two cases seem worthy of publication in view of the questions which are at present occupying attention, and awaiting more definite observations.

EXOPHTHALMIC GOÏTRE.

It has been alleged that Graves's disease is benefited by thyroid extract, though I have not come across any reliable data on the subject. A consideration of the facts and suggestions so ably propounded in the last Bradshawe Lecture by Professor Greenfield[1] would tend to lead one to the opposite conclusion. To bring the matter to a practical test may be so far possible, although in cases of *active* Graves's disease the difficulties and pitfalls encountered are self-evident. The following case, however, seemed peculiarly suited for this purpose, and at the suggestion of my friend Professor Charteris the treatment was begun by giving one of Burroughs and Wellcome's tabloids every three days. Dr. Charteris also closely watched the case along with myself.

The patient, a young woman aged 26, had been under my care for two years for Graves's disease. For the first year the symptoms were typically developed, but the patient then got gradually better until latterly the disease seemed to be in a dormant or resting condition. At this time the thyroid gland itself was considerably enlarged throughout, but this enlargement was of a variable character, showing temporary fluctuations. A slight, but by no means obtrusive, degree of exophthalmos was present; the pulse-rate was from 90 to 100, and the temperature normal. As soon as the treatment was begun, the pulse and temperature were recorded twice daily. By the end of the first week, the exophthalmos had become much more pronounced, a symptom commented on by both the friends of the patient and by herself. The right eye was more affected than the left. The patient also complained of returning pulsation in the neck, which had become more swollen, and she felt weaker and out of sorts. After two weeks there was in addition diarrhœa, and the patient was paler and thinner. In the third week the dose was suddenly increased to two tabloids per day, continued for nine days, when sickness and perspiration ensued. The heart's action rose from 99 to 138, and the temperature record for a fortnight was as follows: Morning (before treatment) 98°, evening (after first tabloid) 100°; morning 99°, evening 99°; morning 100°, evening 100°; morning 99°, evening 100°; morning 100°, evening 99°; morning 99°, evening 99°; morning 100.6°, evening 99°; morning 100.6°, evening 100.8°; morning 100.4°, evening 99°; morning 100°, evening 99°; morning 100.6°, evening 101°; morning 100°, evening 100.8°; morning 99°, evening 99°; morning 100°, evening 100°. The sudden increase in the dose did not affect the temperature.

These facts speak for themselves. It seems to me that the effect of the thyroid extract was to rekindle the symptoms of the disease, and so support the view that Graves's disease is caused by a hypersecretion on the part of the thyroid gland.

PSORIASIS.

The papers of Dr. Byrom Bramwell, on the treatment of psoriasis by thyroid extract,[2] induced me to make a trial in a case which came under my care at the Royal Infirmary, on May 4th. The patient was a young man, aged 19, thin, anæmic, and undergrown. The arms and legs were covered with angry-looking inflamed patches, while frequent patches also occurred on the trunk. He had been taking a mixture containing iron, quinine, and arsenic, with alleged benefit. The disease, the patient said, came out every year about February, and tended to get well towards the end of the summer: usually, however, a few patches were left over the knees. He was given one tabloid daily of the thyroid extract with no other treatment, and by the end of a week every trace of the disease had disappeared.

I freely admit the remarkable character of this result, for even granting that the disease in this case had a natural tendency to disappear, it seems clear that the thyroid treatment had a marked, nay a specific, effect. I have observed marked desquamation of the skin follow thyroid feeding in some cases of myxœdema, and it is probable some skins are more susceptible than others. It is advisable to continue the treatment for some time after the disappearance of the psoriasis to prevent a relapse.

[1] BRITISH MEDICAL JOURNAL, December 9th, 1893.
[2] BRITISH MEDICAL JOURNAL, October 28th, 1893, and March 24th, 1894.

THE late Professor G. Brugnoli, of Bologna, has bequeathed the bulk of his estate, amounting to about £40,000, to the Ospedale Maggiore and the University of Bologna. Substantial legacies are left to the Mutual Help Medical Society, to the Medico-Chirurgical Society of Bologna, and to the Royal Academy of Sciences.

A REPORT ON SOME RECENT CASES OF "MALIGNANT" INDIAN SYPHILIS TREATED WITH THYROID EXTRACT.

BY J. DUNCAN MENZIES, M.B., SURGEON, R.N.
[COMMUNICATED BY THE DIRECTOR-GENERAL R.N.]

DURING the homeward voyage from Bombay in H.M.S. *Euphrates* I had an opportunity of studying the therapeutic action of thyroid extract in a few bad cases of syphilis. The patients were all invalids, lying in the military hospital, having been sent down from their respective stations for change to England. They were all in a very weak, sickly state, the disease being complicated by malaria! fever, bowel complaints, etc. All mercurial and alterative treatment was suspended for the time, in order to watch the effect of the remedy. With the kind permission of Brigade-Surgeon-Lieutenant-Colonel F. Lyons, A.M.S., the senior medical officer in charge or troops, I was enabled to make the following notes:

CASE I.—C. C., aged 23. Private.

History.—Disease contracted at Allhabad, 1893.

Symptoms.—Very severe type of syphilide, a rupial rash, with almost constant fever; swelling of the ends of the leng bones and joints; marked cachexia and emaciation; does not seem to be improving; will probably be a permanent cripple. I visited the patient on April 4th. He was then in a very weak condition, much disfigured by the eruption. Two large sores implicated the nose, and he had several similar ulcers on his body. The thyroid course was commenced this day. Thyroid tabloid (B. W. and Co.) (grs. 5) daily in water. April 6th. Desquamation noticeable on face. April 8th. Crusts on nose dropped off. April 9th. Arms improving, slight thyroidism present. He continued thus till April 14th, when the medicine had to be stopped on account of severe epistaxis and pyrexia. Ergot and turpentine were prescribed. Next day the treatment was resumed, and 10 grains were given. April 18th. Manifest improvement of arms; sores all cracking and drying up. April 22nd. Slight ague attack. Right leg much better; ulcers healed, leaving pigmented scars. Joints less swollen. April 27th. Transferred to Royal Victoria Hospital, Netley.

Remarks.—This patient was distinctly benefited by the new medicine. The serous crusts dried up and separated in a remarkable manner.

CASE II.—A. P., aged 24, bombardier, Royal Artillery.

History.—Admitted to hospital, May 22nd, 1893. Disease contracted at Allahabad. Invalided by medical board at that place, January 15th, 1894.

Symptoms.—True primary lesion, severe secondary stage. By November, 1893, the patient had become extremely debilitated, anæmic, and emaciated. The body was covered with a sloughy, rupial eruption; the head and face being the part chiefly affected. Improvement *nil*; growing weaker; permanently unfit to serve as a soldier.

Previous Treatment.—Mercury in all forms; iodides, nutritive and supporting diet, etc.

When visited on April 4th, the patient was in a terrible state, his face, head, and body being a mass of irregularly shaped sores. He had no pyrexia at first and his pulse was fairly good. One tabloid was given daily till April 8th, when the dose was increased to 10 grains a day. The beneficial effect of the new medicine soon showed itself. On April 11th the rupial crusts exhibited white, circular, desquamating edges. April 16th. Dose 15 grains. April 21st. Ship at Malta coaling. Not so well; cough, coryza, and dyspnœa. Temperature, 104°; pulse, 120; respirations, 30. Symptoms aggravated by coal dust. The thyroid extract was omitted. He was ordered cough linctus, and linseed meal to chest. April 22nd. Temperature, 104°; pulse, 120; still very low. Arsenic and phenacetin; port wine and extras. On April 23rd the temperature was 102.2°, the pulse 100, and he had passed a better night. At the evening visit the thermometer marked 104°. He was ordered quinine, gr. xv., at once, and on April 24 the temperature was 98°, and he was much better. One tabloid was given. He would take nourishment in small quantities only. On April 25th the large deep oval sores on the scalp were healing rapidly and satisfactorily. On April 27th he was disembarked to ambulance train.

Remarks.—A serious and anxious case. The patient was in a desperate state on embarkation at Bombay. In spite of the high fever and unfavourable conditions of life on board ship in a crowded hospital, I think the man's general condition was improved by the new remedy.

CASE III.—M. R., aged 26, driver, Royal Artillery.

History.—Admitted June 25th, 1893. Disease contracted at St. Thomas's Mount, Madras. Venereal complaints prevalent in the station. Typical sore. Secondary stage developed July 26th, 1893, before primary lesion had quite healed. A papular rash appeared, followed by a dull red, indolent, ulcerating syphilide.

Previous Treatment.—Antisyphilitic; mercury hypodermically, etc.

On April 4th 5 grains of extract were ordered. On April 6th the skin was improving, acting freely; desquamation commencing. April 12th. Dose increased to 10 grains; eruption not so dusky; pink granulations under scabs. On April 14th the dose was increased to 15 grains, and on April 17th to 25 grains, which was well borne. On April 18th two large ulcers on the left shoulder were rapidly drying up. A bedsore on the left hip was much better. No thyroidism was noticed. The pulse was 96 and regular. Warm permanganate fomentations ordered to facilitate desquamation. Wine and extras. On April 20th the face was still very red, but the unhealthy cachectic look of the man was fast disappearing. All the larger sores were granulating. On April 22nd there had been a further advance, and the general health was much improved.

Remarks.—This man was in an advanced stage of syphilitic cachexia when received at Bombay from the depôt at Deolali, and had been over ten months in hospital.

CASE IV.—T. H. S., aged 21, private.

History.—Admitted from the station at Bareilly December 8th, 1893. Disease contracted on station October, 1893.

Symptoms.—Extreme debility, cachexia, emaciation, pains in long bones; copious rupial rash on trunk, scalp, and extremities.

Previous Treatment.—Mercury, arsenic, nervine tonics, general support; improved slightly in hospital. A medical board at Moradabad recommended change to England, January 22nd, 1894.

The patient, when placed under my care on April 4th, was in a miserable corrupt state, his body being covered with foul, discharging, malodorous sores. On April 10th desquamation was noticed after 10-grain doses of extract. The old scars were actually peeling, and his general condition began to improve. The crusts over the ulcers became detached, leaving flat, pigmented, healthy granulation areas. On April 14th a large ulcer on the left hip was closing. On April 17th the dose was increased to 20 grains. Pulse 96; no untoward symptoms. On April 20th the face was desquamating freely; an ulcerated patch involving the right upper eyelid showed pink granulations. The sores were dressed with simple ointment. On April 22nd the dose was reduced to 15 grains, as there had been slight diarrhœa on the previous day. The patient continued to gain strength, and was disembarked on April 27th.

Remarks.—This was my best case. No recurrence of the eruption took place. Old cicatrices took on a healthy action, and the pigmentation in a great degree disappeared. I should like to draw attention to the following considerations: 1. The exceptional virulence of the poison. 2. The undeniable value of thyroid extract given alone, without any mercurial preparations. 3. The hygroscopic and absorbent properties of the powdered extract. I have found it useful for insufflation and dusting purposes. "Tabloids" are very susceptible to moisture. Three other cases came under my notice: (*a*) Rupial ulcers of face and arms. (*b*) Ozæna, with ulceration of nasal passages. (*c*) Hereditary syphilitic patient with a broken down gumma of calf. These men also decidedly progressed under the new treatment. I am inclined to regard the remedy as a powerful skin tonic and adjuvant to the mercurial and alterative treatment of syphilis.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

URTICARIA FOLLOWING THE ADMINISTRATION OF IODIDE OF POTASSIUM.

MRS. L., a middle-aged healthy looking woman was taken on May 28th, 1894, with a somewhat severe attack of general urticaria. She complained of prostration, pain in the head, nausea, and general febrile symptoms.

The attack could not be traced to any irritating ingesta in her diet; it lasted about four days, during which time she was obliged to keep to her bed. At my last visit, she showed me a prescription she had commenced taking on May 26th, which she had been ordered for rheumatism. I found it contained potassium iodide, and she was of opinion that the medicine had not suited her: as she felt her "eyes water" and seemed to sneeze a good deal after taking the first dose.

From May 26th to 28th she had taken in all 25 grains in divided doses of 5 grains.

As urticaria is a somewhat exceptional eruption after iodide of potassium I thought the foregoing case not altogether devoid of interest.

GEO. W. SEQUEIRA, M.R.C.S.ENG., L.S.A.
Jewry Street, Aldgate.

SCARLET RASH AFTER ENEMATA.

DR. SUCKLING, in his contribution of June 2nd, points to the possibility of a rash resembling scarlet fever being due to an aperient enema. Mr. Staveley, on June 30th, states that a similar skin condition may be met with after the use of brisk aperients in chronic constipation, and also in later stages of acute intestinal catarrh when peristalsis of the paralysed gut is established. In all these cases he points out that indican is present in the urine.

It seems to me that a kindred phenomenon may be found

in the scarlet rash, at first minutely punctate and then diffuse, which sometimes follows the subcutaneous injection of Koch's tuberculin. At the British Medical Association meeting of 1890, in the Dermatological Section, I alluded to this fact as possibly due to an attempt at direct excretion by the skin of an irritant substance introduced artificially into the body. Perhaps the key to the nature of such an irritant may be afforded by Mr. Staveley's observation on the indican excretion by another channel of elimination. It would be interesting to know if he has detected any such substance in the particular skin rash to which he refers, or if there are any signs of kidney irritation at the time of the actual excretion of the indican.

Welbeck Street, W. David Walsh, M.B.Edin.

GANGRENE OF THE VULVA FOLLOWING LABOUR.

M. O., aged 21 years, was delivered of her second child on February 15th. Confinement was easy, the duration of labour being only about three hours; there was no flooding. The patient was attended by a midwife, and apparently made satisfactory progress until the morning of February 21st, when, on waking, she noticed that her vulva was swollen. The parts were tender but not very painful. The swelling was not preceded or accompanied by any acute pain, and gradually increased in size till February 24th, when I first saw her. She was then in a rather exhausted condition but was not markedly anæmic; the temperature was 102.8°, pulse 140. A swelling, larger than a fœtal head, affected the whole vulva, that of the labia minora being somewhat greater proportionately than that of the majora; the swelling was elastic but did not fluctuate; the left labium minus was gangrenous; there was no abdominal tenderness, no œdema of the legs, and the lochia were normal; the heart and lungs were normal. I had the buttocks slightly raised on pillows and warmth applied to the parts, gave a mixture containing perchloride of iron and sulphate of quinine every four hours, and ordered a solution of perchloride of mercury to be used as a lotion, and iodoform to be well dusted on.

On February 26th Dr. Arthur Giles saw the patient with me. The vulva was still very large, but had decreased in size a good deal. The lower half of the left labium minus was almost detached, and soon sloughed off; the right labium minus showed distinct evidence of gangrene, and exhibited a central perforation, but it did not slough. Erysipelas affected the perineum, the right buttock, and spread a little on the left (no internal examination was made for fear of infection). The patient weaned the child, which was quite healthy.

The erysipelas continued to spread for one or two days, both downwards, reaching nearly to the popliteal space on each side, and upwards over the lumbar region: the labia, however, were not affected. This soon disappeared under the usual treatment, and the swelling of the vulva gradually subsided.

On March 21st the patient came to the dispensary as an out-patient under Dr. Giles. The left labium minus had not quite healed, and the right looked ragged. The uterus was normal for the period of puerperium, freely movable; no pain or tenderness; fornices clear. She felt a little weak, but otherwise well.

Remarks.—The rarity of the above condition, I think, cannot be doubted. I have been unsuccessful in finding a parallel case. The diagnosis must lie between "thrombosis" and "thrombus" (hæmorrhage) of the vulva: I am inclined to favour the former. Against "thrombus" the evidence appears throughout the above notes; further, the surface of the swelling did not present the bluish translucent appearance met with in thrombus, nor was there at any time a discharge either of blood or clots from the swelling. The lapse of time before the swelling made its appearance (six days after delivery) is almost sufficient to put it out of court; for out of fifty cases collected by Winckel, not one appeared after three days of childbed. Cases, however, are on record in which the thrombus made its appearance at a much later date. Helfer reported a case, occurring on the twenty-first day after delivery, but in such cases a history of violent exertion on the part of the patient is invariably present.

Although there was no appearance of erysipelas affecting the vulva during the time the patient was under my care, yet it is quite possible that the labia were primarily attacked with this disease, and that in this way the thrombosis may have been set up.

C. Morley Phillips, M.R.C.S. & L.R.C.P.Lond.,
Resident Medical Officer to the St. Pancras and Northern Dispensary.

FRACTURE OF FŒTAL BONES DURING DELIVERY.

In the Epitome of May 12th an abstract of a lecture by Tarnier on Fracture of Fœtal Bones during delivery is given; it is there stated that fracture of the clavicle is extremely rare. The following instance, which came under my observation a short time ago, may be worth recording.

On March 27th I was sent for by my son to assist him in a case of arm presentation. The woman was a multipara, aged about 35; she had been attended by a so-called midwife. The membranes had been ruptured for five hours. The right arm protruded from the vagina; it was twisted, so that the back of the hand rested on the woman's left thigh, swelled and dark coloured; the trunk was in the dorso-anterior position. Version was at once performed under chloroform, the left leg being brought down; some little difficulty was experienced in bringing down the right arm, which was found at the back of the neck. The child, a male, was born alive, and was found to have sustained a fracture of the right clavicle. No bone was felt to snap during delivery, and for this reason I am inclined to believe that the injury was caused by the efforts of the midwife to deliver the child by traction on the arm. The fracture united well by bandaging the arm to the side.

Reigate. J. Walters, M.B.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

NANSORI PLANTATION HOSPITAL, REWA RIVER, FIJI.

FRACTURE OF LEG; FAT EMBOLISM; DEATH.

(Under the care of Charles T. W. Hirsch, M.R.C.S.Eng., L.R.C.P.Lond., Government District Medical Officer for Rewa, Fiji.)

The following case is of sufficient rarity to make it, I believe, worth recording, especially as Scriba and others deny that fat embolism, as a complication of fractures, may be fatal through interference with the pulmonary circulation.

On September 28th, 1893, I was called to Nansori Plantation Hospital, and found that a free Indian immigrant, A., who had been admitted by the hospital attendant, was suffering from simple fracture of the right tibia and fibula, and a contused and lacerated wound of the right foot.

The injuries were due to direct violence. A., while working in the sugar mill, slipped and struck his right foot against some machinery. The fracture was set in the usual way, back and side splints being applied, and the limb then suspended under a cradle. On the following morning, on account of swelling, the bandages had to be slightly relaxed; otherwise the patient seemed to be then doing well.

On September 30th the hospital attendant reported that A. had passed a very restless night; suffered greatly from breathlessness and dyspnœa, and at 11.40 P.M. was very faint. The temperature at 6 P.M. was 98.6°, at 11 P.M. 97.8°. There was also some coughing, but no hæmoptysis. Hot water bottles were placed around him, and whisky was administered; but the body got colder and colder, and before I could reach the hospital the patient died, seemingly from collapse.

On *post-mortem* examination I found the right tibia and fibula to be fractured transversely at a spot four inches from their lower ends. The upper fragment of the tibia was comminuted, two fragments from its lower end having seemingly been chipped off. There was no displacement. The surrounding soft parts were much damaged, and there was great swelling due to effusion of blood into the neighbourhood. The right side of the heart and the vena cava

were distended; the left side of the heart was empty. The lungs were congested, but floated in water. In many places bright, small, subpleural hæmorrhages could be just noticed with the naked eye. Sections stained with osmic acid showed under the microscope that some of the small branches of the pulmonary artery and capillaries were blocked by emboli. In some places it looked as if there had been a rupture of a vessel, with extravasation of blood into the surrounding air vesicles. The accompanying drawing



Lung. Osmic acid and carmine.

was taken from one of the sections by Surgeon Russell. The kidneys, brain, liver, and spleen were examined microscopically, and seemed to be all perfectly normal.

Remarks.—The symptoms all point to death from interference with the pulmonary circulation, and, as has been already stated, no obstruction in any of the vessels of the brain could be detected. The symptoms occurring on the third day suggests that the entrance of the fat into the circulation was due to pressure of inflammatory exudation or injured adipose tissue, which was thus absorbed into the circulation and finally deposited in the pulmonary blood path in such quantities that the functions of the lungs could no longer be discharged.

WEST HOSPITAL, RAJKOTI.

SUPRAPUBIC LITHOTOMY.

(By Frederick C. Barker, M.D., F.R.C.S., Surgeon-Lieutenant-Colonel, I.M.S.; Medical Officer Kathiawar Political Agency; and in Charge of the Hospital.)

H. H., a Mahommedan boy, aged 15, was admitted on November 4th, 1892. Suprapubic lithotomy was performed on November 25th. The bladder was cleansed before operation with boracic lotion; the rectum was packed with sponges, and extraction was effected through a $2\frac{1}{2}$ or 3 inch incision with the operator's separate bladed lithotomy forceps (jointed like midwifery forceps), which alone could be introduced between the stone and the closely-embracing bladder. Extension of the deep parts of the wound was effected mainly by finger-stretching. The operation was difficult and prolonged, owing to the size of the stone and the great hypertrophy of the bladder. Bleeding was very slight. Every endeavour was made during the manipulations to avoid detaching the bladder from its pelvic surroundings. The peritoneum was seen bulging with respiration in the upper part of wound. Sutures (A. E. Barker's sterilised silk) were applied first to the thickened bladder; then to the muscles and skin together. Some horsehair was applied where the muscles pouted between the lips of the wound. A drain opening was left immediately above the pubes, and a rubber catheter left in. Antiseptic cotton covering was applied over the sutured parts. The weight of the stone (moist) was 2,910 grains (= 6.6 oz. avoir.), and 2,855 grains 25 days after the operation. The surface was smooth and whitish, and its shape slightly oval. Circumferences, first, $7\frac{3}{4}$ inches; second, $7\frac{1}{8}$ inches; third, $6\frac{1}{2}$ inches.

This boy had been worn to a shadow by years of suffering, and his temper was frightful. He left the hospital on the twenty-sixth day after operation, fattened, smiling, and tamed; and was reported as "in good health" eleven months after the operation.

I have to acknowledge the valuable assistance of Surgeon-Lieutenant William Carr Sprague and of Dr. F. S. Davar, my assistant, in the operation.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

F. W. Pavy, M.D., Vice-President, in the Chair.

Tuesday, July 3rd, 1894.

Discussion on Chloroform.

This was an extra meeting of the Society to enable Surgeon-Lieutenant-Colonel Lawrie to lay before the Fellows the results of his experience as to the way in which chloroform acted on respiration and circulation. He contended that the experiments, which were mostly performed under the auspices of the Hyderabad Commission, proved that death was due to respiratory failure, and that the practical point to remember was that during chloroform administration the state of the respiration should be watched, and that the condition of the pulse was quite subsidiary. He referred to the work which had been done by other workers in the same field, and especially to that done by Drs. Gaskell and Shore at Cambridge. The following statement was placed before the Society: "That chloroform is an irritant, so also is its vapour. It irritates and destroys protoplasm. When injected into the substance of a muscle—the heart or the biceps, for example—it arrests their action just in the same way as any other irritant, like hydochloric acid does. But this action can no more take place in the heart than in the biceps in chloroform poisoning by inhalation, and must be altogether ignored in considering the clinical question of accidental deaths under the anæsthetic." The following paragraphs from the Hyderabad Commission were printed and distributed amongst the members of the Society as a basis for his conclusions:

(a) In order to test the alleged danger from shock during chloroform administration, the Committee performed a very large number of those operations which are reputed to be particularly dangerous in this connection, such as extractions of teeth, evulsion of nails, section of the muscles of the eye, snipping of the skin of the anus, etc. In many cases the operation was performed when the animal was merely stupefied by the chloroform and not fully insensible. In such cases a slight variation in the blood pressure would sometimes occur, such as one would expect from the irritation of a sensory nerve, but this struggling was not usually followed, but in no case in any stage of anæsthesia was there anything even suggestive of syncope or failure of the heart's action. In thrusting a needle into the heart there was often a momentary but well-marked fall of blood pressure; but even this was absent in all other injuries. If chloroform really had any power to increase the tendency to shock in operations, it is impossible to believe that it would not have been manifested, to some degree at least, in one or other of these numerous experiments. The Commission was, however, not content with this negative result, and determined to ascertain the effect of direct irritation of the vagi during continued chloroform administration. The result of such experiments (Nos. 65, 117, and others) proved that inhibition of the heart's action prevented rather than assisted the fatal effects of prolonged chloroform inhalation. An animal that was put into a condition of extreme danger (from which it could only be restored by means of artificial respiration) by inhalation of chloroform for one minute, recovered spontaneously and readily after five minutes of chloroform inhalation together with inhibition of the heart by electrical irritation of the vagus carried on simultaneously. In one of these experiments, No. 117, chloroform was pushed for seven minutes; and during continued irritation of the vagus the animals repeatedly came round without artificial respiration. The danger really begins when the inhalation is discontinued or fails to inhibit the heart, and thus enables the chloroform in the lungs to be rapidly absorbed and thrown into the system. This danger is certainly increased by deliberately pumping the chloroform into the lungs, by means of artificial respiration, for animals in which this was done, although they showed a tendency to recover when the chloroform and irritation of the vagus were discontinued, afterwards died rapidly.

(b) To test the effect of shock due to vasomotor change rather than affection of the heart Goltz's experiment on the frog was repeated on three dogs. In one there was slight lowering of pressure which was not extensive, and in the others no effect was produced at all. Other operations which seemed likely to produce shock, such as violent blows upon the testicle, were singularly devoid of effect. Failing to lower the blood pressure by any of these methods recourse was had to section of the splanchnics, but the low condition of blood pressure this produced appeared, like stoppage of the heart from vagus irritation, to be a source of safety rather than of danger during chloroform administration. In this connection Experiment No. 111 may be studied. There was not much external hæmorrhage, but the splanchnics were divided—a proceeding which, as is often said,

bleeds the animal into his own vessels. The pressure was after this extremely low, but chloroform was repeatedly given, and various other actions taken, and then chloroform had to be pushed on a saturated sponge enclosed in a cap for eleven minutes before respiration ceased.

(*c*) The notes of the cases of accidental deaths that occurred during our experiments have been left amongst the other notes in the position in which each occurrence took place, and they can be readily found by a reference to the index. The fatal result was brought about either by neglecting to watch the condition of the respiration during or after the administration of chloroform, especially while the carotid artery was being exposed, or from a rapid administration of chloroform in the endeavour to check or prevent struggles. In all the cases of accidental death the usual chloroformist was absent, and no one was attending to the chloroform. The notes would have been more complete if some one could have watched the condition of the animal, and noted the gradual but unheeded cessation of respiration without calling attention to it. As it is, one has to be content with the remark that the breathing was noticed to have stopped at some particular time, but there is nothing to throw any light upon the condition during the important period that immediately preceded this discovery. A similar hiatus appears in the account of accidental deaths in the human subject, and is unavoidable. These cases are probably identical with experiments referred to by Snow, "in which animals died in a sudden and what was thought unaccountable manner whilst chloroform was given to prevent the pain and struggles which would be occasioned by physiological experiments" (*vide* Snow, *On Anæsthetics*, page 123). The death was not really sudden, but only rapid, and the result of administration of concentrated vapour in the first instance, and neglect of the condition of the respiration in the second. There is no evidence whatever that a single one of them was due to paralysis or sudden stoppage of the heart, as Snow assumes to have been the case.

(*d*) In this case, after the patient had been removed, when the operation was over, one of the most intelligent students was made to describe from memory what had happened during the administration. He could only recall imperfectly and inaccurately what he had seen a few minutes before. For example, he was under the impression that full anæsthesia had been produced in four minutes instead of six. This test was applied in every case subsequently, with the result that though the bystanders, who were in some instances lawyers, were always warned to pay particular attention with a view to giving evidence afterwards, in no single instance could the witness give an accurate description of what occurred during the administration of the anæsthetic. The fact that it is extraordinarily difficult to remember precisely what takes place when everything is normal during an administration, shows how entirely unreliable and worthless statements made from memory by "the competent witnesses who have recorded human deaths under anæsthesia" must be when they are obscured by the shock of a patient dying, and by the frantic efforts to restore animation.

Dr. LAWRIE, by means of enlarged photographs of tracings taken for the purposes of the Hyderabad Commission, submitted the following conclusions to the Society:

(1) *That Chloroform had no direct action on the Heart.* In support of this he explained an enlarged photograph from the fed animal in a cross-circulation experiment, in which chloroform sent to the heart alone produced no effect whatever.

(2) In another similar experiment chloroform sent to the brain alone produced its usual effects by acting on the brain centres.

(3) He demonstrated the difference from the same illustrations between taking respiration or pulse as a guide to the effect of chloroform when the breathing was regular.

(4) He demonstrated similar differences when the conditions were the same, but when the breathing was irregular by vagus stimulation; and

(5) Finally he attempted to show by means of a tracing that chloroform anæsthesia without respiratory complication was free from risk.

Dr. GASKELL said that the experiments performed by himself and Dr. Shore went to show that in cross-circulation experiments heart weakness was produced in the fed animal under chloroform anæsthesia, and in this their results agreed with those of other physiologists who had worked at the question. He held that it would require more than one experiment, which had been produced in the opposite direction, to disprove these results. Such a number of positive results as he and his colleague had produced must be met by a much larger number of negative results before they were disproved. The diagrams which Dr. Lawrie had produced of the Cambridge tracings were misleading, for the diagrams had connected up a series of disconnected tracings taken at intervals. The blood pressure in the animal which acted as feeder remained very nearly the same, instead of falling, as had been erroneously represented in the diagram. Besides this, other animals which acted as feeders, and in which the pressure was higher, gave identical results. In all the cross-circulation experiments which he had performed when chloroform had been given to the fed animal, the respiration continued after the heart had stopped. In some recent experiments which had been performed by Dr. Shore the same result had been obtained, only that the interval between the stoppage of the heart and the stoppage of the respiration was considerably longer. If the chloroform was not administered in very large doses it was common to find no fall of blood pressure till after three minutes, but after that the blood pressure would fall rapidly, and the animal would die. But in Dr. Lawrie's experiments the blood clotted in the manometer before the expiration of three minutes, and that was therefore before the effect on the blood pressure could be produced. It was necessary to be sure of the peptone or of the leech extract solution to prevent clotting. At Cambridge they never had any clotting at all, and all their experiments led to precisely the same result.

Mr. HORSLEY said that he desired to speak from the point of view of danger to life of the persons to whom chloroform was administered. He had had a large experience of the administration of chloroform to animals and had witnessed three deaths from chloroform in human beings, and he was convinced that in the majority of cases death resulted from the arrest of respiration and that in the greater number of cases in which danger supervened inversion of the patient and artificial respiration would bring about recovery. He then showed a series of tracings on the screen showing the mode of death in bullet wounds of the brain, and he said that in all cases of cerebral compression precisely the same form of death occurred. In two cases of cerebral tumour on which he was operating respiration ceased, but artificial respiration was performed, and he opened the skull and relieved the intracranial pressure, when breathing at once recommenced. He felt sure that Dr. Lawrie's conclusion was right in the majority of cases, and that, on signs of danger supervening, artificial respiration and inversion of the patient should be resorted to.

Dr. SHORE said that he and Dr. Gaskell had published six cross-circulation experiments, and had done a few more which they had not yet published. He regretted that Dr. Lawrie had not gone on publishing all his results, as had been done by the Hyderabad Commission at first. Dr. Lawrie had published only three tracings in the *Lancet*, and in these tracings the speaker did not find any support of the propositions which Dr. Lawrie had put forward; indeed, they appeared to him to prove the exact opposite. He, with Dr. Gaskell, agreed that the respiration failed first; but they both held that the chloroform had a direct action on the heart also, and it was this latter proposition which Dr. Lawrie denied. In one of the cross-circulation experiments the respiration continued for five minutes after the heart had ceased to beat.

Dr. LAUDER BRUNTON said that it would be well not to lose sight of the main point, which was the safety of chloroform to the patient, and the best means of administering it. Everyone must admit that the work of Dr. Lawrie had been of immense service in the investigation of this subject. Did chloroform act on the heart when administered by inhalation? It was well known that chloroform was a protoplasmic poison, and would destroy the heart or any other muscle; but could it act thus when given as an anæsthetic? In his experience it always paralysed the respiratory centre before a sufficient quantity was taken in to paralyse the heart. There was an immense body of evidence to show that chloroform acted first on the respiratory centre. In 1848 the late Mr. Wakley published over a hundred experiments to show that chloroform killed by paralysing the heart when given by the stomach. The question of the action of chloroform upon blood pressure was a point of minor importance. Alcohol had an action on the heart precisely similar to that of chloroform, but less in degree. Peptones had been used to prevent the blood coagulating, but they were a powerful poison, and might have been responsible for some of the results which Messrs. Gaskell and Shore had obtained. It was necessary to distinguish the deaths from chloroform *per se* from those during chloroform administration from the operation, from asphyxia, or from noxious substances circulating in the blood. He believed that Messrs. Gaskell and Shore had produced a condition of partial poisoning from the peptones they had introduced. Dr. Lawrie had shown that the first sign of the toxic action of chloroform was failure of respiration, and if instead we watched for cardiac failure we were like the driver of an express who disregarded the distant danger signal, and only tried to pull up on approaching the near signal when it was too late. A Russian observer had been examining the urine of patients before chloroform administration to see if alkaloids were present; for, if they were, then trouble might be expected with the administration. This explained why it was that the cases which usually gave most trouble occurred in strong healthy men who, being on full diet, were more likely to have a quantity of alkaloidal products present in their bodies. There had been a marked increase of deaths from chloroform administration during the last few years, and in connection with this it should be remembered that the foreign meat trade had altered the feeding of the population to an enormous extent. The geographical distribution of deaths from chloroform was also peculiar. In India, Egypt, and in the Southern States of America practitioners swore by chloroform, while in the Northern States the American and Canadian physicians spend a hundred times as much ether as chloroform, and they have found it succeed to paralyse the respiratory centre before the heart, and therefore that respiration should be carefully watched, and the changes in it regarded as the first indication of danger to the patient.

Dr. GASKELL remarked that peptones were used both by himself and by Dr. Lawrie.

Dr. BRUNTON rejoined that the effect would depend upon the dose given.

Mr. BAILEY added a few words from the practical side. His own impression was that there was no anæsthetic which was free from risk. An administrator might watch the respiration, but he must watch the pulse also, and the pupil was often a valuable sign of approaching danger.

Dr. DUDLEY BUXTON said that to watch the respiration solely was probably the secret to obtain the safest results in the administration of chloroform, and the respiration must be watched with the keenest attentiveness. It should not be forgotten that surgeons would not be satisfied unless an incipient narcotism of the respiratory centre in the medulla was produced. He thought that a large proportion of deaths from chloroform were due to carelessness, and in a minority death was due to a primary action on the heart. It was in cases of respiratory difficulty that danger from chloroform might be expected, and yet in operation upon the tongue and jaw in which one expected respiratory difficulty, chloroform was habitually employed.

Dr. DAVID NEWMAN said that since the report of the Glasgow Committee he had taken the utmost interest in this subject, though the Glasgow Committee found that death was brought about in

The only condition not preventable was arrest of the respiration through the nervous system. The respiratory centre was more likely to maintain abeyance than the heart. The two periods of danger in chloroform administration were when the patient was going under and when he was

coming to. He referred to some experiments he had made on frogs to discover what changes took place in the lungs during anæsthesia. He had personally witnessed two cases of cardiac failure on the operating table, and in one the pulse had stopped though the respiration was continuing and air was entering the thorax.

Dr. Hewitt said that if chloroform were given to profound anæsthesia, then observation of respiration alone would infallibly lead us into difficulties. He quoted a case in which respiration proceeded though no pulse could be felt at the wrist.

Dr. Lazarus-Barlow exhibited a tracing taken directly from the heart of a curarised animal, showing that heart failure commenced directly after the commencement of chloroform administration, and that respiration failed later. In practice he thought that the conjunctival reflex was really the safest guide.

Dr. Silk said that so far from physiological evidence having confirmed the results of the Hyderabad Commission the opposite was the case. The great increase of deaths under chloroform had taken place mainly since the promulgation of the results arrived at by the Hyderabad Commission. He said that absolutely safe administration was not possible. Primary attention should be given to the respiration but also to the circulation and vasomotor system through the pulse.

Dr. Shand, of Edinburgh, bore witness to having administered large quantities of chloroform with perfect safety to his patients.

Dr. Lawrie said, in reply, that he had only brought over photographs of two of his tracings on account of the attendant expense. The sudden stoppage of the heart which had been referred to could only be produced by stimulation of the vagus through the breathing. The experiment quoted by Dr. Lazarus-Barlow indicated some damage to the circulation in the lungs. In administering chloroform he had never noticed any difference as to their behaviour under anæsthetics between natives and Europeans. In 700 cases the pulse was carefully watched, but it was found to give no indication of value. It was impossible to teach a careless man to give chloroform safely.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

T. S. Clouston, M.D., President, in the Chair.

Wednesday, June 6th, 1894.

Cases.

Dr. James Carmichael showed a child aged 17 months who had suffered from Exudative Purulent Pleuritis, and from whose pleural space a total of 25 ounces of pus had been removed in five operations.—Dr. Norman Walker showed two cases of Rodent Ulcer after Operation, and drew attention to the very great improvement in the patient's appearance.—Mr. A. G. Miller showed three cases of Excision of the Wrist by Watson's method.

Specimens.

Dr. T. Burn Murdoch showed the remains of a Hypertrophic Growth with Hairs that had been removed from a patient's tongue. It appeared to be non-malignant.—Dr. W. A. Jamieson showed a Soap composed of Resorcin 3 per cent. and Salicylic Acid which he had found efficient in Ichthyosis, and as a Disinfectant of the Skin in Scarlet Fever.—Dr. A. Bruce gave a lantern demonstration of specimens of Syringomyelia from two patients.—Dr. Edward Carmichael showed a specimen of Aneurysm of the Aorta with Rupture into the Right Ventricle. The aneurysm was the size of a pigeon's egg. There had been in life a præcordial thrill and *bruit*.

Separate Acromion Process Simulating Fracture.

Emeritus Professor Struthers read a paper on this subject, illustrated by a very large number of scapulæ from persons of various ages. It was urged that errors of diagnosis too often made in this matter.

After some remarks from Dr. Joseph Bell, Dr. T. R. Ronaldson joined issue with Professor Struthers on his too broad statement, and referred to a case of double separate acromion processes that had come under his notice in a child, and also in the father.

Mr. D. Wallace thought some of these cases might be regarded as persistent epiphyses.

Some other members spoke; and Professor Struthers replied.

Displacement of Semilunar Cartilages of the Knee.

Dr. Logan Turner read a paper in which he discussed very fully the anatomy, diagnosis, and prognosis of the condition. The chief feature of the paper was an admirable series of photographs exhibited by aid of the lantern.

Dr. Turner was warmly congratulated on his paper by Dr. Joseph Bell, Professor Annandale, Dr. Joseph Cotterill, and others.

Professor William Turner, in response to request, also addressed the Society, and spoke of the value of such lantern demonstrations as aids to teaching.

Dr. Logan Turner replied.

CAMBRIDGE MEDICAL SOCIETY.

Hyde Hills, M.R.C.S., President, in the Chair.

Friday, June 1st, 1894.

Case.

Mr. W. H. Copley (Wisbech) showed a patient upon whom he had performed Arthectomy of the Ankle Joint, with good results.

Four Cases of Erythema Nodosum occurring in One Family within Ten Months.

Mr. W. Gifford Nash said on March 17th, 1894, he saw a general servant, aged 16, suffering from a well-marked attack of erythema nodosum affecting the legs. He sent the girl into the Bedford Infirmary, and whilst there the eruption also appeared in the forearms. Her mother informed him that three other of her children had recently had the same affection, and Dr. Banks, of Riseley, had informed him that he had attended three of the children with well-marked attacks of erythema nodosum. Neither the father nor mother had been affected, but thirteen years ago one of the father's sisters had the same affection when she was living in the same village. None of the special works on skin diseases or on general medicine to which he had referred mentioned any family predisposition to this disease, beyond that implied by saying it occurred in rheumatic persons.

Plasmodia of Malarial Fever.

Dr. Laurence Humphry gave an account of some observations he had lately been making in a case of malarial fever. The patient, a soldier, aged 24, had just returned from India, where he had malarial fever in 1889, and since then he had had several slighter attacks. He was admitted into Addenbrooke's Hospital on May 19th, and he had two well-marked attacks of chills, fever, and sweats, a few days after admission. The type of fever was somewhat irregular, but appeared to be tertian. After quinine in moderate doses he ceased to have any more fever, so that there were only two opportunities of examining the blood. Specimens of blood were taken before, during, and after the attacks, and in some of those taken during the interval Dr. Laurence Humphry had been able to find the amœboid bodies inside the red discs described by Laveran, Golgi, and others, and supposed to be one form of organism peculiar to malarial fever, and of which there were in all probability several forms or stages. In one specimen there appeared to be signs of segmentation.

REVIEWS.

The Theory and Practice of Medicine, Prepared for Students and Practitioners. By James Y. Whittaker, M.D., LL.D. With a chromo-lithographic plate and 300 engravings. New York: William Wood and Co. (Demy 8vo, pp. 840. 6.50 dols.)

It is certainly a sign of the times that very considerable attention should be given in such a book as this to the "infections." It shows how the whole aspect of the etiology of disease has been modified by the knowledge gained through bacteriology. This latest and most laborious branch of science has also already aided very considerably in the prevention of disease, and gives promise of modifying even the subject of treatment. It is thus satisfactory to see a textbook on medicine by one who is conversant with this latest acquisition to our resources.

In his preface the author tells us that the cause and diagnosis of disease have received in his work the greatest attention, as by these means the objects of prevention and treatment are advanced. With the exception of bacteriology morbid anatomy receives scant attention, and this tendency to cut down the space allotted to morbid anatomy may be noticed in more than one textbook on medicine, and especially in those published on the other side of the Atlantic. It must, however, be remembered that a knowledge of morbid anatomy is essential to the true clinician. If space can be found for the history of each disease—undoubtedly a fascinating study, but hardly one which should claim much attention from the student—it is difficult to see why an adequate account of morbid anatomy should be excluded.

The general diseases, embracing the infections and parasites, occupy little short of half the book. The ectozoa and entozoa are included here: it certainly appears a little strange to see some of these classed among general diseases. Skin diseases are treated of only in so far as they are caused by ectozoa, whether animal or vegetable. Diseases like cholera, diphtheria, malaria, tetanus, hydrophobia, are very fully and ably described. To foot and mouth disease, glanders, and actinomycosis too much space is given considering their infrequency. It is disappointing to see that the author is very sceptical as to the antiseptic treatment of enteric fever, and that so little does he believe in any special treatment of this disease that he takes the treatment of typhus and enteric fever together, and informs us that the treatment of relapsing fever differs in no way from that of enteric fever (page 268). He is notwithstanding a believer in the cold bath, and says that under improved treatment the mortality of typhoid fever has fallen 7 to 10 per cent. Tuberculosis is very properly placed among the infections, and a sketch of its various forms is given, but the account of renal and peritoneal tuberculosis is altogether inadequate.

The second division of the book, treating of the diseases of organs, is hardly as good as the first, owing chiefly to want of space. Diseases of the heart and vessels occupy only forty-seven pages, the description of thoracic aneurysm being

particularly insufficient. Diseases of the stomach are considered under gastric catarrh, ulcer, cancer, gastrectasis, and gastralgia, the latter including a few remarks on neuroses of the stomach. The treatment of gastric ulcer is dismissed in a few lines. Some general remarks on diet, diagnosis, and treatment of stomach diseases are given in addition at the end of the section. The account of typhlitis is very full and much to the point; the author very properly disagrees with the indiscriminate treatment of the condition by operation. The account of gall stones is also good. While early operation in hepatic abscess is beyond dispute, he who would expect—considering unpublished as well as published cases—80 per cent. of successes is certainly sanguine. To the section on diseases of lungs a chapter on drowning is wisely added. Subphrenic abscess deserves, if only owing to difficulty in diagnosis, more than eight lines of description. At the present day a much fuller account of cerebral localisation, including topography, might be given with advantage, and it should precede the section on cerebral diseases. The prognosis of cerebral abscess, as given here, is very gloomy, much more so than might be supposed from recent writings. Multiple neuritis receives too little attention. The book closes with an account of some of the poisons and short notes upon some quite recently discovered facts.

Although points have been selected here for comment upon which differences of opinion exist, it must of course not be supposed that this book on medicine has not very considerable merits, and especially in its first part. The style is clear and well to the point, and the illustrations are abundant and good.

La Verità sulle Aberrazioni e i Delitti nell' ordine sessuale. [The Truth concerning Sexual Aberrations and Crimes.] Autore Dott. G. de Letamendi, Spagna. Madrid: Stamperia dei Successori di "Cuesta." 1894. (Cr. 8vo, pp. 44.)

Professor Dr. Giuseppe de Letamendi, Dean of the Faculty of Medicine in Madrid, communicates a suggestive outline, addressed to the International Medical Congress held in Rome, of a work in preparation on the subject of aberration and crime associated with abnormal sexual self-indulgence.

While maintaining that the frequency and universality of this vice constitute an alarming cause of insanity in civilisation, and cry aloud for legislation, he distinguishes between sexual crime and misdemeanour, and urges the necessity of a prophylactic rather than a punitive interference on the part of the State. He concludes that this social question, together with that of the thorough emancipation of the female sex, is one that can be adequately met only by medico-civil jurisdiction.

The subject is too large to enter upon here in detail, and in connection with it we will confine ourselves to remarking upon the great stress the learned Professor lays upon what he terms *il principio di panermafrodismo*. It is not everyone who will at once recognise in this garb the realisation of that ancient, ardent, and profound mytho-pagan intuition of a certain son of Hermes and Aphrodite (or Mercury and Venus), who was endowed at the same time with the force and ardour of his father and the fecundity and charms of his mother. Of the eight propositions by which Dr. Letamendi seeks to establish his theory, the first is, as would be expected, that no male existence is simply and solely male, and no feminine one simply female; there is a continuous struggle for the mastery between the two sexes, but neither eventually disappears. If this principle of panhermaphroditism be accepted as a fundamental truth the question of sexual aberration is explained, for the man not being a male but *un uomo androgino*, and the woman not a female but *un uomo ginandro*, it must follow that there are no limits to the contest always going on for the mastery between the two sexes, that is, between the sex which obtains the ascendent and that which is subordinated. Hence the remedy for sexual aberration depends upon the physical and moral accentuation of the dominant sex; in other words it depends upon the male in his *androgismo* obtaining the relative maximum of virility and the woman, in her *ginandrismo*, uniting the maximum of female qualifications. To this end the author lays down three essential conditions: 1. As concerning the extermination of congenital vices or anomalies a careful regard in matrimonial selection. 2. As regards education, a slashing onslaught, hip and thigh, on all traditional systems; and 3. As regards the social influence that can be brought to bear, the wise application of medico-civil jurisdiction.

The Indian Manual of Hygiene. By Surgeon-Captain A. E. Grant, M.B. Vol I. London: H. K. Lewis, 1894. (Demy 8vo, pp. 558. 10s. 6d.)

This is a reissue of King's *Madras Manual of Hygiene*, revised, rearranged, and in great part rewritten. The author's aim is "to supply a book which will be neither too superficial nor too comprehensive, and which, whilst containing all and more than is required by students of medicine, will yet serve as a useful guide and means of information to military and civil medical officers, assistant surgeons, candidates for a degree in sanitary science, and others." In realising this aim two courses were open to the writer—to confine his book to an exposition of the hygienic conditions prevalent in India, accepting some English textbook or books as exponent of the facts and principles of the science of hygiene in general; or to present these in greater or less detail, and take applications and illustrations from Indian sources. The latter is the more satisfactory and useful method, and it is that which has been adopted in this work. The questions, therefore, which the reviewer has to ask in examining the book are—first, whether the presentation of the facts and principles is in accordance with our present knowledge of hygiene, and, secondly, whether the application of that general knowledge to the circumstances of India is correct and complete. The latter is the more important question of the two. The present volume is concerned mainly with general hygiene, and includes the subjects of air, water, soil, waste matters, buildings, and climate. The second volume is to embrace special hygiene, and it is in it, rather than the first, that the merit and usefulness of the book as an Indian manual are to be looked for and judged of. The chapter on air and ventilation is good as a general summary. The illustrations are English, and references to Indian conditions few. More of these are to be found in Chapter II, water: but we should have liked more detailed information regarding the sources and qualities of Indian waters, regarding which an immense amount of material was collected some years ago and ably summarised by Dr. F. N. Macnamara, in a series of valuable reports on the results of the systematic analysis of potable waters, which was conducted in the sixties and seventies under orders of Government. The works which have been executed for the supply of pure water to towns in India might also have been described, and their effect on health; but this information may possibly be given in the second volume.

The chapter on soil is very brief, and the allusions to Indian soils very casual. Indian conditions and requirements are more fully considered under the head of "removal and disposal of waste matter." The author's views on the "systems most suitable for India" are judicious. He very properly extols cremation as the most efficient means of disposing of refuse and rubbish, and of dealing with human and animal remains. We are not in favour of the watercloset for India except under very special circumstances and precautions. In some parts of the country organic refuse and excreta are held in value for manure, and this mode of disposal should be encouraged.

The chapter on buildings is good, and under the head of "villages and towns" in the second volume, the important subjects of width of streets and of building regulations and laws, so much wanted in India, will no doubt receive the attention they deserve. Climate and meteorology are very fully discussed. Meteorological tables are very properly omitted. The sketch of the very various climatic conditions of the continent of Hindustan in relation to physical geography is carefully done. The term "mean highest temperature of year" used in the tables is misleading. It is intended to represent the average maxima of a series of years.

On the whole, with a reservation as regards what may or may not appear in the second volume, we consider this a good book, and likely to fulfil the objects for which it was compiled.

UNIVERSITIES AND COLLEGES.

VICTORIA UNIVERSITY.

"DEGREE DAY."—"Degree day" in connection with Victoria University was held on June 30th, in the Free Trade Hall, Manchester, when the candidates who had qualified for degrees or had gained other distinctions, were presented to the Vice-Chancellor, Dr. Ward. The Vice Chancellor stated that the number of degrees about to be conferred reached 115, which exceeded by 24 the number of graduates of June, 1893. In medicine also the number of candidates showed a great increase. In the medical faculties of the Colleges of Victoria University there was abundant evidence of enterprise and progress. The Yorkshire College was looking forward to the speedy opening of its new medical school, Owens, to that of its new medical buildings and its Schorlemmer Laboratory of Organic Chemistry; and University College, Liverpool, was specially to be congratulated on the splendid munificence which, by the endowment of two important claims—anatomy and pathology—will ensure the future development of its medical department.

Doctor of Science.—J. Beard, Owens.

Doctors of Medicine.—R. Alcock, J. C. Buckley, and J. H. Crocker, Owens.

Masters of Science.—Owens College: W. A. Bone, F. C. Moore, T. E. Stanton, R. G. Wild, and G. Wilson. University College: A. Carey and J. C. Quinn.

Bachelor of Science (Honours).—W. C. Varley, Owens.

Bachelors of Medicine and of Surgery.—Owens College: W. J. Bowden (received the degree in March, and is presented only), J. Jones. University College: E. D. Minshall.

UNIVERSITY OF DUBLIN.

AT the summer commencement (Comitia Æstiva) of Trinity Term, held in the Theatre, or Examination Hall, of Trinity College on Thursday, June 20th, 1894, the following degrees (amongst others) were conferred by the University Caput in the presence of the Senate:

Licentiates in Medicina, in Chirurgiâ, et in Arte Obstetriciâ.—M. J. Smith.

Baccalaureus in Medicinâ.—W. J. Thompson.

Baccalaurei in Medicinâ, in Chirurgiâ, et in Arte Obstetriciâ.—C. Brew, M. C. Carmichael, A. R. Friel, E. E. Goodbody, F. W. Goodbody, R. R. Hastings, H. Kirkpatrick, H. C. Mactier, R. W. Merrick, A. C. O'Sullivan (*stip. cond.*), A. J. H. Thornton, J. W. Watkins, F. F. Wynne.

Doctor in Scientiis.—D. Morris.

Doctores in Medicinâ.—H. E. Blandford, J. W. Boyce, H. C. Drury (*stip. cond.*), W. W. Fenton, R. P. Jones, M. T. Kelly, L. G. F. Macrory, W. A. Valentine, C. E. W. Wilmot.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

THE following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on Monday, July 2nd:

Passed in Anatomy and Physiology.—J. E. Hodgson and S. H. Watton, students of Owens College, Manchester; E. P. Burns, F. S. Hunter, and T. J. Clift, of Mason College, Birmingham; F. P. Mackie, F. H. Rase, W. S. V. Stock, A. S. Hayman, and H. L. W. Norrington, of University College, Bristol; J. H. Watson, of University College, Liverpool; W. Carnes, of Yorkshire College, Leeds; and S. James, of Royal College of Surgeons, Edinburgh.

Passed in Anatomy only.—H. E. Gourley, of Edinburgh and Durham Universities and Mr. Cooke's School of Anatomy and Physiology; A. Evans, of St. Mungo's College, Glasgow; P. H. Stratton, S. K. Vines, and E. H. Collens, of Mason College, Birmingham; G. H. Heron, of University College, Liverpool; A. Cubley, of Firth College, Sheffield; H. Markby and A. C. Nicol, of Yorkshire College, Leeds; H. G. L. Anderson, of Owens College, Manchester; and G. E. Bowring, of Cambridge University and Owens College, Manchester.

Passed in Physiology only.—G. H. Whitesides, M.D.Harv., of Harvard University and Ecole de Médecine, Paris; W. E. Fairweather, C. H. Bradbury, J. Wallwork, R. Tarbuck, and J. D. Eastman, of Owens College, Manchester; V. K. Blackburn, of Firth College, Sheffield; C. D. Ingle, F. P. Gill and A. B. Cridland, of University College, Bristol; T. A. Caley, of Yorkshire College, Leeds; and F. H. Wilkinson, of University College, Liverpool.

Eleven candidates were referred in both subjects, 7 in Anatomy only, and 6 in Physiology only.

Tuesday, July 3rd:

Passed in Anatomy and Physiology.—E. H. Kitchin, student of Yorkshire College, Leeds; M. E. Smallwood, of University College, Liverpool; A. W. Dickson, F. L. Provis, J. H. Churchill, and R. P. Brown, of St. Bartholomew's Hospital; D. Turner, H. T. M. Alford, and A. C. Parsons, of St. Thomas's Hospital; H. C. Regnart, W. J. S. Harvey, and G. R. Mottram, of Guy's Hospital; H. H. Jamison and H. P. Foulerton, of St. George's Hospital; J. G. Scott, of Westminster Hospital; J. W. Turner, of Mason College, Birmingham; and G. Downes, of Carmichael College, Dublin.

Passed in Anatomy only.—R. T. Richmond, of Cambridge University and Mr. Cooke's School of Anatomy and Physiology; G. W. Procter, of Durham University and Middlesex Hospital; C. P. Higgins, of Guy's Hospital; A. R. Todd, of University College, London; A. R. Jones, of St. Thomas's Hospital; and T. A. Ellwood, of Charing Cross Hospital.

Passed in Physiology only.—S. B. Atkinson, E. W. Woodbridge, J. T. Swift, and R. N. Geach, of St. Bartholomew's Hospital; A. J. A. Lennane, of University College, London; C. R. Bearden, of Firth College, Sheffield; D. L. Smith, of Guy's Hospital; E. Grant, of King's College, London; and F. G. Verity, of Charing Cross Hospital.

Eight candidates were referred in both subjects, 4 in Anatomy, and 2 in Physiology only.

Wednesday, July 4th:

Passed in Anatomy and Physiology.—H. A. Scholberg, W. T. Storrs, S. Hunt, and G. E. French, students of St. Bartholomew's Hospital; M. S. Mayon, F. H. Evans, and F. J. Hasslacher, of King's College, London; M. A. Smith, T. L. Glanville, R. D. Johnson, and R. W. Collum, of Charing Cross Hospital; J. B. Christian, of St. George's Hospital; C. H. Mossop, P. W. Moore, A. T. Falwasser, E. H. Pomeroy, and C. R. Nicholson, of Guy's Hospital; O. Levy, of Berlin, Munich and Freiburg Universities; A. J. Bennett, of St. Mary's Hospital; and J. M. Chambers, of Oxford University and St. Thomas's Hospital.

Passed in Anatomy only.—E. J. Gruchy, of London Hospital.

Passed in Physiology only.—W. H. Crossley, of St. Bartholomew's Hospital; W. H. Gray, of University College, London; and C. F. Backhouse, of King's College, London.

Twelve candidates were referred in both subjects, 1 in Anatomy only, and 3 in Physiology only.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following gentlemen have been elected Examiners: Vital Statistics, D. Edgar Flinn; Dentistry, T. Studley; Mathematics and Physics, R. Morton.

The following gentlemen have been elected Examiners under the conjoint scheme with the Apothecaries' Hall: Anatomy, J. I. Burgess; Surgery, J. Harrison Scott; Pathology, C. Coppinger and R. G. Patteson; Physiology, Histology, and Biology, J. F. Knott and G. B. White.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,009 births and 3,101 deaths were registered during the week ending Saturday, June 30th. The annual rate of mortality in these towns, which had declined from 17.7 to 15.7 per 1,000 in the preceding five weeks, further fell to 15.5 last week. The rates in the several towns ranged from 7.0 in Croydon and 10.2 in Leicester to 22.3 in Liverpool and 24.1 in Salford. In the thirty-two provincial towns the mean death-rate was 15.5 per 1,000 and slightly exceeded the rate recorded in London, which was 15.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.2 per 1,000; in London the rate was equal to 2.6, while it averaged 1.8 per 1,000, in the thirty-two provincial towns, and was highest in Bristol and Salford. Measles caused a death-rate of 1.5 in West Ham, 1.8 in Salford, and 1.9 in Sunderland; scarlet fever of 1.8 in Wolverhampton; and whooping-cough of 1.2 in Bristol and in Nottingham, and 1.3 in Salford. The 74 deaths from diphtheria in the thirty-three towns included 56 in London, and 2 each in Manchester, Oldham, Leeds, Sheffield, and Gateshead. Three fatal cases of small-pox were registered in Birmingham, 2 in Manchester, 1 in West Ham, and 1 in Preston, but not one in any other of the thirty-three large towns. There were 132 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, June 30th, against 227, 204 and 170 at the end of the preceding three weeks; 16 new cases were admitted during the week, against 42, 40, and 21 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,087, against 2,232, 2,195 and 2,153 at the end of the preceding three weeks; 233 new cases were admitted during the week, against 238 and 231 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, June 30th, 844 births and 487 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 20.3 to 16.6 per 1,000 in the preceding four weeks, rose again to 16.9 last week, and exceeded by 1.4 per 1,000 the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 13.1 in Edinburgh to 22.1 in Aberdeen. The zymotic death-rate in these towns averaged 2.2 per 1,000, the highest rates being recorded in Leith and Aberdeen. The 222 deaths registered in Glasgow included 9 from whooping cough, 8 from scarlet fever, and 3 from diphtheria. Three fatal cases of small-pox occurred in Leith, and 3 of diphtheria in Edinburgh.

SMALL-POX AT COVENTRY.

SMALL-POX has quite recently cropped up in Coventry, there being 14 cases under treatment in hospital at the end of June. One fatal case, the first since 1881, was in the person of an unvaccinated antivaccinator, who fell a victim to his theory of the uselessness of vaccination. Having regard to the non-enforcement of the Vaccination Acts in Coventry the health officer has referred in no measured terms to the matter, and the Town Council forwarded a copy of his report to the guardians, evidently hoping that its statements might have sufficient influence on the board to lead to a proper enforcement of those much-needed laws in the city. Dr. Mark Fenton has very wisely pointed out that an epidemic of small-pox in the town would mean much addition to the rates by reason of the expense needed to cope with such a disease, and that it therefore behoves the guardians to bestir themselves in the performance of their statutory duty in the matter of vaccination ere it be too late. Already he has had to refuse scarlet fever patients admission to the hospital, now in use for small-pox, for fear that persons admitted for scarlatina should contract the graver malady. In these circumstances it is difficult to understand the attitude of the guardians in having ignored the report and in having passed to the next business as a mode of shelving the matter. It is sincerely to be hoped that the serious responsibility which the body have thus taken upon themselves will not lead to the much-feared explosion of small-pox. No doubt, as has been said, much voluntary vaccination will

be done, but what is wanted at the present time is a properly organised plan of campaign with a view to house-to-house visitation by vaccination officers in order that no unvaccinated person shall be without the means of learning that he can secure the necessary protection at such and such places at stated times to be arranged. The presence of small-pox in other towns has led to the glutting of public stations, but it is to be deprecated that persons should leave to the eleventh hour that which can be better done in the absence of actual urgency. Here at Coventry it may well do the same, but if the Vaccination Acts be thus put in force it will be at the expense of that efficiency which can alone be looked for when the stations are performing their normal functions.

SMALL-POX IN DUBLIN.

THERE are now 15 cases of small-pox in the Hardwicke Hospital and 3 in Cork Street. These are all the cases which have so far occurred. The disease is not of a virulent type, and no death has taken place.

SMALL-POX IN SCOTLAND.

SEVEN cases of small-pox were notified in Edinburgh last week, and there were no deaths. In Leith 13 new cases were reported, and there was one death. A case occurred at Loanhead, Midlothian, in the early part of last week, and the patient died on June 30th from a malignant form of the disease. In consequence of the prevalence of small-pox in Edinburgh, picnic parties from that city are being refused admittance to many places around.

FOOD ADULTERATION.

THE Select Committee of the House of Commons on Food Adulteration sat for the first time in public on July 3rd. Sir Walter Foster occupied the chair. Mr. Herbert Preston Thomas, one of the Inspectors of the Local Government Board, said that under the Food and Drugs Act of 1875 public analysts had been appointed for 237 districts, and that practically covered the whole country. Formerly people were often poisoned by adulteration, but now they were only cheated. The number of samples taken in 1877 was 14,706 but in 1893 it was 37,233. In some places, however, the Acts were a dead letter. In Dover and Colchester, for example, no samples were taken, while in Derby, Devon, Oxford, West Suffolk, Carmarthen, Sunderland, South Shields, Walsall, Ipswich, Great Yarmouth, and other places the samples taken were so small as to be obviously of no use. In 1893, 4,793 samples were reported against, proceedings were taken in 3,174 cases, and fines were imposed in 2,687. The fines were so small, however, that it was often worth the while of the offenders to go on adulterating. Adulteration was most frequent in milk, butter, spirits, lard, coffee, pepper, vinegar, bread, mustard, tea, beer, flour, confectionary, cheese sugar, arrowryot, and cocoa, in the order named. Milk was most frequently adulterated in hot water, when grass was scarce and the demand for milk large; but science was not yet able to distinguish between watery milk from a poor cow and milk adulterated with water. Only two or three cases of the addition of chalk had been detected in the last fifteen years. One-sixth of the adulteration detected was in butter, which was adulterated chiefly with water and margarine. Twenty per cent. of the samples of spirits analysed were adulterated with water, but the introduction of deleterious ingredients like sulphuric acid seemed to have ceased now. In one case of "fine French coffee," 90 per cent. of chicory was found. He suggested that a test standard for milk should be established, that skimmed milk should be labelled as such, and that the quantity of salt in beer and of water in butter should be prescribed.

HOUSE OWNERSHIP FOR THE WORKING CLASSES.

A MEETING was recently held at Westminster in support of a scheme for enabling the working classes to become owners of their own houses, the main principle being that municipalities should be empowered to advance the necessary money for the purchase of the houses, and that the tenants should, instead of rent, repay the advances, together with interest, by weekly instalments over a term of years. Particulars of the scheme were sent to Mr. A. J. Balfour and Mr. J. Chamberlain, and Mr. Balfour has written in reply: "I entertain a very warm sympathy with the object for the promotion of which you have called a meeting, and, though there are doubtless difficulties in the way of carrying it out, I should hope it would not be impossible to find means of surmounting them." Mr. Chamberlain writes: "I am duly in receipt of your letter, and am very glad you are pressing on public attention the desirability of affording facilities to the industrious working classes to become the owners of their own houses. I have myself no doubt that this object could be effected without risk to the State, and its realisation will do much to improve the sanitary condition of the poor, and to increase the happiness of the people. I shall gladly do anything in my power to help this movement on the lines which you have indicated."

SOUTHWARK'S DEATH-RATE.

IN the *South London Press* of June 9th we read the following relating to this subject: "The Rev. J. W. Horsley, of St. Peter's, Walworth, in a letter which appeared in the same paper on May 5th, dealt at some length with what he termed the true death-rates of South London. He arranged in order the figures for the various parishes, and classified them under the headings of 'Good,' 'Fair,' and 'Bad.' St. Olave Southwark was placed in the latter category, with the highest death-rate of all, namely, 27.8, the average death-rate for the whole of the metropolis for the same quarter being 20.8.

"Dr. Wightwick, Medical Officer of Health for St. Olave Southwark, presented a report on this letter at Tuesday's meeting of the Board of Works for the district. He said that Mr. Horsley had evidently copied his figures from a return issued every quarter in the BRITISH MEDICAL JOURNAL, the same errors that occurred from time to time in that journal appearing in Mr. Horsley's figures."

*** The quarterly table in the BRITISH MEDICAL JOURNAL to which Dr. Wightwick referred relates to the deaths in each metropolitan district after the distribution of deaths in institutions to the districts in which the patients had previously resided. This is clearly stated in the heading of the table, and the figures given therein are quite correct. What the "errors" are in those tables to which Dr. Wightwick refers, he does not clearly say. He takes exception to death-rates for short periods, and certainly too much stress should not be laid upon the rate for a single quarter in a population so small as that of St. Olave Southwark, although the figures themselves may be absolutely correct. But if the yearly death-rate of this district be taken, instead of the quarterly rate, it is found that the mortality for the whole of 1891 and 1892 was nearly as high as the single quarterly rate to which Dr. Wightwick takes exception. The Registrar-General's figures now exclude other deaths than those in public institutions of persons not belonging to the sanitary district in which they actually die. By this means the deaths of persons found in the Thames are, where practicable, credited to their proper districts. How far the exclusion of deaths of non-residents should be carried in the endeavour to ascertain the true death-rate of a locality is a matter of opinion. It is impossible to trace those who leave London to die, whose deaths, therefore, cannot be credited to any metropolitan district; it is clear, then, that the exclusion of every death of a non-resident results in the real mortality of a district being understated. But after making full allowance for time fluctuations, and for any deaths which might properly be excluded from the St. Olave totals, it is an indisputable fact that a high death-rate does prevail in that sanitary district. According to the Registrar-General's returns, that is, after distribution of all institution deaths, the death-rate in 1891 was at the rate of 27.7 per 1,000 living, against 21.1 in all London; in 1892 it was 27.0, against 20.1 in London; and in 1893 it was 24.2, against 21.3 in London.

HOSPITAL AND DISPENSARY MANAGEMENT.

EYE, EAR, AND THROAT HOSPITAL, CORK.

AS the Ophthalmic Institution in Nile Street, Cork, has for some time been found inadequate to supply the necessary accommodation, it has been determined to erect a new hospital on the site of the old institution. The cost of building and furnishing is estimated at about £5,000, towards which sum subscriptions have been promised, amounting to upwards of £2,200. Included in this amount is £500 from Sir J. Arnott, and £100 from Lady Arnott.

BRENTWOOD LUNATIC ASYLUM.

THE serious outbreak of small-pox which raged a month or two ago at the Essex Lunatic Asylum, Brentwood, and which proved fatal in fourteen cases, has now been entirely stamped out. The authorities have issued a notice that after Thursday, May 31st, patients will be received into the asylum, but all patients will be refused admission unless they have a medical certificate that they are free from all contagious and infectious disease, and that they have not been living in a house where infectious disease exists.

THE LONDON FEVER HOSPITAL NURSES' HOME.

LADY BALFOUR of Burleigh formally opened on May 18th the nurses' home which has been erected in the grounds of the London Fever Hospital. Lord Balfour of Burleigh, who presided at the opening ceremony said the hospital was erected on the present site nearly fifty years ago. At that time it was not considered necessary to provide any separate accommodation for nurses, who were supposed to work for fifteen or sixteen hours a-day, and to do all the domestic work of the wards besides nursing the patients. As time went on the necessity for accommodation for the nurses became more and more apparent, and the Committee had in consequence provided the new nurses' home. The building was a substantial erection of three floors, and provided ample accommodation for 31 nurses. The cost was £5,113, and with the furniture would amount to £7,000.

THE DERBY BOROUGH LUNATIC ASYLUM.

THE cases under care during the year 1893 numbered 194 men and 200 women. These include 94 cases admitted, 88 for the first time and 8 re-admissions. A large proportion of the admissions were melancholics with pronounced suicidal and homicidal impulses requiring a special nurse for each case, straining the nursing resources of the institution, and entailing a large amount of responsibility and worry. Dr. Rutherford Macphail has therefore reason for congratulation that casualties have been few, not serious in character, and that he is able to report that all suicidal and homicidal attempts were frustrated. With regard to causation, we note that mental depression succeeding an attack of influenza was given as an exciting cause in six of the cases admitted. The recovery-rate among those discharged during the year reached 57.1 per cent., calculated upon the number admitted and excluding transfers from other asylums. This is the highest recovery-rate in the history of the asylum. The death-rate was 8.6 per cent. of the total number under treatment. The general health of the patients was satisfactory. The changes among the nurses and attendants were less frequent. Lectures upon the care and treatment of the patients are given by the medical officers, and eight additional members of the staff have obtained the certificate of proficiency in nursing and attendance upon the insane granted by the Medico-Psychological Association on examination after two years' training.

NOTES ON BOOKS.

Sprains: their Consequences and Treatment. By C. W. Mansell Moullin, M.A., M.D., F.R.C.S. Second edition. (London: H. K. Lewis. 1894. Cr. 8vo, pp. 164. 4s. 6d.)—The first edition of this work was published seven years ago, and a notice of it will be found on page 83 of the first volume of the Journal for 1888. We have referred to this notice because it applies to a great extent to the present work. In many respects, however, we find considerable improvement, that is to say, it is made more practical, though it is still wanting in this respect. As we have said before, it is essentially a philosophical work, treating well of the general principles of treatment, and devoting itself now in the present edition more to the particular sprains to which the joints are liable. In Part I we have to find fault with the want of thoroughness in the description of the anatomical character of joints, for if the work is intended for the profession rather than for the public, one cannot be too accurate and full in the reference to the mechanical function of joints which appear to be very simple and yet are very complex. The remarks upon the influence of age and exercise are extremely good, as are also those upon general treatment. In Part II attention is directed to the particular sprains, and here we cannot help feeling that the general directions for treatment are rather diffuse. However, the book can be safely recommended, and is well written.

Die atonische Magenerweiterung und ihre Behandlung. [Atonic Dilatation of the Stomach and its Treatment.] Von Dr. C. Wegele. (München: J. F. Lehmann. 1894. Demy 8vo, pp. 28. M. 1.)—In this pamphlet the author discusses this interesting subject, and agrees with Riegel and others that it is a more common affection than is generally supposed. The differential diagnosis, etiology, symptoms and treatment come under consideration. The subject naturally claiming most attention is the treatment. The question of dry diet is discussed, and the value of supplying fluid by the rectum at the same time emphasised. In severe cases a complete rest to the stomach for a time is advocated, rectal feeding being substituted. The value of washing out the stomach is duly insisted upon, as well as that of massage, electricity, and hydrotherapy. The treatment by drugs is given with much judgment. Some may think that the author overestimates the value of surgical assistance even in severe cases resisting other modes of treatment. It may be open to considerable doubt whether either putting a tuck in the stomach, after Bircher's method, or gastro-enterostomy, will materially assist the stomach in passing out its contents in non-obstructive cases. The pamphlet, however, well reflects the improvements recently made in the treatment of some forms of gastric disease.

Régénération des Os et Résections Sous-Périostées. [The Regeneration of Bone, and Subperiosteal Resections.] Par L. Ollier, Correspondant de l'Institut, Professeur de Clinique Chirurgicale à la Faculté de Lyon (Publication de *l'Encyclopédie Scientifique des Aide-Mémoire.*) (Paris: G. Masson, Editeur. Gauthier-Villars et Fils. Cr. 8vo, pp. 175. 2 francs 50 centimes.).—This addition to the useful handbooks of scientific subjects published under the direction of M. Léauté, is an abstract of M. Ollier's large work on subperiosteal resection which has already been reviewed in the British Medical Journal of July 8th, 1893, p. 68). Its object is to teach as briefly as possible the physiological bases, the practical details, and the results of the method of resection which was educed by M. Ollier thirty years ago from his experiments on animals. The present volume is a very convenient one: it is clearly written, and presents all the main points relating to the principles and practical value of the subperiosteal method. The author is now enabled to put away much of the scaffolding that encumbered his first work, as the correctness of his views and the value of his practice are now almost universally acknowledged. This abstract, dealing with fundamental questions and the application of physiological data to the surgery of joints, precedes a second volume in the same series in which will be found descriptions of the resection operations on the large joints practised by M. Ollier, and of the orthopædic and functional results that he has obtained from them.

Outlines of Medical Treatment. By Samuel Fenwick, M.D., F.R.C.P., and W. Soltau Fenwick, M.D. Fourth Edition. (London: J. and A. Churchill. 1894. 8vo, pp. 518. 10s.)—The third edition of this work was published three years ago, and the early demand for a new edition is proof that the book meets a want. After some general observations on therapeutic methods, the various local and general diseases are passed in review, and their treatment discussed. The most important addition to the present edition is a chapter contributed by Dr. Lewis Jones on electricity in the treatment of disease. It is thoroughly sound and practical in its character, and will be found to afford an excellent introduction to the study of a subject which has sometimes been obscured by imperfect scientific training or by charlatanic devices.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

POISON BOTTLE.

A new poison bottle has been patented by Mr. W. Stephenson, of Dalston, and is being made in various sizes by Messrs. Hearn, Wright and Co., of the Eclipse Glass Works, Clapton, and sold at prices very little above those for ordinary dispensing bottles. The patentee maintains that this bottle is superior to the fluted pattern now used, which, without pressure by the fingers, might be mistaken for an ordinary bottle. The simplicity of construction of this poison bottle—which consists in its narrow waist—is its great recommendation, and cannot fail to be noticed both by sight and touch. A nurse in attendance on a patient at night, when it is absolutely requisite that very little light be used, would have no difficulty, even in the dark, in distinguishing this bottle from any others which might be in the sick room at the time. These bottles have other advantages; they are made of blue glass, having the word "Poison" in raised letters on both sides, and they occupy about the same space for packing and other purposes as those ordinarily used by chemists.



VACCINATORS.

With reference to a vaccinator made by Messrs. Ferris and Co., described in the British Medical Journal of June 23rd, Messrs. Arnold and Son ask us to state that for many years they have made and kept in stock an instrument which they regard as identical.

AN AXIS TRACTOR.

Dr. W. H. Goodenough (Blairhill, Dysart), writes: I see by the British Medical Journal of June 23rd, that Mr. J. F. Le Page, of Salford, has patented an obstetric hook. I merely wish to state that I have used a similar one for the last fourteen years. I got Messrs. Young, cutlers, Edinburgh, to make it for me, and I have used it with decided advantage ever since.

Sanitation Sunday.—The Archdeacon of London will preach the annual sermon of the Church Sanitary Association at St. Paul's Cathedral on Sunday next, the 7th after Trinity. The Committee appeal to the clergy to make mention of the Society's aims on Sunday next, either in the sermon or during the course of the day's services, by reading the following notice: "The Church Sanitary Association desires to call attention to the fact that this day, the 7th Sunday after Trinity, has been suggested as 'Sanitation Sunday' because the gospel for this day contains the record of Christ's disciples distributing wholesome food to those who were already in the enjoyment of fresh air, pure water, and abundant light, thereby indicating the Divine will that man shall enjoy fulness 'as well for the body as the soul.'"

LIST OF AUTHORS AND OTHERS WHO HAVE PRESENTED BOOKS TO THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

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Applications for duplicates from medical societies forming libraries may be addressed to the Sub-librarian, 429, Strand.

A NEW TREATMENT OF GUINEA-WORM.

THE old-fashioned treatment of guinea-worm by rolling it out bit by bit and day by day on a piece of wood or diachylon is not only a tedious, but a dangerous and unscientific procedure. As pointed out in Davidson's *Hygiene and Diseases of Warm Climates*, this treatment, if instituted too early, is a violent and clumsy interference with Nature, and with the normal process of parturition in the parasite; an interference which is nearly sure to end disastrously in the rupture of the worm, and in the extravasation of myriads of living and very active embryos deep in the tissues of the unfortunate human host. When a guinea-worm shows herself at the surface of the body she is there with a purpose. At this stage of her existence she is practically nothing but an enormously elongated cylinder packed from end to end with myriads of embryos awaiting their chance of obtaining freedom and an opportunity to advance in development. This opportunity comes when the worm has drilled a hole in the derma, and the bulla which forms over this little hole has ruptured. Then, in response to the stimulus of cold water (the medium in which the young of the guinea-worm pass the first stage of their further development) the long musculo-cutaneous cylinder containing the delicate embryo-laden uterus contracts. This contraction forces a short piece of uterus through the mouth of the parasite, the head of which is now lying either just inside or just outside the little hole alluded to. The prolapsed piece of uterus, becoming very tense by the contraction of the parasite, quickly ruptures, its contents flowing out over the surface of the ulcer; in this way instalments of embryos escape from time to time. The worm has no vagina, this organ having been obliterated by the overgrown uterus probably at an early stage of development. Nature has, therefore, been driven to utilise mouth in lieu of vagina in the way described. By a repetition of this process of protrusion and rupture of small portions of the uterus, in the course of a week or two the worm gradually empties herself. She then emerges spontaneously, or can be very easily withdrawn.

It is evident that if the rolling-out process—hitherto regarded as an eminently scientific and "knowing" procedure—is instituted before the worm has emptied her uterus, there is very great risk that, what with the resistance she presumably offers to premature withdrawal and with distension of that part of her body still lying in the tissues of the host from the forcing back into it of the contents of the fore part of the uterus, the parasite will rupture under the strain of traction. This disaster, as a matter of fact, often does occur; and abscess, sloughing of tissues, much suffering, and even death, may result from the blind rule-of-thumb method of treating in this way every case of guinea-worm. The writer of the article referred to has counselled the abandonment of this rolling-out system, or, at all events, that it should not be adopted until there is assurance that the parasite has emptied her uterus, and is physiologically ready to emerge from the body of her host; in other words, he advocates a purely expectant method of treatment, in the belief that Nature has herself sufficiently provided for the expulsion of the guinea-worm.

In the *Archives de Médecine Navale*, June, 1894, Dr. Emily, of the French navy, advocates a treatment of guinea-worm which, if it succeeds in other hands as well as it appears to have done in his, will entirely supersede the rolling-out treatment and the expectant treatment we have referred to. He applies to the guinea-worm the treatment Mesnard has successfully employed in hydatids—namely, injections of perchloride of mercury (1 in 1,000), with the view of killing the parasite. This, he says, it does. The dead body of the worm, he says, is subsequently absorbed in the same way as a piece of sterilised catgut would be. Dr. Emily, at Bandiagara, on the Niger, in a small garrison of 220 men, in the course of three months had to treat 105 cases of guinea-worm: so he speaks from a large experience. As each case treated in the ordinary way involves three or four weeks on the sick list, it is a matter of importance to popularise in districts infested by the guinea worm, such as the Deccan and other parts of India, as well as the West Coast of Africa, a method of treatment calculated to shorten this period as much as possible.

Dr. Emily says he obtains a perfect cure in three or four days. His results and methods have therefore much interest for our naval and military surgeons. He divides his cases into three categories: first, those in which a hard swelling, associated with some pain and cord-like convolutions under the skin, indicates the presence of a guinea-worm about to break through; secondly, a similar but fluctuating swelling indicating that the process has advanced still further: thirdly, those in which this process has been completed, and part of a guinea-worm is protruding from a hole on the ulcerated surface of the limb. The first, he says, is the most hopeful for successful and rapid cure. He simply injects—and only once—a Pravaz's syringeful of bichloride of mercury solution in fractional quantities by several insertions of the needle into the swelling, making the punctures as near the assumed position of the body of the parasite as possible: this plan he follows in the first and second type of case. In the third type he injects, by puncturing it, the protruding body of the parasite itself, and any swelling in the vicinity of the opening from which it is hanging. In the last instance he says the parasite can be easily withdrawn on the day following the injection; in the other two cases the swelling rapidly disappears, and nothing is ever seen of the worm, which, it is to be presumed, has been killed and is subsequently absorbed.

If further experience is found to bear out Dr. Emily's results, he is to be congratulated on having made an important step in the therapeutics of what, in countries infested by guinea-worm, is not only a pest and a serious tax on the industry of the people, but also, in some instances, a positive danger to life, and a cause of much invaliding among troops quartered in the endemic districts.

PRESENTATION.—After the distribution of certificates and medallions gained by members of the St. John Ambulance classes at Hastings, Major-General Scherer, in the name of a committee of ladies, presented to Dr. J. J. de Z. Marshall, Honorary Secretary and Lecturer of the Hastings and St. Leonards Branch, a testimonial, which was accompanied by the gift of a chiming clock. Dr. Marshall acknowledged the presentation in suitable terms, and urged that all students who attended the classes should go in for the examinations.

INCREASE IN METROPOLITAN DIPHTHERIA.

Dr. John F. J. Sykes has recently presented a report to the vestry of St. Pancras on the increase of mortality from diphtheria in London, and the document is one which merits attention from several points of view. He first points out that the rate of death from such diseases as scarlet fever, which responds directly to measures of isolation and disinfection, as also from enteric fever, which responds to general sanitary measures, have both undergone substantial reduction during the period of twenty years terminating in 1890, whereas the diphtheria mortality has undergone increase in England and Wales, and has more than doubled in London. He also shows that, whereas the scarlet fever mortality is falling *pari passu* with the increase of hospital accommodation for its isolation, no such means of isolation were available for diphtheria in the metropolis until 1889. Since then hospital accommodation for this disease has been provided, but the number of deaths in the metropolis from this cause has risen from 1,617 in 1889 to 1,969 in 1892, and to 3,265 in 1893. Hence no diminution has as yet taken place, and the effect of the isolation of diphtheria in hospital yet remains to be seen. But it is satisfactory to note that the fatality per cent. of admissions to hospital has fallen from 41 in 1889 to 29 in 1892.

Dr. Sykes also arrives at the conclusion that "the relationship of diphtheria to insanitary conditions is overwhelmed by the influence of personal infection"; and this leads him to discuss the opinion enunciated in the Milroy Lectures for 1891 on the Natural History and Prevention of Diphtheria, to the effect that the increase of diphtheria in this country was largely due to the aggregation of children in schools under the action of our Legislature as to elementary education. Limiting himself to the metropolis, Dr. Sykes traces the various stages by which our metropolitan child population has been increasingly got together in schools. He gives the census returns of population, and each year's average number of children on the roll of the Board and non-Board schools; and side by side with the increase in school attendances he shows the almost steady increase in the annual mortality from diphtheria. He next shows that a somewhat sudden increase in the diphtheria deaths in the later part of the last decennium was due to the transfer from the group of throat diseases—other than diphtheria—of a number of affections that were thenceforward styled diphtheria, the resulting increase being essentially in young children under the age of 15 years. And he arrives at the two following conclusions: (1) That a slight diminution is taking place in the death-rate from throat diseases as a whole; and (2) that a great rise in the mortality from diphtheria corresponds with a great fall in that from other throat diseases.

But Dr. Sykes's conclusions are based upon data which terminate at times with the year 1891, at others with the year 1892, and we cannot but think that if, when he wrote his extremely interesting report, he had had access to the data for 1893, he would probably have come to the conclusion that the rise in the diphtheria mortality was not so distinctly related to diminution in deaths from "throat diseases" as appears at first sight. The largest number of deaths from diphtheria in the metropolis which he records is 1,885 (1,969 corrected return) for the year 1892; but in 1893 they were no fewer than 3,265, and this with no corresponding diminution in throat diseases properly so-called, for the insertion of "thrush" among throat diseases is not usual; besides which the diminution even in fatal attacks of thrush in no way accounts for the enormous increase in fatal diphtheria. In one of his tables Dr. Sykes gives the quinquennial mean death-rate for "throat diseases," including diphtheria, as 562 for the five years 1881-85, and 542 for the five years 1886-90; but in 1893 the rate reached 760, a rate far in excess of any experienced during any portion of the period dealt with. And Dr. Sykes himself would seem not to desire to attach too great importance to the diminution of fatal throat disease other than diphtheria as a cause of the increase of diphtheria, for in finally reverting to the question of "school influence" as a factor of which account has to be taken, he states that Dr. Thorne Thorne's "conclusion that increased school attendance has had a material influence in increasing the spread of diphtheria is irresistible."

In view of this opinion, which now finds many supporters and which has been enforced again and again by the remarkable researches of Mr. W. H. Power, the question that remains to be solved for the purposes of the sanitary administration of districts, whether urban or rural, is in what way school attendances can be so controlled as to eliminate the operation so-called school influence in the development and propagation of diphtheria without causing such interference with the operations of our elementary schools as is not likely to be entertained in the present day. Elementary education must be maintained as a part of our system of national progress, but every effort should be made so to maintain it as to avoid the increasing sacrifice of life from a disease which seems at present to be so clearly identified with the steady increase of school operations in this country.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

The usual monthly meeting of the Executive Committee of this Society was held at 429, Strand, on June 14th. There were present the Deputy Chairman, Dr. de Havilland Hall in the chair, Dr. M. Greenwood, Mr. Frederick Wallace, Dr. J. Pickett, Mr. F. S. Edwards, Dr. W. Knowsley Sibley, Dr. A. S. Gubb, Dr. G. E. Herman, and Mr. H. H. Clutton.

The accounts presented showed that the business of the Society was growing both through the acquisition of new members and through the existing members increasing their assurances to the limits allowed by the rules. It is evident that the value of the Society is being more and more recognised by the medical profession, and its sphere of usefulness is rapidly expanding.

As the number of members increases and the average age also grows, it is evident that the sickness must also get larger. The accounts for the year just ending are not quite complete, but it will be found that the amount paid for sickness and accident disablement during the twelve months ending June 30th, 1894, will be about £4,000, or nearly eight times as much as in the first year of the Society's working. Large as the claim account is, it is well within the amount expected and provided for in the premium rates, and the Society has accumulated ample reserves.

The large proportion of claims arising from accidents still continues to be a marked feature of the business. For some time past every week has added to the list of members who have been injured by riding, driving, or bicycle accidents, and in that way have been benefited by the sick pay of the Society. Prospectuses and full particulars can be obtained on application to the Secretary, Mr. F. Addiscott, F.I.A., 33, Chancery Lane, London, W.C.

PREVENTIVE INOCULATION AGAINST CHOLERA IN INDIA.

The Application of Laboratory Results to Man.—The Harmlessness of the Experiment.—The Method tested by Epidemic Cholera.—The "Comma Bacilli" of Cholera.—Pfeiffer's Recent Research.—Suggestions for the Improvement of Haffkine's Method.

We have received from Dr. W. T. Simpson, Health Officer of Calcutta, a memorandum on Cholera and Haffkine's Vaccination, which is full of interest whatever view we may hold of this, the newest, development of preventive medicine. Haffkine's method has been described by himself in these pages, so that we need not again allude to the *modus operandi* and its purpose. The cornerstone of the same is the unconditional belief that cholera is an infective process induced by Koch's comma bacillus. Animal experiment has failed to establish satisfactorily the truth of this belief, and it seems, from the present state of our knowledge, that by animal experiments alone we are not likely to succeed in settling this *quæstio vexata*, and that we run the risk of losing ourselves in academic disputations and discussions which can only lead to confusion. Lawful experiments on man hold out greater promise, and therefore Haffkine having established the harmlessness of his method by careful observations on himself and other medical men and scientists, we feel grateful that an opportunity was given for his testing the value of his so-

called anticholeriac vaccinations. So far he has inoculated about 25,000 persons in India, but until recently he seemed to fight against enormous odds, and it seemed hopeless or even impossible to draw any deductions from his inoculations. In March of this year, however, cholera broke out in a *bustee* of Calcutta, and M. Haffkine at once subjected his method to a test. The result, if not perhaps absolutely free from objection, is nevertheless full of significance. With the appearance of cholera, 116 persons out of 200 inhabitants of the *bustee* were inoculated. Fresh cases of cholera occurred, 10 persons being affected. Now all these 10 cases were found among the non-inoculated portion of the community, and none of the inoculated suffered. We give the following selected instances by way of illustration. (*a*) In a family 6 out of 8 were inoculated, and subsequently 1 of the 2 non-inoculated died of cholera; (*b*) in another house 7 out of 14 were inoculated, and 1 of the non-inoculated suffered from choleraic diarrhœa; (*c*) of a family of 8 there were inoculated 3, and of the 5 non-inoculated 1 fell a victim to the disease; (*d*) in another family 11 out of 18 were inoculated, and of the 7 non-inoculated, 4 suffered. All the inoculated persons remained intact. Hence of 48 persons belonging to 4 families, 21 were not vaccinated, and of these 7, or 33.3 per cent., were affected by cholera, while the 27 vaccinated ones did not suffer. At present the numbers are too small for any definite conclusions to be drawn from them, but they indicate the direction in which the research lies, and we hope that Calcutta will offer M. Haffkine further opportunity for carrying on his observations on an extended scale.

If the above results are found to be constant they would prove: (*a*) that cholera is caused by the comma bacillus; (*b*) that it is possible to protect persons easily and speedily against cholera. True, it is difficult to state what the comma bacillus exactly is, because at present we possess some twenty to thirty, if not more, varieties or species of commas which have been cultivated from choleraic stools. Cunningham was the first to point this out, and at one time he was met with great and almost violent opposition; now, however, none of his quondam opponents doubt the fact; on the contrary, they vie with each other in finding the greatest number of commas. But if Pfeiffer's recent experiments are unequivocal we can single out a special group from among the varieties. Whatever view we may express on the results of experiments on man, voluntarily or involuntarily performed, we must all agree, with the exception, perhaps, of Pfeiffer and Haffkine, that the lesions produced in guinea-pigs by intraperitoneal injections of cholera vibrios, so far as appearances go, have no specific character, and what is more—as first shown by Klein, and repeatedly confirmed by others, amongst them his greatest opponents on the cholera question—intraperitoneal injections of other organisms will immunise guinea-pigs against intraperitoneal cholera infection, and *vice versâ*. These observations greatly weakened Koch's theory, for it appeared that the fatal effect following on an intraperitoneal infection was due not to a specific toxin, but to a general bacterial poison, a protein. Now cholera is a specific disease, and must be produced by a specialised virus or toxin. Pfeiffer applies a new test. He finds that although it is possible to immunise animals against an intraperitoneal cholera infection by means of an intraperitoneal injection of typhoid and colon bacilli, yet the serum of an animal immunised against "typhoid" or "coli infection" will not immunise against a "cholera infection." The immunising serum, then, is specific. Testing numerous varieties of comma bacilli he finds that after immunisation the serum of animals immunised against a more or less "typical" variety will immunise, not against all other varieties, but only against a certain number, although by means of an intraperitoneal injection of any one variety animals are immunised against similar inoculations of all the others. He thus singles out by the serum test a few vibrios which naturally fall into a special group.

From his experiments it may be concluded that the serum of persons who have recovered from cholera will afford a delicate test in the case of any particular vibrio. If the latter is a true cholera organism the test serum should protect a guinea-pig against the vibrio, and if the test serum fails to do this the quality of the suspected vibrio must remain doubtful. This sounds simple enough, but we should recall Metchnikoff's observations that: (*a*) the serum of about 50 per cent. of normal human beings possesses immunising properties; (*b*) the serum of 50 per cent. of persons dying from or dead of cholera is protective; while (*c*) the serum of 50 per cent of persons recovered from cholera will not produce immunity against the comma bacillus. Undoubtedly serum is a most delicate immunising medium. We know, for instance, from experiments performed in this country by Kanthack and Wesbrook, that the bacillus prodigiosus intraperitoneally injected will immunise against an intraperitoneal infection with the bacillus pyocyaneus, yet the serum of a guinea-pig immunised against the bacillus prodigiosus will not immunise against the bacillus pyocyaneus. What results Pfeiffer's observations will lead to we cannot at present foresee; his facts are of great importance, especially when considered together with Haffkine's recent experiences. Generalisations are premature.

In a special reprint, Messrs. Haffkine, Hankin, and Dr. Owen give a careful account of the *technique* of Haffkine's anticholera inoculations. He still uses his two vaccines. His method seems somewhat cumbersome. There is probably no necessity to prepare a *premier* vaccine; this appears to have been proved by the experiments of Klemperer and others on the Continent, and by Klein, Kanthack, and Wesbrook in England. An old culture of cholera appears to act as well as any specially attenuated cultivation; so also a sterilised agar-agar emulsion, or a sterilised broth culture or small doses of virulent agar-agar cultures may be used. Kanthack and Wesbrook have shown that by means of broth cultures, living or dead, inoculated subcutaneously and administered by the mouth, an immunity against Haffkine's strongest *deuxième* vaccine may be established, and the same may be done by means of small doses of virulent agar agar culture. The latter soon lose their virulence, and as Gruber and Wiener showed, old attenuated cultures often regain their virulence if transplanted on fresh agar-agar, and used after twelve to twenty-four hours. Simplicity is of the utmost importance when it is intended to make any scientific process general. We would, therefore, hope that shortened and simplified methods may be tested in India.

Sterile cultures are a distinct advantage; sterile agar-agar emulsions administered both by subcutaneous inoculations and by the mouth as described by Klemperer, save considerable trouble, and require less apparatus. Broth cultures are still more preferable. All that is required is a stock of agar-agar cultures passed through an animal from time to time. From this stock a number of broth tubes should be prepared, and these sterilised after twenty-four hours: .2 to .5 c.c. may be injected at the first sitting, and then on subsequent days sterile cultures may be given by the mouth. It will then be found that after a week the individual is immune against Haffkine's *virus fort*. If Metchnikoff's observations are correct—and there is no reason to doubt them—immunisation by the mouth is of great importance, for he found that persons immunised by Haffkine's method were not proof against infection through the alimentary tract.

A final word in regard to Haffkine's preventive inoculations. A point which requires further study is the duration of the protection induced in the individual. In the observations quoted by Dr. Simpson only a few days elapsed between the vaccination and the outbreak of cholera, and the test was, therefore, hardly rigorous enough, since Pfeiffer shows that, working with small quantities, the immunity produced by injections of the typhoid or colon bacillus against cholera lasts about seven days, breaking down on the tenth, while the specific immunity against cholera brought about by injections of cholera vibrios lasts much longer, so that we may say that a specific immunity is more lasting or persistent than a vicarious one. At present we cannot quite accept Pfeiffer's views, however forcibly he presents them to us, though, of course, we by no means reject them. We demand corroboration and confirmation, and further explanation. But should they prove to be correct, then it must be shown that the immunity produced by Haffkine is a prolonged one, otherwise he may be dealing with a "vicarious" rather than a "specific" immunity. A new field of research has been opened out, and, in the chaotic state of the existing views with regard to the etiology of Asiatic cholera, this must be welcome to all who are anxious to make confusion less confused.

SMALL-POX AND VACCINATION IN 1893.

VIII.—Birmingham.

Dr. Alfred Hill, in his annual report for 1893, on the health of the city of Birmingham, has given the facts as to the small-pox in that place during last year; not at any great length, but rather in a summarised form, leading to the assumption that he intends at a later date, when the city shall be free from the disease, to make a completer and more detailed statement on the whole epidemic. We at any rate hope that such is the case, seeing what a severe outbreak will have to be chronicled.

Dr. Hill shows that the first four cases, notified in January, 1893, were all in vagrants, who probably brought the infection to the town from other parts of the country. Hereafter the disease soon became widely diffused, not infrequently by the mixing of the sick with their healthy fellow-workmen. Dr. Hill is inclined to ascribe the spread of small-pox to several causes, chief among them being (1) non-vaccination; (2) want of revaccination; (3) mildness of attacks in vaccinated persons, leading to mistaken diagnosis, with subsequent spread of the disease to healthy persons; (4) wilful concealment of cases; and (5) the potency for harm of unsuspected cases. There were in all 979 cases in the year, of which 77 proved fatal. This yields a per case mortality of 7.9 per cent. The total attacks range themselves as follows in regard of vaccination:

	No. of Cases.	No. of Deaths.	Proportion of Deaths to Cases.
Vaccinated ...	847	38	4.5 per cent.
Unvaccinated ...	105	32	30.5 ,,
Doubtful ...	27	7	25.9 ,,

From this statement we see that the mortality in the vaccinated was little more than one-seventh that of the unvaccinated. Of 35 deaths in hospital among the vaccinated, Dr. Hill tells us that most had been imperfectly vaccinated, 26 of them having fewer than three scars. Not one case of small-pox occurred in vaccinated infants in the city, though 14 did in unvaccinated infants, and in the next five years of life only 6 in the first class against 21 in the second. The proportions of the respective classes being as 5 to 1, those vaccinated should have furnished 100 cases had they been attacked at the same rate as their less fortunate fellows. Of vaccinated persons, 42 per cent. were attacked at ages between 15 and 25 years, and 37 per cent. between 25 and 45 years. Of unvaccinated patients, 66 per cent. were attacked at ages under 15 years.

The case mortality among vaccinated and unvaccinated at different ages is strikingly shown by the following table:

Ages.	Vaccinated. Cases.	Vaccinated. Deaths.	Vaccinated. Case Mortality per cent.	Unvaccinated. Cases.	Unvaccinated. Deaths.	Unvaccinated. Case Mortality per cent.
Under 1 year	0	0	—	14	6	43
Between 1 and 5 years ...	6	0	—	23	12	52
,, 5 and 15 ,, ...	101	0	0	34	2	6
,, 15 and 25 ,, ...	358	6	2	18	4	22
,, 25 and 45 ,, ...	316	22	7	16	7	44
,, 45 and 65 ,, ...	58	8	14	1	0	—
At 65 years and upwards ...	8	2	—	1	1	—

Concerning this table, Dr. Hill says: "It is evident that the protection against death afforded by vaccination lasts longer than the protection against attack, for of the vaccinated patients under 15 years of age not one died; in other words, no patient who had been vaccinated within fifteen years of the date of his attack succumbed to the disease; but amongst the 69 unvaccinated patients under 15 years old 20, or 29 per cent., died."

The above quoted paragraph leads to the assumption that no revaccinated person was attacked during 1893 in Birmingham—it would be interesting to learn if this were the case—but at all events, of over 100 persons engaged at the hospital, and all of whom were revaccinated, not one contracted small-pox, despite their close intimacy with the disease in the discharge of their duties. This is excellent testimony in favour of revaccination.

Birmingham has had seven large experiences of small-pox from 1872 to 1893, the mortality of the first, when most of the cases were treated at home, being twice that of the epidemic of last year, when the great majority of the patients were isolated in hospital.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

VI.—BATH.

The workhouse stands outside the city on a hill surrounded by a large extent of ground, which is cultivated by the able-bodied. The infirmary, though in a separate block, is practically under the same roof as the workhouse, there being a short covered communicating corridor. It is licensed for 230 beds. The house is a very old one, the date, 1834, is inscribed over the door. It is built of Bath stone in the solid style of that part of the country, and its aspect is somewhat of a prison—high walls with asphalte courts. The plan of the main building is the shape of the letter Y, but so much has been added to it since it was first built that at the present time it is almost impossible to discern the original plan.

The Infirmary.

These buildings are of ancient date and have no appliances for sick nursing. It is a two-storied building; the wards on the ground floor are dark and squalid in appearance; the first floor wards are better, but there is but little window space and no cross ventilation; the top floor is the brightest and the airiest, the windows admitting of cross ventilation, but there is no ceiling. We can imagine the howlings of the wind, the draughts in those wards when a storm is raging, as it can rage over those hills. The water supply and system of distribution are inadequate, every drop of hot water for the infirmary use has to be carried from a boiler across a court. The matron showed us that a new boiler was being fitted near the women's quarters which she thought would be a great help in working the place. But when we remarked that hot water laid on to every floor was a necessity for a hospital she informed us that the objection to that was that the pipes would burst in the frost. Some of the closets are of the old pattern and some modern; they are well placed for the use of the helpless at night, but they are in immediate communication with the wards, having a cross ventilation; this would, to a certain extent, cut off the foul air from the wards if these windows are kept open by night as well as by day. The bath-rooms are few and far between, and have a cold water supply only. In one bath, that for the "eruption ward," the steam for the water is turned on for two hours thrice a week in the afternoon; otherwise all the hot water for the baths or for washing the patients is carried from the boiler by the inmates, and no hot water is procurable at night except by boiling a kettle. The staircases are steep and narrow, enclosed in walls. The ventilation is entirely by means of windows. The wards are warmed by fires and lit with gas. The walls and ceilings are colour washed and profusely adorned with pictures pinned on to the walls. The whole place wanted cleaning, but the matron informed us that the matter was in hand.

Patients and Classification.

When going round the wards in company with the matron and nurse we were struck with the large number of acute cases under the care of the guardians as compared with other infirmaries of a similar size. In the twelve wards there were, on a rough estimate, about sixty patients in bed, and the nurse informed us that there were twenty-four temperatures to be taken that evening, of which half or more she expected to be above the normal. Pneumonia has been and is very

prevalent in the neighbourhood, to quote from the medical officer's report (Mr. Craddock, May 23rd): "Amongst others in the infirmary are 4 cases of pneumonia, 4 very bad cases of phthisis, 7 of heart disease, and 16 dirty cases—all requiring the most careful and tender nursing." We most fully concur in this statement of the class of patients in the wards. Besides those above referred to, we saw a woman with internal cancer—ill in every sense of the word, frail and wasted, with a face of great suffering: a bad case of hemiplegia; a man with cardiac dropsy, with a great deal of fluid in the lower part of the body; several men and women with ulcerated legs; besides the unvarying paralysis and bedridden cases, each of whom needs the same care as an infant if they are to be kept in a wholesome state. In the death-certificate book we noticed that in May and June there had been 14 deaths, only 2 of which could be attributed to old age, and the other diseases were pneumonia, cardiac rheumatism, or phthisis. In the children's wards there have been several cases of measles. The lock cases are treated in the ground-floor wards, and their wards have separate offices. The imbeciles and idiots are in another part of the building, under the charge of paid attendants. In this matter and in the provision of separate wards for the sick children this Board sets an example that other boards would do well to follow.

System of Nursing.

To speak accurately, there is no system of nursing; there is one fully-trained nurse to "nurse" all these patients, and she has to help her two assistants, one who has been in the workhouse one year and nine months, uncertificated; the other, who has had only a scrappy training at an infirmary, supplemented by work as a draper's assistant, and a young girl, not trained, who held some other appointment in the house; the nurse is also the midwife. On inquiring from the nurse how much time she had for actual nursing, she informed us that by the time she had looked at the serious cases, made her notes, issued her orders to her subordinates, filled the medicine bottles, and looked through the wards, the time was gone. Under these circumstances it did not surprise us to hear that the paupers gave the medicine, or from the medical officers that a poultice had been left on a pneumonic chest for twenty hours unchanged, or from the nurse that the hours of work for the nurses began at 6 A.M. and ended at 10 P.M. Paupers are largely employed in the infirmary. Every ward has its inmate who is the wardsman or woman; some of these are ancient inhabitants, well-meaning no doubt, but as useful in the ward as they would be in a glass manufactory. The patients are left in the charge of paupers during the night, two on the male side, one on the female. This latter "night nurse" is put to bed in the daytime in one of the wards that she minds in the night. The men are not treated to such a mockery of sleep; they are over in the house somewhere. The woman with internal cancer above referred to complains of the rough handling at night, but the pauper "night nurse" is not to blame. Such being the case, the nurse informed us that the assistants took it in turn to be called on alternate nights to administer the stimulants, and the doctor informed us that he had no guarantee that the extras ordered were given in the night, nor could there be any systematic feeding. It must also daunt a nurse to see the vast amount of work around her, and to know that she cannot do one tithe of it properly, especially with the help that is provided for her; we are not surprised to hear that the nurse has resigned. All the appliances for the hospital are on the same meagre scale; we were informed that there are three roller towels for the use of each ward, of about twenty-three beds; these are changed three times a week; there is one comb somewhere about for the patients, perhaps a brush; cleanliness under these circumstances is impossible. There are two patients with bedsores, and, considering the nature of the cases and the want of system in the nursing, we are surprised that there are so few.

The Medical Officer's Controversy with the Guardians.

Mr. Craddock has brought this state of things before the Board in the strongest and plainest terms possible, and the readers of this Journal will understand that any conscientious officer responsible for the treatment of the sick shrinks from being a party to the continuance of such a state of things; but no amount of words will undo the grievous harm that is being done to the sick whilst it lasts. Poulticing in cases of pneumonia cannot be carried on in a regular manner; feeding in cases of typhoid fever would lack that regularity that constitutes its great value, and so on through all modes of treatment necessary in acute cases. We understand that a night nurse has been engaged by the guardians—one night nurse to 230 beds! She would have to be as strong as a donkey and as active as a flea if she is to see after that number of patients; nor do we see that there is any provision for the complication of the two serious cases requiring attention in opposite ends of the building. The medical officer lives a mile from the infirmary, and his house is not in telephonic communication with the infirmary, nor are there any bells of communication through the building.

The Bedding.

This is chaff for the dirty cases and flock in the general wards; the bedsteads are narrow, they have laths; the mattresses that are supplied are not of sufficient thickness to cushion the laths; the sheets were clean, also the blankets on the patients' beds. We did not see any screens, but the matron informed us that they had been ordered. The utensils in nearly all the wards were under the beds. There were hardly any cupboards, and we saw the medicines on the window-sills. The beds in some wards were crowded so that the nurse would not be able to attend to her patient without moving them.

The Lying-in Ward.

This ward holds four beds; there is no labour ward, and when, as happened lately, several women were in labour at the same time, some were confined in the general ward. This ward is an end taken off a long ward.

The Isolation Hospital.

The isolation hospital is in a distant part of the grounds, almost out of sight. We did not visit this building as it was closed. There are, we believe, four beds in it, and it is intended for patients from the workhouse. The medical officer, in the report above quoted from, states that in January last a man suffering from typhoid fever was nursed there entirely by paupers.

General Remarks.

The rooms provided for the nurses are not good; the only sitting room (of course, poor things, they never sit) is the surgery, redolent of drugs, and we could not ascertain that any separate bath room or lavatory accommodation was set apart for their use. There are no slopsinks; the only place of that kind that we saw was a small fixed basin outside some of the wards, presumably for the officials to wash their hands. In the rooms where the wash-up for each ward was done we saw no convenience of sink, bowl, or other necessary. The matron informed us that she had five separate laundries under her charge for male and female, sick and able-bodied, and for the children; we mention this to show how very rudimentary the arrangements are in this house.

We should recommend that new infirmary buildings be provided; that twice as many nurses be engaged for attendance on the sick, not of necessity all fully trained; and that the nursing staff be put under the sole control of a matron, who shall also be a nurse; that the paupers be kept for the cleaning and the service of the infirmary; and that the doctor's residence be put in telephonic communication with the infirmary. In no other way do we see that it would be possible to create a satisfactory state of things for the sick; the existing infirmary is crowded, both in the wards and in the offices, and no amount of patching and remodelling would overcome the stubborn facts of structure.

The annual festival of the Grand Priory of the Hospital of St. John of Jerusalem in England was held on June 25th. After a special service at the Chapel Royal, Savoy, a general assembly of the Order was held in Gray's Inn Hall, when reports on the work of the Order and its various departments during the past year were read. Subsequently a demonstration was given by the Metropolitan Corps of the St. John Ambulance Brigade. In the evening the members of the Order dined together at the Imperial Institute.

ROYAL COLLEGE OF SURGEONS.

Council Election.

The ballot for the election of three members of the Council was held on July 5th, with the following result:

Mr. Howard Marsh	327
Mr. Reginald Harrison	266
Mr. James Hardie (Manchester)	250
Mr. Davies-Colley	215
Mr. Herbert Page	181

Mr. Wilmot Evans and Mr. Joseph Griffiths acted as scrutineers.

The President, Mr. Hulke, declared Messrs. Harrison and Marsh duly re-elected, and Mr. Hardie duly elected members of Council. There were 383 valid voting papers, and 109 personal votes.

LITERARY NOTES.

Under the title of *Higiene de la Educacion* an inaugural address, delivered by Dr. Joaquin Duran y Trincheria on his reception as a member of the Royal Academy of Medicine and Surgery of Barcelona, and the reply of Dr. Eduardo Bertran y Rubio, have been republished. The former takes Dr. Hughlings Jackson's hypothesis of three levels of nervous centres in the brain as the physiological basis on which the educational edifice must be built up. He urges strongly that in the training of the mind that of the body must not be lost sight of. On this point he says: "To direct education solely with regard to the development of the mental powers is to follow a method analogous to that famous procedure to which it is said the *sopranisti* of the Sixtine Chapel used to be subjected: in order that they might sing like angels they were mutilated as men." While admitting that gymnastics in an enclosed space may be an "excellent orthopædic method" he pleads, for "open air, sunlight, unlimited space, liberty of movement, amusement of all the senses, agility, courage, and endurance" as the necessary conditions of full physical development. Intellectual education must, he contends proceed from the lower sensori-motor to the higher psychical centres. Rational education should begin, not with the mere learning of words, but with "manual training." Dr. Duran believes that the defects of the systems of education which have hitherto prevailed are answerable for a large part of the instability of nervous equilibrium characteristic of the present generation.

The following letter received by the editor of an American contemporary contains an "appreciation" of medical journalism which fortunately is as uncommon in the profession as the grammatical and orthographical eccentricities of the "Christun Docter:"

> Your copy of the —— Jurnal come, and the letter to—askin me to send fifty cens and git it fur a yeer. I don't nead no jurnals. When I git a tuff case I go off inter sum secrit plase and tell the lord all about it and wate for him to put inter my minde what ter do. Thats bettern jurnals and syklopedes and such. If we hed more lord trusting docters and less colleges weed fare better. The lord noes morn all the docters and if we go to him fur noledge it ill be bettern jurnals. Fraternally in the lord. A Christun Docter. P. S.—I've practist medisen morn fifty yeers. Yore ken publish this letter if you want ter.

Curtice's *Newspaper Index*, of which the first volume (July 1st—September 30th, 1893) has just been issued, is an index to the *Times*, the London morning and evening papers, 120 weekly papers, and 31 provincial papers. The *Index* will enable anyone with a minimum of trouble to reconstruct the story of the world's life from day to day. With the assistance of Mr. Curtice's publication, the inquirer can in a few minutes find the record of a marriage or a murder, the sinking of a battleship, or the bankruptcy of a builder. Medical matters are rather oddly classified under the head of "surgical and medical." The greatest amount of space under this head is devoted to "cholera;" next comes the "British Medical Association." The other subjects in the domain of medicine appear to be somewhat capriciously selected, for while there are entries referring to "erythromelalgia," "lymphadenoma," and "pancreatic hæmorrhage," cancer and consumption are not referred to. A little more care in the revision of proofs seems to be called for, such errors as "Cesarean section" (p. 255), "Charnot and hypnotism" (p. 255, "simple glaucoma" (indexed under "simple" by the way, p. 260), "lymph variolus" (p. 115) striking the eye in turning the pages

At a recent meeting of the Spanish Academy of Medicine, Dr. Olmedilla gave an account (founded on an article by M. Dognée in the *Boletin de la Real Academia de la Historia*, November, 1892) of a curious manuscript which is in the library of the University of Liége. The manuscript is described in the catalogue as follows:—"Numéro 887. Albullasem de Baldac, filius Abdi medici, composuit hunc librum." It consists of 84 leaves, each measuring 247 millimetres in height by 170 in breadth, and it contains 166 drawings executed with a good deal of artistic feeling, representing scenes in the lives of persons referred to in the manuscript. The character of the writing fixes the date of the manuscript as somewhere in the first half of the fifteenth century. The work is a treatise on hygiene, translated into Latin by a Spaniard in 1415 from an Arabic original believed to have been composed four centuries earlier by Aboul Cassem Khalaf-ben-Abbas, commonly known as Albucasis. That famous Moorish physician was at the zenith of his career in 1085, teaching and practising medicine with great applause at Cordova, where he lived in a magnificent palace, built for him by Abderraman III. and known as *Medinet-a-Zaharah* (City of the Flower). The manuscript, which relates largely to diet, clothing, dwellings, etc., incidentally throws many interesting side lights on the mode of life of the Spanish Moors in the eleventh century. When not fighting or love-making they seem to have spent their time in hunting. Albucasis seems to have been particularly fond of flowers, and he speaks with Oriental exuberance of language of the gardens of Cordova. Mention is made of crystallised transparent sugar which, mixed with certain fruits, is recommended as an application in gingivitis and certain affections of the teeth.

REGISTRATION OF MIDWIVES.

West Somerset Branch.

At the annual meeting of the West Somerset Branch held at Taunton on June 28th, the following resolution was proposed, and its object ably advocated by several speakers:

> That this meeting approves of the principle of the registration of midwives; and it also agrees with the minority report drawn up by certain members of the Lancashire and Cheshire Branch, as published at page 1223 in the Association Journal.

To this resolution an amendment was proposed as follows:

> That, in the opinion of this meeting, the registration of midwives, such as is suggested in the proposed resolution, is not at present required.

The amendment was warmly supported, and on being put to the meeting was declared to be carried.

Stirling, Kinross, and Clackmannan Branch.

At the annual meeting of the Stirling, Kinross, and Clackmannan Branch held at Tillicoultry on June 29th, communications relative to the registration of midwives were received from the Lancashire and Cheshire Branch, and it was resolved:

> That this Branch recognises the existence of a demand for the services of midwives, and approves of the promotion of a Bill regulating and providing for the education, control, and supervision of such practice.

Edinburgh Branch.

At the annual meeting of the Edinburgh Branch held at Edinburgh on June 14th and 28th, communications were placed on the table from various bodies in reference to the proposed registration of midwives. After some conversation it was unanimously resolved:

> That the correspondence on the midwives question be remitted to a committee to report to nex annual meeting.

The committee was named as follows:—Drs. Bairstow, And. Balfour, J. Carmichael, Elder, Forbes, Berry Hart, J. Jamieson, Nasmyth, Jas. Ritchie, Cormack Smith, Spence, N. Walker (convener), Duddingston Wilson, and P. A. Young.

Professor Ollier, the well-known surgeon of Lyons, has been promoted to the grade of Commander of the Legion of Honour.

BRITISH MEDICAL ASSOCIATION, SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JULY 7th, 1894.

THE WORKHOUSE INFIRMARY AT BATH.

In another column we publish the report of our Commissioner on the workhouse infirmary at Bath, a report to which we would draw special attention because it illustrates the sort of nursing and the sort of appliances which guardians of a certain type—not, we fear, in Bath alone—are willing to accept as good enough for paupers even when sick and dying. There are many workhouses scattered over the country where things are bad enough, but bad from ignorance rather than from malice, where evils exist because they always have existed, and because no one has awakened to their cruelty or the necessity of reform. In Bath, however, the matter is different: for fifteen months the truth has been preached to the guardians by their medical officer, Mr. Craddock; the attention of the board has been repeatedly drawn by certain of its members to the necessity of improving the nursing staff, and one member is stated to have resigned because he was dissatisfied with the nursing. Ignorance, then, cannot be pleaded; the policy which has been persisted in has been adopted in full knowledge and in cold blood.

Now for an example of the outcome of this policy. Here we have an infirmary licensed for 230 beds, and at times so full that it is difficult to know where to place another patient, and yet so unprovided with the necessary appliances for the nursing of the sick that there is not even any hot water laid on to any of the wards. "Every drop of hot water for the infirmary use has to be carried from a boiler across a court... and no hot water is procurable at night except by boiling a kettle," which in hot weather is equivalent to saying that no hot water at all is procurable at night. Let us make no mistake about the meaning of this. We are not here talking about a little sick ward attached to a small workhouse, nor of a place for old people who are merely feeble, but of an infirmary for the treatment of the sick alone, an infirmary with more beds than either Charing Cross, Westminster, King's College, or University College Hospital, and yet without a drop of hot water laid on. This is a detail which must be insisted on because we find at Bath men on the board of guardians who, with this fact staring them in the face, are still satisfied with their infirmary, who maintain that it will compare favourably with other institutions, and look upon it as altogether good enough for paupers.

Of course the defence always set up is that the cases treated are not comparable with those in a general hospital. Perhaps so; still they are all ill, and surely they all require washing. As a fact, however, on the occasion of our Commissioner's visit, one patient in every three was so ill as to be confined to bed, and in a report of the medical officer read at a meeting of the guardians on May 23rd it was stated that there were then 207 patients in the infirmary, and that among them were 4 cases of pneumonia, 4 very bad cases of phthisis, 7 of heart disease, and 16 dirty cases. Again, in a letter to the guardians dated June 11th it is stated that on June 5th there were 25 cases of high temperature, including 5 of pneumonia. Surely such a list indicates a large proportion of acute disease, and emphasises the necessity of having proper appliances for its treatment.

This brings us to the next question, the one in which we are more particularly interested, namely, the nursing of the patients; and here, again, we must grasp the size of the institution, with its 230 beds in 16 wards, scattered over three different floors, thoroughly to appreciate the fact that the guardians have till now been content to employ only one certificated nurse during the day, and no nurse at all, either certificated or not, at night; for we entirely decline to descend to the Bath level and accept as "nursing" the attention of pauper wardswomen, of which the public has lately heard so much at Newton Abbott. We shall be told no doubt that the nurse has three paid assistants, or we may even be entertained with the misleading fiction that there are four paid nurses in the Bath Infirmary, but these other people, however good their intentions may be, are not trained nurses; one of them has been a year and nine months in the infirmary, where she has picked up what she could, but she is still hardly 21 years old; another when engaged had been for four years in a house of business, but before that had acted for a year and a half as assistant nurse in some infirmary the third is a girl of 17, who was not engaged as a nurse at all, but was drafted into the infirmary in an emergency, to look after the children and make herself generally useful. However willing these people may be, they are not trained nurses in the ordinary or in any true sense of the term, and we cannot but express our surprise that a committee of guardians should, in a published report, have committed themselves to the statement that there are four paid nurses in the infirmary, knowing, as they must have done, that the statement was untrue; that this girl of 17 was not a nurse, and that her employment in the infirmary had not been sanctioned by the Local Government Board. We come back, then, to the fact that this large institution, with its more than 200 patients, has one trained nurse with three unqualified assistants. This for the day; about the night, unfortunately, there is no question or dispute; then there is no nursing at all and no bells by which the nurses can be called. The thing is too horrible, but it is true, and, strange to say, it is defended by some of the Bath guardians. a committee appointed to investigate the matter reporting, only on June 20th, that they "cannot recommend that any addition be made to the present nursing staff of the infirmary." They quote in support of their contention the unpleasant fact that there are other infirmaries in even worse plight, Bristol having two paid nurses to 132 patients and Bedminster two to 128.

It would take too long to go into the other points brought

before us in our investigations—the poultice left on for twenty hours, the nephritis case placed between cold sheets after a hot bath, the narrow hard bedsteads, the poor thin beds, the small allowance of towels, the one comb for a ward, the bullying of the children, the insufficient accommodation for lying-in women, the absence of a labour ward, the *accouchement* of women in the general ward, etc. Pages might be written, but we content ourselves with insisting on the two salient points we have brought forward, and assert that guardians who are satisfied to run a hospital of 230 beds without hot water and only one trained nurse, are either absolutely ignorant of the duties they so lightly undertake and so slothfully perform, or culpably indifferent to the sufferings of those entrusted to their care. We fear the latter. So impressed were we with the gravity of the condition brought to light by the report of our Commissioner, that we sent down a representative, asking him to go again over the points which had been raised, and to ascertain how far they might be compatible with any more charitable view. We regret, however, that this gentleman, although armed with a permit from the vice-chairman of the general purposes committee, was absolutely refused admission by the master. Yet we find that among the by-laws approved by the Board of Guardians of the Bath Union is one containing the following provision:—"The Master of the workhouse shall admit any member of this Board, or such person as any member may by writing recommend, to visit the workhouse at all reasonable hours."

For the present there the matter stands. We think it probable, however, that the public hardly realises the completeness with which the inmates of a workhouse are placed in the power and subjected to the caprices of a workhouse master. We all know the common uneducated type of man to be found in this office in so many places; his mind stored, for the confounding of newly-elected guardians, with rules, by-laws, and regulations, his heart hardened by long contact with a system under which deceit is the only means by which relaxation of rules can be obtained. What the public should take well to heart is that between the meetings of the board such men are absolute masters over the workhouses and all their inmates; no outsider can get in, and loud indeed must be the complaint that can get out. What we want is a larger leaven of just men—or, better still, of true-hearted women—who will join the boards of guardians, will visit at all hours (as guardians alone have the power of doing), will watch and investigate every detail, and freely publish everything they see. Until we can get medical men and trained nurses as inspectors of workhouse infirmaries, publicity is the pauper's one protection and the press is the poor man's real guardian. This was the story of the reform of the metropolitan workhouse infirmaries by Mr. Ernest Hart and Dr. Rogers. The poor-law inspectors were among the most astonished men ever seen. They had no idea of what was going on under their eyes and noses. They were then as they evidently now are well-intentioned but technically uninformed and they need to be inspected and probably for these purposes reformed altogether. If the public once understood and believed, the present system could not continue for a moment; but people do not see and do not believe, trusting as they do to a system of official inspection so organised as to whitewash places such as Brentwood and Newton Abbot, an inspection which looks at books and regulations instead of beds and patients, and cries: "Peace, peace, where there is no peace."

PAUPER PALACE SCHOOLS.

Anyone who has followed the articles which have appeared week after week in these columns on barrack schools, can have but little doubt of the grounds on which we hold such institutions to be failures, and on which we advocate in their place the substitution of boarding out for those children who are orphans or deserted, and cottage homes and industrial schools for those whose circumstances do not permit them to be adopted or emigrated. But it is as well further to illustrate and emphasise the grounds for these opinions, or at least a few of them which specially bear on the health of the children, and the economic effect on the ratepayer.

It will be generally acknowledged that if the State has to support its subjects it should do so with a due regard to economy as well as efficiency. Economically the barrack schools are a failure, and that this is no new discovery can be proved by the fact that Lord Cranbrook, as early as 1885, stated in his opening address, at a Poor-law conference held in the Jerusalem Chamber, "that an instance had occurred in which children trained on the barrack system had cost as much as £86 per head." In 1888 the Paddington children cost £59 13s. 6½d, a slight decrease on previous years, for in 1886 we learn that the sum paid by that board of guardians had amounted to £62 0s. 3½d.

This large expenditure, however, cannot be directly attributed to "maintenance," but it is in part due to the fact that "loans, salaries, and other expenses" are defrayed from a common fund to which each parish has to contribute in proportion to its rateable value, regardless of the number of children sent to its schools. It can, however, be used as illustrating the expense of the barrack system as contrasted with the boarding-out system: for if children are sent to village homes the cottager welcomes them to the house he already occupies, and the big item of "loans and salaries" need make no appearance on the balance sheet. To continue, however, with Paddington. We find that even in the two years when the largest number of children was sent to its schools, the cost per head was £31, and this sum may be taken as about the average of the cost of each of the 24,341 children who are dependent on the State. The boys on the training ship *Exmouth* cost £35 5s. 9d. per annum each; the children in the West London District Schools, £33 2s. 2d.; and at Forest Gate the price of supporting each Whitechapel or Poplar child is £25 12s. 2d.

Against these figures it is well to compare the sums spent on children when boarded out. A suitable foster-mother having been found, the cottage sanitarily inspected, and the village school advantages considered, a pauper child is boarded out at the cost of 4s. a week, or £10 8s. a year, *plus* £2 per annum for clothing. Allowances are also granted for medicines and extra nourishment should sickness visit the "adopted" member of the family. The total cost to the State can be safely averaged as £13 per annum. But it has already been shown that the boarding-out system cannot be made available for all children, and therefore it still remains necessary to have some permanent reception houses for those waifs who, dragged in the wake of their

wretched and "ne'er-do-well" parents, are known by Poor-law officials as "ins and outs," as well as for that large class of children who, being inherently unhealthy, unwholesome, deficient, vicious, or unmanageable, are not fit to be placed as inmates of any good home. Classification for these unhappy juveniles is not only desirable, but absolutely essential, unless it is acknowledged to be advisable to introduce plague spots, moral as well as physical, into the midst of large concourses of children. There is no method of classification so satisfactory in its working as that of separate buildings, but the cottage homes hitherto built cannot be considered economical. At the cottage homes at Banstead Downs, which have been built for and maintained by the Kensington and Chelsea Union, each child costs £25 15s. 8d. In every boy's cottage thirty-six lads are housed, and each girl's household numbers twenty-five inmates, while at the Reception House started by the same Union and accommodating 97 inmates, the cost per head is £23 8s. 10d. per annum. At Hornchurch, where the children's village belongs to the Shoreditch Union, each cottage is arranged for thirty children, and there the cost is £25 17s. 8d.

It will be seen at a glance that these sums are not much lower than those which figure as barrack system expenses, but there still remains a third plan, and that is to place certain of these children in little homes or industrial schools, where, under the care of philanthropic ladies—and, we need not add, close Government inspection—the children can be educated and made fit for their place as workers in the world. The cost to the ratepayers of each child so placed is 6s. a week, or £15 10s. a year, but that amount, in all well-managed small institutions, has to be considerably augmented by the gifts of the charitable and the earnings of the children—this last source of income being of considerable value both in the development of character and in the attainment of a high standard of workmanship.

It would be well to turn from the economic point of view and to consider the barrack schools from the health point of view; and here the word "failure" is writ not only larger but deeper. Economic failure means overrated poor ratepayers and a consequent discontent of those who are most ready to share their all with a poor neighbour—results sufficiently disastrous in themselves, but comparatively slight compared to those which follow failure in matters of health.

It requires no very brilliant imagination to follow the career of one of these boys or girls who start in life with damaged eyesight; and yet we are but quoting Dr. Bridge's opinion when we affirm that these monster schools are never free from ophthalmia. Here again it is no new tale. As long as twenty years ago Mr. Nettleship examined, at the desire of the Local Government Board, every State-supported child in the metropolis, and he reports that of the whole population of these schools only 20 per cent. had healthy eyelids, and that this terrible condition of things was mainly due to the herding of the children together, an opinion established by the fact that "the proportion of children who are suffering from ophthalmia when admitted for the first time to the schools is far smaller than the percentage with this disease amongst those who have been some time in the schools."

The equipment to do battle with this insidious enemy has cost the ratepayers many an additional penny, the guardians much anxiety, and excellent officials the pain which all must feel who see their best work injured or nullified by a condition of things which they are powerless to alter.

Seven years ago nearly 50 per cent. of the children at Ashford Schools were stricken with typhoid fever, which has also recently appeared at Forest Gate. Scarlet fever has lately broken out at Brentwood, and it cannot be denied that fever is so frequent a visitor in such schools that there is good ground for the fears of the careful mother who, when circumstances compel her to face the possibility of sending her children into the schools, urges, as a reason against it, that "the fever is 'most allays there."

Besides these, the children suffer from a host of minor physical ills; ills which do not increase the death-rate, and yet most surely, ultimately, increase the poor-rate. Ills that disable the children, keep them listless and languid, and thus unable to take advantage of the educational provision made for them—sore ears, ringworm, skin diseases, chronic throat disorders, itch, boils, broken chilblains. We unhesitatingly affirm that there is no barrack school where these ailments are not more prevalent among their 600, 700, or 1,000 inmates than they are among the same number of children in any board school in the same neighbourhoods from which the incarcerated children are taken. In one medical man's reports he states that he found it necessary to give tonics to about half the children then resident in the pauper school of which he had the care. In another report, the medical officer is able to congratulate the managers on the health benefit that the children who had been sent by them into country cottages for a two weeks' visit had received: for six weeks after their return, he adds, there was no necessity to give them tonics. These visits are paid to the simple cottages in which the boarding-out advocates would permanently place the children.

Economically and hygienically these "Pauper Palaces" have been proved failures, but the Local Government Board, with the conservatism which seems to belong to the department, still continues to allow additions to be made to them, still sanctions alterations, repairs, and developments, which by increasing the "loans, salaries, and other expenses," make it additionally hard should any more enlightened board of guardians wish to take a step that would lead to the abandonment of such "palaces" or to the substitution for them of the more simple cottage homes.

Perhaps Mr. Shaw Lefevre is not yet convinced that barrack education has failed. If so, it is within his power to order a special commission to inquire exhaustively into the matter, a commission that should certainly include a lady among its members, for in the cause of pauper education the women, from Mrs. Nassau Senior and Miss F. Davenport-Hill to Miss Clifford, have done good service.

A Royal Commission can only arrive at the facts on which public opinion can demand action, and if it be argued that the subject is too limited in extent to need a Royal Commission it can be replied that though the matter affects only a few now, the few will ultimately affect the many, either economically as ratepayers or hygienically as spreaders of disease.

Medical Magistrate.—Dr. Frederic Thorne, of Leamington, was on July 3rd sworn in as a Justice of the Peace for the county of Warwick.

THE INDIA OFFICE AND BRIGADE-SURGEONS.

Those of our readers who have followed this subject will recollect that on the occasion of the deputation to the Secretary of State for India, regarding service of the Medical Staff in India, he challenged the correctness of the statement, by the Chairman of the Parliamentary Bills Committee, that his predecessors had benevolently regarded the claim of brigade-surgeons to charge pay or staff allowance, in view of the onerous duties—military, financial, and professional—which had been placed on them by the institution of station hospitals.

In the same strain, in a communication to Mr. Ernest Hart on April 26th, 1894, Lord Reay stated: "I am to add that the records of this Office for 1887 do not bear out your statement that the then Secretary of State admitted 'charge pay' as a just claim."

Fortunately we are able to give copies of two original letters, which go to show, first, that the statement of the spokesman at the deputation was substantially correct, and secondly, that although the "records" of the India Office are incomplete on this matter, undoubted testimony in support of our accuracy nevertheless exists.

The first letter, by Lord Cross to Sir Henry Fletcher, M.P., is strictly official, and suggests or gives permission to the officers in question to set forth their claims individually, a procedure which would not have been advised or permitted had such claims been viewed as improper or inadmissible. It is as follows:

India Office, Whitehall, S.W.,
February 23rd, 1887.

Sir,—I am desired by Lord Cross to acknowledge the receipt of your letter of the 20th inst., enclosing copy of a statement of claims of brigade surgeons in India, and to explain that, to enable the Secretary of State to consider the question it is essential that the representation should come before him in the regular course from an individual officer through the Government under which he is serving. Lord Cross can only suggest, therefore, that your correspondent should, if he thinks fit, embody the statement in the form of a personal memorial.—I am, Sir, yours faithfully, (Signed) W. T. Maitland.

Sir Henry Fletcher, Bt., M.P.

The second letter is semi-official, which may account for its absence from the records of the India Office; it is none the less a clear indication of Sir John Gorst's attitude towards the memorials of the brigade-surgeons, which, in consequence of Lord Cross's letter had come before him. It is as follows, written on official paper.

India Office, Whitehall, S.W.,
March 1st, 1888.

Dear Sir Henry,—Brigade-Surgeon Hamilton's memorial has been forwarded, with memorials from other officers in his position, by the Government of India for the decision of the Secretary of State in Council, and is now under consideration. I shall be glad to do all I can to assist the just claim of these officers, but I am not sanguine that the result will be favourable, as the Government of India state that they are unable to support the prayer of the memorialists, and no arguments seem to be brought forward which have not been considered already.—I am, yours truly, (Signed) John E. Gorst.

It will be observed that Sir John Gorst writes of the "just claim" in the singular, and he could have referred to no other than the claim of charge pay or staff allowance, which indeed was the gist of the several memorials. These letters bear out the entire accuracy of our contention in this dispute, and we trust will quicken the memories of many Indian officials, who cannot but remember the facts if they choose to think of them. The Secretary of State for India in 1888 considered the claim of the brigade-surgeons just, yet it was, nevertheless, set aside by the Council, on other grounds, we suppose, than those of mere justice. The lapse of a few years does not, unless by prescription, invalidate a just claim, and therefore a claim which had justice and fair dealing in 1888 remains, we maintain, the same in 1894.

Sir George Humphry is reported as still very weak, but to be progressing satisfactorily.

We regret to learn that the illness of the Right Hon. Sir Henry Layard is assuming a very serious and imminently threatening form.

Dr. J. Mackenzie Davidson has resigned his position of Ophthalmic Surgeon to the Aberdeen Royal Infirmary. We understand that Dr. George Ferdinands is a candidate for the appointment.

In the list of persons to whom Lord Rosebery has just granted pensions under the Civil List we note the following: Mr. John Beattie Crozier, in consideration of his philosophical writings and researches, £50; Dr. Thomas Gordon Hake, in recognition of his merits as a poet, £65; Mrs. Alice Margaret Hassall, in consideration of the services of her late husband, Dr. Arthur Hill Hassall, £50. Dr. Beattie Crozier graduated as M.B. in the University of Toronto in 1872. His writings, which are highly thought of by Mr. Herbert Spencer and other leaders of modern thought, include *The Religion of the Future*, published in 1880; and *Civilisation and Progress: being the Outlines of a New System of Political, Religious, and Social Philosophy*, a second edition of which appeared in 1888. Dr. Gordon Hake took the degree of M.D. at Glasgow in 1831, and has published several volumes of verse which have earned for him a place among those poets of the day whose writings show most of genuine inspiration. Mrs. Hassall is the widow of the well-known physician who recently died at San Remo.

THE PLAGUE AT HONG KONG.

Our special correspondent telegraphs from Hong Kong that the plague maintains its hold; the cases are fewer, but the virulence is unchanged. Three Japanese doctors have been attacked, one of whom has died.

THE ARMY MEDICAL DEBATE.

We publish in another column a full report of the debate in Supply in the House of Commons on the portion of the Army Estimates dealing with the Army Medical Department. As will be seen, the debate was long, and of no little importance. During its course a great number of topics were touched upon, and on the whole it may be said that Mr. Campbell-Bannerman, in his replies, treated the numerous questions raised in a sympathetic spirit. His statement that he was disposed to extend the system of annual training for field work will be hailed with general satisfaction, but we could wish that he had seen his way to speak more decisively as to the propriety of granting study leave to officers of the Medical Staff anxious to refresh their knowledge of modern surgical and sanitary matters.

THE "CALENDAR" OF THE APOTHECARIES' SOCIETY.

The first *Calendar*, bearing the date 1894, of the Society of Apothecaries of London, has just been issued. It is a slender volume of 110 pages, containing a list, arranged in alphabetical order, of the Licentiates of the Society from 1873 to 1893; lists of the Court of Assistants which is the Governing Body, of the standing committees, and of the examiners, as well as examination papers set for the prizes given in botany and in materia medica and therapeutical chemistry, with the names of the winners since the founda-

tion. The volume also contains the regulations for the Licence, but the pages of most general interest are those devoted to the historical account of the origin and progress of the Society, which has been written evidently by one well acquainted not only with the inner history, but also with the general public relations of the Society, and the influence it has exercised on the growth of the profession. Not the least important public duty of the Apothecaries' Society is the exercise of the important powers, conferred upon it by the Apothecaries Act of 1815, of prosecuting persons who practise medicine without qualification to do so. By the exercise of this power, to quote the words of the writer of this historical summary, the Society "not only protects its own Licentiates, but those of other bodies." The sketch concludes with the record of the fact that the recent report of the Gresham University Commission assigns to the Society a place in the Senate of the proposed Teaching University for London, and recommends also that it should be included in the Medical Faculty. The Society is able, therefore, to look forward to the future with a stout heart, as it looks back to the past with satisfaction.

MAGISTRATES AND THE POLICE DOCTOR.

UNDER the above heading we regret to see in the *Morning Advertiser* of June 20th some rather sharp observations of Mr. Plowden on the conduct of the police in calling for a medical opinion from the division surgeon in cases of slight injury to prisoners. The prisoners have to pay the fee. In the case named a drunken woman had an abrasion on her forehead. The doctor was called in, and the prisoner had to pay 7s. 6d. Mr. Plowden is said to have stigmatised this as "a waste of money, and quite unnecessary." We must say that we have the presumption to differ from the worthy magistrate. Bearing in mind many cases, which he seems to have forgotten, in which prisoners whose external injuries have been slight have afterwards died in the police cell or were removed to hospital, and grave censure has been expressed because medical aid had not been earlier sought, we think the course followed in this and similar cases (and which, we may say, was adopted in direct obedience to orders from the Commissioners) both humane and prudent. And if it adds somewhat to the expense of getting drunk and making a disturbance in the streets, we cannot see that this is an unmixed evil. Some very sensible comments on this matter appeared in the *Daily News* of June 28th. As our contemporary justly says, "If the police are to be perfectly sure that a doctor is necessary before calling him in, back we go to the old system of neglect of the dying if their illness simulates drunkenness."

THE MARINE BIOLOGICAL ASSOCIATION.

THE Marine Biological Association has recently issued a pamphlet recording the fruits of its labours, and appealing for more support, on the grounds that it not only promotes the improvement of zoological and botanical science, but also contributes largely to the development of the fishing industry. A comparative statement of accounts shows that whereas the yearly income of the Association is not much more than £2 000, the Biological Laboratory at Naples has cost about £20,000, and receives some £7,000 a year. The United States Fishery Commission receives £70,000 a year, and has a perfect fleet, while even the Scottish Fishery Board is allotted over £21,000 per annum in the estimates. The Association is greatly in need of funds to provide a sea-going vessel.

CHLOROFORM AND ITS DANGERS.

THE debate on the effect of the inhalation of chloroform as an anæsthetic on the heart and respiration, raised by a communication made by Surgeon-Lieutenant-Colonel Lawrie, of Hyderabad, who is now in this country, will be read with interest. The main contention advanced by Dr. Lawrie is, as is well known, that chloroform given by inhalation has no direct action on the heart. He supports this assertion by a reference to numerous experiments on animals and to a long experience in the administration of chloroform in hospital practice. Drs. Gaskell and Shore, on the other hand, do not accept the interpretation put on the experimental results as correct in all points, and cases have occurred, some of which were quoted during the discussion, in which in man death was apparently due to failure of the heart some time before the respiration ceased. Dr. Lauder Brunton made the interesting suggestion that death under chloroform might be favoured by the presence in the blood of toxins absorbed from the alimentary canal. In support of this he referred to some experiments of a Russian observer on the alkaloids of the urine, to the known fact that many of the deaths under chloroform occurred after accidents in men in robust health accustomed to a meat diet, and to the geographical distribution of deaths under chloroform, which were rare among populations who lived chiefly or entirely on vegetables. Dr. Brunton expressed himself as satisfied that chloroform did tend to paralyse the respiratory centre before the heart. Consequently it should be the duty of the chloroformist to watch the respiration, a tendency to failure in respiration being the first danger signal. Its recognition would probably prevent at least a considerable proportion of the sad accidents of which we have recently had to chronicle so large a number. We are informed that Surgeon-Lieutenant-Colonel Lawrie will give a demonstration of his method of producing chloroform anæsthesia at St. Mary's Hospital, Paddington, on Tuesday next, at 1.45 P.M.

FURTHER GOVERNMENTAL COMMITTEE ON INEBRIETY.

WE are informed that the Secretary of State for Scotland, Sir George Trevelyan, has appointed a committee, of which Sir Charles Cameron, Bart., M.P., is the chairman, to inquire into the whole subject of dealing with habitual offenders and inebriates. The inquiry is for Scotland alone.

THE PLEA OF INSANITY IN CRIMINAL CASES.

THE adjourned annual meeting of the Medico-Psychological Association of Great Britain and Ireland will be held in Bristol on July 31st, at 5 P.M., in the room assigned to the Section of Psychology at the annual meeting of the British Medical Association. After the Treasurer has presented his complete balance sheet, Dr. Mercier will move:

1. That in the opinion of this Association the time has arrived at which it is desirable that the House of Lords should again ask the opinion o the judges as to the questions that ought to be left to the jury in criminal cases in which the plea of insanity is raised.

2. That the Lord Chancellor be asked to receive a deputation from this Association on the subject.

SMALL-POX AND FAIRS.

THE prevalence of disease, especially small-pox, in Staffordshire at the present time has drawn particular attention to the fact that the annual fairs are about to be held, and that as a consequence vast concourses of people will be assembling at these meetings. In these circumstances it is feared that danger to the public health may arise. In respect of small-pox, the danger is appreciable with unvaccinated persons about, and we are therefore not surprised that the question of withholding consent to the fairs at the present juncture has been mooted. Unfortunately, unless we are greatly mistaken, there is no power by the exercise of which the fairs could be stayed; but it may be worth while considering whether some precautions cannot be devised whereby the danger may be minimised. Why not, in those districts where small-pox is now prevailing, get the towns well posted with placards, urging vaccination and revaccination where necessary, and alluding to the danger of crowds in the matter of the spread of the infection of small-pox among those who are not protected? Special facilities for night

attendance at stations, so that workpeople and the like could come, might attract those who could ill afford the time needed for attendance at the hour ordinarily fixed. Power of prohibition of all such gatherings at the discretion of a local sanitary authority, in the face of infectious disease, is much to be desired. The baneful effects which have followed these assemblies have not been limited to small-pox.

CONTAMINATED ICES.

We are glad to learn from the report of the British Institute of Preventive Medicine recently issued that progress is being made with an investigation of the ice creams sold so widely in the London streets and consumed in great measure by young children. The chemical part of the inquiry has been entrusted to Mr. Colwell, F.I.C., F.C.S., and the bacteriological part to Dr. Macfadyen. The number of bacteria present in various samples has already been determined, and the investigation will now be directed to ascertaining whether any of these microbes are of a specific disease-producing nature. Meanwhile we may note that simultaneously with the recent revelations as to the filthy and deadly impurities contained in ices sold in the streets of London, comes still more disquieting news from Paris. The examination of a series of samples of ices, seized on behalf of the Municipal Laboratory, has shown that the ices simply swarm with microbes of all kinds, besides containing fæcal matter and other disgusting impurities. These ices are sold in apparently respectable cafés, and the municipal authorities seem to be unable to stop the sale.

AN ANTI-TUBERCULOSIS LEAGUE.

A report, communicated to the recent French Congress for the Study of Tuberculosis, gives an account of the aims of the League and the methods of its work. By persistently distributing pamphlets descriptive of the nature of tuberculosis and the mode of its infection, by holding conferences, and by exciting interest in the subject, it seeks to diminish the widespread dissemination of the disease, so far as that is due to carelessness and ignorance. The League, however, no longer contents itself with organising conferences of medical men only, but is endeavouring to associate the schoolmasters and mistresses in the work of extending knowledge on this important subject, and already conferences with this object have been held, and have been largely attended. It is thought, however, that the time has arrived when the League might endeavour to press forward certain measures of collective hygiene, which are the legitimate outcome of its teaching. The first of these which would seem desirable is the enforcement of sanitary measures for the disinfection of apartments in hotels at winter health resorts, in which tuberculosis is so often contracted. It has been the opinion of some that notwithstanding all the efforts which have been made to rouse public opinion on this subject, but little effect has been produced. It is a matter of interest then to know that an inquiry made with the view of discovering what is being actually done in the matter at the various winter resorts in France, shows that in nearly all these stations certain efforts have been made to ensure the disinfection of rooms which have been occupied by phthisical persons, that in some of them disinfecting stoves have already been put in operation, and in others are being installed and will shortly be at work. From the discussion which followed the reading of the report it is clear that there is a considerable feeling in France in favour of including tuberculosis among the notifiable diseases, and of making it part of the duty of the sanitary authorities and the inspectors of lodgings to see after the proper disinfection of apartments used by tuberculous patients. On the other hand, in a country where the law and custom in regard to medical secrets are so different from what they are with us, the notification of such a disease as tuberculosis, the nature and even the existence of which can often only be known to the examining physician, is a matter of considerable difficulty. The alternative is, then, the dissemination of knowledge as to the necessity of such disinfection, and, under the influence of repeated advice on the part of physicians, the development of a demand on the part of the public for some proof that the rooms they occupy at hotels have been properly disinfected.

THE LATE PRESIDENT OF THE FRENCH REPUBLIC AND HIS SURGEONS.

The *Progrès Médical* of June 30th gives, on the authority of Professor Poncet of Lyons, the following details as to the surgical treatment pursued in the case of the late President of the French Republic. The wound was inflicted at a quarter past nine in the evening, and M. Poncet, who was at once summoned, found M. Carnot in a state of collapse, and with the aspect of one at the point of death. Tearing open the shirt and underclothing, M. Poncet found to the right of the line alba, about 3 centimetres from the ensiform cartilage, parallel to the edge of the false ribs, a wound from 20 to 25 millimetres in length, from from which black blood was oozing. He contented himself in the first instance with applying a handkerchief lightly to the wound, and with the view of preventing fatal syncope, he placed the President as nearly in a horizontal position as the carriage would allow, and strove to rouse him by speaking to him and occasionally tapping his face with his fingers. On the way to the Prefecture, distant about one kilometre, the President, who was unconscious, retched two or three times, but did not vomit. On arriving at the Prefecture he was laid on the bed with his head low, and while waiting for aseptic instruments M. Poncet applied iced compresses to the abdomen. A few minutes later, considering surgical interference to be urgently necessary, he, with the help of Drs. Masson, Monnoyer, Demandre, and Lépine, and in the presence of Professor Gailleton, Mayor of Lyons, and Drs. Kelsch, Albert, Fabre, and Rebatel, performed a local laparotomy, no anæsthetic being given on account of the collapsed state of the patient. An incision of 10 to 12 centimetres was made and progressively extended as the necessity arose; this incision was a prolongation of the wound made by the assassin's dagger. A considerable quantity of blood escaped, and M. Poncet, introducing his left forefinger into the depth of the wound was able clearly to make out on the anterior surface of the left lobe of the liver near the suspensory ligament a wound of the same dimensions as that in the skin. Separating the edges of the wound with forceps he saw, a little above the costal arch, the wound in the liver, into which the forefinger penetrated to a depth of 2 to 3 centimetres. Such rapid examination as was possible failed to reveal any lesion of the gall bladder, stomach, intestine, etc. At this stage of the operation Professor Ollier arrived, and M. Poncet having shown him the nature of the wound, and the impossibility of suturing the wound in the liver—a procedure, moreover, which appeared to be useless in view of the fact that the bleeding could at once be stopped by pressure—it was agreed, having regard to the collapsed state of the patient, simply to plug the wound. Some fibres of the rectus, which interfered with the manipulations, were divided by another incision of 5 to 6 centimetres inwards towards the middle line. The wound was plugged with iodoform gauze; then compresses of sterilised gauze were applied and fixed in place by a body bandage drawn moderately tight, while an assistant kept up slight pressure with his hand. At the beginning of the operation, when the first incision was made, the President recovered consciousness, and said in a clear voice, "Oh! doctor, how you hurt me." From that time he seemed to recover strength a little and answered questions with perfect distinctness. He was given small pieces of ice and a little iced champagne, and two subcutaneous injections of a gramme of ether were administered at an interval of twenty to thirty

minutes. The President complained of a certain difficulty in breathing and of pain in the stomach and loins. At half-past twelve his voice was still resonant, and he expressed his gratitude for what was being done for him. A minute or two later there was some return of the hæmorrhage, and convulsive movements occurred which caused the intestine to show a tendency to protrude through the wound. At thirty-eight minutes past twelve he died. The results of the *post-mortem* examination were stated in the BRITISH MEDICAL JOURNAL of June 30th. It need only be added that, apart from the wound, the liver was perfectly healthy. We gather that the treatment adopted in the case has been the object of some adverse criticism in France, but, considering the nature of the wound and the collapsed state of the President, it is difficult to see what more could have been done.

COST OF SMALL-POX.

ARISING out of a discussion on a case of alleged small-pox at Saltash, the medical officer declined to say whether it was a case of small-pox, but the expense to that union will not be less than £30. The clerk said the recent outbreak of small-pox would cost Saltash £200, but, inasmuch as this man Kitt was sent by St. Germans rural sanitary authority to the infectious hospital ship *Maud*, they could not get out of paying the bill for new clothes.—It is stated that the recent epidemic of small-pox cost the city of Boston 25,000 dollars.

TWENTY-FIVE CHILDREN.

THE *Lyon Médical* relates the case of a woman, aged 49, who presented herself at the Belleville Dispensary at the end of April last, bringing with her a little girl of 5. It appeared that the woman had been left a widow at 19 with five children; since that time she has had twenty other children born at full term, besides two miscarriages; she had never had twins. She has been three times married. Of the twenty-five children born alive, nineteen were boys who died in infancy; of the remainder, five are daughters, all of whom are alive, the eldest being now 28 and herself six months pregnant. The woman is said to have received a medal from the Sorbonne, but, being a practical-minded person and not in flourishing circumstances, she says she would have preferred some recognition of her contributions to the population question of a more substantial kind. When Madame de Staël asked Napoleon whom he considered to be the greatest woman that ever lived, he replied—much to the disgust, it may be presumed, of the literary lady—"The one who had the most children." He would no doubt have thought highly of the matron whose achievements have just been recorded, though he would have grudged the loss of nineteen possible conscripts.

THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

THE report of the Council presented to the annual general meeting of the British Institute of Preventive Medicine, Sir Joseph Lister in the chair, was on the whole a satisfactory document. During the past year £20,000 has been received from the Berridge Trustees, £10,000 from the Grocers' Company, and cash, securities, and plant from the College of State Medicine estimated to be of the value of over £4,000. Further, the Attorney-General has recently given his consent to the residue of the Berridge bequest, amounting to £25,000, being handed over to the Institute for the endowment of a laboratory to be devoted specially to the chemical and bacteriological examination of water supplies. A site for the Institute has been purchased from the Duke of Westminster at a cost of £6,000, and Mr. Alfred Waterhouse, R.A., has prepared draft plans, which are now under consideration. The work of the Institute is at present carried out in the house formerly occupied by the College of State Medicine. Perhaps the most important inquiry yet undertaken has been into the Hermite electrolytic system for the disinfection of sewage, as to which full reports have been published in the JOURNAL by Dr. Ruffer, the director, by whom the investigation was conducted, in conjunction with Mr. J. Lunt, B.Sc., chemical assistant. A special inquiry is also in progress as to the antitoxin of diphtheria, and arrangements are being made so that at some future time the material may be supplied by the Institute to medical men. The water from two private wells suspected of conveying typhoid fever has been submitted to chemical and bacteriological examination, which so far has yielded only negative evidence. Dr. A. Macfadyen, who has been appointed lecturer on bacteriology, has been chiefly engaged in the work of organisation and teaching; but in his laboratory Dr. Blaxall has conducted an inquiry into the etiology of the suppurative ear discharge occurring as a complication of scarlet fever, and into the biology of the bacillus pyocyaneus. Dr. J. M. Hobson has commenced a research into the bacteriology of sewage irrigation, from which it appears that the number of bacteria in the outfall of sewage is enormously increased by rainfall, and that the retentive effects of irrigation may be very great. The results of Dr. Dempster's inquiry into the influence of different kinds of soil on the comma and typhoid organisms were reported to the Royal Medical and Chirurgical Society last May, and have already been noticed in the JOURNAL, but further investigations on the length of life of pathogenic organisms in unsterilised soils are in progress. Surgeon-Major Smyth and Dr. Blaxall have commenced an investigation into certain bacteria which grow at high temperatures, and several other inquiries are in progress. Altogether it will be seen that good work in various directions has already been done in the laboratories, and that more is in progress, so that the Institute promises soon to take a place among the most important institutions devoted to the biological sciences in this country.

LADY CYCLISTS.

THE death of the lady cyclist from syncope after a bicycle ride is, of course, the text for many fraternal warnings, and advice to lady bicyclists to give up the enjoyment of an exercise in which it is feared they may indulge to excess. They are, of course, told by some that bicycling is unladylike if not unwomanly, and that women do not know how to practise the careful restraint in such matters to which men are accustomed. They may very well afford, however, to treat all this sage advice as at least superfluous. So far from being unsuited for women, bicycling is an exercise in which they may indulge with perfect security, and generally with much advantage. We are persuaded that they are as little prone to excess in athletics as are the generality of men, and within reasonable bounds we should like to see cycling as generally practised by women as by men, and it would be greatly to the advantage of many cycling clubs and cycling resorts that the ladylike element should be more largely introduced.

SCIENTIFIC INVESTIGATION AND THE PUBLIC.

MR. BALFOUR'S *obiter dicta* are always interesting and often instructive. His recent speech to the British Economic Association contained a remark which, though referring to political economy, has a much wider and we venture to think more important, application in the domain of medicine. The leader of the Opposition said "He thought that the public had never mixed itself up with scientific investigations without spoiling the investigations and doing itself a good deal of harm." How true these words are as regards medical investigations no one who knows anything of the subject will be disposed to deny. The invasion of the pathologist's laboratory by the interviewer and the descriptive reporter, which may almost be called a sign of the times, is an unmixed evil from

every point of view but that of the "able editor," who looks upon his paper as, like Peter Pindar's razors, "made to sell." The "feather-brained" irresponsibility, which Matthew Arnold looked upon as the "note" of the new journalism, is nowhere more conspicuously displayed than in the lightheartedness with which the latest "cure" for cancer or consumption, drunkenness or diphtheria is "boomed" with all the emphasis of sensational headlines, without the slightest inquiry as to the truth of the facts or as to the competence of the authority on which they are given. The mischief thus done is simply incalculable. It is not merely that the "man in the street" is invited to judge of matters as to which he is incapable of forming a rational opinion. False hopes are excited in the breasts of sufferers and their friends, and the bitterness of disappointment is added to their cup of sorrow. The diffusion of sound knowledge on matters appertaining to the health—a thing of the very greatest importance for the welfare of a community—is retarded. Scientific discovery is degraded in the eyes of cultured persons by being applied to such catchpenny uses. The effect on the scientific worker himself is hardly less disastrous. He is in danger of being bitten with the desire for cheap notoriety, and in his eagerness for an unwholesome publicity he becomes too apt to give to the world the unripe results of hurried and imperfect research. A great Father of the Church said: *Securus judicat orbis terrarum*, but the "democratic idea" has no place in medicine, and the "great heart of the people" cannot do the work of a scientifically trained brain.

THE UNIVERSITY QUESTION IN LONDON.

A meeting of the Special Committee of the Senate of the University of London was held on June 29th, when a deputation of the Annual Committee of Convocation was received, and presented a resolution adopted at a meeting of the committee on the previous day. The resolution expressed the opinion that it was desirable to memorialise the Government to take immediate steps to appoint a Statutory Commission to frame statutes in general accordance with the report of the Royal Commission, but with power to make modifications after conference with Convocation and other bodies. The Senate's Committee also received representatives of the late Annual Committee, who presented a memorandum setting forth certain objections to the scheme, but declined to receive a deputation of the "London University Defence Committee," on the ground that in the present state of the question, and considering the opinions expressed by the Senate, its reception would be of no advantage. On June 30th a meeting was held at the Royal College of Physicians, under the chairmanship of the President, of del gates representing the Royal Colleges, the medical schools, the theological colleges, and most of the other bodies which it is proposed should form constituent colleges of the reorganised University of London. After some discussion, a resolution moved by Mr. Erichsen, President of University College, and seconded by the Rev. Professor Whitehouse, of the Cheshunt Theological College, was carried, the only dissentients being the representatives of King's College. The resolution expressed general approval of the proposals in the report of the Royal Commission, and urged on the Government the desirability of appointing, at an early date, a Statutory Commission with power to frame the statutes and ordinances in general conformity with the Commissioners' recommendations.

GUY'S HOSPITAL.

The annual distribution of scholarships, medals, prizes, and certificates gained by the students in the Medical and Dental Schools took place at the hospital on July 4th. The place of Sir G. Humphry, who was unable to preside owing to illness, was taken by Professor Clifford Allbutt. After distributing the prizes, Dr. Allbutt said that Sir G. Humphry was improving, and had on the previous day been out for a drive. He remarked also what a serious thing it was for a man to start now on the medical life. He was indeed a brave man who would undertake the hard work of the five years' curriculum. They had that day seen the successful students, but there were others only a little less successful. He had never, happily, known jealousy between the two classes. To lose at examinations was a good discipline for the arduous life before them. An examination tested attainments and the order and regularity of a man's mind, but it was no test of character, which was, after all, the most important thing in life. Probably John Hunter would have passed a very poor examination. The discipline requisite for success at examinations was, however, very beneficial. The practical education by rule of thumb was dying out. Men, in order to do the practical work of the world must now be educated in practical science. The Treasurer of the hospital proposed a hearty vote of thanks to Dr. Allbutt for presiding; this was seconded by Dr. Pye-Smith, supported by Mr. Howse, and carried unanimously. In the evening a company of 230 Guy's men, past and present, and their friends, dined at the Métropole Hotel, under the chairmanship of Mr. Davies-Colley. The proceedings were of an enthusiastic character. The toast of "The Army and Navy" was replied to by Brigade-Surgeon-Lieutenant-Colonel Barrow. "Prosperity to Guy's" was proposed by Mr. Howse, who alluded to the fact that the Salters' Company had recently endowed five beds in the hospital. The Treasurer of the hospital replied, and remarked that extortionate examiners demanded still more every year from students, and that teachers had therefore more work in the way of preparation of their students to accomplish. "Prosperity to the Medical and Surgical School" of Guy's was given by the Chairman. "The Consulting Staff" was proposed by Mr. Clement Lucas. Dr. Wilks, Mr. Bryant, Dr. Hicks, and Dr. Pavy feelingly replied. "The Givers of Prizes" was proposed by Dr. Pye-Smith, and Sir Cameron Gull, Bart., Mr. S. Hoare, M.P., and Mr. Durham responded. Mr. Golding Bird proposed "The Past and Present Students of Guy's," to which Dr. E. H. Galton (for old students), and Mr. A. J. Sharp (house-physician), and Mr. W. J. Johnson (house-surgeon), responded. "The Chairman," proposed by Dr. Goodhart, and "The Honorary Secretary" (Mr. C. J. Symonds) were the two concluding toasts.

INCREASING EPIDEMICS IN SCHOOLS.

Dr. T. A. Stewart, H.M. Inspector of Schools, in his annual report on the Northern District of Scotland, calls attention to what he considers a very serious aspect of school attendance. During the last five years, he states, epidemics amongst children have been far more frequent than formerly. At the same time country schools have been found, in many cases, to be quite incapable of containing the children of the district, and have had to be enlarged. Now, he says, there does not seem to be an obvious—yet he fears there is a very real—connection between these two circumstances. The country population has not increased, but rather diminished, being drained by the centripetal attractions of the towns, and yet the children attending the schools are more numerous than ever before. The explanation seems to be that large numbers of the poorest class of children, many of them living in very insanitary houses, are filling up the schools, the attraction of free education bringing them in. Dr. Stewart also urges on the teaching body—and on those over them by law—that the most scrupulous care in regard to sanitation, not only in lavatories, but in the thorough cleaning of all schoolrooms, and in the prompt removal of all dust, which too often contains germs of infectious diseases, causing half the trouble in deficient school attendance, cannot too strongly be insisted on.

MEDICAL EDUCATION IN EGYPT.

[FROM OUR OWN CORRESPONDENT.]

The "Odds and Ends" Departments.—The Past Failures and Future Prospects of the Medical School.—Professor Virchow on the Difficulty of Language.—The Dearth of Modern Medical Literature in Arabic.—Virgin Soil for an International Medical Congress.—A Radical Remedy Necessary.

IN the task of reform undertaken by England since her occupation of the country it was perhaps unavoidable that Ministries and Departments such as Public Instruction and Sanitary should be the last to be touched by the wave of reform. Coming under what Mr. Milner has described in his *England in Egypt* as the "odds and ends," they had the disadvantage of being considered solely as spending departments, bringing in no direct return to the State.

Such slight reform as was attempted was unfortunately commenced at the wrong end. The Sanitary Department depending altogether on the Medical School for its *personnel*, the first effort should have been to put the Medical School on a proper footing, instead of which it was left untouched until 1890, when the first Englishman, the present Sub-director, was appointed Professor of Anatomy, and for the moment nothing further was attempted.

It is difficult for those outside official circles in Egypt to realise the obstruction, sometimes active, sometimes passive, to any reform involving European appointments. It is not, perhaps, unnatural that such a feeling should exist, but none the less does it impede the progress of reform. It reached its climax under the late Ministry of Riaz Pasha, when a strenuous effort was made to abolish European appointments and to revert to the old order of things, especially in the Medical School, which for the time became the centre of intrigue amongst the professors, and of insubordination on the part of the students. With the fall of the Riaz Ministry and the accession to power of Nubar Pasha, hopes are entertained that public instruction in all its branches will receive more enlightened consideration, and that the technical schools, especially the Medical School, will once for all be placed on a proper basis of organisation. The difficulties, however, are great as the changes necessary are radical. It is time that it should be acknowledged that instruction in the future must be given in a European language. All authorities on medical education who have visited Egypt agree in this. No one is more competent to express an opinion on this point than Professor Rudolf Virchow, and no criticism is more scathing than his on the results of the present system. His opinion may be translated as follows:—

"Many of them understand no other language than Arabic. The whole of the literature of civilised nations is closed to them. They know nothing of the satisfaction to be derived from the incessant conflicts in the arena of our science by all those who take part in them. The final results and theories become known to them only at a late period in a most summary form. I have known many, and can speak highly of their amiability; but I have not found one who could be counted on to contribute in a useful manner to the progress of the science and art of medicine."

A secondary education certificate is now required of students entering the school, and this certificate implies a knowledge of a European language, but the instruction is still given in Arabic. On leaving the school the imperfect knowledge acquired is too often left behind, and a relapse into primitive ignorance becomes too easy, more particularly if the young medical man receive, as is generally the case, an appointment as sanitary inspector in a remote country district.

Current medical literature in Arabic there is none, while even the textbooks used for instruction are Arabic translations of works now out of date; indeed, were it not for the practical and clinical instruction given at the Kasr-el-Aini Hospital, the standard of knowledge would be terribly low. As it is, the doctor turned out by the Cairo Medical School compares most unfavourably with his *confrère* from any European school.

Egyptian medical men possessing any pretensions even to moderate knowledge have been educated abroad, mostly in France, where, however, there is reason to believe that the examinations were somewhat simplified for Egyptian students.

Egypt is now behind every other country in medical education. Bacteriology is untaught, and the country does not yet possess a State bacteriological laboratory. The creation of such a laboratory involved the appointment of a European bacteriologist, and to all European appointments the Riaz Ministry was bitterly opposed. Vanity and ignorance have been described as the characteristics of the Egyptian medical men; whether the accusation be just or not, it is undeniable that they have no appreciation of the fact that in scientific knowledge they are behind the rest of the world.

The recent suggestion of a leading Egyptian that the International Medical Congress should one day soon assemble at Cairo is typical. Behind such a proposition lay either the firm conviction that everything was as it should be in the country, or a want of appreciation of how far behindhand the country really was. It would possibly be a liberal education for any congress to assemble in Egypt to study a country which, whether as regards its medical institutions and education, or its sanitation, is as yet practically virgin soil.

The first steps in reform must be a sweeping change in the teaching staff of the school, the introduction of a European language as the language for instruction, and the appointments of European professors to replace the majority of the old professors. The remedy is a radical one, but the disease is deep seated. Any tinkering with the school will be useless; it must either be wholly reformed or left as it is, a reproach to Egypt, and indirectly to England, which has made such progress in other Egyptian reforms. It remains to be seen whether the Nubar Ministry will have the strength as well as the inclination to carry out a reform which cannot long be deferred in the interests of the Egyptians themselves.

THE CHOLERA.

REUTER'S agent at Brussels, telegraphing on June 30th, reports that the *Journal de Bruxelles* states that five cases of choleraic disease were suddenly announced at Liége on the evening of June 28th. Three of the persons attacked, whose condition appeared to be serious, were taken to the Lazaretto. One fresh case was reported on June 29th, and one death has occurred. Up to June 30th twelve cases of cholera, six of which terminated fatally, occurred at Cronstadt. A new case of cholera, ending in death, is reported from East Prussia. The patient was a boy, aged 10. Owing to the outbreak of cholera at Cronstadt, the Military Governor of that place has taken far-reaching measures for the suppression of the epidemic. The Government of Kielce, in South West Russia, has been declared to be infected of cholera infection by order of the Minister of the Interior. A death from choleraic diarrhœa was announced on July 3rd at the Fejan quarantine station, near Stockholm.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 11th day of July next, at 2 o'clock in the afternoon.

The following Committees will also meet:

Tuesday, July 10th, 1894.—2.30 P.M. Premises Committee.—3.0 P.M. Branch Organisation Committee.—4 P.M. Trust Funds Committee.—4.15 P.M. Scientific Grants Committee.—5.30 P.M. Parliamentary Bills Committee. *Wednesday, July 11th, 1894.*—11 A.M. Journal and Finance Committee.

July, 1894. FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

NORTH WALES BRANCH.—The annual meeting will be held at the George Hotel, Bangor, on Thursday, July 26th. Members having a paper to read, any communication to make, or new member to propose, are requested to intimate on or before July 17th.—W. JONES-MORRIS, Honorary Secretary, Is-y-coed, Portmadoc.

EDINBURGH (AND FIFE) BRANCH.—The annual country meeting in conjunction with the Stirling, Kinross, and Clackmannan Branch will be held at Culross on Friday, July 20th, at 4 P.M. Train to Dunfermline

and thence by coach. Discussion on Empyema, and various communications from members of the Branches. Dinner at the Hotel, Culross. Members intending to be present should communicate with the Honorary Secretary, on or before July 10th, R. W. PHILIP, 4, Melville Crescent, Edinburgh.

BORDER COUNTIES BRANCH.—The annual meeting will be held at the County Hotel, Carlisle, on Friday, July 20th, at 2 P.M. Business: Election of officers for the ensuing year. President's Address, to be delivered by Dr. Connel of Peebles. Notices of motion to be sent to the Secretary ten days before date of meeting.—J. ALTHAM, M.B., Penrith.

OXFORD AND DISTRICT BRANCH.—The annual meeting will be held at Chipping Norton under the presidency of Dr. Hutchinson (who kindly invites the members to lunch), on Thursday, July 19th. Further details will be sent to each member of the Branch. Notice of any motion, etc., should be sent as soon as possible to the Honorary Secretary, W. LEWIS MORGAN, 37, Broad Street, Oxford.

NORTH OF ENGLAND BRANCH.—The annual meeting of this Branch will be held at the Royal Infirmary, Newcastle-on-Tyne, on Wednesday, July 18th, at 5 P.M., when the officers of the Branch for the ensuing year will be elected, and the President elect, Professor Oliver, will deliver the annual address. The dinner after the meeting will take place at the Douglas Hotel at 6.30 P.M.—G. E. WILLIAMSON, F.R.C.S., Honorary Secretary, 8, Eldon Square, Newcastle-on-Tyne.

GLASGOW AND WEST OF SCOTLAND BRANCH.—The Branch will meet at Ayr on Tuesday, July 10th. Dinner will be served at the Station Hotel at 4 P.M. Further particulars may be had by applying to the local Secretaries, F. FERGUS, M.D., 3, Elmbank Crescent, Glasgow; Mr. R. H. PARRY, 3, Brougham Terrace, Queen's Park Gate, Glasgow.

METROPOLITAN COUNTIES BRANCH.

THE forty-second annual meeting of this Branch was held at Limmer's Hotel, on June 26th, the PRESIDENT, Mr. Henry Power, occupying the chair.

Report of Council.—After the confirmation of the minutes the report of the retiring council was read. It showed that the Branch maintained its efficiency, and that the work of the five district societies had been carried on with energy and marked success. The Hertfordshire Society, which had become disorganised, had been reconstituted, and held several well-attended meetings. There had been no fewer than twenty-two losses by death, including Sir Andrew Clark, Dr. Cranstoun Charles, Dr. Edis, Dr. Graily Hewitt, Mr. Barnard Holt, Dr. Platt, Dr. Vinen, and Dr. Waite. A subcommittee of the Council had revised the laws of the Branch, and a general meeting was held on November 14th, 1893, to discuss them. They were finally adopted, and were approved and confirmed by the Council of the Association at its January meeting. A general meeting was held on May 23rd to discuss the question of the better suppression of unqualified practice. To this meeting were submitted proposals, drawn up by a committee of the Council, for the amendment of the existing Medical Acts with a view to this end. These proposals having been in the main adopted, but referred back to the committee for amendment in certain particulars, were now in an amended form submitted to the Branch for discussion. The Council had also considered the report of the Royal Gresham Commission, and adopted the following resolution:

The Council of the Metropolitan Counties Branch of the British Medical Association approves the general principles on which the scheme of the Gresham University Commission is based, but at the same time would take exception to certain details as regards the constitution and powers of the Academic Council.

And especially the Council of this Branch would urge that the medical members of the Academic Council should have greater powers with regard to the extent of the scientific portion of the examinations for medical degrees, which is in the present University the great stumbling-block in the way of obtaining a University degree in medicine.

The Council of this Branch is also of opinion that provision should be specifically made for the graduation of doubly-qualified men who pursued their studies in London previously to the foundation of the new University.

The report concluded by recommending the Branch to invite the Association to hold its annual meeting in London in 1895, and to hold its next *conversazione* in connection with it, instead of this year.—Mr. JESSETT moved, and Dr. HY. SMITH seconded, a resolution that the report of the Council be received, adopted, and entered on the minutes, and asked the Council to consider whether in future it would be advisable to send a printed copy of the report to all members before the meeting.—This was carried.

Treasurer's Report.—Mr. EASTES (the Treasurer) then read his report, which showed a balance of over £200 in his hands. It was then moved by Dr. RIGDEN, seconded by Mr. GEO. BROWN, and carried:

That the Treasurer's report be received, adopted, and entered on the minutes, and that the best thanks of the Branch be given to Mr. Eastes for the able and efficient manner in which he has discharged the duties o Treasurer during the past year.

Election of Officers.—The PRESIDENT then announced the result of the ballot; 126 voting papers had been returned, 5 of which were informal. The following were declared duly elected for 1894-95:—*President:* Leonard W. Sedgwick, M.D. *President-Elect:* Sir W. O. Priestley. *Vice-Presidents:* Fredk. W. Pavy, LL.D., M.D., F.R.S.; Victor Horsley, F.R.S.; Henry Power, M.B.; George Henty, M.D. *Treasurer:* George Eastes, M.B. *Secretaries:* Mr. Andrew Clark; Isambard Owen, M.D. *Members of Council* (the names to which an asterisk is prefixed are those of members nominated in place of eight who retire): *T. Barlow, M.D.; Mr. Geo. Brown; *S. Coupland, M.D.; *C. J. Cullingworth, M.D.; Mr. Frederic Durham; Mr. Reginald Harrison; Mr. J. Brindley James; *Mr. Hugh R. Ker; Norman Kerr, M.D.; *Mr. F. Howard Marsh; E. Hooper May, M.D.; *Brigade-Surgeon-Lieutenant-Colonel A. B. R. Myers; Mr. Morton A. Smale; Percy Smith, M.D.; *Mr. W. J. Walsham; *W. Hale White, M.D.; Dawson Williams, M.D.; C. H. Wise, M.D. *Representatives on the Council of the Association* (the Senior Secretary is *ex-officio* a representative by a law of the Branch): J. Syer Bristowe, LL.D., M.D., F.R.S.; H. Radcliffe Crocker, M.D.; George Eastes, M.B.; Mr. Noble Smith; Mr. Frederick Wallace. *Representative on Parliamentary Bills Committee:* Mr. Ernest Hart.

Annual Meeting of the Association in 1895.—The PRESIDENT then proposed, and Sir WILLIAM O. PRIESTLEY seconded:

That the Association be invited to hold its annual meeting in London in 1895, and that Dr. Russell Reynolds, the President of the Royal College of Physicians, be nominated as President.

This resolution was carried unanimously.

Installation of New President, and Votes of Thanks.—Mr. POWER then left the chair, and was succeeded by the new President, Dr. LEONARD W. SEDGWICK.—Dr. OSWALD moved the following resolution:

That the cordial thanks of the Branch be given to Mr. Henry Power for his able and courteous conduct as President of the Branch during the past year, and for the deep interest which he has shown in its prosperity, and in the discussion of matters affecting the welfare of the medical profession.

This was seconded by Dr. FORSYTH, and carried unanimously. Votes of thanks to the retiring Vice-Presidents and Council were proposed by Dr. DICKSON, and seconded by Dr. HENTY.

President's Address.—Dr. SEDGWICK then gave an address on The Personal Factor in Disease, which will be published.—Mr. POWER proposed and Mr. GEORGE BROWN seconded:

That the best thanks of this meeting be given to Dr. Leonard Sedgwick for his able and interesting address.

Carried unanimously.

Amendment of the Medical Acts.—The discussion on the suppression of unqualified practice postponed from May 23rd was then continued; a draft scheme for amending the Medical Acts was resolved upon, and on the motion of Mr. VICTOR HORSLEY, seconded by Dr. HENTY, it was resolved:

That copies of this be sent to the Council of the Association, the Chairman of the Parliamentary Bills Committee of the Association, the members of the General Medical Council, and such other persons as the Council of the Branch may determine.

Dinner.—The meeting then adjourned to dinner, to which 79 sat down.

LANCASHIRE AND CHESHIRE BRANCH.

THE fifty-eighth annual meeting of the Lancashire and Cheshire Branch was held at Stockport on June 27th, 1894.

Luncheon.—There were 279 members present, who, prior to the meeting, were entertained to a sumptuous luncheon by the profession in Stockport.

Installation of New President.—The chair was taken by the PRESIDENT, Mr. Taylor, who, after the minutes of the last annual and intermediate meetings had been read by the

SECRETARY and confirmed, introduced his successor, Dr. Edwin Rayner, of Stockport.

Vote of Thanks to Retiring President.—On the motion of Dr. SIMPSON, seconded by Dr. WOODCOCK, a very hearty vote of thanks was accorded to the retiring President, Mr. Taylor.

President's Address.—Dr. RAYNER then delivered his inaugural address on The Healing Art, A.D. 79. On the motion of Mr. TAYLOR, seconded by Dr. LLOYD ROBERTS, a very hearty vote of thanks was given to Dr. Rayner for his admirable address, which he was requested to have it printed and circulated among the members of the Branch.

Report of Council.—The report of the Council stated that the year just concluded had been marked by unwonted activity. There had been no fewer than seven Council meetings and three intermediate meetings of the Branch. There had been an accession of 142 new members, while the number of the old members had been depleted by 18 deaths, 21 migrations, and 15 names removed on account of non-payment of subscriptions. The total number of members was 932. The balance standing to the credit of the Branch at the end of last year was £546 14s. 8d., but with the increased expenditure of the current year that sum had already been considerably reduced. The committee appointed at the last annual meeting in Chester to raise a testimonial to Dr. Glascott in recognition of his valuable services to the Branch were very successful in their efforts, having collected £92 19s., with which a service of plate was purchased, and presented to Dr. Glascott at the intermediate meeting of the Branch held at Nantwich. The meeting in the Nantwich Brine Baths Hotel was a small but very enjoyable one. There were several papers of scientific interest read. There had been two very largely attended special meetings held in Manchester and Liverpool to consider the question of the registration of midwives, at both of which the Branch decided to oppose any legislation on the subject. A cordial invitation, which had been provisionally accepted by the Council, had been received from Liverpool to hold the annual meeting of 1895 in that city.—The PRESIDENT moved and Dr. CREGAN seconded the adoption of the report, which after a little discussion was carried unanimously.

Election of Officers.—The following were elected officers for the ensuing year: *President-elect:* Mr. W. Mitchell Banks. *Vice-Presidents:* Dr. Glascott and Mr. James Taylor. *General Secretary:* Dr. James Barr (Liverpool). *Representatives on the Council of the Association:* J. Barr, M.D. (Liverpool) (General Secretary), G. B. Barron, M.D. (Southport), E. H. Dickinson, M.D. (Liverpool), C. E. Glascott, M.D. (Manchester), and J. Taylor (Chester). *Members of Council:* W. Armstrong (Manchester), W. Bain, M.D. (Heaton Chapel), W. C. Barnish (Wigan), E. H. Beaman (Southport), W. Berry (Wigan), H. W. Boddy, M.D. Manchester), T. R. Bradshaw, M.D. (Liverpool), J. E. Burton (Liverpool), W. M. Campbell, M.D. (Liverpool), W. Carter, M.D. (Liverpool), J. M. Chisholm, M.D. (Wootton), R. Crean, M.D. (Manchester), J. N. Cregeen (Liverpool), A. Davidson, M.D. (Liverpool, J. E. Dunn (Preston), T. Fennell (Knutsford), A. Godson (Cheadle), T. B. Grimsdale, M.B. (Liverpool), F. M. Granger (Chester), A. Hamilton (Chester), N. Hannah (Ashton-in-Makerfield, A. C. E. Harris, M.D. (Birkenhead), R. Harris, M.B. (Southport), T. E. Hayward, M.B. (Haydock), E. W. Hope, M.D. (Liverpool), J. M. Hunt, M.B. (Liverpool), T. M. Johnson, M.D. (Salford), L. Jones, M.D. (Manchester), T. Jones, M.B. (Manchester), J. Lambert, M.D. (Birkenhead), H. C. March, M.D. (Rochdale), J. M. H. Martin, M.D. (Blackburn), B. J. Massiah, M.D. (Didsbury), R. A. Murray, M.B. (Stockport), H. L. Pearson (Rockferry), C. Puzey (Liverpool), C. J. Renshaw, M.D. (Ashton-on-Mersey), D. L. Roberts, M.D. (Manchester), W. J. Sinclair, M.D. (Manchester), T. Smith, M.D. (Lancaster), T. S. Smith, M.D. (Warrington), C. T. Street (Haydock), C. Thorp (Todmorden), F. Vacher (Birkenhead), G. E. Walker (Liverpool), W. Walter, M.D. (Manchester), J. W. Watkins, M.D. (Newton-le-Willows), J. White (Wigan), W. W. Wingate-Saul, M.D. (Lancaster), and A. H. Young, M.D. (Manchester). *Parliamentary Bills Committee:* G. E. Shuttleworth, M.D., C. T. Street, and R. R. Rentoul, M.D.

Next Annual Meeting.—On the motion of Dr. CARTER, seconded by Dr. WATKINS, it was unanimously resolved to hold the next annual meeting in Liverpool.

Adjournment of Meeting.—As there was a large amount of work on the agenda paper which it was impossible to get through, Dr. WOODCOCK moved that this meeting be adjourned to Manchester, the date to be fixed as soon as convenient by the Council. This was seconded by Dr. MACKIE CAMPBELL, and carried unanimously.

Dinner.—About eighty members dined together in the evening in the Memorial Hall. After the usual loyal toasts, given by the PRESIDENT, Dr. J. BRASSEY BRIERLEY proposed "The Bishop and Clergy," to which Canon SYMONDS responded.—The MAYOR proposed "The Lancashire and Cheshire Branch," to which the SECRETARY (Dr. Barr) suitably replied.—Dr. WOODCOCK gave "The Town and Trade of Stockport," to which the MAYOR replied.—Among the other toasts duly honoured were those of "The President," "President-elect." "The Medical Profession of Stockport," and "The Scrutineers."

WEST SOMERSET BRANCH.

THE fifty-first annual meeting of this Branch was held at Taunton on June 28th. Fourteen members attended.

Installation of New President.—The retiring PRESIDENT, Mr. Collyns, after some references to his past year of office, and expressing the pleasure which it had afforded him, introduced his successor, Mr. A. D. Willcocks, of Taunton.

Vote of Thanks.—Mr. WILLCOCKS, on taking the chair, moved:

That the best thanks of the Branch be given to Mr. Collyns for the able manner in which he had performed the duties of President during the past year.

The motion was carried by acclamation, and Mr. COLLYNS returned thanks.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

New Member.—Mr. Wm. Reginald Cooper (Bridgwater), already a member of the Association, was elected a member of the Branch.

Report of Council.—The report of Council stated that the Branch continued in a flourishing condition. The number of members at present on the roll was sixty-three, being a gain of one since the last annual report was presented, when it was mentioned that the number of members then in the Branch was the largest on record. Regret was expressed for several losses, among which that of the past-President of the Branch, Dr. Currie, who died on August 25th, 1893, was specially mentioned. The usual intermediate meetings were well attended, and good discussions ensued on each occasion. The autumnal meeting was marked by the attendance of Dr. Arthur D. Davies, from London, who delivered a very instructive and interesting address on Myxœdema and the Therapeutic Value of the Thyroid Treatment. At the spring meeting Mr. W. B. Cosens opened a discussion on Common Diseases of the Eye as met with in General Practice, by reading a carefully prepared paper on the subject. The Council had recently held a special meeting to consider (1) the proposed amendment of the penal clauses of the Medical Act, 1858, as recommended by the Parliamentary Bills Committee, and (2) the question of the registration of midwives. The Treasurer's accounts, which were audited by Mr. Rigden, showed a credit balance on the Branch account of £6 15s. 4d. It was resolved: "That the report of Council and Treasurer's accounts be received and adopted, and the thanks of this meeting be given to the Council and to the Treasurer for their services during the past year."

Election of Officers and Council.—The following were elected: *Representative of the Branch on the Council of the Association and on the Parliamentary Bills Committee:* W. L. Winterbotham, M.B., was re-elected. *Council of the Branch:* Of the three members who go out in rotation Messrs. Randolph and Rigden were re-elected, and Dr. Macdonald was elected in the place of Mr. Paulin. *Secretary and Treasurer:* Dr. Kelly was re-elected. *President-elect:* Mr. W. W. Walter, of Stoke-under-Ham, was elected as President-elect for 1895-96.

Future Meetings.—The Council was requested to arrange for an autumnal and spring meeting as usual, and it was left for the Council to settle as to the time and place for holding the next annual meeting.

President's Address.—Mr. A. D. WILLCOCKS delivered an

address on Alexander Popham, M.P. for Taunton, and the Bill for the Prevention of the Gaol Distemper. He contrasted the sanitary state of public buildings at the present day with what existed in the last century, and illustrated the subject by referring to the prevalence of typhus or gaol fever in the Somersetshire prisons in former times. One of the most notorious and fatal of the "Black Assizes" of the last century occurred at Taunton in 1730, and the ancient hall in which the outbreak originated was still in existence as part of the castle. The state of the prisons in other parts of the county of Somerset was described from the evidence of John Howard's reports, and from other authorities, and various instances were given of local epidemics of typhus which extended from the prisons as centres. The valuable work of Alexander Popham, who was for upwards of a quarter of a century the parliamentary representative of Taunton, was at the present day almost forgotten; and the President felt justified in recalling his name from undeserved oblivion. Mr. Popham very largely co-operated with John Howard in drawing the attention of the Legislature to the sanitary state of the prisons throughout the county. To him was due the introduction and passing into law of one of the most important pieces of sanitary legislation during the eighteenth century. The details of the Bill were passed in review. Some discussion followed, and a most hearty vote of thanks was accorded to the President for his very interesting address.

Amendment of Medical Acts.—It was resolved:

That this meeting approves of the amendment of the penal clauses of the Medical Act, 1858, as proposed by the Parliamentary Bills Committee and adopted by the Council of the Association, and reported in the BRITISH MEDICAL JOURNAL at page 920.

The manner in which unqualified practitioners were carrying on business in different parts of the district as general practitioners was referred to by several members, and Dr. Winterbotham, as Representative of the Branch, was requested to draw the attention of the Parliamentary Bills Committee to the difficulty, if not impossibility, of bringing the law as it now stands to bear upon these unqualified practitioners with any chance of stopping their illicit practices.

Dinner.—The dinner hour having arrived, some communications had to be postponed, and the proceedings were wound up by a good dinner at the Railway Hotel.

[The result of the debate on the registration of midwives will be found at p. 28.]

EDINBURGH BRANCH.

THE nineteenth annual meeting of this Branch was held in Edinburgh on June 14th, and an adjourned meeting on June 28th: Professor ANNANDALE, President, in the chair.

Treasurer's Statement.—The TREASURER presented his annual statement, showing a balance in favour of the Branch of £58 9s. 5½d.

Office-Bearers.—Professor Sir Thomas Grainger Stewart and Drs. Alex. James and A. G. Macdonald (Cupar) were elected members of the Branch Council, in the room of Drs. Cormack Smith, Felkin, and Douglas (Cupar), who retire by rotation. Dr. William Russell was re-elected Representative of the Branch on the Council of the Association; and the other office-bearers were re-elected.

New Members.—The SECRETARY announced that, since June, 1892, sixty-five new members had been admitted. The following were then elected members of the Branch: A. C. Ainslie, M.B.; William Alexander, M.D.; Robert Beveridge, M.B.; R. H. Blaikie, M.D.; H. M. Church, M.D.; Joseph Cotterill, M.B.; C. H. Fox, M.D.; F. W. N. Haultain, M.D.; Elsie Inglis, L.R.C.P.& S.; Fred. W. Mackay, M.B.; J. O. Reddie, M.B.; G. T. Sinclair, M.B.; and J. B. Tuke, M.D.

Order of Business.—Some discussion followed on the order of business, when it was unanimously agreed:

That for the future a meeting of the Council of the Branch be held one week previous to the annual meeting of the Branch, at which the business to be transacted by the Branch at the subsequent meeting shall be arranged; and the different items (including the names, addresses, and qualifications of candidates for admission) shall be placed on the billet summoning the meeting.

Parliamentary Bills Committee Reports.—The report of the Chairman of the Parliamentary Bills Committee on the amendment of the penal clauses of the Medical Act was received and approved. A memorandum from the Chairman of the same Committee, with reference to the Local Government (Scotland) Bill, was approved, and it was agreed to memorialise the Secretary for Scotland on the subject. A committee, consisting of Professor Annandale and Drs. Dow, Nasmyth (Convener), R. W. Philip, and P. A. Young, was appointed to prepare the memorial. The Committee was empowered to consult with the Parliamentary Bills Committee regarding certain other provisions of the Bill. The report of the Committee appointed to inquire into the question of the payment of railway expenses of the members of the Parliamentary Bills Committee was ordered to lie on the table.

British Medical Benevolent Fund.—Sanction was given to the advertisement of the British Medical Benevolent Fund and the Royal Medical Benevolent College on the circulars of the Branch whenever this could conveniently be arranged; and the object of both institutions was commended strongly to the sympathetic notice of the Branch.

Case of Dr. Allan.—On the motion of Dr. P. A. YOUNG (Lasswade), seconded by Dr. CLOUSTON, it was unanimously resolved:

That the members of the Branch express their sympathy with Dr. Allan, of Lasswade, in his anxiety consequent on the recent actions in the Law Courts; they desire to thank him for his courage in appealing the case, by which the rights of the profession have been vindicated in the eyes of the public; and they resolve to open a subscription to defray Dr. Allan's expenses resulting from the aforesaid action.

A Committee, consisting of Professor Annandale and Drs. Clouston, R. W. Philip, and P. A. Young (Convener) was appointed to give effect to the resolution.

Summer Country Meeting.—The summer meeting to be held in conjunction with the Stirling, Kinross, and Clackmannan Branch was fixed for Friday, July 20th, at Culross. Several members announced communications, and it was proposed to have a short discussion on empyema.

[The decision of the Branch on the question of the registration of midwives will be found at p. 28.]

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.

THE annual general meeting of this Branch was held at Tillicoultry on June 29th; Dr. CURRIE, President of the Branch, in the chair. Drs. Strachan, Milne, Spence, Macpherson, Linton, Mackintosh, Fergusson, and Lewis were present.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Treasurer's Report.—Dr. MACPHERSON presented his report of the finances of the Branch, showing a balance in hand of £10 18s. on May 31st, 1894. It was resolved to make a grant towards the expenses of the representative of the Branch on the General Council and on the Parliamentary Bills Committee.

Report of Council.—The report of Council for 1893-94 was presented.

Election of Office-bearers.—The following were elected office-bearers for the ensuing year:—*President:* Dr. J. C. McVail. *Vice-President:* Dr. Fraser (Kilsyth). *Honorary Treasurer:* Dr. Fergusson (Alloa). *Honorary Secretary:* Dr. Lewis. *Members of Council:* Drs. Currie, Strachan, Oswald, and Cribbes. *Representative on General Council and on the Parliamentary Bills Committee:* Dr. Strachan.

Next Meetings.—It was resolved to hold the next two meetings at Stirling and Larbert Asylum respectively.

Joint Meeting with the Edinburgh Branch.—A letter was read from the Honorary Secretary of the Edinburgh Branch, inviting members to meet that Branch at Culross on July 13th, and it was agreed to do so.

British Medical Benevolent Fund.—A leter was read from Dr. Holman in connection with this fund.

Payment of Railway Fares to Members of Parliamentary Bills Committee.—The report of Committee of General Council on this subject was read and approved.

Amendment of Penal Clauses of Medical Act.—Report and draft clauses for amendment of these clauses of Medical Act, was read and approved.

Local Government Bill for Scotland.—Reference was made to this Bill, and particularly to the proposed Local Govern-

ment Board, and the following resolution was passed unanimously:

That this Branch of the British Medical Association records its approval of the proposed constitution of the Local Government Board for Scotland, and considers the presence of a medical member on the Board to be essential to the proper administration of the public health and of Poor-law medical relief; and the Secretary of the Branch is instructed to forward this expression of opinion to the Secretary for Scotland and the members of Parliament for the district, as well as to the Parliamentary Bills Committee of the British Medical Association.

President's Address.—Dr. CURRIE delivered his presidential address on Goitre and its Prevalence in the Devon Valley, and discussed the varieties and causes of goitre, referring to some 160 cases within his knowledge, in only 4 of which exophthalmos had been present.—Several members joined in discussion, and Dr. STRACHAN proposed a vote of thanks to Dr. Currie.

Annual Dinner.—The annual dinner was served in the hotel after the meeting, Dr. Currie acting as chairman.

[The resolution passed on the question of the registration of midwives will be found at p. 28.]

BRITISH MEDICAL ASSOCIATION.

SIXTY-SECOND ANNUAL MEETING.

ADDITIONAL ARRANGEMENTS.

The following additional arrangements have been made for the annual meeting:

The Docks Committee of the Corporation of Bristol have kindly undertaken to provide a steamer to take a party of 100 members (including ladies) for an excursion round the docks and up the river to Hanham. The General Manager (Mr. Girdlestone), hopes to accompany the visitors and will show the granary with its elevating machinery and some of the newest accommodation for the use of American liners. The party will be enabled to obtain a thorough grasp of the dock system of the city.

The Head Master of the Bristol Grammar School and Mrs. Leighton will entertain the Association at a garden party on Thursday afternoon. Mr. Riseley has been engaged to preside at the organ, and Colonel Methuen and the officers of the Bristol Rifles will give the services of the regimental band.

The Directors of the Colston Hall Company will invite the members of the Association and their friends to an organ recital by Mr. Riseley on the morning of Wednesday, August 1st.

SPECIAL CORRESPONDENCE.

PARIS.

The Congress of Public Assistance at Lyons.—New Chemists and Druggists Bill.—Hospital Patients and their Prayers.—Accidents at the Funeral of the late President.—The Hospital for Sick Children.—General News.

AT the Congress of Public Assistance being held at Lyons M. Bourneville dealt with the question of idiot and weak-minded children. He considers that this class is too much neglected, and proposes the following measures, which were adopted by the Congress: That the Legislature should pass as quickly as possible the Bill proposed to amend the law of July 30th, 1838, for the protection of idiot and weak-minded children. Further, that the vote of the Conseils Généraux be carried out, and that departmental asylums be organised for the benefit of this class of infant patients. M. Sabrau, President of the Lyons Hospital Administration Council, declared that the city of Lyons would not be behindhand in providing asylums where these sufferers could be properly treated.

The new Chemists and Druggists Bill which recently passed the Chamber of Deputies is now before the Senate, and Professor Cornil has reported on it. The Senatorial Commission proposes the following modification: The second class of apothecaries is to be done away with; medical men are not to be allowed to dispense drugs.

At a recent meeting of the Municipal Council, M. Narane stated that the child of freethinking parents had been obliged by a nurse and a priest of the Salpètrière to say her prayers. The parents were obliged to protest several times before this coercion ceased. M. Strauss stated that at the Tenon Hospital the same coercion was practised. M. Peyron admitted the truth of the statements, and stated that the nurse had been severely blamed for her want of discretion. He excused the frequent visits of the priest at the Salpètrière by reminding the Council that the inmates were mostly aged, and clung to old-fashioned ways; but liberty of conscience is respected alike in all the Paris hospitals, if the directions of the Public Assistance are observed. M. Alpy justly claimed that every facility should be given to hospital patients wishing to see a priest.

The funeral ceremony of the late President of the Republic was, as had been foreseen, the occasion of a great many accidents; 122 people were treated at the different ambulance stations for sunstroke and some cases proved fatal. One man fell from a pillar in the Tuileries garden, striking against the railing, the spikes of which entered his abdomen, and he died on reaching the Tuileries garden ambulance. Others died from internal injuries. There were also a few cases of broken heads and fractured legs, none of them fatal.

The Commission appointed by the Société Médicale des Hôpitaux to report on the changes to be made in the medical organisation of the Hospital for Sick Children has decided that the late Dr. Ollivier's service should be maintained. Consequently a successor must be named.

Professor Bouchard, of Paris, Ministerial Inspector-General of Medical Faculties, has minutely inspected the entire organisation for medical and scientific instruction of the Bordeaux Faculty, and has expressed his approval of it.

The French Association for the Advancement of Science will hold its annual meeting at Caen from August 9th to 15th.

Dr. Pozzi has been elected Conseiller-Général for the Canton d'Issegeat, in the Dordogne Department, which was the scene of Boulanger's triumph.

The Conseil de l'Administration des Hospices at Lyons has named an annexe to the hospital, which was to have been visited by the late President, "Salle du President Carnot."

MELBOURNE.

The British Pharmacopœia and Australian Indigenous Drugs.—Annual Report on the Health of Melbourne.—Criminal Anthropology. Amputation at the Hip-Joint by Furneaux Jordan's Method.—Further Experiences with Tuberculin as a Diagnostic and Therapeutic Agent.—Adenoma of the Ovary.

AT the second meeting of the Subcommittee of the Branch of the British Medical Association, which was appointed for the purpose of drawing up a report in accordance with the request of the General Medical Council on the pharmaceutical preparations of the colony, Baron Sir Ferdinand von Müeller gave some very valuable information. The duboisin plant, otherwise known as *pituri*, he said, was indigenous in the northern parts of Australia; it was used as a mydriatic, and was more powerful than atropine. In its properties it was somewhat allied to nicotine and hyoscine. The natives are very fond of chewing it, and are very jealous of its whereabouts. They powder the leaves, and carry it in little bags behind the ear. A very small quantity of it is sufficient for stimulation. Its clinical value has not been sufficiently tested. A peculiarity of the *British Pharmacopœia* was that it orders that all essential oils should be derived from plants grown in Great Britain. It was desirable that permission should be obtained to make use of plants grown in the colony for pharmaceutical purposes, as the climate of Victoria was particularly suitable for the cultivation and growth of most of the plants indicated in the *Pharmacopœia*. Of red gum now so extensively utilised it was observed that the succus was the most active preparation. It was also remarked that the Australian wattle bark contained a larger percentage of tannin than is to be found in oak bark, and that the mimosa is ready for barking in six years.

Dr. Jamieson, the health officer of the city of Melbourne, in his annual report to the City Council, has endeavoured to

show that the notoriety which the city has obtained for unhealthiness is not deserved. He says "that the city takes a high rank amongst the principal cities of the world for a low death-rate." The total number of deaths for the year was 1,155. This includes those who died in all our public institutions, and who had been resident previously outside of the city. The population of the city proper was estimated at 63,551, so that the death-rate was 16 8 per 1,000. A table appended to his report shows the death-rate per 1,000 of population—London, 20.6; English towns, 20.7; Melbourne city, 16.8. In zymotic mortality the comparison per 10,000 death is still more decidedly in favour of Melbourne: the figures are—London, 20.4; English towns, 19.2; Melbourne city, 7.9. The infant mortality per 1 000 compares as follows: London, 155; English towns, 164; Melbourne city, 154.8. There were 17 deaths from typhoid fever through the year.

At the last meeting of the Branch Dr. Gresswell intimated that he had induced the Government to have three plaster-of-Paris copies made of the head, neck, and hands of the murderer Deeming, which were to be forwarded, in the name of the Branch, to the Royal College of Surgeons of England, to Turin, and to Oxford.

At the same meeting Mr. R. Stirling, honorary surgeon to the Melbourne Hospital, exhibited two patients on whom he had performed amputation of the hip-joint after the method of Mr. Furneaux Jordan, the one for tuberculous disease of the shaft and head, and the other for a very rare condition—hydatid of the bone.

In a paper entitled Tuberculin as a Diagnostic Agent, Dr. Springthorpe publishes his further experiences as a warm adherent of Koch's method of treatment. The subject is introduced by a number of quotations from well-known authorities in support of his action in continuing this line of treatment. He draws attention to Koch's original statement that in healthy subjects, even when 0.01 c.c. is used, little or no reaction follows, while in diseased individuals a much smaller dose causes severe general as well as a local reaction. With its abandonment as a therapeutic agent seems, not unnaturally, to have come also the general neglect of its use diagnostically. His own experience favours its diagnostic value, and he has always found it reliable when used with discretion. Where apparent failures have been recorded he attributes them to something wrong in the expectations, or the dosage, or the administration, or the sample of tuberculin used. He suggests that in the lower animals it should have been used more frequently, particularly in Victoria, where so large a proportion of the cattle is suspected to be tuberculous. Notwithstanding what others say to the contrary, he has met with no case in which tuberculin failed to produce reaction, and in which the diagnosis of tuberculous disease was beyond question. In a case of anæmia with some (?) hæmoptysis in which there was at first no sputum and the physical signs were not conclusive, and in which afterwards bacilli were found, the reactions to tuberculin were typical. When the question arises is a pleural effusion tuberculous? how can the doubt be settled without tuberculin? In another case of a stonemason aged 38, with three years' history of dyspnœa, blood-tinged sputa, and the signs of fibroid phthisis well marked, on being tested with tuberculin he reacted typically, while later on his sputum contained bacilli. At times it is difficult, if not impossible, to decide whether a case is true lupus, syphilis, or rodent ulcer. One such doubtful case was quoted which reacted with tuberculin. In another case (a woman) which showed no reaction, it was subsequently discovered that the husband was suffering from tertiary syphilis, and a third case of a similar nature which was treated for lupus, and which also showed no reaction to tuberculin, proved itself a rodent ulcer. Similarly with cases of glandular swelling. In a girl with strumous glands of the neck, an immediate reaction was marked, while another girl with lymphadenoma did not react at all. Another cases was one of primary tuberbulous ulcer of the pharynx, which also reacted generally and locally. Dr. Springthorpe concluded his very interesting paper with the remark that he left it to the profession in Victoria to choose whether it would wait for the usual rebound before availing itself of so valuable an aid, or whether it would without prejudice or partiality put it to the test. In the discussion that followed. Dr. Gray mentioned a case of strumous affection of the wrists, knees, and ankles of five years' duration, which had exhausted the diagnostic and therapeutic skill of many medical men, and which only began to improve under the continued use of tuberculin in a surprising and remarkable manner. Dr. Henry said that he was very much concerned in attempting to arrive at some decision in his own mind as to the exact position which Koch's discovery actually held as a remedy in disease. Up to the present he believed that the very high expectations which at one time were entertained had been followed by a general disappointment. We were still virtually in the dark as to the extent of its operations, whether for good or for bad. All medical literature coming from European centres of scientific research for months past contained no further report from any recognised authority indicating any encouragement to proceed with that line of treatment. He feared that even for diagnostic purposes an element of danger surrounded its use, as it was liable to arouse old cases and give a fresh impetus to a disease which might otherwise have remained latent, and possibly set up fresh foci of infection. He was not prepared to deny its uses as of diagnostic value in animals, although he failed to see that this served as a justifiable analogy to apply it in similar cases to man, for this reason, that in addition to the undoubted dangers of its introduction into the system, our means of diagnosing phthisis in the human subject were sufficiently perfect without stooping to the necessity of adopting a method containing such elements of risk. The specific fever set up by tuberculin might possibly be as easily induceded by any other toxin having irritating properties. He had no hesitation in recognising the indefatigable persistency which Dr. Springthorpe had consistently pursued in following up his series of complex investigations, for which he deserved the warmest commendations of the Branch.

The President, Dr. Felix Meyer, exhibited a large adenoma of the ovary he had removed from a girl of 23. There was a cribriform hymen and an infantile uterus. The patient had never menstruated.

CORRESPONDENCE.

THYROID TABLOIDS IN OBESITY.

Sir,—A great deal of discussion has taken place recently as to the value of the above product in the treatment of obesity. Will you kindly allow me to give my experience in the matter. I have exceptional opportunities of testing them, as under my care, the patient's weight is carefully taken each week, both in cases where they see me personally or where I diet, in conjunction with medical men, by correspondence. I have consequently been able to obtain very reliable data.

In the first place I wish it distinctly understood that these are cases in which, owing to an anæmic state of the blood and other abnormal conditions the loss of weight has been far slower than it usually is on the dietary I allow, which is one carefully adapted to each particular case, fat-forming ingredients being, of course, eliminated and nitrogenous constituents very much increased.

In ordinary cases the loss of weight in a person of from 12 to 14 stone averages 14 lbs. the first month, 10 to 12 lbs. the second month, 8 to 10 lbs. the third month, and so on. From an experience extending over a very large number of cases I may say that where obesity is treated by scientific dieting the result is improvement in health and condition and the reduction is permanent for the simple reason that where a proper course of diet is carried out until normal weight is attained, the habit of taking fattening food in excess is broken and the enhanced comfort and health induces the patient to make the very little difference necessary in the future to prevent a reaccumulation of the fat lost. There is no hardship whatever in the system I adopt neither in regard to food or fluid, and even champagne may be taken if it is free from sugar. This, in some cases, is a great desideratum, as many people will forego many luxuries if they can have their favourite beverage.

The brands of Laurent Perrier and Lacaze Rosseau are admissible, and are not only valuable in the treatment of

obesity, but also in the case of gout acidity, etc., where sugar in any form is most injurious.

In administering the tabloids I have given one of Burroughs, Welcome, and Co.'s three times a day, and with the exception of two patients who complained of feeling sick after taking them, in no case have I found any unpleasant symptoms arise. I must, however, mention that in numbers of cases where the loss of weight has already been rapid on diet alone, no increase of weight has taken place on supplementing the thyroid tabloids. The inference I draw from this is that in ordinary cases, with a properly constructed dietary, they would be useless; but that, undoubtedly, in certain conditions of the blood—as where it does not seem to have the power of oxidising the waste of the system—they are a valuable adjunct.

The following averages of a few typical cases will sufficiently illustrate the marked improvement in the loss of fat where the thyroid tabloids have been taken regularly as indicated:

Case 1.	On diet, only loss in	1 month	2¾ lbs.
,,	Thyroid tabloids supplementing diet...	2 months	12 lbs.
Case 2.	On diet only loss in	1 month	3½ lbs.
,,	Thyroid tabloids supplementing diet ...	6 weeks	16½ lbs.
Case 3.	On diet only loss in	1 month	6 lbs.
,,	Thyroid tabloids supplementing diet ...	1 month	15 lbs.
Case 4.	On diet only loss in	3 weeks	6 lbs.
,,	Thyroid tabloids supplementing diet ...	3 weeks	12 lbs.
Case 5.	On diet only loss in	2 months	15 lbs.
,,	Thyroid tabloids supplementing diet ...	3 months	27½ lbs.
Case 6.	On diet only loss in	2 months	14 lbs.
,,	Thyroid tabloids supplementing diet ...	1 month	8 lbs.

Naturally where a great number of cases of obesity come under observation one has the aid of special articles which assist in the process, and Mr. Blatchley, of 167, Oxford Street, London, makes palatable gluten and bran biscuits of different kinds for my purpose, which are a very great advantage, as they are highly nourishing, but contain scarcely a trace of fattening material.

I believe that now sufferers from obesity are beginning to realise the fact that there is no need for their carrying about the useless encumbrance that makes life a burden, and that by so doing they shorten their lives directly, and certainly lay themselves more open to attacks of disease that rapidly destroy it.

Where obesity is complicated by such conditions as fatty degeneration of the heart and albuminuria, I find that a properly apportioned nitrogenous diet has a most beneficial effect; it seems to brace up the muscular and nervous systems, and improve tissue. In one case of a patient who weighed over 19 stone, and whose urine deposited a fourth of its bulk in albumen, after reduction of 4 stone in weight the albumen diminished to a twentieth part. This patient is now in a very satisfactory condition, and able to walk eight or ten miles with enjoyment. Dr. Chambers, in his *Manual of Diet*, points out the benefit of a nitrogenous diet in this disease. I may further add that, in cases of a fatty heart, the benefit of a nitrogenous diet is surprising; it seems to arrest retrograde metamorphosis of and improve existing tissue.—I am, etc.,

Harley Street, W., June 28th. N. E. YORKE-DAVIES.

THE TRANSPORT OF WOUNDED AND THE GENEVA CONVENTION.

SIR,—In a leading article in the BRITISH MEDICAL JOURNAL of June 30th, on "The Medical Services in War," it is stated that "as regards medical transport (of field hospitals, etc.), it has simply ceased to exist in the United Kingdom, since the Transport Staff has been transformed into the combatant Army Service Corps, which is ineligible to work under the Red Cross." Within the last year this statement has appeared many times in the public press, but it is an evidence of a misapprehension of the provisions of the articles of the Geneva Convention. Article No. 2 of the Convention is as follows: "The *personnel* of the hospitals and of the ambulances (field hospitals), including that of the medical officers, of the administration, of the transport of the wounded, as well as the chaplains, shall participate in the benefits of neutrality whilst performing their duties, and as long as any wounded remain to be removed or attended to." As a matter of fact, no corps is ineligible to work under the Geneva Convention, provided its members shall have been authoritatively told off for the transport of or attendance on the sick and wounded in war, and that they wear the Red Cross badge.

As exemplifying how strictly the Germans read the articles of the Geneva Convention, while at the same time proving that they fully recognise that officers and men of combatant corps are eligible, while engaged in ambulance transport duties, to participate in its advantages, I may mention a case which occurred after one of the fights about Sedan in 1870-71. The ambulances of a French division had fallen into the hands of the Germans, and Dr. Roth of the German army was directed to ascertain if all those who had been taken prisoners were entitled to be considered neutral. Roth made no question as to the neutrality of the officer of the French "Intendance" (a combatant corps) who was in command of the ambulance transport, but he refused to consider as neutral that officer's soldier servant, whose only duty it was to attend on his master and not on the sick and wounded.

In European armies the Red Cross may not be worn except under proper and recognised authority, and when so worn there is no doubt but that it will be respected.—I am, etc.,

W. F. STEVENSON,
Professor of Military Surgery, Army Medical School, Netley.

July 2nd.

AN INTERNATIONAL MONUMENT TO CHARCOT.

SIR,—I am glad to see that a movement has been set on foot in Germany to raise funds to assist in the erection of a monument to Charcot in the Salpêtrière. May I suggest that a similar committee should be formed in England, so that we may join in this tribute to the memory of the great man who bore so large a part of the burden in the early days of the advance of neurology, and to whom more than to any other man we owe the great success that has attended that movement?—I am, etc.,

Birmingham, July 3rd. ROBERT SAUNDBY.

"OUR OUT-PATIENT DEPARTMENTS."

SIR,—Sir Edward Sieveking urges that advantage should be taken of the "Teaching University" movement to reform our out-patient departments, and to utilise their educational potentialities. He hopes thus to "bridge over the chasm which now exists between hospital teaching and independent practice," and to restore the good points of the faulty apprenticeship system. Having had considerable practical experience bearing on, and giving much attention to, the problem of the medical attendance upon the sick poor, I would venture to suggest that if a solution is to be found it will be in the extension and perfection of the provident system, with the recognition by hospital authorities that the out-patient department should be a purely consultative department. Provident institutions — whether dispensary or medical club—should be served by general practitioners; the out-patient department should be the public consulting room of the hospital physician or surgeon. The hospital consultant should not see any case that did not bring a card of introduction (which, with a little ingenuity, might be elaborated into a consultation card) from a general practitioner, being the medical officer of a *bonâ fide* provident institution, or otherwise recognised by previous agreement with the hospital authorities.

The provident system, although sound in principle, has thus far not answered all the expectations of its advocates. The provident dispensary, being too often a close institution with a select staff, has not found favour with the general practitioner, and has also elicited the underselling competition of the cheap doctor and of his bogus dispensary. The principles of a sound provident system are that the poor, whose average weekly earnings do not exceed a specified limit, should be able to contract with their chosen doctor for attendance upon themselves and families for a small but fair weekly payment, through the medium of a committee upon which the medical element is sufficiently represented. All the medical men practising in the district should have the option of joining the staff. A system of provident dispensaries in which these principles have been observed has been working satisfactorily to all concerned for fourteen years in Chislehurst and the Crays. Were it once known that the out-patient departments would be closed except to

those applying with such an introduction as is suggested, "cheap" doctors and bogus dispensaries would die a natural death. Dr. Bruce suggests that "policlinical" instruction should be undertaken by provident dispensaries. This could, however, only be done in such close institutions as those to which I have taken exception. It is obvious that instruction could not, as a rule, be as well given by an ordinary, often overworked, general practitioner, as by a less busy consultant, in close touch with his hospital school. Such pupillage would otherwise differ but little from assistantship, which could be obtained elsewhere upon more advantageous terms. I would strongly urge that a conference of representatives of all metropolitan organisations interested in the medical attendance upon the sick poor should be held, to consider the important question raised by Sir E. Sieveking.—I am etc.,

C. H. Allfrey, M.D.

St. Leonard's-on-Sea, June 19th.

UNQUALIFIED PRACTICE AND THE BRITISH MEDICAL ASSOCIATION.

Sir,—Noting as I have for many years past the feeble and half-hearted attempts to redress the wrongs of the medical practitioner, who on his part, I must say, has hitherto callously held aloof from all proferred help, it is with intense pleasure I read the communication signed by the members of the East Kent District, and published in the British Medical Journal of June 23rd. This looks like business at last.

For one I think it high time that our Association should look a little deeper into the burning questions unsettling the minds of many of its members. It is a grand Association, and no doubt has the latent power of greatly ameliorating our lot.—I am, etc.,

Bethnal Green Road, E., June 27th. H. F. C. Eagle.

THE MEDICAL SERVICES IN WAR.

Sir,—An important leading article in the British Medical Journal of June 30th reminds me of efforts I have made from time to time during the last ten years to rouse our rulers from their apathy, and to expose the evil consequences of the red tapeism which injures English prestige so much before other nations. Your article on the "Medical Services in War" will, I trust, do much good. My efforts have been directed to pointing out the defects which astonished this country regarding our Naval Medical Service when called upon to cope with an extra pressure of emergencies, as in the Crimean, Egyptian, and later wars. It is painful enough to learn of commissariat and medical exigency defects to which our land forces are exposed through the want of foresight of our heads of departments. To me the unnecessary hardships from which members of the naval service often suffer are more painful because they are less known. To meet such defects it is evident that special ships, corresponding to properly arranged and constructed hospitals on shore, should be built; and that they be managed by a special staff trained under a system corresponding to that carried out in connection with land forces. With this object I planned "hospital ships," and these plans I have exhibited at five international exhibitions, and received an award from each. But hospital ships would be equally useless with shore hospitals, except a properly-trained medical and nursing staff were always readily available for their management.

Trusting you will continue your efforts to amend the defects in our medical services.—I am, etc.,

P. Murray Braidwood, M.D.

Coleshill, Amersham, Bucks, July 3rd.

DESIRABLE IMPROVEMENTS IN HYPODERMIC SYRINGES.

Sir,—One of the most useful directions in which the inventive energy of pharmacist friends has lately been expended is the construction of hypodermic cases. These, of waistcoat pocket size, are invaluable for emergency practice, as the tablets, tabloids, tabellæ, etc., they contain can, of course, be in many cases just as well given by the mouth, anus, or vagina as under the skin. But the perfect hypodermic case has not yet been constructed, and with a view of helping pharmacists to a knowledge of what we want, I venture to amend the specifications usually followed as hereinafter stated:

1. Aluminium, bronze, or gold, silver, good brass, or vulcanite should be used in their construction; leather and glued-in linings should be studiously avoided.

2. All bottles should be square, as then the names of the contents would always be in view, and the particular drug wanted could be instantaneously selected. As it is now the bottles almost always twist round so that the name is hidden, and you have to twist round or take out every bottle before you find the one you want. Square bottles would take up no more room, and the discs would be less apt to stick, owing to the increased windage.

3. All needles should be not less than 1½ inch long, and should be of platinium-iridium, or some other incorrodible metal, so that no wire stylets would be required.

4. For use in the British Islands, anyway, the discs should be soluble, without requiring any triturating apparatus.

5. The corners of the case should be rounded off.

6. The piston should tighten by some simple mechanism, so that it could always be made airtight at a moment's notice.

These are almost self-obvious requirements, but there is not a single case in the market, as far as I know, which meets them all.—I am, etc.,

Blackpool, June 29th. Wm. Hardman.

NAVAL AND MILITARY MEDICAL SERVICES.

FEVER AND INVALIDING AT MALTA.

The prevalence of fever at Malta and its effects on invaliding having received attention in a service contemporary and in other quarters it is opportune to devote some remarks to the etiology of this disease so far as it can be ascertained from later reports furnished by the Army Medical Department. In respect of these it will be sufficient to refer to the Blue Books of 1891 and 1892, the latest issued, and to supplement this by the views of officers who have had experience of the disease from considerable service in Malta. The Blue Book for 1891 shows, for an average strength of 7,697 troops, 48 admissions with 19 deaths from enteric fever, being in the ratios respectively of 6.2 and 2.46 per 1,000 of strength while simple continued fever gave 840 admissions and 9 deaths; the admission ratio being equal to 109.1 per mille, which is higher than the corresponding rate in the previous year by 23.6, and than the average for five years by 13; the death-rate being lower than in 1890 by 0.11, but above the average by 0.14.

Taking now the figures for 1892 we find, with an average strength of 7,847 troops, that enteric caused 74 admissions and 25 deaths, and simple continued fevers 1,369 admissions with 14 deaths. The ratios of admissions and deaths were respectively 9.4 and 3.19 per 1,000 as compared with 6.2 and 2.46 in the previous year, and 5.1 and 1.87 respectively for the previous sexennial period.

Simple continued fever gave an average constantly sick of 105.63, and the ratios per 1,000 for admissions and deaths were 174.5 and 1.78 as compared with 109.1 and 1.17 in 1891. The average constantly sick rate was 13.46 as compared with 7.75 in the previous year. The considerable increase of sickness from simple continued fever in 1892 as compared with 1891 is remarkable. The probable cause is stated to be "the large number of young soldiers in the ranks."

A few words in respect of invaliding in 1891 and 1892 are requisite. In the former year, 12 cases of enteric and 36 of simple continued fever were invalided; in both there is an increase in the ratio on the previous year. In the latter year (1892) the principal causes of invaliding were continued fever 7.01, and enteric 0.89.

The sanitary reports of principal medical officers at Malta during 1891 and 1892 throw some light on the prevalence of fevers at that station. These may be summarised as follows: In 1891 the principal medical officer reports "the general health was not so satisfactory as during the previous year. The number constantly sick was higher, and there was a greater prevalence of simple continued fever. The increase of sickness from these fevers is attributed to the prolonged and trying summer, and to the presence in the ranks of several of

the regiments of a large number of weakly and immature youths who were unable to withstand the trying effects of climate. Medical officers concur in thinking that the nomenclature is misleading as regards these diseases, being of opinion that the term embraces more than one variety of fever, from the simple febricula to the severe and prolonged form called by some Malta fever. One medical officer states that Malta fever is not a continued fever, as it intermits, and not a true intermittent as it is not malarial, and for a similar reason it is not remittent; besides which its other characteristics are decidedly different.

Another medical officer points out that this disease differs from enteric in its definite duration; that characteristic spots are not found in Malta fever, and that the intestinal lesions are absent. Further, that the mortality from Maltese fever is comparatively small. When Maltese fever does not prove fatal, its sequelæ—for example, rheumatism of the muscular and articular varieties, being almost universal, go far to establish its diagnosis.

Many years ago an army medical officer who had considerable experience of Mediterranean fever at Netley proposed that owing to its obscure symptoms the fever should be called "febris complicata."

The residents of Malta ascribed the increased sickness in 1891 to the long and exhausting summer prolonged late into the autumn. In respect of the accommodation of the troops it is reported that "owing to the number of men to be accommodated some rooms were still in occupation which were not altogether desirable as dwelling places. There was in some cases a diminution of superficial space, causing the men's beds to be unduly close to one another. The conditions of health in casemated rooms is never entirely satisfactory, owing to the gloom and difficulty of carrying out efficient and thorough ventilation. Such rooms would be more fitted for stores."

There are several apparent causes for impairment of health, for example, insufficiency of accommodation, the danger of contaminated milk being supplied, either through dirt in the vessels or adulteration with bad water, and markedly through wines and spirits of the worst quality which are so freely supplied at cheap prices in the wine shops. A dual water supply is also given as a source of danger. In 1892 the principal medical officer again reports: "The health of the troops in the command was not as good as in the previous year. There was a decided increase in the number of both enteric and Mediterranean fevers, and these are always the chief causes of inefficiency. The heavy autumn rainfall washed impurities into the main drinking water supply. Much of the sickness might doubtless be averted if the men could be induced to refrain from drinking the impure water, ginger beer, etc., which they obtain in the town."

For a second time allusion is made in deprecation to the dual water supply—that is, one for drinking and the second for ablution. In 1892 the crowding in barracks is said to have been "much modified," which would point to still further room for improvement in hygienic conditions.

Here, then, to sum up, we have a combination of circumstances tending to produce ill-health and inefficiency in the troops serving at Malta. Possibly some relaxation in the duties during the summer months might go far to diminish the sick-rate, and arrangements to permit of men sleeping under canvas during the warm and dry months.

Maltese fever in all its aspects is a subject capable of being indefinitely expanded, but sufficient has been said to give an insight into its etiology. Its connection with sickness and invaliding in the naval service can be taken separately.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel G. W. McNalty, retired pay, has been appointed to the London Recruiting Depôt at St. George's Barracks.

INDIAN MEDICAL SERVICE.

Surgeon-Lieutenant-Colonel F. C. Nicholson, M.B., Bengal Establishment, is promoted to be Brigade-Surgeon-Lieutenant-Colonel, from April 1st. He was appointed Assistant Surgeon, October 1st, 1869, and served with the Lushai Expeditisu in 1871-72, and has the Frontier medal with clasp.

Surgeon-Lieutenant-Colonel T. H. Hendley, C.I.E., Bengal Establishment, is also promoted to be Brigade-Surgeon-Lieutenant-Colonel, from April 2nd. He, too, dates as Assistant-Surgeon from October 1st, 1869. He was nominated a Companion of the Order of the Indian Empire (C.I.E.) in January, 1891.

Surgeon-Lieutenant-Colonel S. M. Salaman, M.D., Bombay Establishment, is likewise promoted to be Brigade-Surgeon-Lieutenant-Colonel from May 7th, *vice* Brigade-Surgeon-Lieutenant-Colonel J. F. Keith, retired. He entered the service as Assistant-Surgeon, October 1st, 1869, and was made Surgeon-Lieutenant-Colonel, October 1st, 1889.

Brigade-Surgeon-Lieutenant-Colonel R. T. Wright, M.D., Bengal Establishment, Civil Surgeon of Etawah, is permitted to retire from the service, from June 20th. His first appointment was dated April 1st, 1869, and he became Brigade-Surgeon-Lieutenant-Colonel from January 2nd last. He was in the Afghan war in 1880, and has the medal for that campaign.

SANITATION IN THE ARMY.

On April 14th we drew attention to the insanitary condition of the Belfast barracks and its association with typhoid fever among the troops. We then stated that some £1,800 had been voted for drainage improvements. We now understand this has not even yet been commenced, although the Medical Department has urged immediate execution of the work. The subject has received renewed attention by the following circumstance. A soldier of one of the regiments quartered in Belfast, who proceeded on furlough last November, got enteric, and the civil practitioner in attendance on him has submitted a claim for some £8 odd for professional services rendered. The correspondence thereon has been submitted to the Medical Department, who have attributed the disease to defective drainage in the Belfast barracks, as the disease appeared immediately after the soldier left his station. Moreover, the room he occupied was in a block behind which the defective sewer is situated. The Commanding Royal Engineer (as is not infrequently the case) takes exception to the medical officer's views; but there can be little doubt that the latter's opinion is the correct one. At all events, the Medical Department has expressed the conviction that delay in remedial measures, that is, in the immediate removal of the drain, is fraught with danger to life and health. Probably Lord Wolseley's visit to Belfast on inspection will give the necessary impetus to the most discreditable system of *laissez faire* which pervades the Royal Engineering Department in sanitary matters. Why, one may well ask, is an urgent sanitary measure postponed when the money for carrying it out has been voted?

THE ROYAL NAVAL HOSPITAL, CHATHAM.

The Lords of the Admiralty have under consideration a proposal for the extension of the Royal Naval (Melville) Hospital at Chatham, by the addition of a wing to the buildings. Since Chatham has been made a depôt for the Navy Reserve, which has greatly increased the numerical strength under the naval command for that district, the accommodation at the hospital has been severely taxed, and the Medical Staff have lately been compelled to make serious representations to the Admiralty upon the subject. The scheme was advanced a step on the occasion of their lordships' recent official visit to Chatham, when the proposed site was inspected, and it is anticipated that the project will shortly receive their sanction.

THE NEW TITLES FOR WARRANT MEDICAL OFFICERS.

As we have already mentioned, a warrant has been issued by Her Majesty's Secretary of State for India, conferring upon members of the subordinate medical department, commonly known as army apothecaries, the title of assistant surgeon. The senior members of this body have been accorded the honorary rank and title of surgeon-major, surgeon-captain, and surgeon-lieutenant. The services of this most useful class of medical officers are mostly utilised in European military hospitals, but not a few of them are employed in other useful and responsible offices—for example, in the medical store department, in large civil hospitals and colleges, and in charge of small civil stations, while many of them have succeeded in gaining admission into the Indian Medical Service. Of late years the course of instruction which the junior officers of this department are required to undergo in the presidency medical colleges has been extended and amplified, so that now they obtain a training which compares not unfavourably with that of medical men in India and Europe; they are examined and certified accordingly. The new titles attest a fact which these new regulations have established—namely, that the members of this class are no longer mere apothecaries, but well-taught and thoroughly qualified medical men. The title of assistant surgeon which they will now bear is a time-honoured and respected one. Not many years ago it was borne by the junior officers of the British and Indian Medical Services, and they will now share it with that most useful and honourable class of native graduates formerly known as sub-assistant surgeons, who occupy much the same position in the civil department which the apothecary class do in the military. The boon conferred by this warrant will be accepted with satisfaction and gratitude by its recipients. As it will undoubtedly raise their status and repute, it ought also to stimulate them to strenuous efforts to make the most of the educational advantages placed at their disposal by the Government of India, and to qualify themselves for more exalted and responsible duties.

THE SOLDIER'S RATIONS.

The report of a Committee on the general question of rations and their cooking has just been issued from Simla. The Committee, presided over by Brigadier-General Barnard, Commanding Narbada District, visited Poona, Lucknow, Meerut, and Rawal Pindi, four large Indian stations, and as the result of inspection lay down the following rules:

1. That careful and methodical observation is absolutely necessary to secure good rations.

2. That it should be seen that the rations are actually drawn, and that these only entirely reach the cookhouses and are from thence wholly conveyed to the barrack rooms.

At present there is little or no supervision over these important matters, and appliances and modes of cooking are such as existed fifty

years ago and unsuitable to the present time. Often the cooks are filthy. At Poonah a Warren stove was used in the Central Military Prison, the kitchen was a model of cleanliness, free from smells and smoke, and everything neat and tidy as a cookhouse ought to be. The food cooked was excellent.

On leaving the prison the Committee visited the cookhouse of the Station Hospital adjoining. Here the contrast was extreme. The cookhouse a hovel, the rations being messed about as they have been for fifty years past. On the one hand cleanliness, economy, and properly cooked food for the prisoners, on the other dirt, waste, and ill-cooked food for the patients in hospital. Similarly, a few yards distant, was to be found an infantry battalion, where bad cooking, dirt, waste, and extravagance attended the cooking of the soldier's food. The Warren stove in the prison costs some Rs.52 per month for 120 men, whereas in the barracks opposite to the prison Rs.225 were expended. The arguments in favour of the Warren stove, the Committee state, are overwhelming, for meals could thereby be prepared and varied as much in India as they are at home, and further the soldier's diet in India would be under proper supervision, his health benefited, and his living altogether an improvement on what it now is, not to speak of the economy to the soldier himself. All soldiers who have recently arrived in India state that they were living much better at home and more cheaply.

This very important subject presents a large field for thorough reform, as food, and wholesome food, is closely associated with the general health of the troops, more particularly in India, where experience has shown that the cooking is generally carelessly carried out and cleanliness an almost unknown quantity.

RETIREMENT IN VOLUNTEERS.

X.Y.Z. is informed that retirement with privilege of wearing uniform is usually granted to Volunteer medical officers after twenty years' service. The recommendation of the officer commanding the corps is necessary.

MEDICAL MILITARY TITLES.

Persevere suggests that an authoritative order from the War Office would settle the colloquial use of the military titles of medical officers, which at present are in practical disuse.

*** We fear it is about the last thing the War Office would do to issue such an order. We have always regarded the compound as the first step towards a simple military title, and until such is given there is little chance of its use colloquially.

MEDICO-LEGAL AND MEDICO-ETHICAL.

COMPETITION FOR MEDICAL APPOINTMENTS.

It must always be a matter for regret to those who have the honour and interests of the medical profession at heart when any case is found presenting even *primâ facie* the appearance of infringement of any of those admirable ethical rules which have been laid down for the guidance of the faculty in the various relations of professional life. Instances of the kind, however, we have no hesitation in saying, are extremely rare, and it is for this reason that any apparent deviation is the more observable; and we trust, therefore, that some explanation may be forthcoming of the circumstances attending the recent election by the Newtown and Llanidloes Board of Guardians of a medical officer of health for the parish of Llanllwchaiarn.

From the report of the meeting of the board contained in the *Montgomery Express and Radnor Times* of June 19th last, we gather that part of the business on the agenda paper was a motion for the reappointment of Dr. Purchas, the then medical officer for that parish, but on the matter coming forward the clerk to the board stated that he had received a letter from Dr. Roberts of Newtown, who applied for the appointment, and whose letter, after some discussion, was read. The report discloses no complaint of any kind against Dr. Purchas, who has held the appointment for some time. An objection was raised, however, on the part of some of the guardians, that he did not actually reside within the parish, although this apparently had not been considered a ground of objection before, and Dr. Purchas employed a qualified assistant who was resident there.

A somewhat heated discussion seems to have taken place, and reference was made to the presence on that particular occasion of certain *ex officio* guardians, who were not, it is stated, in the habit of entering an appearance on ordinary occasions. This, however, has no reference to the immediate subject matter with which we have to treat. No notice, so far as we can ascertain from the report, had been given of the intention to appoint a new medical officer, but simply of the motion to reappoint Dr. Purchas.

In the course of the discussion Dr. Roberts was called in, and stated that he had decided to reside at Llanllwchaiarn whether he obtained the appointment or not, and eventually the resolution for his appointment, which seems to have come upon some of the guardians by surprise, was put to the meeting and carried by 16 votes to 12.

In commenting upon this subject the *Montgomery County Times* of June 16th, 1894, censures in strong terms the votes of the sixteen members of the board of guardians at their meeting above referred to, and characterises it as a deliberate insult and injustice to an estimable and popular professional gentleman. Moreover, allusion is made to the resolution in question being out of form, as in the absence of an advertisement for candidates the board were not in a position to take the course they had adopted.

The legal aspects of the appointment we do not propose to refer to. If there has been any breach of the regulations provided in such cases the Local Government Board will probably interfere. What we have to concern ourselves with is, whether or not there has been a breach of medical etiquette. Did Dr. Roberts canvass or apply for the appointment in question before there had been any notification of the vacancy or any advertisement for candidates? In the *Code of Medical Ethics* there is a rule to the effect that it is derogatory to the profession for any member ..... "to tender for a club or other paid appointment, or to apply or canvass for such before a vacancy has been declared."

We should be neglecting our duty to the profession if we were to pass over, without comment, what appears to have been a grave breach of a commendable rule, and we do not think that the matter should be allowed to rest until a full explanation has been given.

ACTION FOR LIBEL BY A MIDWIFE.

A libel action of interest to the medical profession and to the public was recently tried at Bristol Assizes. The plaintiff practised as a midwife at Holcombe, near Bath, and she complained of a letter which had appeared in a local newspaper, which stated that a woman whom she had attended had "died in childbed through the unskilful treatment of the midwife." The defendants in the action were the writer of the letter, who was a Poor-law guardian, and the proprietors of the paper. It was proved that a woman whom the plaintiff, without any medical assistance, had attended in a premature confinement had subsequently died. There was an inquest, and the coroner's jury returned a verdict of death from natural causes. The writer of the letter was present at the inquest, and apparently disagreed with the finding of the jury, for he wrote the letter in question to the paper. His defence was a justification, and the husband of the deceased woman and three medical witnesses were called to prove that the plaintiff's treatment had been unskilful. The newspaper proprietors said that the letter referred to a matter of public interest, and that they had also published an answer written by the plaintiff, and consequently suggested that they, at any rate, had incurred no liability. The judge left to the jury two questions, namely, (1) Was the letter a libel? and (2) Were the statements in it true? They answered both questions adversely to the defendants, and awarded £50 damages against the writer of the letter and £25 against the newspaper. It is of course impossible to judge from a short report in a newspaper whether this was a proper one or not. But as the damages cannot be called excessive there is not much probability of its being set aside. People who wish to comment on matters of public interest should be careful not to state anything defamatory unless they are sure of being able to prove its absolute truth.

A FRIENDLY SOCIETIES MEDICAL ASSOCIATION.

M.B. writes, with reference to the tenth report of one of these associations: This association is composed of some sixteen lodges and societies. The medical officer has a salary of £240, and is graciously allowed one-half of the midwifery fees, and has an allowance for cabs, fire and gas, and house cleaning, which makes a total income of £297. The work done by him amounts to over 6,000 visits, and over 11,500 consultations and 270 examinations of candidates per year. Taking these figures as of one value, they show that each is worth a fraction more than 3¾d., so far as the doctor's income is concerned, exclusive of between 60 and 70 confinements. I think I would not be far wrong in stating that the great majority of these cases could afford, say, 1s. per visit and 6d. per consultation; and, if such were the case, this would produce an income of nearly £500, exclusive of the midwifery cases.

To compete with this association there are several private clubs at the same charges, and also a so-called provident dispensary, the staff of which apply a flattering unction to their souls by considering they are doing a charity, though, of course, they are in receipt of a share of the surplus of the members' providence. In the name of this provident dispensary, bills are sent out and collectors call, thereby doing for the dispensary what would be infamous conduct for a private man, though the said medical officers most directly benefit by this touting.

This staff includes some of the hospital staff, the medical officer of health, and some general practitioners, who also have private clubs. Anyone passing the general hospital here on admission days will see at a glance how it is abused. Many patients are perfectly able to and probably have been paying their own doctor, but are allured from the private practitioner by the very men who pride themselves on their position as hospital physicians and surgeons, and on their being charitable in giving their advice for nothing. In fact, they do for a public institution what I am sure they would scorn to do in their private capacity. The remedy is easy—namely, that all applicants for charitable and free advice have a paper signed by their attending doctor, otherwise the hospital and dispensary occupy the position of being the largest and most powerful undercutting schemes in existence.

*** The model of a provident dispensary advocated in this Journal is an institution comprising on its staff all the practitioners of the district who choose to join: and managed by a joint medical and lay committee under such rules with regard to fees and to wage limits as will make it both self-supporting and equitable to the poor and to their medical attendants. To such institutions, honestly managed, no objections of "underselling" can, we believe, attach.

SUPERSESSION.

W.L. writes: Dr. A., three years ago attended a case of diphtheria in a family. Since then the family was attended by Dr. B. and myself. Recently diphtheria again occurred in the family and I was called in to attend. I advised tracheotomy, but suggested a consultation before operating. By common consent Dr. A. was the consultant. I operated in Dr. A.'s presence. The child died in forty-eight hours after operation. The parents got frightened for a third child's throat, and sent for Dr. A. without communicating with me. Dr. A. attended and continued to attend. Is Dr. A.'s action ethically right or wrong?

*** Although there is no ethical rule within our knowledge which directly meets the two special points involved in the case submitted by W. L., we are of opinion that Dr. A. should have been guided by the principle clearly laid down in the following note appended to Rule 12 of the *Ethical Code*, chap. ii, sec. 4: "N.B.—Should the practitioner who

has been called in consultation be subsequently requested to take sole charge of the patient he should courteously but firmly decline." Under the exceptional and affecting circumstances, however, we would advise W. L., notwithstanding the discourtesy evinced towards him by the family, to courteously acquiesce in their apparent wish to revert to their former medical adviser, although he acted as consultant in the recent fatal case of illness, bearing in mind, moreover, that he (W. L.) superseded Dr. A. under somewhat similar circumstances.

CLUB RATES FOR CHILDREN.

VERITAS.—It would appear, from the rules of the medical association forwarded to us by our correspondent, that a subscription of 1s. per annum entitles all the children of a family under 16 years of age to medical attendance, but without saying anything as to the adequacy of this remuneration, we may observe that it is not quite the same as "free" medical attendance. In the article to which our correspondent refers by "free" medical attendance is meant where the attendance of the children is included in the fee paid by the parents, and where there is no additional payment whatever on this count; by the above rules it is clear that the 4s. per annum is in addition to the parents' payments. We regret to learn that in the working of this institution "much visiting is done by an unqualified assistant," and think that in the first place the fact ought to be brought before the committee, whose duty it is to prevent the occurrence of such practices; but if the latter failed to discharge their duty in this respect, we would suggest that the conduct of the responsible medical officer to the institution ought to be brought before the General Medical Council in thus co-operating with an unqualified practitioner.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.

Newton Abbot Workhouse.—Viscount SIDMOUTH asked whether any report of the proceedings in reference to the conduct of officials in the union workhouse at Newton Abbot had been received, and, if such report had been sent in, whether it could be presented to Parliament. Lord HAWKESBURY, in reply, said that a public inquiry had been held by two inspectors of the Local Government Board, and, as a result of that inquiry, the Local Government Board required the immediate resignation of the matron. Subsequently the inquiry was reopened with a view to holding a full investigation as to the management of the workhouse generally. A report of that further inquiry had been received, and was now under the consideration of the Board. The reports made to the Board by its inspectors were confidential communications, and, as the President of the Board stated in the other House, he was not prepared to present the reports in question to Parliament.

HOUSE OF COMMONS.

THE ARMY MEDICAL ESTABLISHMENTS.

On Tuesday, in the House of Commons, on the consideration of the Army Medical Vote in Committee of Supply,

MEDICAL EXAMINATION OF CADETS.

Mr. JEFFREYS said he desired to draw attention to the way in which candidates for the army were medically examined. He referred to the matter last year, and he was then told to bring it up in the present year on the medical vote. Having waited for nine months for his opportunity; he now proposed to lay the matter before the Committee. He believed that great injustice had been done to one young candidate for the army in consequence of the system of medical examination pursued, and he believed that the instance was not a solitary one. The candidate he referred to went up for examination some eighteen months ago. He was passed "sound" by the medical officer, and went in for the literary examination but unfortunately failed to pass it. He then again passed the medical examination but again failed in the literary examination. Having passed the medical examination twice, he was encouraged to continue his studies at great expense to his father, and he again went up for examination. The third time he passed the literary examination very successfully, being at the head of the list of candidates for the cavalry, but he was certified to be "unsound" by one of the chief medical officers. This gentleman said that he had a slight defect in one eye. It was called a congenital defect, so that it had been born with him, and must have been there on both occasions when he was previously examined by the medical officers. Under these circumstances he thought that great injustice had been done to this candidate, and that there ought to be some more consistent and uniform method of examining candidates. He (Mr. Jeffreys) had heard of cases in which men, wishing to become privates in the army, had been subjected to a very slight and cursory examination because they happened to be acceptable to the authorities. In his opinion a medical examination ought not to be carried out according to the mere caprice of medical officers. There ought to be some hard and fast line laid down by which medical men should pass those who were examined as sound or unsound. The candidate to whom he referred was a member of the militia artillery. He could train a gun and use it in the field, and he had never known, until he was informed by the medical officer, that he had the slightest defect in his eyesight. Surely some appeal might be allowed from such a decision. He hoped the Secretary for War would tell the Committee distinctly whether he was willing to provide that there should be some uniform and consistent method of examining young men for the army.

The SECRETARY FOR WAR (Mr. Campbell-Bannerman): The hon. member has called attention to a case—that of young Mr. Nicholson—which I remember perfectly. What the hon. member suggests is that after a candidate for a commission has been examined by a responsible medical officer of the department over which I preside, I, on being appealed to in the House of Commons to let the young man into the service, should override and set aside the opinion expressed by the responsible medical officer who examined him, that opinion being confirmed and approved in all respects by the highest medical officers of the army. I am asked to do this on my own responsibility alone. I was very much pressed in the case of young Mr. Nicholson, having long had the acquaintance of his father, who was for a long time a member of this House, and I looked into the case. I found that he had a serious defect in his sight—serious, not in the sense of immediately impairing the sight, but in the consequences which might follow from it, as it argued a weakness. So far from our regulations with regard to eyesight as applied to candidates for commissions in the army being too severe, if there is any fault to be found with them they are not severe enough. In the case of the navy, a boy is rejected if his sight is at all short of perfect. We in the army do not go as far as that. We admit a certain amount of weakness of sight, but the Director-General, the head of the Army Medical Department, told me in the most positive terms that he could not recommend any change or relaxation whatever in the regulations, and that if any change was to be adopted it should be in the other direction. I am very sorry for Mr. Nicholson, as no doubt this decision cuts him off from a career for which otherwise he was well fitted. It is, however, impossible for me to interfere in the way desired by the hon. member.

Colonel LOCKWOOD said he saw the difficulty in which the right hon. gentleman was placed, and he could hardly expect the right hon. gentleman to over-ride the opinion of the medical officer. What, however, he understood his hon. friend (Mr. Jeffreys) to complain of was that this young gentleman had been twice passed "sound" by other medical officers, and had consequently been encouraged to complete his study at the expense of his father, and that on the third examination he had been rejected. If Mr. Nicholson had been told at the first examination that his eyesight was defective, there would have been no ground to complain; but, when he had been twice passed, it seemed to be a case of considerable hardship that he should at the third examination be rejected.

Mr. HANBURY said there was a great deal in what the hon. member for Hants had said, because it did seem hard that a man who had passed twice already the examination of the army doctors should on a third occasion by another army doctor be rejected. It was a hard case, but, on the other hand, it was, he thought, an exceptional case. The grievance was mostly the other way, that was to say, that when an army doctor or medical board had declared a man unfit, appeals were made to the authorities, and he was brought to bear on them to get the decision upset. The decision of one army medical board should be final, and he protested against a second being called. He hoped the Secretary for War would put a stop to the objectionable practice of allowing a second board to be called. There was another point he desired to mention in connection with the medical examinations. He thought the preliminary examinations should be abolished. It was hard on a lad that he should prepare himself for the army, go through a number of examinations, and then, when he was about to enter, be suddenly told that he was utterly unfit.

THE ARMY MEDICAL REPORTS.

He now wished to call attention to one or two complaints which had been brought before him by medical officers as to their treatment at the present moment. In the first place, he would ask why they always got the army medical reports so late? The information as to the state of the army in 1892 they did not get until 1894. He did not know any report relating to any department which was issued to members so long after the time at which it ought to be presented as the Army Medical report.

SHORT TENURE OF OFFICE BY P.M.O.'S.

Then there was great complaint made—and he thought very properly—as to the constant change of principal medical officers at different stations. He was told that at some of the large stations even within a period of two years there were no fewer than four changes of principal medical officers. He thought that even at stations like Woolwich there were three, and there was one place, the name of which had slipped his memory, where there had been four. They were told that this was due to retirement and to the medical officers being ordered abroad, but principally to retirement. That raised another and a much larger question, which was this: how to help thinking that in this Army Medical Service there ought to be a little more promotion by selection and merit than there was. Men only held their appointments by seniority and length of service. After a man had passed an examination to be surgeon-major he simply went up by degrees without any test whatever as to his merits. In these days—whether rightly or wrongly they were submitting competent officers to examinations at a much higher stage than that, and he did think that, looking at the importance of having as principal medical officers the best men they could get, there ought to be a little more selection, and mere longevity ought to be tempered with selection.

LEAVE AND STUDY.

Another complaint the army medical men made was, that they were treated differently to combatant officers in respect to the leave they got. In the case of a combatant officer, if he had to go and qualify himself in any special way, the time so occupied was not deducted from his leave; but in the case of the medical officer it was deducted. When the medical officer had to go through what was called "a course of operation in surgery," for instance—which took about a fortnight, and sometimes three weeks—the whole of that time was deducted from his leave. He thought that combatant officers and the medical officers really ought to be put on the same footing. If the medical officers were doing this work in the interests of the army, he thought it hardly fair that that fortnight should be deducted from their leave. On one particular point he could not speak with definite information himself, therefore he only threw this out as a suggestion.

THE DIRECTOR-GENERAL'S OFFICE.

But he had heard, bearing on the same subject, a great number of complaints from medical officers, and that was with regard to what was called the Professional Assistant of the Director-general at headquarters, connected with the Medical Department at the War Office. This official drew close on £1,350 a year for pay and allowances, and he had no duty laid down for him in the *War Office List and Directory*. He sat as president of the Standing Medical Board twice a week, and at other times had to sign requisitions for trusses and order the examination of medicine bottles, and do similar clerical work. On the other hand, there was a civilian clerk, called the principal assistant, at headquarters who had a host of details not connected with clerical work, which he would be naturally well able to do, but his work was connected with the movement and promotion of medical officers and the Medical Staff Corps, and the arrangement of the roster, etc. As his (Mr. Hanbury's) informant suggested, surely the duties of these two gentlemen ought to be reversed. The clerical work might well go to the civilian clerk, and the work which was more truly medical connected with the professional assistance of the Director-General, dealing with promotions and things of that kind, ought to go to the more highly paid officer; it was more within the ordinary sphere of his duties. This system he was told led to unnecessary expense, although he did not quite see that it did.

Mr. CAMPBELL-BANNERMAN asked if the hon. member could give the name of his informant.

Mr. HANBURY said he should be glad to do that privately. He could not do it publicly as unpleasant consequences might follow. He might say, however, that his informant was not a medical officer. The information given, however, was backed up by letters of complaint from at least twenty different officers, whose names he did not recollect. They complained, in the first place, that at Malta there were two administrative medical officers of high rank at once at the station, whereas there ought only to be one. They were both drawing high salaries, and one had practically nothing to do. Then he was told that a surgeon-major-general was now principal medical officer at the district headquarters at Colchester, which appointment had been always hitherto held by a surgeon-colonel. Why, he asked, should they have a surgeon-major-general at a salary of £1,350 a year to do the work which had always been done by a surgeon-colonel at salary of £950? His informant said there were two surgeon-colonels at the home district, where only one should be employed, the second one having nothing to do. These were technical points on which he confessed his information was meagre. Still they were points raised by people who understood the subject, and therefore were worth mentioning in the House. Another point was that the Director-General of the Medical Department was so much tied down by correspondence and so on that he could not go round once a year and inspect the medical stations as he ought to do. The Commander-in-Chief went round once a year, but there were grievous complaints on the part of the principal medical officers and others that they never saw their chief, who was wrapped up in red tape and ministerial details in the War Office. Though he might visit a station in the course of the year, yet they maintained that being Director-General it would be a great advantage to the service if he could make a point of inspecting the ordinary departments and the men under him more often than he did. This was a point which any civilian could appreciate, and he should think the right hon. gentleman the Secretary for War would agree that it would be well if arrangements could be made by which the Director-General would give less attention to correspondence and clerical details and more to visiting the medical stations to see that all necessary arrangements were properly carried out.

General GOLDSWORTHY said he agreed that it would be desirable to have some reorganisation of the Medical Department in the way the hon. member for Preston suggested. As to the medical examinations, he thought they were desirable, owing to the fact that the necessities of the service required that men should go abroad and submit themselves to unhealthy climates, and relieve those who could not bear the strain upon them. Attention had been drawn to a case of hardship where a man had passed two medical examinations, and on the third was rejected. He hoped that the Secretary for War would give instructions that mistakes of that sort should not occur again; for it was hard on young men that they should practically lose a great portion of their lives in preparing for a profession which they could not enter. He did not mind how strict they made the medical examination, but, at the same time, he thought that this was a case of hardship. But there were cases in which candidates who had suffered from temporary indisposition should be examined a second time, to see if they were experiencing any bad effects. He thought that Army Medical stations should be inspected by the principal medical officer just as other departments were inspected by their chiefs.

THE WAR-MINISTER'S REPLY.

Mr. CAMPBELL-BANNERMAN: As to the question of examinations let me say this, that naturally it has always seemed to me to be very hard that a parent should incur the expense of preparing a boy for examination, or that a boy should go through the torture of a preliminary examination, and that after all it should be found that he is subject to some medical incapacity. But although it is rather hard, I am afraid that it is inevitable. If the boy is to be examined before the preparation begins, and before the medical examination takes place, it will be necessary to hold these examinations all over the country, and it would be almost impossible to keep them uniform. I do not see how a thoroughly effective examination could be conducted in this way, and I do not know how the difficulty could be avoided. It would involve 700 or 800 candidates being examined on the same day, whereas, under the present system, the examination is only held with reference to those candidates who have been successful in the literary examination. Taking these things into consideration, I do not see how we can avoid the unfortunate necessity of making the important medical examination come last. But let me say this for myself and those with whom I am associated. The hon. member for Preston has a way of saying most awful things of the officials at the War Office. He speaks in the widest terms. He says on the slightest grounds, "Oh, these medical boards are subject to influence being brought to bear on them." Well, I beg to assure him that he will not find that this "influence" is exacted to any extent. There are cases in which it is used, no doubt, but a candidate—or an officer if it is a question of promotion—is examined by a medical board, which, say, pronounces against him. The man and his friends are not aware that he has a particular ailment or bad health. He goes to some distinguished specialist outside, and is examined by him. He produces a certificate from the specialist to say that there is nothing the matter with him. From what the hon. gentleman said, one would suppose that the War Office immediately sponged out the decision of the Medical Board. The War Office is entitled, it may think, to have some ground for supposing that certain elements in the case have been disregarded, to send the opinion of the specialist to the Board, and say "Does that certificate modify your opinion?" Unless the Medical Board modify their report, that report remains in vital force against the candidate or the officer as the case may be. Personally I have always supported the opinion of the Medical Board, and besides that I find that the medical officers of the department are of opinion that the decision of the Board should be acted upon, unless there is some special circumstance to modify it. But it is not the pressure of friends or the influence of distracted relatives which lead to the decision being modified. It is the well-supported opinion of some high authority outside, and that itself is not acted upon but is merely referred to the Board to see whether it alters their view. Of course I am in favour of there being uniformity in the action of these Boards as far as it is possible. In any experience I have had I have no reason to distrust the Boards in any way, or to believe that they are not otherwise than competent for the duties they have to discharge. The hon. member for Preston complains of the medical report being issued so late, but that is because it is necessary to gather statistics in all quarters of the world, and they have to be tabulated and analysed before any conclusions can be arrived at. I do not know whether the delay is longer than these facts justify, but at all events this is enough to account for very considerable delay in producing the report. Then the hon. member apparently takes up certain complaints against the management and control of the Medical Department. Now, I have seen all the complaints he has made to-day in what are called the service newspapers, and in certain other newspapers, which appear to gather up all the gossip, good or bad, of the men in the service. I, however, find nothing definite in the complaints. Very often I find a strain of hasty criticism, very much suggesting the disappointment of mind which some disappointed officer would be likely to display. At all events I will take the hon. member's points one by one. There is the question of promotion by merit. I am all in favour of promotion by merit when it can be done with fairness, and I believe that the present Director-General is very anxious that that mode of promotion should be as much employed as possible. But there are great difficulties at present with regard to the higher ranks of the medical service. Those difficulties we are endeavouring to overcome by some little rearrangement as to the necessity for compulsory retirement at certain ages, but that involves a reference to the Treasury, and is still under discussion. Then the hon. gentleman suggested that medical officers should have leave with pay for the purpose of study. That complaint has often been made, and I should like to see the change made, but the difficulty is as to the expense. As soon as money can be afforded from other charges I shall be glad to do it. The hon. member brought forward a complaint against the headquarters department. With reference to the medical headquarters of the army, the criticisms which I have seen in the newspapers seem to have something in them of a personal feeling against the persons at the head of the department. I am anxious to say that there can be no more efficient and more fair controller of a great department than Sir William Alexander Mackinnon. His professional assistant at the headquarters, Dr. Parkes, is also, as far as my opinion goes, a most competent judge, a most competent man, and is of the greatest assistance to Sir William Mackinnon. But there is apparently some sort of a movement going on with a view to alter the relations of the high officers of the department.

Mr. HANBURY: So far as I understand, the complaint is not in any way personal. The complaint of the medical officers is that clerical work is given to a medical officer and medical work is given to a civilian clerk.

Mr. CAMPBELL-BANNERMAN: I was not satisfied that that was the case at all; but I will inquire further. The distinguished gentleman of whom I spoke in such high terms would not continue the system if it was so notorious and absurdly inefficient as that which my hon. friend described. They have neither of them protested against it, but, as I have said, I am willing to inquire into it. I am satisfied that an arrangement which satisfies them cannot be so utterly unjustifiable as that which my hon. friend has pointed to. He says also that the Director-General ought to move about more and inspect the different branches of the department himself. Of course it is very desirable that that should be done if it is neglected to any considerable extent, but I do not believe that it is. However, I will consult Sir William Mackinnon and ask him whether he can suggest any rearrangement of the work which will increase this system of inspection; but I have so much confidence in him and his assistant that I am sure they will not continue a system which is transparently open to these objections.

THE CASE OF SURGEON-COLONEL BRIGGS.

Mr. PIERPOINT desired to bring forward a grievance which, though it more particularly referred to one individual, still the individual in question was one who deserved well of his country; and when grievances were felt in any branch of the service, they ought to be remedied by the House of Commons. He desired to refer to the case of Surgeon-Colonel Briggs. The matter was discussed in March of last year, and, in order to show that he was not dealing with an officer who was unworthy the consideration of this House, he would read some of the observations which were used by the hon. and learned member for York (Mr. Lockwood), on the occasion of the previous discussion. The hon. member for York described how Surgeon-Colonel Briggs entered the army in 1875, serving with distinction in several campaigns, receiving the medal and clasp, and being mentioned in despatches. After the Soudan campaign he was promoted to the rank of surgeon-major, and whilst holding that position began all the difficulty which had since befallen him, and all the evil fate which had since pursued him. He referred to

the unfortunate connection of Surgeon-Colonel Briggs with the painful divorce case concerning Lord Connemara. He must, of necessity, at this part of what he had to say refer to what the right hon. gentleman the Secretary for War, said concerning Dr. Briggs's retirement from the army on that occasion. The reason that Dr. Briggs retired from the army was because he was made a co-respondent in that painful case, and the honour of himself and a lady was concerned. The trial was due to come off in a few days when he received an order to embark for foreign service. He had the choice given him of whether he should return, or, by obeying the order he had received, miss being present at the trial, and of giving evidence in regard to his own honour and in defence of the lady. Naturally, as a gentleman, he preferred the former course, and he retired from the service in order that he might give his evidence. The case afterwards came on for trial, there was no appearance against him, and he was afterwards cleared of all the imputations which had been made upon his honour. At the time this question was discussed before it was said that the Director-General had dealt with Dr. Briggs as he would have done with any other officer, and that he had reason to believe that Dr. Briggs was taking a course by which, in effect, he would escape his proper share of foreign duty, thereby putting more of the duty on his colleagues. The Director-General, therefore, ordered that officer to proceed to India, and finally placed before him the alternative of going on foreign service or retiring from the army. On this very point he would remind the Secretary for War of an answer given to the member for West Aberdeenshire (Dr. Farquharson) by the right hon. gentleman's predecessor, Mr. Stanhope. Dr. Farquharson asked about the reinstatement of Dr. Briggs, and Mr. Stanhope gave the following reply: "I have carefully considered this case and I am of opinion that Surgeon-Major Briggs should not suffer any loss as regards promotion in consequence of an act which was performed under a pressure which no one could have resisted. Surgeon-Major Briggs will accordingly be restored to the seniority he held before retirement." He should like to say that it would be eminently satisfactory both to the individual to whom he had referred as well as to his professional brethren in the army if some such inquiry could be granted into the case so that Surgeon-Colonel Briggs might have an opportunity of stating fully what he had to say on the subject. He now went to the other part of the question as to whether or not Surgeon-Colonel Briggs was entitled as being retired now to receive a pension, he having only received a gratuity. He confessed that having looked through the Royal Warrant it seemed to one unconnected with the army like himself that it was possible enough to defend any course, but that where's no difficulty comprehension that they suggested to one the idea of a Chinese puzzle. Article 1,079 said: "A departmental officer who, on account of distinguished service has been granted, under the provisions of Article 417, a higher rate of pay in his rank, or has received a higher rate of pay in consequence of promotion or distinguished service shall, if in receipt of such higher pay at the time of his retirement, receive a gratuity or retired pay at the rate next higher than that to which his length of service would entitle him." Of course the right hon. gentleman would say that Dr. Briggs was not in receipt of a higher rate of pay at the time of his retirement. That was true, but he ought to have been. When he referred to Article 417 he found it was as follows: "An officer so promoted (that is, for distinguished service at a seat of war), shall be given the advantages specified in Articles 267A, 267B, or 268, of the rank above that attached to his service, by Articles 268, 338A, 339, 339A, 400, or 400A, as the case may be, when the officer next below him is given such advantages. In a case of distinguished service in the field, for which an officer may merit special reward, although there may not be sufficient grounds for his promotion, our Secretary of State shall have the power, with the concurrence of the Lords Commissioners of our Treasury, to grant him higher ratio of pay, but without alteration of rank." It appeared certainly on the face of that regulation that the smaller thing was to give a man increase of pay without promotion, and that the larger thing was to give him promotion with the advantages mentioned in these various articles. Article 267A, to which 417 referred said: "These ranks shall carry precedence and other advantages attaching to the rank indicated by the military portion of the title." If Surgeon-Colonel Briggs was not entitled to a pension on being promoted, as he was promoted for distinguished service in the field, he should like to know what were the advantages mentioned in these various articles, because otherwise the promotion was a mere empty, giving a man a title without any material advantage whatever. He ventured to say the right hon. gentleman could not produce any case where any medical officer in the army had, in similar circumstances, been promoted and had not received pay. He was aware that the right hon. gentleman was under the impression some little time ago that there was one case such as he referred to. He should first mention that medical officers of the same rank who were promoted on the same day as Surgeon-Colonel Briggs were in receipt of either larger pay for other offices held or, as in this one case, in receipt of larger pay according to his reading of the Royal Warrants. The one case to which he would more particularly refer was that of Surgeon-Lieutenant-Colonel Allen, late retired as surgeon-lieutenant-colonel under the Indian Government, he was promoted for the same campaign as was Surgeon-Colonel Briggs, and he received a higher rate of pay, although at the time when he commenced to receive such pay he had actually seen two years less service than Dr. Briggs. He contended that in a case of this sort any technical or difficult rendering of the law should not be applied to a man who had served his Queen and country well, whilst it would be no encouragement to the officers of the army if they found the War Office was going to defend itself by reference to regulations remote and almost impossible of interpretation, and technical details.

Mr. CAMPBELL-BANNERMAN was glad his hon. friend had brought forward this case in so temperate and reasonable a spirit. It was a case in which a great deal of strong language had been employed from first to last. With regard to what he said last year with reference to the possibility of evasion of foreign service, he referred to that in justification of the somewhat strict and severe action which was taken by the Director-General of the Medical Staff. At the time the Director-General was dealing with Dr. Briggs it was his duty to bear in mind that the line that gentleman was taking was such as would lead to his escaping foreign service to the detriment of some of his colleagues in his department. That was what he (Mr. Campbell-Bannerman) stated, and it was the true view of the necessity of duty which lay upon the Director-General.

Mr. PIERPOINT: As a general principle, but not applying to an individual case.

Mr. CAMPBELL-BANNERMAN said if he and the hon. member were officers in that position, if they were to bring forward a number of reasons for staying in this country and evading foreign service; and if this course was persisted in for some time, that would be a very good reason for the Director-General looking very closely into it, and testing it as well as he could by every means in his power. The point rather was as to the treatment of Surgeon-Colonel Briggs since last year—since he was restored to the army. He need hardly say that the theory of the relation of the War Office to Dr. Briggs being pervaded by the odour of the Connemara case was perfectly absurd. Personally he had no interest one way or the other. That was to say he had no interest in the matter or no sympathy in the least in the case. His Royal Highness, the Commander-in-Chief, had at last—after having been provoked to it time after time without taking any notice of the attacks made upon him—stated in the most open way that from first to last, neither directly nor indirectly, had he ever been influenced by anything of the sort. It was a complete delusion to think that that case had influenced the matter in the slightest degree. Putting that aside, therefore, and dealing with Surgeon-Colonel Briggs as they should with any other officer, this gentleman applied to retire at a certain rate of pay, and he claimed a certain rate of pay which, according to the articles and warrant which the hon. gentleman had read, could not be given to him. He was promoted he was not promoted to a higher rate of pay within his rank, but to another rank altogether, and he had the immediate benefit of that increased rank. But he could not receive any higher pay until he had served twenty years, because pay in the Medical Staff, whether the officer be a surgeon-major or surgeon-colonel, was governed by length of service, not by any other considerations, and Dr. Briggs would not have been, in any circumstances, entitled to the higher rate of pay until he had served twenty years, nor on retirement would he be entitled to anything except a gratuity. The fact of his being promoted specially did not alter that circumstance in the least, because whether in the case of a surgeon-major or a surgeon-lieutenant-colonel the pay went by length of service. Surgeon-Colonel Briggs had been treated in exactly the same way as the officers who were promoted with him at the same time. Two of them were out of consideration because of circumstances peculiar to themselves, being in the employment of the Egyptian Government. Surgeon-Lieutenant-Colonel Allen was promoted under exactly similar circumstances on the same date, and he was treated equally with him. He applied for promotion at the rate of £1 2s. 6d. per day, which was given alike to surgeon-majors and surgeon-lieutenant-colonels of fifteen years' service.

Mr. PIERPOINT: Is Dr. Allen not in receipt of a higher rate of pay now?

Mr. CAMPBELL-BANNERMAN did not know, but Dr. Allen might have longer service than Dr. Briggs. At any rate he was treated in an exactly similar manner.

Mr. PIERPOINT: He could not have had twenty years' service.

Mr. CAMPBELL-BANNERMAN said he would make inquiry as to that, but he was informed that the treatment was exactly similar. The individual circumstances might have been different, and he might have had a longer service than Dr. Briggs. At all events Dr. Briggs had been treated on a principle from which the War Office could not depart, and a principle which was laid down in the Royal Warrants. An officer of this department could not, until he had served twenty years, receive more than £1 2s. 6d. per day, and could not retire on pension but only on a gratuity. Dr. Briggs had retired on a gratuity and had received a gratuity, and had received, from first to last, everything that an officer in his rank and with his length of service could receive. There had been nothing whatever done in his case which would not be done in the case of any other officer similarly situated, and he could assure his hon. friend that if he doubted it he should be ready to point out to him—because it was too technical a matter to explain to the House—the precise clause in the Warrant and the precise effect, so that he thought he could easily convince him that the matter was as he had said.

Dr. KENNY said he desired to bring before the notice of the Committee a matter of the most pressing importance to the community he had the honour to represent, because he thought that on this vote would come the question of the sanitary condition of the Pigeon House Fort in Dublin.

The CHAIRMAN: I think that comes under the Works Vote.

Dr. KENNY: On this vote can I not raise the question of the main drainage and the conduct of the Government in relation to it?

The CHAIRMAN: Not on this vote.

Dr. KENNY: There was a departmental inquiry into the main drainage, and the Committee of Inquiry included the medical men whose votes we are discussing.

Mr. CAMPBELL-BANNERMAN: There is a vote (No. 12) for the Army Sanitary Committee. That is the individual Committee to which this matter was referred, and as I am the culprit who referred it, and acted on the advice of such committee, perhaps the hon. member had better bring it up on the War Office vote, in which I am concerned.

Mr. A. C. MORTON said that, with regard to the case of Dr. Briggs, he, with the hon. member for York, had given a notice on the question more than twelve months ago, and they had, as they thought, got the matter settled. It would appear, however, that the matter was not settled, and that the ill-treatment of Dr. Briggs continued. The Secretary for War did not think that Dr. Briggs had been badly treated; but to his (Mr. Morton's) mind there did not seem to be any doubt about it. It was all very well for the Director-General to excuse his own conduct by saying that there were doctors who tried to escape foreign service. He had no right to make that charge against Dr. Briggs, for if there was one man who had done duty in the service in foreign parts it was that gentleman. Dr. Briggs had told the authorities why he was required to stay in this country—namely, that it was incumbent on him to defend his own honour in the law courts. Notwithstanding, the Director-General made a paltry excuse for harsh treatment, and it was surprising to find the Secretary for War defending that excuse.

Mr. CAMPBELL-BANNERMAN said the hon. gentleman was misstating what had fallen from him. He had not said that Dr. Briggs was ill-treated on that ground at all. He did not wish to go back into ancient history, and he would merely say that Dr. Briggs was reinstated on the admission that he had suffered under circumstances which did not leave reproach on him. All he (Mr. Campbell-Bannerman) had said, which was made so much of afterwards, was in justification of the strict and almost severe attitude assumed by the Director-General, who had to be always on his guard against cases which had a very plausible appearance at the time, and which might have the effect of enabling an officer to escape certain duty.

Mr. MORTON said he did not say there were not medical officers in the army who escaped foreign service, though he had never heard of them. It had not been the desire of Dr Briggs to do that, however. He was bound as a man of honour to stay in England, yet the Director-General or the Commander-in-Chief tried to get him out of the country against the interests of Lady Connemara. Everyone knew how badly Lord Connemara had treated his wife, and Dr. Briggs said that at the last moment he failed to come before the Court. The statement of the Secretary of State made the case much worse against the Director-General and the Commander-in-Chief. If it was said of the Commander-in-Chief himself that he desired to escape foreign service, no doubt it would be right, but to bring that charge against Dr. Briggs was altogether out of the question. It was most improper to attempt to interfere with a witness before a court of law, and with a man in the position of Dr. Briggs. Doubtless Dr. Briggs had shown a warm temper, but anyone in his position would have showed irritation and temper. It was for the purpose of screening the vile deeds of Lord Connemara that the attempt was made to get Dr Briggs out of the country.

The CHAIRMAN: The hon. member is altogether out of order in making such statements.

Mr. MORTON said the salary of the Director-General came under this vote; therefore he had imagined that these observations would be in order. However, the case was so well known that he (Mr. Morton) did not desire to go further into it. So far as he was concerned, he should not have brought it up again that day. He was glad the hon. member opposite had done so, and he thanked him for his action, for these medical officers ought to be protected. He should not be afraid on this vote or any other vote to do his duty and defend the humblest doctor in Her Majesty's service.

Dr. FARQUHARSON said he had taken great interest in this case from the beginning, and had been in communication with Dr. Briggs with regard to it. He must say he regretted the tone the hon. member for Peterborough had adopted. The hon. member opposite had brought the case forward most temperately, and he had been fairly met by the Secretary of State for War, and, on a calm and dispassionate view of the subject, he (Dr. Farquharson) was bound to say he believed Dr. Briggs had been treated with justice. He thought Dr. Briggs's claim had been most adequately met, and he unreservedly accepted the statement of the Secretary of State for War. He did not believe that the Commander-in-Chief had been in the slightest degree actuated by the sinister motives that had been attributed to him. He would confess that at one time he held a different view, but he unreservedly withdrew anything he had said to that effect. He thought the hon. gentleman opposite would be well advised in accepting the statement of the Secretary for War and allowing the matter to drop.

Mr. HANBURY said the right hon. gentleman the Secretary for War had disposed absolutely of all the rumours current as to interference on the part of the Commander-in-Chief, and also of the idea that Dr Briggs had been unfairly treated in the matter. The whole question resolved itself into this: Had Dr. Briggs been treated in the same way as Dr. Allen? The Secretary for War informed them that the treatment had been the same, and, if that were so, he did not see that Dr. Briggs had received any ill-treatment at all. The whole thing hinged on that. The right hon. gentleman said they had both been treated alike, but the hon. member who had introduced the question said that was not so on the authority of Dr. Briggs himself.

The CHAIRMAN, in reply to Dr. KENNY, said that he distinctly ruled that the question of main drainage in Dublin and the action of the Military Sanitary Committee could not be dealt with on this vote.

Mr. PIERPOINT said that he would show the Secretary for War that he had been misinformed as to Dr. Allen, would he be willing to reconsider the case of Surgeon-Colonel Briggs with the view to putting him in the same category as Surgeon-Colonel Allen, who was in India?

Mr. CAMPBELL-BANNERMAN said he knew nothing about the case of Surgeon-Lieutenant-Colonel Allen except what had been stated to him. He knew, however, that Surgeon-Lieutenant-Colonel Briggs had received all the money he was entitled to receive under the warrant—every penny. However willing he might be (Mr. Campbell-Bannerman) might be to give him say £1,000, he could not do it. He had no funds with which to do it. He could only give him what he was entitled to—no more and no less.

Mr. PIERPOINT said that if the right hon. gentleman would give him the opportunity, he would interpret the rules within two hours as to obviously show that his contention was right.

THE TREATMENT OF THE WOUNDED IN WAR.

Mr. HANBURY said he wished to put a question to the right hon. gentleman as to the arrangements made for the treatment of the wounded in war. He was informed that very little preparation was made—that those officers and men whose duty it would be to attend to the wounded on the field of battle had little preparation in time of peace to fit them for the duty. He understood that at the autumn manœuvres at the Curragh and at Aldershot it was intended to employ bearer companies and field hospitals, and he should like to know to what extent this was to be done. It was only to be at two stations, and the army medical officers complained generally that neither they nor the men under them thought of practising the kind of work they would have to do on the battlefield. They ought to be instructed in the use of hospital boxes and haversacks. Looking at the enormous number of wounded there would be in future battles, this was one of the most important matters the right hon. gentleman could have his attention drawn to. It was one in which the public took a great deal of interest. Why should they run the risk of their medical officers and staff being unfit to perform the important duties they were called upon to discharge on the battlefield owing to the want of training in the times of peace. But not only did the medical officers complain of want of training. They complained to some extent also of the inadequacy of their numbers. It was difficult to obtain accurate information with regard to those matters in foreign services, but he was told that the German army corps had twice as many regimental medical officers, twice as many field hospitals, and twice as many beds in the hospitals as there were in our service. He was informed also that the number of men set apart in our service for duty in the field hospitals had been very much reduced in recent years. The system was started in 1878, and the staff for each division then was 8 medical officers, 2 quartermasters, and 142 non-commissioned officers and men. In 1884 the staff was considerably reduced, so that at present there were in attendance on each division of between eight and ten thousand men only 6 medical officers, and 120 non-commissioned officers and men, the quartermasters having been done away with altogether. There was also a complaint as to the small number of attendants in the field hospitals, there being only one to every seven men. In civil hospitals there was one attendant to every three and a-quarter patients, and Lord Wolseley, in an article in one of the magazines, expressed the opinion that the smallest number ought to be one attendant to every five men. There was another important matter in connection with this subject to which he also would call attention. So far as he knew, at the present moment there was no branch of the Army Medical Service to look after the transport of the ambulance and water casks in time of war. The work was thrown on the Army Service Corps, and as that corps was not entitled to wear the Geneva Cross, they would not be protected under the Geneva Convention in their work of mercy on the field of battle. He thought that the men who were responsible for such work ought to have the protection of the Geneva Cross, and he trusted the Government would take this most important question into immediate consideration.

THE WAR-MINISTER'S REPLY.

Mr. CAMPBELL-BANNERMAN: I will refer what the hon. gentleman has said to those who advise me in these matters. But I wish to say, as a general reply to all those complaints which are made in newspapers and otherwise, and particularly by private members in the House, that I hope hon. members will remember that I am not absolutely without intelligent military advisers. To mention only two names, I have as advisers Sir Redvers Bulwer and Sir Evelyn Wood, and I cannot conceive two men likely to be more alive to every particular requirement for the benefit of the army. I would appeal to hon. members, that every time they receive letters pointing to the defectful state of some department of the army, and to the gross neglect of certain very obvious duties, to remember that there are at the head of affairs such high authorities as the officers I have mentioned. But still I will bring what the hon. member for Preston has stated before them, and see whether they agree with him in the matter of the care and the transport of the wounded on the field of battle. As regards the question of training, there will be a number of men of the medical staff in training at Aldershot for some time. I saw them myself march past at the Queen's Birthday parade, and I was told by officers on the spot that they were doing splendid work, and that the training was of the most useful kind. There is something of the kind, also, at the Curragh. This is the first year that anything of this nature has been done. It is, no doubt, on a small scale at present, but we are feeling our way, and probably the work of training will be largely extended in the future. With regard to the numbers on the Medical Staff, the opinion is that they may with advantage be increased, and accordingly we have made a small addition to the Medical Staff in the vote. I may add that I have made such an addition as the funds at our disposal will allow.

Mr. HANBURY said the right hon. gentleman had complained of him for bringing this matter forward——

Mr. CAMPBELL-BANNERMAN: No: I did not find fault with the hon. gentleman, but I cautioned the hon. gentleman and other hon. gentlemen to remember when they receive letters or see stories in the newspapers that at the headquarters of the army there are men with heads on their shoulders.

Mr. HANBURY said there were also men with heads on their shoulders outside headquarters. These were the medical officers, and they complained that in time of peace there was no kind of training for the duties they would have to discharge in war. The right hon. gentleman said there was no foundation for those complaints. But there was at least this foundation, that nothing had been done in the matter till this year. The right hon. gentleman gave away his whole case when he admitted the importance of the subject, and stated that something had been done this year which had not been done in past years. He thought there was nothing more important than the taking of measures in time of peace which would ensure the adequate care and protection of the wounded on the field of battle.

General FITZWYGRAM said he desired to impress on the Secretary for War the absolute necessity of making some provision by which medical officers who returned home after five years of foreign service should have the opportunity of attending for six months, or certainly for three months, in some of the great general hospitals of Edinburgh and London. Medical science did not stand still, and any medical man who was out of the country for any time and away from general medical practice was liable to fall behind, and the opportunity of enabling him to get abreast of medical science again should be taken when he came home after service abroad. If this were not done the medical officer would go abroad for another five years, so that ten years would elapse before he could get any opportunity for general practice.

Colonel KENYON-SLANEY said he was glad to hear from the Secretary for War that steps had been taken to ensure, so far as it could be done by training in times of peace, that the wounded would be properly attended to on the battlefield. They should recollect that a great deal of the fighting, especially in our smaller wars, was done by small scattered bodies of men, for all of which it would be impossible to make complete medical arrangements. It would therefore be of considerable advantage if the officers, and possibly some of the non-commissioned officers, of

each regiment had the opportunity of subjecting themselves to a course of medical instruction such as was known as "first-aid to the wounded," so that in cases of emergency, when regular medical help was not available, they might be able to attend to the injured. He would also like to know whether any advance had been made in the shape and construction of the carts for carrying water which were sent out for service in dry countries when the army was in the field. It was some time since he had experience of those carts, but they were then most cumbersome, old fashioned, and inconvenient, and the water could only be obtained from them very slowly. Old officers would recognise how necessary it was in the interest of discipline that the means of supplying water in the course of an engagement should be as rapid and as convenient as possible, for there was nothing so hard as to maintain discipline in a crowd of men half mad with thirst, surrounding those carts and longing to get at the water during a lull in the fighting.

Mr. PIERPOINT hoped the right hon. gentleman the Secretary for War would not think him too persistent with regard to the case of Dr. Briggs, but he desired to point out that the right hon. gentleman had made no reply to the suggestion he had thrown out that the case ought to be referred to some commission of inquiry.

Mr. CAMPBELL-BANNERMAN said he did not see the need for an inquiry. The question had been settled. Dr. Briggs had been restored to the army, and now, at his own request, had been retired. With regard to the question about the water carts, he understood that a new water cart had been adopted, and made in considerable quantities, and was believed to be the very thing that was required. The suggestion of his hon. and gallant friend that there should be some elementary instruction in the care of the wounded in "piping times of peace" was a good one, and he would bear it in mind. He also agreed with the hon. and gallant member for Fareham that medical officers who were on foreign service were liable to get out of touch with the progress of medical science; but the question of finances really stood in the way of carrying out the suggestions of the hon. and gallant member.

General GOLDSWORTHY desired to say in reply to the right hon. gentleman the Secretary for War that they did not forget that there were good men at the head of affairs at the War Office; but what they complained of was that a good many recommendations of those men were not attended to, but, for financial reasons, were put on one side. He was not referring to the present Government in particular, for the complaints had to be made in regard to every Government. He could say, further, that the observations which were made in the course of the debate were made in a friendly spirit, and were intended to point out, in the interest of the army, serious defects in its administration.

Mr. A. C. MORTON said that last session he had asked five or six questions on the subject of the training of the Medical Staff, the result of which was that the Secretary for War had promised that the training would be commenced this year. He knew that something had been done in that direction, but he was sure that everything that ought to be done had not been done. He could not understand what the right hon. gentleman meant by "newspaper stories." If the right hon. gentleman referred to him, he could tell him that he had got his information, which, indeed, the right hon. gentleman had admitted to be correct, from a different source altogether. In any case, sneers at the newspapers were out of place, because the army was indebted for many of its modern reforms to the exposure of evils by the newspapers. The training of the Medical Staff was a very important matter indeed, for there was a strong feeling in the country that the rank and file should be treated in the field or battle and elsewhere just as well as the officers. He was not satisfied that everything that ought to be done had been done, and he therefore hoped that the War Office authorities would pay more heed to the complaints and recommendations of the surgeons who went about among the men and best knew their needs and requirements. He noticed in the votes that the forage allowance of the surgeon-major-general was 7s. 3d. a day; of the surgeon-colonel, is. 11d. a day; and of the other surgeons, 2s. 7d. a day. He could not understand why there should be this difference in the allowances. Did the horse of the surgeon-major-general eat more, or was he fed in a different way from the horses of the other surgeons? His own opinion was that the horses of the ordinary surgeons who did the work ought to be better treated and fed than the horses of the mere figureheads.

Mr. CAMPBELL-BANNERMAN said the explanation of the differences in the allowances was that the surgeon-major-general had more horses, and required more horses, than the ordinary surgeon.

General Sir G. T. CHESNEY said the replies of the right hon. gentleman the Secretary for War on this vote confirmed him in the opinion which he had long held, that a change in the system of dealing with the military estimates was very much required, both in the interests of the army and the interests of the country.

The CHAIRMAN: The hon. and gallant gentleman is not in order in discussing generally the mode of presenting the estimates. He must confine himself to the medical service vote.

Sir G. T. CHESNEY said that he would move to reduce the vote for the medical service by £500, because he felt that the Committee had not sufficient evidence before it to form an opinion of the merits of the vote. They had a number of medical officers serving at home and abroad, but they had no means of forming an opinion as to the reasonableness or otherwise of their services. The fact was that the business of Supply was practically crowded out by the other business of Parliament, and he submitted that it would be a very great improvement if this particular vote and certain other votes—

The CHAIRMAN: Order, order; the hon. gentleman must confine himself to this particular vote.

Sir GEORGE CHESNEY said he would do so, but he would suggest that it would be a great advantage to the public service, if not to the Committee, if the right hon. gentleman would refer these votes to a Select Committee for inquiry and examination.

The CHAIRMAN: Those are questions for the House and not for the Committee on this particular vote; the object of the Committee now is to discuss the items of this vote.

Sir GEORGE CHESNEY said he understood that all members of the House took part in Supply, and his contention was that many had not the information before them on which to form an opinion on the merits of the question. The House had got into the habit of passing these votes upon inadequate information, and they owed a duty to their constituents and to the taxpayers to see that the business of granting Supply should be properly performed, and he therefore ventured to submit to the right hon. gentleman that this vote should be referred to a Committee to examine it with a view—

The CHAIRMAN: I have already told the hon. and gallant gentleman that that is out of order.

ANNUAL TRAINING.

Mr. ARNOLD-FOSTER said he should like to ask the right hon. gentleman to give them some further information about a matter he had already addressed to him once this session, and that was whether provision had or had not been made for the annual training regarding medical transports. At the present moment there was absolutely no transport at all for the Army Medical Service in the time of war, and consequently the whole of the wagons, etc., would have to be furnished upon the outbreak of war. He asked some time ago what arrangements were made, and he was informed that the army service horses and drivers were allocated to the hospital corps in peace, and the practice would be followed in time of war. He asked if the practice was followed by any other army in Europe, and whether members of a combatant corps would be permitted to wear the Geneva Cross, and be regarded as forming part of the transport of the Medical Army Corps. The right hon. gentleman told him it was the fact that in the other armies abroad the practice was adopted, and that there was no doubt that the Geneva Convention would give the necessary permission. He was sorry to say he did not take advantage of the opportunity given him by the right hon. gentleman, of consulting with an officer in the department, but he believed there was some misconception on this point. It was true there were certain persons who were allowed to wear the *brasseur* of the Geneva Convention, and, if not absolutely entitled, they received protection under fire. But there were two *brasseurs*, once a temporary *brasseur*, which was given to the men employed in the removal of the wounded after a battle, but that was mainly to protect them from being shot as deserters, and to escape the charge of malingering. There was also the *brasseur* of the Convention which was given to all the men who were properly enlisted in the medical corps. The point was what they were to do in their own army in time of war. Hitherto their wars had mainly been with semi-savages. In the Boer war the Boers refused to recognise the Geneva Cross in the case of transport drivers who belonged to a combatant corps, and he (Mr. Arnold-Forster) thought they were justified when these men might be engaged one day in transporting medical stores and the next in transporting ammunition, and, therefore, they ought not to be recognised as non-combatants. If the difficulty was to be got over in time of war, they must contribute a certain number of drivers and horses who were now on the strength of the Army Service Corps, and assign them to the Army Medical Corps. He admitted this was a difficult operation, because every man and horse they assigned for this duty must be taken from the Army Service Corps as it existed at the present time, and the difficulty, he imagined, would be in regard to the provision that was proposed to meet the demand from members of the reserves. He presumed the matter would have been well thought out, though he had not seen any statement to the effect that it had been done as was contemplated. He should therefore be glad if the right hon. gentleman, in the interests of the medical service, would inform them what arrangement had been made and what shrinkage it would cause in the Transport Service and in the Army Service Corps. There would have to be a very large increase made in both services in case of mobilisation. He hoped the right hon. gentleman would be able to give them some information on these points.

Mr. CAMPBELL-BANNERMAN: Perhaps my hon. friend would allow me to make some further inquiries into this matter. The point raised is one of very great importance, but I am not in a position to answer it now.

APOTHECARIES.

Mr. GIBSON BOWLES said there were two or three small matters he wished to ask a question or two about, and the first of these came under subhead 3. He had a friend, an apothecary, and he pointed out that if reference was made to the appendix apothecaries ranked by their pay relatively with surgeon-captains and surgeon lieutenants. This friend of his pointed out that whilst the surgeon-captain only got 15s. a day the apothecary got 18s. a day, and he also said that they were not adequately considered in their relation to other ranks. There were surgeon-captains, surgeon-colonels, and surgeon-generals, and why should there not be an apothecary-captain, an apothecary-colonel, or an apothecary-general (laughter). Hon. members might laugh but the one was not more laughable than the other. If they had a surgeon who preferred to be called a captain, a colonel, or a general he could imagine the same ambition animating the breast of an apothecary. He understood there were two apothecaries, but that the one at Woolwich was to be abolished, and if so who was to make up the medicines? His friend pointed out to him that the compounding of medicines was of the utmost importance, and that the lives of very many persons might be at the mercy of an apothecary's mistake, and his friend claimed that these apothecaries should be continued, and therefore he asked why the remaining apothecaries of England were to be abolished? Then he came to the question of the Medical Staff, and in regard to this matter he found that the postal expenses amounted to the sum of £1,050 in the year. Taking the instance of Ireland, there he found the postage was put down at £250 during the year. That seemed to be an enormous sum. Assuming if they were prohibited from using halfpenny postage cards, that would represent 60,000 letters in the course of the year. Then it could be the necessity of writing 60,000 letters from Ireland to England? Was it that the system was too much centralised—that no one was allowed to do anything without first referring to London? If so, here was a case in which much money might be saved and the efficiency of the service greatly increased. He thought, when the Committee came to realise that £1,050 was put down as postage, they would see what an enormously extravagant sum this was, and from it would be able to judge how extravagant all these items were. His third and last point was with regard to

civilian medical practitioners, the cost for whom was put down at £7,600. He asked, Why was this? He could, perhaps, suggest a reason for it, as he had some experience of army doctors—not upon his own person, but through being in places where these surgeon-captains, colonels, and generals were stationed—and his experience was that wherever the officers could find a private practitioner they did so. He hoped this was not creeping into the service generally, and if it was it ought to be altered. When they had a staff of army surgeons he could not see why they should employ these private practitioners at all.

Mr. CAMPBELL-BANNERMAN said that the civil practitioners were only employed at those scattered stations where the army surgeon was not available, but he admitted that the estimate did seem rather a large amount. With regard to the apothecaries, he was glad to say they were an expiring body, and, as they ceased, their places were taken by a class of non-commissioned officers who were called compounders of medicine, and this was supposed to be a better arrangement.

Mr. GIBSON BOWLES said he thought it was extremely dangerous to hand over the compounding of medicines to these practically untrained men. The compounding of medicines should be done by trained persons who knew a poison from a blue pill.

Mr. CAMPBELL-BANNERMAN said these men were better trained than some of the old apothecaries.

Sir A. ROLLIT thought that one observation made by the hon. member for Peterborough (Mr. A. Morton) ought not to be passed over, and that was when the hon. member referred to the want of care and solicitude for the men on the part of their officers. If it was once the case, it certainly was not at the present time, and so far now from there being any want of care and solicitude, the very opposite observation applied. He had taken some interest in the matter of ambulance work, and he thought the House was indebted to the hon. member for Preston (Mr. Hanbury) for giving prominence to this question of exercising medical skill and training: and he could not help thinking that a little knowledge of medical work in the general army would be highly advantageous. He also thought that great advantage would accrue not only from the lectures that had been suggested, but from instruction in physiology, and he hoped this point would not be lost sight of. He was glad that the right hon. gentleman had taken seriously the question of trantports and the immunity of the men when engaged in this work. It was a question that demanded very serious consideration, as grave doubts existed on the subject, and the sooner they were settled by international convention the better. He would not go into the point which had been raised by the order with regard to the examination of the estimates by a Select Committee, but he thought he might say, without being out of order, that the method of dealing with the estimates did not give a real and effective check to the over expenditure; therefore, if they could be referred to a committee for examination it would be most advantageous.

Mr. BRODRICK said that, in regard to this point——

The CHAIRMAN: The hon. member must not pursue that subject, it is not in order.

Mr. BRODRICK said he only wished to make an observation which was germane to this vote, and he thought it would not be out of order. Whatever might be the course with regard to the estimates generally, with regard to this vote it had been most carefully overhauled by a committee of the House of Commons. This was one of the votes to which great exception was taken in 1887, and it was examined, both that year and the following year, by Lord Randolph Churchill's Committee, and an opinion was expressed of considerable weight, namely, that having in view the large increase in the medical service during the Egyptian war, the time had come when considerable reductions should be made. That was taken very much to heart by his right hon. friend, the late Mr. Stanhope, who committed the vote to a committee of the War Office, which went into the matter, not to see if it might be reduced, but to ascertain what was necessary to put the medical service in an efficient form to go into the field. He had not the estimate before him, but he knew the inquiry resulted in a great reduction, and that the vote had kept very much on the same level ever since.

Sir R. TEMPLE said before they passed this vote there were one or two questions he wished to ask, and he trusted the right hon. gentleman would be able to answer them offhand. They related to items under subheads E and F. Under subhead E the cost of medicines was put down at £16,000 for this year, and it was exactly the same amount last year. He thought it was somewhat peculiar that it should be exactly the same year after year, but he dared say it was susceptible of explanation. With regard to the contractor or contractors with whom the War Office was in the habit of dealing, he might remind the right hon. gentleman that in previous years there had been considerable questions on this point raised before the Public Accounts Committee, but this question had not been raised this year, otherwise he should not have brought it before the Committee. In previous years there were lengthened discussions upon it from the fact that the War Office had always dealt with one particular firm. That particular system might have its merits, but it inevitably aroused jealousy outside, and the question before the Committee was whether the contract to some extent should not be thrown open. Perhaps the right hon. gentleman might be able to give them a satisfactory answer, and at the same time perhaps the right hon. gentleman would explain how it was that exactly the same sum was taken year after year. The other matter related to item F, appropriations in aid. Here, again, the same amount was taken as was taken last year—namely, £12,000 odd. Might he ask how these appropriations in aid were derived? No doubt they reprcsented receipts, the sale of stores, or derived from income to the medical body. There was an increasing jealousy in auditing the accounts in regard to these appropriations in aid, and if the hon. member for Peterborough (Mr. Morton) was in his place he would bear him out in that. Before he resumed his seat he would like to ask whether they were to understand that the very important question raised by the hon. member for Belfast (Mr. Arnold-Forster) as to the immunity of the Transport Staff in time of war, whether that immunity from being fired upon or treated as combatants had received full consideration?

Mr. CAMPBELL-BANNERMAN said that, taking the points raised by his hon. friend, the medicines were supplied by open tender—that was to say, that certain chosen firms were adopted, their premises were inspected by medical officers, and the drugs certified to be of the proper description. The same principle had been adopted in Ireland, so that there was no longer the same monopoly that existed formerly. The next point of the hon. member was as to the appropriations in aid. These arose in various ways, sale of stores, etc., and the amounts had practically stood at the same figure in the last few years. The other question was in regard to the point raised by the hon. member for Belfast (Mr. Arnold-Forster). He would make full inquiry into the question raised by the hon. member as to the immunity of the Transport Service in time of war, and he would give the information required upon report.

Mr. HANBURY asked, with regard to contracts, whether the contract for surgical instruments had been at all enlarged or left open.

Mr. CAMPBELL-BANNERMAN said the contracts were made the subject of very strict survey, and the decisions were arrived at after very careful calculation as to the capacity of the firms tendering to fulfil the contracts, the cost, and the competitive prices.

Vote agreed to.

OBITUARY.

JOHN CLAY, M.R.C.S., L.S.A.,

Professor of Midwifery, Queen's College, Birmingham.

As we briefly stated last week, Mr. John Clay, one of the oldest and most well-known medical practitioners of Birmingham, died at his residence, Steelhouse Lane, Birmingham, on June 27th. Some two years ago, when he was over 70 years of age, Mr. Clay had an attack of influenza, from which he never seemed to recover thoroughly, but ten days before his death the symptoms became more urgent.

Mr. Clay was born at Sutton, in Nottinghamshire, in 1821, and after serving articles of apprenticeship, as was then the custom, entered the Birmingham Medical School at an early age. He had a most distinguished career as a student, and began practice first in Digbeth and afterwards in Moseley Street, from whence he removed to Steelhouse Lane twenty-five years ago. Early in his professional career Mr. Clay devoted himself to gynæcology, and gained high eminence in that branch of the profession. He was elected honorary obstetric surgeon to the Queen's Hospital in 1872 when an obstetric department was first founded in that institution, and held the post for nineteen years, when he was elected honorary consulting surgeon. For many years Mr. Clay was associated with Queen's College as Professor of Midwifery and as member of the College Council. When the medical department of Queen's College passed over to Mason College Mr. Clay continued to hold the Chair of Midwifery in the new organisation, but enfeebled health prevented him latterly from taking a very active part in teaching.

In 1866 he took the medal for the Jacksonian prize essay, and in 1868 the Fothergill prize essay of the Medical Society. He was an original member of the Obstetrical Society, a Fellow of the Medical Society, a corresponding member of the Imperial and Royal Medical Society of Vienna, and a foreign member of the Obstetrical Society of Berlin. During the last few years Mr. Clay gave special attention to the treatment of cancer by the use of Chian turpentine, the value of which as a palliative remedy in early cases he strongly advocated.

His close and sedulous attention, his masterly resource, and his strong common sense gained him the confidence of a numerous circle of patients who looked upon him as a trusted adviser. He leaves a widow, three daughters, and three sons, two of whom are in practice in Birmingham.

THE PRINCESS OF WALES, who was accompanied by the Prince of Wales and the Princesses Victoria and Maud, opened the new buildings of the British Home for Incurables at Streatham, on Tuesday afternoon, July 3rd. The Princess, on arriving at the buildings, was presented by Earl Amherst, the president of the institution, with a silver key, with which the front door was opened. An address of welcome to Her Royal Highness was afterwards read, and the Prince of Wales responded on her behalf. The Princess then formally declared the new buildings open.

THE Senate of the United States on June 16th confirmed the appointment of Dr. John S. Billings to be Lieut-Col. and Deputy Surgeon-General of the United States Army.

NATIONAL ORTHOPÆDIC HOSPITAL.—On and after July 19th attendance will be given for out-patients at this hospital on the evening of Thursday, from 6.30 to 7.30 o'clock.

MEDICAL NEWS.

The Fishmongers' Company have sent twenty-five guineas to St. Peter's Hospital, Covent Garden.

Professor von Jaksch has been elected Dean of the Medical Faculty of the German University of Prague.

Professor Gussenbauer, the newly appointed incumbent of the Chair of Surgery in the University of Vienna, has been elected President of the Twenty-fourth Congress of the German Society of Surgery to be held in 1895.

The St. Petersburg Obstetrical and Gynæcological Society has taken the initiative in organising a Russian gynæcological congress. The first meeting will probably be held in St. Petersburg in December next.

The death-rate in Sheffield for the week ending June 16th was exceptionally low, 13.8 per 1,000. Only on two occasions previously has it been lower—namely, the week ending June 21st, 1886, when it was 13.6, and the week ending July 11th, 1891, when it was 12.3.

The Dental Hospital of London.—An interesting collection of pictures has been got together in the Galleries of the Royal Institute of Painters in Water Colours, and is being exhibited on behalf of the building fund of the Dental Hospital of London (Leicester Square). The work of many eminent artists is represented on the walls: and as a large number of well-known musicians and vocalists are giving their services during the week, we can hardly doubt that the exhibition will add substantially to the funds of the charity.

Congress of American Physicians and Surgeons.—The third Triennial Congress of American Physicians and Surgeons was held at Washington on May 29th, 30th, and 31st, and June 1st, under the general presidency of Dr. Alfred L. Loomis of New York. The Congress, it may be remembered, is formed by the temporary union of national societies, representing all departments of medicine. By an arrangement introduced on the present occasion the sessions on three afternoons, and one of the evenings were assigned to seven of the fourteen participating societies, each selecting its own programme and speakers for these general sessions. This task fell this year upon the first seven societies, taken in alphabetical order: the Societies of Anatomists, Climatologists, Dermatologists, Genito-Urinary Surgeons, Gynecologists, Laryngologists, Neurologists. An immense mass of material—much of it, to judge from the reports before us, of great clinical value—was brought forward, both in the general sessions and in the special meetings of the separate societies.

Physical Education.—On Saturday afternoon, June 30th, the third annual meeting of the British College of Physical Education was held at Exeter Hall, Strand, under the presidency of the Earl of Meath. The report stated that the society was glad to find that in the new regulations of the London School Board special provision had been made for the adequate physical training of the children. The Chairman, in moving the adoption of the report, said the objects of the society were to give physical education in Great Britain a more scientific organisation and bearing, and to promote physical culture in the true sense of the word. It also desired to impart an elementary knowledge of the theory and practice of physical education to all schoolmasters and schoolmistresses who wished to combine the physical with the mental training of children. The masses should, he thought, be provided with those physical means of culture which in other European countries were provided by a compulsory military training, and so counteract the physical degeneracy amongst the inhabitants of large towns. It was the intention of the College to be represented in all the principal cities and towns of the United Kingdom. General Moberly seconded the adoption of the report, which was carried unanimously.

Cooking by Electricity.—At the invitation of the City of London Electric Lighting Company a numerous company assembled recently at the Cannon Street Hotel, to witness a demonstration of cooking by electricity, and to partake of a dinner cooked throughout by electricity. In the kitchen, which was a carpeted room adjoining the reception room, were placed some five or six electric ovens raised above the floor on tables, and on an adjoining table were electric hot plates, electric saucepans, electric fish kettles, and other culinary necessities all worked by electricity, lent by Messrs. Crompton and Co. and the General Electric Company. There is no combustion, the heat being generated in resistances placed in enamel on the sides, top, and bottom of the oven. Each side, together with the top and bottom, is separately regulated by a switch placed at one side of the oven. The whole arrangement appeared extremely simple, compact, and cleanly. Sir David Salomons, who presided, stated that the cost of the cooking of the dinner was 2d. per course per head, a result which was equal in every way to what could be done by gas cooking. The cooking had been done by the *chef* of the hotel, who had absolutely no previous knowledge whatever of the apparatus, thus vindicating the claim for simplicity. Professor S. P. Thompson stated that so long ago as 1749 Benjamin Franklin drew up a programme for an electrical dinner, and that from the year 1879 he had made his own coffee from water heated electrically. Mr. Ernest Hart, an earnest advocate for smoke abatement, pointed out how admirable a solution of that difficulty would be effected by the extensive use of electricity in cooking in the city of London, and the proceedings terminated with the toast of the visitors and the health of the chairman.

Forfarshire Medical Association. — The thirty-sixth annual general meeting of the Forfarshire Medical Association was held at Arbroath on June 28th, Dr. Russell, President, in the chair. The Secretary drew attention to a letter from the Chairman of Committees of the British Medical Association with reference to the proposed Executive Board to be formed in connection with the Local Government (Scotland) Bill, in which there was pointed out the necessity for making a representation to local Parliamentary representatives and to the Secretary for Scotland with the view of supporting the Government in their proposal that one member of the Board should be a medical man, a proposal which it was understood was likely to be warmly contested in the report stage of the Bill. It was remitted to a Committee consisting of Drs. Russell, J. W. Miller, Sinclair, A. M. Anderson, and Peter Campbell to take such steps as might be considered necessary to support the Government proposal with regard to the constitution of the Executive Board. The Treasurer then submitted the yearly financial statement, which was considered satisfactory, and Dr. J. W. Miller was appointed Auditor of Accounts for the current year. On the motion of Dr. MacEwan, seconded by Dr. Lawrence, it was agreed to give a donation of three guineas to the British Medical Benevolent Fund. Dr. Key proposed that the meeting for 1895 be held in Forfar, and that the following gentlemen be appointed office-bearers for the current year: *President:* Dr. Alexander, Forfar. *Vice-Presidents:* Dr. A. K. Mill, Kirriemuir; Dr. A. M. Stalker, Dundee. *Council:* Drs. Chas. Moon, J. W. Miller, Sinclair, Buist, Lennox, Mackie Whyte. *Honorary Treasurer:* Dr. M'Gillivray, Dundee. *Honorary Secretary:* Dr. Peter Campbell, Dundee. The President read a paper on the evil effects of overpressure in schools, colleges, and in the ordinary business of life. After the business meeting, the members of the Association dined together, under the chairmanship of Dr. Russell. The meeting altogether was most successful.

MEDICAL VACANCIES.

The following vacancies are announced:

ARMAGH UNION, Loughgall Dispensary District.—Medical Officer. Salary, £120 per annum, with vaccination and registration fees, and £20 as Medical Officer of Health. Applications to John Nicholson, Honorary Secretary, Taul Bridge, Loughgall, by July 14th.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House-Surgeon for the parent establishment. Salary, £140 per annum, with furnished apartments, coal, gas, and attendance, but no board. Applications and testimonials to J. W. Stride, Assistant Secretary, before July 16th.

CAMBRIDGE LUNATIC ASYLUM, Fulbourn, near Cambridge.—Assistant Medical Officer. Salary, £140 per annum, with board, lodgings, and attendance in the Asylum. Applications to T. Musgrave Francis, Clerk to the Visitors, by July 21st.

DENTAL HOSPITAL OF LONDON, Leicester Square.—Anæsthetist; must be duly registered medical practitioner. Applications and testimonials to Francis Pink, Secretary, before July 9th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis Road, Shadwell, E.—Resident Medical Officer; must be registered practitioner in Medicine and Surgery. Salary, £80 per annum, with board and residence. Applications and testimonials to Thomas Hayes, Secretary, by July 23rd.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Two Assistant Physicians and Resident House-Physicians. Applications to William H. Theobald, Secretary, by July 18th and July 19th respectively.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon; doubly qualified. Salary, £70 per annum, with residence and maintenance in the house. Applications to the Chairman by July 17th.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End.—Senior Demonstrator of Physiology and Lecturer on Biology. Salary for the former, £150 per annum and a proportion of fees paid for classes; and for the latter, £100 per annum and class fees. Applications to Munro Scott, Warden, by July 7th.

NATIONAL DENTAL HOSPITAL, Great Portland Street, W.—Anæsthetist. Applications to E. Almack, Secretary, by July 19th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—Junior House-Physician; for six months, commencing August 1st. Applications and testimonials to T. Glenton-Kerr, Secretary, 27, Clements Lane, E.C., by July 12th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—House-Physician. Salary, £100 per annum, increasing £10 per annum at the discretion of the Committee, with furnished apartments, board, and washing. Applications to the Secretary by July 23rd.

PARISH OF ST. LEONARD, Shoreditch.—Resident Assistant Medical Officer for the Workhouse and Infirmary; doubly qualified. Salary, £120 per annum, rising £10 annually to £150 per annum, with rations, furnished apartments, and washing. Applications, on forms to be obtained at the Clerk's Office, to be sent to Robert Clay, Clerk to the Guardians, Clerk's Office, 213, Kingsland Road, N.E., by July 9th.

QUEEN CHARLOTTE'S HOSPITAL, Marylebone Road, N.W.—Resident Medical Officer. Appointment for four months. Salary at the rate of £60 per annum, with board and residence. Applications and testimonials to Arthur Watts by July 7th.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Senior House-Surgeon. The Junior House-Surgeon is a candidate, and applicants are requested to state whether, in the event of his being appointed, they will be willing to accept the office of Junior. Salary, £75 per annum for the Senior; Junior, £50 per annum, both with board and residence. Applications to the Secretary by July 19th.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant. Appointment for six months, with board and residence. Applications to Percy De Batlie, M.A., Secretary.

SOUTHPORT INFIRMARY.—House-Surgeon; doubly qualified. Salary, £100 per annum, with board, furnished rooms, and attendance. Applications to Joseph Wrall, Infirmary, Southport, by July 11th.

UNIVERSITY COLLEGE, DUNDEE, St. Andrews University.—Professor of Chemistry. Applications to R. N. Kerr, Secretary, by July 7th.

UNIVERSITY COLLEGE, London.—Resident Medical Officer. Applications to J. M. Horsburgh, M.A., Secretary, by July 16th.

WEST DERBY UNION.—Resident Assistant Medical Officer at Mill Road Infirmary. Salary, £100 per annum, with rations. Applications and testimonials to Harris P. Cleaver, Clerk to the Guardians, by July 10th.

WESTMINSTER HOSPITAL, Broad Sanctuary.—Second Dental Surgeon. Candidates must attend the House Committee on Tuesday, July 10th, with testimonials.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.—Demonstrator of Anatomy. Applications to Mr. Spencer, the Dean, before July 10th.

WEST NORFOLK HOSPITAL, King's Lynn.—House-Surgeon, who will also act as Secretary to the Weekly Board. Salary, £30, rising £10 annually to £100, with board, residence, and washing. Applications and copies of testimonials to S. R. Lister, Secretary, by July 7th.

MEDICAL APPOINTMENTS.

BEASLEY, Dr., appointed Medical Officer of Health to the Rowley Regis Local Board.

BROWNE, Mr. B.S., appointed Medical Officer for the Seventh District of the Deepwade Union and Medical Officer for the Fifth District of the Henstead Union.

BRYANT, H. A., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon to the Durham County Hospital.

BULLMORE, W. K., M.D.St.And., M.R.C.S.Eng., reappointed Medical Officer of Health to the Falmouth and Truro Port Sanitary Authority.

CASS, E. E., M.B., B.S.Durh., appointed Medical Officer of Health for the Bootle Union Rural Sanitary District, *vice* Mr. W. B. Griffiths, resigned.

COPE, Albert Ernest, M.D., B.S.Durh., M.B.Lond., appointed Medical Officer for the No. 3 District of the St. George's Union, *vice* John Hunt, M.R.C.S.Eng., deceased.

CULROSS, J., M.A.Glasg., M.B., C.M., appointed Medical Officer for the Workhouse of the Newton Abbot Union.

DALZELL, A., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the No. 6 District of the Barnet Union.

DEWHURST, Dr., appointed Medical Officer for the Campden District of the Shipston-on-Stour Union.

GOODFELLOW, Dr., reappointed Medical Officer of Health to the Brampton Local Board.

GRANGER, Edgar B., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Great and Little Milton Districts of the Thame Union.

JOHNSON, Dr. J. B., appointed Medical Officer for the Mickleton District of the Shipston-on Stour Union.

JONES, Richard, M.D., C.M.Edin., D.P.H.Camb., appointed Health Officer and Compiler of Vital Statistics by the Merioneth County Council.

LAKE, W. Wellington, M.R.C.S.Eng., reappointed Medical Officer of Health to the Guildford Rural Sanitary Authority.

MACLAREN, J., M.B., C.M.Edin., appointed Fifth Assistant Medical Officer to the West Riding Asylum, Wadsley, Sheffield.

MOORE, E. Head, L.R.C.S.Edin., L.S.A., reappointed Medical Officer for the Mylor District of the Falmouth Union.

PAYNE, Dr., appointed Medical Officer for the Ilfracombe District of the Barnstaple Union, *vice* Arthur L. Copner, L.R.C.P.Edin., M.R.C.S. Eng., deceased.

PRATT, Dr. Sutton, appointed Medical Officer to the Workhouse and the Rugby District of the Rugby Union, *vice* F. W. D. McGachen, L.F.P.S. Glasg., L.S.A., D.P.H.Camb., resigned.

ROBERTS, Mr., appointed Medical Officer for the Llanllwchaiarn District of the Newtown Union, *vice* F. U. Purcher, M.D.Edin.

TYNDALL, Francis, M.R.C.S.Eng., appointed Medical Officer to the Lostock Industrial School, *vice* George Howarth, L.R.C.P.Edin., M.R.C.S.Eng., deceased.

WHITESTONE, Augustus M., M.B., C.M.Edin., appointed Medical Officer of the Workhouse and the Second District of the Hollingbourne Union.

WILLIAMS, George Herbert, M.D.Yale, M.R.C.S.Eng., L.R.C.P.Edin., appointed Honorary Surgeon to the Highland Hospital, Matteawan, New York.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

WEDNESDAY.

POST-GRADUATE LECTURES, Metropolitan Hospital, N.E., 5 P.M.—Mr. Willett: Common Diseases of the Breast.

POST-GRADUATE COURSE, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Garrod: Less Familiar Diseases of Children.

THURSDAY.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Specimens will be shown by Dr. Bantock, Dr. Godson, Mr. Bowreman Jessett, Dr. Leith Napier, and Dr. Heywood Smith. Dr. Krantz: On a case of Lymphangiectasis of the Omentum treated by Abdominal Section.

NEUROLOGICAL SOCIETY OF LONDON, Medical Society's Rooms, Chandos Street, W., 8.30 P.M.—Dr. Head: On Disturbance of Sensation, with especial reference to the Pain of Visceral Disease. Part II. Head and Neck.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

SANDERS.—On July 1st, at 15, Alva Street, Edinburgh, the wife of Gordon Sanders, M.B., F.R.C.P., of a son.

THORNTON.—On June 29th, at 14, Cecil Square, Margate, the wife of Bertram Thornton, of a daughter.

MARRIAGES.

HUGHES—GARSIDE.—On July 4th, at St. Paul's Church, Leamington, by the Rev. G. Bassett Kerry, M.A., Edward Lucas Hughes, M.R.C.S. Eng., L.R.C.P.Lond., Whitchurch, Hants, to Sarah Louisa, younger daughter of the late Rev. Joseph Garside, Newbold Terrace East, Leamington.

PACKMAN—MCMEEKIN.—On July 3rd, at All Saints, U. Norwood, by the Rev. Eyre Kidson, Alfred Charles Augustus Packman, M.D., to Eliza Stevenson McMeekin, elder daughter of Thomas McMeekin, Esq., of Falkland Park, S. Norwood.

WADE—PURDON.—On June 19th, at Whiterange, Glawick, by the Rev. Hugh Stevenson, Melrose, George Wade, M.B., C.M.Edin., Melrose, N.B., to Elizabeth Findlay, youngest daughter of the late Thomas Purdon, solicitor and banker, Glawick.

WALKER—PORTUS.—On June 30th, at St. Marylebone Parish Church, by the Rev. W. McCarthy, M.A., Alexander Hope Walker, L.R.C.P., M.R.C.S., of Cranleigh, Surrey, to Helen Consuelo Portus, second daughter of the late George B. Portus, Esq., surgeon, of Bagillt, N. Wales.

WYNNE JONES—CHARTER.—On June 27th, at St. Martin's-in-the-Fields Church, Trafalgar Square, by the Rev. Garton, B.A., Thomas Joseph Wynne-Jones, L.R.C.P., etc., of Southborough, Tunbridge Wells, to Gertrude Geraldine Mary, eldest daughter of the late Rev. J. H. E. Charter, Severn Villa, Shrewsbury.

DEATH.

WORTH.—On June 21st, at Anderton, Plymouth, Edwin James Worth, M.R.C.S., L.S.A., L.M., aged 59.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

N. J. W. wishes to know if piperazine has ever been found of any value in the treatment of diabetes in a gouty subject, as suggested by Hildebrandt.[1]

COST OF HOSPITAL.

MEDICUS would be glad to know of any book giving details of construction, with approximate cost of a general hospital of twenty beds, also size of site required.

*** Our correspondent might consult *Hospitals and Asylums of the World, their Origin, History, Construction, Administration, Management, and Legislation.* By H. C. Burdett. London: J. and A. Churchill. 4 vols. £8 8s.

ST. JOHN AMBULANCE STRETCHER EXERCISE.

A CORRESPONDENT writes to ask how should a stretcher conveying a patient suffering from a fracture of the thigh or fracture of the leg (both bones) be carried up and down hill and up and down stairs; should the head be last in ascending and first in descending?

*** If the patient is suffering from a recent fracture of the lower extremity he will, in all cases, be carried with his head down hill.[2] This is the reverse of the ordinary position, in which the head of the patient points in the direction in which the stretcher is being carried. If the head were forward in going up hill or up stairs in fracture of the lower limb, the weight of the body would tend to cause over-riding of the broken shaft of the bone.

ANSWERS.

M.B., M.A.—The card is one for the licensing bodies whose qualification is held by "Dr. McA." rather than for the General Medical Council.

A. C. M.—The practice of giving testimonials to proprietary remedies and preparations is contrary to the best usages of the profession, and is one which has frequently been condemned.

CAUTION writes in reply to E. S., to utter a note of warning; it is not a foregone conclusion that climatic change will favourably influence any given case of asthma..

W. P.—The treatment of obesity by massage is, as a rule, very fairly successful. As the patient need not be confined to the house there seems to be no particular advantage in sending him to an institution, either at home or abroad.

A. H. F.—There is no doubt in our opinion that our correspondent is liable to pay the rates on the building which he has erected. We advise him to get *How to Appeal Against Your Rates*, published by A. Chapman and Co., 24, Colville Terrace, London, W.

TESTS FOR LACTIC ACID.

A MEMBER would be obliged by information as to the composition of two tests for lactic acid mentioned in the EPITOME for June 16th, namely, Uffelmann's and Boas's.

*** Uffelmann's test: 10 c.c. of a 2 to 5 p.c. solution of carbolic acid is added to a dilute solution of ferric perchloride. Water is then added until an amethyst blue colour is produced. Lactic acid converts this colour into a canary yellow. Boas's test is a much more complicated process. The principles on which it is based are given in the EPITOME, November 4th, 1893, par 364. Further details can be found in the *Münch. med. Woch.*, October 24th, 1893.

[1] BRITISH MEDICAL JOURNAL, EPITOME, March 31st, 1894.
[2] *Manual for the Medical Staff Corps, 1893* (Sect. ii, v).

SEA-SIDE RESORTS FOR RHEUMATISM.

M. E. H.—At this season of the year any of the southern resorts between Ramsgate to the east and Southsea to the west would be suitable.

SO-CALLED MEDICAL PROVIDENT SOCIETIES.

E. V. H. AND A. H. H.—We are much obliged for the cutting, and have already expressed our opinion of the Society in question. There is every objection to provident medical societies that are not under the control of *bonâ fide* lay committees, and we think it desirable that members of the profession should refuse to accept appointments where the least suspicion might attach that the society was formed solely in their own individual interests.

G. H. J.—We are sorry to hear of our correspondent's unprofessional treatment, but at the same time he must allow us to point out that this has very little to do with the matter at issue. On no ethical grounds can it be admitted for a moment that unprofessional conduct on the part of one member of the profession will justify a retaliation in kind on the part of another. With regard to the Medical Provident Society, we see no reason to alter the opinion recently expressed in these columns, and it must be obvious that representing the interests of the profession as a whole we can hardly approve of any institution, whether called a provident dispensary or by any other specious name, which is worked by an individual practitioner at the expense of his professional neighbours. Competition between man and man is the order of the day in every department of the business of life, but among members of an honourable profession we think there are some forms of competition which ought to be in every way discountenanced.

NOTES, LETTERS, Etc.

THYROID GLAND TABLOIDS IN OBESITY.

MESSRS. BURROUGHS, WELLCOME AND CO. (London, E.C.) write: Enclosed is a copy of a letter which we have sent to the daily journals, in consequence of the vast number of inquiries we have received directly from the public regarding thyroid gland tabloid treatment for obesity. As you are well aware, our products are intended for use under medical supervision, and we felt it to be our duty to thus warn the public against the indiscriminate use of these powerful agents:—

"*Thyroid Gland "Tabloids" in Obesity.*

"SIR,—In view of the keen interest which has been aroused by the reports which have recently appeared in *Truth* of June 21st, and other journals, in regard to this treatment, we think that, as the manufacturers of these products, we ought to point out that thyroid gland 'tabloids,' as well as preparations of other organic animal principles, should only be administered under the direction of qualified medical practitioners. We are advised by an eminent authority that this method of treatment is not suited to all classes of cases, and that there is undoubtedly in some cases a liability of systemic disturbances requiring experienced medical supervision.—Yours very respectfully,

"BURROUGHS, WELLCOME AND CO.,
"Per T.W.D."

TRAMPS AND SMALL-POX.

THE *Newcastle Daily Chronicle* of June 25th says: The BRITISH MEDICAL JOURNAL calls attention to the very alarming fact that about 50 per cent. of the primary invasions of districts by small-pox are the result of tramp-spread infection. The Incorporated Society of Medical Officers of Health have had the matter under consideration for some time, and have done their best to suggest remedies in the shape of regulations for the disinfection and detention of vagrants, not only in casual wards, but in common lodging houses. Great as the evil of small-pox propagation is, the difficulties of the situation are nevertheless even more serious. This is a free country, and persons who happen simply to be tramps in search of a "job" retain the privileges of ordinary Britons, and cannot be subjected promiscuously to detention and other more or less inconvenient restrictions.

TREATMENT OF NASAL POLYPI.

DR. A. C. GODFREY (Freemantle, Southampton) writes: I have found an injection of tannic acid—20 grains to 5j of water—in most cases cure nasal polypi. The polypus dries up and comes away without pain.

PASTEURISM IN ROUMANIA.

IN the *Annales de l'Institut Pasteur* for June Dr. Emile Puscariu, Director of the Antirabic Institute of Jassy in Moldavia, gives the statistics of the institute from August 16th, 1891, to May 1st, 1894. The institute was founded in June, 1891, by the late Dr. Eugene Rizou, formerly Dean of the Medical Faculty of Jassy, and by Professor Puscariu, but it did not begin its work till the following August. At first it was an annexe of the therapeutical laboratory of the University of Jassy, receiving a subvention from the Minister of Public Instruction. In December, 1892, after the death of Dr. Rizou, the antirabic service became an independent institute of the Faculty, passing under the direct control of the Superior Sanitary Service. Since that time it has been under the direction of Professor Puscariu, who is assisted by Drs. Babeš and Vesesco. The method employed is that of M. Pasteur, with the following modifications: First, the duration of treatment is longer (from twenty to thirty-five days); secondly, for the last year and a-half the cords, instead of being triturated with *bouillon*, are prepared in an emulsion of *virus fixe*, which is in the proportion of one rabbit's brain to 100 cubic centimetres of distilled water, filtered and sterilised by exposure to a temperature of 80° C. for fifteen minutes. The total number of persons treated up to May 1st, 1894, was 681, distributed as follows: In 1891, 34 with no deaths; in 1892, 133 with 2 deaths, during treatment or within a fortnight of the last inoculation: in 1893, 144 with 1 death, within a fortnight of the treatment and 1 a few later date; in 1894, 50 with 1 death, during treatment. Excluding the four deaths during treatment, the total mortality was, therefore, only [illegible] per cent.

The fact of rabies was established in the usual way in 343 cases; in the remaining 18 there were reasonable grounds for suspicion. The bites were inflicted in 325 cases by dogs, in 26 by wolves, in 6 by cats, in 1 by a horse. Lastly, in 3 cases the biter was that "paragon of animals," man. Unfortunately, however, it is not stated whether these were among the proved or the merely suspected cases.

THE PLANT WORLD.

ACCORDING to *Nature*, in a paper read at the Botanical Congress at Genoa last year, Professor Saccardo calculates the number of species of plants at present known at 173,706, distributed as follows: Flowering plants, 105,231; ferns, 2,819; other vascular cryptogams, 565; mosses, 4,809; hepatic æ, 3,041; lichens, 5,609; fungi, 39,603; algæ, 12,178. Professor Saccardo thinks it probable that the total number of existing species of fungi may amount to 250,000; and that of all other species of plants to 135,000.

MORTALITY FROM ALCOHOL.

DR. ANDERSON, Medical Officer of Health for Blackpool, states in his annual report, just published, that alcohol is responsible for more deaths than appear in the returns. He adds that while 0.176 per 1,000 persons were certified as dying from alcohol, at least 0.634 deaths were caused by excessive drinking. As in England and Wales the deaths from alcoholic excess from 1886-90 were 0.055 per 1,000 the rate in Blackpool is three times as large as in the country generally.

A INSULT TO THE SPANISH MEDICAL PROFESSION.

THE medical profession of Spain has recently had an unpleasant experience of the truth that no man is a prophet in his own country. The Spanish Minister for Home Affairs, Señor Aguilera, wishing to satisfy himself as to the nature of some suspicious cases of "choleriform" disease which occurred on the Portuguese frontier, had specimens of the excreta sent to the Pasteur Institute in Paris for examination. This disregard for local talent has not unnaturally caused great indignation in the profession in Spain.

GOOD WINE NEEDS NO BUSH.

THE doctors of the Gironde dined together on Sunday, June 17th, at Pauillac, and the banquet was, according to the *Echo*, moistened by 218 *crus* and 340 varieties of wine. The *carte* was in twelve pages, setting forth in elegant typography the virtues of the most reputed *crus* and the most famous years. There were 1,400 bottles to 170 doctors. It is hardly to be expected that the doctors of the Gironde tasted all the vintages. Their professional knowledge would act as a monitor, however zealous might be their support of the industry on which doctors and laymen live in the Gironde.

THE BATH WORKHOUSE.

THE *Bath Herald* writes: It almost requires an apology to venture again on the subject of the workhouse and its nursing arrangements. I hear a story, however, which deserves repetition. On Tuesday a lady was sent down by the BRITISH MEDICAL JOURNAL to visit the infirmary at the workhouse, in connection with a series of investigations being made by that paper into the state of the infirmaries in workhouses generally throughout the country. This lady's report was, it would appear, anything but satisfactory, for yesterday the Editor sent down a member of his own staff—a fully-qualified medical man—to make a further investigation. He journeyed to Odd Down armed with a card from one of the guardians, which was duly presented, but to no purpose, and I understand that the Editor of the BRITISH MEDICAL JOURNAL will lay the matter before the Local Government Board in order to obtain a permit to visit the house.

LOT OF THE SICK POOR.

THE condition of the sick poor in provincial workhouses is receiving attention, says the *Morning Leader*, at the hands of a special commissioner of the BRITISH MEDICAL JOURNAL. The town noticed this week is Haverfordwest. The paper says: The sick—that is, those paupers who are placed in the infirmary—are lying on plank beds, with chaff mattresses about 3 inches thick between their weary bodies and the hard, uneven planks. One paralysed woman had a spring bed with the chaff mattress over the springs. There was also a case of rheumatism, a man with a bad leg, and some cases of senile debility; some idiots and imbeciles shared the wards with these patients. The infants occupy a dark stone-paved room, bare of furniture, with no rug for the babies to crawl or lie upon, and no responsible person to see to their feeding or their cleanliness. Dreariness and absence of the simplest comforts reigned throughout the building: no means of bathing, no lights among the sick at night, no provision for attendance at night other than one sick pauper could render to another, no cheerful rooms for use by day, when the aged were able to leave their beds, no gardens or courts for them to sun themselves in. Is this all Haverfordwest can do for the aged, the sick, and the infants? What have they done to deserve so cruel a fate?

UNCERTAINTIES OF ADVERTISING.

MR. T. B. RUSSELL, in an article in *Fame*, a journal for advertisers, dwells upon the difficulty and bewilderling advertiser experiences in choosing the best medium for his purpose. In making an ordinary purchase one is allowed to see and examine the article; but when buying space from a newspaper publisher the advertiser is expected to open his mouth and pocket, shut his eyes, and take what comes. "A few courageous and reasonable publishers," Mr. Russell adds, "stand forward from the ruck, and do business on the impregnable rock of quoted and proved circulation." The majority of good papers declare not only to prove their circulation, but even to state it, and this custom, initiated and maintained by the highest class of newspapers, is followed by all but a very small proportion, so that the uncertainties of advertising are markedly increased. Mr. Russell condemns the practice as immoral, because it is a cloak to direct the gross deception, and short-sighted, because whatever increases the uncertainty of advertising makes success in advertising more difficult. He believes that, were the circulation of the better newspapers known, it would be seen that their charges in proportion to circulation are the cheapest, and that if the rule of stating the proved circulation were general, the revenues of the papers would be largely increased. The favourite excuse of the secretive publisher, "If we published our circulation other people would outbid us by publishing fictitious or exaggerated statements of theirs," is sufficiently answered when it is pointed out that not stated but proved circulation is the desideratum; and if every advertiser were to require a contract of the number of his advertisements to be issued some startling developments would follow.

LUCKY NUMBERS.

TWO French medical students, M. Gustave Lefilliatre and M. Georges Labey, had recently a letter from a solicitor named Leger, of Marines, Seine-et-Oise, stating that the late Dr. Dubois, a medical man at Chars, had left a will by which he bequeathed all his surgical and medical appliances, free of legacy duty, to two students obtaining their degree at the examination next after the decease of the testator. The two students selected were to be those who came out No. 14 and No. 84 in the list. At first it was thought the letter was a hoax, but the two young men went to the place indicated, and were there duly presented with an exceptionally fine collection of instruments and accessories of all kinds for division between them. They learned that their being specially chosen was due to the fact that the deceased doctor had twice passed an examination, and that he had on those occasions been No. 14 and No. 84 on the lists.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(**A**) Professor T. C. Allbutt, Cambridge; Messrs. Arnold and Sons, London; Mr. W. Aspinall, Haslingden; **A. B.** (**B**) Messrs. Burroughs, Wellcome and Co., London; Dr. E. G. Barnes, Eye; Dr. M. Baudouin, Paris; Mr. H. A. Bryant, London; Dr. Braidwood, Amersham; Mr. L. A. Bidwell, London; W. Benthall, M.B., Derby. (**C**) Dr. J. Coats, Glasgow; Church Funeral Reform Association, Secretary of, London; Mr. A. H. Cheatle, London; P. Campbell, M.B., Dundee; Mr. A. Clark, London; J. J. Clarke, M.B., London. (**D**) Dr. T. M. Dolan, Halifax; Miss D'Orsey, Teddington. (**E**) Mr. H. F. E. Eagle, London; Mr. C. Edwards, London; Dr. W. A. Evans, Bradford. (**F**) Mr. G. H. Fosbroke, Worcester; From One Learn All; Mr. C. E. S. Flemming, Freshford. (**G**) Mr. W. H. Goodenough, Dysart; Mr. B. J. Glissan, Wellington, Salop; Mr. J. H. Gornall, Warrington. (**H**) Dr. W. Hardman, Blackpool; Mr. A. E. Harris, London; Mr. J. Hutchinson, London; Dr. L. Humphry, Cambridge. (**I**) Dr. C. R. Illingworth, London; Inquirer. (**J**) Dr. R. Jones, Blaenau-Festiniog; Mr. A. Jackson, Sheffield. (**K**) Dr. W. M. Kelly, Taunton. (**L**) Mr. A. E. Longhurst, London; Dr. E. Le C. Lancaster, Swansea; Dr. G. H. Le Mottée, Fyzabad; Dr. Lord, Crewe; Dr. C. J. Lewis, Stirling; Mr. G. Lucas, Bury. (**M**) A. C. Malley, M.B., Craven Arms; Mr. C. A. Morton, Clifton; Dr. J. Meredith, Wellington, Somerset; J. Maclaren, M.B., Sheffield; Messrs. Miller and Woods, London; M.D. (**N**) Dr. Leith Napier, London; National Orthopædic Hospital, Secretary of, London. (**O**) Dr. James Oliver, London. (**P**) A. J. Prentice, M.B., Lanark; Dr. R. W. Philip, Edinburgh; Dr. W. M. Parham, Bexley Heath. (**R**) Professor Roy, Cambridge; Mr. A. Robottom, London; Mr. A. W. Robson, Aston. (**S**) Mr. W. Stevenson, London; Mr. H. Saunders, Deddington; Dr. L. W. Sedgwick, London; Mr. C. T. Snedeker, London; Dr. F. F. Schacht, London; G. Sanders, M.B., London; Mr. A. W. Sheperd, Cowbridge. (**T**) Mr. A. Thomson, Maidenhead; Dr. H. Taylor, Guildford; Dr. H. Tibbits, London. (**W**) Dr. A. E. Wright, Oakhurst; Mr. W. R. Williams, Preston; Dr. C. Westbrook, Retford; W. H.; J. Williams, M.B., Cardiff; Mr. E. W. Wallis, London; Dr. G. H. Williams, Fishkitt on-the-Hudson; Mr. J. D. Windle, London; Dr. A. G. Welsford, Dover; Mr. C. F. Wightman, Scarborough; D. Walsh, M.B., London; Dr. H. Waldo, Clifton; Mr. C. H. Whiteford, Plymouth; Dr. F. J. Waldo, London; Mr. J. W. Walker, Wakefield. (**Y**) Mr. N. E. Yorke-Davies, London; etc.

BOOKS, ETC., RECEIVED.

Personal Hygiene. By Mrs. A. S. Ballin. London: F. J. Rebman. 1894. 2s. 6d.

Post-Nasal Growths. By C. A. Parker. London: H. K. Lewis. 1894. 4s. 6d.

Inebriety or Narcomania; its Etiology, Pathology, Treatment, and Jurisprudence. By Dr. Norman Kerr. 3rd Edition. London: H. K. Lewis. 1894. 21s.

Handbuch der Arzneimittellehre. Von Dr. H. Nothnagel und Dr. M. J. Rossbach. Berlin: August Hirschwald. 1894. M. 18.

Madeira and the Canary Islands. By A. S. Brown. 3rd Edition. London: Sampson Low, Marston and Co. 1894. 2s. 6d.

The Pharmacopœia of the London Hospital. London: S. F. Hodsoll. 1894.

Aids to the Mathematics of Hygiene. By R. B. Ferguson. London: Baillière, Tindall and Cox. 1894. 2s. 6d.

Elementary Treatise on Natural Philosophy. By J. D. Everett. 13th Edition. London: Blackie and Son. 1894.

De la Symphyseotomie: Recherches expérimentales sur l'Elargissement du Bassin. Par Dr. A. Planellas. Barcelona: Henrich y Cª. 1894.

Two Monographs on Malaria and the Parasites of Malarial Fevers. London: The New Sydenham Society. 1894.

REMARKS
ON
METHODS OF INCREASING AND DIMINISHING THE COAGULABILITY OF THE BLOOD,

WITH ESPECIAL REFERENCE TO THEIR THERAPEUTIC EMPLOYMENT.

By A. E. WRIGHT, M.D.Dubl.,

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We may begin by the consideration of the methods by which blood coagulability can be increased, since these methods form the basis of the rational therapeutics of hæmophilia and of the treatment of all cases of hæmorrhage and aneurysm which are not accessible to surgical treatment. I have already in the BRITISH MEDICAL JOURNAL[1] indicated one of these methods, which consists in the addition of lime salts to the blood, and I now propose to call attention to a further method of increasing coagulability which consists in increasing—by inhalation of the gas or otherwise—the amount of carbonic acid in the blood. It will be convenient to summarise in the form of a series of propositions the results which have been obtained by the experimental application of these methods.

THE ADDITION OF CALCIUM CHLORIDE TO EXTRAVASCULAR BLOOD CAUSES IT TO COAGULATE MORE RAPIDLY.

I have already established this in previous communications,[2] and I have suggested[3] that this fact may be turned to practical account by employing weak (that is 0.25-0.5 per cent.) solutions of calcium chloride as "physiological styptics." I have further pointed out[4] that the efficacy of these styptics may be increased by combining the calcium chloride with solutions of cell nucleo-albumens, that is, with albuminous substances which can be obtained from the aqueous extracts of any cellular tissues—for example, thymus, thyroid, testicle, gastric, and other mucous membranes. The practical utility of such physiological styptics remains a matter for clinical experiment by others; but I desire to point out that the efficacy of any particular sample of styptic can now be readily put to the test before it is employed clinically by taking advantage of the coagulation tubes with mixing chambers which I have recently described and figured in this JOURNAL.[5] The following examples will suffice to indicate the amount of acceleration that may be expected:

Blood drawn from finger of G. C. (a hæmophiliac boy).—Coagulation time of unmixed blood 45 minutes. Coagulation time of blood which had received an addition of ¼ vol. of a 1 per cent. calcium chloride solution 9½ minutes. (Experiment conducted at temperature of air, *circ.* 57° F.)

Blood drawn from finger of the same boy one fortnight later.—Coagulation time of unmixed blood exceeds 45 minutes. Coagulation time of the same blood after receiving an addition of ¼th of a 1 per cent. calcium chloride solution less than 19 minutes. (Experiment conducted at temperature of air, *circ.* 42° F.)

Blood drawn from the finger of a woman (Mrs. H.) who had hunted down the hæmorrhagic diathesis to two sons.—Coagulation time of unmixed blood 5 minutes 25 seconds. Coagulation time of blood after receiving an addition of ¼ vol. of a 1 per cent. calcium chloride solution 2 minutes 45 seconds. (Experiment conducted at 18.5° C.)

My own blood, June 3rd, 1894.—Coagulation time of unmixed blood 5 minutes. Coagulation time after addition of ¼ vol. of a solution of nucleo-albumen combined with 1 per cent. calcium chloride 2 minutes 30 seconds. (Experiment conducted at temperature of 18.5° C.)

My own blood, June 23rd, 1894.—Coagulation time of unmixed blood 5 minutes 45 seconds. Coagulation time after addition of ¼ vol. of the same styptic 2 minutes. (Experiment conducted at 18.5° C.)

It will be observed from the above examples that the addition of a "physiological styptic" may give us a very rapid coagulation. By its very nature, however, it cannot give us the instantaneous cessation of bleeding which we can obtain, if we care to pay the price for it, with an ordinary escharotic styptic.

THE INTERNAL ADMINISTRATION OF CALCIUM CHLORIDE INCREASES THE COAGULABILITY OF THE BLOOD.

I have already in a previous paper shown this to be the case (*a*) in the blood of animals (dogs and rabbits), (*b*) in the blood of my friend Dr. Leonard Rogers and in my own blood; and (*c*) in the case of a hæmophiliac boy who was under my care in July, 1893. I need not do more than supplement this by the following observations on certain families of hæmophiliacs:

CASE I. *Hæmophilia Inherited from Mother and Grandmother.*—This reported derivation of the disease was confirmed by the fact (*a*) that the mother's blood had a coagulation time of 7 minutes, as compared with a coagulation time of 3 minutes in the father's blood (both under identical conditions of temperature and diet), and (*b*), by the fact that the grandmother's blood has a coagulation time of 11 minutes as compared with a coagulation time of 5½ minutes in the grandfather's blood (both under identical conditions of diet and temperature).

The effect of an administration of calcium chloride to a selected number of the members of this family was as follows:—

Relationship to the Hæmophiliac Boy.	Age.	Coagulation Time before Commencement of Treatment.	Temperature at which the Determination was Made.	Date or Dates on which Calcium Chloride and Number of Daily Doses.	Dose of Calcium Chloride.	Coagulation Time after Treatment.	Temperature at which the Determination was Made.
		Min. Sec.	F.		Grammes.	Min. Sec.	F.
Maternal grandmother	68	11	55°	2-11-93	0.6 b.i.d.	5	57°
		5	57°	3-11-93	0.6 ,,	6 30	52°
Mother	28	6 45	55°	2-11-93	0.6 ,,	4 35	57°
		4 35	57°	3-11-93	0.6 ,,	3 25	52°
Eldest sister	9½	11 45	55°	2-11-93	0.3 ,,	9	57°
		9	57°	3-11-93	0.3 ,,	10	52°
Fifth sister	1½	12 20	55°	2-11-93	0.3 ,,	10 15	57°
		10 15	57°	3-11-93	0.3 ,,	7 20	52°
Hæmophiliac boy himself	3	23 (?)	55°	2-11-93	0.3 ,,	35 (?)	57°
		35 (?)	57°	3-11-93	0.6 ,,	21 (?)	52°
		21 (?)	52°	4-7-11-93	0.3 ,,	29 (?)	41°
		29 (?)	41°	13-15-11-93	0.7 ,,	45 (?)	42.5°
Maternal first cousin (boy)	11	8 20	55°	2-11-93	0.6 ,,	4 30	57°

It will be noticed that evidence was obtained of increased coagulability of all the members of the family except the hæmophiliac boy himself. It is impossible to be certain whether in his case there was any increase of coagulability or not for the determinations of coagulability were made at such unfavourable temperatures that it was a matter of difficulty to obtain a correct measure of his coagulability.

I am indebted to Sir William Jenner, Bart., for the opportunity of studying, and for much help in the study, of these cases.

CASE II.—Hæmophilia said to be inherited through the mother. No confirmation of this history obtained on comparing the mother's coagulation time (3½ minutes at 18.5° C.) with the father's coagulation time (3 minutes 10 seconds, at 18.5° C.).

Patient.	Age.	Coagulation Time before Treatment	Date on which Calcium was Administered.	Dose and Number of Daily Doses.	Coagulation Time after Treatment	Temperature at which Determination was made.
Hæmophiliac boy	9	Over 80 min.	14-4-94	2 grammes b. i. d.	27 min.	18.5° C.
		27 min.	15-4-94	2 grammes b. i. d.	13 min.	18.5° C.
Hæmophiliac boy	7	6 min. 40 sec	14-4-94	2 grammes b. i. d.	4 min.	18.5° C.

It will be seen that the administration of comparatively large doses of lime was successful in reducing coagulation time in both these cases.

CASE III.—Hæmophilia of very moderate degree.

Patient.	Age.	Coagulation Time before Treatment.	Date on which $CaCl_2$ was Administered.	Dose and Number of Daily Doses.	Coagulation Time after Treatment.	Temperature at which Determinations were Made.
Male ...	30 *circ*	7 min. 30 sec.	22-3-94	2 grammes b. i. d.	5 min. 50 sec.	18.5° C.

I am indebted to my friend Mr. N. Ridley for the opportunity of studying these cases.

It has thus been shown in the case of four quite unrelated hæmophiliac families (that is, in the cases just reported and in the case reported in my previous paper[6]) that the administration of calcium chloride causes an increase of blood coagulability. I have collected some, but as yet insufficient, evidence of the same favourable effect in the case of three other hæmophiliac families which have come under my observation. I have also notes of a case in which the administration of calcium chloride enabled an operation for nasal polypi to be successfully carried out. An operation had been attempted on a previous occasion upon the patient in question (a girl who is a member of one of the families of hæmophiliacs last referred to), but it was apparently found necessary to abandon it owing to the onset of serious hæmorrhage. A brother of this girl died from hæmorrhage after extraction of a tooth, and his case has been reported in the Army Medical Reports for 1893 by Surgeon-Captain Grenville E. Moffett. I am indebted to this officer for an opportunity of studying this hæmophiliac family.

INTERNAL ADMINISTRATION OF CALCIUM CHLORIDE OFTEN CAUSES AN ARREST OF HÆMORRHAGE.

The proof that internal administration of calcium chloride frequently brings about an arrest of hæmorrhage is a much easier matter than the proof of the occurrence of increased blood coagulability after the administration of lime. This is evident when we consider that an arrest of hæmorrhage obtrudes itself upon observation, whereas an increase of blood coagulability may occur and may pass unperceived, unless we are fortunate enough to hit off the proper time for making our examination of the blood. In actual experience I have on several occasions failed to obtain a record of increased coagulability in cases where there could hardly be any doubt that the arrest of hæmorrhage which had taken place was attributable to the administration of the calcium chloride.

Instances of arrest of hæmorrhage (hæmoptysis, frequently recurring epistaxis) after the administration of lime salts have been put on record by me in my previous paper.[7] Since the date of that paper I have seen other and equally successful results from this treatment, especially in hæmophiliac menorrhagia. Mr. Mayo Robson has also put similar cases on record—arrest of bleeding in surgical operations on the liver and in menorrhagia. A much greater evidential value, however, attaches to cases of arrest of actual hæmophiliac hæmorrhage, for in these we have an opportunity of contrasting hæmorrhages which were left untreated with hæmorrhages in the same patients which have been treated with calcium chloride. It will suffice to say that I have learned from four different sources—in three instances from the medical men in charge—of the successful arrest of hæmophiliac hæmorrhage under the influence of calcium chloride. The details of a fifth case, which was successfully treated by the inhalation of carbonic acid combined with the internal administration of lime salts, will be given in another part of this paper.

THE CONTINUED ADMINISTRATION OF LARGE DOSES OF CALCIUM CHLORIDE IS NOT EFFECTUAL IN KEEPING UP A PERMANENT CONDITION OF INCREASED BLOOD COAGULABILITY.

I have already pointed out this fact in connection with the case of hæmophilia recorded in my previous[8] paper. In the case in point, the administration of calcium chloride (1 gramme t. i. d.) reduced the coagulation time of the blood from 10 minutes to 5 minutes, but on the third day of the treatment, which was also the last day of the experiment, coagulation time was diminished beyond all previous record. The same phenomenon manifested itself in the case of my own blood, and precisely similar results are, as I have pointed out, obtained when calcium chloride is added in excessive quantities to extravascular blood. Since the date of the paper just referred to I have repeatedly come across the same phenomenon. I may instance the case of a patient with abdominal aneurysm,[9] for it is especially in cases of aneurysm that a condition of long-continued high blood coagulability is to be desired. I do not propose to go into detail upon this matter here, for the problem of the treatment of aneurysm involves the subordinate problems of the influence of diet and of abstinence from foods and drink and from exercise upon the condition of blood coagulability. I need hardly point out that the study of these problems has not even been seriously commenced, and that there is therefore as yet no scientific justification for the processes of semi-starvation and drugging with iodide of potassium which have been adopted as the routine treatment for aortic aneurysm. If I might judge of the effects of a very spare diet from observations on myself and on the patient in question, I should conclude that such a diet considerably diminishes the coagulability of the blood. For instance, in the case of my own blood, I find that coagulation takes place more slowly than normally when a comparatively long period of inanition (for example, 10 hours) is allowed to intervene between breakfast and dinner. Under such conditions, I have observed my blood to remain fluid for 6 minutes.[10] Three hours after dinner on the occasion in point my coagulation time stood at 2 minutes. I have made several experiments with very similar results. On the other hand Vierordt[11] found that his coagulability was decreased after meals, but I gather that he took beer[12] at dinner, and surmise that he took beer also at his evening meal.

Reverting however to the question of the effect of a continued administration of large doses of lime salts to the aneurysm patient in question, I found that under the influence of doses of 4 grammes of calcium chloride administered twice daily, the patient's coagulation time decreased from his normal of 6 minutes to a minimum of 4 minutes on the third day of the treatment. On the fourth day coagulability became subnormal, and it reverted to its original level when the administration of calcium chloride was stopped. Similar results were obtained with a morning and evening dose of 3 grammes of calcium chloride. Under the influence of these doses coagulability was increased till a coagulation time of $3\frac{1}{2}$ minutes came under observation on the fourth day of the treatment. On the next day coagulability again began to decline, and coagulation time stood at $6\frac{3}{4}$ minutes on the seventh day of the treatment.

The administration of the lime salt was then again suspended and coagulability increased (this was probably attributable to the elimination of an excess of lime) until the previous maximum coagulability ($3\frac{1}{2}$ minutes) was reached 24 hours after the administration of the lime had been suspended. After this coagulability reverted to its original level, and coagulation times ranging between $6\frac{1}{4}$ minutes and 8 minutes were recorded in the morning and evening determinations of the next two days. The administration of calcium chloride was now begun again (this time 2 grammes of the salt were administered thrice daily), and eight hours after the administration of the first dose, coagulation time stood at $3\frac{1}{2}$ minutes, and under the influence of this treatment, combined with a more generous diet, coagulability increased gradually but irregularly (for there was a temporary fall caused by changes in diet), till on the 12th, 13th, 14th, 15th, and 16th days of this treatment coagulation times of $4\frac{1}{4}$, $4\frac{1}{4}$, $3\frac{1}{4}$, $2\frac{1}{4}$, and $1\frac{1}{2}$ minutes were registered. On the next day after this, though the treatment remained unaltered, coagulability again began to decline, and a few days afterwards the patient passed from under my observation.

INHALATION OF CARBONIC ACID GAS AND INCREASED COAGULABILITY OF THE BLOOD.

After establishing[13] the fact of the increase of blood coagulability under the influence of carbonic acid by direct observations on the condition of blood coagulability in animals

(dogs and rabbits) which were supplied in an alternating manner with ordinary atmospheric air and with atmosphere in which the total nitrogen had been replaced by carbonic acid, and after having verified that the inhalation of carbonic acid had a similar effect on my own blood and also upon the blood of some children belonging to a hæmophiliac family under my care, I determined to employ the inhalation of the gas as a therapeutic measure in a case of almost desperate hæmorrhage which occurred in the hæmophiliac boy who was referred to me for study by Sir William Jenner.

The history of the case is as follows: The hæmophiliac heredity can be traced back through three generations of maternal ancestors. The child is at present nearly 4 years old, and has suffered from an almost continuous succession of subcutaneous hæmatomata. In September, 1893, hæmorrhage set in as a result of a fall upon the forehead, which left a scar which was visible for months after. The hæmorrhage was treated by ordinary palliative measures, and finally ceased after lasting some six weeks. The blood is said to have shown no tendency whatever to clot, unless when the wound had been tightly bandaged up for several days at a time. The coagulation time of this child (taken at temperatures ranging between 42° and 57° F.) oscillated between 45 minutes and 1 hour. On February 22nd, 1894, the child had another fall against a chair, and hurt the frænum of his upper lip, and bled a little at the time. Hæmorrhage came on profusely at night, and his pillow was soaked with blood and a great deal of blood was swallowed. When this was discovered the parents, according to directions previously left with them, administered 0.6 gramme of calcium chloride, and they state[14] that the blood, which had previously shown no sign whatever of clotting, began to clot firmly in two or three hours after the administration of the lime. Bleeding recurred the next day, and in the evening, after the child had fallen asleep, his mouth was found quite filled with blood clot. On February 4th, 5th, and 6th, bleeding recurred at intervals (probably owing to the frequent dislodgment of the clot). Calcium chloride had been administered all this time in 0.6 gramme doses twice daily. The child was seen by me on February 6th, and I found a scratch about one-eighth of an inch long, covered over by coagulated blood on the frænum of the upper lip. There was no oozing from the wound. A drop of blood was drawn off from the child's finger, and coagulation time (determined at 37° C.) was found to be 2 minutes 25 seconds,[15] and the addition of lime to the extravascular blood was found not to effect any acceleration of coagulation time.[16] The calcium chloride appears, therefore, to have done all that could have been expected of it, and yet there had been frequent recurrences of the hæmorrhage when the clot became dislodged. In view of these facts I determined to administer carbonic acid gas with a view to still further increasing blood coagulability. I hoped in this way to cause the blood to clot, not only on the surface of the wound, but also some distance up the lumina of the ruptured vessels. Guided by these considerations I inserted a soft india-rubber tube into the child's mouth, and connected it up with a Kipp's gas apparatus, which I had brought with me. I determined the coagulation time of the child's blood while the carbonic acid was being administered to him, and found that it was accelerated to 1 minute 40 seconds (determined at 37° C.).

The child was not seen by me again till February 12th, when I received another urgent summons saying that the hæmorrhage, which had ceased for 24 hours after the inhalation of the carbonic acid, had broken out afresh, and had continued ever since. Calcium chloride had been administered twice daily in 0.6 gramme doses from the 7th to the 11th, when the child vomited and refused to take it. On arrival I found the child absolutely blanched and tetchy to a painful degree. Determinations of coagulability were therefore out of the question. Blood was found to be oozing from the frænum of the upper lip, and there was a trace, but only a trace, of clot around the wound. Carbonic acid was immediately administered in the same manner as before, and under its influence bleeding broke out copiously. When, however, the child came more under the influence of the gas, and his struggles ceased, the blood clotted instantaneously, so that even the film of blood which was drawn out between the upper and the lower lip when the mouth was opened instantly congealed into a clot. I proceeded to remove the large clot of blood which had formed round the gum, and found it to be of extraordinary firm texture. A small clot instantly reformed round the cut, and the hæmorrhage ceased and the child fell asleep. The administration of the gas was continued for half an hour. The gasogene was then recharged and was left under the parents' charge. Hæmorrhage broke out afresh twice or three times in the course of the night, when the clots became dislodged, but clotting is reported to have taken place as soon as the inhalation of the gas was renewed. After this there was no further return of hæmorrhage, and convalescence took place.

In view of the apparently favourable results which have just been recorded, I resorted to inhalations of carbonic acid as a therapeutic measure in the case of abdominal aneurysm which I have already referred to. The method of administration which was finally selected as the most suitable consisted in filling an india-rubber bag (a water bed was pressed into this service) with carbonic acid gas, and in connecting up this bag with the mouthpiece of a Clover's inhaler. This arrangement allowed of the admixture of any desired amount of air with the gas as it escaped from the india-rubber bag. The administration of the gas was superadded to the medicinal treatment which was adopted. The results of these inhalations on blood coagulability are recorded in the following table:

Date.	Coagulation Time of Patient while Breathing Ordinary Air.	Coagulation Time of Patient a Few Minutes Later when Breathing a Mixture of CO_2 and Air.
	Min. Sec.	Min. Sec.
May 1, 1894	6 0	5 0
,, 3, ,,	6 45	5 0
,, 4, ,,	5 35	1 25
,, 5, ,,	1 7	2 18
,, 6, ,,	5 0	3 15
,, 7, ,,	7 15	6 15
,, 13, ,,	4 5	2 30
,, 15, ,,	3 50	3 15
,, 16, ,,	5 10	2 15
,, 17, ,,	9 40	3 57
,, 18, ,,	7 0	5 40
,, 19, ,,	4 25	3 15
,, 20, ,,	5 0	3 45
,, 21, ,,	1 52	2 42
,, 22, ,,	5 0	2 50
,, 23, ,,	4 20	2 0
,, 24, ,,	1 30	2 25
,, 25, ,,	2 22	1 55
,, 28, ,,	2 37	2 37
,, 30, ,,	3 52	2 20
,, 31, ,,	4 15	2 40
June 2, ,,	10 0	4 40

It is thus evident that a very appreciable increase of coagulability can be obtained by the inhalation of carbonic acid. The following facts are to be noted with respect to the manner of administration: (*a*) It is essential to give a sufficiency of oxygen or of ordinary air with the carbonic acid, not only because a neglect of this precaution causes extreme dyspnœa, but also because an anoxyhæmic condition of the blood appears to induce a condition of diminished blood coagulability. (*b*) Intravascular thrombosis may occur when carbonic acid is administered to an animal whose blood coagulability is abnormally high. I have, for instance, seen it supervene under these circumstances in animals whose blood coagulability had already been increased by the administration of calcium chloride. Naturally, therefore, the administration of carbonic acid was omitted in the case of the aneurysm patient in question on the days in which a coagulation time of less than 2½ minutes was registered. In this connection I may advert to the fact that Sir Joseph Fayrer has pointed out[17] that in persons whose blood is abnormally coagulable intravascular thrombosis tends to occur (*a*) after any violent muscular exertion, (*b*) as a sequela of surgical operations. It is possible that an accumulation of carbonic acid in the blood is a determining factor in both these cases.

Having thus discussed at some length the methods by which blood coagulability can be increased, we may now take a brief survey of the *methods by which blood coagulability*

can be diminished. The physiologist is familiar with some half-dozen methods by which the coagulation of the blood may be indefinitely postponed. Some of these methods—for instance, the addition of neutral salts to the blood or the cooling of the blood to a temperature approaching the freezing point—are not applicable to the intravascular blood. Again, other methods—for example, the addition of peptone or leech extract[18] to the blood—are therapeutically impracticable, because these substances fail of their effect when they are administered by the stomach, and because their injection into the veins is either dangerous or undesirable. In short, of the methods that are familiar to the physiologist, one method alone promises to be of service to the therapeutist. This method consists in operating upon the lime salts of the blood in such a manner as to render a certain portion of these salts unavailable for purposes of coagulation. Either oxalic, citric, tartaric, or malic acids, or the soluble salts of these acids, are at our disposal for this purpose. Oxalic acid and oxalates are, however, contraindicated owing to their poisonous properties. I therefore experimented upon animals and upon myself with tartrates and citrates, taking them by the stomach. I was, however, unsuccessful in obtaining a diminution of coagulability by this method, either in animals or in myself, though I both administered and took large doses of the salts (half an ounce and upwards).

I then experimented with tartaric and with citric acids, and have by this method obtained a diminished coagulability in all my experiments. The protocols of some of these experiments are subjoined:

Dog 1 (*circ.* 6 kilos. weight): 12.35 P.M., coagulation time 1 min. 50 sec.; 12.55 P.M., 15 grammes of tartaric acid administered by mouth; 1.5 P.M., dog vomits; 3 P.M., 15 grammes of citric acid administered by mouth; 3.45 P.M., coagulation time 3 min. 45 sec.

Next day at 12.45 P.M., coagulation time 2 min. 55 sec.; 1.30 P.M., 1 gramme citric acid administered hypodermically in 20 c.c. of distilled water; 2.30 P.M., coagulation time 3 min. 50 sec.; 4 P.M., coagulation time 4 min. 55 sec.; bleeds very freely from puncture in the ear.

Dog 2 (*circ.* 6 kilos. weight): 1.50 P.M., coagulation time 1 min. 30 sec.; 1.35 P.M., 1 gramme of citric acid hypodermically in 20 c.c. of water; 2.45 P.M., coagulation time 3 min.; 8 P.M., coagulation time 3 min. 30 sec.

Next day at 11.35 A.M., coagulation time 1 min. 35 sec.; 11.40 A.M., 2 grammes of citric acid hypodermically in 40 c.c. of water; 1.20 P.M., coagulation time 2 min. 10 sec.; 4.30 P.M., coagulation time 3 min. 30 sec.

Dog 3 (*circ.* 7 kilos. weight): 12 noon, coagulation time 1 min. 50 sec.; 12.5 P.M., 2 grammes of citric acid hypodermically in 40 c.c. of water; 1.50 P.M., coagulation time 2 min. 30 sec.; 4 P.M., coagulation time 1 min. 50 sec.

The injections were apparently painless, and no alteration of respiration was observed.

Experiments on myself: 1.45 P.M., 4½ hours after a light breakfast, coagulation time 5 min.; 4.15 P.M., 2½ hours after a light luncheon, coagulation time 3 min. 10 sec.; 4.30 P.M., 6 grammes of citric acid swallowed in 50 c.c. of water; 8 P.M., coagulation time 7 min. 15 sec.; 9.45 P.M., 2 hours after dinner, coagulation time 7 min.; 11.45 P.M., coagulation time less than 3 min. 40 sec.

One week later: 2.30 P.M., one hour after a very light lunch, coagulation time 5 min. 40 sec.; 2.50 P.M., swallowed 5 grammes of citric acid in 100 c.c. of water; 4.50 P.M., coagulation time 6 min. 50 sec.; 5.30 P.M., coagulation time 7 min. 50 sec.; 7 P.M., coagulation time 7 min. 40 sec.; 9.15 P.M., 1½ hour after dinner, coagulation time 7 min. 30 sec.

The results which are shown upon these last two protocols appear to be conclusive with regard to the only question really at issue, that is, the question whether citric acid can be absorbed from the stomach in sufficient quantities and sufficiently rapidly to exert its influence on coagulation. The evidential value of coagulability determinations which have been recorded is brought out by the fact that, in the very numerous determinations of my own blood coagulability which I have made in the course of the last year, 6 minutes and 15 seconds has been the longest coagulation time which I have registered, and this was at the end of a long fast between breakfast and dinner. I would therefore suggest that we have here a method which may be clinically exploited whenever we find that the coagulability of the blood has become dangerously increased. I need not further particularise the conditions to which the treatment is applicable. I would, however, point out that the effects of the administration ought to be carefully watched, for it is a very easy matter indeed, at any rate when citrates are being injected intravenously, to bind up all the lime salts of the blood in the form of citrates, and thus to render the blood completely uncoagulable and to destroy the irritability of the heart muscle. Before dismissing the subject of the effects of citric acid on the blood, I may be allowed to direct attention to two matters which appear to have a certain clinical importance.

1. The administration of vegetable juices, such as lime juice, which contains citric and other organic acids (*circ.* 8 per cent.), with a certain small admixture (*circ.* 0.3 per cent.) of the soluble salts of these acids, constitutes the routine treatment for scurvy. It is impossible, however, to doubt that this administration of citric acid must be prejudicial in any disorder in which there is a tendency to hæmorrhage, and in which there is actual hæmorrhage occurring from the gums: even solutions of citrates are contraindicated because of their local action in inhibiting the coagulation of the blood as it issues from the bleeding points. I have, through the kindness of Surgeon-Captain Whitehead, had a recent opportunity of actually observing the unfavourable influence that is exerted on incessant oozing hæmorrhage[19] from the gums by the daily exhibition of the juice of three lemons in the form of cooling drinks. The disadvantages of lemon juice in these cases will be apparent to anyone who will test the effect of addition of a minimal quantity of lemon juice to a litle blood in a capillary tube provided with a mixing chamber. Further, if, as seems assured, scurvy is a condition in which the normal alkalinity of the system has been dangerously diminished, the administration of free citric acid quite apart from its influence in diminishing blood coagulability is quite useless for all purposes of treatment, and it is evident that its place ought to be taken by the neutral citrates and tartrates, or preferably acetates, which would supply the alkaline bases which are required by the blood. If solutions of citrates and tartrates are administered in cases where there is hæmorrhage from the gums, the mouth ought evidently to be washed out afterwards with a dilute solution of calcium chloride.

2. The eating of unripe fruits which contain free vegetable acids is known to be a frequent cause of certain urticarious œdemas. These œdemas, and the frequent epistaxis also, if I may judge from my own case and from a few others which I have seen incidentally, are most prone to occur during the period of most active growth—in short, at the period when ossification is proceeding most rapidly, and when lime salts in large quantities are being withdrawn from the blood. It would evidently be interesting, in view of these considerations, to have the condition of blood coagulability tested in these cases.

Having thrown out these suggestions, we may pass on to discuss a further method by which the coagulability of the blood may be intentionally or inadvertently diminished. This method consists in operating upon the gases of the blood with the view of diminishing coagulability by reducing the amount of carbonic acid in the blood. The following methods of diminishing coagulability may probably be resumed under this heading.

Rapid Respiratory Movements Diminish the Coagulability of the Blood.

This fact was established by Hasebroek[20] upon himself. I have not repeated the observation, but have elsewhere shown that the inhalation of oxygen gas will produce a very appreciable diminution of coagulability in the case of animals. This result is probably due to the very rapid respiratory movements which are induced.

Alcohol Diminishes the Coagulability of the Blood.

Observations upon this subject have been made by Vierordt,[21] and he points out that the probable inference from them is that alcohol diminishes blood coagulability.

The following experiments which I have made seem to establish this fact on a more certain foundation.

My Own Blood (3 to 4 hours after rising, 9 hours after last meal).—4.50 A.M., coagulation time, 6 min.; 5 A.M., ½ pint of champagne; 5.10 A.M., coagulation time, 8 min.; 5.20 A.M., coagulation time, 8 min. 5 sec.; 5.30 A.M., coagulation time, 9 min. 30 sec.

Corporal S.'s Blood (4½ hours after last meal).—0 hour 5 min. P.M., coagulation time, 3 min. 15 sec.; 0 hour 10 min., ½ pint of champagne; 0 hour 30 min., coagulation time, 4 min. 27 sec.; 0 hour 55 min., coagulation time, 4 min. 40 sec.

My Own Blood (4 hours after last meal).—1.20 P.M., coagulation time, 4 min. 15 sec.; 1.30 P.M., 10 c.c. absolute alcohol; 2 P.M., coagulation time, 5 min. 30 sec.; 2.10 P.M., 10 c.c. of absolute alcohol; 2.25 P.M., coagulation time, 6 min. 30 sec.; 2.50 P.M., coagulation time, 5 min. 30 sec.

The effect of alcohol on blood coagulability has evidently a considerable importance in connection with the therapeutics of actual or threatened hæmorrhage.

In conclusion, I have only to emphasise that the methods which have been under discussion are not put forward as adequately-tested therapeutic measures. They may, however, chance to be, if I may so express them unblamed, contributions to the building up of the newer and better system of therapeutics.

NOTES AND REFERENCES.

[1] BRITISH MEDICAL JOURNAL, December 19th, 1891. [2] BRITISH MEDICAL JOURNAL, *loc. cit.* [3] BRITISH MEDICAL JOURNAL, *loc. cit.* [4] *Lancet*, February 25th, 1893. [5] BRITISH MEDICAL JOURNAL, February 3rd, 1894. These tubes can be obtained from Mr. A. E. Dean, 73, Hatton Garden, E.C. [6] BRITISH MEDICAL JOURNAL, July 29th, 1893. [7] BRITISH MEDICAL JOURNAL, July 29th, 1893. [8] *Loc. cit.* [9] This case was very kindly placed at my disposal for these observations by Surgeon Colonel E. Fairland and Professor Cayley. [10] Here and elsewhere in this paper where the temperature at which the determination was made is not directly stated it is to be understood that the determination was made at 18.5° C. or *circ.* 65° F. I find that this temperature has several advantages over the temperature 37° C. or 98.4° F., which was originally proposed by me as a suitable standard temperature for coagulability determinations. A temperature of 18.5° C. presents the following advantages: (*a*) coagulation takes place more slowly than at 37° C., and therefore the determinations can be made more accurately; (*b*) the temperature approximates to the temperature at which ordinary hospital wards are kept; (*c*) the tubes therefore require very little cooling or heating to bring them to the correct temperature; (*d*) the proposed standard temperature is a mean between freezing point and blood heat, and therefore is easily remembered as "half blood heat." [11] *Archiv f. Heilkunde*, 1878. [12] *Vide infra*, effect of alcohol on coagulability. [13] *Proceedings Royal Society*, vol. lv. [14] These statements may, I believe, be accepted as accurate, for they were confirmed by the grandfather, who has an extraordinarily wide experience of hæmophiliac hæmorrhage, as he has stood by the death beds of his six sons who all succumbed to hæmophiliac bleeding or to its sequelæ. [15] The more favourable temperature conditions and the hæmorrhagic increase of coagulability brought about by hæmorrhage that had occurred are no doubt responsible for a good deal of the observed acceleration of coagulation time. It is, however, only legitimate to infer that the administration of calcium chloride was largely contributory to it. [16] Compare the results already recorded of previous additions of lime to the extravascular blood of this child. [17] BRITISH MEDICAL JOURNAL, July 22nd, 1893. [18] Peptone is known to be inefficacious when administered by the stomach. Leech extract has in my experience also proved inefficacious. [19] This hæmorrhage, which had continued for more than a month on the regimen of lemon juice, was brought to a complete standstill by the exhibition of 2 grammes of calcium chloride daily diluted in 3 pints of barley water, and taken in sips in order to produce a local as well as a general effect. Coagulation time, which stood at 8½ minutes before the exhibition of lime, came down by gradual steps to 3½ minutes a few days after the commencement of the treatment. [20] *Zeitschrift f. Biologie*, 1882. [21] *Arch. f. Heilkunde*, 1878.

THE CROONIAN LECTURES

ON

A NEW DEPARTURE IN DIABETES.

Delivered before the Royal College of Physicians of London.

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[*Special Abstract Report.*]

LECTURE IV.

THE DESTINATION OF CARBO-HYDRATES TAKEN AS FOOD.

DURING the process of digestion, carbo-hydrates not already soluble were rendered soluble by ferment action. The complex starch molecule was hydrated and broken down into the smaller molecules of, at first dextrine and maltose, and, finally, of maltose alone. An analogous process occurred in the digestion of proteid. The proteid molecule was hydrated and broken down, albumoses and peptone, and, as already stated, sugar being the products. We had not, as had been supposed, to go to the liver for this breaking-down process, which was, in fact, accomplished by digestive fermentation. Rather did the liver exercise a protoplasmic action on the products broken down by digestion.

THE PROTOPLASM OF THE VILLI.

Before they reached the liver at all, however, the products of digestive action had already been brought into relation with active protoplasmic bodies—the lymphoid cells of the villi of the intestine. It had been shown in the course of these lectures that protoplasm could synthesise carbo-hydrate with nitrogenous matter into proteid, and it was a fact that in the villi peptone and carbo-hydrate disappeared. The conclusion was justified that the synthesis actually took



Fig. 3.—Point of villus in section from fasting rabbit. Treated with osmic acid. No fat perceptible. × 600. From a photomicrograph.



Fig. 4.—Point of villus in section from rabbit killed four hours after having been fed with oats. Treated with osmic acid. Fat discovered fat displayed. × 600.

place under the influence of the protoplasm of the villi. The chyle was described by physiologists as an "oleo-albuminous" fluid, and much of the newly-formed proteid reached the general circulation by that medium. Some passed by way of the portal blood, which yielded rather more of the amylose derivative of proteid on analysis than blood from other parts of the body. The protoplasm of the villi thus acted as a first line of defence, protecting the general circulation from the entrance into it of the carbo-hydrate of the food as such.

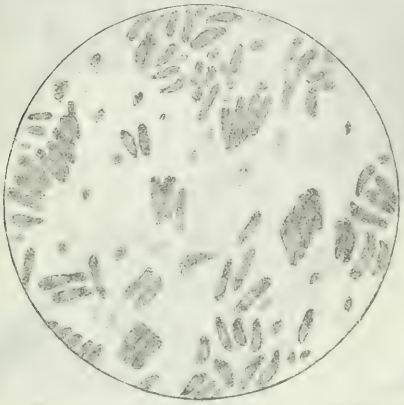


Fig. 5.—Appearances presented by cells of villi from a fasting rabbit.

But the protoplasm of the villi accomplished something more. There was no doubt that animals possessed the power of converting carbo-hydrates into fat. After the ingestion of fat the cells of the villi became charged with fat globules, which passed into the lacteals, and thence into the receptaculum chyli. The fat in a minute state of subdivision was taken up by the cells of the villi, and thence transmitted to the lacteals. A precisely similar process was to be observed after the ingestion of carbo-hydrate food. Oats contained only about 5 per cent. of fat, yet after a meal of oats the lacteals in the rabbit were as fully distended with milky chyle as in the dog after a meal of fat.

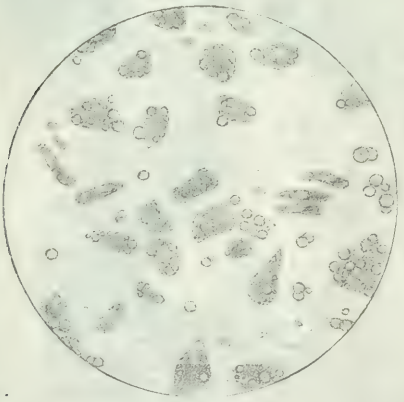


Fig. 6.—Appearances presented by cells of villi from a rabbit killed four hours after having been fed with oats.

This point was illustrated by a number of lantern slides, some of which are reproduced here. In all cases the microscopic preparations were treated with osmic acid, which blackened any fat which might be present. Fig. 4 shows a section, under a high power, of a villus from a rabbit, killed four hours after having been fed with oats; the blackening indicating fat is especially evident near the tip of the villus. Fig. 3 represents the tip, also highly magnified, of a villus from a fasting rabbit. It will be seen that in the first named preparation fat was present in abundance, whereas it was absent from the other. The same point is illustrated by Figs. 5 and 6, which are drawings of slides made from the scrapings of the intestinal mucous membrane in a fasting rabbit, and in one fed four hours previously on oats. The separate columnar epithelium cells can here be distinguished, and it will be seen that those from the animal recently fed on oats are full of oil drops.

The conclusion, therefore, was warranted that the carbo-hydrates of the food were converted into fat by the protoplasm of the cells of the villi, and entered the system in a manner exactly similar to the manner in which fats taken as such entered the system. The villi thus became invested with an importance not previously known to be theirs. It would appear, moreover, that the cells of the intestinal mucous membrane were the seat of the process through which persons became fat on a carbo-hydrate diet.

The Liver and Carbo-Hydrates.

In the liver glycogen was formed by the transmutation of the surplus carbo-hydrate of the food which escaped synthesis by the cells of the villi. With full ingestion of carbo-hydrates there might be as much as 5 per 1,000 of carbo-hydrate in the portal blood. Probably the glycogen stored in the liver went eventually to the formation of fat, for there was evidence that the liver was a fat-forming organ. The liver, therefore, had its share in preventing the entrance of free carbo-hydrates into the circulation. There were thus two lines of defence—the villi and the liver. Even in health both lines of defence might be passed; this happened if too much carbo-hydrate was ingested, and then the urine became saccharine.

The Carbo-Hydrates in Diabetes.

In diabetes the two lines of defence were less perfect than in health, were inadequate to accomplish their function of synthesising the carbo-hydrates, and thus carbo-hydrate reached the general circulation in excessive quantity, and appeared in the urine as sugar. If the defect in the lines of defence were but slight, the individual might take a diet containing a small amount of carbo-hydrate, and no sugar would appear in the urine. In every case of glycosuria there was a limit to the power of the organism to stop the entrance of carbo-hydrate into the blood of the general circulation, and if the diet were such that this limit was not passed, no sugar reached the urine.

A diabetic was a person who had not protoplasmic power sufficient to dispose of the carbo-hydrates in his diet by synthesis to proteid, by transmutation into fat, and by dehydration into glycogen. The question was, Why did protoplasm lose this power? It could not be supposed that the fault lay with the protoplasm itself, for this power was one of its constant properties wherever it was met with. It must depend on the conditions under which it was placed. Dr. Pavy said that he had long had the conviction that the exercise or non-exercise of this protoplasmic power was influenced by the condition of the vessels, which, again, was determined by the condition of the nervous system. A hyper-oxygenated state of the blood favoured the passage of carbo-hydrate matter into glucose, and was capable of producing saccharine urine. Dilatation of the arterioles allowed a rush of blood through the capillaries, so that the blood in the veins was not sufficiently de-arterialised. Under such circumstances the passage of carbo-hydrates into glucose would be favoured. The whole history of diabetes went to prove that it was frequently to be attributed to the condition of the nervous system.

But in some cases of diabetes there was more than this. There were severe cases in which neither strict animal diet nor complete abstention from all food sufficed altogether to prevent the appearance of sugar in the urine. The tissues, therefore

must yield the sugar, and since they consisted mainly of proteid matter, which had a glucoside constitution, it was only necessary to suppose the existence of a ferment action. Phloridzin diabetes was possibly of this nature, the drug acting as a ferment.

FATTY DEGENERATION.

Fatty degeneration of proteid tissue was an analogous process. It might well be that one kind of ferment might lead to the cleavage-off of sugar, and another to the cleavage-off of fat. As hyper-oxygenation favoured cleavage-off of sugar, so hypo-oxygenation favoured the cleavage-off of fat. The manner in which the deficient oxygenation was produced made no difference—whether through deficient respiratory power, sluggish circulation, or deficiency in the number of the red corpuscular elements in the blood, as in idiopathic anæmia, in which disease fatty degeneration was of frequent occurrence.

CONCLUSION.

In a peroration, which was eloquent by reason of its simplicity, Dr. Pavy, after thanking the College for the opportunity of bringing forward results which he believed to be of the first importance to physiology and medicine, said that throughout his researches, which had occupied so large a part of the active time of thirty years, he had always sought to be guided by the injunction of Harvey, "to search and study out the secrets of Nature by way of experiment."

SUPRAPUBIC PROSTATECTOMY OR McGILL'S OPERATION.[1]

WITH REPORT OF A SERIES OF 12 CASES.

BY A. W. MAYO ROBSON, F.R.C.S.ENG.,

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IT is only within the last decade that the operative treatment of hypertrophied prostate has received the attention it deserves, and I venture to think that to no one surgeon is the present position of the subject due so much as to my late friend and colleague, A. F. McGill, who, by a series of cases reported and shown at the British Medical Association meeting in Leeds, in 1889, clearly demonstrated that suprapubic prostatectomy was a practicable and effectual method of treatment. Both on this account and because of our desire to perpetuate the memory of our late colleague we speak of the operation in Leeds as "McGill's operation."

So far as I can see, all the minor operative procedures through the perineum and urethra have proved disappointing, and even perineal prostatotomy or prostatectomy, which has a number of advocates, shows a mortality of 13 per cent., and is only of use in the case of a projecting or pedunculated middle lobe. The experience of any one surgeon in suprapubic prostatectomy must be comparatively limited, not on account of the infrequency of prostatic disease but because of the unsuitability of the greater number of cases for operative treatment, either on account of sufficient relief being effected by catheterism or else because of kidney or other complications rendering the subjects unfit for any major operation. Hence my reason for giving the results of my personal experience in so small a number as 12 cases; but I should at the same time remark that my impressions are derived from a considerably greater number of cases, "about 30," which I have witnessed or taken part in, in the hands of my colleagues or other surgeons.

The following is a list of the cases that have come under my care, and in order to save time I hand round a printed table giving brief details of each case.

While it is unnecessary here to consider the subject of the diagnosis of prostatic enlargement, I may be pardoned for pointing out a method which, doubtless practised by some, is certainly not generally employed, namely, that by means of bimanual examination, either with or without an anæsthetic, the condition of the whole of the prostate may be mapped out, and the presence or absence of other organic disease of the bladder may be ascertained. The method I usually employ is with the patient on his back, and, after emptying the bladder, to bring him to the right side of the bed, to prop the shoulders with pillows, and to ask the patient to flex the thighs; then, with the right index finger, well greased, inserted into the rectum, and the left hand well warmed placed on the hypogastric region and gently pressed backwards, the intervening bladder and prostate can be quite clearly felt, and the latter can be mapped out. If a catheter be then passed, the thickness of the middle lobe, or of the bar at the neck of the bladder, can be accurately gauged by the left hand pressing the catheter backward on to the finger in the rectum, which is then able to estimate the thickness of tissue intervening.

Next, with regard to the selection of cases. This comes under two distinct categories (1) those not requiring operative treatment, and (2) those disqualified by other disease. Whenever a patient has no large amount of residual urine, and can be made comfortable by the passage of a catheter at night, or night and morning, and where catheterism is well borne and not difficult or distressing, operative treatment is unnecessary. In the presence of complete atony of the muscular coat of the bladder, operation is advisable if the atony be only of short duration, say a few weeks; but if the conditions have existed for many months the removal of the obstruction to the urinary outflow, even if successfully accomplished, can probably lead to very slight ultimate benefit, but I am convinced that atony of less duration can be overcome by tonics and galvanism when the obstruction is removed.

The presence of a large amount of residual urine associated with fair vesical contractility and not diminishing after regular catheterism, the patient being otherwise in fair health, is a decided indication for prostatectomy, unless the relief given by the catheter is considered adequate by the patient.

Cystitis associated with enlarged prostate, especially if catheterism is difficult and painful, is an indication rather than otherwise for suprapubic prostatectomy, as at the same time the bladder can be thoroughly purified and drained. The presence of a calculus, or of calculous material associated with prostatic enlargement and residual urine, is an indication for suprapubic lithotomy followed by prostatectomy, as at the same time it enables the bladder to be thoroughly cleared, the coexisting cystitis to be treated by drainage, and the obstruction at the neck of the bladder to be removed.

Contraindications.—The presence of advanced kidney disease, especially if associated with a greatly diminished excretion of urea; chronic atony of the bladder; glycosuria; well-marked degeneration of the blood vessels associated with general senile debility, or other organic disease which would render any major operation inadvisable, would lead the surgeon to seek to give relief by catheterism or simple perineal drainage rather than by a more serious operation. It is unnecessary to enter into all the minutiæ of the operation, but there are certain details which I may perhaps be excused for mentioning.

Besides asepticising the skin by a previous carbolic dressing and washing out the bladder with boracic lotion, I usually like to give my patient 5 to 10 grains of boracic acid and a little saccharin thrice daily for a few days before operation, so as to render the urine aseptic if possible. The rectal bag, by raising the prostate nearer to the manipulating finger, is of advantage, but I think it is important not to overdistend it, lest rupture of the rectum or inflammation in the meso-rectum ensue, and I only have 4 or, at most, 6 ounces of water introduced. The bladder is distended with boracic lotion until it can be felt above the pubes, no fixed quantity being employed. In two cases the peritoneum has been in touch with the pubes, and in Case 9 it was so fixed to it that I had to deliberately open the serous membrane to reach the bladder, after which I carefully separated it and closed the peritoneal opening before incising the bladder, the patient being no worse for the complication.

In removing the obstruction I have found McGill's scissors or the cutting-ring forceps invented by my colleague Mr. Jessop to answer best for the sessile or pedunculated enlargement of the middle lobe, and for the ring-like obstruction I have used the scissors, first at one side and then at the other, so as to cut out a V-shaped portion, making a clear channel from the vesical pouch straight into the urethra, down which the finger is passed to see that the passage is clear.

[1] Contributed to the International Congress held in Rome, March, 1894

Mr. Mayo Robson's Cases of Suprapubic Prostatectomy, or McGill's Operation.

No.	Date.	Age.	History.	Operation.	Result.	After-History.
1	December, 1887	67	Frequent micturition at night for several years, and every half hour during day for a year. Hæmaturia, and signs of calculus four years. Cystitis. General condition bad	Uric acid calculus, 322 grains. Projecting middle lobe removed by scissors and forceps	Recovery. Urine by urethra ninth day. Healed fourth week	Two years after patient in good health and at work.
2	June, 1888	63	Nocturnal frequency eight years. Frequency of micturition in day 20 to 40 minutes. Hæmaturia. Retention—65 ounces drawn off by catheter, after which catheter thrice daily up to operation. Cystitis and atony	Lateral lobes much enlarged. Removal by scissors and forceps and enucleation. Bladder pouched and reticulated. Fifty calculi removed, largest, 1½ inch: smallest, size of pea	Recovery. Urine by urethra in 3 weeks. Discharged in seven weeks. Could hold urine six hours in day, and only once disturbed in night	Two years after quite well and at work.
3	September, 1888	62	Symptoms eight years. Of late up in night 20 times. Retention on admission. Catheter night and morning. Cystitis	Middle lobe size of walnut and enlarged lateral lobes. Removed by scissors and forceps; weighed ½ ounce. Calculi in pouch removed	Recovery. Wound healed slowly and some cystitis persisted	Patient perfectly well and at work in 1892. No need for catheter since operation.
4	March, 1890	66	Four years catheter life. Seven years nocturnal frequency. Bed or couch for seven months. Cystitis relieved by washing out bladder. Catheterism increasing difficulty, and only bicoudée catheter would pass	Ring of prostate surrounded entrance to urethra and middle lobe enlarged. V-shaped wedge removed by forceps and scissors. Three calculi removed from pouch below prostate	Recovery. Healed within month. Slight cystitis persisted for a time	In January, 1892, patient in good health and leading active life.
5	J. M., November 1890	73	Four years' symptoms. Atony of bladder due to overdistension. Dribbling of urine due to overflow. 16 ounces residual urine. Urine acid and free from albumen	Prostate very large. Middle lobe removed, and over ¾ ounce from lateral lobes enucleated. Free bleeding stopped by washing out with hot water, with ½ ounce tr. hamamelis to the pint	Recovery	Recovered from operation and was able to sit up during second week. Urine passed by the urethra. Patient was feeble and decrepit at the time of operation, and in a few weeks succumbed to asthenia. *Post-mortem Report:* Bladder normal. No disease to account for death, which was due to old age.
6	August, 1891	61	Eleven years since first catheterism. Nocturnal incontinence for several years. Feeble power. Cystitis. No calculus. 10 ounces residual urine. Six months' catheter life	Pedunculated middle lobe size of walnut and small growth from left side of prostate removed by scissors, forceps, and enucleation	Recovery. A month after was passing urine without pain	Phosphatic calculus removed three months after. Recovery. At work 1893.
7	January, 1892	61	Nocturnal frequency for years. Difficulty in micturition six months. Regular catheterism one month. Capacity of bladder, 20 ounces. Atony	Middle lobe forming a collar round orifice. V-shaped incision and removal of a wedge by forceps	Recovery rapid. Up within a week. Began to pass urine by urethra within a week of operation	Unable to trace patient after complete recovery.
8	H. J., March, 1892	64	Symptoms over a year	Collar around entrance to bladder. Wedge removed	Recovery	Passed good stream a month after. Three months after passing free stream.
9	June, 1892	72	Operation, March, 1889, by another surgeon; small portion of middle lobe removed, giving relief for nearly two years. Immense prostate felt *per rectum*, June, 1892. Complete retention; cystitis. Great suffering	Six ounces of adenomatous prostate enucleated and phosphatic stone removed. Wound healed in three weeks	Recovery. Great relief and regaining of health	Good health for some time. In October, 1893, a phosphatic stone was crushed without any difficulty. Patient now quite well (1894).
10	H. A., August, 1892	73	Bladder symptoms for several years. Much worse during first two years. Catheter required. Blood in urine. Cystitis	Phosphatic material in bladder. Enlarged prostate and pouch behind it, in which was encysted a uric acid calculus with the top just capable of being felt. By removing the piece of prostate between the entrance to the urethra and the pouch, the stone was freed and could be removed, and the exit from the bladder was relieved from obstruction	Recovery	Rapid recovery. Patient passed urine by urethra within three weeks. Some time afterwards in good health and free from urinary symptoms.
11	December, 1893	62	Symptoms for five years. Catheter life for six months. Urine offensive and cystitis severe. In November, 1893, phosphatic stone (¾ oz.) crushed and bladder regularly washed out afterwards, curing the cystitis. Catheter required thrice daily, though no atony. Prostatectomy in December	Wedge removed from collar of prostate surrounding entrance to urethra. Tube removed third day; patient up seventh day; urine passed by urethra fourteenth day	Recovery	When last heard of, March, 1894, was quite well, and passing urine by urethra.
12	R. J., January, 1894	73	Nocturnal incontinence for years. Retention on admission. Atony subsequent to catheterism, which had to be performed thrice daily. General condition feeble. Pus and albumen in urine, but no casts found	Collar around entrance to urethra. V shaped piece excised. Bladder sacculated and very large and atonic. Four ounces of fluid in rectal bag not being sufficient to elevate the prostate within reach of the finger, more was added, and the rectum was probably overdistended, leading to the subsequent abscess in the meso-rectum, which was apparently not connected with the wound.	Death	Patient died in third week when apparently recovering. *Post mortem.* Suppuration between bladder and rectum, extending into meso-sigmoid and meso-rectum. Wound healthy and nearly closed, and no irritation around or near it. Large fasciculated and sacculated bladder free from cystitis. Aortic disease and granular kidney.

If, as in Cases 5, 6, and 9, the lateral lobes are much enlarged the finger can be insinuated within the capsule and the adenoid masses can be enucleated with very little difficulty.

Lastly, all loose pieces of tissue are cut away and the parts are left as smooth as possible. In order to disturb as little as possible the cellular surroundings of the bladder the edges of the vesical opening are fixed temporarily to the margin of the wound by a suture on each side before any intravesical manipulations are commenced.

I have found suprapubic drainage efficient in all the cases, and have not thought it necessary to drain through the perineum. In the after-treatment boracic acid is given thrice daily, and the bladder is washed out once or twice daily by syringing a solution of boracic acid through from the urethra to the drainage opening. The drainage tube is removed if possible on the third day, and the patient is allowed to sit up within a few days of the operation. I find that as a rule recovery is attended with very little general disturbance or discomfort, and that the urine begins to be passed by the urethra soon after the patient is allowed to sit up.

In conclusion, I consider that the operation of suprapubic prostatectomy in properly-selected cases is one attended with less danger than is usually thought, and that if thoroughly and completely performed it is capable of affording such relief as may be in many instances genuinely termed a cure, and that in a class of cases which until a few years ago were looked on as incurable.

A MODIFICATION OF THE OPERATION OF CIRCULAR ENTERORRHAPHY.

BY R. COZENS BAILEY, M.S.LOND., F.R.C.S.
Senior Assistant Demonstrator of Anatomy, St. Bartholomew's Hospital.

THE history of the operation of circular enterorrhaphy shows a constant effort on the part of surgeons to invent some method which would render the insertion of sutures into the bowel more easy, or make their employment partially or wholly unnecessary. Some, however, who speak with authority maintain that all mechanical appliances are unsurgical, useless, or positively harmful.

OBJECTIONS TO SUTURES.

Before drawing attention to a new method of operating in which sutures are supplemented by the use of a decalcified bone tube, I had therefore examined the case for sutures alone, and tried from published cases to justify the position taken up by those who advocate their employment unaided; but this led me to such lengths that I have been obliged to omit the grounds on which my conclusions are based, and simply to state these unsupported by the facts from which they have been deduced.

Briefly the cases in which sutures are employed alone show a high rate of mortality, death being due either to (1) collapse, (2) peritonitis, or (3) intestinal obstruction.

Collapse, when the operation has not been undertaken in an already hopeless case, depends on the length of time necessarily taken for its completion.

Peritonitis is due in a large number to fæcal extravasation owing to defective suturing.

Intestinal obstruction is caused by the swelling of that part of the bowel turned in towards the lumen in order to secure apposition of the serous surfaces.

I am convinced, therefore, that sutures in all cases take an excessive time for their accurate introduction, in many when introduced do not hold, and in some, when holding, defeat the ends in view by failing to relieve the condition for which the operation was undertaken.

No better argument that sutures are defective could be advanced than the number and variety which have been from time to time advocated; and the same may be said of the tubes, rings, plates, and bobbins, many of which have been described since mine were first made, now some three years ago.

THE USE OF DECALCIFIED BONE TUBES.

The form of tube which I have employed in seven experiments performed upon dogs during the past year at the laboratories of the College of Surgeons, the results of which are detailed below, is shown in Fig. 1.



Fig. 1

It is made of bone decalcified in nitric acid, and hardened and preserved in spirit. For use in the human subject the most convenient length is 2 inches, and sizes varying in diameter from ½ inch to 1⅛ inch should be kept in readiness, as the rapidity with which the operation is completed depends largely upon the tube fitting easily, but,

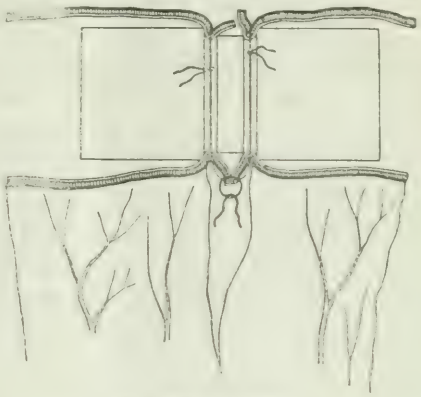


Fig. 2.—First stage of operation.

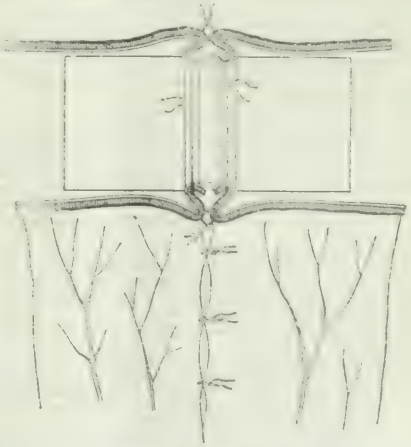


Fig. 3. Operation complete.

at the same time, without too much room to spare. Around

the centre of the tube run two grooves ¼ inch apart, sufficiently deep to prevent a ligature from slipping, and the intervening portion is on a slightly lower level than the rest of the tube, in order to allow the fold formed, when the operation is completed, to lie smoothly.

The experiments were performed as follows, a smaller sized tube of course being used than that above described. A coil of small intestine was withdrawn through a median incision, and 3 or 4 inches of its length resected. A stitch was then passed through all the coats of the bowel and the mesentery of one side and then on through mesentery and bowel of the other and tied, thus bringing the divided ends together and preventing retraction of the mesentery. The tube was then inserted and the two ends slipped together evenly over it; each was in turn brought down well over its corresponding groove in the tube and firmly secured by a circular ligature passed through the gap in the mesentery. The part beyond the ligature was trimmed with scissors to remove any excess of tissue in that situation. The seat of operation was well flushed with carbolic lotion, and the enterorrhaphy completed by bringing the serous surfaces together with Lembert's sutures, five in number, one on each side of the mesenteric attachment, the remainder round the rest of the circumference.

Operation I. May 30th.—On June 5th the abdominal wound reopened and the animal was therefore at once killed. On *post-mortem* examination the omentum was found firmly adherent to the scar. There was no leakage under considerable pressure of water. On stripping off the omentum which required considerable force, the ends of the bowel were separated for a little space opposite the mesenteric attachment; everywhere else union was good. In spite of this slight imperfection the ultimate result would in all probability have been good as the space was quite closed by adherent omentum and plastic exudation.

Operation II. July 17th.—On August 30th the animal was killed while in perfect health. *Post mortem*: The proximal and distal portions of the intestine were seen to be of the same size. There was no contraction of the scar. Inside the scar was found to be represented by a flattened band scarcely projecting at all into the lumen of the bowel.

Operation III. July 31st.—The animal was killed on August 30th, while in perfect health. *Post mortem*: The intestine was seen to be rather sharply kinked, and the proximal side slightly dilated. There was no contraction of the scar. Inside the scar was represented by a fibrous ring projecting somewhat into the lumen, but admitting the end of the index finger.

Operation IV. August 9th.—The animal was found dead on August 14th. *Post-mortem* examination showed general peritonitis, due probably to introduction of septic matter at the operation, as there was no leakage from the bowel.

Operation V. October 23rd.—The animal was killed on January 18th, while in perfect health. On *post-mortem* examination no dilatation of the proximal side was found, and no contraction of scar.

Operation VI. November 14th.—The animal was killed on January 18th, while in perfect health. On *post-mortem* examination slight dilatation of proximal side was found, but no contraction of scar.

Operation VII. November 16th.—The animal completely recovered from the operation, but died suddenly on December 13th. *Post mortem*: On the distal side of the scar the intestine was collapsed and empty. The proximal side was dilated to three or four times its normal size, forming a pouch, which contained a hard mass of short straws and pieces of bone, with difficulty broken up and removed. No contraction of the scar was visible from the outside, and on introducing the finger it passed readily through a thin fibrous ring.

Thus, of the seven dogs operated upon: One died on the fifth day from peritonitis, one was killed on the sixth day, one died on the twenty-seventh day from obstruction, one was killed on the thirtieth day, one on the forty-fourth day, one on the sixty-fifth day, and one on the eighty-seventh day. In all the immediate results were good, there being no escape of fæces; and in the five which lived for periods ranging from one to three months the condition of the scar was satisfactory.

From the above results I think it may fairly be claimed that the tube I have described satisfactorily meets the objections I have stated to exist in the unaided use of sutures.

(1) It reduces the time necessary for the performance of the operation enormously. This it does by—

(*a*) Securing absolute steadiness and close approximation of the divided ends.

(*b*) Lessening the number of sutures required.

(*c*) Rendering absolute accuracy in the manner of suturing unnecessary, since all that is required is that the serous surfaces should be approximated, the circular ligatures, not the sutures, preventing fæcal extravasation.

(*d*) The immediate restraint of all hæmorrhage from the divided ends by the circular ligatures.

(2) It completely and absolutely prevents escape of the intestinal contents till the tube is absorbed, and prevents the contact of fæcal matter with the sutures, so that union is rapid and sufficiently strong of itself to prevent extravasation when the tube becomes inefficient.

(3) Obstruction by swelling of the edges is impossible owing to the presence of the tube.

No less important than the immediate result is the ultimate behaviour of the scar; and, since this being circular is necessarily badly placed, no effort should be spared to render it otherwise satisfactory. True, in time the contractility of a scar in the intestine may tend to disappear, but the wider the band of uniting material, and the more it encroaches upon the lumen from the first, the less likelihood is there of this result being attained.

In both of these respects the use of the tube contrasts favourably with that of sutures. In the former the intestine is united by a thin layer thrown out between the ends, which are in contact at one point only all the way round, in the latter between a considerable width included between the two rows of stitches. In the former, too, the scar at first does not project into the lumen at all, while in the latter the projection inwards from the first is considerable—in some cases so great as to produce obstruction, as mentioned above.

The description I have given of the operation presupposes the fact that the two ends to be united are approximately of the same size; but should one be larger than the other, a slight alteration in detail, whereby the smaller is invaginated, is easily carried out, and is equally satisfactory. In cases where the disproportion was very great, it might be convenient to have the tubes made conical instead of cylindrical as figured in the diagram.

Conclusions.

In conclusion, I would insist upon the following details, as more or less essential to the success of the operation:

1. The ends should be drawn together by a single stitch through the mesenteric border, before the tube is introduced.

2. The circular ligatures should not be passed through the mesentery, but through the gap and then round the bowel. The former, though slightly easier, might subsequently produce trouble in two ways: for since the vessels pass in a circular manner round the intestine, the part beyond the ligature might not have its blood supply cut off, and thus might continue to pour out its secretion, which would collect in and distend the space enclosed between the tube and the row of sutures, and then burst into the peritoneal cavity. Later, if this danger were escaped, a polypoid mass projecting into the intestine might result.

3. Too much rather than too little should be included beyond the ligatures, as any excess is easily removed with scissors, whereas, if too little be taken, a portion of the circumference may escape inclusion. If this occur, a second ligature should be applied without removing the first, special attention being paid to the part which at first escaped.

4. Before approximating the serous surfaces, the parts between the ligatures should be thoroughly cleansed to remove any fæcal matter which may be adhering to the mucous membrane.

6. In the experiments interrupted sutures were used, as the thick intestine of the dog rendered a continuous suture unsafe; but in human intestine a continuous suture answers well, and is quickly applied.

The tubes have been made for me by Messrs. Maw, Son and Thompson.

THREE CASES OF INTESTINAL OBSTRUCTION TREATED BY LAPAROTOMY.

By EDWARD J. CAVE, M.D.Lond.,
Surgeon to the Crewkerne Hospital.

In some remarks on a case of intestinal obstruction by a band, which was successfully treated by laparotomy, published in December, 1890, I ventured to insist on the necessity of early surgical interference, and I added that until this doctrine was recognised as a surgical canon it was desirable to record every case with the conditions determining failure or success.

The three cases which follow are all that have occurred in my practice since that date, external hernia, and malignant disease of the rectum being excluded.

Case I. *Tuberculous Peritonitis : Obstruction of Ileum : Operation : Relief : Death one month later from Apoplexy.*—S. B., aged 50, a labourer, was admitted to the Crewkerne Hospital on May 28th, 1892. He had been suffering for two or three months from symptoms of chronic intestinal obstruction, with increasing emaciation. On admission the obstruction had been absolute for a week with fæcal vomiting for two days. Laparotomy was at once performed, and disclosed dry contracting tuberculosis of the peritoneum. The matting of the intestines was particularly dense in the right lower segment, and immediately above the right ileo-cæcal valve the bowel was so dragged and kinked as to be completely obstructed. Some troublesome dissection so far remedied matters that the intestinal contents passed readily from the enormously-distended ileum into the empty large bowel. The abdomen was then freely washed out and closed. The bowels acted next day, the wound healed, and the man's general condition improved very markedly for a fortnight, when diarrhœa set in. He got up at the end of three weeks; the diarrhœa still continued and we concluded that it was due to tuberculous ulceration of the bowels. On June 20th, with no nervous prodromata, he had two epileptiform convulsions, and died comatose half an hour after the second fit. *No post-mortem* examination was permitted.

Case II. *Diabetes : Intussusception : Laparotomy : Coma.*—On the evening of December 9th, 1893, I saw with Mr. C. Alford a gentleman, aged 66, who for the past three months had been suffering from a succession of boils on his right hand and forearm. He denied any noticeable degree of thirst, polyuria, or wasting; but the urine had a density of 1040, and contained a large quantity of sugar. There was no albumen and no reaction with perchloride of iron. The occasion of my seeing him was that on the previous day he had in the morning a tendency to diarrhœa. At 11 A.M. he conducted a service in his church, but was then seized with severe pain in the abdomen, so that he went home and lay on his bed. He had a feeling that he required relief, and took two rhubarb pills. At night he had slight pains and constant tenesmus, and in the morning took an ounce of castor oil. Still there was no satisfactory stool, only a few tablespoonfuls of blood-stained mucus being evacuated. Two starch enemata with opium were administered through the night, which lessened the pain, but the tenesmus persisted as before. There was no vomiting. The next day, and also on December 11th, the colon was distended under pressure, but without relief. The tenesmus was most distressing, and he became slightly delirious. On December 12th he was weaker, still insisting on going to the stool every few minutes. The pulse was 102, the temperature 98°. The abdomen was rather more distended, but not tense. The bowel was again forcibly distended, but without avail. He had been taking extract of belladonna with opium every two hours in a pill. Later in the day he got drowsy and easier, and the pills were omitted. Still no relief was obtained, and at 10 P.M., at the urgent request of his friends, I decided to make an artificial anus. The intussusception was found at the ileo-cæcal valve, and a loop of ileum 6 inches above was drawn out, the mesentery transfixed with a bone knitting needle, and the operation, which lasted only five or six minutes, completed rapidly. He was at this time half-unconscious, and this developing into coma he died the following day.

Case III. *Acute Obstruction of Ileum by a Band : Laparotomy : Cure.*—On February 3rd, 1894, I saw J. M., aged 25, a robust young farmer, 6 feet high, who gave the following history: He had had a serious "abdominal" illness about eleven years earlier, when he was very ill for three weeks; he said that every "spring and fall" for a year or two thereafter he had a recurrence of pain and indigestion, but had enjoyed good health since with the exception of occasional attacks of spasmodic asthma. On January 30th he went to a party at a neighbouring farm and was shooting rabbits all day. He ate a heavy dinner at 6 P.M.; after that he played cards and drank several glasses of cider and one of whisky and water. At midnight he had some tea and a piece of cake. Soon afterwards he was seized with severe pain in his abdomen, his bowels acted, and he vomited the dinner which he had eaten six hours before. He went to bed, but the pain was so bad all night that he could not sleep, and at 5 A.M. he got up and walked home, a distance of three or four miles, in drenching rain; it was as much as he could do to get to his house. During that day (January 31st) he vomited two or three times, and the pain still persisted about the umbilicus. His food was mostly milk. He took castor oil, but without effect. At night he sent to the doctor, and had a sedative mixture of opium and soda to take every four hours. On February 1st, after a better night, he was easier, but vomited once or twice. He took more castor oil, but this, too, he vomited, and in the evening the pain was much worse. On February 2nd he passed one small costive-looking fragment of fæcal matter. He vomited several times, but kept down some milk. The opiate mixture was repeated. On February 3rd he had severe pain from 7 to 9 P.M., and vomited once. The bowels had not acted, nor had he passed any flatus. The urine was scanty and loaded with lithates. The temperature was 97°, the pulse 84. There was no abdominal tenderness nor distension; nothing amiss was to be felt. His expression was quite calm; the tongue was dry, with a rough fur. A copious enema returned unchanged. He was ordered calomel gr. v. On February 4th the temperature was 98.5°, and the pulse 88. No wind or fæces had passed. He had not had much pain, but had vomited twice; the vomit contained curdled milk. He looked a little anxious, and there was slight tympanitic distension and frequent rolling of the bowels. To clear up the diagnosis he was given 10 grains of blue pill with colocynth. On February 5th the pulse was 112. He had had a bad night, rolling in pain; had vomited frequently, and the vomit was brown and stinking. The bowels had not acted; he looked a good deal worse, drawn and haggard, and rather blue. The diagnosis being now clear, I washed out the stomach and opened the abdomen. The small intestine was greatly distended and very dark, with a flabby wall. The cæcum was empty. Tracing up the ileum from the valve, I came almost at once on a tight cord-like band about 1 inches long, forming a loop over a large coil of intestine. It was attached at both ends to the back of the abdomen, on the left side at the level of the pelvic brim, but on the right it passed down deeply into the pelvis. This was tied at each end and removed. I was about to evacuate the distended gut, when the patient ceased to breathe and became pulseless at the wrist from chloroform syncope. The abdomen was hastily washed out with a few pints of hot water and sewn up, artificial respiration going on meanwhile. Ether was injected hypodermically and brandy into the rectum, and in ten minutes he rallied and was removed to bed after an absence of forty-five minutes. He vomited twice an hour later, the vomit being brown and fæculent. After this the vomit ceased. The bowels acted freely twenty-four hours later, and the wound, when dressed for the first time on the twelfth day (February 16th) was firmly healed. A week later he got up wearing a belt, and is now in perfect health.

In the first case the obstruction was relieved permanently by the operation, but the tuberculous disease was unchecked.

The coma which proved fatal in the second case was apparently of diabetic origin, and it was the presence of this constitutional dyscrasia which induced us to avoid earlier recourse to operation, hoping against hope that the intussusception would yield. I doubt whether an operation would have been more successful at the beginning of the attack.

The third case illustrates a difficulty that often arises. On the fifth day of obstruction it still seemed possible that the condition was one of obstinate constipation which a brisk aperient might relieve; in such cases one must run the risk of damage to the gut which is involved in violent peristalsis. By a policy of inactivity a greater risk is incurred, and to operate before the diagnosis is clear involves the possibility of an unnecessary and dangerous procedure. As a matter of fact, aperients are given in the vast majority of cases of intestinal obstruction, and it is by their failure to act that the diagnosis is in great measure established. As to the details of the operation, I rarely open an abdomen for whatever purpose without flushing with hot water poured from a large jug, of which I have no objection to leave a considerable quantity in the cavity. In closing the wound I no longer sew up the abdominal wall in three layers, but include the whole with one continuous suture; this saves time, and does not in my experience increase the risk of a yielding cicatrix. Out of a considerable number of abdominal sections for various conditions, I have had but one case of ventral hernia, and this in an elderly woman who left off her support immediately on leaving the hospital three weeks after the removal of a large ovarian tumour. No doubt the tendency to protrusion is greatly increased by the use of a drainage tube; but this is an appliance for which in abdominal, as in other branches of surgery, I find rarer occasion every year. When the wound is once closed and dressed I prefer not to see it again for ten or twelve days.

OVARIOTOMY ON A PATIENT IN HER 85TH YEAR.

By J. PAUL BUSH, M.R.C.S.,
Surgeon, Bristol Royal Infirmary.

A. M., a widow, aged 84, was transferred to my care in the Bristol Royal Infirmary by my colleague, Dr. Shaw, with the following history. For the past twelve months she had noticed her abdomen was increasing in size; for nine months she had been much troubled with pain in that region; three months before coming under our treatment vomiting had commenced, and on admission was severe.

When first seen the patient was quite unable to move about on account of her size, and on account of the severe pain and vomiting which all movements caused; all the usual physical signs of a large ovarian cyst were present.

On September 12th, 1893, by means of a small incision, I exposed the cyst, tapped it, and removed a large thin-walled multilocular ovarian cyst; there were no adhesions; the fluid measured 19 pints. The first week after the operation the temperature ranged from 96° to 97° F., and then remained steady at 97°, which appeared to be her normal temperature. The wound healed rapidly, and, excepting a little bronchitis, which she said she always had in the winter, she had no bad symptom. She went home on October 16th cured. I heard of her being alive and well and able to get about some months after this.

I report this case now, having lately had to refer to the interesting paper of Dr. Spencer in the British Medical

Journal of December 9th, 1893, in which he states that "his patient, who was aged 83, was, as far as he knew, the oldest upon whom ovariotomy had been performed, with the exception of Dr. Homan's case, which was a few weeks older."

The exact age of the woman was carefully inquired into at the time of her admission into the medical wards, and was confirmed by papers and documents when she came under my care for operation

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

TRACHEOTOMY FOR FOREIGN BODY IN THE LARYNX.

Mr. Baildon's successful case of tracheotomy and removal of foreign body from the bronchus brings to my mind one that occurred in my practice here twelve years ago. A boy aged about 9 years had an ordinary housewife's sewing needle in his mouth, and in trying to raise up a younger child who had tumbled over some article of furniture, it suddenly disappeared down his throat. As the symptoms were neither alarming nor urgent, the parents did not bring him to my surgery until the following day. He then complained of pricking in the trachea: and when in the upright position I could detect a minute elevation between the second and third rings, which entirely disappeared when he was placed on his back. As the respiration was free, and there were no urgent symptoms, I deferred interference. However, on the second day following my examination, I found it necessary to perform tracheotomy with the assistance of two other surgeons. The tracheal spasm was so violent, and the dyspnœa so urgent, that we could not detect any foreign body then. I introduced the trachea tube, and on the second day, when the trachea was quiet, I succeeded in extracting the needle, which was firmly imbedded above the tube eye downwards.

B. J. Glissan, L.R.C.P.Ed., L.F.P.S.Glasg.

St. George's, Wellington, Salop.

RUPTURE OF BOTH TYMPANIC MEMBRANES BY COUGH.

Cases of rupture of both membranes from coughing are so rare that the following case is of interest:—

A gentleman, aged 60, of intemperate habits, had been under treatment for bronchitis and emphysema. His hearing was normal, and he had made no complaint of auditory trouble. During a severe fit of coughing he suddenly heard a loud explosion in both ears, and became deaf. There was a slight hæmorrhage from both ears, and on examination a large rent was discovered in each membrane. The deafness later increased, so as to become total, bone conduction being abolished. He complained of tinnitus, and a slight discharge was set up. This condition lasted until his death a few months later.

In such cases hearing power as a rule is not completely abolished, and no doubt pathological changes were set up in the deeper structures by the accident. The ears were not syringed, but were frequently wiped out; plugs of antiseptic wool were inserted loosely in each external auditory meatus, and the patient was kept as much as possible at rest.

Dover. A. G. Welsford, M.D. F.R.C.S.

CASE OF TOLERANCE OF CHLOROFORM.

As I find, on comparing notes, that I administer as a rule even larger quantities of chloroform than Surgeon-Lieutenant-Colonel Lawrie, the following case may prove of some interest as illustrating the largest quantity which I believe I have ever used in a given time.

Patient, a female, aged 25 years, a native of London. Operation by Dr. H. C. Cameron for rupture of the perineum: chloroform freely administered on a towel. At the fifth minute a stoppage of the breathing of half a minute occurred, and it was then resumed in a more slow and shallow form. In thirteen minutes, when twelve drachms of the anæsthetic had been expended, there came an audible effort with inspiration, as if stertor were about to commence, and the patient was now drawn to the edge of the table. It was now found, however, that she was still quite sensitive, and several minutes longer inhalation was required before the operation could be commenced. During its course the anæsthesia was frequently pushed till the pupil became a pin's point, the cornea insensitive, and the breathing stertorous; but whenever the inhalation was left off in this condition, it was found necessary to resume it in half a minute. Another apnœal pause of half a minute occurred during deep anæsthesia, when I did nothing but wait till the breathing recommenced. Total time, 50 minutes; chloroform, 31 drachms.

Robert Kirk, M.D.,
Physician to the Dispensary for Diseases of Women, Glasgow Western Infirmary.

A CASE OF HYPERPYREXIA.

A boy, aged 10 months, was admitted with multiple subcutaneous abscesses. Before death the temperature rose to 109°. *Post mortem* most of the organs were found to be studded with recent tubercles, except the brain, the grey matter of which was softened and injected, and its membranes. A gland, situated immediately above the right bronchus, was enlarged to the size of a walnut, and contained a mass of cheesy material, breaking down in the centre into a thick puriform fluid; this was apparently the centre of infection.

Fredk. H. Lewis, M.B.Cantab.,
House-Surgeon Royal Alexandra Hospital for Children, Brighton.

CASE OF CHANCRE OF LOWER LIP.

I was recently called to see a female servant in a gentleman's family suffering from severe headache. The pain affected the left side of the head, and the upper eyelid of the same side drooped a little.

Besides the headache, there was a raw-looking sore, as big as a threepenny piece, on an indurated base, to the left of the middle line of the lower lip. The submaxillary glands of the same side were enlarged and painless. On looking at the skin, there was a faint macular eruption over the chest, upper part of abdomen, and inner aspects of both forearms. She had noticed the sore on her lip for five or six weeks.

On inquiry, she told me that she "kept company" with a young man, with whom I asked for an interview. Soon afterwards he called on me, and his condition was interesting. There was a mucous patch on the left side of his upper lip. He had been infected with syphilis eight months before, and the indurated site of the primary sore was easily felt on the body of the penis behind the glans. The glands of the groin were knotty, and there were stains of a former eruption. The girl's headache soon disappeared, along with the temporary droop of the upper eyelid. She was removed to a house where there were no children, with strict orders to avoid any risk of infecting others.

These cases of syphilis insontium are very sad. This poor girl for a time loses her means of support, may have her health permanently injured, and has the prospect, if she marries, of having for years to come syphilitic children, and all through no fault of her own.

Edinburgh. Francis Cadell, M.B., F.R.C.S.Ed.

IODIDE OF POTASSIUM IN HYPERTROPHY OF THE PROSTATE.

About two years ago I had a very troublesome case of hypertrophied prostate in which catheterisation was almost impossible, and the patient's sufferings so great that they had to be relieved by ever-increasing doses of morphine. When a catheter could not be passed at all the involuntary straining efforts to pass a few drops were most distressing to witness, the patient being bathed in perspiration and groaning with agony. I had never at that time heard of Dr. J. William White's proposal, but if I had I feel sure I should have suggested its adoption for this old man on the principle of "any port in a storm." The reduction of the prostatic enlargement being the problem I felt hopeless about solving it, and I told my patient so, but I told him at the same time that I should give him a prescription having that end in view, adding, however, that I had no confidence in its being of any

benefit. He expressed his readiness to do, or to submit to, anything. The prescription was for suppositories, each containing 10 grains of iodide of potassium, one to be placed in the rectum every night. I told him that if any good followed it would be only after a long time, so that he must persist with the treatment if it seemed to him to promise any relief whatever. The suppositories were prescribed, of course, in what seemed to me the vain hope that some absorption might be produced in the prostate. The patient, who was in no way bound or expected to remunerate me for my care of him, was so pleased with what he called the "result" that he sent me a very substantial cheque, and some months later a further cheque for more than double the amount of the first. I found that the relief he experienced was due to a considerable diminution in the size of the prostate, not sufficient to enable him to dispense altogether with the use of the catheter, although he was never reduced to a No. 1 again, and he could for the most part pass his water in a fair stream. I am quite prepared to be told that the change had no connection with the use of the potassium iodide, knowing, as I do, the dangers of *post hoc propter hoc* reasoning. I may say, however, that the patient would have it *propter*. I write in the expectation that, in view of the serious procedure recommended by Dr. J. W. White, a trial may be made of a plan which, no doubt, has been adopted before (though I do not happen to know whether it has or not), and which has, at least, the merit of simplicity, and of being quite incapable of doing any harm.

Sheffield. F. A. Davy, M.D.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ROYAL MARINE INFIRMARY, WALMER.

A CASE OF ACUTE YELLOW ATROPHY OF LIVER.

(By Fleet-Surgeon J. N. Stone, R.N.)

F. F., aged 17, a recruit, well developed, was admitted to the Royal Military Infirmary, Walmer, on April 13th, complaining of headache, nausea, and loss of appetite. The tongue was yellow, and there was a general icteroid condition of skin. There was no fever, no hepatic uneasiness, and no enlargement of the liver. He had been born and had lived for several years in India. He was anxious to go on with his drills, but as the weather was cold it was considered advisable to send him to bed in the infirmary, where he was under the immediate care of Surgeon Doyne, who watched him carefully throughout. He was ordered nitro-muriatic acid mixture and 5-grain blue pill at night.

Up to April 20th little change had taken place; there was no fever and no hepatic tenderness; the jaundice, however, continued, and the urine contained bile. At the above date there was considerable bilious vomiting, the jaundice became more pronounced, and there was some pain in the hepatic region. The bowels were open, the motions being light coloured. A mustard leaf was applied to the hepatic region.

Occasional bilious vomiting took place, but no marked change in the patient's condition showed itself until April 25th, when delirium commenced, with tendency to doze. He could take no food. Jaundice was very marked. The area of hepatic dulness was found to be diminished, and the possibility of acute atrophy was suggested for the first time.

On April 26th the pulse was 66; the temperature was normal. He did not answer questions, was semicomatose, and took no food. The bowels confined. A turpentine enema was ordered. Leucin and tyrosin were present in the urine.

On April 27th jaundice was deep, the teeth and gums were dry, the area of hepatic dulness was much diminished. He was comatose. The bowels were confined. The pulse was 108; the temperature 101.6°. He passed urine in bed. At 3 P.M. he passed a light-coloured solid motion after the enema. At 8.15 P.M. the pupils were widely dilated, the pulse 144, the respiration 42, and the temperature 100.4°. He died quietly at 3.15 A.M. on April 28th.

Post-mortem examination April 29th. Body well nourished, skin deeply yellow; some venous ecchymosis on arms and neck. Abdomen: intestines bile stained; gall bladder nearly empty; the duodenum contained a quantity of bilious matter. Liver: weight 31½ ounces; yellow throughout on section, capsule adherent, substance of liver firm; no appearance of abscess. Spleen: 6½ ounces; friable. Kidneys: right, 6½ ounces; left, 6 ounces; yellow tinge throughout on section. Heart: 19 ounces; endocardium and clots yellow stained.

Microscopic examination of one portion of the liver showed breaking down of the liver cells, the *débris* of which filled the place of normal tissue. Actual disintegration could be seen taking place without round-celled invasion. In other portions there was round-celled infiltration with destruction of liver cells. No sign of liver abscess, however, was present.

THE DISTRICT HOSPITAL, WEST BROMWICH.

A CASE OF ANTHRAX.

[Under the care of Mr. H. Langley Browne.]

(Reported by G. Edgar Helme, M.B.)

The patient, a charwoman, aged 30, complained of pain, and a crust on the lower lip at the right angle of the mouth, and a general feeling of illness. On May 12th, she had felt some tingling which was followed by a pimple in the above position; this enlarged and burst on May 15th, after she had applied linseed poultices.

She was admitted on May 18th, 1894. The temperature was 99°, and at the right angle of the mouth on the lower lip there was a black slough, the size of a shilling, surrounded by a whitish vesicular ring exuding serum, with inflammatory induration extending under the chin to the top of the larynx, and to about one inch from the right angle of the jaw. Some blood from the inflammatory area, and some vesicular exudation was taken for microscopical examination. Specimens of each were stained with Beck's "new purple stain" and bacilli of anthrax found in the blood but not in the exudation.

The patient was put on a diet of milk and beef tea with brandy (℥ iij) and a mixture of quinine sulphate gr. iv and tincture of perchloride of iron ♏ xv was given every four hours; the charbon, together with the inflammatory area, was painted with iodine liniment.

On May 19th, the induration had spread up to the right ear and over to the centre of the left cheek. Iodine liniment was again applied, and taken well over the spreading edges and lint moistened in corrosive sublimate lotion 1 to 1000 applied; this was repeated daily until May 21st, when the induration was lessening, and the patient much more comfortable.

On the following day a specimen of blood was examined microscopically, and bacilli again found to be present. On May 25th, the slough separated leaving the pit, the size of a sixpence, extending half through the thickness of the lip, but deeper and undermined towards the mesial line. Four hours after admission the temperature rose to 103.2°, and continued between this and 100° until May 21st., when it gradually fell to normal. The patient steadily progressed towards recovery, and was discharged cured on June 7th.

Remarks.—The case is entirely an isolated one, careful inquiries having failed to elicit any possible source of infection, the only relevant fact obtainable being that the patient was engaged in cleaning an upholsterer's shop five weeks previously.

Irish Medical Schools' and Graduates' Association. The summer dinner of this Association was held at the Midland Hotel, Bradford, on June 30th. The President, in reply to the toast of "The Association," said the Association was prospering, and was sure to prosper, because in it were found, working in the most perfect harmony, Irishmen of all shades of religion and political opinion, who were banded together with the double object of social intercourse, and of obtaining for Irish diplomates practising in England the same privileges as regards honorary appointments in hospitals as were enjoyed by their brethren holding English qualifications.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

G. E. HERMAN, M.B.Lond., F.R.C.P., President, in the Chair.

Wednesday, July 4th, 1894.

SPECIMENS.

A DEMONSTRATION of microscopic specimens, illustrating the Anatomy of Menstruation in Semnopithecus Entellus was given by Mr. HEAPE.—Dr. STEVENS (for Dr. HORROCKS) showed Fibroma of Uterus undergoing Degeneration.

REMARKS ON FŒTAL RETROFLEXION, WITH REPORT ON A SPECIMEN.

This paper was read by Dr. REMFRY. He discussed the causes of retroflexion as given by various authors, and divided them into: (1) Abdominal, (2) Dorsal. In (1) the cases were connected with abnormalities in the umbilical cord; in (2) with various abnormalities of the vertebræ. In the case reported the incompletely-developed spine was so bent over that the posterior part of the head nearly touched the crests of the ilia. There was some lateriflexion to the left, and on this side the gluteus maximus was seen to have a distinct origin from the upper portion of the occipital bone. On the right side an encephalocele of about 3 cubic inches capacity separated the occipital bone from the crest. The presentation was pelvic, and delivery was effected only after prolonged traction, during which something was felt to give way. It was found that the cord was only 2 inches long, and had ruptured.

Dr. GILES believed that malformations of the vertebral column were always secondary to the close application of the abdominal surface of the fœtus to the placental surface. By adopting this view a uniform explanation of retroflexion was obtained.

Dr. AMAND ROUTH thought that the cause of the retroflexion here was the extreme shortness of the cord. He wished to know why the insertion of the gluteus maximus into the left occipital bone was thought to be secondary to the retroflexion.

The PRESIDENT considered that extreme retroflexion of the fœtus might be produced by a very slight cause, as if the fœtus for any reason became so extended that the occipito-spinal or any spinal joint became in front of the line along which the pressure of the uterine walls on the two ends of the fœtus was exerted, then this pressure would tend to more and more retroflex, that is extend, the fœtus. This explained the great amount of extension in face presentations, and Dr. Remfry's specimen was in the attitude of a fœtus presenting with the face.

Dr. REMFRY, in reply to Dr. Amand Routh, said the explanation depended on the fact that the latissimus dorsi and the gluteus maximus were both parts of a primitive sheet of muscle, and in the present specimen the ordinary relations had become displaced in consequence of the retroflexion.

TEMPERATURE AFTER DELIVERY IN RELATION TO THE DURATION OF LABOUR.

Dr. A. E. GILES read this paper. He had analysed 600 cases of normal labour from the point of view of the relation of the temperature after delivery to the characters of the labour. His conclusions were as follows: (1) The average rise of temperature due to labour is slight (average of 600 cases, 98.7°). (2) The length of the first stage of labour bears a slight relation to the subsequent temperature. (3) The length of the second stage has a direct influence on the temperature, which rises in proportion to the length of this stage. (4) The time of day at which delivery takes place has very little influence on the temperature; this is, however, highest in the groups of cases where delivery occurred between 12 and 4 A.M., and between 4 and 8 P.M. (5) When chloroform is given during the second stage of labour the temperature is commonly low after delivery, even if the second stage last long. The average temperature in fifteen cases with 2 second stage averaging two hours and forty minutes was 98.7°. (6) A similar result follows the application of forceps under chloroform; in twenty-six cases with a second stage lasting on an average three hours and a-half the average temperature was 98.8°. (7) In twelve cases of natural delivery in which the second stage lasted on an average thirty-five minutes, but where an intrauterine douche was given, the average temperature afterwards was 99.4°. Tables and charts illustrating the above points in the paper were exhibited.

Dr. CULLINGWORTH was glad to find that chloroform exercised no prejudicial influence upon the *post-partum* temperature.

The PRESIDENT said that this paper of Dr. Giles's was the first attempt to reduce to law the minor temperature variations of the normal lying-in. These variations, although they might be in the present state of knowledge unimportant, because not leading to inferences useful in the management of the case, yet could not be fortuitous.

ON THE CHANGE IN SIZE OF THE CERVICAL CANAL DURING MENSTRUATION.

The PRESIDENT read this paper. He referred to the different opinions that had been expressed as to the state of the uterine canal during menstruation, some saying that the canal was made smaller by swelling of its mucous membrane; others that it dilated. All these opinions were based mostly on theory, and little on observation. He detailed measurements made to ascertain what change really occurs in the cervical canal during menstruation. He came to the following conclusions: (1) That slight spontaneous dilatation of the cervical canal takes place during menstruation. (2) That this dilatation is at its maximum on the third and fourth days of menstruation. (3) That this dilatation takes place in those who menstruate with pain as well as in those who menstruate without; in those who menstruate scantily as well as in those who menstruate copiously; and there is no marked concomitant variation between the amount of dilatation and the amount of pain or the amount of the flow.

Dr. CULLINGWORTH was surprised to hear that the effects of artificial dilatation were lasting enough to vitiate observations made on the following day. It was usually supposed that the effects passed off much earlier.

Dr. GILES asked whether the observations referred to the cervix only, or whether the bougies were passed to the fundus. (The PRESIDENT signified the latter.) In that case it was interesting that the maximum dilatation was found on the same days of menstruation (third and fourth) as those on which desquamation occurred in the uteri of monkeys observed by Mr. Heape. The dilatation might thus be partly anatomical. The dilatation of the first day was probably functional.

Dr. C. H. F. ROUTH said that it had always been known that the uterus dilated during menstruation, but he knew of nothing so precise as the statements of the President. It was possible to pass a probe through the cervix during menstruation in cases where this could not be done in the interval. Again, we were conversant with the fact that in certain cases of dysmenorrhœa the pain was due to spasm of the uterus, and sometimes to a flexion which had to be overcome. The pain usually ceased on the second to the fourth day, and this might explain the gradual dilatation of the uterine canal at this period, although preceded by a contraction. Another cause for the diminution in size of the uterine canal consisted in the swelling of the walls caused by the congestion occurring prior to menstruation.

The PRESIDENT said that his measurements were of the cervical canal; but the os internum was the narrowest part of this. He could draw no distinction between the functional and the anatomical os uteri. Menstruation seemed to him like a miniature labour; as the cervix dilated in labour, so it did in menstruation. Dr. Routh's observation as to a pinhole os admitting a sound during menstruation but not at any other time was valuable. He had not been able to find any publication to this effect. Dr. Routh's remarks as to the swelling of the uterus blocking up the canal he thought illustrated the need for observations such as he had in this paper submitted to the Society.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

D. ARGYLL ROBERTSON, M.D., F.R.S.E., President, in the Chair.

Friday, July 6th, 1894.

A NEW OPERATION FOR TRICHIASIS AND DISTICHIASIS.

MR. W. SPENCER WATSON read this paper. A bridge was formed by incisions parallel to one another and to the margin of the lid, including in its substance the whole of the faulty eyelashes; a "button-hole" lying horizontally above the margin of the lid was thus formed. Into this "button hole" a "button" marked out in the skin immediately above it by a semilunar incision was turned, and fixed *in situ* by sutures. The result was to place a band of skin, which soon became partly mucoid in character, at the margin of the eyelid; by this means the transplanted eyelashes were quite removed from the cornea and assumed in their growth a normal horizontal direction. A case exhibited showed the advantages of this method of operating.

Mr. JESSOP had done this operation many times, and had always called it Spencer Watson's operation.

Dr. BRAILEY thought that the operation did not remedy the faulty curve of the upper lid, whereby the cornea was unduly pressed on.

Mr. BENSON thought Mr. Spencer Watson was entitled to great credit for introducing the whole series of transposition operations for the relief of deformities of the lids. He thought that this operation was inferior to Van Millingen's operation and its various modifications now in use, and known as blepharoraphy-ectropiasty. The old operation of Spencer Watson's operation was that the skin did not turn into satisfactory mucous membrane, small hairs still remained in the skin, and the epithelium was different from that of the cornea, and was always harmful to it.

Mr. SPENCER WATSON, in reply, described his first operation referred to by Mr. Jessop, and the difference between it and the present method. In his experience, although the skin did not become a true mucous membrane, it did assume a mucoid character, and was not harmful to the cornea.

"MONOCULAR ASTEROID HYALITIS."

This paper was read by Mr. ARTHUR BENSON (Dublin). Captain ——, aged 62, was in good health, but was suffering from asthenopia and muscæ in the right eye (V=⅔. Ja 1, and H+0.75 D). This he attributed to overstrain, caused by excessive and prolonged use of the eyes some thirty years ago. He had syphilis as a young man, but there had been no manifestation since. The right vitreous was found to be thickly studded through and through with hundreds of small, stationary, cream-coloured spheres, arranged apparently without system, and varying in size from excessive minuteness to about a quarter of a millimetre or so in diameter. They suggested the appearance of stars on a clear night so strongly that the name "asteroid hyalitis" seemed suitable, as their pathology was unknown. The eye seemed otherwise quite normal, and as the vision in it was practically as good as that in the other eye, Mr. Benson thought that the condition was probably congenital. It was not caused by cholesterin crytals, nor did it resemble at all the hyalitis punctata seen in syphilis or in serous cyclitis. It had remained quite unchanged during nine months while under Mr. Benson's observation. In his experience the case was unique.

The PRESIDENT had seen a similar case, except that the spheres floated about instead of being stationary; in his case there was also commencing cataract.

Mr. LANG had seen a similar case of spheroid bodies in the vitreous, but the bodies were movable. The vision was unaffected.

Mr. JESSOP suggested that, as these bodies were fixed and were seen with +32 D, they might be in the lens; he thought that no body in the vitreous could be quite fixed.

Dr. BAKER referred to a case of spheroidal bodies in the front part of the vitreous in a myopic patient of advanced age.

Mr. BENSON, in reply, said that these bodies were not confined to the front part of the vitreous, but were closely distributed through the whole vitreous from the back to the front.

NOTES OF A CASE OF SYMPATHETIC OPHTHALMIA OF THE RIGHT EYE WHICH SHOWED ITSELF EIGHTEEN DAYS AFTER A KICK IN THE LEFT EYE.

This paper was read by Dr. ADOLPH BRONNER (Bradford). There were no

signs of external wound nor of rupture of the left eye. The eye was enucleated, but there had been several recurrent attacks of typical sympathetic ophthalmia of the right eye during the last two years. Serous iritis with opacities of the aqueous and vitreous and slight inflammation of the optic nerve. Twenty similar cases had been recorded, of which, however, only 5 were genuine. In 4 of these 5 the uveal tract of the injured eye was diseased. These cases seemed to speak strongly against the microbic origin of sympathetic ophthalmia.

THE USE OF CHLORINE WATER IN CERTAIN DISEASES OF THE EYE.

This paper was read by Mr. LAWFORD. He gave notes of cases in which it had proved of real service. His experience of it as an intraocular application was limited to two cases; in both instances suppuration in the anterior chamber was arrested by the use of liquor chlori. The other cases in which the solution had been used included purulent conjunctivitis, membranous conjunctivitis, suppurating ulcers of cornea, and purulent dacryocystitis.

Mr. POWER had used aqua chlori not infrequently, but almost entirely in diphtheritic cases.

Mr. LANG employed chlorine water at times. He had used it once as an intraocular injection in suppuration of the globe; the suppuration was arrested, but though the eye was retained, it subsequently shrank. He had also used it in hypopyon and corneal suppuration, but without uniformly satisfactory results.

Mr. LAWFORD, in reply, said that Dr. Berry had found suppuration in the vitreous arrested after the use of chlorine water. He himself had never used it in the vitreous; he had found it very satisfactory in one case of diphtheria. Von Graefe had recommended it in granular lids, but he had had no experience of this.

CARD SPECIMENS.

Mr. GRIFFITHS: Case of Filamentary Keratitis.—Mr. POWER: Section of the Orbit in a case of Congenital Exophthalmos in an Infant.—Mr. JESSOP: Case of Sloughing of both Eyelids and Eyeball in an Infant with subsequent complete Cicatrisation.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

T. S. CLOUSTON, M.D., President, in the Chair.

Wednesday, July 4th, 1894.

THROMBOSIS OF LATERAL SINUS.

MR. MILLER showed a lad on whom he had operated for middle-ear disease and thrombosis of sinuses. After the middle ear had been cleaned out the lateral sinus was opened by gouge, incised for half an inch, and found filled with healthy red clot, which was left alone. Pus was found under the dura. The wound was stuffed with iodoform gauze, and healed without suppuration. The internal jugular was ligatured, and found collapsed and empty. He drew attention to a cannula for draining the middle ear through the external auditory meatus, which canal had a tendency to become narrowed after operation. The cannula was fixed to a movable plate, which lay anteriorly to the ear, and could be kept in position by tapes. The drainage was carried on by capillary attraction by means of threads passed through the cannula.

RARE CASES OF SKIN DISEASE.

Dr. ALLAN JAMIESON showed two rare cases of skin disease. In the first the eruption, which consisted of spines and papules, greyish on a pink base, due to congestion, appeared two months ago on the back of the neck, and on the thighs and back of knees. It was a disease of the hairs, had no subjective symptoms, and was probably trophic in origin; it occurred chiefly in children. This disease was called lichen spinulosus, or lichen pilaris. The treatment carried out had been salicylic acid and glycerine applied to the patches under which the spiny condition was disappearing. Dr. Jamieson also showed a drawing of the case. The second case was that of a woman with a symmetrical eruption of the face like ordinary lupus erythematosus, but differing from it in showing scattered through the red congested skin true brown jelly-like nodules of lupus vulgaris. The condition was a rare one, and had been called lupus vulgaris erythematoides by Leloir. This patient was treated by thyroid, and the reaction was so marked that the treatment had to be suspended for a time.

OPERATION FOR APPENDICITIS.

MR. CATHCART showed two lads on whom he had operated successfully for appendicitis by removal of the appendix. In one of the cases the appendix was gangrenous, and contained a small calculus. In the other, which was not so acute, the appendix was found deeply congested, dilated, and in opening it a few black points were found. The cases both did well, although there was slight peritonitis in each case. Mr. Cathcart called attention to the value of early operation, when a small incision was sufficient, and no subsequent bulging took place.

UNILATERAL ENLARGEMENT OF CRANIAL BONES.

Professor CHIENE showed a patient with unilateral enlargement of the anterior part of the parietal and frontal bones, and superior and inferior maxillæ on the left side of his head. The etiology was quite obscure. The patient thought it due to a blow. Dr. Welsh, who sent him to Professor Chiene, thought it followed typhoid. Professor Chiene would not venture any opinion. He referred to an address of Mr. Jonathan Hutchinson in 1890, delivered before the Edinburgh Royal Medical Society, in which he described a similar condition, also to a skull showing similar enlargement in the possession of Mr. Alexis Thomson, and referred to a paper by Dr. Murchison on a case of Mr. Bickersteth's, where there was nodular enlargement of all the skull bones but the occipital.

THYROID EXTRACT IN LUPUS.

Dr. BYROM BRAMWELL showed two cases of lupus treated with thyroid and three cases of pseudo-hypertrophic paralysis in different stages of the disease, one of them showing true fibrillary twitching in the muscles of the back, the occurrence of which Erb denied in this disease.

SPECIMENS.

Dr. BURN MURDOCH exhibited a Cast of the Skull of King Robert the Bruce, which he claimed to be the original cast taken at the disinterment, as described in a paper on the subject by Sir W. Turner.—Mr. JOSEPH BELL showed, for Dr. B. BELL, two Cartridges which had been fired out of a gun by a small boy in cocking at his brother. The child had picked them up when some volunteers had been practising, and put both in the one barrel. Dr. Bell found one at the time of the accident in the soft parts over the upper jaw. This he extracted, but, the wound not healing, four months afterwards the other was extracted and the wound healed at once.

THE ACTION OF ACIDS AND ALKALIES AND OF SOME OTHER DRUGS ON THE SECRETIONS OF THE BODY.

Dr. A. LOCKART GILLESPIE read a paper on this subject. After giving a brief summary of the literature on the subject, he described a series of experiments with cases, with special reference to the reaction of the stomach contents. As a result of these he found (1) a remarkable relation between the acidity of urine and that of the stomach contents, namely, that they were inversely proportional. (2) That the acids before food diminish the acidity of the stomach contents; after food they increased it. (3) That alkalies act the reverse of this. (4) That in certain cases ammonium chloride has a remarkable power of increasing the acidity of gastric contents, 20 grains of ammonium chloride having more effect than 3jv of the dilute hydrochloric acid. (5) That mastication increases the acidity. (6) That warm water diminishes it slightly only.

Drs. ALLAN JAMIESON, BYROM BRAMWELL, Mr. MILLER, Drs. BURN MURDOCH, TAYLOR, T. RITCHIE, CLOUSTON, and DAWSON TURNER also spoke; Dr. LOCKART GILLESPIE replied.

SURGICAL ECONOMY IN HOSPITALS.

Mr. CATHCART gave one or two brief extracts from Dr. Arthur Neve's paper on "Surgical Economy in Hospitals," which, owing to the lateness of the hour, was taken as read.

PHYSICS OF AN ANEURYSM.

Dr. DAWSON TURNER showed a model to demonstrate by means of manometers "that the pressure on unit area in an aneurysm was greater than that in the distal vessels and at least as great as that in the proximal." His paper on the physics of an aneurysm was also taken as read.

CROUPOUS RHINITIS.

Dr. BURN MURDOCH'S paper on a case of croupous rhinitis was taken as read, and he showed specimens of the membrane shed from turbinate bones and dwelt on the extreme rarity of the condition.

REVIEWS.

A CATECHISM OF HYGIENE AND SANITARY SCIENCE, in XV Parts. By PATRICK HEHIR, M.D., F.R.S.E., F.R.C.S.E., D.P.H.(Camb.). Part I.—Water. Calcutta: Thacker, Spink, and Co. 1894. (Cr.8vo, pp. 610.)

THE task which Dr. HEHIR has undertaken is a sufficiently formidable one, even apart from the difficulties which, as he explains in the preface, have attended the publication of the first instalment of the work. The volume before us, devoted to water alone, extends to nearly 600 pages of tolerably close print, and is to be followed by fourteen more! It is arranged after the manner of a catechism, and consists of no fewer than 2,353 questions, with answers which vary greatly as to fulness, some being a couple of pages long, while others are extremely brief. The idea is not a bad one, and the author has evidently bestowed much time and thought upon his work, the extent of his reading being (as the text shows) even wider than the not very exhaustive bibliography would seem to imply. The most noteworthy *lacuna* in this respect is the absence of any reference to the recently acquired knowledge as to the conditions of efficiency of water filtration on a large scale. We regret to be unable to say that entire success has been achieved, or that the volume in its present form is one upon which students can be advised to rely. In the first place, it stands sadly in need of pruning and revision, which could be effected without sacrificing any of the really valuable information with which it abounds. It is not so much the lack of methodical sequence, although something is left to be desired in that direction, as the wearisome and often confusing repetition that constitutes the great defect of the book. Instances abound in which the same information is repeated over and over again, sometimes in almost identical terms. Thus Answer 1,873 is practically a repetition of 1,862, 1,747 of 1,742, 1,836 of 1,821, and it is difficult to see what purpose is served by the triple statement in answers 2,118, 2,345, and 2,352 of the standards proposed for trade effluents. The printer is no doubt responsible for the occasional perversions of chemical terms, such as "theosulphate" and "dephenylamine," which are consistently wrong, and also for such obvious blunders as that in Answer 2,318, whereby the author

is made to announce that hard water "is said to produce excessive oxidation of the bones of the base of the skull," or in Answer 2,077, where a standard solution is made by dissolving "395 grms. of potassic permanganate in a litre of water."

Trivial errors such as these are perhaps scarcely likely to mislead, but there are others of more moment. In some cases it would seem that the author's notes must have got mixed; as, for instance, in Answer 2,020, which would serve as a very fair summary of the attempts which have been made to deprive water of the power of acting upon lead, but which is absurdly wide of the mark as a reply to the question: "What measures have been proposed to overcome the hardness of water?" The definition of "watershed" (728) is scarcely correct, and Answers 2,149 and 2,160 are likely to convey the idea that "albumenoid ammonia" is a substance present in water as such, and not merely a derivative obtained in the process of analysis. Elsewhere (1,871) it is suggested that in order to enable a beginner to test the accuracy of his analytical work, "a water containing a known quantity of nitrogenous organic matter may be prepared artificially, and then the ammonia process may be applied to it, and the actual analytical results compared with the calculated results." Any student attempting to carry this suggestion into effect would be likely to encounter difficulties.

Among the tests for chlorine, reference is made to an "indigo process," and directions are given for the preparation of the necessary standard solution, but there the description comes to an end. It would be easy to multiply examples, but the above will serve to illustrate the absolute necessity for careful revision and condensation before the work can be regarded as a trustworthy textbook. By those who have already sufficient knowledge of the subject to detect such pitfalls, Dr. Hehir's *Catechism* may be studied with profit, for it contains a great deal of information upon details which the smaller manuals of necessity omit. The index is by no means adequate.

The Hygienic Prevention of Consumption. By J. Edward Squire, M.D. London: C. Griffin and Co. 1893. (Cr. 8vo, pp. 190. 6s.)

This is an opportune little book, drawing attention to the various aspects of a large question which is very apt to be regarded and discussed in a more or less one-sided fashion. The author frankly accepts the infective nature of tuberculosis and its communicability from man to man, but, while founding upon that doctrine many of the precautions which he recommends, he also lays great emphasis on the fact that other influences are at work in deciding which individuals out of the great crowd exposed to infection shall become victims of the disease. Predisposition would seem, indeed, to be the key to the causation of the malady, as the modification of that predisposition is to its prevention.

The bulk of the book is, as its name implies, devoted to preventive measures, and, while dealing fully with the question of infection, is chiefly occupied in considering how to escape or modify the predisposing causes of the disease. The hygiene of infancy and childhood, of school, and of adult life, are dealt with in readable pages containing many hints on many topics, such as clothing, diet, exercise, choice of occupation, and selection of residence.

Perhaps the most interesting chapter is that on the prevention of consumption in the family when one member of the household is already consumptive. Many directions as to ventilation are given, the utility of an open chimney being insisted on, even though no fire may be required. Residence in sunny rooms is advised, not only on account of the beneficial effect of sunlight on the patient, but also because of its influence on the infective particles given off by him. To prevent the spread of infection from the sick to the healthy, directions are given as to the mode of dealing with dust and with sputum. The house should be kept thoroughly clean, and especially should the sweeping and the dusting of the rooms chiefly occupied by the patient be frequently and thoroughly attended to. This is one reason why two rooms are necessary for such invalids, who can then occupy one while the other is being aired and cleaned. The carpet should be laid loosely, so that it can be taken up and shaken out of doors. All spaces between the boards of the floor should be carefully filled in to prevent accumulation of dust and allow complete cleaning. Curtains should, as far as possible, be of washing materials. Dusting should be done with a damp cloth, so as to remove the dust instead of merely scattering it, and tea leaves, or bran moistened with Sanitas, should be used when sweeping the floors. As showing the advantage of cleanliness and good ventilation, it is mentioned that nearly all the cases of probable direct infection from a phthisical patient take place in small ill-ventilated houses, and such cases are almost unknown in the airy houses of the well-to-do.

The author gives very definite instructions as to the mode of dealing with the sputa of a phthisical patient. The spitting cup is to be kept near at hand, and is to contain some liquid germicide, such as carbolic acid (1 to 48), or solution of corrosive sublimate (1 to 500), and if no such disinfectant be used the contents of the spittoon should be thrown on a hot fire and burned, and the spittoon itself be well rinsed with boiling water. Expectoration into the chamber vessel, unless it contain a disinfectant, or into the closet, should not be permitted. "When the expectoration is scanty, or when the patient is away from home, pieces of linen which can be burned may be used to receive the sputa; or if the handkerchief is used it should be soaked in disinfectant, or scalded, as soon as it is done with." We would point out, however, that it is during the use of the handkerchief, not after it is done with, that the mischief is likely to happen. Carbolic acid of the strength mentioned is but a feeble germicide for the purpose intended, nor is there the slightest ground for believing that either it or the sublimate solution would have any influence on the micro-organisms contained within the gelatinous masses of expectoration on which they are supposed to act.

The last few chapters are perhaps less worthy of commendation than those which are devoted to the ostensible object of the book. The curability of consumption, its early symptoms, and its climatic treatment, are interesting topics enough, and would find their proper place in a complete treatise on the whole subject, but their connection with the matter in hand is vague. It is proverbially difficult to serve two masters, and these later chapters will probably be looked on with different eye by different sets of readers.

The Physician's Wife. By Ellen M. Firebaugh. London: F. J. Rebman. 1894. (Demy 8vo, pp. 198. 6s. 6d.)

If France may claim to have founded the school of realistic romance, in which the passions, the crimes, and the vices of life are exposed with the ruthless veracity of the dissector, to America belongs the honour of having developed that daintier and more delicate style of realism in literature, in which the common everyday life of common everyday persons is portrayed with such sympathy and intimate knowledge of circumstance that all who read feel the truth of the description. The physician whose life the wife illustrates with such delicate touches, and an art which simulates simplicity, is no hero of romance nor worker of miraculous cures; he is only the country doctor whom we all know, who may be seen any day driving in his gig from house to house, giving friendly nods to passers-by, or who wends his way night after night along the dark lanes under the stars to carry aid to a distant sufferer. But the sympathy of his wife makes us henceforth better understand his long toilsome days, his broken nights, his disappointments, his sense of the world's ingratitude, his loving service of others. His wife quietly notes it all; she misses none of the humour and pathos, and even the doctor himself does not escape her gentle irony. Numerous little impressionist sketches are given; of the woman who despised doctors on the grounds that "she'd done a heap o' doctoring herself, and had buried three husbands and six children, and had doctored them all herself;" of the persons who never pay, but do not hesitate to call up the doctor in the night, one for medicine for his daughter, for "she's got a pain in her stummick;" another to come and see his wife because "she's got a pain in her side, and is swelling up right smart:" of the patients who cannot pay in money but who pay in kind, and deposit in the doctor's house or garden a cartload of pumpkins, a batch of

brooms, a bucketful of pickles, or pigs which err in being too long lengthwise and not broad enough broadwise, or horses and cows noted neither for beauty nor strength. Then, again, there are the patients who never dream of paying, who are surprised at being asked; and reply "Why, doc., you don't expect *me* to pay you anything"; and the lady in reduced circumstances, who was attended for years without fee, and finally disappeared. The doctor, meeting her in the street, expressed surprise that he had not seen her for so long, to which was given the ingenuous reply, "Well, doctor, I didn't seem to gain very much, and thought I'd consult a pay doctor."

Thus the doctor comes to harden his heart, and to determine that, for the sake of wife and children, he will not give advice and medicine unpaid any more than the baker and butcher give bread and meat; and that prepayment shall now be enforced where the demand for fees has been always neglected. Full of his new resolve, there comes the usual urgent demand to come at once and see a sick wife. Payment is neither made nor promised, and the doctor refuses to go. "It ain't her fault; she's always done her part," pleads the man; but the doctor is obdurate. Little rest, however, has he and his wife that night, and before daybreak he is up and dressed, and on his way to the cottage where lies the sick woman who has always courageously done her part. But death has been there before him, and the doctor has missed the chance of easing another's pain, or perhaps of saving another's life. "It is not hard to see that in the presence of things like this, the physician's resolution to work only for himself and his family must vanish away, and that in the future as in the past much of his work, his time, and his strength must be given where they will bring him little or nothing in return." But he learns to take the urgent calls of alarmed relatives quietly, and to proceed with the measured step which brings him the one calm person into the sick room. The story is told of a little boy who came one day to the surgery in a panic of fright, begging the doctor to come at once, as the baby was choking to death. Knowing full well that babies did not choke so easily he told the boy to go back home and he would come. He waited on one or two patients and then started to see the choking baby. He had not proceeded far when he saw the figure of the little boy, who was running to meeting him, and a happy voice piped out "The baby's unchoked."

REFERENCE HANDBOOK OF THE MEDICAL SCIENCES. By Various Writers. Edited by ALBERT BUCK, M.D. Vol. IX. Supplement. New York: William Wood and Co. 1894. (Imp. 4to, pp. 1076. Illustrated by chromolithographs and wood engravings.)

THE object of the present volume is to bring the *Reference Handbook* published between the years 1885 and 1889 up to date. It has been wisely decided to do it in this way rather than issue a new edition of the whole work. Apart from additions, a number of quite new articles have been introduced.

It will give some idea of the ground covered when it is mentioned that articles on microscope *technique* with histological formulæ, bacteriology, embryology, biological analysis of water, food and drug inspection, vital statistics, hospital construction, military nursing, and veterinary science, will be found in it, in addition to subjects of every-day interest to the physician and surgeon.

Turning to diphtheria—a subject of great interest at the present time, owing to the possible further application of bacteriological methods to the treatment of disease—we find a satisfactory account given by Dr. Ernst, including the bacteriology and the subject of immunity. A very short account is given of the preventive treatment of rabies, but the opinion is expressed that it may be considered thoroughly satisfactory, and that it is the only rational and safe treatment. The antiseptic treatment of enteric fever receives scant attention, but the extension of the treatment by the application of cold is emphasised.

Much space is given to the nervous system, including both its anatomy, minute structure, and development. The article on cerebral tumour, by Dr. Mary Putnam-Jacobi, is full of interest. It includes an excellent account of the results of operative treatment, with tables. As yet these results are hardly very satisfactory, even when published cases are alone considered.

In the surgery of the spinal cord a judicious statement is made by Dr. W. W. Keen as to what may be expected of laminectomy in spinal caries, and the frequency of recovery from the paraplegia (between 50 and 60 per cent.) without operation is properly brought forward. In contrast to the majority of observers, Keen recommends, at any rate at the present time, early operation in cases of fracture of the spine. The prognosis of chronic peritoneal tuberculosis, treated without operation, appears to be made too gloomy. It would help materially to the solution of this question if more cases were put on record, especially, perhaps, those in which recovery occurs without operation, and those in which operative treatment has failed to produce benefit. The article on appendicitis, by Dr. Tiffany, is moderate and discriminating, but it fails in the point of greatest interest and importance—the selection of cases for operation. Much is said about watching the patient, but little about the results of this watching. Under fever the views of Macalister are very generally adopted. The care of epileptics is the subject of a useful article. The recent advances in genito-urinary surgery and in the operative treatment of gall stones are duly reflected.

A subject well worthy of attention is considered in an article termed "The Curative Treatment of Sarcoma and Carcinoma by Erysipelas." The terrible and increasing frequency of malignant disease, and our helplessness in coping with it, open the way to the due consideration of any investigation carefully designed and carried out. The cases recorded here are examples of recurrent and inoperable growths, and although the treatment is not altogether free from risk, the results might at times be really termed satisfactory. The important subject of the morbid anatomy of the mastoid process is given in a very practical fashion, and is abundantly illustrated. The remarkable results of the new departure in the treatment of myxœdema are duly noted. The considerable advances in our knowledge of the cause of malaria by the discovery of the plasmodium malariæ, and by the investigation of its life-history, are detailed in an appendix. The numerous new drugs, mostly belonging to the antiseptic, antipyretic, antirheumatic, and antineuralgic classes, are efficiently described by Dr. Beaumont Small.

The advances made in all branches of the medical sciences including preventive medicine and bacteriology during the past few years cannot be other than a matter of satisfaction; they are recorded here in a series of well-written and well-digested articles. As a reference book, we can strongly recommend this volume to the favourable notice of the profession.

TRAITÉ DES MALADIES DES YEUX [Treatise on Diseases of the Eye]. By PH. PANAS, Professeur de Clinique Ophtalmologique à la Faculté de Médecine, etc. Paris: G. Masson. 1894. 2 vols. (Imp. 8vo., pp. 1,254, 7 coloured plates, 296 figures. Fr. 40.)

PROFESSOR PANAS'S name is so well known in ophthalmology that much will be expected of a treatise from his pen. The work before us is, according to the author's preface, the fruit of a life-long study in hospital and laboratory, and many will rejoice that so competent an observer has given the profession the results of his extensive experience in the study and practice of ophthalmology.

Although the book bears throughout the imprint of the individual, there is ample evidence that the author has made use of the knowledge and experience of numerous contemporary and earlier workers in the same field of science. The references to the writings of others are, for a book of this character, fairly comprehensive: the only criticism we would make is, that in some respects these references are not quite up to date; several important contributions of the last few years are not mentioned; it does not necessarily follow, however, that the author was unacquainted with them.

The first volume, of 761 pages, concerns the eyeball and optic nerve only, dealing with the anatomy and physiology and the diseases of their component parts; under the diseases

of the optic nerve are included the visual disturbances consequent upon lesions of those parts of the cerebrum connected with the sense of sight.

The second volume includes the conjunctiva, lids, orbit, and adjoining structures, their anatomy, physiology, and diseases. A noteworthy feature in this book is the chapter devoted to the consideration of the bony cavities (frontal, maxillary, sphenoidal, and ethmoidal), disease of which often brings the patient under the notice of the ophthalmic surgeon, in consequence of the effect produced upon the eyeball or other orbital contents.

The book may be read with great interest. It is pleasing as well as instructive, by reason of the various departures from the beaten track, too faithfully followed by most writers of similar textbooks, and we consider it a trustworthy guide. At the same time we confess that it hardly reaches the standard we had expected in a work by Professor Panas.

The printing of the letterpress and illustrations is generally very good. The errors which have escaped detection are comparatively few.

The Principles and Practice of Medical Jurisprudence. By the late A. S. Taylor, M.D., F.R.S. Fourth Edition. Edited by T. Stevenson, M.D. London: J. and A. Churchill. (8vo, Vol. I pp. 770, Vol. II pp. 682, 31s. 6d.)

In the ten years that have elapsed since Dr. Stevenson was first called upon to edit Taylor's great work many notable cases have occurred in which familiar crimes have developed a new phase or have otherwise been made of special interest to the medical jurist. The editor has thus had no lack of fresh material to select from, and the fact that there is hardly a chapter throughout the whole of these two volumes which does not contain some reference to a recent case will show with what care he has performed his task. The urgent necessity of keeping the work within reasonable limits has no doubt necessitated the new references being in many instances very brief, but where this is the case—as, for instance, in regard to the Maybrick trial—the reader is referred to a source where a full and critical report can be seen. A few cases of interest have escaped mention, notably one where an attempt was unsuccessfully made to obtain a decree of nullity of marriage on the ground of the wife's insanity at the time of the marriage, and the Lotinga insurance case, which was of interest from more than one aspect. But there can be no doubt that in the present edition the work will easily maintain its position as the leading authority on medical jurisprudence in the United Kingdom.

Die Pathologie und Therapie der Nierenkrankheiten. [The Pathology and Treatment of Kidney Diseases.] Klinisch bearbeitet von Dr. Siegmund Rosenstein. Vierte verbesserte Auflage. Mit 13 Holzschnitten und 7 Tafeln. Berlin: A. Hirschwald. 1894. (Roy. 8vo, pp. 724. M. 20.)

This well-known work was first published some thirty years ago. The fourth edition, though of much the same size as the last one, is really enlarged, as some of the illustrative cases have been omitted to make room for new matter.

The introduction is occupied with an account of the anatomy and physiology of the kidney, and of the constituents—both normal and abnormal—of the urine. The various diseases are then dealt with in the following order: Mechanical engorgement, albuminuria of pregnancy, the cholera kidney, Bright's disease, lardaceous disease, the fatty kidney, circumscribed nephritis, pyelitis and pyelo-nephritis, hydronephrosis, peri- and paranephritis, new growths, deposits and concretions, animal parasites, hypertrophy of the kidney, displacement of the kidney, and disease of the renal vessels. Under the albuminuria of pregnancy puerperal eclampsia is very fully considered. The author discusses the theories of origin, including the infective theory, and leans to the view that altered conditions of the cerebral circulation, rather than any poison in the blood, cause the disease. The cholera kidney is also attributed to the altered and impeded circulation. Under acute Bright's disease toxic nephritis, as produced by cantharides and metals, is first described, and then the various forms of acute nephritis, as seen in each of the acute infections. A short section is given to Bright's disease as produced by exposure to cold or heat, but it is not quite apparent whether the author thinks that these agents can alone set up the disease in previously healthy kidneys. Chronic nephritis is divided up, rather differently than in our English textbooks, into: (*a*) the large white kidney, said not to be very frequent; (*b*) the speckled or smooth contracted kidney (*Schrumpfniere*); and (*c*) the granular kidney. All these forms of renal disease are described together, the differences being duly noted; yet the advantage of separating two diseases differing so widely clinically as the large white kidney and the granular kidney can hardly be doubted. The etiology of chronic parenchymatous nephritis remains as obscure as ever. The complications and accidents of chronic renal disease are set out with much clearness. The chapters on pyelitis and pyelonephritis, and also that on calculus, are very good. Under parasites some very rare diseases are described. In the chapter on abnormal positions of the kidney, enteroptosis is frequently alluded to, yet M. Glénard's name does not appear. The treatment is mostly very satisfactorily given, including the broad outlines of operative procedures whenever surgical help can be of value. Each chapter is preceded by a useful bibliography. The plates at the end are very beautiful, but a few more illustrations might have been given with advantage in the text.

This book is obviously from the pen not only of an experienced clinician, but of one extremely well read in his subject, and especially so, perhaps, in English writings. But on one or two occasions the author's learning has appeared to us rather in danger of obscuring a clear expression of his own views on the subject. This work can certainly be recommended as containing an excellent account of renal disease as it is known at the present day.

NOTES ON BOOKS.

Les Nouvelles Idées sur la Structure du Système Nerveux [New Ideas as to the Structure of the Nervous System]. Par le Dr. S. Ramon y Cajal. Paris: C. Reinwald and Cie. 1894. (Demy, 8vo, p. 200.)—This collection of the minor papers of Ramon y Cajal in one volume will be of use to the student in neurology. They include studies on the spinal cord, the cerebellum, cortex of vertebrates, and peripheral sense organs (retina, auditory organ, etc.), of animals (rat, rabbit, cat, etc.) mainly based upon the use of Golgi's methods and Cajal's modifications. The facts are well and clearly placed before the reader. The best portion is that relating to the cerebral cortex of higher animals. There are 49 drawings (small size) in the text, the small size and price of the volume precluding the insertion of larger plates, which should be looked for in the various scattered publications of the author. The illustrations are singularly good and accurate, and the whole work is clearly written. A short account of the *technique* and a small bibliography closes this little book, small but of precious value to the worker. The Croonian lecture of the author before the Royal Society (March, 1894), and its summary in the British Medical Journal (March, 1894) should be studied in this connection. An English translation of the book would be welcome to many.

Die Behandlung der Leukæmia [The Treatment of Leukæmia]. Von Dr. H. Vehsemeyer. Berlin: S. Karger. London: Williams and Norgate. 1894. (Crown 8vo. pp. 40. 1s.)—It is a matter of unquestionable value to have the treatment of a disease reviewed from an impartial standpoint by one experienced and well read in the subject. How unsatisfactory is the treatment of leukæmia is obvious from the number of methods which have been proposed. Even the etiology of the disease is very obscure. Is it a disease of the blood-forming organs or of the blood itself? If the latter, does the lesion affect primarily either the blood cells themselves or the plasma in which they float. Finally, is it a chronic or sometimes an acute infective disease? Before these questions can be answered all treatment must be empirical in the strictest sense of the word. The treatment by oxygen inhalation, quinine, phosphorus, arsenic, iodides, and ergot are almost exhaustively discussed here. Arsenic hardly comes

out as well as might have been expected. The author saw striking benefit in a case under treatment with berber sulphur (p. 21). Passing improvement in the general condition has been noted in a number of cases under varied treatments. Transfusion has proved itself useless. It would seem quite unnecessary to touch here upon the so-called local treatment. The author has done good service in presenting so thorough a study of the subject.

A Synopsis of Clinical Surgery during the service of Samuel H. Pinkerton, M.D., Surgeon to the Holy Cross Hospital. By FRANKLIN A. MEACHAM, A.B., M.D., Assistant Surgeon to the Holy Cross Hospital, Salt Lake City, Utah. (1892.) (Salt Lake City: Tribune Printing Company. 1893. Crown 8vo, pp. 140, 13 illustrations.)—In this brief record of surgical work the author has made good use of abundant and interesting clinical material, and, where he has thought it necessary, has given in detail the reports of the more important cases, as, for instance, some of those in which operations had been practised on the chest and abdomen. The synopsis concludes with a return of 104 major amputations, performed in the majority of cases for injury. Of these 104 amputations, which included 6 at the shoulder-joint, 6 at the hip, and 26 of the thigh, 10 were fatal—a mortality of 9.6 per cent. In his remarks on anæsthetics Dr. Meacham gives instances of a further danger attending the administration of chloroform which is not generally known. This agent, it is asserted, when given in a room lighted by gas jets or any other naked flame is apt to produce in the operator and his assistants, as well as in the patient, serious disturbance of the respiratory organs.

Manual Instruction in Schools. By CHRIST. B. SHUTTLEWORTH. (London: O. Newmann and Co. 1894. Demy 8vo, pp. 54. 9d.)—This monograph, founded on a course of training at the Nääs Training College, Sweden, and inspection of certain schools in England where Slojd is a part of the educational curriculum, puts in concise form the case in favour of manual instruction. The supposed evils of a purely intellectual education supplemented only by games and athletics is well expressed, and arguments are supported by many authorities. A gradual course of carpentry under trained teachers is the method advocated. We are heartily with the author in insisting that "teachers," not "carpenters," should teach Slojd in schools. This is as important in manual training as the employment of teachers in place of drill sergeants for any physical exercise designed to effect brain training. There remains the question, for what class of children is manual training most needed? We should say for those who fail most to profit by a purely intellectual training. This pamphlet will be welcomed by those to whom the subject is new.

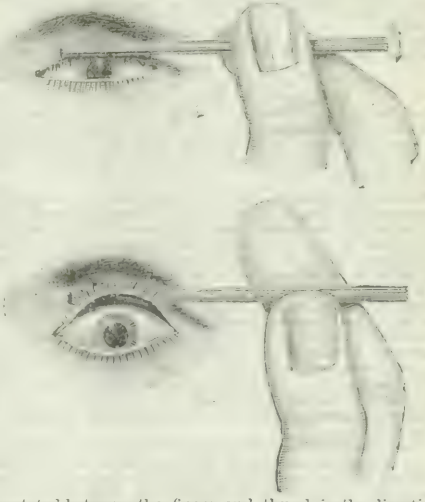
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

TEA TABLOIDS.

WE have received from Messrs. Burroughs, Wellcome, and Co. a box of tea "tabloids" for examination. Tabloids of compressed tea secure to the consumer several important advantages, amongst which we may mention the following: "Tabloids" contain pure tea only, of superior quality, without the large proportion of inferior leaf found in common tea, hence they yield a delicious and healthful beverage. Each "tabloid" contains an exact and uniform quantity, and yields an infusion of uniform strength. Waste is entirely avoided. "Tabloids" afford the most convenient and quickest method of making tea. They produce a cup of delicious tea in one minute with a maximum of theine and a minimum of tannin. Tabloids possess superior keeping quality, and the greatest possible portability is secured. We look upon these tea tabloids as one of the most useful of modern inventions. For hospitals, hotels, and public institutions, for the traveller and the yachtsman, for "afternoon" tea or the matutinal cup "at eight o'clock," they are peculiarly advantageous and convenient. One hundred cups of pure tea for sixpence, made in a minute, accurately dosed as to quantity, and in the most wholesome form, of a rapid infusion, should effect a valuable and far-spreading revolution. They may, it seems, among other things, according to the report of the Lunacy Commissioners, remove a prevalent cause of dyspepsia and insanity among the poor, by whom tea is frequently "stewed" for hours.

INSTRUMENT FOR RAISING THE UPPER EYELID.

THE accompanying woodcuts serve to illustrate a simple instrument for raising the upper lid, which Mr. Frederick Bass has found very convenient. It is merely a thin metallic stem or handle, with longitudinal corrugations. The terminal half inch or so is applied to the skin of the lid parallel to, and at a little distance from, the ciliary border. It is then thrust under the margin of the orbit, and at the same



time rotated between the finger and thumb in the direction indicated by the arrow, so carrying the eyelid with it. It is not intended for eversion, nor will it conveniently overcome orbicularis spasm; but in all ordinary cases, and more especially in patients with sunken globes and thin flaccid lids; or when the skin is wet with discharge or smeared with ointment, it is believed by Mr. Bass to be of much convenience and utility. Messrs. Arnold and Sons, of West Smithfield, supply the instruments at a low price.

DONATIONS AND BEQUESTS.—The Cutlers' Company, at their last court, voted £273 to be divided among twenty-five hospitals and other charitable institutions.

LEPROSY IN THE UNITED STATES.—At the meeting of the Congress of American Physicians and Surgeons at Washington a resolution was adopted, on the proposition of the Dermatological Association, to present a memorial to Congress requesting it, in view of the undoubted existence of leprosy in North America, to appoint a commission of inquiry. The memorial will suggest that the commission should consist of five persons, that the inquiry should be directed to the investigation of the prevalence of leprosy in the United States and the countries upon its borders, and that the commission should be instructed to suggest means for the control of the disease.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SECOND ANNUAL MEETING.

The sixty-second Annual Meeting of the British Medical Association will be held at Bristol on Tuesday, Wednesday, Thursday, and Friday, July 31st, August 1st, 2nd, and 3rd, 1894.

President: George Hare Philipson, M.D.Cantab., D.C.L., F.R.C.P., Professor of Medicine in the University of Durham.

President-Elect: E. Long Fox, M.D.Oxon., Consulting Physician to the Bristol Royal Infirmary.

President of the Council: J. Ward Cousins, M.D.Lond., F.R.C.S., Senior Surgeon to the Royal Portsmouth Hospital.

Treasurer: Henry Trentham Butlin, F.R.C.S., D.C.L., Surgeon to St. Bartholomew's Hospital, E.C.

An Address in Medicine will be delivered by Sir Thomas Grainger Stewart, M.D.Edin., Professor of the Practice of Physic and Clinical Medicine in the University of Edinburgh.

An Address in Surgery will be delivered by James Greig Smith, M.B., F.R.S.E., Surgeon to the Bristol Royal Infirmary.

An Address in Public Medicine will be delivered by Sir Charles Cameron, M.D., Medical Officer of Health, Dublin.

A. Medicine.

Library of Medical School.

President: Frederick T. Roberts, M.D. *Vice-Presidents:* E. Markham Skerritt, M.D.; R. Shingleton Smith, M.D. *Honorary Secretaries:* W. T. Brooks, M.A., M.B., 32, Holywell, Oxford; J. Michell Clarke, M.D., 28, Pembroke Road, Clifton, Bristol.

Wednesday, August 1st.—I. Discussion on Functional Diseases of the Heart, introduced by Douglas Powell, M.D. The following gentlemen have announced their attention of taking part in the discussion: Sir Frederic Bateman, Paul M. Chapman, M.D., W. Soltau Fenwick, M.D., James A. Lindsay, M.D., G. A. Gibson, M.D., E. Markham Skerritt, M.D., R. Shingleton Smith, M.D., A. Ernest Sansom, M.D., P. Watson Williams, M.D., Harry Campbell, M.D., H. Handford, M.D., and Francis Hawkins, M.B.

Thursday, August 2nd.—II. Discussion on Pyrexia and its Treatment, introduced by W. Hale White, M.D. The following gentlemen will take part in the discussion: E. Markham Skerritt, M.D., Shingleton Smith, M.D., James Barr, M.D., James A. Lindsay, M.D., J. E. Shaw, M.D., H. Handford, M.D., Douglas Powell, M.D.,and W. Soltau Fenwick, M.D.

Friday, August 3rd.—III. Ataxia and the Diseases of which it is a Symptom, introduced by J. A. Ormerod, M.D. The following gentlemen will take part in the discussion: James Cagney, M.D., L. Andriezen, M.D., F. W. Mott, M.D., Henry Waldo, M.D., J. S. R. Russell, M.B., and Michell Clarke, M.D.

The following papers have been announced:

Althaus, Julius, M.D. The Differential Diagnosis of Nosophobia and Hypochondriasis.

Bentley, A. J. M., M.D. A Few Practical Hints for Invalids on the Maintainance of Health in the Climate of Egypt.

Campbell, Harry, M.D. The Mechanical Treatment of Heart Disease.

Clarke, Michell, M.D., will show cases and morbid specimens of Friederich's Disease and a case of Tabes.

Fenwick, W. Soltau, M.D. Dyspepsia of Strumous Origin.

Fisher, Theodore, M.D. Diastolic and Presystolic Murmurs in Dilated Hearts without Valvular Disease.

Gibson, G. A., M.D. The Conduction of Cardiac Murmurs.

Griffiths, P. Rhys, M.B. 1. The Remote Effects of Spinal Injuries in Miners. 2. Sporadic Cretinism and Thyroid Feeding.

Hawkins, Francis, M.B. The Treatment of Croupous Pneumonia.

Lane, Hugh, L.R.C.P. Neurotic Arthritis.

Mott, F. W., M.D. Pernicious anæmia.

Ross, J. Carne. Some Notes on a Series of Cases of Cancer.

Russell, J. S. R., M.B. The Diagnostic Importance of certain late Phenomena in Lesions of the Dorsal and Lumbar Cord.

Sansom, A. Ernest, M.D. Disturbances of the Cardiac Rhythm subsequent to Influenza.

Sharp, Gordon, M.B. Cactus Grandiflorus, its Literature, Chemistry, Pharmacology, and Therapeutics.

Smith, R. S., M.D. (1) Pulmonary Stenosis and Endocarditis a cause of Embolic Phenomena and Chronic Intermittent Fever. (2) Membranous Exudations, more especially those of Intestinal Origin.

Waldo, Henry, M.D., will show a case of Early Tabes with Arthropathy and Perforating Ulcer.

Wethered, F. J., M.D. The Treatment of Chronic Heart Disease by Baths and Gymnastics as practised at Nauheim.

Whitby, C. J., M.D. Modern Hydropathy; its Relation to General Therapeutics.

Williams, P. Watson, M.D. A case of Pancreatic Diabetes, treated by Grafts of Sheep's Pancreas.

B. Surgery.

Physical Science Lecture Room—University College.

President: W. Mitchell Banks, M.D. *Vice-Presidents:* Nelson C. Dobson, F.R.C.S.; Professor Victor Horsley, F.R.S. *Honorary Secretaries:* G. A. Wright, M.B., 8a, St. John Street, Manchester; James Swain, M.D., 14, Buckingham Place, Clifton, Bristol.

The following subjects have been selected for discussion in the Section:

1. The Operative Treatment of Perforative Ulcer of the Stomach and Intestines. To be introduced by A. Pearce Gould, M.B., F.R.C.S. The following gentlemen will take part in the discussion: G. H. Hopkins, F.R.C.S. (Swansea), R. Maclaren, M.D. (Carlisle), Mayo Robson, F.R.C.S. (Leeds), J. Ward Cousins, M.D., F.R.C.S. (Portsmouth), Rutherford Morison, F.R.C.S. (Newcastle-on-Tyne), Gilbert Barling, F.R.C.S. (Birmingham), Jordan Lloyd, F.R.C.S., and W. F. Haslam, F.R.C.S. (Birmingham).

2. The Surgical Treatment of Injuries of the Spine and Spinal Cord. To be introduced by William Thorburn, M.D., F.R.C.S. The following gentlemen will take part in the discussion: G. H. Hopkins, F.R.C.S. (Swansea), W. M. Barclay, F.R.C.S. (Bristol), C. B. Keetley, F.R.C.S. (London), H. Langley Browne, F.R.C.S. (West Bromwich), Gilbert Barling, F.R.C.S. (Birmingham), and H. L. Burrell, M.D. (Boston).

3. The Treatment of Injuries of the Lower End of the Humerus. To be introduced by Jonathan Hutchinson, jun., F.R.C.S. The following gentlemen will take part in the discussion: G. H. Hopkins, F.R.C.S. (Swansea), Professor Landerer (Stuttgart), R. Jones, F.R.C.S.Edin. (Liverpool), J. Ward Cousins, M.D., F.R.C.S. (Portsmouth), Jordan Lloyd, F.R.C.S.

The following papers have been announced:

Harrison, Damer, F.R.C.S. (Liverpool). Note on the Treatment of Traumatic Delirium Tremens.

Jones, R., F.R.C.S.Edin. (Liverpool). On Amputation and Shock and Amputation through Shoulder-joint for Diffuse Spreading Traumatic Gangrene.

Lloyd, Jordan, F.R.C.S. On a series of Craniectomies in Children.

Mayo Robson, F.R.C.S. (Leeds). On a Consecutive Series of Ovariotomies performed in the Surgical Clinic at a General Hospital.

Morison, Rutherford, F.R.C.S. (Newcastle-on-Tyne). On Some Points in the Anatomy of the Right Hypochondriac Region relating especially to Operaton for Gall Stones.

Murphy, James, M.D. (Sunderland). 1. Splenectomy, with Notes of a Successful Case. 2. Notes of a Case of Rupture of the Bladder treated by Abdominal Section, Suture, Recovery.

Snow, H., M.D. (London). The "Dispersible" Tumours of the Mamma.

C. Obstetric Medicine and Gynæcology.

Lecture Room No. 2—University College.

President: Professor J. G. Swayne, M.D. *Vice-Presidents:* E. Malins, M.D.; A. E. Aust-Lawrence, M.D. *Honorary Secretaries:* R. Boxall, M.D., 29, Weymouth Street, London, W.; Walter C. Swayne, M.B., 8, Leicester Place, St. Paul's Road, Clifton, Bristol.

The following subjects have been selected for discussion in the Section:

1. The Necessity of Inducing Labour in Certain Conditions of the Mother not Obstructing Delivery. To be opened by Robert Barnes, M.D., Consulting Physician-Accoucheur to St. George's Hospital, London. The following gentlemen will take part in the discussion: Fancourt Barnes, M.D., R. Bell, M.D., T. More Madden, M.D., J. Murphy, M.D., W. H. C. Newnham, M.A., M.B., J. Inglis Parsons, M.D., A. J. Smith, M.D., and John Campbell, M.D.

2. The Treatment of Hæmorrhage during the Last Two Months of Pregnancy. To be opened by W. J. Symly, M.D., Master of the Rotunda Hospital, Dublin. The following gentlemen will take part in the discussion: Fancourt Barnes, M.D., R. Bell, M.D., J. W. Byers, M.D., T. More Madden, M.D., J. Murphy, M.D., W. H. C. Newnham, M.A., M.B., J. Inglis Parsons, M.D., E. Stanmore Bishop, F.R.C.S., and A. J. Smith, M.D.

The following papers have been announced:

Aust-Lawrence, A. E., M.D. On Abdominal Section as Part of the Treatment in Certain Cases of Menstrual Retention due to Atresia of the Genital Tract.

BARNES, Fancourt, M.D. Selection of Cases for Hysterectomy.
BELL, Robert, M.D. On Ovariotomy.
BISHOP, E. Stanmore F.R.C.S. The *Technique* of Vaginal Hysterectomy.
COLLINS, E. T., F.R.C.S. The Nervous Impulses Controlling Menstruation and Uterine Hæmorrhage.
CULLINGWORTH, C. J., M.D. On a Case of Advanced Extrauterine Gestation in which a Living Child was Removed, the Placenta left undisturbed, and the Abdominal Wound entirely closed.
DEMPSEY, Alexander, M.D. On Curetting the Uterus for Puerperal Septicæmia, with notes of two successful cases.
EDGE, Fred., F.R.C.S. A Modification of the Alexander Adams's Operation.
HARRISSON, Damer, F.R.C.S.E. On Paresis of the Intestines following Abdominal Operation.
JESSETT, F. B., F.R.C.S. On Thirty Cases of Vaginal Hysterectomy for Carcinoma Uteri with Two Deaths.
KEITH, George E. The Operative Treatment of a Form of Dysmenorrhœa and Sterility.
MADDEN, T. More, M.D. On Pruritus and other Hyperæsthetic Conditions of the Vulva and Vagina.
MARTIN, Christopher, F.R.C.S. Some of the Complications and Difficulties met with in the Removal of the Uterine Appendages.
MURPHY, James, M.D. Notes of a Case of Hæmatometra successfully Treated by Hysterectomy.
NAIRNE, J. Stuart, F.R.C.S. On Resection of the Uterus for Fibroid Tumours and other Diseases.
NEWNHAM, W. H. C., M.B. Successful Treatment of Sterility.
O'CULLAGH, R. Uterine Surgery.
PURSLOW, C. E., M.D. An Account of Four Cases in which Separation of the After-coming Head had occurred during Delivery, and of the Means used to Extract the Head.
RABAGLIATI, A., M.D. Some Obscure Ailments which simulate Ovarian Disease, their Causes and Treatment.
REID, W. L., M.D. A Case of Simple Enterocele Vaginalis Posterior with an Operation for its Relief.
SCHARLIEB, Mary A. D., M.D. Treatment of Uterine Myomata.
SMYLY, W. J., M.D. Total Extirpation of the Myomatous Uterus.
TAYLOR, John, F.R.C.S. On Doubling of the Uterus and Vagina and Allied Malformations.
WALTER, W., M.D. Ovarian Dermoid containing 3,940 Pea-like Bodies.
WILLIAMS, J. D., M.D. Tuberculous Disease of the Portio Vaginalis.

D. PUBLIC MEDICINE.

Museum Theatre.

President: Professor W. H. CORFIELD, M.D. *Vice-Presidents:* J. LANE NOTTER, M.D.; D. S. DAVIES, M.D. *Honorary Secretaries:* B. H. MUMBY, M.D., Town Hall, Portsmouth; J. C. HEAVEN, M.R.C.S., 17, Whiteladies Road, Clifton, Bristol.

Papers on the following subjects have been announced and will as far as possible be read on the various days as indicated below.

Wednesday, August 1st.

DAVIES, Sidney, M.D. (Plumstead). Ventilation of Sewers.
ANDERSON, A. Jasper, M.D. (Blackpool). Ventilation of Sewers.
NEECH, J. T., L.R.C.P. (Atherton). Sewer Ventilation and the Movement of Air in Sewers.
PRINGLE, R., Brigade-Surgeon-Lieutenant-Colonel, M.D. 1. The Seasons and Sites of Hindu Pilgrimages in Bengal and their Bearing on Epidemic Cholera. 2. Notes on an Outbreak of Bubonic Plague in British Ghurwal Himalayas in 1864.
STEPHENS, E., L.R.C.P. (Ilminster). Cremation.

Discussion of above papers.

Thursday, August 2nd.

NOTTER, J. L., Brigade-Surgeon-Lieutenant-Colonel, M.D. Filtration of Potable Waters.
THRESH, J. C., M.B. The Interpretation of Water Analyses.
PRINGLE, R., Brigade-Surgeon-Lieutenant-Colonel, M.D. The Storage of Rain Water for Drinking Purposes.
KENWOOD, H. R., M.B. Notes on the Origin and Spread of Enteric Fever.
CAMERON, J. Spottiswoode, M.D. Diarrhœa in the Autumn of 1893.
WALDO, F. J., M.D. and WALSH, David, M.B. 1. Does Baking Sterilise Bread? 2. Does Cooking Sterilise a Meat Pie? (To be illustrated by cultivations, slides, etc.).
BUCKMASTER, G. A., M.D. (Title uncommunicated).

Discussion of above papers.

Friday, August 3rd.

PRIESTLEY, J., M.D. (Leicester). Some Lessons to be Learnt from an Epidemic of Small-pox in an Unvaccinated Community.
EVANS, Arnold, M.D. The Aërial Convection of Small-pox.
ALLAN, F. J., M.D. Public Measures for the Prevention of Phthisis.
BLACKMAN, J., M.D. Public Measures for the Prevention of Phthisis.

Discussion of above papers.

The following gentlemen will take part in the discussions: J. Spottiswoode Cameron, M.D., Walter Dowson, M.D. Sydney Davies, M.D., Herbert Jones, L.R.C.S.I., A. Jasper Anderson, M.B., A. Robinson, M.D., Brigade-Surgeon-Lieutenant-Colonel R. Pringle, M.D., Thomas D. Savill, M.D., J. Priestley, M.D., Jas. T. Neech, L.R.C.P., F. C. Dodsworth, L.R.C.P.

Should time permit discussion on the following additional subjects will be invited.

1. Notification: Difficulties Experienced; Value of.
2. Hospital Isolation and Accommodation required for Urban Sanitary Districts, Counties, and Rural Districts.
3. Diphtheria: its Causation and Prevention; its Connection with Defective Sanitary Arrangements.
4. The Value of the Bacteriological Determination of Cholera.
5. Port Preventive Measures and the 1893 Cholera Epidemic in England.
6. Infant Mortality in Relation to Female Labour.

N.B.—It is hoped that gentlemen who have promised papers will kindly note the days on which it is proposed they shall be taken.

E. PSYCHOLOGY.

Lecture Room No 4—University College.

President: G. F. BLANDFORD, M.D. *Vice-Presidents:* S. R. PHILIPPS, M.D.; FLETCHER BEACH, M.B. *Honorary Secretaries:* C. S. W. COBBOLD, M.D., Bailbrook House Asylum, Bath; R. S. STEWART, M.D., Glamorgan County Asylum, Bridgend.

On August 1st the President will open the work of the Section by giving an address upon the "Prevention of Insanity," and a discussion is specially invited upon this subject.

On August 2nd at 11 A.M. it is proposed to hold a discussion upon "The Law in Relation to the Criminal Responsibility of the Insane;" L. A. Weatherly, M.D., has promised to open it, and members of the legal profession will be invited to join (as visitors) in the debate.

The following additional discussions have been promised: The Treatment of Neurasthenia, to be opened by G. H. Savage, M.D. The Status of Assistant Medical Officers in Lunatic Asylums, to be opened by C. Mercier, M.B. Points Connected with the Education of Feeble Minded Children, to be opened by G. E. Shuttleworth, M.D.

The following papers have been announced:

ANDRIEZEN, W. Lloyd, M.D. Contributions and Suggestions towards a Pathological Classification of the Insanities (with Microscopic Demonstration of Specimens).
BLAKE, Henry, M.B. (Great Yarmouth). Four Cases Illustrating the Origin and Possible Prevention of Different Types of Insanity.
BULEN, F. St. J., M.R.C.S. The Influence of Reflex and Toxic Agencies in Insanity and Epilepsy.
CAMPBELL, Harry, M.D. Train Panic.
FOX, B. B., M.D. A Case for Diagnosis.
KERR, Norman, M.D. Probationary Curative Restraint of the Alleged Insane.
RUTTLEDGE, Victor J., M.B. Facial Expression in the Insane, illustrated by an Album of Photographs.
SHAW, James, M.D. (Liverpool). The Early Treatment of Mental Cases in Private Practice.
SMITH, Telford, M.A., M.D. Cases of Sporadic Cretinism Treated by Thyroid Extract.
STEWART, R. S., M.D. The Spastic and Tabetic Types of General Paralysis.

Members attending the Section will be invited to inspect the Bristol City and County Asylum at Fishponds, near Bristol.

F. PATHOLOGY.

Chemical Lecture Theatre—University College.

President: G. SIMS WOODHEAD, M.D. *Vice-Presidents:* JOSEPH FRANK PAYNE, M.D.; M. A. RUFFER, M.D. *Honorary Secretaries:* NORMAN DALTON, M.D., 4, Mansfield Street, London, W.; C. A. MORTON, F.R.C.S., 24, St. Paul's Road, Clifton, Bristol.

On Wednesday, August 1st, a discussion on the Pathology of Vaccinia, to be introduced by S. M. Copeman, M.D., of the Local Government Board. M. A. Ruffer, M.D., H. G. Plimmer, M.R.C.S., and R. W. Boyce, M.B., will take part in the discussion.

Professor E. M. Crookshank, S. Coupland, M.D., A. P. Luff, M.D., and T. W. Hime, M.D., are expected to be present and will speak.

The following papers have been announced:

BLAXALL, F. R., M.D., and A. MACFADYEN, M.D. Thermophilic Bacteria.
BLAXALL, F. R., M.D. Amœbic Dysentery.
CAMPBELL, Alfred W., M.D. Degenerations Consequent on Destructive Lesions of the Human Cerebellum.
FYFFE, W. Kington, M.B. The Influence of Creasote on the Virulence of the Tubercle Bacillus.
HARRISON, Reginald, F.R.C.S. The Pathology of Enlarged Prostate.
HUTCHINSON, Jonathan J., F.R.C.S. Tertiary Syphilitic Disease of Lymphatic Glands, with specimens.
KENT, A. F. Stanley. Histology of the Vaccine Vesicle.

Macfadyen, A., M.D. The Biology of Ringworm Organism.
McWeeney, Edmund J., M.D. A Chromogenic Bacillus, perhaps Identical with Bacillus Chromo-aromaticus.
Murray, George, M.D. The Effects of Thyroidectomy in Rabbits.
Powell, D'Arcy, M.B. An Experimental Investigation into the Causation of Cancer.
Ritchie, James, M.B. Relation between Chemical Composition and Antiseptic Action.
Russell, J. S. Risien, M.B. Degenerations consequent on Lesions of the Cerebellum.
Snow, Herbert, M.D. Cancer and Phagocytosis.
Snow, Herbert, M.D. Marrow Infection, and other Novel Points in the Pathology of Cancerous Diseases.
Trevelyan, E., M.D. The Morbid Anatomy of an unusual Case of Infantile Palsy, involving the whole length of the Cord.

J. H. Targett, F.R.C.S., has promised a Pathological Demonstration.

J. Galloway, M.D., Vaughan Harley, M.D., and T. G. Brodie, M.B., have each promised papers, titles of which are uncommunicated.

There will be an exhibition of specimens, bacteriological cultures, instruments for pathological research, etc., in the museum attached to the Section.

Pathological Museum.

Drs. Plimmer and Blaxall will exhibit in the Pathological Museum a collection of cultures of the pathological and non-pathogenic organisms with microscopic specimens of the most important bacteria from the bacteriological laboratories of the British Institute of Preventive Medicine.

More than one hundred specimens of special interest have been selected from the hospital museums in Bristol for the annual Pathological Museum.

G. Ophthalmology.

Medical Lecture Theatre, Medical School.

President: F. R. Cross, M.B. *Vice-Presidents:* H. E. Juler, F.R.C.S.; Simeon Snell, F.R.C.S. *Honorary Secretaries:* C. H. Walker, M.B., 3, Leicester Villas, St. Paul's Road, Clifton, Bristol; J. Tatham Thompson, M.B., 24, Windsor Place, Cardiff.

The following papers have been announced:

Beaumont, W. M., M.R.C.S. The Soldier's Red Coat as a cause of Retinal Hyperæsthesia.
Chisholm, J. J., M.D. (Baltimore). On the Good Effects of Dressing one Eye only after Cataract Extractions.
Da Gama, Sir J., (Bombay). Some remarks on Subconjunctival Mercurial Injections in Syphilitic and other Diseases of the Eye.
Doyne, R. W., F.R.C.S. The Influence of Education as a Cause of Eye Disease.
Edridge-Green, F. W., M.D. A New Spectroscope for the Quantitative Estimation of Defects of Colour Perception.
Griffith, John, F.R.C.S. Criticism concerning Recent Views as to the Secretory Function of the Ciliary Body.
Hewetson, H. B., M.R.C.S. 1. Blepharitis and Asthenopia in German Jew Tailors in Leeds. 2. Asthenopia and Headaches in Girl Machinists in Leeds. 3. The effects of Electric Welding Operations upon the Eyes.
Johnson, G. Lindsay, M.D. The Influence of Prolonged Excessive Light on Vision.
Juler, H., F.R.C.S. On the Diagnosis and Treatment of the Three Chief Forms of Contagious Ophthalmia, namely, the Catarrhal, the Purulent, and the Granular Varieties.
Landolt, Professor E. (Paris). Some Rules to Simplify the Diagnosis of Ocular Paralysis.
McGillivray, A., M.B. The Therapeutic Value of Ice in Ophthalmic Surgery.
Russell, J. S. R., M.B. Experimental Investigation of Eye Movements.
Rutle, Robert, L.M.Dub. Report on Three Cases of Orbital Tumour.
Scott, Kenneth, M.B. The Treatment of Granular Conjunctivitis or Trachoma.
Snell, Simeon, F.R.C.S. On the Relations of Occupation to Eyesight.
Stephenson, Sydney H. A., F.R.C.S. Cellulitis following Mules's Operation.
Stevens, Dr. G. T. (New York). The Maintenance of Equal Rotation of the Eyes after Operations on the Ocular Muscles.
Taylor, S. J., M.B. A case of Probable Disease of the Lenticular Ganglion.
Thompson, J. L., M.D. (Indianapolis). Observations on some Phases of Opacity and Luxation of the Crystalline Lens.
Thompson, J. Tatham, M.B. Keratomalacia in Acute Infantile Jaundice.
Wray, C., F.R.C.S. Mixed Astigmatism.

Papers have also been promised by Messrs. Jonathan Hutchinson, F.R.S.; Hermann Snellen; T. J. Bokenham, L.R.C.P.; and Ernest Clarke, M.D.

H. Laryngology and Otology.

Physiology Lecture Theatre, Medical School.

President: P. McBride, M.D. *Vice-Presidents:* W. H. Harsant, F.R.C.S.; Barclay J. Baron, M.B. *Honorary Secretaries:* P. Watson Williams, M.D., 2, Lansdown Place, Victoria Square, Clifton, Bristol; W. Milligan, M.D., 28, St. John Street, Deansgate, Manchester.

The following subjects have been proposed for formal discussion:

August 1st.—The Prognosis of Non-Suppurative Otitis Media (with Imperforate Membrane), to be opened by G. P. Field, M.R.C.S., London, and Thomas Barr, M.D., Glasgow.

August 2nd.—The Treatment of Acute and Chronic Laryngeal Stenosis, to be opened by David Newman, M.D., Glasgow, and William P. Northrup, M.D., New York.

August 3rd.—The Diagnosis and Treatment of Empyema of the Nasal Accessory Sinuses, to be opened by Greville Macdonald, M.D., London; Charters Symonds, M.S.Lond., F.R.C.S.

Urban Pritchard, M.D.; Dundas Grant, M.D.; Wyatt Wingrave, M.R.C.S.; R. Fullerton, M.D.; R. Mackenzie Johnston, M.D., J. B. Ball, M.D.; Scanes Spicer, M.D.; T. Mark Hovell, F.R.C.S.Ed.; H. B. Hewetson, M.R.C.S.; G. W. Hill, M.D.; C. W. Warden, M.D.; John Bark, M.R.C.P.I.; Dr. Birkett (New York); W. F. Brook, F.R.C.S.; Felix Semon, M.D., J. Ward Cousins, M.D., and J. W. Downie, M.B., have intimated their intention to take part in the discussions.

Time will also be allowed for the reading and discussion of special papers.

The following papers have been announced:

Bronner, A., M.D. 1. On Intratympanic Injections in the Treatment of, *a*, Chronic Dry Catarrh of the Middle Ear; *b*, Chronic Purulent Catarrh of the Middle Ear. 2. On the Use of the Curette in the Treatment of Tuberculous Laryngitis.
Downie, J. Walker, M.B. The Care of the Ear during the Course of the Exanthemata.
Collier, Mayo, F.R.C.S. On the Surgery of the Frontal Sinuses.
Dutton, Thomas, M.D. Voice Hygiene.
Grant, Dundas, M.D. A More Exact Appreciation of Rinne's Test.
Harsant, W. H., F.R.C.S. The Hearing Power of Deaf Mutes.
Hill, G. W., M.D. Otitis Media Acuta, a Personal Experience.
Love, J. Kerr, M.D. Deafmutism as a Clinical Study.
McBride, P., M.D. Coryza Caseosa.
Metcalfe, G., M.B. A Case of Rudimentary Auricle.
Milligan, W., M.D. Observation upon Excision of the Ossicula Auditus in Chronic Suppurative Otitis Media.
Murdoch, Barr, M.D. Case of Fibrinous Rhinitis.
Permewan, W., M.D. 1. Laryngeal Paralysis in Chronic Nervous Disease. 2. Deafness and Stupidity in School Children.
Spicer, Scanes, M.D. Title uncommunicated.
Williams, P. Watson, M.D. The Larynx in Typhoid Fever.
Wingrave, V. H. Wyatt, M.R.C.S. Turbinal Varix: its Pathology, Symptomatology, Diagnosis, and Treatment.

I. Dermatology.

Lecture Room No. 3—University College.

President: A. J. Harrison, M.B. *Vice-Presidents:* Stephen Mackenzie, M.D.; H. Waldo, M.D. *Honorary Secretaries:* J. Hancocke Wathen, M.R.C.S., 16, York Place, Clifton, Bristol; H. Leslie Roberts, M.D., 46, Rodney Street, Liverpool.

Wednesday, August 1st. 10 A.M.—Lupus: its Etiology, Pathology, and Relations to Other Forms of Cutaneous Tuberculosis, introduced by Professor Leloir. H. G. Brooke, M.B.; Norman Walker, M.B.; Henry Waldo, M.D.; G. W. Potter, M.D.; James Startin, M.R.C.S.; and Dale James, M.R.C.S., have promised to take part in the discussion.

Thursday, August 2nd, 10 A.M.—Management of Eczema, introduced by Malcolm Morris, F.R.C.S.Edin. E. D. Mapother, M.D. (London), A. S. Myrtle, M.D. (Harrogate), T. D. Savill, M.D., James Startin, M.R.C.S., David Walsh, M.B., and G. W. Potter, M.D., will take part in the discussion.

Etiology and Treatment of Acne, introduced by Stephen Mackenzie, M.D. Phin. S. Abraham, M.D., A. Eddowes, M.D., James Startin, M.R.C.S., Leslie Phillips, M.D., and Leslie Roberts, B.A., M.D., have promised to take part in the discussion.

Friday, August 3rd, 9.30 A.M.—The Nervous Origin of Diseases of the Skin and its Importance in Treatment, introduced by J. J. Pringle, M.B. Radcliffe Crocker, M.D., T. Colcott Fox, M.B., Stephen Mackenzie, M.D., T. D. Savill, M.D., and G. W. Potter, M.D. have promised to take part in the discussion.

The following papers have been announced:

Anderson, Professor McCall. On the Necessity on the Part of the Student for the Clinical Study of Dermatology.

BOWLES, R. L., M.D. Observations on the Scientific Aspect of the Influence of Solar Rays on the Skin.
BROOKE, H. G., M.B. Trade Eczema or Dermatitis.
DUNBAR, Eliza L. W., M.D. The Use of Belladonna in Allaying Irritation and Healing Certain Skin Diseases.
EDDOWES, A., M.D. The Ways of Infections: their Importance as regards Treatment of Skin Affections and the Prevention of Relapses.
FOX, T. Colcott, M.B. Remarks on a Case of Acne Necrotica.
HUTCHINSON, Jonathan, F.R.C.S., F.R.S. On Certain Diseases of the Skin induced by Exposure to Sun.
JAMES, Dale, M.R.C.S. Some Relations between Psoriasis and Eczema.
ROBERTS, H. Leslie, MD. The Present Position of the Question of Vegetable Hair Parasites.
STARTIN, James, M.R.C.S. Treatment of Psoriasis by Tar and Chrysophanic Acid.
TAYLOR, Stopford, M.D. Remarks on a Case of Mycosis Fungoides (will exhibit patient).
WALDO, Henry, M.D. Treatment of Favus of Scalp and Nails.
WALKER, Norman, M.B. Note on Pigmented Tumours of the Skin.
WALSH, David, M.B. A Case of Symmetrical Lupus in Scton Scars.

Dr. Unna will demonstrate various organisms associated with skin diseases.

J. DISEASES OF CHILDREN.

Lecture Room No. 5—University College.

President: W. HOWSHIP DICKINSON, M.D. *Vice-Presidents:* JOHN EDWARD SHAW, M.B.; FREDERIC S. EVE, F.R.C.S. *Honorary Secretaries:* R. W. MURRAY, F.R.C.S., 15, Rodney Street, Liverpool; BERTRAM M. H. ROGERS, M.D., 11, York Place, Clifton, Bristol.

On Wednesday, August 1st, a discussion on the Treatment and Complications of Whooping-Cough. To be opened by J. Carmichael, M.D. The following gentlemen have signified their intention to take part in the discussion: W. B. Cheadle, M.D., C. Elliott, M.D., E. Mansel Sympson, M.D., and F. W. Burton-Fanning, M.D.

August 2nd.—Diphtheria: Its Diagnosis and Treatment. To be opened by H. R. Hutton, M.D. The following gentlemen have signified their intention to take part in the discussion: W. B. Cheadle, M.D., J. Dacre, L.R.C.P., W. G. Black, F.R.C.S., W. P. Northrup, M.D. (New York), E. Mansel Sympson, M.D., A. Murray Gray, L.R.C.P., J. E. Shaw, M.B., F. Wethered, M.D., P. Watson Williams, M.D., H. D. Chaplin, M.D., (New York), and T. Pagan Lowe, L.R.C.P.

August 3rd.—The Treatment of Tuberculous Disease of Joints. To be opened by Frederick S. Eve, F.R.C.S. The following gentlemen have signified their intention to take part in the discussion: J. Ewens, L.R.C.P., A. E. Barker, F.R.C.S., Noble Smith, F.R.C.S. Edin., D'Arcy Power, M.B., W. G. Black, F.R.C.S., A. Parkin, M.D., C. H. Milburn, M.B., R. Jones, F.R.C.S., E. L. Freer, M.R.C.S., and Jordan Lloyd, F.R.C.S.

The following papers have been announced:

CHAPLIN, HENRY D., M.D. (New York). A System of Infantile Measurements.
EWENS, J., L.R.C.S., and L.R.C.P. Deformities of the Lower Extremities (with Exhibition of Cases).
FREER, E. LUKE, M.R.C.S. 1. Some Notes on the Orthopædic Treatment of Deformities, with Illustrative Cases. 2. An Effective and Inexpensive Instrument for the after-treatment of Talipes.
JONES, H. R., M.D. How the Health of Infants is Influenced by their Food.
JONES, ROBERT, F.R.C.S. 1. The Treatment of Paralytic Joints. 2. The Treatment of Injuries about the Elbow-joint in Children.
LLOYD, Jordan, F.R.C.S. The Treatment of Curvatures of the Long Bones by Simple Fracture.
MACKEY, E., M.D. A Case of Multiple Neuritis in a Child, with Remarks.
MORGAN, GEORGE, L.R.C.P. Varicella Bullosa.
MILBURN, C. H., M.B. Osteotomy for Genu Valgum.
MURRAY, R. W., F.R.C.S. The Treatment of Rickety Deformities by means of Osteoclasis.
PARKIN, ALFRED, M.D. The Treatment of Spinal Caries and its Results by Laminectomy.
POWER, D'Arcy, M.B. The Value of Bursal Enlargements as Indications of Incipient Tuberculous Arthritis.
ROUÉ, BARRETT, M.D. The Study of Diseases of Children and its Place in the Medical Curriculum.
TUBBY, A. H., F.R.C.S. Craniectomy for Microcephaly and its Results.

Dr. Northrup will show for Dr. O'Dwyer (New York) an apparatus for artificial respiration.

Honorary Local Treasurer: W. JOHNSTONE FYFFE, M.D., Rodney Place, Clifton.

Honorary Local Secretary: E. MARKHAM SKERRITT, M.D., Edgecumbe House, Richmond Hill, Clifton.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 31ST.

9.30 A.M.—Meeting of 1893-94 Council.
11 A.M.—First General Meeting, Large Hall, Victoria Rooms. Report of Council. Reports of Committees and other business.
3 P.M.—Sermon.
8.30 P.M.—Adjourned General Meeting from 11 A.M. President's Address.

WEDNESDAY, AUGUST 1ST.

9.30 A.M.—Meeting of 1894-95 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting, Large Hall, Victoria Rooms Address in Medicine.

THURSDAY, AUGUST 2ND.

9.30 A.M.—Meeting of Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting, Room of Victoria Chapel (opposite Reception Room). Address in Surgery.
7 P.M.—Public Dinner of the Association.

FRIDAY, AUGUST 3RD.

9.30 to 11 A.M. Sectional Meetings.
11 A.M.—Concluding General Meeting, Large Hall, Victoria Rooms. Address in Public Medicine.

SATURDAY, AUGUST 4TH.

Excursions.

ADDITIONAL ARRANGEMENTS.

The following additional arrangements have been made for the annual meeting:

The Docks Committee of the Corporation of Bristol have kindly undertaken to provide a steamer to take a party of 100 members (including ladies) for an excursion round the docks and up the river to Hanham. The General Manager (Mr. Girdlestone), hopes to accompany the visitors and will show the granary with its elevating machinery and some of the newest accommodation for the use of American liners. The party will be enabled to obtain a thorough grasp of the dock system of the city.

The Head Master of the Bristol Grammar School and Mrs. Leighton will entertain the Association at a garden party on Thursday afternoon. Mr. Riseley has been engaged to preside at the organ, and Colonel Methuen and the officers of the Bristol Rifles will give the services of the regimental band.

The Directors of the Colston Hall Company will invite the members of the Association and their friends to an organ recital by Mr. Riseley on the morning of Wednesday, August 1st.

REGISTRATION OF MIDWIVES.

SHROPSHIRE AND MID-WALES BRANCH.

AT the annual meeting of this Branch held at Shrewsbury on June 26th, it was proposed by Mr. HARRIES, and seconded by Mr. W. EDDOWES:

That in the opinion of this Branch the present system of allowing any woman, even without the slightest training or fitness, to practise as a midwife, and under no control, is unsatisfactory.

Several members spoke on the subject, and eventually the resolution was carried *nem. con.*

DEVON AND CORNWALL BRANCH.

At the Branch Council of this Branch, held at Liskeard on June 27th, the following resolution was carried unanimously:

That this meeting is desirous of drawing the attention of the Parliamentary Bills Committee to the proposed creation of a new order of midwifery practitioners partially trained, and to the certificates which are now given ostensibly to midwives; and, while most anxious to improve the training of monthly nurses, this meeting believes that such action endangers the lives of children and pregnant women and tends to repeal the educational sections of the Medical Act of 1886.

BUSTS of the late distinguished alienists, Baillarger and Falret, were unveiled in the Salpêtrière on July 7th, under the auspices of the French Medico-Psychological Society.

HYGIENIC EXHIBITION IN ROME.—The ninth exhibition of hygienic and alimentary products, organised by the International Association for the Progress of Hygiene, the headquarters of which is in Brussels, will open in Rome on September 20th, 1894. His Excellency Professor Baccelli is the President of the Patronage Committee. Further information as to the exhibition can be obtained by applying to the General Secretary of the Association, 4, Rue de la Limière, Bruxelles-Midi.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

VII.—BISHOP AUCKLAND.

Bishop Auckland is in the centre of the Durham coal pits, and draws its inmates almost entirely from that class of workers. Bishop Auckland is built over the coal pits, many of which are in the parish; the Bishop's castle stands on the borders of the town; the town itself is a quiet little country place, existing only for the colliers, and, as it is off the main line of rail, it does not attract many visitors.

The Workhouse.

The workhouse stands on the outskirts of the town, on rising ground. The infirmary is a separate block behind the main building. The medical officer (Dr. Wardle) was unable to meet us when we made our visit, but his place was supplied by the master and matron, who spared no pains in showing us the sick wards and other parts of the house. At the time of our visit the drains were being relaid, and the closets in all parts of the house were in the course of reconstruction with modern appliances. The master stated that the water supply was intermittent; but this was due to the source from which the water is drawn—the river Wear—and not to the machinery for distribution. The water is laid on to all parts of the building, and there are bathrooms on every landing with a supply of hot and cold water. Besides the bathrooms there are fixed basins outside the wards, but we did not see any slop sinks.

Wards.

These are of varying size, and accommodate 115 patients, the average being from seventy to eighty occupied beds. The wards present a cheerful appearance to the visitor; they are adorned with pictures; there are strips of matting in the centre, plants, flowers, and newspapers for the inmates. In the large wards the fireplace is in the middle, the flue being enclosed; besides the fires there are hot pipes for the winter. We saw Tobin ventilators (not always in use, as in one ward the ventilator served as a shelf for books), openings in the ceiling, and open windows. As the wards were of all sizes, cross ventilation was the exception: some of the rooms were close and airless. Those on the female side are more modern, the long ward with the windows on each side and fireplaces at both ends; but this shape is not popular with the inmates, not being home-like. The bedsteads are of varying width, but most commonly the full size, and there are about twelve that have spring mattresses; water and air mattresses are used for such cases as need them. The bedding is chaff, and on those beds that we turned down there was an ample supply of blankets; all was quite clean. In one ward—and to this we were taken last—we found four old women, one with hemiplegia, another blind, one old age, the fourth with heart disease; these formed a happy family; the matron, with a touch of humanity, had allowed them to set out their treasures and hang up their pictures in the room, so that it looked more like an almshouse than a workhouse ward; here we were expected to sit down and admire the work, hear stories about the portraits, and bring our news from the outer world; these patients all helped each other, and the whole made a pleasing picture of the possibilities of workhouse life under humane management.

The Patients.

But there is a darker side to this picture, and that we saw when walking round the wards and studying the cases in bed; some of them, cases requiring hospital care but being treated under such circumstances and in such surroundings as make such care impossible. There was one poor man in a corner of the large ward, whose days were numbered; if he had been in a hospital he would have received a large share of the care of a trained nurse, a suitable or varied diet would have been given him, a resident doctor would have been at hand to superintend the treatment, and this routine would have been carried on through the night; what was the reality? This dying man was to all intents and purposes being nursed by paupers, for though there is a trained nurse, at this time she was far away in another part of the building, and as we hovered at the bed the wardsman was telling the matron of the progress of the case; we did not see anything near at hand in the way of food or drink, and at night that sick man would be left to the charge of the ward, all the occupants of which would be in bed. In that same ward there was an imbecile who spent his time in twisting his fingers until the knuckles were rubbed into callosities; he was the sole care of an inmate; the bulk of the patients in that ward were up where they lived as well as slept. The other patients in bed were a man with fistula, a severe case of heart disease, a man with pressure on the veins of the leg, consumption, paralysis, and old age; in all there were about twenty cases in bed on both sides. The doctor does any operation that may be requisite, as there is no hospital in the town. We saw one man who exhibited his leg with much pride; it had been a case of acute necrosis soundly healed, and he was shortly going out. There is no separate ward for the children. There is a watercloset close to each ward for use at night, and the usual lockers in the wards.

System of Nursing.

These 70 or more patients are under the care of one trained nurse, who is also the midwife; the doctor lives at some little distance, and if required in the night is fetched by an aged pauper. The nurse's quarters are in the women's infirmary, and in themselves are very comfortable. There is telephonic communication from the wards, and the same system of communication is laid on to the master's house. Pauper help is largely used in this house, as indeed it must be if the sick are to have anything like attention, and when going round we formed the opinion that the matron held them responsible for their several charges. The nurse did not go round with us, nor could we see where she came in; but as she had only lately come, doubtless she was new to the place. There is no night nurse, the wardsman or woman do what they can in the night, and when any patient requires "watching" an inmate is deputed for the duty. The poor man dying of dropsy had not reached the stage of "watching." In justice to the management we must say that the utmost was made of the inmates, they are drawn from an intelligent class; and we felt that, given a more generous system of nursing, with better appliances, the recoveries would bear a larger proportion, and much of the pauper help could be dispensed with. The lying-in ward holds four beds, it has separate offices, and is fairly suitable for the work; it is under the care of a pauper inmate, who works under the nurse.

Classification.

As a matter of fact, there is no classification; the imbeciles and idiots were scattered all up and down the wards among the sane patients, but each feeble-minded patient had an attendant inmate in charge of him or her, and it was touching to see the interest they took in their simple-minded children. The lock cases are in small wards at each end of the infirmary, and there are separate offices for these wards. There is want of more dayrooms, especially on the men's side; there are dayrooms on the ground floor but not for the wards above. We could not judge of the airing courts, as they were in disorder through the drainage works.

Diets.

The dinner was being served at the time of our visit. It was suet pudding with sweet sauce. The pudding was nice and light; the people said that they liked it; some of the patients were having boiled beef and potatoes; this also was properly cooked. The doctor is responsible for the extras, and, to judge by the bedcards, these were milk or beef-tea; the matron also made lemonade for those who could take it. Of necessity there is no systematic feeding through the night, and we wondered how that poor fellow with dropsy would manage to get through the night without any such

alleviation. The hours of meals, as usual, are 8 o'clock breakfast, 12 for dinner, 6 o'clock for tea; tea is given in the sick wards.

Isolation Hospital.

There is a separate block for the isolation of infectious patients; it appeared to us that the situation was not well chosen; it lies between the infirmary and the children's quarters, and being a low-storeyed building, it is in a well, and might in the event of a prolonged epidemic become a source of infection. It was empty at the time of our visit, and if in use it is in the charge of an inmate. It is complete in itself.

General Remarks.

We were glad to see an ample supply of cushioned arm-chairs for the old people, and the women, both those in bed and those up, were wearing comfortable knitted hoods of a bright colour with flannel jackets or shawls. They are provided with dressing gowns and slippers for use at night. Both the master and matron evidently bestowed all the care and thought possible on the sick; the defects we noticed when making our round are those of the system, and not on the part of the officers. We would recommend that the guardians appoint two more nurses; a second for the day to take either the male or the female side, and one for duty in the whole building at night; this is the very smallest amount of nursing requisite, even if the infirm were separated from the sick and placed under the care of a paid attendant; for this being practically the only hospital, it receives many acute cases. With regard to the building, we would suggest that the present isolation hospital be taken for some other purpose—for the use of the feeble-minded, for instance—and that another infectious block be built in a more suitable situation. Altogether we were pleased with the humanity and care evident in the management of the house.

PROFESSOR CROOKSHANK'S EVIDENCE BEFORE THE VACCINATION COMMISSION.

The position taken up by Professor Crookshank on this subject may be shortly stated thus: Cow-pox is a specific disease, a disease *sui generis* in the cow, producing by inoculation cow-pox, and nothing else; it is not small-pox, and has nothing to do with it; vaccination with cow-pox is no protection against small-pox, although inoculation with variolous matter is; and lastly, the community can be fully protected from small-pox by a system of prevention, of which no details are given, but which apparently consists of measures of notification and isolation very like those at present in operation, combined with a certain amount of variolous inoculation.

At first sight this seems a very plain and straightforward position, and, excepting as to the variolous inoculation, one can easily conceive the joy of the antivaccinationists in the possession of such a witness. When, however, one enters into details one cannot but be struck by the hair-splitting limitations of Professor Crookshank's verbal definitions, and by a certain onesidedness in the selection of his facts, which takes away greatly from the importance of his evidence, elevating, or perhaps degrading him to the position of an advocate rather than a witness.

Professor Crookshank is known to medical men as a bacteriologist, his position being that of Professor of Comparative Pathology and Bacteriology in King's College. His evidence, however, is largely historical, if such an uncriticised collection of paragraphs from old authors can be called history, and would seem to bear more relation to book searching in the British Museum than to work in a bacteriological laboratory. We say "uncriticised" for we cannot doubt that a good many of the hearsay and much copied statements which are contained in the literary portion of his evidence might under cross-examination have met with the same fate as befel the assertion that small-pox inoculation had prevailed in Wales from "time immemorial." That cow-pox is an absolutely distinct disease is the very essence of Professor Crookshank's position. He maintains that while inoculation with variola is protective, inoculation with cow-pox is absolutely inoperative, except so far as regards the production of a transient antagonism such as might be produced even by cattle plague.

While small-pox is one disease and cow-pox is another, vaccinia, according to Dr. Crookshank, may be anything according to its parentage. "From sheep-pox, horse-pox, cow-pox, cattle plague, small-pox, and perhaps goat-pox, we can, by inoculation upon the human subject, produce certain phenomena which we recognise as the phenomena of vaccination;" and these phenomena are indistinguishable from one another whatever their source. To estimate aright the weakness of Dr. Crookshank's position it must be remembered that while he maintains the specific nature of cow-pox, apparently because it transmits itself and is not infectious like small-pox, he has to admit that a variola-derived lymph in man may make a vesicle indistinguishable from one derived from cow-pox, may be transmitted from case to case as a specific disease (what we are all accustomed to call vaccinia), and may show no tendency to revert to infectiousness notwithstanding its variolous ancestry. He refuses to admit that cow-pox in the cow has the same parentage as vaccinia in man, which he alleges to have been derived from small-pox in many cases, and yet when he is pressed, notwithstanding that the value of his whole evidence hinges on it, he has to confess that "we have no proof" (12,366) that in the cow, even as in man, cow-pox is not derived from small-pox, or that it really is a disease *sui generis* belonging to cattle.

Under these circumstances the question comes back to a matter of fact, how far these vaccines which are now in use, be they derived from cow-pox or variola, are protective against small-pox; and in regard to this Professor Crookshank is of course no expert. The Commission no doubt expected from him some information on the bacteriological side of the question, instead of which he gives much vague history and unproven hypothesis, which is of course to be regretted. When, however, he attempts to fill up the gaps in his case by foreign statistics of small-pox infection among nurses, and actually gives figures to show that revaccinated nurses suffered more in proportion than those who had not that protection, one sees the advocate rather than the witness, especially when he has the experience of English hospitals staring him in the face.

Patience, however, and deference to his position entirely break down when we find him gravely propounding to a Royal Commission the suggestion that nurses nowadays escape small-pox, not from their being protected by vaccination, but because of the improved condition of the hospitals. Is it wilful, or is his intellect bedimmed by overmuch historical research? He cannot defend himself by saying that these matters are outside his own field; he imposes no limits on himself, and brings these matters up of his own free will, and yet while he rakes up the analogy of typhus fever he appears to remain blind to the fact that the safety of nurses in small-pox hospitals is not shown by a general lessening of risk all round, as in the case of typhus, but is entirely confined to those who have protected themselves by vaccination; and further that at a time in the history of hospitals when the only nurses who escaped small-pox were those who had already suffered from it, in these same hospitals revaccination was found to be a thorough protection against small-pox.

When, however, the question was put direct to him what he would do with the nurses if he himself had the management of a small-pox hospital, he evidently saw the weakness of the position, and had to answer: "I should 'vaccinate' them, but not with cow-pox or horse-pox. I should use variola, especially after Colin's experience" (12,399). Why should he accept Colin's experience in a French hospital, and on the strength of it condemn nurses to inoculation, with all its risks, and with the certainty of disseminating small-pox among others, and yet refuse to accept the universal testimony of all English hospitals, telling in exactly the opposite direction?

The game of cross purposes which Professor Crookshank chose to play with the Commission is well seen in his answer regarding Marson's cases of protection of nurses by revaccination. He says: "If the immunity was really due to that (vaccination) we cannot say that it is proof of the efficacy of cow-pox, because we find that Marson used Ceely's variola vaccine." But the Commission was appointed to in-

quire into the effect of vaccination as now carried out, the lymph of which many people, including Professor Crookshank, believe to have originated from transmitted small-pox. When he is once drawn away from his pet disease *sui generis* of cattle, is pinned down to vaccination, and is asked plainly: "You would admit that vaccination as generally practised does protect many?" he at last has to answer "Yes; for a time," which is surely what everyone of common sense believes. How long is another question, and one which has already been, and certainly can only be, answered by clinical observation, assuredly not by laboratory experiments. It is nothing to us that after vaccination some people can be shown to be susceptible to small-pox inoculation. We want a protection which will enable us to go about our ordinary duties, not one that will enable us to withstand the lancet of the inoculator; and Professor Crookshank offered no shred of proof that such a protection is not afforded by vaccination.

FACTORIES AND WORKSHOPS.

Women's Long Hours of Work.—Legal Overtime.—Work in Illegal Hours.—Defective Sanitary Inspection under the Workshops Act.—Want of Co-operation.—The Extent of the Extra Work Involved.

It is seldom that one peruses a Blue Book with such a feeling of satisfaction as one does this record of the year's work submitted to the Home Department by Mr. Sprague Oram, Chief Inspector of Factories and Workshops. Not that it tells an altogether pleasant tale, for it deals with evils and abuses still rampant in our midst, but it shows how much is being done to put these evils down, and gives evidence of an amount of energy, enthusiasm, and devotion to detail which far transcends the popular idea of the work of a public department. One of the most interesting points observable in its pages is the evidence continually visible that the officers engaged have not been content with mere inspection and report writing, but have used their position and their experience to urge precautions for the more safe carrying on of the various trades they have had to inspect, and have devoted no small ingenuity and technical knowledge to devising means for remedying the evils they have met with in the various manufacturing processes.

The question of overtime is evidently a prominent one in many trades. In the textile trades under the old Factory Acts of course there is no such thing, but under the Workshops Act legal overtime can be worked on forty-eight days per year in such trades as dressmaking, and on ninety-six in trades in which perishable articles are employed. Attention is again and again drawn to the anomaly that while all around there is an agitation going on for an eight hours working day for men, women are still working, under the provisions of the Act, from 8 A.M. to 10 P.M. for a considerable portion of the year. It is shown, moreover, that a great abuse exists, and still within the letter of the law, in some dressmaking and millinery establishments, where the women after working their ten and a-half hours in the workroom are brought into the shop to serve behind the counter till 10 or even 12 o'clock at night.

Illegal overtime is, however, an even greater evil, especially in the dressmaking trade, where, under the cloak of mourning orders, very excessive hours are sometimes worked. One of the inspectors obtained a conviction against a fashionable dressmaker who considered that a mourning order justified her in having kept two girls at work for thirty-four consecutive hours, allowing them one hour and a-half only for rest; and many instances are related of the use of bedrooms and showrooms for continuing work in illegal hours after the proper workroom had been closed, the girls being instructed to explain to the inspector, should he happen to turn up, that they were working for themselves.

Complaints are made by many of the inspectors regarding the very small assistance or co-operation given by the sanitary authorities, on whom, by the Act of 1891, the duty of carrying out the sanitary provisions in the workshops was thrown, "the main reasons being that the medical officers of health are reluctant to add this work to their other duties, and the local authorities are adverse to add to local taxation by the appointment of a sufficient number of sanitary inspectors." It was clear at the time the Act was passed that this would be a weak spot, unless the authorities were prepared to spend money in carrying out its provisions.

Mr. Jones, Her Majesty's Inspector at Plymouth, says: "The medical officers of health, without exception, object to a considerable increase of work without a corresponding increase of salary. All agree in saying that for the amount of work they have to perform the remuneration is insufficient. Details which the authorities request them to forward to me would naturally greatly add to their work, and they politely decline to furnish the information."

As an illustration of the amount of work which the complete carrying out of the provisions of the Act might throw on the sanitary officials, the following remarks by Mr. Bignold, Her Majesty's Inspector at Norwich, may be quoted: "In four of the large towns—that is, in Norwich, Ipswich, Colchester, and Cambridge—lists of 'outworkers' have been prepared at my instance in the form ordered by the Home Secretary in September, 1892, from which it appears that there are over 10,000 'outworkers' places' in these four towns, which, except in the case of Ipswich, have remained entirely uninspected by the sanitary officers of the local authority. I cannot find that I have any right of entry into these places if the outworker employs no one, but the sanitary officers have such right under the Public Health Act, and, no doubt, they would be prepared to exercise it if the Local Government Board instructed the local authority that the work must be done. It is idle to suppose that the overworked and underpaid medical officers of health can undertake such an important addition to their duties without a large addition to their staff or their salaries."

Mr. Hine, Her Majesty's Inspector at Leeds, reports: "With respect to the workshop inspection by the sanitary authorities, I am able to report a change for the better since last year. I then said, with the exception of Leeds and one or two small places, that I could see no signs of anything being done. Now the work is being taken up more generally, and I should specially mention Hull, where the work has been begun most energetically. An inspector was specially appointed about six months ago to visit workshops and any factories where sanitary matters required attention, and also to carry out the Shop Hours Act. I believe he is doing some very good work where it was very much wanted, and I receive from him lists of workshops in which women or young persons are found to be employed, and also lists of any workshops which he ascertains have ceased to exist. Hull and Leeds are the only two places where an inspector is specially appointed for this work, but in other smaller places I have found the medical officer himself or one of his sanitary officers visits the workshops."

It seems quite clear that the duty is thrown on the sanitary authorities, and that the proper course is for them to pay for the work being done, not to allow it to drift on to their sanitary staff as an unpaid addition to their ordinary work. In large towns the only possible course is the appointment of special officers, as has been done in Hull; but in small places it may be much more convenient for the existing officials to carry out the work. In this case, however, it should be understood that it is an extra requiring extra salary.

METROPOLITAN INSANITY.

Some important statistical material in regard to lunacy in London has been brought together by the Asylums Committee of the London Council. The actual increase in the total number of London pauper lunatics, including lunatics in workhouses and at imbecile asylums, has been 2,017 on the total number since 1889, the number now reaching 18,058. Owing to the changes brought into operation by the Local Government Act, 1888, the existing medical statistics have not been able to give sufficient explanation of the causes of the variation of numbers. It is very important, however, that the real meaning of these figures should be understood, in order to cope with the provision of further accommodation. They may either indicate actual increase of occurring insanity, or temporary accumulation caused by low rates of death or recovery. A thorough examination has, in conse-

quence, been made of all names included in the statutory returns for the past five years, investigating the variations in detail and tracing the appearance of new names and the disappearance of old ones each year. By this means it has been possible to form a correct idea of the ratios of increase or decrease in the four great divisions of registered lunacy or imbecility in the metropolis. The "exitus" rate, that is, combined death and recovery, has been calculated upon the total number under treatment during each year as shown by the statistics of the London asylums and the Metropolitan imbecile asylums.

Exitus Rates.

Year.	London County Asylums.		Metropolitan District Imbecile Asylums.		Combined Percentages.	
	Exitus Rate on Total No. under Treatment.	Exitus Rate on Average No. Resident.	Exitus Rate on Total No. under Treatment.	Exitus Rate on Average No. Resident.	Exitus Rate on Total No. under Treatment.	Exitus Rate on Average No. Resident.
1889	14.60	18.48	9.29	10.39	12.59	15.17
1890	15.98	22.33	11.38	13.26	14.32	18.65
1891	15.54	22.57	9.52	10.84	14.54	17.83
1892	16.73	21.78	9.44	10.72	14.14	17.51
1893	14.21	18.92	8.43	9.16	12.40	15.43

As far as can be ascertained, there was in 1889, for some reason which cannot be explained, except as connected with want of accommodation, very little annual increase in the numbers of fresh cases brought under certification. In the three following years the exitus rate rose about 2 per cent., and being still unaccompanied at first by any considerable increase in new cases certified. The result was the very small numbers recorded for annual increase in respect of 1890 and 1891. At this time the death-rate was exceptionally high, owing probably largely to the epidemic of influenza, and it continued high through 1891 and 1892. In 1893 the combined death- and recovery-rate made a sudden drop, which brought it down to a level with the rate estimated for 1889. The examination of the medical statistics of the London asylums in connection with the inquiry into the increase of lunacy has disclosed certain points in those tables where improvements might be made, especially in respect of the percentages of recoveries and deaths.

HOSPITALS OF THE STATE.

DR. DOLAN, the able medical officer of the Halifax Union Infirmary, has written a pamphlet setting forth his views regarding the construction, management, and organisation of workhouse infirmaries or "State hospitals," as he calls them, adopting a title introduced by Mr. Ernest Hart thirty years ago, in the article in the *Fortnightly Review*, which became the manifesto of metropolitan workhouse reform. He points out that in many towns they supply the major part of the hospital accommodation.

The evil condition of many infirmaries arises from the fact that the workhouses were originally designed principally for the custody of ne'er-do-wells and vagrants, and that the needs of the genuinely sick were an after-thought, an appendage to the main scheme. Many boards of guardians have, he says, recognised the responsibilities thrust upon them by the changed circumstances, have erected infirmaries fulfilling all the requirements of advanced hospital construction, have provided pensions for the aged, solving in a measure one of the questions of the day, and have built cottage homes for children whom they have sent for education to the ordinary day schools.

Dr. Dolan shows how the task of designing a pauper infirmary is complicated by the necessity of classification, provision being required for infants and children, the parturient acute medical and surgical cases, chronic medical and surgical cases, skin and specific diseases, wandering lunatics, and for incurables and the infirm. For most of these classes both a male and female side is requisite.

Many rules are suggested for the definition and arrangement of the work of the nurses. In regard to the employment of paupers in the work of nursing the sick, he points out that it is very costly. If fit for such employment, these people should be fit to earn their own living; and a proof of this is often afforded by the discharges which are taken when the extras and indulgences of the sick wards are no longer forthcoming. The removal of wards people usually sets free a number of sick beds, having a money value which may be estimated as on an average about £100 a piece a year. The waste and misappropriation of food also, which is so large an item of infirmary expenditure, is largely dependent on the employment of pauper helps, whose interest is selfishly concerned in its continuance. The rapid destruction of costly appliances is another way in which unskilled labour is expensive; and it should be understood by guardians that they will rarely obtain the full value of their paid nurses so long as there remains opportunity or excuse for these officers to delegate their duties to inmates.

Among other necessary officers a good cook is mentioned as important, and attention is drawn to the great waste which often takes place in these institutions one example of which is the waste of bread which is involved in the requirement that each patient shall be served with his share of so many ounces.

As regards medical attendance, Dr. Dolan is in favour of a resident house-surgeon in any large infirmary, and a visiting staff of surgeons and physicians. With regard to inspection, it is strongly urged that this duty should be performed by medical men. It is really a question of having a trained mind *versus* an untrained one, and if medical men could be secured who themselves have had a training in the daily routine of the Poor Law, the inspection would be much more satisfactory. The time also appears ripe for the introduction of women as inspectors, who should be trained certificated nurses and have served as lady superintendents or matrons. There are many particularly feminine matters in our Poor-law system in regard to which inspection by a woman, and advice by a woman, must be of greater value than that by a man.

Dr. Dolan is evidently a man accustomed to organisation, and perhaps it is this habit of mind which has led him to write in the methodical manner which he has adopted, dividing his matter into series of propositions, and cutting up his pages into numbered paragraphs, which make his book appear much more dull than it really is. The pamphlet before us, in fact, is far more interesting than might be guessed from a cursory inspection, and contains suggestive thoughts on many subjects, besides endless tables and details concerning the work of the different departments of infirmary administration which are sure to be of great service to those who are practically engaged in the beneficent work of reforming the administration of our workhouse infirmaries.

LITERARY NOTES.

A MEMOIR of the late Professor Geo. J. Romanes, F.R.S., of Oxford, is in preparation.

A Polish translation of Huxley's *Elementary Lessons in Physiology* has recently appeared as a "gratuitous supplement" to a leading Warsaw daily paper named *Prawda* (Truth). The translation has been made from the latest edition of Rosenthal's German translation by Miss Rozalia Nussbaum.

A new medical review has recently appeared in Cordova, Argentine Republic, under the auspices of the Professors of the Medical Faculty of the University of that city. It is to be published fortnightly, and according to its prospectus is to be "the organ of the professors and students of the said school."

The *Boletin de Medicina y Cirugia* is the name of a new fortnightly journal which has recently appeared at Guadalajara, in Mexico. The editor is Dr. Teodoro Nuñez, and the object of the journal, as stated on the title page, is to promote "the diffusion and progress of medical science."

A recent number of the Bulgarian illustrated monthly *Svetlina*—the Bulgarian *Graphic*, as they proudly call it—publishes a good likeness and an interesting biography of the late Dr. Stoian Tchomakoff, an eminent patriot, statesman, and physician, who died in November, 1893, after a short illness, contracted during the funeral of the Prince Alexander I, at Sophia. In 1887—the most critical time in the history of "Liberated Bulgaria"—Dr. Tchomakoff occupied the post of Minister of Public Instruction, while subsequently he was twice sent by the people to the Narodno Sobranie (Bulgarian Parliament).

The *Jahrbuch der practischen Medicin*, for 1894, just published by Ferdinand Enke, of Stuttgart, is a bulky volume of 931 pages. Founded by the late Paul Börner, it is now edited by Dr. J. Schwalbe, of Berlin, with the collaboration of a number of able contributors. Anatomy is in the hands of Professor Karl von Bardeleben, of Jena; Physiology in those of Professor P. Grützner, of Tübingen. Professor Hugo Ribbert, of Zurich, is responsible for General Pathology and Morbid Anatomy; Professor Kolaczek, of Breslau, for Surgery; while Internal Medicine is apportioned among Professor Seeligmüller, of Halle (Diseases of the Nervous System); Dr. Lewald, of the Lichtenberg Asylum (Mental Diseases); the Editor himself (Diseases of the Respiratory Organs and of the Heart); Dr. Th. Rosenheim, of Berlin (Diseases of the Digestive Apparatus); Professor Fürbringer, of Berlin (Diseases of the Kidney); and Dr. Freyhan, of Berlin (Constitutional Diseases and Infective Diseases). Midwifery and Gynæcology are under the charge of Dr. A. Czempin, of Berlin; Children's Diseases, of Professor A. Baginsky and Dr. E. Strelitz, of Berlin; Cutaneous and Venereal Diseases, of Dr. Max Joseph, of Berlin. Eye Diseases are dealt with by Professor C. Horstmann, of Berlin; Diseases of the Ear, by Dr. H. Koch, of Brunswick; Diseases of the Nose, Naso-Pharynx, Mouth, Larynx, and Trachea, by Dr. J. Michael, of Hamburg; Pharmacology and Toxicology, by Dr. A. Buchwald, of Berlin; Climatology and Balneology, by Dr. Felix Beetz, of Munich; Forensic Medicine, by Dr. Strassmann, Stadtphysicus, of Berlin; Public Health, by Dr. A. Pfeiffer, of Wiesbaden; and Military Medicine, by Staff-Surgeon Dr. Schill, of Dresden.

Dr. Oliver Wendell Holmes has, it seems, been charged with drawing all the villains of his stories from the clerical and legal professions. Here is his defence which makes the offence gracious—at least to members of his own profession:

> I am afraid I shall have to square accounts by writing one more story, with a physician figuring in it. I have long been looking in vain for such a one to serve as a model. I thought I had found a very excellent villain at one time, but it turned out he was no physician at all, only a—I mean not what we consider a practitioner of medicine. I will venture to propose a sentiment which, as I am not a working physician, need not include the proposer in its eulogy. The medical profession—so full of good people that its own story tellers have to go outside of it to find their villains.

According to an interesting obituary list given by the *Atlanta Medical and Surgical Journal*, the following medical periodicals published in the United States have lately departed journalistic life: The *National Medical News*, the *Epitome of Medicine*, the *Country Doctor*, the *Weekly Medical Bulletin* (of Chicago), the *American Gynecological Journal* (of Toledo), and the *Journal of Surgery, Gynecology, and Obstetrics* (of Atlanta). If this catalogue seems to indicate a somewhat high rate of mortality among American medical journals, it must be remembered that the birth-rate of such publications in the States is more than sufficient to prevent any serious decrease of the journalistic population.

Many theories have been offered in explanation of Swift's *coprolalic* misanthropy and peculiar relations with women, the one most generally accepted being that of Scott, that it was a case of what another poet calls "eunuch's spite." However this may be as regards the grim Dean of St. Patrick's, it appears to be probable that the sourness of temper of the famous French satirist, Boileau, is to be explained by a physical condition of the same kind. In the *Revue Médicale* of June 17th Dr. Gourdon relates, on the authority of a writer in the old journal, *Mercure de France*, that Boileau in his childhood was put out to nurse in the country. While playing in the farmyard he had a misadventure with a turkey cock which attacked him savagely, inflicting injuries of such a nature that, as Carlyle says of an unfortunate duellist, though he lived and broke many of the Commandments, *one* he perforce kept with the strictest observance. Boileau led a very retired life, and his satires are remarkable for the bitterness with which he speaks of women and of poets who sing of love. He could not endure the opera, though this in itself might prove nothing more than the soundness of his taste. He seems to have confided his condition to Gendron, a celebrated Montpellier professor of his day, with the strict injunction not to reveal the secret to any one; he was afraid that the poetasters whom his vitriolic pen had scarified might, with the brutality characteristic of the literary controversies of that age, find in his infirmity materials for a terrible revenge. Gendron kept the secret till Boileau's death, after which he confided it to a discreet person, who, after the manner of his kind, lost no time in publishing it *urbi et orbi*.

In the *Maryland Medical Journal* of June 16th Mr. Walter B. Platt, F.R.C.S., of Baltimore, gives an interesting account of Larrey, Napoleon's famous Surgeon-in-Chief. Larrey's experience as a military surgeon was, and probably will remain, altogether unrivalled. He went through no fewer than twenty-four campaigns. He was of small stature, somewhat inclined to rotundity in his late years, with a massive brow, and a head which measured 590 millimetres in circumference, exactly the same as Napoleon's own. Larrey's powers of physical endurance were very great, and in speaking of the disastrous retreat from Moscow he describes himself as one of the strongest men in the French army. Though a "non-combatant" Larrey was several times wounded, once particularly in the leg in the campaign on the Rhine, and again at Waterloo, where he dashed through a troop of Prussians, firing both pistols, and might have escaped if his horse had not fallen, when he received a double wound on the head and shoulder. He soon rose, however, and walked several miles before he was captured. At first he was believed to be the Emperor, and when the mistake was discovered it was decided to shoot him—for what reason does not appear, unless it was that he was a "non-combatant"—but his life was saved by a young German surgeon who recognised him. Shortly afterwards he was seen by General Bülow, who sent him to Blücher. The latter gave him the means to return home. Larrey was as popular with the French army as Ambroise Paré, of whom it is related that, at the siege of Metz, when it was known that he had arrived, the soldiers went about exclaiming, "Our Paré is with us; we shall not die." When passing through the South of France in 1834 Larrey was recognised by some *vieux de la Vieille*, and he was followed about from village to village by one-legged and one-armed veterans. Napoleon said of him, "Larrey is the most honest man I have ever known:" and again, "If France ever wishes to erect a monument out of gratitude, let it be to Larrey." Yet Napoleon was the greatest soldier that ever lived, and Larrey was "only a doctor." Soldiers of lesser calibre might advantageously in this, as in other military matters, take a lesson from *le petit Caporal*.

The *Intercolonial Quarterly Journal of Medicine and Surgery*, the first number of which has just reached us, is the outcome of a resolution passed at the last Intercolonial Medical Congress. It contains an excellent selection of original papers, among which may be mentioned Thyroid Treatment of Skin Affections, by A. W. Finch Noyes, jun., F.R.C.S.E.; Brain Hydatid, by Henry O'Hara, F.R.C.S.I.; Three Cases of Suprapubic Cystotomy, by Peter Bancroft, M.B.Syd.; and a Case of Ostitis Deformans, by Professor Watson. A useful "periscope" of current medical literature is given, and a section is devoted to reviews. The *Intercolonial Quarterly Journal of Medicine and Surgery*, which is published at Melbourne, is excellently printed and admirably illustrated, and both its contents and its appearance warrant us in anticipating for it a successful journalistic career.

By decree dated June 16th, the Portuguese Government has dismissed Dr. Vicente Urbino de Freitas from the chair of physiology in the Medico-Chirurgical School of Oporto. Dr. de Freitas is now undergoing a term of penal servitude, having been convicted of poisoning a young relative. The case made a great sensation some time ago, and in its scientific aspects continues to be a subject of heated controversy among medico-legal experts in Portugal.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JULY 14th, 1894.

THE PHYSIOLOGY OF THE CARBO-HYDRATES AND THE PATHOLOGY OF DIABETES.

Whatever views may be arrived at ultimately as to the doctrines taught by Dr. Pavy in the Croonian Lectures which have been reported in these columns during the last few weeks, and which have been enunciated with greater elaboration in the work which we noticed recently,[1] it behoves medical practitioners, physiological inquirers, and students of medical science alike to welcome the outcome of a life's labour, to receive with respect the dicta of a master of his subject, and to inquire studiously and by experimental methods into the new aspects of the question which are opened up.

Even the first year's student, the medical analogue of Macaulay's schoolboy, knows that there are two names indissolubly associated with the subject of glycogenesis, although his ideas may be a little hazy as to the exact differences of opinion between Bernard and Pavy. Bernard's teaching has been very largely accepted by physiologists; he regarded glycogen as carbo-hydrate material stored within the liver to be given out as sugar to the blood of the hepatic veins for distribution throughout the body. The formation of glycogen he regarded as the vital act of the liver cells; its transformation into sugar as the result of ferment action.

This view was always combated by Dr. Pavy, and now, at the end of thirty years' work, he has presented to the medical world the results of a long series of most laborious and conscientious researches, which have led him to hold, more strenuously than ever, that Bernard's teaching, so long accepted, is wrong, and that reference to animal glycogenesis as it is now understood should be expunged, except a matter of history, from works on physiology.

It is impossible to extol too highly the patient work which throughout the long years has been going on, difficulty after difficulty being subdued until at last it has been possible to piece it together to make a consistent whole. There are, alas, few physicians in busy practice who throughout a lifetime have continued to frequent the laboratory and to work on for the sake of knowledge useful alike for comprehending both healthy and diseased conditions. In the prosecution of this work Dr. Pavy has been assisted by several co-workers, and he has gratefully and gracefully acknowledged the assistance rendered him by Messrs. Scard, Rowntree, and Siau.

[1] *The Physiology of the Carbo-hydrates: their Application as Food and Relation to Diabetes.* By F. W. Pavy, M.D., LL.D., F.R.S. London: J. and A. Churchill. 1894. Large 8vo, pp. 290. 10s. 6d.

Dr. Pavy has marched with the times. He is acquainted with recent chemical work on the synthesis and constitution of the carbo-hydrates, and he has himself employed with conspicuous success the phenyl-hydrazine test for the detection of sugars and discrimination between them. He has had recourse to photography for some very beautiful reproductions of the crystalline osazones he has made and for the figures of intestinal villi, some of which we have been enabled to reproduce in our reports of his lectures.

Starting with a description of the carbo-hydrates—first in classes and then one by one—we are led on to investigations on the animal carbo-hydrates in blood and liver and other organs, and to the interesting deductions to be drawn from the careful analytical data accumulated. Throughout his work Dr. Pavy has received light by being familiar with the disease diabetes. Nature's experiments have gone hand in hand with those he has himself performed.

The theory of the glucoside constitution of proteid matter has recently received abundant independent confirmation by Hammarsten, Kossel, and other Continental workers, and whether or not the views of Dr. Pavy be accepted in their entirety, this discovery will surely rank as one of the most important of modern times. Dr. Pavy himself regards it as the key to the problems which he has been probing so long.

We will now endeavour to state briefly the main proposition which Dr. Pavy sets himself to prove. The liver is not the source of sugar, but instead of throwing sugar into the circulation it checks the progress of sugar by abstracting it from the portal blood. If the liver does not perform this office the result is diabetes, and if sugar really originated in the liver we ought all to be diabetic. Glycogen is a store of carbo-hydrate in the liver, but it is not subsequently reconverted into sugar to be transmitted onwards once more. The liver, if removed fresh from the body, yields no more sugar than any other organ; the venous blood is not poorer in sugar than arterial blood, as it should be if sugar left the circulation at the systemic capillaries, as is implied in the ordinary glycogenic doctrine, and the portal blood during feeding is always richest in sugar.

What, then, is the fate of the hepatic glycogen if it does not lead to the formation of sugar? The answer given to this is that it is applied to the construction of proteid (here the glucoside constitution of proteid comes in) of fat, or of both. The power of the animal body to form fat from carbo-hydrates is certainly undoubted; and some very striking new facts are brought out by the experiments on intestinal villi and chyle. On a diet of oats the intestinal epithelium cells and the chyle in rabbits become loaded with fat, just as though the diet had been itself rich in fat. The formation of fat from starch is thus not limited to liver cells, but is accomplished, also, by those little masses of protoplasm that cover the villi, the synthetic power of which has recently come so prominently before physiologists. In the formation of fat from carbo-hydrates the proteids are regarded as intermediaries. The carbon goes in as carbo-hydrate, and comes out as fat.

The application of all this to explain many of the phenomena of diabetes is obvious. Given a moderate degree of that disease, it is a known clinical fact that a diet on which the amount of carbo-hydrate is restricted is followed at once by a disappearance of glycosuria. Dr. Pavy would explain

this by supposing that the power of his "two lines of defence"—the living protoplasm of the villi and of the liver—to stop soluble carbo-hydrates and to take them up into proteid, to transmute them to fat, and to dehydrate them into an amylose (glycogen)—is impaired but not destroyed. In more severe cases there is a still greater impairment, while in the worst cases of all, those in which even on a diet from which all carbo-hydrates are excluded sugar still appears in the urine, not only are the "two lines of defence" so completely broken down that even the carbo-hydrate which he asserts is cleaved off from albuminous food by ferment action in the process of digestion is not synthetised into proteid. In looking for the fundamental defect Dr. Pavy turns to the nervous system, and, supporting himself by well-known clinical and physiological facts, suggests that in at least the milder types of the disease the failure to deal with the carbo-hydrates is to be attributed to hyperoxygenation of the blood due to dilatation of the arterioles permitting the blood to pass with undue speed from the arterioles through the systemic capillaries to the venous side. The dilatation of the arterioles must be attributed to a derangement of the controlling power of the vasomotor nervous system. In the more severe cases it is possible that something is added over and above this, and this something is probably of the nature of a ferment.

The strength of all chains lies in the weakest link, and though we would not utter one word in depreciation of the merits of Dr. Pavy's argument, we feel bound, in conclusion, to point out that subsequent investigators will probably find the weak links to be the following: (1) The distinction drawn between the liver during life and after death. After death all admit that it produces sugar; can a hard and fast line be drawn between life and those changes that occur in protoplasm which is dying, but which still manifests vital activities? (2) Is it not possible that the glucoside theory of the composition of a proteid will work both ways? May it be, after all, that carbo-hydrate goes into the proteid, but comes out in the same way? Dr. Pavy admits it may in certain diseased conditions, but if it is at all a general rule, we come back to something very much like the old theory of glycogenesis. (3) A quantitative point has struck us; the quantity of carbo-hydrate food is always, in a normal diet, vastly in excess of proteid food. Is it possible that all this can unite with proteid? the quantity of sugar obtained by breaking up the proteid appears to be small, but accurate quantitative analyses should be given on this point.

It is, however, easy for a critic to pick holes and ask questions on any subject; the true critic in this case must be a worker in the laboratory, and such a one will not be in a position to judge until he can show as good a record as Dr. Pavy. Dr. Pavy has opened fresh fields for those engaged in scientific research, and we venture to predict that the wide and important questions involved in his Croonian Lectures and in the present book will not be settled for many a long year.

THE COLLEGE OF SURGEONS ELECTIONS.

The result of the ballot at the College of Surgeons on July 5th was briefly announced in our issue of last week. The reputation and popularity of Mr. Howard Marsh and Mr. Reginald Harrison fully explain and justify the large number of votes which they polled. Mr. Marsh received 327, whilst Mr. Harrison polled 266—a high score, when it is remembered that the latter candidate had not, like Mr. Marsh, the support of a large school, including a number of recently-made Fellows, who always make use of the honourable privilege of voting.

We now come to a phenomenon which must, in the best interests of the College, be considered satisfactory. Mr. Hardie, of Manchester, though his Fellowship (by examination) dates only from 1882, came in third, and secured a place on the Council. He gained 35 more votes than the next candidate, who belongs to one of the largest London schools, and 69 more than the last candidate, who is a teacher at a metropolitan school; yet both the unsuccessful candidates are personally of note. Their defeat is in many respects to be regretted. The satisfactory feature of the case is the activity shown by provincial Fellows, which encourages most wholesome competition in future, both in London and in the country. The voting-paper system has greatly favoured the cause of the provinces. Last year Mr. Mayo Robson came in at the top of the poll. Voting by paper will probably become more general, especially when the proposed alteration of the By-laws is carried out. Under the new arrangement a voting paper will be sent to all Fellows and not as hitherto only on special application. It is the best form of voting for those who are specially anxious to ensure the election of a particular candidate, for the busiest surgeon has plenty of time to mark and post a voting paper, whilst no Fellow of the College can make sure that he can vote in person on the day of election. Voting papers would be yet more popular if everybody understood that they are not "proxy" papers. The term "proxy" mystifies the elector, who thinks of having to trouble colleagues, or perhaps fancies that something like an affidavit is needed. In truth, nothing more is needed than to mark the desired names on the voting paper and return it to the Secretary. The energy of Mr. Hardie's friends is shown by the fact that he received 41 plumpers; both the unsuccessful candidates scored 13 plumpers, or 28 less, yet the first and second winning candidates gained but 5 and 4 respectively, hence, probably, Mr. Davies-Colley's and Mr. Herbert Page's friends showed some activity.

The moral of this year's election is obvious. Fellows must work well for their candidates, and rely more on voting papers than on the uncertain chances of personal voting confined to a short space of time, at not very convenient hours, on a particular day. The smaller London schools certainly include surgeons well fitted for the Council. Their best plan would be combination, which would sooner or later ensure the election of able men like Mr. Herbert Page or Mr. Norton.

A statue of the late Dr. J. Marion Sims is shortly to be erected in Byrant Park, New York. The statue is from the chisel of the well-known French sculptor, M. Dubois.

The movement for making the proposed memorial of Charcot in the Salpêtrière international in character is being taken up in Russia. Professor J. P. Mierzejewski has collected 229 roubles for the purpose among the members of the St. Petersburg Psychiatric Society, and Dr. M. M. Scherschewski has collected a still larger sum in the Russian capital.

It has been decided to erect a memorial of the late Professor von Billroth in the Rudolphinum Hospital at Vienna, an institution with which the deceased surgeon was closely associated, and in which he took a keen interest.

The Departmental Committee on Inebriates and Habitual Offenders in Scotland held their first meeting in London on July 9th. There were present Sir Charles Cameron, Bart., M.P., chairman; Colonel McHardy, Dr. Farquharson, M.P., Sheriff Dove-Wilson, Sir Colin Scott Moncrieff, Miss Stevenson, and Dr. J. F. Sutherland.

THE LEEDS GENERAL INFIRMARY.

Mr. R. N. Hartley, M.B., C.M.Lond., has been appointed one of the honorary surgeons to the Leeds General Infirmary, consequent upon the retirement, after twenty years' service, of Mr. Edward Atkinson, who now becomes one of the consulting surgeons. This appointment creates a vacancy in the staff of assistant surgeons, for which there are several applicants.

THE HACKNEY SCHOOLS SCANDAL.

The Local Government Board inquiry into the allegations against the management of the Hackney Workhouse Schools at Brentwood, which were made during the trial of Nurse Gillespie, will be opened on Tuesday, July 17th, in the board room at the school. Mr. W. E. Knollys, the Board's Chief General Inspector, will conduct the inquiry, and Mr. J. F. Rotton, Q.C., the Board's legal adviser, will be associated with him. A large number of witnesses will be examined, and it is expected that the proceedings will last over several days.

A MUNIFICENT GIFT.

At the last meeting of the Council of University College, Liverpool, it was announced that the Rev. S. A. Thompson Yates had presented the College with the sum of £15,000 in order to build physiological and pathological laboratories. This gift, following so closely those of the Earl of Derby and Mr. George Holt, which provided for the endowment of the chairs in Anatomy and Pathology, bears striking testimony to the munificent generosity of Liverpool citizens and to the deep interest which is taken by them in the development of medical education in the North of England.

CHOLERA NOTIFICATION IN INDIA

Surgeon-Major W. G. King, Acting Sanitary Commissioner Madras, has drawn the attention of the Madras Government to the difficulty of obtaining information regarding the existence of cholera in places bordering upon the Madras presidency, which belong to other governments and native States. He has suggested a system of direct communication between the medical officers of adjoining districts, as preferable to the usual routine of transmitting information through roundabout official channels. The Government of Madras has accepted Dr. King's suggestion, and addressed the administrations and States contiguous to Madras with a view to their being carried into practice. This system of direct notification from district to district might well be extended throughout the whole of the Indian Empire.

THE LONDON COUNTY COUNCIL AND BAKEHOUSES.

The London County Council, on the recommendation of one of its Committees, has declared itself in favour of the adoption of certain amendments in the law relating to bakehouses. These proposals agree, broadly speaking, with those which have been advocated by ardent bakehouse reformers for many years; in respect of certain details, however, they appear open to criticism, altogether apart from the question of the need for root and branch methods in dealing with bakehouses. Dr. Waldo issued a plan of campaign directed against underground bakehouses some months ago in which annual licensing by the London County Council was contemplated. The Council itself proposes that licences should be granted by the various metropolitan sanitary authorities, and for a period of five years. There is no mention, moreover, made of compensation for disturbance in the Council's proposals, which none the less appear to aim at the complete annihilation of the underground bakehouse after allowing it a five years' period of grace. We may again express the opinion that before radical measures are adopted it must be conclusively shown that the existing law is not adequate; and inasmuch as there appears to have been considerable activity in the matter of bakehouse reform of late, it is by no means clear that further legislation is urgently needed.

"WHEN IN DOUBT OPERATE."

The silly and ignorant crusade against what people are pleased to call vivisection seems to be joining hands with an even more silly and ignorant attack on life-saving surgery. To show the depths to which it is possible to descend, the old aphorism, "when in doubt operate," has been twisted from its meaning, and paraded before the public as an illustration of the awful hankering after operation which is supposed to permeate and degrade the surgical mind. It would be difficult to imagine a greater perversion of truth than is conveyed in the suggestion that, in such a case of doubt as is there meant, the operation would be undertaken for the surgeon's instruction rather than for the patient's good. In a case of hernia there can be no more life-saving rule than this of operating, if there is any doubt as to whether it may not be strangulated. It was an aphorism derived from experience long before operations had the safety now given them by antiseptics; how much more should it hold true now. To give a patient "the benefit of the doubt" means to give him the benefit of the operation, and none but those who know nothing of the subject could have founded on the phrase an argument against the tendencies of modern surgery.

AN EPILEPTIC COLONY.

The scheme for the establishment of an epileptic colony at Chalfont St. Peter has now advanced so far that a temporary institution, capable of accommodating 18 epileptic persons, will soon be opened. This is but the beginning of a much more extensive undertaking which awaits the completion of a permanent building. An admirable site, the gift of Mr. Passmore Edwards, has been obtained, and four acres of fruit trees have been planted. Farming under the management of a competent bailiff, dairy work, and market gardening are to be the first industries, which will be followed by a variety of other occupations suitable to the conditions and sex of the patients, the important and distinctive feature of the "colony" being that every epileptic will be engaged, as far as is practicable, in some healthy and profitable occupation in the open air.

A COLLECTION OF MURDERERS.

During the election of members of Council at the Royal College of Surgeons of England on July 6th there was exhibited in the Library a series of drawings of heads of murderers who had been sent to the College for dissection. The drawings include a likeness of Bellingham, who assassinated Spencer Perceval in the lobby of the House of Commons, 1812, and who was executed on May 18th of that year. Bishop and Head (*alias* Williams) are also represented; these two suffered the extreme penalty of the law for the murder of an Italian boy in 1831; the discovery of this crime was in a great measure due to Mr. Richard Partridge, to whom the boy's body was sent for dissection. The drawings were made by Mr. W. H. Clift as soon as the bodies were received at the College; there are notes appended to the pictures, some of them giving information as to movements of the heart, etc.

The note as to Bellingham states that the "right auricle moved at irregular intervals without the application of any stimulus during the period of nearly four hours from the time of execution, and for about an hour longer upon being touched with a scalpel, etc.; not the least motion in the left auricle or in either of the ventricles. This motion was not strictly a contractile action, diminishing in any sensible degree the cavity of the auricle; it was undulatory and weak, sometimes beginning at the right extremity of the auricle and moving to the left, at other times commencing and proceeding in the contrary direction." Some of the notes are characteristic of the elder Clift; for example, that on John Dennett, aged 62, "executed at Newgate, June 22nd, 1818, for the murder of Jane Rogers, aged 30, on the 18th of May, 1818, because she was about to marry another man, having previously cohabited with him. He was an itinerant florist, and had a large double hydrocele, which is preserved among the pathological preparations, and might be considered as a remote predisposing cause of his death!" This somewhat ghastly collection came into the possession of the College at the death of the late Sir Richard Owen, amongst whose papers the drawings were found.

THE PLEA OF INSANITY IN CRIMINAL CASES.

In the Section of Psychology of the annual meeting at Bristol a discussion will take place on August 2nd, on the law in relation to the criminal responsibility of the insane. The following resolution will be proposed by Dr. Lionel Weatherly:

> That in the opinion of this meeting the present law relating to the defence of insanity in criminal cases, as laid down by the judges in 1843, is not in accord with modern mental science, and should be reconsidered.

This will be seconded by Dr. Charles Mercier, who will subsequently second a resolution identical with that which he intends to propose at the meeting of the Medico-Psychological Association of Great Britain and Ireland on July 31st. This resolution, which was printed in the Journal on July 7th, p. 33, will be moved by Dr. Weatherly.

IMMORAL "MASSAGE" ESTABLISHMENTS.

We have received communications suggesting that an association should be formed for those who have gone through a proper course of instruction in massage and obtained certificates of proficiency, and asking our assistance in the preparation of a list of good and satisfactory workers. The suggestion is, however, beset with difficulties. We understand that a good many "massage shops," the advertisements of which are frequently inserted in one or two of the fashionable daily papers, are very little more than houses of accommodation. A very common plan, we are informed, is for some man with a little capital to open an establishment of this kind, and then to advertise for half-a-dozen young lady assistants to do the work. Their remuneration is nominal, but they are at liberty to accept presents from the customers, who pay the principal from half-a-guinea to 2 guineas for each visit. If the young lady is willing to make herself "agreeable" she is retained on the staff, but if she has conscientious scruples she is discharged and someone is found to take her place. This is so well understood that young men about town often make a tour of these establishments. Many of these girls have certificates, but they, as a rule, have spent their last penny in getting instruction, and, little by little, drift into a mode of life which is often most distasteful to them. The men are often not much better, and it has become a fashionable fad for certain ladies of position to frequent the rooms of a young and good-looking masseur. We are given to understand that the subject has attracted the attention of the police, and that quite recently one of the best known of these places has been raided and stopped. Certificates in "massage" are given, even by qualified medical men, after the most perfunctory course of instruction. The women are told that they can make a good income, but as soon as they are squeezed dry they are turned out to shift for themselves. Some of the stories of the unfortunate victims which have come to our knowledge are almost incredible. These facts have been conveyed to us privately and on reliable authority, but we fear much difficulty would be experienced in getting these young women to testify in a court of law. Our impression is that the legitimate massage market is overstocked, and that no woman, unless she has a private connection, has the slightest chance of getting a living by massage alone—at all events in London. We are afraid that nothing could be done in the way of registration unless the ground could previously be cleared of what is undoubtedly a great social scandal. It would be difficult, at all events at first, to refuse a place on the list to any woman who has a certificate from a legally qualified practitioner, and yet in many cases such recognition would mean neither more nor less than a recognition of prostitution. This may seem a very strong statement, but we cannot well discredit information which has come to us from very various and well-authenticated sources.

DEATH UNDER CHLOROFORM.

Mr. Septimus Rayner Lister, house-surgeon to the West Norfolk Hospital, King's Lynn, has favoured us with the following notes of a case of death under chloroform which occurred in that institution: The patient was a healthy-looking boy, 12 years old, suffering from stone in the bladder. Having been properly prepared for operation, chloroform was administered and lateral lithotomy performed. The anæsthetic was taken well and no bad sympton arose during its administration. Between ten minutes and a quarter of an hour after it was stopped, and while the patient was coming round he retched rather severely, the face becoming dusky. The chin was drawn up; about a drachm of green fluid was vomited and respiration returned; the pulse had become imperceptible at the wrist; four or five feeble breaths were taken—expiration could be felt with a hand over the face—and finally ceased. The patient's head and chest were drawn over the end of the table and artificial respiration was resorted two; two or three gasps were made. Artificial respiration was continued for three-quarters of an hour; faradism and other restoratives were tried, but failed to do good. At the *post-mortem* examination no obstruction could be found in the larynx, trachea, or bronchi; the lungs were congested. The heart was sound; its right cavities were distended, the left empty. There was a little pus in the pelvis of the right kidney; the bladder was hypertrophied, but all other organs sound in appearance.

WHAT IS AN "OUTBREAK" OF INFECTIOUS DISEASE?

This question has so often been asked that we are glad to be in a position to give our readers the recent ruling of the Local Government Board on the point. In a letter before us the Board state that, speaking generally, there does not seem any necessity for the reporting of each single case of infectious disease. Where the occurrence of disease embraces a few cases, the health officer is to form a judgment to the best of his ability as to whether the cases constitute an outbreak, having regard to the likelihood of the disease to spread; and he is held responsible for this judgment as to whether the occurrence is one to be reported to headquarters or not. In respect of graver diseases, such as small-pox, typhus, or Asiatic cholera, the Board consider it of more importance that immediate information should be conveyed to them of any outbreak. But they do not in the case of these diseases attempt to describe an "outbreak." The nearest approach to a definition of "outbreak" is the instruction that "all prevalences" of disease calling for the closing of public elementary schools shall be notified to the Board. This appears to us to be a very reasonable demand; since interference with scholastic duties, such as is brought about by the closing of schools,

seems certainly to point to the presence in a district of disease in an epidemic form, or at least in a form which is not unlikely to manifest conditions of epidemicity if not held in check by some such measures as have thus been taken. As regards both small-pox and typhus, we do not doubt that the health officer would look anxiously on single cases of these diseases, and would keep the locality of their notification under strict surveillance; whilst in the matter of Asiatic cholera we should hope that not only would report be made of a single case, but that the occurrence, especially if an initial one, would appear to him to call for telegraphic report. In these days of press telegrams and eagerness on the part of the public to be furnished with news served up hot, so to speak, a health officer would not wish to be behindhand in forwarding trustworthy information to headquarters. In leaving to the health officer the responsibility of deciding whether or not an outbreak has occurred in a sense calling for report, the Local Government Board state that, considering the very different circumstances of different districts, they have thought it undesirable to lay down minute rules in the matter. We are glad it is so. To have a hard and fast line drawn would militate against the efficient carrying out of an important duty, since a wooden scheme of reporting would follow as a matter of course, whereas now a health officer is a free agent in a great degree, and if he have the best interests of his district at heart, will strive to make his reports serve the purpose for which they are intended, namely, to show that the disease, which is the cause of their being made, is understood in its local significance, and is being treated in the way best calculated to arrest its spread.

THE PLAGUE AT HONG KONG.

Our special correspondent at Hong Kong telegraphs that the plague is abating.

REAPPEARANCE OF CHOLERA IN ST. PETERSBURG AND CRONSTADT.

Our letters from St. Petersburg give medical particulars of the reappearance of cholera in St. Petersburg. The earliest cases were admitted to hospital on June 19th (July 1st). From the 19th to the 21st, 15 men and 6 women entered the hospital with choleraic symptoms. Six of these cases proved fatal, and the diagnosis of cholera was confirmed in these by bacteriological investigation. Up to the 23rd there had been in all 80 cases with 20 deaths. The latest bulletin states that between noon on the 23rd and noon on the 24th there were 22 fresh admissions, 19 deaths from cholera, and that 61 patients remained. In Cronstadt cholera reappeared two weeks ago. From June 8th (20th) to June 16th (28th) there were 19 cases, in 17 of which the comma bacillus was found. Between June 16th and 20th the fresh cases of cholera numbered 20, and there were 16 deaths. At the last date there remained 9 patients ill with cholera.

THE DR. TAIT FUND.

On July 5th the subscribers to this fund met at the residence of Dr. Glover, Highbury, the Chairman of the Committee. The meeting was representative, and letters were read from Sir Dyce Duckworth, Dr. John Williams, Mr. Tom Smith, Mr. Marsh, Dr. Brunton, and others expressing regret at being unable to attend. Dr. Glover, in the name of the subscribers, presented Dr. Tait with a cheque for £162 19s. 3d., which with £2 19s. 9d. expenses for circulars, postage, etc., made £165 19s. 0d., the sum raised. This represents about five-sixths of Dr. Tait's legal expenses. The Chairman, while enjoining on all practitioners the duty of becoming members of defence unions, expressed the hope that if such actions should still occur they might always have in the defendant the advantage they had in this case—one whose history and whose character were a sufficient reply to all charges. The interest of the occasion was completed by the presentation, on behalf of Dr. Tait's patients, of a very handsomely illuminated address expressing unabated respect for Dr. Tait, and signed by about 200 of his *clientèle*. The address was presented by Mr. Wm. Muller, of Highbury New Park. Dr. Tait made a very graceful and suitable reply. On the resolution of Dr. Woodroffe, seconded by Mr. King, hearty votes of thanks were accorded to the medical press for enabling the public and the profession to judge the merits of the case, and for promoting the subscription. With votes of thanks to the Treasurer, Mr. Keale, the Secretary, Dr. Reid, and to the Chairman, the meeting ended.

LONDON HEALTH ADMINISTRATION.

It is not matter for surprise that the proposition of the London County Council, which contemplates practically the dissolution of the Metropolitan Asylums Board, should have met with some expression of disapproval from Sir Edwin Galsworthy at the last meeting of the managers. Sir Edwin Galsworthy was able to refer to the experience which the managers had gained during the twenty-six years they have administered the hospitals for infectious diseases in London, and no one is prepared to say that any newly-constituted authority would be able to carry on the work without recognising that they have much to learn. But the solution of the difficulty is to be found in the election of the Chairman of the Metropolitan Asylums Board and of those of his colleagues who will continue to render service to London, either by the ratepayers or as aldermen of the county. Logic is on the side of the County Council in the argument, and certainly two facts are obvious. The Asylums Board cannot in these democratic days continue to exist unless directly elected by the ratepayers, and it is impossible that two central metropolitan authorities concerned in health duties should exist in London. There would inevitably be clashing of functions, and London would be the loser. We sympathise much with Sir Edwin Galsworthy and his colleagues, and fully recognise the good work they have done, but we none the less regard the proposed change as inevitable.

THE EPIDEMIOLOGICAL SOCIETY OF LONDON.

The annual dinner of this Society was held at the Grand Hotel on Friday, June 29th, the President (Dr. Payne) occupying the chair. There was a large attendance, and among the visitors present were Sir Walter Foster, M.P., the President of the Royal College of Surgeons, Professor Clifford Allbutt, the President of the Pathological Society, Dr. Tatham, Mr. W. H. Power, Professor Sherrington, the Vice-President of the Institute of Actuaries, and Mr. C. E. Moyse, Professor of English at the McGill University, Montreal. After the usual loyal toasts, Sir Joseph Fayrer proposed "The Public Health Service," to which Sir Walter Foster and Dr. Whitelegge responded. The former referred in highly complimentary terms to the work performed by the medical department of the Local Government Board during the General Cholera Survey, and to the brilliant services which Dr. Thorne Thorne had rendered to this country and to the cause of medical inspection at the several international Congresses which he had attended on behalf of the Government of Great Britain. Referring to the excellent work done throughout the country by medical officers of health, Sir Walter Foster deprecated the absurdly small pay accorded by numerous sanitary authorities for the great services which they received, and assured his hearers that so long as he remained a member of Her Majesty's Government he would do all in his power to amend the present unsatisfactory condition of affairs. Dr. Whitelegge, in his reply, spoke of the high qualifications which were now required by the regulations from those entering the public health service, and of the great expenditure, both of time and money, which the preparations for the diploma of

public health necessitated. With these requirements he contrasted the ludicrous salaries offered, and expressed a hope that a better state of things would soon be brought about. He spoke, too, of the steady and progressive work which on all hands, it was admitted, had been performed by many county councils, and of the stimulating effect which the threatened invasion of cholera had had upon sanitary progress. Dr. Thorne Thorne, in proposing "The Visitors," referred to the broad aspect of the term "public health," and of the manner in which it was essentially interwoven with the study of clinical medicine, pathology, bacteriology, and statistics. He alluded to the distinguished services which many of those present had rendered in the several branches. He also spoke of the great sanitary reform achieved in the metropolis by the London County Council, and congratulated the Society on having obtained the services of Mr. Shirley Murphy as President. Mr. Hulke and Professor Clifford Allbutt responded to the toast. The Chairman proposed "The Epidemiological Society," and gave an interesting sketch of its work in the past and in the present. Sir B. W. Richardson, in proposing "The Chairman," alluded in graceful terms to the valuable service which Dr. Payne had rendered to the Society.

THE CONSTITUTION OF THE LOCAL GOVERNMENT BOARD FOR SCOTLAND.

The Royal College of Physicians of Edinburgh, after considering a communication from Mr. Ernest Hart on the above subject, has sent to the Secretary for Scotland a memorial to the following effect: "That your memorialists desire to express the satisfaction with which they regard the proposal of the Government to place a representative of the medical profession on the Local Government Board for Scotland, proposed to be established by the Bill now before Parliament. That in view of the fact that much of the work of the proposed board will consist of duties relating to public health and other allied matters requiring medical knowledge, your memorialists deem it absolutely essential that a medical man, well versed in sanitation, should take part in its deliberations, and should have a voice in directing its policy. That your memorialists learn with alarm that there is to be an attempt to deprive the board of its medical element. They believe that if this attempt be successful it will inevitably have the effect of seriously restricting the usefulness of the board. Your memorialists therefore pray that the Government will adhere to the view embodied in the Bill."

WORKHOUSE NURSING.

Dr. Milsom Rhodes, Chairman of the Chorlton Board of Guardians, writes to us drawing attention to the strange fact that "notwithstanding all that was done by Mr. Ernest Hart in 1865 to demonstrate the condition of the London workhouse infirmaries, the results of that inquiry have had so little influence on country workhouses that it is still possible to make the revelations regarding country infirmaries which the British Medical Journal is publishing from week to week." He points out, however, that the blame should not be laid upon the Local Government Board so much as upon the guardians, for the inspectors have great difficulties to deal with. He says, "I know of a case approaching, if not quite so bad as, those described in your columns; and although the medical, general, and architectural inspectors have done all that could be done to convince the members of the board of the insanitary and disgraceful state of the workhouse, it has taken several years to induce them to buy the necessary land for a new one." Not that he would blame the guardians too much, for many of them are to some extent to be pitied, having been placed in administrative positions for which they do not possess the necessary qualifications. He does not wonder at boards of guardians not possessing more first-class men, seeing the very meagre recognition which they as a class have received from any Government. He entirely deprecates the idea of any commission sitting in London to investigate the matter, but thinks a small commission, partly of local selection, sitting in each county, might be of service, especially if the press were admitted to their conferences.

THE SICK POOR IN PROVINCIAL WORKHOUSES: BISHOP AUCKLAND.

It will be seen from the report of our Commissioner's visit to the workhouse in Bishop Auckland that another instance has been brought to light of the very inefficient staff that is provided for the nursing of the sick. Here is an infirmary for the reception of 115 patients, having an average of about seventy constantly in the wards, and there is one trained nurse in charge of the whole building, with the responsibility of the midwifery cases on her shoulders. There is no night nurse, not even that makeshift for night nursing—a staff of wide-awake paupers ready to assist any bedridden patient. Bishop Auckland has no hospital, so that, as a matter of fact, all the poor, when acutely ill, would come into the infirmary, and operations must be undertaken and carried through with this staff. The report of the visit gives a pleasant account of the attempt that is made to make the wards as homelike as possible, and there is a picture of one ward that was more like an almshouse than a ward, the matron having allowed its inmates to brighten it with their own possessions. It is sad to turn from this bright spot to another ward where a man is lying in a dying condition suffering from dropsy, his only nurses practically being the pauper inmates around him, one of whom is the wardsman; contrast what would be the circumstances surrounding that dying man if fate had placed him in a hospital instead of the workhouse ward, and then try to find an answer to the question, Why is the contrast so sharp? Our Commissioner evidently admired the tone of kindness and thoughtfulness that characterised the officers of the workhouse, but no amount of kindness can take the place of that skilled nursing which is the right of the sick whether in a palace or a workhouse. The number of sick in bed at the time of visit was about twenty; many of these needed nursing. A case of fistula, one with phthisis, another with heart disease, paralysis in its various phases, and the usual sprinkling of bedridden cases, were all left at night to the casual help of their ward companions. There was no classification, the wards held a large number of imbeciles and idiots, many of these being quite too imbecile to be of any service in the house; the lock cases are kept in separate wards attached to the infirmary. The dayroom accommodation being inadequate, the larger wards on the first floor on the men's side were used as dayrooms, wherein the inmates smoked, ate, and amused themselves, as well as for sleeping; in one of these the dying patient above referred to was lying. Our Commissioner notices that the drainage was being relaid, and that the closets were being fitted with modern appliances: all the airing-courts were upset by these works. A ladies' committee is appointed to visit this house.

A "PROFESSOR" AND SMALL-POX.

A curious petition came before the Willenhall Local Board on July 2nd asking that a certain "professor" should be allowed to attend small-pox patients in the district, that the patients under his treatment should not be interfered with, that the usual parish pay should be allowed to all cases under his care, and ending with a profession of confidence that the said "professor" would cure any twenty cases the board could find free of charge, without a single failure; and also that he would guarantee to prevent it from ever coming into Willenhall again. Certainly these petitioners seem a people of much faith but very little sense of humour. The members of the local board, however, were men of wider knowledge, and took no notice of this curious effusion beyond inquiring of the inspector of nuisances

whether any cases of small-pox were being attended by an unqualified practitioner, and, if so, whether such cases had been notified. It was then stated that the "professor" was attending about two dozen cases which had never been reported to the medical officer at all. The clerk said it was the duty of the head of the household to notify the disease at once, and it was decided to issue handbills on the subject. Probably a few prosecutions of householders for neglect of notification would be more effectual than many handbills. The duty of the householder in regard to notification is a matter far too often overlooked.

MEDICAL COMFORTS.

THERE is always opportunity for friction between medical officers and boards of guardians in regard to the relief ordered for the sick. The Wolverhampton guardians seem to have been exercised on this subject lately, their clerk reporting that he had made inquiries into the matter and had found that the relief ordered was in some cases very extraordinary. He cited cases where patients were ordered to receive per week, besides monetary relief, 21 lbs. of beef, 21 quarts of milk, and 1½ pint of whisky. The relief appeared to have been ordered without discrimination, and some of the patients had to return the notes, as they could not take all the relief ordered by the doctor, who had ordered an old woman 89 years of age to have 14 lbs. of beef in a week. We make no comment; there may be a reasonable explanation; everyone knows how quickly the making of beef-tea runs up the butcher's bill. We think, however, that in many cases it might conduce to peace if a medical officer when giving an obviously extraordinary order would deign to append some sort of explanation. No doubt the relieving officer is bound to obey the order, but there is no rule against his treasuring up the item for future use in case of quarrel, and it is easier to put an explanation on record at the time than to find one later.

SMALL-POX IN ESSEX.

DURING the past month about twenty cases of small-pox have occurred in and around Maldon, Essex, three of which were of the hæmorrhagic type, and rapidly proved fatal. The disease was first introduced by a mariner, but was chiefly spread by an unrecognised case, which was diagnosed as purpura hæmorrhagica. As is too frequently the case, the authorities were quite unprepared, and a tent, two old cottages, and a temporary wooden building have had to be utilised for isolating the cases. The expense already incurred has been considerable, and would have gone a long way towards providing a permanent hospital. The epidemic, however, is not likely to prove an unmixed evil, since it has caused the urban, rural, and port sanitary authorities to meet and decide that it is desirable to provide a permanent structure for the joint use of the three authorities, and a small committee has been formed to consider how such a scheme can best be carried out.

GLANDERS AND MALLEIN.

FOR some time it has been supposed that glanders did not exist in the horses of Ireland. A recent occurrence, within the jurisdiction of the Cork Board of Guardians, has, however, amongst other matters of interest, yielded evidence of the incorrectness of this view. From the report of a meeting of this local authority it appears that an animal affected with glanders had been condemned by the local veterinary inspector, and an order made on May 31st for the slaughter of this and any other horse found to be affected or showing suspicious symptoms. Recognising the difficulties associated with the diagnosis of the disease, the veterinary inspector advised the test by "mallein." The owner of the horses, undoubtedly acting within his rights, refused to have them subjected to this test, on the ground that "he was ignorant of the use of the drug," the efficacy of which, he says, "is questioned even in scientific circles, and that the proposed experiment may only injuriously affect his horses and incapacitate them from work besides depreciating their value." On June 28th, finding they had no power to enforce it, the guardians rescinded the order for slaughter, and are at present endeavouring to carry out the law and to bring the owner to his senses by preventing the removal of any horse from the place, which is declared an infected area, etc. It is paradoxical that the private opinion of an owner of animals affected or even only supposed to be affected with a disease dangerous alike to men and other animals should override the opinion of experts, and be allowed to stultify the labour and results of scientific work. The use of "mallein" as a diagnostic agent appears now to have passed the experimental stage. Its value is now recognised wherever it has been largely employed, both on the Continent and in this country. Not in a few isolated instances but in several hundreds has "mallein" proved its efficacy in the hands of English veterinary surgeons, often yielding during life evidence of pulmonary glanders in animals in no way suspected—indeed, regarded as free from any disease, such animals on *post-mortem* examination showing indubitable glanders lesions in the lungs. One of the great difficulties connected with any proposed attempt to exterminate the disease from Great Britain has, heretofore, been that of diagnosis of the commonly obscure, and consequently most dangerous, forms; "mallein" appears to have removed this obstacle. The circumstance at Cork here referred to demonstrates the utter inefficacy of present enactments, and it is to be hoped that in the new Contagious Diseases (Animals) Bill, which is soon to be introduced, provision will be made for dealing more promptly with affected or suspected animals, and for the application of the best means of diagnosis, whether it be "mallein," "tuberculin," or whatever else science or common observation may suggest.

ATHLETICS IN FRENCH SCHOOLS.

THE first thing the French nation has to learn is personal initiative; all the efforts made to emancipate themselves from their national shortcomings, both negative and positive, are manifested by congresses, societies, and organisations representing leading strings and redtapeism to a greater or lesser degree. The Paris International Congress of Athletic Sports has arranged its programme, which will benefit a few, but leaves untouched the question of athletic sports for the many, and even fails to awaken the desire for them. In the French *lycées*, the French admit (those who are interested in the question) that if the games are ridiculous and the gymnastic exercises laughable. Until the whole system of French education is changed, neither moral nor physical exigencies can be satisfied. It is not *MM. les proviseurs* who can perceive the need of reform, much less realise it, but educated principals like the eminent men who are at the head of the English colleges who by their abilities and qualities influence coming generations which give England her glory. When can this be said of the all-powerful, tyrannical, narrow-minded *proviseurs* of French *lycées?* International lessons received in a good spirit would do much to reform French secondary education.

STOCKTON BOARD AND THE BRITISH MEDICAL JOURNAL COMMISSION OF INQUIRY.

OUR Commissioner visited Stockton, and, being personally introduced to the chairman of the board, asked for an instruction to the master of the workhouse for the purposes of this commission. To our surprise this was refused, on the plea that the chairman had no authority to act without the consent of the board; at the same time the chairman stated that if he admitted the representative of one journal he might be besieged with similar requests from any halfpenny paper on the look-out for sensational copy. At the request of our Commissioner we wrote to the board for permission

for our representative to visit the infirmary, and received the following answer: "Stockton Union, Stockton-on-Tees. June 20th, 1894. Dear Sir,—Your letter asking permission for a member of your staff to visit the infirmary wards at the union workhouse was brought before the guardians at their meeting held this morning, when I was instructed to inform you that they are unable to accede to your request. (Signed by the Clerk.) To the Editor British Medical Journal." Doubtless the board has good reasons for this refusal; conscience makes cowards of us all; but in the present state of public anxiety upon this question of the guardianship of the sick poor by the guardians of the rates, we would advise boards to court the visit of our responsible representative, unless they are prepared to take the chance of providing "sensational copy for some halfpenny paper" at some future date. The Stockton Board may probably hear from us later, as we have not done with it.

SPREAD OF INFECTIOUS DISEASE BY TRAMPS.

The necessity for placing under control the movements of tramps, or, rather, of designing some machinery for limiting the spread of infectious disease by their movements, continues to receive much attention; and there is no doubt that a strong feeling exists as to the necessity for some strenuous effort to prevent a repetition of the occurrences which recent experience has demonstrated. The subject will in all probability be fully threshed out at the conference which the London County Council will hold next week. We note that one of the subjects for discussion will be the compulsory revaccination of vagrants, and we anticipate that the argument will be urged that these persons are a source of danger only to communities who neglect to protect themselves against small-pox. The difficulty of dealing with a nomadic class is great, for it will not be easy to impose upon any class of the community conditions which are not thought necessary for all. That vagrants are a public danger is amply proved, but it will require no little skill to induce Parliament to consent to special legislation. An interesting letter has been addressed to the *East Anglian Daily Times* by Dr. Francis W. Clark, the medical officer of health of Lowestoft, who proposes to rely mainly upon the ticket system; this system is, however, only applicable to those who are in need of poor relief during their migrations. Disease is conveyed by poor persons who resort to common lodging houses, and especially to those which are provided by persons with charitable intentions, and which are not registered, where, for a trifling sum, the applicant can obtain a night's lodging and a meal. For these the ticket system would have no application.

WAS THE COMTE DE CHAMBORD POISONED?

At the time of the death of the late Comte de Chambord (claiming to be Henry V of France) there were whispers of foul play, but the report of the physicians was so clear as to negative any supposition of the kind except in the minds of those who make it a point of honour in such matters to appear wiser than their neighbours. The question has just been revived by an article published by M. Robinet de Cléry in the *Vie Contemporaine*. It may therefore be well to quote the medical report presented to the Académie de Médecine at the time by M. Vulpian, in which the whole subject is discussed with perfect frankness. It may be remembered that towards the end of the Comte de Chambord's fatal illness M. Potain was sent for, but was prevented from obeying the summons. M. Vulpian was then called in, and saw the Comte once during life and once again after death. On the occasion of his first visit M. Vulpian made a diagnosis of cancer of the stomach. After the *post-mortem* examination, however, he saw reason to modify his opinion. The question of poison had evidently presented itself to his mind, and in his report he seems to have taken special pains to exclude this as a possible cause of death. He says: "Toxic substances are of two kinds—those which do, and those which do not, give rise to lesions. It is clear that the toxic substances of the second category, such as digitaline, morphine, aconitine, nicotine, are out of the question, since considerable lesions were found. As regards the other agents—arsenic, phosphorus, salts of mercury, or antimony, caustic substances—it is known that the lesions which they produce are distributed, when death has taken place rapidly, not only over the whole extent of the upper digestive passages, but also in the stomach and intestines. Never, whether death be rapid or slow, are ulcerations seen having the characters presented by those which we met with in the œsophagus of the Comte de Chambord. Moreover, if death takes place a certain number of weeks after ingestion of the poison, changes are found in the viscera, particularly in the liver and in the kidneys, and sometimes alterations in the muscles; these changes were here entirely wanting. It is beyond question that the illness of the Comte de Chambord did not have as its starting point the ingestion of a poison. He never took food alone, and those who habitually ate in his company partook of the same dishes as he did. The Prince himself attached importance to the fact that his illness had begun the day after he—and his friends as well—had eaten strawberries which were somewhat spoilt. Can it be admitted that these strawberries, by reason of a special idiosyncrasy, had determined in him an acute irritation of the mucous membranes similar in nature to those eruptive lesions which the ingestion of that fruit sometimes sets up on the skin? And might the irritation, once set up, possibly have attained in one of the affected spots in the lower part of the œsophagus and in the stomach a degree of intensity such as to result in ulceration?" Vulpian summed up the case as follows: "The disease of the Comte de Chambord was characterised from the anatomical point of view by ulceration of the mucous membrane of the stomach, and especially of the mucous membrane of the œsophagus; from the clinical point of view by a complex of symptoms which made it necessary to admit at least as probable the existence of a cancer of the stomach. In short, the case was one of extreme rarity, and if I am not mistaken, of great interest."

MEDICAL OFFICERS OF HEALTH AND PRIVATE PRACTICE.

The question whether medical officers of health should be engaged in private practice appears to be receiving increased attention in the lay press of late, although unfortunately the prior question of reasonable remuneration and security of tenure is for the most part quite overlooked by the advocates of reform. Indeed the tendency is for salaries to become smaller in spite of the increase of duties and responsibility, which has given rise to the demand for "whole-time" service. It would perhaps be invidious to particularise, but some recent appointments of the kind have been made on terms which are in odd contrast to the increasing stringency of qualification for such offices, and which are anything but encouraging to those who think that the public health service should consist of competent men who have cut themselves adrift from other branches of the profession. With comparatively few exceptions medical officers of health are appointed either for a single year or for a short term of years, with no guarantee of reappointment at the end of that time. Usually the renewal takes place as a matter of course, but sometimes it does not, and in the latter event there is practically no appeal against the decision of the local authority. Such an instance has occurred at Lytham, a Lancashire watering place, where the Improvement Commissioners recently thought fit to supersede their former health officer, and to reduce the salary of the office from £55 to £30. There seems to have been no better reason for this than pique on the part of some of the commissioners, but the Local Government Board, the Lancashire County Council, and the residents of Lytham have protested in vain. It

will scarcely be contended that the possibility of treatment of this kind, without redress or justification, is coexistent with the acceptance of the "whole-time" system, even at a very different salary to the modest £55 which Lytham was able to offer. As long as the appointments are left to the absolute discretion of small authorities, it is unreasonable to ask that qualified medical men should trust themselves and their whole career and means of livelihood entirely to such a precarious tenure. The simplest way of conferring security would be to give ample powers of interference to the Local Government Board, as has to some extent already been done in the metropolis. Another plan, which has much to recommend it, would be to place the appointment of local health officers under the control of the county councils, thus laying the foundation of a county sanitary administration which would remove much of the insecurity of the present order of things, while avoiding the "centralisation" which is now held in such disfavour by local authorities, good and bad alike. It would have the further advantage of giving more reality to the supervision of county councils over the general sanitary work of their districts, especially in details which it is neither practicable nor fitting for a government department to attempt to follow throughout the country. Another phase of the private practice question has arisen at Rowley Regis in Staffordshire, where the local board desire it to be understood that the salary of their medical officer of health is to include the fees otherwise legally payable to him under the Notification Act for reporting cases occurring among his own patients. This is a contingency expressly provided for in the Act, the medical officer of health being in this respect entitled to the same fees, and subject to the same obligations, as any other practitioner.

SEWER GAS AND SMALL-POX.

MR. R. HARRIS REEVES, of Messrs. Reeves and Co., civil engineers, of Putney, who was called as a witness at the inquest on the unfortunate men killed in the Stamford Street sewer, has issued a highly-comic pamphlet on sewer air and sewer ventilation in which he is guilty of the most delicious confusion of ideas. *Inter alia* Mr. Reeves therein observes that in 1885 an epidemic of small-pox was prevalent, and large sums were required to provide hospitals and staff to cope with the disease. At the time the source of the disease was considered (by whom?) in all probability "to be the foul air from the sewers." The then Main Drainage Committee, on the advice of Mr. Dibdin, their chemist, chemically treated the whole of the main sewers under the control of the Board, with the view of preventing the discharge of sewer gas from the sewage in transit. It was a rough but effectual experiment, and *the effect*, he observes, was a cessation of the outbreak, and the following year the hospitals were empty of cases, and, as a proof how little the staff had to do, an application was made and granted to allow a band to play on the ship and hospitals to relieve the monotony of the staff. To make this complete it is only necessary for Mr. Reeves to add that he knows sewer gas must have been the cause, as "he was in London at the time." We recommend Mr. Reeves to the society of Mr. Biggs, Mr. Tebb, Mr. Williams, and Mr. Hopwood, Q.C. This is precisely the line of "argument" and deduction in which they revel and delight, and which finds so much favour with the perfervid ignoramuses (on medical subjects) who superintend the small-pox correspondence of some of the evening papers.

SHORT SCHOOL HOURS AND LONG HOLIDAYS.

THE cry of over-pressure in schools has again been raised, and a shortening of the school hours and longer holidays is advocated. This is equivalent to proposing a total diminution of education during the few years of elementary school life. If there be a tendency to press children up through the school standards under the present code, that is due more to the action of parents anxious to terminate the school period early, than to the professional instinct of the teachers. The existence or non-existence of undue educational pressure can be determined only by observation of the pupils said to be over-pressed by lessons, and not by reference to rates of child mortality, which cannot be proved to be connected directly with education. A Committee which was originally appointed by the British Medical Association in 1888 has reported on 100,000 children seen individually in schools by Dr. Francis Warner, and while their results of inquiry are generally favourable to national education, they point out that an appreciable proportion of the child population need special care and training—about 16 per 1,000, or 10,000 children for the London area. This duty has to some extent been undertaken by the London School Board. The effects of secondary education as given in public elementary schools upon weak and dull children ought to be watched with great care. Special training of bright children has a tendency to make the struggle of the weak and dull more difficult both in the school and in social life. When the brightest pupils are collected for higher teaching, the dull pupils are often accumulated in certain sections of the school without special care for removal of their deficiencies. Funds devoted to the education of children other than the average should be assigned to higher education and care of the dull and weak. Special training is afforded to science teachers, cookery teachers, and others: arrangements should be made to provide a special staff of teachers for the children of feeble brain power. This presents a tangible aspect of the question of educational pressure, and its continuation is more likely to be productive of useful results than a general indictment against compulsory education in school boards.

TEA DRINKING.

"A FREE breakfast table" has been looked upon as an essential part of a progressive political creed, and the cheapness of tea and sugar, which has resulted from the continued reduction of taxation on these commodities, has led to an enormous increase in their consumption. This has been by no means an unmixed advantage. The report of the Commissioners who were appointed to inquire into the alleged increase of insanity in Ireland suggests that the causes of this increase may be traced in some degree to the excessive consumption of tea. Alcohol, of course, figures as a very common cause of insanity, but tea, in the manner in which it is prepared and drunk by the Irish peasantry, may also in our opinion take a part in the causation of mental disease. It is prepared as a strong decoction, not as a light infusion, and is kept stewing in the pot all day, and the peasantry, we are told, make their meals—morning, day, and evening—of bread and tea. It is further stated that this habit is found to produce a "peculiar form of dyspepsia, which, in its turn, leads to a general debility of the nervous system." Most hospital physicians who are engaged in the out-patient department have recognised this potent influence of excessive tea drinking as a cause of dyspepsia, and now alienists are beginning to inform us that its influence may be traced as a notable factor in the increase of insanity amongst the poorer classes. It seems not unreasonable also to connect the remarkable prevalence of the complaint of sleeplessness in recent times to the increased consumption of tea, and this nervous unrest may be a step in the progress of those degenerative changes which end in permanent mental disorder. Something, no doubt, might be done to arrest this evil by the dissemination of a knowledge of better methods of preparing tea, but we have found that the working classes do not care for the finer teas lightly infused; the bite and grip of the hot strong solutions of tannin sweetened with sugar is what they prefer. It is much to be regretted that there is no cheap drink which can compete as a beverage with tea and beer. Milk is a food, not a mere beverage, and many persons are unable to digest

it unless freely diluted. A sound light beer, like the German lager beer, is, we think, a very wholesome beverage, and if the temperance party, instead of presenting an uncompromising hostility to all beverages containing even a small percentage of alcohol, would throw their influence and energy into the work of promoting the adoption of lighter beers or other cheap, wholesome, and attractive beverages, they would possibly do more good than they now do by the exclusive standpoint they adopt. It is remarkable how difficult it is to get a draught of any wholesome non-intoxicating beverage, except tea, bad coffee, or milk, at a small price. We know a greatly-frequented shop in the most frequented thoroughfare in the City where refreshments are sold, and where in the summer time there is always a jug of home-made lemonade. But the charge for a small tumblerful is sixpence!—the original cost of which must be something less than a halfpenny. It is a scandal that such charges should be tolerated. It has also been asserted that excessive tea drinking is responsible for the modern increase—if increase there really is—in dental caries. No doubt the consumption of hot solutions of tannin sweetened with sugar and drunk while eating bread and butter is highly calculated to cover the roots of the teeth with a good culture medium for the hostile microbe, and as the poor rarely adopt any measure of buccal hygiene, we are quite disposed to admit that the ravages so commonly observed amongst the dental furniture, even of quite young people in the present day, are contributed to by the prevalent devotion to the drinking of decoctions miscalled "tea."

ACCIDENTAL POISONING.

AN inquest has just been held in Shoreditch upon a man whose death was caused by taking oxalic acid in mistake for Epsom salts. This occurrence of the case by which Dickens illustrated in his *Pickwick Papers* the danger of poison shows the probable consequence of that familiarity with poison which is produced by the too frequent neglect of necessary precautions. Though the general sale of poisons has been prohibited by statute, and it has been entrusted exclusively to chemists on the assumption that they would be competent to afford the public due protection against risk, the result, judging from the frequency of accidental poisoning, does not appear to be satisfactory. Cases are now before the court in which registered chemists are charged with having infringed the Pharmacy Act by neglecting to observe the statutory regulations in the sale of poison. If chemists cannot fulfil the duty assigned to them, or, if they find the task incompatible with their trade interests, it may become desirable again to approach Parliament on this subject with the view of removing the present restriction of sale, and replacing it by a more stringent enactment providing for the use of a striking poison label that will be an efficient warning, and for the imposition of a heavy penalty against those who neglect this precaution.

MEDICAL CERTIFICATES IN COURT.

ALTHOUGH much allowance should be made for the worry and annoyance medical men are too frequently exposed to in the matter of giving sick certificates, we do not think for the credit of the profession that the laxity which is sometimes found to exist in this respect should be suffered to continue without condemnation. Only a few weeks ago a well known judge stated in court that he would not accept medical certificates of inability to attend as witnesses, unless the facts of each case were sworn as affidavits, remarking that it had been his experience actually to see in court witnesses who a few hours before had been medically certified as unfit to leave their beds. The latest instance of this kind comes to us from South Wales, and we learn that on June 26th his Honour Judge Gwilym Williams, at the Ystrad County Court, made some very uncomplimentary remarks regarding the behaviour of some medical men in giving sick certificates which, according to the facts of the case, can hardly be said to be unmerited. It would appear that the assistant of a Dr. Washington David (his name is not mentioned, but we must infer that he is a registered practitioner) certified that John Isitt, a collier and a defendant in a county court action, was unable to attend court by reason of sickness, when it was proved to the judge that on the day in question the defendant actually went down into the pit and performed his work as usual. His Honour, after finding for the plaintiffs, remarked that in future he would invariably accept official documents from colliery offices in preference to medical certificates, as it had been clearly shown that there was considerable negligence in the system of issuing the latter. It is certainly not creditable to us as a profession that a county court judge should feel himself in any case justified in making such remarks as these, and it is very desirable that all practitioners should exercise the greatest caution in giving medical certificates of every description. From time to time certificates have been brought under our notice which, from the careless way they have been given, and from the character of the facts they undertook to vouch for, would have been put aside with contempt by any lawyer. From the curriculum and course of education that members of the medical profession have to go through it might be reasonably expected they would have a correct view of the nature of evidence, and what they can and what they cannot reasonably certify: and they cannot too soon find out for their own credit that they are not justified in giving a written certificate in any terms their patient may happen to require.

THE ENDOWMENT OF MOLECULAR PHYSICAL RESEARCH.

MR. LUDWIG MOND, F.R.S., has made a proposal to the managers of the Royal Institution of Great Britain to convey to the members of that institution the freehold of No. 20, Albemarle Street, to be held by them for the purpose of a laboratory, to be named "The Davy-Faraday Research Laboratory of the Royal Institution," and for the purpose of providing increased accommodation for the institution. The managers, at their meeting on July 2nd, most cordially and gratefully accepted this munificent gift made in the communication from Mr. Mond. Mr. Mond was present on Tuesday evening, July 3rd, at a banquet given by the Maccabean Club in honour of M. Yves Guyot, Mr. D'Avigdor in the chair. After the toast of the evening had been disposed of, Mr. Ernest Hart rose, by request, to express the satisfaction which was felt by the members of the club at the munificent endowment that day publicly announced, with which Mr. Mond had enriched science by the establishment of a chemical research laboratory, specially intended for the study of molecular physics in connection with the Royal Institution of Great Britain. Mr. Hart stated that there is not at the present time any such institution in Europe. To conceive the plan and to endow it was an act not only of great munificence, but implying a large intellectual outlook. Such an institution would hardly fail to confer permanent and continuous benefits on mankind in promoting the acquisition of new knowledge of a kind much needed, and of which the results would be far-reaching. He congratulated the Jewish community on the fact that one of their number had given this valuable example of civic liberality and enlightened enterprise.

CARELESS SUPPLY OF POISONS BY CHEMISTS.

A CORRESPONDENT writes describing a case in which a child, aged 3 years, was brought to him by a neighbouring chemist, as she had drunk some liniment which the chemist had supplied to the child's mother in the ordinary course of trade, and without a prescription for it. Not having made an entry of the sale, the chemist was not sure whether the liniment was belladonna or aconite, though from our correspondent's examination of the remainder it was probably the latter. In any case great carelessness was

displayed in selling the liniment without a poison label, and the tendency of some chemists to neglect that and other precautions in the sale of poison calls for immediate attention. Aconite liniment and belladonna liniment are both poisons within the meaning of the Pharmacy Act, and consequently they cannot lawfully be sold by registered chemists, unless distinctly labelled with the words "poison," and the name of the article, etc. Aconite liniment being in the first part of the poison schedule as one of the more dangerous poisons, its sale has to be accompanied by further precautions. The person to whom it is supplied must be known to the seller or introduced by a person known to him. The sale must be registered in a book kept for that purpose, with a statement of the date, name, and address of purchaser, name and quantity of article supplied, purposes for which it is required, and this entry of particulars must be attested by the signature of the purchaser or that of the person introducing him to the chemist. If these regulations are observed as strictly as they require to be, the difficulty of obtaining any of the articles included in the first part of the poison schedule will sufficiently impress people with a sense of their dangerous character to induce caution in their use and prevent accident. But there is reason for doubting whether the regulations are attended to by chemists in such a manner as to protect the public or even to justify the restriction of the sale of poisons to registered chemists. Many are of opinion, therefore, that entire freedom of sale, subject to very stringent provisions as to the use of a conspicuous poison label or some other mechanical safeguard would be more effectual in preventing accidental poisoning. However that may be, there is evidently need for a more strict control of the supply of poisons by registered chemists than is always exercised by them. In the case now referred to the chemist had evidently neglected either to label the bottle, to register the sale, or to enter the supply of the poisonous article in the prescription book. When the child was poisoned there was, therefore, no means of ascertaining the nature of the poison, and the chemist had then forgotten whether the liniment was aconite or belladonna. We cannot understand the disinclination of chemists to adhere to the regulations laid down in the Act, but would suggest that if such negligence as the above case exhibits is met with it is the business of the Pharmaceutical Society to exercise its powers under the Act upon all offenders, whether they be chemists or grocers.

DISTOMA RINGERI IN AMERICA.

The discovery by Professor Ward, University of Nebraska, that distoma Ringeri (D. Westermanni, Kerbert) occurs in the United States of America, is of medical as well as of scientific interest. Hitherto this parasite has been found only in Japan, Corea, and Formosa, where it is the cause of a peculiar form of hæmoptysis and chronic cough, with rusty mucoid expectoration, in a considerable proportion of the population in certain districts. It is now known that this fluke lives in the lungs in burrows or cysts which communicate with the bronchi. The discharge from these cysts constitutes the characteristic sputum of the disease, and contains the rusty brown ova of the parasite. Kerbert in 1878 found the same parasite in the lungs of a tiger, and Raillet refers to its occurrence in the dog in Japan. Professor Ward has now found it in the lungs of the cat in America. It would be interesting to know if the parasite is indigenous to the United States, and the exact areas and localities of its distribution; or, as is more probable, if it is of recent introduction (probably from Japan), and, if so, in what way and when it was introduced. It would also be interesting to know the history of the cat in whose lungs the parasite was found. Was it born and had it always lived in the United States? If distoma Ringeri is now endemic in America we may expect to hear more about it soon, not only as a parasite of the lower animals but as a cause of endemic hæmoptysis in man. The figure Dr. Stiles gives[1] of an ovum of the parasite is somewhat misleading. When newly expectorated the ova do not contain a ciliated embryo as represented; it is only after they have lain in water for a month or two that the embryo is developed.

THE PRACTICES OF QUACKS.

COLLECTIVE INVESTIGATION.

A PROPOSAL BY THE CHAIRMAN OF THE PARLIAMENTARY BILLS COMMITTEE.

A correspondent from Haslingden, Lancashire, has forwarded a flyleaf advertisement of a herbalist, in which the advertiser states that he has no rival among the myriad herbalists of the kingdom; it is one of many similar documents which reach me from time to time. There is no doubt that this class of quacks is very large, and does an immense amount of harm. These charlatans defraud the public of their money and injure them in health. The Legislature does nothing. To a great extent this apathetic indifference of the powers that be is due to an utter ignorance of the magnitude of the evil. Members of the profession dilate eloquently on the number of these pests and the evils they perpetrate. But such general denunciation does not lead to much practical result. If the Chairman of the Parliamentary Bills Committee of the Association is to take the matter in hand, he must be in a position to present a strong case. On the strength of the case that he can bring forward the possibility of future legislation must depend. The information must be reliable and well digested. It would be necessary for this purpose for every Branch to divide itself into districts. The members practising in each district must take different localities. Each member must collect the following information: The name and address of the quack, the description of his premises, one of his advertisements, including a copy of each book and pamphlet, and cuttings from the local papers with dates; a memorandum must also be made of the date on which the name, address, and description of the premises is taken down. The member must do this himself, and preserve his original notes. The results of the observations should then be catalogued and arranged by the different Branches. It would also be necessary to note the nature and condition of the neighbourhood where the quack purports to practise, and his hours of attendance. If this work is carried on all through the United Kingdom, we should then be in a position to call the attention of Parliament to the prevalence of quackery. I admit that the task is a heavy one, but unless some such plan is carried out it will be impossible to expect such drastic reform in the Medical Acts as is desirable in the public interests as well as in the interest of the profession. This class of quacks will scarcely be affected by the hitherto proposed amendments to the Medical Acts.

Ernest Hart.

[1] *Bulletin of the Johns Hopkins Hospital*, Vol. v, No. 40, May, 1894.

SECOND ANNUAL MEETING OF THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Gresham Commission.—Method of Voting at Elections of Council.—Increase of Disciplinary Powers.—Proposed Annual Dinner.—The Mode of Election of President.—Need for a New Charter.

THE second annual meeting of the Fellows of the Royal College of Surgeons of England, the first having been held on July 7th, 1893, took place on July 5th, at 5 P.M., in the theatre of the College. The PRESIDENT (Mr. J. W. Hulke) was in the chair. There was a good attendance.

The minutes of the extraordinary meeting of Fellows on March 19th last having been read and confirmed, the CHAIRMAN reported that the Council had adopted a resolution expressing approval of the report of the Gresham University Commission in the terms of the resolution of the delegates of the two Royal Colleges.

The regulations of the Council relating to meetings of the Fellows were then read and ordered to be entered on the minutes. The alteration of the Clauses 5 and 6, Section iv, of the by-laws relating to the election and admission of members of Council, by which a voting paper will in the future be sent to each Fellow of the College, whose address in the United Kingdom is registered at the College, was unanimously approved.

Mr. WILLIAM H. BENNETT moved:

That this meeting of Fellows of the Royal College of Surgeons of England desires to congratulate the Council on the proposed alteration of By-law, Section iv, for the election and admission of members of Council.

In the course of his remarks he described this important concession embodied in the alteration of the by-law as due to a spontaneous act on the part of the Council.

The resolution was seconded by Mr. BOWLBY.

Mr. HOLMES expressed his surprise that Mr. Bennett should have attributed to the Council the suggestion that a voting paper should be issued to each Fellow of the College. The alteration in the issue of the voting papers was a matter which had been repeatedly urged upon the Council by the Association of Fellows.

The PRESIDENT said that he was under the impression that the suggestion had originally come from the Council.

The resolution was carried.

The SECRETARY next read Section xvi of the by-laws relating to "misconduct of Fellows and Members" as at present constituted and in the altered form proposed by the Council, whereupon Mr. FREDERICK TREVES moved the following resolution, which was seconded by Mr. HAWARD, and carried unanimously:

That this meeting of Fellows of the Royal College of Surgeons cordially approves of increased powers being given to the Council to deal with those Fellows or Members of the College who misconduct themselves, as contemplated in the proposed alteration of the by-laws, Section xvi.

The PRESIDENT, on behalf of the Council, asked the views of the meeting upon the desirability or otherwise of a dinner alternating with the Hunterian Festival being given by the College to distinguished guests, with the object of returning courtesies shown to the College through its President, and of helping the College to maintain its position among other great institutions. He felt great diffidence in accepting hospitality extended to him in his official capacity as President, because hitherto there had been no opportunity of returning it in the name of the College. It was by no means the same thing making some return for such hospitality by issuing private invitations, nor did he think that the College would expect its presidents to entertain privately those who had made themselves the hosts of the College by sending invitations to the President.

Mr. HOLMES, while quite agreeing with what had fallen from Mr. Hulke, asked whether the Council could legally devote any funds of the College to the purpose indicated. Had counsel's opinion been obtained upon the matter?

Mr. TRIMMER (Secretary) said the question had not been submitted to counsel, but he believed that the Council had power, within reason, to expend sums in the manner suggested. The expenses of the *Conversazioni* at the College had, in previous years, been defrayed out of the College funds.

After some discussion it was agreed to leave the matter to the Council to make what arrangements they deemed to be necessary.

Mr. HERBERT W. PAGE moved:

That the Council be requested to take steps for obtaining the opinion of the Fellows on the mode of election to the office of President.

He said that a short time ago a circular was issued to some of the Fellows asking their opinion as to the mode of election of the President, and the result was a slight majority in favour of the existing method. But it was felt that the time had come for the question to be submitted to the whole body of Fellows, with a view to some definite conclusion being arrived at, and there was no doubt that the best plan would be for the Council to undertake the inquiry.

Mr. JOSEPH GRIFFITHS seconded the resolution.

Mr. CRAVEN (Hull) remarked that if the election were placed in the hands of the Fellows there would be "touting" for votes for the President throughout the country. In the election to the Council, just decided, he had been canvassed by a circular to support the provincial candidate, and he had voted for the latter, because he thought that a provincial candidate should be elected. Nevertheless, he had set his face against both the combinations of Fellows which had been formed. He was quite prepared to admit that the Association of Fellows had done a great deal of good work, but he believed that, so far as the election of President was concerned, the interests of the College would be best consulted by leaving things as they were.

Mr. HOLMES thought that Mr. Craven was entirely mistaken in supposing for a moment that there would be any such thing as "touting" for votes for the President.

Ultimately the resolution was carried by 23 to 8.

Mr. VICTOR HORSLEY moved:

That in the opinion of this meeting the concessions made by the Council, and such other changes as the general body of Fellows may desire, should be embodied in a new charter.

He said that in proposing the resolution it was impossible to go over the whole ground rendering a new charter essential, but all that he would ask the meeting to do was to support the principle that certain changes, which everyone felt to be necessary, should be embodied in a new charter. He did not propose any general question of the kind without at the same time suggesting, out of respect to the Council, a means whereby the feeling of unrest which existed could be got rid of, and the principles of the amendment of the charter established. It seemed quite possible to appoint a conjoint committee, consisting of members of the Council and certain members nominated from the general body of Fellows. The duty of such a committee would be to collect evidence on the various questions involved, and to report thereon to a general meeting of the Council and Fellows. This, by giving opportunity for the ventilation and full discussion of all matters of interest to the College, would secure that co-operation without which it was impossible to successfully press reforms upon the Government.

Mr. NORTON, who seconded, said that the resolution embodied two distinct features—concessions actually made and others which the general body of Fellows desired. There had been many important concessions made by the Council, at least some ten or a dozen, and for these the Fellows had to thank the powerful minority on the Council for the exertions they had made, and the successful results which those exertions had met. As regards the concessions yet to be desired, he must say that there were many, but he would only refer to two which he knew could not fail to be in accordance with the views of all Fellows, whether belonging to the Association of Fellows or not. Those two were, first, that these meetings of Fellows should have the power to appoint an annual committee or other committees to consider and report on subjects referred to them, and to confer, when necessary, with the Council of the College. The second desirable change was that no alteration in the constitution and external relations of the College should be effected without the consent of the body corporate. The concessions already made were neither on the charter nor mentioned in the by-laws, but were simply placed on the minutes as reso-

lutions passed by the Council, and could with equal facility, at any future meeting of the Council, be by resolution rescinded.

Mr. Howse considered that the reasons alleged in favour of a new charter were futile.

Mr. Rivington supported the motion.

Mr. Golding-Bird then moved the following amendment:

That it is premature to consider the question of a new charter until the changes required have been resolved upon.

Mr. Crosby seconded.

Mr. Holmes said that there was no material difference between the amendment and the original resolution.

Ultimately the amendment was carried by a small majority, and a vote of thanks to the President brought the proceedings, which had lasted nearly two hours to a close.

EXHIBITION AT THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Not the least interesting feature of Election Day at the College is the annual display of preparations which have been recently added to the Museum. During the protracted and somewhat monotonous procedure of telling the votes, an inspection of these preparations serves to relieve the tedium by providing objects for consideration of wholesome, curious, and scientific interest. The collection comprises specimens illustrating human and comparative, normal and pathological, anatomy with teratology; as well as drawings, models, and casts. The pathological section includes some eighty specimens, the most noteworthy of which were as follows: An enormous dermoid cyst successfully removed from the inner side of the thigh; two preparations showing extensive destruction and necrosis of the bones of a knee-joint in consequence of the presence of hydatids; two articulations presenting the appearance of osteo-arthritis from a well-marked case of syringomyelia; an upper jaw with supernumerary incisor teeth having lateral invaginations of the enamel upon their crowns; a hernia of the small intestine into a peritoneal pouch at the root of the transverse meso-colon, and a very large fibrous polypus of the pharynx which had long caused grave symptoms, and was ultimately expelled by vomiting. The series relating to the diseases of the uterus and its appendages was enriched by many valuable specimens received with the Jackson Prize Essay on that subject.

From the Conservator's report, it appears that the teratological collection of the Museum has been completely revised and catalogued, including the malformations of plants as well as animals. To this section much new material has been added, which is worthy of careful study by all interested in this difficult branch of anatomy.

Undoubtedly the most remarkable exhibits, both as beautiful works of art and as objects for scientific investigation, were a series of elaborate dissections of the nervous system in certain of the lower animals, such as the leech, lobster, crab, snail, etc. An excellent mode of demonstration was adopted in some of these preparations. Alongside of a complete dissection of the nervous system, with its delicate cords and ganglia suitably displayed in relation with other structures, was placed for comparison an isolated specimen of the whole nervous apparatus of that particular animal. Thus, at a glance, the relative size and position of the ganglia with their commissural fibres and loops were appreciated. This very valuable addition to the Museum was due to the skill of Mr. Burne.

Among other zoological preparations was the integument of a very rare burrowing animal from South America (*Chlamydophorus truncatus*), which, in addition to a thick coat of silky hair, has a broad dense shield like an armadillo. This is firmly attached to the head and pelvis, but is only connected along the mid-dorsal line by slender strands of fibrous tissue. A rare and complicated illustration of symbiosis has been recently presented to the Museum, and is exceedingly well displayed in a series of preparations. A species of ant from Guatemala makes its nest in the hollow spines of an acacia, the leaves of which supply all the essential elements of food for the ant. In return the ant defends the plant from the attacks of other animals.

Normal human anatomy was represented by: An elaborate dissection of the œsophagus, heart, large vessels and nerves as seen from behind: a series of transverse sections of the male urethra, including the penis and prostate, to show the varying shape of the canal in different regions and the coarse structure of the penis; a virgin uterus with its appendages in which the ovarian fossa was very well defined on both sides; and several other excellent dissections not hitherto contained in the anatomical department of the museum.

Among the curious may be mentioned the lancet and case used by Baron (then Dr.) Dimsdale, on the famous occasion when he inoculated the Empress Catherine and her son at Petersburg in 1768. For this successful operation he received a fee of £12,600, a pension of £500 per annum for life, and the dignity of a Baron of the Empire. A collection of coloured and pencil sketches were received by the College with the papers of the late Professor Owen. These were presumably the work of the younger Clift, and represented the heads of many famous criminals who were brought to the College after execution during the first quarter of the present century. Notes and characteristic remarks appended to some of them are in the handwriting of W. Clift, sen. These drawings had not been previously exhibited, and attracted considerable attention.

THE CHOLERA.

During the week ending July 7th, 141 cases of cholera and 59 deaths occurred at St. Petersburg, and 41 cases and 17 deaths at Cronstadt. At Warsaw from June 24th to June 30th there were 8 cases and 4 deaths. During the same period 30 cases and 21 deaths were reported in the Government of Warsaw; 20 cases and 8 deaths in that of Grodno; 68 cases and 30 deaths in the Government of Kielce; and 23 cases and 14 deaths in that of Radom. In the Government of Ploczk from June 17th to June 24th there were 73 cases and 29 deaths; and from June 4th to June 30th 26 cases and 1 death in the Government of Tula. Thirty-nine cases and 13 deaths were recorded on July 7th at St. Petersburg, fresh and on July 8th 66 cases and 17 deaths.

According to advices received at Athens 8 cases of cholera and 2 deaths have occurred at the village of Sparta, near Adalia, in Asia Minor. A bacteriological examination made in the case of 4 passengers by the steamer *Döbeln*, who were fellow travellers with the Englishman who died last week, has shown that all four are suffering from Asiatic cholera.

M. Proust, Inspector-General of the Sanitary Service of France, reports as follows with regard to cholera:—At Constantinople and its environs the public health is generally satisfactory. In Asia Minor cholera still exists, but at Sivas, Castamouni, and Trebizond the disease appears to be almost at an end. Unfortunately, the statistics given by the Ottoman sanitary authority have been questioned by a telegram sent from the Russian consul at Samsoun to the Russian ambassador at Constantinople. Cholera has reached Dunia, and exists in the district of Angora. It would be valuable to know what means have been taken to protect the two most dangerous places—Adana upon the Mediterranean and Angora, which is the head of a railway now being constructed. But since the appearance of the disease no documents have been received by the sanitary authority except the bulletin of statistics sent by the civil authorities, the correctness of which is doubted. The three doctors sent by the Council of Hygiene of Constantinople to keep a watch upon the principal points in the invaded district have as yet sent in neither reports nor letters, and are contenting themselves with telegraphing the names and figures communicated to them, and at the end of their mission with sending in a joint report that will only be of retrospective interest.

The Meccan pilgrimage is closing without cholera having been reported from Hedjaz; 49,600 pilgrims have disembarked in a good sanitary condition.

A certain number of cases of cholera have been reported in Austria-Hungary, in the province of Galicia.

A telegram from Vienna, dated July 11th, states that the district of Zaleszczki, in Galicia, where 28 cases had occurred during the previous two days, of which 11 proved fatal, has been declared by the Home Ministry to be a centre of the epidemic in the sense of the Dresden Conventions, and the necessary precautions have been taken to prevent communication with the infected district.

Telegraphing from Berlin on July 11th the *Standard* correspondent states that the German State Commissioner for the Vistula reports that 7 cases of cholera and 2 deaths have occurred in the Prussian part of the basin of that river during the previous three days. One of the deceased was a raftsman, and twenty men who were on the same raft were at once taken to the hospital and placed under supervision.

Precautions at Grimsby.

The Grimsby Sanitary Authority has decided upon adopting measures against the possible introduction of cholera into the port. Already the service of four additional sanitary inspectors have been engaged to inspect the whole town, whilst Dr. Simpson has been appointed assistant medical officer to inspect all shipping entering the port. The cholera visitation last year cost Grimsby over £5,000.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1894. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 24th, 1894. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before such meeting—namely, October 3rd, 1894.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

NORTH WALES BRANCH.—The annual meeting will be held at the George Hotel, Bangor, on Thursday, July 26th. Members having a paper to read, any communication to make, or new member to propose, are requested to intimate on or before July 17th.—W. JONES-MORRIS, Honorary Secretary, Is-y-coed, Portmadoc.

EDINBURGH (AND FIFE) BRANCH.—The annual country meeting in conjunction with the Stirling, Kinross, and Clackmannan Branch will be held at Culross on Friday, July 20th, at 4 P.M. Train to Dunfermline and thence by coach. Discussion on Empyema, and various communications from members of the Branches. Dinner at the Hotel, Culross. Members intending to be present should communicate with the Honorary Secretary, on or before July 10th, R. W. PHILIP, 4, Melville Crescent, Edinburgh.

BORDER COUNTIES BRANCH.—The annual meeting will be held at the County Hotel, Carlisle, on Friday, July 20th, at 2 P.M. Business: Election of officers for the ensuing year. President's Address, to be delivered by Dr. Connel of Peebles. Notices of motion to be sent to the Secretary ten days before date of meeting.—J. ALTHAM, M.B., Penrith.

OXFORD AND DISTRICT BRANCH.—The annual meeting will be held at Chipping Norton under the presidency of Dr. Hutchinson (who kindly invites the members to lunch), on Thursday, July 19th. Further details will be sent to each member of the Branch. Notice of any motion, etc., should be sent as soon as possible to the Honorary Secretary, W. LEWIS MORGAN, 37, Broad Street, Oxford.

NORTH OF ENGLAND BRANCH.—The annual meeting of this Branch will be held at the Royal Infirmary, Newcastle-on-Tyne, on Wednesday, July 18th, at 5 P.M., when the officers of the Branch for the ensuing year will be elected, and the President-elect, Professor Oliver, will deliver the annual address. The dinner after the meeting will take place at the Douglas Hotel at 6.30 P.M.—G. E. WILLIAMSON, F.R.C.S., Honorary secretary, 8, Eldon Square, Newcastle-on-Tyne.

NORTH OF IRELAND BRANCH.—The sixteenth annual meeting will be held in Monaghan on Thursday, July 19th, at 12 noon. Special train arrangements have been made for the convenience of members travelling from Belfast. The President (Dr. J. Campbell Hall) will entertain the members to luncheon.—JOHN CAMPBELL, M.D., F.R.C.S., Honorary Secretary, 21, Great Victoria Street, Belfast.

SHROPSHIRE AND MID-WALES BRANCH.

THE annual meeting was held at Shrewsbury on June 26th, Mr. J. McC. MCCARTHY, President, in the chair. Thirty-two members were present.

Vote of Thanks to Retiring President.— A vote of thanks was accorded to the retiring President, Dr. H. Nelson Edwards.

Officers and Council.—The following were elected: *President-Elect:* Dr. Cureton. *Representative of Branch on Council of the Association and on Parliamentary Bills Committee:* Mr. J. D. Harries. The other officers and members of Council were re-elected. A vote of thanks was accorded to Dr. Bowen Davies, for his past services on the Parliamentary Bills Committee.

New Members.—The following gentlemen were elected: Dr. E. Hyla Greves (Bournemouth), Mr. J. K. K. Benjamin (Dorrington), Mr. L. J. Godson, Mr. C. K. Millard, Dr. C. E. Salt (Shrewsbury).

Amendment of Medical Acts.—Dr. CÆSAR moved:

That the Branch approves of the report and draft clauses submitted to them by the Parliamentary Bills Committee, but considers the present condition of unqualified practice eminently unsatisfactory, and desires to call the attention of the Committee to the necessity of taking immediate steps to have the penal clauses of the Medical Act strengthened against all such practice.

—This resolution was carried unanimously.

The Walker Prize.—The PRESIDENT then brought before the notice of the Branch the quinquennial prize which had recently been instituted at the Royal College of Surgeons by Mr. Walker, a Shropshire gentleman, with the view of helping towards the elucidation of the cause and cure of cancer.—A resolution was passed expressing the appreciation by the Branch of Mr. Walker's philanthropy and generosity.

President's Address.—The PRESIDENT delivered an address on Medical Organisation.—A vote of thanks for his paper was moved by Dr. THURSFIELD, and carried by acclamation.

Clinical Cases.—Several cases of interest were shown, including an armless case, exhibited by the PRESIDENT, in which the feet had acquired the functions of hands.

Dinner.—The annual dinner was held at the Music Hall after the meeting.

[The resolution relative to the registration of midwives will be found at p. 79.]

DORSET AND WEST HANTS BRANCH.

THE summer meeting of this Branch was held at Bournemouth on July 4th under the presidency of Mr. WALTER WYKE SMITH. Thirty-seven other gentlemen were present.

New Members.—Mr. John Claude Cormack, of Bournemouth, and Dr. Charles Silvester Evans, of Shaftesbury, were elected.

Discussion.—A discussion on some points in the diagnosis of Locomotor Ataxy was opened by Dr. LAWRIE, Vice-President, and continued by Dr. LYS, Dr. GREVES, Dr. MACDONALD, Mr. CHARLTON, Mr. CORMACK, Mr. PARKINSON, Dr. SNOW, Dr. GRIFFIN, and Mr. HORSFALL.

Communication.—Dr. MACDONALD read a paper on a case of Perforative Peritonitis, with specimen.

Next Meeting.—It was resolved that the next meeting should be held at Dorchester.

Sir John Charles Bucknill.—It was resolved to present the congratulations of the Branch to Sir John Charles Bucknill on the honour conferred on him by Her Majesty.

Dinner.—The members and friends dined together at the Royal Bath Hotel.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE twenty-fourth annual meeting of this Branch was held at Cardiff on June 28th.

Addresses.—Interesting addresses were delivered by the PRESIDENT (Dr. Milligan, Abersychan), entitled "Harking Back:" and by Professor HORSLEY on the "Pathology and Treatment of Gunshot Wounds of the Brain, Illustrated by Experiments." Cordial votes of thanks were presented for both addresses.

Report of Council.—The report of the Council showed a continuance of good work and an increase of members. The total number was now 228. There was a credit balance of £80 18s. 4d.

Donation.—A sum of ten guineas was voted as a donation to the sufferers from the Albion colliery explosion.

New Members.—Dr. MURPHY, Cwmbran, was elected a member of the Association and Branch; and Dr. Roderick, Llanelly, a member of the Branch.

Vote of Thanks to Retiring President.—A cordial vote of thanks was passed to the retiring President, Mr. H. A. Latimer.

Election of Officers.—The following were elected: *President-elect:* Mr. J. G. Lock, Tenby. *Members of Council:* Dr. T. Wallace, Garrod Thomas, Redwood, Leigh, and Horder. *Honorary Secretaries:* Drs. A. Sheen and D. A. Davies. *Representatives on General Council:* Drs. Sheen and Evan Jones. *Representative on Parliamentary Bills Committee:* Mr. Evan Jones.

Amendment of Medical Acts.—The consideration of the amendments of the penal clauses of the Medical Acts (com-

munication from Parliamentary Bills Committee) was referred to two Subcommittees.

Proposed Alteration of Rule.—A motion by Mr. HORDER, Cardiff, to alter a rule so that a retiring member of Council should not be eligible for re-election was lost.

Sporadic Cretinism.—Dr. P. R. GRIFFITHS, Cardiff, gave a lantern demonstration of sporadic cretinism before and after thyroid feeding.

SPECIAL CORRESPONDENCE.

PARIS.

Pseudo-Tuberculosis caused by Aspergillus.—Typhus Fever in France.—First Aid in France.—Hospital Organisation.—Congress for the Protection of Infant Life.—Medical Practitioners and the Law Courts.—Leprévost Dispensary at Havre.

M. GAUCHER, of the St. Antoine Hospital, and his *interne* M. Sergent, have studied a case of pseudo-tuberculosis resulting from the presence of *aspergillus simplex*. The patient coughed, and spat blood, and there were signs of breaking down of tissue at the apex of one of the lungs. The patient was a pigeon stuffer at the Paris Central Market. He crushed the seed between his teeth, and the pigeons were fed from his mouth. M. Gaucher is inclined to believe that the seed contained the parasite. Bacteriological examination failed, however, to reveal the presence of Koch's bacillus. Inoculations of the aspergillus did not produce tuberculosis.

Typhus has broken out in the Place Mauber, one of the dirtiest parts of Paris. In the Somme department there have been sixteen cases. Several cases have occurred in Paris since June; a patient and a nurse have died of typhus in the Bicêtre Hospital. At the police Prefecture there are four medical men to diagnose doubtful cases. This condition of things is admittedly serious, and stringent measures are required.

At the National Congress of the Public Assistance recently held in Lyons it was proposed that in the principal towns of France policemen should receive instruction as to the treatment of street accidents; that urban ambulances should be organised in all the principal cities of France on the model of the Bordeaux ambulance: and that railway companies be called upon to organise in all the principal stations on their lines means of removing and treating wounded passengers. It was also urged by the Congress that instruction on the treatment of accidents and sudden illness should be more diffused among the lay public. The pupils who receive a diploma after attending the classes are to have the title of *Secouristes*.

At the same Congress M. Brodet, Clinical Professor at the Lyons Medical Faculty, read a report on the past and future of hospital organisation. According to him, local hospitals are necessary in order to prevent overcrowding in the Paris hospitals and those of large towns. They should consist of pavilions two storeys high. The medical staff should be elected by competitive examination.

The International Congress for the Protection of Infant Life will be held at Bordeaux on July 22nd, 1895. It will consist of three sections: (1) A physical section, in which all questions relating to societies for protecting infant life, maternal charity *crèches*, children's hospitals, sanatoria, etc., will be discussed. (2) A moral section, for the discussion of questions relating to the protection of children abandoned by their natural protectors, apprenticing, orphan homes, and agricultural colonies. (3) An administrative section, in which the Roussel law and all questions relating to the protection of infant life will be studied.

Law proceedings between doctor and patient are becoming frequent. M. Michel Ephrussi has just been worsted in one. He objected to pay the fees claimed by Dr. Déclat for attending his wife, and offered £20. The Court has decided that the whole sum claimed must be paid. In another case the decision was also against the patient, who had refused to pay 10 francs a visit to his medical man for attendance after an operation performed by an eminent surgeon. The patient contended that before the operation he paid only 5 francs. The doctor stated that after the operation the patient required more care and time. The Court decided that the rate was not excessive. The Versailles Court has recently decided that a medical man who bought a practice from the widow of a colleague and afterwards claimed damages, the practice not turning out remunerative, must put up with his loss, inasmuch as he made a bargain which involved a certain risk and must take the consequences.

The dispensary at Havre, named after Leprévost, was inaugurated a few days ago. Dr. Leprévost's bust was garlanded with roses, and eulogistic orations were delivered. The ceremony terminated by a visit to the wards, and £40 was collected.

NEW ZEALAND.

The Medical School at Dunedin.—The Medical Congress at Napier.—The Sanitary Eccentricities of a Lady Mayor.—The New Zealand Centre of the St. John Ambulance Association.—Death of Dr. Henry and of Dr. Patrick.

THE discussion as to the Medical School of Dunedin continues. The question as to the advisability or necessity of such a school has been mooted for some time; it was brought before the Medical Congress held at Napier this year, and motions were passed to the following effect:

(1) That no one centre in New Zealand can provide sufficient clinical material for clinical teaching.

(2) Recommending the Senate of the New Zealand University to secure the services of a body of independent examiners in medicine and surgery.

(3) Recommending that a committee be appointed to arrange for clinical instruction in the four chief hospitals.

At the same Congress a motion was passed to bring the question of the intercolonial medical journal before the next Intercolonial Medical Congress to be held at Dunedin in 1896. A motion to incorporate the New Zealand Medical Association with the British Medical Association was postponed to the next annual meeting to be held at Christchurch in 1895. The Canterbury Branch brought up a report on the collective investigation into typhoid fever made by them; it was resolved to continue the investigation for another year.

It has been urged that if women were placed in a position of authority they would abuse their power and become tyrannous, and certainly the proceedings of Mrs. Yates, Mayor of Onehunga, Auckland (the first woman in the British Empire elected to such an office) tends to prove this. Dr. Erson, a medical practitioner in Onehunga, reported to the New Zealand Government an outbreak of typhoid in Onehunga, which he attributed to insufficient sanitary precautions. Mrs. Yates delivered an oration at the Council Board, denouncing Dr. Erson as a traitor, and giving her views as to the origin of typhoid, etc.; afterwards men were sent to break up and fill in a drain from Dr. Erson's house, which passed under a public road; while the inspector of nuisances was sent by the lady mayor to make a minute inspection of the unfortunate medico's house. It is only just to the councillors of Onehunga to say that, according to the press reports, the rest of the council opposed their mayor's high handed proceedings.

Some surprise is felt at the fact that Dr. W. E. Hacon's services in practically starting the New Zealand centre of the St. John Ambulance Association have not yet been suitably acknowledged. The Adelaide centre, started two years after the formation of this centre, have had three of their medical staff appointed Honorary Associates of the Order of St. John of Jerusalem, while New Zealand has not had one medical man appointed Associate.

I regret to record the deaths of two old and highly respected practitioners in New Zealand: Dr. Henry, of Wellington, and Dr. Patrick, of Christchurch: they had both occupied the position of President of their respective local medical societies.

Dr. S. SCHNEIDER, médecin-major of the First Class in the French army, who was not long ago sent by the French Government on a scientific mission to Persia, has been appointed physician to the Shah.

PROFESSOR CESARE LOMBROSO, so well known by his writings on "criminal anthropology," has been elected President of the Royal Medico-Chirurgical Academy of Turin.

CHICAGO.

Endowment of a Davis Chair of Medicine in the North-Western University Medical School.—A Holiday Book.

The North-Western University Medical School has received a legacy, and at the same time Dr. N. S. Davis, its Dean, becomes specially honoured by a gift of 50,000 dollars from Mr. Deering, an extensive manufacturer of harvesting implements. This gift will go to endow a Chair in Medicine in honour of Dr. Davis. This legacy comes at a particularly opportune time, when the school is taking on added impetus, owing to its new buildings, and a wider and deeper interest. It comes, also, during a period when Chicago is becoming better recognised as a centre of medical learning. And, again, it comes while we still have with us one whose name it is an honour to perpetuate, one of whom we are honestly proud, one who has accomplished much in the advancement of medical science, and whose work is still vigorous. A few more such endowments given to our medical schools would place them still higher in the scale of utility; but such gifts, unfortunately, are few and far between; at least this has been the experience in the past in the endowment of medical institutions; indeed, it is a deplorable feature of public philanthropy, which there has been no little argument and effort to correct.

Professor Nicholas Senn is soon to become engaged in the preparation of another considerable literary work. This time on the general subject of "Tumours." Dr. Senn's method in this effort will differ somewhat from that followed on previous occasions; in other words, he hies himself away, with paper and pencil, and while on his voyage by land and sea he proposes to devote exactly four hours out of each twenty-four to the literary exercise of writing a book. He allows himself four months' time for its completion. This is somewhat a novelty in point of medical writing, though followed out by many general literary men. It appears to deserve imitation, since the results of literary effort in medicine will be more satisfactory when conducted along lines which separate the author from the grind of strictly professional work, and allow him a better environment, a keener energy, and a more extensive thought—elements of much value in this scientific period.

CORRESPONDENCE.

MR. GIBSON BOWLES, M.P., ON "ARMY DOCTORS."

Sir,—In what is headed as the "Medical Debate," in the House of Commons, in your report Mr. Gibson Bowles embraced the opportunity of discharging some poisoned arrows at "army doctors," a class of men it is his pleasure, with or without reason, to hold up to public ridicule and contempt in the press before he became an M.P. and now in the House, where his voice is nightly heard, and has become familiar to his fellow legislators.

In the speech to which I refer the following passage occurs: "His" (Mr. Bowles's) "third and last point was with regard to civilian medical practitioners, the cost for whom was put down at £7,600. He asked, why was this? He could perhaps suggest a reason for it, as he had some experience of army doctors—not upon his own person, but through being in places where these Surgeon-Captains, Colonels, and Generals were stationed—and his experience was that whenever the officers could find a private practitioner they did so." Mr. Campbell-Bannerman explained that the item in question was incurred not in the manner the hon. member supposed, but in payment of services rendered by private practitioners at stations where no army medical officer was posted. This, however, is not my point. I wish to refresh the memory of Mr. Gibson Bowles on a point which it appears to me if he had chanced to have it in his mind when he used the language I have quoted, would probably have had a deterring effect on his fluent tongue.

The hon. member on the occasion to which I refer "was in a place" where surgeon-captains and so on "were stationed." A case of serious illness occurred in the house of his host, in which he was deeply interested. A civilian medical practitioner in large practice was called in (since deceased). The case assumed an alarming aspect; an army doctor was called in, who diagnosed the case as one of enteric fever, which not having been done before, the common routine of sanitary precautions, disinfections and so on, had not been carried out. Fortunately the patient was saved, but the nurse, the soldier servant of the host, and one of the maid servants of the house were attacked: the two first named lost their lives, and the last escaped after a severe illness in the Southampton Infirmary. I may be allowed to add that, although numerous cases of enteric fever were treated in the great Netley Hospital, from whence the army doctor referred to came, there had never been an example of enteric fever passing from person to person; presumably, first because the army doctors there knew enteric fever when they saw it, and so knowing, took the needful sanitary measures to prevent the propagation of the disease.

One word as to the alleged invariable calling in of "civilian practitioners" by officers for themselves and their families. I assert, with more knowledge on this matter than the hon. member can with truth claim, that this practice was, up to the time of the abolition of the regimental system, almost unknown. We all know that this abolition was suddenly sprung, not only on regimental and staff officers, but on army doctors themselves, without any adequate preparation to smooth the transition from one system to another. The result, as should have been foreseen, was confusion, disgust, and dissatisfaction, not only on the part of officers and men, but on that of the Medical Staff, on whom the odium fell for all the shortcomings that instantly ensued. The unfortunate army doctors, suddenly permanently detached from their regiments, were hurried from "post to pillar"—here to-day, gone to-morrow. Disgusted with having repeated changes of doctors for themselves and their families, officers naturally turned to the nearest "civilian practitioner," who might be expected to see the patient from the beginning to the end of the illness. The writer of this letter can recall having it from the lips of officers and men, that they have had, at the time in question, "ten different doctors in attendance in the space of one month."

Under cover of his interest in a mythical apothecary "friend," Mr. Gibson Bowles had his sneer, rewarded by what he aimed at—a "laugh" at captain and colonel and general surgeons. Perhaps by the time the Secretary for War presents his next military estimates, the hon. member, among other lessons in military medical matters, may have learned that the compound titles were not medical inventions, and will direct his sneers, not at the bearers of the said titles, but at those who were their inventors, and will be able to recognise that they are intended to symbolise the substantive rank which the altered conditions of military medical service have rendered necessary for the effective discharge of the various duties now imposed on the Medical Staff of the army.

As Mr. Gibson Bowles has made his attack openly in his own person, in his place in Parliament, I cannot be guilty of replying under the shelter of a pseudonym.—I am, etc.,

W. C. Maclean, M.D.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS, ENGLAND, AND THE ISSUE OF THE VOTING PAPERS.

Sir,—It was stated at the meeting of the Fellows of the College on July 8th, that the proposed alteration in Clauses 5 and 6, Section iv, of the by-laws, by which provision is made for sending a voting paper to each Fellow of the College in the United Kingdom, was the result of a spontaneous act on the part of the Council, and the Fellows present were asked to congratulate the Council on having spontaneously introduced the improvement. Mr. Holmes, however, pointed out that, so far as his memory served, the alteration now adopted by the Council was urged upon the Council by the Association of Fellows. But the President on being appealed to by Mr. Holmes, stated that his impression was that the Council had acted spontaneously in the matter. To what extent, however, Mr. Holmes is right and Mr. Hulke wrong, your readers may be able to judge from the following items culled from the minute book of the Association of Fellows:—

At the meeting of the deputation of the Committee of the

Association with the Committee of the Council of the College on October 30th, 1890, one of the special points urged upon the Council was:—

That the Council be requested (*a*) to send out the voting papers for the election of members of Council, unasked, to every Fellow whose address is known at the same time as the names of the candidates are issued, instead of requiring Fellows who wish to vote by voting papers to make a request ten days before the election for a voting paper to be sent; (*b*) to allow voting papers properly signed and witnessed to be received at the College up to the date of election, instead of requiring them to be sent in at least forty-eight hours previously.

So much for the suggestion of the Association. Now for the reply of the Council. In a letter received from the Secretary of the College on November 14th, 1890, the committee was informed that on the previous day the Council, as the result of the suggestions of the deputation, adopted the following resolution:

That a committee be appointed to consider and report to the Council on the rules relating to voting papers for the election to the Council.

All this, it will be noted, took place four years ago, and it is only now that the Council has seen fit to recommend the alteration in the by-law which the Association of Fellows had suggested. This matter is one of much moment, and in common justice, I think, the correction should be made.—I am, etc.,

H. PERCY DUNN,
July 10th. Hon. Sec. Association of Fellows.

THE PROPOSED REGISTRATION OF MIDWIVES.

SIR,—A number of practitioners having asked me to condense my views upon the proposed formation of an inferior order of midwifery practitioners, I may say that my aims are:

1. To oppose any proposed legislation for the so-called registration of midwives, and so prevent the repeal of the Educational Sections of the Medical Act, 1886.

2. To supply all pregnant women—rich and poor alike—with fully educated and fully qualified medical practitioners, during their confinements.

3. To give our adherence to, and our assistance in carrying out, the rule made by the General Medical Council at its May session, 1894, regarding the legal granting of certificates.

4. Not to interfere with the present midwives, but to insist that no more midwives be created.

5. To improve the education of obstetric nurses, and, if need be, to support a reasonable scheme for their registration, under the charter granted to the Royal British Nurses' Association.

6. To insist that such obstetric nurses are educated as nurses only, and certified to act as obstetric nurses only: not granting them any power to attend on their sole responsibility even so-called natural labours, or to prescribe for or treat any illness in the mothers or infants.

7. To introduce in all lying-in hospitals the system in force at the lying-in hospitals at Newcastle and Oxford, where district medical officers are appointed and paid a yearly salary of from £70 to £40, along with a fee of 10s. 6d. per confinement; and where a district nurse is appointed to nurse the confined women and infants.

8. To see that the Poor-law infirmaries are opened for the clinical instruction of fifth-year students in practical midwifery, and that the certificates of such attendances are not refused by the medical examining bodies.

9. To call the attention of the Local Government Board in England to the order of the Poor-law Commissioners, issued December 8th, 1847, to Articles 182 and 183 of that order, which provides for the payment of a midwifery fee of from 10s. to 40s. to workhouse and district medical officers; and to see that Poor-law guardians do not insist on contracting their their medical officers out of Articles 182 and 183.

10. To re-establish the apprenticeship system, as recommended by the General Medical Council in June, 1890, and to suggest that general medical practitioners have, as their apprentices or pupils in midwifery for six months, one fifth-year medical student, who would pay pupilage fees, so teaching him practical midwifery; and that each district medical officer to a lying-in hospital or to the Poor-law Service have only one such pupil, and for six months only.

11. To petition the General Medical Council to withdraw their Recommendation No. 18 to the medical examining bodies, to the effect that students be admitted to their final examination if they present a certificate showing they have "personally conducted" only three labours; but for the General Medical Council to recommend that each student must present a certificate from a medical practitioner certifying that the student has personally conducted at least thirty labours under his immediate supervision.

12. To petition the General Medical Council to exercise its statutory powers by recommending that the entrance and the first and second medical examinations be made more stringent, so that those students who fail to pass their examinations may not become unqualified assistants, or go to swell the class of unqualified persons who practise medicine.

13. That the medical practitioners in each town form themselves into a society, so that they may give practical effect to the above aims, each giving a donation of five shillings to provide for expenses therewith.

If the above proposals were carried into effect they would benefit the public and enhance the position and dignity of our profession. The above aims are amplified in my pamphlet on the *Proposed Formation of an Inferior Order of Midwifery Practitioners*, published by Messrs. Gibbons and Co., Ranelagh Street, Liverpool, price 1s. nett.—I am, etc.,

Liverpool, July 9th. ROBERT R. RENTOUL.

THYROID TABLOIDS IN OBESITY.

SIR,—The report of six cases of obesity treated by Mr. Yorke-Davies by diet (not given) and tabloids prepared by Burroughs and Wellcome is instructive. As to the efficacy of the latter expedient, I would suggest that the marvellous power attributed to thyroid extract in the cure of so many different diseases can most easily be accounted for by our ignorance of the nature and mode of action of the remedy: "*omne ignotum pro magnifico*" is an old and true saying, and of all errors those of observation are the commonest. The reckless administration of thyroid in the absence of well-attested results is open to grave objection. Its use in Mr. Yorke-Davies's hands appears not to have been attended with serious consequences. In the treatment of myxœdema I submit that it is in this connection that its use has been controlled by several competent observers, and very serious results have been recorded.[1] Two patients died.[2] Dr. Lundie reports patient suddenly become breathless and livid, and appeared to be dying. Another report mentions epileptiform seizure resulted. Personally, when I tried the tabloid I felt ill and wretched to a degree; and one of my obese patients tried the drug without my knowledge, and came confessing his error, saying, "I felt horribly ill." In the face of such evidence extreme caution is needed. The tabloid treatment of obesity is well advertised in in the lay press. I venture to suggest that the only safe treatment in obesity is by diet alone. The following case is one of many, and will compare as to result favourably with Mr Yorke-Davies's cases.

A. B., May 7th, 1892, weight 15 st. 3 lbs.; June 25th, 13 st. 3 lbs.; loss in abdominal girth 5½ ins. The patient, a busy country doctor, writes: "I am now extremely well; can cycle twenty to thirty miles daily without fatigue since I became so much lighter; I no longer marvel at the power of diet alone." For some months past much discussion has been going on in several lay papers. I have never allowed my name to appear, having a strong feeling that all discussion on professional questions should be confined to the recognised medical journals. I see no reason whatever to change my views which from time to time you, Sir, have kindly permitted me to make known to the profession in your columns. I have, nevertheless, been often urged to enter into discussions appearing in daily public journals: but, though much tempted, I have resolutely refused. Tabloids of thyroid extract may be or may not be safe and harmless, but the experience of many well-known writers prove that danger may arise. Apologising for the length of my letter. I am, etc.,

W. TOWERS-SMITH.
Harley Street, W., July 8th.

[1] BRITISH MEDICAL JOURNAL, 1892, vol. ii, p. 450.
[2] *Ibid*, January 14th, 1893.

HOSPITALS FOR THE WORKING CLASSES.

SIR,—I enclose herewith a cutting from the *Birmingham Daily Post* of June 29th which those of your readers, who are interested in outdoor hospital patients, may care to note. An honorary secretary of a Sunday Service Committee tenders his resignation to mark his disapproval of the refusal of the Guest Hospital authorities to continue to treat his child after they had rendered first aid in setting a fractured arm. He considered himself entitled to hospital assistance as a working man, and especially after having rendered the institution honorary services. His post (honorary) is doubtless one requiring ability and influence, and as a doctor's fees have been paid it was evidently not assistance as a charity that was asked for.

I venture to suggest that the opinions and ideas of those of the working classes who subscribe to hospitals and kindred institutions be asked for, as to what they expect to receive, or even demand as a right (irrespective of their income) in the way of treatment when ill or injured in return for their periodic collections, information probably easily got by a circular of questions sent round, say, by the British Medical Association. Perhaps the replies would astonish a few of the well-to-do who think they subscribe to charities for the deserving poor, and possibly some of the honorary medical staff. One would also obtain a good view of who should use the hospitals from the workman's point of view.—I am, etc.,

Birmingham, July 5th. ALLAN GRAY.

TENTS AS A MEANS OF RELIEVING OVERCROWDED HOSPITAL WARDS.

SIR,—I should like to bring before the readers of the BRITISH MEDICAL JOURNAL the results of our experiments in this direction. Three years ago Dr. Hunt, Medical Officer to the Sheffield Workhouse Infirmary, having seen the extensive use of tents in the large hospitals in American cities, advised the guardians to purchase a tent for the use of our hospital patients. This summer two other tents are in use, and have given uniformly good results. We commenced by at first getting the patients out for an hour or two and allowing them to shelter in the tent when tired or cold. Now that the weather is so much warmer the tents are occupied night and day. In some cases the bedsteads are moved bodily into the tent, in others palliasses are put down, whilst in others again the patients sleep indoors but are out in the fresh air all day long. The results have been most marked. Hip-joint cases that were going down hill and losing all appetite have taken a fresh lease; phthisical patients have put on weight and improved in their general health: and many other cases have been greatly benefited. It is, as would be expected, in tuberculous and strumous patients that the most good is seen. The excitement of a change, the removal from the vitiated atmosphere of the wards, and the continuous fresh air seem to work wonders, and the method appears to us worthy of a further and more extended trial.

The best form of tent, in our opinion, is one about 18 feet by 12, marquee-shaped, and pitched on an asphalte or wooden flooring. This shaped tent allows the sides to be looped up or down according as the state of the sun or wind may require.

The advantages of being able to completely or even partly empty a ward of its inmates for a few hours are obvious, ventilation and disinfection being carried out much more thoroughly and easily. The tents are specially recommended in small overcrowded hospitals where the wards are full of phthisical and strumous patients, or in workhouse hospitals as a means of—to a small extent—brightening the lives of the many chronic and bedridden cases that are constantly found therein.—I am, etc.,

ERNEST E. WATERS, M.B., C.M.EDIN.,

July 8th. Assistant Medical Officer Sheffield Workhouse Infirmary.

A WORD IN SEASON TO BATHERS.

SIR,—I am interested in "The Art of Swimming," especially in the education of the young in this invigorating and life-saving pastime, and therefore anxious to avoid, or remove, anything that may have a deterrent effect.

In your article on "A Word in Season to Bathers," in the BRITISH MEDICAL JOURNAL of June 30th, you refer to the causes of the sudden death which "makes a strong swimmer suddenly throw up his hands and sink at once to a watery grave."

You specify, as probable causes, two views: (1) That "the accident is probably due to failure of the heart's action, perhaps the result of spasm of the cardiac muscle—'cramp' of the heart;" and (2) that "the cause of drowning is perforation of the drum of the ear by the pressure of the water, followed by vertigo and sudden unconsciousness."

But, Sir, it seems to me that when the reason of this sudden death is argued out, there is a cause still more probable, for none ever return to tell the tale.

Let us consider for a moment the state of the case. A strong, hearty, athletic, and very capable swimmer goes out to bathe, and while enjoying his swim, and when the question of exhaustion cannot even be raised, he throws up his arms in the air, utters no sound, and sinks like a stone. The question is, What has happened? My impression is, that being an experienced swimmer, he is able to take his breaths at long intervals, and sometimes completely empties his lungs before refilling them.

The next inspiration he is, therefore, compelled to take quickly, and being low in the water because of the absence of air in the lungs, a very slight splash on the surface of the water may cause even a single drop of water to be suddenly sucked in with as great force and rapidity as the suction power of a vacuum, which, causing a sudden spasm of the glottis, effectually closes the entrance of air, prevents the utterance of sound, and necessitates his sinking like a stone, which is facilitated by the action of his arms.

If this be not the probable explanation, the facts which remain for explanation are:

1. That the accident—for an accident it seems to be—usually occurs to an experienced swimmer when the circumstances are not unfavourable.

2. That it is he alone who has learnt to breathe at long intervals; while it never occurs to an inferior swimmer, for he is incapable of so managing his respiration, and he much more readily becomes exhausted. Moreover, did it arise from "cramp" or from the ears it would occur to the novice, who often spends an equally long time in the water and under far more unfavourable circumstances.—I am, etc.,

Rugby, July 7th. CLEMENT DUKES.

CHLOROFORM ADMINISTRATION IN INDIA.

SIR,—During the debate on chloroform administration on July 3rd at the Royal Medical and Chirurgical Society Surgeon-Lieutenant-Colonel Lawrie stated that on the day on which he delivered a lecture in Madras on chloroform, or on the day before, Dr. Crawford had a death from chloroform in the General Hospital, Madras. Will you permit me to correct this statement, and to say that Surgeon-Lieutenant-Colonel Lawrie has been misinformed?

The case to which Dr. Lawrie probably refers was that of a Hindu dying from septicæmia, under the care of Surgeon-Captain Robertson. Dr. Robertson had his patient placed under chloroform in the hope of performing a slight operation with a view of giving him some relief for the short time he had live. There was much hæmorrhage, and the patient sank on the table. At the *post-mortem* examination the body was found practically bloodless. Dr. Robertson published this case with much care in the *Transactions* of the South Indian Branch of the British Medical Association, but was careful to call it a case of death *under*, not *from*, chloroform. On the occasion of Dr. Lawrie's lecture in Madras Dr. Robertson brought this case to Dr. Lawrie's notice, but I understand the latter said very little about it.

As in all Indian hospitals, so in Madras, chloroform has been always administered with uniformly good results. There is a tradition in the General Hospital, Madras, of a death from chloroform having occurred about the year 1873. It is said that two young surgeons fresh from home tried to anæsthetise a Hindu on his cot in a dark corner of the ward, and that he died in their hands, chloroform being the drug used: but I could not find any record of this case.

Such is the record of chloroform in that hospital, where it is administered some 2,000 times annually. It is administered by fully qualified assistants, the principles of Syme and Howard, New York, being adhered to. The pulse is, of course, felt now and again if the operation is prolonged, or if

there has been serious hæmorrhage. The chloroformist never dreams of discussing current topics, or the pictures on the walls, or the details of the operation, with anyone. He studies his patients alone—therein only is safety. The chloroformist is regarded as "the man at the wheel," with whom it is forbidden to converse.—I am, etc.,

JOHN SMYTH, M.D.,
Surgeon-Major.

East India United Service Club, St. James's Square, S.W., July 10th.

VACCINATION AND DEMOCRACY.

SIR,—I hear through a correspondent at Chicago that small-pox is rife in that city at the present time, and that vaccination is being enforced by the municipal authorities with such rigour that "everyone who is not vaccinated will be fined 25 dollars." Whatever faults may be found with democratic governments, that of squeamishness in the presence of danger is not to be laid to their charge; nor is there to be seen any of the truckling to the clamour of a few fanatics that marks the action of our statesmen in this matter of compulsory vaccination.—I am, etc.,

HENRY TAYLOR.

Guildford, June 27th.

TEMPERANCE BREAKFAST AT BRISTOL.

SIR,—Will you allow me to inform your readers that the National Temperance League has arranged for a breakfast to members of the British Medical Association at Bristol on Thursday, August 2nd, under the presidency of Dr. E. Long Fox, and that I shall be glad to hear from members of the Association who wish to be present?—I am, etc.,

ROBERT RAE,
Secretary.

33, Paternoster Row, E.C., July 7th.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

ASSISTANT-SURGEON HENRY STAPLETON EDWARDES, M.D., late of the Royal Navy, died at Alexandra on June 15th, aged 68 years.

Mr. W. H. LONGHEAD, M.B., has been appointed Surgeon and Agent at Donnanook and N. Cotes, July 4th.

ARMY MEDICAL RESERVE.

SURGEON-CAPTAIN ANDREW K. RICKARDS, having resigned his Volunteer appointment, ceases to be an officer of the Army Medical Reserve, July 11th.

MILITIA MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL W. K. CURTIS, 3rd Battalion the Buffs (East Kent Regiment), formerly the East Kent Militia, has resigned his commission, with permission to retain his rank and uniform, July 7th.

Surgeon-Lieutenant-Colonel J. PARKES, 3rd and 4th Battalions the Lancashire Fusiliers (late the 7th Royal Lancashire Militia), has also resigned his commission, retaining his rank and uniform, June 18th.

THE VOLUNTEERS.

THE undermentioned gentlemen are appointed Surgeon-Lieutenants to the Corps specified, dated July 7th: WILLIAM M'CLELLAND, M.B., 8th Lancashire Artillery; WILLIAM EDWARD RAMSDEN WOOD, M.D., 1st Volunteer Battalion the Cheshire Regiment; WILLIAM MURDOCH, M.D., 3rd (Dumfries) Volunteer Battalion the King's Own Scottish Borderers.

Honorary-Assistant Surgeon E. NASON, 3rd Volunteer Battalion the Devonshire Regiment, has resigned his commission, which was dated November 4th, 1870.

The Volunteer Officers' Decorations has been conferred upon Surgeon-Lieutenant-Colonel ROBERT F. COOK, M.B., 1st Newcastle-on-Tyne Engineers, Fortress and Railway Forces, Royal Engineers; and upon Surgeon-Lieutenant-Colonel THOMAS JOYCE, 2nd (the Weald of Kent) Volunteer Battalion the Buffs (East Kent Regiment).

Surgeon-Captain A. C. KEEP, M.D., 2nd Volunteer Battalion the Worcestershire Regiment (late the 2nd Worcestershire), has resigned his commission, July 11th.

Surgeon-Captain W. J. STOTT, 2nd Volunteer Battalion the East Lancashire Regiment (late the 3rd Lancashire), has also resigned his commission, with permission to retain his rank and uniform, July 11th.

Surgeon-Lieutenant J. MALPAS, 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment (late the 3rd Hampshire), is promoted to be Surgeon-Captain, July 11th.

Surgeon-Captain W. STUART PALM, M.B., from the 6th (Fifeshire) Volunteer Battalion the Royal Highlanders, is appointed Surgeon-Captain to the 1st Fifeshire Light Horse, July 11th.

Surgeon-Captain J. B. OLIVER, 6th Lancashire Artillery, is promoted to be Surgeon-Major, July 11th.

Mr. WALTER EVELYN JAMES is appointed Surgeon-Lieutenant to the 1st Monmouthshire Artillery, July 11th.

VOLUNTEER MEDICAL STAFF CORPS.

SURGEON-LIEUTENANTS J. M'GREGOR ROBERTSON, M.B., W. F. SOMERVILLE, M.D., and A. MOYES, M.B., of the Glasgow Companies, are promoted to be Surgeon-Captains, July 11th.

MILITARY NOTES.

IT is not generally known that in June Captain Norton put a question to the Secretary of State for War on the disposition of administrative medical officers at Colchester, the headquarters of the Eastern District, and at the headquarters of the Home District. Mr. Campbell-Bannerman's reply to Captain Norton was in effect as follows:

"There are not at present two medical officers of surgeon-colonel's rank serving in the Home District, though there recently were; but a surgeon-major-general now occupies a surgeon-colonel's position at Colchester. The reasons for this inconvenient arrangement are (1) that surgeon-major-generals necessarily serve but a few years in that rank, and (2) that the Indian Government will not receive an administrative medical officer who has not two years to serve. The result has been that for some months past there has been an excess of one surgeon-major-general at home and a deficiency of one in India. The arrangement is not without precedent, but it is obviously inconvenient, and I have it under consideration in what way a remedy can be applied."

This statement on the part of the Secretary of State for War being of importance to the Army Medical Staff, and not having been reported in any paper, we have been at some trouble to obtain and reproduce it in our columns.

It seems clear that some scheme of extending the age for retirement of surgeon-major-generals is under consideration. We have already stated what its effect is likely to be if carried out.

The probable rearrangement of the medical department under the army corps scheme in India may be given in the following tabular system for the Madras corps:

Present Disposition.

P.M.O. Troops: Surg.-Maj.-Gen. A.M.S.

Presidency.	Bangalore and Belgaum District.	Secunderabad and Hyderabad District.	Rangoon.	Mandalay.
Surg.-Col. A.M.S.	Surg.-Col. A.M.S.	Surg.-Col. I.M.S.	Surg.-Col. I.M.S.	Surg.-Col. I.M.S.

Proposed Scheme.

P.M.O. Troops: Surg.-Maj.-Gen. I.M.S.

Presidency.	Bangalore and Belgaum District.	Secunderabad and Hyderabad District.	Rangoon.	Mandalay.
Surg.-Col. I.M.S.	Surg.-Col. I.M.S.	Surg.-Col. I.M.S.	Surg.-Col. I.M.S.	Surg.-Col. I.M.S.

The Hyderabad contingent will have a brigade-surgeon-lieutenant-colonel I.M.S., drawing, probably, Rs. 250, extra for charge. The Chin Hills Command (Burmah) may go to an A.M.S. officer, who will very likely get no extra allowance. The Headquarters Southern District may be located at Wellington.

SUBSTANTIVE RANK.

THE extract on the subject of the substantive military rank of army medical officers from the BRITISH MEDICAL JOURNAL, which we publish, shows, says the *Broad Arrow*, how sensitive members of the medical profession are with regard to their military status, and there can be no doubt that the Commander-in-Chief in India has taken a right view of the matter specially referred to in the above-mentioned extract. Clearly the adjutant was in the wrong and his excuse frivolous, for the surgeon-major was his senior officer in the performance of duty, and the fact of the scene being the regimental parade ground was an incident of no significance. The adjutant in question must either have intended a deliberate slight to the medical officer—in which case he was sadly wanting in tact, and his action clearly not calculated to raise the tone of his own branch of the service—or he was wofully ignorant of his duty to a senior officer. We can scarcely believe that such an incident would have occurred in the old days.

FROM ONE LEARN ALL writes: The refusal of an adjutant to salute a surgeon-major, or call the men to attention at a health inspection, once for all proves how unsatisfactory the position of medical officers is. The occurrence took place more than a year ago, and the ruling of the Commander-in-Chief in India was in the particular case, and probably only published at the station where the event happened; indeed, it is likely that general publicity has only now been given to it in your columns. Why are military regulations so indefinite on these matters that a ruling is necessary? Simply because "military advisers," being the framers of the regulations, take care that the public shall be kept in the dark as to the military position of departmental officers. For instance, guards turn out to combatant officers of the rank of major-general, but medical officers of that rank only receive a field officer's salute. The rank is not recognised. So in many other points.

*** There is much to favour our correspondent's suggestion that the regulations are kept purposely indefinite on the subject of recognition

of the military status of medical officers; there can hardly be any other explanation.

USES FOR CHELSEA HOSPITAL.

A CORRESPONDENT writes: It has lately been pointed out that there is great waste in keeping up Chelsea Hospital as an asylum for old soldiers, who could be much better provided for by a system of out-pensions. Could not such a magnificent pile be used to replace Netley, as a hospital and medical school, somewhat after the pattern of the Val de Grâce at Paris? It could be fitted up for at least 600 beds, and there are ample detached outbuildings for all purposes. The chief military hospital could thus be brought into direct touch with the London hospitals and centres of medical teaching. Specialists could lecture, and post-graduate courses for army medical officers be organised. The sanitary and statistical work at present done at headquarters could be transferred here as a scientific centre; ambulance instruction might be given to volunteers, etc. The splendid library and museum, now practically buried at Netley, would be freely accessible, and the hospital become a real Alma Mater for army medical officers. Its use as a hospital could easily be made freely accessible for the reception and disposal of sick and invalids. The sketch here given may appear somewhat Utopian, but it is nevertheless very possible and desirable.

***Admitting that the proposed uses to which our correspondent would put Chelsea Hospital are in themselves desirable, we suspect nothing short of an Act of Parliament could divert the benefaction from its present uses, and such legislation is very unlikely to be compassed.

THE FOREIGN ROSTER.

A CORRESPONDENT writes: Discontent exists among surgeon-captains who are now approaching their second term of foreign service, owing to the long home service of surgeon-lieutenants. The former were ordered abroad at from three to twelve months' service, but now over forty juniors with one year's service are at home. With so short time at home surgeon-captains find it hard to prepare for the difficult examination for promotion.

***It is doubtless somewhat hard on the existing race of surgeon-captains. Yet the rule of not hurrying young surgeon-lieutenants out to India is a wise and humane one from a sanitary point of view.

MARRIED MEDICAL OFFICERS.

AN UNMARRIED OFFICER, in referring to "Cassandra's" wail over the junior officers in India, and the difficulties principal medical officers have with them, asks why should this be? Are not all paid equally, and equally liable for all services according to rank? Are not rosters of duties kept and officers detailed accordingly? Is there anything in the regulations favouring married officers in regard to duties? If not, to speak mildly, it is rather hard on unmarried officers (who have to certify they are such on entrance) to be put to extra expense to save married officers from being moved. One can read between the lines. I could offer some suggestions on the point, but it might be considered presumptuous coming from a bachelor.

***Our correspondent's questions are unanswerable, and his position unassailable—from a strictly regulation point of view. Yet he would no doubt admit that, when the female element comes in, even the strictest regulations has to be read between the lines. That is so. Principal medical officers are but human, and we fear even the sternest of their experiences qualms in dealing with his married juniors. All the same we admit the hardship to the unmarried.

FIELD MEDICAL TRANSPORT.

ONCE BITTEN, TWICE SHY writes: The Army Service Corps being now a combatant corps, cannot on any show of reason provide transports for field hospitals and bearer companies. It cannot be combatant one day and under the Geneva Convention the next. Besides, we are not likely to forget what happened during a comparatively recent campaign, where the medical field transport detailed "on paper" was unceremoniously diverted to other functions by a certain great general. Such will assuredly happen again, unless the medical has its own non-combatant transport not eligible for combatant duties.

***When the question was first raised, the War Minister, on the authority of his military advisers, spoke quite confidently of the eligibility of the Army Service Corps to act in the field under the Geneva Cross. We greatly doubt whether this view would be endorsed by foreign military authorities, and we notice his latest utterances in the House of Commons on the subject are not quite so confident. The case may be stated thus: If hospital field transport can be, as cited by our correspondent, suddenly diverted to bring up warlike stores to the front, how can it reasonably claim or receive the protection (such as it is) of the Red Cross? Such disregard of the spirit of the Geneva Convention as this shuffling of transport implies is unquestionably fraught with danger to our wounded, and might easily lead to reprisals. What the medical service wants is its own non-combatant transport in the field, which must be labelled "strictly non-transferable."

UNIVERSITY OF WARSAW.—On June 20th the University of Warsaw celebrated the twenty-fifth anniversary of its foundation. It was in 1869 that the then existing "High School" and the Medico-Chirurgical Academy were amalgamated into a university with four faculties. By the end of 1869 the number of students was over 1,000.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE HARNESS CASE.

IN the High Court of Justice (Queen's Bench Division), before Mr. Justice Charles and a special jury, Brasyer *v.* Harness and Another has lasted since July 2nd. It was concluded on July 10th. Jeremiah Brasyer, the plaintiff, a retired colonel in Her Majesty's army, sued the defendant, Cornelius Bennett Harness, the manager of the Medical Battery Company, and James Montgomery M'Cully, a surgeon, to recover damages for alleged negligence and fraudulent misrepresentation in connection with their advertised cures by electrical process. After hearing the evidence the jury found that Dr. M'Cully made no misrepresentations in order to induce Colonel Brasyer to part with his money, and that neither he nor Mr. Harness had been negligent in treating Colonel Brasyer. Upon the question whether Mr. Harness had made such representations, and upon the claims lodged for Mr. Harness and Dr. M'Cully for damages for malicious prosecution they were unable to agree. Judgment was given for Dr. M'Cully on Colonel Brasyer's claim. The judge will probably be asked to hear further arguments in the case.

UNQUALIFIED ASSISTANTS AND THE QUESTION OF COVERING.

WE are informed that an inquiry under this heading from "Young Practitioner" is attributed to Dr. G. McM. Brown, of Tunstall. This attribution is quite incorrect.

WHOLESALE CHEMISTS AND UNQUALIFIED MEDICAL PRACTITIONERS.

A. B. writes: A certain person, describing himself as a surgeon although he holds no qualification whatever, is supplied with drugs, including poisons, from a firm of wholesale chemists. The hampers come labelled So-and-so, Surgeon, address. Cannot the Pharmaceutical Society prosecute for the sale of poisons to an unqualified person?

***According to the description given of the circumstances a breach of the law appears to have been committed. Though the sale of poiso "in the ordinary course of wholesale dealing" may be lawfully carried on by persons who are not qualified under the Act, the busine s wholesale dealers in supplying poisons—whether they are qualified or not under the Act—is regulated by the provisions of the 17th ction. The provisions of that section as to labelling must be observed every instance in wholesale as well as retail transactions, and any pe n infringing the law in that respect would be liable to a penalty of £5 for first offence, and £10 for a subsequent offence. The further provisions o the same section as to personal knowledge of the purchaser and the registration of sales do not apply to "sales by wholesale to retail dealers in the ordinary course of wholesale dealing." The terms in which this exemption of sales by wholesale dealers is expressed are very important, on account of their clear definition of the scope of the exemption. The only lawful retail dealers in poisons are registered chemists and druggists, and "sales by wholesale" to such persons alone are the only kind of sales that would come within the limitation expressed by the precise terms in which the 17th section defines in that respect "the ordinary course of wholesale dealing." In the supply of poisons by wholesale dealers to persons who are not qualified under the Act to retail poison, all the provisions of the 17th section as to labelling, knowledge of purchaser, and registration of sale must be observed in the same manner as in retail sales. Neglect of those provisions would involve liability to the penalties, and the police authorities or any private individual can take proceedings against offenders. It is not the special duty of the Pharmaceutical Society to enforce the Act under the 17th section, but such action on the part of the Society might be desirable, and we would suggest that our correspondent should communicate to the Registrar and Secretary full particulars of the case referred to, in order that they may be considered by the Council.

CHANGE OF ADDRESS.

IF M.D. had been an observant reader of the answers recorded in the Medico-Ethical column of the BRITISH MEDICAL JOURNAL, he might have seen recently, and on several previous occasions, our reply to a question analogous to that he asks: "When impracticable to notify personally the change of residence, the most unexceptionable mode is to transmit an autograph note, or a *facsimile* thereof on note paper, to the *bonâ fide* patients of the newly-located practitioner; or to address an ordinary address card with 'Change of Address' inserted at the top, the old address in the lower right corner being defaced by a black line, and the new one engraved in the left corner, or *vice-versâ*."

WHO IS RESPONSIBLE?

A YOUNG MEMBER OF THE BRITISH MEDICAL ASSOCIATION.—We altogether sympathise with our correspondent, and strongly deprecate the character of the advertisement enclosed. It is just possible that the medical man may be unaware of the issue of these cards, and if so, he cannot for his reputation's sake be too soon informed of it. At the same time, we are compelled to confess that we never heard of the London and Manchester Industrial Insurance Company adopting so questionable a procedure. We think, at any rate, notice of these cards should be given to that company, and by the action they take in the matter it would be possible to see whether this company is merely an ordinary medical aid society, or a more reputable associa-

tion carrying on a *bonâ-fide* assurance business among the working classes. We have always supposed it to belong to the latter class, and although we have occasionally heard complaints about the "touting" practised by its agents, which we have always promptly condemned, we have never heard of so organised a system of "touting" as would seem to be implied by the issue of such cards as these; and we are quite sure that no medical man who has the least respect for his professional reputation can allow his name to be associated with such practices.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.

THE MEDICAL PROFESSION AND THE NOTICE OF ACCIDENTS BILL.

Lord PLAYFAIR moved that the report of the amendments to the Notice of Accidents Bill be received by their lordships, this being more or less a formal stage of the measure.

Lord ASHBOURNE said he had a small amendment to the first subsection of Clause 3. The certifying surgeons who there performed a very important and useful office desired to have their status and usefulness recognised more in the Bill. Their wishes in this direction were discussed in the Standing Committee, but he believed the noble lord in charge of the Bill did not see his way to put in any amendment. He did not propose to go over the ground again for accepting the amendment which he now moved, but would suggest that while it possibly did not add to the efficacy of the Bill to recognise in a direct and express way the status and position of these surgeons and also of the medical profession generally, such a recognition could not in any way detract from the usefulness of the Bill. The way the clause read at present was as follows: "The Board may appoint competent persons to hold an investigation and may appoint a person possessing legal or special knowledge to act as assessor upon such investigation." It was possibly that that would enable medical or other experts to act as well as lawyers, but as lawyers were mentioned he did not think it could do harm to mention the medical profession as well, and he accordingly moved the addition of words so as to include the members of such profession. He hoped the amendment would be accepted.

Lord PLAYFAIR: There is no objection on the part of the Government to the amendment the noble lord has proposed.

The amendment was accepted, and the motion of Lord Playfair to receive the report of amendments was adopted.

Prevention of Rabies.—The EARL OF ROSSE proposes to call attention in the House of Lords shortly to the question of rabies in dogs, and to ask the Government whether they are not of opinion that the conferring upon a Government Department powers for ordering the muzzling of dogs which are for the present vested in the local authorities only is desirable with the view of stamping out canine rabies.

HOUSE OF COMMONS.

Food Adulteration.—The Select Committee of the House of Commons on the adulteration of food products met again on July 5th, Mr. H. GARDNER in the chair. Mr. PRESTON THOMAS gave further evidence. In the report of Tuesday's evidence, Mr. Thomas was represented as having recommended the adoption of a statutory standard for milk. The fact is that though he enumerated to the Local Government Board certain suggestions to that effect for the amendment of the Sale of Food and Drugs Act, he declined to express an opinion as to whether statutory standards ought or ought not to be adopted, that being a matter for the Committee itself to determine. He pointed out, however, the difficulty as regards milk of fixing on a standard that would not, if high, condemn much genuine milk, or, if low enough to include all genuine milk, would not be so low as to admit of the addition of a considerable amount of water to the product of the average cow. Questioned as to the adulteration of cheese, witness stated that out of 330 examples examined 12 were reported, chiefly because they showed the presence of skimmed milk. Witness quoted the opinions of several medical and scientific men condemning the use of condensed milk for infants on the ground that it was made from skimmed milk. The Committee met again on Wednesday, Sir WALTER FOSTER, Parliamentary Secretary of the Local Government Board, presiding. Dr. RICHARD BANNISTER, Government analyst at Somerset House, said that his department received samples of food products from all over the country. Last year they received from the Customs Department 2,137 samples for examination. Those included 73 from the Admiralty, 557 from the Board of Trade, 707 from the India Office, 143 from the Post Office, 43 from the Home Office, 18 from the War Department, 80 from the Admiralty, 10 from the Stationery Office, 38 from the Office of Works, 2 from the Colonial Office, 71 references from magistrates under the Food and Drugs Act (1871), and 15 parochial samples. From the Inland Revenue Department they received 12,083 samples of tobacco, 9,102 samples of beer for drawback, 1,621 beer duty samples, 2,820 samples of beer from public-houses, 5,775 samples of tinctures, 773 samples of naphtha, and 5,392 miscellaneous samples. From 1875 down to March 31st, 1891, 678 analyses by public analysts were submitted to his department, with the result that in 474 cases the analysis was confirmed, in 188 cases the analysis was disagreed from. In the case of the milk analysis the disagreement, when it occurred, was rather a matter of interpretation of the results than of actual mistakes. It was practically impossible from the sample to tell whether the milk was adulterated milk or merely poor milk. The process of analysis used at Somerset House was that known as the "modernised process." Different methods of analysis gave different results, and even different operations with the same method brought out different results. The magistrate, in arriving at a decision, ought to take into account the method of analysis adopted. During the last few years his department had been making experiments as to the solids in milk. They had obtained specimens of milk from different parts of the country and at different times of the year, and they also obtained particulars of the feeding of cows. They had 273 cases of undiluted cow's milk, and also specimens of milk from 55 churns. Of the former specimens, the lowest percentage of non-fatty solids was 7.52, and the highest 10.01, giving an average of 8.90. The lowest percentage of fats was 2.42, and the highest 5.97, giving an average of 3.29. From the churns the lowest percentage of non-fatty solids was 8.40, and the highest 9.70, giving an average of 8.96. The lowest percentage of fats was 2.89, and the highest 5.61, giving an average of 4.00. The difficulty of fixing a limit was occasioned by the provisions of the Food and Drugs Act, which laid down that a milk, however poor it might be, must be regarded as genuine if nothing had been added to it and nothing had been taken away from it. Of a large quantity of milk sold in towns, Somerset House could not trace the place of production; and where milk, without a warranty, fell below a certain standard the burden should be thrown on the person concerned of proving to the satisfaction of the Court that water had not been added to the milk. His department were suspicious of the introduction of water when the percentage of solids was as low as 8.5 per cent. A recent and dangerous practice that had grown up was to adulterate milk by the addition of separated milk to new milk. The practice of adulterating butter by an excessive addition of water also existed. This was especially the case in respect to Irish butters. There was as yet no judicial decision as to the amount of water permissible in butter. Butter adulterated with margarine came chiefly from Holland. Between 1884 and 1893, of 17,604 samples of beer examined, 3,720 were found to be adulterated. The adulterants were water only, sugar only, or water and sugar together.—Examined by Sir CHARLES CAMERON, WITNESS said that the vinegar makers had taken advantage of the extended liberty given to the brewers, who at one time were allowed to brew from malt only, and who now could use saccharine matter. "White vinegar" was almost come only in some countries was only acetic acid and water. It would be very useful for any court of chemical appeal to define the words in use in commerce; but care must be taken not to fetter trade by these definitions, for trade moved faster than experts. Anyone who manufactured acetic acid for human consumption must take out a licence as a vinegar manufacturer. One stipendiary magistrate in the provinces had declared that he would not recognise the views of the *British Pharmacopœia*, which was purely malt and grain. Somerset House made no secret of the limits they adopted in their analysis.

Fever at Malta.—Mr. CAMPBELL-BANNERMAN, in answer to Sir SEYMOUR KING, said that there were in the two past winters outbreaks of enteric fever at Malta which caused together ninety-two admissions to hospital and twenty-five deaths. Inquiry into the cause led to the conclusion that drinking tank water was probably the origin of the evil. Aqueduct water was substituted for drinking purposes with good results. As to simple continued fever, the cases had been below the average number. Inquiries have been made as to the huts in use by the troops, but, according to the last sanitary report, their condition was satisfactory. There were no Crimean huts at Malta.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

THE following gentlemen have passed the Final Examination for the degrees of M.B. and C.M. (those marked with an asterisk have passed "with distinction"):

W. D. Adams, M.A.; C. H. Adamson, C. C. Aitken, C. J. H. Aitken, G. N. Alexis, *S. H. B. Allison, B.A.; J. W. Anderson, K. Y. Anderson, J. C. Atkinson, C. Ayres, B.A.; A. Balfour, T. M. Bartlett, H. Bateson, *J. M. Beattie, B.A.; *R. W. Beesley, W. Bethune, R. St. G. S. Boud, W. H. Bowie, A. Bremner, R. W. Briggs, B. W. Broad, H. R. Brown, M.A.; R. W. Bruce, A. W. H. Bryce, M. B. Burt, A. J. Campbell, *A. S. Campbell, C. S. Camtrell, O. H. Chapman, P. F. Chapman, R. M. Clark, R. Cochrane, M.A.; J. A. Coutts, W. B. Craig, M.A.; D. Macforn, R. Crichton, H. M. Crosby, A. Dall, M.A.; R. T. Davidson, T. H. C. Durham, G. A. Dickson, E. R. Dodds, E. A. W. English, T. Evans, J. H. Ewart, F. H. Fairweather, R. W. Fell, J. Fenton, P. J. H. Ferguson, J. S. Flett, M.A., B.Sc.; J. V. Forrest, *E. J. H. Fraser, S. Fraser, W. C. Fraser, *G. B. French, A. M. Geddes, A. Gibson, J. A. Gibson, *T. Gibson, M.A.; H. H. Gill, *J. R. Gilmour, J. O. Goldie, A. D. M. Grant, *L. Grant, W. Y. Grant, G. D. Gray, J. Gray, H. M. Green, J. D. Gregodson, R. Grieve, W. Haig, F. H. Hardman, J. Henderson, R. Z. Herdman, J. E. Hewlitt, A. Heys, E. R. Holmes, G. Hudson, P. T. Hughes, J. K. Jamieson, T. H. Jamieson, D. A. Johnstone, W. E. Johnstone, M.A.; J. H. Jones, T. H. Jones, B. Keighly, T. B. Kennedy, A. E. Keid, D. F. Laidlaw, G. C. Lang, J. A. Laing, J. Lawrie, R. E. Legat, G. F. Leicester, W. Leslie, J. M. Lincoln, *T. G. Lusk, D. G. MacArthur, A. J. Macdougall, C. J. R. MacFadden, J. A. Macfarlane, A. J. M'Ilroy, J. Maciver, M. M'Larty, J. F. Macphail, M.A.; J. F. Macpherson, *J. D. Macrae, C. M'Vicar, M.A.; W. Mailor, H. B. Mapleton, B.A.; H. H. Marshall, W. R. Marshall, F. O. N. Mill, J. M. Menzies, A. Mitchell, A. Mitchell, K. W. Monserrat, E. C. Moore, R. O. Morris, M.A.; R. S. Mowat, J. R. Muir, H. V. Munster, G. A. Murray, T. M. Mair, J. Nicolson, F. R. Oliphant, D. Orr, C. W. Owen, A. A. Palmer, R. Parkhurst, J. A. Parsons, G. W. S. Paterson, T. B. Pearson, T. C. Penfold, A. P. Percival, J. M. Pereird, T. Pettey, C. E. Potter, D. R. Price, A. M. M. Pringle, F. G. Proudfoot, M.A.; E. de C. Prout, P. M. Ragg, A. Reid, W. Riach, J. K. Richards, A. Richardson, W. H. Robertson, A. Rodger, L. Rose, M.A.; H. Ross, G. H. R. Harrison, J. M. Rutherford, J. Scott, T. M. Scott, P. J. Sharp, G. Shaw, T. D. S. Shaw, T. R. S. Sibbald, C. M. Simpson, S.S. Skinner, B.A.; P. D. Smith, R. W. I. Smith, T. Smith, W. E. Smith, A. M. Stafford, J. G. Standing, *W. A. Stephen, M.A.; M. B. Stouart, H. Steven, W. L. Stevenson, *J. P. Stewart, M.A.; *W. S. Strapp, J. Struthers, F. W. Taylor, W. S. S. Titterton, M. L. M. Vaudin, G. D. Waal, S. S. H. Walker, J. W. T. Walker, F. T. Walmsley, F. Ward, J. Watson, E. C. Watts, E. T. Whitaker, A. Whytt, E. D. Williams, J. M. Wishart, J. J. N. Wood, H. M. Woodhead, R. J. T. Wright, M.A.; G. P. Yule.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

The following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on Thursday, July 5th:

Passed in Anatomy and Physiology.—E. Evans, B. B. Gough, J. Dixon, and F. W. Lee, students of Guy's Hospital; J. H. Bendle, of St. Mary's Hospital; W. J. Schuller and J. E. F. Palser, of London Hospital; W. J. Fanning, of St. Thomas's Hospital; A. H. Prichard, of University College, London; H. J. Walker, of King's College, London; S. D. T. Halliday, of Middlesex Hospital; and D. L. Beath, of St. Bartholomew's Hospital.

Passed in Anatomy only.—J. J. Haverson, of London Hospital; L. A. W. French and H. C. Jackson, of University College, London; D. Price, E. H. Scott, and F. C. Blackiston, of St. Thomas's Hospital; H. D. Peile, of Guy's Hospital; and H. W. Abbott, of Charing Cross Hospital.

Passed in Physiology only.—W. L. Burn, G. S. Haynes, W. A. Cholmeley, and Gilbert Smith, of St. Bartholomew's Hospital; A. H. Burt, of King's College, London; R. A. MacLeod, of Westminster Hospital; and H. C. Jonas, of St. Thomas's Hospital.

Thirteen gentlemen were referred in both subjects, 8 in Anatomy only, and 3 in Physiology only.

Friday, July 6th:

Passed in Anatomy and Physiology.—H. B. Durant, H. Simson, A. R. Adams, and F. C. Hitchens, of Guy's Hospital; F. F. Lobb and R. M. Richards, of St. Mary's Hospital; H. M. Cruddas and F. E. Price, of St. Bartholomew's Hospital; H. J. Phillips, of St. Thomas's Hospital; W. L. Hay and P. A. J. Maver, of King's College, London; W. Forrester, of Bengal Medical College and Mr. Cooke's School of Anatomy and Physiology; H. W. Turner, of Middlesex Hospital; W. T. Connell, of Queen's University, Kingston, Canada; H. W. Hardy and W. Johnston, of Charing Cross Hospital.

Passed in Anatomy only.—Mr. A. M. Ross, of King's College, London.

Passed in Physiology only.—S. G. Butler and E. W. Clapham, of London Hospital, and S. Roch, of St. Bartholomew's Hospital.

Sixteen gentlemen were referred in both subjects, 3 in Anatomy only, and 1 in Physiology only.

Monday, July 9th:

Passed in Anatomy and Physiology.—H. S. Bendles and R. R. Thomas, of St. Bartholomew's Hospital; A. Kinsey-Morgan, H. R. Marsh, A. J. Hull, W. A. Fuller, D. B. Todd, and H. Fulton, of Guy's Hospital; G. W. G. Jones and R. S. Osbourne, of St. Mary's Hospital; W. Brenton and W. C. Rivers, of Charing Cross Hospital; L. F. Leslie, of London Hospital; A. P. Ambrose, of Westminster Hospital; W. J. E. Davies, of St. Thomas's Hospital; A. Schadler, of Zurich, Lausanne, and Berne Universities; and A. N. McArthur, of King's College, London.

Passed in Anatomy only.—B. Holländer, of King's College, London; R. H. Hyde, of University College, London; and W. J. Humby, of Middlesex Hospital.

Passed in Physiology only.—P. C. Maillant, of Middlesex Hospital; J. H. Pigg, of Cambridge University and St. Thomas's Hospital; and A. O. Way, of St. Bartholomew's Hospital.

Eighteen gentlemen were referred in both subjects, 4 in Anatomy only, and 1 in Physiology only.

Tuesday, July 10th:

Passed in Anatomy and Physiology.—J. Sandison, of London Hospital; H. J. Weston, Evan Jones, F. Harvey, and H. C. Bennett, of St. Bartholomew's Hospital; M. Smith, of Middlesex Hospital; A. H. Carter, of Guy's Hospital; H. E. Raper, of University College, London; and M. J. Nolan, of St. Thomas's Hospital.

Passed in Anatomy only.—M. C. B. Anderson, of St. Mary's Hospital; T. J. Davies, of Middlesex Hospital; T. B. Jones, of St. Bartholomew's Hospital; J. Ponsonby, of Guy's Hospital; and H. C. Meacock, of St. Thomas's Hospital.

Passed in Physiology only.—A. L. H. Smith and R. L. Wilcock, of University College, London; B. E. Laurence, of St. Bartholomew's Hospital; R. S. Rowland and T. J. Vick, of Guy's Hospital; J. H. R. Robinson, of London Hospital; E. U. Bartholomew, of Charing Cross Hospital; E. T. Longhurst, of St. Mary's Hospital; G. L. Thornton, of Cambridge University, St. George's Hospital, and Mr. Cooke's School of Anatomy and Physiology.

Thirteen gentlemen were referred in both subjects, 9 in Anatomy only, and 5 in Physiology only.

Wednesday, July 11th:

Passed in Physiology only.—A. R. Greenwood, of Middlesex Hospital; C. A. Vertannes, of Westminster Hospital; E. M. B. Payne and G. B. Kaufmann, of London Hospital; J. A. A. Rouillard, W. B. Price, and G. D. Howlett, of St. Thomas's Hospital; C. J. Francis and E. P. Clowes, of Guy's Hospital; W. J. Richards, of St. Bartholomew's Hospital; L. S. Allen, of St. Bartholomew's Hospital, Owens College, Manchester, and Mr. Cooke's School of Anatomy and Physiology; L. E. L. Parker, of St. George's Hospital; and S. T. G. Ransford, of St. Mary's Hospital.

Two candidates were referred.

SOCIETY OF APOTHECARIES OF LONDON.

Primary Examination, Part II.—The following candidates passed in—

Anatomy and Physiology.—O. C. Andrews, Birmingham; R. L. Argles, St. Mary's Hospital; A. Arant, St. George's Hospital; W. A. Crossley, St. Bartholomew's Hospital; D. Fletcher, St. Bartholomew's Hospital; T. H. Guillaume, Charing Cross Hospital; W. Latham, Manchester; W. Lloyd, London; P. C. Maitland, Middlesex Hospital; C. J. Palmer, Liverpool; J. Ponsonby, Guy's Hospital; W. G. Silvester, Birmingham; H. J. Watts, Manchester; A. B. Whishaw, St. Thomas's Hospital; W. J. H. Williams, St. Mary's Hospital.

Anatomy.—M. A. Alabone, Guy's Hospital; W. Allen, Birmingham; W. J. Bebb, Charing Cross Hospital; A. H. Bell, Guy's Hospital; F. M. Cooper, Women's Medical College; R. F. Crawford, St. George's Hospital; A. Cubley, Sheffield; G. J. D. Davies, Leeds; F. R. Greenwood, St. Bartholomew's Hospital; A. Hay, St. Bartholomew's Hospital; F. T. Knott, Guy's Hospital; H. H. Monckton, King's College; P. A. Pierre, Westminster Hospital; G. H. Wilkinson, Birmingham.

Physiology.—A. N. Clemenger, St. George's Hospital; G. E. French, St. Bartholomew's Hospital; O. Hall, Durham; T. B. Jones, Guy's Hospital; G. H. Ormsby, Westminster Hospital; C. H. R. Provis, St. Bartholomew's Hospital; A. W. Shea, Sheffield; W. Taylor, Birmingham.

Primary Examination, Part I.—The following candidates passed in—

Chemistry, Materia Medica, and Pharmacy.—G. W. Dutton, Middlesex Hospital; F. Gartside, Manchester; H. L. Hands, Madras.

Chemistry and Materia Medica.—W. Taylor, Birmingham.

Chemistry.—T. H. Guillaume, Charing Cross Hospital.

Materia Medica and Pharmacy.—T. Christie, Liverpool; F. G. Haywood, Birmingham; A. D. B. von Rosen, City School.

OBITUARY.

WILLIAM J. LITTLE, M.D.Berlin, F.R.C.P.Lond., M.R.C.S.Eng.

Dr. William J. Little, late of Park Street, and formerly of Brook Street, Grosvenor Square, who died on July 7th at his residence, near West Malling, Kent, was born in 1810. He took his M.D. degree at Berlin in 1837, having previously qualified as M.R.C.S.Eng. and L.S.A. In 1877 he was elected F.R.C.P.Lond.

At one time he was one of the leading London specialists on deformities and diseases of children. In early life he was physician and lecturer on medicine to the London Hospital; afterwards he was physician to the Royal Orphan Asylum at Wanstead, to the Asylum for Idiots at Reigate, and to the Royal Hospital for Incurables.

Dr. Little was the founder of the Royal Orthopædic Hospital. He was a pupil of Stromeyer, and the author of a "Course Lectures on Deformities" which appeared in 1843-44; of a *Treatise on Club-foot Analogous Distortions* (1839); of a *Treatise on Ankylosis or Stiff Joint* (1843); of *Treatment of Deformities in the Human Frame* (1853); of *Spinal Weakness and Spinal Curvatures, their Early Recognition and Treatment* (1868); and of several other works connected with that branch of his profession. He was at one time an active member of the Hunterian and Pathological Societies, and of other learned societies, both at home and abroad. He retired from active work in London about fifteen years ago.

JOHN BROCKWELL, M.R.C.S., L.R.C.P.Edin.

We record with much regret the sudden death of Mr. Brockwell on June 25th, at Buxton, where he was staying for the benefit of his health. The cause of death was angina pectoris. Mr. Brockwell had not been in good health for a year past, and had suffered from acute gouty neuralgia. He had been sent at different times to Ramsgate and Bath, and had each time come back to his practice at Norwood, relieved by the rest and change. He at first derived benefit from his stay at Buxton, but after breakfast on the day of his death sank into a condition of syncope, which lasted only a few hours before it ended fatally. He was a native of Sturry, Kent; was educated at King's School, Canterbury, and at Guy's Hospital, London. He became M.R.C.S.Eng. in 1863, and L.R.C.P.Edin. in 1864. He first practised at Cleator, Cumberland, and in 1870 removed to Gipsy Hill, Upper Norwood, where he joined Dr. Allan Duke in partnership. He was genial, sympathetic, versatile, and, above all, hospitable; and these characteristics added to a wide knowledge of practical medicine, ensured his success as a practitioner. He enjoyed the regard of numberless friends, to whom his death occasioned the greatest sorrow. He was one of the surgeons to the Norwood Cottage Hospital, Medical Officer to the Upper Norwood Dispensary, the Post-office (Norwood District), Oddfellows, and Foresters; and was always interested in all local public questions which tended to the well-being of his neighbours. He married in 1865, and has left his widow and a large family to mourn their loss. At his funeral on June 29th there was a wide gathering of friends and acquaintance, and the public manifestations of sorrow at his decease were everywhere apparent.

Dr. Antonio Maria Gemma, of Brescia, who died on June 28th, was distinguished in medicine, in science, and in literature. He was a *libero docente* of dermatology and venereal diseases at Brescia. He was one of the first to point out the influence of spoilt grain in the production of pellagra, and to him is due the suggestion of arsenic as a useful agent in the treatment of that disease. He wielded a pen at once incisive and graceful, and wrote a vast number of articles on hygienic and medical subjects in the *Gazzetta Medica Lombarda*, of which he was for a long time one of the editors. He took a very active part in the preparation of the *Encyclopædia Medica*, to which he contributed many excellent articles, chiefly biographical. He was a poet of no mean order, and, following the example of Virgil in ancient, and Oliver Wendell Holmes in modern, times, used to read his own verses to the members of the Ateneo of Brescia.

Dr. Gillet de Grandmont, who has just died at the age of 57, was one of the leading ophthalmologists of Paris. He took his degree in 1864 with a thesis on the development of the mucous membrane of the uterus during pregnancy, and almost immediately devoted himself to the special line of practice in which he won distinction. Though his career was spent outside the charmed circle of academic dignity within which none dare walk but a chosen few, he held a high place in the estimation of his professional brethren. The list of his published writings includes the following among other valuable contributions to the literature of his speciality: *Ophthalmoscopic Examination in the Diagnosis of Tumours of the Encephalon* (1861); *Pilocarpine in Eye Affections* (1878); *Continuous Electric Currents applied in the Neighbourhood of the Eye* (1883); and *Two New Forms of Keratitis: Perceptometry and Chromotopsia* (1888).

Dr. Antonio Da Cruz Cordeiro, who recently died at Recife, in the province of Bahia, Brazil, was distinguished as an author as well as a physician. He was born in 1831, and studied medicine in the University of Bahia. While yet a student he published a work, *Impressoes da Epidemia* (1856), in which he gave a vivid description of the horrors of a cholera visitation. He practised at Parahyba, and wrote a number of poems and dramas which earned for him an honourable place in literature. He was also a prominent politician, having been more than once elected a member of the Provincial Assembly, where he distinguished himself as an orator.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Primo Ferrari, Professor of Dermo-syphiligraphy in the University of Catania; Dr. Langlois, Chief Physician to the Lunatic Asylum of Nancy and a distinguished neurologist; Dr. Vincenzo Chiaia, Professor of Anatomy and Minor Surgery in the University Schools of Bari; Dr. Moritz Traube, of Berlin, a younger brother of Ludwig Traube, and well known for his work in the province of medical chemistry, especially in fermentation processes, aged 68; Dr. Wiethe, one of the health officers of Vienna, and formerly assistant in the Otological Clinic of the University of that city; Dr. William L. Briggs, of Nashville, U.S.A., President of the American Surgical Association in 1885 and author of several valuable contributions to surgical literature, aged 66; Dr. William G. Austin, of New Orleans, one of the oldest and most eminent practitioners in the Southern States, aged 80; and Dr. Eugen Diminitron, formerly assistant in the Anatomo-Pathological Institute of the University of Charkoff, aged 30.

A Chemical and Pharmaceutical Congress.—The fourth Italian Congress of Chemistry and Pharmacy will be held at Naples from September 2nd to 7th. The Congress is divided into two sections: scientific and professional. In connection with the Congress there is to be an exhibition of chemical products, drugs, mineral waters, etc. All communications should be addressed to the President of the Organising Committee, Professor Arnaldo Piutti, Istituto di Chimica Farmaceutica e Tossicologica della Reale Università di Napoli.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 5,692 births and 3,223 deaths were registered during the week ending Saturday, July 7th. The annual rate of mortality in these towns, which had declined from 17.7 to 15.5 per 1,000 in the preceding six weeks, rose again to 16.1 last week. The rates in the several towns ranged from 7.9 in Croydon and 9.6 in Leicester to 20.7 in Oldham and 23.6 in Salford. In the thirty-two provincial towns the mean death-rate was 16.3 per 1,000, and exceeded by 0.5 the rate recorded in London, which was 15.8 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.4 per 1,000; in London the rate was equal to 2.6, while it averaged 2.2 per 1,000, in the thirty-two provincial towns, and was highest in Nottingham, Salford, and Wolverhampton. Measles caused a death-rate of 1.5 in Sunderland and 1.6 in Nottingham; scarlet fever of 1.2 in Wolverhampton; and whooping-cough of 1.4 in Cardiff and in Nottingham and 2.5 in Wolverhampton. The 65 deaths from diphtheria in the thirty-three towns included 43 in London, 3 in Birmingham, 3 in Sheffield, and 2 each in West Ham, Birkenhead, and Manchester. One fatal case of small-pox was registered in London, and 1 each in Liverpool, Manchester, Salford, and Halifax, but not one in any other of the thirty-three large towns. There were 109 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday, July 7th, against 204, 170, and 132 at the end of the preceding three weeks; 28 new cases were admitted during the week, against 40, 21, and 16 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,099, against 2,195, 2,153, and 2,087 at the end of the preceding three weeks; 266 new cases were admitted during the week, against 231 and 233 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, July 7th, 883 births and 454 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.6 and 19.0 per 1,000 in the preceding two weeks, declined again to 15.9 last week, and was slightly below the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 10.3 in Perth to 19.2 in Greenock. The zymotic death-rate in these towns averaged 1.9 per 1,000, the highest rates being recorded in Paisley and Greenock. The 218 deaths registered in Glasgow included 6 from scarlet fever, 5 from diphtheria, 6 from whooping cough, and 4 from "fever." Three fatal cases of small-pox were recorded in Edinburgh and 1 in Leith.

CORONER'S INQUEST AT TOTNES UNION WORKHOUSE.

We see by the *Western Guardian* that an inquest has been held at the Totnes Workhouse on the body of a female patient, advanced in years, who died two days after admission, Dr. Hains, the medical officer of the house, having refused to certify the death on the ground that the patient ought not to have been sent to the house in such a hopeless condition as she was at time of her removal to it. It appears from the evidence that this patient had been paralysed and in a helpless state for several weeks past; that she had been during this period mainly supported by neighbours; that her husband's household goods had been seized and sold the day previously; and that there was no suitable home for the unfortunate woman, who was consequently sent to the workhouse on the order of the assistant overseer, and on the recommendation of Dr. Vickers, the district medical officer. Having read the evidence given in this case, we most readily endorse the remarks made by the coroner, namely, that Dr. Vickers acted for the best, and exercised a wise discretion in recommending the removal of the patient. It may have been an unsatisfactory case for Dr. Hains, the medical officer of the workhouse, to have had thrown upon him, but it appears to us that it was his duty to accept the responsibility. We are unable to see that he had reasonable grounds for refusing to certify the cause of death, especially as by so doing he risked incriminating a brother officer whose duties in connection with the case had been far more difficult and responsible than any he had himself to perform. The remarks made by the coroner and the verdict returned by the jury, namely, that the deceased died from natural causes, must have given the greatest satisfaction to Dr. Vickers, the district medical officer.

LEITH AND ITS MEDICAL OFFICER AND SANITARY INSPECTOR.

The Subcommittee of the Leith Public Health Committee has issued a long memorandum on the squabble between its medical officer and sanitary inspector. They find several of the charges against the latter have been proved, and think he ought to be asked to send in his resignation. This (the report continues) would involve the reconstruction of the sanitary department, and the Subcommittee is of opinion that "advantage should be taken of the present crisis for the medical officer being likewise requested to send in his resignation, in order that the local authority may be free to consider anew the important question whether or not the time has now arrived when Leith ought to have a medical officer of health who shall devote his whole time to his public duties."

A NATIONAL DEPARTMENT OF PUBLIC HEALTH FOR THE UNITED STATES.

The American Medical Association has petitioned Congress to establish a department of Public Health, with a secretary who shall be a member of the Cabinet, and on a footing of equality with the heads of the departments already established. It is stipulated that the secretary of the proposed department shall be a member of the medical profession. This proposal received the approval of the Pan-American Congress held in

Washington last autumn. In its petition to Congress the American Medical Association calls attention to the fact that 521,000 deaths occurred in the United States in 1890; of this number it is estimated that about one-half were due to preventable diseases. No fewer than 100,000 of these deaths were due to consumption. Another proposal, which it is thought would have a better chance of being accepted by the Government, is made by the New York College of Medicine. This plan provides for a Commissioner of Public Health and an Advisory Council. The Commissioner shall be an expert sanitarian, appointed by the President, subject to the approval of the Senate. The Commissioner shall be the responsible head and executive officer of the bureau, and shall preside at the meetings of the Advisory Council. The latter body shall be composed of one member from each State, who shall be a medical practitioner of good repute, and who shall be appointed by the Government of the State which he represents. This proposal is strongly supported by Dr. George M. Sternberg, Surgeon-General of the United States Army. The principal objects of the Central Health Bureau, according to him, should be to extend and disseminate exact knowledge regarding sanitation, to give advice with regard to its application to special cases, to correspond with the central authorities of other countries for the purpose of learning their methods of sanitary administration and their results, and to collect and publish vital statistics.

SEWAGE-FED FISH.

AN interesting question has been raised as to the extent to which the germs of disease contained in the sewage of towns poured into our rivers may be brought back to us by sewage-fed fish caught. Certain fishes—trout, for example—avoid sewage, but many others are greatly attracted by its warmth and by its richness in microscopic forms of life. Mr. Lawrence-Hamilton, writing on this subject, says that cod, turbot, sprats, herrings, pilchards, oysters, clams, limpets, periwinkles, mussels, sea anemones, scallops, lobsters, crabs are fond of sewage-fed water in moderate amounts; whilst grey mullet, eels, tench, and carp can thrive and revel in those which are much more filth-polluted. With regard to fish proper it is always presumed that they are thoroughly cleaned and thoroughly cooked, both of which are, to say the least, mere assumptions. The softening of gelatine takes place far below boiling temperature, yet we all know often that dish of fish fails to come easily off the bones. In regard to whitebait our dependence upon the completeness of the cooking is absolute. Immature herrings, sprats, etc., called "whitebait," are always eaten whole, unbled, ungutted, and uncleaned, and, too often like other bigger fish, insufficiently cooked. "Whitebait," says Mr. Lawrence-Hamilton, "are frequently taken from about sewer outfalls."

The worst indictment, however, against the inhabitants of sewage-polluted water lies against the molluscs. Oysters, scallops, cockles, mussels, etc., are said to thrive in water which is moderately contaminated by sewage; and while oysters are habitually eaten quite raw, the others only receive such a modicum of cooking as will facilitate their removal from their shells. How far the consumption of these creatures is a common cause of disease it is impossible to say. The probabilities are that it is only under very special circumstances that they convey direct infection. Where, however, they dwell on areas subject to an occasional pollution of considerable intensity the coincidence must now and again happen of their being taken to market containing a much stronger charge of sewage than our knowledge of their ordinary life history would warrant one in expecting. Nor must one forget that the water in which they may be kept after capture, and a portion of which is swallowed along with the delectable morsel, is derived from unknown and possibly uncleanly sources: and is exposed to many chances of contamination.

SANITARY PROGRESS AT BRIGHTON.

A PUBLIC *abattoir* is a necessary adjunct to a healthy town. There are some things which can be done on the large scale in a cleanly manner and without offence, although almost always associated with sanitary evils and æsthetic annoyance when in the hands of private individuals, and of these the slaughtering of animals is a marked example. This, however, is far from being the only or the most cogent reason for the concentration of this work in a public *abattoir*. Every year we see more clearly the necessity of a careful inspection of all carcasses destined for our food supply, an inspection which is quite impossible where slaughter houses are numerous and scattered over a large area. For every reason, therefore, we congratulate Brighton on the erection of the very complete and carefully-planned *abattoir* which was opened recently by the Mayor. Dr. J. Ewart, J. P., in the presence of a large number of members and officials of the corporation. In the planning of the buildings every effort has been made to ensure efficient drainage, and avoid the possibility of either walls or floors becoming fouled, and plenty of space has been provided for future extension.

NOTIFICATION OF PHTHISIS.

PHTHISIS.—We know of no sanitary district in which phthisis is notifiable. Partial notification of this disease could be of little use even if universal notification could be of any avail.

AERIAL CONVECTION OF SMALL-POX.

M.B.S.A.—A series of valuable reports, by Mr. W. H. Power, on the influence of the Fulham Small-pox Hospital on the surrounding neighbourhood will be found in the last portion of Dr. Thorne Thorne's report, On the Use and Influence of Hospitals for Infectious Diseases, issued in 1892, and reprinted during the present year (C. 7280 of 1892); in the volumes of the Medical Officer of the Local Government Board for 1884 and 1885. An interesting paper by the same writer on the statistics of small-pox incidence round small-pox hospitals in London and in West Ham is to be found in the volume for 1886. So far as we know these constitute the main reports on the subject issued by the Local Government Board.

MEDICAL OFFICERS' CHARGES FOR SURGICAL APPLIANCES SUPPLIED TO PAUPERS.

UNION MEDICAL OFFICER would like to know if it is customary for guardians to demand manufacturers' invoices for surgical instruments, etc., supplied to paupers.

**** We are unable to say to what extent this demand of guardians is customary, but as union medical officers are not supposed to make any profit on surgical instruments or appliances supplied to paupers, we are not disposed to regard this request as unreasonable.

INDIA AND THE COLONIES.

INDIA.

HEMP DRUGS AND INSANITY.—It is a significant circumstance, says the *Times of India*, that, despite the outcry that has been raised as to the terrible effect of the consumption of hemp drugs, the lunatic asylums of the Central Provinces should have admitted only thirteen patients during last year whose condition was attributable to this cause. Neither bhang nor charas appears to have been responsible for a single case, and those for which in the tables the smoking of ganga is assigned as the cause of admission form so small a proportion of the total number of lunatics as fairly to justify the elimination of all of these preparations from the lists of causes inducing insanity. The evidence taken by the Hemp Drugs Commission will have prepared the public mind to some extent for this testimony on the part of the lunatic asylums.

SOUTH AFRICA.

THE KIMBERLEY HOSPITAL.—We have received a communication from Dr. Draper Bishop drawing attention to various anomalies in the management of the Kimberley Hospital. If he will refer to the BRITISH MEDICAL JOURNAL for June 2nd, page 1228, he will see that we have already commented on them. Into individual matters of complaint, either on the part of Dr. Bishop or the Board of Management, it is obviously impossible for us to enter without hearing both sides; it seems clear, however, that the position, not only of a house-surgeon, but of every member of the staff, must be rendered very difficult by such a system as Dr. Bishop describes. According to his account, the board has such confidence in the matron that "they pay her a lump sum of £2,000 a year to find nurses for the establishment, how many or whether capable or not is a matter of no moment to them; they decline to listen to or to entertain any complaints that nurses or the public may make, the same answer always being given, that the board leave everything in the hands of the matron." Now it is obvious enough that any hospital board which so delegates its authority, and refuses to investigate complaints against the officers or the management, seriously fails in one of its most important duties, and not only makes it difficult to provide good medical attendance for the patients, but opens the door to much tyranny and abuse. As for farming out the nursing and paying for it by a lump sum, that doubtless goes with the religious sisterhood system, which is a large subject on which we cannot now enter. Any board, however, which refuses its proper function of supervision offers a premium to the worst evils of officialism.

HOSPITAL AND DISPENSARY MANAGEMENT.

SEASIDE CONVALESCENT HOSPITAL, SEAFORD.

THIS most useful charity is, like most of our medical charities, in want of funds, about £5,000 being required to place the institution on a sound financial basis. It is doing more work than ever, but in order to do this has "been obliged to sell out £1,145 out of their slender amount of funded capital." We trust this appeal will be successful, and that the next annual meeting will have a more cheerful tale to tell.

THE CARMARTHEN ASYLUM.

IT appears that the recent appointment of an Englishman to the Medical Superintendency of the joint Counties Asylum at Carmarthen, Wales, has given offence to some in Wales, on the ground that a Welshman was not appointed.

Considering how many of the Welsh, Irish, and Scotch enter into competition for, and obtain a large share of, the public medical appointments in England, the hostile murmurs and howls raised when an Englishman, once in a way, gets an appointment in one of the other parts of the kingdom, are grossly unfair and discreditable.

The *Llanyollen Advertiser* is opposed to this dissatisfaction, and concludes that the visiting committee selected the best man among the candidates, as far as they could judge; and that they were quite right in doing so.

DONATIONS AND BEQUESTS.—Mr. John Maple, of Hampstead, has, through the medium of Sir J. Blundell Maple, M.P., given to the Middlesex Hospital a donation of £1,000.—The Paddington Green Children's Hospital has received a donation of £500 from Mr. George Hanbury towards the building fund of the hospital. About £4,000 are still required to complete and open the new hospital free from debt.

IT is contemplated to provide better accommodation for the nurses and improved laundry and kitchen arrangements at the Sheffield General Infirmary, and the architect has been instructed to prepare plans and find a suitable site within the infirmary grounds for the proposed buildings.

MEDICAL NEWS.

Dr. G. Danford Thomas, Coroner for Middlesex and London (Central District), has appointed Dr. H. W. Oswald as his deputy.

Falmouth Hospital, the gift of Mr. J. Passmore Edwards, was opened for the reception of patients on Saturday, July 7th.

The meeting of the German Medico-Psychological Association will be held this year at Dresden on September 22nd and 23rd.

At the 120th Annual Commencement Exercises of the Medical Department of the University of Pennsylvania, held on June 7th, the degree of Doctor of Medicine was conferred on 199 candidates, being the largest class ever graduated in the United States.

Successful Vaccination.—Dr. Arnold Thomson, public vaccinator for the Bray and Hurley Districts of the Cookham Union, has been awarded the Local Government Board grant for successful vaccination.

French Association of Surgery.—The French Congress of Surgery will hold its eighth meeting at Lyons on October 9th and following days, under the presidency of Professor Tillaux, of Paris. The following questions are proposed for discussion: 1. Etiology and Pathogeny of Cancer. 2. Surgery of the Spine. For any further information relative to the Congress inquiries should be addressed to M. Félix Alcan, Publisher to the Congress, 108, Boulevard St. Germain, Paris.

Presentations.—Dr. Neilson, of Bulwell, has been presented by the members of the Babbington Ambulance Class with a carriage watch and case as a memento of the valuable instruction and pleasure they had received at the lectures given by him.—Dr. Wm. Alexander, of Dundonald, was on July 6th presented with a handsome testimonial, consisting of a silver bowl, silver salver, and a cheque for £250 on the occasion of his retiring from the active duties of his profession after a service of sixty years.

The Derbyshire Royal Infirmary.—The Duke and Duchess of Devonshire opened, on July 7th, the Derbyshire Royal Infirmary, which has taken three years to build at a cost of nearly £100,000. The Duke of Devonshire, in declaring the infirmary open, said that in the matter of alleviating sickness and distress, they were determined so far as lay in their power that the people of Derbyshire should enjoy all those material and moral advantages which it was possible for knowledge, science, and liberality to supply to them. During the course of the proceedings several handsome donations were announced, including one of £1,200 from Mr. Herbert Strutt, for the erection of an additional ward, and another of the same amount from Mr. Walter Evans for the same purpose.

Successful Progress of the Medical Defence Union.—The Medical Defence Union is continuing its progress. There have been 823 new members elected this year, and fresh applications for membership are being received weekly. The guarantee amounts to £5,063, the new members of this year alone guaranteeing £990. There have been twenty-three Council meetings during the half-year ending June 24th, and nearly 400 "cases" have been dealt with. The resignations this year only number 24—a very small percentage of the total memberships and a satisfactory evidence of the confidence of the members and the managers of the business of the Union. The offices of the Union are now located at 20, King William Street, Strand, W.C.

Notification of Infectious Diseases in Portugal.—By decree dated June 16th, the Portuguese Government has enacted that in Lisbon all cases of the following diseases occurring in schools, hospitals, refuges, and asylums, shall be notified to the Central Sanitary Authority on the first Monday in each week: Plague, cholera and choleriform affections, yellow fever, typhus, enteric fever, miliary fever, cerebro-spinal meningitis, small-pox, whooping-cough, measles, scarlatina, diphtheria, influenza, puerperal fever, dysentery, "green diarrhœa" of infants, and purulent ophthalmia. Medical practitioners are also instructed to notify all cases of tuberculosis which they meet with in their practice.

The American Medical Association held its forty-fifth annual meeting in San Francisco on June 5th, 6th, 7th, and 8th, under the presidency of Dr. Hibberd. It is twenty-three years since the Association met last in San Francisco, and since then immense progress has been made in the development of medical institutions and the organisation of medical education in the Pacific States. A great deal of the time of the general meetings was spent upon the consideration of reports of special committees on the proposed revision of the constitution and by-laws and of the code of ethics of the Association. In the end a decision upon both subjects was postponded indefinitely. It was arranged to hold the next meeting of the Association at Baltimore, and Dr. Donald McLean of Michigan was elected president.

Sanitation Sunday.—Last Sunday was observed in many parishes as "Sanitation Sunday," when mention was made from the pulpit of the aims of the Church Sanitary Association. The annual sermon was preached in St. Paul's Cathedral by the Archdeacon of London, Dr. Sinclair, who said that to the majority of the dwellers in country districts the advantages of satisfactory drainage, dry soil, wholesome food, fresh air, cleanliness, warm and purified clothing, the laws of illness, the principles of infection and contagion, the requisites of convalescence, and the importance of the first symptoms of disease were probably unknown. This want of knowledge had called into existence the Church Sanitary Association, which aimed at inducing the clergy in every parish to inculcate the laws of health.

A Medico-Historical Exhibition.—We are pleased to note that at the Congress of German Scientists and Medical Practitioners, which is to meet in Vienna in September next, there is to be an exhibition of articles illustrating the historical development of medicine. The arrangements are in the hands of Dr. Theodor Buschmann, the Professor of Medicine in the University of Vienna. The Exhibition committee is sending a circular to the custodians of museums, and the officials of hospitals and other institutions, asking for the loan of any valuable or curious diagnostic, therapeutic, surgical, or obstetrical instruments of former ages; plans or pictures of hospitals, portraits of famous physicians or surgeons, medals struck as memorials of plagues, or other objects likely to be useful as historical illustrations of past stages in the healing art. All persons who may have such "documents" in their possession are invited to communicate with the Austellungs-Comité, University of Vienna.

The annual general meeting of the Brussels Medical Graduates' Association took place at the Café Monico on July 7th. In absence from illness of the president, Dr. E. J. Nix was elected to the chair. In the course of his remarks the chairman congratulated the meeting on the continued prosperity of the Association, and pointed out that the balance-sheet then presented was by far the best that had been ever hitherto brought forward at any annual meeting. Attention was also called to the increased popularity of the M.D.Brux., as shown by the increasing number of members of the profession who studied for this degree. The following officers were elected for 1894-95:—*President:* Dr. E. R. Tweed. *Vice-President:* Dr. J. W. Warburton. *Treasurer:* Dr. E. G. Younger. *Hon. Secretary:* Dr. M. Greenwood. *Auditors:* Drs. Nix and Beresford Ryley. *Council:* Drs. S. Sunderland, C. T. Brookhouse, C. Burland, A. W. Thomas, W. A. Hearnden, J. R. Gabe, A. L. Achard, E. A. Snape, J. H. Turtle, J. C. Naumann. *Solicitors:* Messrs. Beckingsale and Co. The members and their friends afterwards dined together, and passed a very pleasant evening.

American Jottings.—The *New York Medical Journal* states that, according to the testimony of one of the witnesses before the Lexow Committee, there are about 10,000 smokers of opium in New York.—According to the *Atlanta Medical and Surgical Journal* for June a death from cocaine recently occurred in a dentist's chair in Goshen, Indiana. The patient, a man aged 50, was about to have two teeth extracted. Ten minims of a solution of cocaine of the strength of "nearly" 11 per

cent. were injected into the gums, and the patient died a few minutes after the teeth had been extracted.—The *Boston Medical and Surgical Journal* of June 21st relates the following sad case of a medical man who seems to have fallen a victim to the abuse of drugs. The practitioner, who was 35 years of age, is said to have long been a great sufferer from rheumatism, and in order to relieve the pain he used morphine freely, and thus became addicted to the opium habit. After a time he also took large quantities of chloral, paraldehyde, and other hypnotics, and a few days before his death he is said to have swallowed about an ounce and a-quarter of paraldehyde in a single dose, yet the next day he had recovered from the effects of the drug sufficiently to go out. It was at first supposed that he had died from morphine poisoning, but the coroner's inquiry showed that death was in reality due to septicæmia resulting from the excessive use of the hypodermic syringe. Both arms, from the shoulders to the wrists, were in a state of violent inflammation.

MEDICAL VACANCIES.

The following vacancies are announced:

BRIDGWATER INFIRMARY.—House-Surgeon. Salary £70 per annum, with board and residence. Applications to Mr. John Coombs, Honorary Secretary, by July 19th.

CAMBRIDGE LUNATIC ASYLUM, Fulbourn, near Cambridge.—Assistant Medical Officer. Salary, £140 per annum, with board, lodgings, and attendance in the Asylum. Applications to T. Musgrave Francis, Clerk to the Visitors, by July 21st.

CHARING CROSS HOSPITAL, Strand, W.C.—Assistant-Surgeon; must be F.R.C.S.Eng., and reside within three miles of the hospital. Applications to the Chairman of the Committee of Selection by July 28th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to Eugene Street, Secretary, by August 6th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis Road, Shadwell, E.—Resident Medical Officer; must be registered practitioner in Medicine and Surgery. Salary, £80 per annum, with board and residence. Applications and testimonials to Thomas Hayes, Secretary, by July 23rd.

GENERAL HOSPITAL, Birmingham.—House-Physician. Salary, £70 per annum, with residence, board and washing. Surgical Casualty Officer; non-resident. Honorary Surgeon. Applications to Howard J. Collins, House-Governor, by July 28th, for the first two vacancies, and July 23rd for the last one.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Two Assistant Physicians and Resident House-Physicians. Applications to William H. Theobald, Secretary, by July 18th and July 19th respectively.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon; doubly qualified. Salary, £70 per annum, with residence and maintenance in the house. Applications to the Chairman by July 17th.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer; doubly qualified, unmarried, and not less than 25 years of age. Salary, £150 per annum, with board and residence. Applications to W. L. Saunder, General Superintendent and Secretary, by July 28th.

NATIONAL DENTAL HOSPITAL, Great Portland Street, W.—Anæsthetist. Applications to E. Almack, Secretary, by July 19th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—House-Physician. Salary, £100 per annum, increasing £10 per annum at the discretion of the Committee, with furnished apartments, board, and washing. Applications to the Secretary by July 23rd.

ROCHDALE INFIRMARY AND DISPENSARY.—House-Surgeon, unmarried. Salary, £80 per annum, with board and residence. Applications to the Secretary, 176, Duke Street, Rochdale, by July 17th.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Senior House-Surgeon. The Junior House-Surgeon is a candidate, and applicants are requested to state whether, in the event of his being appointed, they will be willing to accept the office of Junior. Salary, £75 per annum for the Senior; Junior, £50 per annum, both with board and residence. Applications to the Secretary by July 19th.

SEAMEN'S HOSPITAL SOCIETY, *Dreadnought*.—Junior House-Surgeon doubly qualified, for Branch Hospital, Royal Victoria and Albert Docks, E. Salary, £50 per annum, with board and residence. Applications to P. Michelli, Secretary, Seamen's Hospital Society, Greenwich, S.E., by July 30th.

SUSSEX COUNTY HOSPITAL, Brighton.—House-Surgeon; doubly qualified, unmarried, and under 30 years of age. Salary, £120 rising to £140 per annum, with board, residence, and washing. Applications to the Secretary by August 7th.

UNIVERSITY COLLEGE, London.—Resident Medical Officer. Applications to J. M. Horsburgh, M.A., Secretary by July 16th.

VICTORIA UNIVERSITY, The Yorkshire College, Leeds.—Demonstrator of Physiology. Salary, £150 per annum. Applications to the Secretary by July 16th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Dermatologist. Applications to R. J. Gilbert, Secretary and Superintendent by August 1st.

MEDICAL APPOINTMENTS.

ATKINSON, Edward, M.R.C.S.Eng., appointed Consulting Surgeon to the Leeds General Infirmary.

BERESFORD, Robert de la Poer, M.D.Glasg., L.R.C.P., L.R.C.S.Edin., re-appointed Medical Officer of Health to the Oswestry Town Council.

BISS, Cecil Yates, M.A., M.D.Cantab., F.R.C.P., appointed Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

DOWLER, H. M., M.R.C.S., L.R.C.P.Lond., appointed Junior House-Surgeon to the Westminster Hospital.

EDWARDS, G. M., B.A., M.B., B.C.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Middlesex Hospital.

EVERETT, E. W., M.R.C.S., L.R.C.P., appointed Medical Officer for the Norwich District of the St. Faith's Union.

FERGUSSON, J. P., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of the Long Preston District of the Settle Union.

FOSTER, M.B., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Physician to the Leicester Infirmary.

FULLER, Joseph, F.R.C.S.Edin., M.R.C.P.I., appointed Medical Officer of the Workhouse of the Bedminster Union, *vice* Henry Pritchett, M.R.C.S.Eng., resigned.

GAYLOR, Edward, L.R.C.P.Edin., L.F.P.S.Glasg., reappointed Medical Officer of Health for the Ripley Urban Sanitary District.

HARTLEY, R. N., M.B., B.S., M.R.C.S., appointed Honorary Surgeon to the Leeds General Infirmary, *vice* Edward Atkinson, M.R.C.S.Eng.

HILL, John Stonely, M.B., C.M., appointed Honorary Surgeon to the Royal South London Dispensary.

KELLY, Dr., appointed Medical Officer to the St. Nicholas Parochial Board.

LAVERY, Mr. Anthony, appointed Assistant House-Surgeon to the Coventry and Warwickshire Hospital, Coventry.

NOWELL, G. H., B.A., B.C., M.B.Cantab., L.S.A.Lond., appointed Senior House-Surgeon to the Westminster Hospital.

OWENS, J. S., B.A., M.B., B.Ch., appointed Medical Officer of the Gorey Dispensary District, *vice* Dr. W. J. Meldon, resigned.

PURSLOW, C. E., M.D.Lond., M.R.C.P.Lond., appointed Ingleby Examiner, Queen's Faculty of Medicine, Mason College, Birmingham, for the current year.

ROBINSON, Henry James, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the Burnley District and Workhouse of the Burnley Union, *vice* Joseph C. Brumwell, M.D.St.And., resigned.

SANDERSON Dr., appointed Medical Officer of the Workhouse of the Chapel-en-le-Frith Union.

SAUNDERS, Sedgwick, M.D., L.R.C.P., M.R.C.S., reappointed Medical Officer of Health for the City of London.

SMITH, S. Kellett, F.R.C.S., appointed Surgeon to the Liverpool Stanley Hospital.

SOPER, R. W., M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Dartmouth Town Council.

THOMAS, Robert Stanley, M.A., M.B., B.C.Cantab., M.R.C.S.Eng., L.R.C.P. Lond., reappointed Casualty Surgical Officer to the Middlesex Hospital.

VAUGHAN, Mr. H. W., appointed Medical Officer for the Gosforth District of the Whitehaven Union.

WARD, W. Alfred, M.R.C.S Eng., L.R.C.P.Lond., L.S.A., reappointed Casualty Medical Officer to the Middlesex Hospital.

CORRECTION.—In the BRITISH MEDICAL JOURNAL of July 7th, we stated that Mr. Roberts was appointed Medical Officer for the Llanllwchairarn District of the Newtown Union, *vice* E. U. Purchas, M.D.Edin. We are informed that the information was incorrect, as at the time the above was published the appointment was not sanctioned by the Local Government Board.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

WEDNESDAY.

POST-GRADUATE LECTURES, Metropolitan Hospital, N.E., 5 P.M.—Mr. Waring: Diseases of the Tongue.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

EDRIDGE-GREEN.—On July 9th, at 6, Ravensfield Villas, Hendon, N.W., the wife of F. W. Edridge Green, M.D., F.R.C.S., of a son.

MARRIAGE.

MACDONALD—FORWARD.—On July 10th, at the Cathedral, St. John's, Antigua, by the Right Rev. The Lord Bishop of Antigua, assisted by the Rev. E. Branch and the Rev. H. Y. Shepherd, Millie, second daughter of John MacDonald, Esq., of Gray's Hill, to Francis Edward Forward, F.R.C.S., Medical Officer to the Holberton Institution, Antigua.

DEATH.

STEER.—On July 5th, at Fulham Union Infirmary, Mildred Alice Reeve, only child of William Steer, M.R.C.S., Medical Superintendent, aged 7 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

LEAD IN DRINKING WATER.

W. H. asks for a simple but certain test for lead in drinking water.

*** The simplest test for lead in drinking water is to place 100 c.c. of the water in a Nesslerising glass and to stir in a drop of a solution of sulphide of ammonium. A dark coloration, not discharged by the subsequent addition of a drop or two of strong hydrochloric acid, indicates the presence of lead or copper. Unless a faint red tint appears on adding a drop of acetic acid and of ferrocyanide of potassium to another 100 c.c. of the water, lead only is present.

ANSWERS.

DR. NEWELL.—Throughout the press, but more fully, we believe, in the BRITISH MEDICAL JOURNAL than anywhere else.

DE LA H.- Santa Caterina is referred to in Dr. Burney Yeo's work on *Climates and Health Resorts*, and in the late Dr. Macpherson's *Baths and Wells of Europe*, and more fully in monographs to be obtained at the bath itself.

SO-CALLED MEDICAL PROVIDENT SOCIETIES.

H. S.—We have dealt fully with this subject, and expressed our disapproval of societies of this description. With regard to the Surgery Club Card, although, perhaps, not quite so open to criticism, we are by no means disposed to look on arrangements of this kind with unqualified approval. As we have before remarked, all means adopted by individual practitioners to form provident associations for their own private benefit will naturally be regarded with suspicion by their professional neighbours, as it is obvious that such associations or clubs may not infrequently interfere materially with the practice of the latter, especially in districts where the majority of the inhabitants belong to the poorer classes. If an unqualified assistant is employed in the way reported, we should advise our correspondent to bring the facts of the case under the notice of the General Medical Council.

NOTES, LETTERS, Etc.

THE "BRITISH MEDICAL JOURNAL" COMMISSION ON WORKHOUSE INFIRMARIES: SOME COMMENTS OF THE PRESS.

THE *Haverfordwest Telegraph*, of July 4th, observes as follows: You all know the old saying that if news is wanted you must seek it away from home. The truth of this was exemplified last Saturday when I read in the pages of the BRITISH MEDICAL JOURNAL the report of a Commissioner who had been visiting the sick poor in Haverfordwest Workhouse. The report will be found in another column of the *Telegraph*, and, I make no doubt, will open the eyes of many as to what is going on in the refuge of the homeless and helpless in our own union. I take it for granted that the Commissioner is a medical man who knew what he was writing about, and the responsibility attaching to his words, and I therefore presume that the picture he presents is an accurate reflection of the inside of the house. If it is, all I can say is that stigma attaches to the guardians of the poor in allowing such disgraceful state of affairs to exist. Personally I would not support the indolent, especially those who are young and able to work, but what can be said of a system which allows old men and women, sick and miserable at their failure of success in the battle of life, being left to lay their weary bodies on plank beds, amidst dreary and desolate surroundings? What of the fact that idiots and imbeciles should be quartered in the same rooms with sick paupers who, despite all that they have lost, still retain their reason? The picture of the unlit ward, comfortless beds, and absence of attendants to change the wearied occupants from one position to another; helplessness intensified and embittered by the knowledge that it must be endured, is sickening to anyone with a heart other than a stone; and well may the leading medical journal ask what the aged, the sick, and the infants have done to deserve such a cruel fate. The disclosures have filled me with amazement, and I cannot but think that the Visiting Committee for the workhouse have either failed to carry out their duties or else have walked about the cheerless, stony wards blind to the misery which must have been apparent.

MR. E. PICTON PHILLIPS writes to the editor of the *Milford Haven Telegraph* under date of June 30th: May I request your insertion in your influential paper of the enclosed article from the BRITISH MEDICAL JOURNAL of the 30th ult., detailing the visit of their commissioner to the Haverfordwest Workhouse, and what he saw there? I think it but right that every publicity should be given to his report, so that those whose business it is to see that the working of the institution is properly carried out may be in a position to disprove it if untrue; as, if true, that such a sad state of things should be at once seriously considered, and, as far as possible, reformation attempted.

THE *Bath Herald* of July 7th says: Through the courtesy of the Editor of the BRITISH MEDICAL JOURNAL we were able to give in our evening editions on Thursday, July 5th, the report upon the nursing arrangements at the Bath Workhouse, and comments thereon, which appeared in the issue of that journal published on July 6th. The report, it should be mentioned, is the sixth of a series on the nursing and administration of provincial workhouses and infirmaries which is being made by a Special Commission of the BRITISH MEDICAL JOURNAL. Both the report and the comments upon it are of such a serious nature that we print them *in extenso*.

THE *St. James's Gazette* of July 6th says: The BRITISH MEDICAL JOURNAL is publishing a series of reports on the system of Nursing and Administration of Provincial Workhouses and Infirmaries. Mr. Ernest Hart and Dr. Rogers "worked" the metropolitan workhouse infirmaries years ago, but it is pretty evident, from the revelations made by the BRITISH MEDICAL JOURNAL'S Commissioner, that there is a great deal yet to be done in waking up the provincial boards of guardians to their duty. It is the same tale everywhere of an insufficient supply of nurses—such as there are not even being properly trained, and of a scandalous want of all the decencies and ordinary requirements of hospitals for the sick. The latest workhouse examined is that at Bath. Here the deficiences are such that for fifteen months the medical officer in charge has made expostulations without effect. The infirmary is licensed for 230 beds, and is always full; but there is not even a supply of hot water, and for the sixteen wards only one certified day nurse, and not one (certified or not) at night has been provided. It seems to be thought that a few pauper wardswomen by day can do all that is wanted for patients suffering from pneumonia, phthisis, cancer, or heart disease. We will not here go into the medical details given in the BRITISH MEDICAL JOURNAL, but there is one thing which the public ought to be known and which ought never to be tolorated, and that is that the provision for lying-in women in some infirmaries is so bad that their accouchement has frequently to take place in the general wards. One more thing. It seems that the "masters" of certain workhouses are still too often the bullying tyrants of whom we read in fiction. The amateur guardian is at the mercy of these officials. At this very workhouse at Bath, the representative of the BRITISH MEDICAL JOURNAL, who arrived with a permit from the vice-chairman of the board, to make a final visit, refused admission by the master.

Commenting upon this, our contemporary remarks as follows: "The official may have within his rights, but we altogether decline to believe that a master of a workhouse would care to offer such a rebuff to a member of his board unless he was well assured that he had behind him the support of a predominant faction to whom the publication of the truth would be unwelcome. We think it probable, however, that the public hardly realises the completeness with which the matters of a workhouse are placed in the power and subjected to the caprices of a workhouse master. We all know the common uneducated type of man to be found in this office in so many places—his mind stored, for the confounding of newly-elected guardians, with rules, by-laws, and regulations, his heart hardened by long contact with a system under which deceit is only which relaxation of rules can be obtained. What the public should take well to heart is that between the meetings of the board such men are absolute masters over the workhouses and all their inmates: no outsider can get in, and loud indeed must be the complaint that can get out. What we want is a larger leaven of just men—or better still, of true-hearted women—who will join the board of guardians, will visit at all hours (as guardians alone have the power of doing), will investigate every detail, and freely publish everything they see. Until we can get medical men and trained nurses as inspectors of workhouses and infirmaries, publicity is the paupers' one protection, and the press is the poor man's real guardian."

THE *Yorkshire Herald* of July 10th says: The condition of workhouse infirmaries is attracting a good deal of attention. The Special Commissioner employed by Mr. Ernest Hart has already made some statements which seem to require the attention of the authorities. The particular allegations in the case of the Bath Workhouse Infirmary may or may not be well founded. But it is easy to prove the inaccuracy such as that there is not a supply of hot water, or to show that it is not true that only a single certificated day nurse is provided for the sixteen wards. It cannot be expected that the patients in such an institution should enjoy every luxury or have a certificated day nurse in every ward, but they should receive adequate attention. If, as is affirmed, the master refused admission to the infirmary at Bath to a representative of the press who held a permit signed by the vice-chairman of the board of guardians, we imagine that the matter has to be merely brought before the board to ensure the official a reprimand—unless, of course, the latter is able to justify his action.

Reprints from the "British Medical Journal."

The *Scotsman* of July 9th publishes the following: "Messrs. Smith, Elder, and Co. have published the first two numbers of a series of *Essays on State Medicine*, reprinted from the British Medical Journal. One contains a paper on "Compulsory Vaccination," written by Mr. Ernest Hart; the other two papers, by the same author, one on "Compulsory Notification in England and Wales in 1892," the other on "State Aid in Relation to Port Cholera Expenses." The *Essays* are valuable contributions to the literature of public health, and their publication in this separate form will be welcome to many students and to medical officers generally.

Erratum.

Dr. T. Lauder Brunton (Stratford Place, W.) writes: I shall be obliged if you will kindly allow me to correct an error in the report of my speech, on page 15 of the last number of the British Medical Journal. The experiments on chloroform in 1848 were made by the present Mr. Wakley and not by his "late" father.

The Griffiths Fund.

Drs. E. Le Cronier Lancaster (Winchester House, Swansea), and W. F. Brook (Northampton Terrace, Swansea), Hon. Secretaries, desire to acknowledge the following additional subscriptions to the above fund:

	£	s.	d.
Amounts already acknowledged	183	12	0
V. Ll. Jones, St. Clears	1	1	0
Howell Rees, Glan Garnant	1	1	0
J. F. Stamper, Pembroke Dock	1	1	0
W. Davis, Llandilo	1	0	0
Part fees returned by Eben. Davies, H. Charles, and W. F. Brook, who were subpœnaed as witnesses at the trial	49	6	6

Legitimate and Illegitimate Specialism.

Specialism in medicine and in treatment is necessary in many departments where the growth of modern knowledge has been rapid. The legitimate specialist is one who, having a special mental bent and special advantages for making a particular class of observations, uses them not only for his own advantage but also for the advancement of his profession at large, demonstrating what he knows, so that a general knowledge of the subject may be advanced, and treatment of a certain class of patients improved thereby. On the other hand, a bad form of specialism is the assumption of knowledge and of a position of precedence with an amount of self-advertisement which is objectionable in any professional position. These remarks apply equally to medicine and to any profession dealing with the treatment of patient by any methods. We regret to see that a prospectus has been issued bearing the name of a teacher in one of our great educational colleges advertising that special advice and recommendation as to consultation of medical specialists is offered in connection with defects of speech. We trust that such advertisements will be withdrawn as unworthy of any established educational body.

Rival "Cures."

It is amusing to read how the proprietors of rival "cures" love one another. In a recent prospectus of one of the multitude of "cures" for inebriety we read that in one period of two years this "latest triumph of medical science" was successfully used in the treatment of 1,019 cases, 92 of which had been absolute failures, of the "gold cure treatment." Further, it is asserted that "the treatment from the start restores to health and builds up the wasted and diseased nerve centres instead of prostrating the system, as is the case with bichloride of gold." Need we add that the proprietor claims that his "discovery" "has been absolutely successful"?

The late Mr. David Taylor.

Dr. A. J. Wall (Paris) writes: In your obituary notice of Mr. David Taylor there is an omission that I feel sure is not intentional on your part. You only mention three of Mr. Taylor's sons. Fourteen years ago, as many of your readers will remember, there was a landslip occasioning much loss of life at Naini Tal, in the North-West Provinces of India. A portion of the hillside fell, burying some of the inhabitants under it. The civil officer in charge of the district at once organised a party to endeavour to rescue those engulfed, he himself superintending the operation. Whilst engaged in this perilous task a greater landslip occurred, burying him and all those with him. This officer was Mr. Leonard Taylor, of the Indian Civil Service, assistant magistrate of the district, and those who knew him will bear witness to the bright promise of the young life he thus sacrificed at the call of duty. He was a son of Mr. David Taylor, and a brother of Dr. Frederick Taylor, of Guy's Hospital. It is well that we should not forget deeds like these.

Doctors in Parliament.

The medical profession is much better represented in the French Chambers than in our own House of Commons, and the medical legislators take measures to make their Parliamentary influence felt when the occasion arises. What might be called an "extra-Parliamentary Medical Committee" has recently been constituted. The medical members of the two legislative Chambers assembled at the Palais Bourbon on June 21st for this purpose, and decided to form a "group" for the examination of the numerous questions which concern the medical profession, the organisation of medical aid for the sick poor, and the protection of the public health. M. Berthelot, Senator, was elected President of the "group;" MM. L. Labbé, Senator, Cornil, Senator, and Lannelongue, Deputy, Vice-Presidents; MM. Dellestable, Senator, and Pedebidou, Deputy, Secretaries; M. Gueneau, Deputy, Questor-Treasurer. In addition to these the group comprises the following Senators: MM. Combes (Charente Inférieure), Chautemps (Seine), Cledon and Quintan (Basses Pyrenées), Le Borgne (Finistere), Collat (Haut saone), Demoulins de Riols (Landes), Francoz (Haute Savoie), Frezoul (Ariège), Gérente (Algiers), Ouvrier (Aveyron), Rolland (Tarn-et-Garonne), and Taulier (Vaucluse); and the following members of the Chamber of Deputies: MM. Amodru (Seine-et-Oise), Bizarelli (Drôme), Bouray (Charente Inférieure), Bourgoin (Ardennes), Bourrillon (Lozère), Cosmao-Dumenez (Finistère), Cot (Hérault), Delarue and Gacon (Allier), Delbet (Seine-et-Marne), Guenoun (Côte d'Or), Guiguard (Maine-et-Loire), Guillemaut (Saône-et-Loire), Isaac (Guadeloupe), Legludic (Sarthe), Leroy (Somme), De Mahy (La Réunion), Marfan (Aude), Pourteyron (Dordogne), and Ricard (Côte-d'Or).

LETTERS, COMMUNICATIONS, Etc., have been received from:

(**A**) An Old Member; Dr. T. M. Allison, Guisborough. (**B**) Mr. F. Bass, London; Mr. W. Bernard, Londonderry; Dr. H. T. Bulstrode, London; Dr. C. Y. Biss, London; Messrs. Baiss Brothers and Co., London; Dr. T. Lauder Brunton, London; Mr. W. F. Brook, Swansea; Mr. W. Boyle, London; Mr. T. Blair, Leeds; T. P. Beddoes, M.B., Aberystwyth; Dr. F. R. Blaxall, London; G. M. Brown, M.B., Tunstall. (**C**) Mr. S. Craddock, Bath; Mr. J. Coombs, Bridgwater; Dr. M. Copeman, London; Dr. J. M. Clarke, Clifton; Mr. J. D. Costine, Liverpool; Mr. J. Cleavers, London; Mr. H. Calvert, London. (**D**) Dr. T. M. Dolan, Halifax; Mr. J. Dacre, Clifton; Dr. C. Dukes, Rugby; Mr. W. Dalton, Blackpool; Mr. H. Davis, London. (**E**) Mr. G. M. Edwards, London; Ealing Surgeon; G. Eastes, M.B., London; Mr. E. A. S. Elliot, Kingsbridge. (**F**) Mr. L. Fletcher, Ipswich; Mr. M. B. Foster, Leicester; Dr. R. Farrar, Stamford; Mr. C. E. S. Flemming, Freshford. (**G**) Mr. A. Gray, Birmingham; Dr. A. L. Gillespie, Edinburgh; Mr. G. A. Gibson, Edinburgh; Dr. J. Gairdner, Crieff. (**H**) Mr. H. W. Hayes, London; Mr. A. Hawkes, Launceston; G. Halley, M.B., Broughty Ferry; Hants. (**I**) Dr. C. R. Illingworth, London; Infanticide. (**J**) Mr. V. C. Jones, Presteign; Justitia. (**K**) Kidderminster Medical Society, Secretary of, Kidderminster; Dr. R. Kirk, Glasgow. (**L**) Mr. S. R. Lister, Lynn; Mr. H. Littlewood, Leeds; Mr. N. B. Langley, Cricklade; Mr. A. Lavery, Manchester; Mr. E. Little, London; R. Lyddon, M.B., Deal; Dr. W. G. V. Lush, Weymouth. (**M**) Mr. W. L. Mackenzie, Newton Stewart; Mr. T. Murtagh, West Brighton; Mr. G. B. Mead, Newmarket; Mr. G. R. Murray, Newcastle; Mr. S. W. MacIlwaine, South Petherton; Mr. J. Mackie, Nottingham; M.B.A.; Marza Manufacturing Company, London. (**N**) Mr. P. Newell, Crowborough; Mr. J. J. Newitt, Leeds. (**P**) Mr. J. Paynter, London; Mr. J. O. Pemberton, Birmingham; Phthisis; Professor J. Penberthy, London; Dr. C. E. Purslow, Birmingham; Parochial. (**R**) Royal Microscopical Society of London, Secretary of, London; Royal Society, Secretary of, London; Mr. R. Rae, London; Dr. J. Robertson, Dumbarton; Dr. J. M. Rhodes, Didsbury; Mr. A. Reid, London; Mr. R. G. Roberts, Penmaenmawr; Dr. E. Rice, Oxford. (**S**) Messrs. F. Stearns and Co., London; Mr. J. Stewart, Clifton; Mr. R. R. Sleman, London; Mr. F. J. Smith, London; Straddles; Dr. E. M. Sympson, Lincoln; Dr. J. T. Sutherland, London; C. E. A. Semple, M.B., London; Mr. T. Smith, London; Dr. J. Smyth, London; G. F. Still, M.B., London. (**T**) Miss L. Twining, Tunbridge Wells; Mr. R. S. Thomas, London; A. Taylor, M.B., Bolton; Dr. J. C. Taylor, Windermere; A. Tuthill, M.B., Parkstone. (**U**) Union Medical Officer. (**W**) Mr. W. J. H. Wood, Boston; Dr. A. J. Wall, Paris; Mr. C. A. Whitney, Liverpool; Mr. R. C. Worsley, Ramsgate; Mr. J. T. Walters, Nottingham; Dr. L. A. Weatherley, Bath; Mr. H. White, Manchester; E. E. Waters, M.B., Sheffield; Mr. F. Windsor, Manchester; J. H. Wilks, M.B., Sheffield; Mr. A. Wiglesworth, Liverpool. (**Y**) Mr. N. E. Yorke-Davies, London; etc.

BOOKS, Etc., RECEIVED.

The Pharmacopœia of the Hospital for Diseases of the Throat (Golden Square). Edited by F. G. Harvey. 5th Edition. London: J. and A. Churchill. 1894. 2s. 6d

Organic Chemistry. Part I. By W. H. Perkin, jun., and F. S. Kipping. London and Edinburgh: W. and R. Chambers. 1894.

A Compend of General Pathology and Morbid Anatomy. By Dr. H. N. Hall. London and Edinburgh: Young J. Pentland. 1894.

The Retrospect of Medicine. Edited by Dr. J. Braithwaite. Vol. CIX, January to June, 1894. London: Simpkin, Marshall, Hamilton, Kent and Co.

Edinburgh Hospital Reports. Edited by Dr. G. A. Gibson, Dr. C. W. Cathcart, Dr. J. Thomson, and Dr. D. B. Hart. Vol. II. London and Edinburgh: Young J. Pentland. 1894.

Handbuch der praktischen Gewerbehygiene. Herausgegeben von Dr. H. Albrecht. Lieferung I. Berlin: Gustav Schmidt. 1894. M. 4.50.

Clinical Diagrams, with Directions for Recording Cases of Heart Disease. By Dr. G. Herschell. London: Baillière, Tindall and Cox. 1894. 1s.

Diagrams for Recording Cases of Heart Disease. By Dr. G. Herschell. London: Baillière, Tindall and Cox. 1894. 6d.

Income Tax: How to Get it Refunded. By A. Chapman. 10th Edition. London: Effingham, Wilson and Co. 1894-95. 1s. 6d.

*** In forwarding books the publishers are requested to state the selling prices.

A POST-GRADUATE LECTURE
ON
FURTHER RESEARCHES ON THE CAUSATION OF ANÆMIA AND THE BLOOD CHANGES PRODUCED BY URIC ACID.

Delivered at the Metropolitan Hospital on Wednesday, July 4th, 1894.

BY A. HAIG, M.A. AND D.M.OXON., F.R.C.P.LOND.

I HAVE shown in my writings[1] that there is a large group of diseases, including paroxysmal hæmoglobinuria, splenic leucocythæmia, anæmia, and chlorosis, in which the blood changes occur in association with the passage of a large amount of uric acid in the urine.

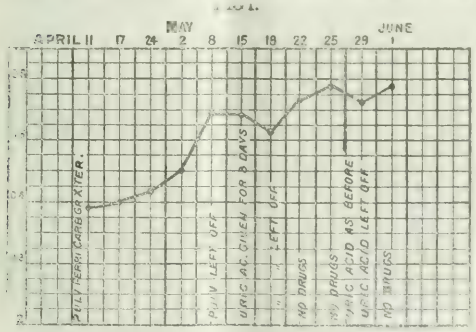
On the other hand my results in myself and others also show that the value of the blood decimal[2] fluctuates from day to day with the amount of uric acid passing through the blood into the urine, and that the intentional increase of uric acid is always accompanied by a corresponding fall in the value of the blood decimal. And so constant are these results that I would undertake to make the blood decimal vary in anyone from day to day, according to a prearranged plan. On the other hand I would tell correctly from a 12 or 24 hourly examination of the blood what had been the changes in urate excretion during the same periods.

I now further proceed to show that iron cures anæmia by clearing the blood of uric acid, that the administration of uric acid will quickly undo its work, and that if in any case it fails to clear the blood of uric acid it also fails to cure the anæmia.

That when iron has failed to cure, other drugs that have more power over uric acid, or act in a slightly different way, may succeed; but that no drug of any kind will succeed if it fails to clear the blood of uric acid.

Lastly, I shall point out that this uric acid causation of chlorosis enables us to give an absolutely complete explanation of its occurrence in girls and young women; and, further, may enable us in the future to prevent it with an almost mathematical precision. And that similar reasoning enables us to account completely for the connection of this group of diseases with such factors of causation as rheumatism, dyspepsia, melancholia, headache, Bright's disease, hot climates, malarial and other fevers.

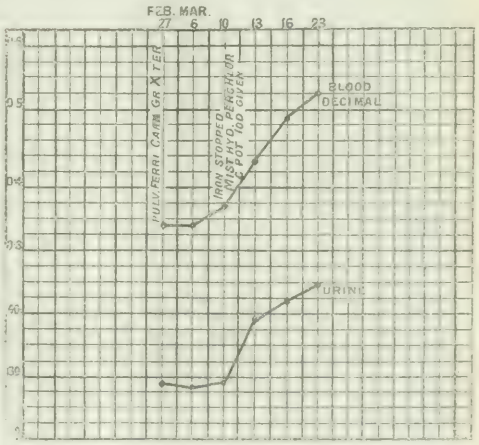
Fig. 1 shows the blood decimal of J. K., suffering from



chlorosis. From April 11th to May 8th she was on iron, and we see the rise it produced in the decimal. On May 11th iron was left off, and on May 15th the blood decimal was the same as on the 8th. On May 15th and two following days the equivalent of 4 grains of uric acid were given, and on May 18th the blood decimal had fallen, but it rose again on the 22nd and 25th, after the uric acid had been left off. However, on the 17th and 18th, menstruation was present, and, as this might have caused a fall of the blood decimal (menstruation is nearly always accompanied by some dyspepsia, with fall of urea and acidity, and secondary uric acidæmia), I repeated the dose of uric acid on the 25th and two following days, and on the 29th the decimal had again fallen, to rise again on June 1st after the uric acid had been left off.

There seems, then, to be very little doubt that the administration of uric acid and its passage through the blood (for a similar administration to myself does cause it to pass in excess through the blood and into the urine[3]) causes a distinct fall of the blood decimal in spite of the presence of a considerable amount of iron in the body. But iron does not always succeed so well as it did in this case, and then, as we shall see in the following case, it fails because it is unable to clear the blood of uric acid, for other drugs which have more power in clearing the blood of uric acid succeed. Fig. 2

FIG. 2.



shows the blood decimal of A. P., aged 17, suffering from chlorosis, and below this for comparison I have placed the curve of the urine excretion in ounces.

I may say that she had been attending as an out-patient for more than three months, and taking iron the whole time, but on February 27th there was no improvement; the gums were very pale, and the face puffy and wax-like.

I took her in, examined the blood, and found the decimal at 0.34. I put her on pulv. ferri carb., and on March 6th the blood decimal was just the same; so that a week on iron and in bed produced no improvement. She suffered considerably from headache and dyspepsia, and I have little doubt that the dyspepsia kept the acidity low, and so prevented the iron from clearing the blood of uric acid, and hence, though given steadily for three and a-half months, it had practically done no good.

To test this point I began to examine the urine, and on March 8th there were 29 ounces containing 267 grains of urea and 15.2 grains of uric acid, a relation of uric acid to urea of 1 to 17. On March 9th there were 28 ounces of urine containing 206 grains of urea and 13 grains of uric acid, relation 1 to 15.

Here then, while the patient was on iron we have evidence of a great excess of uric acid in the urine, and no doubt also in the blood, which explained her headache and scanty urine (for the urinary water is, as I have shown, in everyone inversely as the uric acid excreted along with it[4]) and her œdematous, almost myœdematous, face from retention of fluids

in her tissues, and also completely explained why the iron had for so long failed to do good.

On March 10th, however, there was a slight improvement, and the blood decimal had risen to 0.37, but as I had found such an excess of uric acid in the urine in spite of the iron, I decided to stop it and give a drug which I knew had more power of clearing uric acid out of the blood and urine[5]. I accordingly put her on the ordinary mist. hydrarg. perchlor. c. pot. iod. three times a day, and the rest of the figure shows its effect on the blood and urine.

On March 13th there were 39 ounces of urine, containing 304 grains of urea and 10.8 grains of uric acid—relation 1 to 28. Note the increase of water and urea and the decrease of uric acid in illustration of the law above mentioned.

On March 16th there were 42 ounces of urine, containing 232 grains of urea and 9.1 grains of uric acid—relation 1 to 25.

On March 23rd there were 45 ounces of urine, containing 332 grains of urea and 9.7 grains of uric acid—relation 1 to 34, or normal.

And with this clearance of the blood and urine of uric acid the blood decimal went up by leaps and bounds, and having risen in eleven days on iron only 0.03, it rose 0.06 in three days on iodide of mercury, and 0.15 in thirteen days, reaching 0.53 on March 23rd, a height which more than three months on iron had quite failed to raise it to; and we now know why this was so, for the one drug cleared the blood of uric acid and the other failed to effect this result. I know, however, from experience in other cases that even the iodide of mercury may fail to clear the blood and urine of uric acid, and then, like iron in the above case, it also fails to produce any continuous improvement in the blood decimal.

The marked rise in urinary water, which coincided in this case as it always does with the equally marked fall in uric acid, soon removed the excess of water from the tissues, and her face assumed a natural appearance, her appetite and digestion improved, and she considered herself cured.

In this case I have very little doubt that but for the dyspepsia the iron would have been able to clear out the uric acid at first,[6] and then she would have been cured in six or eight weeks instead of remaining almost unaffected at the end of three months. Now it is well known that Murchison and others have pointed out that in some cases iron will not cure anæmia till the liver has been got into proper order, and the drug he used to get the liver into order was mercury. We can now see that this mercury did good, not by any special action on the liver, as was supposed, but because it cleared the blood of uric acid, and so altered at once the circulation and nutrition of the whole body; and any other drug that clears the blood and urine of uric acid produces the same fall in excretion of uric acid and rise in excretion of urea, but some have more power, and will succeed in clearing the blood of uric acid when others have failed.

On the other hand, we now know that you have only to introduce into the body and blood an excess of uric acid to quickly undo all the good that iron, mercury, salicylates, or anything else has done, which still further emphasises the fact that they do good merely by clearing the blood of uric acid; and if you give uric acid along with iron the blood decimal falls, or at least fails to rise any further, so long as the uric acid is continued, which parallels what we see in Nature, that when there is a great excess of uric acid in the urine and blood, iron may be administered for months without effect.[7]

In concluding this part of the subject I will merely point out that it is open to anyone to repeat my results, and I hope you will all repeat them.

You may not have time to estimate uric acid from day to day, but, if you can collect the urine, you may safely take a steady increase in its quantity as a proof of a steady decrease of uric acid, and, even if you cannot examine the blood, a marked improvement, such as that shown in Fig. 2, very soon becomes obvious to the naked eye.

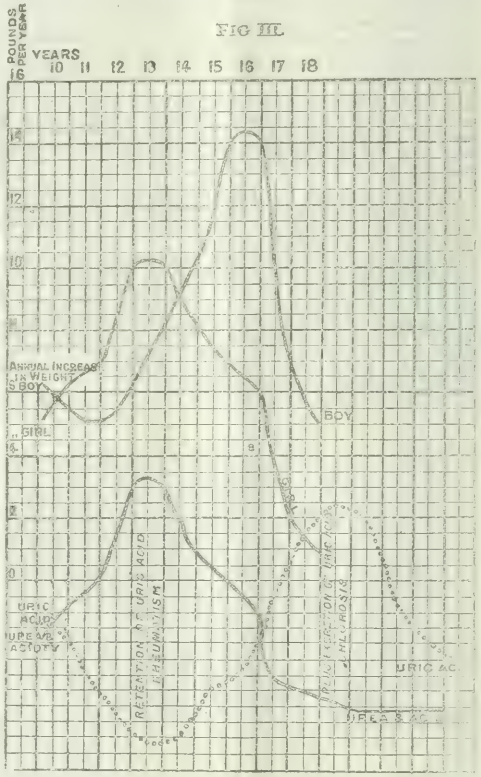
I may, perhaps, be allowed to remind you in this connection that uric acid is contained in all meat food, and also in the *Pharmacopœia*, for caffein is chemically trimethylxanthin, and I have shown[8] that xanthin and hypoxanthin may, as regards intoduction into the human body, be considered equivalent to uric acid.

Defective metabolism, the result of defective circulation, is probably as near as we can get at present to the action of uric acid in producing these blood changes, and its action is probably precisely similar in several other important diseases, but for details I must again refer to my book.

And now as to the causation of chlorosis. It will, no doubt, be readily admitted that we meet with it chiefly in women between the ages of 16 and 25. How do girls and women of these ages differ from boys and men of the same ages? As you know well, a girl at about the 13th year develops with enormous rapidity, and her weight may increase by as much 11 lbs. in this one year, as she dashes at a bound from childhood into womanhood.

Now, this very rapid growth and development entails a corresponding rapidity of tissue change and metabolism, with a very large formation of uric acid and urea per pound of body weight—this being always much greater in the child than in the adult. But high urea formation is always accompanied by high acidity,[9] that is to say, the urine will be highly acid and the blood lowly alkaline. The blood alkalinity being low, it will be but a bad solvent of uric acid, and hence a considerable proportion of the large amount of urate formed in these years of active metabolism will not be held in solution in the blood and excreted, but will be retained and deposited in various parts of the body, giving local signs of which we shall speak presently.

FIG III.



Unfortunately, later on a girl's metabolism falls very greatly, and by the end of the 18th year her increase in weight is almost *nil*: with this there is a great fall in the formation

of urea and acids, and the blood becomes more alkaline; as a result of this it becomes also a better solvent of uric acid, and it now takes up and passes into the urine so much uric acid—probably several hundred grains—as was stored in the tissues during the preceding period of active metabolism, from 12 to 14. Hence, from 16 to 19, or later, she will have an excess of uric acid passing through her blood, and will suffer from its effects on the blood decimal—namely, chlorosis.

To illustrate this point a little further, I give in Fig. 3 a curve showing the annual increase in weight of boys and girls.[10] From this we see that the greatest development in girls is in the 13th year, and in boys not till the 16th; and though the boys' curve falls very greatly in the 17th and 18th years, they are still increasing about 5 lbs. a year when the curve ends.

Now I think that girls in their more early development will probably form more uric acid and urea per pound than boys in their later development, and when later on the girls' increase is almost *nil*, the uric acid previously retained will pass through the blood both in greater quantity and more suddenly than it does in boys, whose increase is for several years later very considerable and their acidity not so low. I have therefore added to the curves a line representing the probable effects of the girls' increase in weight on the excretion of urea and acids, and a broken line below showing the effect on the excretion of uric acid, and from these we see at a glance that the chlorosis and anæmia of 18 are the result of the passage of an excess of uric acid through the blood, which again is the result of a previous storage of this substance from 12 to 15. Add to this that just at the time when a girl's increase of weight is coming down, and her urea and acidity falling, menstruation is established; and that even if this does not upset digestion and appetite, it often obliges girls to keep quiet for several days, so that its result is to still further reduce urea and acidity, and still more markedly flood the blood with uric acid, thus completely accounting for the increase of her chlorosis, and the functional troubles so often met with at menstrual periods.

Then, again, if we look at this figure, we shall see that we have got not only a complete explanation of the causation of chlorosis, but that we have also unexpectedly come upon an equally complete explanation of the girl's great tendency to rheumatism, as compared with her brothers; for I have for years been pointing out[11] that what we call gout or rheumatism is really the irritation of certain joint structures by uric acid or urates retained in those structures; and that they are retained in those structures by the same causes that prevent their excretion, and bring about their retention in the body in general, namely, a rise of acidity, or the presence in the blood of any substance whose urate is insoluble.

Now the retention in this instance is produced by a rise of acidity, and the joints are one of the places in which the urate is retained; it is little wonder, then, that girls are specially liable at this period of their lives to acute rheumatism, and Dr. Cheadle says[12] that girls of 10 to 15 years old are twice as liable to rheumatic fever as boys of the same age; these years including, I remark, the period of their most active metabolism.

Probably boys are liable to rheumatic fever from a similar cause at 16 years of age, but their active metabolism coming when they are older, they probably form less uric acid per pound than girls; and, further, they probably retain much less uric acid at this time owing to their more active habits of life.

For it follows from the first principles of urate excretion, for which I must again refer to my book, that, other things being equal, those in any given period of life retain most uric acid in their body who take least exercise, and those retain least uric acid in their body who take most exercise, which explains Cullen's well-known observation that gout seldom attacks those employed in constant bodily labour.

Now no one, I suppose, will deny that boys take much more exercise than girls all through school life, and especially as compared with girls at and after the commencement of menstruation. We see, then, that boys differ from girls in that their active metabolism comes later, when their formation of uric acid per pound is probably smaller, and that, owing to their greater bodily activity, they probably retain a smaller amount of the uric acid they form; while, lastly, their activity and nutrition are better continued and maintained, and are not subjected to the depressing effects of menstruation, so that any urates they have retained pass more gradually through their blood; hence they escape the chlorosis and anæmia from which their sisters suffer.

Prevention follows from this reasoning in the most simple manner, namely (1) diminish the girls' retention of urates at 13 by not introducing in food a single grain that is unnecessary, and not giving more animal food than is required for healthy nutrition; and, further, by increasing the bodily activity, prevent part of the rise of acidity and its results. In this way you may save her not only from chlorosis but also from rheumatism; (2) later on, at 16 or 17, let her continue her bodily activity, and prevent her becoming a semi-invalid when menstruation is established; in this way any urate she has stored will pass slowly through her blood (as in the case of her brother), and severe chlorosis will be prevented.

With regard to (1) I would direct special attention to the thoughtless way in which urates are often introduced into the body in soups, beef-tea, and meat extracts, which are useless for nutrition and yet contain large quantities of it, and these should in girls of 13 be avoided like poison.[13] The same applies to coffee and vegetable alkaloids in general. As regards the developed disease there is only one indication, namely, to clear the blood of uric acid; and if iron, mercury, or other metals can do this they will cure; if they fail to do it they will not cure.

In this latter case the best course is probably to cut off at once all unnecessary urates in the food, and give a good course of salicylates to clear out the accumulations already in the body, and on this treatment the blood decimal may improve more in a few weeks than it did on iron or arsenic in as many months, and if you examine the urine you will soon see the reason of this.

Of the relation of anæmia to acute rheumatism I need not, I think, say any more,[14] and the same reasoning applies to dyspepsia and its allies melancholia and headache.[15] In Bright's disease the excess of urates in the blood is well known, while hot climates will obviously lower the acidity and facilitate the passage of urates through the blood. Then, again, malarial and other fevers cause a fluctuation in urate excretion exactly similar to that traced out above in the case of girls, first a retention and then a plus excretion as its result, and this fluctuation accounts for very many of their symptoms[16] as well as for the anæmia which so often follows them.

NOTES AND REFERENCES.

[1] BRITISH MEDICAL JOURNAL, September, 1893, and *Uric Acid*, 2nd Edition, Churchill, London, 1894. [2] The blood decimal is the resultant obtained by dividing the percentage of haemoglobin by the percentage of cells. [3] See *Journal of Physiology*, vol. 15, p. 167. [4] *Uric Acid*, 2nd Edition pp. 36, 93, 378. [5] See BRITISH MEDICAL JOURNAL vol. 1, 1890, p. 1241, and *Medico-Chirurgical Transactions*, vol. 76. [6] See *Medico-Chirurgical Transactions*, prev. ref. [7] *Uric Acid* 2nd Edition, pp. 233-4. [8] *Uric Acid*, 2nd Edition, p. 48. [9] *Uric Acid*, 2nd Edition, p. 25. [10] Copied from a paper by Dr. W. Stephenson, *Lancet*, September 1888. [11] *Practitioner*, February, March, and April, 1891, and BRITISH MEDICAL JOURNAL, July 1888. [12] *Lancet*, vol. 1, 1889. [13] See *Uric Acid*, 2nd Edition, p. 355. [14] See also *Uric Acid*, 2nd Edition. [15] *Loc. cit.* [16] *Uric Acid*, 2nd Edition pp. 106-267.

IRREGULAR AND PROLONGED SUCKLING.—Dr. Danford Thomas, at an inquest held recently, called attention to one source of deaths of infants by suffocation. He said that he had held 300 inquests on children found suffocated in bed, and added that he had no doubt that many, in fact the majority, of these cases, were due to the mothers falling asleep after suckling with the children in their arms. There is no doubt that this practice of letting an infant remain at the breast all night is most pernicious. It not only involves the danger of overlying, but is a fruitful source of over-suckling and dyspepsia. As the coroner said, an infant should be suckled and then put in its cot to sleep. Simple as this precaution, and obvious as it seems to the educated intelligence, it is very commonly neglected by mothers of the working classes. It will be found in practice that attention to this detail will solve many difficulties which are untouched by drugs.

A BACTERIOLOGICAL INVESTIGATION OF THE SUPPURATIVE EAR DISCHARGE OCCURRING AS A COMPLICATION IN SCARLET FEVER.

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Before recording my own results, I will briefly give an abstract of some of the more important researches of other observers which bear upon this subject. It is evident that this class of cases presents us with an association and causative relation of two processes which may be distinct and independent. Thus I shall endeavour to separate the literature on these subjects into three parts, taking first that which relates to the scarlatinal process *per se*; secondly, that which deals with the bacteriology of otitis media, both acute and chronic; and, thirdly, that which relates to the combination of the two processes, as in my own cases.

I.—THE BACTERIOLOGY OF SCARLET FEVER.

The specific pathogenesis nature of Klein's[1] micrococcus or Edington's[2] bacillus has not been established. Crooke[3] discovered cocci in various parts of the body in scarlatinal cases, and Fraenkel and Freudenberg,[4] in three cases, noticed the constant presence of streptococcus pyogenes; they considered that in all probability this organism played a most important part in the causation of the secondary infections. Babes[5] considers that the whole scarlatinal process may result from a modified streptococcus infection; but Raskin,[6] finding this organism only in the epidermic scales in simple cases, and never in the blood, whereas it was constant in all cases complicated with suppuration, is of opinion that the streptococcus is the principal factor of the secondary infections, but that it has nothing to do with the etiology of the specific disease. Lenhartz[7] also found the streptococcus in pure culture, in the blood stream of a case complicated with suppuration of the glands of the neck. D'Espine and de Marignac,[8] from the blood of the finger of a scarlet fever patient obtained a streptococcus which curdled milk, but was not pathogenic for mice, showing that it was not identical with the ordinary pus streptococcus. Thus most observers agree that in scarlet fever the organism which plays the most important part, at any rate in regard to the secondary infections, is the streptococcus pyogenes.

II.—THE BACTERIOLOGY OF OTITIS MEDIA.

This has been the subject of research by many eminent observers, but as, in the majority of the cases investigated, the cause of the disease has not been stated, it may well be that some of them would have been more properly placed under the third division. Netter[9] endeavoured to find the cause of the otorrhœa in newly-born children, and for this purpose made twenty necropsies on infants varying in age from 9 days to 2 years, and found constant changes in the middle ear. In 18 cases he found the streptococcus pyogenes 13 times, the staphylococcus 6, and the pneumococcus 5 times, but Gradenigo and R. Penzo,[10] after a more careful examination of 20 cases, found no pathogenic organisms, but a large number of saprophytes, and came to the conclusion, as Politzer[11] previously had done upon more general grounds, that the discharge was due to the rapid decomposition of the delicate fœtal tissues of the middle ear, and not to an inflammatory process. Allusion is made to these reports to demonstrate the difference between such cases and those which are truly inflammatory, for of this nature alone are those now under consideration. Netter,[12] out of a series of 11 cases, found the streptococcus pyogenes 9 times, 4 times in pure culture, and twice the diplococcus pneumoniæ, once in pure culture. The staphylococcus pyogenes aureus was present with bacilli in a few cases. Zaufal,[13] the chief authority upon this subject, was the first who examined in the living the secretion obtained by paracentesis of the middle ear. In the first case he obtained Friedlaender's bacillus pneumoniæ, and in the second the diplococcus pneumoniæ. In 12 cases examined after rupture of the membrane, he found the diplococcus pneumoniæ in 4, the streptococcus pyogenes in 5, in 2 the staphylococcus pyogenes aureus, and in 1 the micrococcus tetragenes in pure culture.

Zaufal also found the diplococcus pneumoniæ in 6 cases, and he believes it to be the cause of otitis media acuta, whilst in the secondary forms he chiefly found the pus organisms, especially the streptococcus, but including besides those organisms already mentioned the staphylococcus albus—staphylococcus cereus albus, staphylococcus tenuis, bacillus tenuis, and the bacillus pyocyaneus. The last named he obtained in pure culture after paracentesis of the membrane.

Upon these grounds he divides otitis into three forms (1) that due to pneumococci; (2) that due to staphylococci—aureus, albus, and cereus albus; (3) that due to streptococci.

Zaufal was the first to assert the importance of the streptococcus pyogenes in the complications of otitis media. In this he is supported by Moos and Netter, and also Scheibe, for in 6 cases in which the last named found streptococci in 4 was the mastoid affected. Zaufal has also succeeded in setting up an acute inflammation in the ears of rabbits by means of inoculations of pure cultures of diplococcus pneumoniæ, and also of Friedlaender's bacillus pneumoniæ. Scheibe[14] examined by paracentesis the secretion in 11 cases. Twice he found the staphylococcus pyogenes tenuis, three times the staphylococcus pyogenes albus, in 4 cases the streptococcus pyogenes in pure culture, and in 1 case streptococci with staphylococcus albus and diplococcus pneumoniæ. He never found the staphylococcus aureus. Rohrer[15] found staphylococcus pyogenes albus and saprophytic bacilli in some cases but only cocci in non-fœtid cases.

Moos[16] in 3 cases found streptococcus pyogenes and diplococcus pneumoniæ. Again, in 18 cases he found the streptococcus 11 times, 5 times with tubercle bacilli, and once with the diplococcus pneumoniæ, this last case being one of caries after scarlet fever. Kanthack[17] examined 57 cases. In the acute stage he found most abundantly the diplococcus pneumoniæ sometimes in pure culture, also staphylococci, streptococci, and a number of non-pathogenic organisms. In chronic cases he never found the diplococcus pneumoniæ, but pathogenic staphylococci and other bacteria. In suppuration of the mastoid he found the diplococcus pneumoniæ frequently; but, on the other hand, in both acute and chronic cases the streptococcus pyogenes was remarkable by its scarcity.

Bordoni-Uffreduzzi[18] in acute cases found the diplococcus pneumoniæ and pyogenic cocci, but in chronic cases only the pus organisms and once the proteus vulgaris. Maggiora[19] in 13 cases of catarrhal affection of the middle ear examined before rupture of the membrane found the staphylococcus pyogenes albus 10 times, and the staphylococcus pyogenes aureus 6 times.

Bordoni-Uffreduzzi and Gradenigo,[20] in 4 cases of acute otitis media after spontaneous perforation found three times in the pus—twice in pure culture and once with staphylococci—organisms, morphologically and culturally resembling the diplococcus pneumoniæ, but differing from that organism by growing upon gelatine at 18 to 20° C., and by being found as chains within the cells. They suggest that the organism is an attenuated diplococcus, and that the streptococcus so frequently found by others is really an attenuated diplococcus pneumoniæ. They observed the same thing in a case of otitis media after influenza. Martha[21] records 2 cases of purulent otitis media out of 53 examined, in which the bacillus pyocyaneus was found in pure culture; in none of the other cases was it present. Crévoisier de Vomécourt,[22] who has worked much at the subject, states that the most important organisms are the streptococcus, the pneumococcus, Friedlaender's bacillus pneumoniæ, the staphylococci, and the bacillus pyocyaneus. Nathan[23] examined 40 cases of ear discharge, and in 12 found tubercle bacilli.

It will be seen from the foregoing that the organism to which the first place is assigned in the etiology of acute

otitis media by many authorities is the diplococcus pneumoniæ of Fraenkel. This point has been emphasised by Zaufal's successful inoculations of animals, but he has also been similarly successful with Friedlaender's bacillus pneumoniæ which has been recognised by several observers. Next in importance comes the streptococcus pyogenes, and much stress has been laid upon the activity of this organism as the cause of the complications which follow otitis media; and finally subsidiary to these are the pyogenic staphylococci and the bacillus pyocyaneus.

III.—THE BACTERIOLOGY OF OTITIS MEDIA IN SCARLATINA.

In the third series of cases—namely, those which consist of cases of otitis media occurring as a complication in scarlet fever—there is but little to quote. In one case, already mentioned, recorded by Moos of caries after scarlet fever, diplococcus pneumoniæ and streptococcus pyogenes were found. Marie Raskin,[4] however, who examined bacteriologically many cases of scarlet fever, out of 30 complicated cases found 8 with otorrhœa. In these the streptococcus pyogenes and, later, the staphylococcus pyogenes aureus and albus were found invariably.

My own investigations were carried out at the British Institute of Preventive Medicine, under the superintendence of Professor Macfadyen, to whom for most valuable assistance and consistent kindness I am greatly indebted. Out of 287 cases of scarlet fever, 36 suffered from otitis media, occurring mostly from the twentieth to the thirtieth day after the onset of the disease. Of these, 14 cases were examined bacteriologically, 4 of them twice at different periods.

The method of obtaining the pus was as follows: After spontaneous rupture of the membrana tympani, in some cases almost immediately after, the cheek, pinna, and external auditory meatus, were cleansed with an antiseptic solution—perchloride of mercury 1 in 2 000, or carbolic acid 5 per cent. solution—and then carefully dried with antiseptic wools. A fine capillary glass tube, previously sterilised by heat, was passed through the aperture in the membrane, with every endeavour to avoid contact with the walls of the external auditory meatus, and the pus from the middle ear aspirated into the tube. The tube was then withdrawn with similar precautions, and sealed at both ends.

From the pus thus obtained were made as soon as possible:

1. Microscopic specimens. Cover-glass preparations of the pus were stained with Ehrlich's aniline dyes and after Gram's method.

2. An emulsion in peptone beef broth or peptone water. From this emulsion were immediately made plate cultivations in nutrient agar-agar and nutrient gelatine, according to Koch's method, and placed in incubators, the one at a temperature of 37° C., the other at 22° C. From the isolated colonies obtained in this manner were made inoculations upon suitable media, and the various organisms were differentiated according to their modes of growth on different culture media, their staining properties, and their morphological appearances, further evidence being obtained in some cases by inoculations of animals. Some of the cases were examined immediately after perforation of the membrane, others at a later date, and, as before mentioned, 4 were examined a second time after an interval had elapsed.

The results obtained I have tabulated in order that the different organisms isolated in each case may be perceived at a glance.

This table shows, and the microscopic preparations of the pus even more clearly showed, that the shorter the interval between the rupture of the membrane and the examination, the more the pyogenic cocci predominate over rod forms. Cases I, II, and III showed almost pure cultures of cocci, whilst in the cases taken after a few days the presence of adventitious organisms was very marked, such as yeasts and sarcinæ. But even in the earliest cases the cocci were not in pure culture, but were associated with bacilli, and in one

Case.	Age.	Date of Examination after Perforation.	Organisms Found.							
1	4 years	1st day	Streptococcus pyogenes	Staphylococcus aureus	Staphylococcus albus	—	—	—	—	Saprophytic bacilli
2	1 year	,,	,,	,,	,,	Bacillus striatus albus				Oidium albicans.
3	3 years	,,	,,		..	..	Micrococcus albus liquefaciens			
3 2nd time	,,	9th day	—	—	,,	..	..			Pink yeast; chromogenic coccus (air); bacillus (unknown).
4	6 years	2nd day	Streptococcus pyogenes			..	..	Bacillus subtilis		Sarcina lutea; sarcina alba.
5	4 years	3rd day	,,			—	—	—	Bacillus pyocyaneus	Spirilla (probably from mouth).
6	4 years	1st day	,,	Staphylococcus aureus	Staphylococcus albus	Bacillus striatus albus			—	
6 2nd time	,,	17th day	,,	,,	—	..	—			Torulæ.
7	6 years	7th day	,,	,,	,,	..	..	—	—	
8	4 years	9th day	,,	,,	,,	—	—	—	—	Bacillus acidi lactici and a few saprophytic bacilli.
9	4 years	7th day	,,		Staphylococcus albus	—				Yellow yeast; bacterium unrecognised.
9 2nd time	,,	19th day	,,	—	—	Bacillus striatus albus	—	—	—	Aspergillus niger; bacterium unrecognised.
10	5 years	4th day	,,	Staphylococcus aureus	Staphylococcus albus	—	Micrococcus albus liquefaciens			—
10 2nd time	,,	11th day	,,		,,	—	—	—	—	Bacillus acidi lactici; bacterium as in Case 9.
11	7 years	6th day	,,		..	Bacillus striatus albus	—	—	—	Tubercle bacilli, aspergillus niger, penicillium.
12	10 years	4th day	,,						—	Three kinds of saprophytic bacteria.
13	5 years	21st day	—	—	—	Bacillus striatus albus			—	White yeast; diplococcus unknown.
14	6 years	26th day	—	—	—	..		—		White yeast, pink yeast, sarcina lutea, and coccus (air).

case with spirilla, which had probably ascended from the mouth and air passages.

Out of the 14 cases chosen for examination, the various organisms were found as follows:

Streptococcus pyogenes	12 times	Bacillus acidi lactici	2 times
Bacillus striatus albus	9 ,,	Bacillus subtilis	1 ,,
Staphylococcus pyogenes albus	8 ,,	Bacillus pyocyaneus	1 ,,
Staphylococcus pyogenes aureus	5 ,,	Tubercle bacilli	1 ,,
Micrococcus albus liquefaciens	3 ,,	Yeasts	6 ,,
		Sarcinæ	3 ,,
		Moulds	4 ,,

And a few other bacteria, whose recognition was not absolute, and which were found to be non-pathogenic for mice.

This list shows the frequency with which the streptococcus pyogenes was found, and it will further be observed that I was never once successful in finding the diplococcus pneumoniæ. This may be due to the fact that the purulent discharge was not suited for direct inoculation, or that the prevalence of the pyogenic cocci hindered its growth or hastened its decease, or because the diplococcus pneumoniæ does not play such an important part in the etiology of otitis media of scarlet fever as in that due to other causes. But it has been suggested, and I have already quoted the authors, that the streptococcus so frequently found is really an attenuated form of the diplococcus pneumoniæ; and in support of this view might be adduced Kanthack's report, since he found in acute cases the diplococcus pneumoniæ very frequently, but the streptococcus very rarely. That the diplococcus pneumoniæ in an "attenuated" form may have been mistaken for the streptococcus is no doubt possible, and *vice versâ*. In my own cases great attention was directed to the discovery and recognition of the diplococcus, but without success.

The points that were considered necessary for the identification of the streptococcus pyogenes were these:

1. That in fluid media it should appear in its characteristic chain formations, and give the typical growth in beef broth.
2. That it should flourish upon nutrient gelatine (tube and plate cultures) from 18° C. to 22° C., giving its characteristic growth, and that it should not liquefy the gelatine.
3. That it should remain stained after treatment with Gram's method.
4. That it should be capable of being cultivated from generation to generation on gelatine or in beef broth.
5. That it should be capable of living at 18° C. to 22° C. for a considerable time.

The points that were considered necessary for the identification of the diplococcus pneumoniæ were these:

1. That its growth upon nutrient agar-agar at 37° C. should present its characteristic "dewdrop" appearance.
2. That it should remain stained with the Gram method.
3. That its growth should cease or be markedly hindered on nutrient gelatine at room temperature.
4. That inoculations into animals should produce their death, and that the organism should be found in the tissues encapsuled.

Answering to this last description no organism was found, but corresponding to the first set of conditions was the organism which was isolated 12 times in 14 cases, and in the microscopic specimens of the pus from these same cases was seen in its characteristic chains in each. This organism I consider to be the streptococcus pyogenes.

Mention may here be made of a distinction that has lately[25] been drawn between two forms of the streptococcus, according to the length of the chain formation: the streptococcus longus and the streptococcus brevis. The latter is said to be less pathogenic and to liquefy the gelatine slightly. It was never met with in my research.

As far as I have been able to ascertain, the diplococcus pneumoniæ has only been recognised once in connection with scarlet fever (H. Moos), and this case was one associated with caries (suggesting a chronic process), whereas most authorities lay stress upon its occurrence only in acute cases. Again, I was equally unsuccessful in finding the bacillus pneumoniæ of Friedlaender, but, as seen by the table, the bacillus pyocyaneus occurred once in connection with the streptococcus and spirilla.

The bacillus isolated nine times, and mentioned as the bacillus striatus albus, was an organism resembling morphologically and culturally the organism described by Von Besser[26] under that name as occurring in normal nasal secretion. The case in which tubercle bacilli were found was discovered subsequently to have suffered from ear mischief some years before the onset of scarlet fever, that disease having set up a recrudescence.

The occurrence of the bacillus acidi lactici twice is interesting as following an acute illness in children, during which the staple food had been milk.

The other rod forms and cocci isolated were most of them inoculated upon mice, and found to be non-pathogenic, and since they did not resemble any of the commoner varieties of saprophytic organisms, were left unnamed.

I have already quoted weighty authorities to prove that in scarlet fever the secondary infections are due to the activity of the streptococcus pyogenes, and therefore in otitis media consequent to that disease we should expect to find that organism most prominent. In this my observations agree. Raskin found it invariably present. The fact that I did not find it in 2 cases out of 14 is probably due to the pus having been taken for examination later, and after the influence of antiseptics.

Conclusions.

It appears from my observations:

1. That the organism most potent in the etiology of the otitis media of scarlet fever is the streptococcus pyogenes.
2. That the less chance there is of contamination from the outer air through the external orifice the more the pyogenic cocci predominate over rod forms, but that prior to perforation of the membrane the occurrence of such organisms is not precluded, since they may ascend from the mouth and air passages.
3. That next to the streptococcus the most important organisms are the staphylococci albus and aureus.
4. That apparently the diplococcus pneumoniæ of Fraenkel or the bacillus pneumoniæ of Friedlaender do not play such an important part in the otitis media of scarlet fever as in that due to other causes.

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THE TREATMENT OF UTERINE FIBROIDS BY ABDOMINAL SECTION.

Read at a Meeting of the Plymouth Medical Society.

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It does not lie within the limits of this paper to enter upon any general disquisition as to the nature of uterine fibroids, or, as they may be more correctly called, fibromyomata. I shall content myself with calling attention to those conditions which demand surgical interference; and, in the next place, I shall refer only to their treatment by abdominal section. But it may be as well *in limine* to state that which is probably within the experience of most medical men, that a very large proportion of women affected with this disease recover without surgical interference. A subperitoneal or interstitial fibromyoma may grow to an enormous size, and, save for its bulk, cause no inconvenience to the patient. Smaller tumours are not infrequently destroyed by pregnancy. When submucous they are sometimes extruded in the form of polypi, or through some rupture of the capsule they break down and come away piecemeal. And, finally, at the menopause, we expect, and are not often disappointed in our expectation, that these tumours will vanish away, and "leave not a wrack behind." Still, there are few conditions which require such prolonged watchfulness, extending often over a period of many years. A fibromyoma, which to-day is un-

attended by any bad symptoms, may next year, or the year after, become either intolerable to the patient or dangerous to life. It may have grown in such a direction as to exert pressure on other organs, or it may have approached the mucous surface, causing hæmorrhage, or it may have degenerated and become cystic. In all these events we have to review our position, and to adopt active measures in the place of our hitherto "masterly inactivity." It is somewhat remarkable that it is only within recent years that much attention has been bestowed upon this disease. A woman with a fibroid was left to take her chance. Her condition was recognised, and she was told that, as time went on, Nature would effect a cure. And, doubtless, under these circumstances, many women have died, worn out by pain or the exhaustion of repeated hæmorrhage. And even now, I fear, the profession at large is not alive to the necessity for that continual watchfulness to which I have referred above. The advances of uterine and abdominal surgery have, however, placed in our hands a means of cure, or, at any rate, of alleviation, which those, our immediate predecessors, had not. To one only of these means I am about to refer—namely, abdominal section with a view either to hysterectomy or removal of the uterine appendages. There are on record some very curious cases in which abdominal section alone has been immediately followed by the shrinking and ultimate disappearance of uterine myomata. In two cases an abdominal section was made with a view to remove the tumour, but in neither instance was it found possible. But shortly after the operation the tumours commenced to decrease in size, and finally were cured. In another case a women had a large fibroid, which gave her no distress. She underwent the operation for cholecystotomy. At the time of the operation the tumour reached half way up to the umbilicus. The operation was performed in the month of May, and in the following November the tumour had receded into the pelvis, and was not one-third of its original size. Again, there is a case on record where a woman was diagnosed to have a cystic tumour, together with a fibromyoma producing severe hæmorrhage. The case was operated upon, and the ovarian cyst removed, but the myoma, being situated in the posterior wall of the uterus, could not be interfered with. She made a rapid recovery, and between July, when the operation was performed, and the following October the tumour had diminished one-half. She afterwards married, became pregnant, went her full time, and no trace of the tumour could be discovered.

It is probable that these cases may be mere coincidences. But when we remember the curative effect of laparotomy in tuberculous peritonitis, of which, so far as I am aware, no satisfactory explanation has been afforded, we can imagine that incision of the peritoneum may also exercise some as yet unknown influence on the growth of these tumours. At any rate, it is an argument in favour of exploratory incision when we are in doubt as to the probability of our being able to carry out any further proceedings.

We now come to the more immediate purpose of this paper, namely, the treatment of these fibromyomata by abdominal section. We may class the surgical proceedings to which recourse may be had broadly under four heads:

1. Hysterectomy.
2. Enucleation.
3. Ligation.
4. Removal of the uterine appendages.

And here we may remark that before the abdomen is opened and the tumour is examined it is next to impossible to determine to which of these procedures it may be necessary to resort. The operator must then come to his task with a full armamentarium and with a competence to undertake either of the above operations. It is also but fair to the patient that she should know, so far as it can be explained to her without causing undue alarm, that although it is proposed, for example, only to remove the uterine appendages, yet that it may be needful to perform a major and more serious operation.

With regard to the first of these proceedings, I do not propose to trouble you with the details of the operation in a straightforward case of hysterectomy, as doubtless they are familiar to all of you. But there is one warning I would give. In large tumours, especially those occupying the cervical portion of the uterus, the bladder is frequently found dragged high up out of the pelvis, and in some cases spread out, and much attenuated, over the surface of the tumour. It has been my fate to wound the bladder in such a condition. I immediately sewed it up with Lembert's sutures, and the patient made a good recovery. But I need hardly say it was an unfortunate complication, and added considerably to the risk and length of the operation. To avoid this the parietal incision should not be carried down too far, and the position of the bladder should be ascertained either by passing a sound or by partially distending it with fluid. The peritoneum also should be carefully incised from above downwards.

One of the most serious questions which we have to consider is the method of treating the stump after the amputation has been completed. The ordinary method of fixing it in the wound with the *serre-nœud* attached has yielded most admirable results, and is, I think, at the present moment the method more usually adopted by English gynæcologists. I say advisedly "at the present moment," for I think that in process of time the alternative operation for treating the pedicle by the subperitoneal method will become more popular, and that as the clamp in the treatment of the ovarian pedicle has disappeared into the limbo of the past, so also will the *serre-nœud* in hysterectomy. As in the days of old we are told that at their meetings the early Christians had each a psalm, or a doctrine, a tongue, a revelation, or an interpretation, so now the gynæcologists each have a method which they interpret at their meetings. And so it comes about that we who wait for the crumbs that fall from our master's table are frequently rewarded for our patience. We learn much from their discussions, and standing on one side, like the looker on who sees most of the game, we are sometimes able to use our own unbiassed judgment in the selection of operations.

The battle of the pedicle in hysterectomy is now being waged; and the younger men are advocating the abolition of the *serre-nœud*. They are reproached with being premature in bringing forward the results of so few cases, and they answer—which from the view of a gynæcologist should be conclusive—that all things must have a beginning. To amputate the uterus above the cervix, to cover the stump with peritoneum, and to close the abdominal wound sounds so good that the imagination is at once caught with the idea. But it is more easily said than done. And the trouble arises in the difficulty of arresting hæmorrhage at the time of the operation, and the fear of its recurrence after the abdominal wound has been closed. In a straightforward case the method is as follows: The uterus being lifted out of the wound the cervix is encircled with an elastic ligature. The peritoneal covering is then incised some distance above the ligature, and deflected down. The amputation is performed by a V incision, the point of the V being towards the cervix. All visible vessels in the stump are secured by ligatures of Chinese twist. The sides of the V are brought together with deep sutures of chromic gut. Then the folds of peritoneum are stitched over the stump by Lembert's suture with fine Chinese twist. I have twice performed this operation with satisfactory results. To make "assurance doubly sure" it is recommended that a double ligature should be placed on the two main vessels on either side that supply the uterus, namely, the ovarian and the uterine. The ovarian artery, which is easily found in the broad ligament, is first ligatured with a double ligature, and divided between the ligatures. The broad ligament is then divided between the ligatures. The uterine artery is next secured close to the cervix, and in doing this care must be taken to avoid the ureter, which is in close proximity. The cutting off of this blood supply practically renders the operation bloodless.

In one of my cases of hysterectomy a curious result followed. It was a very interesting case of pregnancy at the third month, complicated with a large interstitial fibroid. I watched the case for some time, being in considerable doubt as to the diagnosis. But eventually I operated, because the poor woman's sufferings were intense, and moreover she was getting something approaching to intestinal obstruction from pressure of the tumour on the rectum. For three days after the operation she went on perfectly well. She then developed acute mania, which I thought was akin to, if not actually, puerperal mania. I see, however, that Dr. Keith

has had no fewer than five cases of mania following the ordinary operations of hysterectomy in which there were no puerperal complications. The number of cases puts the idea of coincidence out of court, and we must therefore conclude that acute mania is one of the complications incident to this this operation.

The next method of treating fibroids, by enucleation, is one to which I shall refer very briefly. The mortality following this operation is so great that it can hardly be justified. In one of my cases of removal of the appendages there was a small fibroid projecting from the fundus. It was movable and evidently encapsuled. I was tempted to enucleate it, and sincerely regretted that I had yielded to the temptation, for although the case made a very good recovery, yet the hæmorrhage following the enucleation gave me infinite trouble and much delayed the operation.

The third proceeding, that of ligation, is not often practised; but it is a useful alternative when it is found impossible to remove the entire tubes and ovaries. It is very simple. The tube is drawn up in a loop, and a ligature applied at the base. Thus the blood supply entering the tube from the ovarian artery at two points is completely cut off. The last method of treating fibroids, namely, by removal of the uterine appendages, is without doubt the most satisfactory, both in its immediate and remote results, when it is applied in suitable cases. Rapidly growing tumours in young women, tumours of moderate size causing profuse hæmorrhage, constant distress, or dangerous neuroses, are all conditions in which this operation is eminently useful. In very large tumours it is of doubtful expediency, the principal objection being the extreme difficulty of finding the second tube and ovary. In cases of cystic fibroma the operation is also counterindicated, as it has been proved in many cases that removal of the appendages in such conditions does not arrest the growth of the tumour. The operation itself in a straightforward case is a very simple one. When there are complications it becomes one of the most difficult. When, for instance, the tumour is large, it is exceedingly difficult to find the second tube and ovary owing to the rotation of the uterus. The first ovary may present in the wound, but the second one may be situated deep down in the pelvis, or it may be so jammed against the pelvic walls as to be inaccessible, or again it may be buried in a deep groove caused by the lobulated nature of the growth. As the removal of one tube and ovary is a perfectly useless proceeding, it is therefore important, before you attack the one first to hand, that you should ascertain that the second one is accessible. Another trouble arises from the adhesions which are frequently found to omentum and bowel. These have to be separated, and it sometimes happens that the ligature has to be placed on the tube perilously near to the uterus, the result being that there is great danger of the ligature slipping off. In one of my cases this happened, fortunately before I had closed the abdominal wound, but after I had inserted the sutures preparatory to doing so. I had considerable difficulty in securing the pedicle, and could only do so by inserting deep sutures with a curved Hagedorn's needle into the tissue of the uterus itself. Thus the hæmorrhage was arrested, and the case did well.

One other complication is sometimes met with, and I think it is the most troublesome of all, and that is when the fibroid in its growth has separated the layers of the broad ligament. In such cases you will come upon a very large plexus of vessels, which would be perforated by the needle in passing the ligature, or even, if not so injured, would be more than likely to slip out of the noose owing to the tension on the structures. If you elect to go on with the removal of the tube, these vessels must be taken up one by one and secured with fine silk before any attempt is made to ligature the tube.

I now proceed to give a very short summary of the cases in which I have removed the uterine appendages for fibroma of the uterus.

CASE I.—S. H., aged 40. Suffering great pain in the back, constipation, and difficulty in micturition from the pressure of fibroid, which was the size of an orange. Menstruation regular and not excessive. May, 1891. Tubes and ovaries removed with great difficulty owing to adhesions to floor of pelvis. Smart hæmorrhage; good recovery after attack of influenza. September, 1892. Pain on defæcation and micturition quite gone. Occasional vaginal discharge; no menstruation.

CASE II.—A. H., aged 42. Continuous hæmorrhage; very pale and anæmic. Two tumours on either side, the left reaching to umbilicus. June, 1891. Right ovary and tube removed with ease. Left adherent to broad ligament and removed with four interlocking stitches. February, 1892. Uterus size of large pear; no hæmorrhage.

CASE III.—M. A. E., aged 45. Two years ago noticed lump in abdomen, and then periods lasted a fortnight or more and were very profuse. Six months ago periods stopped but swelling increased. A week ago had severe flooding, which required plugging, and still went on. Tumour reaching within two fingers' breadth of umbilicus. September, 1891. Appendages removed; difficulty in getting up the left one. January, 1892. Tumour much diminished; no hæmorrhage.

CASE IV.—Mrs. W., aged 51. Eight months ago first noticed small swelling; grew rapidly; now above umbilicus. Great pain, especially in the groin and legs. Periods always regular and not excessive. Extremely alcoholic. January, 1892. Appendages removed; left small and shrivelled and presenting in front and attached to omentum; right large and cystic; ovary got at with difficulty. Recovery prolonged. Lately heard that tumour is shrinking considerably and pain gone.

CASE V.—Mrs. T., aged 45. Rapidly-growing lump on abdomen, with pain and hæmorrhage. January, 1892. Both appendages removed with difficulty owing to the jam in the pelvis. Small subperitoneal fibroid enucleated with much hæmorrhage. December, 1892. Uterus normal size; no hæmorrhage.

CASE VI.—E. K., aged 40. Noticed lump three years and a half; constant sickness, excessive periods, constipation; tumour nearly reaching umbilicus. June, 1892. Right appendage presented and was removed; left behind, and got at with difficulty; broad ligament torn away from ligature, and stitched together with fine silk. March, 1893. No menstruation since; uterus normal size.

CASE VII.—M. H., aged 49. Profuse hæmorrhage for ten years and great bearing-down pain; had been treated by Apostoli's method; tumour 1 inch above umbilicus; cannot hold water when standing. February, 1893. Left appendix first brought forward with great difficulty; right easily removed. Right broad ligament removed with interlocking stitches; ligature slipped from right pedicle with profuse hæmorrhage; secured by deep sutures into substance of uterus; good recovery.

CASE VIII.—E. E., aged 44. Tumours growing for five years; great pain in iliac region; periods irregular but not excessive; a lump felt, springing from the left of fundus; doubtful whether tube of fibroid. June, 1893. Found large fibroid prolapsed behind uterus; appendages removed with difficulty owing to depth; good recovery.

CASE IX.—M. T., aged 44. Large myoma; sound passed 7 inches; pain and hæmorrhage. August, 1893. Right appendage removed; left could not in consequence of adhesions, and was ligatured. Excellent recovery. In four weeks diminished 3 inches in girth.

CASE X.—S. G., aged 43. For twelve months periods constant and very profuse; then noticed small lump; now extends 2 inches above umbilicus; patient very ill with systolic *bruit*. August, 1893. Anæsthetic taken very badly. A. C. E.; tubes very short and secured with difficulty. Died from exhaustion and shock on third day.

In addition to these there are two cases of hysterectomy.

S. D., aged 40. Large fibroid in uterine wall. Gravid uterus at second month. Obstruction both at rectum and urethra. Hysterectomy was performed, and the stump treated by the intraperitoneal method. Three days after, having been quite well in the intervening period, she developed acute mania, and died on the seventh day. On *post-mortem* examination the abdomen was found perfect, the uterine stump having quite healed.

Miss B., aged 38. For many years profuse periods. Peritonitis. Difficulty in defæcation and passing water. Hard mass in lower abdomen, especially felt through rectum. Very difficult to find way into peritoneal cavity. Opened bladder, which was stretched out over tumour. Opening sewn up 5 inches long. Found tumour between layers of broad ligament, and in separating adhesions again opened bladder. Removed entire mass with uterus. Could not close second bladder wound. Shut off general peritoneal cavity by bringing forward recto-vesical fold of peritoneum. Put in drain tube into bladder. Prolonged recovery. Is now well, but suffers from bladder irritation.

It will be seen that of the ten cases of removal of the tubes and ovaries, nine made excellent recoveries. The only case that died was an exceptionally bad case run down by previous hæmorrhages and pain. Seven of the cases have had no return of hæmorrhage, and the tumours have diminished considerably, and in some cases altogether disappeared. In two cases I have had no recent report. The death after hysterectomy took place on the seventh day from the exhaustion of acute mania, and the *post-mortem* examination found the abdominal cavity perfect.

Since writing the above paper I have operated on three more cases for removal of tubes and ovaries with most satisfactory results.

DONATIONS AND BEQUESTS.—The late Mrs. Mary Eldridge, of Oak Lawn, Clapham Park, has by her will bequeathed the reversionary interest of £7,000 in India stock between Guy's Hospital and the London Hospital, and she devises freehold houses and properties in Bayswater to the Seamen's Hospital, the Middlesex Hospital, the Governesses' Benevolent Institution, and St. George's Hospital. The residue of her estate she leaves to the British Home for Incurables, the Royal Society for the Prevention of Cruelty to Animals, the National Hospital for the Paralysed and Epileptics, and the Charity Organisation Society in equal parts.

AN ADDRESS
ON
TWO CASES OF UNCOMPLICATED INTRAPERITONEAL RUPTURE OF THE URINARY BLADDER.

By JOSEPH COATS, M.D.,
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The subject of rupture of the urinary bladder presents points of interest in many directions. My attention has been called to it by the occurrence of two cases within a short period, which presented many points in common, and, in the conditions found after death, offered some matters of surprise both to the clinical observer and to the pathologist. Both of the cases came under the category of uncomplicated intraperitoneal rupture, that is to say, there was no other injury or disease which had any direct relation to the rupture, and the whole group of phenomena were simply the result of that accident. I will first relate the cases briefly and then make some remarks on the points of special interest. For the clinical notes in the first case I am indebted to Dr. Oswald, of Gartnavel Asylum, the patient having been an inmate of that institution.

Case I. *Notes by Dr. Oswald.*—"March 11th, 1893. This morning at 9 A.M. the writer was called to see Mr. D., as he was seriously ill. He was found in bed looking pale and collapsed; his pulse small and 60 at the wrist. His abdomen was slightly distended. There was a clear area round the umbilicus, relative dulness on the right side, and dulness in both flanks, slight in extent. There were no external marks of violence. He had had a bad night; had only slept three hours and a-half, and had been noisy for a time. He rose at 9 A.M., washed and dressed as usual, and at 8 took his porridge. Afterwards he walked from the dining room to the sitting room, and talked for a time with an attendant. At 8.30 he was seen to be sitting with his head on his hands, the elbows on the knees in rather a cramped position, and he half slipped to the floor; but he said he was all right. The attendant saw he was looking very ill. He moaned as he was carried to bed, and lay in bed with his knees drawn up and complained of pain over the lower abdomen. (It may be taken as a fact that there was no violence). The bladder was not unduly distended, but he had not passed water since 1 A.M. His bowels had been freely moved the previous day. Through the day he vomited a good deal, and was very restless, and his mental condition bad.

"March 12th. Complains of pain low down in the abdomen. No motion of bowels and no passage of flatus. Passed no water since last night. Soft catheter introduced, and 12 ounces of clear urine drawn off. Ill, healthy, containing no albumen. Temperature slightly subnormal; 97.6° last night, 98° this morning.

"March 13th. Sick through the night. Passed about 3 ounces of urine during the night; 10 ounces drawn off this morning. Seen by Dr. H. C. Cameron, who saw no grounds for operative interference. To-night he passed some urine containing some blood.

"March 14th. Seemed better. Pulse 104, and fairly good. Abdominal distension is greater, and there is more changing dulness in the flanks. No passage of flatus, no motion of bowels, and no more vomiting.

"March 15th. Seen again by Dr. H. C. Cameron.

"March 16th. Died suddenly this morning, rather unexpectedly. He had had two free bowel motions, and seemed rather better, but collapsed and died at 9 A.M. All through, his mental condition was one of subacute mania, and his extreme restlessness and incoherency prevented much being done for him."

Post-Mortem Examination.—I was asked by the friends of the patient to make a *post-mortem* examination in this case, and I wrote the following account of the results. The examination, by direction of the friends, was limited to the abdomen. The surface of the body was pale, and there were no marks of injury visible on the abdomen. The wall was incised in several places, to see if there was any hæmorrhage in the structures, but none was found. The abdomen contained a large quantity of fluid of a dark straw colour. There was no exudation of a solid character on the surface of the peritoneum. The urinary bladder was found empty and collapsed. The posterior surface showed a ragged, rounded aperture, with everted edges, which were to a slight extent infiltrated with blood. On removing the bladder the rupture was found sufficient to admit two fingers. The mucous membrane was not ulcerated, and the edges of the aperture were everted as if the rupture had taken place from within. Microscopic examination revealed no disease of the bladder. There was simply the tear whose edges were slightly infiltrated with blood, and there was very little, if anything, of inflammatory exudation.

As I was asked to give my opinion of the cause of death, I added to the report given above the following words: "I am of opinion that death has resulted from rupture of the urinary bladder. In the case of an excited patient, if the bladder happened to be distended with urine, an accidental blow or fall might be sufficient to cause such a rupture."

Case II.—W. S., aged 30, an ironmoulder, was admitted to the Western Infirmary with symptoms which pointed to acute peritonitis. The history was that he had on a Friday night been intoxicated and slept out. There was also an obscure history of his having fallen downstairs whilst intoxicated. On the Saturday morning he had a severe rigor. When admitted on Sunday evening the abdomen was tympanitic and very tender, the face pinched, the tongue dry and leathery, the pulse rapid and soft, and the temperature 99.2°. There was a good deal of vomiting of dark fluid matter, with a fæcal smell. Shortly before death, which took place early on the Monday morning, the temperature rose to 103.8°.

At the *post-mortem* examination, which was made on the Tuesday morning, it was expected that the usual evidences of peritonitis would be present. On opening the abdomen, however, whilst there was a considerable quantity of blood-stained fluid, there was not a trace of the ordinary fibrinous exudation which we associate with peritonitis. There were some flakes of blood, but these were few, and they were chiefly in Douglas's pouch. The source of the mischief was found in a rent in the posterior wall of the bladder, which is thus described in the *post-mortem* record. The posterior aspect of the urinary bladder shows a transverse rent 2 cm. (about three-quarters of an inch) in extent, and the tear is continued on either side in the peritoneum to the extent of 3 cm. on the left, and about 2 cm. on the right, making in the peritoneum a tear of about 7 cm., or nearly 3 inches. Around the lips of the gaping wound there is a deposit of light brown coagulum. In Douglas's pouch there is also coagulum partly dark and partly paler, but there is nowhere anything that can be called a proper fibrinous exudation. Viewed from within the rent is seen to be situated about 2 c.m. from the fundus. The mucous membrane is everted, passing well outwards into the wound. The rest of the mucous membrane of the posterior wall is markedly œdematous. The bladder was almost fully contracted, and it contained a small quantity of red fluid and a crumbling altered coagulum. It is to be presumed that the contraction of the bladder had diminished the size of the rupture, and that in the distended bladder the rent was at least as great as that in the peritoneum, namely, about 3 inches.

Remarks.—In studying these two cases the points which seem to me to emerge as worthy of comment, are these, which I will take up seriatim, namely, the absence of a clinical diagnosis in both: the seat of the rupture; the interval of time between the rupture and death; the question of inflammation of the peritoneum as a consequence of rupture: the state of the wound; and the mode in which death was brought about.

The existence of rupture of the bladder was not suspected during life in either of the cases, and the condition was a "find" at the *post-mortem* examination. There was no clear history of violence in either case, and the patients themselves were not able to give any proper account of the origin of the disease. The one patient was acutely maniacal, and the other had been deeply intoxicated. It is noted by Rivington[1] that "in 41 out of 107 cases of simple intraperitoneal rupture it is distinctly specified or implied that the patients had been drinking alcoholic liquors freely or were actually drunk, at the time of the accident." The frequency of this accident in intoxicated persons is to be explained chiefly by the tendency to over-distension which alcoholic excess brings about. The liquor imbibed increases the amount of urine, and the state of blunted consciousness makes the call to empty the bladder less appreciated. It may be added to this that the intoxicated person is liable to falls, and that the body is not so readily protected by the active movements of the limbs as in a sober person. The drunk man falls like a heavy bag, and a distended viscus may be more readily burst. In this connection I may refer to the remark of Ferraton,[2] that ruptures of the bladder occur much more frequently in England and Germany than in France. He accounts for this by the use, frequently in excess, of alcoholic drinks, such as beer, which provoke an excessive diuresis. Whether this be the explanation or not, there seem to be more cases recorded in England than in any other country. Of 90 cases summarised by Ferraton no fewer than 60 are by English or American observers, chiefly the former.

The seat and size of the rupture were similar in the two cases. It was the posterior wall of the bladder, a short distance from the fundus. The rupture was distinctly transverse in the second case, whilst in the first it was nearly circular. It was noted in the second case that the peritoneal tear was considerably greater than that of the muscular and mucous coats. The explanation of this clearly is that the muscular wall of the bladder had contracted more than the peritoneal coat, which latter, however, must have shrunk considerably as compared with the stretched condition that existed when the bladder was over-distended. It is noted that in this contracted condition the crack in the peritoneum was about 7 cm., or nearly 3 inches in extent, and we may infer that the tear when produced must have been considerably larger. We can picture to ourselves the greatly distended viscus with a great rent in its posterior surface.

The interval of time between the rupture and the death of the patient is an important matter both in its practical and pathological relations. In the first case the patient was observed to be seriously ill on the morning of March 11th, so

ill that he "half slipped to the floor," and he died on the morning of the 16th, an interval of five days. I think that the rupture must have occurred on the date mentioned, as already, on the 11th, there is mention of pain low down in the abdomen as a prominent symptom. Dr. Oswald has suggested that there had first been a small rupture and afterwards a larger one, but I scarcely think this possible. In order to cause a rupture in a perfectly normal bladder sufficient to admit two fingers there must have been a considerable distension of the bladder, and it is scarcely conceivable that such a distension could occur if there were already a tear, even if it were small in size. The duration of this case may be set down as five days. In the second case the duration is shorter. The patient slept out intoxicated on a Friday night, and he died early on Monday morning, so that the duration here is only two to three days.

In this connection it is interesting to note the duration of life after the rupture as collated by Rivington.[3] He states: "Out of 85 fatal simple intraperitoneal ruptures 8 died within twenty-four hours, 15 within two days, 15 within three days, 16 within four days, 10 within five days, 4 within six days, 5 within seven days, 5 within eight days, 1 within nine days, whilst 1 lived twelve days (Anton Graw), 1 more than twelve days (Montagu), 1 fourteen days (Von Roonhuysen), 2 about fifteen days (Ellis and *Gazette des Hôpitaux*), and 1 sixteen clear days (Crossley)." That is to say, more than half the cases lived over three days after an intraperitoneal rupture of the urinary bladder, and some lived for much longer periods.

The question of peritonitis in connection with rupture of the bladder is one which is not without difficulty. I confess that when I examined these two cases and found none of the ordinary evidences of acute peritonitis I was surprised. I feel now that I should not have been surprised, because acute peritonitis is a septic inflammation, and healthy urine, being aseptic, is incapable of producing a septic inflammation. I was also aware that urine may be injected into the peritoneal cavity of animals not only without producing any peritonitis, but without apparently affecting the health of the animals. Thus Wegner,[4] in his important paper, states that large quantities of normal urine may be injected into the peritoneum without evil result. Grawitz[5] also states that, along with Israel, he made an experiment in a rabbit in which, by dividing the ureter, the secretion of one kidney was passed for months into the peritoneum without producing any acute peritonitis, the only result being a fibrous adhesion of the intestine.

The observations of Wegner, Grawitz, and more recently the confirmatory experiments of Waterhouse,[6] demonstrate the extraordinary absorbent power of the peritoneum, and show also that, on account of this absorbent power, even pyogenic microbes, when introduced, do not produce peritonitis unless the peritoneum is so altered as to interfere with absorption, or the conditions are such as to offer to the microbes a sufficiency of nutritious matter for their rapid growth. Normal urine must be readily absorbed by the peritoneum and even if it be present in considerable quantity it should do no material injury to the membrane. And yet Rivington, writing in 1883,[7] regards it as "an erroneous opinion prevalent that the peritoneum often tolerates the presence of pent-up urine." The truth obviously is that, unless there is an introduction of septic matter along with or subsequently to the rupture, there will be no appearance of ordinary peritonitis whatever, and this was the state of matters in our two cases.

This observation is far from an isolated one. Ferraton, in two cases which he observed, found the peritoneum free from inflammation. This author, is spite of the statement commonly found in published works that in rupture of the bladder death usually occurs from peritonitis, asserts that "usually at the necropsy no sign of peritonitis is to be found." Surgeon-Major Hamilton records a case of a soldier who had been drinking and fell from a window-sill 20 feet. The patient lived five days and four hours after the fall, and yet at the *post-mortem* examination "the peritoneum was perfectly normal; not a sign of peritonitis could be detected anywhere." In a case recorded by Macewen in 1873[8] the ordinary signs of peritonitis were absent, although there was a considerable quantity of fluid in the abdomen. The patient had been ill for four days at the time of death, and the absence of peritonitis was taken to indicate that rupture had not occurred at the beginning of his illness, but had taken place shortly before death. In view of what has been adduced above this can scarcely now be contended, and the case seems to have been one of rupture during intoxication, with survival for four days without any of the ordinary signs of peritonitis.

Absence of inflammatory reaction in the wound of the bladder was particularly noted in the first case. As the case was one to which special interest attached on general grounds, I made a careful microscopic examination of the wall of the bladder and of the edge of the wound. Not only was there no evidence of disease of the wall of the bladder such as to give occasion to the rupture, but the wound itself presented an extraordinary freedom from inflammatory reaction. It had the characters of a wound which had been quite recently inflicted, scarcely any leucocytes were in or around it, and very little dilatation of vessels. Yet there is reason to believe that this wound had been in existence for five days. I should not expect even a wound protected by all aseptic precautions to show such entire absence of evidences of inflammation. The process of healing by the first intention involves a certain inflammatory exudation and proliferation, and it looked in this case as if even the process of healing had been paralysed. Having these facts vividly in my memory I was much interested at certain observations recorded by Ferraton in his memoir. The matter is of such consequence that I venture to give an exact translation of one of the paragraphs bearing on it:

"Our observations are very interesting in this respect that they are concerned with patients who, at the same time that they sustained rupture of the bladder became the subjects of wounds, the one on the hand, and the other on the forearm with fracture of the forearm. In these two cases there presented itself this remarkable fact, the importance of which we shall develop further on, that at the moment of death these wounds had precisely the same aspect as at the admission to the hospital—they presented no tumefaction, no redness, no secretion, in a word no trace of a process of inflammation and repair."

I do not know whether this observation of Ferraton's will be confirmed by further investigation, but the two cases seem to have been carefully observed. It would seem as if the presence of urine in the peritoneum and its absorption, so as to accumulate in the blood, had the effect on wounds of preventing those processes which we are accustomed to observe in freshly-inflicted wounds, and which are in some degree to be associated with the process of healing.

It may further be suggested that this circumstance of the non-healing of the wound may possibly account for the exceeding rarity of recovery from intraperitoneal rupture of the bladder. Rivington, in his work already referred to, gives a detailed analysis of cases reported to have recovered from this condition, and seems to throw doubt on all of them; and yet, under ordinary circumstances, it might be expected that a wound in the bladder would sometimes unite sufficiently to allow of retention of the urine for a time and so of ultimate recovery. It need scarcely be added that, if the abdomen be opened, its urinary contents thoroughly removed, and the wound in the bladder fully united by sutures, there is no reason to doubt that union would occur as readily as in other peritoneal wounds and that recovery would generally be secured.

The mode of death in intraperitoneal rupture of the bladder is, I think, to be directly related to the absorption of urine by the peritoneum and its continuous accumulation in the blood. If the bladder be ruptured the case is not like that of Grawitz's rabbit, where the ureter was severed and the secretion of one kidney passed into the peritoneum. In that case, as one kidney remained in communication with the bladder, there would be a continuous elimination of urine, although there would probably be a constant excess of the urinary constituents in the blood. In the case of rupture of the bladder, however, the urine absorbed from the peritoneum, when eliminated afresh by the kidneys, would only pass back into the peritoneum to be again reabsorbed as before. In this way a vicious circle would be established, with the result that the blood would be progressively loaded

with the urinary constituents. I do not presume to determine whether this condition is precisely that known under the designation uræmia. In ordinary uræmia the process of secretion in the kidney is interfered with, and the products which ought to be removed accumulate. In rupture of the bladder the products have been secreted, and may have undergone considerable chemical change in the process. The absorption of these altered products may well produce a different complex of symptoms from that of a typical uræmia. Perhaps it would be more convenient to speak of urinary poisoning as the condition in these cases.

In considering the cause of death the condition of the peritoneum is not to be ignored altogether. The presence of a fluid of a different constitution from that of the normal peritoneal fluid may well have an influence on the membrane, and may affect its nervous and vascular arrangements. The symptoms of the patient indicate this in many cases, so that the diagnosis of peritonitis may be made, as in our second case. This must, however, be a subsidiary element, as the experiments of Wegner seem to prove that large quantities of urine may be infused into the abdomen without producing any pronounced symptoms.

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A NOTE ON CHLOROSIS IN THE MALE.

By C. F. MARTIN, M.D.,

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CHLOROSIS is almost universally regarded as a disease which, if not peculiar to women, is at least of importance merely as it concerns the female sex—an idea which is likewise borne out by the name so often applied to it, morbus virgineus. Many authors, indeed, deny utterly its existence in members of the male sex, while others, though recognising its rare occurrence in men, have regarded it as a condition present only in connection with other feminine attributes, and existing thus only in men whose general characteristics and constitution render them effeminate. Thus Eichhorst, while denying that chlorosis is exclusively confined to women, and insisting on its occasional occurrence in men, considers that male chlorotics are always slender individuals, of feminine build, and frequently engaged in effeminate occupations, such as tailoring, etc.

In a recent article in the BRITISH MEDICAL JOURNAL Dr. Lloyd Jones states that in a research covering more than eight years he has been unable to discover a single case of chlorosis in the male. From the article mentioned it is inferred that these observations were founded merely on estimations of the specific gravity of the blood as a basis for testing the chlorotic condition. While doubtless there may be a definite relation between these two features, nevertheless the distinct relative decrease in the hæmoglobin has, during these last years, been considered as the crucial test for chlorosis, and on this altered relationship first, I believe, insisted upon by Gruber—Dr. Osler lays special stress.

Regarding then chlorosis as an essential anæmia whose main characteristics are a greenish sallow tint of the skin, accompanied by a definite relative diminution of the hæmoglobin in the blood, we may say that such statements as those of the authors above mentioned fail to coincide with observations made by us during the past few months in Montreal, and hence the mention of a few cases which have led to the conclusion that, whether or not a true chlorosis be at times present in males, it may at least be said that occasionally in men a condition is found very closely approximating the chlorotic condition.

In estimating the hæmoglobin, a Fleischl hæmometer was employed, the instrument having been previously thoroughly tested on normal subjects, and due allowance made for the slight inaccuracies found.

CASE I.—J. S., a doctor of medicine aged 24, had observed that for several months a gradually increasing pallor and sallowness had developed, accompanied by gastro-intestinal symptoms, of which the most prominent were prolonged and obstinate constipation, anorexia, and fulness after eating. In addition he suffered greatly from headaches and severe intercostal neuralgia. The patient was of a decidedly neurotic temperament, had a personal history of hard work and prolonged studying at night. The family history was good. On physical examination there was found no evidence of organic disease. Estimation of the blood however revealed on an average 5,300,000 red corpuscles, white cells 1 to 400, and hæmoglobin 68 per cent. Treatment by arsenic was recommended and carried out. The patient was greatly improved thereby. Inasmuch as he left town soon after, there was no possibility of making further investigations, though letters received indicate a complete restoration of health.

CASE II.—H. G., a merchant, aged 27, having a history of prolonged dyspeptic disorders, was observed to have a markedly anæmic appearance; he had epigastric pain and fulness after meals, flatulence and marked constipation. Mental depression, almost approaching true neurasthenia, was superadded. Neither the personal nor family history could afford any light on his condition. Physical examination showed a normal state of all the organs, while the estimation of the blood gave the following result: Red cells 5,300,000, white cells about 1 to 350, hæmoglobin 72 per cent., this being the average of several examinations. Under treatment with arsenic and iron rapid improvement resulted, and when examined about two months later the patient's general condition was practically normal, and the blood examination showed the hæmoglobin to be 96 per cent.

CASE III.—E. H., a medical student, aged about 25, was likewise examined, inasmuch as a distinct greenish sallow complexion gave some indication of abnormal blood condition. The patient was of a nervous disposition, but had no complaint other than constipation. Physical examination of the organs was negative. During the examination of the blood the patient became very faint, almost losing consciousness. Red corpuscles numbered 6,030,000, hæmoglobin 77 per cent.

CASE IV.—M. S. This case resembled in nearly all its features Case No. II. An average of several blood examinations revealed 4,800,000 red cells, hæmoglobin 77 per cent. A soft systolic murmur was held at the base.

In these various cases presented, a blood condition has been obtained indicating a disease identical with the chlorosis described by many authors, and inasmuch as no other cause can be discovered with which to associate that anæmia, there seems good reason to believe that in them we have found an ordinary chlorosis. Although in no case there has been an extreme diminution of the hæmoglobin, yet it may be presumed that, as in these, so in many men, from some cause as yet not fully ascertained, an anæmia may be found whose main characteristic is a diminution of the hæmoglobin.

While being unable to contribute in any way to the subject of its etiology, yet that the condition described does sometimes exist in a mild form in males is at least worthy of mention, and that it may be perhaps more frequent than is generally supposed seems borne out by the experiences we have here met with during the past few months.

A REMARKABLE CASE OF INTUSSUSCEPTION.

By E. M. H. O'CONNOR, L.R.C.P.I., ETC.,

Market Deeping, Lincolnshire.

ON May 1st, 1893, I was called in to see a lad, aged 13 years. I found him to present all the symptoms of acute peritonitis. He had had two or three well-marked rigors. He complained of vomiting, retching, and intense shooting pain in the abdomen. He lay on his back, legs drawn up; the face looked anxious; tongue small, red, and dry; intense thirst; respirations 50 per minute; temperature 104°; pulse 138, hard and wiry. The abdomen was distended to a marked degree. He could not bear the slightest touch without calling out in agony.

I got the following history of the attack: Eight days previous to my visit the patient had had a severe wetting, and was put to bed when he got home, a warm drink being administered. He got up next morning apparently none the worse, and went about as usual for four days. His bowels, however, had not been moved since the wetting. A dose of castor oil was then administered, but, having no effect, the friends, after waiting two days longer, gave him half an ounce of mag. sulph. This caused him a great deal of pain, so that several times "he cried out," but there was no evacuation.

On the evening before I was called in two "strong" purgative pills had been given, and I was informed that he had been much worse since he had taken them, and that the bowels had not moved.

I ordered turpentine stupes to be applied to the abdomen. The only food was to consist of milk in small quantities,

given frequently. I prescribed tinct. opii, mxv. every three hours until I saw the patient again. Late in the evening I paid another visit. I was then informed that he had had a large passage from the bowels. On examining the evacuation it was not hard to discover that the greater part of it consisted of intestine. Having washed it I was astonished to find the specimen of which I send a photograph.

The patient was now suffering much less pain. He had taken half a pint of milk during the five hours which had elapsed, and had only vomited once.



On May 2nd there was slight improvement. He could take milk in small quantities without ill effects. The temperature was 103°, the pulse 120, and the respirations 45. He was not in so much pain. There was a slimy discharge from the bowels, and small masses of fæces were passed. From this date the patient made steady progress. The slimy discharge, which had been constant, ceased on May 10th. He sat up for an hour on May 14th, and came downstairs a week later. Diarrhœa still continued, the bowels being moved sometimes six times in twenty-four hours.

It is now twelve months since the attack. The boy looks strong and healthy. He has not had any pain in the abdomen for ten months. His bowels have been slightly relaxed ever since the attack.

The portion of bowel, as will be seen from the photograph, consists of ileum with Meckel's diverticulum. The total length was 11¼ inches. The upper portion was invaginated into the lower, the entire length of the diverticulum appearing through the lower orifice.

CASE OF INTUSSUSCEPTION WITH SLOUGHING OF INTESTINE; RECOVERY.

By A. SUTCLIFFE, F.R.C.S.Edin.,
Burnley.

The following case presents some features of interest, especially in the very rare circumstances of the passage of a sphacelus of bowel.

J. W. G., aged 17 years, on the morning of June 23rd, 1893, began to suffer from severe abdominal pain and vomiting, which continued through the day, and under treatment (by belladonna and morphine) passed away during the following night. The next morning he felt so much better that he got up and seemed quite comfortable when I called. He began, however, to be worse later in the day, and vomited several times. In the evening I found some general tympanitic swelling of the abdomen, but as far as the finger could reach in the rectum there was nothing abnormal to be felt, and externally I could detect no tumour. From this time all nourishment swallowed was rejected, and the tympanites rapidly increased to the fullest extent, and for eight or nine days this condition continued. The patient refused food altogether, and only took ice, and vomited occasionally dark brown or greenish matter, which, however, had not a distinctly fæcal odour. Several enemata of soap and water—as much as could be retained—were given by means of the long tube, which could be passed about half its length. This was repeated once a day at the boy's desire, as he said he felt much relieved by it. Some fluid fæcal matter usually came away with the enema. In addition to this, nutrient enemata, every six hours, of beaten egg or Brand's essence dissolved in water were given and retained.

On July 1st, the fæcal matter passed was mixed with blood. There was extreme tympanites, and in the general swelling the ascending and transverse portions of the colon stood out very clearly defined and resonant. There was very little tenderness, but at a point corresponding to the junction of the transverse and descending colon there was some dulness on percussion, and pressure was resented.

About July 5th the bowels began to act spontaneously, bringing away solid fæces, and the tympanites gradually lessened. All motions passed were examined, and on July 10th, seventeen days from the onset, a piece of intestine came away. I found this to be 13 inches long, and my first impression was that it was small intestine, its size (flattened breadth being about an inch) and general appearance decidedly giving that impression, though the physical signs pointed to obstruction beyond the transverse colon. The presence of an unmistakable appendix epiploica, however, showed it to be large intestine. Of intact bowel, with some mesentery attached, there was 7 inches, while the rest of the length consisted of a ribbon of only one half the circle of the gut, evidently the remains of one broken up fold of the volvulus.

On July 16th the patient began suddenly to have abdominal pain and vomiting; the temperature was 102°, and there was much tenderness to the left of the umbilicus. Tympanites increased, but soon subsided, and all inflammatory symptoms disappeared by July 21st. On August 6th he had frequent dysenteric stools, mucus flowing away involuntarily. On examination by the rectum the finger came in contact, just inside the anus, with a large tumefied mass, round and tense, in the centre of which the finger could be passed through a small hole into the lumen of the bowel. Round the mass was a *cul-de-sac*, the extremity of which could apparently be reached by the finger with an effort. On August 9th he passed much pus, with mucus, but was improving generally.

From this time he made good recovery. The mass in the rectum gradually disappeared, and soft folds of membrane only remained. For some time he required aperients. He has since had one severe attack of colic, with tympanitic distension, which quickly passed away. His bowels now act regularly, and he is in good health.

Among the noteworthy features of this case it may be mention that apparently there was never absolute occlusion, as some fæcal matter could always be washed away, and the vomited matters never gave a distinctly stercoraceous odour. It is also remarkable that, considering so much of the bowel was involved, the transverse colon should be apparently intact, as was seen during extreme tympanitic distension, and at the same time nothing could be felt by the rectum. The attack of local peritonitis on July 16th was no doubt due to some defect in complete coaptation, and would be reparative in its effect. To account for the structural condition felt in the rectum later, it would seem that there had been a secondary descent of the bowel, with severe inflammation of the coats.

DIPHTHERIA CURED BY ANTITOXIN.

By THOMAS EASTES, M.D., F.R.C.S.
Folkestone.

AN early publication of the following case may enable some lives to be saved, if the result was more than a coincidence:

F. L., aged 10½ years, had on July 8th what appeared to be rather a severe form of catarrhal tonsillitis, with the glands at the angles of the jaw swollen and tender on both sides. On July 9th there was complete local evidence of diphtheria, the fauces were much more swollen, and the left tonsil was covered by thick membrane, there being less on the right. On the 10th both tonsils were very much swollen and projecting towards the middle line, and thickened so as to make a long and deep but narrow chink or channel between them, which was quite enveloped in thick yellowish white membrane, and getting blocked in front by the uvula, which was œdematous and becoming affected. At 1 P.M., July 10th, I injected subcutaneously 5 c.c. of Aronson's diphtheria antitoxin, using Debove's syringe. On the 11th the swelling was less, the whole diseased surface clearly marked off from the healthy tissues and separation had commenced. Pulse until now about 92 to 96 every morning. She felt much better. On the 12th, pulse 88. Much of the membrane separated, the remainder looks softened and breaking down, the surrounding tissues healthy, slight nasal catarrh and irritation, and a sore on the upper lip near the mouth, probably caused by the spray producer. July 13th, pulse 83; much better; throat nearly clean, one patch about the size of half a pea on the left tonsil, and a few shreds scattered about; nose nearly well. On the 14th, throat clean, glands not swollen or tender, pulse 72, child seems quite well. From the commencement I had used vigorous local treatment, with a spray of a strong solution of carbolic acid and iodine, and free doses of perchloride of iron internally, but the disease steadily advanced until July 10th, when the injection was given. The swollen state of the throat was now so bad as to very much nullify any effect the spray might have had when the diseased surface was fully exposed to its action; but the spray had hitherto utterly failed to prevent the local condition becoming very serious and typical of a very severe case. The improvement seemed to commence at once after the injection, as, twenty-four hours after, the surrounding tissues had improved considerably, and there was an evident line of demarcation where the diseased parts were already commencing to separate. I have never before seen a case in which improvement has been so rapid and so soon complete after such a continuous and dangerous increase in the local signs in spite of very thorough and energetic treatment. The antitoxin was supplied by Messrs. Zimmermann, Cross Lane, E.C.

THREE CASES OF CONTAGIOUS PNEUMONIA.

By BERTRAM THORNTON, M.R.C.S., L.R.C.P.LOND.,
Surgeon to the Royal National Hospital for Scrofula, Margate.

THE following brief notes on three cases of pneumonia which occurred in one household within fourteen days may be worthy of record.

CASE I.—On April 12th I was called to see E. P., aged 26, at 8 A.M. He had been in his usual health, and at work up to the previous evening. I found him in a state of collapse, almost pulseless, with respiration 60 per minute, temperature 101°, but cold at the extremities. Under stimulants, etc., he rallied, and it was apparent that he had pneumonia of the left lower lobe. He was nursed by his mother and sister. The disease maintained an asthenic form till he died on April 14th.

CASE II.—On April 20th his sister came to my house with a temperature of 104°, and pneumonia of the right base. She had been taken ill on the previous day. This patient made an uninterrupted recovery.

CASE III.—On April 26th I saw the mother, aged 62, a fragile woman, who was evidently sickening from the same disease. She rapidly developed an asthenic form of pneumonia, with consolidation of the left upper lobe; her temperature never exceeded 102°. She died on May 3rd.

In none of these cases were there symptoms of influenza, and the three remaining members of the household remained healthy. The sister was removed to the hospital: the two fatal cases remained at home, and were well nursed and attended to. The sanitary conditions of the house were bad; among other things the cesspool communicated directly with the house through a soil pipe which was not ventilated; the water supply to this special closet had been cut off for months. There were no other similar cases in the district.

Out of the six members of the household the three most robust escaped. In the first case, which appeared to be the most virulent in its onset and course, no chill or predisposing cause could be discovered. The interesting problem to decide is whether the obvious insanitary condition of the house was the poisonous influence in these three cases, or whether the son was infected with the pneumonia bacillus outside his home, and his mother and sister, fatigued with nursing him, were rendered specially liable to the infection. Or again, whether sewer gas is a special predisposing cause to pneumonia and allied disorders such as diphtheria and typhoid fever.

Much depends on the solution of these questions. As pneumonia is so rarely a contagious disease in hospitals and well-drained houses, one is tempted to argue that when a series of cases is found in a markedly insanitary house, the sewer gas has some special influence, either direct or indirect, in producing the disease.

There are few things we know less about than sewer gas and its ever-varying constituents; it is time that it should be made the subject of patient investigation. The man who discovers the key to its mysteries will render as great a service to public health as Lister has done in the domain of operative surgery.

Groups of cases similar to those I have briefly recorded may help to indicate the path of research.

A CASE OF DIPHTHERIAL LARYNGITIS IN A CHILD 18 MONTHS OLD, IN WHICH TRACHEOTOMY WAS FOLLOWED BY RECOVERY.

By LESLIE DURNO, M.D.,
Stoke Newington, N.

ON first seeing E. L., a very stout male child, 18 months old; there was a large patch of diphtherial membrane on each tonsil, and the cervical glands on each side very much swollen.

Despite active treatment, both locally and generally, with generous diet and liberal supply of stimulant, the symptoms continued to get worse. On the evening of the fourth day the temperature was 102° F., pulse 130, respirations 32. The exudation had extended considerably and was gradually invading the uvula, soft palate, and pharynx. The character of the cough and breathing left little doubt that the larynx in turn was becoming involved. An efficient emetic was ordered at stated intervals, and imperative instructions given to warn me should the breathing get worse.

Responding to a hurried message on the morning of the fifth day, I found the child becoming deeply cyanosed and fighting for his breath. There was evidence of commencing congestion at the base of both lungs. Dr. A. Felix Stevens, who saw the patient along with me, agreed that tracheotomy was the only hope of saving life. The child was anæsthetised, and I proceeded with the operation at once. From the excessive turgescence of the cervical veins, the venous hæmorrhage was very profuse, but the child was almost moribund from rapidly approaching asphyxia. So naturally the question very forcibly presented itself, was it right to prolong the operation in attempting to arrest the hæmorrhage before opening the trachea? The extreme condition of the patient in my mind afforded no time to hesitate. I opened the trachea in the midst of very considerable venous hæmorrhage, turned the patient almost on to his face, and kept the tracheal opening patent with dressing forceps.

The obstruction was removed, the dyspnœa relieved, the venous tension lessened, and the hæmorrhage reduced to a minimum almost at once. A silver bivalve cannula was introduced and fixed, and the little patient replaced in his semi-canopied bed, breathing a moist, warm atmosphere impregnated with eucalyptus.

On the second day after operation the temperature was 102.5° F.; pulse 140; respirations 38. The wound, swollen and

unhealthy-looking, was powdered with iodoform and douched with 1 to 40 solution of carbolic acid every three hours.

On the third day the temperature was 101.5° F.; the pulse 130; and the respirations 36. The wound was completely covered with membrane, and the neighbouring tissues were very much swollen and infiltrated.

On the fourth day the temperature was 100° F.; the pulse 120; the respirations 30. The wound was healthier, and the swelling had decreased. The silver cannula was replaced by one of Dr. Baker's india-rubber cannulas.

On the fifth day the temperature was 99°; the pulse 110; the respirations 28. The wound was almost free from membrane, and the general condition was good.

On the sixth, seventh, and eighth days the treatment was continued, and the symptoms improved.

On the ninth day the tube was removed, and the powers of natural breathing tested by occluding the tracheal opening with the finger. Exhalation was performed freely and well. Inhalation at once induced spasm, and the tube had to be reintroduced. At half an hour's interval a second attempt met with the same result.

On the tenth, eleventh, and twelfth days the tube was removed for a longer period each day; and on the thirteenth day it was removed altogether.

On the eighteenth day the child was perfectly well, the voice had returned, and the wound had completely healed up.

Remarks.—The discouraging effect which the unfortunate very high mortality of tracheotomy for diphtherial laryngitis in children under 2 years of age has on the mind of the general practitioner prompted me to give a full account of the successful issue of this case. The features of special interest are:—That the case was conducted at the patient's home; that the father, an intelligent artisan, nursed the child faithfully and well, single-handed, for the first five days and nights; that the parent's consent (often the chief source of delay) was obtained well in advance; that the operation was suggested before the lungs were affected to any extent; that the venous hæmorrhage, which was very profuse, practically ceased on opening the trachea; that stimulants (brandy) were freely given throughout the case, and that the child was entirely well by the eighteenth day after the operation.

SUGGESTIONS FOR THE TREATMENT OF PANCREATIC DIABETES.

By J. McNAMARA, M.D., B.Ch., B.A.O.R.U.I.

In a paper recently read before the Académie des Sciences, Paris, M. Kaufmann has given the results of very interesting experiments which he performed on dogs. He has proved that the internal secretion of the pancreas (that is, the secretion which, instead of passing along the pancreatic duct, is reabsorbed by the blood vessels) has an inhibitory influence on the formation of sugar in the liver. He has proved that this influence is exerted not merely through the nervous system, but through direct action on the liver cells. Removal of the pancreas, or excessive diminution of its internal secretion, is followed by hyperglycæmia and glycosuria. Exaggeration in the activity of the internal secretion produces hypoglycæmia.

From these facts I would suggest as the treatment of pancreatic diabetes the administration of fresh, uncooked, pancreatic extract, not by the mouth, for this has been already tried, with failure, nor hypodermically, but through the rectum, and, if necessary, through the rectal veins.

The failure which has followed the administration of pancreas through the mouth may be due to the fact that the secretion of the stomach neutralises the products of the pancreas, or, as I believe is more probable, it may be due to the fact that when administered in this way the sugar-restraining pancreatic element, instead of entering directly the portal vessels, as it normally does, gets absorbed by the lymphatics of the alimentary canal, and so passes into the general circulation. If any of it at all should ultimately reach the sugar-forming cells of the liver from the general circulation, it would probably be in a form so altered or so diluted as to be useless. The consideration of the wonderful ways by which Nature adapts her means to her ends would lead us to believe that there is some good reason why this mysterious sugar-restraining element is not allowed to enter the alimentary canal like the other products of the pancreas, and I would suggest the likelihood of its absorption by the lymphatics and subsequent destruction in the general circulation as the explanation. For the same reason, administration of pancreatic extract by hypodermic injection would probably be useless.

The case of the pancreas is not analogous to the case of the thyroid. The products of the thyroid gland pass directly into the general circulation. The sugar-restraining element of the pancreas must first do duty in the liver.

As regards rectal administration, we have of course the same difficulty to contend against. The lymphatics of the rectum, like the lymphatics elsewhere, lead to the general circulation. To get over this difficulty I would make the following suggestions. In the first place, after clearing the rectum by a purgative enema, I would inject a large quantity of pancreatic extract, a quantity too large for the lymphatics to take up at once. In this way it is possible that some of the extract might find its way directly into the capillary blood vessels and thence into the portal veins. Should this method not be followed by satisfactory results, I would suggest the injection of pancreatic extract into the submucous tissue of the anus or rectum. An ordinary hypodermic needle would serve for the anus, but for the rectum some modification in the needle and a speculum would be required.

This method would not be free from certain dangers, for instance, the formation of abscess in close proximity to the rectal veins, with consequent danger of pyæmia; or perhaps peritonitis from pushing the needle into the peritoneal cavity; or, again, the injection of a systemic vein with a substance of unknown action. The effect of injecting a systemic vein with pancreatic extract could, however, be ascertained by experiments on animals.

Here I may remark that injecting a portal vein is a very different thing from injecting a systemic vein. It is now known that peptones and some other products of digestion when injected into any vein, except a portal vein, will produce convulsions, coma, and death. But these difficulties are of small importance when we consider that pancreatic diabetes under present methods of treatment has but one termination, and that the grave.

Since these thoughts occurred to me I have had no case of pancreatic diabetes. Being unable, then, to subject my theories to the test of experiment, I offer them as suggestions to any members of the profession who may be more fortunately circumstanced.

TWO OBSCURE CASES OF POST-INFLUENZAL CEPHALALGIA ENDING FATALLY.

By F. MORTIMER ROWLAND, M.B.Cantab., M.R.C.S.
Lichfield.

The two following cases are of extreme interest from their similarity and obscurity, and, so far as I am aware, from no such sequence of influenza having as yet been recorded. The chief points to be noted are briefly:

1. Influenza of no great severity was the illness preceding—in Case A, immediately; in Case B, a few months.
2. Mental trouble was a prominent factor.
3. With the exception of typhoid (?) fever both had fairly good health, and were robust without any trace of a syphilitic or tuberculous strain.
4. The sudden fatal termination after apparent improvement.
5. The obstinate constipation until the partial improvement began.
6. Absence of vomiting.
7. The gross retinal lesion in A, and its absence in B.
8. The sudden onset—in A. with a convulsion, in B. without—in both with syncopal symptoms.

Case A.—J. R., aged 46, but looking 60, a tall, fine-looking, well-built man, had "typhoid" five years before he came under treatment. He had lost his wife in March, 1893, and was "never the same man again." On

May 3rd, 1893, he sickened with influenza, which, under treatment, ran a usual course. On the 10th day he was fit to go out, "but caught a chill." Four days afterwards (that is, a fortnight from the commencement) he was suddenly taken with a convulsive attack, followed at intervals by alarming syncopal symptoms for a few hours; he complained of agonising pain in his head and back. Treatment by bromides, chloral, ice, blisters, and leeches, produced no material improvement. He complained of increasing dimness of sight, and ophthalmoscopic examination showed a perfectly black fundus. He became totally blind to everything in front of him, but could distinguish a little as objects passed at his side. Extensive hæmorrhage behind both retinæ was diagnosed, except at the margins, where it remained intact. The urine was normal. The temperature ranged between 99° and 100°. Towards the end of June, 1893, he had greatly improved, and was able to get about led by the hand. He lost all the pains in the head and back, and was only troubled by his blindness and a feeling of weakness. The pupils were equal and normal. On July 24th, 1893, he consulted an oculist at Nottingham, in whose waiting room he had a succession of "fits," with deepening coma. He was removed to the hospital, and died the same evening. No *post-mortem* examination was permitted.

CASE B.—Mrs. H., aged 47, a stout woman, had had eleven children living and eleven miscarriages. She had had "low fever" twice four years before she came under treatment, and "influenza" in November, 1893, for which she did not consult a medical man, "as it was like a previous attack," but she was in bed several days. She had not felt quite the same since, and had been a good deal worried by business matters. On May 16th, 1894, she was suddenly seized with great pain in the head (chiefly occipital) and "bottom of back," and faintness. When seen she was blanched, as if from severe hæmorrhage. Mustard plasters, blisters, and bromides were ordered, and in view of the rheumatic origin of the symptoms, she was given large doses of salicylates. Antifebrin, exalgin, and nitro-glycerine were tried at intervals, but with no good result. On May 24th there was slight discharge from the right ear, which soon ceased without influencing the pain. She was put on a mixture containing cannabis indica, gelseminum, and diaphoretics, together with occasional doses of pilocarpin, and slowly improved. On June 3rd she was able to sit up in bed, the pain being present only at intervals, whereas previously it had been constant with frequent agonising exacerbations. On June 5th she was feeling much better, but at 4 P.M. she suddenly became paralysed on the left side of the face, with stertorous breathing. The pupils were equal at first, but there was no reaction to light. Gradually the left pupil enlarged and then became small, and the right pupil followed suit. The knee-jerk was exaggerated on the left side, and there was twitching of the arms. She died the same night. No *post-mortem* examination was permitted. The temperature throughout was normal and subnormal, and the urine healthy.

In both these cases, more especially A., there seems no doubt that influenza was the primary cause of the altered tissue condition that led to the attack, mental worry being possibly a determining factor. As to the exact pathology, there will always be a doubt owing to the lamentable refusal of the *post-mortem* examination. The course and symptoms of both cases pointed to meningeal trouble primarily, with possibly secondary affection of cerebral tissue, and it is rather from the termination of the cases that the condition seems to imply that the primary lesion was in the cerebral substance itself. Whether the fatal ending was due to the rupture of blood vessel, abscess, or cyst, or to some other cause, cannot be decided, but from Case B. it would seem that there had been a rupture into the ventricles, or that their internal pressure had been otherwise suddenly raised. I have to thank both Mr. Welchman and Mr. Morgan, who saw the case in consultation, for many valuable hints and suggestions.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

ABSCESS OF ANTRUM AFTER INFLUENZA COMPLICATING POLYPI.

MR. B., aged 68, sent for me on April 26th to examine his nose with a view to removing some polypi which were obstructing both nostrils, and had existed for some seven years and a half. Both nostrils were engaged, and the right closely packed, and the thickened ends of two polypi protruding through the anterior nares. His right cheek was greatly swollen, œdematous, but brawny and congested. The lower eyelid was much discoloured, but the eyeball did not protrude. His palate was very much swollen on the right side, and the adjacent gum much thickened, and of a deep red colour. There were no teeth in the upper jaw; the soft palate was depressed, and incapable of being elevated. He complained of a great deal of pain, which was worse at night, over the cheek bone, upper and lower alveolar margins, also over the region of the superciliary ridge, and the distribution of the nasal nerves. He had a good deal of lachymation, and complained of inability to drink with ease and to feed himself comfortably, as he felt choked for want of air when his mouth was engaged for other than breathing purposes. Little pieces of tissue-paper were in constant requisition to prevent the mucous discharge from dropping on his clothes. He had had no peace night or day since influenza some months earlier. He was deaf on the right side, and complained of crackling noises in his ears. He had neither taste nor smell.

On May 1st I removed six polypi from the right and two or three from the left nostril. There was some hæmorrhage afterwards, and some discharge of blood-streaked mucopurulent matter. The patient had two syncopal attacks during the operation, but I managed to complete it by frequent administrations of brandy. He confessed himself next day much relieved. A few days after he caught cold; the discharge, which previously had been very free, was somewhat checked; the pain in the cheek and eye returned with great violence, and his mouth and gum became again very painful and swollen. I diagnosed an abscess, and wanted to perforate the floor of the antrum, but he refused, so I recommended frequent bathings of the cheek with hot water, and the same to be held in his mouth. On May 14th the abscess opened itself, and discharged very fœtid pus somewhere about the situation of where the first and second molar teeth should have been. He was then greatly relieved, and the cheek became much less swollen and tender.

ARMSTRONG TODD, M.B., B.Ch., B.A.O.

Market Drayton.

DYSENTERY AND TROPICAL LIVER ABSCESS.

FOR about three years, from February 1857, I made or assisted to make nearly all the *post-mortem* examinations in the military hospital at Hong Kong; these largely consisted of cases of dysentery. I do not recollect finding a single case of hepatic dysentery during that period. I saw a case at that station in 1880. The patient had been for some time under treatment for dysentery; he was apparently recovering, but suddenly became worse and died. At the *post-mortem* examination a small abscess was found in the liver; the colon was adherent to the anterior edge of the liver; there were old and recent scars of ulcers in the colon—one in the neighbourhood of the adhesions contained puriform contents—ultimately a fistulous communication with the liver was discovered. There was a difference of opinion as to the primary seat of mischief; my own view was that the dysentery preceded the abscess.

The liver requires a normal quantity of blood of unexceptionable quality to carry on its functions. When climates, or diets, or modes of life combine to deprive it of a healthy supply of material in quantity or quality, the result must be deterioration; and if, superadded to this, no viscus takes on the depurative action of the liver, this condition may end in abscess.

In dysentery the colon, I venture to think, takes on a depurative action; this supplies a reason why abscess of the liver and dysentery rarely occur together. Certainly, so far as my experience goes in India, I rarely came across abscess of the liver. I had plenty of cases of dysentery; these I always fed well; when milk could not be digested—known from lumps of casein in the stools—I used meal food. The first treatment of dysentery I take to be well known: calomel and ipecacuanha, each three grains, followed two hours later by a dose of castor oil. This clears the gut well out, and leaves nothing deleterious to be absorbed. Treatment by ipecacuanha is now begun by the mouth or anus. I advocate the latter, because a small dose is as beneficial as a larger one, and creates no nausea. In 1857 I began to use 10 grs. of ipecacuanha, with 30 drops of laudanum in 2 ounces of starch as an enema, twice or thrice a day; infusion of bark and effervescing saline by the mouth. For chronic dysentery I used 5 grs. of the same, with 5 grs. of extract of hemlock as a suppository twice a day. The patient need not be confined to bed, nor too much restricted in diet, unless he have tenderness in the course of the colon; the position should then be strictly horizontal, and no tobacco should be allowed. When narrating this mode of treatment to the late Dr. George

Budd, he inquired in his characteristic way, But how does it act? I don't know how it acts, but I know it cures.

How is the liver to work when deluged and poisoned by alkalies and the like, and starved or supplied with food devoid of hæmatogenous principles? When at last the liver does work it does so, I believe, by virtue of its inherent recuperative faculty and the crumbs of food it can secure, and not from the special action of drugs; it may, however, be so severely damaged by poison as to be only capable of recovery by the production of a slough. Alterative agents, of course, may be beneficial, but it is their use to the exclusion of all hæmatogenous food to which I venture to take exception.

Charles Moore Jessop,
Redhill. Deputy-Surgeon-General.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

MANCHESTER ROYAL INFIRMARY.

TWO CASES OF TUMOUR OF BLADDER OCCURRING IN CHILDREN.

(Under the care of Mr. F. A. Southam.)

Case I. *Sarcoma of Bladder in a Boy aged 9.*—The patient was admitted into the hospital on July 30th, 1887, with the following history. He had enjoyed good health until about a year previously, when, on passing water, it was observed that the urine was of a bright red colour, containing a large quantity of blood. No cause could be found to account for the hæmaturia, which came on suddenly, and continued for a day and night; during the attack micturition was very frequent and attended by pain. The symptoms then subsided, the urine becoming quite clear, and he was perfectly well until a few months before admission, when he began to suffer from incontinence of urine by night, and increased frequency of micturition during the day. Latterly blood had again been present in the urine, though in small quantity, and passed only at the end of micturition. On admission the urine—specific gravity 1014, acid—contained no blood, but was turbid from the presence of a little pus. He suffered from incontinence both by day and night. Micturition was very frequent, and accompanied by straining efforts and pain, referred chiefly to the end of the penis. The prepuce was much elongated owing to the habit he had of pulling it to relieve the pain. On digital examination of the rectum he complained of tenderness when pressure was made upon the anterior wall of the bowel, but nothing abnormal could be detected.

The symptoms pointing to the presence of a stone, the bladder was sounded under chloroform, but no calculus could be felt; a distinct irregularity or roughened spot could, however, be distinguished, just beyond the neck of the bladder on the left side. After the sounding blood reappeared in the urine, and was present, often in considerable quantity, until the operation. In the absence of a calculus, the symptoms pointed to the presence of a vesical growth, and the fact that free bleeding had been excited by sounding rather supported this view. It was therefore resolved to explore the bladder from the perineum.

August 27th. Perineal urethrotomy was performed. On introducing the finger into the bladder through the perineal opening, a sessile growth, the size of a shilling, of firm consistence, and with an irregular surface, could be felt springing from the trigone on the left side close to the neck. This was removed in small particles by scraping with the finger nail and a Volkmann's spoon, the operation being attended by very little bleeding. During the first twenty-four hours after its performance the urine contained a small quantity of blood; it then became clear, and afterwards remained so. The removal of the growth was followed by complete relief to the pain and other symptoms. The patient progressed very satisfactorily, and was up in the ward on the fifteenth day.

The perineal wound was slow in healing, and on this account he remained in hospital till November 7th, when he was discharged with it still open. He was entirely free from pain or other evidence of bladder irritation: he had steadily gained flesh, and there had been no recurrence of bleeding. The urine was acid in reaction, and quite clear; the greater part was passed by the urethra, some still coming through the perineal fistula.

Examination of the tumour showed it to be of a sarcomatous nature, consisting chiefly of small round cells, mixed with which were a few spindle cells.

The boy continued to enjoy good health, being free from any bladder trouble until January, 1888, when he began to suffer from a return of his former symptoms. He was accordingly readmitted into the hospital, and upon again exploring the bladder from the perineum it was found that the growth had returned, though more extensively, in the same situation as before. It was removed as completely as possible by scraping, and though the patient recovered sufficiently to leave the hospital, he gradually sank and died at home the following April, with evidence of further recurrence.

Case II. *Myxo-sarcomata of Bladder in a Boy, aged 6.*—The patient was sent into the hospital in the belief that he was suffering from retention of urine, due to impaction of a calculus in the urethra, for there was distension of the bladder, with incontinence, and upon attempting to introduce a catheter its passage was arrested by an obstruction in the canal, which felt rough and grated, simulating an impacted stone. The history of the case was as follows: For about nine months previously micturition had been increased in frequency, and attending by straining efforts; latterly it had become extremely painful, and he had been troubled with incontinence; no blood had ever been observed in the urine.

When admitted on December 4th, 1893, the bladder was greatly distended, forming a prominent oval swelling, plainly discernible through the abdominal walls, reaching nearly to the umbilicus. On examination under chloroform a catheter was passed into the bladder with some difficulty, but only about 2 ounces of alkaline urine, containing a little pus, but no blood, could be drawn off, no apparent alteration being made in the size of the swelling. This fact at once pointed to the distension of the bladder being due to the presence of a tumour, and the diagnosis was confirmed on washing out the bladder through a large-sized silver catheter, for the fluid as it returned brought away numerous particles of growth, the size of peas. On rectal examination a distinct fulness could be felt, and upon bimanual palpation the presence of a growth was readily detected. The examination was not attended or followed by the presence of any blood in the urine.

December 9th. Suprapubic cystotomy was performed in the hope that the tumour might be found capable of removal. On opening the bladder a mass of greyish, translucent, polypoid growths, varying in size from a pea to a pigeon's egg, resembling a bunch of Muscatel grapes, immediately protruded through the wound. Several growths were readily separated with the finger nail without much bleeding, but as it was found that they were too numerous to be removed, the operation was not proceeded with. For twenty-four hours he progressed favourably, but afterwards becoming extremely collapsed, he rapidly sank, and death took place on the second day.

Report of Post-mortem Examination by Dr. Kelynack.—The bladder is filled with masses of polypoidal growths, which closely resemble the mucous polypi met with in the nasal fossæ. They are but little vascular, consisting of a clear, gelatinous-looking structure. The whole of the mucous membrane is involved with the exception of the lower part of the trigone, which is practically free. An elongated polypoid growth extends into the urethra, and almost completely blocks it. Both ureters are dilated and distended with urine. The pelves of the kidneys are also dilated, each kidney being in an early stage of hydronephrosis. The growths appear to be limited to the bladder.

Professor Sheridan Delépine, who has very kindly examined the growth, reports as follows: "It is a typical sarcoma. The polypoid masses are covered with a distinct layer of transitional epithelium, under which there is a thick layer of myxo-sarcomatous tissue, composed of very large branched cells with long processes, separated by a moderate

amount of mucous matrix. Numerous large congested vessels are found in this layer. More deeply still the tumour has the appearance of a round-celled sarcoma. The tumour is therefore a mixed form of sarcoma, chiefly myxo-sarcomatous, and beginning in the vesical mucosa and submucosa."

I am indebted to my former dresser, Mr. T. P. Hall, for the accompanying drawing, which shows the condition of the bladder:



Myxo-sarcomata of bladder (from a male child aged 6 years). Case II: The bladder has been opened by an incision through the anterior wall, prolonged into the urethra. S, section through bladder wall, much thickened at the summit, from which numerous polypoid growths originate; M, a large growth springing from posterior wall; O, smaller growths springing from posterior wall; G, multiple growths springing from right lateral wall; Tr, trigone, the only part of bladder wall free from growths; F, elongated polypoid growth, which extended into urethra; R, rectum.

Remarks.—Tumours of the bladder are so rarely met with in children that the preceding cases are worthy of record. It would appear that growths in this situation, when occurring at an early period of life, are usually of a sarcomatous nature, and it is probable that most of the so-called "mucoid" and "fibrous polypi" of the bladder, which have been described in children, are in reality examples of myxo- and fibro-sarcomata. The first case illustrates how closely the symptoms of a vesical growth, when occurring at an early age, may resemble those of calculus, for it was only after the absence of a stone had been proved by sounding that any suspicion as to the existence of a tumour was entertained. The second case is interesting as showing how distension of the bladder with a tumour may simulate retention of urine; and when the protrusion of a polypoid growth into the urethra blocks the canal and obstructs the passage of a catheter, the resemblance is still more complete, for one of the most common causes of retention in a male child is blocking of the urethra by an impacted calculus.

Edinburgh Royal Maternity and Simpson Memorial Hospital.—Messrs. Thomas B. Kearder, M.B. and C.M., and E. Croft Watts, M.B. and C.M., enter on duty as resident surgeons on August 1st.

REPORTS OF SOCIETIES.

BRITISH GYNÆCOLOGICAL SOCIETY.

Henry Savage, M.D., President, in the Chair.

Thursday, June 14th, 1894.

Specimens.

Mr. R. T. O'Callaghan showed a Strangulated Ovarian Cyst, with hæmorrhage into the cyst cavity, followed by suppuration. The first symptoms of rotation occurred ten months before those of hæmorrhage.—Mr. Christopher Martin (Birmingham) showed two specimens of Fibroma of the Ovary.—Dr. J. A. Mansell Moullin showed a large Uterine Myoma involving the cervix and removed by total extirpation of the uterus.—Dr. Hodgson showed a Multilocular Ovarian Cyst with twisted pedicle.

Intraperitoneal Hæmatocele.

Mr. John W. Taylor read a paper entitled Intraperitoneal Hæmatocele, forming a Definite Tumour: the Relation of this to Unruptured Tubal Pregnancy ("Tubal Abortion.") He had been struck by the frequency with which, as his experience of ectopic gestation increased, he had met with cases of unruptured tubal gestation; even when much hæmorrhage had occurred, it was often found that the pregnancy itself was still within the tube, the blood having "dripped" out from the open fimbriated end. Some surgeons had doubted even the possibility of an intraperitoneal hæmatocele forming a definite tumour, and had supposed that all such local hæmorrhages must be extraperitoneal, and between the layers of the broad ligament. Such teaching was not altogether true, in proof of which he related a case where, after operation on a parovarian cyst, there was secondary hæmorrhage from the stump. Some peritonitis followed, and the blood became localised, its upper limit being defined by an abrupt line stretching across the abdomen. The hæmatocele was tapped *per vaginam*; later the remainder of the clot decomposed, and he evacuated it by free incision from below. The finger was passed into the abdomen through Douglas's pouch, and he satisfied himself that the hæmatocele was strictly intraperitoneal. Analogous cases sometimes resulted from the rupture of a tubal pregnancy, with a moderate degree of hæmorrhage, but this was exceptional. The most common cause of a defined hæmatocele was the slower hæmorrhage or blood drip, which took place from an open Fallopian tube when the pregnancy or mole lay within it. Such hæmatoceles were found at operation under various conditions:—*a*. A mass of coagulum without definite form or consistence, easily scooped or washed out. *b*. A definite and consistent clot adherent to the peritoneum, the surface of which it leaves rough on removal. *c*. By adhesions to neighbouring parts a tubo-ovarian blood cyst was formed, distinguished anatomically from the true tubo-ovarian cyst due to pyosalpinx by the fact that in the former a new formation of tissue helped to make the cyst and enclose the blood, whereas in the latter the walls were formed entirely by distended tube and adhesions. *d*. Lastly, there was a condition hitherto, so far as he knew, unrecognised, in which a complete cyst wall was formed by organisation of the blood clot. Within the neck of this globose pitcher lay the fimbriated end of the Fallopian tube, which could be lightly drawn out from its enclosing sheath, showing its fimbriated end uninjured. Illustrative cases of these conditions were related. Referring to Mr. Lawson Tait's view, that tubal gestation before gestation was never diagnosed, except by mere accident, because it produced no symptoms, Mr. Taylor said that he and others could point to specimens of unruptured gestation correctly diagnosed before operation. But as regarded the diagnosis between ruptured tubal gestation and so-called tubal abortion, the only distinguishing feature that he could find was that in the latter the period of amenorrhœa preceding the irregular hæmorrhage was commonly wanting. On the subject on nomenclature, he thought that the term "tubal abortion" had, in the hands of Mr. Bland Sutton, done much to spread knowledge and to increase interest. But he could not find in his own or any other cases any evidence of extrusion of the mole; and so thought the term was neither happy nor exact. He had drawn up a table, showing what he believed to be the various possible consequences of tubal pregnancy.

Tubal pregnancy may cause:

1. Hæmorrhage from the abdominal ostium with formation of defined intraperitoneal hæmatocele ... ...
   1. By simple clotting.
   2. Clotting with septal adhesions.
   3. Clotting with peripheral adhesions.
   4. Encapsulation.
2. Rupture of tube into
   1. Abdomen
      1. With diffuse hæmorrhage into the abdomen.
      2. With formation of defined intraperitoneal hæmatocele (rarely).
      3. With escape of fœtus, forming so-called abdominal pregnancy.
   2. Broad ligament
      1. With formation of extraperitoneal or broad ligament hæmatocele.
      2. With development of so-called broad ligament pregnancy.
3. Closure of tube and formation of tumour of indefinite duration (possible development in tube?).

Dr. Cullingworth thought that as the term tubal abortion had acquired a definite meaning, it would be unwise hurriedly to discard it. He agreed with the author that hæmatocele and tubal abortion were diagnosable; the proof was that they were continually being diagnosed and verified by operation. He had looked up his notes of ectopic gestation and of hæmatoceles. He found that of ten cases of the latter on which he had operated eight were due to pouring out of blood from an unruptured tube; one only was due to rupture of a tubal gestation, and one was due to a ruptured hæmorrhagic broad ligament cyst of the opposite side. Of cases of ruptured early tubal gestation he had had six:

in four the blood was diffused, in one the rupture was into the broad ligament, with formation of hæmatoma (extraperitoneal hæmatocele), and one resulted in the intraperitoneal hæmatocele above mentioned. So that his experience of the relative frequency of the different causes of intraperitoneal hæmatocele entirely coincided with Mr. Taylor's. He had had one case illustrating Mr. Taylor's fourth group of encapsulation; and the explanation in the paper had put the matter in a clearer light. In the last volume of the St. Thomas's Hospital Reports there was a coloured drawing of such a case.

Dr. Bantock joined issue with Mr. Taylor on the subject of nomenclature. For years he had been on the look out for a case of intraperitoneal hæmatocele, with formation of a definite tumour, but he had never come across one; and he believed that these cases were really extraperitoneal. In those instances where hæmorrhage occurred into the peritoneal cavity he believed that "intraperitoneal effusion" would be a better name. He related a case he had seen not long ago, which confirmed him in his views.

Dr. Cullingworth remarked that this was one of Dr. Bantock's pet heresies, and invited Dr. Bantock to come and see a case then in the wards at St. Thomas's, which would, he thought, convince him.

Mr. Christopher Martin agreed with Dr. Cullingworth's views as to intraperitoneal hæmatocele, and pointed out that the term was used differently by different authors.

Mr. Taylor briefly replied.

EDINBURGH OBSTETRICAL SOCIETY.

Summer Meeting.

Wednesday, July 11th, 1894.

A. H. Freeland Barbour, M.D., President, in the Chair.

Specimens.

Dr. Ballantyne, in Dr. Felkin's absence, showed a Membranous Cast of the Uterine Cavity.—Dr. Brewis showed a Fibroid Uterus containing Placenta and Cord, removed by Hysterectomy.—Dr. Fothergill showed for Professor Simpson specimens removed from a case of Extrauterine Pregnancy by Abdominal Section.—D. J. Stewart Nairne showed a series of specimens illustrative of Early Ovarian and Tubal Disease.

Extrauterine Gestation.

Dr. Stewart Nairne read notes of a case of extrauterine and extraperitoneal gestation, in which he had operated successfully.

Retained Menses with Perforation into Bladder.

Dr. Balfour read this paper for Dr. Benjamin Bell. The patient was sent in as pregnant by a midwife. There was an abdominal tumour the size of a six months' pregnant uterus, severe pain, and signs of hectic. On vaginal examination the hymen was found very thick; it had only a small perforation, from which a septic discharge was oozing. The meatus urinarius was very patulous. The treatment adopted was puncture and evacuation by trocar, the trocar opening gradually enlarged, and the cavity treated by antiseptics. The hectic condition was at once checked, and the patient made a good recovery. There was found afterwards a small perforation into the bladder from sloughing through the vaginal wall. The patient came back pregnant six months after dismissal, and an explanation of the patent meatus was then given, when it transpired that before her first admission she had had frequent coitus with her future husband.

Fibrous Diaphragm in Vagina.

Dr. Oliphant described a case of labour in a primipara in which there was a fibrous diaphragm in the vagina. She was brought in from the country for Cæsarean section. There was a small opening in the diaphragm just admitting the point of a sound. Dr. Reid was called in and advised waiting. Twenty hours after admission the head was born without difficulty, the opening having gradually enlarged. During labour all that could be felt of the diaphragm was an elastic ring in the vaginal wall.

Dr. Berry Hart said he had seen one similar case, only the diaphragm was lower down in his case. It also presented no obstruction to the passage of head.

Acute Religious Mania.

Dr. John G. Havelock related the case of a girl who, thinking she was pregnant, consulted a medical man, who confirmed her suspicion. She at once shut herself up alone, and, when got at by relations, was found in a condition of acute religious mania. This condition spread to her brothers and sisters, till eleven persons were more or less in the same condition. The girl herself and two of her brothers eventually jumped out of the window half naked into the street, were promptly arrested and taken to an asylum, where they recovered—the brother after two weeks and the girl in two months. This arrest at once sobered the others. Dr. Havelock remarked that the interest of this case lay in its resemblance to similar outbreaks one read of in the Middle Ages.

Pelvic Peritonitis.

Dr. P. A. Young read notes of a case of pelvic peritonitis of obscure origin, with notes of *post-mortem* examination. Some ten days before death the patient was in perfect health; menstruation was delayed, being preceded by an attack of tonsillitis, after which normal menstruation occurred. While out just after the period she was seized with acute abdominal pain. Dr. Young found her collapsed. Mr. Cathcart was called in consultation, and fecal obstruction diagnosed. She was treated by enemata, but rapidly sank, and died in thirty hours from the onset of the acute symptoms. On *post-mortem* examination some purulent fluid and collapsed bowel were found in the pelvis. The distal extremity of the left Fallopian tube was congested, distended, and contained purulent fluid. The pus was stained, and only streptococci found. There had evidently been a collection of pus in the tube, which had ruptured and caused acute septic poisoning.

Fibroid Uterus.

Dr. Brewis read the history of the case the specimens of which he had shown. The patient came under his care a month ago; she had been six months amenorrhœic before. In the abdomen there were two tumours, one hard and one soft; between these the cervix was found wedged; the cervix was soft, but no fœtal heart could be heard. There were three possibilities: (1) Pregnancy in fibroid uterus; (2) malignant fibro-cystic tumour; (3) ovarian tumour as well as fibroids. The first of these conditions was diagnosed. The abdomen was opened, and the specimens shown removed. The patient made a good recovery.

Cyst of Broad Ligament.

Dr. Haig Fergusson read notes on a case of cyst of the broad ligament occurring in a woman who had passed the climacteric, which he successfully removed by enucleation. It was so tensely filled with fluid (about two quarts) that its pelvic portion—which was between the folds of the broad ligament—before operation gave all the signs of a solid tumour.

Menstrual Headache.

Dr. R. J. E. Young read notes of a case where severe menstrual headache in a woman of 21, which had lasted since menstruation began, and was successfully treated by him by præmenstrual venesection.

Antiseptic Vaginal Douching.

Dr. Halliday Croom opened in the affirmative a discussion as to whether antiseptic vaginal douching should be made a routine practice during the puerperium or not.

Dr. James Ritchie replied on the negative side.

An interesting discussion ensued, in which Dr. James Carmichael, Professor Simpson, Dr. Martine, Dr. Hunter, Dr. Connel, Dr. Ballantyne, Dr. Thom, and others gave their experience.

The President, in summing up, said that the general opinion of the meeting seemed to be "that in normal labour douching was not necessary, but that where the labour had been abnormal, and in hospital practice, routine douching was to be carried out."

Dinner.

On the invitation of the President the members dined in the Waterloo Hotel. The President expressed the hope that the dinner would hereafter become an annual one.

KIDDERMINSTER MEDICAL SOCIETY.

S. Stretton, M.R.C.S., President, in the Chair.

Friday, June 29th, 1894.

Specimens and Cases.

Mr. J. L. Stretton showed: (1) A Gum Elastic Catheter, No. 6, which, after being easily passed through a stricture and the urine drawn off, was so tightly gripped that considerable difficulty was experienced in withdrawing it, and it was found to be nearly severed at the point just above where it had been held. The catheter had never been used before. Mr. Stretton insisted upon the existence of spasm in many cases of stricture, which in this case was so excessive as to create an unforeseen danger. (2) A female child, aged 2½ years. She had had Discharge from her Ears since birth, and two days previously the mother noticed a hard substance at the orifice of the right ear. On removal this proved to be a piece of necrosed bone about the size of a threepenny piece, and two smaller pieces were removed by syringing. The meatus was full of granulation tissue, and a probe touched bare bone posteriorly. There was a large perforation of the left tympanum. The child had not exhibited any symptoms pointing to such destructive changes. (3) A boy, aged 15, who was admitted suffering from Extensive Glandular Enlargements along the anterior borders of the sterno-mastoid muscles. There was a history of phthisis, and as treatment by arsenic and thyroid failed they were removed, a large dissection being necessary to free them. The report of the portion which was exhibited, showed it to be a rapidly growing lymphosarcoma. The wounds healed without difficulty, and no glands could be discovered. (4) A girl, aged 19, who on admission was freely Desquamating on both Feet, especially the soles. She stated that she had had no illness, no rash, and no sore throat; the urine was natural. The case was regarded as innocent, and kept in the general ward without any ill-effect. Mr. Stretton insisted upon the point that it was impossible to say from the desquamation *per se* that a patient had suffered from scarlet fever or not. Mr. D. Corbett laid stress upon the previous history in such cases, and the absence of kidney mischief, and several members joined in the discussion. (5) A boy, with Fractured Clavicle, who when first seen was found to have a great deal of displacement. It was impossible to rectify this by any of the ordinary methods of treatment, so he was admitted and kept on his back flat in bed; the fragments were then easily adjusted, and good union with little deformity followed.—Dr Evans showed a boy who had suffered from ingrowing Toenail, which had been treated by the excision of a semilunar portion of the flesh below the nail. There was rapid healing, and the side of the nail projected well over the flesh of the toe. (2) A case of Extreme Hallux Valgus of both feet, together with Hammer-toes, treated by excision of the heads of the metatarsal bones of the great toes, division of the ligaments of the other toes, and splint treatment, with excellent results.—Mr. Johnson showed a specimen of a Kidney the seat of a Medullary Carcinoma removed from a man, aged 73. The man had been ill eighteen months; illness commenced with pain in bladder, which came on when bending down, followed by discharge of bright clear blood *per urethram*. This was supposed to come from the bladder, as there was no indication of any disease in either kidney region. Under treatment the hæmorrhage diminished considerably, but eventually recurred, and shortly after a tumour manifested itself in region of the left kidney. The patient had no uræmic symptoms, and passed a fair amount of urine up to the time of his death.

Paper.

Mr. W. Hodgson Moore read a paper on Anthrax.

Presentation.—Dr. Bertram Rogers, of Clifton, was presented with a malacca cane with ivory handle, by the members of the Bristol Post Office Ambulance Class on July 12th.

REVIEWS.

Le Traitement Physiologique de la Mort: Les Tractions Rhythmées de la Langue. [The Physiological Treatment of Death: Rhythmical Tractions of the Tongue.] Par T. V. Laborde, Directeur des Travaux Physiologiques à la Faculté; Membre de l'Académie de Médecine. Paris: Félix Alcan. 1894. (Cr. 8vo, pp. 192. Fr. 3.50.)

This work is written by a physiologist, and appears at an opportune moment, when the minds of the public and of the profession are again much occupied with a reconsideration of the subject of the treatment of the apparently drowned. It is asserted by a new society, the Life-Saving Society, that during the year 1893 no fewer than 6,000 inquests were held in the United Kingdom and Ireland on persons who had been found drowned, and the various methods of resuscitation are much discussed and sought after by members of that and other humane societies. A committee was appointed in 1890 by the Royal Medical and Chirurgical Society to determine the question raised by Dr. Bowles in a paper published in the *Transactions*, vol. lxxii, on the relative value of the Marshall Hall, Sylvester, and Howard methods of the treatment of the apparently drowned.

Dr. Laborde's procedure is simple, and consists in seizing the tongue by its tip and drawing it forcibly forwards, rhythmically, about fifteen to twenty times a minute, according, as to time, with the natural respiratory movements. This is to be continued for many minutes or even longer until the respiratory movements are resumed with returning life. The idea was first suggested to him by observing, during experiments on animals in his laboratory, that when he pulled out the tongue preparatory to the use of artificial respiration in cases of syncope or asphyxia after anæsthetics, it alone often sufficed to provoke the return of respiration.

He first put his observations to the test in human beings in two cases of submersion which he treated at the sea coast. These incidents he describes in a truly dramatic fashion. In the first case unsuccessful efforts at resuscitation had been made by two other doctors for nearly an hour before his arrival, and he then found the patient with all the signs of apparent death, except that the pupils were contracted and the jaws clenched. Having forced a spoon into the back of the throat, he seized and forcibly drew the tongue out of the mouth, when immediately a noisy inspiration (*hoquet*) took place, followed by copious and repeated vomitings of liquid; and in about an hour sure signs of recovery revealed themselves. In the second case a lady who was bathing had scarcely got into the water before she was taken with faintness, which persisted after she was removed from the water. Having nothing at hand M. Laborde passed his finger over the base of the tongue and pulled it forward, and the procedure was immediately followed by a violent noisy inspiration, and vomiting of the contents of the stomach. The pulling out of the tongue was continued until the natural respiration returned.

In his interpretation of these two cases M. Laborde says that at the time of rescue the entrance of the glottis was closed by the spasmodic contraction which constitutes its reflex defence, and had not yielded to the irruption of water into the bronchial tubes, a bronchial inundation which gives rise ordinarily to the irremediable condition of asphyxia.

Dr. Bowles has shown that in conditions of apparent death the paralysed tongue drops back, in the supine position of the body, and blocks the pharynx. Dr. Laborde, under the supposition that he was restoring life by the excitation of reflex action after a novel method, in both these cases really effectually removed the blocking by hooking up the base of the tongue, which procedure was immediately followed by a noisy inspiration, just in fact what would naturally be expected on the sudden removal of an obstruction in the air passages.

In the true sense neither of these were cases of drowning; no water had entered the lungs, and the reflex functions were still in an active state. In cases of real drowning with waterlogged lungs we would begin where Dr. Laborde stops, and hope for recovery in cases which he considers hopeless. It is true that he uses frictions, hot and cold douchings, general warmth, and all adjuvants likely to be useful, especially artificial respiration by Sylvester's method; but since all these have failed in his hands he looks upon the rhythmical tractions of the tongue as the last resource and the one most likely to be successful. His failure by these methods is not perhaps surprising when we reflect that the Sylvester method does not provide for the evacuation of the frothy water from the lungs, the presence of which renders the introduction of air quite impossible; and although Dr. Laborde frequently quotes the "Commission de Londres" as his authority, he does not seem to have grasped the fact that there are with us two other methods which fully provide for the unloading of the lungs *pari passu* with the introduction of air—the Marshall Hall and the Howard methods.

After his communication to the Academy, four other cases of so-called drowning were treated, but in none had water entered the lungs and in none had the reflex functions ceased. The same may be said of the other forms of asphyxia treated of in his work. Of course there are, as usual, a large number of cases of the successful treatment by this method of the "apparently stillborn" reported from country districts, but all who have experience of midwifery know how infants in this condition recover long after birth without any means at all being employed, so that in a scientific inquiry such recoveries cannot be considered trustworthy evidence. Subsequently Dr. Laborde subjected some dogs and guinea-pigs to real drowning, and it is interesting to observe how closely his observations accord with those obtained by the Committee of the Royal Medical and Chirurgical Society in 1862. The lungs were always found loaded with frothy fluid, which, during the movements employed for resuscitation, drained away in large quantities from the nose and mouth, especially if the head hung downwards, but as he depended so much on the tractions of the tongue and the Sylvester method of artificial respiration the unloading of the lungs was in no instance sufficiently effected, as was proved at the necropsies.

It may be that in the moribund the throat reflexes are the last to die out, and that the stimulation of them may prove a valuable addition to the other means of resuscitation which have hitherto proved to be trustworthy, but in drowning the tractions of the tongue must never be allowed to supersede the paramount necessity of unloading the waterlogged lungs. The method may very well be employed in conjunction with other means, but it should be employed only with the patient lying on his side or in such other position as will permit the expression and drainage of the frothy water from the lungs and of the ready expulsion of the contents of the stomach. So far no method appears so suitable to effect these objects as a slight modification of the old "Ready" or Marshall Hall method, but, none the less, we may be grateful to Dr. Laborde for the useful work that he has done.

The Student's Introductory Handbook of Systematic Botany. By Joseph W. Oliver, Lecturer on Botany, etc., Birmingham Municipal Technical School. London, Glasgow, Edinburgh, and Dublin: Blackie and Son. 1894. (Cr. 8vo, pp. 366, with 170 woodcut illustrations in the text. 4s. 6d.)

This is one of Blackie's Science Textbooks of the "advanced series," and we are glad to be able to state at the outset that, so far as our examination and test of it go, it is an exceedingly carefully compiled and reliable work, comparing favourably with the majority of the numerous works of the same class annually produced by teachers. Mr. Oliver is evidently thoroughly acquainted with his subject and with the present literature relating thereto; it is also evident that he is a good editor, the book being singularly free from orthographical errors and unintelligible definitions. We do not mean to convey by this that it is free from error, nor that there are not important omissions, but that in a general way it is both trustworthy and sufficient so far as it professes to go.

The author begins with the simplest organisms and proceeds upwards, except that when he reaches angiosperms he takes them in the reverse order to that usually adopted in

this country, beginning with the Liliaceæ and ending with the Ceratophylleæ. But this is of little moment, especially as there is a good index.

With regard to the illustrations, they are for the greater part fairly good reproductions of familiar figures, though some of them have suffered in the process of reproduction and reduction. Of course, it is impossible for an author to give original work throughout the whole range of the vegetable kingdom; hence it would be much better to indicate the source or authority in each case. In reference to this point, the author says in his preface: "I have also to acknowledge the readiness with which publishers, both English and foreign, have supplied duplicates of existing illustrations to supplement my own. Without them my book would have been lacking in one of the most important factors of utility." This is true, yet it is an admission that conveys no adequate idea of the extent to which the author is indebted to others, or of what he has actually accomplished himself. In one of the best of recent German textbooks on botany, three-fourths probably of the figures are borrowed from other works (the best authorities in each branch), and each one is duly acknowledged. What is more, the author may well be content with the originality of the other fourth.

Passing to applied botany and the properties of plants, we note that Mr. Oliver has introduced many bare facts such as one finds in a dictionary, namely, that a certain plant yields a valuable fibre, oil, or drug, or that it is poisonous. It would be very much better to devote a little more space and illustration to a few of the really important useful and harmful plants. Generalisations convey no practical knowledge, but particularisation in a few orders, such as the dangerous Umbelliferæ, Solanaceæ, and Aroideæ, would lead to profitable knowledge.

In relation to the distribution of the plants of a given natural order, Mr. Oliver is generally very near the mark; but at page 189, he says of orchids: "with representatives in every part of the globe except where the climate is very cold or very dry." It is true that orchids are not characteristic, either in very cold or very dry climates, but they are represented in very dry climates and reach very nearly the altitudinal and latitudinal limits of flowering plants. Again, at page 115, he states that tree-ferns are confined to tropical and subtropical zones. As a matter of fact, tree-ferns abound in Stewart Island, the extreme south of New Zealand, ascending to elevations of 1,000 to 1,500 feet, and, in the lower regions, they sometimes attain a height of 25 feet. We must allude to one more error, which has been repeated in almost every botanical textbook of the century, though Linnæus correctly described the conditions much more than a century ago. Like so many of his predecessors, Mr. Oliver describes the receptacles of the common fig as having a zone of male flowers near the mouth, and the rest of the space below as covered with female flowers; and male and female flowers are shown, without any further explanation, in the figure illustrating the inflorescence of the fig. Briefly, the cultivated fig is the female of *Ficus carica*; the male being the "caprifig" of the South of Europe, which does not produce edible "receptacles" or fruit. And the cultivated or female fig never, except by a freak of Nature, bears male flowers. It may be mentioned that in the fig, as in the banana and bread fruit, it is not necessary that impregnation should take place for the development of the edible part of the fruit; and there are seedless varieties of many other fruits.

On Common Neuroses. By J. F. Goodhart, M.D., F.R.C.P. Second Edition. London: H. K. Lewis, 1894. (Cr. 8vo, pp. 142. 3s. 6d.)

If we venture to call this little book charming, it may well be asked how such an epithet can be fitting to a serious book on medicine, or to any book written with the gravity of positive thought. Dr. Goodhart's Harveian Lectures are charming in this sense—the lecturer takes a broad and humane view of his subject, presents it in a winning style, and carries the reader captive by his helpfulness and enthusiasm. He comes out of the sphere of abstraction, and takes men and women by the hand as he finds them.

The author boldly claims the right to speak of certain maladies as "nervous" or "neurotic," a title which offends some physicians, who find no meaning in it. Moreover, he asserts that we shall have to attribute more and more of the phenomena of disease to nervous instability as the nervous system becomes more and more elaborate. Now, a distinction must be drawn between phenomena which indicate the higher degrees of development of the nervous system, which will make for the strength of control, and those which indicate that the kind of life we lead tends to perturb such nerves as we have.

A very large deduction must be made from the sum of neurotic maladies on account of the healthier lives of women. The enforced idleness and repression of the lives of women in the time of our grandmothers, and their exclusion from healthy exercises, must have contributed vastly to accumulation of the "vapours."

Those of us who can look back upon thirty years of practice will probably agree in saying that hysteria, weak spines, and so forth were far more frequent in our earlier days than they are now. They were accepted then with more equanimity, and there was scarcely a family without its elegant invalid who lived upon the tendernesses of the rest, and who repaid these sacrifices in woolwork, in voluminous letter writing, and in the extension of a somewhat peevish old age.

Several times in the book before us Dr. Goodhart regards the neurotic strain as a product of evolution of the nervous system, but we cannot long delay upon the element of error which we suspect in this proposition. Surely "luxury" is not in itself a mark of evolution; "luxury" is a question-begging word.

If by "luxury" we mean those adaptations of the grosser conditions of life which set free the higher faculties for their own ends, we mean a condition of evolution; but if we mean by the word a mere love of this material ease for its own sake—a mere pampering of temporary sensation—then such advances of "luxury" are not evolution but retrogression, and may well lead to enervation.

We had marked many pages in Dr. Goodhart's Lectures for argument or admiration, but our limits prevent more than this indication of a fundamental distinction which is too often overlooked. The clinical slang in which disease is often spoken of as a "development" is to blame for some fogging of our minds on these matters.

On insomnia, on asthma, on angina pectoris, on "weak heart," on dyspepsia, and on many other ills, Dr. Goodhart gives counsel broad enough and wise enough to instruct the most learned reader; and to the young man entering upon practice, well equipped with scientific knowledge, but needing a better knowledge of his fellow creatures, needing a training in tact, in common sense, and in humanity, these lectures will be invaluable.

The Medical Annual and Practitioner's Index, 1894. Bristol: John Wright and Co. 1894. (Cr. 8vo, pp. 680. 7s. 6d.)

There can be no doubt about the advantage to the practitioner of being supplied with a handy book containing, in a readable form, a general view of the ideas which during the past year have permeated the medical journals; and this *Medical Annual* contains: notes on remedies, treatment, pharmacy, and sanitation, together with varied information about books, lunatic asylums, and hydropathic establishments fading off gradually into advertisements, a most useful addendum to such a desk companion as this book really is.

As a complete record of the work done during the year it can hardly aspire to first rank, but as a medical scrap book it occupies a position of its own. A systematic bibliography or index-epitome of the year's work would be far too heavy reading to take up at spare moments, to fill up odd scraps of time; but he must indeed be an intensely well-informed man or else a very dull one who could turn the pages of this annual without in a short time finding a good deal to interest him. Want of system is a good point in a scrap book, and the interpolated essays, such as the capital article on Facial Expression in Mental Disease by Dr. Shaw, little as they may have to do with new treatment, are far from being the least useful portion of the book.

NOTES ON BOOKS.

On Seborrhœa and its Consequences. By JOSEPH FRANK PAYNE, M.D., F.R.C.P. (London: John Bale and Sons. 1894. Demy 8vo, pp. 24. 1s.)—This is a clinical lecture on seborrhœa, in which Dr. Payne makes some useful remarks on its nature and treatment, and on the micro-organisms contained in seborrhœal crusts.

Disease and Race. By IADROO. (London: Swan Sonnenschein and Co. 1894. Cr. 8vo, pp. 128, with 9 illustrations. 2s. 6d.)—The object of this work is to show some continuity in disease, and to indicate its racial effects. The diseases chiefly dealt with are leprosy, syphilis, gonorrhœa, tuberculosis, and small-pox, which are treated particularly from a bacteriological point of view. The author's object is to support ideas by his statements rather than work out theories, leaving it to the future either to substantiate or refute them. From the nature of the book and the use of a pseudonym on the title page, it would appear as if the author wished figuratively to fly a kite to ascertain the direction of the wind before publicly fathering the thoughts it contains.

Sciatic Neuritis: its Pathology and Treatment. By ROBERT SIMPSON, L.R.C.P., L.R.C.S. (Bristol: John Wright and Co. 1893. Fcap.8vo, pp. 46. 1s.)—The object of this little book, the author tells us, is to advocate the adoption of massage as a therapeutic agent, and to bring into notice the satisfactory results he has obtained by this and other modes of treatment in sciatic neuritis. These latter comprise such ordinary means as rest, electricity, potassium iodide, etc., so that altogether a searcher after originality would hardly find it here. The clinical evidence adduced by the author, though scanty, may perhaps encourage anyone having to treat this troublesome affection.

A Manual of Hygiene. By J. WHITE WALLIS. (London: Kegan Paul, Trench, and Co. 1894. Cr. 8vo, pp. 150. 2s. 6d.)—This book seems to have been put together for the purpose of serving as a manual for the use of children before leaving school. One may well doubt, however, whether it will be of the use which might be desired in this direction. A great part of its contents would be very unintelligible to a child who had not already gained some knowledge of the structure and function of the different parts of the human body, and to anyone who had such knowledge the very elementary teaching in regard to matters physiological which the book supplies would be useless. One cannot but suspect that the meaning of some of the words employed has not always been absolutely clear even to the author. The number of contradictory statements in the book is by no means small, and a great deal of explanation would be required if it were used as a textbook. In fact, we can quite believe that in the hands of an inquisitive schoolgirl it might be made the means of inflicting no small torture on any mistress who happened not to be well informed on the multitudinous subjects on which it touches. Although the fact is nowhere stated, we presume the book is written for girls. It might be well, however, to make this more clear, for if put into the hands of a class of boys a teacher might find it no small embarrassment to explain the frequent references to menstruation and its derangements.

HAMBURG AND ITS HELPERS.—The Hamburg Senate has sanctioned the award of a silver commemorative medal to the medical men and students who worked in the cholera hospitals of that afflicted city during the epidemic of 1892. The medal, which is a fine specimen of artistic work, struck from a design by A. Vogel, measures about 8 centimetres in diameter, and bears the inscription: "Den Helfern in der Noth, das dankbare Hamburg. (From grateful Hamburg to those who helped her in her need.) On one side of the medal is a representation of Hercules overcoming the Hydra: on the other the arms of the city of Hamburg, surrounded by a garland of oak leaves.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SECOND ANNUAL MEETING.

THE sixty-second Annual Meeting of the British Medical Association will be held at Bristol on Tuesday, Wednesday, Thursday, and Friday, July 31st, August 1st, 2nd, and 3rd, 1894.

President: GEORGE HARE PHILIPSON, M.D.Cantab., D.C.L., F.R.C.P., Professor of Medicine in the University of Durham.

President-Elect: E. LONG FOX, M.D.Oxon., Consulting Physician to the Bristol Royal Infirmary.

President of the Council: J. WARD COUSINS, M.D.Lond., F.R.C.S., Senior Surgeon to the Royal Portsmouth Hospital.

Treasurer: HENRY TRENTHAM BUTLIN, F.R.C.S., D.C.L., Surgeon to St. Bartholomew's Hospital, E.C.

An Address in Medicine will be delivered by Sir THOMAS GRAINGER STEWART, M.D.Edin., Professor of the Practice of Physic and Clinical Medicine in the University of Edinburgh.

An Address in Surgery will be delivered by JAMES GREIG SMITH, M.B., F.R.S.E., Surgeon to the Bristol Royal Infirmary.

An Address in Public Medicine will be delivered by Sir CHARLES CAMERON, M.D., Medical Officer of Health, Dublin.

A. MEDICINE.

Library of Medical School.

President: FREDERICK T. ROBERTS, M.D. *Vice-Presidents:* E. MARKHAM SKERRITT, M.D.; R. SHINGLETON SMITH, M.D. *Honorary Secretaries:* W. T. BROOKS, M.A., M.B., 32, Holywell, Oxford; J. MICHELL CLARKE, M.D., 28, Pembroke Road, Clifton, Bristol.

Wednesday, August 1st.—I. Discussion on Functional Diseases of the Heart, introduced by Douglas Powell, M.D. The following gentlemen have announced their attention of taking part in the discussion: Sir Frederic Bateman, Paul M. Chapman, M.D., W. Soltau Fenwick, M.D., James A. Lindsay, M.D., G. A. Gibson, M.D., E. Markham Skerritt, M.D., R. Shingleton Smith, M.D., A. Ernest Sansom, M.D., P. Watson Williams, M.D., Harry Campbell, M.D., H. Handford, M.D., and Francis Hawkins, M.B.

Thursday, August 2nd.—II. Discussion on Pyrexia and its Treatment, introduced by W. Hale White, M.D. The following gentlemen will take part in the discussion: E. Markham Skerritt, M.D., Shingleton Smith, M.D., James Barr, M.D., James A. Lindsay, M.D., J. E. Shaw, M.D., H. Handford, M.D., Douglas Powell, M.D., and W. Soltau Fenwick, M.D.

Friday, August 3rd.—III. Ataxia and the Diseases of which it is a Symptom, introduced by J. A. Ormerod, M.D. The following gentlemen will take part in the discussion: James Cagney, M.D., L. Andriezen, M.D., F. W. Mott, M.D., Henry Waldo, M.D., J. S. R. Russell, M.B., and Michell Clarke, M.D.

The following papers have been announced:

ALTHAUS, Julius, M.D. The Differential Diagnosis of Nosophobia and Hypochondriasis.
BENTLEY, A. J. M., M.D. A Few Practical Hints for Invalids on the Maintainance of Health in the Climate of Egypt.
CAMPBELL, Harry, M.D. The Mechanical Treatment of Heart Disease.
CLARKE, Michell, M.D., will show cases and morbid specimens of Friedreich's Disease and a case of Tabes.
FENWICK, W. Soltau, M.D. Dyspepsia of Strumous Origin.
FISHER, Theodore, M.D. Diastolic and Presystolic Murmurs in Dilated Hearts without Valvular Disease.
GIBSON, G. A., M.D. The Conduction of Cardiac Murmurs.
LAFFAN, T., M.D. On Some Cases illustrating Cardiac Prognosis.
LANE, Hugh, L.R.C.P. Neurotic Arthritis.
MOTT, F. W., M.D. Pernicious anæmia.
ROSS, J. Carne. Some Notes on a Series of Cases of Cancer.
RUSSELL, J. S. R., M.B. The Diagnostic Importance of certain late Phenomena in Lesions of the Dorsal and Lumbar Cord.
SANSOM, A. Ernest, M.D. Disturbances of the Cardiac Rhythm subsequent to Influenza.
SHARP, Gordon, M.B. Cactus Grandiflorus, its Literature, Chemistry, Pharmacology, and Therapeutics.
SMITH, R. Shingleton, M.D. (1) Pulmonary Stenosis and Endocarditis a cause of Embolic Pneumonia and Chronic Intermittent Fever. (2) Membranous Exudations, more especially those of Intestinal Origin.
WALDO, Henry, M.D., will show a case of Early Tabes with Arthropathy and Perforating Ulcer.
WETHERED, F. J., M.D. The Treatment of Chronic Heart Disease by Baths and Gymnastics as practised at Nauheim.
WHITBY, C. J., M.D. Modern Hydropathy; its Relation to General Therapeutics.
WILLIAMS, P. Watson, M.D. A case of Pancreatic Diabetes, treated by Grafts of Sheep's Pancreas.

Dr. F. J. Wethered will give a practical demonstration of

the Treatment of Chronic Heart Disease by Gymnastics on Thursday at 9.30 A.M.

B. Surgery.

Physical Science Lecture Room—University College.

President : W. Mitchell Banks, M.D. *Vice-Presidents :* Nelson C. Dobson, F.R.C.S.; Professor Victor Horsley, F.R.S. *Honorary Secretaries:* G. A. Wright, M.B., 8A, St. John Street, Manchester ; James Swain, M.D., 14, Buckingham Place, Clifton, Bristol.

The following subjects have been selected for discussion in the Section :

1. The Operative Treatment of Perforative Ulcer of the Stomach and Intestines. To be introduced by A. Pearce Gould, M.B., F.R.C.S. The following gentlemen will take part in the discussion : G. H. Hopkins, F.R.C.S. (Swansea), R. Maclaren, M.D. (Carlisle), Mayo Robson, F.R.C.S. (Leeds), J. Ward Cousins, M.D., F.R.C.S. (Portsmouth), Rutherford Morison, F.R.C.S. (Newcastle-on-Tyne), Gilbert Barling, F.R.C.S. (Birmingham), J. Paul Bush, M.R.C.S. (Bristol), and W. F. Haslam, F.R.C.S. (Birmingham). N. C. Dobson, F.R.C.S. (Bristol), D. Harrisson, F.R.C.P. (Liverpool), J. Murphy, M.D. (Sunderland), K. Franks, F.R.C.S.I. (Dublin), R. O'Callaghan, F.R.C.S.I. (London).

2. The Surgical Treatment of Injuries of the Spine and Spinal Cord. To be introduced by William Thorburn, M.D., F.R.C.S. The following gentlemen will take part in the discussion : G. H. Hopkins, F.R.C.S. (Swansea), W. M. Barclay, F.R.C.S. (Bristol), C. B. Keetley, F.R.C.S. (London), H. Langley Browne, F.R.C.S. (West Bromwich), Gilbert Barling, F.R.C.S. (Birmingham), and R. W. Lovett, M.D. (Boston U.S.A.), D. Harrisson, F.R.C.S. (Liverpool), W. Thomas, F.R.C.S. (Birmingham), Noble Smith, F.R.C.S.E.

3. The Treatment of Injuries of the Lower End of the Humerus. To be introduced by Jonathan Hutchinson, jun., F.R.C.S. The following gentlemen will take part in the discussion : G. H. Hopkins, F.R.C.S. (Swansea), Professor Landerer (Stuttgart), R. Jones, F.R.C.S.Edin. (Liverpool), J. Ward Cousins, M.D., F.R.C.S. (Portsmouth), Damer Harrisson, F.R.C.S. (Liverpool).

The following papers have been announced :

Bush, J. P., M.R.C.S. (Bristol). A Case of Division of the Pneumogastric Nerve, Suture, Recovery.
Collier, Mayo, F.R.C.S. (London). Hallux Rigidus with Specimens.
Cotterell, E., M.R.C.S. (London). The Diagnosis between Some Forms of Syphilis of the Tongue and Early Epithelioma.
Franks, K., F.R.C.S.I. (Dublin). Œsophagectomy with Remarks on the Treatment of Œsophageal Stricture.
Harrisson, Damer, F.R.C.S. (Liverpool). 1. Meningeal Hæmorrhage followed by Paralysis and Sensory and Motor Aphasia treated successfully by Operation. 2. Note on the Treatment of Traumatic Delirium Tremens.
Jones, R., F.R.C.S.Edin. (Liverpool). On Amputation and Shock and Amputation through Shoulder-joint for Diffuse Spreading Traumatic Gangrene.
Lowe, T. P., M.R.C.S. (Bath). The Treatment of Senile Rheumatic Arthritis of the Hip-joint by Forcible Movements.
Mayo Robson, F.R.C.S. (Leeds). On a Consecutive Series of Ovariotomies performed in the Surgical Clinic at a General Hospital.
Morison, Rutherford, F.R.C.S. (Newcastle-on-Tyne). On Some Points in the Anatomy of the Right Hypochondriac Region relating especially to Operation for Gall Stones.
Morton, C. A., F.R.C.S. (Bristol). A Case of Malignant Disease of the Testis in which the Interior of the Growth was filled with decolorised Clot and Brown Fluid simulating Hæmatocele.
Moullin, C. M., M.D., F.R.C.S. (London). The Treatment of Enlargement of the Prostate by Removal of the Testes.
Murphy, James, M.D. (Sunderland). 1. Splenectomy, with Notes of a Successful Case. 2. Notes of a Case of Rupture of the Bladder treated by Abdominal Section, Suture, Recovery.
Neve, E. F., M.D. Clinical Remarks on Sixty-five Cases of Operation for Vesical Calculus.
O'Callaghan, R., F.R.C.S.I. (London). Radical Cure during Operation for Strangulated Hernia in Octogenarians.
Snow, H., M.D (London). The "Dispersible" Tumours of the Mamma.
Stokes, Sir William (Dublin). The Operative Treatment of Flat Foot.
Tait, Lawson, F.R.C.S. (Birmingham). Typhlitic and Perityphlitic Inflammation and Suppuration with an Especial Regard for the Different Opinions expressed on the Prognosis of the Disease by Physicians and Operating Surgeons.
Thomas, J. L., F.R.C.S. (Cardiff). The Condition of the Tympanic Membrane in some Head Injuries.

C. Obstetric Medicine and Gynæcology.

Lecture Room No. 2—University College.

President : Professor J. G. Swayne, M.D. *Vice-Presidents :* E. Malins, M.D.; A. E. Aust-Lawrence, M.D. *Honorary Secretaries:* R. Boxall, M.D., 29, Weymouth Street, London, W. ; Walter G. Swayne, M.B., 8, Leicester Place, St. Paul's Road, Clifton, Bristol.

The following subjects have been selected for discussion in the Section :

1. The Necessity of Inducing Labour in Certain Conditions of the Mother not Obstructing Delivery. To be opened by Robert Barnes, M.D., Consulting Physician-Accoucheur to St. George's Hospital, London. The following gentlemen will take part in the discussion : Fancourt Barnes, M.D., R. Bell, M.D., T. More Madden, M.D., J. Murphy, M.D., W. H. C. Newnham, M.A., M.B., J. Inglis Parsons, M.D., A. J. Smith, M.D., Professor M. Cameron, and John Campbell, M.D.

2. The Treatment of Hæmorrhage during the Last Two Months of Pregnancy. To be opened by W. J. Symly, M.D., Master of the Rotunda Hospital, Dublin. The following gentlemen will take part in the discussion : Fancourt Barnes, M.D., R. Bell, M.D., J. W. Byers, M.D., T. More Madden, M.D., J. Murphy, M.D., W. H. C. Newnham, M.A., M.B., J. Inglis Parsons, M.D., E. Stanmore Bishop, F.R.C.S., Professor M. Cameron and A. J. Smith, M.D.

The following papers have been announced :

Aust-Lawrence, A. E., M.D. On Abdominal Section as Part of the Treatment in Certain Cases of Menstrual Retention due to Atresia of the Genital Tract.
Barnes, Fancourt, M.D. Selection of Cases for Hysterectomy.
Bell, Robert, M.D. On Ovariotomy.
Bishop, E. Stanmore F.R.C.S. The *Technique* of Vaginal Hysterectomy.
Collins, E. T., F.R.C.S. The Nervous Impulses Controlling Menstruation and Uterine Hæmorrhage.
Cullingworth, C. J., M.D. On a Case of Advanced Extrauterine Gestation in which a Living Child was Removed, the Placenta left undisturbed, and the Abdominal Wound entirely closed.
Dempsey, Alexander, M.D. On Curetting the Uterus for Puerperal Septicæmia, with notes of two successful cases.
Edge, Fred., F.R.C.S. A Modification of the Alexander Adams's Operation.
Harrisson, Damer, F.R.C.S.E. On Paresis of the Intestines following Abdominal Operation.
Jessett, F. B., F.R.C.S. On Thirty Cases of Vaginal Hysterectomy for Carcinoma Uteri with Two Deaths.
Keith, George E. On the Operative Treatment of a Form of Dysmenorrhœa and Sterility.
Madden, T. More, M.D. On Pruritus and other Hyperæsthetic Conditions of the Vulva and Vagina.
Martin, Christopher, F.R.C.S. Some of the Complications and Difficulties met with in the Removal of the Uterine Appendages.
Murphy, James, M.D. Notes of a Case of Hæmatometra successfully Treated by Hysterotomy.
Nairne, J. Stuart, F.R.C.S. On Resection of the Uterus for Fibroid Tumours and other Diseases.
Newnham, W. H. C., M.B. Successful Treatment of Sterility.
Porslow, C. E., M.D. An Account of Four Cases in which Separation of the After-coming Head had occurred during Delivery, and of the Means used to Extract the Head.
Rabagliati, A., M.D. Some Obscure Ailments which simulate Ovarian Disease, their Causes and Treatment.
Reid, W. L., M.D. A Case of Simple Enterocele Vaginalis Posterior with an Operation for its Relief.
Scharlieb, Mary A. D., M.D. Treatment of Uterine Myomata.
Smyly, W. J., M.D. Total Extirpation of the Myomatous Uterus.
Taylor, John, F.R.C.S. On Doubling of the Uterus and Vagina and Allied Malformations.
Walter, W., M.D. Ovarian Dermoid containing 3,940 Pea-like Bodies.
Williams, J. D., M.D. Tuberculous Disease of the Portio Vaginalis.

D. Public Medicine.

Museum Theatre.

President : Professor W. H. Corfield, M.D. *Vice-Presidents:* J. Lane Notter, M.D.; D. S. Davies, M.D. *Honorary Secretaries :* B. H. Mumby, M.D., Town Hall, Portsmouth ; J. C. Heaven, M.R.C.S., 17, Whiteladies Road, Clifton, Bristol.

Papers on the following subjects have been announced and will as far as possible be read on the various days as indicated below.

Wednesday, August 1st.

Davies, Sidney, M.D. (Plumstead). Ventilation of Sewers.
Anderson, A. Jasper, M.D. (Blackpool). Ventilation of Sewers.
Neech, J. T., L.R.C.P. (Atherton). Sewer Ventilation and the Movement of Air in Sewers.
Pringle, R., Brigade-Surgeon-Lieutenant-Colonel, M.D. 1. The Seasons and Sites of Hindu Pilgrimages in Bengal and their Bearing on Epidemic Cholera. 2. Notes on an Outbreak of Bubonic Plague in British Ghurwal Himalayas in 1864.
Stephens, E., L.R.C.P. (Ilminster). Cremation.
Mahomed, A. G. S., M.R.C.S. Should there be a Civil Medical Service for Great Britain?

THOMPSON, Sir Henry. Cremation, its Progress at Home and Abroad, and the Medical Responsibilities which it entails.

Discussion of above papers.

Thursday, August 2nd.

NOTTER, J. L., Brigade-Surgeon-Lieutenant-Colonel, M.D. Filtration of Potable Waters.

THRESH, J. C., M.B. The Interpretation of Water Analyses.

PRINGLE, R., Brigade-Surgeon-Lieutenant-Colonel, M.D. The Storage of Rain Water for Drinking Purposes.

KENWOOD, H. R., M.B. Notes on the Origin and Spread of Enteric Fever.

CAMERON, J. Spottiswoode, M.D. Diarrhœa in the Autumn of 1893.

WALDO, F. J., M.D. and WALSH, David, M.B. 1. Does Baking Sterilise Bread? 2. Does Cooking Sterilise a Meat Pie? (To be illustrated by cultivations, slides, etc.).

BUCKMASTER, G. A., M.D. Recent Experimental Methods employed in Diagnosis of Typhoid Bacilli contrasted with Coli Commune.

Discussion of above papers.

Friday, August 3rd.

PRIESTLEY, J., M.D. (Leicester). Some Lessons to be Learnt from an Epidemic of Small-pox in an Unvaccinated Community.

EVANS, Arnold, M.D. The Aërial Convection of Small-pox.

ALLAN, F. J., M.D. Public Measures for the Prevention of Phthisis.

BLACKMAN, J., M.D. Public Measures for the Prevention of Phthisis.

BROWNE, Lennox, F.R.C.S.Ed. The Etiology of Diphtheria in Relation to Insanitation.

Discussion of above papers.

The following gentlemen will take part in the discussions: J. Spottiswoode Cameron, M.D., Walter Dowson, M.D. Sydney Davies, M.D., Herbert Jones, L.R.C.S.I., A. Jasper Anderson, M.B., A. Robinson, M.D., Brigade-Surgeon-Lieutenant-Colonel R. Pringle, M.D., Thomas D. Savill, M.D., J. Priestley, M.D., Jas. T. Neech, L.R.C.P., F. C. Dodsworth, L.R.C.P.

Should time permit discussion on the following additional subjects will be invited.

1. Notification: Difficulties Experienced: Value of.
2. Hospital Isolation and Accommodation required for recent Urban Sanitary Districts, Counties, and Rural Districts.
3. The Value of the Bacteriological Determination of Cholera.
4. Port Preventive Measures and the 1893 Cholera Epidemic in England.
5. Infant Mortality in Relation to Female Labour.

N.B.—It is hoped that gentlemen who have promised papers will kindly note the days on which it is proposed they shall be taken.

E. PSYCHOLOGY.

Lecture Room No 4—University College.

President: G. F. BLANDFORD, M.D. *Vice-Presidents:* S. R. PHILIPPS, M.D.; FLETCHER BEACH, M.B. *Honorary Secretaries:* C. S. W. COBBOLD, M.D., Bailbrook House Asylum, Bath; R. S. STEWART, M.D., Glamorgan County Asylum, Bridgend.

On August 1st the President will open the work of the Section by giving an address upon the "Prevention of Insanity," and a discussion is specially invited upon this subject.

On August 2nd at 11 A.M. it is proposed to hold a discussion upon "The Law in Relation to the Criminal Responsibility of the Insane;" L. A. Weatherly, M.D., has promised to open it, and members of the legal profession will be invited to join (as visitors) in the debate.

The following additional discussions have been promised: The Treatment of Neurasthenia, to be opened by G. H. Savage, M.D. The Status of Assistant Medical Officers in Lunatic Asylums, to be opened by C. Mercier, M.B. Points Connected with the Education of Feeble Minded Children, to be opened by G. E. Shuttleworth, M.D.

The following gentlemen are expected to take part in the discussions: Drs. Fletcher Beach, H. A. Benham, Bourneville A. N. Davis, A. S. Eccles, D. Nicolson, R. Noot, Rees Philipps, T. D. Savill, J. B. Spence, Hack Tuke, Outterson Wood, and Oscar Woods.

The following papers have been announced:

ANDRIEZEN, W. Lloyd, M.D. Contributions and Suggestions towards a Pathological Classification of the Insanities (with Microscopic Demonstration of Specimens).

BLAKE, Henry, M.B. (Great Yarmouth). Four Cases Illustrating the Origin and Possible Prevention of Different Types of Insanity.

BULLEN, F. St. J., M.R.C.S. The Influence of Reflex and Toxic Agencies in Insanity and Epilepsy.

CAMPBELL, Harry, M.D. Train Panic.

FOX, B. B., M.D. A Case for Diagnosis.

KERR, Norman, M.D. Probationary Curative Restraint of the Alleged Insane.

RUTTLEDGE, Victor J., M.B. Facial Expression in the Insane, illustrated by an Album of Photographs.

SHAW, James, M.D. (Liverpool). The Early Treatment of Mental Cases in Private Practice.

SMITH, Telford, M.A., M.D. Cases of Sporadic Cretinism Treated by Thyroid Extract with lantern demonstration.

STEWART, R. S., M.D. The Spastic and Tabetic Types of General Paralysis.

Members attending the Section will be invited to inspect the Bristol City and County Asylum at Fishponds, near Bristol, on Thursday afternoon August 2nd. H. A. Benham, M.D. Medical Superintendent.

Dr. J. Batty Tuke will give a Lantern Demonstration of 1. Histological changes in normal nerve cells as illustrated by Dr. Gustave Mann, University of Edinburgh. 2. Effects of Stimulation on nerve cells as illustrated by Dr. Hodge, Clarke University, Mass.

F. PATHOLOGY.

Chemical Lecture Theatre—University College.

President: G. SIMS WOODHEAD, M.D. *Vice-Presidents* JOSEPH FRANK PAYNE, M.D.; M. A. RUFFER, M.D. *Honorary Secretaries:* NORMAN DALTON, M.D., 4, Mansfield Street, London, W.; C. A. MORTON, F.R.C.S., 24, St. Paul's Road, Clifton, Bristol.

On Wednesday, August 1st, S. Monckton Copeman, M.D., will introduce a discussion on the Pathology of Vaccinia. A. Stanley Kent will read a paper on the Histology of the Vaccine Vesicle. Professor Chauveau, of Paris: Dr. Voight, of Hamburg: M. A. Ruffer, M.D.: H. G. Plimmer, M.R.C.S.: Professor R. W. Boyce; S. Coupland, M.D.: A. P. Luff, M.D.; and T. W. Hime, M.D., are expected to speak on the subject of the Pathology of Vaccinia.

On the same day it is expected that the following papers will also be read:

CLARKE, T. Jackson, F.R.C.S. The Sporozoa of Cancer and the Sporozoa of Variola—a comparison.

POWER, D'Arcy, M.A., F.R.C.S. An Experimental Investigation into the Causation of Cancer.

SNOW, Herbert, M.D. (1) Cancer and Phagocytosis. (2) Marrow Infections and other Novel Points in the Pathology of Cancerous Diseases.

SURVEYOR, N. F., M.D., and BOYCE, R., M.B. The Fungus Foot Disease of India.

On August 2nd the following papers will probably be read:

BOKENHAM, T. J., L.R.C.P., and FENWICK, William Soltau, M.D. A Contribution to the Chemistry of Enteric Fever.

CAMPBELL, Alfred W., M.D. Degenerations Consequent on Destructive Lesions of the Human Cerebellum.

FYFFE, W. Kingston, M.B. The Influence of Creasote on the Virulence of the Tubercle Bacillus.

MACFADYEN, Allan, M.D. The Biology of the Ringworm Organism.

MACFADYEN, Allan, M.D., and BLAXALL, F. R., M.D. Thermophilic Bacteria.

MCWEENEY, Edmund J., M.D. A Chromogenic Bacillus, perhaps Identical with Bacillus Chromo-aromaticus.

MOTT, Frederick T., M.D. The Pathology of Amyotrophic Lateral Sclerosis.

RITCHIE, James, M.B. Relation between Chemical Composition and Antiseptic Action.

RUSSELL, J. S. Risien, M.B. Degenerations consequent on Lesions of the Cerebellum.

TREVELYAN, E., M.D. The Morbid Anatomy of an unusual Case of Infantile Palsy, involving the whole length of the Cord.

TURNER, Aldren, M.D. The Central Connections of Certain Cranial Nerves.

On August 3rd the following papers will probably be read:

AULD, A. G., M.D. A further report on the Suprarenal Gland and the Causation of Addison's Disease.

BLAXALL, F. R., M.D. Amœbic Dysentery.

HARRISON, Reginald, F.R.C.S. The Pathology of Enlarged Prostate.

HUTCHINSON, Jonathan, jun., F.R.C.S. Tertiary Syphilitic Lymphadenitis.

MURRAY, George, M.D. The Effects of Thyroidectomy in Rabbits.

Surgeon-Major Smyth, M.D., and Norman Dalton, M.D., will show sections of Malarial Tissues, and Leonard A. Bidwell, F.R.C.S., will show sections of Skin Grafts.

J. H. Targett, F.R.C.S., will give a lantern demonstration in the Museum on Wednesday afternoon on Hydatids in the Bones.

There will be an exhibition of specimens, bacteriological cultures, instruments for pathological research, etc., in the museum attached to the Section.

PATHOLOGICAL MUSEUM.

Drs. Plimmer and Blaxall will exhibit in the Pathological Museum a collection of cultures of the pathogenic and non-

pathogenic organisms with microscopic specimens of the most important bacteria from the bacteriological laboratories of the British Institute of Preventive Medicine.

More than one hundred specimens of special interest have been selected from the hospital museums in Bristol for the annual Pathological Museum.

G. OPHTHALMOLOGY.

Medical Lecture Theatre, Medical School.

President: F. R. CROSS, M.B. *Vice-Presidents:* H. E. JULER, F.R.C.S.; SIMEON SNELL, F.R.C.S. *Honorary Secretaries:* C. H. WALKER, M.B., 3, Leicester Villas, St. Paul's Road, Clifton, Bristol; J. TATHAM THOMPSON, M.B., 24, Windsor Place, Cardiff.

The following papers have been announced:

BEAUMONT, W. M., M.R.C.S. The Soldier's Red Coat as a cause of Retinal Hyperæsthesia.
CHISHOLM, J. J., M.D. (Baltimore). On the Good Effects of Dressing one Eye only after Cataract Extractions.
DA GAMA, Sir J. A. (Bombay). Some remarks on Subconjunctival Mercurial Injections in Syphilitic and other Diseases of the Eye.
DOYNE, R. W., F.R.C.S. The Influence of Education as a Cause of Eye Disease.
EDRIDGE-GREEN, F. W., M.D. A New Spectroscope for the Quantitative Estimation of Defects of Colour Perception.
GRIFFITH, John, F.R.C.S. Criticism concerning Recent Views as to the Secretory Function of the Ciliary Body.
HEWETSON, H. B., M.R.C.S. 1. Blepharitis and Asthenopia in German Jew Tailors in Leeds. 2. Asthenopia and Headaches in Girl Machinists in Leeds. 3. The effects of Electric Welding Operations upon the Eyes.
JOHNSON, G. Lindsay, M.D. The Influence of Prolonged Excessive Light on Vision.
JULER, H., F.R.C.S. On the Diagnosis and Treatment of the Three Chief Forms of Contagious Ophthalmia, namely, the Catarrhal, the Purulent, and the Granular Varieties.
LANDOLT, Professor E. (Paris). Some Rules to Simplify the Diagnosis of Ocular Paralysis.
MCGILLIVRAY, A., M.B. The Therapeutic Value of Ice in Ophthalmic Surgery.
RUSSELL, J. S. R., M.B. Experimental Investigation of Eye Movements.
RUTTLE, Robert, L.M.Dub. Report on Three Cases of Orbital Tumour.
SCOTT, Kenneth, M.B. The Treatment of Granular Conjunctivitis or Trachoma.
SNELL, Simeon, F.R.C.S. On the Relations of Occupation to Eyesight.
STEPHENSON, Sydney H. A., F.R.C.S. Cellulitis following Mules's Operation.
STEVENS, Dr. G. T. (New York). The Maintenance of Equal Rotation of the Eyes after Operations on the Ocular Muscles.
TAYLOR, S. J., M.B. A case of Probable Disease of the Lenticular Ganglion.
THOMPSON, J. L., M.D. (Indianapolis). Observations on some Phases of Opacity and Luxation of the Crystalline Lens.
THOMPSON, J. Tatham, M.B. Keratomalacia in Acute Infantile Jaundice.
WRAY, C., F.R.C.S. Mixed Astigmatism.

Papers have also been promised by Messrs. Hermann Snellen; T. J. Bokenham, L.R.C.P.; H. E. Jones, L.R.C.P.; and Ernest Clarke, M.D.

H. LARYNGOLOGY AND OTOLOGY.

Physiology Lecture Theatre, Medical School.

President: P. MCBRIDE, M.D. *Vice-Presidents:* W. H. HARSANT, F.R.C.S.; BARCLAY J. BARON, M.B. *Honorary Secretaries:* P. WATSON WILLIAMS, M.D., 2, Lansdown Place, Victoria Square, Clifton, Bristol; W. MILLIGAN, M.D., 28, St. John Street, Deansgate, Manchester.

The following subjects have been proposed for formal discussion:

August 1st.—The Prognosis of Chronic Non-Suppurative Otitis Media (with Imperforate Membrane), to be opened by G. P. Field, M.R.C.S., London, and Thomas Barr, M.D., Glasgow.

August 2nd.—The Treatment of Acute and Chronic Laryngeal Stenosis, to be opened by David Newman, M.D., Glasgow, William P. Northrup, M.D., New York, and Joseph O'Dwyer, New York (paper to be presented by Dr. Northrup).

August 3rd.—The Diagnosis and Treatment of Empyema of the Nasal Accessory Sinuses, to be opened by Greville Macdonald, M.D., London; Charters Symonds, M.S.Lond., F.R.C.S.

Urban Pritchard, M.D.; Dundas Grant, M.D.; Wyatt Wingrave, M.R.C.S.; R. Fullerton, M.D.; R. Mackenzie Johnston, M.D., J. B. Ball, M.D.; Scanes Spicer, M.D.; T. Mark Hovell, F.R.C.S.Ed.; H. B. Hewetson, M.R.C.S.; G. W. Hill, M.D.; C. W. Warden, M.D.; John Bark, M.R.C.P.I.; Dr. Birkett (New York); W. F. Brook, F.R.C.S.; Felix Semon, M.D.; J. Ward Cousins, M.D.; Mayo Collier, F.R.C.S.; Lennox Browne, F.R.C.S.Ed.; and J. W. Downie, M.B., have intimated their intention to take part in the discussions.

Time will also be allowed for the reading and discussion of special papers.

The following papers have been announced:

BRONNER, A., M.D. 1. On Intratympanic Injections in the Treatment of, *a*, Chronic Dry Catarrh of the Middle Ear; *b*, Chronic Purulent Catarrh of the Middle Ear. 2. On the Use of the Curette in the Treatment of Tuberculous Laryngitis.
DOWNIE, J. Walker, M.B. The Care of the Ear during the Course of the Exanthemata.
DRINKWATER, H., M.D. Treatment of Rhinitis Atrophicans or Ozæna.
COLLIER, Mayo, F.R.C.S. On the Surgery of the Frontal Sinuses.
DUTTON, Thomas, M.D. Voice Hygiene.
GRANT, Dundas, M.D. A More Exact Appreciation of Rinne's Test.
HARSANT, W. H., F.R.C.S. The Hearing Power of Deaf Mutes.
HILL, G. W., M.D. Otitis Media Acuta, a Personal Experience.
LOVF, J. Kerr, M.D. Deafmutism as a Clinical Study.
MCBRIDE, P., M.D. Coryza Cascosa.
METCALFE, G., M.B. A Case of Rudimentary Auricle.
MILLIGAN, W., M.D. Observation upon Excision of the Ossicula Auditus in Chronic Suppurative Otitis Media.
MURDOCH, Barr, M.D. Case of Fibrinous Rhinitis.
PEEMEWAN, W., M.D. 1. Laryngeal Paralysis in Chronic Nervous Disease. 2. Deafness and Stupidity in School Children.
SPICER, Scanes, M.D. Title uncommunicated.
WILLIAMS, P. Watson, M.D. The Larynx in Typhoid Fever.
WINGRAVE, V. H. Wyatt, M.R.C.S. Turbinal Varix: its Pathology, Symptomatology, Diagnosis, and Treatment.

I. DERMATOLOGY.

Lecture Room No. 3—University College.

President: A. J. HARRISON, M.B. *Vice-Presidents:* STEPHEN MACKENZIE, M.D.; H. WALDO, M.D. *Honorary Secretaries:* J. HANCOCKE WATHEN, M.R.C.S., 16, York Place, Clifton, Bristol; H. LESLIE ROBERTS, M.D., 46, Rodney Street, Liverpool.

Wednesday, August 1st, 10 A.M.—Lupus: its Etiology, Pathology, and Relations to Other Forms of Cutaneous Tuberculosis, introduced by Professor Leloir. H. G. Brooke, M.B.; Norman Walker, M.B.; Henry Waldo, M.D.; G. W. Potter, M.D.; James Startin, M.R.C.S.; and Dale James, M.R.C.S., have promised to take part in the discussion.

Thursday, August 2nd. 10 A.M.—Management of Eczema, introduced by Malcolm Morris, F.R.C.S.Edin. E. D. Mapother, M.D. (London), A. S. Myrtle, M.D. (Harrogate), T. D. Savill, M.D., James Startin, M.R.C.S., David Walsh, M.B., and G. W. Potter, M.D., will take part in the discussion.

Etiology and Treatment of Acne, introduced by Stephen Mackenzie, M.D. Phin. S. Abraham, M.D., A. Eddowes, M.D., James Startin, M.R.C.S., Leslie Phillips, M.D., and Leslie Roberts, M.D., have promised to take part in the discussion.

Friday, August 3rd, 9.30 A.M.—The Nervous Origin of Diseases of the Skin and its Importance in Treatment, introduced by J. J. Pringle, M.B. Radcliffe Crocker, M.D., T. Colcott Fox, M.B., Stephen Mackenzie, M.D., T. D. Savill, M.D., and G. W. Potter, M.D. have promised to take part in the discussion.

The following papers have been announced:

ANDERSON, Professor McCall. On the Necessity on the Part of the Student for the Clinical Study of Dermatology.
BOWLES, R. L., M.D. Observations on the Scientific Aspect of the Influence of Solar Rays on the Skin.
BROOKE, H. G., M.B. Trade Eczema or Dermatitis.
DUNBAR, Eliza L. W., M.D. The Use of Belladonna in Allaying Irritation and Healing Certain Skin Diseases.
EDDOWES, A., M.D. The Ways of Infections: their Importance as regards Treatment of Skin Affections and the Prevention of Relapses.
FOX, T. Colcott, M.B. Remarks on a Case of Mycosis Fungoides.
HUTCHINSON, Jonathan, F.R.C.S., F.R.S. On Certain Diseases of the Skin induced by Exposure to Sun.
JAMES, Dale, M.R.C.S. Some Relations between Psoriasis and Eczema.
ROBERTS, H. Leslie, M.D. The Present Position of the Question of Vegetable Hair Parasites.
STARTIN, James, M.R.C.S. Treatment of Psoriasis by Tar and Chrysophanic Acid.
TAYLOR, Stopford, M.D. Remarks on a Case of Mycosis Fungoides (will exhibit patient).
WALDO, Henry, M.D. Treatment of Favus of Scalp and Nails.
WALKER, Norman, M.B. Note on Pigmented Tumours of the Skin.
WALSH, David, M.B. A Case of Symmetrical Lupus in Seton Scars.

Dr. Unna will demonstrate various organisms associated with skin diseases.

J. DISEASES OF CHILDREN.

Lecture Room No. 5—University College.

President: W. HOWSHIP DICKINSON, M.D. *Vice-Presidents:* JOHN EDWARD SHAW, M.B.; FREDERIC S. EVE, F.R.C.S. *Honorary Secretaries:* R. W. MURRAY, F.R.C.S., 15, Rodney Street, Liverpool; BERTRAM M. H. ROGERS, M.D., 11, York Place, Clifton, Bristol.

On Wednesday, August 1st, a discussion on the Treatment and Complications of Whooping-Cough. To be opened by J. Carmichael, M.D. The following gentlemen have signified their intention to take part in the discussion: C. Elliott, M.D., E. Mansel Sympson, M.D., and F. W. Burton-Fanning, M.D.

August 2nd.—Diphtheria: Its Diagnosis and Treatment. To be opened by H. R. Hutton, M.D. The following gentlemen have signified their intention to take part in the discussion: J. Dacre, L.R.C.P., W. G. Black, F.R.C.S., W. P. Northrup, M.D. (New York), E. Mansel Sympson, M.D., A. Murray Gray, L.R.C.P., J. E. Shaw, M.B., F. Wethered, M.D., P. Watson Williams, M.D., H. D. Chaplin, M.D., (New York), and T. Pagan Lowe, L.R.C.P.

August 3rd.—The Treatment of Tuberculous Disease of Joints. To be opened by Frederick S. Eve, F.R.C.S. The following gentlemen have signified their intention to take part in the discussion: J. Ewens, L.R.C.P., A. E. Barker, F.R.C.S., Noble Smith, F.R.C.S. Edin., D'Arcy Power, M.B., W. G. Black, F.R.C.S., A. Parkin, M.D., C. H. Milburn, M.B., R. Jones, F.R.C.S., E. L. Freer, M.R.C.S., and Jordan Lloyd, F.R.C.S.

The following papers have been announced:

CHAPLIN, HENRY D., M.D. (New York). A System of Infantile Measurements.

EWENS, J., L.R.C.S., and L.R.C.P. Deformities of the Lower Extremities (with Exhibition of Cases).

FREER, E. LUKE, M.R.C.S. 1. Some Notes on the Orthopædic Treatment of Deformities, with Illustrative Cases. 2. An Effective and Inexpensive Instrument for the after-treatment of Talipes.

JONES, H. R., M.D. How the Health of Infants is Influenced by their Food.

JONES, ROBERT, F.R.C.S. 1. The Treatment of Paralytic Joints. 2. The Treatment of Injuries about the Elbow-joint in Children.

LLOYD, Jordan, F.R.C.S. The Treatment of Curvatures of the Long Bones by Simple Fracture.

MACKEY, E., M.D. A Case of Multiple Neuritis in a Child, with Remarks.

MORGAN, GEORGE, L.R.C.P. Varicella Bullosa.

MILBURN, C. H., M.B. Osteotomy for Genu Valgum.

MURRAY, R. W., F.R.C.S. The Treatment of Rickety Deformities by means of Osteoclasis.

PARKIN, ALFRED, M.D. The Treatment of Spinal Caries and its Results by Laminectomy.

POWER, D'Arcy, M.B. The Value of Bursal Enlargements as Indications of Incipient Tuberculous Arthritis.

ROUÉ, BARRETT, M.D. The Study of Diseases of Children and its Place in the Medical Curriculum.

TUBBY, A. H., F.R.C.S. Craniectomy for Microcephaly and its Results.

Dr. Northrup will show for Dr. O'Dwyer (New York) an apparatus for artificial respiration.

Honorary Local Treasurer: W. JOHNSTONE FYFFE, M.D., Rodney Place, Clifton.

Honorary Local Secretary: E. MARKHAM SKERRITT, M.D., Edgecumbe House, Richmond Hill, Clifton.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 31ST.

9.30 A.M.—Meeting of 1893-94 Council.
11 A.M.—First General Meeting, Large Hall, Victoria Rooms. Report of Council. Reports of Committees and other business.
3 P.M.—Service in the Cathedral, sermon by the Rev. Canon Ainger.
8.30 P.M.—Adjourned General Meeting from 11 A.M. President's Address, and any business adjourned from Meeting at 11 o'clock.

WEDNESDAY, AUGUST 1ST.

9.30 A.M.—Meeting of 1894-95 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
11 A.M.—Organ Recital at the Colston Hall.
2 P.M.—Opening of the Clifton Spa and Pump Room. Luncheon by Mr. Newnes.
3.30 P.M.—Second General Meeting, Large Hall, Victoria Rooms Address in Medicine by Sir Thomas Grainger Stewart, M.D. Presentation of Middlemore Prize.
4.30 P.M. to 6 P.M.—Garden Party given by Mr. Lewis Fry at Goldney House, Clifton.
8.30 P.M.—Reception by the President and the Executive Committee at Clifton College. Illumination of the Zoological Gardens

THURSDAY, AUGUST 2ND.

9.30 A.M.—Meeting of Council.
10 A.M. to 2 P.M.—Sectional Meetings.
11 A.M.—Excursion round the City Docks by invitation of the Docks Committee.
3 P.M.—Third General Meeting, Lecture Room of Victoria Chapel (opposite Reception Room). Address in Surgery by Mr. James Greig Smith, M.B.
4 P.M. to 6 P.M.—Garden Party given by Sir Greville and Lady Smyth at Ashton Court.
4.45 P.M. 7 P.M.—Garden Party given by the Head Master of the Grammar School and Mrs. Leighton at the Grammar School.
7 P.M.—Public Dinner of the Association.

FRIDAY, AUGUST 3RD.

9.30 to 11 A.M. Sectional Meetings.
11 A.M.—Concluding General Meeting, Large Hall, Victoria Rooms. Address in Public Medicine by Sir Charles Alexander Cameron.
1.30 P.M.—Luncheon at the Merchant Venturers Hall by Invitation of the Society of Merchant Venturers.
2 P.M.—(Special train). Luncheon at the Assembly Rooms, Bath, by invitation of the Mayor and Corporation of Bath.
3.30 P.M.—(Special train). Reception at the Pump Room, Bath, by the Mayor and Corporation of Bath.
1.18 P.M.—(Ordinary Fast Train). Visit to Clevedon by invitation of Residents of Clevedon. Luncheon.
2.30 P.M.—Visit to the Bristol Waterworks Reservoirs at Barrow Gurney.
8 P.M.—Reception by the Mayor of Bristol in the Colston Hall. Concert by the Madrigal Society 8.30 P.M.

SATURDAY, AUGUST 4TH.

Excursions.

9.15 A.M.—To Berkeley Castle.
10.10 A.M.—To Chepstow, Tintern, and Symonds Yat.
9.25 A.M.—To Wells and Glastonbury.
9 A.M.—To Weston-super-Mare and Cheddar.
9 A.M.—To Lynmouth and Ilfracombe.

Places of Interest.—The Cathedral, College Green. St. Mary's, Redcliffe The Mayor's Chapel, College Green. The Council House, Corn Street St. Peter's Hospital, Peter's Street. The Museum and Library, Queen's Road. The Zoological Gardens, Guthrie Road.

Hospitals.—(Open to Members at any time). The Bristol Royal Infirmary, Maudlin Street. The Bristol General Hospital, Guinea Street. The Bristol Hospital for Sick Women and Children, St. Michael's Hill. The Bristol Eye Hospital, Lower Maudlin Street.

Clubs.—(On production of card of membership). The Clifton Club, The Mall. The Literary and Scientific Club, Berkeley Square. The Salisbury Club, Queen's Road. The Constitutional Club, St. Stephen Street. The Liberal Club, Clare Street. The Commercial Rooms, Corn Street.

Theatres.—The Prince's Theatre, Park Row; *The Private Secretary.* The Theatre Royal, King Street; *Lost in London.*

Works, etc.—(Tickets to be obtained at the Reception Room.) Messrs. J. S. Fry and Sons, Chocolate and Cocoa Manufactory, 11 to 25, Union Street: August 1st and 2nd, 3 P.M. to 4.30 P.M., 30 each day. Victoria Pottery, St. Philip's Marsh; July 31st and August 1st, 11 A.M. to 1 P.M., unlimited. Messrs. Robinson and Co.'s Paper Factory, 1 to 4, Redcliffe Street; August 2nd, morning and afternoon, 3 parties of 20. Messrs. W. D. and H. O. Wills's Tobacco Factory, East Street; July 31st and August 2nd, 10.30 A.M. and 2 P.M., unlimited, in parties of 20. Messrs. Spillers and Baker's Flour Mills, Redcliffe Back; August 1st and 3rd, at 11 A.M., 15 each day, gentlemen only. Messrs. Edwards, Ringer, Bigg's, and Co.'s Tobacco Manufactory, 60, Redcliffe Street; August 1st and 2nd, at 10 A.M., unlimited. Atlas Engine Works, St. George; August 1st and 2nd, any hour, unlimited. Messrs. Llewellyn's and Laines's Bell Foundry, Castle Green; July 31st, August 1st, 2nd, and 3rd, 10 A.M. to 1 P.M., 2 to 5 P.M., unlimited. Messrs. Price, Sons, and Co.'s Stoneware Pottery, 39-44, Thomas Street; August 1st and 2nd, 11 A.M. to 1 P.M., and 2 P.M. to 4 P.M., unlimited, in parties of 12. Bristol Wagon Works, Lawrence Hill; August 1st and 2nd, at 11.30 A.M. and 3.30 P.M., unlimited in parties of 20. Messrs. Champion and Co.'s Confectionery Works, Lewin's Mead; August 1st, 2nd, and 3rd, at 3 P.M., 40 each day.

Drives.—Cadbury Camp, Brockley Coombe, Penpole Point, Blaise Castle, Arbutus Walk, and Henbury, Leigh Woods, and Nightingale Valley.

RECEPTION ROOM.

A room at the Victoria Rooms, Clifton, Bristol, will be opened at 4 o'clock in the afternoon on Monday, July 30th, and on Tuesday, July 31st, and the following days at 9 o'clock, for the issue of tickets to members and for supplying all necessary information. It is particularly requested that members on their arrival will at once proceed to the reception room, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult the list of lodgings, hotels, etc.

DINNER TICKETS.

Dinner tickets may be obtained on application to Mr. J Paul Bush, Vyvyan House, Clifton Park.

The exhibitors in the Annual Museum have arranged to open the exhibition with a *conversazione* on the evening of Tuesday, July 31st, to be held immediately after the President's address.

NOTICES OF MOTION.

Dr. JOHN INCE hereby gives notice that he will move:

That this meeting regrets the great and growing increase in the annual expenditure as compared with the income of the Association; and suggests to the Council the expediency of a careful and substantial reduction thereof in all departments, especially in the matter of the editorial and office expenses, which appear out of all proportion to the needs and nature of the BRITISH MEDICAL JOURNAL.

Dr. MEAD hereby gives notice that he will move:

(1) That a Committee be appointed to bring the matter of railway fares of members attending the annual and local meetings of this Association, before the railway companies, with a view to the obtaining of return first class tickets at single fares for all members attending such meetings. That a sum not exceeding be granted for the purpose of defraying the expenses of members of such Committee attending as deputation on the various railway authorities.

(2) That when practicable ladies be admitted to the dinner of the British Medical Association.

Dr. T. GARRETT HORDER hereby gives notice that he will move:

That this meeting strongly recommends the Council to constitute an Ethical Section at the annual meetings.

July 20th, 1894. FRANCIS FOWKE, *General Secretary.*

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee was held at the office of the Association, 429, Strand, W.C., on Tuesday, July 10th, 1894,

Present:

Mr. ERNEST HART in the Chair.

Mr. BUTLIN, Treasurer.

Mr. S. H. AGAR (Henley in Arden).
Mr. D. B. BALDING (Royston).
Surgeon-General CORNISH (London)
Dr. G. W. CROWE (Worcester).
Dr. W. DICKSON (Upper Norwood).
Mr. GEORGE EASTES (London).
Dr. ESLER (Peckham).
Mr. E. H. GALTON (Brixton Hill).
Dr. BRUCE GOFF (Bothwell).
Dr. W. GORDON (Exeter).
Dr. C. GROSS (London).
Mr. J. H. HEMMING (Kimbolton).
Dr. HOLMAN (London).
Dr. LOWE (Burton-on-Trent).
Dr. A. R. MANBY (East Rudham).
Dr. MICKLE (London).
Dr. W. WITHERS MOORE (Burgess Hill).
Dr. JAMES MURPHY (Sunderland).
Mr. C. H. WATTS PARKINSON (Wimborne Minster).
Dr. G. REID (Stafford).
Dr. SOMERVILLE (Galashiels).
Mr. W. D. SPANTON (Hanley).
Mr. C. T. STREET (Newton-le-Willows).
Mr. F. WALLACE (Upper Clapton).
Dr. WINTERBOTHAM (Bridgwater).

The minutes of the last meeting were read and confirmed.

Letters of apology for non-attendance were read from Dr. Hugh Ker (London), Dr. Urquhart (Perth), Dr. J. Ritchie (Edinburgh), Dr. T. W. Grimshaw (Dublin), Dr. Stanley Haynes (Malvern).

THE REGISTRATION OF MIDWIVES.

The CHAIRMAN said the Committee had received and entered upon its minutes a copy of the resolutions of the Lancashire and Cheshire Branch on this question. From the reports of Branch meetings which had been published in the BRITISH MEDICAL JOURNAL, it would be seen that at subsequent meetings some of the Branches voted for the registration of midwives, while others voted against it. He should suggest that the matter should be postponed until the whole of the Branches had passed resolutions either for or against, when they would have some more definite view to go on. In the meantime it was a matter which might very well be threshed out at the annual meeting.

Mr. PARKINSON said that as far as the poorer class of practitioners were concerned, a very large majority of them were adverse to the registration of midwives, as it would take away a large amount of their midwifery practice. There was a great deal of difficulty now in finding any man who was able to undertake midwifery cases. How was he to learn? Unless he began with the poorer cases, who would trust him with a wealthy case? Midwifery practice was learned by experience, and if it became the common practice to have midwives practising throughout the country there would be great injury done; they would monopolise the whole of the poorer midwifery cases. If midwives were to be allowed to attend cases they should be educated so that they could attend difficult cases. If these women were only qualified to attend cases of natural labour, what were they to do in difficult cases? They had to send, perhaps, some six miles for the doctor, and before he arrived the woman was dead.

Dr. HOLMAN said he would take the question of instructing young men in midwifery practice. The York Road Lying-in Hospital, where patients were received and a large number of patients were attended outside, worked side by side with Guy's and St. Thomas's Hospitals, and yet so overwhelming was the number of lying-in women applying at Guy's Hospital that the area over which the students attended had to be lessened. The Royal Maternity Charity interfered in no way with the supply of midwifery cases at St. Bartholomew's. When he first commenced practice in the country, cases of labour in the union workhouse and in surrounding parishes were attended by unqualified women, and the results accruing compelled him to take cases simply to protect these poor people from malpraxis. Punishment could only reach them, with the utmost difficulty, under the common law. Years after one of the youngest practitioners in the district introduced a qualified midwife who practised at small fees, to the entire satisfaction of the medical men, saving them much fatigue and loss of time, as well as freeing them from many bad debts. The Plaistow trained midwifery nurses were practising now in many districts, and were welcomed by the medical men where they worked. Midwifery practice by women had existed from time immemorial, and would continue to do so. It would appear to be the soundest course possible to educate them to do no harm, but much good; to restrain their practice in difficult cases, and teach them when to send for a medical man; and as regards their extending the limits of their vocation and becoming prescribing attendants, a clause in the Bill prohibiting this should be inserted, which could easily be enforced.

After some further discussion, it was proposed by Dr. WITHERS MOORE, seconded by Surgeon-General CORNISH, and resolved:

That the discussion be adjourned, in the hope that the matter may be discussed at the annual meeting.

LOCAL GOVERNMENT (SCOTLAND) BILL.

The CHAIRMAN said that when the Local Government (Scotland) Bill and the Dundee Corporation Bill were before the House, he had used every endeavour to keep the medical officer of health on these bodies, and after a struggle he had been successful.

FACTORIES AND WORKSHOPS BILL.

The CHAIRMAN said that in the Factories and Workshops Bill now before Parliament there were many things which required to be amended in the interest of the medical profession. In the Bill now passing through the House of Commons there was a provision that the same doctor's certificate of fitness would do for the whole of the factory. There were a great number of works in which various trades were carried on, and it was evident that a young person might be perfectly fit to work at weaving and not at iron work, which was often carried on in the same factory; so that it became necessary that the certificate should only be filled up in respect to the trade and not in respect to the place. At present the health condition of factories was under the supervision of the local medical officer of health, who was not able to find much time to go over the factories, while the certifying factory surgeon was constantly there; and it was proposed, after consultation with the secretaries of the Certifying Factory Surgeons' Association, that this duty should be transferred to the certifying factory surgeons. He had requested Mr. Costelloe, after consultation with the Honorary Secretaries of the Certifying Factory Surgeons' Association, to prepare certain clauses for amending the present Bill.

The CHAIRMAN said there were also certain amendments required in the Accidents in Mines Bill which was before the house of Lords, and he had been in communication with Lord Playfair, Lord Castleton, and Lord Ashbourne with reference to them, and he hoped the necessary alterations would be made.

It was proposed by Mr. GEORGE EASTES, seconded by Dr. DICKSON, and resolved:

That the action of the Chairman with reference to the Local Government (Scotland) Bill, the Dundee Corporation Bill, the Factories and Workshops Bill, and the Accidents in Mines Bill be approved.

Dr. SOMERVILLE said, coming from north of the Tweed, he should like to express the thanks of the medical profession in Scotland to the Chairman for the able way he had managed the Local Government (Scotland) Bill.

AMENDMENT OF MEDICAL ACTS.

The CHAIRMAN said at the last meeting of the Committee he submitted a report on the proposed amendments of the penal clauses of the Medical Acts, of which the Committee approved, and gave general approval to the new draft amendment clauses which he then brought before them. It was then resolved that copies be sent to the Branches of the British Medical Association and to the General Medical Council for comment and approval. The report and draft clauses were sent to the General Medical Council, and they had paid them the compliment of directing that they be received and inscribed on the minutes, which of course did not commit them to accept the clauses; then a further resolution was moved and adopted that the report and draft clauses be referred to the Executive Committee for special report. They were now under the consideration of the Special Committee of the General Medical Council, and in time the Committee would get a copy of their report. It was important to come to a thorough understanding with the General Medical Council as to how far they would approve of the proposed clauses, or whether they would recommend any alterations. The report and the draft clauses had also been sent to the Branches, and thus far some seven Branches had approved of them. The Staffordshire Branch, while approving of the general principles, further suggested that the Parliamentary Bills Committee should endeavour to introduce a clause making it compulsory on coroners to hold inquests in all cases of death not certified by a registered medical practitioner. He had only to observe on that clause that, however desirable that might be, it formed part of a different Bill which Mr. Asquith was introducing into the House for modifying and improving the registration of deaths, in favour of which the Committee had already memorialised. Another document which he had received was a special report from the Metropolitan Counties Branch on the suppression of unqualified practice. The draft report of the Committee of the Metropolitan Counties Branch of the British Medical Association dealing with the suppression of unqualified practice had been revised and annotated by Mr. Upton (solicitor to the Association) by order of the Council of the Branch. Not merely did the report go out of its way to propose amendments to the whole of the Medical Acts, many of which were, as Mr. Upton pointed out, useless, but it went out of its way to reopen the whole question of foreign degrees. This extremely difficult subject was entirely irrelevant to the question of the suppression of unqualified practitioners, which was practically included in the amended penal clause, and that clause requiring the consent of the General Medical Council before a prosecution was instituted. The penal clause, as passed by the Metropolitan Counties Branch, was a striking illustration of the principle that it was as dangerous for a man to be his own lawyer as it was for him to be his own physician. Apart from the penalties that were proposed, and which would be dealt with later, the clause would have been practically a dead letter. It provided that any person using any name, title, etc., "implying that he is registered under this Act or legally qualified to practise," etc. Naturally Mr. Upton objected to the word "legally." If the phrase meant anything, it meant that he was able to be registered under this Act, that was to say, it was a redundancy. Now anyone who had had any experience of the administration of the Veterinary or Dentists' Acts knew that the unqualified man took good care not to represent himself as being registrable under those Acts. If the word "qualified" was used, it would be better to use the phrase "specially qualified," which had already received judicial interpretation. Coming now to the penalties: the proposed amendments made a penalty of not less than £20 fine for the first offence, and not less than £40 fine or imprisonment for not less than six months for the second offence. Mr. Upton pointed out that such words indicating a minimum instead of a maximum penalty would not be allowed in any statute. It was an elementary principle of modern criminal jurisprudence to fix a maximum penalty and leave the punishment in each case to the discretion of the judicial tribunal before which the matter was tried. The maximum penalty for each offence must depend on a number of considerations which it would take too long to enter into at present. It was safe, however, to say that it could never be fixed by that class of people who would be most beneficially affected by the passing of the penal statute. No doubt one strong argument in favour of a severe penalty being fixed would be the fact that an offence against the new Medical Act was, from the nature of the case, of a more serious character than one under the Veterinary Act, and therefore the Legislature would be justified in fixing a heavier maximum penalty than under that Act. However, it must not be thought that the work of the Metropolitan Counties Branch had been wasted. The lines that the new Act must run on had been well defined: it must now be left to other hands to lay the lines in such a way that the Act might run smoothly and efficiently. The clauses of the Dentists' Act were very much more stringent. It certainly ought to be known that whereas the dentists had taken a strong interest in the matter, and carried a strong Act, the doctors had taken none. The dentists during the whole time that their Act was up before Parliament had a permanent committee constantly in the lobby of the House to watch the progress of the Act, with the result that they succeeded in carrying through a very much stronger Act than the Medical Act.

It was proposed by Mr. BUTLIN, seconded by Dr. MURPHY, and resolved:

That the reports and draft clauses now submitted be handed to Mr. Upton, and that he be requested to take the opinion thereon of Mr. Muir Mackenzie, Mr. Costelloe, and Mr. Smith Turner.

INFANT MORTALITY AND FACTORY LABOUR.

The CHAIRMAN, in submitting a memorandum on infant mortality and the employment of married women in factories, said this statement had been drawn up by the Subcommittee of the Parliamentary Bills Committee, to whom the matter was deputed, and it was proposed to send it to Mr. Asquith, and to ask him to receive a deputation. The substance of it had already been sent to Mr. Asquith, who had incorporated a good deal of it in his Factory Bill now before Parliament.

Proposed by Surgeon-General CORNISH, seconded by Mr. J. H. HEMMING, and resolved:

That the Chairman be requested to send the memorandum to the Home Secretary, and to ask him to appoint a time to receive a deputation on the subject.

On the motion of Dr. REID it was resolved to ask Dr. Hugh Jones to take part in the deputation.

BARRACK SCHOOL MORTALITY.

The CHAIRMAN said this subject had engaged his attention as Editor of the BRITISH MEDICAL JOURNAL as well as Chairman of the Committee. During the last three months the question had occupied public opinion. There was first of all the Forest Gate School, which on investigation showed a very painful result in respect to the enormous cost of the keep of the children, going to £80 per year as against £25 and £28, owing to the constant succession of epidemics and the low standard of health, and very unsatisfactory health in every way in those establishments. There were the cases of chronic ophthalmia at the Brentwood Schools, and also the Norwood Schools. There was now a strong case for inquiry whether the Government ought not now to consider the greater advantages of a system such as they had in Scotland, which was known as the cottage homes or boarding-out system. In these large barrack schools it was quite impossible to maintain a good standard of health. The question had been taken up on all sides: Sir John Gorst and Mr. Samuel Montague were very strong on it, and Mr. Shaw Lefevre, the

President of the Local Government Board, had appointed July 23rd to receive a deputation on the subject.

Mr. WALLACE said he was one of the guardians of the Hackney Union, and what was wanted was that the guardians should have more power with reference to boarding out of pauper children. In their school they had 600 children, but they could only board out 30.

After some further conversation, it was resolved:

That the Chairman be authorised to attend the deputation as Chairman of the Parliamentary Bills Committee, together with Dr. Bridgwater, Mr. Wallace, and any other member of the Parliamentary Bills Committee or of the Council of the Association who were willing to join.

The draft annual report of the Parliamentary Bills Committee was approved subject to any alterations.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

THE quarterly general meeting of this Society was held on July 11th at 429, Strand. There were present Mr. Ernest Hart (the Chairman), in the chair; the Deputy Chairman (Dr. de Havilland Hall), Dr. W. Knowsley Sibley, Dr. Major Greenwood, Mr. Frederick Wallace, Mr. Edward Bartlett, Dr. Walter Smith, and Mr. William J. Stephens.

The annual report to be presented to the members at the general meeting to be held at Bristol on August 1st was submitted together with the accounts for the year ending June 30th, 1894. They showed that in no year since the foundation of the Society in 1884 has it made such rapid growth or done so much solid work in alleviating the losses caused to the members by sickness and accident. The number of the sickness and accident claims which have arisen during the year was 290, and in respect of these claims 1,353 weeks of sickness pay were granted. Next to influenza, which produced 87 claims, "accidents" are the greatest cause of the need for sick benefit, and 36 members came upon the funds during the year through having been injured generally in riding or driving. In some instances the injuries were very serious, compelling the members to cease entirely from work for many weeks, and in such cases the aid of the Society is found extremely useful. The total amount paid away during the year for sickness and accident claims was £4,271 11s. 6d., and although this is the largest amount yet paid by the Society in one year it is satisfactory to know that it is well within the expectation, and is fully provided for by the tables.

A recent investigation has proved that the Society has ample reserves, and when the full report is in the hands of the members they will receive gratifying evidence of the success of the business.

Prospectuses and full particulars may be obtained on application to the Secretary, Mr. F. Addiscott, F.I.A., 33, Chancery Lane, London, W.C.

THE EIGHTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

WE have received the following official communication relating to the Congress of Hygiene and Demography to be held at Buda-Pesth, September 1st to 9th:—

Dear Sir,—I take the liberty to ask you the favour of granting me space in one of the next issues of your valuable paper for the following lines:

The preliminary arrangements for the eighth International Congress of Hygiene and Demography, will soon be concluded.

The results obtained until now are beyond all expectations, so that the Congress promises not only to be a worthy successor of its predecessors, but also to be in some respects superior to them. The very lively interest taken in this Congress in all parts of the world, as testified by the numerous notices received, fully warrants this. To this warm interest it is to be attributed that up to this day a total of 725 papers have been notified, of which 593 belong to the hygienic and 132 to the demographic groups of the Congress. Besides this, 26 Governments with 92 delegates, 91 public corporations with 163 delegates, 41 universities with 65 delegates, and last but not least 132 learned and other societies with 300 delegates, have notified their intention to be officially represented at the Congress; this makes 290 public bodies with 620 delegates.

I specially mention some out of these delegations, such as that of the Government of the United States, the Argentine Republic, the Cape of Good Hope, and the State of Michigan, of the cities of Burmah, Howrah, Rangoon, and Mexico. Delegates will also officially represent Columbia College of New York and the University of Michigan. The Geographical and Statistical Society of Mexico has also notified delegates.

The interest in the Congress will greatly be enhanced by the Exhibition, especially by exhibits of important towns such as Berlin, Hamburg, Brünn, Paris, Montpelier, Venice, Odessa, Alexandria, and San Louis de Potosi, which have promised to send in plans and models of their public sanitation works.

Of the papers and lectures, the following deserve special mention: 1. Dr. Ernest Hart (London): Protection against Cholera in the Orient, and the Hypothesis of its Epidemic Diffusion; The Propagation of Cholera by River Communication and by Railway Lines; The Direct Connection between the Propagation of Cholera and of Typhoid Fever by Water, Milk, and Food, together with the proved connection between the suppression of cholera and typhoid fever, and the improvements in the system of drainage, etc. 2. By Professor Dr. E. Leyden, Med. Privy Councillor (Berlin): On Provisions made by Large Towns for Consumptives. 3. Professor Dr. George Mayr (Strassburg): On Statistics and Social Science. 4. Baurath Herxberg, C.E. (Berlin): The Civil Engineer's Work in Hygiene. 5. Professor E. Levasseur (Paris): The History of Demography. 6. Professor Dr. E. T. Erisman (Moscow): The Struggle with Death. 7. Professor Dr. C. Lombroso (Turin): The Criminal.

We have entrusted with the sale of tickets for the voyage the International Sleeping Car and European Express Train Company. These tickets will be issued to members only, by presenting their membership card. The company will arrange tickets for entire tours at such reduced prices as have been granted to members of Congress by various railway and other companies.

The Executive Committee is just now sending out the "Second Invitation" circular, which contains detailed information. In this circular members are respectfully requested to send in to the office of the Secretary-General (St. Rochus Hospital, Buda-Pesth) the membership fee not later than August 10th, otherwise the Executive Committee would not be responsible for the punctual issue to members of tickets and other objects to which they are entitled.—I have the honour to be, dear Sir, your obedient servant,

Professor Dr. COLOMAN MÜLLER, the Secretary-General.
Buda-Pesth, July 10th, 1894.

A LOCAL committee for the collection of subscriptions to the proposed Charcot memorial in Paris has been formed in Greece. The committee has issued an appeal "to all brethren of the Greek territories," which is signed by Drs. Constantine Delyanis, George Caramitzon, Michael Chatzimichalis, Julius Galvani, and George Caryofillis.

SEMMELWEISS INTERNATIONAL MEMORIAL.—The Committee which has been formed in this country, under the presidency of Sir Spencer Wells, to assist in raising a fund towards the erection of the above memorial, held their final meeting on July 13th. Dr. Cullingworth, the honorary treasurer of the fund, handed in a list of 100 subscribers from Great Britain, Ireland, and India. Dr. Boxall, the honorary secretary, reported that the invitations to the Colonies to contribute to the fund had met with response only from Canada and and Barbadoes. It was announced that 1,000 florins had been already transmitted to the Central Committee at Buda-Pesth, and, after deducting expenses, 100 florins more remained to be transmitted. Votes of thanks were passed to the chairman, treasurer, and secretary for the services which they had rendered in raising the fund, and Dr. Duka, on behalf of the Central Committee, thanked the subscribers generally.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

SUBSCRIPTIONS to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JULY 21ST, 1894.

CHOLERA PROSPECTS.

THE circular which the Local Government Board has prepared for issue to all sanitary authorities in England and Wales concerning the desirability of adding, for a season, diarrhœa to the list of notifiable diseases will serve to remind these bodies that there is such a disease as cholera and that attention may have to be paid to it in our own country at no very distant date. The circular is well timed, having regard to the accumulating evidence of recrudescence of cholera on the Continent. From St. Petersburg on the north to Paris on the south there is plenty of cholera to keep our port sanitary authorities on the alert; and, when they are kept on the watch, it is time for inland authorities to look to it that their houses are in order. The Russian capital has its 200 attacks of cholera daily, and a high fatality rate, the present epidemic being indeed worse than that of last year. The Russian western frontier, Galicia, Belgium, Sweden, and Germany all now demand attention on account of the presence of the disease in its fatal form; and who shall say what is taking place in the domains of our neighbours across the Straits of Dover? In any case, the news of cholera as it prevails in Europe to-day is disquieting and calls for careful consideration on the part of our sanitary authorities as to their preparedness to resist importation of the disease. Nor is cholera of the seaborne character only to be feared. We had the seeds of a possible cholera prevalence sown in our land last year; are we to escape entirely this year a repetition of former experiences? One question of interest which springs from this query is, Are we now in the first or second year of our invasion? In other words, did the cholera of last year in England accrue from the cases brought into our ports in 1892 or was it the result of invasion of our coasts last summer? The question is a very pertinent one, since the history of cholera in England points to the fact that the disease is generally much more potent for harm in its second year in a country than in the first. Cholera, as we have known it in this country, has in the first year of its appearance attacked but a few towns, and to only a slight extent; but in the succeeding year has spread to a much greater degree, and with much more deplorable results. Was, then, the experience of last year so very far removed from what has gone before in our years of primary invasion? Taking it for the moment as allowed that the cholera of 1893 was the fruit of the Continental cholera of that year, it now remains for us to see what our vaunted progress in sanitation has done for us in the way of mitigation of cholera epidemics. And it behoves sanitary authorities to beware how they let mere monetary considerations stand in the way of measures needed to bring their districts into that state of sanitary fitness needed to cope successfully with cholera when once introduced. It may well be that we shall this year have to face a cholera epidemic, which but for our sanitary administration would rage as some of its predecessors have done in other countries. Will our sanitary state prove equal to the strain which such a condition of things would put upon it?

We do not wish to be misunderstood. It is not that we in any way undervalue the immense progress that has been made in matters pertaining to the sanitary well-being of the community. By no means. Quite otherwise. We are ready to admit that our country has, in a way to be followed by all others, abandoned the useless methods of quarantine so hugged still by many nations, in favour of sanitation *per se*. This, however, generally. It is well known that the horse that is taken to water will not always drink; so, only too many so-called "health committees" and the like in the midst of overwhelming evidence as to the wisdom and eventual economy of expenditure on such elementary requisites as good drainage and water supply, prefer to wallow on in carefully preserved filth, and to consume a diluted form of their own and their neighbour's excrement. No one, surely, who has the true interests of his country at heart, and knows what he thus should know, would hesitate to accept the statement that there are half-a-hundred places in England where, if cholera were to be introduced to-morrow, it would, unless at once detected, spread, and not only so, but spread to the danger of communities around, and which by reason of gathering grounds of their water supply, or the like, are at the mercy of some rural body whose sole aim as a body seems to be to cut down the rates at the expense of the public health. We have drawn no fanciful picture. One grossly insanitary area can work havoc to numerous surrounding areas if it be in the position to those areas which is held by only too many of our rural districts nowadays. And there are town populations which are living in conditions which are a disgrace to the land. The finger of scorn has indeed been pointed at us by foreigners in respect of some of our towns, and the cholera of 1892 served to accentuate the feelings which pervade those who, while jealous of our advance in sanitation, find no difficulty in laying their finger on plague spots in our land. It is not for our country generally that we need have any fear this or any year. It is for those parts of it which are still in like case with many Continental cities to-day that call for stringent measures of costly quarantines in an attempt to do that which we have so far accomplished by simple inspection of shipping, and subsequent trust to sanitary preparedness of inland areas.

England has of course to-day a very excellent safeguard in the shape of notification; and if the offer of the Local Government Board be accepted, diarrhœa will shortly be also notifiable for some two months or so, by which time all fear of cholera epidemicity should this year have vanished. Our sanitary bodies have not been without repeated warning. The very excellent services to the country carried out by the

medical staff of the central board in the matter of inspection of so many of our local government districts should have resulted not only in stirring up the localities visited, but should also have been the means of causing other health bodies to see for themselves how they stood. And it must not be forgotten that these visits have now been in progress during some two years. There is, it may be, still time for amelioration of the grosser evils persisting in many localities. The cold rains which we are experiencing are, perhaps, assisting to lessen for the moment our danger of cholera. But however this may be, we would urge health bodies to bestir themselves while it is to-day, with a view of justifying their existence.

FACTORY LEGISLATION AND FEMALE WORKERS.

Mr. Asquith's efforts to amend and extend factory legislation in the interests of health have been most praiseworthy; but, like other movements which disturb preconceived notions and practices, they have stirred up considerable opposition. Both masters and men have not been slow in raising objections to the proposed rules of his new Bill—the former denouncing them as destructive to the manufactures they are engaged in, the latter proclaiming that they do not go far enough in the way of protecting them against industrial evils, of which, by the way, not a few are due to their own imprudence and carelessness. Last of all, the lady employers of labour have risen up against his benevolent purposes, notwithstanding the efforts he has made to propitiate them by appointing inspectors of their own sex, and in other ways. They resent his proposal to discourage home work after the legal period of labour within the recognised workrooms has expired, and to regard women as on a par with children—calling for protection in the pursuit of their business. Such were the principal grievances urged upon the Home Secretary by the lady deputation that waited upon him recently at the House of Commons. He had to remind the complainants that women, young persons, and children, in the interests of the State and of themselves are, and have long been, subjects for the protection afforded by factory legislation, and that in the eye of factory laws women at large stand on the same level with children. He could not accede to the proposition that work carried on within a recognised workshop or factory was rightly subjected to rules and official inspection, and that work done at home should be exempt therefrom. In thus disallowing the contention Mr. Asquith had abundant grounds furnished him by the revelations of the Commission on "Sweating," and by the experience of the Factory Office.

His arguments will be best conveyed in his own words: "As to the clause which dealt with taking work home, this was one of the greatest abuses of the factory system. The law which required that a child, a young person, and a woman should be only employed a certain number of hours during the day in a factory was perpetually and habitually evaded by these persons after they had served the number of hours which the law allowed in factories having work given to them to do at home, where there was no power of inspection to see what the sanitary conditions might be. . . . The clause, to which he attached the greatest importance, was not aimed at the destruction of home work pure and simple at all; it was only aimed at preventing the evasion of the law."

With regard to the clause restricting overtime to three instead of five days as heretofore, Mr. Asquith justified its enactment on the ground that the demand for it is in most cases a consequence of the mismanagement of business, and not a genuine need. Another extension of central control he deemed necessary in the case of occupations declared dangerous to health or life: namely, that power be given to the Secretary of State to prohibit the employment of persons in such trades, or to limit their hours of work. "He attached great importance to that provision, because he had found himself constantly baulked of being able to prohibit the employment of people who were obviously engaged in certain dangerous processes—the lead industry, for instance, and some branches of the chemical industry. It was in order that he might have the power of doing that, and also of seeing that, if people were employed in some of these dangerous trades, they should not be employed for dangerously long hours."

Lastly, in the matter of laundries, now for the first time brought under factory supervision, he had come to the conclusion "that there was not sufficient reason for exempting laundries from the general provisions that apply to other factories and workshops." In closing his remarks he observed that the new Bill was not dictated by any spirit of hostility to female labour; "the only object the Government had in proposing this legislation was to protect the health of the workers."

It is gratifying to the medical profession to recognise in the Home Secretary one who has such clear and enlightened views respecting the end and aim of factory legislation in its sanitary aspects.

JUDGE AND WITNESS.

A charge of criminal assault at the Gloucestershire Assizes has brought about a somewhat extraordinary attack by Mr. Justice Hawkins upon Mr. N. B. Langley, of Cricklade, who was one of the medical witnesses for the prosecution; and as the matter is one not only of professional but of public interest, we think it necessary to state the circumstances of the case. We have no desire in this Journal to criticise unnecessarily the casual eccentricities of Her Majesty's judges, but i is necessary occasionally to enter a protest. The independence of the Bench is an excellent thing, but the rights of the private person who has the misfortune to appear as a witness are sufficiently important, and where they affect the profession we do not propose to keep silence. The incident to which we refer was reported in full in the *Wilts and Gloucestershire Standard* of July 7th. It appears that Mr. Langley was consulted by the mother of the girl upon whom the assault was alleged to have been committed, and that he was subsequently asked by the police to make a thorough examination in consultation with another surgeon at the girl's home. For this purpose they found it necessary to give ether, as it was impossible otherwise to keep the patient sufficiently quiet to make a complete examination. The examination was made and the ether administered in the presence of the girl's mother, who assented to all that was done. Not the slightest difficulty of any kind arose. Notwithstanding, when Mr. Langley in the

course of his evidence mentioned that the girl had been examined under ether, the judge suddenly attacked him and demanded to know by whose authority the ether was administered. By the report before us, he appears also to have suggested that the examination itself was made without authority. For neither suggestion was there the smallest ground. After cross-examining the witness in a fashion which was obviously uncalled for, his lordship is reported to have delivered himself of the following extraordinary comment: "It is a very strange proceeding. I will just tell you quietly that I am not going to suggest to anybody to bring an action against you, because it is possible you might be able to find some explanation of the matter, which at present is not very clear to me. But to do that upon the orders of the police—the whole body of them, or one of them—is a wrong which you have no right to commit without subjecting yourself to an action for assault."

We feel it our duty to say deliberately that such an attack was an abuse of the judge's power. There was nothing "strange" about the proceeding, and no lawyer in his senses would dream of saying, if he knew the facts, that there was any question of assault or any claim, even the flimsiest, for damages. The judge's reference to the possibility of bringing an action reads unpleasantly like the famous advice, "Don't nail his ears to the pump." It is quite obvious that any such suggestion from the Bench is exceedingly likely to attract the notice of some speculative solicitor, and to involve the man who has the misfortune to be attacked in all kinds of vexatious claims and litigation. It is perfectly true that the police have no legal power to compel a girl who is alleged to have been assaulted to submit to examination, either with or without the administration of ether. But we venture to think that the medical profession are quite aware of that fact, and that no medical man would lend himself to any such proceeding, where the girl or her parents refused their assent. If an examination is to be made, the question whether it is or is not proper that ether should be administered is obviously a matter on which the skilled persons who are dealing with the case must form an opinion. If they decide that it is either necessary or expedient, we cannot imagine why Mr. Justice Hawkins should take it upon himself, with practically no knowledge on the subject, to declare from the Bench that they are wrong. When they deem it necessary to give ether, there still remains, of course, the question of the further consent necessary for taking that step. It is quite obvious that in the present case consent was obtained, and that, in fact, both the daughter and the mother were duly apprised that the medical men proposed to give ether, and that neither of them made the very least objection. We would like to know what more even Mr. Justice Hawkins expects a medical man to do. The fact is, however, that in this case, as in the case in which we recently had occasion to comment on the judicial humour of Mr. Justice Day, the real mischief is a certain uncontrolled licence of comment which from time to time afflicts the judges of assize. They are, and they ought to be, to a large extent independent of control, but there is a limit even to judicial independence.

Donations and Bequests.—The late Mr. Henry Boys, of Walsall, has by his will bequeathed £2,000 to the Walsall Cottage Hospital for a Henry Boys Ward, and £1,000 for a fund for surgical instruments.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

The Royal Medical Benevolent College at Epsom is to be congratulated on the new powers which, as we announced recently, the governors have obtained under an amending Act. As soon as the necessary funds are forthcoming the pensioners will receive augmented annuities which will leave them free to live where they please. Further, the limitation of the school to the sons of medical men has been removed, and power has been obtained to throw the school open to the sons of men in other professions or in business. Both these changes are improvements. Schools restricted to a single social class have never attained the highest success. As soon as their doors have been thrown open to all comers, permitting the special class for whose benefit they were founded to mix with their fellows from other classes of society, success has come quickly. The histories of Marlborough and of Wellington Colleges are cases in point. The new departure at Epsom is a step in the right direction and cannot fail to result in a great educational gain and in a wider and more perfect charity. It has not been taken at the expense of any existing rights. Those of the foundation scholars have been guarded carefully, and the privileges enjoyed by the sons of medical men are preserved intact.

It may not be generally known that among the special educational advantages offered by Epsom College are to be numbered ten scholarships, varying in value from 90 to 125 guineas, offered by the authorities of various metropolitan medical schools to boys leaving Epsom College. The College gives six scholarships to boys leaving to go to the universities. It also possesses entrance scholarships for boys going to Epsom, school exhibitions, and four annual school scholarships of £15 each.

It would, we believe, be difficult to find any school in which boys could be better prepared to enter upon the study of a scientific or learned profession. The evidences of a judicious and broad-minded spirit given by the governing body, and the success of Epsom pupils at the Universities of Oxford, Cambridge, and London, have gained the confidence of the profession, and led to the rapid growth of the school. It is now full to overflowing, and the pressing need for further accommodation is receiving the serious attention of the Council of the College.

At the present time this great medical foundation makes a special appeal to the medical profession for assistance through a period of growth and transition. An enlarged school would imply eventually an increased income, and in this way funds would be liberated to increase and consolidate the charitable work of the fund. About £6,000 is given annually to pensioners and foundation scholars. Nearly the whole of this large sum has to be collected year by year. Donations and subscriptions are at the present moment urgently needed, not only to maintain and extend this great charitable work, but to enlarge the buildings used by the school, and thus increase its earning power. Such increase is to be desired in the interest of the continued success of the school itself, and of the charity with which it is linked.

Within the last few months a sum of £10,000 has been received under the will of the late Mr. Pugh to found new non-resident pensions. This munificent bequest must en-

courage the Council to press forward their long cherished scheme to render all pensioners non-resident. It is a scheme which we trust every member of the profession will support to the best of his ability. Dr. Holman, the Treasurer, is well known to the members of the British Medical Association as a former zealous incumbent of one of its most important offices, and gifts, whether small or large, will be welcomed by him, not only for their intrinsic value, but for the moral support which they will afford to the governing body in carrying out the extension of the work of the institution, which is desirable in the interests alike of education and benevolence.[1]

SIR THOMAS GRAINGER STEWART, Professor of Medicine in the University of Edinburgh, and Sir Seymour Haden were among those who attended at Windsor on Wednesday and received the honour of knighthood from the Queen.

THE list of successful candidates at the Summer Matriculation Examination of the University of London contains 1,095 names; of these 17, including 3 ladies, were placed in the Honours Division, 716 in the First, and 358 in the Second Division. There were over 2,000 candidates.

THE Queen has conferred the honour of a baronetcy upon Dr. John Williams, Consulting Obstetric Physician to University College Hospital, and formerly Professor of Midwifery in University College. Dr. Williams, who is a Welshman by birth, received his medical education at University College, and during his subsequent connection with the hospital earned the warm and affectionate esteem of all students who were numbered among his pupils.

THE *Minutes of Evidence* taken by the Gresham University Commission have been issued in a bulky volume of over 1,200 pages. It can be obtained through any bookseller from Eyre and Spottiswoode (London), John Menzies (Edinburgh and Glasgow), or Hodges, Figgis and Co. (Dublin), price 9s. 8d. A separate volume (price 1s. 6d.) containing papers handed in by witnesses, and various other communications submitted to the Commission, together with an analytical index to the evidence, has also been issued. Both volumes have been presented to Parliament.

THE report sedulously propagated by antivaccinators in Germany that the Emperor's children have never been vaccinated is, we understand, without foundation and contrary to the fact. All the Emperor's children have been vaccinated in the ordinary way.

SOLDIER NURSES.

THE question put by Viscount Folkestone to the Secretary of State for War, in the House of Commons on the 13th, on "soldier nurses," gives strength to the remarks we have already made on the defective nursing arrangements in Indian hospitals. At Now Shera 13 men of the 1st Battalion Bedfordshire Regiment died of enteric fever, having had only inexperienced "orderly comrades" to nurse them through their illness. This state of things is discreditable to our medical arrangements, and no time should be lost in organising the Medical Staff Corps for India, or largely increasing the establishment of lady nurses. Existing defects hamper the success of medical officers in the treatment of serious diseases, and markedly decrease the chances of recovery among patients. The information that the "orderly comrades" had been refused extra pay for duty of a trying nature aggravates the case; and under the circumstances of epidemics in India it is futile for the Secretary of State for War to speak of "extra duty pay for a limited number of these orderly comrades" being sanctioned.

[1] The London offices of the Royal Medical Benevolent College are at 37, Soho Square.

INDIAN LUNATIC ASYLUMS.

A DEATH-RATE of 8.26 per cent. of the daily average strength is for a lunatic asylum a very fortunate circumstance, indicative of good management and careful attention to hygiene. This result was obtained by the lunatic asylums of the Province of Bengal during the year 1893, and it compares very favourably with the statistics of other Indian provinces and of European countries. It must not be forgotten, however, that a large proportion of the cases of insanity treated in Indian asylums are instances rather of drug intoxication than of mental alienation, and are therefore more curable and less fatal than the forms met with in countries where drink, worry, and overwork produce more serious and intractable disturbances of mental equilibrium. Indian asylums labour under two serious difficulties. They constitute but a share, and often a small share, of the work imposed upon medical officers, burdened with other responsibilities, who have had no special training or experience in asylum management; and there is a tendency on the part of Governments to look upon them as a species of prison, and apply to them prison rules and prison dietaries. This latter point, which involves a grave error in principle and may result in serious practical errors, is attracting attention in Madras at the present time. It must never be lost sight of that a lunatic asylum is essentially a hospital.

DIPHTHERIA IN ELEMENTARY SCHOOLS.

MR. SHIRLEY MURPHY has presented to the London County Council a report which raises questions of no small moment. He shows that while the death-rate from diphtheria in London has of late been increasing ominously, the increase has been disproportionately great at ages between 3 and 10 years of age, a period which may be taken to represent broadly that of school attendance. This special liability appears to date from the time when increased activity in enforcing attendance at elementary schools was brought into play (about 1871) by the operation of the Elementary Education Act. Bearing in mind the researches of Dr. Thorne Thorne and Mr. Power with regard to the demonstrable influence of schools in the diffusion of diphtheria epidemics, the importance of Mr. Murphy's statistics is manifest, and the conclusion to which they point is supported by the available figures of other parts of the kingdom. In this direction much more extended comparison will be possible when the forthcoming decennial Supplement for 1881-90 is issued by the Registrar-General; and Mr. Murphy makes the welcome announcement that Dr. Longstaff intends to continue the statistical investigation into the distribution of diptheria mortality, which has done so much to give precision to modern views as to its etiology. Meanwhile, the array of figures which are so ably marshalled by Mr. Murphy deserves the closest study, and renders it more than ever incumbent upon those who are charged with the administration of the elementary schools of the metropolis to make every effort to minimise the risks which, it would seem, are part of the price to be paid for the indisputably enormous benefits of compulsory and universal education.

NEWTON ABBOTT AND THE VILLAGE MASON.

PERHAPS we have been a little hard on the Newton Abbott Guardians. We have shown how badly paupers are treated in that part of the world, but it would seem that, so far as public bodies are concerned, much the same indifference is displayed to the welfare of those outside the workhouse as to those within. It appears that the sanitary authority, in consequence of an outbreak of enteric fever at Lustleigh, a pretty moorland village frequented by visitors during the summer season, gave orders that a stream, which served in a

dual capacity as drain to the house and as water supply, should be covered in. This was a few weeks ago, but because the village mason was so busy that he "could not attend to the job," it was not done, and so the fever spread. One man washed in the water regularly; he caught the disease and died. Inmates of all the other houses who have drunk the water are now down with the fever. A boy residing half a mile away drank of the stream, and carried the disease to his home. And this was because the village mason was "too busy to do the job." We must not, however, blame the mason; it was open to him either to do the job or leave it. It is the sanitary authority which is to blame, and it is their ineptness in allowing their officials to drivel on in this perfunctory way which is accountable for the mischief. We wish that sanitary authorities would understand that they do not occupy the proudly independent position of a village mason; it is not open to them to do the job or leave it: they have a trust imposed upon them which they are bound to perform. This, however, we fear is a step beyond the wit of Newton Abbott.

THE "CONGRESS" OF THE BRITISH INSTITUTE OF PUBLIC HEALTH.

THE *Manchester Guardian* states that "some disagreeable incidents have occurred in relation to the Health Congress to be opened here next week by the British Institute of Public Health, for which the arrangements are considered to be in many respects unsatisfactory. This gathering was arranged under the auspices of the late Lord Mayor, Sir Stuart Knill, who attended last year a like meeting at Edinburgh. Sir Stuart Knill has, however, by a formal letter, withdrawn from participation in the forthcoming Congress." It states further, and we believe correctly, that "Mr. Ernest Hart, who had accepted the post of President of the Section of Municipal and Legislative Hygiene, has resigned, and declined to read his promised paper. A like course has been followed by Sir Spencer Wells, Sir Henry Thompson, Sir C. Cameron, Bart., M.P., Mr. Fletcher Moulton, M.P., Canon Barnett, Surgeon-General Ewart, the Mayor of Brighton, and other leading persons. The County Council of London, the Sanitary Institute, the National Health Society, the Royal College of Surgeons, and other public bodies invited to send official delegates have refused to do so. The Plumbers' Company of London, which had been announced as intending to give a banquet and reception, have passed a resolution refusing to do anything of the kind, and requesting that their repudiation of any such intention may be publicly announced. How far all this will affect the Congress remains to be seen." We learn that some other well known names, such as those of Mr. Shirley Murphy and Dr. Seaton, etc., are being used without authority.

GRANTS TO UNIVERSITY COLLEGES.

THE report of the Committee on the distribution of the Government grant of £15,000 to University colleges has been printed, together with a Treasury minute accepting its recommendations. The Committee, which consisted of Mr. Bryce, Lord Playfair, Sir Henry Roscoe, and Mr. W. Kenrick, find that good progress has been made by each of the colleges now claiming the grant. They recommend that a grant of £700 a year should be made to Bedford College, London; but that as University College, Dundee, is now a part of the University of St. Andrews, it has been withdrawn from the scope of the grant, and will participate in future in the increased grants to the Scotch Universities. The grants recommended and approved for five years are to Owens College, Manchester, £1,800; to University and King's Colleges, London, each £1,700; to Liverpool University College, £1,500; to Mason College, Birmingham, and Yorkshire College, Leeds, each £1,400; to the University Colleges at Nottingham and Bristol, to the Durham College of Science, Newcastle-on-Tyne, and to Firth College, Sheffield, each £1,200. The grant to King's College is contingent on the removal before March 31st of the regulation which imposes a religious test on officers of the College (other than theological). From the terms of an appeal for public subscriptions towards an endowment fund made by the Principal, it would appear that King's College will not accept this proviso, so that this sum of £1,700 a year will be at the disposal of the Treasury, and will, it may be hoped, be divided among the other Colleges participating.

HARTLEPOOLS HOSPITAL.

A SOMEWHAT curious question was brought before the governors of the Hartlepools Hospital, and is noticed in the *Darlington Echo* of July 4th. One of the physicians to the hospital is surgeon to some works in the town, and it appears that a resolution had been passed by the board permitting this gentleman to admit cases of accident from these works for operation at all times, and to operate on them himself. His surgical colleagues, who are only permitted to receive patients under their own charge in one week out of every three, not unnaturally complained of this prerogative given to one of the physicians, and obtained the co-operation of another of the physicians, on whose motion the resolution was rescinded. The question was unfortunately complicated with personal considerations, into which it is needless to enter, and which are only important to the persons themselves, but it involves the all-important principles (1) that public hospitals are established for public purposes only: (2) that the patients admitted into them are to be treated by the officers of the hospital appointed for that purpose, and by them only; and (3) that no consideration of private convenience should be allowed to modify the arrangements of the hospital. All these primary rules of hospital management appear to have been violated by the resolution in question; it was wrong to give applicants from a certain quarter a right of admission denied to the other inhabitants; it was wrong to permit one of the physicians of the hospital to act as surgeon in the case of his own private patients: and it was wrong to vary the rules of the hospital for the convenience of one individual. So that we hold that the resolution was rightly rescinded.

IMMORAL MASSAGE.

THE paragraph in the BRITISH MEDICAL JOURNAL of July 14th in which we drew attention to a form of immorality now carried on in London under the name of "massage" has excited considerable interest in many quarters, and has served to direct the attention of the Home Secretary and the police to abuses the extent of which had previously hardly been recognised. We have given the cue; it is for the authorities to act upon it. That under the cloak of a useful form of medical treatment the grossest immorality should be practised, that under the guise of "massage establishments" houses, not unfortunately of ill fame, but of equally evil morals, should be publicly advertised, and that under the pretence of teaching massage girls should be introduced to an immoral life are matters of public importance well worthy of the attention of our police and our magistrates. There is, however, a professional and medical side to this question of massage to which it is our duty to refer. If those who thus abuse the pretence of medical treatment are to be effectually dealt with by the police, it is of importance that it should be possible to draw a sharp dividing line between the sheep and the goats, between those who merely make a cloak of massage and those who practise it honestly as a means of cure. We would suggest to all medical practitioners who find it necessary to order massage for their patients to consider well the social elements involved. Perhaps it is owing to the preponderance of women in the "profession," perhaps it is a matter of fee, which is but another way of expressing the same thing, but, whatever the cause, we fear that, all

unthinkingly, no doubt, it is, in some cases, too common a thing to order massage by a masseuse where a masseur would be more appropriate. There may be little harm, perhaps, in local massage applied by a woman to a man suffering from writers' cramp or a sprained ankle, or in cases where a gentle "effleurage" of the scalp—practically a form of hypnotism—is required for a restless patient; but "general" massage of a man by a woman, involving as it does massage of the trunk and limbs, is an abomination; as is also the practice of "general massage" of a woman by a man. So far as the medical uses of massage are concerned, woman can do all that is necessary for woman, and man for man; the best authorities on massage will support us in this. Massage of the uterus again is a proceeding which, with all respect to those gynæcologists who have advocated it as a method of treatment, we cannot help regarding with the extremest suspicion and dislike. Whether practised by man or woman it verges so nearly upon well recognised abuses that we cannot but think that the hoped-for physical benefits are far outweighed by the almost certain moral evils. This is a proceeding which we would like to taboo utterly, and as regards all other forms of massage we would keep sex to sex. We have reason to believe that young women of modesty and proper feeling have found it necessary to sever their connection with otherwise respectable institutions simply because, under medical prescription, they have been detailed to apply "general" massage to men. This is a real evil, and tends to whittle away the boundary line between propriety and impropriety, if not immorality. We cannot but feel that to order a woman to apply "general" massage to man, suffering perhaps from nothing worse than restlessness and insomnia, is either to be contemptuously indifferent to the self-respect, and perhaps even the good conduct of the masseuse, or to neglect that element of sex which is present in human affairs, and which refuses to be ignored.

FREE ISOLATION HOSPITALS.

The Evesham Joint Hospital Board have decided to abolish all charges for the maintenance of patients. It was stated that the receipts from this source had in seven years amounted to only £143 out of a total expenditure of £3,731. This is in accordance with general experience. The revenue from patients is nominal, and the attempt to enforce the charges goes far to destroy the utility of the hospital. Isolation hospitals must be free if they are to be effective, a principle which has now received Parliamentary sanction in Lord Thring's Act of last year.

A PROVIDENT ASSOCIATION AND ITS MEDICAL OFFICERS.

We have received a copy of the rules and regulations of the Provident Association of Warehousemen, Travellers, and Clerks. It seems similar to many others, and offers the munificent payment of 5s. per annum per member. At first sight this might seem a whole shilling per annum better than the ordinary club rate, but on closer inspection we see the reason of this unwonted liberality: (*a*) Members are to be supplied with bottles, etc., free; (*b*) the medical officers are required to consult with one another when occasion arises, without any extra fee; (*c*) consultants are appointed to whom the medical officers are expected to refer suitable cases, and with whom it will be their duty to hold consultations without additional fees. We think our readers will consider this extra shilling on the whole well earned, and we feel sure that many practitioners would prefer the old rate of payment, minus these additional duties. There are one or two other things which ought to be pointed out to members of the profession respecting this Association. In the first place, there is no wage limit whatever contemplated; our correspondent on writing to the secretary on this point, is told, in the words of that officer:—"We have nothing whatever to do with a member's position; we never ask what salary they are getting, and we have some getting a small one, and others are in a splendid position, still they are all the same to us as members." We would ask, if it is all the same to members of our profession that such persons in "splendid positions" should get their medical attendance for 5s. per annum, bottles being thrown in? It certainly does seem to us a wonderful thing that so many respectable practitioners should be found to support an institution of this character, for we are compelled to confess that, on the list supplied to us, we see the names of well-known consultants, specialists, and general practitioners. Our surprise is still further increased when we notice that, by Rule 12, "Homœopathic surgeons" are to be appointed, and that the same rule requires "the surgeons shall further be expected to aid each other in consultation in any particular case without further fee or reward." Are we to understand, then, that Dr. A. E. Sansom, and Sir W. B. Dalby, and the other consultants mentioned, will be at all times ready to meet in consultation with the Society's homœopathic medical officers under this rule? It is rather surprising to find their names appearing in such company.

THE REGULATION OF BAKEHOUSES.

The London County Council has had under consideration a report by one of its committee on the need for amendment of the law relating to bakehouses. The opinion was expressed in this report that the Council should be empowered to make regulations dealing with position, structure, use, licensing, etc., of bakehouses. The committee, moreover, thought the central metropolitan authority should be responsible for the inspection of bakehouses with a view to ascertaining that the regulations were complied with. This last-named suggestion did not, however, find favour with the council. The central metropolitan authority certainly appears to be the proper body to make the regulations, while the local sanitary authorities seem best fitted to attend to their enforcement. This view is, we note, advocated by the Medical Officer of Health for Kensington (Dr. Dudfield), who, in his last monthly report, deals in some detail with the history and future prospects of bakehouse legislation. It may be remembered that the London County Council appears to have endorsed the recommendation of its committee to the effect that "bakehouses which are occupied before the by-laws came into force should be exempt for a period of five years from the regulations, as far as these will require structural alterations other than those now required under the existing law, but that after this period they should be required to comply with all the regulations." If this means that it is proposed to endeavour to promote legislation which will give underground bakehouses five years' grace and then abolish them altogether, the suggestion is a somewhat startling one and is sure to meet with strong opposition.

THE SICK POOR IN PROVINCIAL WORKHOUSES: CHESTER.

The reported proceedings at an inquest held on a pauper who met his death in the infirmary attached to the workhouse in Chester points to the usual lack of efficient nursing during the night; and when the evidence is read in the light of our Commissioner's visit to that infirmary, reported in another column, the possibility of a recurrence of the catastrophe is made clear. Our representative speaks of the kindness that is shown to the sick inmates: but when we read of one trained nurse being on duty in the night, and that the conditions of her work are that she is responsible for 160 beds distributed in two blocks "quite apart," the wonder is not that there is one inquest to be held, but that these casualties do not occur more frequently. The nurse's assistants are pauper inmates, who help the infirm and helpless patients, who make their beds, wash the patient or superintend the washing, and, if we read the report of the inquest aright, exer-

cise some corrective control over the hapless patient whose infirmity has necessitated the cleaning of a bed. In the absence of the nurse in the other block the ward helper is practically master of the situation, the only corrective to his power being the chance that a patient with more courage than his fellows will tell the truth. If the truth is established it is well, but if the patient fails to substantiate his tale, he may be exposed to the revenge of a tyrant. Is this what happened on that morning when the poor man was found with his ribs broken, and there was the story of a scuffle between the patient and the wardsman? In the daytime our Commissioner found that there was a trained nurse on duty in each block, and that the beds under her care numbered over eighty when full, and taking one-third of this number away (when the infirmary is light), we have fifty-five left to be nursed by the nurse. It will be observed in reading the report that there was a certain number among the patients scattered through the wards whose illnesses required skilled nursing; and when we add the helpless patients who are as children in their condition, we can form some estimate of the amount of nursing that each patient would receive. The block wherein the lock and itch cases were located seemed to be left to look after itself—we mean in the way of nursing—and our Commissioner saw a child with the rash of measles fully out dressed and being dandled by its mother, who was its nurse, without any precautions being taken to protect it from chill. That child may develop some chest or abdominal complication that may cling to it for life as the result of that neglect, and if it grows up, its earning powers being crippled for want of proper nursing through the measles, it may become a permanent charge on the rates. This makeshift nursing is a good forcing house wherein to cultivate paupers. We trust that this sad death may stir up the ratepayers to provide efficient nursing for the sick committed to their care.

NOTIFICATION OF INFECTIOUS DISEASE.

At least 50 cases of scarlet fever are reported to have occurred at Arbroath between June 29th and July 4th, the majority of the patients being consumers of a particular milk supply. The origin of the outbreak had been traced to a lad residing in a house adjoining that from which milk was supplied to the burgh. Several cases of typhoid fever had occurred moreover in March last in the town, and no intimation of the existence of this outbreak had been made to the sanitary authorities until the second week in June. The Public Health Committee, in the light of these occurrences, unanimously resolved on July 9th that it was desirable the Infectious Diseases Notification Act should be adopted, and at a meeting of the Police Commission, as the local authority, held recently, it was resolved that the board meet after fourteen days to adopt the provisions of the Infectious Diseases Notification Act.

THE LOCAL GOVERNMENT BOARD AND CHOLERA AND DIARRHŒA NOTIFICATION.

The Local Government Board has issued a circular letter to all sanitary authorities embodying the suggestion that during the current quarter the Notification Act should be extended to diarrhœa, in view of the significance which that disease may have in the approaching cholera season, and especially in view of the recrudescence of cholera at the present time on the Continent. It is pointed out that cholera in this country last year led to the discovery that antecedent diarrhœa had been prevailing in districts where cholera obtained some headway, and when information to be derived from notification could not be utilised to prevent the disease from gaining a footing while in its least recognisable form. The Board raises the further point of making the notification of diarrhœa operative only—at any rate, as matter of first instance—as regards persons over 1 year of age. This seems to us to be a very valuable suggestion, since it ought to do away with any scruples which sanitary authorities may have on the question of £ s. d. As most of the summer diarrhœa of our country is in infants, the exclusion of these numerous cases will greatly lighten the burden of the fees to be paid in respect of notification: and, as regards cases in older persons—and this the more as the age of the patients increases—sanitary bodies will be well advised if they avail themselves of the hint thrown out by the Central Board, as by early knowledge of diarrhœal disease in their districts they will be prepared for any subsequent manifestation of the graver malady. In the words of the circular, "the utmost vigilance should be exercised (by sanitary authorities) within their respective districts to control any diarrhœa which may be suspicious, either in character or in amount, during the present and forthcoming season."

REFORMATORY SCHOOLS AND EXCEPTIONAL CHILDREN.

At a recent meeting of the National Association of Certified Reformatory and Industrial Schools, the Earl of Stamford, who was in the chair, referred to his visits to such schools in the United States and in Australia, and pointed out that the teaching and discipline needed to be adapted to the special requirements of many of the inmates, owing to the large number of abnormal and defective boys and girls there found. He proceeded to draw attention to the report prepared for the British Medical Association by Dr. Francis Warner, which showed that, among 876 children in such schools, 30 appeared to be definitely defective in body or in brain, while 391 presented some defect of body, and 270 were said to be dull pupils. At a meeting of the Committee on the physical and mental condition of school children, at which Lord Egerton of Tatton presided, reports on work done in 1892-94 were read, and a resolution was proposed by Mr. T. Holmes, and seconded by the Earl of Stamford, that it is now desirable that a committee be appointed by the House of Lords to inquire as to the number, distribution, and special needs of feeble and defective children, other than imbeciles, and as to the educational provision now made for them. The present time is opportune for such inquiry; secondary and higher education is being extended and made available for the elevation of the better trained children, while but little is being done for the large proportion of dull children and those who present some deficiency.

MEDICAL DEFENCE AND ORGANISATION.

The urgent needs of the medical profession at the present day are union and organisation. This is the opinion expressed by Dr. Arthur Welsford in the current number of the *Medical Magazine*. He appears to yearn after a professional unionism which shall be strong enough to defend the interests of all classes of practitioners, and with prophetic enthusiasm he boldly announces that unless some powerful and representative body comes forth to maintain our social prestige and defend our interests, the quality and efficiency of the profession will soon deteriorate. He draws a comparison between the feeble union of the medical profession and the strong combination which characterises the profession of the law. Is it not possible to have a representative association developed on the lines of the Incorporated Law Society? Medical defence and legal defence, however, cannot be considered on equal terms. Solicitors are in the very atmosphere for defending themselves and effectually protecting their own interests. They are fighting men, and their legal weapons are generally in good order; but is the legal profession after all better organised for defence than the medical? The Incorporated Law Society possesses powers similar to those exercised by the General Medical Council, but can it be easily moved to defend the professional privileges of its members? Can it be readily roused into action for the purpose of prosecuting unqualified persons and legal quacks?

The fact is, the legal profession is not free from contending interests, and there are yet many grievances which ought to be redressed. On one matter, however, we heartily agree with Dr. Arthur Welsford as to the growing power and influence of the British Medical Association. It is true that many are anxious that greater prominence should be given to questions which involve the interests of the profession as a whole, and that during recent years the attention of many of the Branches has been directed to the discussion of social topics and the best remedies for casting out the many evils which surround the practice of medicine in the present day. It must not be forgotten that the Association has long laboured to advocate reforms, to ventilate professional grievances, and to promote protective legislation. Surely it is a matter for great congratulation that the scientific character of the transactions has been thoroughly maintained during the long period of sixty years, and that the policy of the Council, under the guidance of the constitution, has been loyally directed to promote the great purposes for which the Association was originally established. Fortunately the members require no assurance that the Council will embrace every opportunity for rendering our great and world-wide organisation fully adapted to all the requirements of the times, and will persistently endeavour to prove that it is the faithful guardian of the honour and highest interests of the profession.

PLAGUE IN HONG-KONG.

OUR Hong Kong correspondent telegraphs: "There are a few cases of plague still, but the situation is improving."

MEDICINE IN CHINA.

WHILE acknowledging the value of the thirty-eighth, thirty-ninth, and fortieth reports by the medical officers attached to the Chinese Maritime Customs service and issued by the Inspectorate-General,[1] we regret to have observed during recent years a progressive falling off in the fulness, scientific value, and punctuality of issue of these reports. Of course the medical officers are in great measure answerable for this. We cannot but think, however, that the delay attending publication has much to do with the deterioration we refer to. A medical officer is not likely to take much pains with a report or to prepare a paper which, from past experience, he knows will not see the light for several years. The present reports, though referring to 1889 and 1890, have only just appeared. Although some of them are very meagre, we would specially note the sensible remarks by Dr. A. Rennie, of Tamsui, on malarial fevers; a note by Dr. Ringer, of Amoy, on suprapubic lithotomy; and one by Dr. Deane, of Pakhoi, on renal congestion from chill. The allusions made by several of the reporters to the occurrence of influenza are of value as fixing the date of the outbreak of the late epidemic at various points in the Chinese empire. We miss Dr. Jamieson's reports on the health of Shanghai, and his very valuable notes on the diseases endemic at that port. A report by the medical officer at Kowloon, dealing, as it might very well do, with the health of the large foreign community of Hong Kong, would be of especial value, and ought to be forthcoming. The profession is already much indebted to Sir Robert Hart for having instituted these reports; they are practically the only source of information we possess about the diseases of China, and apply to about one-fourth part of the human race. In the past they have been of great service, and it would be an immense misfortune to medical science if in the future they are allowed to fall through. We would suggest that an effort be made to issue them in future more promptly and with greater regularity; that a report be insisted on from every medical officer attached to the Customs service; that returns of births and deaths in the foreign communities at the various Treaty ports be accurately kept and made on a definite and well-considered plan; and, further, that encouragement be held out to the Customs medical officers to work at and report on the diseases of the country.

[1] *China: Imperial Maritime Customs.* Medical Reports for the year ended March 31st, 1890 (thirty-eighth and thirty-ninth issues), and for the half-year ended September 30th, 1890 (fortieth issue).

IMMORAL "MASSAGE" ESTABLISHMENTS.

THE Home Secretary has ordered an investigation into the facts which the BRITISH MEDICAL JOURNAL last week brought to notice as to the large and dangerous abuses now existing in establishments ostensibly advertised as "Massage Rooms," etc. At the request of the authorities of Scotland Yard, who have been directed to undertake this inquiry, we have placed them in communication with the medical sources from which our information was derived, and there is good reason to believe that the prompt action of Mr. Asquith in following up the clues which we have furnished will lead to an early repression of some of the abuses at these establishments, abuses which constitute a serious offence against public morality of an insidious and dangerous kind. Meantime, we do not doubt that the newpapers, many of them of a highly reputable position, which have been in the habit of innocently publishing advertisements from some of the worst of these places will see fit to exercise a special care in rejecting those which are *primâ facie* suspicious. Already we observe that much greater care is being exercised in this respect than was the case a week ago when we called attention to the subject, and already some of the proprietors of the most objectionable of these establishments have, we are informed, taken alarm, a result which, as our object is repression rather than exposure, is immediately satisfactory.

PAUPER SCHOOL CHILDREN.

DEPUTATION TO THE PRESIDENT OF THE LOCAL GOVERNMENT BOARD.

A DEPUTATION will wait upon Mr. Shaw Lefevre on Monday next, July 23rd, at 2.30 P.M., on the subject of the conditions under which pauper children are educated in barrack or associated schools, and to ask for a Royal Commission or other method of public inquiry. Among those constituting the deputation are Sir John Gorst, M.P., who will introduce the deputation; Mr. Ernest Hart, Chairman of the Parliamentary Bills Committee, who will make the opening statement; Sir S. Montague, M.P., Sir F. S. Powell, M.P., Dr. Farquharson, M.P., Sir H. Roscoe, Sir J. Kennaway, and a number of other members of Parliament; the Bishop of Bedford, Canon and Mrs. S. A. Barnett, and Miss Davenport Hill, Miss Meade, Miss Johnson, and the representatives of many associations concerning themselves with the welfare of pauper children and their career in after life. The allegation of the failure of the present system is based upon the prevalence of ophthalmia, skin affections, and diseases of degeneration, and the physical and moral evils arising out of the present system. The suggested alternatives include boarding out, the use of cottage homes, and of small certified schools. Although strictly representative the deputation will be a numerous one, and of highly influential character.

CLOSE OF THE SUMMER SESSION AT ABERDEEN.—The summer session of the Aberdeen University closed on July 13th, and the examinations for the various medical degrees began on July 14th. About the average number of candidates have presented themselves for the examinations.

PAUPER PALACE SCHOOLS.

Deputation to the Local Government Board.

It will be a matter of satisfaction to all who have followed our recent statements and arguments and to all who are interested in the up-bringing of pauper children to learn that Mr. Shaw Lefevre has agreed to receive a deputation at the Local Government Board Office at 2.30 on July 23rd. The deputation will lay before the President the facts and arguments which led them to ask him for a Royal Commission to inquire, not only into the conduct of the barrack or associated schools, but also into the possibilities of dealing otherwise with pauper children. The Right Hon. Sir John Gorst will introduce the deputation, and a statement will be made by Mr. Ernest Hart on behalf of the Parliamentary Bills Committee of the British Medical Association who will be followed by Mrs. S. A. Barnett, the Bishop of Bedford, Mr. Burns, and other experts and representatives of public bodies.

If Mr. Shaw Lefevre sees his way to granting such an inquiry it will be the opening up of a large field. The failure of the present system hardly needs further proving. From all sides similar information is received. The superintendent of a working lads' home reports that "it takes a year to knock the nonsense out of that sort of lad. He expects everything done for him. To fetch a drop of water is a hardship, for he supposes that it will come and wash his hands of itself. He does not seem to understand that as a man works so shall he get. It's all been done for him at the schools till he can't do it for himself." The head official of a shoeblacks' institute states that the boys under his care who have come from the barrack schools are "neither self-dependent, bright, brave, nor industrious."

This is not satisfactory, but the general concurrence of opinion of those who know both boys and girls is that the nature of the boys is not as much injured by being brought up in large numbers as that of girls. "We want," said the American orator, "not more female lawyers, journalists, doctors, or politicians, but we do want more female women." This system certainly does not tend to produce "female women," by which may be supposed to be meant domesticated or home-abiding wives and daughters. When the numbers are so large the individual characters of the children cannot be considered and developed.

In schools varying in number from 500 to 1,800 it is not possible that officers, often themselves overweighted by routine duties, should have either the time or opportunity to give to the cherishing of germs of good in individual children or to the discovery and eradication of hidden wrong or an unkind spirit. Girls especially need this personal training, it being part of the charm and strength of the feminine nature that it lives and grows on the breath of approbation and affection. In support of this we give the opinion of an inspector of factories, who said that those employers get more work out of their workgirls who supervised them by a kind inspector and allowed them to show their individuality either by the quality or quantity of their labour. Girls also seem to be more susceptible to moral taint. The introduction into the midst of a large school of the "ins and outs"—the title by which the casual children are known—must be a source of danger to all; but the more robust and less sensitive nature of the boys seems the better able to throw off the evil effects than it is possible for the girls to do.

But for both sexes the system is wrong and should not be perpetuated. "In such schools," writes one expert at a conference on the care of pauper children, referring to large institutions, "the inmates are like parts of a machine. They may have acquired much book learning, but they will be found lamentably deficient in the more ordinary but not less important education of common life. An institution badly managed, without order or precision, with strict discipline, demoralises the children, makes them slovenly and awkward. An institution well managed, on the other hand, destroys the individuality, makes the child to grow up without affection and in an unnatural and therefore an unhealthy atmosphere."

In the opinion of a lady who has given most of her life work to the after-care of these girls "the associated school system for pauper girls manufactures faults of its own. Every mistress who has taken a girl straight from one of the large schools knows the pauper temper, the deaf, blind, dumb condition of stubbornness in which when thwarted the girl clothes herself as with armour, knowing too well from long experience that it is her only defence, and renders her invincible to all but an official invested with absolute authority. Such authority must become more or less cruel; it has neither time nor opportunity to develop rational submission."

Again, we quote the words of one who has had large experience with barrack-bred girls. She writes: "These children, herded together and kept in order by fear, are nevertheless, like the Greek slaves of old, conscious of their power. They know too well that they are 'on the rates,' that come what come may, the very officials whom they are bound, under pain of punishment, to obey, are in their turn bound to provide them with food, lodging, and clothing, all better of their kind than fall to the lot of their happier brethren outside. This consciousness strengthens them in their obstinate fits, and loosens their tongues to defiance and disrespect when they are out of their masters' hearing. As members of small households there would be no excuse for this particular form of resistance to authority. The 'Mother' would replace the 'Board.'"

It would be easy to multiply similar quotations, but we content ourselves with stating the opinion of the Chairman of the Metropolitan Association for Befriending Young Servants, who, when writing of such schools, says that "the very perfection of the system, the very completeness of the school routine has been almost cruel," for "the child has been deprived of all that unconscious education which comes from the contact with difficulties. There has been no calculation of the time required to do a number of allotted tasks, no exercise of memory as in the practical details of cookery, no call on the ingenuity to meet a difficulty with inadequate resources," and it is thus unprepared that hundreds of State-supported children yearly leave these "Pauper Palaces."

In years gone by the failure of these girls was lamentable, and there is no reason to believe that it would be otherwise now, were it not for the untiring efforts of the charitable ladies who unite to become the vigilant friends of (to again quote their report) "the children who have learnt to swim with bladders, and have afterwards to buffet without them against the waves of this troublesome world."

It is sometimes argued that any system is good supposing that the supervision exercised is adequate, benevolent, and intelligent, but in these large schools it is impossible to obtain such supervision. We do not wish to accuse the managers of either the Brentwood or Forest Gate Schools with neglect of duty, and yet the children in both these institutions were injured physically by ill-usage and bad food, and the mental and moral damage that must have been done to the servants as well as to the girls and boys who knew that such cruelties were being practised, and yet had to keep silence, is incalculable. That the fears which kept them silent were not groundless has been proven by the dismissal, after 18 years' good service, of Henry Elliott, the one man who among the many who witnessed it dared to speak and tell of broken dietary tables and unwholesome food. These are two discovered incidents, but without doubt they indicate many others undiscovered. Even if the superintendents of such schools were chosen from a class of society not so likely to yield to the temptations inseparable from their position, it would still be true that it is impossible to obtain from one man such personal supervision as is required for upbringing

healthily, lovingly, and wisely 500 to 1,800 little children. It must be borne in mind that the system does not permit these officials to be aided by the fierce or helpful light of public opinion. Behind the school walls neither the press nor the public enter. The guardians may either be enlightened and philanthropic gentlemen and ladies, or ignorant self-assertive egotistical men, merely sent as the creatures of parties, to whom the saving of the rates is the point of paramount importance. But, whatever be the government, neither the press nor the public are asked to criticise it, and the officers are quick to realise the security of their shelter. "I never met a man good enough to be a Governor-General of India," said the late John Bright; and yet everyone of the Viceroy's actions are closely followed by an interested and critical public, who at least tell him how others see him. Not so the officials of these pauper institutions: they can act rightly, humbly, lovingly, and no man knows; they can act wrongly, concertedly, cruelly for years before discovery, and then, too often, they are punished only by a reprimand, or allowed to "resign" and seek another and perhaps a more influential post.

If the President of the Local Government Board grants the inquiry asked for, it will not be the least of its duties to devise some method of bringing such institutions into the light, so that their conduct may be guided by the torch of criticism.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

VIII.—CHESTER.

The workhouse is about a mile outside the city, the infirmary buildings standing behind the main block; these are in three parallel blocks connected by wide bridges. The latter form a pleasant airing ground for the patients, and comfortable benches are placed on them. One block is set apart for the imbeciles and harmless lunatics; one block accommodates the medical cases, the infirm patients, and the lying-in wards; and the third block has the surgical cases, some infirm patients, and the children. The male and female inmates are thus in each block, and a trained nurse is in charge of each block. The infirmary is returned as accommodating 247 patients, but this includes the imbecile block: the average is about 80 in each block, more or less. The blocks are entirely apart, there being no means of communication except by the bridges aforementioned.

The System of Nursing

is a mixture of the trained nurse with pauper help; both the nurses whom we saw had received hospital training, but they could not attend upon 80 or more patients; hence the pauper inmate is requisitioned to supplement them, and the style of the work bore out that system. At night there is one trained nurse for the two sick blocks, and in each block there is a male and female attendant besides: these latter are paupers. We lay stress on these points, bearing in mind that just recently an inquest was held on a pauper who died under circumstances that aroused suspicion that his death had been caused by the rough treatment which he had received at the hands of his ward attendant. The jury returned a verdict of manslaughter. With that verdict we have nothing to do; but we wish to emphasise the criticism of the coroner, who asked, "Is there no person here to take the night nurse's place when a person is dying in another ward?" and the recommendation of the jury that "there should be an assistant night nurse in the hospital in case of emergency." When the nurse is in the one block she is as much away from the supervision of the other block as though she were in another street, and in her absence and before she could be fetched (for there are no communicating bells) there is time for any such tragedies to occur, the patients being practically in the hands of the inmates. In plain terms, the night nurse has to see after 160 patients in separate blocks. Pauper help is of necessity largely employed in this infirmary. We saw the wardsman or woman in each ward; from the evidence given at the inquest these inmates wash the patients "in a bowl, whilst he or she is seated on a chair at the bedside." So lax a system admits of accidents, and it depends entirely on the vigilance of the nurse to discover any mishaps which may have befallen the patients in her absence, unless attention is called to the matter by some courageous inmate.

The Wards

are small, the largest containing eleven beds: the others have six and four beds in them severally; this arrangement applies to both blocks. The wards are comfortable and homelike in appearance, the bedsteads of the full width, and the bedding is long straw, well filled, except where the nature of the case requires a water mattress, which the matron informed us was then supplied. The patients are classified as medical and surgical, the dirty cases being distributed among the other patients. The lock and itch patients are in a small separate block containing six beds for males and the same for the females. The master is responsible for the male patients, whilst the matron visits the female side of this isolation block. There is a labour ward having two beds: it struck us that the bed used as the labour bed was inconveniently small for its work. The women are convalesced in the larger ward. In the children's ward, which is on the ground floor, we found nice modern cots, and wool mattresses; these are a gift from a guardian who takes interest in the little ones. The ward looked cheerful and comfortable; it holds eleven cots, and has its separate bathroom and offices. There were very few children in at the time of our visit, and no severe case. A pauper is in charge of this ward.

The Patients,

of whom only a few were in bed, included a severe case of cancer of the face—this was dressed with sal alembroth wool and gauze—it was most offensive and required isolation: a woman in an advanced stage of internal cancer: several cases of ulcerated legs; a man recovering from pneumonia; some cases of paralysis and of senile debility. We saw a hale old body whose bedcard recorded the age of 101; she was in full possession of her faculties, and was proud of her great age. The itch ward on the female side was given up to some children with measles: these were in the care of their mothers, and we could not ascertain that they received any care from the nurses: we saw one child on whom the rash was fully out, dressed, and in its mother's arms, the lower part of its body was exposed to any chill, and the ward was not very warm though the day itself was so. That child was not being nursed in the hospital sense of the word, and no precautions were being taken to keep it in one temperature. When the doctor is required in the night a pauper is sent to the master, and he sends to call the porter, who is then sent off to the doctor, who lives nearly two miles from the infirmary.

The Sanitary Appliances,

are not up to date: the baths are movable, and stand on the landings, where they are used behind screens. Hot and cold water is laid on for ward use, but the bath water is heated by geysers, which the matron informed us were quite efficient. The closets are also on the landings, a step or two down, and at a little distance from the wards, so that commodes are in use at night. There seemed to be a sufficient supply of water. The bath for the children's ward is a fixed one. Gulleys are provided for the emptying of the large baths. There is only one day room, and that is on the men's side; the men are allowed to smoke in the wards, or on the bridges. The airing courts are of the usual back-yard style, but the bridges have to a certain extent superseded them.

Recommendations.

There is much in the structure of the infirmary that might be improved. The wards are crowded, and there is no ward for the separation of an offensive case or patient requiring isolation; day rooms are needed to relieve the wards of the

more convalescent patients; bath rooms with improved closet accommodation are a necessity, especially in the lock and itch wards. Then the nursing staff is lamentably weak, we might almost say dangerously so, in the light of the late inquest. We would suggest that the pauper nurses be withdrawn, and that more fully-trained nurses be engaged, who should be assisted by a few probationers; that one nurse at the least be on duty at night in each block, and that the wards be placed in communication with each other, and with the master's quarters by means of a telephone or bells, and that a telephone be laid on to the doctor's house; that the isolation block should be placed under the care of the trained nurses, and that the whole infirmary be made into a separate department under a trained superintendent.

VACCINATION AND SMALL-POX IN LEICESTER.

Mr. Biggs on the Defensive.—His "Staggering and Mortal Blow."—Fallacious Comparisons.—Scarlet Fever Dissemination and Small-pox Prevention.

IT is not surprising that Councillor J. T. Biggs has felt it incumbent upon him to make some attempt to interpret to the liking of antivaccinators the very striking facts as to small-pox in relation to vaccination, contained in the last annual report of Dr. Priestley, the health officer of Leicester. The columns of the *Echo* and of the *Leicester Post* have been open to his efforts, but we cannot believe that the editors of those journals have taken the slightest trouble to look into his figures; and we venture to call their attention to some of the main points in the articles which they so unstintingly commend.

In his report, Dr. Priestley, with a view to showing the different rates of small-pox fatality as between vaccinated and unvaccinated, divides the total small-pox cases which occurred in Leicester into vaccinated, revaccinated, and unvaccinated, with further classification and contrast according to age, under and over 10 years. He does not, however, attempt to compare the attack-rates in the vaccinated and unvaccinated population of Leicester, doubtless foreseeing much room for dispute as to the relative numbers. Mr. Biggs, in endeavouring to make a statement of attack-rates, as distinguished from death-rates, in speaking of "protection" against small-pox afforded by infantile vaccination, says that the Local Government Board "has issued a memorandum fixing the limit at about ten years," and on this erroneous basis goes on to separate out the protected from the unprotected population of Leicester; and, making an estimate quite his own, he says that the total number of so-called protected and doubly-protected in Leicester may be liberally stated at 10,000, the remaining 174,000 being looked on as unprotected. The total numbers of vaccinated persons under and over 10 years of age who were attacked by small-pox are stated by Dr. Priestley as 2 and 176 respectively. Mr. Biggs attaches the whole to the 10,000 persons computed as above mentioned, leaving only the 153 unvaccinated cases to be distributed among his 174,000 "unprotected" population above 10 years of age; thus making the attack-rate among his "unprotected" to be less than 1, and that among his "protected" and "doubly-protected" classes combined, 21 per thousand. We doubt whether we have ever met with a more scandalous abuse of statistics.

Mr. Biggs's assertion that the Local Government Board fixes ten years as the limit of protection is entirely erroneous. As matter of fact it has been found by general experience that in the third quinquennium of life the protection afforded by infantile vaccination has in some individuals been so far lost as to make them liable to attack, and in very small proportion even to fatal attack under exposure. Hence the desirability of revaccination for all alike.

Both in the *Echo* and in the *Leicester Post* "their one recognised leader," as the *Post* describes him, asks his followers and the public at large to attach great importance to the fact that in Leicester, in 1892-93, small-pox has been much less prevalent than it was in 1871-73. In capital letters he declares that the comparison of these periods gives a "staggering and mortal blow" to the vaccination delusion, and he points out that in Leicester the small-pox death-rate per million living under 10 years of age was 6,699 in 1871-73, and only 301 in 1892-94. The former rate is fully 22 times higher than the latter. But what does it profit to make this comparison without any reference to the epidemic prevalence of small-pox in other parts of the country in the two periods? It is not yet possible to make full comparison of the mortality of the disease at separate ages for 1893, but we do not doubt that when the Registrar-General's reports come to be published the period 0 to 10 years will be found to have borne even a less share of the total small-pox mortality than in the former epidemic. But, passing this by in the meantime, let us compare even the total small-pox death-rates of 1871-72 with those of 1892-93. In England and Wales in the former period the rate was over 900 per million of population, and in the latter it was less than 32 per million. We have therefore a greater difference between the two epidemics in the country as a whole at all ages than in Leicester in the first ten years of life; but since, with regard to syphilis, Leicester objects to being compared with England and Wales, let us, with regard to small-pox, compare it with London, and let us take for each poplation the worst year of the 1870-73 epidemic. In Leicester, according to Mr. Biggs, the rate fell from 3,523 per million in 1872 to 89 per million in 1893; while in London, according to the Registrar-General, the rate fell from 2,420 per million in 1871 to 47 per million in 1893. The fall, therefore, which has been "nearly 40" to 1 in Leicester, has been over 50 to 1 in London. It has been the habit of anti-vaccinators to avoid general comparisons with Leicester, and to select particular towns at particular dates of relatively high small-pox mortality for this purpose. During successive epidemics they have thus gone to Sheffield, to Warrington, to Preston, and elsewhere; but not to Wolverhampton, with its drop from 4,160 to 11 per million between 1871 and 1893; not to Newcastle; not to Oldham, so badly vaccinated, with its small-pox death-rate in 1893 no less than 476 per million, or just ten times higher than the London rate, forty-four times higher than the Wolverhampton rate, and infinitely higher than the Newcastle rate. But the whole method of antivaccination argument is here so absurd that it carries with it its own refutation.

There are other points in Mr. Biggs's articles which tempt to further comment, but we must leave our readers to judge of the whole from what we have already given, and from one additional fact. Dr. Priestley, at page 11 of his report, states that "the committee have definitely decided not to again crowd the hospital in an attempt to stamp out scarlet fever in the town by means of isolating all the cases as they occur." The disease, some 4,000 cases in all occurring, raged throughout last year, as "was to be expected," no hospital being available, the building having had to be emptied in October, 1892, to make room for small-pox; the result was double the number of notified cases of scarlet fever in the next two months. It seems to be, therefore, a part of the perfected Leicester system, of which Mr. Biggs has had so much to say to the Vaccination Commission, that, in order to cope with the one disease, small-pox, cases of scarlet fever have had to remain wherever they happened to occur in the town. Surely this is a terrible price to pay for small-pox prevention, even if isolation and quarantine were actually of themselves capable of preventing small-pox. But if there is one lesson that the Leicester outbreak has taught it is that, as we have already shown in the BRITISH MEDICAL JOURNAL of May 5th and 12th, in the absence of vaccination, quarantine and isolation are utterly untrustworthy. Looking to the Leicester failure with regard to all diseases other than small-pox, one might have thought that even Mr. Biggs might have seen that there must be something essentially different in the management of small-pox from that of the other zymotics. Leicester has given up as hopeless the task of stamping out scarlet fever by quarantine and isolation, and it stands by and sees the cases running on to 4,000 in the course of a single year. With small-pox it has had no such experience. It is simply pitiful to see men like Mr. Biggs, otherwise competent to conduct the ordinary affairs of life, so hopelessly deluded with regard to this one subject of vaccination in its relation to small-pox.

THE memorial bust of the late distinguished surgeon, Richard von Volkmann, from the chisel of Herr Arthur Volkmann, will be formally unveiled in the Surgical Clinic of the University of Halle on August 1st.

WATERBORNE TYPHOID AT WORTHING IN 1893.

The long-looked-for official report on the extensive epidemic of typhoid fever at Worthing last year proves to be a document well worth perusal. The report itself, apart from its special significance, is one of admirable construction and powers of reasoning. Its deductions are all sound and none of its arguments far fetched. On these and other grounds we are glad that it has been placed on sale.[1]

The epidemic which Dr. Theodore Thomson has to chronicle on behalf of the Medical Department of the Local Government Board was one affecting four distinct areas, namely, Worthing, West Worthing, West Tarring, and Broadwater. The following statements out of the report will serve to show at a glance the salient features of the epidemic in its broader aspects—in relation to population, local incidence, fatality, water supply, and drainage.

Table I.

Sanitary District.	Area Invaded by Enteric Fever.	Estimated Population in middle of 1893.	No. of Cases of Enteric Fever, May to Nov., 1893.	Attack Rate per 1,000 Population.
Borough of Worthing	"Worthing"	15,317	1,257	82.0
	"West Worthing" ...	2,116	58	27.4
East Preston Rural Sanitary District...	Village of West Tarring	1,070	55	51.4
	Village of Broadwater...	787	41	53.4

Table II.

Sanitary District.	Area Invaded by Enteric Fever.	Estimated Population in the middle of 1893.	Enteric Fever. No. of Deaths, May to Nov., 1893.	Enteric Fever. Death-rate per 1,000 Inhabitants.
Borough of Worthing	"Worthing"	15,317	153	10.0
	"West Worthing" ...	2,116	15	7.1
East Preston Rural Sanitary District...	Village of West Tarring	1,070	9	8.4
	Village of Broadwater...	787	9	11.4

Table III.

Sanitary District.	Area Invaded by Enteric Fever.	Water Supply.	Drainage.
Borough of Worthing	"Worthing"	"Worthing" Waterworks	"Worthing" Sewerage System.
	"West Worthing"	"West Worthing" Waterworks	"West Worthing" Sewerage System.
East Preston Rural Sanitary District ...	Village of West Tarring	¾ "West Worthing" Waterworks ¼ Local wells	Almost entirely on the "Worthing" Sewerage System; the remainder drains into cesspools.
	Village of Broadwater	⅜ "Worthing" Waterworks ⅝ Local wells	Drains into cesspools and ditches.

It will be seen that the outbreak comprised 1,411 cases and 186 deaths, and that the greatest incidences alike of attack and fatality were on Worthing and Broadwater. The borough of Worthing has been divided into two areas for the purposes of the inquiry. In trying to discover the factor to which to ascribe the disease, Dr. Thomson had to set aside all known causes of typhoid other than water, but only after careful study of their possible relationship to the disease. Thus milk, sewerage, drainage, and the like came under his special notice. As to the second, Table III shows that the differing systems of sewerage would in nowise fit the theory of sewer-borne fever. The disease followed a parallel course in Worthing and Broadwater, which have nothing in common as to sewerage.

Far other was it as to water supply, as the same Table (III) shows. As to incidence on the water supplies, the report shows that of the 1,257 cases occurring in Worthing, no fewer than 1,255 were in persons who are known to have drunk of the public service; in Broadwater, of 41 cases 34 had been in the habit of drinking the same public water; in West Tarring 15 of the 17 earlier cases, and in West Worthing 4 of the 6 earlier cases, were of consumers of the same water. The later manifestation of fever in the two latter places was confined to the area served by the West Worthing water supply.

Briefly stated, the water supply of Worthing is obtained from three wells, with three headings, two headings serving as connecting tunnels between the three wells. In 1885 a shaft had been commenced near a corner of the waterworks yard, but had to be abandoned on account of a large body of suspicious water met with coming from a fissure in the chalk. On March 13th, 1893, a new heading was commenced, which proved to be just beneath this fissure; on April 14th a large fissure was struck, and so great was the rush of water that the workmen had to run for their lives, leaving their tools in the workings. The water derived from this new heading prior to its general use was, on the continued blocking of a pump, and on Saturday afternoons and on Sundays, turned into the public supply, the water thus dealt with running at the rate of 60 gallons per minute. This yield was from a fissure cut into on April 7th, and early cases of fever cropped up between April 16th and 22nd, the main outbreak commencing a fortnight or three weeks after tapping the fissure in question. The incubation periods for both these manifestations of fever are consistent with the use of this water as the *vera causa* of the disease.

How could the water have become contaminated? With a view of testing whether the abandoned shaft of 1885 had led to the discovery of a fissure which communicated with the new heading below, Dr. Thomson caused a ton of salt in solution to be thrown down the fissure, and had as a result an increase of chlorine in the adjacent well from 5.0 to 35.8 parts per 100,000 within an hour and a half from the commencement of the experiment. It is thus evident that any sewage contamination of the surface of the ground above the fissure experimented on would permit of the entry of dangerous material to the public water service. That such contamination was abundant is amply demonstrated in the report. Old disused drains, leading to sewage pollution of the soil overlying the chalk in which the wells, etc., are sunk, were found in close proximity to the new heading. Under certain conditions, sewage could have polluted the soil only 30 feet away from the new heading. Not only so, but other existing sewers of defective construction were found hereabout, permitting escape of their contents, one being 160 feet and another 210 feet from the heading and a well respectively. Dr. Thomson enters in much detail into this part of the story, showing how enormous were the opportunities for sewage contamination of the water. He also states that all the excreta of the typhoid patients falling ill in April and May passed along a leaky main drain to the west of the waterworks, and that up to June the excreta of patients were also passing along a defective sewer to the east of the works.

An important appendix by Dr. Klein demonstrates sewage contamination of water from the well just mentioned, a considerable amount of bacterium coli being found in the water, whilst a sample of water from a main, distributing to Worthing and Broadwater alike, on submission to examination was found to contain, in addition to the bacterium coli, the enteric fever bacillus. Thus the chain of evidence against the Worthing water has been made complete. Dr. Kelly has evidence of excremental fouling of the new workings, but there is no trace of fever having been present among the men employed on the works. The water is not filtered before distribution to the mains.

The outbreak of typhoid at West Worthing and West Tarring in and after mid-July demands other explanation,

[1] *Dr. Theodore Thomson's Report to the Local Government Board on an Epidemic of Enteric Fever in the Borough of Worthing and in the Villages of Broadwater and West Tarring*, 31 pp., maps, diagrams, etc. Messrs. Eyre and Spottiswoode, price 4s. 6d.

and we can only stop to say that all the ninety cases were in consumers of the West Worthing water, which is furnished from a couple of wells, the water being seemingly pure as it enters the mains; consequently it must have been contaminated *in transitu*, if at all. The epidemic as it affected these places in July and later was confined to the lower part of each. The conformation of the ground is such that there is a ridge which runs through the district, dividing the two places, the water mains following the contour of the ground. If any infective material gained access to the mains, it would naturally gravitate to the two invaded areas. The mains are fitted with ball hydrants, and filth from the hydrant box or the roadway might easily pass into the mains when a ball had fallen as the result of a reduced pressure in the mains. Dr. Thomson discusses many theories as to the mode by which the water may have become contaminated, but has to admit that there is not sufficient evidence to show how the infection was derived.

THE PRACTICES OF QUACKS.

COLLECTIVE INVESTIGATION.

The Chairman of the Parliamentary Bills Committee desires again to call attention to the proposal contained in the following letter:—

In a flyleaf advertisement of a herbalist, forwarded to me recently, the advertiser states that he has no rival among the myriad herbalists of the kingdom; it is one of many similar documents which reach me from time to time. There is no doubt that this class of quacks is very large, and does an immense amount of harm. These charlatans defraud the public of their money and injure them in health. The Legislature does nothing. To a great extent this apathetic indifference of the powers that be is due to an utter ignorance of the magnitude of the evil. Members of the profession dilate eloquently on the number of these pests and the evils they perpetrate. But such general denunciation does not lead to much practical result.

If the Chairman of the Parliamentary Bills Committee of the Association is to take the matter in hand, he must be in a position to present a strong case. On the strength of the case that he can bring forward the possibility of future legislation must depend. The information must be reliable and well digested. It would be necessary for this purpose for every Branch to divide itself into districts. The members practising in each district must take different localities. Each member must, if the object in view is to be attained, collect the following information:

(1) The name and address of the quack.

(2) The description of his premises.

(3) One of his advertisements, including a copy of each book and pamphlet, and cuttings from the local papers with dates.

(4) A memorandum must also be made of the date on which the name, address, and description of the premises is taken down.

(5) The member must do this himself, and preserve his original notes. It would also be necessary to note the nature and condition of the neighbourhood where the quack purports to practise, and his hours of attendance.

(6) The results of the observations should then be catalogued and arranged by the different Branches.

If this work is carried on all through the United Kingdom we should then be in a position to call the attention of Parliament to the prevalence of quackery. I admit that the task is a heavy one, but unless some such plan is carried out it will be impossible to expect such drastic reform in the Medical Acts as is desirable in the public interests well as in the interest of the profession. This class of quacks will scarcely be affected by the hitherto proposed amendments to the Medical Acts. I shall be glad to receive the names of gentlemen willing to assist in the inquiry.

Ernest Hart.

THE CHELSEA HOSPITAL FOR WOMEN.

The Committee of Inquiry appointed in regard to the statements made by Dr. Parkes as to the Chelsea Hospital for Women has issued its report, with which the Hospital Committee has favoured us with a copy. The Committee consists of Lord Balfour of Burleigh, Lord Sandhurst, Sir Charles Dilke, Dr. John Williams, Mr. H. G. Howse, F.R.C.S., and Mr. J. H. Brass.

After recounting the events which led up to the investigation, and detailing the correspondence which had taken place between the medical officer of health and the hospital authorities, they say: "We have no doubt that defects did exist which might have been, and probably were, the cause of serious evil, and we think Dr. Parkes was acting in accordance with his duty in calling attention to the matter." They go on to say, however, that they do not understand why Dr. Parkes, in presenting his report recommending that notice should be served on the Hospital Committee, requiring them to amend the sanitary arrangements, and prohibiting the use of the hospital till that was done, "omitted to inform the Vestry that at the time of presenting his report the hospital had actually been clear of patients for more than three weeks, and that some days previously to the presentation of his report he had actually received a letter from the Secretary of the hospital, stating that it was their intention to proceed with the work as soon as possible, and certainly before inpatients were readmitted to the building."

Certainly this remains completely unexplained so far as the report before us goes. A careful analysis is given of the operations done in the hospital and the mortality which attended them, and we cannot fail to see that the Committee's report is even more condemnatory than that presented by Dr. Parkes. "Of the twenty-six deaths after operations in the hospital we are of opinion that twenty were due to septicæmia, or were accompanied by symptoms of septic poisoning. Among these we include the cases which died with peritonitis."

The cubic space allotted to each bed and the general principles on which the hospital is administered are criticised severely, and various recommendations are made, among which are the appointment of a registrar and a pathologist.

It is perhaps to be regretted that the Committee restricted themselves to inquiring as to the statements of Dr. Parkes, instead of investigating the causes of the disastrous results which they record. The really important question is whether the mortality was due to drains or to deficient antiseptic management. The drift of Dr. Parkes's report was suggestive of sanitary deficiencies as the cause, but reading between the lines of the Committee's report one seems to see that management was at fault. If this was their conclusion it is a pity they did not express it more decisively; they say:—

> In referring to the deaths which occurred in the hospital, we have stated our opinion that a large number (20 out of 26) was due to septicæmia, and we must add that septic temperatures were not infrequent amongst the cases operated upon which ultimately recovered. This applies to cases of minor operations as well as to those of more serious character. As it has a bearing upon the general sanitary state of the hospital, it should be noted that septic temperatures did not prevail in the practice of every member of the staff.

THE CHOLERA.

A Reuter's telegram from St. Petersburg, dated July 12th, states that 143 fresh cases of cholera and 54 deaths were registered there on the previous day. Now that cholera has taken such a hold on St. Petersburg the municipal authorities begin seriously to realise that it is time to take measures for the purpose of preventing the spread of the disease. The streets are being watered with a solution of tar, but in totally insufficient quantities.

On July 13th there were 171 fresh cases and 50 deaths registered in St. Petersburg, and on July 14th the total number of new cases reported was 218 with 89 deaths.

According to an official bulletin published on July 14th, 875 cases and 294 deaths have occurred in St. Petersburg since July 8th, while at Cronstadt between the same time there were 57 cases and 15 deaths. Between July 1st and 7th 16 cases and 3 deaths were reported at Warsaw. With respect to the various Governments in which cholera has reappeared this summer, the following figures are given: Between July 1st and 7th, Warsaw, 33 cases and 21 deaths; Kyelets, 119 cases and 51 deaths; St. Petersburg, 26 cases and 10 deaths; Estland, 7 cases and 3 deaths; Kovno, between June 24th and July 7th, 187 cases and 46 deaths; Plotzk, between June 24th and June 30th, 66 cases and 36 deaths; Olonets, between July 4th and 9th, 3 cases and 2 deaths.

The St. Petersburg Board of Health has caused public notices to be posted up in the streets giving directions as to the best measures to be taken to ward off the disease. The railway authorities have engaged a number of extra men on sanitary duty, and along the St. Petersburg, Moscow, and Warsaw lines special wards and ambulance carriages are being prepared for the reception of cholera patients. In St. Petersburg and the suburbs several public buildings are to be utilised as temporary hospitals, and the municipality has ordered the restaurant keepers to organise a gratuitous distribution of boiled water among the poorer classes. On July 16th there were 196 fresh cases and 79 deaths at St. Petersburg.

The Grand Master of St. Petersburg has published an order shutting up all the small drinking shops on Sundays and feast days till the epidemic abates, basing his order on the observations that the consumption of bad drink produces thirst which is afterwards quenched in the first water that is handy.

It is reported that a woman has died at Helder from Asiatic cholera.

Between July 13th and July 17th 5 cases of genuine cholera have taken place in or near Dantzig, of which 2 proved fatal. At Neufahrwasser 1 fresh case, that of a sailor, is reported, and at Neufahrwasser 2 cases.

The State Commissioner for the River Vistula reports several cholera cases and deaths during the last few days, especially among raftsmen.

The Galician town of Zaleszczyski has been officially declared a centre of infection. There were 9 fresh cases of cholera there, and 1 death on July 9th, and 15 cases on July 10th.

A *Central News* telegram from Vancouver, dated July 15th, states that steamers arriving there with the mails from China and Japan report that cholera is spreading with amazing rapidity throughout the Chinese Empire. It is stated that there have been 40,000 deaths in Canton alone. The Government is, however, reticent, and there are no means of arriving at the full extent of the scourge.

PRECAUTIONS IN SCOTLAND.

The *Edinburgh Gazette* of July 13th, 1894, contains an order by the Secretary for Scotland, continuing for a further period of six months the order putting in force Part III of the Public Health (Scotland) Act, 1867. Part III of this Act is concerned with the prevention and mitigation of diseases under order in Council, and had been put in force on January 2nd, 1893, in respect of the prevalence of Asiatic cholera in certain parts of Europe, and expired on July 14th, 1894.

REGISTRATION OF MIDWIVES.

[FROM OUR SPECIAL CORRESPONDENT AT LIVERPOOL.]

Meeting of the Lancashire and Cheshire Branch at Stockport.

Anyone familiar with the annual meetings of the Branch who was present at the meeting at Stockport on June 27th could not fail to perceive that something of unusual interest and importance was expected to take place.

The attendance, which numbered 279, has never been equalled, and included five lady members. There was a large influx from all parts of Lancashire and Cheshire, including many of the busiest practitioners, who had surrendered the best part of their working day, not with any hope of a holiday, and, to judge from the multitude of resolutions on the agenda paper, with little prospect of hearing the medical or surgical papers.

The cause of this extraordinary interest was the realisation on the part of the members of the fact that on the result of the ballot for the officers of the Branch depended its future character and usefulness for many years to come; that a party had arisen which, although in a minority and in great part but recently connected with the Branch, was by agitation and persistency endeavouring to oust from the Council and from the representation on the Council of the Association a large number of the oldest and most esteemed members and to replace them by others who had had no experience of the work of the Branch. That this was the intention of the party of which Dr. R. R. Rentoul is recognised as the leading spirit, is evident from a circular issued by a body styled the Medical Practitioners' Club, Manchester, accompanied by "Instructions How to Vote," a document which was almost a *facsimile* of the actual balloting paper.

In this document 27 of the names nominated by the Council for the new Council are crossed out, among them being those of W. M. Campbell, W. Carter, A. Davidson, E. W. Hope, J. W. Watkins, Leslie Jones, and W. J. Sinclair—in fact most of those who by long service and high professional standing seemed best qualified to serve on the Council. As regards the five representatives on the Council of the Association, the party proposed to deal still more drastically with the Council's nominations, and to remove the names of G. B. Barron, who has served in this capacity for many years; C. E. Glascott, who has recently completed a period of ten years as honorary secretary of the Branch; James Taylor, the retiring president; and E. H. Dickinson. For these they wished to substitute the names of J. B. Brierley, R. R. Rentoul, W. H. Hughes, and Samuel Woodcock.

On the other hand, those who did not agree with the views of Dr. Rentoul's party had made no less careful preparations, though their aims were less revolutionary. In fact, they proposed merely to substitute others for the names of Colin Campbell and R. R. Rentoul on the Council, and to vote for the Council's list for the five representatives on the Council of the Association. With regard to the representatives on the Parliamentary Bills Committee the Council had proposed three names provisionally, though it is not considered likely that three members will be allowed to sit. The Council's nominations were R. R. Rentoul, G. E. Shuttleworth, and G. T. Street. Dr. Rentoul's party wished to substitute the name of Samuel Woodcock for the last; the opposing party merely proposed to erase that of R. R. Rentoul.

At the memorable meeting at Liverpool, when Dr. Rentoul's supporters carried their proposals in opposition to the registration of midwives, including a vote of £250 out of the funds of the Branch, it is now known that votes were given by some who were not members of the Branch: and, in order to avoid the possibility of such an irregularity being repeated, it was resolved at the meeting at Stockport that there should be a strict adherence to the by-law which says that the voting papers must be handed in personally to the Secretary. The personal handing in of the papers took from one to two hours, and when all had voted the meeting was adjourned to some date not yet agreed upon. The counting of the votes occupied the scrutineers until close upon 9.30 P.M., when the result was announced to those members who had remained to dinner. These results showed a complete defeat of the agitation to displace the older members of Council. The Council's nominations for the representatives on the Council of the Association had been carried as they stood, and the Council's list for the Council had been carried except in so far that the names of Colin Campbell and R. R. Rentoul had been replaced by those of two other members who are not in sympathy with their views and who had been selected by the opposing party for the purpose.

The three representatives on the Parliamentary Bills Committee were returned as nominated by the Council, but Dr. Rentoul received fewer votes than the other two. In an election of this kind a good deal of cross voting was inevitable, and it is therefore scarcely possible to determine the exact proportion of votes on either side, but there seems to have been a majority of at least 3 to 2. It cannot be doubted that both parties put forth their full strength, and the result has shown that the old officers retain the confidence of the Branch, and that the revolutionary views of some who have lately been a good deal heard of do not commend themselves to the majority of the members.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1894.

ELECTION OF MEMBERS.

A meeting of the Council will be held on October 24th, 1894. Candidates for election by the Council of the Association must send in their forms of application to the General Secre-

tary not later than twenty-one days before such meeting—namely, October 3rd, 1894.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

NORTH WALES BRANCH.—The annual meeting will be held at the George Hotel, Bangor, on Thursday, July 26th, at 1.30 P.M. After formal business, and the President's address, the following papers and communications will be read: A. Bernard, M.B., Liverpool: 1. On the More Recent Treatment of Gleet and Urethritis. 2. On the Treatment of Early Syphilis by Intramuscular Injections of Mercury. Richard Williams, Liverpool: The Sanitary Aspect of the Labour Commission's Report on North Wales. J. Lewis Owen, Llangefni: Pathological Specimens, with Short Notes. Hugh Jones, M.B., Dolgelly: Extrauterine Gestation; Recovery. J. Lloyd Roberts, M.B., Denbigh: Leucocythæmia. John Elliott, M.D., Chester: Anthrax Pustule on the Skin—Human. R. H. Mills Roberts, F.R.C.S.Edin.: 1. Fractured Ribs in Old Age. 2. Note on Trephining. E. J. Lloyd, M.D., Bangor: Cases from Infirmary Practice. H. J. Roberts, Penygroes: Clinical Cases. The annual dinner at 5 P.M.; tickets 5s. each.—W. JONES-MORRIS, Honorary Secretary, Is-y-coed, Portmadoc.

LANCASHIRE AND CHESHIRE BRANCH.—Members of the Lancashire and Cheshire Branch who propose attending the annual meeting of the Association at Bristol can obtain railway time tables by applying to the Honorary Secretary, Dr. James Barr, 72, Rodney Street, Liverpool.

SOUTH-WESTERN BRANCH.

THE fifty-fifth annual meeting of this Branch was held at Liskeard on June 27th. About forty members were present. Before the meeting Mr. W. Nettle, the President-elect, entertained the members at luncheon. The general meeting was held in the Guildhall at 1.30 P.M. In the absence of the President, Mr. Tosswill, the chair was taken by Mr. SWAIN, Vice-President.

Installation of New President.—The minutes of the last annual meeting and of the subsequent intermediate meetings at Exeter and Plymouth having been taken as read, Mr. SWAIN resigned the chair to the new President, Mr. Nettle. A letter was read from the retiring President, Mr. Tosswill, expressing his regret that he could not attend. Dr. ROLSTON moved and Dr. WOODMAN seconded a hearty vote of thanks to Mr. Tosswill, which was carried unanimously.

President's Address.—The PRESIDENT then delivered his inaugural address, drawing attention to the many claims both of scenery and situation which Liskeard had upon the profession as a healthy and health-giving locality. A most hearty vote of thanks was accorded to the President for his most interesting address.

Report of Council.—The HONORARY SECRETARY read the annual report of the Council, which stated that the Branch now numbered 244, being an increase of 8 during the past year. Twenty-eight new members had been enrolled, of whom 19 were already members of the Association; 4 had died, 4 had left the district, and 10 had resigned. The last annual meeting was held at Exeter, and two intermediate meetings had been held, one at Exeter on October 20th, and the other at Plymouth on February 14th. The financial position of the Branch continued to be satisfactory, the balance in hand being £68 13s. The Council suggested Tiverton as the next place of annual meeting, and Mr. L. Mackenzie as President-elect. The report was adopted.

Next Annual Meeting.—Resolved that the next annual meeting be held at Tiverton, and that Mr. Mackenzie be the President-elect.

Election of Officers.—It was resolved that the election of six new members of the Branch Council be left to the President-elect, and the members resident at Tiverton. It was resolved that the President and Honorary Secretary be the Representatives of the Branch on the Council of the Association. Resolved that the Honorary Secretary be the Representative of the Branch on the Parliamentary Bills Committee; and that Dr. Gordon be re-elected Honorary Secretary.

Communications.—Dr. MONTGOMERIE, of Penzance, read a Case of Pyopneumothorax, and a Case of Psoriasis treated with Thyroid Extract successfully after the failure of other remedies.—Dr. KEMPE, of Exeter, read an interesting Case of Diagnosis and Ovariotomy.—Dr. HINGSTON, of Liskeard, showed a Case of Sporadic Cretinism treated by Thyroid Extract.—Mr. SWAIN, of Plymouth, showed a Calculus removed by suprapubic operation.

Dinner.—After the meeting the members made a most enjoyable excursion to Cheesewring, and in the evening dined together at Webb's Hotel.

SPECIAL CORRESPONDENCE.

PARIS.

Typhus in France.—The late M. Carnot.—Ringworm.—Hospitals and the Pari Mutuel.—Illegal Practice of Medicine.—General News.

AT a recent meeting of the French Consultative Committee of Public Health it was stated that from January 1st to July 4th 47 cases of typhus occurred with 22 deaths. The Minister of the Interior has sent a circular to all the prefects of France explaining under what conditions typhus is developed, also the prophylactic measures to be adopted. It is also urged that the Paris night refuges organised by private philanthropy be called upon to utilise the facilities offered by the municipal disinfection service.

The annual fête given at the Salpêtrière Hospital by the Brothers Leonnet has been postponed. The assassination of the late President of the Republic has produced such an impression on the patients that the medical men consider it wiser to avoid any form of excitement. The professors and *agreges* of the Bordeaux Medical Faculty will wear crape on their hats at all meetings where the official dress is worn. The Bordeaux Municipal Council has voted £20 to be devoted in memory of M. Carnot to the benefit of sickly children, who will be sent to the Arcachon sanatorium.

M. George Villain, municipal councillor, at a meeting of the Council, expressed, on behalf of the population of Moisselles, fears that ringworm may be spread in consequence of children from the Berck Hospital suffering from this complaint being lodged at Moisselles in a building destined as an asylum for the aged. The Director of the Assistance Publique replied that every precaution had been taken to prevent contagion.

The Municipal Council has authorised the construction, at the St. Louis Hospital, of the Lallier School Hospital for children with ringworm; the expenses will amount to 60,000 francs; three-fourths of this sum will be furnished by the *Pari Mutuel*. The Council, after hearing M. Straus's report, authorises the construction of a sanatorium for phthisical patients at Agincourt, in the Oise department. The expense will reach nearly 32,000 francs, and will also be defrayed by the *Pari Mutuel*.

Mme. Blin, who had been proceeded against in the Mans law court for illegal practice and fined, has appealed, and the Angers law court has overruled the judgment. Mme. Blin is a midwife, and pretends to cure all complaints by placing her hand on the patients and looking at them. The Court stated that if, according to the law (*Ventôse, An IX*), Mme. Blin and her congeners could be prevented from practising, the law of November 30th, 1892, is powerless to deal with such acts. French legal progress strongly resembles that of a crab.

The War Minister has awarded a medal to Madame Berges (Sister Marie Fréderique), who has shown remarkable intelligence and courageous devotion during typhoid epidemics, especially those of 1893 and 1894 in the Lure barracks. Madame Grénier (Sister Emilie) has been awarded a gold medal for her conduct during the thirty-three years she has devoted herself at the military hospital at Auch.

Sixteen of the male nurses who have followed the elementary lectures on medicine and nursing at the Tenon Hospital have received *certificats d'études*; also a sum of money placed in the savings bank for their separate benefit. Dr. Félizet, the surgeon in chief of the hospital, and the *internes* have organised this fund.

M. Paul Berger, *agrégé* at the Paris Medical Faculty, has been elected Professor of Clinical Surgery.

CORRESPONDENCE.

IRISH DISPENSARY DOCTORS.

SIR,—As you will see by enclosed newspaper report, my Dispensary Committee has consented to pay a substitute for me during my vacation. This is the first time they have paid a substitute for me since my appointment fifteen years ago. With many thanks for your exertions on our behalf, I am, etc.,

Wexford, July 11th. THOMAS PIERSE.

THE PROPOSED REGISTRATION OF MIDWIVES.

SIR,—You have given to Dr. Rentoul a column in the BRITISH MEDICAL JOURNAL of July 14th to ventilate his "aims" regarding the proposed formation of what he describes as "an inferior order of midwifery practitioners."

May I ask for about a quarter of the same space to say that probably a majority of our profession believe that:

1. There are numerous cases in towns and country districts where poor women have been maimed for life from the brutal treatment they have met with during their confinements from ignorant women who are allowed to practise as "midwives" by the present law.

2. That from poverty as well as from other conditions prevailing in scattered country districts it is impossible to carry out Dr. Rentoul's second aim—namely, "to supply all pregnant women, rich and poor alike, with fully educated and fully qualified medical practitioners during their confinements."

3. That this great hardship which falls upon the poor, and only the poor, can to a great extent be remedied by the proposed measure to register midwives.

4. That our profession, from the action of a minority of over-zealous members, may be charged with greedy and selfish motives in resisting a measure whose object is to confer a great boon on poor people, and which has for its support many of our leading members.—I am, etc.,

Garstang, July 16th. J. J. GORHAM, M.D.

SIR,—The members of the Lancashire and Cheshire Branch, and, indeed, of the whole of the British Medical Association, have been called upon frequently to discuss Dr. Rentoul's views, of which he now kindly gives us a condensed form. It is seen that under the title of Views on the Proposed Registration of Midwives, we are to consider not only what is implied by the title but such wide subjects as the administration of lying-in and poor-law hospitals, apprenticeship and examination of medical students, and last, the eminently practical suggestion that we should subscribe 5s. each to forward the promulgation of Dr. Rentoul's views. Everyone knows that Gregory powder may be administered in jam with great success. Dr. Rentoul wishes us to oppose the registration of midwives, and we are to be induced to do so by such perfectly unobjectionable, not to say noble, views as his second aim, "to supply all pregnant women with fully-educated and fully-qualified medical practitioners during their confinements." It reads almost like a pious wish for the millenium. If Dr. Rentoul can provide qualified practitioners to do all the work done by midwives there would only be the question of preference on the part of the patients to be considered. Surely in the meantime others may be allowed to do their little to improve the present state of affairs. Dr. Rentoul proposes the system in force at Newcastle and Oxford as a practical method of carrying out his second aim. Perhaps he would make out the little bill and ask the Town Council of Liverpool to adopt the plan. He need fear no opposition from his medical brethren.

Dr. Rentoul speaks glibly of introducing his pet system into all lying-in hospitals. If he were to devote his energies to showing the committees of and subscribers to these institutions the better way, he might let the members of the British Medical Association have peace for a season. Many of us have got tired of the waste of time and money which Dr. Rentoul requires of us for the purpose of fighting chimeras that have their existence chiefly in his own fervid imagination. Many of the supporters of the agitation against the improvement of midwives seem to fear that any such improvement will be the last straw in the competition between a certain class of medical men and midwives, an idea carefully kept in view, though not too prominently put forward, by the promoters of the agitation. It is only to be wondered at that Dr. Rentoul's condensed views have not more comprehensive style, but what vistas may not open out from his expanded views? Perhaps in time he may let his supporters have glimpses of a future of fixed (large) incomes for all qualified medical men paid out of the rates, and suppression of all competition from quacks, chemists, wholesale or retail, midwives, and every other person who now ventures to advise ailing humanity. With many wishes for this pleasant state of affairs, I am, etc.,

Liverpool, July 16th. ALEXANDER STOOKES.

SIR,—Much of what Dr. Rentoul says in his letter in last week's BRITISH MEDICAL JOURNAL seems to me to be irrelevant. Midwives we have always had, and midwives we shall continue to have as long as the world lasts I suppose. There is no law to compel a pregnant woman to have a doctor to attend her in her confinement; and there is no law to prevent any woman, however ignorant she may be, attending another woman in labour.

What we must insist upon is that the present condition of things, by which an ignorant woman can unchecked attend poor women in their confinements, and so risk the lives of these poor women, shall be put a stop to. Dr. Rentoul offers no practical suggestions as to how this is to be brought about. Certainly he says that one of his aims is "to supply all pregnant women with fully educated and fully qualified medical practitioners during their confinements." How does he propose to do this? How does he propose to compel the wife of a labourer earning 18s. a week to have one of these practitioners in attendance? It cannot be done.

The discussion of this subject is, in my opinion, much confused by such letters as Dr. Rentoul has recently written.—I am, etc.,

Cardiff, July 16th. A. SHEEN.

*** In the copy of the letter forwarded to us by Dr. Rentoul, and published last week, he accidentally omitted the following paragraph, which should have been numbered 11:

"11. To recommend that practitioners in each town establish and exclusively manage a maternity society, so that the wives of that portion of the industrial class (who on the one hand are ineligible for medical charity, and on the other are not able to pay the higher confinement fee, and where the weekly income of the entire family from all sources does not exceed 25s.) be able to provide a medical practitioner for their confinement; that the confinement fee for a natural labour be 21s., paid in weekly or monthly instalments before the confinement; that such fee include four subsequent visits and vaccination; that each practitioner have a fifth year student apprentice; and that each society provide an obstetric nurse to look after the mother and infant for seven days."

The paragraph numbered 3 should have run as follows:

"3. To give our adherence to and our assistance in carrying out the rule made by the General Medical Council at its May session, 1894, relating to the *illegal* granting of diplomas.

SPREAD OF INFECTIOUS DISEASE BY TRAMPS.

SIR,—I am glad to see that the ticket system, which I advocated at the last annual meeting of the British Medical Association, for preventing the spread of infectious disease by tramps, has found another defender in Dr. Clark, of Lowestoft. Three ways have been suggested for checking the dissemination of infection by this class—compulsory vac-

cination, quarantine, and the ticket system. Vaccination applies only to small-pox, and I take it that it would be impossible to obtain an Act of Parliament making it compulsory, unless perhaps during a panic caused by some unusually severe epidemic. There remain only quarantine and the ticket system. The former would, as it appears to me, involve a needless interference with the liberty of the subject which would in some cases cause real hardship, and would on that account probably fail to obtain the sanction of Parliament. It would also, I believe, be found more costly and more difficult to work than the ticket system, which would be only an extension and further application of the principles which already guide us in dealing with cholera.

It has been suggested that tramps wishing to evade the system might exchange their tickets, but this might be prevented by the insertion of one or two easily taken measurements on the Bertillon system, such as the length of a foot or a finger. With regard to common lodging houses used by tramps, I fancy that most of these are already registered under the Public Health Act, and I think there would be no great hardship in requiring that those referred to by you as being privately supported should also be registered, and the same sanitary regulations applied to all.—I am, etc.,

C. Gore Ring.

July 17th. M.O.H., Keswick.

PROFESSOR CROOKSHANK'S EVIDENCE BEFORE THE VACCINATION COMMISSION.

Sir,—The article in the British Medical Journal of July 14th, on Professor Crookshank's evidence before the Vaccination Commission, is of the greatest value at what would seem to many to be a crisis in the vaccination question as a whole, and not the compulsory section of it, which has been cleverly put forward as a kind of subway by which the citadel of the prophylactic might be attacked insidiously, and some think overwhelmingly. Professor Crookshank's is a sudden, and would be by many considered a scientific, attack at the very first principle of the whole vaccination question, which in your article you have focussed into inoculation *versus* vaccination, or variola *versus* vaccinia, as prophylactics against variola. The point focussed is the following: "Vaccination with cow-pox is no protection against small-pox, although inoculation with variolous matter is." As one who has seen both extensively practised, and have myself intentionally pitted the former, vaccination, against the latter, inoculation, and come off victoriously with vaccination, I think I can claim a right, if anyone can, to ask from the Professor the proof of facts, not the deductions of theory. While doing this, I know, as regards this country, I am asking for the evidence of a practical impossibility. Then why, I ask, did not the Royal Commission on Vaccination call for these proofs of facts? And the members of that Commission cannot say they did not know that these proofs were available, as I repeatedly offered to supply them, and to submit to any species of cross-examination which any member thought fit to subject me to. I was promised that I would be examined in my turn, and have the evidence of the secretary in support of this. Further, feeling that time was passing, I did everything I could to be examined, but without success. I was deliberately shunted, and on asking a professional friend, who could reply with some amount of authority, why evidence such as I could give, and which I had fully submitted to the Commission, together with copies of my pamphlet entitled *What is Efficient Vaccination?* was not called for, I received the characteristic reply, "Your evidence is not wanted." It is only *pro bono publico* that I enter into these details, but when a certain evening paper with strong antivaccinist proclivities hinted that certain officials, and others considered as experts in vaccination, declined to be examined, though called on for their evidence, I wrote to that and other papers stating that not only had I never been asked to give evidence, but that I was denied the opportunity of giving my evidence in favour of one of the greatest blessings vouchsafed to humanity, and this though I was one of the first to offer myself as a witness, and had complied with every requirement necessary in submitting the points on which I was prepared to give evidence. The evening paper in question declined to insert my letter. I have no wish to take up more of your valuable space, but as the Royal Commission on Vaccination has seen fit to deny me the privilege of appearing before it in support of scientific vaccination, yes, and of its immense superiority to even the most scientific inoculation, conducted on true Pasteurian lines of cultivation, I herewith challenge Professor Crookshank to defend his theory, which you have focussed, as against my practice as just given, before a professional gathering at the meeting of the British Medical Association at Bristol, the lines of my attack being those given in my pamphlet on *What is Efficient Vaccination?* page 10.—I am, etc.,

Blackheath, S.E., July 16th. Robt. Pringle, M.D.,
Brigade-Surgeon-Lieutenant-Colonel.

RESEARCHES ON VACCINIA.

Sir,—In a recent number of the British Medical Journal a paper was published by Dr. Ruffer and Mr. Plimmer giving an account of certain protozoa found by them in vaccinia "pustules."

Through the kindness of Dr. Ruffer I have had an opportunity of examining some of his specimens, and was able clearly to make out in them the bodies which he and other observers, more particularly Guarnieri, believe to be of a parasitic nature.

Whether this be so or whether the appearances seen are merely the result of epithelial irritation of a non-specific nature,[1] I must join issue with those observers who believe these bodies to represent the special organism of vaccinia, especially as they can be "grown" in the corneal epithelium of the rabbit—an animal which my own experiments appear to show is insusceptible to this disease. Moreover, I demonstrated to the Norwich Medico-Chirurgical Society in February last certain small bacilli which appear always to be present in large numbers in the vaccine vesicle of man and of the calf, provided that the vesicle be examined before it has attained maturity. If the lymph be taken with all precautions as to cleanliness, including previous removal of the uppermost layer of epithelium, these bacilli are present often in very large numbers, while other micro-organisms are conspicuous by their absence. These bacilli (which cannot be found in later lymph, or only in extremely small numbers, possibly for the reason that they have given rise to spores) I hope to have the opportunity of demonstrating at the Bristol meeting. Dr. Klein informs me that he has also invariably found similar bacilli in vaccine and variolous lymph, so that, although I have not seen his specimens as yet, I cannot but think that they must bear a definite relationship to these diseases. Unfortunately, neither Dr. Klein nor myself have been able to cultivate them up to the present on artificial media.—I am, etc.,

Cromwell Crescent, S.W., July 15th. S. Monckton Copeman.

THYROID TREATMENT IN OBESITY AND EXOPHTHALMIC GOITRE.

Sir,—May I crave the privilege of the insertion of the following few remarks on the important subject of thyroid treatment (1) in obesity and (2) in exophthalmic goitre?

1. In obesity: The booming of the thyroid treatment by irresponsible writers in the lay press has naturally called forth some comment in the columns of the British Medical Journal. Mr. Yorke-Davies concludes from his experience that in ordinary cases with a properly-constructed dietary the thyroid treatment is useless, but that undoubtedly in certain conditions of the blood it forms a valuable adjunct. As apparently he has always combined the thyroid treatment with dieting, it is a little difficult to say how far the former has affected his results in the few typical cases which he publishes. My own experience of the treatment of obesity with thyroid has been much more limited, for the reason that, after a careful trial of it more than a year ago, I came to the conclusion that it did no good. I treated a woman, aged 53, weighing 16 st. 3½ lbs., for three months, first with 5 minims of Brady and Martin's thyroid extract twice a day, and secondly with one of Burroughs and Wellcome's tabloids three times a day, at the same time allowing her to continue her ordinary diet. In the first two months she lost 8½ lbs.,

[1] *Cf.* D'Arcy Power: "Some Effects of Chronic Irritation upon Living Tissues" (British Medical Journal, October 14th, 1893).

but in the next month she gained 5 lbs., so that at the end of three months' treatment she was very much *in statu quo*. Subsequently I treated her by dieting alone, with the very satisfactory result of reducing her between 2 st. and 3 st., with great improvement in her general health. I may add that, with the exception of headache for the first two or three days of the thyroid treatment, no bad results manifested themselves; in fact, the patient assured me that while taking the thyroid she felt better. My own opinion coincides with that of Mr. Towers-Smith, that the results of dieting, properly carried out, are so good in most cases of obesity that no other treatment is required. Moreover, if employed at all in obesity, the thyroid method should only be adopted when other modes of treatment fail, and then, on account of possible idiosyncrasy, should be used with caution.

2. In exophthalmic goitre: In December last year you published an account of a case of "Thyroid Feeding in Exophthalmic Goitre" by Mr. David Owen, of Manchester, in which great benefit was attributed to the administration of thyroid gland. I have seen this case quoted as a very remarkable one both in America and in this country, and it is again referred to in a very able article on Graves's disease by Professor Putnam in the number of *Brain* just published. It has doubtless prompted others to use the thyroid gland in the treatment of this disease. The case was one in which a man was said to have had, by mistake, ½ lb. of thyroid gland for two days running. As the weight of an individual gland is only about 90 grains, it seemed to me that possibly a mistake had arisen on the part of the butcher, and that the patient had not had thyroid gland at all. On my writing to Mr. Owen he very kindly reinvestigated the subject, and found that—at any rate, in the first instance—it was not thyroid gland that the patient had had.

Two years ago, as soon as I found the potency of thyroid gland when given by the mouth in myxœdema, I tried it in exophthalmic goitre in what would now be regarded as heroic doses—2 lobes a day. I have never held with those who believe that the thyroid gland is the *fons et origo* of Graves's disease, although I think it is undoubtedly responsible for some of the symptoms. I thought it possible that by giving thyroid gland by the mouth the activity of the patient's gland might be inhibited, and that it might have a physiological rest which would prove beneficial to the patient. This patient and another treated in the same way were certainly not made worse in any way. I do not think they improved more than other patients do in the natural course of the disease.

Dr. Auld's recent case, where the patient was made worse by the administration of thyroid extract, is instructive; but I do not agree with him in his conclusion that this fact supports the view that Graves's disease is caused by a hypersecretion on the part of the thyroid gland. If this were so, it should be possible to produce Graves's disease experimentally by giving large doses of thyroid gland. Attempts of this kind on animals have hitherto proved quite unsuccessful.

It is very easy to deceive oneself as to the effects of treatment in Graves's disease. It is a disease in which there is not only an acute stage, but there are often recrudescences, sometimes distinct relapses. The natural subsidence of these attacks may be attributed to our remedies when Nature should get the credit. I thoroughly agree with Dr. Auld that the test of any treatment is its effect on an obstinate chronic case. My own experience is that thyroid treatment has little effect one way or the other.—I am, etc.,

Welbeck Street, W., July 14th. HECTOR W. G. MACKENZIE.

SIR,—I do not dispute Mr. Towers-Smith's dictum that the administration of thyroid glands in obesity is of no service whatever. On that point I am not qualified to offer an opinion. But I demur to the conclusion that their use in myxœdema is attended with danger.

No doubt if a patient recovering, under the influence of the thyroid treatment, from myxœdema be allowed to resume or to increase the bodily exercise too abruptly, there may be risk of a weakened and diseased heart giving out; and in the matter of treatment this is a point which seems to have been a good deal overlooked. But to suppose that the disappearance of mucin from the tissues can have anything but a tonic effect on the cardiac muscle is not reasonable, especially when it is plainly apparent that the laryngeal muscles regain their power, under this treatment, in a most remarkable degree.

It would be most unfortunate if, under some imaginary sense of danger, any victims of myxœdema should be debarred from profiting by this valuable method; at the same time it is well that the possible danger alluded to should not be lost sight of.—I am, etc.,

Broadstairs, July 15th. THOMAS F. RAVEN.

SIR,—It is evident that Mr. Towers-Smith did not read my letter, for if he had done so he would have noticed that it was only in exceptional cases and under careful observation that the thyroid tabloids were used, and I may remark that it is a good thing for science and for our profession that there are not many of Mr. Towers-Smith's opinion, as, if this were the case, no new remedy, however beneficial, would be discovered or tried, and we should certainly remain in continual ignorance to the end of time.

Under proper observation, it is undoubtedly advisable that any dietetic substance, whether it be pepsine or thyroid powder, should be tried, where it is likely to be beneficial, and its virtues, if it has any, proved. I do not think Mr. Towers-Smith is wise in attempting to suppress legitimate use of remedies by others, who are quite as well able to judge what is to the interest of their patients, if not more so than he is. If Mr. Towers-Smith could be persuaded to embark on a crusade against quack medicines for the relief of obesity, instead of against thyroid tabloids, he would do some good, because he must know—at least I do—that an incalculable amount of harm is done to thousands of people, and their health permanently injured by taking advertised remedies for the reduction of obesity. There is scarcely a day that a case does not come under my observation where untold injury to the digestive organs and nervous system has not been done in this way. Mr. Towers-Smith's experience with thyroid tabloids and his patients also is certainly unique, and one is reminded in reading it, of our old friend Mr. Snodgrass, in Pickwick, who attributed, after dining "not wisely but too well," his very severe giddiness and inability to articulate to the salmon he had eaten. Mr. Towers-Smith, in his letter, says that "errors of observation are the commonest," so that possibly poor Mr. Snodgrass may have been right, but his friends may have lacked the power of observation. It is a pity that thyroid substance should be credited with such results as Mr. Towers-Smith implies, especially on such evidence as he adduces in his own case. Coincidences will occur, and we are apt sometimes to attribute effects to the wrong cause. Mr. Towers-Smith complains that I do not give the dietary in the six cases specified. This I adapt to the particular requirements of the patient, but he (Mr. Towers-Smith) ought to know that every case of obesity, like that of any other diseased condition, should be treated on its merits. Regard for your space prevented my giving the diets in detail.

It seems absurd Mr. Towers-Smith's quoting one specimen case of obesity, treated by diet only; nobody questions its efficacy. I could quote hundreds and hundreds of cases where two to six stone has been lost with permanent benefit. The great thing in treating obesity is to make the diet as easy and as pleasant as possible, compatible with a rapid loss of weight, and to teach the patient the difference he should make in the future so that the reduction may be permanent.

In the case of a large number of medical men now under my care, who are anxious to try the thyroid tabloids, I impress upon them the greater benefit of strict dieting, in preference to any adventitious aid, and this opinion I shall continue to enunciate. Apologising for further occupying your space, I am, etc.,

Harley Street, W., July 13th. N. E. YORKE-DAVIES.

SCOTCH HEALTH BILLS IN THE HOUSE.

SIR,—I have been instructed to convey to you an expression of the thanks of this Society for your kind aid and support:

1. In securing the deletion of the obnoxious clause in the Dundee Corporation Bill, promoted this session, in which it

was proposed to abolish the security of tenure hitherto enjoyed by the medical officer of health; and

2. In anticipating the movement in opposition to the proposal of the Government to place a representative of the medical profession upon the new Local Government Board for Scotland, and for so successfully organising the forces in support of the clause as to carry it triumphantly through Committee. I may, indeed, add that your action in this matter, and the advocacy of the BRITISH MEDICAL JOURNAL, appear to have given general satisfaction to the profession in Scotland.—I am, etc.,

A. CAMPBELL MUNRO,
Honorary Secretary, Society of Medical Officers of Health for Scotland.

Paisley, July 16th.

QUESTIONS FOR PARLIAMENTARY CANDIDATES.

SIR,—Being one of the central committee to select a candidate to contest the representation of this district of boroughs in Parliament, I put the following questions to the candidate who was selected—Mr. W. Tudor Howell—who (besides verbally) has given me his replies in writing, and for publication. The series of questions may be of assistance to other members of our profession in interviewing candidates. In the interests of the profession definite opinions upon such points should be elicited from all who seek to enter Parliament; and certainly afterwards these will prove to be of advantage to the public.—I am, etc.,

Denbigh, July 16th. J. LLOYD ROBERTS.

1.—*Vaccination.*

Would you support the continuance of compulsory vaccination, as at present carried out?—I believe in compulsory vaccination, but must of course keep my mind open to the consideration of the report of the present Royal Commission on the subject. I am in favour of all vaccinations being carried out with pure calf lymph.

2.—*Public Health Administration in the Country.*

Are you in favour of consolidating the Public Health Acts, and of making all throughout compulsory, instead of allowing some Acts and sections in others to continue permissive?—I am most certainly in favour of consolidation of the law upon public health. It is essential that it should be clearly intelligible to the people at large. I do not care to bind myself upon the permissive regulations without having the particular clauses or regulations which it is sought to make compulsory put before me.

Are you in favour of securing uniformity in administration, in vigilance, and activity by sanitary authorities?—The basis of sanitary administration should most certainly, in my opinion, be as uniform as possible so as to allow different districts to work together. In matters of detail, however, I think it would be undesirable to tie the hands of sanitary authorities.

3.—*Vivisection.*

Do you consider the present legal restrictions under which physiological investigations are conducted a sufficient guarantee to the public that no cruelties or unnecessary suffering to animals are perpetrated; and will you resist further legislative interference with the advancement of the science of physiology which will have the effect of driving English leading scientists out of the country or of putting them in a second position in respect to those of other nations?—Under the present rigorous regulations I see no possibility of abuse, but I should be against any extension of the privileges of vivisection to any persons except well known and responsible scientists. I believe that vivisection has been and is necessary to the advance of surgical and medical science, and shall resist any attempt to handicap English students.

4.—*Sale of Poisons.*

Are you in favour of the extension of the Sale of Poisons Act to include rat poisons, carbolic acid, patent medicines (sold now under Government stamp) which contain dangerous quantities of poisonous drugs, and suchlike articles, which are sometimes used to cause death of human beings either criminally or accidentally?—The schedule to the Poisons Act might be materially improved by being overhauled by some competent authority. Although, of course, I only speak as a layman in such matters, I am informed that at present some anomalies exist. As a lawyer, I have in mind the great difficulty which must arise in applying legal restrictions to the sale of articles containing poisonous ingredients.

5.—*Habitual Drunkards.*

What are your views upon compulsory treatment or confinement of habitual drunkards; and would you support a well-considered measure for dealing with such persons?—I certainly think that excessive alcoholism is a form of mental aberration, and under similar conditions I would extend to the habitual drunkard the compulsory powers of restraint at present exercised over lunatics.

6.—*Registration of Midwives.*

Will you oppose any Bill which may be brought forward for the registration of midwives in the official *Medical Directory*?—I understand that upon this question considerable differences of opinion exist even in the medical profession. Looking at the matter as I do, quite impartially, I fancy that the registration of midwives would open a dangerous door to illegitimate practice.

7.—*Quackery.*

What measures would you propose for the protection of the public from quackery, or from the impostures and impositions of unlicensed and unlearned professors of the healing art?—I think that very much greater vigilance should be exercised by the Public Prosecutor in bringing to justice cases of quack impositions. The duty of prosecution at present devolves upon too many public authorities. I am not prepared to lay down the principle of a Bill by which such an extremely difficult question could be efficiently dealt with.

THE HOLY WELL AT SHIREHAMPTON.

SIR,—The approaching visit of the British Medical Association to Bristol induces me to write to you about the Holy Well at Shirehampton. In a secluded nook on the banks of the Avon is to be found a typical example of a Holy Well. There are not many such to be met with. Those members of the Association who take interest in archæological and historical pursuits will be enchanted by this genuine specimen of the old-fashioned curer. Even now country folk travel long distances in order to benefit of the waters in this well. When I lived at Shirehampton three years ago I devoted a good deal of attention to the subject of Holy Wells, but in my journeyings since I have lost my notes. However, I have no doubt the vicar of Shirehampton (Rev. A. Harvey) would be able to guide any members of the Association who might wish to visit this secluded spot.

Artist members of the Association can be delighted by viewing the sunset from Pen-pole point, another interesting spot near Shirehampton. By-the-bye, Pen-pole should be Penfold, as this eminence used to be the place that sheep and cattle were driven upon, to prevent their being drowned by the overflowing of the Severn.

The water of the Holy Well is impregnated chiefly with lime salts, and gets great credit from ophthalmic patients.—I am, etc.,

Amersham, July 16th. P. MURRAY BRAIDWOOD, M.D.

INSPECTION OF WORKHOUSES.

SIR,—May I add one suggestion to your article on this subject, as I have for some years urged its importance? It is that women are as urgently required as inspectors as guardians, and I think that recent events in various places must have confirmed all such convictions in practical minds. Unless inspectors are either medical men or trained nurses, how can they perceive the needs and defects of sick wards, for which surely an acquaintance with hospitals must be essential? Then women as inspectors of schools would be able to gain the confidence of children, and examine their bodily condition in an efficient manner that must be impossible for men to carry out. Women of refinement and education should also be engaged in the work of superintending all the larger Poor-law schools, if in no lower positions, and I am thankful to find that at least some such persons are beginning to entertain the desire to offer themselves for the work. It is surprising that these ideas have grown so slowly in official minds.—I am, etc.,

Tunbridge Wells, July 5th. LOUISA TWINING.

OBITUARY.

PROFESSOR GEORGE EDGEWORTH FENWICK, M.D., C.M.

IT is with regret we have to announce the death of Professor Fenwick, which occurred at his house in Montreal on June 28th. He was born in Quebec in 1825, and graduated in medicine at McGill University in 1847. For many years he was the leading surgeon in Canada, and was known over the American continent as a skilful operator. His name will be chiefly remembered in connection with the surgery of the joints, and the operation of excision of the knee-joint, devised by him before the days of antiseptic surgery, is still a most excellent and conservative one, and has been extensively adopted by surgeons throughout Canada. He was also a very successful lithotomist, and had a large experience in excision of the rectum. His contributions to medical literature were numerous and valuable, but as they were chiefly published in the *Canada Medical and Surgical Journal*, of which he was for many years editor, they were not widely known. He was the author of the article on Excision of the Knee in the *International Cyclopædia of Surgery*.

Dr. Fenwick held for eight years the Chair of Clinical Surgery and for fifteen years the Chair of Surgery in the McGill

University. As a teacher he was very popular. He was always very original in his methods, and insisted on the importance of bedside instruction. He taught his students to observe and think for themselves. His influence on the progress of surgery in Canada was perhaps greater than that of any other man. For twenty-five years he was full surgeon to the Montreal General Hospital. He had been President of the Canadian Medical Society and the Montreal Medico-Chirurgical Society, and was also for a number of years a member of the Council of the College of Physicians and Surgeons of the Province of Quebec. His kindly genial manner and benevolent countenance will long be remembered by those who have had the privilege of being his students, and many practitioners who when in difficulties availed themselves of his wise counsel, helpful guidance, and generous support, will feel that they have lost a friend.

DR. A. G. FENWICK, of London, Canada, elder brother of Professor Fenwick, passed away not long before him. He was born in England in 1818, and emigrated with his parents to Canada in childhood. He studied medicine at M'Gill College, Montreal, taking his degree in 1840. When the establishment of the Western University was mooted Dr. Fenwick took a leading part in the promotion of the scheme, and was Dean of the Faculty, besides occupying the Chair of Medical Jurisprudence and Toxicology. He was also for several years representative on the Medical Council at Toronto.

WE regret to have to record the death of Dr. J. P. FAIRMAN, of Savile Town, Dewsbury, which took place suddenly on June 8th. The deceased, who was a native of Scotland, graduated as L.F.P.S.Glasg. in 1838, and L.R.C.P.Edin. in 1860. He was the author of several papers.

WE regret to announce the death of Dr. JOSEF HYRTL, formerly Professor of Anatomy in the University of Vienna. Professor Hyrtl, who was 84 years of age, resigned his chair some twenty years ago on account of failing sight, and he has ever since lived in retirement at Berchtoldsdorf, near Vienna. Professor Hyrtl was famous not only as an anatomist but as a man of great and varied erudition. He was an excellent speaker both in his native tongue and in Latin, which he handled with a familiar mastery rare among modern scholars. His wife, who survives him, is a lady of English extraction, who has won for herself a name among the poets of Austria.

DR. AUGUSTE LANGLOIS, Professor of Mental Diseases in the Medical Faculty of Nancy, who died recently, was born at Avranches in 1839, studied medicine in the old French Faculty of Strassburg and in Paris, where he took his Doctor's degree in 1873 with a thesis on intercurrent diseases in the insane. His whole professional life was passed in the study of mental disease, and held subordinate offices in various asylums at Saint-Dizier (1868-1873), Dijon (1873-78), and Vaucluse (1878-79), finally becoming physician-in-chief to the Maréville Asylum, where he remained till his death. In 1879 he was appointed to the Chair of Mental Diseases at Nancy. He was the author of a large number of valuable medico-legal reports, of several papers in the *Annales Médico-Psychologiques* and of some important monographs, among which may be mentioned *An Essay on the Survival and Pre-eminence of Firstborn Children as regards Organs and Functions* (1879), and *Simulated Madness and Lunatics said to be Criminals* 1889.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Hagedorn, of Madgeburg, a former assistant of B. von Langenbeck's, an excellent operator, and author of numerous valuable contributions to surgical literature; Dr. Auguste Audibert, a leading physician of Lyons, aged 47; Dr. Horace Tavernier, medico-legal referee to the law courts of Lyons, and for many years treasurer, Vice-President, and, finally, President of the Medical Association of the Rhône Department, aged 84; Dr. Wilbrand, formerly Professor of Forensic Medicine and Hygiene in the University of Giessen, and the Senior Professor in the Medical Faculty of that University, aged 83; Dr. Adolphus Hannover, of Copenhagen, a Councillor of State of Denmark, and author of a number of important papers, aged 80; Dr. Ezra M. Hunt, formerly lecturer in the Vermont Medical College and Secretary of the New Jersey State Board of Health from the time of its organisation in 1878, aged 64; Dr. Henry van Aernam, of Franklinville, in the State of New York, formerly United States Commissioner of Pensions, a member of Congress, and a man of social as well as professional prominence, aged 75; and Dr. E. Allen Wood, of Pittsburg, one of the organisers of the Western Pennsylvania Medical College and the first Professor of Dietetics in that institution, formerly a member of the State Senate, and author of several widely-read novels, poems, and plays, in addition to his medical writings, aged 60.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 8s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

SURGEON-MAJOR under orders for India sailing early in the season wishes exchange to ensure his remaining home two years and a-half longer. Address No. 2,111, BRITISH MEDICAL JOURNAL Office.

A SURGEON-CAPTAIN under orders for India next trooping season, probably by an early trooper, wishes to exchange with an officer who has been home about one year or over. Apply to No. 15, care of Messrs. Holt and Co., 17, Whitehall Place, S.W.

THE NAVY.

THE following appointments have been made at the Admiralty: J. DUNLOP to be Surgeon and Agent at Port Ballinlay; J. M. FOGARTY, M.B., to be Surgeon and Agent at Torr Head; G. M. O'CONNOR to be Surgeon and Agent at Ballycastle; J. T. CREVES to be Surgeon and Agent at Cawsand; D. LIMOND to be Surgeon and Agent at Allapool; FRANK E. ROCK, Surgeon, to the *Traveller*, lent July 18th.

ARMY MEDICAL STAFF.

SURGEON-MAJOR-GENERAL P. B. SMITH, M.D., Principal Medical Officer at Netley, attained the age of 60 on July 18th, and will consequently be placed on retired pay. Surgeon-Major-General J. Davis, recently appointed Principal Medical Officer at Portsmouth, is mentioned as the probable successor to Surgeon-Major-General Smith at Netley.

INDIAN MEDICAL SERVICE.

SURGEON-COLONEL J. G. PILCHER, Bengal Establishment, officiating as Inspector-General of Hospitals, North-West Provinces and Oude, is confirmed in that appointment from May 19th.

Surgeon-Colonel R. HARVEY, M.D., D.S.O., Bengal Establishment, officiating as Inspector-General of Civil Hospitals, Bengal, is confirmed in that appointment from May 19th.

The following volunteer medical officers are appointed Surgeon-Lieutenant-Colonels: Surgeon-Lieutenant C. J. W. MEADOWS (Surgeon-Lieutenant-Colonel Indian Medical Service), Central Bengal Light Horse; Honorary Surgeon E. B. RUTTLEDGE (Surgeon-Lieutenant-Colonel Indian Medical Service), Dehra Dun Mounted Rifles; Surgeon-Lieutenant F. R. SWAINE (Surgeon-Lieutenant-Colonel Indian Medical Service), Chota Nagpore Mounted Rifles.

The following volunteer medical officers are appointed Surgeon-Majors:—Honorary Surgeon A. R. W. SEDGEFIELD (Surgeon-Major Indian Medical Service), Ghazipore Light Horse; Honorary Surgeon J. MORAN (Surgeon-Major Indian Medical Service), Sorakhpore Light Horse; Honorary Surgeon R. G. GRIFFITHS, East Indian Railway Volunteer Rifle Corps; Honorary Surgeon H. H. BATHE, East Indian Railway Volunteer Rifle Corps; Honorary Surgeon J. S. BROOKE, East Indian Railway Volunteer Rifle Corps; Surgeon-Lieutenant J. ARMSTRONG (Surgeon-Major Indian Medical Service), 5th Administrative Battalion North-West Provinces Volunteers; Honorary Surgeon W. DEANE (Surgeon-Major Indian Medical Service), Oude Volunteer Rifle Corps; Honorary Surgeon J. F. MACLAREN (Surgeon-Major Indian Medical Service), Ghazipore Volunteer Rifle Corps; Honorary Surgeon G. M. NIXON (Surgeon-Major Indian Medical Service), Midland Railway Volunteer Rifles.

The following volunteer medical officers are appointed Surgeon-Captains:—Honorary Surgeon R. F. DEDRICKSON, Calcutta Naval Volunteers; Honorary Surgeon W. G. P. ALPIN (Surgeon Captain Indian Medical Service), Ghazipore Light Horse; Honorary Surgeon C. L. FAULKNER, Northern Bengal Mounted Rifles; Honorary Surgeon D. PUCACHY, Northern Bengal Mounted Rifles; Honorary Surgeon J. E. PASSIOTY, 2nd (Cadet) Battalion Calcutta Volunteer Rifles; Honorary Surgeon E. C. T. SUTCLIFFE, East Indian Railway Volunteer Rifles; Honorary Surgeon C. MACTAGGART (Surgeon-Captain Indian Medical Service), Agra Volunteer Rifles; Honorary Surgeon W. VENIS, Ghazipore Volunteer Rifles.

The following volunteer medical officers are appointed Surgeon-Lieutenants:—Honorary Surgeon E. HINDMARSH, Behar Light Horse; Honorary Surgeon J. L. HENDLEY, Dacca Volunteer Rifles; Honorary Surgeon W. J. SIMPSON, Presidency Volunteer Rifle Battalion; H. FINDLAY, Rangoon Volunteer Engineers.

THE YEOMANRY CAVALRY.

THE Queen having approved the disbandment of the 2nd West York (the Prince of Wales's Own) Yeomanry, the resignation of Surgeon-Major E. W. SYMES, M.D., as well as that of the other officers, has been accepted. He is permitted to retain his rank and uniform.

RETIREMENT OF VOLUNTEERS.

A CORRESPONDENT takes exception to our answer to another correspondent that retirement of volunteer medical officers, with privilege of wearing uniform, is usually granted after twenty years' service; and points out the regulation that it may be granted after fifteen years' service. That is so; but our answer, qualified with the word "usually," substantially meets the majority of cases so recommended.

THE A.M.S. IN INDIA.

THE economic arrangements in India seem to be pecuniarily injuring Army Medical Staff officers to no small extent. We are now informed on good authority that the A.M.S. Secretaryship to the Principal Medical Officer in Simla is to be abolished. This is the only post held by any executive medical officer A.M.S. that carries with it extra pay.

PROPOSED EXTENSION OF AGE OF ADMINISTRATIVE OFFICERS.

SHOULD the age of administrative medical officers be extended to 62, the brigade-surgeon's age for compulsory retirement will no doubt be prolonged to 57. Taking into consideration the prolonged foreign service of medical officers, the latter age is too old for administrative rank. We can see nothing but discontentment resulting from the proposed extensions. It is to be regretted that recurring changes in warrants are in contemplation, they only tend to unsettle the medical department.

THE CASE OF DR. CORBETT.

ACCORDING to the statement of Mr. Clancy, M.P., in the discussion on the Army Medical Vote, the case of Dr. Corbett is briefly as follows: Dr. Corbett was a probationer at the Army Medical School, Netley, and for a breach of discipline was called upon to resign his connection with the school, for he had not yet been commissioned. With seven or eight other gentlemen connected with the school he attended a dance given by the wives of one of the establishments at Netley, and the whole of these gentlemen unfortunately took a little too much to drink, and offended against military discipline by treating the men. For this lapse Dr. Corbett was brought before a superior officer and reprimanded, and it all the others had been treated in the same way justice would have been done. But he afterwards was ordered up for trial on the charge of being drunk and disorderly on the occasion of the dance. The result of the investigation was that he was asked to send in his resignation, which he did. Mr. Clancy was of opinion Dr. Corbett had been treated unequally and for a very special reason. The evidence had not been made public, and he (Mr. Clancy) had been refused leave to read it. But Dr. Corbett had on occasion of a quarrel with the Catholic chaplain of the place, and his mess wine bill showed he was the reverse of a drunkard. Out of six or seven he had been so treated because he was the only Irishman and Catholic among the lot. Redress had been refused on the ground that the War Minister did not like to override the decision come to by the military authorities at Netley.

Mr. Campbell-Bannerman replied that the case had come under his notice immediately after it occurred, and he, in common with the Director-General of the Medical Department, was at first disposed to take a somewhat lenient view of it, but in looking into the matter more closely he came to another conclusion. Dr. Corbett was not a commissioned officer in a true sense, and had misconducted himself on the occasion. There was no justification for the suspicion that he was treated exceptionally because he was a Catholic and an Irishman. He was called on to resign on the opinion of his superiors at Netley. The military authorities at headquarters, who were consulted in the matter as a question of discipline, took a strong view upon the subject. He was unable to override the opinion of these authorities. He could no tell whether he was the only Irishman present, but there were no others guilty of the same offence.

Mr. Clancy: Will the right hon. gentleman grant an investigation?

Mr. Campbell-Bannerman: No, I do not think that would be consistent with the Regulations.

MALTA FEVER.

IN supplement to our article on this subject on July 7th, and the subsequent correspondence in the daily papers, we may now furnish the views of an administrative medical officer of high rank who has had large experience of fever at Malta. He writes as follows:

"An officer or soldier seriously affected with it (Maltese fever) will seldom be fit for general duty in less than a year, so the sooner he is invalided home the better. Some of the low-lying ports and creeks are imperfectly drained, unconnected with the main drainage, and pour their sewage into an almost tideless sea. Sewage and salt water is a dangerous mixture under a hot sun with a saturated and decaying soil giving off exhalations favourable, no doubt, to the micrococcus which was demonstrated by Surgeon-Captain Bruce as being invariably present in Malta fever and absent in enteric. Sailors have a scanty accommodation on board ship; the proper ventilation of our modern war ships is almost impossible. The ships are frequently anchored in the vicinity of these creeks, hence the liability of our men-of-wars-men to contract fever in Malta harbour. The naval water tanks used to be very imperfectly protected from pollution. A few years ago it was quite common for natives to use the grated inlets on the top of the tanks as 'conveniences,' under the impression that they led into the sewer. It is to be hoped that now fresh water direct from the pipes is shipped instead of water stored in unwholesome tanks. Sailors used to be much exposed to sewer air when at musketry drill, from sewer ventilators which opened on the ground, and from the backwash of the sewage from Fort Ricasoli and the mouth of the main drain."

It is believed that although regulations exist for preserving the public health, these are continually disregarded by foreign merchantmen, and thus the creeks in Malta harbour are converted into fever dens. Mr. Campbell-Bannerman's reply to Sir Seymour King in the House on the 10th inst., on the prevalence of fever at Malta is of the usual unsatisfactory and unsatisfying character. The suggestions of a complete investigation of the whole matter of fever and its causes by a scientific commission, if carried out, could not fail of giving satisfaction.

THE DISUSE OF OFFICIAL TITLES.

SURGEON-GENERAL (RETIRED) writes: Your late remarks are much to the point on the disuse of official titles, and the complaints of medical officers would soon cease if they themselves set the example of colloquially using their titles. The late Warrant, if it did nothing else, made some concession on substantive rank and the employment of consecutive military titles. The essence of the title is that which indicates the rank, and was never meant to be eliminated and that of "doctor" alone given. Medical officers should print their titles on their cards before their names, and not after the name, as at present, out of place both on a card and in the *Army List*. The sneers and carping at the new titles will only hasten the evolution of pure military titles. Medical officers should always speak of and address each other by their titles.

THE ADJUTANT SLIGHT.

ONE WHO ASKS FOR PURELY MILITARY TITLES ON THE SCORE OF EFFICIENCY writes: The case of a surgeon-major who was treated in a most unmilitary and rude manner on parade by a combatant officer—in a way, in fact, no true soldier would adopt towards a brother officer, no matter what his corps—reveals the conduct of the adjutant as "unbecoming an officer and a gentleman." But this is not an isolated case; it may be taken as a sample of the thousand and one slights to which medical officers are subjected in the course of their daily duties, and they will continue until pure military rank and titles are conceded. What must the men on that parade have thought. They saw the Queen's uniform and badges of rank worn by the medical officer grossly disrespected. What must be the result on discipline? The open insults to medical officers is not only subversive of discipline but insulting to the whole medical profession, who, as civil supporters of the army, have a right to demand fair protection for their brethren against a mere army caste.

*** The slight to the medical officer by the unsoldier-like conduct of the adjutant was bad enough, but as nothing compared with the insult to Her Majesty's uniform and the badges of rank displayed by the medical officer, and the inevitable consequent sapping of discipline. It is surprising that so-called combatant officers cannot see that such outrages on symbols of rank must undermine their own position.

MEDICO-LEGAL AND MEDICO-ETHICAL.

SUPREME COURT OF JUDICATURE.—COURT OF APPEAL.

(Before the MASTER OF THE ROLLS, Lord Justice KAY, and Lord Justice A. L. SMITH.)

PHARMACEUTICAL SOCIETY *v.* ARMSON.

THIS was a proceeding taken by the Pharmaceutical Society of Great Britain to recover a penalty from the defendant, William Armson, for an offence against the Pharmacy Acts, 1852 and 1868. The plaintiffs issued a plaint in the County Court of Derby under Section 12 of the earlier Act. The particulars of the claim were as follows: "For amount of penalty incurred by the defendant on the 18th day of October, 1893, in keeping open shop for the retailing, dispensing, or compounding of poisons, to wit 'morphine' (morphine being a preparation of opium) or a 'preparation of morphine,' being poisons within the meaning of the Pharmacy Act, 1868, contained in the, and forming part of, the ingredients in a compound called 'Powell's Balsam of Aniseed,' contrary to the provisions of the said statute, £5." By Section 16 of the Pharmacy Act, "any person who shall sell or keep an open shop for the retailing, dispensing, or compounding of poisons . . . not being a duly registered pharmaceutical chemist or chemist and druggist . . . shall for every such offence be liable to pay a penalty or sum of £5; and the same may be sued for, recovered, and dealt with in the manner provided by the Pharmacy Act for the recovery of penalties under that Act." By Section 11 nothing in that Act is to interfere with the making and dealing in patent medicines. Section 2 says that the article named or described in Schedule A to the Act shall be deemed to be poisons within the meaning of the Act. Schedule A, Part 2, includes "opium and all preparations of opium." The defendant kept a grocer's shop at Melbourne near Derby, where he sold bottles of the mixture called "Powell's Balsam of Aniseed." The defendant was not a qualified or registered chemist. It was stated that each bottle of the mixture contained one-tenth of a grain of morphine, which was admitted to be a preparation of opium. The county court judge, after hearing evidence, found as a fact that a bottle of the mixture if taken at once would be injurious to a child, and if taken by an infant would probably be fatal. He therefore held it to be a poison, and imposed a penalty of £5 on the defendant. On appeal to the Divisional Court, Mr. Justice Charles and Mr. Justice Bruce, the decision of the county judge was affirmed (10, The *Times Law Reports*, 443). The defendant appealed. Mr. Moulton, Q.C., and Mr. Bousey appeared for the defendant, and argued that, by virtue of Section 16, the present case was exempted out of Section 15. "Patent medicines" in Section 16 meant nothing else than proprietary medicines—that was, medicines which were contained in bottles bearing a stamp, and which reached the hands of the consumer in the same state as that in which they left the hands of the maker. Such medicines were exempted from the provisions of Section 15, and reasonably so, because if they did contain poison there was no greater danger in their reaching the public through the hands of a qualified chemist. Secondly, a balsam of aniseed was not a preparation of opium or morphine. It was merely a compound, which was different from a preparation. The

mere existence of a very small quantity of poison with a compound did not constitute a poison within the Act. Mr. Crump, Q.C., and Mr. T. R. Grey appeared for the plaintiffs. The Court dismissed the appeal. The Master of the Rolls said that with regard to the facts they could not depart from the finding of the county court judge. There was in the article sold by the defendant—that was, in the bottle containing this substance—one of the poisons named in the schedule of the Act. The Divisional Court had held that the defendant was liable to a penalty because he had sold a poison, not being a person entitled under the Act to sell poisons. Two points had been taken. It was said that the defendant did not sell the poison mentioned in the schedule because he had sold it mixed with other ingredients; but that did not make it any less a poison. If poison was put into a medicine, and the medicine was sold, the person who sold the medicine sold the poison in it. There was nothing in the Act which said that, though you might not sell poison by itself, you might sell it mixed with other things. Then, secondly, it was said that in the trade all kinds of proprietary medicines were known as patent medicines, and that therefore the exemption of patent medicines included this case. He doubted very much whether in the ordinary language of the trade the phrase "patent medicines" had this extended signification, but in any case it was immaterial. They had not to construe an Act of Parliament which contained that phrase. Other Acts of Parliament had been cited which carefully drew a distinction between proprietary medicines and patent medicines. And seeing that this Act spoke merely of patent medicines, he thought they must say that it did not include all kinds of proprietary medicines, but merely referred to those medicines in respect of which letters patent had been granted under the Great Seal. They had been asked to overrule three cases of "Berry *v.* Henderson" (L. R., 5 Q. B., 296, "Pharmaceutical Society *v.* Piper and Co." (1893, 1 Q. B., 689), and "Pharmaceutical Society *v.* Delve" (1894, 1 Q. B., 71). But in his opinion those cases had all been rightly decided. The appeal must therefore be dismissed. The Lord Justices concurred.

SUPERSESSION.

IN relation to the comments which appeared in the BRITISH MEDICAL JOURNAL of July 7th, page 46, under the heading "Supersession," we deem it simply right to observe that if "W. L." were cognisant of the alleged facts referred to by Dr. A. in his rebutting note of July 9th, the suppression thereof by "W. L." was reprehensible. Under the circumstances related by Dr. A.—who appears to have been the trusted family medical adviser for many years, and so remains—we have no hesitation in expressing the opinion that he (Dr. A.) was fully justified in assuming charge of the child patient in question.

AN INCONSIDERATE PATIENT.

A., a stranger and a traveller, goes to consult B. B. is busy, and makes an appointment for next morning, case not being urgent. A. goes straight off and consults C.; is next day confined to the house, and calls C. On day after that calls upon C.; same evening sends for B., who is unaware at first of C.'s attendance, but is informed of it before he leaves the house. He says that as A. had some excuse for his cavalier treatment of him, he will not refuse to continue in attendance. C. only hears of the matter when he calls upon A. next day, when he has to retire as gracefully as he can.

*** Inasmuch as A. had previously been a patient of B., and on the day referred to in his (B.'s) explanatory note went to reconsult him but found him "getting into his buggy to attend an urgent case," on which, as his own ailment was not pressing, he assented to B.'s request to renew his visit on the following morning; nevertheless, taking umbrage at his (B.'s) fancied curt treatment, he (A.) at once proceeded to consult C. On reflection, however, he would appear to have regretted his hasty action in the matter, and after two days sent for B., but discourteously omitted to intimate his intention to C. Personally annoying as are such incidents, we think that C. may rest well content with B.'s written explanation, taking care at the same time not to omit to charge the fickle patient his full fee for the intervening attendance.

UNQUALIFIED ASSISTANTS AND CLUB PRACTICE.

JUSTITIA writes: If a surgeon to a club, after seeing a sick member once, leaves him entirely in the hands of his unqualified assistant for two months, during which time he gets worse every week, and the member then calls in another surgeon and rapidly gets well, can he legally claim from the club or from the club surgeon the other surgeon's fees?

*** The other surgeon has no claim against the club of any kind; his only remedy is against the person who called him in. The patient, however, although he alone is liable to the second surgeon, has a remedy against the club, and might possibly be able to recover from the latter any fees he has paid to another surgeon if he can prove that when he was sick, and in accordance with the rules of the club, required the services of a legally qualified practitioner, he was put off with an unqualified one. The club surgeon, too, who employed an unqualified assistant in so reprehensible a manner, might be made to answer for his conduct before the General Medical Council.

FOURPENNY DISPENSARIES.

M. B. A.—The conduct complained of by our correspondent is very lowering to the profession. How a qualified medical practitioner can undertake to give advice and medicine for fourpence passes our comprehension. Unfortunately, in certain districts, it is largely advertised in the windows of so-called provident dispensaries that "Advice and Medicine" are furnished for the moderate sum of fourpence. Most of these dispensaries have no name over the door, so that it is not easy to tell in many cases whether they are conducted by qualified or unqualified men. This, we think, is a highly objectionable practice from a public point of view, and has been adversely commented on over and over again at inquests. It is to be hoped that in any future amendment of the Medical Acts the law will make it compulsory for the name of the medical practitioner who conducts one of these dispensaries to appear on the premises, so that the public may at least know with whom they are dealing. We fear the General Medical Council would not take any steps in the matter unless the practitioner were unqualified, and was being "covered" by a registered practitioner.

NEWSPAPER PUFFS AND ADVERTISEMENTS.

DR. T. P. GROSART WELLS (St. Albans) writes: Referring to your remarks in the BRITISH MEDICAL JOURNAL of June 23rd on "Mrs. Spriggins," etc., I beg to state that I had no intimation whatever of this objectionable paragraph appearing, and read it with much annoyance on publication of the newspaper. In the second paragraph you refer to (without the advertisement) I also disclaim any responsibility in my name appearing "with other medical gentlemen." The editor of the *St. Albans Times* and the patients are prepared to exonerate me.

DAMP WALLS A NUISANCE.

DR. R. LYDDON (Deal) writes: At the Lambeth Police Court lately the sanitary authority contended that a damp wall in the basement of a house was a nuisance and injurious to health. The house is let at a yearly rental of £32. The front basement room is partly below the level of the street. Its front wall, either from this cause or some other, is somewhat damp. To remedy this condition the sanitary authority served a notice on the owner to construct a dry area in front of the premises, such area to extend the whole length of the basement room, to be at least 3 feet wide, and in depth to extend to at least 6 inches below the floor of the room. It was not suggested that the room was an underground room within the meaning of the Public Health (London) Act, 1891, but its condition, owing to the dampness of its wall, was considered to be a nuisance under Section 2, Subsection 1 (*a*) of the Act. Now, the wording of the notice is almost identical with that used in the Act in dealing with underground rooms (Section 96, 1 (*c*), but the room is let in conjunction with the rest of the house, so this section cannot apply to it. The magistrate made an order for the conditions of the notice to be carried out.

*** It seems reasonable to regard dampness as one of the conditions which may make a house unhealthy, apart from any question of leakage from drains, and we see no violence to the spirit or letter of the Public Health Act in classing it as a "nuisance" if the degree is sufficient to call for the interference of the sanitary authority. Whether the instance before us was of this degree or not is a matter upon which we can express no opinion; but, assuming it to be so, the course followed by the authority seems to have been the right one. Many other diseases besides diphtheria might have been cited as having relation to damp, notably rheumatism and phthisis. We do not quite follow our correspondent in his reference to cellar dwellings. It was practically incumbent upon the sanitary authority to specify the works necessary to be done in order to abate the alleged "nuisance," and they no doubt advisedly followed the terms of the Act with regard to underground tenements in this particular.

DOCTORS' SHOPS.

ENGLISH PRACTITIONER writes: In the JOURNAL of June 30th you report a case tried before the Appeal Court in Edinburgh, in which you state that in future as the result of this decision "poison should not be supplied for the public except through the hand of a person possessing proper statutory qualification." Does this apply to England? If so it will seriously affect practitioners who supply poisonous drugs to their patients (that is prussic acid and strychnine) without a qualification in pharmacy.

The only qualifications in that department of medicine in England are those of the Apothecaries and Pharmaceutical Societies. In Scotland the College of Surgeons and the Faculty of Glasgow confer qualifications in pharmacy; and in Ireland the Apothecaries and Pharmaceutical Societies. None of the other British universities and colleges have power to confer such licences. Are not those who do not hold the qualifications above enumerated in an anomalous position if this decision holds? They can only in future prescribe and not supply poisons to their patients.

P.S.—A registered M.D. of Edinburgh can no longer supply a patient with a poison after this decision.

*** The passage our correspondent quotes expresses the view entertained by the Lord Justice Clerk as to the general meaning of the Pharmacy Act and the opinions of the other judges sitting with him in the Edinburgh Court of Appeal coincided with it. The law applies to the whole of the United Kingdom, and the decision shows that the sale of poisons by persons who are not duly registered under the British or Irish Act respectively is unlawful and punishable with penalty, whether the person sells on his own account or on behalf of a master who is qualified to sell poisons. The qualification is a purely personal one. In the sale of poisons medical men keeping open shops are as much subject to the law as other persons, but apothecaries and other legally qualified medical practitioners are to a great extent exempted from the restrictions put upon the supply of medicine containing poison and likewise from those affecting the sale of poison. That exemption, in virtue of their medical qualification, entitles medical men to supply poisons in the form of medicine for their patients subject to the proviso in the Act. It also entitles them to sell poisons and to keep open shop for that purpose, but the exemption applies only to qualified practitioners, and it is not transferable to their assistants, unless they also

possess the medical qualification or are registered under the Pharmacy Act, so as to prevent poison being supplied to the public except through the hands of a person possessing proper statutory qualifications.

AN ANXIOUS MOTHER.

STRADDLES.—Under the special circumstances related by our querist, he will, in our opinion, be justified in charging the suggested fee, in support of which view we may refer him to the *Medico-Chirurgical Tariff*, fifth edition, embodied in the *Young Practitioner: his Code and Tariff*, under the heading of "Letters of Advice, etc.," No. 9, page 392.

LEGAL BIRTH AND INFANTICIDE.

I.—An infant is born in a legal sense when its body is completely outside that of its mother; it is not necessary that the cord should have been divided. If the coroner's comments were directed to demand proof of the division of the cord as essential to complete legal birth, he was certainly wrong. The fact that full and complete respiration had taken place affords strong presumption on medical grounds that the child had had a separate existence.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF ABERDEEN.

AT a meeting of the University Court of the University of Aberdeen, held July 10th, the following were appointed extra-professorial Examiners for Degrees for one year, commencing October 1st ensuing: Botany: R. J. Harvey Gibson, M.A., University College, Liverpool. Zoology: J. Arthur Thomson, M.A., School of Medicine, Edinburgh. Chemistry: John Hunter, F.I.C., etc., School of Medicine, Edinburgh. Anatomy: Thos. Wardrop Griffith, M.D., Yorkshire College, Leeds. Physiology: W. H. Thompson, F.R.C.S., Queen's College, Belfast. Materia Medica: Francis Warner, M.D., London. Medical Jurisprudence and Public Health: Fras. J. Allan, M.D., London. Pathology: Jas. Lorrain Smith, M.A., M.D., Cambridge. Medicine: Sidney Coupland, M.D., London. Surgery: John C. Ogilvie Will, M.D., Aberdeen. Midwifery: Geo. M. Edmond, M.A., M.D., Aberdeen.

THE QUALIFICATIONS AND APPOINTMENTS OF UNIVERSITY PROFESSORS.—By 5 votes to 3 the Aberdeen University Court, at its last meeting, disapproved of draft ordinance No. 27. The ordinance is to the following effect: In case of a vacancy in any professorship in any university the University Court shall advertise such vacancy, and shall request candidates to submit evidence of their qualifications on or before a date to be fixed by the Court; the Senatus Academicus shall thereafter appoint a committee of not more than five of its members, to whom the evidence submitted by the candidates shall be transmitted, and who shall consider the same, and present to the patrons of the vacant chair a detailed and reasoned report on the candidates' qualifications. The majority of the Court view the granting of this power to the Senatus Academicus as retrograde and objectionable.

UNIVERSITY OF ST. ANDREWS.

THE *Edinburgh Gazette* of July 13th contained Ordinance No. 53 relating to pensions to principals of the University of St. Andrews. The scheme is similar to that for the other Scotch universities, which has already appeared in the BRITISH MEDICAL JOURNAL. For ten years' service an annual allowance of $\frac{1}{60}$ of the annual emoluments of his office, for eleven years' $\frac{11}{60}$, and so on, with no addition in respect of any service beyond thirty years, and no account taken of any sums he may have received in any one year in excess of £900.

UNIVERSITY COLLEGE, DUNDEE.

MR. JAMES WALKER, at present Lecturer and Demonstrator in Chemistry in University College, London, has been appointed to the Chair of Chemistry in University College, Dundee, in room of Professor Frankland, who has gone to Birmingham.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following are the regulations adopted by the Council for the meetings of Members:

1. These meetings will be for consultative purposes only, and can have no official or corporate character or efficacy.

2. Meetings shall be summoned by the Council at such times and for such objects as may by the Council be thought desirable, either with or without a requisition from the Members.

3. Such requisition must be signed by at least thirty Members, and contain a statement of the object or objects for which the meeting is requested.

4. The subjects to be considered shall be (*a*) matters referred to the meetings by the Council; (*b*) motions introduced by Members.

5. The motions introduced by Members (*a*) shall be signed by the mover, or by the mover and other Members; (*b*) must be received by the secretary not less than fourteen days before the meeting.

6. The president shall determine what motions are in order, and direct the arrangement of the agenda.

7. The quorum of each meeting shall be thirty, and if at the expiration of fifteen minutes from the hour for which the meeting has been summoned a quorum be not present, the meeting shall not take place. If after the commencement of the meeting it shall be found upon a count that a quorum be not present, the meeting shall be dissolved.

8. The president, or one of the vice-presidents, or in their absence the senior member of the Council present, shall be chairman of the meeting, and the chairman's decision shall be final upon all points of order which may arise.

9. The secretary, or his representative (*a*) shall act as secretary in relation to the business of the meetings; (*b*) shall give notice by advertisement of each meeting, and shall issue a copy of the agenda to each Member who may apply for one within the fourteen days preceding the meeting; (*c*) shall keep minutes of the proceedings.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.

Cholera Precautions.—MR. SHAW-LEFEVRE, in reply to MR. HENEAGE, said in the case of every vessel coming from a foreign port the officers of Customs inquired as to cholera and other cases of infectious disease on board, and if a suspected case of cholera appeared to have occurred they would at once communicate with the medical officer of health of the port. Notices appeared in the daily press as to the countries and ports in which cholera was present, and if the Local Government Board should have any information as to a serious outbreak of which there had been no public notice the Board would communicate with the local authorities. As regards the question as to assistance by the State, he would only refer to the replies which were given to similar questions last session.

Habitual Drunkards.—MR. WHARTON asked the Secretary of State for the Home Department whether he proposed to lay upon the table of the House a Bill dealing with the question of habitual drunkards.—MR. ASQUITH said the Bill was being drafted, and would be introduced in one House of Parliament or the other before the close of the session.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,926 births and 3,180 deaths were registered during the week ending Saturday, July 14th. The annual rate of mortality in these towns, which had been 15.5 and 16.1 per 1,000 in the preceding two weeks, declined again to 15.4 last week. The rates in the several towns ranged from 9.5 in Derby and 10.2 in Cardiff to 22.0 in Salford and 22.4 in Liverpool. In the thirty-two provincial towns the mean death-rate was 15.6 per 1,000, and was 0.6 below the rate recorded in London, which was 16.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.5 per 1,000; in London the rate was equal to 3.0, while it averaged 2.1 per 1,000 in the thirty-two provincial towns, and was highest in Croydon, Preston, Salford, and Sunderland. Measles caused a death-rate of 1.9 in Croydon and 3.8 in Sunderland; scarlet fever of 1.2 in Wolverhampton and 1.3 in Salford; whooping-cough of 1.4 in Preston and 1.9 in Croydon; and diarrhœa of 1.8 in Salford and 1.9 in Preston. The 62 deaths from diphtheria in the thirty-three towns included 45 in London, 2 in Bristol, and 2 in Liverpool. Two fatal cases of small-pox were registered in London, and 1 each in Birmingham, Manchester, and Oldham, but not one in any other of the thirty-three large towns. There were 97 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday, last, July 14th, against 170, 132, and 109 at the end of the preceding three weeks; 17 new cases were admitted during the week, against 21, 16, and 28 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,143, against 2,153, 2,087, and 2,099 at the end of the preceding three weeks; 277 new cases were admitted during the week, against 233 and 266 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, July 14th, 397 births and 440 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.9 and 15.9 per 1,000 in the preceding two weeks, further declined to 15.4 last week, and was 0.5 per 1,000 below the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 11.6 in Leith to 19.0 in Dundee. The zymotic death-rate in these towns averaged 2.0 per 1,000, the highest rates being recorded in Leith and Dundee. The 365 deaths registered in Glasgow included 5 from measles, 4 from scarlet fever, and 4 from diphtheria. One fatal case of small-pox was recorded in Edinburgh and 1 in Leith.

THE DISCONNECTION OF HOUSE DRAINS.

A NEW system of sewerage has been devised by Dr. Arthur and Dr. Illingworth with the object of providing so perfect an interception between the house drains and the sewers that on the one hand the sewer air shall not be able to enter the house, and on the other that it shall be impossible to empty the trap by any mechanical or other means which may be used for the ventilation of the sewers. With this object, the inventors make the house drains enter the sewers at the bottom instead of at the side. Obviously the portion of the drain which lies below the level of the contents of the sewer will always be full, and will thus form a very complete interception through which no air can find its way, also its bed forms a trap which never can get dry, being always replenished from the sewer itself. Whether it will not form too complete an interception and stop the sewage as well as the sewer air is another question. The power of self cleansing which any trap possesses depends largely on the freedom of its outflow, and we should think that a trap discharging under water as is here proposed would never properly empty itself, and would inevitably silt up. It may be said that this can only be proved by experience, but we would ask for some positive experience of the action of this form of trap under ordinary conditions before we could venture to recommend its adoption. Further, one great object to be held in view is to keep the surface of the sewer perfectly smooth and uniform. Messrs. Arthur and Illingworth propose to make a sort of bagatelle-board of the bottom of the sewer, into the holes of which all the silt, etc., must deposit.

SMALL-POX AND VACCINATION AT BRADFORD.

THE Bradford Sanitary Committee has expressed the opinion that the epidemic of small-pox which has recently infected the borough was in a great measure caused by neglect to enforce vaccination, and has communicated this opinion to the Board of Guardians. That body referred the matter to their Vaccination Committee, who now express their emphatic dissent from the statement that any neglect of theirs to enforce vaccination was the cause of the epidemic. They state that they have done everything possible short of actual prosecutions, to procure the vaccination of all children, but add that they have not thought it desirable, pending the report of the Vaccination Commission, to take the extreme step of proceeding against neglectful parents. In other words, the Vaccination Committee while expressing emphatic dissent appear to admit the neglect, and cannot be complimented on the logic of their attempt to rebut the contention of the sanitary committee.

SMALL-POX IN SCOTLAND.

IN Edinburgh 17 new cases of small-pox were notified last week, and there was 1 death. Since Saturday an additional death has been reported. Thirty-two cases, all adults, now remain in the hospital. The new Small-pox Hospital in the Queen's Park has, happily, not been called into use.—In Leith 8 new cases were notified, and there was 1 death.—At the village of Letham (Forfarshire) small-pox has attacked two families, giving, it is reported, 14 cases. The outbreak has been quite definitely restricted.—Two cases have occurred at St. Boswels (Roxburghshire), and both patients have died. It is believed that both cases can be distinctly traced to Leith, as something like the first 50 Edinburgh cases could be.—A case has occurred at the Barry militia camp (Forfarshire), a recruit of the Royal Scots being the victim. This also, it is said, can be traced to Leith.

ISOLATION HOSPITAL SCHEME FOR DERBYSHIRE.

DR. BARWISE, the county medical officer for Derbyshire, has presented an important report to the county council, in which he advises that for the purposes of the Isolation Hospitals Act the county should be divided into twelve districts. He suggests as a minimum a total of 270 beds, the county population being 426,768. It is stated that under this scheme it would be practicable to distribute the hospitals in such manner that nearly every parish would have one within eight miles, and 100,000 of the population would be resident within six miles from a hospital. Dr. Barwise does not intend the twenty first section of Lord Thring's Act to become a dead letter, but advocates that the county council should make substantial contributions out of county funds to the cost of such hospitals, on condition that they are erected on the lines laid down by the Local Government Board, in such places as to form part of a general scheme, and built so as to be of permanent use. He thinks that a county grant of one-third of the cost of construction would be sufficient to induce the local authorities to fall in with the proposal. As an additional advantage, it is pointed out that fever wards at workhouses will become unnecessary when hospitals are available for the whole of the county. The scheme has much to commend it, and we shall hope to hear that the council have agreed to give effect to it. The equalisation of county rates for purposes such as this is in harmony with the tendency of recent sanitary legislation, and some concession of the kind seems to be inevitable if all districts alike are to have the benefit of isolation hospitals.

UNUSUALLY LOW DEATH-RATE IN EDINBURGH.

THE death-rate of Edinburgh for the last three weeks was respectively 12, 14, and 13. The first of these figures is the lowest on record, and that despite the occurrence of some cases of small-pox and a certain amount of scarlet fever. In the face of all this there seems to have got abroad the notion that Edinburgh is a sort of hotbed of all manner of infectious disease, and this stupid idea has been reiterated by some English papers, so much so that almost every day the Edinburgh Medical Officer of Health receives inquiries as to whether it is safe to come to Edinburgh just now. Doubtless Edinburgh suffers to a certain extent from its unhappy proximity to Leith. But the fact is Edinburgh was hardly ever a safe place for holiday seekers.

LEGALITY OF ELECTION OF A DISTRICT MEDICAL OFFICER.

OUR attention has been specially directed to the proceedings of the Newtown Llanidloes Board of Guardians, which, at a recent meeting, the proposal to appoint a fresh District Medical Officer appears to have been made and carried by a majority of the guardians present, though no notice of such proposal, either by advertisement or otherwise, had been given.

A very stormy discussion arose on the question, and proper order was not kept by the Chairman, who, though doubtful as to the legality of the resolution, allowed it to be put to the meeting, the result being that the late District Medical Officer, Dr. Purchas, has been unexpectedly superseded, and a stranger elected to his post.

The appointment of Dr. Purchas appears to have been an annual one, and the business in reference to this question was, as appears on the agenda paper, "To consider the reappointment of Dr. Purchas." This notice being thus framed, we fail to see how, under any circumstances whatever, anyone else could have been on that day properly elected. The question of the appointment of an unknown candidate, whose name had not been previously mentioned, was not open for consideration. The Chairman of the Board, Captain Adams, had not the courage to support his own opinion, but to have allowed the resolution to elect Dr. Roberts in the place of Dr. Purchas to be proposed and carried.

At a subsequent meeting the question was raised as to whether the minutes of the preceding meeting should be confirmed or not, and the Chairman then admitted that he had fallen into an error in allowing Dr. Roberts to be proposed for office, and that he ought to have kept the meeting to what was on the agenda, namely, to the reappointment or not of Dr. Purchas. This question was subsequently referred to the Local Government Board, which replied that, if Dr. Purchas's appointment had been legally made, it could not be revoked. And this is really the question, Was it legally made or not? Other points bearing on the comparative claims of the late medical officer, Dr. Purchas, and those of Dr. Roberts have but little bearing on it. For the present it is legality or illegality of appointment. We are not aware that the appointment of Dr. Roberts has been actually confirmed by the Local Government Board, and shall be very much surprised to hear the department has given its sanction to any such irregularity.

THE POWER OF A SANITARY AUTHORITY TO LAY WATER MAINS.

A MEMBER writes to ask our opinion in the following circumstances:—An owner of property has leased it to various persons, who have erected cottages between which the lessor has made two streets, the only way of approach. The water which he furnished having been condemned by the sanitary authority, after complaint by the occupiers of the cottages, the lessor refuses to allow the authority to lay their water on by pipes along the streets. Can he legally so refuse?

*** Section 54 of the Public Health Act, 1875, states that where a local authority supply water within their district, they shall have the same powers and be subject to the same restrictions for carrying water mains as they have, and are subject to, for carrying sewers. And section 16 says that any local authority may carry any sewer through, across, or under any turnpike road or any street. "Street" is defined in section 4 of the same Act as including any road, etc., whether a thoroughfare or not. These facts leave no doubt in our minds as to the power of the sanitary authority to supply water by pipes along the streets to the cottages in question.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE SEA-BATHING INFIRMARY AT MARGATE.

THE 103rd anniversary of this noble charity was celebrated the other day at Margate, and as our readers know not under the most favourable circumstances; for this institution is so lamentably in want of funds that more than half of the beds are, we believe, disused. We note that the number of beds occupied on June 21st, 1893, was 88; and on the same day in the present year 67; while the total number of beds is given in the *Medical Directory* as 220. This lamentable condition of things has been brought about, as is well known, by the unfortunate inadvertence of Sir Erasmus Wilson, who omitted to carry out the intention, which he certainly had formed, of providing in his will for the endowment of the new wing which his splendid generosity had erected. The hospital has in consequence been since his death in perpetual want of funds, and has with rare honesty and energy insisted on paying its debts and meeting its financial difficulties in the only honourable way by limiting its expenditure. This, however, involves a lamentable limitation also of the good that it is capable of doing. Yet the pressure on its beds is so great, that in a report made to the governors by Sir D. Duckworth, Mr. Croft, and Mr. Willett, it is stated that there are at present over 100 applicants for admission, and that the last cases on the list must wait, in the ordinary course of events, for fully four months before they can be received. There are, however, some cheering signs in all this gloom. The hospital is out of debt, the yearly income is increasing, so that gradually beds are being taken into use. The meeting recently held at Grosvenor House was successful, and the Dean of Westminster volunteers to get an offertory at the Abbey. Still the hospital needs for perfect efficiency an increase of something like £3,000 of yearly income; and only some immense public movement could supply such a sum, or perhaps the attention of some of our millionaires, who just now are giving sums as great to causes much less worthy, comparatively worthy though they are in themselves. What a blessing it would be to the poor victims of scrofula if some Erasmus Wilson or Peabody would find £100,000 for the Margate Infirmary! If the former were alive we do not think the demand would need repetition.

THE CARMARTHEN ASYLUM.

N. W. B. writes: If I may venture upon a criticism of the recent appointment of a medical superintendent to the above asylum, it is to the effect that the grievance you note, that a Welshman was not appointed, lies not in nationality but in language. "Wales for the Welsh" is a senseless, almost meaningless, cry in itself, but the principle that a Welsh-speaking doctor should have been chosen for the direction, care, and treatment of Welsh-speaking asylum patients is one full of reason. No monoglot English-speaking doctor would think of embarking upon private practice with any hope of success in the districts which supply Llandarren Asylum with patients. *A fortiori* is it the more necessary for the proper understanding of the insane that the asylum superintendent should be duoglot—in other words, a Welsh-speaking man.

If I may further venture to say it, I think that the point to be arrived at by the Committee was not simply that of selecting for their superintendent the doctor who gave evidences of the highest scientific attainments and aptitude for scholarly research, but to find one who could best meet all the requirements of the patients entrusted to his care; to find a man of pronounced competency, professional and other, who could add fluency in Welsh to his accomplishments, and so understand without the aid of an interpreter, and himself appreciate the personal statements and complaints of his patients. It is too much to think that there are no such men in Wales or holding junior appointments in asylums.

One great charge brought against the Established Church in Wales has been the appointment of English clergymen to Welsh bishoprics and other livings. Curiously enough, the loudest complainers, through their democratic representatives, have been the first to perpetuate this grievance in another form.

MEDICAL NEWS.

Mr. J. W. Hulke has been re-elected President, and Mr. Reginald Harrison and Mr. Alfred Willett have been elected Vice-Presidents of the Royal College of Surgeons of England.

H.R.H. the Duchess of York has graciously consented to become a Vice-Patron of Queen Charlotte's Lying-in Hospital, of which Her Majesty the Queen is Patron, and Her Royal Highness the Princess of Wales a Vice-Patron.

Dr. Juan J. Ulloa, who was the official delegate of the Republic of Costa Rica to the Pan-American Medical Congress held at Washington last autumn, has been appointed Secretary of the Interior and of Public Improvements by the President of Costa Rica. Dr. Ulloa is a graduate of the Medical Department of the University of New York.

On the initiative of Professor von Leube and the Governmental President, Count Luxburg, an association has been formed at Wurzburg for the establishment of a sanatorium for indigent sufferers from tuberculosis at Spessart. The sanatorium is estimated to cost 250,000 marks, of which 50,000 has already been promised by Professors Prym, Leube, and others.

Society for Relief of Widows and Orphans of Medical Men.—A quarterly court of this Society was held on July 11th, Mr. Christopher Heath, V.P., in the chair. Four new members were elected, and the deaths of two widows announced. There were no fresh applications for assistance. It was resolved to distribute £1,211 among the 54 widows and 9 orphans on the funds, and the 4 orphans on the Copeland Fund. The expenses for the quarter amounted to £44 8s.

Medicine at Monaco.—Monaco, like France and other countries, is putting its medical house in order. The *Journal de Monaco* of June 26th publishes the text of a decree relative to the practice of medicine, pharmacy, midwifery, and dentistry, issued by the Governor-General of the Principality of Monaco, "in pursuance of the sovereign ordinance dated May 29th." This decree enacts that the following qualifications will, for the purposes of medical practice in the Principality of Monaco, be considered equivalent to the French diploma of Doctor of Medicine: The *laurea* in medicine and surgery of the universities of the kingdom of Italy; the degrees of Doctor, giving the right to practise medicine and surgery, of the universities, academies, or official faculties of Germany, Austria-Hungary, Holland, Belgium, Denmark, Sweden and Norway, Switzerland, Russia; those of Doctor in Medicine of the universities of "the United Kingdom of Great Britain," and of Fellow of the Royal Colleges of Surgeons and Physicians of London, Edinburgh, Dublin, and of the Faculty of Physicians and Surgeons of Glasgow; those of Fellow of the College of Physicians and Surgeons of New York and Boston in the United States of America. Every application for leave to practise must be accompanied by the diplomas of the applicant or by copies of those documents certified as correct either by a consul of the Principality or by the Mayor of Monaco. The applicants must enter into an undertaking to live in the Principality and to practise their profession during the whole or part of the months of May, June, July, August, September, and October, agreeably to Article 1 of the Ordinance of May 29th, 1894. Only those who send in their applications in time will be included in the official list, which is to be drawn up and distributed at the beginning of each month to all hotels and boarding houses, where it will be posted up in a conspicuous place. This list will contain the name and nationality of the practitioners and the nature and source of their qualifications.

The Metropolitan Provident Medical Association.—We are glad to see, by a notice in the *Echo*, July 10th, that this Association is making good progress. Nearly £100 has been divided among the different branches by the Hospital Sunday fund, and the trustees of the City Parochial Charities have given a grant of £300, with a conditional promise of its renewal for five years. Two new and flourishing branches have been opened at Edmonton and at Woolwich, bringing the number of branches up to 18. The Association is one which we believe to be thoroughly deserving of support, as being engaged in an honest and most difficult attempt to stem the tide of so-called "medical charity" which is introducing pauperism and sapping the foundations of self-reliance in our working population. So difficult is this attempt, and so keen the competition of the gratuitous charities and the cheap doctor's shops, that it has been found necessary to fix the scale of fees so low that a branch dispensary cannot become self-supporting till a large number of members have been enrolled. Hence the need for outside aid to meet the preliminary expenses, until the advantages of the scheme become so apparent to the working classes in the district as to induce them to join in the requisite number. The advantages claimed (and as we believe realised) by the provident system are that the patients are treated always by their own medical man, instead of being seen for a minute or two by some stranger; that they are seen deliberately and receive deliberate advice, instead of a routine bottle of physic; and that they are spared the crowd, the delay, and the risk of infection met with in the out-patient rooms. But we need hardly say that 18 branches in the whole metropolitan area is a sadly insufficient tale of membership. Under the circumstances no doubt it is encouraging, and most creditable to the energy and perseverance of those who have so long maintained an almost hopeless struggle with the evils of our present system. But what might not be effected for the reform of that system and the amelioration of the medical treatment of the poor, would but the governing bodies of our great hospitals recognise the need, and co-operate heartily to that end.

Lectures at the Royal College of Surgeons of England.—The following is a list of the lecturers and of the subjects selected by them so far as at present arranged: Professors of Surgery and Pathology: C. B. Lockwood (On Traumatic Infection) and J. Griffiths (Observations on the Testis). Professor of Comparative Anatomy and Physiology: Charles Stewart. Arris and Gale Lecturer on Anatomy and Physiology: W. G. Spencer (The Central Nervous Mechanism of the Respiration). Erasmus Wilson Lecturer: J. H. Targett.

American Jottings.—A meeting of medical practitioners and philanthropic citizens was recently held at Baltimore, with the view of deciding on the steps to be taken for the establishment of a hospital for consumptives. A number of coloured medical practitioners in Baltimore have decided to organise a hospital and dispensary for negro patients in that city. A building has already been secured for the purpose.—According to Professor Bayard Holmes, of Chicago, the proportion of blind persons in the United States shows a steady increase. In 1850 in each million 422 were blind: in 1860, 403; in 1870, 527; in 1880, 976; and in 1890, 805. The same authority states that the production of "other defectives" is in about the same proportion.—The Pennsylvania State Board of Health recently passed a resolution to the effect that the time had come when the State should provide hospital accommodation for persons suffering from pulmonary tuberculosis in the case of those who cannot be properly cared for in their own homes and who through carelessness might be dangerous to the community at large. It is believed that the establishment of such hospitals might be of great value in educating the people.—The city of Louisville, Kentucky, taxes every medical man practising within its boundaries 10 dollars a year, while the town of Charlotte, North Carolina, extracts 15 dollars annually from the pockets of its doctors. In this way the former city obtains a revenue of 3,400 dollars and the latter one of 405 dollars, and yet no doubt in each case the medical profession is expected to do the usual amount of work for which the satisfied sense of virtue is the sole reward. Why should the medical profession have a monopoly of such virtue? And is it not enough to be virtuous without being taxed for it? Lawyers and clergymen are not taxed in their professional capacity. This difference, though at first sight unfair, is, however, in strict accordance with the principles of a sound political economy. Only luxuries should be taxed, and the medical profession is presumably the only one that indulges in the luxury of unremunerated virtue.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN ROYAL INFIRMARY.—Ophthalmic Surgeon. Applications to the Treasurer, before July 21st.

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House-Physician. Salary, £65 per annum, with board, lodging, and washing. Applications to the Secretary by July 30th.

BATH EASTERN DISPENSARY.—Resident Medical Practitioner. Salary, £100 per annum, with furnished apartments, coal, gas, and domestic attendance. Applications to Colonel F. V. Eyre, R.A., Honorary Secretary, Rockville, Lansdown, Bath, by August 11th.

BIRMINGHAM DENTAL HOSPITAL.—House-Surgeon; must hold diploma of Dental Surgery. Applications to W. Arthur Addinsell, Honorary Secretary, 112, Edmund Street, Birmingham, by July 28th.

CAMBRIDGE LUNATIC ASYLUM, Fulbourn, near Cambridge.—Assistant Medical Officer. Salary, £140 per annum, with board, lodgings, and attendance in the Asylum. Applications to T. Musgrave Francis, Clerk to the Visitors, by July 21st.

CHARING CROSS HOSPITAL, Strand, W.C.—Assistant-Surgeon; must be F.R.C.S.Eng., and reside within three miles of the hospital. Applications to the Chairman of the Committee of Selection by July 28th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to Eugene Street, Secretary, by August 6th.

CITY OF LIVERPOOL: INFECTIOUS DISEASES HOSPITAL, Netherfield Road.—Resident Medical Officer, doubly qualified, and not more than 30 years of age. Salary, £100 per annum, increasing £10 yearly to £120 per annum, with board, lodging, and washing at the hospital. Applications endorsed "Resident Medical Officer" to be addressed to the Chairman of the Port Sanitary and Hospitals Committee, to be sent under cover to the Town Clerk, Municipal Offices, Liverpool, by July 23rd.

CITY OF LONDON OPHTHALMIC HOSPITAL, 238A, Gray's Inn Road, W.C.—House-Surgeon. Rooms, coals, and light provided. Applications to the Secretary by August 7th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis Road, Shadwell, E.—Resident Medical Officer; must be registered practitioner in Medicine and Surgery. Salary, £80 per annum, with board and residence. Applications and testimonials to Thomas Hayes, Secretary, by July 23rd.

FISHERTON ASYLUM.—Assistant Medical Officer, not more than 30 years of age. Salary £100 per annum, with board, lodging, and washing. Applications to Dr. Finch, Salisbury.

GENERAL HOSPITAL, Birmingham.—House-Physician. Salary, £70 per annum, with residence, board and washing. Surgical Casualty Officer; non-resident. Honorary Surgeon. Applications to Howard J. Collins, House-Governor, by July 28th, for the first two vacancies, and July 23rd for the last one.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House-Surgeon, unmarried, doubly qualified. Salary, £50 per annum, with residence, board, and washing. Applications to Outis Webster, Secretary, by August 1st.

KINGTON UNION.—Medical Officer and Public Vaccinator for the Pembridge District. Salary, £30 per annum, with additional payments authorised by the Consolidated Order of the Poor Law Commissioners. Applications to Anthony Temple, Clerk to the Guardians, Union Offices, Kington, by July 30th.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer; doubly qualified, unmarried, and not less than 25 years of age. Salary, £150 per annum, with board and residence. Applications to W. L. Saunder, General Superintendent and Secretary, by July 28th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—House-Physician. Salary, £100 per annum, increasing £10 per annum at the discretion of the Committee, with furnished apartments, board, and washing. Applications to the Secretary by July 23rd.

POPLAR AND STEPNEY SICK ASYLUM, Bromley, E.—Locum Tenens for nine or ten weeks at £3 3s. per week, with usual resident allowances. Applications to the Managers by July 23rd.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant. Appointment for six months, with board and residence. Applications to Percy De Bathe, M.A., Secretary.

SEAMEN'S HOSPITAL SOCIETY, *Dreadnought*.—Junior House-Surgeon doubly qualified, for Branch Hospital, Royal Victoria and Albert Docks, E. Salary, £50 per annum, with board and residence. Applications to P. Michelli, Secretary, Seamen's Hospital Society, Greenwich, S.E., by July 30th.

SUSSEX COUNTY HOSPITAL, Brighton.—House-Surgeon; doubly qualified, unmarried, and under 30 years of age. Salary, £140 rising to £140 per annum, with board, residence, and washing. Applications to the Secretary by August 7th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Dermatologist. Applications to R. J. Gilbert, Secretary and Superintendent by August 1st.

MEDICAL APPOINTMENTS.

ANDERSON, Dr., appointed Assistant Medical Officer to the Infirmary of the Chelsea Union, *vice* J. A. Ward, M.R.C.S.Eng., resigned.

ARTHUR, J., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Gabalfa District of the Cardiff Union.

ASHTON, Harold, L.R.C.S., L.R.C.P.Edin., L.F.P.S.Glasg., appointed Medical Officer of Health for Chadderton, and District Medical Officer and Public Vaccinator for the Chadderton District of the Oldham Union.

BENSON, Miss Annette, appointed First Physician to the Kama Hospital, Bombay.

ELKINS, Frank Ashley, M.B., C.M.Edin., appointed Medical Superintendent of the Borough Asylum, Sunderland.

FLEMMING, C. E. S., M.R.C.S., appointed Medical Officer for the Eighth District of the Bath Union.

FOSTER, Mr. J. R., appointed Assistant Medical Officer of the Workhouse of the Bath Union.

GIBSON, C. G., M.B., C.M.Edin., reappointed Medical Officer of Health to the Launceston Town Council.

GRENFELL, Dr., appointed Medical Officer for the Modbury District of the Kingsbridge Union.

GRIFFITH, T. Wardrop, M.D.Aberd., Professor of Anatomy, Yorkshire College, appointed Examiner in Anatomy at the University of Aberdeen.

HARDMAN, Richard Smith, L.R.C.P., M.R.C.S., appointed Junior House-Surgeon to the Wigan Infirmary, *vice* C. E. M. Lowe, M.B., appointed Senior House-Surgeon.

HODGSON, W., M.R.C.S.Eng., appointed Medical Officer for the Reeth District and the Workhouse of the Reeth Union.

HUGHES, Mr. J. H., appointed Medical Officer for the Sutton-on-Trent District of the Southwell Union.

JOSCELYN, Arthur E., M.R.C.S., appointed Medical Officer to the Greenwich District of the Post Office.

KEAY, John, M.D., F.R.C.P.Edin., appointed Medical Superintendent of the District Asylum, Inverness.

MCPHEE, Mr. D., appointed Medical Officer for the Holme on Spalding Moor District of the Howden Union.

PARKER, Geo. Roger, L.R.C.P.Lond., M.R.C.S Eng., reappointed Medical Officer of Health for the Lancaster Rural Sanitary District.

POLAND, John, F.R.C.S., appointed Consulting Surgeon to the St. Pancras and Northern Dispensary, *vice* Henry Smith, F.R.C.S., deceased.

POWELL, Mr. N., appointed Medical Officer for the Second District of the Shepton Mallett Union.

SMITH, S. Keillett, F.R.C.S., appointed Honorary Assistant Surgeon to the Liverpool Stanley Hospital.

SUTTON, Edward, M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant House-Surgeon to the Poplar Hospital for Accidents, Blackwall, E.

THOMPSON, Mr. E., appointed Medical Officer for the Sixth District of the Bath Union.

WEEKES, Hy. Holman, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer to the Gillingham Infectious Hospital, *vice* Henry Weekes, L.R.C.P. Edin., M.R.C.S.Eng., resigned.

WILLIAMS, J. D., M.B., C.M.Edin., appointed Medical Officer for the Roath District of the Cardiff Union.

WILLIAMS, John Humphry, M.D., M.B., C.M.Edin, reappointed Medical Officer of Health for Flint Borough.

WILSON, J. H., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of the No. 3 District of the Plympton St. Mary Union.

WOOD, Joseph, M.D., appointed Medical Officer for the Liversedge District of the Dewsbury Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

ARNISON.—At 4, Fenham Terrace, Newcastle-on-Tyne, on July 15th, the wife of W. C. Arnison, M.D., of a daughter.

SCOTT-TEBB.—On July 14th, at Charlcombe, Boscombe Hill, Bournemouth, the wife of W. Scott-Tebb, M.A., M.D., of a son.

MARRIAGES.

ALLAN—MACINNES.—On April 11th, at St. Stephen's Presbyterian Church, Sydney, Australia, by the Right Rev. G. MacInnes, B.D., cousin to both bride and bridegroom, assisted by Revs. J. Kinghorn and T. W. Dunn, Surgeon George Allan, M.B., C.M., Royal Navy, only son of George Allan, M.A., Keith, Scotland, to Martha Margaret, younger daughter of the late John MacInnes, of Arncliffe, Sydney.

MOTHERSOLE—RALFE.—July 12th, at St. John's, Birkenhead, by the Rev. Gerald C. Dicker, Vicar, Robert Devereux Mothersole, M.D., M.S., F.R.C.S., of Bolton, son of the late Thomas Mothersole, of Colchester, to Susanna Mary, eldest daughter of the late F. Whitfeld Ralfe, of Llancaiach, Glamorganshire.

RAWLINSON—ALEXANDER.—On July 14th, at the United Presbyterian Church, Lenzie, Dumbartonshire, by the Rev. W. Miller, M.A. Frederick Juland Rawlinson, F.R.C.S.Eng., of Stuart House, Bognor, Sussex, younger son of Alfred Rawlinson, of Hurstmead, Eltham, Kent, to Edith Mary, youngest daughter of William Alexander, of Fairview, Lenzie.

TRESIDDER—JAMES.—On June 19th, at Bottesford Parish Church, by the Rev. H. H. Wood, assisted by the Rev. E. H. Stone, William Elliot Tresidder, M.B.Lond., of Sherwood Street, Nottingham, fourth son of the late Surgeon-General Tresidder, of H. M. Indian Medical Service, to Gertrude, younger daughter of William James, of Bottesford.

DEATHS.

SMITH.—On July 15th, at 24, King Street, Great Yarmouth, John Caporn Smith, M.R.C.S., L.S.A., aged 82 years.

TURNBULL.—Newcastle-on-Tyne, 3, Jesmond Terrace, on July 12th, aged 36, William Turnbull, M.B., B.S., eldest son of the late John Lumsden Turnbull, Esq., of Gosforth, Northumberland.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not Later than Midday Post on Wednesday. Telegrams can be Received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal and not to his private house.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any Circumstances be Returned.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

M.D. asks for opinions on the use of celluloid sets of teeth.

Mr. F. W. Jordan asks to be recommended an appliance for a very stout lady, who has a chronic umbilical hernia and a very large and pendulous abdomen.

Obelisk asks for information concerning the best treatment for that affection known as "tennis" or "golf arm." All his treatment in this case has so far proved ineffacious, and doubtless some of the members will be able to kindly proffer suggestions.

J. O. asks for suggestions in the treatment of a case of severe neuralgia just below the left breast, recurring every evening at 9 P.M. There is monorrhagia, due, probably, to subinvolution. Hypodermic injections of plain water relieve the pain (the patient being under the impression that the injection is morphine). A course of ergot, syrup of the hypophosphites, massage, iron and strychnine, etc., have each failed in turn. Change to a bracing seaside place temporarily cured the neuralgia, but the pain recurred at the first catamenial period after her return.

Wanted a Diagnosis and Treatment.

A Member writes: A girl, aged 16, who has not yet menstruated, but every fourth week gets in a most distressing condition, goes to bed, knows nobody, and has an incessant craving for food, is light-headed, shivers, and complains of pains in the head; this lasts a week, when her senses return, and she keeps in a very prostrate condition for some time. The attacks are getting worse; usual remedies—iron, aloes, hot baths, etc.—produce no effect.

ANSWERS.

Doubt.—The case is one for the opinion of an expert.

J. R.—We are unable to express any opinion as to the dose of the proprietary preparation mentioned.

Anxious.—The Mutual Reserve Fund of New York is an assessment scheme, and in the opinion of reliable experts its trustworthiness is open to much doubt.

C. E. S. F.—It seems that our correspondent has scarcely been treated with the courtesy which is usual and proper, and the refusal of the certificate was uncalled for. But, under the circumstances, the medical officer of health cannot be said to have exceeded his duty in visiting the house, or even in examining the child with the consent of the parents.

A Saleable Appointment.

W. M. P.—We trust that the practice our correspondent contemplates purchasing has something more to recommend it than the appointment he mentions; otherwise we should seriously advise him to reconsider his decision. We have over and over again in the columns of the British Medical Journal pointed out the character and tendency of the business done by "medical aid societies," and have repeatedly advised practitioners to have no dealings with them. We feel convinced that no possessor of a respectable medical practice would be willing to reckon in it such an appointment.

Winter Climate for Chronic Phthisis.

J. M. T.—The high altitude sanitaria of Switzerland, such as St. Moritz, Davos, Wiesen, and Arosa, seem indicated as a winter climate for a patient "who has been suffering from phthisis for almost three years," for they prove highly beneficial in chronic phthisis without pyrexia. They are also useful in insomnia. How far they are exactly suited to any individual patient must depend on the constitutional and circulatory powers, on the extent of lung surface available for respiratory purposes, and other conditions which can only be ascertained by careful examination of the patient.

NOTES, LETTERS, Etc.

The "British Medical Journal" Commission on Workhouse Infirmaries: Some Comments of the Press.

The British Medical Journal is, says *The News* of July 12th, publishing a series of reports on the system of nursing and administration of provincial workhouses and infirmaries. It is the same tale everywhere of an insufficient supply of nurses—such as there are not even being properly trained—and of a scandalous want of all the decencies and ordinary requirements of hospitals for the sick. The latest workhouse examined is that at Bath. Here the deficiencies are such that for fifteen months the medical officer in charge has made expostulations without effect. The infirmary is licensed for 230 beds, and is always full. But there is not even a supply of hot water: and for the sixteen wards only one certificated day nurse, and not one (certificated or not) at night has been provided. It seems to be thought that a few pauper wardswomen by day can do all that is wanted for patients suffering from pneumonia, phthisis, cancer, or heart disease. We need not go into the medical details, but some things recorded ought not for a moment to be tolerated by common humanity. What have the Bath authorities to say in reply?

The London and Manchester Industrial Assurance Company, Limited.

We have received a copy of the prospectus of this association, and we learn that "over 1,000 thoroughly qualified medical gentlemen are attached to the different branches throughout the United Kingdom, and are in attendance in the surgery hours at their respective residences to give professional advice and medicine daily to members." We find that members can obtain the advantage of this for the very moderate premium of 2½d. per week, and at first sight it would appear that the above association is nothing more than one of the ordinary "medical aid societies," but it must not be overlooked that none but *members* of this Association can avail themselves of its medical aid department, that is, all who avail themselves of it must be the holders of some of its assurance policies, so that in this respect it differs very considerably from the ordinary type of medical aid society, with which it ought not to be confounded. At the same time it must be confessed that we hear many complaints from members of the profession as to the way in which the agents of this association are accustomed to spread its business by "touting" for members among the working classes, and making use of this medical department as a means of attracting patients from their usual medical attendant to swell the lists of the medical officers of the [illegible].

Preventive Inoculation of Immunised Scarlet Fever Blood Serum.

Dr. Albert S. Ashmead (New York) writes: One of my sons, aged 7 years, being stricken with scarlet fever, I have inoculated, on the second day, two of my other children, who had not had this disease, aged 5 and 2 years. The blood serum was taken from their elder brother, aged 9 years, who had had scarlet fever six years before. Two drops taken from a blister on his breast were used for each child, and there was one inoculation only for each. There was no real isolation; separate bedrooms during the night, but free intercourse during the day. Now, the forty-fifth day, no infection has been observed.

Prizes of the Royal Society, New South Wales.

The Royal Society of New South Wales offers its medal and £25 for the best communication—provided it be of sufficient merit—containing the results of original research or observation upon the following subjects: On the Physiological Action of the Poison of any Australian Snake, Spider, or Tick; essay to be sent in not later than May 1st, 1895. On the Origin of Multiple Hydatids in Man; On the Effect of the Australian Climate on the Physical Development of the Australian-born Population. The last two essays to be sent in not later than May 1st, 1896. The successful papers will be published in the Society's annual volume. Fifty reprint copies will be furnished to the authors free of expense.

Assistant Medical Officers in Asylums.

A. M. O. writes: Apropos of assistant medical officers in asylums the following verse may give a key to the situation in a great number of cases:

> There was once a strange A. M. O.,
> Who was heavy, lethargic, and slow
> He complained day by day,
> Of his "status" and pay,
> And yet was unwilling to go.

Placenta Prævia Complicated by Double Pneumonia.

Dr. Basil Trevelyan (Bath) writes: At 10 A.M. on May 8th I was called to a midwife's case. The patient, a multipara, aged 40, was seven months pregnant and had been bleeding from the vagina for six weeks. She had also caught cold three days previously. The temperature was 102°, the patient was very weak and prostrate; breathing short, pulse bad. There was dulness and fine crepitation at the bases of both lungs, most marked at the left. The bedding was soaked with blood as well as several cloths; the vagina was full of large clots, the blood still constantly dribbling. The os was dilated to admit two fingers, the presentation not discernible, but the edge of the placenta was to be felt.

After the usual preliminaries, except an anæsthetic, I dilated the os, aided by a friend pushing down the uterus. I then turned, first detaching the placenta from the left lower segment of the uterus. But bringing down even both legs failed to arrest the bleeding. Consequently I delivered the dead child, removed the placenta and membranes, and with great difficulty obtained temporary contraction of the uterus. Violent hæmorrhage, however, soon set in, and was only finally checked by intrauterine douches of hot water and perchloride of iron. But the collapse was too great, the patient never rallied, and death occurred in about half an hour after the cessation of the bleeding. This case seems of interest from the gravity of the complications, which precluded any chance of recovery.

Inversion of Uterus due to Fibroma: Spontaneous Reinversion after Removal.

Mrs. L. Frazer Nash L.R.C.P. and. S. Ed., etc., (Hackney), writes: J. a Hindu woman, aged 40, married since childhood, had had five miscarriages, and two stillbirths. For seven years she had been subject to severe hæmorrhages, and suffered recently from painful defæcation and micturition. She complained that lately a lump came down outside the vulva, which had been replaced till the last eight days, when in spite of all efforts it remained outside. I found an ulcerated, extremely fœtid fibroma the size of a large closed fist. It was attached by a thick peduncle, four inches long, to the fundus, which lay outside the cervix. By the constant dragging it was elongated and indistinguishable from the peduncle to the sight and feel. She was very tender, so I put her under chloroform, and adjusted the *écraseur* with a stout wire round the upper part of the elongation. I then allowed her to recover consciousness, and by the hyperæsthesia of the fundus and the want of sensation in the peduncle, I judged the upper limit of the latter, and tightening the wire very slowly cut the tumour off. The cut surface was flush with the level of the inverted fundus. No bleeding followed, but I judged it better to try no manipulations, but applied firmly a plug of iodoform wool. Two days later on going to replace the fundus I found it had completely reinverted itself, the sound passing just over the normal.

Desirable Improvements in Hypodermic Syringes.

Dr. F. R. Humphreys (South Hampstead) writes: May I point out to your correspondent in the British Medical Journal, of July 7th that the use of wire stylets is quite unnecessary, even in the steel needles now in use? I have not used a stylet for the last four or five years. The needle, after use, may either be washed out with a little spirit or it may be heated in the flame of a match or any other convenient way. The latter method has the effect of discolouring the needle and I have discarded it for the former. The addition to the cases of tabloids of a bottle for distilled water would add greatly to their value. Spirit can always be obtained or, even from teetotallers, a lucifer.

The Medical Profession and Freemasonry.

Mr. Chas. F. Forshaw (Bradford) writes: Dr. Cockburn is not the only medical man who is a provincial grand master, for Dr. James Middleton is the Provincial Grand Master of Roxburgh, Peebles, and Selkirkshires, and so recently as May 3rd last he presided over 200 brethren at the Quarterly Communication of the Grand Lodge of Scotland, held in Freemasons' Hall, Edinburgh. As I am an honorary member of the Peebles Kilwinning Lodge, No. 24 (founded 1710) Dr. Middleton's jurisdiction perhaps you will kindly, by inserting this letter, allow my P.G.M. to share with Dr. Cockburn the peculiar honour of being the only two medical men in Great Britain who hold the proud position of provincial grand masters.

Chinese Medicines: A New Field for the Pharmacologist.

Mr. M. F. A. Fraser, British Consul at Pakhoi, in China, in his report to the Foreign Office on the trade of his district, draws attention to a curious article of export—namely, dried lizards. The European, scampering over the Pakhoi plain on a little native pony, finds his equestrian pastime sadly marred by the necessity for a bright look-out for the holes dug by the natives, sometimes on the very paths, to catch lizards. The numerical importance of these little saurians in the list of exports may well cause surprise. The greater quantity exported comes from the neighbourhood of Wuchow. In Kwang Si lizards are used for making medicine called "lizard wine;" it is said to be a tonic, and also to cure eye diseases. "To these persons," says the distinguished American, Dr. Wells Williams, speaking of Chinese physicians, "nothing comes amiss, and, like the ingredients of the bubbling, bubbling cauldron of Macbeth's witches, the stranger it is the more potent they think a dose will be. Petrifactions of crabs and orthoceras, bezoar of cows, scales of pangolina, claws of rhinoceroses, pheasants', tigers' bones, and other suchlike things are sought after as medicines and large sums paid for them." Independently of lizards, however, there is a large import and export of native medicines, both in steamers and in junks, here as elsewhere in China, and among many valueless articles there must be some, and even many, good ones. It is much more in surgery than in medicine, Consul Fraser says, that the European doctor surpasses the Chinese who have a respectable array of learned—though lamentably out of date—authors on the subject. The intrepid explorer, Fortune, gratefully ascribed the saving of his life to a native practitioner who cured him of a fever. Able European specialists are taking up the important question of the vast native *materia medica* with increasing interest and success; and, as the foreign doctor is constantly winning his way to native favour, and more and more Chinese adepts to western science are being enrolled, we may expect increasing benefits, not only to humanity and science, but also to manufacturing industry and to commerce, from their researches.

The Indian Pilgrims to Mecca.

The *Pioneer*, in alluding to the recent representation which has been made by Mr. Ernest Hart to the Secretary of State on behalf of the Indian pilgrims to Mecca, says:—This question of the Mecca pilgrims is another proof that England is a great Mahomedan power. The Aliv Rafiuddin and those whom he represents know probably that appeals to the Sultan for help would be of little avail. The officials at Constantinople would block his way, and he would gain little by representing grievances to them. They might be liberal with promises, but the Hedjiz is an outlying province where the local governor has full power, and there is no system of direct supervision under which reforms could be assured if they were sanctioned. The British Government, on the other hand, is given to keeping promises once made, and Mahomedans recognise how great is its power outside the limits of the Empire proper. In this connection it may be pointed out that one way of increasing our prestige among the tribesmen who are coming under our influence on the North-West frontier, from the Hindoo Kush to the Helmand, is to announce to them that they will enjoy the full benefits of British protection in their pilgrimages to Mecca. They are ignorant and fanatical, and many of them hate the white man as a Kafir, not knowing how tolerant is the Government of India to all religions, and how it protects each and every creed in the exercise of its rights. Our political officers might make known in Chitral, the Indus, Kohistan, Swat, Boneyr, Bajour, Waziristan, and in short throughout the whole borderland, that the Government are anxious to facilitate the journey of pious Mahomedans to Mecca, and that all who embark upon it will travel as British subjects. This may seem a roundabout way of confirming our influence over the tribesmen, but in truth it is not so. The Mahomedan is easily affected by consideration shown to his religious feelings, and the pilgrims who go on the Haj cannot fail to be impressed by the solicitude shown for their welfare. The experiment above indicated is worth a trial at all events, and no difficulties are likely to arise in carrying it out.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(**A**) Anti-Monopoly; Mr. T. M. Anderson, Glasgow; Dr. A. S. Ashmead, New York; Mr. R. Asher, Woodbridge; Mr. R. Ahmad, London; Dr. J. Alexander, Paignton; Professor T. C. Allbutt, Cambridge; A. B. C.

(**B**) W. G. Bigger, M.B., London; Mr. P. M. Braidwood, Amersham; Messrs. Burroughs, Wellcome, and Co., London; Dr. R. Boxall, London; Dr. J. Barr, Liverpool; Mr. Blackett, London; T. W. Butcher, M.B., Blackpool; B.

(**C**) Dr. W. H. Climo, Colchester; Messrs. T. Christy and Co., London; Dr. Copeman, London; Church Society for the Promotion of Kindness to Animals, London; Mr. H. B. Carter, London; Mr. W. H. Copeland, Newcastle-on-Tyne; C. C.; Mr. A. C. Chichester, Pontypool; Mr. E. K. Corbin, Guernsey.

(**D**) Doubt; Dr. T. Dutton, London; Mr. H. Davidson, Belfast; Mr. R. Dutt, Cambridge; Dr. H. Drinkwater, Wrexham; Mr. A. C. Dixey, Newton Abbot4.

(**E**) Dr. J. Ewart, Brighton; Dr. T. Eastes, Folkestone.

(**F**) Mr. C. F. Forshaw, Bradford; Mrs. A. Fairmann, Dewsbury; Dr. J. Ferguson, Perth; Dr. L. Francis, Redhill; W. B. O. Ferguson, M.B., Lincoln; Dr. C. Forbes, London.

(**G**) Mr. J. L. Gaskin, Barbados; Mr. J. Goland, London; Mr. C. Godson, London; Mr. M. Goodwin, Matlock Bridge; Dr. J. J. Gorham, Garstang.

(**H**) Mr. C. A. Harris, London; H.M.S.; Mr. S. R. Hodge, Hankow; Mr. E. J. Howes, Liverpool; Dr. J. Holmes, Whitefield; Mr. E. F. Hanrahan, Dublin; Dr. W. Hardie, Brisbane: Mr. J. Hutchinson, London; Dr. W. D. Haslam, Bournemouth; Mr. C. E. Howell, Felixstowe.

(**I**) Inquirer; International Congress of Hygiene and Demography, Secretary of, Buda-Pesth.

(**J**) Mr. A. E. Josalyne, London; J. D. M.; Mr. J. Jackson, London; *The Journalist*, Editor of, London; Sir George Johnson, London; J. D. M.; Mr. F. W. Jordan, Stockport; Mr. J. B. James, London.

(**K**) Dr. H. Knaggs, Bombay.

(**L**) Dr. C. J. Lewis, Stirling; London Skin Hospital, Secretary of, London; Dr. J. F. Le Page, Manchester; Dr. R. Lee, London; Mr. A. W. Loveridge, Newport.

(**M**) Mr. G. H. Mapleton, St. Kitts; Mr. J. M. Murray, Germantown; M. O.; Medicus; Mr. Shirley Murphy, London; M.B., M.A.; A. Manknell, M.B., Bradford: Dr. H. W. G. Mackenzie, London; Mr. W. L. Mullen, Melbourne; Mr. S. B. Mason, Pontypool; Member of the B. M. A.; Mr. J. H. Morgan, London; M.D.; Member: Dr. R. H. Milson, London; T. Mason, M.B., Dublin.

(**N**) Dr. A. Newsholme, Brighton; Natural Competition.

(**O**) Obelisk; Dr. W. O'Donnell, Dunkineely.

(**P**) Dr. W. M. Parham, Bath; Mr. T. Pierse, Wexford; T. W. Parry, M.B., Eton; Dr. H. W. Pomfret, Manchester; Perplexed; Dr. C. Potter, Stockport.

(**R**) Mr. H. M. Riley, Leicester; Dr. J. Rothe, Kingstown; Royal College of Surgeons in Ireland, Registrar, Dublin; Mr. F. J. Rawlinson, Bognor; Dr. B. Rogers, Bristol; Dr. J. M. Rhodes, Didsbury; Mr. T. L. Roberts, Denbigh; Dr. W. Rutherford, Edinburgh; Mr. T. F. Raven, Broadstairs; Mr. C. G. Ring, London.

(**S**) Messrs. Street and Co., London; Mr. H. D. Senior, Newcastle-on-Tyne; W. B. Simpson, M.B., Grimsby; Mr. J. M. Smith, Sydney; Dr. E. Seaton, London; Mr. E. Sutton, London; Dr. J. A. Smith, London; Dr. H. Snow, London; Dr. A. T. Schofield, London; Mr. T. H. Smith, Liverpool; Surgeon-Lieutenant-Colonel A.M.S.: Dr. C. E. Shelly, Hertford; Dr. A. Sheen, Cardiff; Dr. H. R. Spencer, London.

(**T**) Dr. E. P. Thurston, London; Mr. R. W. Turner, London; Dr. J. C. Thresh, London; Dr. J. M. Trimble, Strabane; The Tonnissteiner Co., London; Dr. G. Thomson, Oldham; Dr. Symes Thompson, London.

(**W**) Dr. L. A. Weatherly, Bath; Mr. E. S. Wood, Cambridge; Dr. P. Weber, London; Mr. E. H. Whitcombe, Westerham; Mr. E. Wilson, Exeter; Dr. T. Williams, London; W. J. F.; Mr. P. F. Walsh, Callan; Dr. T. S. Wilson, Edgbaston; W.; Mr. W. Wingrave, London; Mr. T. L. Webb, Iron Bridge; Mr. G. T. Willan, Melton Mowbray; Mr. T. P. G. Wells, St. Albans.

(**Y**) Mr. N. E. Yorke-Davies, London; etc.

BOOKS, Etc., RECEIVED.

A Textbook of the Diseases of Women. By Henry J. Garrigues, A.M., M.D. London: Henry Kimpton. 1894.

Die Giftthiere und ihre Wirkung auf den Menschen; Ein Handbuch für Mediciner. Von Dr. Otto V. Linstow. Berlin: Hirschwald. 1894. 4 m.

Saunders' Pocket Medical Formulary, with an Appendix. By William M. Powell, M.D. Second Edition. London: Henry Kimpton. 1894.

CRITICAL REMARKS

ON

SIR ANDREW CLARK'S THEORY AND TREATMENT OF "RENAL INADEQUACY."

BY SIR GEORGE JOHNSON, M.D.LOND., F.R.S.,

Emeritus Professor of Clinical Medicine and Consulting Physician to King's College Hospital; Physician Extraordinary to Her Majesty the Queen.

IT must be well known to the readers of the BRITISH MEDICAL JOURNAL that the late Sir Andrew Clark has described, with the copiousness and clearness of diction which he always had at his command, a class of cases to which he gave the name of "renal inadequacy." His first public statement on this subject was made in a paper read at a meeting of the Medical Society of London; an abstract of which, with the discussion thereon, was published in the medical papers (1879): a more complete and detailed account of the distinguished author's views is contained in an address delivered before the Metropolitan Counties Branch (Hackney District), and published in the BRITISH MEDICAL JOURNAL of February 24th, 1883.

The cases of so-called renal inadequacy are described as those "in which the kidney, without any sensible alteration of structure that our modern means of investigation will enable us to determine, cannot produce a healthy urine. Such kidneys produce a urine which, assuming the quantity to be a quantity of health, is low in density and is deficient in solid constituents, principally the constituent of urea and its congeners." "I call this state," he says, "renal inadequacy." He goes on to explain that "people who have this renal inadequacy are characterised by three things particularly." They have a curious inability properly to repair damages done to them by accident or by disease. They cannot repair the injury inflicted by a common accident, or recover satisfactorily from an attack of pneumonia. Then they are peculiarly vulnerable; they often catch cold, from which they do not quickly recover. "They are people who, without apparent reason, get pneumonia, pleurisy, pericarditis, and the like. Then, thirdly, you can never be sure of the result of the performance of an ordinary surgical operation upon them." They may die from hæmorrhage after a simple operation, or become pyæmic after the opening of an abscess. It is further remarked that these patients are made worse by a liberal diet, and that they usually improve, while the density of the urine is increased, on a restricted dietary. This is the description of this class of cases, given, for the most part, in the author's own words. It should be added that the urine is free from albumen and tube casts, and two cases are mentioned in which after death no structural change in the kidneys was discoverable.

Now the theory of renal inadequacy implies that kidneys which are structurally sound are unable to discharge their excretory function. The result of this should be that "urea and its congeners" being formed as usual, accumulate in the blood; there should be a uræmic condition identical with that which is known to occur in the last stage of renal degeneration. The blood, however, appears not to have been analysed. At any rate, although Sir Andrew Clark tells his patient that his "chimney is choked," and that he "must not put too many coals on the fire," there is no evidence that the scanty excretion of urea has for its result an accumulation of that material in the blood.

Another invariable result of an accumulation of urinary excreta in the blood is high arterial tension with increased cardiac impulse, and in prolonged cases the physical signs of hypertrophy of the left ventricle are present. These conditions appear not to have been observed in cases of renal inadequacy. In addition, then, to the *a priori* improbability of structurally sound kidneys failing to discharge adequately their excretory functions, there is an absence of those physical conditions which invariably result from the retention of urinary excreta in the blood. What, then, is the explanation of the enfeeblement of body and the derangement of health which Sir Andrew Clark has quite accurately described?

During the discussion of the paper at the Medical Society of London Dr. Routh said: "There was no proof that the author's dictum was correct, and he inclined to believe the ailment was due to defective assimilation, and therefore lessened amount of salts in blood and urine rather than to renal inadequacy."[1] This gives in a few words the probable explanation of the phenomena.

Dr. Saundby, in a letter criticising Sir Andrew Clark's theory, says:[2] "He asks us to accept the doctrine that these patients possess kidneys which, although free from structural change, are functionally far inferior to most kidneys in a very advanced stage of chronic organic disease."

Sir Andrew Clark mentions amongst "the symptoms and signs most commonly associated with renal inadequacy" those of "flatulent dyspepsia." In these symptoms we have an indication that the earlier stage of the digestive process is defective, and it is reasonable to suppose that this defect extends through the successive stages of the imperfectly understood processes by which the food is so assimilated as to repair and nourish the various tissues, and to take the place of materials which by disintegration and metabolism become waste and excrementitious products: and it is conceivable that a defect in the process of assimilation may be associated with a diminished formation of urea and other metabolic products of nitrogenous food and tissues[3]. It is agreed by all physiologists that the function of the kidneys is not to form urea, but to separate that which is formed elsewhere and conveyed to the kidneys by the blood.

The condition which has been called renal inadequacy may, I think, be instructively compared with the state of the hepatic and renal secretions during the collapse stage of cholera. One of the most constant results of choleraic collapse is the almost complete suppression of bile and urine; yet however prolonged may be the collapse, jaundice never occurs and the blood contains no excess of urea. The reason is that the constituents of bile and urine are formed only in very minute quantities, and the explanation of this is not difficult. During the state of collapse the amount of blood which passes through the lungs is greatly reduced, and as the blood is the channel by which oxygen enters the system, the oxidation of the blood and tissues is reduced in proportion to the lessened circulation. The chief constituents of bile and urine are products of oxidation, and their diminished formation during the stage of collapse is a necessary and intelligible result of the defective supply of blood and oxygen. That this is the true explanation of the hepatic and renal "inadequacy" during the stage of choleraic collapse receives interesting confirmation from the fact that in a woman who is suckling her infant the secretion of milk continues, apparently undiminished, during the stage of collapse, and the breasts become painfully distended. This fact I have myself observed, and it has been recorded by various writers on cholera—from 1832 by Magendie, to 1866 by the physicians of the London Hospital. The explanation of this continued secretion is that the chief constituents of milk—casein, sugar, and fat—are not products of oxidation. Therefore the mammary secretion is abundant, while the hepatic and renal secretions are reduced to the scantiest proportions.[4] That this is the true physiological explanation of the almost complete suppression of bile and urine during choleraic collapse is, I think, unquestionable, and that the condition is fairly comparable with Sir Andrew Clark's renal inadequacy can scarcely be disputed. We know from the history of cholera and the various modes of treatment which different theories have suggested, that calomel has often been given with the object of acting on the liver, and restoring the secretion of bile; and that it would help to restore that secretion is probable, not, however, by any direct influence on the liver, but by its evacuant action

[1] *Lancet*, vol. ii, 1879, p. 801.

[2] BRITISH MEDICAL JOURNAL, vol. i, 1883, p. 537.

[3] Dr. M. Foster says, "The whole story of proteid metabolism consists at present mostly of guesses and of gaps."—*Physiology*, Fifth Edition, p. 760.

[4] See the chapter on Epidemic Cholera in the author's *Medical Lectures and Essays*, p. 126, *et seq.*

on the bowels it would facilitate and quicken the elimination of the poison which is the primary cause of the arrested circulation, with the resulting defective oxidation to which I have just now referred.

During intrauterine life there is pulmonary, hepatic, and renal "inadequacy," but as soon as respiration is established the correlated work of the liver and the kidneys commences and continues.

It must be admitted, I think, on careful consideration, that the theory of defective digestion and assimilation satisfactorily explains not only the deficiency of urinary solids, but the leading characteristics of the patients so well described by Sir Andrew Clark—their imperfect repair of injuries the result of accident or disease, their proneness to contract disease, and the uncertain result of any surgical operation which they have to undergo. As a result of defective food conversion and assimilation, the tissues of these patients are imperfectly nourished, and the materials for repairing injuries the result of disease or accident, are faulty.

It is quite intelligible that these patients should be benefited and the density of their urine increased by a restricted diet. The nutrition of the tissues depends not upon the amount of food taken into the stomach, but upon the due conversion and assimilation of food materials, and an enfeebled digestive apparatus can more effectively deal with a comparatively scanty than with a too liberal dietary.

It is not without interest to refer to another class of cases of defective digestion and assimilation, in which the urine has characters the opposite of those found in cases of so-called renal inadequacy. The urine is of high specific gravity —1030 or more. It contains an excess of urea, as much as 3 per cent., and of other nitrogenous products, including uric acid and kreatinin; and the reducing action of these two substances upon alkaline copper solutions has sometimes led to the erroneous diagnosis of glycosuria.[5] Now, in this class of cases, as in those in which the urine is of low density and deficient in its normal solids, the kidneys are not at fault, since their function is to separate the urinary excreta, whether scanty or superabundant, which reach them through their blood vessels. The term "renal inadequacy" is as incorrectly applied to the first class of cases as would be that of "renal superadequacy" to those in which the urine is of high density with an excess of normal solid constituents.

Many of the laity suppose that diabetes is a disease of the kidneys, and it is sometimes difficult to make them understand that the sugar, which is so abundantly secreted, is formed elsewhere than in the kidneys. This obvious error is, I venture to say, analogous to that which is implied in the term "renal inadequacy."

In the treatment of his cases of so-called renal inadequacy Sir Andrew Clark wisely insisted upon a restricted and carefully regulated diet, but, influenced by his theory of defective renal excretion, he appears to have attached undue importance to "get all the supplementary, complementary, excretory organs to do fully their appointed work; that they may, if possible, take some share of the defective work of the kidney upon their shoulders." On the other hand, he omits to mention any direct means for assisting the digestive organs to discharge their functions. This, however, is a class of cases in which great benefit is often derived from a combination of vegetable bitters—quinine and nux vomica or strychnine—with or without dilute hydrochloric acid, and with or without some form of pepsine, to be taken immediately after each meal.

Although I have ventured to criticise the theory of renal inadequacy, it is due to the memory of the late Sir Andrew Clark to acknowledge that he did good service to the profession and to mankind by directing attention to this class of cases, and by insisting upon the importance of a careful and systematic examination of the urine.

[5] See a paper by the writer on Some Common Sources of Error in Testing for Sugar in the Urine.—*Lancet*, July 7th, 1894, p. 11.

Presentation.—Dr. Brogden has been presented by the lady members of the Canton Branch of the St. John Ambulance Association with a handsome gold signet ring in recognition of his gratuitous services as lecturer.

PRESIDENTIAL ADDRESSES

DELIVERED AT THE

ANNUAL MEETINGS OF THE BRANCHES

OF THE

BRITISH MEDICAL ASSOCIATION.

ON DEATH-RATES.

Delivered at the Annual Meeting of the Worcestershire and Herefordshire Branch.

By G. H. FOSBROKE, M.R.C.S., D.P.H.Camb.,
Fellow of the Sanitary Institute, etc., and County Medical Officer for Worcestershire.

In the first place, I desire to tender you my best thanks for having elected me as your President for the coming year, and in the next to express regret that the comparatively short notice I received of this meeting, coupled with considerable pressure of official work, has prevented me from preparing, or attempting to prepare, an address worthy of the occasion.

Having devoted the past twenty-two years of my professional career exclusively to the practice of State medicine, I trust I may ask your indulgence for a short time while I lay before you, in a superficial fashion, some ideas I have formed in relation to the branch of our profession with which I am intimately associated.

Death-rates and their Fallacies.

Crude death-rates are now so generally appealed to, as a test of local sanitation, that I think it is quite time we began to instil into the minds of the public that, unless checked in various ways, they often lead to fallacious conclusions. In drawing inferences from the rates of mortality presented by different localities, it should be said that no true comparison can be made unless the death-rates are considered individually and collectively, and, in addition to this, various other points should be carefully weighed.

Unfortunately, the actual enumeration of the population only takes place once in ten years, and the census taken in 1891 shows that great differences have been found to exist between the estimated and the enumerated populations of urban as well as rural districts. Until a quinquennial census is established the only fairly reliable method of checking such estimates is to obtain the number of inhabited houses from the assessment books for the year, and multiply this by the average number of inhabitants for each house as compared with the last census.

But even this method involves the fallacy that new houses which have been erected may be of different class from those previously existing, and may therefore contain a different average of inmates per house. In rapidly increasing localities, however, this method of estimating the population will yield more reliable results than the one usually adopted, which is based on the assumption that the same rate of increase will be maintained as in the previous intercensal period. On the other hand it is manifest that in many rural districts, where there has been an actual decrease in the population during recent years, this method of estimating the population from the rate books is the only one by means o which the number of the inhabitants can be approximatel ascertained.

But granting that the estimated populations of different localities are fairly accurate, there are various fallacies to be guarded against in comparing the calculated rates of mortality. For example, in comparatively small districts there will be considerable fluctuations of the mortality rates from year to year, so that it is only by taking the averages of a series of years that any correct inference can be drawn.

With a small number of births there may be a high rate of infant mortality in any given year, and a few deaths from measles and whooping-cough may yield a high death-rate from zymotic diseases, even though the general death-rates may be much below the average. Or again the general death-rate may be exceptionally high for any given year, and the rate of infant mortality and zymotic death-rate may, one or

both, be much below the average. But in fairly populous districts containing 10,000 inhabitants or upwards, these fluctuations are not so marked, and they diminish as population increases.

With regard to the significance which may be attached to the several rates of mortality, it is necessary, in comparing the statistics of the different localities, that the influence of age and sex distribution, as well as of occupation, should as far as possible be taken into consideration. Thus the fashionable suburbs of towns inhabited by the wealthy classes always contain a great excess of adults (in the large number of servants), and in these low death-rates prevail, while the birth-rate is also low. In districts occupied by the artisan and labouring classes the birth-rate is not only high, but if mothers are employed in factories the rate of infant mortality is largely increased by deaths resulting from improper feeding, apart altogether from the influence of insanitary conditions.

Although in populous communities the high rate of infant mortality may be taken as indicative of sanitary neglect, especially when infantile diarrhœa contributes largely to the death-rate, no true conclusions can be drawn without analysing the various certified causes of death. The effects of parental neglect or ignorance, maternal occupation, improper feeding, hereditary influence, and infant life assurance have all to be weighed carefully and considered. So in the same way with regard to the death-rate from zymotic diseases. A severe outbreak of measles or whooping-cough may largely increase the zymotic death-rates in districts where cases of typhoid fever or diphtheria are of the rarest occurrence. Then, again, the prevalence of zymotic disease varies greatly in different districts according to the proportional number of young children in each, apart altogether from any differences of sanitary condition, simply because the most fatal of these diseases are incidental to child life.

Notwithstanding these limitations, the zymotic death-rate possesses considerable value as a test of sanitary condition, but it is always necessary to separate it into its component parts before drawing conclusions. Generally speaking, the most reliable deductions as regards the sanitary condition of any district are those that are based upon the statistics of that district, when reviewed over a series of years. If the death-rate from zymotic diseases, and more particularly from fever, diphtheria, and diarrhœa, has become steadily lowered, it may fairly be regarded as indicative of progressive sanitary improvement.

The general inference from the preceding consideration is that implicit faith must not be placed in general death-rates, and that more stress must be laid on the respective so-called zymotic death-rates, particularly on those of typhoid fever. The death-rates occasioned by tuberculous diseases, and infantile mortality, too, should not be lost sight of.

SMALLPOX, VACCINATION, AND ISOLATION HOSPITALS.

The diminishing death-rates of England and Wales, when considered individually and collectively, prove beyond doubt that the public health of the present day is vastly superior to what it used to be, and that improved sanitation fortifies us against disease. In small-pox there has been a decided saving of life, for soon after the plague—now ravaging Hong Kong—disappeared from Europe, it was one of the greatest scourges of the country, and even at the end of the last century the deaths exceeded 10 per cent. of the total number which occurred. Of the way in which vaccination, duly associated with revaccination, has driven small-pox from our midst there is no need to speak in a gathering of this kind; but convincing proofs of the efficacy of this operation are afforded by the statistics of the Sheffield epidemic in 1887-88. Dr. Barry's report is so well known and appreciated that I consider it unnecessary to take up your time by discussing it. Just now, however, when antivaccinationists are so boisterous, I cannot refrain from quoting a sentence from Dr. Buchanan's summary of Dr. Barry's report, wherein he says that "the vaccinated children had, as compared with the unvaccinated children living in the town, a 20-fold immunity from attack by small-pox, and had a 480-fold security against death by small-pox; that in the invaded houses the vaccinated children had, as compared with the unvaccinated, an 11-fold immunity from an attack by small-pox, and a 381-fold security against death by small-pox."

With regard to the effect of unknown cyclical changes of small-pox Mr. Netten Radcliffe drew attention to the fact that the law of periodicity of epidemic diseases is not yet determined. Two factors appear to be at work—(1) the influence of an accumulation of susceptible persons in the interval between two epidemics of the same disease, and (2) certain extraneous conditions which appear to be operative in determining the periodicity but about which little or nothing is known. The first factor is exemplified by the fluctuations in the amount of small-pox in England which have been observed to have a close relationship with the fluctuations in the number of unvaccinated children. The second factor appears to be exemplified by the fact that in 1871, when one of the periods of epidemic increase was due, some other undetermined condition gave to that epidemic a severe character. In 1893, too, the deaths from small-pox were unusually high.

No disease appears to correspond with the local distribution of small-pox. Its association with insanitary conditions is not so intimate as the antivaccinationists endeavour to induce the uninitiated to believe. Rapid spread of the disease in dark and crowded alleys is doubtless in some measure due to the low vitality of those persons who reside in such places, but its intensely infectious character and the distances at which the infective material operates are the main causes of its speedy dissemination. It is to the practical aspect of the aërial distribution of small-pox under certain conditions of the atmosphere (first pointed out by Mr. Power when investigating outbreaks of this disease in the neighbourhood of the Fulham and Hampstead Hospitals) that I specially wish to call your attention.

Mr. Power's views when first promulgated were generally received with scepticism, and I frankly admit that I was among the number of those who, although regarding Mr. Power as a hygienist of unusual ability, felt constrained to look upon his views as "not proven." Subsequent events, however (several of which have come under my personal observation), convinced me that small-pox under certain circumstances can be carried through the air, and the disease be disseminated without personal contact. This atmospheric distribution of small-pox is undoubtedly more prone to occur when patients are aggregated, and points to the necessity for placing small-pox hospitals in remote places, and at considerable distances from dwellings.

Realisation of the necessity of this increases the difficulties of medical officers of health in the discharge of their important duty of urging the acquirement of isolation hospitals, for as you know sanitary authorities too often hesitate to incur expense in the provision of such institutions. I rejoice however to say that the local success which attends the erection of such buildings is becoming apparent to the general public, and so their representatives are beginning to realise that the provision of such safeguards cannot be longer postponed.

In my opinion small-pox hospitals should not be located upon the same site as other hospitals, or be within half a mile of dwellings. I have found this assertion to be a shock to some sanitary authorities with whom I have recently conferred, and I may add that I am not altogether surprised that it should be so, for it is beyond the limits of practical sanitation to endeavour to urge rural and small urban boards to provide two isolation hospitals for the same district; that is, one for small-pox patients and one for persons suffering from other infectious diseases. I trust, however, that the powers conferred upon county councils (by the Isolation Hospitals Act, 1893) to group sanitary districts and cause hospitals to be erected, may be conducive to efficiency as well as to economy, and become a useful weapon wherewith the ravages of infectious diseases may be combated.

It has fallen to my lot to have considerable acquaintance with isolation hospitals, and to be intimately connected with the Alcester and Evesham institutions for long periods, namely, from 1875 in one instance, and from 1887 in the other. Experience has taught me that provided the buildings are fairly accessible, a properly constituted hospital will serve for a district included in a circle with a diameter of from 20 to 24 miles, that is, the patients admitted (usually suffering from small-pox, scarlatina, or diphtheria) may with

impunity to themselves or the inhabitants of the neighbourhood through which they pass, be conveyed distances of from 10 to 12 miles; for such persons are usually removed either in the early stages of their illnesses or during convalescence. I would have it clearly understood, nevertheless, that even with approved ambulances I do not advocate the conveyance of typhoid fever patients for such long distances. On the other hand, it is found in actual practice that in the country typhoid fever cases seldom seek admittance.

Doubtless you have heard it advanced as an argument against the acquirement of a hospital, that even if provided it would not be voluntarily made use of, and that parents would not allow their children to be taken from their homes. Such an arrangement is absolutely fallacious; for, provided the hospital is properly equipped and managed—a generous diet for convalescent patients being duly provided—persons of all classes readily avail themselves of the advantages of hospital treatment. In reply to the frequent assertion that young children are not readily sent into hospital, I would say that of the 1,428 persons treated at Alcester and Evesham, no fewer than 68 per cent. were children under 10 years of age.

Consideration of the aërial distribution of small-pox has induced me to dwell at length upon hospital questions, and I fear by doing so I have wearied you.

SMALL-POX AND TRAMPS.

The distribution of small-pox through the agency of tramps is a subject on which I wish to say a few words. At the present time the midland counties are literally infested with vagrants, to a degree never before experienced, and many outbreaks of small-pox have come to my knowledge during the past year which were absolutely due to this cause. Considering how tenacious the infection is, and what filthy clothes vagrants wear, such a state of things is not to be wondered at. Although this danger is great, the means of guarding against it are inadequate.

Dr. Armstrong, who has collected a mass of evidence on this subject, suggests with respect to preventive measures:—

1. That vagrants should be restrained in the power of carrying infection about the country, especially in epidemic times.
2. That they should be made to report their movements.
3. That they should, when requisite, be subject to detention, revaccination and disinfection.

As yet boards of guardians have not the necessary powers to enforce such precautionary measures, much as they are needed. Poor-law medical officers and masters of workhouses can at the present time, however, do much to avert outbreaks of small-pox by carefully examining all tramps who show signs of illness. A rise in temperature is a diagnostic sign of considerable value.

DIPHTHERIA AND "SORE THROAT."

Having resided in Warwickshire for nearly the whole of my professional career, special facilities have been afforded me of investigating many outbreaks of diphtheria, as that county is one in which the disease is unduly prevalent: and it was my intention to-day to have raised a discussion upon several etiological points connected with it.

I regret, however, that time prevents me from doing so at length. Adverting for one moment to the causation of diphtheria, I would say, and I know you will agree with me, that it is a source of anxiety to us. In my opinion, although this disease may be, and often is, brought about by sanitary defects, still no reliable evidence has ever been adduced to favour the view that polluted water supplies have caused it. On the other hand, this disease not uncommonly appears in healthy places. It is frequently asserted that persons with a capacity for developing diphtheria (and family susceptibility has a marked influence on the disease) generally inhabit dark, damp, stuffy, and mouldy dwellings. My somewhat exceptional opportunities cause me to doubt whether the generally accepted notion that diphtheria is associated with damp sites is more than coincidence. Experience induces me to corroborate a theory enunciated by Dr. Thorne Thorne, F.R.S., the eminent medical chief of the Local Government Board, to the effect that "sore throat" may by "progressive development eventually produce characteristic diphtheria." With reference to mild cases of "sore throat" as associated with epidemic diphtheria, I fear that they are often too lightly regarded, and that children with such ailments are frequently sent to school, even though diphtheria is known to have obtained a footing in the locality. When once this disease has fastened itself upon a district (even in a non-epidemic period) and "sore throat" is at all prevalent, the closure of the parochial schools is a precautionary measure which should not be delayed. Hesitation in this respect has often caused disaster.

CANCER.

At the present time there appears to be good reason for assuming that cancer is due to a micro-organism. According to Mr. D'Arcy Power, M.A., F.R.C.S.Eng., Demonstrator of Surgery to St. Bartholomew's Hospital, who has quite recently made a series of experiments on cancer at the conjoint laboratories of the Royal Colleges of Physicians and Surgeons of London, the micro-organism probably passes part of its existence in the human body, and another outside it. The cycle outside the body may, perhaps, be spent in the soil, and perhaps in the water.

Our knowledge of cancer and of its etiology is admittedly so vague, that, at a conference of medical officers of health held in Worcester in December, 1890, I submitted the following points for consideration; not that I thought any definite conclusions would then be arrived at, but merely to indicate the lines on which I hoped my colleagues would extend their research, namely:

1. Does cancer more frequently occur in high or low lying districts?
2. Does it exist to any extent where phthisis is prevalent?
3. Does cancer occur more extensively in districts which are on clay, and are frequently flooded, than in districts which are upon gravel or other porous subsoil—that is, does it occur more frequently in damp, waterlogged soils than in dry ones?
4. Is cancer on the increase?
5. Is there any evidence to show it is (1) hereditary, (2) inoculable?

The elaborate statistical tables prepared by Mr. Haviland appear to show that cancer is most prevalent in waterlogged soils, and that it is therefore most often met with in river valleys which are liable to seasonal floods, and where, from the flatness of the surrounding country, the water is less liable to flow away readily. In the second edition of Haviland's work the statistics of the two decades 1851-70 are incorporated, and he alleges that the facts of the second decade confirm those of the first. His results, however, are based entirely upon statistics, and as this method is open to fallacy (especially if corrections for age distributions of population at different periods be neglected), it requires to be controlled by carefully observed facts. In the first place, then, it should be ascertained whether cancer is increasing in frequency in any given area.

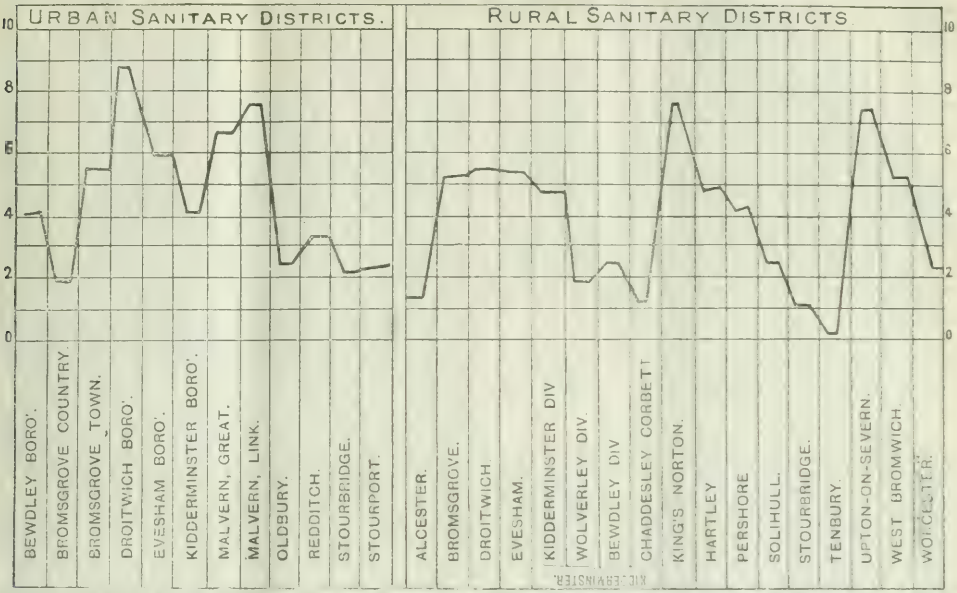
Secondly, the variety of cancer should be noted, whether epithelioma, scirrhus, or encephaloid is the prevailing type.

Thirdly, whether the disease follows on injury or can be directly traced to it. It should be ascertained, too, whether the assigned injury was a bruise, or actually produced a breach of surface.

When cancer has occurred in a house, the exact physical condition of the dwelling—whether newly built, old, dry, or damp—should be found out. The condition of the cellars as regards moisture should be noted. Is it possible to obtain a history of similar disease in previous occupants of the house? Have the persons attending the affected persons suffered? It should be carefully recorded whether innocent tumours, such as fibromata, or semi-malignant ones, like keloid, and recurrent fibromata, have also occurred. Furthermore, efforts should be made to ascertain whether cancer has been limited to a single house, or if it has occurred in a group of houses more or less closely aggregated. In cases of small outbreaks what have houses in common? The wells should be carefully examined, especially as to the mud at the bottom, which, if practicable, should be subjected to microscopical examination. Such are some of the lines of study associated with the etiology of cancer that I would submit for your consideration. As I have previously said, our knowledge is so admittedly vague that it behoves us not to jump to any conclusions too hastily, but by accumulation of facts to endeavour to elucidate the problem of how this terrible complaint may be eradicated.

Since I came into Worcestershire in 1890 I have noted the various cancer death-rates year by year, and the following tables and chart give such details for the respective sanitary districts in the administrative county. In the chart I have

Diagram of cancer statistics in Worcestershire; average death-rates per 10,000 of population for years 1890-93.



Cancer Death-Rates in the Respective Sanitary Districts of Worcestershire during the Years 1890-93, per 10,000 of Population:—

Districts.		Averages.				
		1893.	1892.	1891.	1890.	1890-93.
Bewdley	Urban	10.0	0.0	3.2	3.2	4.1
Bromsgrove Country ...	,,	0.0	5.9	0.0	2.1	2.0
Bromsgrove Town ...	,,	7.5	5.0	5.1	4.7	5.5
Droitwich	,,	7.5	7.4	9.7	10.0	8.9
Evesham	,,	1.0	6.8	10.2	5.7	5.9
Kidderminster	,,	7.0	6.5	2.6	0.0	4.0
Malvern Great	,,	6.0	11.4	3.3	5.7	6.8
Malvern Link	,,	8.0	6.5	0.0	18.6	7.7
Oldbury	,,	0.0	3.4	3.5	2.7	2.4
Redditch	,,	3.0	4.5	5.2	0.0	3.1
Stourbridge...	,,	2.0	0.0	3.2	3.0	2.0
Stourport	,,	2.8	0.0	5.6	0.0	2.1
Alcester	Rural	1.7	0.0	0.0	3.6	1.3
Bromsgrove	,,	1.7	11.2	0.0	8.0	5.2
Cleobury Mortimer ...	,,	0.0	0.0	0.2	0.0	0.05
Droitwich	,,	0.0	7.0	11.2	2.6	5.2
Evesham	,,	0.0	0.0	8.5	13.0	5.3
Kidderminster:—						
Kidderminster Division	,,	3.5	7.0	3.8	4.5	4.7
Wolverley Division ...	,,	2.8	0.0	0.0	4.5	1.8
Bewdley Division ...	,,	9.0	0.0	0.0	4.5	3.3
Chaddesley Corbett Division	,,	0.0	0.0	0.0	4.5	1.1
King's Norton	,,	7.0	10.9	7.4	5.6	7.7
Martley	,,	2.1	4.9	6.6	6.2	4.9
Newent	,,	0.0	0.0	0.1	0.0	0.02
Pershore	,,	2.8	6.1	6.3	2.8	4.2
Shipston-on-Stour ...	,,	0.0	0.0	0.3	0.0	0.07
Solihull	,,	9.6	0.0	0.0	0.0	2.4
Stourbridge	,,	2.4	0.0	1.3	0.0	0.9
Stow-on-Wold	,,	0.0	0.0	30.0	0.0	7.5
Stratford on-Avon ...	,,	0.0	0.0	0.1	4.6	1.1
Tenbury	,,	0.0	0.0	0.0	0.0	0.0
Tewkesbury	,,	0.0	0.0	0.2	0.0	0.05
Upton-on-Severn	,,	5.0	7.4	8.9	8.6	7.4
West Bromwich	,,	0.0	0.0	0.3	20.4	5.1
Winchcombe	,,	0.0	0.0	0.3	0.0	0.07
Worcester*	,,	9.	0.0	0.3	0.0	2.3

* This does not include the city of Worcester.

omitted certain districts, since the population is so small that the facts, even when accumulated in after years—as I hope they will be—would be of little value.

The highest average rate for the years 1890-93 inclusive amount to 8.9 per 10,000 of the population in the Borough of Droitwich. Next in order comes Malvern Link and King's Norton with rates of 7.7, on the heels of which follows Upton-on-Severn with a mortality of 7.4. These figures are for such limited periods as not to be as yet of much value.

It is alleged that large centres like Manchester, Bradford, Oldham, and Leeds show a low cancer mortality, while Worcester and other towns subject to periodical floods of the Rivers Severn and Avon have a high mortality. Be this as it may, the tables I have submitted seem to show that the rates of Droitwich, Evesham, and Upton-on-Severn districts support this view, while that of Stourport opposes it. A table prepared by the Registrar-General, with the necessary corrections for age and sex (Report for 1884), shows London at the head of the list, while the counties round London have a high cancer rate. Mining and industrial counties are low, in the table contrasting favourably with most of the agricultural counties. Eastern counties, again, have usually a higher cancer mortality-rate than the western, though this rule is not without exception. The Registrar-General sums up the result of his inquiry in the following statement: "It must be confessed that, notwithstanding all the labour that has been expended in duly correcting the cancer rates in the several counties for differences of age and sex distribution of their respective populations, no certain conclusions can be drawn from the result."

Time does not allow me to discuss whether or not cancer is directly contagious, or if it be on the increase. On the latter question I would quote Dr. Newsholme, a well-known authority on vital statistics, to the effect that the registered mortality from cancer has steadily increased, and it is nearly twice as great as it was in the decade 1851-60. Part of this increase is, however, apparently due to diagnosis and more careful statement of causes of death. This is shown (1) by the steady decrease in the number of deaths from tumour, abdominal disease, and other ill-defined forms of disease; and (2) by the fact that the increase of mortality from cancer

is greater among males than females. The greater increase in the male mortality is in a great measure due to better diagnosis, the cancerous affections of males being internal in a much larger proportion than those of females.

Before I conclude I should like to direct attention to an interesting article on Cancer Houses and their Victims, published in the British Medical Journal of June 9th last by Mr. D'Arcy Power, and which probably you too have seen, wherein he shows that cancer, like tubercle, may repeatedly show itself in certain houses. As Mr. Power frankly says, such occurrences may be mere coincidences, but it is better to record them as they occur than to argue as to their origin. In the British Medical Journal of June 16th similar experiences were recorded by Drs. Scott and Chapman.

Now, gentlemen, I must conclude, as I feel I have trespassed too long upon your patience. I trust, however, that what I have ventured to say with regard to cancer may induce those of you who may not have hitherto considered the disease from an etiological point of view to do so, and to assist me in accumulating facts, which I devoutly trust may tend to elucidate the etiology of this obscure and terrible disorder.

THE PERSONAL FACTOR IN DISEASE.

Delivered at the Annual Meeting of the Metropolitan Counties Branch.

By LEONARD W. SEDGWICK, M.D.

Gentlemen.—When I was informed that in your great kindness you had determined to confer upon me the high honour of becoming your President, among the many causes of unfitness that at once occurred to my mind was the thought that I, unused to speak to my brethren, should have at the commencement of my year of office to address you from this chair. Yet underneath this feeling of unfitness lurked something of satisfaction that here was an opportunity of speaking on a subject which has frequently in dim outline presented itself to my mind. I have often thought that in these scientific days, which I am not here in any way to disparage, disease as an entity, self-existing, was engrossing the attention of the profession in the persons of its most active workers, rather than disease as we practitioners know it, a phase in the life of the sufferer, largely influenced and modified by his mental, moral, and physical condition; that the human element, the personal factor, in disease was in danger of being cast into shade by the microbe and the phagocyte, the ferment and the toxin.

I beg you, then, to bear with me for a short time as I, while professing my firm belief that the medical art can only advance on the sure ground of physiological science, endeavour to remind you of certain serious considerations which seem to me in some danger of being forgotten. I have no new truth to declare; I aim only at reviving, if it may be, your appreciation of ideas which must at times have been forced upon the minds of all of us.

There are certain specific diseases, such as cancer and small-pox, which probably pursue their career in all people in much the same manner, but there are many disorders and morbid conditions whose outward signs and whose probable termination are largely conditioned by the peculiarities of the individual who is suffering them. These peculiarities or properties of the person may be inborn and often hereditary, or they may be acquired in later years by the mode of life, or by the influence of some disease, or by unhealthy environment. Nay, more; the mental build of a sick person, his degree and kind of education, and even his religious beliefs, his moral state, and his æsthetic development, may modify a diseased condition and impede or help its removal.

In considering the influence of certain previous diseases on another following them, one naturally thinks first of syphilis as the most potent and perhaps the most frequent; yet it may be doubted whether this is indeed so; for the troubles in various organs which occur during the later stages of the disease would rather appear to be definite manifestations of the action of the syphilitic poison itself, immediate or remote, than independent diseases modified by the primary disorder. A disease of the lungs, or of the liver, or of the brain of a syphilitic person, is a disease in itself essentially syphilitic. And in so far as this is true it does not enter into my purview.

But this is not so to any great extent in regard to one suffering from such a disease as gout; a bronchitis in a gouty person is still essentially a bronchitis, but it is often so stained by the gouty disposition as to need special treatment by colchicum or by potassium iodide; in like manner a gastric catarrh or a dyspepsia often exhibits its gouty taint by its indisposition to yield to the ordinary remedies until they are aided by colchicum.

Then, again, who can doubt the after-influence of an attack of malarial fever? A subsequent catarrh or a digestive trouble will be accompanied by rigors and sweating long years after the original disease has passed away, and will be most effectually dealt with by the help of quinine.

As another illustration of the lasting impress on the human body of a disease, let me instance that latest plague, the demon influenza, which I may not unfairly describe as of the malarial type; for it very closely resembles diseases of that character, especially in its sudden onset, its rapidly advancing febrile process, its speedy defervescence, and, in the uncomplicated cases, its independence of proportionate recognisable disease of any important organ. To my mind the pneumonia and the bronchitis which not infrequently follow the first paroxysm of fever are no essential parts of the disease, but accidents of its course; in the larger number of instances arising from a premature exposure of the patient to the chances of a chill when the fever has just gone, but when the temperature has sunk much below the natural, and when the nerve force, whatever that may be, is defective. The fire has blazed up and has died out, but it has left the body more susceptible of the injurious influence of cold, or exposure, or fatigue. And here I would interpose the suggestion that the nature and degree of the subsequent and consequent evils of an attack of influenza are largely determined by the special defective health conditions of the individual, and by his place and mode of life; that the personal factor determines their character. It is a common thing to say that influenza finds out the weak points of a man—develops gout in the gouty, bronchitis in those predisposed to it, nerve troubles in the neurotic; and further, I would express my belief that in the poorer classes and in those exposed to the vicissitudes of weather, chest troubles are the most frequent accompaniments, and that in the educated classes and in the brain workers nerve disorders predominate; that this is the reason why the so-called catarrhal form of influenza is found chiefly in rural districts and in industrial parts, and why the neurotic form occurs chiefly among the cultivated residents of towns; and that these forms are determined not by varieties in the disease, but by the characteristics of the sufferer and the nature of his environment; in other words, that the human element or personal factor is the predominant cause of the form which the disease assumes. But I shall return to the subject of influenza when considering the mental condition of a sick person.

If such a determining force be granted to an antecedent diseased condition of the body it may well be expected that the physical conditions in which a man lives will influence most potently the course and termination of diseases or injuries which may have befallen him. What can be more certain than the prejudicial influence of organically impure air on the progress of maladies? See how a simple cut with a surgeon's knife in days not long past refused to heal, and became a suppurating sore or an erysipelatous focus in a hospital the air of which was laden with pestiferous microbes, and how labour was fatally followed by a septicæmia in a lying-in ward teeming with putrefactive germs. Here, again, it was not the physical injury or the natural process which was producing the mischief but the condition in which the individual found himself. For although the *causa causans* of the erysipelas and of the puerperal fever was the microbe peculiar to it, it was not in the nature of things that the operation should have been succeeded by the one, or the natural labour by the other of these calamities, but they were produced by the surroundings of the patient and so far concerned the human element. Purposely I have selected extreme instances, but the personal factor has no less to be considered in individuals who live in any unhealthy surrounding, the

constant breathing of even diluted sewer gas seriously alters the character and the termination of an ordinary sore throat.

These illustrations are sufficient to mark the position I have taken up, that the phenomena of many diseases are profoundly impressed by what used to be called the constitution or the diathesis of the patient. These words and the things that they denote obtained much more attention from the earlier writers on medicine than they do in the textbooks of to-day; indeed in many of these they are not even mentioned. Doubtless there was much that was unscientific and much that was unfounded in the details, but there was a basis of fact of a not unimportant nature in the conception, which was that the individual has personal peculiarities, hereditary or acquired, which determine to a large extent the characters and the importance of some diseases, and which require for them a special handling. Then again sex is to be taken into consideration. Without insisting on the several special diseases to which each sex is prone, see what a disturbing influence the peculiar female emotions have on the progress and on the treatment of some diseases; and how the ruder worries of the need of money getting trouble the course of a lingering illness in the bread-winner of the house.

Age, too, is no less important: the tolerance of belladonna by infants and their intolerance of opium is a notable fact, not less than the sensitiveness of the old to the toxic influence of strychnine.

Again, see the destructive power of the excessive and irregular taking of alcoholic drinks on the body and the mind of a sick person; tractable diseases are made intractable, curable diseases incurable, in one who will not give up the pernicious habit. In these words I am not by the way of advocating total abstinence from alcohol as a daily habit of life, for I have to admit myself to be a moderate drinker. Some of the public, markedly those who have fallen victims to the curse, naturally unwilling to lay on their own shoulders a burden which they can pile on the backs of others, cry out that drunkenness or secret drinking among the educated classes, especially among females, is mainly caused by the unwise and careless orders of the doctors to them to take a little stimulant when they feel low. Doubtless if we recommend stimulants at all it is our bounden duty to define their nature and their amount, and in so far as we neglect this duty we are grievously culpable; but in the great majority of cases this plea is a mere groundless excuse: the carelessly scattered tares must have fallen on a soil ready for them, or the unwholesome crop would not have flourished.

In these latter days alcohol as a human enemy has many and potent allies; opium and morphine by the hypodermic syringe have much evil to answer for; but probably at present more harm to the nervous system is done by the unauthorised taking of antipyrin, phenacetin, sulphonal, cocaine, and such-like drugs for the relief of pain or the production of sleep. And yet, perhaps, not altogether unauthorised, for I think that we ourselves make too frequent and too prolonged use of them, not only as hypnotics but also as antipyretics: in the former case they are sometimes given when the administration of strychnine or of food would better serve to produce the longed-for sleep; and in the latter case they are continued too long after the temperature has begun to fall, and are occasionally unwisely used when the fall of temperature is only to be gained at the expense of the nerve force. But many drugs of this class are taken by the public in reckless fashion, and there can be no doubt that much of the neurosis which modifies the symptoms and interferes with the treatment of disease is due to this pernicious practice; here again the personal factor is all important.

Turn we now to the moral condition, or perhaps it were better to say the mental attitude, of a sick person, and see how important the human element is. For some years back the cultivation of the sensibilities and the emotions has been proceeding apace: men and women have been growing more and more sensitive to what for the moment is the orthodox beauty in form or colour, more impatient of all that does not comply with the accepted dogmas of good taste. At first this cult was confined in great degree to the æsthetic sense as influenced by sight and sound, but gradually it has gathered to itself the common physical sensations of pleasure and of pain, and now one of the most marked characteristics of a certain portion of the cultivated classes is their intolerance of what can barely be called discomfort. They not only demand to lie on uncrumpled rose-leaves, but they require even these to be carefully ironed before they consent to repose on them. This intolerance of physical discomfort is a notable feature in many of the invalids of the day; it distorts the symptoms and seriously interferes with the treatment of their diseases. It is so prevalent that it has demanded the dignity of a Greek phrase, and its subjects are called neurasthenic. These are they who are constantly demanding a new remedy, and their demand is truly well supplied: in the greater number of instances not to their profit—not to their profit physically, for the frequent use of these drugs is in many instances damaging to the nervous tissues, as witness the need for increasing the dose; and damaging to them morally, as witness the helpless inability of their votaries to withstand the temptation even when the ultimate evil is plainly recognised. Much of the prevailing tone of thought of the day, this pessimism as its devotees love it to be called, is of like nature. But it is a poor thing after all: there is in it nothing of the robust antagonism of the spirit which denies, only a pampered petulance which in the main expends its little life in bemoaning the weather, or railing against the climate. That this is largely a question of fashion, a *fin de siècle* fancy, I would fain hope, for then one might confidently expect soon to see the end of it: but I think that this prevailing pessimism of the time has been deepened in shade by the advent of the mysterious scourge influenza, and that the diseases we have now to treat are leavened with its deteriorating influence. It produces at times definite disorganisation of nerve tissue in neuritis, for instance: and there can be no doubt that in many persons it leaves for years its malignant impress on the nervous system in a less manifest but not less certain manner. Children who have had the disease run up into high temperatures from slight causes much more markedly than they did before they were so afflicted, and adults will manifest a melancholy during a passing disorder which formerly they never experienced. This has combined, with the depressing tone of much of the literature and the thought of the day, to modify seriously the manifestations of the many disorders which we have to treat, and to hinder recovery by the want of that hopefulness which is so potent an aid to the restoration of health.

But if this age is one of pessimism and of emotional speculation chiefly concerning the sexual relations, and conducted by a recently developed epicene form of humanity, it is also markedly one of great questioning of motives of action, of great apparent efforts to regulate the life in accordance with the dictates of logical necessity, and freed from the shackles of the old morality; yet this progress has not entirely changed the view which some take of the doctor; they still look upon him—even many of the most cultured—as a sort of mystery man of the Red Indian: and when they are told to abide by some simple hygienic rule, to "wash in Jordan and be clean," they are dissatisfied, and demand that the prophet shall do some great thing. The red and the blue electricity of the Italian Count are still a potent influence.

But I would not end with criticism of our clients, for, after all, such as these are the few. With the many our relations are those of mutual confidence. We, on our part, while striving to conquer disease, look past it, with hearty sympathy, to the sufferer, and try to bring a cheery presence to the bedside of even the hopelessly sick: and they, on their part, recognising to the full our aim and our intention, help us and help themselves by yielding to us a reasonable and an ungrudging faith.

FAILURE TO DIAGNOSE SMALL-POX.

Apropos of the burning question of the spread of disease by vagrants, a somewhat curious case of mistaken diagnosis in a tramp is recorded in the columns of the *Western Morning News*, the person having tramped through several unions with the infection of small-pox. The patient thought that he was suffering from an attack of itch; and, more striking still, he seems to have been treated at one place for ulcer of the cornea, the supposed ulcer being a pock mark. Dr. Elliott, of Kingsbridge, has traced the movements of the man for the thirteen days preceding his reception into the workhouse in that town, with the result that he is found to have passed through ten towns in that period.

THE MODERN DEVELOPMENT OF THE GERM THEORY.

Delivered at the Annual Meeting of the Birmingham and Midland Counties Branch.

By HENRY LANGLEY BROWNE, F.R.C.S.E.

[Abstract.]

Mr. Langley Browne opened his address by observing that the germ theory was by no means a new one. Linnæus published an essay in 1730 attributing small-pox, measles, plague, syphilis, dysentery, and whooping-cough to the agency of minute animals. Ehrenberg in 1828 found numerous organisms in water and dust, and designated them "infusion animals;" and, in remarking upon the highly organised structure, astonishing minuteness and fecundity of these animals, argued that they might cause many of the diseases affecting man; and Schwann in 1837 declared that the atmosphere was laden with germs of fermentation and putrefaction.

In 1839 Sir Henry Holland published an article on the Hypothesis of Animalcule Life as a Cause of Disease. In this article, after arguing that it was unsafe to conclude that there were not in the atmosphere examples of animal life as numerous as those visible by the aid of the microscope in water, he proceeded to urge that in the life history of organisms beyond the then reach of the microscope it was probable generation might be dependent on casualties of season or place, which would determine their movements and their power to affect the human body. After referring to some other instances of diseases probably due to causes acting from without, he dealt at length with the question of cholera. He urged that no gaseous mineral or vegetable matter, diffused through the atmosphere, or exhaling from the earth, could account for the phenomena, and that it was necessary to suppose that the cause was capable of reproducing itself. It was therefore necessary to assume that either animal or vegetable life, in their simple forms, must furnish the material cause sought for, since thus alone could be explained the indefinite renewal of the active cause of the disease.

Views of this character, though urged with much force by Henle in the following year, were in advance of their time. Thirty-five years later Liebermeister, in Ziemssen's *Cyclopædia*, though he advanced a similar doctrine, was able to bring forward but little experimental evidence of its truth. He mentioned that in all great epidemics since the time of the Athenian plague there had been a revival of the popular notion that the wells were poisoned, and observed that the idea had this advantage over most other hypotheses: that it supposed a real cause. Henle had again in 1853 defended the theory of a *contagium vivum* with greater force and more convincing logic, and Liebermeister expressed himself an adherent. He relied especially upon the fact that vaccine virus, and the virus of small-pox, measles, scarlet fever, etc., were obviously capable of multiplying to an endless extent. He coupled with this the known fact that ferment processes, which owed their capacity for extension to the multiplication of low organisms, presented acknowledged resemblances to infectious diseases. Liebermeister quoted the proof which had then been afforded of the parasitic nature of the contagious diseases of the silkworm, but he omitted all reference to Pasteur, and appeared to be ignorant of the work of Lister.

The advance made since the date at which Liebermeister wrote had been enormous. The special micro-organisms of the diseases then recognised as infectious had in many cases been discovered, and many additions had been made to the list of infectious diseases.

Mr. Langley Browne then sketched the work of Pasteur, and referred to some of the most remarkable observations of recent years with regard to anthrax, relapsing fever, tuberculosis, erysipelas, and other diseases, and expressed the opinion that to this list malignant growths would shortly have to be added. The revolution which the germ theory, and its application to practical needs by Lister, had worked in surgical methods and results, was next briefly sketched; and Mr. Langley Browne then referred to the new light which had been thrown by the researches of Metchnikoff on the processes which occur in the body infection.

The truth of the old adage that prevention is better than cure was now more obvious than ever. In the field of preventive medicine, medicine had done most, but still had much to do.

THE CYCLE OF LIFE.

Delivered at the Fiftieth Annual Meeting of the South-Eastern Branch.

By J. SIDNEY TURNER, M.R.C.S., F.L.S.

[Abstract.]

Aristotle, Mr. Turner observed, had discerned in organic nature an ascending complexity from the vegetable kingdom to man, but his thought had remained dormant until Lamarck, Goethe, Erasmus Darwin, and, above all, Charles Darwin and Alfred Russell Wallace gave it vigour to unfold and bloom as the fairest flower of modern philosophy. The theory of evolution traced step by step the gradual development of the higher from the lower organisms, or from ancestors which were common to both; but it hardly took sufficient account of the work effected, and still being done, by micro-organisms, without which all life would be impossible, and which had certainly been amongst the principal agents and factors of evolution.

Bacteriology, the youngest of the sciences, had illuminated all other sciences connected with life, had elucidated some of the chief phenomena of agriculture, and had placed many manufacturing industries upon a rational footing. How or when life first originated could not be stated, but most naturalists were agreed that the ocean was the original home of all life, and that during a long period of the earth's history there was practically life there only. Whether or no the bacteria in seawater performed the function of fixing the nitrogen of the air, so that it could be utilised by pelagic algæ, in the same way as nitrifying organisms were known to do on land, had yet to be discovered; but it was clear that the teeming myriads of marine animals, the most conspicuous of which were all carnivorous, must get their nitrogen from somewhere. The small amount of *débris* coming from the land and the very limited supply of vegetable food which the shore could afford could never support so vast a fauna—far larger, indeed, than that of the land. On the earth's surface was a vast vegetable kingdom, whose grand and mysterious function it was to turn inorganic matter into organic life by the action of rootlets and spongioles upon nitrogen, salts, and minerals, and by that of the chlorophyll of the cells upon carbon under the influence of the sun's light.

If we cast our minds back to the time when the earth was composed of the primary rocks, we were led to see that the action of heat, rain, and cold was continually causing their degradation into a detritus, to which the term "soil" was applied. This soil had been shown to be incapable of sustaining vegetable life, except that of certain micro-organisms. The nitrifying bacteria seemed to thrive best in a medium devoid of all organic matter. Schloesing and Müntz in 1877 demonstrated that living ferment was necessary for the production of nitrates in the soil. Later Frankland, Warington, and Winogradsky had shown that two different bacteria were involved in the process, of which one converted ammonia into nitrous acid, while the other continued the process, producing nitrates assimilable by plants. In importing nitrates as manure we imported also the nitrifying organisms, which continued to fertilise even after the nitrates themselves had been used up, by acting upon the ammonia in manures afterwards applied. Leguminous plants, it had long been known, tended rather to enrich than to impoverish the soil on which they were grown; and the Rothamsted experiments showed that they were in some way able to obtain nitrogen from the air. Wilforth and Hellriegel discovered that their roots, grown in fertile soil, were covered with nodules, and that these nodules were caused by the presence of certain bacteria (*B. radicicola*) which, however, were not parasites, but lived with their plant-host in true symbiotic relationship. They borrowed from the plant the necessary hydrocarbons and supplied it with

nitrogen, which they assimilated from the air circulating in the soil. It had been proved, moreover, that these bacteria were the cause of the nodules appearing on the roots of the plants; for, when the plants were grown without the bacteria, they ceased to produce these swellings on their roots, which were so remarkably rich in nitrogen and swarming with bacteria.

Nobbe had confirmed these results, and found that a similar symbiosis existed between microbes and robinia, and he further discovered that each plant had its own particular microbe, and did not thrive so luxuriantly when the microbe of another plant was substituted for its own. Thus, besides a general nitrification of the soil, constantly occurring for the maintenance of all plant life, there appeared to exist a special arrangement between certain plants and certain bacteria for their mutual benefit. Whether or not these microbes could be made to adapt themselves to other hosts in course of time was being made a matter of experiment by Dr. Schneider, of Illinois.

Numerous instances were mentioned by Sir John Lubbock, Frank, and others of symbiosis or commensalism of certain fungi and some of forest trees, such as the beech and pine, which throve only when their roots were in contact with michoriza and other fungi, and, although it was formerly supposed that the fungi were attacking the roots, it was now considered that the tree and the fungus benefited each other mutually.

In the well-known instance of lichens the algal cells were nourished by the hyphal tissue of their fungal overgrowths, which wove themselves round and supplied nitrogen and inorganic materials, whilst the algal cells, in turn, converted the carbonic acid of the air into organic compounds, such as starch, which the fungus made use of. The fructification in lichens was produced by these fungal overgrowths; and it was interesting to observe that, in the proximity of large towns, they did not attain to this stage, because the smoky air was inimical to the growths of the fungi.

The so-called "fairy rings" on hills and downs were produced by the better and more vigorous growth of the grass, owing to the excess of nitrogen afforded by the fungi, which composed the ring of the previous year. According to the recent experiments of Schloesing and Laurent, various mosses and minute algæ (confervæ, oscillatoriæ, etc.), which usually developed on the surface of the soil, also absorbed nitrogen from the air, which, after having been assimilated to the soil, went to feed the higher plants.

Whether or no these lower plant organisms took the nitrogen direct from the air or were indebted to bacteria for their supply was not at present known, but that the higher plants were dependent upon bacteria and the lower fungi for their nitrogen was clearly established. There was every reason to believe that nitrifying organisms supplied the lower fungi, and that these in turn associated with algæ to form lichens and afforded nitrogen to them. Thus we ascended by the gradual increase of available plant food to the higher forms of vegetable life from which the animal world derived its sustenance.

After referring to the ferments of the digestive tract in man Mr. Sidney Turner proceeded to observe that the cycle of life as thus far traced had been of the synthetic type, each succeeding link in the chain of life becoming more complex. But there was another side to that process of Nature. Disease might be defined as a disturbance of vital phenomena, and zymotic disease as "life in the wrong place." After the death of the individual putrefactive organisms were the factors of change causing organic to be broken up into inorganic matter while chemical decomposition and mechanical disintegration restored the mineral and gaseous elements to the condition of being able to live again. Cyclical change thus appeared to be the keynote which dominated all the harmonies of Nature.

Dr. William H. Park, an American medical missionary and surgeon in charge of the Methodist Hospital at Soo Chow, China, has had the rank of Mandarin conferred on him by the Emperor of China. The honour was bestowed in recognition of the successful treatment of a wounded Chinese general.

MEDICAL ORGANISATION AND REMUNERATION.

Delivered at the Annual Meeting of the Shropshire and Mid-Wales Branch.

By J. McC. McCARTHY, M.R.C.S.,
Surgeon to the Wellington Dispensary.

Want of Organisation and Union.

Gentlemen,—For the text of the remarks I am about to make I am indebted to a very remarkable article that appeared in the *Medical Magazine* for June, discussing the organisation of the profession. As the British Medical Association is freely referred to therein, and is suggested as the "society which embraces the largest proportion of the profession," and therefore, so far as my reading goes, the parent society to whom to look for help, there can be no hesitation as to the propriety—if not the necessity—of opening the question here.

The following are some of the leading points in the article referred to:

1. That our organisation is lamentably deficient.
2. That no other profession more sorely needs the influence of a great central organisation capable of representing authoritatively the interests, desires, and powers of its members.
3. That the recent difficulties which have arisen in connection with medical defence render the present a favourable opportunity for opening the whole question of professional organisation.
4. That the British Medical Association was unfortunately so constituted that its powers are practically *nil*.

Lastly, whether it is not possible that a way could be found to engraft on to the British Medical Association a branch possessing the necessary authority, having the advantage of the larger body, and the machinery of organisation at its command.

The statements as to the deficiency of organisation and the necessity for the same are undoubtedly true; further, that we consequently suffer as a body as well as individually, you will, I think, admit. The effect of this having been severely felt for a long time past by our members is that different societies have been formed for definite purposes by groups of individuals, until now we are in danger of such a multiplication of these as will tend still further away from the union which is strength and without which we are a defenceless prey to our adversaries.

We have our Association, to which every true medical practitioner should belong; then for defence purposes either the Medical Defence Union, Limited, or the London and Counties Protection Society, Limited. There are the Poor Law Medical Officers' Association, the Factory Officers', and the Police Surgeons'. There are more than these, but they will represent pretty fairly the societies to which a man in general practice should subscribe if he would insure himself against heavy, possibly ruinous, actions at law, and at the same time exhibit that *esprit de corps* which dwells within him.

In addition to the number of authorities we have another important item to deal with, namely, the number of subscriptions. The amounts due annually to each of these Societies are: the British Medical Association, 26s.; one of the Defence Societies, 10s.; the others 5s. each, making a total sum of £2 11s. per annum. Is it strange then, that, with the limited incomes and heavy expenses that the greater number of our profession suffer from, many of us do not, indeed cannot, subscribe to these, and that every now and again some one of us is landed in a lawsuit, and has to cast himself on the charity of the profession, as is witnessed from time to time by the appeal columns in our medical papers?

It might be allowable to notice here the £5 drawn by the General Medical Council at the start of our professional careers, which we do not begrudge because of the exclusive privileges conferred by the same, only chemists and quacks participating to a great extent.

Now, is there need for these other associations, societies, or limited companies? The answer, to my mind, must be most certainly in the affirmative, and this until there is one very strong defensive organisation to watch not only the individual but the collective interest of the profession and to defend from outside attacks.

Medical Defence Societies.

To ascertain the correctness of this answer let us examine the surroundings of those who in their different spheres of labour fly for help to these different societies. After this

Association, which is absolutely necessary to a man in practice unless he would rust, we come to the Defence Societies. During the past few years how many scores of men have been saved time, money, and vexation by the action of these societies? How many threatened actions have never again been heard of so soon as a letter has been received to the effect that the solicitor to the company has been instructed to accept service, etc.?

In other cases men who could not have faced expensive litigation, if it had to be provided out of the scanty professional income on which wife and family were dependent, have been enabled to show a bold front and defeat what in some instances at least has been merely an attempt to take advantage of a man's limited means to blackmail him. These are only examples out of many of the class of work done by such organisations, and of that kind in which our own Association has not up to the present been able to help us.

From the original Defence Society there has already been one branching off, and there is nothing to prevent there being a number of defence or insurance societies started, competing one against the other. This, to my thinking, would be a calamity, and totally opposed to union for defence, the prevailing idea at the time of our starting.

The Poor-law Medical Officers' Association.

Many of you have the honour to be Poor-law medical officers, an honour not on account of the rewards and emoluments this service offers, but because in the harsh system of Poor-law administration the poor have one bright spot, and that is the medical service as conducted by its underpaid officials.

In the notes attached to *Glen's Poor-law Orders* it is stated:—

> A medical officer is not empowered by the orders of the Local Government Board to order food or articles of diet, as meat, milk, wine, or porter for his pauper patients. Any direction that he may give to that effect will only amount to an expression of opinion on his part that relief in food or other necessaries is required. The power of granting relief rests with the guardians, and in case of sudden necessity with the relieving officer, and any certificate given by the medical officer for the allowance of extra nourishment to any of his patients can only be regarded as a recommendation or statement of his opinion as to what is required.

Is this in the interests of the poor or conducive to the success of the treatment given by their medical attendants? Say you have twelve to twenty old people in your district suffering from chronic ailments, who are allowed the handsome sum of eighteenpence to half-a-crown a week with which to keep their withering frames nourished, housed, and warmed—if you give an expression of opinion, which is the only one possible for a sane man to give, that these should have meat, milk, wine, or porter, this expression of opinion would be placed on one side as only a recommendation, or they would be told to enter the house, which, with their aversion for loss of liberty, they decline to do, to fall back on your hands for you to find medicine, which is also food.

If we turn to the scale of remuneration, we have a strong reason for organisation. Is it not common for the boards, when applied to for an increase of salary, to admit the justice of the application, but to refuse the same, on the ground that it would open up the question of the other medical officers' salaries also?

Are you willing that the scale of extras for surgical cases where fractures of the knee-cap, elbow, clavicle, and scapula are excluded should remain thus for ever? Why is it that recent legislation should insult us by granting only 1s. for a notification report in the case of a pauper, whilst we can get half-a-crown in the case of a private patient?

In the case of a false charge being made against you, should you not be able to fall back on some union to save you expense in clearing your character, and in so doing to strengthen the hands of your brethren? In the Poor-law service we have an example of the noble work done by our profession, but there ought to be some combination to prevent the sweating of our members to save the rates.

The Certifying Factory Surgeons' Association.

No doubt many business firms regard our inspection for certifying purposes as unnecessary, and would be glad to get rid of us. On the whole, though, this is one of the pleasantest departments where we find work, but there is one most humiliating point in the scale of fees; this not so much on its intrinsic worth as that a value is given by this Act (the Factory and Workshops) to our services, which if regarded as a relative standard would be derogatory in the extreme. The clause alluded to runs thus: "When the examination is not at the factory or workshop, but at the residence of the surgeon or at some place appointed by the surgeon for the purpose, etc.; 6d. for each person examined." This refers to a number less than five, as any number exceeding that must be examined at the workshop.

We are almost universally opposed to men lowering the status of the profession by working sixpenny dispensaries; it might be submitted by these that all factory surgeons are placed out of court in opposing them on account of their being willing, or most probably unwilling, subscribers to the above-mentioned term of appointment.

The granting of a certificate on personal examination as to age and freedom from disease is a somewhat more elaborate process than the swearing of an affidavit, and yet our sister profession does not go below eighteenpence for that simple business. Again, if the fee were not raised it might be made a ready money transaction, as it is adding insult to injury when these sixpences have to be booked through the ledger, and bills for the same sent out quarterly.

Medical Aid Companies.

Were we sure of going on as heretofore, we might, as we have done for years, put up with certain inconveniences of which examples have been given this afternoon, but legislation is progressive, and the number of medical practitioners rapidly increasing; therefore it behoves us to look ahead.

Already we find a most serious departure which bids fair to revolutionise the future of practice so far as the majority of general medical practitioners are concerned; I refer to the principle involved in the carrying out of some medical aid associations, where part of the moneys that should belong to the medical officer is used by bodies composed of laymen for the swelling of the association funds.

Club practice at 4s. a year per member we have long known to be much abused and very unremunerative, but that money always went to the medical officer. Now associations are to be open to working men, tradesmen, publicans, and others, in fact almost anyone, whether well able to pay for medical attendance or not, and not even the whole of the meagre sums that these pay are to be given over to the medical officer, but only part, the balance of the moneys earned by medical skill being devoted to what purposes the committee who regulate the business choose.

So far there is no power in our profession to prevent this. Why should not enterprising company promoters take advantage of it and form syndicates for the supplying of medical and surgical attendance and medicines on the cheap? That this is possible the following figures will prove: Suppose a shilling dispensary to be started by such a body in a populous centre, we may calculate that if it be only open for four hours a-day, it will secure 30s. This multiplied by 365, the number of days in the year, gives a round sum of £547 10s.

The expenses may be summed up thus:—

	£	
Surgeon	150	per annum
Dispenser	60	,,
Medicines	100	,,
Rent of rooms	25	,,
Total	335	,,

This leaves a profit of £212 10s. on each dispensary. If thirty dispensaries were run by such a syndicate there would be a profit of £6,375 per annum. If such as this is possible, is it not high time to awake?

Union is Strength.

It is in the light of such facts as these that I felt justified in bringing before you the question (raised not by myself, but elsewhere) as to whether for our future safety we should not look to our Association instead of to a multiplication of limited companies. Experience points to it as being more representative of the provinces, in fact the only thoroughly representative body. A question for our thoughtful consideration is what I would leave with you this afternoon:

This Association having done so gloriously for us in the past in many ways, could she not still further extend her powers to help us forward in matters for which at the present time we have to seek help elsewhere? If she, with her admirable organisation, could spread her wings yet a little wider, so as to cover those parts that are still unprotected, it seems to me the majority of the members of the profession would feel a greater sense of security in being attached for all purposes to the one powerful organisation.

THE SPIRIT OF QUACKERY WITHIN THE PALE OF THE PROFESSION.

Delivered at the Annual Meeting of the Midland Branch.

By J. WEST WALKER, M.B.Lond.

[ABSTRACT.]

AFTER referring to the characteristics of quackery in its barest and most uncompromising forms, Dr. Walker proceeded to inquire whether or no the enemy—quackery—had gained an entrance within the profession. He animadverted upon the tendency on the part of certain dealers to advertise proprietary preparations with an amount of elaboration which appeared to him to be quite uncalled for.

He then turned to the attitude of consultants with regard to treatment, taking occasion in the first place to pay a high compliment to the diagnostic skill commonly exhibited, and frankly admitting that assistance in treatment was often obtained from them. But, he added, when I send to a consultant I invariably ask myself what novelty shall I have to procure, and this, notwithstanding it is the rule to have my surgery well supplied with most of the established therapeutic agents. The recently-born mineral water or proprietary dietetic, the endless variety of the carbon derivatives with their break-jaw names, the latest importation from America, some form of course of antiseptic, the newest tabloid, capsule, or cachet, some drug, it may be, not to be found in the *Pharmacopœia* nor the usual trade lists, but only to be obtained from a particular chemist: these and such like form a tempting catalogue of choice novelties from which selection may be made according to fancy. I make it a point of honour scrupulously to carry out the consultant's plan of treatment, but if the case be chronic, say of cardiac or renal mischief, I soon find that one by one these addenda are dropped and that the general management of the case falls back upon the original adviser. He has to bring into play all the skill and judgment he may be possessed of to meet the various and varying symptoms as they arise, aided and supported by the line of right principle which he has received from his professional brother. But more, our patients usually return to us loaded with minute instructions as to diet and regimen.

Unfortunately, especially in the matter of diet, these instructions are by no means uniform. Different advisers give different advice. *Quot homines tot sententiæ.* The old adage that "what is one man's meat is another man's poison" seems to be completely lost sight of, and anyone whose inclination prompts him to do it can easily ride his hobby to death among the intricate bypaths of dietary tables. Exact details, both as to quantity and quality, of the fish, of the flesh, of the vegetable which only are to be allowed; nice distinctions as to what beverages may be swallowed; careful directions as to the time for the infusion of tea; explicit rules as to meals, exercise, and habits generally: these and similar minutiæ are laid down and enjoined with great exactitude. If the patient can be induced to have faith in this dogmatism and obey it, if he adhere strictly to the diet and regimen laid down for him, if he become afraid of the taunts of kind friends on the least infringement of the doctor's orders, benefit to health will generally follow. If the patient who is in the habit of dining off half a dozen courses and of making his other meals proportionate, who freely partakes of beer, wine in variety, and whisky-and-soda —if such a patient can be induced to forsake his gustful yet disgusting diet and daily to take instead four pints of hot water and sundry messes of minced beef, it is easy to see that good will be done by the change, at any rate for a time.

And since the end is usually greater than the means, and since the end of professional effort must ever be the patient's good, something may be said in favour of means which conduce to such a desirable end even though they be a wee bit irregular. May it not be well, however, to ask ourselves and fully realise the answer to the question, How far are these good results the positive effects of what we cause our patient to do, and how far the negative effects of what we cause him not to do? The removal of some vicious habit, some worrying occupation, or some unhealthy environment may really be the cause of good, and our remedies only contribute to bring about the result by the oblique rather than by the direct method. As before hinted, the oblique method may have something to commend it, and the practice of it may even, like homicide, be under circumstances justifiable. Let not our eyes be dusty. If we strip this line of practice of adornment, and look upon it in its nakedness, we in too many instances recognise so many of the family features that if we would call a spade a spade we can designate it by none other than the family name. It may be that stratagem in medicine, as in war, must still be occasionally resorted to: be ours the care lest we award to the victory won by it glory in amount equal to that which we bestow upon the result of a hand-to-hand encounter.

Returning again to the subject of new remedies, Dr. Walker observed that a new drug which was really useful required little advertisement. Of this the history of the introduction of chloral and cocaine was sufficient proof. He protested against the abuse, not the use, of advertisement; while condemning credulity, he would not favour its opposite—a dogged scepticism, which in an inexact science, such as medicine, was perhaps even more harmful than credulity.

In conclusion, he uttered a note of warning as to the practice of prescribing mixtures in strong form, to be taken in doses of 1 or 2 drachms or of so many minims. To prescribe concentrated mixtures of strychnine, of arsenic, or of mercuric perchloride, and direct them to be given in various degrees of dilution was, he considered, a custom fraught with danger. To place side by side on the nurse's table, often in a dimly-lighted room, two bottles of equal size—the one containing sulphate of magnesia to be given in doses of two tablespoonsfuls, the other containing chloral to be given in doses of one teaspoonful—was a risky procedure, and one which, were the directions never so explicit, paved the way for that terrible catastrophe—poisoning by misadventure.

ON FIVE CASES OF HYDROCELE IN THE FEMALE.[1]

By LLOYD G. SMITH, M.D.,
Surgeon to the Tottenham Hospital.

HYDROCELE in the female, also called hydrocele in the labium majus, hydrocele of the canal of Nuck, is a condition, although of some rarity, still of great practical importance, owing to its resemblance to hernia and to its predisposing to that affection.

The more modern textbooks on gynæcology contain annotations on the subject, and all are unanimous in describing it as rare; but I am inclined to agree with Mr. Osborne, of the Soho Hospital, who remarks, when reporting some cases in the BRITISH MEDICAL JOURNAL for 1887, that hydrocele in the female is not so rare as is supposed, but not so frequent at general as at special hospitals.

During rather less than four years we have operated on five cases in the Tottenham Hospital, and, when we take the number of cases treated as in-patients during that period to be 3,200, we get an approximate idea of its relative frequency. The condition is due to an abnormality: the vaginal process of peritoneum which surrounds and accompanies the round ligament through the inguinal canal is formed at the third month of intrauterine life, and extends to the mons veneris; this process of peritoneum ought to become obliterated at or

[1] Read at a meeting of the Northern Division of the Metropolitan Counties Branch.

soon after birth, and failure of this obliteration may lead, when absolute, to the formation of hernia, while if the communication with the peritoneal cavity is wholly or partly occluded, and the rest of the vaginal process remains unobliterated, we get a hydrocele, the wall of the cyst so formed taking on a secretory action.

The two conditions are analogous to congenital hernia and hydrocele of the cord in the male. When the amount of fluid is small and can be reduced into the inguinal canal, we can easily see how this state may lead to little inconvenience. It may be entirely ignored by the patient, unless injured or irritated, when acute symptoms supervene owing to the increase of the secretion and the sudden occlusion of the communication with the peritoneal cavity. Or the swelling may be confused with hernia and treated by wearing a truss. I have frequently met with slight protrusions in this region which caused no inconvenience, and I have no doubt we may place in this category some of the cases operated on for the radical cure of inguinal hernia in young girls, as well as those cases in which an abscess forms over the so-called hernia after wearing a truss.

The ordinary signs and symptoms are well shown by the fourth case that presented herself for treatment here:

The patient, a girl, six years of age, was first seen in the out-patient department. The swelling complained of was the size of a hazel-nut, situated above the left labium majus. It was freely movable, and had a thin cord-like prolongation upwards. The inconvenience caused by it was inconsiderable, and as the condition could with certainty be diagnosed, she was advised to leave it alone; but two weeks later—that is, one month after she first noticed the swelling—she again applied. The tumour had increased to the size of a walnut, and was painful on stooping. Accordingly, on February 4th, 1892, chloroform was administered and the cyst shelled out, after ligaturing the long narrow neck. It was thin-walled, and contained serous straw-coloured fluid. The wound healed by primary union.

It can easily be understood how hydrocele in the female might be mistaken for hernia, and the cases I record, as well as numbers of published ones, testify how common this confusion is. Fortunately it is not of great importance to the patient provided we treat the case as I suggest. Mr. Bryant, in the *Medical Times and Gazette* for 1861, says that in similar cases to his, that is, cases sent into hospital as suffering from strangulated hernia, provided an operation is performed, no harm is done, and the diagnosis is cleared up; while if the operation be delayed, and the tumour prove to be a hernia, the delay will have been to the woman's detriment.

The first case was that of a woman, aged 63, who suffered from asthma and heart disease. The swelling complained of, situated over the left external inguinal ring, appeared two weeks before admission after a bout of coughing; it was the size of a pigeon's egg, hard, semi-elastic, and tender, no impulse on coughing; it had increased recently, and the patient had vomited several times. She was supposed to be suffering from a strangulated hernia by the medical gentleman who sent her in, as well as by all who saw her, until the cyst was fully exposed at the operation. The sudden onset, the sickness, and the tenderness not permitting of manipulation, along with the look of distress, were a sufficient justification for the error. On August 29th, 1890, chloroform was administered and the cyst enucleated; it was thin-walled, translucent, and contained straw-coloured serous fluid, and shelled out easily. The wound healed by primary union.

The second case was that of a woman, 38 years of age, who had suffered from pain in the back and abdomen for two days, and then an increase of pain and the appearance of a swelling in the right groin without apparent cause. The swelling extended for about 3 inches up and out from the labium majus, and somewhat resembled a large femoral hernia, extending up over Poupart's ligament; but it had no distinct neck, it felt nodular, there was no impulse on coughing. On October 14th, 1891, under chloroform the cyst was removed; it ruptured during removal, the contents were straw-coloured serous fluid and a clot of dark fibrine the size of a hazel-nut attached to the upper part. The wound healed by primary union.

The third case is probably of the greatest interest. She was admitted under the care of my colleague Dr. Hooper May, to whom I am indebted for allowing me to make use of it. The patient, aged 48 years, stated that she had had a rupture on the right side six years ago; an abscess formed over it, and was opened (the linear cicatrix was visible, and she still wore a truss for that side. A swelling had existed in the left groin for some time, and six days before admission it became painful and tender, and her medical attendant administered chloroform and attempted to reduce it, thinking it was a hernia. She was then sent in for operation. The swelling was the size of a walnut, and was situated immediately above the left labium majus; no impulse on coughing; a narrow continuation could be detected passing up into the inguinal canal; there was no sickness nor constipation. On December 30th, 1891, the cyst was removed under chloroform; it was dark-coloured, shiny, thin-walled, and lobulated; it ruptured during removal, and gave vent to dark-coloured watery fluid, and at the upper part there was a dark clot of fibrine. On drawing down the pedicle what looked like the ovarian fimbriæ came into view; no doubt we had hold of the round ligament. The wound healed by primary union.

The fourth case I have already referred to.

The fifth case is of quite recent occurrence. A woman, aged 53, complained of a swelling in the left groin. It had existed twenty years, but until two weeks ago she was able to press it back; it never caused inconvenience. On admission, the tumour was as large as a hen's egg, situated at the outlet of the left inguinal canal, above Poupart's ligament, external to the spine of the pubes, irreducible, no impulse on coughing, no pain; the continuation up into the inguinal canal was quite narrow. On January 4th of this year, under chloroform, the cyst was removed. It was completely shut off from the peritoneal cavity, and contained several smaller cysts attached to the wall, exactly similar to an encysted hydrocele of the cord in the male. These collections of fluid amounted to about 3 drachms, and were of a straw colour and serous in appearance. The wound healed by primary union.

The above cases, as well as recorded ones, show that the difficulty of diagnosis is a real one. Some writers would rely on the transmission of light, others on the results of puncture with an aspirating needle, but there is no symptom which accompanies hernia which may not be found in these cases; probably the most reliable is pressing the cyst down and defining the upper border, when the continuation upwards will be found to be too small for a hernia. This, again, may be impracticable if, as in my first case, the tumour is tender. Consequently the safest procedure is to operate on all tumours in the hernial regions when we have any doubt, and thus aid our diagnosis by the treatment. At the Tottenham Hospital we have always exposed the cyst by a linear incision, and after ligaturing the neck (in case the peritoneal cavity is not completely shut off) enucleated the cyst, and closed the wound by superimposed layers of continuous sutures of juniper gut; boric acid and iodoform powder are dusted on the wound, and cyanide gauze and absorbent wool complete the dressing, which is changed in a week, when the sutures will have separated and the wound healed. After another week on the couch the patient is discharged.

DIPHTHERIA TREATED BY ANTITOXIN.

BY GEO. F. STILL, M.A., M.B.CANTAB.,
Murchison Scholar of the Royal College of Physicians; late House-Physician, Guy's Hospital.

THE following case, with its highly satisfactory result, seems worthy of record: for, although a single instance of any treatment can have but little scientific value, and it might, therefore, have seemed wiser to wait until one could publish a series of cases, I have thought that by recording this, the first case of antitoxin treatment of diphtheria at Guy's Hospital, others might be encouraged to make further experiments speedily. We may thus the sooner ascertain how far we have in antitoxin an effectual therapeutic agent against diphtheria. I am indebted to Dr. Goodhart for kind permission to publish the case, which was under his care.

J. C., aged 3 years, was admitted at 2 P.M. on June 23rd. It was said that he had been at play, and apparently quite well that morning. At midday he complained of his throat, and had croupy cough; and respiration soon became difficult. On admission there was considerable inspiratory stridor, and some "sucking in," above and below the clavicles, and also in the lower intercostal spaces. On the right tonsil was a patch of membrane. The tonsils and fauces were very slightly injected and swollen. The temperature was 102.4°, the pulse 140, and the respiration 34. The colour was good, but the child was distressed and restless. Tracheotomy seemed imminent, but the operation was deferred till bed and steam kettle had been tried. At 4.30 P.M. antitoxin ℥xj was injected hypodermically in the forearm, with strict antiseptic precautions. At 6 P.M. the patient seemed more comfortable. The temperature was 99.2°; respiration continued difficult, but the patient was less restless, and slept fairly well during the night.

June 24th. The temperature was about 99° all day, the pulse 128, and the respiration 32. The child was again becoming restless, and stridor was increasing. Antitoxin ℥viij was injected at 4.30 P.M.

June 25th. The stridor was much less. The child was playing and talking and took solid food; the temperature was normal.

From this time the stridor decreased. The child seemed perfectly well, playing and laughing merrily, although the cough remained croupy until June 27th, and membrane persisted on the tonsil until June 30th, that is, seven days.

The diagnosis was made certain by cultivation from the membrane.

The only additional treatment adopted was a steam kettle and tent bed, and brandy mxxx every four hours. A spray of iodine and carbolic acid was tried twice on June 23rd, but as the child objected it was not used again. The antitoxin used (kindly given by Messrs. Zimmermann and Co.) was Schering's. Whether the favourable result was *post hoc* or *propter hoc*, it is noteworthy that the subsidence of constitutional disturbance was extremely rapid, occurring within a few hours after the injections; that the constitutional improvement occurred while the visible membrane persisted, apparently without corresponding improvement; and last, but not least, that the injection would seem to be entirely innocuous, being followed by neither local nor general disturbance.

BRITISH MEDICAL ASSOCIATION.

[*The following Reports of the Council and of the Committees will be presented at the Annual Meeting to be held at Bristol on July 31st and August 1st, 2nd, and 3rd, and are published in accordance with the regulations for the conduct of Annual Meetings, which require that all Reports of the Committees of the Association shall be printed in the* JOURNAL *before the Annual Meeting.*]

REPORT OF COUNCIL OF BRITISH MEDICAL ASSOCIATION FOR 1894.

In accordance with By-law 19, your Council have the honour to submit to you the sixty-second annual report. Your acceptance of the invitation last year given by a deputation of members of the Bath and Bristol Branch, headed by Dr. Long Fox, the Council feel, will be fully justified from the preparations which have been made, and the warmth of your reception. The city of Bristol is the headquarters, with Bath, of one of the oldest and most active of the Branches of the Association, and it is interesting to note that the first anniversary meeting of the Provincial Medical and Surgical Association, now the British Medical Association, was held at Bristol, in 1834, under the Presidency of Dr. Andrew Carrick; and it is on record that 200 members attended out of a total of 316.

The Council would remind you that an important change has occurred in the Association since the annual meeting of last year, by the admission of medical women as members, and that upwards of forty have been already elected. Taking into consideration the increase and rapid growth of the Association, the Council feel that the organisation of the annual meetings must undergo some modification, and therefore they trust that in future members will kindly show their reception cards whenever they are requested, in order that strangers may be prevented from crowding the meetings and Sections.

In accordance with a resolution of the last annual meeting, an address and memorial designed by your President, and enclosed in a silver casket, was presented to Her Majesty the Queen, upon the occasion of the marriage of their Royal Highnesses the Duke and Duchess of York, and Her Majesty graciously expressed through Sir Henry Ponsonby her admiration of the execution and finish of the memorial and casket, as well as her satisfaction at receiving it through the Home Secretary.

The Council have again the pleasure to report to you a financial success for the year. The revenue has been £35,367, or £1,223 more than last year, while the expenditure, including amounts written off the sums spent on alteration of premises, leases, furniture, and premiums on investments, amounting to £800, and £567 losses on subscriptions (from deaths and resignations) was £30,216, or £1,021 more than last year, leaving a surplus or profit of £5,150, which has since been invested. The Council, upon the advice of one of the committees which investigated the matter, purchased two freehold premises adjoining your premises in the Strand for a sum of £4,640. This investment will bring you in on the present arrangements 4½ per cent., and it must be looked upon as a desirable investment according to the present rate of interest paid by first-rate securities. The total amount of invested funds in Railway Debenture Corporations and Bank of England Stocks, together with the aforesaid freehold property, now amounts to £41,789 at cost price, and are valued in the books of the Association at this sum, but an estimate at the then market price was made in January last, which showed the real value to be £4,000 more. At the end of December the total excess of assets over liabilities amounted to £55,906.

The number of members on the books last year was 14,703; during the year 988 new members have been elected, 203 have died, and 398 have resigned, leaving on the books 15,090. It is curious to note the yearly similarity in the number of new members elected and the numbers resigning from various accidental causes.

The Branches which have been recognised during the past year are the Grahamstown and Eastern Province of South Africa Branch, the Queensland Branch, the Dundee Branch, mentioned in the last annual report, the British Columbia, and the Deccan Branch. Your thanks are due to the following members of the Association who have acted in the formation of new Branches, namely: Grahamstown and Eastern Province of South Africa Branch, Dr. T. D. Greenless; Queensland Branch, Dr. Peter Bancroft; Dundee Branch, Dr. A. M. Paterson; British Columbia Branch, Dr. E. Hasell; proposed Deccan Branch, Surgeon-Major F. P. Nichols and Surgeon-Major-General C. Sibthorpe.

All these gentlemen have taken an active part in the formation of these important centres, but your thanks are due more especially to Surgeon-Major-General Sibthorpe for his valuable assistance in connection with the Deccan Branch, as this is the third Branch which this distinguished officer has aided in founding, and the Council trust that this Branch may prove as successful as the other two.

In an able and interesting address by Dr. J. W. Moore, President of the Dublin Branch, he justly awards the honour of being the founder of that important Branch to Dr. Duffey, and makes some interesting observations upon the value and importance of Branch organisation. But, though Dr. Moore mentions Dr. Duffey's undoubted good service to the Association in founding the Dublin Branch, it must not be forgotten that for many years Dr. Moore ably acted in the capacity of Honorary Secretary for Ireland, before the formation of any of the Branches in the sister island.

Your thanks are due to the Honorary Secretaries of Branches, now numbering 38 home Branches and 24 Indian and Colonial, for the past year's services. These services are growing more important and heavier every year, for the work of a Branch increases in almost direct proportion as its numbers increase. The Honorary Secretaries who retire—most of them after many years of good service—are: Dr. Ward Cousins, the founder of the Southern and Dorset Branches; Dr. Byers, of the Belfast Branch; Mr. Cardew, of the Gloucestershire Branch; Dr. P. Maury Deas, of the South-Western Branch; Dr. Alfred Lendon, of the Adelaide and South Australian Branch; Mr. J. Gray, of the Shropshire and Mid-Wales Branch; Mr. Jordan Lloyd, of the Birmingham and Midland Counties Branch; Dr. Edwards, of the Leeward Islands Branch; Surgeon-Captain Smyth, of the South Indian and Madras Branch; and Dr. J. C. Cameron, Montreal Branch; while your Council regret to report the death of Mr. J. G. U. West, of the Staffordshire Branch.

The library has been maintained during the year in a state of efficiency. A large number of books have been presented, many of them of considerable value, while others have been utilised for the purposes of the duplicate lists. Purchases of illustrated or standard works have added much to the value of the collection. The gifts include several important series of medical periodicals, British and foreign, illustrated works of a classical character, as well as several of recent publication. By arrangements made by the Honorary Librarian, who has since its foundation been the principal donor to the library, a larger selection of the more important current foreign medical periodicals has been obtained for the use of the reading room, free of cost. Upwards of 250 contemporary medical periodicals may now be seen in the library, in addition to the calendars, reports, and transactions of all the leading medical societies and colleges, and current re-

ports of medical officers of health and the Local Government Boards. The attendance of members continues to grow; it has amounted to 3,984 during the year, an increase of 12½ per cent. over the previous year. Four hundred and twenty-six duplicate volumes have been presented to other societies and libraries in response to their requests, and further applications have been received from Colonial Branches of the Association, which will be met as far as possible; in all, 2,722 volumes have thus been distributed.

In accordance with resolutions passed at the annual meet held at Nottingham, a short memorial on the subject of voice training was prepared and sent out to public schools, other schools not classed as public, the universities, theological colleges of all denominations, the Temple, and other places in which students reside, and also to training schools for teachers of both sexes.

The memorial was also directed to be sent to the Vice-President of the Council on Education. It has evidently produced much interest, as many replies and inquiries were received relative to it, and the Council have reason to believe its issue has proved successful.

At the last annual meeting it will be remembered that the question of payment of the railway fares of the members of the Parliamentary Bills Committee was referred to the Council for consideration, and a report upon the subject was drawn up and sent to each of the Branches of the Association. The report does not recommend the payment of railway fares of members of the Parliamentary Bills Committee; it suggests a modification in the present constitution of the Committee. A copy of this report is placed before you in a separate form.

At the last annual meeting a resolution was passed, a copy of which is as follows:

That it is desirable that nurses—medical, surgical, and obstetric, etc.—should, in the performance of their duties, be entirely under the control of the medical profession, and that the Council be requested to consider and report as to the best means to attain this end.

The Council, after fully considering the matter, passed the following resolution:

That while considering it desirable, in the interest of the patient, that nurses should be under the control of the medical man in attendance, the Council of the British Medical Association do not see any mode in which such relation can be enforced.

At the last annual meeting a resolution was carried referring to the Council the question of a set of model by-laws for all the Branches of the Association. The Council have communicated with these Branches which were without any regulations, recommending them to adopt by-laws. The East Anglian Branch has complied with the invitation, and the code of by-laws has received the approval of the Council; but the two other Branches communicated with have not yet replied.

The Council having received last year only one essay in competition for the Middlemore Prize, and the adjudicators having reported that they did not consider the essay worthy of the prize, the Council have decided that the prize should be awarded this year, and in accordance with the additional powers given to them by a further deed of trust for the best work done during the past three years. Adjudicators were appointed, who have advised the Council that Mr. Treacher Collins is worthy of the prize under the foregoing conditions. The prize will be presented at the general meeting on Wednesday after the Address in Medicine.

The Medical Charities Committee have again been in communication with the various medical charities of the metropolis, and the replies have given much encouragement. The Council would draw the attention of all who are interested in the subject to the more detailed report of the Committee, the publication of which, it is hoped, will have the effect of leading more of the charities to adopt the recommendations of the Committee on the subject.

The attention of the Council was called to the question of unqualified assistants, advertised for from time to time in the JOURNAL. After considering whether such advertisements should be admitted into the JOURNAL, the following rules were adopted in accordance with the recommendations of a subcommittee appointed to report upon the matter.

1. That all advertisements for unqualified assistants to conduct branch practices apart from the principal should be excluded from the JOURNAL.

2. That the term "unqualified" should not appear in the advertisements in the JOURNAL. Your Committee suggest that "dispensing assistants," or "surgery assistants qualified to dispense," would be better substitutes, and meet the requirements of those members who have, your Committee feel, a claim to make their wants known through the medium of the JOURNAL.

Fourth-year students, being recognised by the General Medical Council as assistants, should be simply advertised as such.

During the past year the Inebriates Legislation Committee formed part of a representative deputation to the Home Secretary, introduced by Dr. Farquharson, M.P. Sir William Charley for the legal profession, the Dean of Hereford and Canon Duckworth for the clergy, and other eminent advocates of temperance, supported the plea of the Chairman of the Committee; Professor Gairdner and other well-known medical men on behalf of the compulsory therapeutic restraint of habitual drunkards, provision for the poor, a relaxation of the restrictions of the procedure for inebriates applying voluntarily for reception and detention in a retreat, and other practical amendments of existing legislation. The Home Secretary promised to introduce a Bill based mainly on the suggestions of the Departmental Committee on Inebriates, and the measure is now in the hands of the Government draftsman. Legislative proposals for the compulsory care of inebriates have passed their first stage in the Legislative Assembly of Natal. At the instance of Mr. Lees Knowles, M.P., a parliamentary paper has been issued giving the legislative provision for inebriates in the different Swiss cantons.

A subcommittee, appointed by the Journal and Finance Committee to consider the expenditure on scientific grants and scholarships, brought up a report which was considered by the Council in August last. At the same meeting a report of a subcommittee of the Scientific Grants Committee on the same subject was considered by the Council. After full consideration of both reports, the Council decided that £800 be voted for scientific research for the ensuing year, of which sum £450 shall be devoted to the establishment of three scholarships of £150 each, the remaining £350 to grants in aid of research; at the same time, finding that the Committee appointed to consider and advise the Council upon the distribution of the sums was not such as had been originally designed, the Council decided that in future the Scientific Grants Committee shall consist of eighteen members, of whom at least two-thirds shall be members of the Council, and that the chairman of the Committee shall be always a member of the Council.

The Parliamentary Bills Committee have been occupied in the consideration of proposed amendments of the penal clauses of the Medical Acts with the view of arming the law with greater powers for controlling the injurious practices of quacks and charlatans. In the two reports presented by the Chairman he has prepared clauses directly aimed against the unqualified assumption of medical titles, and has drafted an amended Bill, copies of which have been forwarded for consideration to all the Branches of the Association, and also to the General Medical Council, who have entered the same on the minutes and referred it to their Executive Committee. This matter will be followed up with the view of obtaining some important amendments by parliamentary authority.

The scheme proposed by the Gresham Commission of the new University for London has been considered by the Committee in especial reference to the position and powers of the proposed Academic Council. The Committee passed a resolution approving of the general provisions of the report, but taking exception to certain details, and calling for specific provision for the graduation of doubly qualified men who pursued their studies in London previous to the foundation of the new University.

Considerable progress has been made in restricting the sale of proprietary medicines containing poisons, which, as the result of various prosecutions following communications from the Chairman to the Home Office and to the Pharmaceutical Society, must now be labelled in accordance with the provisions of the Act. A draft Bill is in preparation dealing with the whole question of secrecy in so-called patent medicines. Representations have been made to the Home Secre-

tary on the subject of infantile mortality in relation to factory labour, on which matter an important report has been prepared by Dr. Reid for the use of the Committee. Reports have also been presented on other subjects of importance relating to the prevention of small-pox under the existing law, payment of expenses connected with the dealing with cholera at outports, and other questions of public health administration. In the intervals of the sittings of the Committee, the Chairman has been called upon to advise departments of the Government on various subjects, and to intervene at short notice, so as to secure the presence of a medical representative on the proposed new Local Government Board for Scotland; with the assistance of some members of Parliament, especially Dr. Farquharson, M.P., and Sir Charles Pearson, M.P., this object has been successfully achieved in Grand Committee. Other subjects dealt with by the Parliamentary Bills Committee will be discussed later in its annual report, which cannot be prepared in detail until a later date.

Your Committee appointed to investigate the physical and mental condition of school children have carried on their work in conjunction with the Committee appointed by the International Congress of Hygiene and Demography. A report is now presented on 50,000 children seen individually in 63 schools during the period from 1892-1894. The large amount of tabulated information now gained has made it possible to prepare a list of the signs or abnormal points observed in children classified in divisions. A catalogue giving definition or descriptions of these signs or conditions, together with the number of children presenting each defect represents this portion of the work. A card has been prepared for each of the 9,941 children noted as presenting a defect, and represents the condition of the individual case. These cards are being arranged in groups as to social class, nationality, town or country, etc., and the results are being tabulated by actuarial processes. The relations of mental dulness, nerve conditions, defects in development, and low nutrition among the different groups of children are being investigated and will be published. The work done and results, as far as they have been obtained, point strongly to the desirability of completing the investigation of 100,000 children, of whom half have been seen, and preparing a complete report from which conclusions may be drawn as to the causation and means of removing many common defects of childhood. Many of the most important groups of cases are at present small in number.

The Committee on the Efficient Control of Railway Servants' and Mariners' Eyesight reports that some progress has been made during the past year, but that its labours have been retarded by the necessity of waiting for the publication by the Board of Trade (1) of the correspondence which has passed between the Board and the railway companies, and (2) the new regulations for the examination of the eyesight of certain classes of mariners. The Committee seeks reappointment in order to deal with these publications and continue its aims.

Amongst those members whose decease during the past year your Council deeply regret to report are: Sir Andrew Clark, President of the Royal College of Physicians, whose many virtues and generous nature caused him to be universally mourned by the profession; Dr. Brown-Séquard, an honorary member of the Association; Dr. George Graham, an ex-President of the Melbourne and Victoria Branch; Dr. James C. Phillippo, the first President and the founder of the Jamaica Branch—the first recognised colonial addition to the Association; Surgeon-Major Parke, who received the Medal of Merit in 1890 for his brave conduct in the Stanley Expedition; Dr. J. M. Bryan, of Northampton, who for twenty-eight years acted as Honorary Secretary and Treasurer to the South Midland Branch; Dr. J. G. U. West, who for years acted as Honorary Secretary to the Staffordshire Branch; Dr. Arthur Wellesley Edis; Dr. T. Cranstoun Charles; Dr. Ernest Henry Jacob, of Leeds; Dr. Charles Gibson, of Newcastle; Dr. E. Hart Vinen; Dr. John Segar; Dr. Robert Foster Hill; Mr. F. A. Cox; Mr. Thomas Aubrey Bowen; Dr. James Young; Dr. W. A. G. Hewitt; Dr. Alex. Wattie; Mr. G. St. G. Tyner; Dr. E. C. H. Van Buren; Dr. Herbert H. Ashdown; Mr. James Molony; Dr. W. T. Irvine; Mr. J. C. Gardner; Dr. George Walker; Mr. H. P. Robarts; Dr. P. C. Baxter; Mr. Richard Moody-Ward; Dr. W. Rhys-Williams; Dr. Matthew Corner; Dr. Edward J. Felt; Dr. Arthur Thomas Myers; Dr. M. J. Turnbull; Mr. Arthur Stedman; Dr. Arthur Hill Hassall; Surgeon-Captain F. L. Carte, A.M.S.; Dr. A. Marshall; Mr. Thomas C. Cade; and Mr. John Clay.

J. Ward Cousins, *President of Council.*

REPORT OF THE PARLIAMENTARY BILLS COMMITTEE.

The work of the Committee during the year has covered a large amount of ground, and touched upon many subjects which are of great public and professional importance. Some of these—such as vaccination, the amendment of the penal clauses of the Medical Acts, the regulation of the sale of poison, have been brought forward from last year, and must be carried over into the year to come; others have had to do with current events, such as the Opium Inquiry, the Local Government Bill, 1893; the extension of sanitary powers to county councils; the Gresham University scheme, but all have involved a considerable amount of labour, and some have demanded the preparation of special reports.

Sale of Proprietary Medicines Containing Poison.

The position which has been reached in regard to this matter is this. The fact that an article containing a scheduled poison is a proprietary medicine and bears a Government stamp in no way exempts it from the law as to the sale of poisons, or from the provisions of the Pharmacy Act. It must be distinctly labelled "Poison"; it can only be sold by registered chemists, who must themselves conform to the regulations laid down in regard to such sale in the 17th Section of the Act. Two of the quibbles by which it has been sought to evade the law have been effectually cleared away. It has been shown that the application of the term "patent medicine" to these proprietary articles is a mere popular usage, and in no way gives exemption from the operation of the Pharmacy Act by the provision in Section 16 relating to the "making or dealing in patent medicines." Unless an article be the subject of letters patent, it is not a patent medicine. Again, the pretence that because the poison in these preparations was mixed with other ingredients it was therefore not subject to the Pharmacy Acts, has also been negatived, the judges holding that the whole mischief which the Act was intended to prevent would be allowed if it were once admitted that, by mixing poison with something else, it then ceased to be poison within the meaning of the Act. Although this decision has been appealed against, it has, after argument, been upheld by the judges in the Queen's Bench Divisional Court on two occasions and within the last few days by the judgement of the Master of the Rolls and two Lords Justices in the Court of Appeal.

The judicial construction of the Pharmacy Act thus obtained has the effect of establishing the applicability of the Act in every respect to the sale of secret remedies or other preparations containing poisons, and it has so far fully supported the view, long since put forward in the British Medical Journal, that the provisions of the Act in regard to the sale of poisons are adequate for the purposes contemplated by it. The course to be adopted by the Council of the Pharmaceutical Society was thus clearly defined. It has been followed by that body with commendable regard for its public duty, and in a very large number of cases, in which action has been taken on that line, the authority of the law has been successfully upheld. In some of these cases forensic ingenuity was applied to the question, What is a poison? with the object of showing that the applicability of the word is to a great extent relative. Anything may be poisonous when taken in excess, and everything may be harmless when administered in proper quantity; but, in regard to the Pharmacy Act, such discussion of the subject is irrelevant, because poison, in the eye of the law, is clearly defined. There are many articles of a poisonous nature the sale of which is left free from restriction, because they are frequently required for various technical purposes. The poison schedule of the Act comprises only a small number of articles, mostly employed for medicinal purposes, and hence it may reasonably be inferred that absolute prohibi-

tion of the sale of those specified articles by any but qualified persons was the intention of the Pharmacy Act. If restriction of the sale of those poisons were limited by considerations as to poisonous quantities the Act would be of little utility and the poison schedule would require to be extended so as to include a very much larger number of articles than it does now.

Under these circumstances it might be thought that the way was plain, and that nothing was left but for the Pharmaceutical Society to put the Pharmacy Act in force. Things were not, however, quite so clear as might appear. There have been two exceptions to the success of the attempt to enforce the Pharmacy Act, and one of the points raised in these instances is still undetermined. It is the extent to which the exemption of "the making or dealing in patent medicines" applies. In the Dublin Police Court it has been decided that a medicinal preparation containing a poison within the meaning of the Pharmacy Act, and also entitled to be called a "patent medicine," is so far exempt from the provisions of the Act that it can be sold retail by persons unqualified to sell poisons. That decision has not been appealed against; but it appears to be distinctly at variance with the object of the Act. It would open the way to the indiscriminate sale of all or any of the poisons which are placed under restriction by the Pharmacy Act. In regard to the kinds of business exempted by the 16th Section of the Act, the exempting provisions relating to sale and dispensing of poisons absolutely negative all the preceding portion of the Act, including the section constituting certain articles poisons; consequently those articles are not poisons within the meaning of the Act in regard to the business of legally-qualified medical or veterinary practitioners, wholesale dealers, or makers or dealers in patent medicines. That is quite consistent with the qualifications of some of the persons just referred to, and with the conditions of wholesale trade. But if that exemption were extended to the retail sale of patent medicines containing poison it would also do away with the necessity for observing, in that case, any of the precautionary measures which the Act declares to be essential for the safety of the public. That would be a degree of exemption utterly inconsistent with and subversive of the main object of the Act even when applied to medicines patented before the Pharmacy Act was passed. It is inconceivable that such a view can be upheld, and the absence of any foundation for it is manifest from the fact that the trade exemptions specially provided for by the Act relaté only to wholesale dealing.

Still, so long as this decision stands and so long as patents can be obtained for medicine containing poisons it will be possible entirely to frustrate the provisions of the Pharmacy Act in regard to these poisonous compounds.

In addition to the point above mentioned, which will, no doubt, soon come before the courts for decision, there is another relating to the quantity of a poison which is subject to the provisions of the Act. This point was raised in a prosecution at Manchester, and it was contended that the quantity of morphine in the article sold was so small that it was not "poisonous." This argument introduces a consideration of quantity which the Pharmacy Act does not take cognisance of. The Act provides that certain articles "shall be deemed poisons," that their sale shall be restricted to persons qualified under the Act, and that certain precautions shall be observed in their sale. There is no consideration of quantity, and, if there were, the difficulties to which it would give rise would imperil the object of the Act. In the case to which reference is now made it appears to have been assumed that the question before the court was whether the preparation was poisonous. That, however, is a question which cannot be decided by a court of law, and it is one which does not arise under the Pharmacy Act. If evidence be produced that a poison within the meaning of the Act is present, and that evidence is not disproved, it should follow as a necessary consequence that the sale of the article is subject to the provisions relating to the sale of poisons.

Both these questions urgently required to be brought before the higher courts, and if the decisions given in the first instance had been maintained, it would have been necessary to seek for further legislation. But the judgments which have now been given by Lord Esher and Lords Justices Kay and A. L. Smith do away with that necessity altogether They emphatically endorse the view that, for the purposes of the Pharmacy Act, a poison is an article named in the schedule of that Act; that the sale of such an article is not removed from the operation of the Act when it is mixed with other ingredients; that the term "patent" is applicable only to medicines which are the subject of letters patent; that the object of the Act was to restrict the sale of poisons to persons duly registered under it, and that the sale of poisons by any other persons is illegal. This decision of the judges of the Court of Appeal entirely disposes of the pretences by which it has been attempted to maintain that the Pharmacy Act was a futile, unmeaning, and inconsequential measure. It supports in the most uncompromising manner the view which has long been contended for in the British Medical Journal that the Act was intended for the protection of the public, and that its provisions, if properly enforced, are amply sufficient for that purpose. If it should, however, be found necessary for any other reason to amend the Act, it would be well to endeavour to obtain the insertion in it of certain provisions which experience has shown to be much wanted for the protection of the public. One of the chief of these would be the compulsory statement of the composition of all proprietary medicines upon the label of every bottle and package. Not only is that desirable for the direct protection of the consumers, and for the sake of rendering it impossible for the dealer in such articles to plead ignorance of their nature, but for an almost equally important purpose, namely, that of ensuring the uniformity of such preparations. As things stand at present, there is nothing to prevent a maker of a proprietary medicine from altering its composition as he likes, leaving out an expensive ingredient after it has obtained repute for efficacy, or putting in poison—such as morphine—after it has gained a reputation for harmlessness. The Government stamp should be a protection to the public, and, not as at present, only a source of revenue and a specious suggestion of Governmental approval.

A strong argument for the necessity of such a statement of the composition of proprietary medicines is furnished by the fact that, when the decision was given in the first chlorodyne case, the composition of several of these preparations was altered by leaving out or largely reducing the amount of poison they had contained. It was then announced by public advertisement that the sale of these preparations was not subject to the restrictions imposed by the Pharmacy Act. Judging from the medicinal importance of the ingredients so left out in order to secure freedom from the effect of the decision, it may be expected that when the influence of that decision has subsided, the use of the poison ingredients will be again resumed. Thus the danger of concealed poison would be supplemented by a further danger arising from a variation in the composition of such articles.

Another very important point which has been partially decided is the impossibility of patenting medicinal preparations containing poison. The revocation in several instances of letters patent granted for such preparations has supported the view put forward in the British Medical Journal that if the provision of the Pharmacy Act exempting patent medicines from its operation applies to their retail sale, it must necessarily be a bar to any such preparation being made the subject of letters patent. If that were not the case, a patent would be nothing less than a licence to break the law relating to the retail sale of poisons. The result of the action taken by the Pharmaceutical Society in this respect shows that such an unreasonable position cannot possibly be maintained. That is still more plainly shown by the conditions under which patents are granted and by the proviso in letters patent that they "shall forthwith determine and be void to all intents and purposes" if at any time it be made to appear that the "grant is contrary to law or prejudicial or inconvenient" to the public.

Amendments to the Medical Act.

The question of obtaining some amendment of the penal clauses of the Medical Act has been one to which great consideration has been given. The necessity is obvious, but the difficulties are great. In a report presented to the Committee

by Mr. Hart, after much consultation and discussion with specially competent authorities, he pointed out that it is not a mere matter of imposing penalties for assuming certain titles. The public are so ignorant of the meanings of medical titles and their abbreviated forms that it is the easiest thing in the world to invent titles which, without being colourable imitations, are quite good enough to mislead the public. What it is desirable to suppress, then, is not so much the assuming of a particular title, but the acting or practising as if qualified, and so leading the public to assume the existence of a qualification. It is obvious that to frame words which shall cover this, and at the same time not prevent a bonesetter from practising as a bonesetter or a quack as a quack, is a very difficult matter.

The notorious case of the Indian oculists excited much public interest in this question. The jury, while returning a verdict of "Not guilty," added a rider to the following effect: "We very deeply deplore that there exists at present no criminal law to prevent persons with such gross ignorance as the defendants from practising medical surgery." In commenting upon this case, the leading newspaper referred to Sir Forrest Fulton's summing up, and remarked that he put the matter as follows:

The actual state of the law is such that if a person dies under the hands of a negligent or ignorant practitioner the latter may be criminally liable, but if any evil short of death befall him the practitioner is only liable civilly. He cannot be prosecuted; he can only be sued for damages, and as the civil suit can only be set in motion by the person aggrieved, whereas a criminal prosecution may be, as in this case, conducted by the Treasury it followed that the quack was practically secure of immunity. He has mainly to do with poor people, and they will not sue him because of the expense.

Proceeding further, he was of opinion that the ignorant classes of the population ought to be protected against themselves, and that the law ought to be armed with greater powers for controlling charlatans who meddle with the human body. Herbalists, eye doctors, and even dentists ought to be under some more efficient control than that which exists at present, which is limited to the action of the criminal law when the victim dies, and to civil process initiated by himself when he happens to survive.

There was a general consensus throughout the newspaper press that the law at present is in a chaotic state, and that the public requires better protection than it receives at present. This is undoubtedly true. There is nothing in the world to prevent any quack from going about the country to cure all manner of diseases so long as he is careful to abstain from holding himself out as a duly qualified practitioner.

But there are many other deficiencies in the Medical Act which require amendment, especially in regard to the assumption of what may be termed fraudulent titles, titles devised for the conjoint purpose of deluding the public while escaping the provisions of the Act. This has assumed new importance lately, from the fact that certain persons have openly auowed their intention to use the title M.D., with the letters (Bc.), signifying Botanic appended. Counsel has already given an opinion that this is not even a colourable imitation or infringement of the Act, as there is no implying that the person using it is registered under the Act. If this be so, any persons can use the title M.D. with any letters after it they choose, and make any interpretation of such appended letters as they like. It should be added, however, that in this case the imitation was too exact, and a conviction was obtained. The proceedings were taken under Section 40 of the Medical Act for the unqualified assumption of medical titles. The matter was of more than ordinary interest, in consequence of its being the first case in which the defence had been set up that the defendant was a member of the Incorporated Council of Safe Medicine, Limited, the Council of which had awarded to him a diploma which gave the right to make medicines under their formulæ, and that he was a holder of the diploma from that body, and accordingly signed himself M.D.Bc., which, it was elicited, signified the rank of Doctor of Botanic Medicine. The case resulted in the conviction of the defendant, and in a penalty of £10 and £4 1s. 6d. costs, and in default of payment six weeks' imprisonment.

How best to devise a phraseology which should bring into the net both those who falsely assume titles to which they have no right, those who use titles to which they have a right, but which are wrongly interpreted by the public to imply a qualification, those who use mere bogus letters for the same purpose, and those who, like the Indian oculists, without any assumption of titles merely practise as if they were qualified, and thus lead people to believe them to be so, has been a very difficult task. The draft clauses as finally suggested by Mr. Hart after consultation with Mr. Upton, the Solicitor of the Association, run as follows:

Whereas in order that persons requiring medical and surgical aid should be better able to distinguish between qualified and unqualified practitioners, it is expedient to extend and amend the Medical Act, 1858. Be it therefore enacted, etc., etc.,

1. This Act may for all purposes be cited as the Medical Act Amendment Act, 189 .

2. If after the passing of this Act any person other than a person whose name is for the time being on, or entitled to be on, the *Medical Register*, or who prior to the passing of the Medical Act, 1886, would have been entitled to be registered, shall take or use the name or title Physician, Doctor of Medicine, Licentiate in Medicine or Surgery, Bachelor of Medicine, Surgeon, General Practitioner, Medical Practitioner, Apothecary, Aurist, Oculist, Accoucheur, or any title, style, addition, or description, directly or indirectly implying that he is registered under this Act, or that he is specially qualified to practise medicine or surgery or any branch thereof, he shall upon a summary conviction for any and every such offence pay a sum not exceeding £ .

It is hereby declared that the words "title, style, addition, or description," where used in this Act, include any style, title, addition to a name, designation, or description, whether expressed in words or by letters, or partly in one way and partly in the other.

3. With respect to the offence of a person not registered, or entitled to be registered, under the Medical Acts for the time being, taking or using any name, title, addition, or description as above in this Act mentioned, the following provision shall take effect:

(1) He shall not be guilty of an offence under this Act:

(*a*) If he shows that he is not ordinarily resident in the United Kingdom, and that he holds a qualification which entitles him to practise medicine or surgery in a British prossession or foreign country, and that he did not represent himself to be registered under the Medical Acts.

(*b*) If he shows that he has been registered, and continues to be entitled to be registered, under the Medical Acts: but that his name has been erased on the ground only that he has ceased to practise.

4. Any penalty to which under this Act any person is liable on summary conviction may be recovered by the General Medical Council, or any person with their consent in the manner provided by Section 41 of the Medical Act, 1858, and any sum or sums of money arising from recovery of penalties as aforesaid shall be paid to the Treasurer of the General Medical Council, or person suing with their consent; anything contained to the contrary in the Metropolitan Police Acts or any Act passed before the passing of this Act notwithstanding.

This report has been handed to the various Branches of the Association for their consideration. The resolutions and reports which they have adopted thereon are now in course of digest, but are not complete.

Extension of Sanitary Powers to County Councils.

The Chairman has laid before the Committee a report which he had drawn up on the subject of extension of sanitary powers to county councils. It has been submitted to and been approved of by all the leading medical officers of health in Great Britain. The subject is one which will probably become of considerable importance, but, so far, no opportunity has arisen for its discussion in Parliament. When occasion arises, it will probably be desirable to hold a conference between the Parliamentary Bills Committee and the officers of the county councils throughout England, when a conjoint committee can be appointed to bring a Bill into

Parliament. This report is published in the British Medical Journal of July 15th, 1893, p. 123; July 22nd, p. 187: and July 29th, p. 246, and has been distributed to the local authorities, who have largely expressed their approval and assent.

Small-pox and Notification of Infectious Disease.

Elaborate reports have been drawn up by the Chairman on these subjects. In presenting them he said they had entailed a most laborious amount of investigation, as, in fact, the tables and statistics contained in them make manifest. These reports have by order of the Committee been printed in pamphlet form.

The District and Parish Councils Bill.

A careful watch has been kept upon the various clauses of the Local Government Bill, 1893, in its passage through Parliament. The whole question has been very difficult and complicated, for it has been essential not to attempt too much, while on many points it seemed most desirable that the Bill as it stood should be strengthened. Especially was this the case in regard to the machinery for bringing into play the powers of the county councils in case of default by district councils; the obligation to appoint medical officers of health by district councils; the transference to the county councils of their duties and powers with regard to such appointments; and the facilities for combinations of parish councils for water supply purposes by appeal to the county councils.

Cholera at the Hardwâr and other Indian Fairs.

The following resolution was passed by the Public Medicine Section of the Newcastle meeting of the Association:

That it be referred to the Parliamentary Bills Committee to take such steps as may be desirable to approach the British and foreign Governments with a view to obtain their intervention in securing measures for the suppression of cholera at the Hardwâr and other Indian fairs, and at the Meccan pilgrimage in the manner suggested by Mr. Ernest Hart in the paper read at this Section; and that for this purpose also due submission of the facts be made to His Majesty the Sultan.

In consequence of this resolution it became necessary to decide what action should be taken in the matter. The question arose largely in consequence of the papers read by the Chairman before the Public Health Congress at Edinburgh, and which had also appeared in the British Medical Journal, and in an expanded form in the *Nineteenth Century*. It was therefore felt well to refer the matter to him, especially as he was anticipating going to Constantinople in regard to it. On the proposition of Dr. Reid, seconded by Dr. Manby, it was resolved:

That the Chairman be requested to take such steps as may seem necessary to carry out the resolution of the Public Medicine Section.

The whole of the documents were transmitted to foreign Governments. They came under notice of the recent Paris International Conference on Cholera, which, according to the statement of M. Hanotaux, was prepared to accept them as a basis of international consultation, and in the end practically approved the whole of the conclusions and recommendations above referred to.

Costs Incurred by Port Sanitary Authorities.

The Chairman had been in communication with the authorities, and had had the whole of the facts of the costs incurred by the port sanitary authorities, and to what extent they involved Imperial questions put into the form of a special report. It was resolved:

That the report be printed, and referred to a subcommittee, to take whatever steps they thought necessary in the matter.

It is understood that the Government concur in and are prepared to accept the conclusions reached in this report, and meantime they are practically being acted on.

The Opium Question.

An inquiry has been instituted by the Chairman to ascertain the feelings and opinions of medical and other officials in India as to the use and abuse of opium. A series of questions was forwarded to a large number of Indian medical officers and other officials, and a large mass of evidence was rapidly collected. As the Opium Commission was then meeting in India, and as short summaries of their evidence were appearing in the newspapers day by day, it was thought well to publish analyses of these reports as they came to hand, and in that way a large mass of very valuable evidence was made available for public purposes.

The Gresham University Commission.

The report of the Royal Commission on the Gresham University presented many points which have required the careful consideration of the Committee, especially in regard to the position and powers of the Academic Council in the proposed University scheme. In regard to this, a critical memorandum was drawn up and presented to the Committee, with the object of showing the true position of the "Academic Council" in the Commissioners' scheme, attempts having been made in some quarters to minimise or deny the virtual autocracy in academic matters which it was proposed to vest in this small professional committee, on which Medicine was represented in a most inadequate manner.

After careful discussion it was resolved:

That the Parliamentary Bills Committee of the British Medical Association approves of the general principles on which the scheme of the Gresham University Commission is based, but at the same time feels bound to take serious exception to certain details, especially as regards the constitution and powers of the Academic Council.

The Parliamentary Bills Committee is also of opinion that provision should be specifically made for the graduation of doubly qualified men who pursued their studies in London previous to the foundation of the new University.

It was further resolved:

That the Chairman be instructed to convey copies of the resolution with regard to the Gresham University to the Home Secretary, and also to Earl Cowper, as Chairman of the Commission.

Copies of these resolutions were sent to the officials mentioned, and have been formally acknowledged.

Infant Mortality in Relation to Factory Labour.

This important subject has received careful attention, as it seemed possible that some steps might be taken in the matter in consequence of the report of the Labour Commission, who had reported in the same sense as the Parliamentary Bills Committee that there ought to be some restriction on the freedom of married women to accept work which must necessitate the injury or neglect of their offspring. It was resolved:

That the special Committee appointed to take steps to bring the question of infant mortality in relation to factory labour before the responsible Government department, with the view of effecting certain remedial legislative enactments on the lines suggested in the last report to the Committee on the subject, be empowered to take the necessary steps to obtain an interview with the Home Secretary, with the view of advocating the recommendations contained in the report in question.

It should be noted, also, that a considerable advance has lately been made in the restriction, and even the abolition, of female labour in certain dangerous trades, many of which, especially those involving the use of lead, have an indirect influence on infant mortality. All these matters have had the consideration of the Committee.

Registration of Midwives.

This subject was brought prominently forward by the following resolutions on the subject of the registration of midwives, which had been received from the Lancashire and Cheshire Branch of the British Medical Association.

That in view of the fact that a "Midwives' Registration Association" has been formed—*ostensibly* for the purpose of promoting legislation for the registration of midwives, but in reality for the creation of an independent order of midwifery practitioners—this meeting, while anxious to improve the training of monthly nurses, and recognising that duly qualified medical *women* already exist—records its emphatic protest against any such proposed legislation, as such would (*a*) endanger the lives of pregnant women and infants; (*b*) interfere with the training of medical students in practical midwifery; (*c*) repeal the educational sections of the Medical Act, 1886; and (*d*) prevent newly-qualified practitioners from perfecting their knowledge of obstetrics and diseases of infants.

That a copy of this resolution be sent by the Branch Secretary (1) to the General Medical Council; (2) to our five direct representatives on the General Medical Council; (3) to our Branch representatives on the Council of the British Medical Association; (4) to the Council and Parlia-

mentary Bills Committee of our Association; (5) to each Branch of our Association; (6) to each medical society; (7) to the medical members of Parliament, and to the members of Parliament for the counties and boroughs of Lancashire and Cheshire, earnestly requesting them to consider and strenuously oppose such proposed legislation.

The whole subject was discussed, and various views were laid before the Committee, after which the letters and resolutions were entered on the minutes.

THE LOCAL GOVERNMENT BOARD FOR SCOTLAND.

The Government have introduced a Bill to amend the local government of Scotland, which was referred to a Grand Committee. At the termination of the first session of the Grand Committee on the Local Government (Scotland) Bill, the proposals of the Government for the creation of a purely official board to consist, *de facto*, of three members, had been accepted. It had further been determined that, of the three members, one should be chairman and another a legal member. At this stage the Committee adjourned, but not before indications had been given that a great effort was to be made to upset the Government proposal that the third should be a medical member. This movement appears to have had its origin in the feeling of jealousy and distrust with which the legal and official classes regard the growing influence of the medical profession. In addition to this, however, it was evident that the opposition would receive support from the members of the Committee, who were antagonistic to the idea of a purely official board, and who hoped, through the displacement of the medical member, to be able to secure in some sort the representation on the Board of some of the bodies concerned in local government administration. It evidently did not occur to this section of the Committee that the practical effect of the adoption of their proposal would probably be the establishment of a board consisting of three lawyers, in which case the last condition of things would be worse than the first.

It was necessary to act with promptitude if this attempt to swamp the medical element was to be successfully combated; and Mr. Ernest Hart, as Chairman of the Parliamentary Bills Committee of the British Medical Association, immediately placed himself in communication with the medical members of the Committee, in order to secure concerted action for the defeat of the reactionary proposal. At the next meeting of the Committee, Dr. Farquharson led off in support of the original proposal of the Government, and the Committee, after a keen discussion, decided, by 36 votes to 27, to retain the medical representative on the Board. This happy result was largely attained through the aid of Sir Charles Pearson, ex-Lord Advocate, and member for the Universities of Edinburgh and St. Andrews, who, casting aside all legal bias, acted as became the representative of the greatest medical constituency in the country.

There were indications, however, that the attempt to keep the medical profession "in its place" will be renewed on the report stage of the Bill. Mr. Ernest Hart therefore drew up a document, of which he addressed copies to all the leading medical corporations and societies in Scotland and to our own Branches, there representing that it is desirable that the profession should make itself heard in the matter, *and that strong representations on the subject should be made to all the Scottish members of Parliament by the Scottish Branches of the Association and by individual members, in the course of the next month*, in favour of the retention of medical members on the Board.

The document was widely circulated and acted upon, and there is reason to believe that the clause will remain intact: an important point gained for the just influence of the medical profession and the furtherance of the interests of public health.

The following letter of acknowledgment has been received from the Honorary Secretary of the Society of Medical Officers of Health for Scotland:

SCOTCH HEALTH BILLS IN THE HOUSE.

SIR,—I have been instructed to convey to you an expression of the thanks of this Society for your kind aid and support:

1. In securing the deletion of the obnoxious clause in the Dundee Corporation Bill, promoted this session, in which it was proposed to abolish the security of tenure hitherto enjoyed by the medical officer of health; and

2. In anticipating the movement in opposition to the proposal of the Government to place a representative of the medical profession upon the new Local Government Board for Scotland, and for so successfully organising the forces in support of the clause as to carry it triumphantly through Committee. I may, indeed, add that your action in this matter, and the advocacy of the BRITISH MEDICAL JOURNAL, appear to have given general satisfaction to the profession in Scotland.—I am, etc.,

A. CAMPBELL MUNRO,
Honorary Secretary, Society of Medical Officers of Health for Scotland.

Paisley, July 16th.

ERNEST HART, *Chairman*.

REPORTS REPRINTED.

The following reports by the Chairman of the Committee have been republished for further use in the form of separate pamphlets, and may be obtained at the offices of the Association:

Compulsory Vaccination and Small-pox in relation to Vaccination.
Compulsory Notification in England and Wales in 1892.
State Aid in Relation to Port Cholera Expenses.
On the Use of Opium in India.
The Nurseries of Cholera, its Diffusion and Extinction.

REPORT OF THE COMMITTEE APPOINTED BY THE COUNCIL ON THE PAYMENT OF RAILWAY FARES, ETC.,

IN accordance with the instructions of the Council (October, 1893), the Committee has devoted its attention: first, to the question of the desirability of payment of the railway fares of the members of the Parliamentary Bills Committee; secondly, to the composition of that Committee.

1.—The suggestion that the railway fares of the members of the Committee should be paid out of the funds of the Association was made on the ground that the Parliamentary Bills Committee differs from all the other committees of Council, in that it is a representative Committee, on which each Branch of the Association within the United Kingdom is entitled to a representative. In this respect the Parliamentary Bills Committee resembles, and is the only committee of Council which does resemble, the Council of the Association, the members of which have their railway fares paid out of the funds of the Association.

Your Committee would venture to point out that the Council differs from the Parliamentary Bills Committee in the one great fact that the Council is the executive body of the Association in which the control of the finances of the Association is vested, and that, on this account, it is not merely desirable, but is essential, that every Branch should be represented, and that the representatives of the Branches should attend its meetings with great regularity. The only other members of the Council than the representatives of the Branches are the past and present Presidents of the Association or of the Council, and the past and present Treasurers. The payment of the railway fares of the Branch representatives of the Council was finally determined on in order to promote the regular attendance of the representative members of the Council, and to assist the more remote Branches in the United Kingdom to maintain their interest and take part in the management of the affairs of the Association.

The Parliamentary Bills Committee, on the other hand, does not differ essentially from any other committee of Council. The representation of the Branches (which was first instituted in 1867) had for its object merely the intention of keeping the Branches in touch with the business of the Committee, and for this purpose notices and documents relating to the work of the Committee are still sent to the representatives instead of to the secretaries of the various Branches. But the representatives, it is generally understood, need not attend all the meetings of the Committee unless there is some special business which calls for their presence.

Your Committee considers that no special demands are made upon the representatives of the Parliamentary Bills Committee, and that the payment of the railway fares of the Committee must be followed by a like payment to the members of all other committees appointed by the Council.

On these grounds your Committee recommend that the railway fares of the members of the Parliamentary Bills Committee shall not be paid by the Association.

II. *Composition of the Committee.*—The rapid development of the Branch organisation has increased the number of members on this Committee without in any way increasing its efficiency. The payment of railway fares would tend to promote the attendance of a still larger number of representatives at the meetings—a result which would rather impede than aid the progress of business.

Your Committee believes that the interests of the Parliamentary Bills Committee will be best served by appointing a Committee of twelve members, together with one representative of each of the Branches. The Committee has gradually and insensibly become so large that there is danger that the value of its work may be impaired. The proposed modification will, it is believed, be advantageous to the deliberations of the Committee, while the number of members will be sufficient to ensure the thorough consideration of the various questions submitted to it.

In order to facilitate the attendance of the representatives of the Branches on all occasions on which their presence is very desirable, the meetings are, if possible, arranged for the afternoon preceding the quarterly meeting of the Council. By appointing the same representatives on the Parliamentary Bills Committee and Council, the Branches can secure the payment of the railway fares of their representatives on the Parliamentary Bills Committee.

J. WARD COUSINS, *President of Council.*

REPORT OF THE SCIENTIFIC GRANTS COMMITTEE.

THE Scientific Grants Committee have to report that during the past year, 1893-4, the sum of £400 has been granted in aid of scientific research, of which the following are particulars:

	£	s.	d.
BAILEY, R. C., M.B., and BOWMAN, H. M., M.D., 2, Museum Chambers, Bury Street, W.C.—Study of growth, nutrition, and repair of bone, with special reference to the influence of the nervous system upon certain diseases of bones and joints	10	0	0
BLAXALL, F. R., M.D., The College of State Medicine, 101, Great Russell Street, W.C.—For making a bacteriological investigation of scarlet fever...	5	0	0
BRODIE, T. G., M.R.C.S., L.R.C.P., Physiological Laboratory, University College, W.C.—The chemistry of cellular degenerations	15	0	0
CAMPBELL, H. J., M.D., Senior Demonstrator of Biology, and Demonstrator of Physiology at Guy's Hospital, and FAWCETT, J., M.D., Demonstrator of Physiology in Guy's Hospital.—The comparative histology of the suprarenal capsules	5	0	0
CHAPMAN, Dr. P. M.—For the purchase of apparatus for clinical work	5	0	0
CLARKSON, ARTHUR, The Medical Department, Yorkshire College, Leeds.—For the furtherance of a research upon the suprarenal capsules	10	0	0
COOPER, C. DUDLEY, M.R.C.S., L.R.C.P., Pathological Department, University College, W.C.—For an experimental research on the subject of compression myelitis	10	0	0
COOPER, P. R., M.B., Ch.B., B.Sc., Owens College, Manchester.—A research on psorospermosis	5	0	0
CUSHNEY, A. R., M.B., Pharmakologisches Institut, Strassburg, Germany.—Research on the active principles of scilla maritima	5	0	0
FLOOD, EVERETT, M.D., University College W.C.—Cerebral localisation	10	0	0
HALLIBURTON, W. D., M.D., F.R.S., 9, Ridgmount Gardens, W.C.—To continue work on various researches in chemical physiology, more particularly on the chemistry of muscle and red blood corpuscles	25	0	0
HEWLETT, R. T., M.D., Bacteriological Laboratory, King's College.—An investigation into the chemistry of malignant growths, including an examination of their proteid constituents, albumins, globulins, nucleo-albumins, etc., and a research for albumoses, ptomaines, toxalbumins, ferments, etc.	10	0	0
HILL, LEONARD, M.R.C.S., L.R.C.P., Sharpey Scholar, University College, Gower Street, W.C.—For continuing a research on cerebral pressure, and on the vasomotor nerves of the brain	15	0	0
JONES, E. LLOYD, M.D., White House, Teddington.—For continuing an investigation of the cause of chlorosis... ...	15	0	0
KANTHACK, A. A., M.B., 31, Rodney Street, Liverpool.—To continue research into the nature of snake poisons	10	0	0
KENT, A. F. S., Physiological Department, St. Thomas's Hospital, S.E.—(1) For an inquiry into the structure and functions mammalian heart; (2) For a research upon the functions of the thyroid gland	20	0	0
	175	0	0

	£	s.	d.
Forward	175	0	0
LANZ, P. OTTO, Esq., Pathological Department, University College, W.C.—For a research to ascertain the origin of the tremor in dogs suffering from cachexia thyreopriva, with a view to elucidate the nature of the tremor in myxœdema...	5	0	0
LEVY, A. G., M.B., Pathological Department, University College, W.C.—To carry out a research into the elasticity of the brain	15	0	0
MENZIES, J. A., M.B., C.M., The Owens College, Manchester.—To examine anew into the nature, relation to oxyhæmoglobin, and conditions of production of hæmoglobin	5	0	0
MOTT, F. W., M.D., 84, Wimpole Street, W.—To continue the research upon the functions and structure of the central nervous system	20	0	0
MURRAY, G. R., M.B., 2, Saville Place, Newcastle-on-Tyne.—For an investigation as to the effect produced on rabbits and monkeys by the administration of various extracts made from thyroid glands, both before and after the thyroid gland has been removed	15	0	0
OLIVER, T., M.D., 7, Ellison Place, Newcastle-on-Tyne.—(1) Chemical analysis of the blood under anæsthesia induced by chloroform, ether, bichloride of methylene (2) Lead poisoning; experimental investigation of effects of the various compounds of lead	10	0	0
PEMBREY, M. S., M.B., Physiological Laboratory, Oxford.—A research on the immediate effect of change of external temperature on the respiratory exchange	10	0	0
RANSOME, A., M.D., F.R.S., Devisdale, Bowdon.—To continue experiments upon the disinfection of tubercle-infected houses	10		0
RUSSELL, J. S. R., M.B., 4, Queen Anne Street, W.—For investigating the differences of excitability of red and white muscle, and to extend the observations to degenerated muscle	15	0	0
SHENNAN, T., M.B., 71, Leamington Terrace, Edinburgh.—For the purpose of carrying out a research on catha edulis ...	10	0	0
SHORE, LEWIS, M.D., Physiological Laboratory, Cambridge.—To continue work on the physiological action of chloroform ...	15	0	0
STEWART, G. N., M.D., New Museums, Cambridge.—To continue some work on the gaseous exchange	5	0	0
STOCKMAN, RALPH, M.D., 12, Hope Street, Edinburgh.—For a research on the absorption of iron	10	0	0
SYMES, W. L., M.R.C.S., Physiological Laboratory, St. Mary's Medical School, Paddington, W.—For continuing his work on nerve section	10	0	0
TARGETT, J. H., M.B., Royal College of Surgeons.—For a research upon the minute anatomy of the new growths of the bladder	10	0	0
THOMPSON, W. H., Esq., Physiological Laboratory, University College, W.C.—For an investigation into the effects of atropine and morphine on the secretion of urine	15	0	0
TIMS, H. W. M., M.D., 48, Lupus Street, S.W.—For further experiments with regard to the fornix and other nerve tracts in the brain and spinal cord	10	0	0
TUBBY, A. H., M.B., F.R.C.S., and STARLING, E. H., M.D., 39, Finsbury Circus, E.C.—For the determination of data which govern absorption from the pleural cavity	10	0	0
WASHBOURN, J. W., M.D., Guy's Hospital.—For an experimental investigation of the nature of scarlet fever	15	0	0
WHITE, W. HALE, M.D., 65, Harley Street, W.—Calorimetric researches on heat production	10	0	0
Total	400	0	0

The following sums have been returned as unused:—

	£	s.	d.
Dr. R. C. Bailey	0	12	6
Dr. H. J. Campbell	1	10	4
Dr. R. Cooper	5	0	0
Dr. R. T. Hewlett	4	16	6
Dr. E. Lloyd Jones	8	6	8
Dr. J. A. Menzies	4	5	6
Dr. G. Murray	1	13	0
Dr. T. Oliver	10	0	0
Dr. T. Shennan	6	13	0
Dr. L. E. Shore	15	0	0
Dr. R. Stockman...	7	5	10
Dr. H. M. Tims	10	0	0
Dr. J. W. Washbourn	13	12	3
Total	88	15	7

Dr. R. C. BAILEY has been engaged in determining the trophic changes in bones and joints, and reports that the little known, or at any rate to be found in the textbooks, concerning the early changes in the joints in cases of Charcot's disease, and the causes of cessation of growth in the bones of limbs, the subjects of infantile paralysis, has led him during the past year to study experimentally, in rabbits, the changes in those structures which result from lesions of the nervous system, in the hope that some light might be thrown upon the subject. The observations made up to the

present deal only with lesions of the peripheral nerves, and are by no means complete. Animals killed soon after section of a nerve give, as far as at present ascertained, only negative results. Experiments extending over longer periods have therefore been undertaken, and the results of these cannot yet be given. The investigation is attended with many difficulties, but when the series is finished Dr. Bailey hopes to be able to report some progress. A partial account, such as is alone at present possible, would be useless.

Dr. F. R. BLAXALL has been engaged in a research on the etiology of the suppurative ear discharge of scarlet fever, the results of which were published in the BRITISH MEDICAL JOURNAL of July 21st, p. 116.

Mr. T. J. BOKENHAM, Research Scholar, has sent in the following report on his investigations on enteric fever. These have been made on the organs obtained from fatal cases. From the spleen he has succeeded in obtaining two classes of substances: the first being insoluble in alcohol, but soluble in water, and giving the reactions of an unstable proteid; the second being freely soluble in alcohol, and giving all the reactions characterising an animal alkaloid. A complete description of these two substances, and of fatty acids associated with them, together with their actions on animals, Mr. Bokenham proposes to present at the annual general meeting. Investigations on certain drugs useful in ophthalmic medicine: these include a number of physiological and clinical experiments with benzoyl-pseudotropeine, scopolamine, and hyoscine—drugs considered by him as worthy of more experimentation (clinical). He has offered a paper on them to the Section of Ophthalmology. The influence of guaiacols and allied substances on tuberculosis: the results of this series of observations have been most unsatisfactory, but he proposes shortly to present them as negative evidence. Investigation into the chemical substances formed by streptococci and their clinical use: Mr. Bokenham has prepared considerable quantities of the toxin formed by the erysipelas streptococcus for clinical use, by himself and others, and will soon be in a position to report fully.

Mr. T. G. BRODIE has, during the past year, been engaged in continuing his work upon the elasticity of muscle and other tissues. He states that a considerable amount of time has necessarily been spent in perfecting the apparatus, and this has consequently delayed the publication of the results obtained. A full paper is now, however, nearly completed, and will shortly be published. He has also been engaged upon the chemistry of cancerous tumours. A preliminary note on some of the results so far obtained has been published by Mr. Shattock in his Morton Lecture, and a detailed account will shortly be ready for publication. A third piece of work has involved the chemistry of fibrous tissue, with especial reference to that found in pathological degenerations, and Mr. Brodie is still engaged upon this work.

Dr. H. J. CAMPBELL reports that he has up to the present time examined microscopically the suprarenal capsules of thirty-four vertebrates, including birds (storks, spoonbill, hawk, duck, pheasant, etc.), rodents (gerbille, coypu, rat, etc.), marsupials (phalanger, kangaroo, wallaby), one edentate (the great anteater), carnivora (puma), and primates (lemur, marmoset, monkeys, chimpanzee, etc.). Whilst finding considerable minor points of difference in the various animals, the general resemblance of the capsules of all the mammals is, as might be expected, great. The suprarenals of birds, however, present marked differences from those of mammals, both in the presence of certain included cells, in the arrangement of the blood vessels, and especially in the character and disposition of the columnar cells of the cortical and medullary portions of the organ. In continuing his investigations, he proposes to pay special attention to the suprarenal capsules of birds, and hopes during next year to undertake an examination of the functions of these organs in these animals, and to be able to report more fully upon their structure.

Dr. P. M. CHAPMAN reports that the amount granted to him, namely £5, has been expended in minor apparatus in connection with his lectures (Goulstonian), delivered before the College of Physicians last March. The money was chiefly spent in the endeavour to perfect a sphygmograph *à transmission* for clinical work.

Dr. P. R. COOPER reports that his research has been suspended, but he hopes to continue it shortly.

Dr. EVERETT FLOOD reports that the experiments which were performed by him, in conjunction with Professor SCHAFER, and by the method of isolating incisions, were instituted for the sake of determining to what extent the motor paralysis which follows removal of a portion of the Rolandic cortex is accompanied, and to what extent it is determined, by loss of tactile sensibility. This particular region was chosen, first, because it is situated as far as possible from the mesial surface, destruction of a part of which (gyrus fornicatus) has been shown by Horsley and Schäfer to produce marked hemianæsthesia, so that it might not be alleged that they had interfered with fibres going to that gyrus; and, secondly, because the paralysis affects the cheek pouch, and it is possible to determine from the natural action of the animal whether tactile sensibility is present in that part; for a distended cheek pouch will be ultimately emptied provided the presence of the food within it is perceived by the animal, and this emptying, although usually effected by the action of its own muscular wall, can be, and frequently is, also done either by pressing the pouch with the hand, or by pressing the cheek against the shoulder. If, therefore, the cortical lesion is found to produce motor paralysis of the opposite cheek pouch, and nevertheless the animal becomes conscious of the presence of food within the pouch, as is shown by his voluntarily emptying it by the hand, this may be taken as evidence that the motor paralysis is not the result of lack of tactile sensibility. This is, in fact, what was invariably found in all the animals in which the lesion in question has been produced. They operated in this manner upon six animals, and of these four were subjected, at a later date, to a similar operation upon the opposite side, thus giving ten experiments in all. In all the cases they obtained motor paralysis of the opposite pouch and of the greater part or whole of the face, and in two instances paresis of the opposite hand, although in the operation they never reached the actual limit of the excitable hand area. The motor paralysis was invariably accompanied at first by sensory paralysis, so that the pouch into which food readily passed remained full, the animal being seemingly unaware of the presence of the food: and on testing the sensibility of the integument by applying a spring clip to the skin, it was found to be dulled over the whole face. The dulness, however, was not necessarily confined to that part, being in three cases deficient also over the arm, leg, and trunk—confined, of course, to the side opposite the lesion—even when there was no perceptible motor paralysis of any part besides the face. This sensory disturbance was invariably evanescent. Usually after three days they could no longer perceive any difference upon the two sides, and they now found the animal emptying his still paralysed pouch by pressure with the head or against the shoulder. *Tactile sensibility is recovered but the motor paralysis remains: the latter, therefore, is not dependent upon the former, although in the first instance accompanied by it.* Ultimately, after some weeks, the motor paralysis also became in great measure or entirely recovered from, so far as the pouch was concerned, and this became emptied by the muscular action of its own wall. If now a second operation were performed upon the same region of the brain, but on the intact side, the opposite pouch became paralysed. The first pouch was not, however, thrown back into a condition of paralysis, but retained its recovered condition. *This recovery, therefore, is not due to the function of the region in the one hemisphere being taken up (after mutilation) by the corresponding region in the intact hemisphere,* but must have been due to the action of the lower centres in the pons and bulb. As might have been expected, there is always a considerable amount of difficulty in the processes of drinking, mastication, and swallowing food after a lesion of this part; but singularly enough, although, as Horsley and Semon have shown, excitation of this region produces movements of the larynx and glottis, they have never found any loss of alteration in the voice or in the manner of using it—a manner which is very characteristic in the species they have employed (Macacus Rhœsus).

Professor W. D. HALLIBURTON has, in conjunction with Dr. T. GREGOR BRODIE, continued his work on nucleo-albumins during the past year, especially in the direction of ultimate analysis of these substances. A full communication on the subject is in preparation for the *Journal of Physiology*. Among

other researches carried out in his laboratory, towards the expenses of which the grant has been used, are a research into the chemistry of muscle by Dr. Whitfield, Medical Registrar, King's College Hospital, and an investigation into the properties and varieties of mucin by R. A. Young, B.Sc. Papers on these subjects are already in the press for publication in the *Journal of Physiology*.

Dr. J. Berry Haycraft, F.R.S., Research Scholar, reports that during the time he has held the British Medical Research Scholarship his attention has been largely occupied by an investigation into the functions of the kidney. It was originally intended to approach the subject entirely from the experimental side; but, feeling some doubts as to the interpretation of certain histological appearances presented by the organ, he felt that it would be expedient to investigate these in the first place, in order that he might have a more certain anatomical basis for his future work. He accordingly studied the development of the rabbit's kidney, and has to express his indebtedness to his friend, the late Mr. George Brook, for the material he placed at his disposal. The results of this work and some fresh information regarding the anatomy of the adult kidney are sufficiently complete for publication, and only await the completion of some of the illustrations. Dr. Hayeraft also investigated the paths of secretion, and with this end in view he injected into the jugular veins of rabbits aniline colours, natural dyes, and substances normally secreted by the kidneys, and has studied under the microscope the changes produced in the appearances of the tubules; this work is nearly complete enough for publication. His work on the kidney was carried out in the laboratory of University College, London, and he expresses his very warm thanks to his friend, Professor Schäfer, for the kind welcome and ever ready help tnat he received from him. Last summer Dr. Haycraft furnished a short investigation into the action of the sugar levulose administered to diabetics. A preliminary notice of this has just appeared in the *Zeitschrift f. physiol. Chemie*, Band xix, Heft 2.

Dr. R. T. Hewlett has submitted the following report: 1. The localisation of phosphorus in tumours. Sections have been prepared and stained by the method of Lilienfeld and Monti (ammonium molybdate and ethereal pyrogallol): (*a*) Columnar epithelioma, uniformly stained brown; microscopically cells stained light brown, the cell nuclei a deeper brown. The cancer cells and tissue cells equally stained. (*b*) Spindle-celled sarcoma, stained uniformly brown; microscopically, spindle cells brown, nuclei deeper brown, fibrous tissue brown; all tissues equally brown. (*c*) Fibro-adenoma of breast, stained uniformly brown; microscopically, same as *b*. (*d*) Coccidial disease in rabbit's liver; cells and tissues stained brown as in preceding. The coccidia, however, stain a deep brown, and appear to be rich in phosphorus. *Conclusions.*—The cells in carcinoma, sarcoma, and adenoma seem to contain phosphorus in about the same amount as the cells of normal tissues. The coccidia in coccidial disease of rabbits seem to be very rich in phosphorus. 2. The localisation of iron in tumours by Macallum's method (potassium ferrocyanide and hydrochloric acid). The same series have been examined as in (1). There is no special distribution of iron in these growths, their cells being neither richer nor poorer in iron than ordinary tissue cells. 3. The proteids of carcinoma—cancerous material mixed up fine and extracted with 5 per cent. sodium chloride solution, filtered. Filtrate contained much proteid, coagulated at 48° C., and gave flocculent precipitate on acidulation and on dialysis. On saturating the solution with magnesium sulphate, nearly the whole of the proteid was precipitated; it seemed to consist of a nucleo-albumin. *Conclusion.*—Like the cellular organs, the proteids of cancer seem to be chiefly nucleo-albumin. 4. Are there albumoses in cancerous tissue? Material is being collected for this branch of the research; no results have been yet obtained. 5. Do albumoses collect in the spleen in cases of extensive malignant disease? Fresh spleens from healthy individuals contain no albumoses. In the infective diseases (diphtheria, scarlet fever, etc.) specific toxic albumoses are found in the spleen. Putrefaction also probably produces albumoses in the spleen. Spleens from several diseases are being examined. Some albumoses are found in spleens from tuberculosis, cardiac disease, typhoid fever, etc. Some sheep's spleens which have been allowed to stand for varying periods of time are also being examined to get some idea of the influence of putrefactive changes in the production of albumoses. The livers of rabbits extensively affected with coccidial disease also appear to contain some albumoses. The progress in this work is necessarily slow. In the search for albumoses in carcinoma only perfectly fresh unulcerated material is employed, and a sufficient stock has to be collected; it is useless to work on small quantities. In the search for albumoses in the spleen of cancerous patients only spleens from cases of extensive visceral disease are suitable. Although the author is in communication with King's College, the Middlesex, and the Cancer (Fulham Road) Hospitals, only two cases have as yet been obtained. The material, when obtained, has then to stand for many weeks under absolute alcohol.

Mr. Leonard Hill reports that his experiments have been directed towards the invention of an absolutely accurate method of measuring intracranial pressure in any part of the subdural space under normal and abnormal conditions, and to the investigation of functional effects produced by alterations of intracranial pressure. The methods and results are fully described in the Royal Society paper. The cerebral venous pressure has also been directly determined by a new method in the superior longitudinal sinus, and the pathway of absorption of serum and normal saline solution from the intracranial cavity has been shown to be the blood vessels of the meninges, and not the lymphatics, as has generally been held. Since the publication of the Royal Society paper some further results have been obtained. The intracranial pressure has been simultaneously measured in two different places, and the brain has been found to transmit the pressure equally in all directions when pressed upon at any one point. Thus, Bergmann's assertion that the brain must be regarded as a "bag of fluid" in its physical relations has been proved. The normal intracranial pressure has been found to vary with the position of the animal, and the same result has been found in man. With the animal horizontal the pressure equals 10 to 12 mm. Hg.; with the head higher than the tail end the pressure falls to zero or slightly below zero; with the tail end higher than the head the pressure rises to 20 or 30 mm. Hg. In the dead animal the same result obtains, but to a different degree, for two factors are probably involved in the living animal—the pressure of the column of cerebro-spinal fluid and the pressure of the column of venous blood between the heart and the brain. In the living animal the intracranial pressure is always the same as the blood pressure within the brain. In the normal condition the intracranial pressure is the cerebral capillary pressure; in the abnormal condition produced by a foreign body introduced within the cranium the capillaries are occluded if the blood pressure remains unaltered, and the brain pressure becomes that of the arterioles or arteries which remain unoccluded by the pressure of the foreign body. The cerebro-spinal fluid is reabsorbed as soon as the intracranial pressure rises above normal. Finally, the brain can be and is forced down by a foreign body introduced within the cranium into the foramen magnum, which it blocks up as a valve, and thus the pressure in the spinal canal remains unaffected by the high pressure produced within the cranium. In this way it is very probable that the important centres in the lower part of the bulb are protected from the increased intracranial pressure. The lamina of the atlas has been trephined, and the measurements taken at that point in order to investigate this point. The investigations are still being continued, and a further paper will be published in the course of the year.

Dr. A. A. Kanthack and Mr. Hardy, of Caius College, Cambridge, have continued their researches on the wandering cells, especially in their relation to immunity. Their paper is already in the hands of Mr. Langley for publication in the *Journal of Physiology*, and it will appear as soon as there is space in that journal. They have carried on the researches begun with the frog which were communicated to the Royal Society eighteen months ago, and have studied the morphology and chemical histology of the wandering cells in mammalia under normal conditions, and also in relation to bacteria and chemical irritants. Some of the specimens were shown at the recent *soirée* of the Royal Society. Part of the grant was used for the investigation of the changes during

decomposition of food which Dr. Kanthack has begun in conjunction with Mr. J. H. Drysdale, of Liverpool (Lecturer on Bacteriology at the University College, Liverpool). These are still in progess, and necessarily will occupy some time, from the tediousness in separating the bacteria and their products. The grant covered only a part of the expenses incurred.

Dr. E. Lloyd Jones reports that during the past year he has made further observations upon the blood of healthy males and females, and of chlorotic women. In brief his conclusions are as follows: Chlorosis is an exaggeration of a change which occurs in the blood of the healthy female at puberty, and which leads to an increase of the amount of blood plasma, associated with a diminution of the amount of hæmoglobin. This change in the blood of the healthy female has for its end the storing up of material to serve as food for the fœtus during each pregnancy. Those healthy persons who have the greatest number of brothers and sisters have blood which possesses in the most marked degree the characters of female blood, namely: (1) abundance of blood, (2) abundance of serum, (3) low specific gravity of the whole blood, and relatively little hæmoglobin. There are two kinds of blood to be met with in healthy persons of both sexes; the first kind is more nearly akin to the male blood, it is of a high specific gravity, yielding serum which is not abundant and of a low specific gravity. Persons yielding this kind of blood do not bleed freely. The second kind resembles the female rather than the male blood; it occurs in persons of fair, pretty or well coloured, or pink and white complexion. It has a low specific gravity, and yields a large proportion of serum, and this serum has often a high specific gravity. Corresponding to these two types of healthy blood are two widely different kinds of "anæmia." The first (oligæmia) occurs commonly in both sexes. The sufferers have pale or sallow complexions, but their ears and lips are of a deep red colour. They have no cardiac dilatation nor œdema. The blood has a high specific gravity, but the plasma is deficient in amount, and is generally of a low specific gravity. The relative amount of hæmoglobin is increased. These patients are not, as a rule, benefited by iron. The second type of anæmia occurs most commonly in persons of the female sex, and simple chlorosis is the best example of the kind. The ears, lips, and mucous membranes are pale. They often have enlargement of the heart and œdema. The specific gravity of the whole blood is low or below the average. The plasma is excessive in amount, and often of normal or high specific gravity. The amount of hæmoglobin is diminished. These persons are often benefited by the administration of iron. Those who suffer from the first kind of anæmia have generally few brothers and sisters. Those who suffer from the second kind have generally many brothers and sisters. Chlorotic persons have a very large number of brothers and sisters, and the blood exhibits the above characters of female blood in an abnormal degree. Chlorosis is attended with gastro-intestinal congestion and gastric "dilatation" of a peculiar kind; and this is apt to be increased about the menstrual periods. Chlorotics are especially prone to relapse about these periods. The nervous system plays a part in the production of chlorosis, and Dr. Jones is inclined to regard it as probably induced in somewhat the same way as Basedow's disease; but he is unable to say in what the nervous lesion consists. Meinert maintains—it seems to Dr. Jones on insufficient grounds—that chlorosis is due to gastric changes induced by the mode of dress conventional among civilised peoples. That tightness of the clothing plays a part in the production of chlorosis in some cases he is prepared to admit; that it can alone cause chlorosis or induce it in a boy, he does not believe. But supposing that the corset is responsible in many cases for chlorosis, which appears likely, we have at once a *raison d'être* for the prevalence of this article of dress among civilised peoples. Dr. Jones hopes to publish a fuller report shortly.

Mr. A. F. Stanley Kent has sent the following report of a research upon the functions of thyroid gland. His results are based on experiments on twenty-five to thirty cats, and a smaller number of other animals. A difference in the severity of the symptoms following thyroidectomy has been observed in the different sexes of the same animal: in the male the symptoms are more severe. Castration appears to exert some protective influence. In one case at least almost typical symptoms of myxœdema were present. The administration of thyroid extract exerts a very marked influence even in cases where the symptoms have become very severe. He has been able, by means of repeated injections, to keep alive for months animals in which the symptoms were well developed and convulsions of frequent occurrence. Treatment with extract previously to thyroidectomy appears to exert no protective influence after the operation. There is a great tendency to ulceration of the extremities. The results of the bacteriological examination are interesting. Specific organisms occur in animals dying with acute symptoms after thyroidectomy, such organisms being (1) a large bacillus, (2) a large diplococcus. These organisms have been observed not only in the animals in one series of experiments, but also in others operated upon in a different laboratory. It appears therefore of importance to further examine the changes in the resistance to different organisms produced by thyroidectomy. Upon this work Mr. Kent is at present engaged.

Dr. P. O. Lanz sent in a report in full, which was published in the British Medical Journal, 1893, vol. ii, p. 676.

Dr. A. G. Levy has sent a full report of his research to the Royal Society, which will probably be published shortly.

Dr. J. A. Menzies has been investigating the changes which take place when agents which convert oxhyæmoglobin into methæmoglobin are allowed to act for a longer time than is necessary to produce methæmoglobin. While solutions of pure oxyhæmoglobin or of blood do not become decomposed to form hæmatin on prolonged standing at the temperature of the room, or at 37° to 40° C., such solutions, treated with permanganate, ferrocyanide, chlorate or nitrate of potassium, amyl nitrite, iodine solution, certain dilute mineral or organic acids or glycerine, yield first methæmoglobin, then hæmatin and a colourless proteid. Except in the case of acids, and even with acids if they are used in certain proportions, the hæmatin becomes precipitated, and the proteid remains in solution. On redissolving the hæmatin and mixing its solution with that of the proteid, then adding a reducing agent, hæmochromogen is formed, then hæmoglobin. If the proteid be omitted hæmochromogen only is formed. With regard to the action of amyl nitrite, Dr. Menzies has reason for believing that, in the first place at least, it is due to the decomposition products (nitrous acid, etc.), which are formed when amyl nitrite or any organic nitrite is mixed with water. It seems probable also that the action of potassium nitrite is due to the same cause, and that the slowness of its action is accounted for by its greater stability. Dr. Menzies believes with Araki, Lankester, and others, that the middle two absorption bands in the four-banded spectrum of methæmoglobin usually described are due to admixture with small quantities of unchanged oxyhæmoglobin; and he also believes that the description of the spectrum originally given by Lankester is correct—namely, that it is characterised by two bands, one in the red and one towards the violet end. The latter is not seen when the solution contains a certain proportion of hæmatin, for this substance absorbs the violet, blue, and most of the green rays. Dr. Menzies's experiments seem to lead to the conclusion long ago advocated by Hoppe Seyler that methæmoglobin is an intermediate stage in the decomposition of oxyhæmoglobin, due to a modification of the proteid constituent of hæmoglobin and a change of the hæmochromogen constituent into hematin, which is combined with the modified proteid. Further, his experiments seem to point to the correctness of Hoppe Seyler's view that hæmoglobin is a compound of hæmochromogen and "globin," and not of hæmatin and "globin."

Dr. F. W. Mott has sent in a summary of a preliminary report upon an experimental investigation into the afferent tracts of the central nervous system. Five experimental lesions of the medulla oblongata were made in monkeys to produce unilateral separation of the posterior column nuclei from the internal arciform fibres issuing therefrom. This lesion caused degeneration of all the internal arciform fibres thus separated, and they could be readily traced by the Marchi method into the opposite interolivary layer, thence into the lemniscus (principal fillet), and eventually into the optic thalamus, where apparently they ended in the substance of

that ganglion after being intersected by the striæ medullares. In performing the operation, which was done under deep anæsthesia with all antiseptic precautions and perfect success, it was impossible to avoid some injury to the restiform body and the ground fibres; and, as a result of one or both of these injuries, there resulted a peripheral descending degeneration in the anterior region of the spinal cord, which could be traced down as low as the sacral region, where many of the degenerated fibres decussated in the anterior commissure. Five experimental lesions of the spinal cord and roots were made in the lumbo-sacral region. This portion of the inquiry is not, however, sufficiently advanced to make any absolutely definite statement. Two of the lesions were median sections of the spinal cord, the three remaining experiments were sections of one or many roots. The following facts seemed to be established, but more experiments will be necessary to be certain. The antero-lateral tract of the spinal cord is a mixed tract of ascending and descending fibres. The ascending for the most part cross in the anterior commissure. The majority of these fibres go to the middle lobe of the cerebellum, but some, as stated by Erlinger, pass into the formatio reticularis and lateral fillet, and can be traced to the corpora quadrigemina, and even into the optic thalamus. In one case of unilateral section of a large number of roots of the cauda equina a symmetrical degeneration in the antero-lateral columns of both sides of the spinal cord was observed. These degenerated fibres could be traced as high as the corpora quadrigemina. Dr. Mott believes the degeneration is not accidental, but the result of the lesion.

Dr. George Murray has investigated the effects of thyroidectomy in rabbits and monkeys, and also the curative action of various extracts of the thyroid gland on the induced condition of myxœdema in order to gain further information as to the nature of the active principle contained in the secretion of the thyroid gland. The thyroid gland was removed from five rabbits. Two of them were killed eleven days later; one developed well-marked myxœdema in the course of ten months, one in twelve months, and the other remained well fifteen months after the operation. The thyroid gland was removed from three bonnet monkeys and from one rhœsus monkey. The three bonnet monkeys developed myxœdema, but the rhœsus monkey remains well five months after the operation. The symptoms of myxœdema disappeared when a glycerine extract of sheep's thyroid gland was injected, as detailed in the British Medical Journal of September 23rd, 1893, p. 677. The experiments with other extracts are not yet completed; the results will be published later.

Dr. T. Oliver has returned the amount of the grant made to him, and is applying for a new grant.

Dr. Pembrey reports that in the experiments in which he has been engaged the reaction of the normal animal was first examined and then the operation of dividing the spinal cord was performed. By the operation the greater portion of the muscles of the body were paralysed, and thus the voluntary movements of the animal were greatly curtailed, limited, as they were, to the head, neck, and fore limbs. After the effects of the anæsthetic and shock had passed off the reaction time for changes of temperature was again determined. The results show that the integrity of the voluntary control over the muscles is essential for the rapid response to changes of temperature shown by the normal animal.

Dr. A. Ransome states that a full report on the results of experiments on the disinfection of tuberculously-infected houses will be presented to the annual meeting by Professor S. Delépine and himself, and that a simple and practical method of disinfection will be described.

Dr. J. S. Risien Russell reports that the amount granted was inadequate to allow of his commencing so expensive a research as that in which he proposed to deal with certain conditions of red, white, and degenerated muscle. He therefore used the money to aid him in furthering his investigations in connection with the cerebellum, and in an investigation of eye movements. With regard to the cerebellum, Dr. Russell has found that an inequality in the excitability of the two hemispheres results after ablation of one lateral half of the organ, or of one lateral lobe, in which the opposite cerebral cortex is more excitable on electrical excitation and to absinthe, while that on the same side as the cerebellar lesion is less excitable. Dr. Russell has also traced the paths which degenerate after ablation of one lateral lobe of the cerebellum, and after extirpation of the middle lobe. The investigation of eye movements has shown that in the eye area of the cerebral cortex all the movements of the eyes are represented, and not merely that of the conjugate turning to the opposite side, which had alone been previously demonstrated. Certain points in connection with ocular deviations, the result of cerebral and cerebellar lesions, were investigated, and evidence obtained in favour of looking on those resulting from cerebellar lesions as paralytic, rather than irritative phenomena as has previously been supposed. The ocular phenomena in connection with lesions of the cerebellum have been proved to be independent of any interference with the labyrinth or eighth nerve. Two forms of nystagmus have been shown to result from cerebellar lesions, the one evidently paralytic in character, while the other is possibly an irritation phenomenon.

Dr. T. Shennan has been engaged during the past year in carrying out a research on catha edulis, and has reported as follows: Catha edulis, of the natural order *Celastraceæ*, is a small tree or shrub, indigenous in South Arabia and in elevated parts on the eastern coast of Africa. It is used by the Arabs as a mild stimulant, in small amounts causing pleasant dreams, in larger wakefulness. The leaves are the part used. In smell and taste they somewhat resemble tea. There is no caffeine contained, but an alkaloid is present, of which he has obtained the sulphate in an impure form. If in the extraction strong agents, such as quicklime or lead acetate, be employed, the product is not satisfactory, part being lost or destroyed in the process. Dr. Shennan extracts the leaves with crude amylic alcohol, alkaline with ammonia; drives off ammonia with slight heat, extracts with acidulated water, and subsequently purifies. There is also a glucose, tannic acid, and a small amount of resin. Action on frogs: They seem at first narcotised; reflex is sluggish; but after a time reflexes become very marked, particularly the abdominal reflex. *Post-mortem* examination: Heart, in diastole ventricles, distended; bladder also distended. He has not yet made a sufficient number of experiments to formulate definite conclusions.

Dr. L. Shore has returned the amount of his grant.

Dr. Ralph Stockman reports that he is still engaged in his research on the absorption of iron, but is unable at present to formulate any results.

Mr. W. L. Symes reports that the work in which he has been engaged has been continued on the same lines as in previous years. The early interfibrous adipose deposit found in muscles within a few weeks after division of their nerves passes insensibly into true intrafibrous fatty degeneration. Renewed attempts have failed to determine any constant duration for the above predegenerative stage. Further attempts have also been made to provoke an action current in a nerve whose muscle fails to respond to indirect stimulation, but always unsuccessfully. Nerves kindly furnished by Professor Sherrington are also under examination. These are muscular nerves whose roots have been divided (the posterior root on the "central" side of the ganglion), and which contains a surprisingly large number of normal nerve fibres.

Mr. J. H. Targett has been engaged upon an investigation into the morbid anatomy of sarcomatous growths affecting the bladder, particularly with regard to their minute structure and the variations observable at different periods of life. An account of these observations will shortly be published.

Dr. H. W. M. Tims has returned the amount of his grant.

Messrs. Tubby and Starling have carried out a research on absorption from and secretion into the serous cavities. Their conclusions are briefly as follows: (1) Substances in solution are absorbed from the serous cavities by means of the blood vessels, the stomata and lymphatics taking little or no part in the process. This process of absorption is extremely rapid. Soluble substances injected into the pleura or peritoneum appear in the urine within five minutes after their injection. (2) Although osmotic differences are of importance in regulating the absorption of fluid and dissolved substances from the serous cavities, yet there is evidence that an active absorption from these cavities may take place, that is, the cells between these cavities and the blood vessels

may take up substances and pass them on in a direction opposed to the osmotic difference. A full report of these experiments has appeared in the *Journal of Physiology*, and an abstract of them has been sent to the British Medical Journal.

Dr. Washbourn has been engaged in an experimental investigation of the nature of scarlet fever, and reports that in cases of scarlatina, the exudation on the throat and the pus from various sources have been examined microscopically and by cultivation. The pus in glandular abscesses, abscesses in the joints, and subcutaneous tissue has been examined, and in all cases a streptococcus has been found in pure cultivations. This streptococcus appears to be identical with the streptococcus pyogenes. In cases of otitis the pus has been found to contain several kinds of bacteria. The ones most frequently met with have been the above mentioned streptococcus, the staphylococcus aureus, and a diplococcus, probably the pneumococcus of Fraenkel. In the membranous exudation upon the throat during the primary fever, no diphtheria bacilli have in any case been found. Several kinds of bacteria were present, but the most constant was the above-mentioned streptococcus. In the membranous exudation upon the throat occurring as a sequela to scarlet fever, the diphtheria bacillus was found in all the cases examined. The above results only confirm those of previous investigators, and the research is not yet completed. An examination of the blood of scarlet fever patients has hitherto yielded only negative results.

Dr. Hale White has, in association with Messrs. Haldane and Washbourn, completed an improved calorimeter, suitable for estimating the heat production of animals. A full account of the instrument is published in the *Journal of Physiology*.

J. Ward Cousins, *President of Council.*

REPORT OF COMMITTEE ON LEGISLATION FOR INEBRIATES.

Since the presentation of the last annual report your Committee took part, with the Council of the Society for the Study of Inebriety, and other representative persons interested in the treatment of inebriates, in the proceedings of a deputation to the Home Secretary on the subject of amended legislation for habitual drunkards. The deputation was introduced to Mr. Asquith, who was supported by Mr. Herbert Gladstone, M.P., Mr. Leigh Pemberton, Sir George Buchanan, and Dr. Hoffmann (Inspector of Retreats), of the Home Office, by Dr. Farquharson, M.P., who endorsed the request for further legislation, especially as to the power of compulsory reception in a retreat. Your Chairman presented the case of the Association, calling for involuntary curative detention of habitual drunkards too bereft of will power to apply for reception and detention of their own accord, for the removal of existing hindrances to voluntary admission, for provision for the poor, for the seclusion of inebriates in all intoxicating drugs as well as in alcoholic liquors, for the more speedy return of escaped patients, for power to guardians to detain or pay for treatment of inebriate paupers, and for option to magistrates to commit inebriate police-court offenders to a reformative institution instead of to a prison. Professor Gairdner, Sir Wm. Charley, Q.C., as representing the legal profession, the Dean of Hereford and Canon Duckworth, for the clergy and the Homes for Inebriates Association, Lady Henry Somerset, for temperance reformers, and Surgeon-Major Poole, followed in support. Mr. Asquith, in an appreciative reply, stated that he would give instructions to frame a Bill founded mainly on the suggestions of the Departmental Committee on Inebriates, which, it may be remembered, included a power of compulsory therapeutic seclusion in certain cases, optional magisterial power to send to a special reformatory instead of to a prison, State or rate aid to some extent, and the substitution of one justice for the two justices before whom an appearance has to be made at present by voluntary applicants for admission to a retreat.

Your Committee is glad to be in a position to state that the Home Secretary has given the necessary instructions, and the promised Bill is in process of being drafted. Though possibly the measure may not embody all the amendments which have been asked for, your Committee has every reason to expect that it will effect, when passed, a substantial improvement on existing procedure.

Your Committee has issued an appeal to the clergy for aid in the formation of a sound public opinion, and in a simultaneous petitioning of the Legislature in favour of the legislative amendments required. This appeal has met with an encouraging response. Several prelates have heartily entered into the movement; the official organ of the Church of England Temperance Society has warmly supported the proposal; and in the Northern Province, in consequence of the energetic action of the Diocesan Secretary, the Rev. J. Hirst, of Liverpool, petitions have been sent from meetings of magistrates in a large number of boroughs and counties. Other religious communities have cordially co-operated in this valuable mode of agitation.

As an evidence of the progress of public sentiment on the compulsory care and treatment of inebriates, your Committee desires to draw attention to a Bill which has just passed a first reading in the Legislative Assembly of Natal. It provides that the Governor and Council shall have power to establish and maintain a retreat: that a judge, or a resident magistrate, may commit to a retreat, for a term of not less than six months or more than two years, any person convicted before him several times of drunkenness, or any one proved to be an inebriate, on the application of a relative, friend, or constable.

Your Committee heartily thanks Sir Charles Cameron for his unremitting parliamentary services, Dr. Farquharson, M.P., for his good offices in procuring the interview with the Home Secretary, and Mr. Lees Knowles, M.P., for a parliamentary paper giving a valuable detailed account of legislation for inebriates in the various cantons of Switzerland.

The Committee recommends its re-election as follows: The President and President-elect, *ex officio*, the President of Council, Mr. D. B. Balding, J.P., Mr. R. Welsh Branthwaite, Dr. T. Bridgwater, J.P., Sir Charles Cameron, Bart., M.P., Dr. G. B. Clark, M.P., Dr. C. R. Drysdale, Mr. Geo. Eastes, Dr. J. W. Eastwood, J.P., Dr. R. Farquharson, M.P., Dr. W. T. Gairdner, F.R.S., Dr. W. C. Garman, Dr. J. Hill Gibson, Dr. A. Grant, Mr. F. J. Gray, Dr. C. J. Hare, Dr. Arthur Jamison, Mr. H. R. Ker, Dr. Norman Kerr, Dr. Longhurst, Mr. R. H. B. Nicholson, Surgeon-Major G. K. Poole, M.D., Brigade-Surgeon R. Pringle, M.D., Fleet-Surgeon Geo. Robertson, M.D., Dr. Geo. Danford Thomas, Coroner, Dr. Wynn Westcott, Coroner, and Dr. H. W. Williams.

Norman Kerr, M.D., *Chairman.*

REPORT OF THE MEDICAL CHARITIES COMMITTEE.

Your Committee beg to report that, in accordance with the terms of the resolution adopted at the last general meeting of the Association at Newcastle-on-Tyne, the "Recommendations" of the Association adopted at the general meeting held at Nottingham, with a view to prevent the abuse of hospitals and dispensaries, have been printed for circulation among the medical charities in the metropolitan district. Your Committee have also had a considerable number of large posters printed with the following notice:—

THIS INSTITUTION

Being established to relieve only those persons who are too poor to pay for suitable Medical and Surgical Aid,

NOTICE IS HEREBY GIVEN

That On and After this Date

Patients will be required to give information as to their means and circumstances with a view to prevent the abuse of this charity by persons who are well able to pay.

By Order of the Committee.

Dated

A Subcommittee consisting of Drs. G. Henty, Hugh Woods, and Mr. George Brown, undertook to visit the principal hospitals and interview personally the officials, and endeavour to induce them to adopt the Recommendations and exhibit the posters in the out-patient waiting rooms. The Subcommittee, after visiting a large number of hospitals,

reported at a meeting of the Committee held on April 10th as follows:

"The experience of the Subcommittee shows that it is almost impossible to obtain a definite reply from hospital officials as to their willingness or otherwise to adopt the suggestions of the Association through a personal interview. We therefore recommend that the General Secretary of the Association be authorised to send copies of the poster and Recommendations to each hospital and dispensary in the metropolis, accompanied by a circular requesting a reply not later than June 1st in the affirmative or negative as to their willingness to adopt the suggestions."

It was resolved to adopt this course, and the Secretary of the Association sent copies of the Recommendations and poster to every hospital and dispensary in the metropolitan district, accompanied by the following letter:

British Medical Association,
429, Strand, London, W.C., May 2nd, 1894.

Dear Sir,—I am instructed to forward to the Governing Council or Committee of Management of your Institution a copy of the Recommendations of the British Medical Association and also Posters which the Association will be glad if you would exhibit prominently in a position where applicants for relief would see them.

Will you kindly forward to me before June 1st, 1894, a definite answer as to the willingness of your Institution to adopt the principle of the Recommendations, as the Council of the Association are very anxious to include your Institution in the List of "Medical Charities" at which Regulations in accordance with these Recommendations are in operation.

Hoping to be favoured with an early and affirmative reply,—I remain, Dear Sir,

Francis Fowke, *General Secretary, B.M.A.*

In the annexed appendix we give an abstract of the replies received in answer to the above circular letter, from which it will be seen that a considerable number of institutions have received the Recommendations most favourably, and we believe are acting upon them with excellent results as regards the checking of the abuse of charity. We regret, however, to find that among our larger hospitals, Guy's, Middlesex, Charing Cross, and St. Thomas's have not accepted the Recommendations. In our opinion every hospital and medical charity should adopt effective measures to prevent any but deserving cases obtaining medical relief at the expense of the benevolent public. By neglecting to adopt such measures, many of our medical charities have lost public confidence to a considerable extent, as shown by the serious falling off in subscriptions. The results of the labours of the Committee since its appointment in 1891 are most encouraging, and we have good reason to believe that cases of gross abuse of hospitals are much less frequent than formerly. We may state that previous reports of this Committee have attracted a good deal of extra-professional attention, and their publication has undoubtedly had a widely spread influence, especially in showing that the complaints of abuse made by medical men practising in the neighbourhood of hospitals are well founded.

We would recommend the reappointment of the Committee, in order that during the coming year further efforts may be made to induce the officials of those institutions whose replies have hitherto been unfavourable to adopt the more important of the Recommendations we have had the honour of urging upon them on behalf of the Association.

Signed Thomas Bridgwater, *Chairman.*

Members of Committee.

Dr. J. Ward Cousins, Mr. H. T. Butlin, Dr. F. H. Alderson, Mr. J. Wickham Barnes, Mr. W. G. Bott, Dr. T. Bridgwater, Dr. J. B. Brierley, Dr. J. S. Bristowe, Mr. George Brown, Dr. G. W. Crowe, Dr. J. Langdon H. Down, Dr. Ogilvie Grant, Dr. Major Greenwood, Dr. F. de Havilland Hall, Mr. Ernest Hart, Dr. G. Henty, Mr. J. Brindley James, Dr. W. Withers Moore, Dr. R. W. J. Oswald, Dr. J. R. Thomson, Mr. F. Wallace, Dr. Hugh Woods.

APPENDIX

Abstract of the Replies to the Circular Letter sent out by the Medical Charities Committee to the various Hospitals and Dispensaries in the Metropolis on May 2nd, 1894.

I.—Medical Charities from which more or less favourable replies have been received, or which already adopt precautions.

Alexandra Hospital for Children with Hip Disease.

I beg to say that we have posted your bill prominently in the out-patients' room. With reference to your Recommendations I may say that they have been practically complied with for some time. Stanley Smith, Secretary.

Battersea Provident Dispensary.

I may say that the Managing Committee of this institution are in entire sympathy with the Recommendations of your Council. J. G. Bristow, Hon. Secretary.

Belgrave Hospital for Children.

I have to inform you that the Recommendations of your Council have been under the serious consideration of my Committee, and I am directed to say that the objects contemplated in the Recommendations are practically attained under the arrangements at present in force at the Hospital.

Percy Gates, Hon. Secretary.

Brompton Provident Dispensary.

The principle on which the Recommendations you forward are founded seems a sound one, and has always been acted upon in this institution. A book is kept in which all the particulars suggested by you are carefully entered in every case, and the maximum amount of earnings allowed to qualify for membership are publicly exhibited, so that the object you have in view is secured.

F. Young, Secretary.

City of London and East London Dispensary.

I am requested to inform you that the Committee are not prepared to entertain the Recommendations which you have put forth to the extent suggested by you, but they have caused a notice to be placed up in our dispensary intimating that this institution is established for the relief only of those persons who are too poor to pay for medical and surgical aid, etc., Frederick R. Bluett, Secretary.

City Orthopædic Hospital.

I am in receipt of your bill for exhibition here and other printed matter, which I shall be very glad to make use of, and to assure you that for some time past we have strictly adhered to your plan of inquiry.

Ernest Derenth, Secretary.

Clapham Maternity Hospital.

I beg to say that we are very glad to carry out the principle of the Recommendations made by the Council of the British Medical Association in respect to our out-patient department. This system of inquiry and refusal of well-off patients has been conscientiously carried out by the medical women in charge, but we are too small an institution to have a "paid officer." Marian Ritchie, Hon. Secretary.

Eastern Dispensary.

I am desired by the Committee to state this institution has already guarded against imposition from the source referred to by the introduction of the following rule:

"No persons are to be deemed objects of this charity except such as may be considered really necessitous."

G. W. Ilsley, Secretary.

Great Northern Central Hospital.

The principle of the Recommendations of your Committee on Medical Charities has been adopted for some time at this hospital, and copies of the poster you forward have been exhibited here for some months past.

William T. Grant, Secretary.

Grosvenor Hospital for Women and Children.

The Committee are in sympathy with your object, but it is considered that the notice or poster is not required in this institution, where it is and always has been, the custom to make inquiry. A. S. Harvey, Secretary.

Holloway and North Islington Dispensary.

I have to inform you that already the Committee take such steps as they find it possible to prevent abuse of the insti-

tution. All parties receiving relief have to pay a small fee, and should anyone apply, in the opinion of the medical officer not suitable for relief, inquiries are at once made, and if found necessary further relief is refused.

Chas. W. Sawbridge, Hon. Secretary.

Hôpital et Dispensaire Francais.

The form of Register of Out-Patients has been adopted for the twenty-six years. Nos. 2 and 3 of the Recommendations cannot apply to foreigners. The Committee already exhibit a placard. F. Sorel, Secretary.

Hospital for Diseases of the Throat.

In replying to your circular I am to inform you that the system recommended has been followed in this hospital in a slightly modified form for many years.

W. Holt, Secretary.

London Hospital.

The Recommendations contained in your Report are practically such as have been in use at this hospital for some years past; also a similar notice to that sent by you is posted in a conspicuous place. I can assure you that it is the hearty wish of the Committee to work completely in harmony with the suggestions made by your Association.

G. Q. Roberts, House Governor.

Metropolitan Ear, Nose, and Throat Hospital.

I am requested by our Committee of Management to say that they are willing to adopt, and already do so so, the principle of the Recommendations of the Council of the British Medical Association. W. West, Hon. Secretary.

Metropolitan Hospital.

We have already inspectors, and use every means in our power to prevent the abuse of this institution by persons who are well able to pay.

Charles H. Byers, Secretary.

National Hospital for Diseases of the Heart and Paralysis.

All patients are examined as to their means, etc., and the officials of the hospital have strict injunctions to use every precaution to prevent any abuse of the charity in the out-patient department. F. Handley, Secretary.

New Hospital for Women.

We already make all the inquiries suggested, and a register is kept of all the out-patients. I give the new letters myself, and when unsuitable cases present themselves I do not admit them. The notice, as suggested, shall be placed in the waiting-rooms. Margaret M. Bagster, Secretary.

Paddington Green Children's Hospital.

We are quite willing to adopt, as indeed we have already done, the principle of your Recommendations, and will exhibit in the waiting room your poster. Our Secretary has sufficient time to inquire into doubtful cases, and has made a practice of so doing. C. W. Empson, Hon. Secretary.

Pimlico Road Free Dispensary.

I beg to say this hospital has always been worked on such a system, certain test questions having to be answered by applicants not known as absolutely poor. However, it is rare that we ever have to use these questions, mostly our free applicants being obviously destitute. Our charity is too poor to afford an inquiry officer. H. Venman, Secretary.

Royal Free Hospital.

A notice has been placed in the out-patients' department, in accordance with your suggestion. The principle of making careful inquiry to avoid abuse of the charity has been strictly adhered to at this hospital since the present system of inquiry was introduced in 1890.

Conrad W. Thies, Secretary.

Royal London Ophthalmic Hospital.

There is already a paid inquiry officer here, and he keeps a book of detail of the refused cases, and watches daily over the general reception of the out-patients.

R. J. Newstead, Secretary.

Royal Orthopædic Hospital.

My Committee have always acted upon the principle of the Recommendations referred to in your circular, and fully intend to adhere to the practice.

Benjamin Markell, Secretary.

Royal Westminster Ophthalmic Hospital.

The object which your circular contemplates is kept in view by the medical staff of this hospital, and inquiries are made in such cases as may suggest that undue advantage is being taken of the charity, but the Committee think it undesirable to adopt the course suggested respecting the posting of the placard. T. Beattie-Campbell, Secretary.

St. Bartholomew's Hospital.

For many years past there has been in operation here a system of inquiry into the circumstance of persons applying for treatment, which system, although not in all respects identical with that advocated by your Association, has the effect of preventing the abuse of the hospital by persons well able to pay for medical and surgical aid.

W. H. Cross, Clerk.

St. George's Hospital.

The objects aimed at are already to a large extent attained at St. George's Hospital, where for many years past the number of out-patients has been strictly limited, and where a system of inspection and of external inquiry in doubtful cases conducted by the Charity Organisation Society is already in operation. The Board do not see any adequate reason for incurring the extra expense which the system proposed by the British Medical Association in place of its own would necessarily involve. C. L. Todd, Secretary.

St. John's Hospital for Diseases of the Skin.

Many of the Recommendations they are glad to notice are already in force, and the remaining ones shall have careful attention, so that any abuse of the hospital may be prevented by the exercise of great caution in the Secretary's office, where every new patient has to be registered.

St. Vincent Mercier, Secretary.

St. John's Wood and Portland Town Provident Dispensary.

The Committee of this institution are quite willing to adopt the principle. In fact, such a system is now and has been for many years past in operation. A paid official ascertains and makes full inquiry into the position of all new members joining. The wage limit you name has now been adopted as being more reasonable.

F. Dawkin, Secretary.

St. Peter's Hospital.

The poster you sent shall be exhibited in the out-patients' waiting-room, and care will be taken to see that the out-patients' department of this hospital is not made use of by those who could afford to pay a surgeon for treatment. All patients are seen and questioned before they are admitted to the consulting rooms. Irwin H. Beattie, Secretary.

Tottenham and Edmonton General Dispensary.

The Recommendations are carried out in respect to the above dispensary. The Committee make a thorough investigation into each case, applicants frequently appearing before the Committee when there is any doubt as to their eligibility. C. Coventry, Hon. Sec. (*pro tem.*).

West End Hospital for Paralysis.

The Committee have much pleasure in not only adopting the suggestions conveyed in the circular, but the majority of the suggestions have been in operation for some time past, the Secretary having, as part of his duty, acted in the capacity of inquiry officer.

Henry Ansell, Secretary.

Western General Dispensary.

All our important cases come with recommendations from our subscribers, who are called upon to see that they are fit objects for the charity. With the number of cases that come to our dispensary daily, it would be impossible for us to make inquiry into the circumstances of each applicant. Simply to ask questions of the persons themselves, without verifying the answers, would be worse than useless; but knowing the neighbourhood as we do, as one of the very poorest in London, we are quite satisfied that only a *very* few, *if any*, would be able to pay for medical attendance.

I. Norton, Hon. Secretary.

West Ham, Stratford, and South Essex Hospital.

In reply to your communication respecting the appointment of an inquiry officer, the following resolution was

passed: "That the Committee are not prepared at present to engage an inquiry officer, and also to inform you that under the existing arrangements strict inquiries are always made with regard to doubtful cases, and that a notice similar to the one proposed by the British Medical Association has already for some length of time been affixed in the Out-Patients' Departments." G. PAGENSTECHER, Secretary.

WESTERN OPHTHALMIC HOSPITAL.

All the Recommendations have been in force since November last, and the "Register of Out-Patients" will be altered in accordance with your plan shortly. Our register is almost identical with the one you suggest.

HOSTINGS NEALE, Secretary.

Favourable replies have also been received from King's College Hospital, North-Western Hospital, and the Tottenham Hospital and Institution.

II.—Medical Charities that are partially favourable.

CENTRAL LONDON OPHTHALMIC HOSPITAL.

The Committee have special arrangements of their own, and while agreeing in the main with *some* of the clauses, they prefer to have the conduct of the matter in their own hands.

WILLIAM ABRAMS, Secretary.

ST. GEORGE HANOVER SQUARE DISPENSARY.

The Committee of this dispensary considers that the institution being conducted on the provident system, and its benefits limited to those whose earnings on an average do not exceed £2 a week, and who reside or pursue their calling within the dispensary district, the rules are sufficient to guard against imposition.

WILLIAM ABRAMS, Secretary.

UNIVERSITY COLLEGE HOSPITAL.

I am directed to inform you that in the opinion of the two Committees the cases of abuse are not sufficiently numerous to warrant the appointment of an inquiry officer in the out-patients department here. I am, however, further directed to state that the Committees have decided to post a notice in the out-patient departments, a copy of which I now enclose. NEWTON H. NIXON, Secretary.

WESTBOURNE PROVIDENT DISPENSARY AND MATERNITY.

I am directed to say that while we are endeavouring to carry out your very excellent Recommendations, our Committee do not consider it advisable to have the large bill up in their dispensary. W. R. MUMFORD, Secretary.

III.—Medical Charities which have not yet accepted the Recommendations.

CHELSEA HOSPITAL FOR WOMEN.

I submitted your proposition to the House Committee at its meeting yesterday, but they do not feel that they can at the present moment adopt the Recommendations of your Council. A. C. DAVIS, Secretary.

EALING COTTAGE HOSPITAL.

My Committee are in full sympathy with the object to be attained, but seeing that our hospital patients in all cases pay something towards the expenses of their maintenance, and our dispensary or out-patients are all paying members, we do not feel that it is necessary for us to take any special means such as suggested to check the abuse of this charity.

JOSEPH BOX, Hon. Secretary.

EVELINA HOSPITAL.

The subject has been carefully considered on a previous occasion, and from inquiries then made of the medical officers and of the nurses in the out-patient department, the Committee are quite satisfied there is no appreciable abuse of this charity. They therefore do not see their way to adopt the Recommendations of the Association.

T. S. CHAPMAN, Secretary.

GENERAL LYING-IN HOSPITAL.

I am desired to write and say as all cases are very carefully inquired into before they are admitted, the Committee do not think it necessary to put up the handbill.

ANNIE WHYTE, Secretary.

GERMAN HOSPITAL.

The Board of Management have taken your letter with reference to the management of the out-patients' department into serious consideration, but regret, while acknowledging the advantages arising from the system proposed by your Association, that they do not see their way to carry out the suggestion of submitting every doubtful case recommended by a governor or subscriber to an individual inquiry.

M. GULICH, Superintendent.

GUY'S HOSPITAL.

The Recommendations of the Committee upon Medical Charities came before the Treasurer and Governors of this Hospital on Wednesday last, and I am directed to inform you that they do not at present propose to act upon them.

HENRY WILLIAMS, Clerk.

HOSPITAL FOR EPILEPSY AND PARALYSIS.

My Committee direct me to say that the principle which has always prevailed at this hospital is that all patients should be encouraged to pay what they can afford, with the view of minimising abuses and promoting providence. The notice, in its wording at any rate, would conflict with this principle. The employment of an inquiry officer in the case of a hospital expending, like this institution, about £2,000 is almost an impossibility, and the Committee do not see their way to any further action in this direction.

H. HOWGRAVE GRAHAM, Secretary.

LONDON TEMPERANCE HOSPITAL.

I am instructed to state that the existing arrangements under which relief is afforded by this institution to necessitous and deserving persons are in the opinion of my Board quite adequate to prevent any systematic abuse of this charity.

E. WILSON TAYLOR, Secretary.

MIDDLESEX HOSPITAL.

Referring to a circular letter received from you enclosing a schedule of Recommendations of the Committee on Medical Charities of the British Medical Association, I am directed by the Weekly Board of this hospital to inform you that they have very carefully considered the points involved, and regret that they are unable to adopt the proposals contained in your communication.

F. CLARE MELHADO, Secretary-Superintendent.

NATIONAL ORTHOPÆDIC HOSPITAL.

I have to inform you that the Committee of this hospital is satisfied that the object designed is attained by the inquiries made of patients and others, and they do not see any need for further action so far as we are concerned.

H. J. TRESIDDER, Secretary.

ROYAL EYE HOSPITAL.

I am desired by the Council to acquaint you that their experience in regard to those attending this hospital does not incline them to the opinion that, so far as regards this institution, there is any sufficient reason for adopting the suggestions. C. COMYN, Secretary.

WEST LONDON HOSPITAL.

I have placed the Recommendations before my Committee, by whom I am directed to inform you that they feel unable at the present moment to adopt them.

R. J. GILBERT, Secretary-Superintendent.

I.—Medical Charities that have replied favourably.

Alexandra Hospital for Children with Hip Disease
Battersea Provident Disp.
Belgrave Hospital for Children
Brompton Provident Disp.
City of London and East London Dispensary
City Orthopædic Hospital
Clapham Maternity Hospital
Eastern Dispensary
Great Northern Central Hospital
Grosvenor Hospital for Women and Children
Holloway and North Islington Dispensary
Hôpital et Dispensaire Français
Hospital for Diseases of the Throat
King's College Hospital
London Hospital
Metropolitan Ear, Nose, and Throat Hospital
Metropolitan Hospital
National Hospital for Diseases of the Heart and Paralysis
New Hospital for Women
North-Western Hospital
Paddington Green Children's Hospital
Pimlico Road Free Dispensary
Royal Free Hospital
Royal London Ophthalmic Hospital
Royal Orthopædic Hospital

Royal Westminster Ophthalmic Hospital
St. Bartholomew's Hospital
St. George's Hospital
St. John's Hospital for Diseases of the Skin
St. John's Wood and Portland Town Provident Dispensary
St. Peter's Hospital
Tottenham and Edmonton General Dispensary
Tottenham Hospital and Institution
West End Hospital for Paralysis
Western General Dispensary
West Ham, Stratford, and South Essex Hospital
Western Ophthalmic Hospital

II.—Medical Charities that are partially favourable.

Central London Ophthalmic Hospital
St. George Hanover Square Dispensary
University College Hospital
Westbourne Provident Dispensary and Maternity

III.—Medical Charities which have not yet accepted the Recommendations.

Chelsea Hospital for Women
Ealing Cottage Hospital
Evelina Hospital
General Lying-in Hospital
German Hospital
Guy's Hospital
Hospital for Epilepsy and Paralysis
London Temperance Hospital
Middlesex Hospital
National Orthopædic Hospital
Royal Eye Hospital
West London Hospital

IV.—Medical Charities still under consideration.

Cancer Hospital
East London Hospital for Children
Finsbury Dispensary
Gordon Hospital for Fistula
London Skin Hospital
Portland Town Dispensary
Royal London Ophthalmic Hospital
Samaritan Free Hospital
Tower Hamlets Dispensary
Victoria Hospital for Children
Westminster Hospital

Names of Hospitals and Dispensaries from which Replies have not been received.

Acton General Infirmary, Bloomsbury Dispensary, British Hospital for Skin Diseases, British Hospital for Mental Disorders, Brixton and Streatham Hill Dispensary, Cancer Hospital, Central London Throat, Nose, and Ear Hospital, Charing Cross Hospital, Chelsea Dispensary, City Dispensary, City of London Hospital for Diseases of the Chest, City Orthopædic Hospital, Clapham Dispensary for Women and Children, Farringdon General Dispensary, Gipsy Hill Dispensary, Highgate Dispensary, Home and Infirmary for Children and South London Dispensary, Hornsey Dispensary, Hospital for Consumption and Chest Diseases, Hospital for Sick Children, Hospital for Skin Diseases, Hospital for Women, Infirmary for Consumption and Chest Diseases, Italian Hospital, Kensington Dispensary, Kilburn and Maida Vale General Dispensary, Lock Hospital, London Dispensary, London Throat Hospital, Metropolitan Dispensary, Miller Hospital and Royal Kent Dispensary, Municipal Throat and Ear Infirmary, National Hospital for Paralysed, North-Eastern Hospital, Queen's Jubilee Hospital, Royal Ear Hospital, Royal General Dispensary, Royal Hospital for Chest Diseases, Royal Hospital for Children and Women, Royal South London Dispensary, St. Anne's Dispensary, St. George's and St. James's Dispensary, St. John's Hospital, St. Luke's Dispensary, St. Mark's Hospital for Fistula, St. Marylebone General Infirmary, St. Mary's Hospital, St. Pancras and Northern Dispensary, St. Thomas's Hospital, South Belgrave Dispensary, South Lambeth Dispensary, South London Hospital for Women, Surrey Dispensary, Victoria Dock Dispensary, Walthamstow Dispensary, Western Dispensary, Western Dispensary, Skin Hospital, Westminster General Dispensary.

REPORT OF COMMITTEE ON CHILDREN.

YOUR Committee appointed to investigate the physical and mental condition of school children have carried on the work in conjunction with the Committee appointed by the International Congress of Hygiene. A report is now presented to you on 50,000 children—boys, 26,287; girls, 23,713—seen individually in sixty-three schools by Dr. Francis Warner from June, 1892, to May, 1894.

The large amount of tabulated information now gained has made it possible to prepare a list of the signs or abnormal points observed in children classed in divisions representing the conditions of children, with the number of children presenting each defect respectively. A catalogue giving definition or description of these signs or conditions, together with the number of children presenting each condition, represents this portion of the work as far as it has been carried out.

A card has been prepared for each of the children noted as presenting a defect, and represents the condition of the individuals—boys, 5,112; girls, 3,829. These cards are being arranged in groups as to social class, nationality, town or country, etc., and results tabulated by actuarial processes. The relations of mental dulness, low nutrition, defects in development, and nerve conditions among the different groups of children are being investigated, and will be published. The work done and results so far as they have been obtained point strongly to the desirability of completing the investigation of 100,000 children, of whom half have been seen, and preparing a complete report from which conclusions may be drawn. Many of the most important groups of cases are small in number.

A CATALOGUE GIVING DEFINITION OR DESCRIPTION OF THE SIGNS OR ABNORMAL POINTS OBSERVED IN 50,000 CHILDREN AND REGISTERED.

A. *Defects in Development.*—The term includes any point of defect in the form, proportion, or size in the body and its parts or their absence. Cases: Boys, 2,308; girls, 1,618.

A 1. *Cranium Defective* includes any defect in size, form, proportions, or ossification of the cranium. A given case may come under more than one of the classes below. As to a standard of normal size: In a well-developed child of good potentiality the head circumference at 9th month is 17½ inches, at 12 months 19 inches, at 7 years 20 to 21 inches. This is a rather high standard of size. Boys, 706; girls, 622.

A 2. *Cranium Large.*—A head of 22 inches circumference or over may be considered large in a school child; allowance must be made for age. Doubtless many of these cases are rachitic. Hydrocephalus is entered in its own class. Boys, 107; girls, 15.

A 3. *Cranium Small.*—The point of size of head is recorded as apart from the size of the child for its age. The volume is estimated in relation to the normal for age. This is determined by inspection, by the open hand placed upon the head, and by the measuring tape. A head with circumference over 20 inches at any school age is not registered as small; usually the small heads are 18 to 19½ inches circumference. Small head is noted independent of stature. Boys, 149; girls, 516.

A 4. *Cranium Bossed.*—There may be bosses, protuberances, or outgrowth at the sites of the ossific centres of the frontal bones, at the parietal centres, at the site of the fontanelle, and elsewhere. These are usually symmetrical, but not always. Boys, 323; girls, 47.

A 5. *Forehead Defective.*—The forehead may be narrow, shallow in vertical measurement, or small in all dimensions; it may bulge forward and overhang. All defects of the forehead, except "bosses" and "frontal ridge" (A 4, A 6) are here included. Boys, 53; girls, 23.

A 6. *Interfrontal Ridge.*—The vertical suture between the two halves of the frontal bone may be the site of a bony ridge, present in all degrees: if the forehead be also narrow it forms the scapho-cephalic type. Boys, 121; girls, 19.

A 7. *Cranium Asymmetrical.*—Asymmetry may be as to the forehead or other part: one side of the cranium may be smaller than the other. Boys, 27; girls, 2.

A 8. *Dolichocephalic.*—Head long in antero-posterior diameter. Boys, 26; girls, 2.

A 9. *Hydrocephalic.*—This term is used as in medicine. Boys, 2; girls, 1.

A 10. *Other Types of Cranium.*—Square; oxycephalic, or elevated and conical; cranium larger in anterior than in posterior segment. Boys, 11; girls, 2.

B 11. *External ear defective* in its parts, size, or form. Abnormality in size, proportioning, absence of parts, texture of

skin are here recorded. The ear may be outstanding with great convexity posteriorly and concavity in front; the helix or portions thereof and the antehelix may be absent; the skin over the cartilage may be tight and adherent, coarse in texture with varicosities. The ears may be asymmetrical, and the lobes may be adherent to the face. Boys, 364; girls, 110.

C 12. *Eyelids with Epicanthis.*—The epicanthis is a fold of skin continuous with the lower fold of the upper eyelid (not a fold of mucous membrane) placed across the inner angle of the opening of the eyelids covering the caruncle; it may be asymmetrical. Boys, 288; girls, 196.

D 13. *Palate Defective in Shape.*—Defects in form are described as seen in the horizontal and in the vertical plane. Boys, 496; girls, 324.

D 14. *Palate Narrow.*—Without being otherwise altered, the palate may be contracted laterally in the space between the alveolar processes. Boys, 276; girls, 163.

D 15. *V-shaped Palate.*—Pointed more or less sharply at its anterior extremity, the alveolar processes being nearly straight lines, meeting at their extremities at an acute angle. Boys, 179; girls, 110.

D 16. *Palate arched or vaulted*, thus deviating from the normal in the vertical plane with a high roof. Boys, 30; girls, 22.

D 17. *Palate Cleft.*—A deformity which may affect the hard and the soft palate. Boys, 12; girls, 12.

D 18. *Other defective types of palate*, such as the flat and the horse-shoe type. Boys, —; girls, 1.

E 19. *Nasal bones*, wide, sunken, or indented. The bony bridge of the nose may be thus ill-shapen and depressed as in the undeveloped condition of babyhood. Boys, 155; girls, 156.

F 20. *Growth small* or stature short. Children short and small in build for their age. Boys, 275; girls, 335.

G 21. *Other defects in development* less frequently observed. Boys, 251; girls, 213.

G 22. *Adipose Type.*—Children flat and flabby, generally without spontaneity and slow in action. Boys, 1; girls, 4.

G 23. *Cyanosis.*—General blueness of face, lips, and ears, commonly dependent on defect of the heart. Boys, 2; girls, —.

G 24. *Dermoid Cyst.*—Tumours at margin of orbit or near the temporal fossa.

G 25. *Face asymmetrical*, one side being smaller than the other. Boys, 3; girls, 1.

G 26. *Face Small.*—The face, including the upper and lower jaws, with their bones, may be small, independent of the size of the calvarium or brain case of the skull. Boys, 17; girls, 21.

G 27. *Features Coarse*, heavy, flat, or lips thick. The features may be large and ill-proportioned. The separate features may not be individually malformed, but disproportionate one to another or to the size of the face; thus the nose may be small, the face large, round, flat, the features rising from the plane of the face. The lips may be thick and protuberant. Boys, 27; girls, 12.

G 28. *Forehead Hairy.*—The forehead may be covered with downy hair; the hairy scalp may join the outer extremities of the eyebrows. Boys, 19; girls, 4.

G 29. *Frontal Veins Large.*—There may be well-marked veins in the middle of the forehead and across the bridge of the nose. Boys, 12; girls, 4.

G 30. *Hands Blue and Cold.*—This was registered when it appeared to be a more or less permanent condition as a defect independent of weather. It may be seen in a paralysed limb. Boys, 13; girls, 47.

G 31. *Hare Lip.*—Congenital fissure of the upper lip. Boys, 15; girls, 7.

G 32. *Ichthyosis.*—Scaly skin on wrists and arms, or general on face, ears, and all parts. Boys, 5; girls, 2.

G 33. *Moles* on face or eyebrows; they may be pigmented, and may or may not be raised, and are often covered with hair. Boys, 1; girls, 6.

G 34. *Mouth Small.*—Referring to measurement of the opening when the face is at rest. Boys, 50; girls, 38.

G 35. *Nævus.*—"Port wine stains" or patches on the face coloured by vascularity. Half the face may be thus affected, with affection of conjunctiva and mucous membrane of mouth. Boys, 4; girls, 2.

G 36. *Nose soft tissue*, wide or superabundant. The skin and subcutaneous tissue of the bridge of nose may be superabundant and wide, giving an appearance of great width between the eyes. Boys, 13; girls, 17.

G 37. *Orbits Oblique.*—The transverse axis of the orbits sloping in place of being horizontal.

G 38. *Orbits Sunken.*—The whole cavity and its malar boundary appearing sunken into the skull.

G 39. *Palpebral fissures defective* in size or form. The eyelids may be small as well as the palpebral fissures or openings between them, both in their vertical and transverse measurements. In some cases the opening is not symmetrical, being wider on the inner than on its outer half. The transverse axis may slope outwards and upwards, or outwards and downwards, instead of being horizontal. Boys, 41; girls, 25.

G. 40. *Prognathous Type.*—The lower jaw large, heavy, underhung.

G 41. *Supernumerary ears* represented by sessile or pedunculated outgrowths in front of the tragus, sometimes nearly half an inch long. Boys, 21; girls, 12.

G 42. *Miscellaneous Defects in Development.*—Under this heading are included congenital defects of eyes and congenital deformities of the body. Boys, 12; girls, 15.

B. *Abnormal nerve signs* seen in the balances and movements of the body. Cases: Boys, 2,853; girls, 2,015.

43. *General Balance Defective.*—Asymmetrical positions of the limbs, shoulders, back; slouching, listless gait. Boys, 90; girls, 115.

44. *Expression Defective.*—Want of changefulness, vacancy, fixed expression. The visible muscular action and balance seen in a face may be described, and still there may be an expression that cannot be described anatomically. A face may be balanced or moved abnormally by action of its muscles, and yet carry a good expression. Boys, 152; girls, 196.

45. *Frontals Overacting.*—The frontal muscles may produce horizontal creases in the forehead, which may be deep if these muscles overact coarsely. Sometimes these muscles are seen working under the skin in vermicular fashion, with an athetoid movement; in other cases the action is fine, producing what may be called a dull forehead. This over-muscular action does not necessarily erase expression. Boys, 696; girls, 158.

46. *Corrugation.*—Knitting the eyebrows, drawing the eyebrows together; vertical creases are thus produced on the forehead above the nose. Corrugation may coexist with over-action in the frontal muscles. Boys, 38; girls, 12.

47. *Orbicularis Oculi Relaxed.*—There is a thin muscle, the orbicularis oculi, which encircles the eyelids. Its tone gives sharpness to the lower lid, so that its convexity is seen. When this muscle is relaxed there is a fulness or bagginess under the eyes, which is not due to œdema (dropsy), and may disappear on laughter. Boys, 371; girls, 296.

48. *Eye Movements Defective.*—When an object is moved at a distance 2 feet in front of the face, the eyes normally move in following it; in some children the head always turns towards the object, while the eyes are kept still in their orbits. In other cases fixation of the eyes is bad, or there are restless, uncontrolled movements of the eyes. Boys, 348; girls, 264.

49. *Head Balance Asymmetrical or Drooped.*—In the normal the head is held erect. It may be inclined to one side or drooped. Boys, 94; girls, 274.

50. *Hand Balance Weak.*—In this type of balance the wrist is slightly drooped, the palm is contracted laterally, and the digits are slightly bent. Boys, 1,234; girls, 805.

51. *Hand Balance Nervous.*—When the arms are held out the wrist droops, the palm is slightly contracted laterally, the thumb and fingers are extended backwards beyond the straight line at their junction with the palm. Boys, 253; girls, 365.

52. *Finger Twitches.*—When the hands are held out for inspection, there may be twitching movements of the digits in flexion, or extension, or laterally. Boys, 145; girls, 144.

53. *Lordosis.*—When the hands are held forwards, an alteration in balance of the spine may appear, with an arching forward in the lower part of the back, while the upper part of the spine between the shoulders is thrown back. Boys, 36; girls, 112.

H 54. *Other Abnormal Nerve Signs* less frequently observed.

Signs grouped for convenience of primary arrangement as being less frequent in occurrence than those given earlier, but not necessarily of less importance. Boys, 468; girls, 287.

55. *Deaf, or Hearing Defective.*—Children deaf, or partially deaf. Tests for hearing cannot be used in a school inquiry. Boys, 12; girls, 15.

56. *Grinning, or Over-smiling.*—Over-smiling or grinning may be spontaneous, or may occur on any stimulation to effort. The lines formed in the naso-labial region of the face may be fine or coarse; there may be a duplicate or triplicate naso-labial groove partly depending upon the thinness or thickness of the skin; permanent skin creases may result. Boys, 19; girls, 14.

57. *Mouth Open or Jaw Drooped.*—The jaw may be drooped, or the mouth may be open with the teeth closed. This should not be recorded as a nerve sign if it is probably due to obstruction of the respiratory passages. Boys, 233; girls, 110.

58. *Over-Mobile.*—Constant spontaneous movements. Among children in the infant school, and in some over 7 years, spontaneous movement is normal; it is most common in the fingers. Boys, 4; girls, 9.

59. *Response in Action Defective.*—Response in action following a command or in imitation may be accurate or uncertain, prompt or slow. There may be an interval between the command and the response, or the action may be continued unduly long. Response may be better when stimulated through the eye or through the ear respectively. Boys, 56; girls, 62.

60. *Speech Defective.*—Stammering (spasm), or defect in articulating certain sounds. Speech may be nearly absent; it may be indistinct. As a mental defect, the question asked may be repeated without a reply. Boys, 105; girls, 52.

61. *Statuesque or Immobile.*—Without any spontaneity, immobile except under stimulation to action. Boys, 4; girls, —.

62. *Tremor.*—A uniform rapid movement with but slight displacement of the parts moving. Boys, 15; girls, 14.

63. *Miscellaneous Abnormal Nerve Signs.*—Under this heading are included eye cases, 71, 72, and the paralytic cripples. Boys, 67; girls, 45.

C. *Nutrition Low, Thin, Pale, Signs of Delicacy.*—This was registered to any child seen to be pale, thin, or delicate. No inquiries were made as to the feeding of the children. Nutrition of the limbs and face was observed, as well as colour in the face and lips. Cases: Boys, 749; girls, 770.

D. *Dull Mentally, or so Reported by the Teachers.* In every case registered the teacher's opinion concerning the child's mental capacity was asked and written down; those reported as below average ability in school were registered as dull. After the children presenting visible defects had been picked out, the teachers were invited to present any other pupils known by them to be mentally dull. All grades of mental dulness were registered under this heading—see Groups D., 76, 77, 78. Total of dull children: boys, 2,072; girls, 1,632.

E. *Defects of Eyes.*—When the eyes were looked at obvious defects were noted, but no tests were used as to acuteness of vision or errors of refraction, and the ophthalmoscope could not be used in the schools. Ophthalmia was not registered, but some of its late effects are recorded under "Disease of Cornea," "Eye Lost by Disease," 68, 70. Boys, 774; girls, 715.

64. *Squint.*—Under this heading are registered cases of organic squint, one eye being turned; also temporary or varying convergence when looking at an object 2 feet from the face, which probably indicates hypermetropia. Boys, 470; girls, 345.

65. *Using Convex Glasses.*—Evidence of hypermetropia. Boys, 141; girls, 226.

66. *Using Concave Glasses.*—Evidence of myopia or short sight. Boys, 39; girls, 55.

67. *Myopia not Using Glasses.*—Short sight ascertained on inquiry. Boys, 12; girls 11.

68. *Disease of Cornea.*—Inflammation, ulcers, white patches. It was not found convenient to record ophthalmia, but if disease of cornea were present this was registered. Boys, 52; girls, 46.

69. *Eye Lost by Accident.*—As stated on inquiry. Boys, 33; girls, 16.

70. *Eye Lost by Disease.*—Inquiry was made as to cause of loss of eye. Boys, 10; girls, 18.

71. *Nystagmus.*—Organic tremor of the eyes. This defect is also registered under "Other Nerve Signs. Miscellaneous. Bh 63." Boys, 20; girls, 11.

72. *Ptosis.*—Drooping of eyelid may be partial or complete in one eye or in both. Boys, 24; girls, 5. This defect is also registered under "Other Nerve Signs. Miscellaneous. Bh 63."

73. *Pupils Unequal.*—Inequality of size of pupils when the eyes are equally stimulated by light. Boys, 4; girls, 2.

74. *Cataract* may be congenital or the result of injury. Boys, 8; girls, 5.

75. *Miscellaneous and Congenital Defects of the Eyes.*—Including coloboma or defect in a portion of the iris. Unequal and asymmetrical pigmentation of irides and "tortoise-shell irides." Albinos destitute of all pigmentation. Excessive largeness of cornea. Congenital smallness of one eye. Congenital blindness from cause unknown. Congenital defects of the eyes are also registered under "Other Defects of Development. Miscellaneous. Af 42." Boys, 8; girls, 8.

F. *Cases of Rickets.*—When bent legs or pigeon breast indicated rickets the fact was registered: conditions of the cranium were not accepted as evidence of rickets, but were registered under their respective headings (see Aa 2, 4, 5). Boys, 39; girls, 10.

G. *Exceptional Children.*—Children who on account of certain observed defects may at once be said to need individual consideration:

76. Idiots.
77. Imbeciles. Boys, 3; girls, 2.
78. Children feebly gifted mentally. Boys, 50; girls, 51.
79. Children mentally exceptional. Boys, 4; girls, 3.
80. Epileptics, and children with history of fits during school life. Boys, 20; girls, 35.
81. Dumb. Boys, 4.
182. Children crippled, maimed, and paralysed.
83. Disease of hip. Boys, 11; girls, 3.
84. Disease of spine. Boys, 11; girls, 8.
85. Disease of upper limb. Boys, 7; girls, 3.
86. Disease of lower limb. Boys, 11; girls, 5.
87. Hand maimed. Boys, 2; girls, 1.
88. Amputation of arm. Boys, —; girls, —.
89. Amputation of leg. Boys, 5; girls, 1.
90. Congenital absence of greater part of upper limb. Boys, 2; girls, 3.
91. Congenital absence of hand.
92. Congenital defect of hand. Boys, —; girls, 2.
93. Congenital absence of foot. Boy, 1.
94. Club foot.
95. Hemiplegia. Boys, 7; girls, 11.
96. Paraplegia.
97. Infantile palsy, upper limb. Boys, 1; girls, 3.
98. Infantile palsy, lower limb. Boys, 11; girls, 10.
99. Torticollis. Boys, 4; girls, 5.
100. Blind, or nearly so. Girls, 3.
101. Chorea. Girl, 1.
102. Crippled by burn. Boys, 2; girls, 4.
103. Heart disease. Boy, 1.

FRANCIS WARNER, *Honorary Secretary.*

REPORT OF THE ANÆSTHETICS COMMITTEE 1894.

NINE meetings of the Executive and seven of the General Committee had taken place up to October, 1893, at which time the printed tables of cases of death and danger, as analysed and classified by the Executive Committee, were presented. After consideration of these tables and the interim report, the Committee agreed that a large amount of valuable material was still to be obtained from the 26,000 collected records, and that a more thoroughly exhaustive analysis, to include all the normal cases in addition to those cases with untoward symptoms already tabulated, should be made. The further analysis of the record books was deputed to Dr. Dudley Buxton, Mr. Eastes, Dr. Hewitt, and the Assistant Hon. Sec., Mr. Rowell. A complete system of analysis was devised, and it was agreed to deal with the whole of the cases by this method.

This Subcommittee have found that, with the regular help of three clerks, and the occasional kind assistance of several volunteers, it has not been possible to complete the tabulation of more than about 100 cases in an hour. In all they have met seventy times, and have concluded about two-thirds of the work. The meetings continue to take place twice weekly, and the Committee look forward to the completion of their full report before the 1895 meeting of the Association.

Jonathan Hutchinson, *Chairman.*
Christopher Childs, *Hon. Secretary.*
George Rowell, *Assistant Hon. Secretary.*

REPORT OF THE THERAPEUTIC COMMITTEE.

During the past year the Therapeutic Committee have concluded their inquiry regarding the frequency and importance of ill-effects following the use of the three chief antipyretic agents—phenazone (antipyrin), acetanilide (antifebrin), and phenacetin; and they herewith submit their completed report.

A draft of this report was submitted to the Council at their last annual meeting; but in the complete report now presented much new matter has been added.

The Committee consider that the inquiry has yielded much-needed information, supplying, as it does, clear evidence that, both as regards their frequency and importance, the statements made regarding these ill-effects have been considerably exaggerated, most of all so in the case of antipyrin and phenacetin.

The ill-effects observed, when not obviously due to idiosyncrasy, have in the majority of cases been the direct result of injudicious or excessive dosage. This has especially been the case with antifebrin, with which drug the ill-effects have been the most frequent and serious. The dosage employed by no fewer than three-fourths of observers (4 to 10 grains) has been habitually excessive; the proper dose of this drug being from 1 to 4 grains.

In view of the issue of a new edition of the *Pharmacopœia*, the Committee have thought they would be furnishing valuable information if they ascertained from the Association the extent to which certain of the more obsolete drugs and preparations are now employed. A report containing a list of such drugs has been made to them by their Pharmacopœia Subcommittee; and an inquiry to the whole Association is now in course of being issued.

The Committee has also in the same relation undertaken investigations with regard to the dosage of certain of the older remedies. William Hunter, *Honorary Secretary.*

Extract from Minutes of Therapeutic Committee, June 29th, 1894:—

The following resolution was directed to be conveyed to the Council. "The Therapeutic Committee request the Council that they be reappointed, and that they be allowed the sum of £50 (Fifty Pounds) for their expenses during the coming year. They would also request that the names of Dr. C. H. F. Phillips and Dr. W. Hale White be added to the Committee." D. J. Leech, *Chairman.*

REPORT OF THE COMMITTEE ON THE EFFICENT CONTROL OF RAILWAY SERVANTS' AND MARINERS' EYESIGHT.

The Committee has only a brief report to make this year. In its last annual report it was explained that on August 31st, 1892, a circular letter had been issued by the Board of Trade to all the railway companies of the United Kingdom, inviting their careful consideration and their comment upon the recommendations made by the Committee of the Royal Society on Colour Vision, as bearing upon the eyesight of railway servants. It was further indicated that the replies to the circular above mentioned were to be eventually laid before Parliament. This correspondence was not issued until March, 1894. Its perusal makes evident that while there has been a considerable awakening of many of the railway authorities, and a consequent adoption of stricter precautions by a few of the most enlightened managers, there is in many instances a persistent employment of fallacious methods of testing conducted by unskilled and incompetent examiners, and in the case of some companies no action whatever has been taken.

Under these circumstances it is regrettable that on May 31st ult. the President of the Board of Trade (Mr. Bryce), in answer to a question in the House of Commons, was led to reply "that the correspondence showed that the railway companies were fully alive to the importance of this subject, and that they were endeavouring by additional tests to do what is necessary in the matter on the lines of the recommendations of the Committee of the Royal Society. The Board of Trade did not propose to take any further action at present, but the matter would not be lost sight of." It will be the duty of the Committee shortly to make some further representations to the Board of Trade.

The Committee hoped that the no less important subject of the eyesight of mariners, which had also been referred to it, might have received ample consideration in this year's report.

Responding to a question in the House of Commons last April, Mr. Mundella stated that "the new regulations for testing the eyesight of seamen had been decided upon, and were to be issued shortly."

Up to the present date (July 3rd) they have not appeared. The Committee awaits their publication with much interest.

To continue the consideration of these matters the Committee seeks reappointment.

The best thanks of the Committee are due to Dr. MacGregor, M.P., for his ready help in procuring information for the Committee in the House of Commons.

N. C. Macnamara, *Chairman.*

A SCIENCE LABORATORY FOR THE IMPERIAL INSTITUTE, LONDON.

We find that a large collection of indigenous medicinal plants and drugs, fibres, and cereals has already been made in the Imperial Institute from India and the East. A great many of the Indian drugs have enjoyed a reputation in tropical diseases for the last 2,000 years. They are, however, employed in the crude state, generally in combination with metallic and mineral compounds, and do not therefore indicate their individual value as medicines. They have, with a few exceptions, undergone no chemical analysis or pharmacological experimentation, and such researches have not yet been taken up either by Government or by private Individuals in India, neither are there facilities or expert knowledge easily procurable for such researches. To submit them to experts in London for proper investigation would be very costly under the circumstances. The establishment of a chemical and pharmacological laboratory in connection with the Imperial Institute, under a committee of experts, would be a valuable addition. There are few institutions of the kind where any original researches can be made in London; it will therefore be a very desirable and useful institution for the promotion of science. It may in addition be expected to help towards the discovery of important medicines and products of great dietetic and commercial value.

The benefits which would accrue from the institution would be greatly appreciated both by English and Indian contributors to the funds of the Imperial Institute; and it would tend to bring together scientific men from all classes and races of men in the British Empire.

A project of the kind, we understand, has been contemplated by the authorities in charge of the Institute, but it is making slow progress. We venture to say that the matter should engage the attention of the committee of the Institute, and that the necessary steps should be taken at an early date.

The Canadian-Australian Steamship *Miowera* makes a further cruise to Western Norway on August 9th, sailing from Newcastle-on-Tyne.

THE PLAGUE AT HONG KONG.

[FROM OUR SPECIAL CORRESPONDENT.]

The Limitation of the Epidemic.—Attacks among Europeans.—The Flight of the Chinese.—The Disturbance of Trade.—The Plague in Canton.—Resistance to Sanitary Measures in Hong Kong.—Anti-European Agitation and the Guild of the Native Hospital.—Closure of the Native Hospital and the Opening of a Worse.—Suppression of the New Warehouse Hospital and Establishment of European Control.

At the present date (June 21st) a decided drop in the number of new cases to record has occurred during the last forty-eight hours. It is the first real indication of any favourable issue to the stringent measures adopted to combat the epidemic.

The disease is confined for the most part to the poorest classes of Chinese and to the part of the city of Victoria which is most overcrowded and most filthy. The better classes of Chinese have hitherto enjoyed a wonderful immunity.

Up to the present date the English and European community have, with the exception of the soldiers actually employed in cleansing the houses, escaped completely. An officer and ten soldiers constitute the sick roll for Europeans. Of these the officer, Captain Vesey, and one soldier died; the others are doing fairly well. Within the last few days, however, a few Hindus, Portuguese (half-castes), and Japanese resident in the colony have been attacked, and a considerable proportion died.

The Chinese have fled from the colony to the number of about 100,000; the consequence is the city streets are deserted. The busy, crowded thoroughfares are but the skeleton of their former selves, and a sad stillness prevails.

The trade of the port is completely dislocated, there being no coolies to be had to work. The magnitude of the disturbance to trade can only be guessed at when it is remembered that the port of Hong Kong is the largest in the world, London alone approximating it in tonnage register. The factories are empty; sugar manufacturing—a large industry—is at a standstill. House servants are leaving their masters and going to the mainland. It is difficult to understand for what purpose they go thither, as the city of Canton, where most of the refugees go, is in a terrible state. From thence the plague reached Hong Kong, and there it has still a firm hold.

In Canton the estimated number of deaths amounts to over 100,000, in an estimated population of 1,000,000.

In Hong Kong, with a population of 200,000, only 2,000 deaths have been officially registered, but when any member of a Chinese family is seized he is taken to a junk, and conveyed to the mainland, or proceeds to Canton by river steamer. On board the steamer, during a journey of eight hours, many deaths occur daily, but no one knows what happens to those conveyed in native boats. The sanitary authorities of the town have had an arduous task. The primary difficulty was to get any knowledge from the Chinese that a disease really existed amongst them. Gradually, however, about the beginning of May, accounts reached the ears of the police that a fatal illness was causing the deaths of whole households. The news continued to be so alarming that a house-to-house inspection had to be insisted on. This, of course, met with much opposition from the natives, and threatened to lead to some serious disturbance.

The doctors were stoned, the inspectors were roughly handled, and the military were called out, but their presence was quite sufficient to check further development of hostilities. One district of the town where the disease was most prevalent was condemned, the inhabitants turned out, and the streets walled up with brick and mortar.

As usual with all Asiatics, foreign interference in medical treatment was resisted. The Chinese residents in Hong Kong are well accustomed to English hospitals, no fewer than three being continually at work, with an average attendance of from 40,000 to 50,000 patients yearly. The native Chinese doctors are ever on the watch to find opportunities to cast a slur and heap ignominy on the heads of English doctors, and the present epidemic was seized on by them and by all anti-English as a golden opportunity of gratifying their heart's desire. Canton and Hong Kong were placarded broadcast with anti-foreign pamphlets. The treatment followed by foreigners was graphically described according to the fancy of the individual at the moment. One stated that all patients were first filled up with brandy, and then large lumps of ice were placed on the chest until the breath was squeezed out of them. Another gave a butcher-like description of a *post-mortem* examination; others recorded that the medicines given were prepared from the bodies of those who had died the day before, and so on. All these emanated from the guild which presides over the native (Tung-Wa) hospital. A Chinese hospital committee is no mere collection of philanthropists; the hospital board directs all relations with foreigners, listens to petitions from the various city guilds; they are, in fact, the native town council, and exercise much influence accordingly. With them philanthropy takes a political form, and its full force has been exercised at the present juncture to thwart foreign interference. However, neither protests nor threats availed them now to any great extent. Commercial matters being disturbed by their remonstrance soon precipitated affairs, and they had to be firmly dealt with.

The Tung-Wa Hospital, situated as it is in the midst of the worst hotbed of disease, was shut up, and a medical officer (Surgeon-Major James, F.R.C.S.) placed in charge. All cases brought thither were examined, and the plague-stricken were sent to a branch hospital erected in the outskirts of the city. The Chinese, however, insisted that they were to treat and deal with the sick, and the Government yielded. A large warehouse was placed at their disposal, and thither the sick were despatched. In a few days a terrible state of affairs prevailed. The warehouse floors were covered with the sick, the dying, and the dead. The occupants were packed close; the windows kept closed; no attendants provided; the friends were allowed to visit and remain by the sick until they died. No latrine arrangement existed, and the patients vomited, defecated, and urinated where they lay. More than half were delirious and rolled about. The more conscious prayed for death, and, it is said, beat themselves on the floor to hasten the end. Immediately the state of affairs was known all sanitary measures were removed from the hands of the Chinese authorities and the warehouse was emptied and another large building appropriated. Police were placed in charge and the Government medical officers assumed the direction of affairs. The Government civil hospital, also situated in the city, opened a branch hospital at the outskirts of the city, and the Alice Memorial and Nethersole Hospital closed their doors and opened a large hospital well removed from the city. In the meantime there is sufficient hospital accommodation and an ample medical and nursing staff, and affairs are well in hand.

The diminution in the returns—only 20 new cases reported yesterday, June 20th—is gratifying, and it is all but certain that the crisis is over. The signs and symptoms of the disease I will discuss in another letter, and also intimate what has been done bacteriologically.

Professor Kitasato, formerly assistant to Professor Koch, is here with a staff of Japanese assistants; and Professor Calmettes, chief assistant from the Pasteur Institute at Saïgon, is also here earnestly engaged bacteriologically.

Gift to Marischal College, Aberdeen.—At a recent meeting of the Aberdeen University Court, the Marquis of Huntly intimated that Mr. Charles Mitchell, LL.D., of Newcastle, had stated that he was desirous to fill the large window of the new Graduation Hall with stained glass, in order to improve the decorative effect. He also was desirous to have the subject matter heraldic, and he had been fortunate in securing the able services of Mr. P. J. Anderson, Librarian, who had prepared a highly artistic composition, representing the heraldic history of Marischal College. The Court enthusiastically accepted the generous gift, and ordered a formal expression of thanks to be drawn up to Dr. Mitchell.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

SPECIAL COMMISSION OF THE "BRITISH MEDICAL JOURNAL."

IX.
ABERYSTWITH.

IT was quite refreshing to turn from the dreary squalor of the infirmary of Haverfordwest to the cheerful little infirmary attached to this workhouse. The matron took us round the wards, and showed the various departments with justifiable pride.

BUILDINGS AND WARDS.

The workhouse is in the town of Aberystwith; it is a cheerful-looking place, clean and well cared for; the wards have eleven beds on the men's side and seven on the women's. The men's wards are of a good size, the eleven beds being in two rooms. The women's ward is crowded; the seven beds are in one room, while some of the necessary air space has been curtailed by the erection of a high wooden screen, so as to take off a passage.

The bedsteads are the usual width; the laths are covered with cocoanut matting, on which is the straw bed; these are filled with the long straw, and appeared to be quite comfortable. The labour ward is small; it has no offices, and all refuse must be carried outside. There is no receiving ward.

CLASSIFICATION OF PATIENTS.

There is practically no classification, as there are no separate wards for the imbeciles or idiots, and it seemed to us that there was a possibility of the imbeciles of both sexes mixing together, as the nature of the building hindered complete separation. There is no machinery for dealing with a case of insanity except by placing the patient in the fever wards. These same fever wards are utilised for lock cases, when such are under treatment, or for infectious diseases. At the time of our visit there were no patients in bed on the women's side and only two on the men's. One of these was very ill with consumption, and the other was a case of old age; there could be no doubt about the care bestowed on the sick as far as circumstances would admit.

SYSTEM OF NURSING.

The nurse, whom we saw, is not trained, but she was quite capable for the nursing in that infirmary, as she had had some previous experience, and her wards looked business-like and clean. A midwife is engaged from the town for the lying-in ward; no trained nurse is employed in the fever wards; the patients are placed under the care of an inmate.

SANITARY ARRANGEMENTS.

These are quite modern; all the closets are flushed automatically, except those on the sick landings, which are done by hand. Hot and cold water is laid on to the wards, but there are no bath rooms for the sick, though there is ample supply in the other parts of the house.

DIETS.

These are ordered by the medical officer, and are liberal. We saw milk on the bed cards, and the sick are allowed as varied a food as possible. The last meal is at 6 P.M., and the first at 8 A.M., which represents a long interval for sick people.

DAY ROOMS.

There are no day rooms for the sick, nor are the airing courts available for them; this is especially hard for the men, who must either smoke in the ward—a dangerous and unhealthy custom—or go into the able-bodied part of the house. The infirm on both sides are placed on the ground floor, and have dayrooms off their bedrooms. The garden at the back of the house is of very little use for the sick, as there is no means of keeping the sexes apart.

RECOMMENDATIONS.

The infirmary requires to be enlarged to give more space in the wards, especially for the women, and to provide wards for isolation.

Separate quarters for the imbeciles and idiots, and a safe ward for the detention of insane patients until their removal.

The provision of bathrooms attached to the wards.

A new lying-in ward, if possible further away from the living part of the house.

The employment of trained nurses for the fever cases.

The employment of a paid attendant in the sick wards during the night.

VAGRANTS AND THE SPREAD OF DISEASE.

A WELL-ATTENDED conference of representatives of local sanitary authorities took place on July 19th, at the County Hall, Spring Gardens, to discuss the means to be taken to prevent the spread of disease by vagrants. Sir JOHN HUTTON, Chairman of the London County Council, presided.

The CHAIRMAN, having welcomed the delegates, said the object of the conference was rather to lay down general principles than to discuss the particular mode in which those principles should be carried out. In view of the considerable spread of disease by vagrants there could be no doubt as to the importance of the deliberations in which they were about to engage. The London County Council had a peculiar interest in the subject, because it was soon to become the authority for dealing with the common lodging houses of the metropolis. The accommodation of the common lodging houses was supplemented by that afforded by the casual wards and the shelters, and with regard to the latter, which were of modern introduction, it was the opinion of the Council that they needed further supervision.

The following resolution, moved by Mr. BATES (Lancashire) and seconded by Mr. HINDEMARSH (Gateshead) was carried:

That common shelters which are not subject to the law relating to common lodging houses should be made subject to such law.

Dr. SEATON moved and Dr. ARMSTRONG seconded the following resolution, which was passed:

That there should be power to local authorities to require medical examination of all persons entering common lodging houses and casual wards.

On the motion of Dr. ARMSTRONG, the following addition to the resolution was agreed to:

That each inmate of a casual ward or common lodging house should on admission have a bath of fresh water.

The next resolution, which was proposed by Mr. ACWORTH, of the Metropolitan Asylums Board, seconded by Dr. SEATON, and carried, was as follows:

That the local authority should have power to order the keeper of a common lodging house, in which there has been infectious disease, to refuse fresh admissions for such time as may be required by the authority.

Dr. ARMSTRONG moved a resolution which, after being amended, was adopted in the following form:

That the local sanitary authorities should have power to require the detention of any inmate of a common lodging house or casual ward who may reasonably be suspected of being liable to convey infectious disease.

Mr. HINDEMARSH moved the following resolution, which was carried with three dissentients:

That means should be provided for the detention and isolation of any vagrant found wandering in a public place if reasonably suspected of being liable to convey infectious disease.

It was further resolved:

That the local authority should have full power to require the disinfection of the person and clothes of any person in a common lodging house or casual ward, whether infected or exposed to infection.

A resolution was carried to the effect that arrangements should be made by which the occurrence of infectious disease in common lodging houses or casual wards should be made known by the local authority of the district to the local authorities of other districts.

The last resolution, which was carried by 61 to 13, was as follows:

That local authorities should be empowered to require the vaccination or revaccination of persons in common lodging houses or casual wards who are exposed to the infection of small-pox.

The proceedings afterwards terminated with a vote of thanks to the Chairman.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

SUBSCRIPTIONS to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JULY 28TH, 1894.

THE PRESENT POSITION OF THE GRESHAM UNIVERSITY SCHEME.

THE prospects of any action being taken by the Government this session in reference to the reconstitution of the University of London on the lines proposed by the Gresham Royal Commission are still very dubious, and it is doubtful whether the results of the meeting which was held at the Royal College of Physicians on Saturday, July 14th, has been to improve them, or the reverse. One step in advance was certainly taken. The majority of the institutions which the Commissioners proposed to include in their scheme had commissioned delegates in response to Professor Ramsay's invitation, and, with two exceptions, the delegates found themselves sufficiently in accord to agree to a resolution expressing "generally" approval of the Commissioners' proposals, and urging the Government to appoint its Statutory Commission to frame statutes of foundation "in general conformity" with the recommendations of the report. But it is no secret that the apparent unanimity of the delegates covered certain differences of opinion as to several details of the scheme, which the words "generally" and "general" were designed cautiously to bridge over for the time being. There was, in the main, a distinct difference of opinion as to the part which should be played by the proposed Statutory Commission when it is appointed, some delegates holding that it should be empowered to modify details and to receive representations thereon from the various bodies concerned, others maintaining that it neither could nor should do aught but stereotype the Commissioners' report as it stands.

Probably some further effort to come to an agreement upon this point, which surely should not be insurmountable with proper tact and good feeling, will be made before the Government is actually approached by the delegates in person. But the attitude of the delegates of King's College threatens a more serious obstacle, should the Council of the College endorse the views of the Boards which the delegates represented. King's College, its members apprehend, could not, under the scheme as it now stands, participate in the full benefits of the University with proper regard to the integrity of certain trusts which it holds as a distinctively Church of England College; and while the particular provisions of the scheme which the College Boards object to are provisions to any alteration of which strong Parliamentary opposition might be anticipated, King's College, almost alone among London educational institutions, is able to count upon equally strong political support of its special interests. It is rumoured that the position of King's in the scheme is at present the subject of negotiation in high quarters, and that the unwillingness of the Home Secretary to receive a deputation from the general body of delegates at the present juncture is due to this cause.

It is not very clear to us how, in any case, the Commissioners' scheme could be carried out in its entirety, for some of the data on which it was based have, since its publication, proved to be fallacious. It was anticipated by the Commissioners that a strong faculty of law could be created by the co-operation of the legal corporations; it was part of their scheme to combine the Royal College of Music with the Royal Academy and the Guildhall School to form a worthy faculty of music; and the proportional representation of the various Faculties on the Senate and the Academic Council was fixed on the assumption that these two would be included. But the Inns of Court evince little desire to avail themselves of the Commissioners' invitation, while the Royal College and the Royal Academy of Music have flatly declined it. If no efficient Faculty of Law or Faculty of Music can be created in the University, the balance of representation on its governing bodies will obviously require some degree of resettlement, a resettlement in which, we may venture to trust, more justice will be rendered to the important position of Medicine and Surgery in the University than in the original scheme.

If the reconstitution of the University is still to be carried out by Act of Parliament, the only satisfactory solution of the situation, as it seems to us, is that which we have from the first advocated, namely, the appointment of a strong Statutory Commission with ample powers of revision. We question, however, whether an Act of Parliament is any longer a necessary or desirable means of effecting the required end. The device of an Act and a Statutory Commission was, as we understood, resorted to as the only means of carrying out a reconstitution of the University in the face of the expected opposition of Convocation. But Convocation is no longer in opposition. Its representatives have accepted and cordially approved a reconstitution in general accordance with the Commission's report. What, then, is there now to hinder the carrying through the ordinary channels of the Privy Council and a Royal Charter a scheme on the general lines of the report, elaborated by Senate and Convocation in union, and accepted in friendly conference with the other bodies and institutions concerned? Is it to be said that the educational world of London is so little of a "Republic of Letters," so incapable of self-government, that it cannot legislate for itself in such a manner without calling a dictator to its aid.

THE CHOLERA.

THE alarming increase in the number of cases of cholera in St. Petersburg draws attention to the fact that the season is approaching when cholera has in this climate often made its appearance. For several weeks past there have been reports of cholera having occurred in Russia culminating in a severe epidemic in St. Petersburg. It must not, however, be imagined that St. Petersburg stands by itself in this matter. Not only in various

parts of Russia, but in Asia Minor, in Galicia, in Berlin, at Liége, and near Stockholm cases are reported.

Perhaps the most interesting point in this recrudescence of a disease which during the past two summers has been so widespread throughout Europe has reference to the question how far and for how long cholera may become endemic in temperate climes. Are these fresh attacks due to a revival of old germs which have remained dormant ever since the former outbreak, or are they the result of fresh infections?

For the first view a great deal is to be said. It has been the case so often that an attack in the autumn has apparently died away in the winter, only to be followed by a fresh outburst in the late spring or summer of the succeeding year, that it has been rather taken for granted that when the soil or water once became infected the germ could easily live through a winter, and, under the influence of warmth and other suitable conditions, break out again into full activity, and this view receives considerable support from the full confirmation which experience has given to the observation made by Dr. Ballard in regard to the relation of earth temperature to infantile diarrhœa. At the same time, it is impossible to avoid the observation that not only is cholera, in so far, at any rate, as its virulence goes, an absolutely distinct disease, but that whereas diarrhœa is truly endemic in certain places, only requiring certain conditions to develop it, cholera just as definitely is an epidemic disease, and is always introduced from without. Nor is it very clear why, if the infection can hybernate through the seasons which are unpropitious to its growth, it should die out at all so long as the insanitary arrangements which allowed it to spread the first time remain in operation; and yet, although recently the disease has seemed to show a tendency to repeat itself year after year, there can be no doubt that in the earlier European outbreaks the natural history of the sequence was generally the same—a moderate attack in the autumn, a complete cessation during the winter, followed by a fierce epidemic the next year, and then the end.

To explain the tendency of the disease to become endemic we must look to its history in those parts of the world which are its natural home, the "endemic area" in India, the lower valley of the Ganges. Here it is always present, and we are told that there is no year and no month of any year in which cases of cholera are not reported. It is said to be "endemic," yet when we inquire we find that it is not true that cholera is continually present in any one place but rather that it is continually wandering about. It is a curious thing that notwithstanding the immense mortality from cholera in India not all nor even the majority of the deaths take place within the endemic area. Cholera wanders about India in the form of epidemics just as it does about Europe or America, with this exception that the conditions being almost always suitable for its development the chances of its introduction are equally continuous, and so it is never absent for long. Nevertheless, when introduced into a village, even within the endemic area, cholera tends to die out, and does die out: and although in a large district cholera may always be more or less present, it is not so in the individual villages, from which cholera may depart for considerable intervals even after most virulent attacks. This dying out of cholera in localities within the endemic area is a most striking fact. It points strongly to the probability that endemicity of cholera depends on a conjunction of local conditions as to temperature, moisture, etc., favourable to the temporary development of the contagium together with the habit of drinking defiled water and frequent opportunities for the reintroduction of the disease.

The evidence is very strong that at any given time all men are not susceptible to cholera. The virulence of the disease at the beginning of an epidemic and the rapid waning of its intensity, as shown by its case mortality, point strongly to the probability that in the first onset the disease kills off the mass of those who are susceptible, leaving a large proportion of those who are less open to attack and who therefore recover in greater numbers.

It is quite possible that the racial variations in susceptibility to cholera may be explicable in the same way. At any rate we have to face the fact that cholera, even in India, does tend to die out locally, and that although there it is so frequently started afresh as to appear, from statistics taken from large areas, to be constantly present, here in Europe its tendency is to die out absolutely, and was so even in times when no sanitary measures were taken to stay its course. During the past few years, however, we find a somewhat new phenomenon; we find large areas of country, especially in Russia, in which cholera is tending to recur again and again, to become endemic in fact much in the same manner as it is endemic in India, not fixed in one spot but wandering about within the district; and it is impossible to shut one's eyes to the fact that this tendency is developing coincidently with the large increase in the facilities for human locomotion which has taken place during the last quarter of a century.

If it should turn out to be true, as seems likely, that cholera in India is not due to an ineradicable germ constantly present in the soil, but to repeated sowings of that germ in fresh and suitable soil, the same would hold good for Europe; the long persistence of the disease in recent years indicating that its natural tendency to die out is being counteracted by the increased facilities for its reintroduction arising from the large areas which are now placed in communication with each other.

The march of cholera depends on a conjunction of many influences, a chain of many links, some of which are absolutely beyond control: fortunately, however, a chain is no stronger than its weakest link, and however cholera may rage, it cannot spread unless man swallows it. This protection surely is within the reach of civilisation, namely, that man shall not drink defiled water; and in truth this is enough.

THE Irish Medical Schools' and Graduates' Association will hold a general meeting on Wednesday, August 1st, at 4.30 P.M., in the meeting room of the Surgical Section of the annual meeting of the British Medical Association in University College, Bristol.

THE Honorary Secretaries of the Metropolitan Counties Branch desire to state that the draft report on the suppression of unqualified practice, which was the subject of criticism in the Parliamentary Bills Committee on July 10th, was not its final form but a copy annotated by Mr. Upton, the solicitor to the Association, and that in the report as finally adopted the word "legally" is omitted, as recommended by Mr. Upton, and a maximum as well as a minimum penalty specified.

CALF VACCINE.

Dr. T. W. Hime has been engaged to supply calf vaccine to the Egyptian army. It has been on trial for some time and notwithstanding the difficulties of distance and climate the results were so satisfactory that it has been decided to take it, using chiefly the conserve. This is the form used almost universally on the Continent and also by our army and navy. The Local Government Board still uses tubes of lymph filled direct from the calf pock, which general experience has discarded everywhere.

THE OPHTHALMOLOGICAL CONGRESS.

The eighth meeting of the International Ophthalmological Congress will take place in Edinburgh during the second week of August. The last meeting was at Heidelberg in 1888. About 300 ophthalmic surgeons from different countries, amongst whom are many Americans, are expected to attend the Congress. The President of the Congress is Dr. Argyll Robertson, the General Secretary Mr. George Berry.

THE HEALTH OF MR. GLADSTONE.

We are authorised to state that a careful examination was made of Mr. Gladstone's right eye on Thursday, July 19th, exactly eight weeks after the operation for cataract. The eye is, and has for some time been, strong and quiet. In the earlier period there was rather more than the usual ciliary redness, and for a short time at about the end of the first week some inflammation of the iris was threatened; the pupil, however, dilated promptly and widely under the influence of atropine, and no iritis occurred. Though the lens was hard and came out easily, the pupil is now sufficiently obstructed to render a needle operation necessary sooner or later, the operated eye being in its present state somewhat less useful than the other. With the other eye, which is affected by immature cataract, Mr. Gladstone can still, with the aid of a weak solution of atropine, see to write and to read good print moderately well. Mr. Gladstone is remarkably well and very vigorous, but he is troubled with an occasional slight return of his old ailment if he walks too much.

THE FIRST LADY GRADUATES OF GLASGOW UNIVERSITY.

The results of the final examinations for degrees in medicine and surgery in Glasgow University were made known at the end of last week. The candidates numbered 135, of whom 69 passed in all subjects, and 30 in all but one. Of the 30, 21 were referred for three months in surgery. There were 8 withdrawals and 28 rejections. Of the candidates 4 were ladies, of whom 2 passed in all subjects, and 2 in all but surgery. The graduation took place on July 19th, among the graduands being the two ladies mentioned. These ladies have the unique distinction of being the first lady graduates of this more than three centuries old University, and their names ought to be recorded. They are Miss Marion Gilchrist, of Bothwell, and Miss Alice L. L. Cumming, daughter of Dr. Cumming, of Blythswood Square. Both are students of Queen Margaret College, Glasgow, where each took a preliminary training in Arts before entering on her medical studies. Miss Gilchrist is an L.L.A. of St. Andrew's, and has the additional honour of graduating with high commendation. Queen Margaret College has reason to be proud of her first University candidates.

DEATH UNDER CHLOROFORM.

We have been favoured by Dr. W. S. West, House-Surgeon at the North-Eastern Hospital for Children, Hackney Road, N.E., with the following report of a case of death under chloroform which occurred recently in that institution. A well-nourished infant, aged 4 months, was brought to the hospital on July 12th for the removal of two nævi, one on the thigh, the other on the back. The nævus on the thigh was cauterised without anæsthetic, but that on the back was of considerable size and unsuitable for the cautery; accordingly chloroform was given and the nævus excised. During the operation the child had to be turned on to the right side into a partially prone position. The operation was completed and the wound just dressed—the bandage passing round the chest—when the child suddenly became very faint and cyanosed. The bandage accordingly was cut and artificial respiration, brandy and ether injections, hot and cold water applications, inversion, and other means of restoration promptly resorted to, artificial respiration being kept up for forty-five minutes. These means, however, failed to restore the child. The amount of chloroform used was about 1½ drachm over a period of nearly twenty minutes. *Post mortem:* Organs healthy; heart relaxed and its cavities empty; lungs congested; death from cardiac failure.

THE KILKENNY GUARDIANS AND THEIR MEDICAL OFFICERS.

A curious case has been under discussion by the Poor-law guardians of Kilkenny. It appears that in 1886 the medical officer of the workhouse applied for an assistant, and Dr. Walsh was appointed on the condition that Dr. Ryan should forego half his salary—that is, £25. The Local Government Board sanctioned the arrangement. Dr. Ryan has now resigned, and the contention is that Dr. Walsh's appointment also lapses. Some very stormy proceedings are reported, and it was alleged at the meeting that the attempt to displace Dr. Walsh is made in order to have another person, just qualified, elected. As the case is published we have no doubt that Dr. Walsh's removal would be most unjust, and, we think, illegal. There is no evidence that he was the personal assistant of the doctor. The Local Government Board sanctioned his appointment, and the position in which he appears to stand is that of a second medical officer, the first having required help in doing the work. When assistants are appointed in public departments they remain after the retirement of the chief. If one person is sufficient to take charge of the hospital at Kilkenny, Dr. Walsh ought to be that person, and no further election is necessary. The matter is before the Local Government Board, and its decision will soon be made known.

LUNACY IN THE METROPOLIS.

In the course of his annual address to the members of the London County Council, Sir John Hutton said that the report of the Asylums Committee was full of sad interest. The number of pauper lunatics, including lunatics in workhouses and imbecile asylums, on January 1st, 1889, stood at 16,041. These figures, on January 1st, 1894, had been increased to 18,058, or an average increase of 400 per annum. The rate of increase in the year 1893 was strikingly in excess of any previous year, and stood at no less than 807. It was probable that the opening of Claybury Asylum might have had some effect upon this registered increase by the absorption of a large number of previously unregistered lunacy cases. The extension of public accommodation to a wider class than the mere pauper lunatics had also tended in that direction. In 1892 the Royal College of Surgeons passed a regulation requiring medical students before being admitted to their final examination to produce certificates of having attended clinical demonstrations at a recognised lunatic asylum. Other licensing bodies, including the University of London, were, it is understood, about to require similar certificates. A subcommittee, consisting of medical members of the Committee, had been considering how best to utilise the asylums for clinical instruction, and much valuable and interesting information had been obtained in regard to the method of pathological research followed in the more important lunatic asylums of Europe and the United States. The new Asylum at Claybury had been selected as

the most convenient place for pathological study. The reports of the asylums generally were of an encouraging character as regards their administration and efficiency, but the dull shadow of the fearful increase of lunacy hung over the work of the Committee, and it was devoutly to be hoped that science would be enabled by research to judge more accurately of the active causes of these diseases that the necessity for erecting a new lunatic asylum every two or three years might be obviated.

DR. WILSON FOX'S PLATES OF DISEASES OF THE LUNGS.

DR. SIDNEY COUPLAND and Dr. W. R. Gowers write to say that they desire to inform managers of medical schools in England, the Colonies, and America, that there is a considerable number of the surplus sets of the coloured plates of Dr. Wilson Fox's *Atlas of Diseases of the Lungs*. They contain the most perfect representation of morbid states of the lungs ever produced. They will be of great value to medical schools if framed and placed in the museum or *post-mortem* room. It is therefore proposed to give a set to each medical school which desires it, and a certain number will be reserved until October to give Colonial medical schools an opportunity of obtaining them. Each set contains twenty-five coloured plates. A brief description can be prepared and affixed to each plate, from the text of Dr. Fox's *Atlas*. The cost of packing and transmission amounts to 1s. in the United Kingdom, and 2s. 6d. for America and the Colonies. This sum should be sent with the application to Messrs. Mintern Brothers, 84, Southampton Row, London, W.C.

NEW QUAY AS A HOLIDAY RESORT.

THOSE members who have taken part in the annual meeting of the Association at Bristol, will doubtless, many of them, continue to travel westward, and make their holiday in one or other of the many attractive resorts the West of England affords. The rapid advance in popularity which has been made by New Quay, situated midway between Bude and St. Ives, on the picturesque north coast of Cornwall, will probably tempt some of our members to visit it. Not so very long ago New Quay was an obscure fishing village, where, it is said, the inhabitants often found smuggling more profitable than fishing. The numerous and vast caverns which pierce the cliffs, and which now offer a picturesque and attractive feature to the visitors, were found of great convenience heretofore by the native bands of smugglers. New Quay has now become one of the most popular resorts on the Cornish coast. It is 96 miles from Exeter, and is now accessible by rail through a branch line on the Great Western Railway, or by coach from Delabole, near Camelford, on the South-Western line. Many, however, may prefer the fine coach drives which would convey them from the North of Devon through the fine scenery surrounding Bideford, Clovelly, Bude Boscastle, and Tintagel to New Quay. The town is built on high ground, at the head of a bay, which is protected by a remarkable headland which extends for more than half a mile into the Atlantic, and affords a splendid natural promenade between two bays. It has a very spacious hard, dry, sandy beach, not only admirable for bathers, but hard enough for lawn tennis, while golf links are adjacent. The climate is bracing, but equable, and is said to be excellently well adapted for a nerve-rest cure. Its sanitary condition is reported to be satisfactory.

INSECURITY OF TENURE OF MEDICAL OFFICERS OF HEALTH.

AMONG the difficulties with which medical officers of health have to contend there is one which must be admitted on all hands to be senseless and exasperating, namely, the want of any security of tenure of office. It has happened only too often that a fearless and conscientious discharge of his statutory duties has involved the health officer in unpopularity with his neighbours and with members of the sanitary authority whom he serves, and it is tolerably obvious that the more a local authority are inclined to procrastination and inaction the greater will be their resentment of unwelcome zeal on the part of their professional advisers. Doubtless zeal may be ill timed and tactless, but it ought not to be within the power of a temporary majority practically to dismiss a public officer without reasonable evidence of unfitness for his post. In other branches of the public medical services, and indeed among health appointments under the new London Act, provision is made against injustice of this kind, while reserving to the local authority ample safeguards in the shape of an appeal to the Local Government Board. Similar protection will, no doubt, be extended to provincial health officers by the next Public Health Act, but in the meantime the remedy lies in the hands of the medical profession. It ought to be regarded, and happily is generally so regarded, as contrary to accepted standards of ethics and propriety for any medical man to apply for or accept an appointment which another fills with credit to himself and advantage to the community. We regret to learn that a question of this kind is likely to arise in a midland borough in which the vicious custom of appointment for a short term is maintained, but we trust that we may be spared the unseemly spectacle of a member of an honourable profession grasping at the appointment worthily held for several years by the present medical officer of health.

PORT CHOLERA EXPENSES.

THE *Liverpool Daily Courier* publishes a leading article on Mr. Ernest Hart's paper on State Aid in Relation to Port Cholera Expenses, and, after calling in question the right of the British Medical Association "to dictate" on the subject, promptly proceeds to do that which in the body just named it condemns. The *Courier* seems embittered because, forsooth, Liverpool finds no place in the returns on which to a great extent the paper was based, and says that "a port return which does not include Liverpool is neither a complete nor a conclusive document." As to completeness, we of course concur; as to conclusiveness, that is matter of opinion. But the humour of this remark is only apparent when we state that Liverpool was the one and only port that refused the Association the information which they sought for the purposes of adequately discussing the subject. This reference to the omission of that great port from the tabulated returns comes, therefore, with bad grace from that city. We would only too gladly have included the facts had they been vouchsafed us. Apart from this point, the *Courier* appears to surmise that the large ports are correspondingly important in the matter of danger of cholera importation; but we much doubt if this contention can be substantiated, seeing that cholera is no respecter of locality, and is as likely to be seaborne to one of our numerous smaller, as to one of our relatively few larger, ports. Indeed, we should expect to see our small harbours suffering the brunt of the disease in its maritime aspects if our coasting traffic were to become infected, as might very well happen if cholera became prevalent either in some large Continental seaport or on our own littoral—for example, at Grimsby or Liverpool. The *Courier* denies that there has been any great outcry on the matter of State aid, but surely the demands of 1892, and those of last year, have been forgotten. And in regard of these port expenses being a matter of State concern, has it not been overlooked that we are in much greater danger this year from inland-bred cholera than from any seaborne infection? And again, given an outbreak of cholera in northern France, what would our port defence avail to keep the disease out of this country? The same is true of other Continental countries. There can be but one answer, namely, that the disease having an incubation period many times longer than the

short sea voyage between England and numerous Continental seaports, the ports on our side could do but little to ensure that the disease did not develop after passengers had been landed in this country. Our seaports deriving, as they undoubtedly do, much monetary and other advantages from their position, are undeniably the districts most interested in keeping cholera at a distance, and next to them in the matter of advantage, as a rule, comes the county in which they find place. How supremely so is this in the very case of Liverpool. Mr. Ernest Hart's proposal has for its basis local, county, and central supervision of our port sanitary line of defence, as the plan most to be commended on the grounds set forth in the paper to which the *Liverpool Daily Courier* takes objection.

THE LAW CONCERNING ANTHRAX.

At the recent quarter sessions at Gorey, co. Wexford, Dr. Kelly sued the Enniscorthy Board of Guardians for £14 14s. for work done in connection with the late outbreak of anthrax in the district. A number of hides were ordered to be destroyed by the Privy Council, and it was further necessary to destroy the furniture and clothing in a patient's house and to have the premises disinfected. These things were done under the personal direction of the plaintiff. The judge held that the destruction of the hides by direction of the Privy Council should be paid for, and he awarded £8 8s., but with regard to the destruction of clothing, that was work to be carried out by the executive sanitary officer, and not by Dr. Kelly, and, therefore, the balance of claim must be disallowed. The law appears to be clear upon this point, but it is very unsatisfactory. Let us suppose a case of a very fatal outbreak of a contagious disease, in which the timid lay sub-officers become scared, and that only the doctor will dare to take personal risk. By his action he may save the lives of hundreds of people, and, as in this case, prevent the spread of a plague amongst thousands of cattle. Is it not unjust that for all this skill and labour he cannot be rewarded? If he sits still, and adheres to the letter of his duties he fails to fulfil their spirit; if he voluntarily does a public service, and asks for payment, he is told that he has exceeded his duties. Truly the lot of the dispensary doctor in Ireland is hard in more ways than one.

BOYCOTTING THE NURSES.

The recalcitrant guardians have played their next card, and now we must expect to see a boycott of the Workhouse Infirmary Nursing Association on the part of those unions which are determined not to provide proper nursing for the poor, or are ashamed of the condition of the workhouses under their care. This seems the only explanation of the conduct of the Bedford Board of Guardians. Last October they applied for a nurse, and were supplied by the Association with one of excellent character and training. It was understood that she gave great satisfaction in her work at Bedford, and on her resignation in March of this year (to take up district nursing) the Association was asked to fill her place. A nurse was sent who had received three years' training at Chorlton Union Infirmary, and had been two years at the Ulster Hospital. She had worked for the Association for two years before going to Bedford. In May a subscription was received by the Association from the Bedford Board of Guardians with a letter from the master saying he was "directed by the Board to send the cheque in acknowledgment of the good services rendered by your Association in sending us Nurse ——, who I am glad to say is doing nicely here." From the same source a little later came the following remark: "With regard to Nurse ——, I quite endorse every word you say in her favour." It is thus evident that the Association have provided the Bedford Board of Guardians with thoroughly trained and efficient nurses and of good character, and now comes the interesting fact that the present nurse has been told that if she is appointed permanently to the infirmary she must give up all connection with the Association, and on her representing to them that she is under an agreement, and therefore cannot sever herself thus, even were she inclined to do so, she has been dismissed at a month's notice. It is very apparent that it is not the nurses who have given dissatisfaction, but that it is the Association to which the Board of Guardians object, although they were willing enough to ask its help in procuring nurses. Those who read between the lines, and compare this with the recent proceedings at Hampstead, and the revelations which were elicited at Newton Abbott mainly in consequence of the presence of a nurse accustomed to proper methods, will not fail to see the meaning of this objection to the employment of reliable nurses who have the moral support of being able to appeal to a properly organised institution, and the public will not be backward in perceiving that such a boycott of the Workhouse Infirmary Nursing Association, to whose efforts the sick poor of England owe so much, is but a confession that things are not as they should be, and that the guardians dread the light.

HEALTH ASSURANCE.

Dr. W. Fleming Phillips, of St. Austell, called the attention of our readers some weeks ago to a system devised by him, and which he has denominated "Health Assurance; the Provident Preventive System of Medical Attendance," as a substitute for the provident dispensary system. The proposal seems to have been noticed in the British Medical Journal some years since, but had passed out of our recollection, so that we were obliged to request from Dr. Phillips a reperusal of his pamphlet. We are bound to admit that the scheme is essentially a sound one, and is applicable to all classes of patients—nay, perhaps, is more applicable to the middle classes than the poor. It rests on the old adage that "prevention is better than cure," and on a perhaps exaggerated idea of the extent to which prevention of disease is possible by medical advice. For we must recollect that of the original causes of many of the most fatal diseases medical men know nothing, and that even when they do know the causes, their patients' circumstances may make them unable or their self-indulgence unwilling to follow the advice given. Still we have no doubt that if people were willing to retain the services of a regular medical adviser in advance for a fee which would include treatment in the ordinary affections (excluding accidents, surgical operations, etc.), the health of the family might be much improved, and this is the substance of Dr. Phillips's proposal. It has many advantages. It would secure the continuity of medical attendance—no small matter—would equalise and render less uncertain the income of the practitioner, and would give the doctor a direct interest in the health instead of the sickness of his patient. Dr. Phillips assures us that he has been practising health assurance almost ever since he first proposed it, and therefore is assured of its practicability, and that he believes the plan has been adopted by others. The amount of the annual fee is regulated among the well-to-do by the rent of the house occupied, the medical history of the patient, his habits, and some other particulars, and is settled for the current year by agreement between the patient and doctor; for the poor the fee is regulated by the weekly earnings and by similar considerations as the above. And in the latter class it seems to us that there is very little to choose between Dr. Phillips's scheme and the ordinary provident system. At a good provident dispensary—and of course the comparison should be made with the better class of these institutions, not the worse—the medical attendant remains the same for an indefinite period, and has the same motive for keeping his patient in good health as he has under the health assurance scheme. But the great objection to the idea of health assurance seems to us the impossibility of getting people to pay money for what they feel no need of at the moment. We quite agree with Dr. Phillips that the

general adoption of his scheme would be a good thing; but we confess that we should be surprised to hear that it has recommended itself to any great extent to our artisans and tradesmen. Some further particulars of the extent to which the scheme has been adopted, and of its working, would be interesting.

PAIN IN ANIMALS.

Professor Penberthy, at the twelfth meeting of the National Veterinary Association held this year in London, read a very thoughtful essay on Pain; its Indications and Significance in the Domesticated Animals. He first considered the true meaning of the word "pain," and the relation of painful and like stimuli to action. In man, the sense and variety of whose nervous energies are so wonderful, the stimulus of sensations of pain or apprehension has consequences out of all relation to those in lower animals. We cannot therefore measure the effects of pain in lower animals by the standard of man. Stimuli which cause intellectual agitation in man are incomparably more painful than those which in animals result simply in motion, as in the flight of a hare for example, though a superficial observer may regard the latter as more pitiable. "It is as natural for a fox to run before his enemies, and to exercise all the faculties necessary to escape, as it is for a man to go to his home and lock his door at night." Intensity or amount of pain depend, the writer adds, upon the power of realisation of ideas presentative and representative; this intensity is therefore incomparably higher in man than in animals, in whom the same material of mind does not even exist. "It would indeed prove a source of the most horrible contemplation to admit that the lower animals have the same sense of pain as highly civilised man." Professor Penberthy goes on to show that without pain to lower animals, and to men also, there could be no advance in civilisation: "the cost must be animal and human suffering." To say that a knowledge of physiology is not essential to the prevention and treatment of disease is absurd; and it is equally absurd to point to individual experiments as useless "because their value is not patent to certain men and women of limited minds and education." If it be urged that experiment on animals leads to no direct knowledge of man, Professor Penberthy well says that veterinarians, though challenging the statement of course, are not concerned to give any answer to it. The essay is a singularly thoughtful, temperate, and broad-minded contribution to a very important and trying subject, and one which is highly honourable to the veterinary profession of the day.

DISPENSARIES AS COMMERCIAL SPECULATIONS.

Our contemporary the *Sun* has drawn attention to the growing scandals of the dispensary system. It says: "The field for legitimate medical practice is daily growing less; one well-known name in London boasts of some forty establishments of this sort." Speaking of the men put into these dispensaries to conduct them, it adds: "Forced to live upon wages at which any fair artisan would grumble, and to maintain a position far beyond his means, is it any wonder, with the chance of starting on his own account removed by capitalist medical men, if sad cases will now and then occur? This farming of medical practice is unprofessional in every sense of the word and is a sham on the public generally." We cordially endorse the last paragraph; it is unprofessional in every sense of the word, and we think that the profession generally should show its disapproval of such practices. There has recently been a great outcry against medical aid societies, which has even resulted in the impeachment of these associations before the General Medical Council; but if medical men themselves think it right to speculate in this way and run a sort of commercial venture in the shape of numerous dispensaries in different parts of the town we fail to see the difference between enterprise of this kind and that of a grocer or oilman who opens shops in every district, except that the latter can honestly appeal to the public to support him and the former cannot. There is no reason why the wares sold at one shop should be inferior to those vended at another: but this cannot be said to be true in the case of the medical practitioner who puts up his name over some twenty or thirty dispensaries. Here the public do not come to buy articles which might be equally well retailed anywhere; they come for professional advice, and expect to see the man whose name appears as a guarantee over the premises. If this man is never there, and never intends to be there, what is it "but a sham on the public," even if a qualified practitioner is there in his place? If, then, medical men act in this way, and imply by their conduct that this is an allowable professional practice among themselves, is it surprising that, at the present time, when the ordinary capitalist finds it difficult to invest his money profitably, he should give medical aid societies a trial, and consider in so doing he in no way outrages medical opinion. If abuses of this kind are to be reformed at all, it must be by the profession itself; no outside force can do this, least of all the public, although they are greatly concerned in the matter. In order that the profession may be able to do this work effectively, a much closer union among the individual members is necessary, and the sooner this union takes place the better it will be for the dignity and general welfare of the whole profession. Unless some measures of this kind be shortly taken, it is difficult to conceive how the numbers that are annually added to our ranks will be able to exist in the not remote future, or to what degrading depths they may be reduced if the field of their work is to be continually eaten into by medical charities, medical aid societies, pseudo-provident associations, and the above enterprising commercial adventures of individual practitioners.

MEDICINE IN JAPAN.

In an interesting paper which recently appeared in the *Deutsche medicinische Wochenschrift*, Professor M. Ogata, of Tokio, gives an account of the introduction of European medicine into Japan. There are three kinds of medical practitioners in that country: those who practise according to the traditional teaching of Japanese medicine; those of the Chinese school; and those who have been trained in European schools. Many practitioners combine two or all of these systems. The history of Japanese medicine goes back to a date previous to historical record; as far back as 2,500 years ago there was a body physician to the Emperor. Chinese medicine was introduced about 1,500 years ago. European medicine first reached Japan 350 years ago from Portugal and Spain, having been introduced by the Jesuit "Bateren" (*Padres*). A century later the Government allowed Dutch traders and doctors access to particular ports; the doctors treated sick people with the help of a Japanese interpreter, himself always a medical man. For this reason, until a short time ago, European medicine was known in Japan as "Dutch", and it was chiefly in repute on account of the superiority of its surgical results. R. Maino, a native of Japan, 130 years ago, first translated Dutch books on medicine, astronomy, mathematics, etc. At a later period his pupils Ohzutei, Sugita, Udagawa, and others, studied medicine and published translations which greatly furthered the study of medicine in Japan. Fifty, or according to some authorities 70 years ago Von Siebold came to Nagasaki, and many Japanese practitioners went there to study under him. Thirty-six (or, according to other authorities, fifty-six) years ago, the Japanese Government invited the Dutch military surgeon, Dr. Pompfe, to Nagasaki to teach medicine. Under him studied the late Staff-Surgeon-General R. Mazumoto, S. Satoh, T. Lasaki, and others, and a hospital was opened in which many patients were treated. Thirty-two years ago Dr. Bodwin went to Nagasaki, and was the first to give systematic instruction in medicine. He taught physiology, materia medica, clinical medicine and surgery,

and ophthalmology, besides physics, chemistry, and anatomy. About thirty-four years ago Ito, Takenonzi, and Hayashina established a vaccination station in Tokio, and in connection with this institution a school of medicine, of which K. Ogata and R. Mazumoto were the directors, was established three years later. Subsequently T. Zuboi, K. Schimamura, and others taught in this school. In the year of the War of the Restoration (1868), a military hospital was founded in Yokohama; this was afterwards transferred to Tokio, and amalgamated with the medical school under the name of a university. Here the English physician, Dr. Willis, taught, and after a time Dr. Bodwin came from Nagasaki to Tokio. Twenty-one years ago the then director of the Medical Faculty of Tokio, K. Sagara, being convinced that medical science was more advanced in Germany than in any other country, induced the Government to invite teachers from that country to come to Japan. Accordingly Dr. Müller and Dr. Hofmann came to Tokio as teachers of surgery and medicine respectively. German became the official language of medical and scientific teaching in the university. Other German teachers soon followed. Seventeen years ago a *Staats-examen*, on the lines of the German one, was instituted. The course of professional study extends over eight years, and the number of students who graduate averages from 20 to 40 annually. Up to 1891, the degree of doctor of medicine had been conferred on 384 persons. The total number of medical practitioners in Japan in 1889 was 41,305, about one-fourth of whom had studied European medicine "more or less." The majority of practitioners dispense their own medicines; they charge nothing for advice but live by the sale of drugs. Those whose practice is at all extensive have several pupils, besides one or two qualified assistants. Some physicians and surgeons in large practice in cities like Tokio, Osaka, etc., have private hospitals accommodating from 40 to 100 patients.

THE SICK POOR IN PROVINCIAL WORKHOUSES: ABERYSTWITH.

This little seaside town boasts a clean, airy and comfortable workhouse, which stands in a well kept garden, giving a refined appearance to the institution. Encouraged by these outward signs our commissioner rang, and asked to see the inside of the house, and the matron courteously assented. The inside did not belie the outside, the inmates appeared to be humanely treated, their needs being thoughtfully cared for. This was especially the case in the sick department, where we found a pleasant-looking nurse, seemingly on the best of terms with her patients. The wards, properly so called are on the first floor; they are too crowded, particularly on the women's side, where a passage has been taken off by means of a low partition. There were only a few patients in when we went round, but when the seven beds are all filled the amount of air space must be below the proper quantity per patient. On the ground floor we found the infirm old people; they were sitting in their bright day rooms, which gave easy access to the airing courts; these are, however, nothing but a back yard. Is it not possible to make these airing courts more like a garden, a place of recreation where the men may sit and smoke, and the women do their knitting, with bright flowers, trees, or grass to gladden their eyes? There was the usual sprinkling of imbeciles among the inmates, and we were surprised to see how little means there appeared to be of controlling these irresponsible beings. We understood that it was mainly on their account, that the inmates generally had to be confined to the airing courts instead of being permitted to enter the gardens. One woman with a roving tendency wandered off towards the gardens while we were in the court; she was promptly brought back, but it seemed that the want of classification among the inmates of the house must hamper its efficiency. Still with these defects the house contrasted favourably with others seen, and doubtless the Board of Guardians are doing their best to provide more accommodation, and to establish a better classification. The impression left was one of satisfaction at seeing the pleasant quarters provided for the sick; but we would recommend that the partition in the women's ward be removed—it hardly seemed necessary; that bath rooms be attached to the sick department; that more efficient means be provided for controlling the imbeciles, either by placing them in separate wards, or by the employment of a paid attendant; improved airing courts for the infirm; day rooms for the infirm; employment of trained nurses for the care of fever, or lock cases.

THE SCANDALS AT NEWTON ABBOTT WORKHOUSE.

It seems extraordinary that the Local Government Board have not even yet issued any report respecting their recent inquiries into the management of Newton Abbott Workhouse. In the meantime reforms are delayed, and most things are at a standstill. The *Western Mercury* states that the master and matron (Mr. and Mrs. Cawse) are considerably overworked, and the strain is telling on their health. It seems a curious commentary on the position of affairs that of every suggestion the master has made—and they have been numerous—not one has been adopted or carried out by the Board. Whatever might be said about the master's work in the past, he has spared no effort recently, not even his health, to put things right: and it is a pity that the Board have not yet seen their way to adopt any of his recommendations and their report is so long delayed.

CHEAP TEMPERANCE DRINKS.

We have once again received a strong denunciation of temperance reformers for not having discovered a cheap, palatable, and popular teetotal beverage. The advocates of abstinence are not, however, specially blameworthy in this matter. Repeated attempts have been made, by the offer of handsome prizes by abstainers and others, to stimulate the production of such a drink, but the issue hitherto has been failure. In a well-known attempt of this kind, of the forty-seven competing beverages, it was truly said that the attractive were intoxicating, and the unintoxicating repulsive. There are several varieties of effervescent pleasant non-alcoholic drinks, such as orange and lime-fruit champagnes, but a still and pleasing liquor has not yet been forthcoming, at least such a one as would prove acceptable to the public. Whoever succeeds in producing such an article will speedily make a competency. This achievement ought not to be beyond the resources of modern manufacture. Meantime, we know no more refreshing drink, especially in hot weather, than lemon juice in iced water, but it ought to be drunk moderately. Ginger beer in penny stone bottles, or "home made" selling at a penny a bottle, is an extremely pleasant, wholesome drink, to our palate more acceptable than champagne of whatever brand. It is far more refreshing than the costly ginger ales of commerce, of which the price is at least three times as high.

INFECTIOUS DISEASE AND THE LIBERTY OF THE SUBJECT.

The conference which the London County Council convened to discuss the subject of infectious disease and vagrants, and which was held last week in the County Hall, has served a useful purpose. The observations which have been made show no sympathy with the vagrant; he may be arrested, detained, disinfected, and subjected to the requirements of possessing a ticket upon which his route is indicated, but he must not be vaccinated, except with his consent, and even his vaccination, however willing he may be, is protested against as useless and injurious, and as an infringement of the liberty of the subject. It is evidently a nice point to decide where the liberty of the subject is to begin, if this thought is to govern the treatment of the vagrant, and we are not at all prepared to say it should be lost sight of; the incarceration of persons who may possibly

develop disease must surely be looked upon with hesitation. To the well-vaccinated and revaccinated the movements of the vagrant may, as far as small-pox is concerned, be regarded as unimportant; the risk is to the badly vaccinated and to the unvaccinated. Certainly the vagrant who is protected by vaccination against small-pox may reasonably expect to be independent of the restrictions which the conference proposed to impose on him, and which well-vaccinated persons would not, so far as their personal safety is concerned, desire to impose. It is, we should think, more than likely that the House of Commons would not assent to the compulsory revaccination of the vagrant. We doubt, too, whether compulsory detention would be imposed by the Legislature upon one class unless it could be shared by all, and we do not think that the population has as yet become so unprotected against small-pox, notwithstanding the temporary falling off of vaccination, as to enable public opinion to assent to the Leicester method of detaining persons exposed to small-pox as well as those who are suffering from the disease. Probably the most useful outcome of the conference will be the requirement that common shelters, however philanthropic their object, shall be subject to the same regulation as common lodging houses. If the conference achieves this result, the time of the delegates of sanitary authorities will not have been wasted.

NILE RESERVOIRS.

WHILE we can thoroughly sympathise with Mr. Cope Whitehouse in the disappointment he must feel at the rejection of the Wadi Raiyan scheme, of which he has been such a steady advocate, and the adoption of which would have been for him a moral as well as material victory, we cannot follow the line of argument laid down in his letter published in a recent number of the BRITISH MEDICAL JOURNAL. Nothing that we have published would justify the statement as to our making grave charges against the competency of the British officials of the Ministry of Public Works. We said that the International Commission had pointed out the possibility of the formation of marshes and the outbreak of springs in the lower lands of the Fayum; and further, that the Commission "is in general unfavourable to the Wadi Raiyan project." It is left to Mr. Cope Whitehouse's imagination to twist this into a statement that the Wadi Raiyan scheme was pronounced "not feasible," while further on we are made to say, "but as soon as a Frenchman and Italian examined it they found it *impracticable*." We are not aware that either the Commission in giving its opinion, or we in reporting it, ever justified such a statement. The Commission, with certain projects before it, selected a Nubian in preference to a Wadi Raiyan reservoir, having carefully considered the relative advantages of the two from the point of utility as well as cost. Coming to the sanitary question, we cannot naturally expect too much from one who in sanitation cannot certainly be considered an expert. General and vague statements, based on no scientific facts, are hardly deserving of notice were it not that they might mislead an ignorant public. As to the pollution of the reservoir at Assuan by cholera and typhoid germs, so that it would become a centre for the distribution of these diseases in an epidemic form, we believe it is most improbable, if not impossible. The sparsely-populated country (and if the recommendations of the Egyptian Sanitary Department be carried out there will be no population on the banks of the reservoir), surrounded by desert, is by its natural position probably better protected from the outbreak of such diseases than any other part of Egypt. Cholera has never invaded Egypt from the south, and Assuan would be the last town in the country to be infected. An outbreak of cholera originating at Assuan is so improbable as not to merit consideration. All danger which can exist as to the propagation of cholera or typhoid fever by contamination of the Nile so high up exists at this present moment. A Nubian reservoir will diminish rather than increase the danger. To describe the future reservoir as a stagnant pool with only a central current is about as inaccurate as the other statements of Mr. Cope Whitehouse. A reservoir discharging 50,000,000 cubic metres a day from sluices equally distributed along the entire length of the base of the dam can hardly be pronounced a stagnant pool; the term might more fittingly be applied to the Wadi Raiyan reservoir, with its one outlet from the surface. As we have said before, we have never seen the sanitary advantages of the Wadi Raiyan scheme clearly defined, unless it be that the abuse of the Nubian reservoir constitutes, *per se*, praise of the Wadi Raiyan. Mr. Cope Whitehouse is right in defending the scheme which, if adopted, would have brought him so much distinction and possibly profit; but he should not do so at the expense of accuracy. At all events, amidst much difference of opinion, on two points the International Commision is agreed—that a Nubian reservoir is preferable to a Wadi Raiyan, and that it offers no danger from the sanitary point of view. With this Egypt is content, and so are we.

THE VENTILATION OF SEWERS.

DR. FRANCIS CLARK has recently presented a report to the urban sanitary authority of Lowestoft on the ventilation and flushing of sewers in relation to health, and we shall be much mistaken if engineering experts have not something to say concerning Dr. Clark's opinions as to the methods to be adopted. Shortly stated, Dr. Clark's proposal is to close all roadway openings to sewers and to supplant these by ventilating pipes, on the sewer side of the house drain interceptor, carried up the sides of houses. He quotes from the writings of several health officers in favour of the closure of roadway openings, and appears to lay stress on the experience of this and that town during a single year in the matter of diphtheria and its incidence upon one and another class of houses, according as they were or were not on lines of sewers ventilated in the roadways. Dr. Clark regards surface ventilators as a cause of the spread of diphtheria, and the idea conveyed by the report is that in the writer's mind the towns selected for comparison as to diphtheria rates have all things equal outside their sewerage systems. The opinions of those health officers whose judgment Dr. Clark sought on the various points respecting sewer ventilation are very diverse, and themselves indicate the want of any unanimity on the part of medical experts as to the best method of procedure to be followed. With Dr. Clark's suggestion as to the ventilation of sewers by means of pipes up the sides of houses no one could quarrel, were it not for his further proposition that these should supplant surface ventilators. Without closing the surface ventilators they may be combined with extractors of a calibre sufficient to act as upcast shafts, this question of calibre being one of the chief difficulties in the way of their general adoption. Roadway openings at short distances with efficient upcast shafts at equally short intervals, and midway between the surface openings, would probably meet the complaints of those who now object to surface ventilators. If air can be drawn through our sewers and led to join the general atmosphere at a high point away from living rooms, the problem of how to ventilate without nuisance will probably have been solved.

THE total number of students in the four universities of Holland is 2,972, of whom 19 are women.

DR. VON ROLLET, Professor of Physiology at the University of Graz, has been elected Rector of that University for the academic year 1894-95.

UNIVERSITIES OF SWITZERLAND.—The number of students in the various Universities of Switzerland during the present summer semester is officially given as follows: Basle, 155 men, 3 women; Berne, 162 men, 42 women; Geneva, 173 men, 43 women; Lausanne, 84 men, 19 women; Zurich, 235 men, 80 women, giving a grand total of 996. The number in the last winter semester was 1,009.

THE "BRITISH MEDICAL JOURNAL" AND THE BARRACK SCHOOLS.

THE BARRACK LIFE OF PAUPER CHILDREN: A PUBLIC INQUIRY OBTAINED BY ROYAL COMMISSION OR SELECT COMMITTEE OF THE HOUSE OF COMMONS.

A very large and influential deputation waited on the Right Hon. G. J. Shaw Lefevre, President of the Local Government Board, at the Local Government Board Office, on July 23rd, to lay before him the matters recently brought to notice in a series of articles in the British Medical Journal concerning the evils of the present system of massing pauper children in huge schools, and to urge upon him the desirability of appointing a Royal Commission or some other mode of public inquiry to investigate the conditions under which pauper children are educated in barrack or associated schools. The deputation included some 200 representative persons, and was one of the largest and most important ever received at the Board. Among those present were:

Right Hon. Sir John Gorst, M.P.
Sir Richard Temple, M.P.
Sir Samuel Montagu, M.P.
Sir F. S. Powell, M.P.
Mr. J. G. Talbot, M.P.
Mr. H. Lawson, M.P.
Mr. Thomas Lough, M.P.
Mr. Benjamin Cohen, M.P.
Professor Stuart, M.P., L.C.C.
Mr. G. M. Bartley, M.P.
Mr. Samuel Smith, M.P.
Dr. Farquharson, M.P.
Mr. J. M. Macdonald, M.P.
Mr. Archibald Grove, M.P.
Mr. W. S. Caine, M.P.
Mr. H. W. Paul, M.P.
Mr. Cyril Dodd, M.P.
Mr. C. Hopwood, M.P.
Mr. A. D. Provand, M.P.
Mr. R. W. Hanbury, M.P.
Sir Mark Stewart, M.P.
Mr. M. Austin, M.P.
Mr. J. B. Curwen, M.P.
Sir T. Esmond, M.P.
Mr. W. E. Tomlinson, M.P.
Mr. J. Buchanan, M.P.
Mr. E. H. Pickersgill, M.P.
Mr. Rathbone, M.P.
Sir H. Roscoe, M.P.
Mr. F. A. Channing, M.P.
Professor Jebb, M.P.
Colonel Waring, M.P.
Mr. John Burns, M.P.
Mr. James Rowlands, M.P.
Admiral Field, M.P.
The Bishop of Bedford.
Archdeacon Sinclair.
Canon Barnett.
Mr. J. P. Fletcher, L.C.C.
Hon. R. Grosvenor, L.C.C.
Mr. T. Catmur, L.C.C.
Mr. Steadman, L.C.C.
Mr. Ernest Hart, D.C.L., Chairman of the Parliamentary Bills Committee of the British Medical Association.
Dr. Wallace.
Dr. Bridgwater, J.P.
Mr. Macnamara.
Mr. E. Noble Smith.
Dr. Warner.
Dr. Dickson.
Mr. A. Maddison.
Mr. F. D. Mocatta.
Mrs. S. A. Barnett.
Miss F. Davenport Hill.
Miss Emma Cons.
Mrs. Ernest Hart.
Miss Brodie-Hall.
Mrs. Eva MacLaren.
Miss Donkin.
Mrs. A. Hicks.
Miss Townsend.
Mrs. Shaen.
Miss Spence.
Mrs. Hall.
Miss A. L. Browne.
Mrs. F. Raikes.

Sir John Gorst, M.P., said he had the honour of introducing that large and influential deputation, which the President would see represented all the political parties of the State, and was composed of people who took the greatest interest, and had a considerable amount of experience in the management of the children of the State. The object of the deputation was not to make an attack upon the management of the great district schools, but to go a great deal further, and urged that the time had now come when a public inquiry ought to be made into the whole system of the treatment of the children, and in the light of modern experience to consider not only whether the schools were ill or well managed, but whether the system of herding children together in large numbers must not necessarily produce evil results, detrimental to the State and to the children themselves. They did not wish to interfere with the inquiries being made into the management of schools and with regard to the persons responsible for the recent scandals, but they were disposed to say that those scandals were the natural result of the unnatural mode in which the children were treated. There were those present who would speak with authority and with experience, and give facts to show, however good the management, it could not secure the children in those schools against diseases; and also they would show—and perhaps that would appeal more to a statesman's point of view—that the children were disabled and made for ever dependent upon the public for support. They would also tell the hon. gentleman the reasons why the system failed to evoke in the children those self-reliant qualities which were absolutely essential for their maintaining their position in after life as worthy and honest citizens. They would also lay before him facts which would show that those spasmodic acts of cruelty brought before the public were only a small percentage of those which took place, and that as long as the herding together in those barracks continued under the control of officials, who could not have affection for the individual child, those acts of cruelty must go undiscovered; and that when a case occurred, the real duty of the public was not to inquire merely into the cruelty of the persons concerned, but into the system itself, and to see if the enlightenment of modern times could not enable them to discover a more rational and more natural system of treating those children for whom the State was responsible.

Past and Present.

Mr. Ernest Hart said: The general statement which I have to make, on behalf of this deputation, Mr. Shaw-Lefevre, will necessarily be limited, for I shall be followed by those with special knowledge of special departments of the question. I may begin with the glad admission that the graver abuses in the education of workhouse children, which were noticeable in the earlier part of my career twenty or thirty years ago, have largely disappeared, and that undoubtedly the present state of things testifies largely to greater enlightenment and the greater activity with which pauper education is administered by this Board, with the assistance of a more enlightened public opinion.

Present Abuses and Evils: If Preventable why not Prevented.

After making that glad admission, it still remains my duty to say there are serious abuses and grave defects which still remain, and which, we submit to you, require remedying and call for inquiry. First of all are the great abuses: these may be considered perhaps as temporary and preventable; if so, it must be a matter for bitter rumination for this great department and this Board that they have not been prevented in the past. As examples of what I mean, I will not refer to any past or ancient history, but only—and that briefly—to quite recent and even contemporaneous cases. I may almost pass with a few words the investigation now going on on the mismanagement and cruelties and scandals of the Brentford schools of the Hackney Union. Swift justice has already overtaken some of the principal actors in that tragedy, and inquiries which are being prosecuted on behalf of this Board will be made public in some unreadable form at some distant period.

Mr. Shaw-Lefevre: The proceedings have not lasted long.

Mr. Ernest Hart: It may be a long time before it sees the light. We may leave that to the future with something of expectation, but possibly the only result will be that some unimportant official will be severely censured or have to resign, but this state of things will go on as before. However, I will refer more briefly—and I do so unwillingly—to the scandals and inquiries at Forest Gate. I take this as a typical example of what I speak of as scandals in the barrack school system. There was a poisonous food epidemic, and a man called Elliot threw light on the cause, and pointed to the use of stale officers' food for the children's dinners. An inquiry was held at which he was the chief witness. The guardians defended the administration of the school by counsel, and left this man unaided. The result of the inquiry was that his chief allegation was proved. It was shown that on

one day 52 lbs. of meat had been charged to the guardians and not served to the children, who had instead stale meat from the officers' tables. That was proved and admitted. That was spoken of in the report of your Board as "unsatisfactory," and the official responsible for this "irregularity" remains in office with all its emoluments, whilst the man who led to the discovery of these irregularities has been turned out into the world ruined and penniless. Now, sir, that is not an encouragement to us to hope that abuses of this kind will be discovered by independent means or be prevented in the future under the present system.

PERMANENT EVILS.

I pass from these abuses to faults of a permanent character. I classify them under three heads: First, the deterioration of the constitution of the children, injury to health, and its effect on the citizenship of the children. The second indictment against this system is that it leads to moral and social injury of the children—a most mischievous result. And our third head of charge is that this system as to which we ask you to institute a public inquiry is costly, as will be proved. Now, sir, as to the moral and social side of the question, there are others here more qualified to speak. Mrs. S. A. Barnett, for many years one of the managers of Forest Gate School, and having a large acquaintance with their working, will have something to say. Mr. Crooks, who was brought up in a pauper school, and is now a London County Councillor, is well qualified to speak; and Mr. B. F. C. Costelloe, a London County Councillor well known to you, will give you some figures which will perhaps show you how it is that each child at the barrack schools may cost, as Lord Cranbrook pointed out at a Board of Guardian Conference, as much as £85; that a child brought up under the boarding-out system will cost from £12 10s. to £15; and that a child brought up in the smaller homes and reformatories will cost from £20 to £25 per annum.

THE SCHOOLS INACCESSIBLE AS PRISONS.

It is my duty specially to refer to the physical question, and before doing that I hope I may be allowed to say there is a special disadvantage under which I feel I labour. First of all, the information I put before you is mainly derived, not from my own observation within the schools, but from the dry bones of skeleton reports of official inspectors—reliable, but not full of detail, or what I may call picturesque information which is desirable. And that is so because all these schools called barracks and associated schools are in effect Bastilles in which the children are walled out from the world, and into which the public vision is not admitted. If I were to knock at the door of one of these establishments I should be refused admission, and I find that you, the master of these places, would not be allowed in. Quite lately, when it was my duty to apply for admission to the sick wards of workhouses, I and my representatives, competent and highly judicious persons, were refused admission, and when I applied to you, you said you had no authority to open the doors of one of these places. You were good enough to add in your kind and courteous letter that you regretted it, and that as far as you were concerned you had no objection to my having facilities for inquiry. I cannot be satisfied that that expressed more than your individual opinion, as the official opinion is against the admission of persons, for of that we have had abundant and repeated proofs.

THE ABOLITION OF THE MEDICAL OFFICERSHIP OF THE BOARD AND OF VISITING PHYSICIANS TO POOR-LAW ASYLUMS AND HOSPITALS.

I must remind you that, under the influence of an impulse with regard to similar scandals and inquests thirty years ago in the metropolis, it was my duty to investigate them, and in eighteen months we were able to bring about a complete reformation: we brought about the Asylums Board, with the assistance of Mr. Gathorne Hardy, who I regret is unable to attend to-day; we altered the whole system. Under the pressure which I was able to bring to bear, this Board appointed a medical officer, Dr. E. Smith. Mr. Gathorne Hardy's Bill incorporated most of my suggestions, and among others a clause was introduced which appointed medical officers — not persons who would be slaves to the guardians, but visiting physicians of the same character as those who attended the metropolitan asylums. That clause was passed under the influence of public opinion, and the first act of this Board was to quietly insert into an official Act a clause abolishing all this. And then, I am bound to say, at the death of Dr. Smith his appointment was permanently left vacant, and you have no medical officer of the Board. You have what the public think is the medical officer, but he is not present here to-day to inform you and support you. The duty of your medical officer is to advise as to the health of persons who are not paupers. He is happily employed in waiting on cholera and taking port and sanitary measures under that blessed influence, the cholera scare.

THE USES OF A "PUBLIC SCANDAL."

I have some hope that, under the influence of these renewed Poor-law scandals, we may now have once more some impulse of public opinion which may assist you to reform the present state of things. Here, Sir, let me pause to say that I feel perfectly certain, addressing you as the official head, that in what I say you will see nothing personal to yourself. I feel sure we have in this your sympathy, as we have the sympathies of other enlightened members of your staff.

MANUFACTORIES OF DISEASE.

On this physical question I need not trouble you with many details, because we have already laid before you a printed paper which shows the failure of the present system. It shows by the results of an inquiry as to ophthalmia twenty years ago, that of the pauper children in the metropolis only 20 per cent. of the whole number then had healthy eyelids, whereas there should have been 99 per cent. This still persists. I have only to remind you that this granulated ophthalmia is chiefly a pauper disease, and mainly a disease of barrack schools. When as a surgeon I was at St. Mary's Hospital, out of 100 ophthalmic patients I never saw 1 per cent. of such cases. It is created by this department, and is practically a barrack school disease. Then as to fever and diphtheria. You have lamentable figures here, and it is not necessary for me to go over them, but I would like, with your permission, to read what your able inspector Dr. Bridges says on this subject in an official report. He says: "Hanwell school is a standing monument of the incompetency of this Board in its organisation—a standing monument of its failure, as you have a permanent hospital to cure this unnecessary disease, ophthalmia." Did you ever hear of any other institution in the world which finds it necessary to have a permanent hospital for a disease which should not exist. Its very existence is a standing discredit to the system under which you have worked. The history of Hanwell School will not have been in vain if it act as a warning to the founders of similar institutions to avoid collecting children in large masses, and in dormitories so arranged that vitiated air flows from one to another, and is never completely dissipated and renewed. And finally, it must not be forgotten that as every condition which promotes the spread of ophthalmia is also favourable to the growth of the other ailments and deficiencies which abound in institutions of this kind—chilblains, ringworms, eczematous eruptions, stunted growth; and, on the moral side, apathy, stagnation, and the dull spirit of helpless routine; so is the converse true of remedial action. The substitution of individual care for mechanical manipulation of masses, the development of energy, native wit, common sense, that follows from the separation into small groups with whom the teacher or nurse comes into personal contact, as contrasted with the lifeless aggregation of molecules into a passive lump, which is hardly avoidable in very large institutions; these things have physical and moral reactions which go side by side. The diseases that haunt pauper schools are diseases of defective vitality, due partly to the apathetic stock from which the children spring, partly to the mistaken policy of handling them mechanically in large masses. Everything which promotes free circulation of atmosphere, which creates muscular and moral energy, which raises the boy or girl

from a dead fraction to a living unit, will tend to eradicate not ophthalmia only, but the other diseases of stagnation, physical and moral, to which pauper schools are prone.

Reports of a Committee of the British Medical Association.

There are one or two other documents I will ask you to let me refer to. Here is a document got out by the British Medical Association, the Charity Organisation Society, and other subscribers at a cost of about £1,000, and mainly in the interests of this Board and the pauper children. I am sorry to say that document got little attention at the hands of this Board, although it gave the analyses of 50,000 cases collected at great cost and trouble by Dr. Warner, and was brought under your notice by ourselves and Lord Egerton of Tatton. We asked Mr. Fowler if we might lay the facts before him, but he said he had no time. Then the document was referred to Dr. Bridges, who advised its being printed and published by your Board, but his minute was sat upon, and the document was not printed. Here is the report, some of the facts of which Dr. Warner will give very briefly, which shows you that there is 50 per cent. more eye disease and injured sight in your barrack schools than you have in your ordinary pauper schools. It has been republished in America at the public expense, but your Board did not think it necessary to have the slightest knowledge of it, and refused to print it or to lay it before Parliament. There is one other point, and that is the development of the children. If Mr. E. Noble Smith, who has made important inquiries in this, were present, he could give you striking details. These pauper children are liable to rickets, and the schools give a large proportion of bow-legged and ricketty children. I pass from this to answer the question, What is it we want?

Wanted: A Public Inquiry.

We ask for a public inquiry. What I have said may be alleged to be exaggerated or in some one or other detail incorrect. Let us have light. Then you may fairly ask me, From whom? First, from your own officers. Dr. Bridges can give you valuable information on this subject; and there are the guardians, especially the lady guardians, and there are associations such as the Metropolitan Association for Befriending Young Servants, the Girls' Friendly Society, and those associated with reformatories and schools. Well then, we ask, can this be got without public inquiry? If so, it would be a waste of time and money to hold one. Have the Local Government Board got the information? When Sir John Gorst asked that a return should be laid before Parliament as to the number of cases of ophthalmia and diphtheria, of imperfect development and glandular disease, the reply was that the Local Government Board did not possess the information, and could not supply the return. That is a reason for an inquiry being held. Do the guardians get the information? They have a good deal of scattered and more or less accessible information, but they have not the information required as to the necessary standards of disease from which to draw deductions. I am not one of those (and in fact the presence of many distinguished guardians with the deputation shows it) who have the slightest intention of throwing discredit on the guardians in any degree—we owe too much to them, and we are glad to welcome them—but after all, the average guardian knows little of the facts we wish to bring out. He is no scientist; he has not the elements. Before a committee of this sort, no doubt we should get from his reports the elements for furnishing these standards, and so obtain the information; but he certainly has not got that now. If the average guardian goes into the place and sees that the floors are well scrubbed and the beds turned down, and sees the regulation beeswax polish on the children's faces, and children playing noisily or stealthily silent in the school, he goes away like an honest Briton with a bosom swelling with pride. Now we should like this inquiry further to throw some light on what are the technical requirements for the office of inspector.

Who shall Inspect the Inspectors?

On what basis are inspectors appointed by this Board: what are their technical qualifications; what tests do they go through. I think you are perfectly entitled to reply that the inspectors are gentlemen distinguished by education and public spirit. Many of the reports show that. But I am much of the opinion of the old Scotch lady who asked a divine for a recommendation for a cook, and he replied that she was of high education and excellent character, and the lady replied: "Confound her learning and good qualities, can she make good collops?" We say the same of inspectors. What is the good of their highest education if they know nothing of nursing requirements or of medical standards? It does not matter to us that they may be gentlemen of education who have done political services in the past or are connected with most noble families—have they the requisite knowledge of the subject, and are they fitted for the inspections they have to make? The supposition is that they have not; otherwise it is impossible that they would have passed over the things discovered by the first person who goes into the Poor-law law infirmaries and schools, such as the reports disclose which are now in course of appearance in the British Medical Journal on provincial workhouses, infirmaries, and metropolitan barrack schools. I do not know that there should be any objection to a statement of what are the technical requirements of an inspector, and whether any care is taken to ascertain whether people who inspect these places know anything of their technical duties, and whether those who inspect barrack schools have any previous training in the subject. And now I come to the end.

Answers to Objections.

I have, finally, to answer one or two objections which may be raised to the inquiry. One is that the question is not big enough. We are told that after all it is but a small part of the Poor-law question, on which sooner or later an inquiry must come. And then we are told all these scandals will be prevented by employing more technically-fitted inspectors. But what we ask for is an inquiry at once into the specific point which is now laid before you. Let everything be granted—that the Board is willing to appoint masters to these institutions who shall not be merely policemen, and suppose that they have visiting boards, and are willing to admit that there are two sexes and have lady guardians and inspectors; admitting all as granted.

"If the Guardians were Angels and the Inspectors Archangels."

If the guardians were angels; if the inspectors were archangels, and if you had a permanent seat in the House of Commons and a life tenure of this Board, and were the leader of the angelic band for the rest of your natural life, these abuses must still continue because you are fighting against the laws of Nature. Nature requires individual care. Of course you can give figures to show that all are not failures but this is not owing to you but largely to the many charitable associations who befriend these girls. Nature cannot be expelled and a higher power corrects our follies.

The Bishop of Bedford next spoke of his connection with the guardians of Whitechapel, and said he was quite confident that the present barrack system called for inquiry. He hoped that the district schools would disappear from the land, and the boarding-out system be adopted.

Mrs. S. A. Barnett said: I venture to speak to you to-day because I have had some experience in this matter. For sixteen years I have been a manager of the Forest Gate District School. For nearly twenty years I have been a working member of the Metropolitan Association for Befriending Young Servants, the Society which was founded by Mrs. Nassau Senior, and which exists mainly to look after girls trained in the pauper schools. For nearly fifteen years I have taken girls from the schools straight into our own home, and have thus had 135 under my personal observation. I began my work as a manager, believing that the system of associated schools could be made to serve the purpose of educating and up-bringing these children in a right and suitable way: but slowly and reluctantly I have arrived at the opposite opinion. There may be defects in boards of management or superior officers, but when both are enlightened and benevolent, the *system* of educating large numbers of children together makes their efforts inef-

fective. The requirements of administration oblige them to keep to rule. They cannot give rein to their affections or time and tenderness to small mites who need special care. As one of the school officials said to me: "I often have to tell a child that she is shamming when I would like to cosset her a bit; but what should we come to if we petted up every child when there are so many?" The requirements of administration also compel the large majority of those engaged in the up-bringing of these children to be unmarried. The schools, which are the only home of hundreds of children, are to the officers and servants merely their workshop. Themselves homeless, they cannot (even should they wish to do so) share with their charges their fireside pleasures or their family interests. My own experience, as well as that of a number of other ladies, enables me to say that many of the girls brought up in these barrack schools have faults peculiarly their own. They are: 1. Self-indifferent—indifferent to vice as well as to virtue, to vanity as well as to affection, to scolding as well as to ambition. 2. They are of a temper that combines sulkiness and rage, spite and stubbornness, and it is this "pauper temper" which frequently causes them to lose their situations. 3. They are ignorant of the commonest dangers of the world, frequently as powerless to keep themselves clean as to avoid temptation, and were it not for the devotion of the 1,050 ladies who, as members of the M.A.B.Y.S., unflaggingly watch, guide, and protect these girls, the results, I fear, would not be far other than they were when Mrs. Nassau Senior's inquiries elicited the fact that 53 per cent. of girls brought up in pauper schools had to be classed as "unsatisfactory and bad." 4. They know nothing of domestic affairs. The mistakes they make would be comic if their consequences were not apt to be tragic. They have been trained too much by machinery, too little by "mothering"—turned out according to pattern, they miss the individuality which might make life a pleasure to themselves and a help to other. I promised you, sir, to be brief, so I will say no more; only allow me, on behalf of the many girls who are under State care, to join my voice to those who ask for an inquiry that will lead to reform. I know that boarding out can only provide for a small proportion of rate-supported children, but an inquiry may bring to light, not only the evils under which the children now suffer, but also other methods by which they can be wisely educated—methods which will allow the more permanent children to be divided from the "ins and outs," namely, the children of the degraded from those of the decent widow; methods which will permit each child to be brought up as an individual with its own character and tastes, an individual who needs to be loved as well as to be drilled, to be developed as well as to be disciplined. Sir, I thank you for having listened to me.

Mr. W. CROOKS, L.C.C., who said he was dependent more or less for support by the guardians till he went to work at 11 years of age, spoke very strongly against the whole Poor-law system, and said that at Bromley sick asylum a number of children were down with measles, and the nurses attended those children, and also some suffering from some other complaint. If they were to complain to the Local Government Board asking for more nurses, the stereotyped reply would be, "The number of nurses appear to compare favourably with those of other institutions." In the name of common humanity he asked for an inquiry.

Dr. WARNER said: The few remarks I have to make are based upon the investigation made between 1889 and 1891 of 50,000 children seen individually in various schools, and I have had the opportunity since of seeing another 50,000. Of these 50,000 children 10,000 were seen in Poor-law associated schools around London, and they include most of the schools of that nature. There were a few who would not give us facilities, but in most we were well received, and obtained all we asked for. The first point I wish to put forward is the great difference between these children and those in elementary schools. Of the children in the associated schools 14 per cent. present deficiencies in make of body, as against 10 per cent. in elementary day schools. Then, taking the teachers' reports as a basis of information as to their mental ability, one finds of these Poor-law children that 8 per cent. are reported as dull, as against 6½ per cent. in the elementary day schools. Then, again, as to eye defects, one finds, on taking all the eye cases, 3½ per cent. of the children in the associated school had either disease or some defect of the eyes as against 2.8 per cent. in day schools, and let me say here that I declined to take any note whatever of ophthalmia. When I saw that I simply passed it over, as being a matter for the regular medical officers. I cannot give any records of ophthalmia in these schools. These figures prove then, that these children have a lower physical and mental status. Now as to the effects of massing in associated schools. The figures here are very marked indeed, and generally speaking the effect is to make the children fatter, and to render them more dull, and the large percentage of them present disordered brain conditions. The effect of placing them in these barrack schools as compared with day schools show that 12 per cent. more of the boys and 5 per cent. more of the girls present nerve disorders—the proportion of those mentally dull rises 2 per cent. for the boys and 4 per cent. for the girls. Then again there is what attracted the attention of the committee some years past, namely, the children who are definitely defective in their make. Now it appears that children of that kind of obvious physical and mental defect who require careful treatment are about 21 per thousand. They are more frequent than in the public day schools, where the proportion appears to be about 16 per thousand. The proportion falls much heavier on the children collected in the district schools. And then, above all that, I think it has not been referred to the evidence given to the Royal Commission of the Blind and Dumb, which officially recognised that there was a class of children who mentally presented a defect, and the recommendation said "that feeble-minded children should be separated from ordinary scholars in public elementary schools, in order that they may receive special instruction; and that the attention of school authorities should be particularly directed towards this object." The proportion of children who seem to require exceptional treatment seem to be about 21 per 1,000.

Mr. B. F. C. COSTELLOE, L.C.C., next addressed himself to the financial side of the question, and pointed out that the children of the West London School District cost £32 2s. 2d. per head; at Forest Gate, £25 12s. 2d.; and at the Central London Schools, £36 8s.; and at the North Surrey Schools, £30 8s. 8d. He might also say that since 1849 the capital expenditure on the Central London Schools had been £191,000. On the other hand he pointed out that the children in the existing cottage homes cost about £25 per head, and on the boarding-out system they cost about £13 per head, so that as much again might be spent on more efficient inspectorship without loss to the ratepayers. The reason why the cost in the barrack schools of producing these notoriously poor results was so absurdly high could not be fully ascertained from any existing reports. In fact there was much need for a commission from the ratepayers' point of view on the question of cost alone. But the accounts of the Central London District indicated something of the situation because it appeared by one of their summaries for 1893 that out of a total expenditure for all purposes of £37,000 there was no less than £13,700 for officers' salaries, rations, and superannuation. The charges on capital account for principal and interest were £10,000, and, in fact, less than £10,000 was all that appeared under the head of "children's maintenance and burial." Everyone who was acquainted with public feeling in London was aware that there was a storm of indignation rising on this question which concerned 10,000 London children, and from every point of view a Royal Commission was necessary.

Mr. SHAW-LEFEVRE, in reply, said: I need hardly say I have listened with the greatest interest to the statements which have been made to me by the various speakers of this important deputation. Sir John Gorst introduced the deputation with a speech of great moderation, in which he said he did not desire to take into consideration recent circumstances. He said he desired to raise the question of the system under which the children were cared for in the workhouse schools. He said many things had occurred showing the unnatural result of that system, and that what he desired to complain of was the system of herding the children together in large masses. Mr. Ernest Hart, who followed, went somewhat beyond the brief

of Sir John Gorst, and entered into very controversial matter, affecting the conduct of my predecessor and myself and various officers of this department. He complained of my predecessor not having published a report of Dr. Warner, and I believe the reason of this was that it is very unusual to publish as a parliamentary paper the private report of an individual. Mr. Ernest Hart complained of myself also for not having given an order to his commissioner reporting for him on the various workhouses of the country. I was compelled to refuse to give an order because, under the existing state of the law, I am unable to make an order to that effect. I stated in my letter that I noticed that his Commissioners had been able to obtain access to workhouses, and that, as far as I was concerned, I was glad they went there. Beyond that I cannot go. I do not think I need detain the deputation by entering into controversial matters brought before me by Mr. Hart. After all, what you are really here for is to ask me to direct an inquiry into the system. I need hardly say that in a question of this immense size, affecting the pauper children which are to be found not only in London but all over the country—one which for many years occupied the attention of the Legislature and this department—what we all desire is that these children shall be brought up in a manner free from the workhouse taint and in such a manner as to have the best chance of becoming good citizens. You all admit the question is one of considerable difficulty. It has made considerable advance of late years, and I am glad to hear my friend Mr. Ernest Hart admit that however defective the great schools may be yet they have improved greatly in the last twenty years, and many of the graver omissions and defects which existed have disappeared. Well, that is satisfactory, and I think is an indication that with further expression of public opinion on the subject, and further efforts, we may yet hope to make great improvements in the future. We rather anticipated the deputation here to-day to dwell merely on London schools. Mr. Ernest Hart has informed me it desires an inquiry not only into London, but into the education of pauper children throughout the country; and I may really interpret your views to be that while desiring a wider scope for an inquiry into the children in these large schools, they are mainly to be found in the neighbourhood of London. There are few of these large schools elsewhere. I need not remind you that these great schools in the neighbourhood of London were erected under the influence of public opinion, and with the authority and approval of the Government of the day. They have greatly increased in number and size. At the same time I think, as time has gone on, there has been a change in public opinion, and whereas it was at one time in the direction of large schools, it has of late changed round, and found many objections to them. I believe it will generally be admitted that these schools have healthy situations, and are surrounded by a considerable amount of other land used for the purposes of recreation, and I think I am justified in saying that, as a general rule, the children, apart from individual incidents, are well fed there. I believe that undoubtedly is the case, and certainly great attention has been given of late years to medical inspection. At the same time, it must be admitted that the bringing together of large numbers of children in this way is not on the whole likely to be conducive to a healthy condition, and it has undoubtedly been the policy of this Board of late years to oppose the system of very large schools. Wherever we have been able to do so, we have refused assent to the erection of such large schools and the extension of medium-sized schools into larger ones. There have been alternative methods of dealing with these children as suggested, and the Bishop of Bedford to-day has expressed his confident hope that greater extension might be given to the boarding out system, and Mrs. Barnett has also spoken in the same way, though she has told us that it is, in her opinion, not available for large numbers of the children. The Board is most favourable to the boarding-out system, and does all it can to further that object. It has made regulations under which boards of guardians may take steps in that direction, and it has certified to a large number of districts where there are established branches of the boarding-out system. But anyone looking into the matter must see that this is not a complete remedy. In the first place, it is only applicable to orphans and those children who have been deserted by their parents. It is not applicable to the children whose parents are in the workhouse, whose children must be within reach of their parents. Well, now, a large proportion of the children in the workhouse, I am sorry to say, come within that category. Then, again, the changes in the workhouses with regard to the children are very considerable. Of the 12,000 children in the workhouses the admissions are yearly upwards of 7,000, showing a large number of children are continually taken out, and it is obvious these children cannot be treated so. It is absolutely essential, therefore, that there must be some method of providing for the majority of the children in workhouse schools, and the question is what kind of schools and how best to provide for them? The Local Government Board is opposed to the extension of very large schools. The second question is whether we shall have medium-size schools of from 300 to 400 children, or the cottage home schools, where the children are provided for in numbers of 25 to 30. That is a system which has been adopted by the parish of Shoreditch with admirable results, and this Board desires to see that system extended. Now I am sorry to see that with reference to the condition of pauperism in London there has been of late a considerable influx of children into workhouse schools, and that influx has been attended with the extension of ophthalmia, a complaint which specially applies to schools of this kind, and which becomes more and more prevalent as the schools become more crowded. I am sorry to say there are indications in the schools around London, in consequence of the great influx of the children and of the overcrowding of some of the schools, that the complaint is increasing, and it will be necessary for the Local Government Board to consider, in concert with the authorities of London, how the matter can be met. It will be necessary to provide in all probability greater hospital accommodation in London in these schools. It appears to me this necessity affords the opportunity of considering the whole position—that of having some form of inquiry as to the best mode of effecting this extension. We may possibly extend further the system of boarding out or some other method, or decide which is the best form of schools—whether the medium form or the cottage system. Under all these circumstances I have come to the conclusion that it will be desirable at this present time to hold some form of inquiry. What that will be I have not yet discussed with my colleagues—whether it should be in the direction of a Royal Commission, or in the direction of a Committee of the House of Commons. For myself, I am inclined to think a Committee of the House of Commons, for many reasons, would be a proper form of inquiry; but I have not come to a conclusion on that matter. All I can say is, I have heard with great interest the statements made to me to-day, and I will carefully consider the whole subject, and consult my colleagues at an early date as to what form of inquiry would be best suited, and I hope before coming to a conclusion to consult Sir John Gorst and other persons in order that the inquiry will be such as to give general satisfaction.

Sir John Gorst thanked the hon. gentleman, and the deputation withdrew.

A French Congress of Internal Medicine.—As alone among all the special departments of the healing art internal medicine has hitherto been without a congress devoted especially to it in France, a movement has recently been set on foot to remedy this omission. The initiative in the movement has been taken by members of the medical faculty of Lyons, who propose that the first meeting of the French Congress of Internal Medicine should take place at Lyons on the occasion of the International Exhibition to be held in that city this year. An Organising Committee has been formed, which includes the names of Professor Gailleton, Mayor of Lyons, as President; Drs. Mayet and Soulier as Vice-Presidents, Dr. Bard as General Secretary, and Dr. Lannois as Treasurer. The date chosen for the meeting of the Congress is October 25th. Medical men of any nationality may take part in the proceedings on payment of a subscription of 20 francs, but all communications must be in the French language.

CHELSEA HOSPITAL FOR WOMEN.

Resignation of the Medical Staff.

Lord Cadogan presided on July 24th at a meeting of the governors of this hospital, specially convened to consider the report of the Committee of Inquiry resulting from the charges of Dr. L. C. Parkes (M.O.H. for Chelsea).

The Chairman stated that the recommendations made by the Committee appeared to be that there should be more cubic space allotted per bed, in order to satisfy the hygienic requirements of sick persons; that the Committee of Management should meet more frequently than monthly: that the House Committee ought to be better attended; that there should be an independent *post-mortem* examination in every case unless the deceased's friends offered objection; that there should be some competent person to report, direct, and advise upon internal management; and that there should be an independent registrar to keep a clinical record of every case admitted to the hospital. The Board had received letters from the members of the medical staff who had tendered their resignation, but who had kindly expressed their willingness to continue the work of the hospital until the Board had appointed their successors. The report of the Committee of Inquiry had already been considered by the Board of Management, who had unanimously resolved to carry out the recommendations therein contained; and he (the Chairman) felt that it was the duty of the governors to accept the recommendations in that report. With reference to the Committee's statement, "that, owing to want of system, there has not been proper control of the medical staff by the managers of the hospital," he said that no board of management containing among its members a proportion of the medical staff could do otherwise than take advice on medical and surgical subjects from the medical and surgical members of the Board. Whilst it was highly desirable that the medical staff should never form a majority of the Board, he could not quite see how the lay members of the board of management of any hospital could so control the medical staff as suggested, and ascertain for themselves on all occasions whether the medical and surgical—the professional—work of the hospital was being carried out as it should be. In conclusion, he said that there had been no attempt whatever at concealment, and, in fact, the Board was of his opinion, that nothing could be more fatal to the credit of any institution than secrecy. If the hospital was to be carried on at all it must be up and doing, and the Board were quite agreed as to the desirability of reorganisation, and so amending its methods as to secure public confidence, and enable the institution in the future to be as beneficial, or more so, to the class it was intended to help as it had been in the past.

Mr. B. B. Chapman thought the medical staff had not been treated with the consideration which they deserved, bearing in mind what they had done for the hospital and its patients. He also urged that the unfavourable statistics as to mortality applied to only one year, and that a year in which the hospital was in a bad sanitary condition.

Dr. W. H. Fenton remarked that without impugning the impartiality of the Committee he must point out that the medical staff had not the representation upon it as originally suggested by Lord Cadogan and accepted by the governors, of one or more of their consulting staff. They were therefore in the position throughout this inquiry of defendants without counsel. They accepted *in toto* the recommendations of the Committee, and in order to give the governing body a perfectly free hand to carry out those recommendations had resigned in a body. In a letter by Dr. Parkes to the Committee he said: "The use of the expression 'justifiability' as applied to these operations was therefore only intended to appertain to the special and temporary circumstances of the hospital in the year 1893, and was not all introduced in order to raise the question of the general propriety or fitness of any class of surgical operations in general." Upon this the Committee commented: "It will be at once observed what an important limitation this explanation has placed upon the meaning attached to the report. Most undoubtedly, as we have said, the paragraph was understood to have a much wider application." Dr. Fenton said that it was not yet recognised that this statement as to the justifiability of these operations *per se* had been retracted by Dr. Parkes and this retractation had been accepted by the Committee. In this connection he must emphasise the fact that not a single operation had been performed in 1893 in the hospital that was not the common practice of the leading metropolitan hospitals doing similar work. As regarded the general mortality for 1893, it was lower than that of the special departments given up to similar work in at least three of the leading general hospitals in London, in spite of the fact that the Chelsea Hospital was labouring under the disadvantage of admitted sanitary defects. The existence of these defects did not become patent till the end of the year, inasmuch as the twenty cases of septicæmia after operation occurred in the practice of eight operators, and were scattered over a period of thirteen months. This insanitary condition of the hospital had necessarily affected the mortality of the operations under the thirteen heads into which they were divided in this report. In reference to the first, ovariotomy, he said that the small number of cases operated upon by each physician in one year could not be accepted as a basis upon which statistics of mortality might be computed. For instance, in 1893, the death-rate after ovariotomy in the special departments in six of the leading metropolitan hospitals varied as from 4.3 to 22.2 per cent, whereas Chelsea Hospital did not attain this maximum in spite of the then sanitary defects. This variation of per cent. results showed the fallacy of the reasoning. Similar variations could be shown to have existed in the returns from other hospitals with regard to the remaining groups. In justice to the staff he must explain with regard to the so-called "exploratory operations," that not a single one was performed merely with a view to diagnosis. They were done with an honest belief that some morbid condition was present which threatened life, and in the majority of them some fatal disease existed which was beyond the power of surgical skill to remove. Before performing any serious operation the risks were invariably explained to the patients and their full consent obtained. And it must be borne in mind amongst the class that sought relief at this hospital many poor creatures were wholly disabled from earning their living, and had but the choice of undergoing an operation or spending their remaining days in a workhouse. He would ask what possible motive could be attributed to any member of the medical staff of that hospital in performing operations other than a genuine and humane desire to relieve human suffering.

After further discussion, the following resolution, proposed by Mr. E. Oppenheim, and seconded by Colonel Shipway, was unanimously carried:

> That this meeting of the governors of the Chelsea Hospital for Women hereby endorses the proposed action of the Board of Management with reference to the report of the Committee of Inquiry.

Major Probyn then stated that immediately after this meeting the Board intended to sit with the view of reconstituting the hospital.

A vote of thanks was then accorded the Chairman.

LUNACY IN ENGLAND AND WALES.

The Commissioners of Lunacy, in their forty-eighth report, state that on January 1st last there were 92,067 lunatics, idiots, and persons of unsound mind recorded in the various returns obtained by them in England and Wales. This number is 2,245 in excess of the corresponding number on January 1st, 1893, and shows the largest annual increase in the number of officially-known lunatics yet recorded. A summary of insane patients shows an increase of 101 in the private class, 2,132 in the pauper class, and 2 in the criminal class. The figures of 1893 revealed a total increase of 1,974, while the average increase for the ten years 1882-92 was only 1,306. The increase seemed to have been fairly general throughout England and Wales, 42 counties showing an increase, as against an average of 30 counties in the preceding ten years. But the predominant feature of the figures was the great increase shown for the county of London, its pauper lunatics numbering on January 1st last 806 more than they did a year before, while the average increase for the ten years from 1883 to 1893 was only 308. The additions were to the asylum population, 826 having been added thereto, while the number in workhouses and in the metropolitan district asylums, as also the number of outdoor pauper lunatics, showed a diminution. The increase was undoubtedly serious, and must press gravely on the authority charged with the duty of providing for the insane poor of the county; but a little consideration might lead to the conclusion that it was, to some extent at least, abnormal. The county had for some years past been behindhand in providing asylum accommodation, and it might fairly be assumed that the difficulties experienced by relieving officers in finding vacancies must, with other causes, have conduced to the retention in their homes of many insane persons who would otherwise have

been placed in an asylum. There was reason to think that between 1889 and 1892 many insane poor (not "paupers" until in receipt of relief by removal to an asylum) were treated in their own homes, but subsequently on a large provision of beds becoming available, such cases were poured into the asylum wards, and so swelled the list of officially known and enumerated insane. There was also reason to think that unwise advantage was taken of the additional room to fill with old and mentally worn-out persons places which had better have been reserved for cases of a curable character. Thus, 442 persons 60 years of age and over were sent to London County asylums during 1893. For the administrative county of Middlesex—a county which was fast becoming metropolitan—there was last year an excessive increase, namely, 103, as compared with 42 for the previous ten years. In considering the increase for the past year of known pauper lunatics in the whole of England and Wales, regard must be had to two factors, the death-rate and the recovery-rate, in county and borough asylums especially. In 1893 the former rate was 10.1, the same as in the previous year, and 0.1 per cent. lower than the average of the five previous years; while the recovery-rate was 37.3 per cent. of the number of admissions, or 1.7 per cent. lower than the corresponding rate for the five years 1888-92. Had the recovery-rate been the same in 1893 as in 1892, 280 more patients would have been discharged, while, had it been equal to the average of the five years mentioned, the number discharged would have been 304 greater. It was, however, right to state that the recovery-rate of pauper patients in licensed houses in 1893 was considerably higher than the average corresponding rate in the five previous years. One of the tables accompanying the report showed that agricultural labourers furnished a larger yearly average number of lunatics than any other class of the population. When the census of 1891 was taken there were in England and Wales 733,433 agricultural labourers and farm servants, and the yearly average number of lunatics of that class admitted to asylums in the five years 1888-92 inclusive was 584, representing a ratio per thousand of 7.8 males and 14.1 females.

"THE COMPTROLLER OF PRIVATE BUSINESS IN THE HOUSE OF COMMONS."

WE cannot resist the pleasure of presenting to our readers an excellent little sketch of Dr. Farquharson, our senior medical member in the House of Commons, which we find in a recent number of the *Pall Mall Gazette*. Dr. Farquharson has for many years rendered the most valuable services to the community and to the medical profession by the able, impartial, and judicious treatment of questions affecting the public services, naval and military, as well as the sanitary organisation and the duties and public relations of the medical officers of health, Poor-law medical officers, and certifying surgeons. As one



of the oldest and most attached members of the British Medical Association, as a former member of the Reference Committee of the BRITISH MEDICAL JOURNAL, and as one who is always willing to consider claims and to assist to redress the grievances of members of the civil and military services of the country, and from whom we have always received courteous and unfailing attention to any communications on this subject which it has been our duty to make to him, we feel it a particular pleasure to notice the high position and general regard which Dr. Farquharson's modest and assiduous and valuable parliamentary services have secured for him in the House of Commons, and we are glad to note this well-deserved tribute to his popularity and his authority in the House of Commons.

"Just at present," says the *Pall Mall Gazette*, "he is the wise member who picks out the few moments of psychological interest in the sitting, and then bolts. In this sense a vast majority of the House are wise. They come down, wait through private business and questions, then they either go away altogether or loll in the sunshine of open windows, or lounge in the open air of the Terrace till they happen to be wanted. Nothing but conscientiousness, and the Whips, could make them turn up at all. Public business is a blank, private business is boring to all but interested parties, and questions are a lottery. Perhaps the middle term is really the most interesting, for there is a summer heat about members who are directors of companies that comes out over private business and leaves them altogether afterwards. While Dr. Farquharson sat on the Treasury bench, where he is allowed to take a place as understood comptroller of private business, there was a merry time while they tried to set the Thames afire about the Conservancy Bill."

THE CHOLERA.

The Outbreak in Russia.—Great Severity of the Present Epidemic in St. Petersburg.—Cholera and Sunday Drinking.—Hospital Accommodation in St. Petersburg.—The Epidemic in Cronstadt.—Cases on an English Ship.

OUR Special Correspondent at St. Petersburg writes:

In this, the third year of its prevalence in St. Petersburg, cholera has attained a severity very much greater than it did either last year or the year before, I append the numbers of cases and deaths that have been recorded in the last fortnight. The figures apply to periods of twenty-four hours, ending at noon on the dates named.

Date (O.S.)	Fresh Cases.	Deaths.	Remain under Treatment.
June 25th	39	13	87
,, 26th	66	17	109
,, 27th	89	29	141
,, 28th	77	30	224
,, 29th	111	39	287
,, 30th	143	54	382
July 1st	171	59	494
,, 2nd	218	69	570
,, 3rd	158	69	665
,, 4th	196	79	743
,, 5th	208	92	787
,, 6th	197	95	836
,, 7th	198	121	842

The total number of cases of cholera, since its reappearance on June 19th, has been 1,973, and of deaths 770. The largest number of fresh cases on any one day has so far been 218 on July 2nd. In 1892 the largest number on any one day was 156, on August 16-17th; in 1893 only 63, on September 6-7th.

The present outbreak otherwise presents broadly the same features as its predecessors; and the same measures, with certain additions, are being put in force to deal with the epidemic. The most drastic step yet taken has been the order of the prefect of the city that all houses for the sale of intoxicants are, until further notice, to remain closed on Sundays and holidays. This step has been taken in consequence of the numberless cases of cholera occurring in drunken men, and of the invariable increase both of drunkenness and cholera upon and just after Sundays and holidays. The order further forbids the keepers of all houses for the sale of liquor to allow drunkenness therein. The day after the order was issued, one *traktir*, or bar, had its doors closed "for ever" by the police for breaking this part of the order.

The hospital accommodation for the still increasing number of cholera patients has not as yet been overtaxed. There are 1,000 beds available, but it will be seen that this total is already being rapidly approached. Some unused barracks and an empty prison have been converted into hospitals, and, if necessary, other buildings can be employed. The city has again been divided into thirty-eight parts, each having a staff of medical and sanitary officials. The Sanitary Commission and city authorities have voted 50,900 roubles (about £5,400) for expenses incurred during the next three months in connection with the epidemic.

In Cronstadt cholera has also spread considerably. There are at present under treatment in the large naval and military hospital between 50 and 60 cases, and there are admitted daily from 6 to 12 fresh cases. The large majority of the patients are dock labourers. Most of them ascribe their illness to the drinking of raw water direct from the mole. Only one English ship has so far become infected. Eight men from the s.s. *Acme* of London have been admitted to the English hospital at Cronstadt. Of these, 3 were suffering from cholera, as proved bacteriologically; 1 was suffering from symptoms resembling cholera, but comma bacilli could not be detected in the stools; and 4 were suffering from diarrhœa not choleraic in character. One of the cases died on June 30th (July 12th), ten hours after admission; the other two are convalescent; the remaining patients with diarrhœa have, with one exception, rejoined their ship. There are good grounds for believing that the source of infection in this outbreak was the water of the Gulf, with which the *Acme* had filled one of her tanks immediately after her arrival off Cronstadt.

The wife of a Berlin tradesman, who arrived at Berlin from St. Petersburg on July 18th was taken to the Moabit Hospital suffering from cholera.

A Reuter's telegram from Brussels, dated July 19th, states that cholera continues to prevail in several communes, especially at Jemeppe, where 14 cases have occurred during the current month. Two cases have occurred at Cheratte.

Two hundred and eight fresh cases and 82 deaths were registered in St. Petersburg on July 17th, and 19 cases and 11 deaths in the various infected districts of Galicia. The official statistics show that since April 7th 323 cases of cholera and 150 deaths have occurred throughout Galicia, and 19 cases and 7 deaths in the Bukowina. According to an official bulletin published on July 24th, 1,292 cases and 584 deaths have occurred in St. Petersburg since July 15th; at Cronstadt between the 14th and 19th July there were 58 cases and 18 deaths; and at Warsaw between the 8th and 14th July, 63 cases and 25 deaths.

The raftsmen coming down the Vistula from Russian Poland are a constant source of danger to Germany, and the cholera staff at Schillno, one of the supervision stations, have so much to do that a fourth doctor and a second hospital assistant has been applied for.

A bargeman, whose vessel lay in the Spree at Charlottenburg, just below Berlin, has died of cholera. The necessary precautions to prevent the spread of the disease was promptly taken by the authorities.

A NEW DEPARTURE: DAMAGES AGAINST A SANITARY AUTHORITY.

WE hail with great satisfaction, as of vast importance to public health, the decision in the case of Waugh *v.* the Corporation of Tynemouth, tried at the current assizes of the North-Eastern Circuit. It will bring home to many sanitary authorities a truer sense of their responsibility in the matter of drainage than they have hitherto had. The negligence complained of in this case was the non-connection of a house drain with a new sewer, whereby the drain became blocked, producing an accumulation of sewage under the house, which in its turn caused the illness and death of the occupier. No doubt it is not always possible, under such circumstances, to prove a definite connection between the defect in drainage and the resulting death, but where this can be done it is clear that the sanitary authority can be made responsible. In this case the jury awarded £900 damages against the corporation, as the urban sanitary authority, for negligence in the exercise of their duty. We believe that the non-connection of old drains, the ramifications of which are not at the moment always easy to trace, is by no means an uncommon occurrence when new sewers are being laid, especially when the work is being done by contract under inefficient supervision; and it is an evil which, in a porous soil, may not demonstrate its existence for a considerable time. It is satisfactory, then, to note that, whatever may happen to the contractor, the sanitary authority are liable to heavy damages for such neglect of duty.

Sir John Simon and Mr. Ernest Hart have more than once forcibly urged that water authorities and companies ought not, without suffering in their pockets, to be allowed to supply or distribute polluted and death-dealing drinking water. Perhaps now this precedent may be made to apply. At any rate, this decision affords some hope that perpetrators of sanitary neglects and crimes of this kind may henceforth be touched in that highly sensitive part of the corporate conscience which lies in the breeches pocket.

THE APPEAL OF THE CIVIL RIGHTS DEFENCE COMMITTEE.

ANDERSON FUND.

WE have on several occasions stated the circumstances under which this appeal is made, most recently in the BRITISH MEDICAL JOURNAL of June 30th, p. 1423. A decision by a court of law to the effect that a medical man cannot bargain as to the rate of remuneration for his services, and cannot legally withdraw from the charge of a case which he has once undertaken, might form a very dangerous precedent. The matter cannot be left in its present unsatisfactory condition, and it is every way desirable that it should be set at rest by an appeal to the Privy Council. The "Anderson Fund" is being raised in order to defray the necessary legal expenses. The following subscriptions have been received or promised by the Civil Rights Defence Committee, of which Lord Stamford is chairman:—

	£	s.	d.
The Right Hon. the Earl of Stamford ...	1	1	0
The Right Rev. Bishop Mitchinson	1	1	0
Sir Joseph Lister, Bart., F.R.S. ...	1	1	0
Sir George Johnson, F.R.S.	1	1	0
Dr. Alderson, London ...	1	1	0
Dr. Anderson, C.I.E., London	1	1	0
Mr. Anderson, London ...	1	1	0
Dr. Anningson, Cambridge	1	1	0
Mr. Balding, Royston ...	1	1	0
Professor Barnes, London..	1	1	0
Mr. Barling, Birmingham...	1	1	0
Dr. Barlow, London ...	1	1	0
Dr. Fancourt Barnes, London	1	1	0
Mr. Bartlett, London ...	1	1	0
Dr. Bastian, F.R.S.	1	1	0
Dr. Beale, F.R.S., London	1	1	0
Dr. Bennett, Dublin ...	1	1	0
Mr. Black, London ...	0	5	0
Dr. Blacker, London ...	1	1	0
Dr. Blandford, London ...	1	1	0
Mr. Brodhurst, London ...	1	1	0
Mr. Brook, Fareham ...	0	10	6
Dr. Bullock, London ...	1	1	0
Mr. H. T. Butlin, London ...	1	1	0
Mr. St. Clair Buxton, London	1	1	0
Dr. Lauder Brunton, F.R.S., London	1	1	0
Mr. Campbell, Saddleworth	1	1	0
Dr. Carline, Lincoln ...	1	1	0
Dr. Carter, Liverpool ...	1	1	0
Professor Chiene, Edinburgh	1	1	0
Mr. Clutton, London ...	1	1	0
Professor Corfield, London	1	1	0
Mr. Anderson Critchett, London	1	1	0
Dr. Ward Cousins, Portsmouth	1	1	0
Mr. Durham, London ...	1	1	0
Dr. Eastes, Folkestone ...	1	1	0
Dr. Eddowes, London ...	1	1	0
Mr. Hurry Fenwick, London	1	1	0
Mr. Field, London ...	1	1	0
Mr. Foulerton, London ...	1	1	0
Mr. Frost, London ...	1	1	0
Mr. Gay, Putney ...	1	1	0
Dr. Goude, London ...	1	1	0
Dr. Greenwood, London ...	1	1	0
Dr. Haig, London ...	1	1	0
Professor Halliburton, F.R.S., London ...	1	1	0
Mr. Hamilton, Chester ...	1	1	0
Dr. Hare, London ...	1	1	0
Mr. Haslam, Birmingham...	1	1	0
Dr. Haynes, Malvern ...	0	10	6
Dr. Hebb, London ...	1	1	0
Dr. Heron, London ...	1	1	0
Dr. Herringham, London ...	1	1	0
Dr. Wharton Hood, London	1	1	0
Mr. Horsley, F.R.S., London	1	1	0
Mr. Howse, London ...	1	1	0
Mr. Hulke, London ...	1	1	0
Mr. Hutchinson, London ...	1	1	0
Mr. Jackson, Sheffield ...	1	1	0
Dr. Johnson, London ...	1	1	0
Mr. Juler, London ...	1	1	0
Dr. Norman Kerr, London..	0	10	6
Dr. Keser, London ...	1	1	0
Mr. Knaggs, Huddersfield..	0	5	0
Dr. Lawford, London ...	1	1	0
Messrs. Lee, Crerar, and Co., London ...	3	3	0
Mr. Jordan Lloyd, Birmingham	1	1	0
Dr. Lockie, Carlisle ...	1	1	0
Mr. Lund, Manchester ...	1	1	0
Mr. McCarthy, St. George's, Shropshire	1	1	0
Dr. Mackenzie, London ...	1	1	0
Dr. Martin, Sheffield ...	1	1	0
Mr. Meade, Bradford ...	1	1	0
Mr. Mercier, London ...	1	1	0
Mr. Merriman, London ...	1	1	0
Dr. Moore, Dublin ...	0	10	0
Mr. Morris, London ...	1	1	0
Mr. Mumnery, London ...	1	1	0
Mr. Monnington, London...	1	1	0
Dr. Morton, London ...	1	1	0
Mr. Nettleship, London ...	1	1	0
Dr. O'Neill, Belfast ...	1	1	0
Mr. Parker, London ...	0	10	6
Mr. Parkinson, Wimborne	0	10	6
Dr. Parsons, London ...	1	1	0
Dr. Pearson, Newcastle-on-Tyne	1	1	0
Dr. Renshaw, Ashton-upon-Mersey	1	0	0
Mr. Mayo Robson, Leeds ...	1	1	0
Dr. Rutler, London ...	1	1	0
Dr. Russell, London ...	1	1	0
Dr. Sansom, London ...	1	1	0
Dr. Saundby, Birmingham	1	1	0
Dr. Savage, London ...	1	1	0
Dr. Semon, London ...	1	1	0
Mr. Shadwell, Walthamstow	1	1	0
Mr. Morton Smale, London	1	1	0
Mr. Noble Smith, London	1	1	0
Mr. T. Smith, London ...	1	1	0
Dr. Somerville, Galashiels	1	1	0
Dr. Spencer, London ...	1	1	0
Dr. Danford Thomas, London	1	1	0
Mr. Thompson, Launceston	1	0	0
Mr. Priestley Teale, Leeds ...	1	1	0
Dr. Thorowgood, London...	0	10	0
Mr. Tweedy, London ...	1	1	0
Mr. Walker, Liverpool ...	1	1	0
Dr White, London ...	1	1	0
Mr. Wilkin, London ...	1	1	0
Mr. Williams, London ...	1	1	0
Dr. Woakes, London ...	1	1	0
Dr. Wolfenden, London ...	1	1	0
Dr. Woods, London ...	1	1	0
Dr. Younger, London ...	1	1	0

The Committee (on which the British Medical Association is represented by Dr. Ward Cousins, President of Council, and Mr. H. T. Butlin, Treasurer) has decided that individual subscriptions shall not exceed one guinea, in order that the number of subscriptions may indicate the importance attached by medical men to the rights involved. Cheques and post-office orders should be crossed and made payable to the Anderson Appeal Fund Account, and forwarded to the Manager of the Chancery Lane Branch of the Union Bank, Chancery Lane, London, E.C.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1894. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 24th, 1894. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before such meeting—namely, October 3rd, 1894.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

LANCASHIRE AND CHESHIRE BRANCH.—Members of the Lancashire and Cheshire Branch who propose attending the annual meeting of the Association at Bristol can obtain railway time tables by applying to the Honorary Secretary, Dr. James Barr, 72, Rodney Street, Liverpool.

BATH AND BRISTOL BRANCH.

THE annual meeting of this Branch was held at University College, Bristol, on June 27th, 1894. The chair was taken by Dr. SHINGLETON SMITH, the retiring President, and there were fifty members present and one visitor.

New Member.—Mr. F. E. Peake, M.R.C.S., L.R.C.P., of Bristol, was elected a member.

Installation of New President.—Dr. Shingleton Smith then resigned the chair to Mr. NELSON C. DOBSON, F.R.C.S., who delivered the presidential address. A vote of thanks to the President for his interesting and valuable address was moved by Dr. J. G. SWAYNE, seconded by Dr. BRABAZON, and carried by acclamation.

Report of Council.—Dr. E. MARKHAM SKERRITT, Honorary Secretary for the Bristol District, read the report of the Council, which stated that the total number of members was now 277: 26 new members had been elected during the year, 5 in the Bath section and 21 in the Bristol. There had been one resignation in the former district and four in the latter, owing to the removal of members from the neighbourhood. Four members—Mr. F. Spencer in the Bath district, and the Rev. F. E. Belcombe, Mr. G. M. Stansfeld, and Dr. J. A. Barton in the Bristol section—had been lost by death. Among the members of the profession who had passed away during the year was Mr. David Davies, who, although not a member of this Branch at the time of his death, was one for many years, and in 1881 ably occupied the presidential chair. Twenty-six communications had been made at the ordinary meetings during the session, and numerous patients had also been exhibited; and the meeting at Bristol on January 31st was devoted to a valuable discussion on appendicitis, which was ably introduced by Dr. James Swain. The following gentlemen had been elected to fill the vacancies on the Council:—Bath Section: R. S. Fowler, L. A. Weatherly, M.D., and A. Waugh. Bristol Section; F. P. Lansdown, W. J. Fyffe, M.D., and J. Michell Clarke, M.D. The financial condition of the Branch was satisfactory, the balance-sheet showing a balance in hand of £26 19s. 1d. The Council recommended a donation of £10 10s. to the Medical Benevolent Fund, and a contribution of £5 5s. to the Royal Medical Benevolent College. On the motion of Mr. HARSANT, seconded by Dr. ALFORD, it was resolved unanimously:

That the report and financial statement now read be received and adopted.

Election of Officers.—President-elect: Dr. Coombes, of Castle Cary. *Representatives of the Branch on the Council of the Association:* Mr. R. S. Fowler, of Bath; and Dr. E. Markham Skerritt, of Clifton; and on the motion of Dr. WATSON WILLIAMS, seconded by Mr. WALKER, *Representative of the Branch upon the Parliamentary Bills Committee of the Association:* Dr. Harrison.

Votes of Thanks.—A vote of thanks to the retiring President for his courteous and able conduct in the chair during the past year was proposed by Dr. SHAW, seconded by Mr. LANSDOWN, and carried by acclamation; and a vote of thanks to the Council and the Secretaries for their services during the year, with a request to the latter to continue in office, was proposed by Mr. EWENS, seconded by Mr. CARR, and carried unanimously.

Alterations of Rules.—On the motion of Mr. BUSH, seconded by Dr. FYFFE, the rule relating to the alteration of the rules of the Branch was altered by a unanimous vote so as to make a two-thirds majority necessary to the alteration of any rule. On the motion of Mr. HARSANT, seconded by Dr. MARKHAM SKERRITT, the rules were altered so as to admit women to membership and to the presidential chair, there being one dissentient.

Annual Dinner.—The members afterwards dined together at the Clifton Down Hotel.

The result of a debate on the registration of midwives will be found at p. 228.

METROPOLITAN COUNTIES BRANCH: HERTS DISTRICT.

A MEETING of this District was held at the Clarendon Hotel, Watford, on July 11th; Dr. LEONARD SEDGWICK, President, in the chair.

Communications.—Mr. FISHER, the Hon. Secretary, showed a case of Radical Cure of Hernia in a boy, aged 15, and stated that he had found the method for prevention of orchitis by incising the testicle to be of much use.—Mr. Fisher also showed a case of Chronic Œdema of Lower Eyelids following repeated attacks of erysipelas, which was improving under thyroid feeding. The PRESIDENT considered that the patient exhibited had slight myxœdema, which probably accounted for the repeated attacks of erysipelas and also for the improvement under thyroid treatment.—A third case was one of Tuberculous Lupus of Face, also benefitting by thyroid feeding.—Dr. VINCENT DICKINSON read a paper on Chronic Inflammation of the Womb and its Treatment. The subject, which was the outcome of a study of 300 cases at the Chelsea Hospital for Women, 1883-88, was treated under the following heads:

A. Endometritis: i, cervical
  ii, corporeal
    1, catarrhal } Erosion of cervix
    2, hæmorrhagic
    3, neoplastic
B. Metritis ... i, cervical (follicular degeneration)
  ii, general (subinvolution hyperplastic.

The author considered all cases of catarrhal endometritis, whether cervical or general, as being kept up by microbic infection, and advocated the employment of antiphlogistics and astringents of an antiseptic character to lessen the exudation of serum, which formed a cultivating medium for the microbes, and in severe cases with a patulous uterine cavity, the use of an intrauterine tampon of iodised phenol, carbolic, and an ichthyol applied subsequently to a zinc alum point. The etiology, diagnosis, and symptomatology were also treated of at length from a practical point of view. For hæmorrhagic endometritis the author considered that curetting was the most successful treatment, and he also described, under the name of "neoplastic," cases of endometritis after abortion resulting in malignant degeneration of the endometrium. In discussing the treatment of chronic disease of the cervix with laceration, the author expressed his preference for amputation by Professor Simpson's method over Emmett's operation of trachelorraphy; and the paper concluded with an account of some cases of general chronic metritis in which marked benefit had taken place after a course of electrolysis, or Apostoli's method, and which had resisted other methods of treatment for a long period.

Votes of Thanks.—The meeting terminated with votes of thanks to Dr. Leonard Sedgwick and Dr. Vincent Dickinson.

OXFORD AND DISTRICT BRANCH.

THE annual meeting was held at Chipping Norton on July 19th, under the presidency of Dr. HUTCHESON, who entertained the members at luncheon. A large number of members and guests were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Installation of President.—Dr. HUTCHESON, of Chipping Norton, was installed in the presidential chair, and delivered an interesting address, for which he was accorded a hearty vote of thanks.

New Members.—Dr. Mackay, of Princes Risboro, Dr. Rygate, of Wardington, and Dr. Emmett, of Adderbury, were elected members of the Branch.

Reports of Treasurer and Council.—The reports of the Treasurer and Council were read and adopted.

Next Annual Meeting.—Oxford was chosen as the place for the annual meeting of 1895.

Election of Officers.—Mr. Julius Sankey was elected President-elect; Mr. A. Winkfield was re-elected representative on the General Council and Parliamentary Bills Committee, and also Treasurer; Mr. W. Lewis Morgan was re-elected Hon. Secretary; Dr. Pemberton, Dr. D. Hyde, and Mr. W. A. Thompson were elected members of the Branch Council.

Vote of Thanks to Retiring President.—A hearty vote of thanks was accorded to the retiring President, Mr. Iles.

COMBINED MEETING OF EDINBURGH AND STIRLING, KINROSS, AND CLACKMANNAN BRANCHES.

A COMBINED meeting of the Edinburgh and the Stirling, Kinross, and Clackmannan Branches was held at Culross on July 20th, Professor ANNANDALE, President of the Edinburgh Branch, in the chair. Some sixty members were present, and a most enjoyable afternoon was spent.

Communications.—Dr. GEO. MACKAY described and showed a new Spectacle Frame for use in cases of Ptosis.—Dr. BATTY TUKE gave a lantern demonstration of the Constituents of the Brain Cortex (prepared by Golgi's method), and of the Effects of Fatigue in Nerve Cells.—Dr. R. A. FLEMING showed transparencies of Sections of Nerve from a case of Multiple Neuritis.—Dr. JOHN THOMSON exhibited a series of clinical pictures, including Tetany, Congenital Syphilis, and other Abnormalities.—Professor CHIENE discussed the Procedure and Advantages of the Flap Method of Operating, and exhibited drawings of illustrative cases.—Dr. JAMES contributed a review of the Comparative Frequency of Empyema and the *Rationale* of its Diagnosis and Treatment.—Dr. JAMES RITCHIE described an unusual case of Hysteria in the Male.

Excursions.—Prior to the meeting proper a portion of the company travelled in advance to Dunfermline and visited the Abbey and Palace Grounds, under the guidance of Dr. Dow, Dunfermline, who entertained them to tea; thereafter the combined party was driven to Culross by Dr. Dow. After the business of the meeting the company visited Culross Abbey and other historical remains under the guidance of Drs. Dow and Reddie.

Dinner.—At 6.30 the members dined together in the Dundonald Arms Hotel. Professor Annandale occupied the chair, and was supported by Dr. Argyll Robertson as vice-chairman (in adjoining room), and Drs. Dow, McVail, and Reddie as croupiers. After the loyal toasts had been honoured, "The British Medical Association" was proposed by Sir T. GRAINGER STEWART, and acknowledged by the PRESIDENT of the Edinburgh Branch. The other toasts included "The Contributors, Scientific and Social," "The Guests," "The Chairman," "The Croupiers," etc.

NORTH OF ENGLAND BRANCH.

THE thirtieth annual meeting of this Branch was held at Newcastle-upon-Tyne, on July 18th.

Installation of New President.—The retiring President, Dr. BLANDFORD, introduced the new President, Dr. OLIVER, who delivered the annual address.—Dr. BROADBENT proposed a vote of thanks to the President for his address: this was seconded by Sir J. CRICHTON BROWNE (who was present as a visitor, and unanimously carried.

Report of Council.—The report of Council and the Treasurer's account were read and adopted.

Next Annual Meeting.—On the motion of the PRESIDENT, seconded by Dr. MURPHY, it was resolved that Dr. Crisp, of South Shields, be appointed President-elect, and that the annual meeting in 1895 be held at South Shields.—Dr. CRISP replied, accepting office.

Vote of Thanks to Retiring President.—A vote of thanks to the retiring President was unanimously carried.

Election of Officers.—The officers of the Branch were re-elected, Dr. Blandford taking the place of the late Dr. Foss on the Council. The officers for 1894-95 are as follows:—*President:* T. Oliver, M.D. *President-elect:* J. L. Crisp. *Honorary Secretary and Treasurer:* G. E. Williamson, F.R.C.S. *Council of Management* (Northumberland): D. Drummond, M.D.; G. H. Philipson, M.D.; G. H. Hume, M.D. North Durham: S. W. Broadbent, M.R.C.S.; W. Gowans, M.D.; J. Murphy, M.D. South Durham: G. Middlemiss, M.D.; J. W. Blandford; J. Hedley, M.D. *Representatives on Council of the Association:* David Drummond, M.D. and G. E. Williamson, F.R.C.S. *Representative on the Parliamentary Bills Committee of the Association:* J. Murphy, M.D.

Annual Dinner.—The annual dinner took place at the Douglas Hotel after the meeting. Forty-three were present, including the Mayor of Newcastle, Sir J. Crichton Browne, and other guests.

MALTA AND MEDITERRANEAN BRANCH.

A GENERAL meeting of this Branch was held at the Station Hospital, Valletta, on June 26th, Surgeon-Major-General INKSON, A.M.S., Vice-President, in the chair. There were twelve members of the Branch present, and ten visitors, chiefly officers of the Royal Navy.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Diagnosis between Enteric Fever and the Remittent Fever of the Mediterranean, with a Note on Ehrlich's Urine Test.—Surgeon-Captain W. L. HUGHES, A.M.S., read a paper on this subject. He said that as ague (paludism) did not exist in Malta, except in the form of relapses occurring in men who had previously suffered from the disease in India, Mauritius, or elsewhere, there was an opportunity in that place of studying enteric fever and the protracted fever of the Mediterranean, side by side in a pure and unmasked condition. This diagnosis was of great importance, especially with reference to the safe moving of fever patients. During the past three and a-half years he had had the opportunity of personally observing many hundreds of cases of both forms of fever in the military hospitals of Malta, but especially based his paper on careful notes taken of 150 cases of Mediterranean remittent fever, whose later history or *post-mortem* appearances left no doubt as to the correctness of the diagnosis. With exceptions, remittent fever favoured individuals in their second or third years of residence indiscriminately up to 35 or more years of age (23 being the most fatal age). It prevailed mostly during the hot dry months from June to October, in an inverse ratio to the amount and continuance of the rainfall, and when the temperature was uniformly over 60° F., while individual cases might, especially during an epidemic, be traced to certain rooms in certain buildings. Enteric fever, on the other hand, favoured newcomers between the ages of 15 and 25, and occurred mostly in the autumn, after the first heavy rains, and as a rule on some definite area of milk or water supply distinct from those of remittent fever, except in certain epidemics in which a dual cause appeared to be at work. Clinically the pyrexial curve was the most useful means of diagnosis. A fall of temperature approaching to normal in the case of adults during the first eight or ten days without apparent adequate cause (such as entorrhagia) was a frequent and sure sign of remittent fever. The pyrexia, moreover, in this fever consisted of intermittent waves of remittent pyrexia of a non-paroxysmal nature, varying in character and duration with a variable period of apyrexia between each wave. The later waves bore no necessary resemblance to the primary attack or to other waves. The total duration of pyrexia was most variable (20 to 180 days, the average of 342 cases being 66.3 days), and the resulting anæmia and debility extreme, causing a very high invaliding-rate and an average stay in hospital of ninety days. Entorrhagia, on the other hand, was a sure in-

dication of enteric fever, occurring in from 6 to 8 per cent. of cases; epistaxis was presumptive evidence of such. Pain and effusion in the joints, neuralgic symptoms, and orchitis were characteristic symptoms in remittent fever; while he had personally observed an odour peculiar to this disease, comparable with, but distinct from, that observed in typhus and rheumatic fever. Among less characteristic symptoms he mentioned that in remittent fever there was usually an early tendency to severe headache, absence of abdominal tumidity, and a more enlarged and tender spleen. The pain and tenderness of the right iliac region so characteristic of enteric fever was in remittent fever generally replaced by a similar condition in the epigastric region, combined with even nausea and vomiting, and a moist, swollen, uniformly-coated tongue. Diarrhœa was the exception in remittent fever in non-fatal cases—only 3 per cent.—while constipation was the rule. In fatal cases, however, diarrhœa was a frequent and ominous symptom—occurring 13 times in 20 cases—but even then was not "pea soup" in character. After death (occurring in under 2 per cent. of remittent fever cases) the appearance of Peyer's patches, the spleen, and the characteristic growths obtainable from the latter organ were diagnostic. Lastly, Ehrlich's reaction had shown in 150 instances of remittent fever of varying severity an absence of the crimson-red colour in the fluid or froth, and of the green precipitate obtained in enteric fever urine by the writer and others, a yellow, orange, or mahogany-brown colour (to transmitted light), and a mud-coloured precipitate being present, many of the cases in question having been during the first few days cases of disputed diagnosis. He hoped that should the test continue to give satisfactory results, the analogy of these fevers with those occurring also in India, China, and elsewhere would extend its usefulness to a large and important geographical area.—An animated discussion ensued, in which the following took part:—Brigade-Surgeon-Lieutenant-Colonel MACARTNEY, Surgeon-Major Twiss, and Surgeon-Captain CORCORAN, of the A.M.S., and Staff-Surgeon KIRKER, R.N., and the meeting adjourned to June 28th.

GRANTS IN AID OF SCIENTIFIC RESEARCH.

THE Council upon the recommendation of the Scientific Grants Committee have made the following awards:

	£	s.	d.
BRODIE, T. G., M.R.C.S., Physiological Laboratory, King's College, W.C.—To complete and extend a work on the chemistry of cancerous tumours and of fibroid degenerations; and for the purchase of new apparatus constructed for the study of the amount of work performed by muscles under varying conditions	20	0	0
COOPER, C. D., M.R.C.S., Pathological Department, University College, W.C.—An investigation on the subject of the metabolism in general paralysis of the insane	5	0	0
GILLESPIE, A. L., M.D., 10, Walker Street, Edinburgh.—For the purpose of testing the action of alkalies and acids on that of the pancreas and intestines	10	0	0
GRUNBAUM, ALBERT S., M.B., Physiological Department, St. Thomas's Hospital, S.E.—For an investigation into the cutaneous distribution of the peripheral nerves in the monkey	10	0	0
HALLIBURTON, W. D., M.D., F.R.S., 9, Rigdmount Gardens, Gower Street, W.C.—To continue research work on the proteid constituents of animal tissues	25	0	0
HARRIS, A. BUTLER, M.B., Loughton, Essex.—For an investigation on the processes of oxydation in the various tissues and organs, the relative degree of the same, and the alterations in disease	20	0	0
HAYWARD, JOHN A., M.D., St. Bartholomew's Hospital, E.C.—(1) For an investigation to improve, if possible, our means of cultivating the diphtheria bacillus, whereby the diagnosis of disease bacteriologically may be facilitated. (2) To test the action of certain drugs and ferments in the diphtheria bacillus. (3) To examine a series of cases of membranous sore throats, whether simple, scarlatinal, or diphtheritic, and to determine their relation to the diphtheria bacillus	10	0	0
HEWLETT, R. T., M.D., Bacteriological Laboratory, King's College, W.C.—To defray expenses to be incurred in the completion of the research on the chemistry of cancer	1	16	6
	£104	16	6

	£	s.	d.
Forward	104	16	
HORNE, R. M., M.B., Physiological Laboratory, The Owens College, Manchester.—For an investigation on muscle. (1) The nature of the muscle ferment. (2) The influence of calcium salts on the coagulation of muscle. (3) The existence of a myo-albumose	5	0	0
KANTHACK, A. A., M.D., St. Bartholomew's Hospital, E.C.—To continue a research on the nature and behaviour of wandering cells	15	0	0
KENT, A. F. S., Esq., Physiological Department, St. Thomas's Hospital, S.E.—For a continuation of an investigation upon the functions of the thyroid gland	15	0	0
LEVY, A. G., M.B., 29, Cumberland Terrace, Regent's Park, N.W.—For a research to investigate the elastic recoil of the living brain after compression for varying lengths of time, and to establish the vascular conditions which have an influence upon the brain's elasticity	10	0	0
LAZARUS-BARLOW WALTER S., M.D., Pathological Laboratory, New Museums, Cambridge.—(1) The œdema which accompanies inflammation. (2) The physiological action of the diphtheria toxin on the heart	20	0	0
MOTT, F. W., M.D., 84, Wimpole Street, W.—For a continuation of a research upon the functions and structure of the central nervous system	20	0	0
MUIR, ROBERT, M.D.—(1) An inquiry into the nature of leucocytosis. (2) An inquiry into the changes in the lymphoid tissues during leucocytosis	10	0	0
MURRAY, G. R., M.B., 2, Saville Place, Newcastle-upon-Tyne.—To continue an investigation into the active substances contained in the secretion of the thyroid gland	15	0	0
PEMBREY, M.S., M.B., Physiological Laboratory, Oxford.—For a continuation of a research upon the effect of section of the spinal cord and of anæsthetics upon the reaction of changes of temperature	10	0	0
SAMWAYS, D. W., M.D., Ramleh, Crouch End, N.—(1) To demonstrate the physical cause of the wave. (2) To investigate the time relation in the contraction of the left auricle and ventricle, when the former is hypertrophied in cases of mitral stenosis.	20	0	0
SHENNAN, T., M.B., 71, Leamington Terrace, Edinburgh.—For continuing a research on catha edulis	5	0	0
SMITH, HUGH R., M.D., Pathological Laboratory, University College, W.C.—For an investigation into the nature of the various exudations and transudations found within the body. (a) Special attention will be given to the examination of the different forms of fluid found in the various cysts originating within the female pelvis. (b) The investigation of pleuritic, ascitic, œdemic, and other fluids	20	0	0
SYMES, W. L., M.R.C.S., Physiological Laboratory, St. Mary's Medical School, W.—For continuing his work on nerve section	10	0	0
TUBBY, A. H., M.B., 39, Finsbury Circus, E.C.—For an investigation on the effect of stimuli on the pleural and pericardial membranes. Observations to be made on heart, blood pressure, and respiration by the application of heat, cold, various antiseptic substances, etc.	10	0	0
VINCENT, SWALE, M.B., Mason College, Birmingham.—For prosecuting a research upon the physiology of the suprarenal capsules	10	0	0
WEBSTER, J. C., M.D., Laboratory, 7, Lauriston Lane, Edinburgh.—For the following researches—(1) The place of fertilisation of the ovum. (2) External and internal wandering of the ovum. (3) The reaction of the peritoneum to the fertilised ovum, having the consideration of the question of primary abdominal gestation	20	0	0
WHITE, A. H., L.R.C.P.I., 81, Grosvenor Square, Rathmines, Dublin.—For a research in connection with the changes in the composition of the blood in traumatic anæmia	20	0	0
WHITE, W. HALE, M.D., and WASHBOURN, J. W., M.D., 65, Harley Street, W.—For expenses in connection with the working of their animal calorimeter	10	0	0
	£349	16	6

The Council also, upon the recommendation of the Scientific Grants Committee, have appointed to the two vacant scholarships for one year Dr. Lloyd Jones and Dr. Cartwright Wood. There were twenty applications.

FROM the report of the Puffin Island Biological Station for last year it appears that much work has been done in getting the station, which was taken over from the Liverpool Marine Biological Committee in 1892, into working order. Investigations with regard to certain fishery questions were commenced, and the report also contains notes on the entomology, the flora, the land molluscs, and the earth worms of the island, and also on its archæology. The director of the station is Mr. Philip J. White, M.B., Lecturer on Zoology, University College, North Wales.

PROCEEDINGS OF THE COUNCIL.

At a meeting of the Council, held in the Council Chamber at the office of the Association, 429, Strand, W.C., on Wednesday, July 11th, 1894:—

Present:

Dr. J. Ward Cousins, President of the Council, in the chair.

Dr. E. Long Fox, President-elect.

Mr. Henry T. Butlin, D.C.L., Treasurer, London.

Dr. J. Barr, Liverpool.
Dr. G. B. Barron, Southport.
Dr. R. W. Batten, Gloucester.
Dr. T. Bridgwater, Harrow-on-the-Hill.
Dr. J. S. Bristowe, F.R.S., London.
Mr. Langley Browne, West Bromwich.
Mr. Andrew Clark, London.
Surg.-Gen. W. R. Cornish, London.
Dr. H. R. Crocker, London.
Dr. G. W. Crowe, Worcester.
Dr. E. H. Dickinson, Liverpool.
Dr. J. L. H. Down, London.
Mr. George Eastes, M.B., London.
Dr. W. A. Elliston, Ipswich.
Dr. R. S. Fowler, Bath.
Dr. J. H. Galton, Upper Norwood.
Dr. C. E. Glascott, Manchester.
Dr. Bruce Goff, Bothwell.
Dr. W. Gordon, Exeter.
Dr. H. Handford, Nottingham.
Mr. J. D. Harries, Shrewsbury.
Mr. J. H. Hemming, Kimbolton.
Dr. C. Holman, London.
Mr. T. V. Jackson, Wolverhampton.
Mr. T. R. Jessop, Leeds.
Mr. Jordan Lloyd, Birmingham.
Mr. N. C. Macnamara, London.
Sir W. Moore, K.C.I.E., London.
Dr. Withers Moore, Burgess Hill.
Mr. R. H. B. Nicholson, Hull.
Mr. C. H. W. Parkinson, Wimborne Minster.
Dr. C. Parsons, Dover.
Dr. F. M. Pope, Leicester.
Dr. J. Rolston, Stoke.
Dr. A. W. Sandford, Cork.
Dr. R. Saundby, Birmingham.
D. A. Sheen, Cardiff.
Dr. E. Markham Skerritt, Clifton.
Mr. Noble Smith, London.
Dr. R. Somerville, Galashiels.
Mr. H. Stear, Saffron Walden.
Mr. J. Taylor, Chester.
Dr. J. Roberts Thomson, Bournemouth.
Dr. T. W. Trend, Southampton.
Mr. F. Wallace, London.
Mr. Joseph White, D.C.L., Nottingham.
Mr. A. Winkfield, Oxford.
Dr. W. L. Winterbotham, Bridgwater.

The minutes of the last meeting having been printed and circulated, and no objection taken to them, were signed as correct.

Read letters of apology for non-attendance from the President (Dr. Philipson), Dr. F. Bateman, Dr. Beverley, Dr. Mackenzie Booth, Dr. David Drummond, Dr. W. Russell, Mr. W. Thomson, Dr. Urquhart, Dr. W. F. Wade, and Mr. Williamson.

The President introduced Dr. Sandford, of Cork, who attended for the first time as representative of the Cork and South of Ireland Branch.

Resolved: That any discussion upon the proposed amendments of the Medical Acts be taken with the Parliamentary Bills Report at the annual meeting at Bristol.

Read letters from the Irish Graduates' Association, the Medical Sickness and Annuity Society, and New Sydenham Society, and the Postal Medical Officers, asking for permission to hold meetings during the annual meeting of the Association at Bristol.

Read letter from Dr. Fletcher Beach asking for permission to hold an adjourned meeting of the Psychological Association on Tuesday, July 31st, in the section room of the Psychological Section.

Resolved: That permission, according to the proposed arrangement of the General Secretary, be given to the various societies and associations to hold their meetings at Bristol, so long as the meetings do not interfere with the programme of the Association.

Read report of the Branch Committee of the Lancashire and Cheshire Branch, appointed to watch the progress of, and to oppose any proposed legislation for the registration of midwives, also letters from Mr. Upton, the Clerk to the Apothecaries' Society, and Dr. Rentoul.

Resolved: That the letters be received and entered on the minutes.

Read resolution passed by the South-Eastern Branch, of which the following is a copy:—

That this Branch considers that it will be to the advantage of both the medical profession and the public that the Council of the British Medical Association have power and authority to proceed against unqualified practice, and in other ways to protect the interests of the medical profession; and that it will be to the advantage of all if the Council were to authoritatively decide questions which affect medical men *inter se*. And this Branch request the Council of the Association to take such steps as are necessary to carry these suggestions into effect, and to promote union and combination among medical men.

T. Jenner Verrall, Hon. Sec.

Resolved: That the resolutions of the South-Eastern Branch and the Midland Branch be referred to the Journal and Finance Committee for their consideration and report.

Read resolution of the Oxford and District Branch, of which the following is a copy:—

That, in the opinion of this meeting, medical men ought not to meet in consultation medical officers of medical aid associations (as defined by the Committee of the General Medical Council), and that the Branch Council should bring the matter before the Central Council, and that they (the Central Council) be urged to bring the matter before the Annual Meeting.

W. Lewis Morgan, Hon. Sec.

Resolved: That while declining to express any opinion on the question, the Council suggests that the Branch should bring the matter before the Annual Meeting by giving notice in the usual way.

Read the resolution of the Lancashire and Cheshire Branch upon the report on the payment of the railway fares and the constitution of the Parliamentary Bills Committee, of which the following is a copy:

That it be a recommendation from the Council of this Branch that in the constitution of the Parliamentary Bills Committee in addition to one representative from each Branch there should be additional representatives from those Branches containing more than 300 members, in the proportion of one representative for every complete 300 members.

Jas. Barr, Hon. Sec.

Resolved: That the question be postponed to the Annual Meeting upon the discussion of the report of the subcommittee on the payment and constitution of the Parliamentary Bills Committee, which will be placed before the Annual Meeting at Bristol.

Read letter from the Sanitary Institute asking for the appointment of delegates to the next congress and exhibition of the Sanitary Institute.

Resolved: That Dr. Spottiswoode Cameron and Mr. Langley Browne and any other member of the Council who proposes to go to the meeting be requested to represent this Council at the conferences.

Read letter from the Honorary Secretary of the International Congress of Hygiene, asking that delegates be sent to the Congress.

Resolved: That Sir Walter Foster, M.P., and Dr. Saundby, together with any other member of the Council who may decide to be present, be requested to represent this Council at the coming meeting of the International Congress of Hygiene and Demography at Buda-Pesth.

Read letter from Dr. Mackay, Honorary Secretary to the Railway Servants' Eyesight Committee, asking the Council to consent to an extension of the work of the Committee to mariners' eyesight.

Resolved: That the letter be referred to the Council to be held at Bristol on Thursday, August 2nd.

Read letter from Lord Stamford, asking that Dr. Anderson might be allowed to address the meeting at Bristol on the subject of his trial.

Resolved: That the President of the Council be requested to reply to the letter, stating that discussions of professional subjects will not allow time to be given for an address by Dr. Anderson.

Resolved: That the request of the Section of Psychology to invite barristers and solicitors to attend the discussion on criminal responsibility be granted.

Resolved: That the 133 candidates whose names appear on the circular convening the meeting, providing that they are all British subjects, be and they are hereby elected members of the Association.

Resolved: That the consideration of the candidates whose names are mentioned on the supplemental list issued be postponed till the next meeting of the Council at Bristol.

The draft annual report of the Council was then considered.

Resolved: That the report of the Council be received, approved, and published in the JOURNAL for presentation at the annual meeting at Bristol on July 31st (see page 181.)

Resolved: That the report of the Parliamentary Bills Committee be received, approved, and published in the JOURNAL for presentation at the annual meeting at Bristol on July 31st (see page 183).

Resolved: That the report of the Scientific Grants Committee be received, approved, and published in the JOURNAL for presentation at the annual meeting at Bristol on July 31st (see page 188).

Resolved; That the report of the Committee on Legislation for Inebriates be received, approved, and published in the JOURNAL for presentation at the annual meeting at Bristol on July 31st (see page 193).

Resolved: That the report of the Medical Charities Committee be received, approved, and published in the JOURNAL for presentation at the annual meeting at Bristol on July 31st (see page 193).

Resolved: That the report of the Committee on School Children be received, approved, and published in the JOURNAL for presentation at the annual meeting at Bristol on July 31st (see page 197).

Resolved: That the interim report of the Anæsthetics Committee be received, approved, and published in the JOURNAL for presentation at the annual meeting at Bristol on July 31st (see page 199).

Resolved: That the report of the Therapeutic Committee be received, approved, and published in the JOURNAL for presentation at the annual meeting at Bristol on July 31st. (see page 200).

Resolved: That the report of the Committee on Railway Servants' Eyesight be received, approved, and published in the JOURNAL for presentation at the annual meeting at Bristol on July 31st (see page 200).

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved and the recommendations contained therein carried into effect.

The minutes of the Journal and Finance Committee contain a letter from the Medical Sickness Society, a resolution on the subject of the scientific examination of school children, and the accounts for the quarter, amounting to £7,762 9s. 9d.; also letter from DR. T. C. Moore, Secretary New Zealand Medical Association.

Resolved: That the minutes of the Inebriates Legislation Committee of June 12th last be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Inebriates Legislation Committee contain the annual report of the Committee.

Resolved: That the minutes of the Medical Charities Committee of July 3rd be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Medical Charities Committee contain the report of the Subcommittee upon the replies from the various hospitals and dispensaries, and a resolution passed by the South of Ireland Branch upon the question of hospital abuse.

Resolved: That the minutes of the Premises and Library Committee of July 10th be received and approved, and the recommendations contained therein carried into effect.

The Premises and Library Committee minutes contain the particulars of the agreement for the tenancy of No. 2, Harvey's Buildings, also particulars for the increase of the hot water apparatus, an agreement with the Vestry of St. Martin-in-the-Fields respecting a ventilating pipe being erected at the rear of 2 and 3, Agar Street, and the report of the Hon. Librarian.

Resolved: That the minutes of the Branch Organisation Committee of July 10th be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Branch Organisation Committee contain the by-laws of the Dundee Branch, the East Anglian Branch, the by-laws and adoption of a Branch of the Association for Gibraltar, and the recognition of a new Branch for Deccan; also the altered by-laws of the South Indian Branch.

Resolved: That the minutes of the Trust Funds Committee of July 10th be received and approved, and the recommendation that the Middlemore prize be awarded to Mr. E. Treacher Collins, F.R.C.S., carried into effect.

Resolved: That the minutes of the Scientific Grants Committee of July 10th be received and approved, and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Parliamentary Bills Committee of July 10th be received and approved, and the recommendations contained therein carried into effect.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SECOND ANNUAL MEETING.

THE sixty-second Annual Meeting of the British Medical Association will be held at Bristol on Tuesday, Wednesday, Thursday, and Friday, July 31st, August 1st, 2nd, and 3rd, 1894.

President: GEORGE HARE PHILIPSON, M.D.Cantab., D.C.L., F.R.C.P., Professor of Medicine in the University of Durham.

President-Elect: E. LONG FOX, M.D.Oxon., Consulting Physician to the Bristol Royal Infirmary.

President of the Council: J. WARD COUSINS, M.D.Lond., F.R.C.S., Senior Surgeon to the Royal Portsmouth Hospital.

Treasurer: HENRY TRENTHAM BUTLIN, F.R.C.S., D.C.L., Surgeon to St. Bartholomew's Hospital, E.C.

An Address in Medicine will be delivered by Sir THOMAS GRAINGER STEWART, M.D.Edin., Professor of the Practice of Physic and Clinical Medicine in the University of Edinburgh.

An Address in Surgery will be delivered by JAMES GREIG SMITH, M.B., F.R.S.E., Surgeon to the Bristol Royal Infirmary.

An Address in Public Medicine will be delivered by Sir CHARLES CAMERON, M.D., Medical Officer of Health, Dublin.

A. MEDICINE.

Library of Medical School.

President: FREDERICK T. ROBERTS, M.D. *Vice-Presidents:* E. MARKHAM SKERRITT, M.D.; R. SHINGLETON SMITH, M.D. *Honorary Secretaries:* W. T. BROOKS, M.A., M.B., 32, Holywell, Oxford; J. MICHELL CLARKE, M.D., 28, Pembroke Road, Clifton, Bristol.

Wednesday, August 1st.—I. Discussion on Functional Diseases of the Heart, introduced by Douglas Powell, M.D. The following gentlemen have announced their attention of taking part in the discussion: Sir Frederic Bateman, Paul M. Chapman, M.D., James A. Lindsay, M.D., G. A. Gibson, M.D., E. Markham Skerritt, M.D., R. Shingleton Smith, M.D., A. Ernest Sansom, M.D., P. Watson Williams, M.D., Harry Campbell, M.D., H. Handford, M.D., and Francis Hawkins, M.B.

Thursday, August 2nd.—II. Discussion on Pyrexia and its Treatment, introduced by W. Hale White, M.D. The following gentlemen will take part in the discussion: E. Markham Skerritt, M.D., Shingleton Smith, M.D., James Barr, M.D., James A. Lindsay, M.D., J. E. Shaw, M.D., H. Handford, M.D., Douglas Powell, M.D.,and W. Soltau Fenwick, M.D.

Friday, August 3rd.—III. Ataxia and the Diseases of which it is a Symptom, introduced by J. A. Ormerod, M.D. The following gentlemen will take part in the discussion: James Cagney, M.D., W. L. Andriezen, M.D., F. W. Mott, M.D., Henry Waldo, M.D., J. S. R. Russell, M.B., and J. Michell Clarke, M.D.

The following papers have been announced:

ALTHAUS, Julius, M.D. The Differential Diagnosis of Nosophobia and Hypochondriasis.

BENTLEY, A. J. M., M.D. A Few Practical Hints for Invalids on the Maintainance of Health in the Climate of Egypt.

CAMPBELL, Harry, M.D. The Mechanical Treatment of Heart Disease.

CLARKE, Michell, M.D., will show cases and morbid specimens of Friedreich's Disease and a case of Tabes.

FENWICK, W. Soltau, M.D. Dyspepsia of Strumous Origin.

FISHER, Theodore, M.D. Diastolic and Presystolic Murmurs in Dilated Hearts without Valvular Disease.

GIBSON, G. A., M.D. The Conduction of Cardiac Murmurs.

HAIG, Alexander, M.D. Direct Introduction of Uric Acid into the Body, its Bearing on the Prevention and Treatment of Disease.

HYDE, Samuel, M.D. The Natural Mineral Waters and Climate of Buxton their Indications and Modes of Application.

LAFFAN, T., M.D. On Some Cases illustrating Cardiac Prognosis.

LANE, Hugh, L.R.C.P. Neurotic Arthritis.

MOTT, F. W., M.D. Pernicious anæmia

ROSS, J. Carne. Some Notes on a Series of Cases of Cancer.

ROWAT, J., M.D. Chill as a Cause and Symptom of Disease.

Russell, J. S. R., M.B. The Diagnostic Importance of certain late Phenomena in Lesions of the Dorsal and Lumbar Cord.
Sansom, A. Ernest, M.D. Disturbances of the Cardiac Rhythm subsequent to Influenza.
Smith, R. Shingleton, M.D. (1) Pulmonary Stenosis and Endocarditis a cause of Embolic Pneumonia and Chronic Intermittent Fever. (2) Membranous Exudations, more especially those of Intestinal Origin.
Waldo, Henry, M.D., will show a case of Early Tabes with Arthropathy and Perforating Ulcer.
Wethered, F. J., M.D. The Treatment of Chronic Heart Disease by Baths and Gymnastics as practised at Nauheim.
Whitby, C. J., M.D. Modern Hydropathy; its Relation to General Therapeutics.
Williams, P. Watson, M.D. A case of Pancreatic Diabetes, treated by Grafts of Sheep's Pancreas.

Dr. F. J. Wethered will give a practical demonstration of the Treatment of Chronic Heart Disease by Gymnastics on Thursday at 9.30 A.M.

B. Surgery.

Physical Science Lecture Room—University College.

President : W. Mitchell Banks, M.D. *Vice-Presidents :* Nelson C. Dobson, F.R.C.S.; Professor Victor Horsley, F.R.S. *Honorary Secretaries:* G. A. Wright, M.B., 8a, St. John Street, Manchester; James Swain, M.D., 14, Buckingham Place, Clifton, Bristol.

The following subjects have been selected for discussion in the Section:

1. The Operative Treatment of Perforative Ulcer of the Stomach and Intestines. To be introduced by A. Pearce Gould, M.B., F.R.C.S. The following gentlemen will take part in the discussion: G. H. Hopkins, F.R.C.S. (Swansea), R. Maclaren, M.D. (Carlisle). Mayo Robson, F.R.C.S. (Leeds), J. Ward Cousins, M.D., F.R.C.S. (Portsmouth), Rutherford Morison, F.R.C.S. (Newcastle-on-Tyne), Gilbert Barling, F.R.C.S. (Birmingham), J. Paul Bush, M.R.C.S. (Bristol)., and W. F. Haslam, F.R.C.S. (Birmingham). N. C. Dobson, F.R.C.S. (Bristol), D. Harrisson, F.R.C.S.Ed. (Liverpool), J. Murphy, M.D. (Sunderland). K. Franks, F.R.C.S.I. (Dublin), R. O'Callaghan, F.R.C.S.I. (London).

2. The Surgical Treatment of Injuries of the Spine and Spinal Cord. To be introduced by William Thorburn, M.D., F.R.C.S. The following gentlemen will take part in the discussion: G. H. Hopkins, F.R.C.S. (Swansea), W. M. Barclay, F.R.C.S. (Bristol), C. B. Keetley, F.R.C.S. (London), H. Langley Browne, F.R.C.S. (West Bromwich), Gilbert Barling, F.R.C.S. (Birmingham), and R. W. Lovett, M.D. (Boston U.S.A.), D. Harrisson, F.R.C.S.Ed. (Liverpool), W. Thomas, F.R.C.S. (Birmingham), Noble Smith, F.R.C.S.Ed.

3. The Treatment of Injuries of the Lower End of the Humerus. To be introduced by Jonathan Hutchinson, jun., F.R.C.S. The following gentlemen will take part in the discussion: G. H. Hopkins, F.R.C.S. (Swansea), Professor Landerer (Stuttgart), R. Jones, F.R.C.S.Edin. (Liverpool), J. Ward Cousins, M.D., F.R.C.S. (Portsmouth), Damer Harrisson, F.R.C.S.Ed. (Liverpool).

The following papers have been announced:

Bush, J. P., M.R.C.S. (Bristol). A Case of Division of the Pneumogastric Nerve, Suture, Recovery.
Collier, Mayo, F.R.C.S. (London). Hallux Rigidus with Specimens.
Cotterell, E., F.R.C.S. (London). The Diagnosis between Some Forms of Syphilis of the Tongue and Early Epithelioma.
Franks, K., F.R.C.S.I. (Dublin). (1) Œsophagectomy with Remarks on the Treatment of Œsophageal Stricture. (2) A Case of Aural Fibroids.
Harrisson, Damer, F.R.C.S.Ed. (Liverpool). 1. Meningeal Hæmorrhage followed by Paralysis and Sensory and Motor Aphasia treated successfully by Operation. 2. Note on the Treatment of Traumatic Delirium Tremens.
Jones, R., F.R.C.S.Edin. (Liverpool). On Amputation and Shock and Amputation through Shoulder-joint for Diffuse Spreading Traumatic Gangrene.
Lowe, T. P., M.R.C.S. (Bath). The Treatment of Senile Rheumatic Arthritis of the Hip-joint by Forcible Movements.
Mayo Robson, F.R.C.S. (Leeds). On a Consecutive Series of Ovariotomies performed in the Surgical Clinic at a General Hospital.
Morison, Rutherford, F.R.C.S. (Newcastle-on-Tyne). On Some Points in the Anatomy of the Right Hypochondriac Region relating especially to Operation for Gall Stones.
Morton, C. A., F.R.C.S. (Bristol). A Case of Malignant Disease of the Testis in which the Interior of the Growth was filled with decolorised Clot and Brown Fluid simulating Hæmatocele.
Moullin, C. M., M.D., F.R.C.S. (London). The Treatment of Enlargement of the Prostate by Removal of the Testes.
Murphy, James, M.D. (Sunderland). 1. Splenectomy, with Notes of a Successful Case. 2. Notes of a Case of Rupture of the Bladder treated by Abdominal Section, Suture, Recovery.
Neve, E. F., M.D. Clinical Remarks on Sixty-five Cases of Operation for Vesical Calculus.
O'Callaghan, R., F.R.C.S.I. (London). Radical Cure during Operation for Strangulated Hernia in Octogenarians with some Fractical Remarks Thereon.
Snow, H., M.D. (London). The "Dispersible" Tumours of the Mamma.
Stokes, Sir William (Dublin). The Operative Treatment of Flat Foot.
Tait, Lawson, F.R.C.S. (Birmingham). Typhlitic and Perityphlitic Inflammation and Suppuration with an Especial Regard for the Different Opinions expressed on the Prognosis of the Disease by Physicians and Operating Surgeons.
Thomas, J. L., F.R.C.S. (Cardiff). The Condition of the Tympanic Membrane in some Head Injuries.

C. Obstetric Medicine and Gynæcology.

Lecture Room No. 2—University College.

President : Professor J. G. Swayne, M.D. *Vice-Presidents :* E. Malins, M.D.; A. E. Aust-Lawrence, M.D. *Honorary Secretaries:* R. Boxall, M.D., 29, Weymouth Street, London, W.; Walter C. Swayne, M.B., 8, Leicester Place, St. Paul's Road, Clifton, Bristol.

The following subjects have been selected for discussion in the Section:

1. The Necessity of Inducing Labour in Certain Conditions of the Mother not Obstructing Delivery. To be opened by Robert Barnes, M.D., Consulting Physician-Accoucheur to St. George's Hospital, London. The following gentlemen will take part in the discussion: Fancourt Barnes, M.D., R. Bell, M.D., T. More Madden, M.D., J. Murphy, M.D., W. H. C. Newnham, M.A., M.B., J. Inglis Parsons, M.D., A. J. Smith, M.D., Professor M. Cameron, and John Campbell, M.D.

2. The Treatment of Hæmorrhage during the Last Two Months of Pregnancy. To be opened by W. J. Smyly, M.D., Master of the Rotunda Hospital, Dublin. The following gentlemen will take part in the discussion: Fancourt Barnes, M.D., R. Bell, M.D., J. W. Byers, M.D., T. More Madden, M.D., J. Murphy, M.D., W. H. C. Newnham, M.A., M.B., J. Inglis Parsons, M.D., E. Stanmore Bishop, F.R.C.S., Professor M. Cameron and A. J. Smith, M.D.

The following papers have been announced:

Aust-Lawrence, A. E., M.D. On Abdominal Section as Part of the Treatment in Certain Cases of Menstrual Retention due to Atresia of the Genital Tract.
Barnes, Fancourt, M.D. Selection of Cases for Hysterectomy.
Bell, Robert, M.D. On Ovariotomy.
Bishop, E. Stanmore F.R.C.S. The *Technique* of Vaginal Hysterectomy.
Collins, E. T., F.R.C.S. The Nervous Impulses Controlling Menstruation and Uterine Hæmorrhage.
Cullingworth, C. J., M.D. On a Case of Advanced Extrauterine Gestation in which a Living Child was Removed, the Placenta left undisturbed, and the Abdominal Wound entirely closed.
Dempsey, Alexander, M.D. On Curetting the Uterus for Puerperal Septicæmia, with notes of two successful cases.
Edge, Fred., F.R.C.S. A Modification of the Alexander Adams's Operation.
Harrisson, Damer, F.R.C.S.Ed. On Paresis of the Intestines following Abdominal Operation.
Jessett, F. B., F.R.C.S. On Thirty Cases of Vaginal Hysterectomy for Carcinoma Uteri with Two Deaths.
Keith, George E. The Operative Treatment of a Form of Dysmenorrhœa and Sterility.
Lawrie, Macpherson, M.D. Two Cases of Hysterectomy followed by Insanity.
Madden, T. More, M.D. On Pruritus and other Hyperæsthetic Conditions of the Vulva and Vagina.
Martin, Christopher, F.R.C.S. Some of the Complications and Difficulties met with in the Removal of the Uterine Appendages.
Murphy, James, M.D. Notes of a Case of Hæmatometra successfully Treated by Hysterectomy.
Nairne, J. Stuart, F.R.C.S. On Resection of the Uterus for Fibroid Tumours and other Diseases.
Newnham, W. H. C., M.B. Successful Treatment of Sterility.
Purslow, C. E., M.D. An Account of Four Cases in which Separation of the After-coming Head had occurred during Delivery, and of the Means used to Extract the Head.
Rabagliati, A., M.D. Some Obscure Ailments which simulate Ovarian Disease, their Causes and Treatment.
Reid, W. L., M.D. A Case of Simple Enterocele Vaginalis Posterior with an Operation for its Relief.
Scharlieb, Mary A. D., M.D. Treatment of Uterine Myomata.
Smyly, W. J., M.D. Total Extirpation of the Myomatous Uterus.
Taylor, John, F.R.C.S. On Doubling of the Uterus and Vagina and Allied Malformations.
Walter, W., M.D. Ovarian Dermoid containing 3,940 Pea-like Bodies.
Williams, J. D., M.D. Tuberculous Disease of the Portio Vaginalis.

D. Public Medicine.

Museum Theatre.

President : Professor W. H. Corfield, M.D. *Vice-Presidents:* J. Lane Notter, M.D.; D. S. Davies, M.D. *Honorary Secretaries :* B. H. Mumby, M.D., Town Hall, Portsmouth;

J. C. HEAVEN, M.R.C.S., 17, Whiteladies Road, Clifton, Bristol.

Papers on the following subjects have been announced and will as far as possible be read on the various days as indicated below.

Wednesday, August 1st.

DAVIES, Sidney, M.D. (Plumstead). Ventilation of Sewers.
ANDERSON, A. Jasper, M.D. (Blackpool). Ventilation of Sewers.
NEECH, J. T., L.R.C.P. (Atherton). Sewer Ventilation and the Movement of Air in Sewers.
PRINGLE, R., Brigade-Surgeon-Lieutenant-Colonel, M.D. 1. The Seasons and Sites of Hindu Pilgrimages in Bengal and their Bearing on Epidemic Cholera. 2. Notes on an Outbreak of Bubonic Plague in British Ghurwal Himalayas in 1864.
STEPHENS, E., L.R.C.P. (Ilminster). Cremation.
MAHOMED, A. G. S., M.R.C.S. Should there be a Civil Medical Service for Great Britain?
THOMPSON, Sir Henry. Cremation, its Progress at Home and Abroad, and the Medical Responsibilities which it entails.

Discussion of above papers.

Thursday, August 2nd.

NOTTER, J. L., Brigade-Surgeon-Lieutenant-Colonel, M.D. Filtration of Potable Waters.
THRESH, J. C., M.B. The Interpretation of Water Analyses.
PRINGLE, R., Brigade-Surgeon Lieutenant-Colonel, M.D. The Storage of Rain Water for Drinking Purposes.
KENWOOD, H. R., M.B. Notes on the Origin and Spread of Enteric Fever.
CAMERON, J. Spottiswoode, M.D. Diarrhœa in the Autumn of 1893.
WALDO, F. J., M.D. and WALSH, David, M.B. 1. Does Baking Sterilise Bread? 2. Does Cooking Sterilise a Meat Pie? (To be illustrated by cultivations, slides, etc.).
BUCKMASTER, G. A., M.D. Recent Experimental Methods employed in Diagnosis of Typhoid Bacilli contrasted with Coli Commune.

Discussion of above papers.

Friday, August 3rd.

PRIESTLEY, J., M.D. (Leicester). Some Lessons to be Learnt from an Epidemic of Small-pox in an Unvaccinated Community.
EVANS, Arnold, M.D. The Aërial Convection of Small-pox.
ALLAN, F. J., M.D. Public Measures for the Prevention of Phthisis.
BLACKMAN, J., M.D. Public Measures for the Prevention of Phthisis.
BROWNE, Lennox, F.R.C.S.Ed. The Etiology of Diphtheria in Relation to Insanitation.

Discussion of above papers.

The following gentlemen will take part in the discussions: J. Spottiswoode Cameron, M.D., Walter Dowson, M.D. Sydney Davies, M.D., Herbert Jones, L.R.C.S.I., A. Jasper Anderson, M.B., A. Robinson, M.D., Brigade-Surgeon-Lieutenant-Colonel R. Pringle, M.D., Thomas D. Savill, M.D., J. Priestley, M.D., Jas. T. Neech, L.R.C.P., F. C. Dodsworth, L.R.C.P.

Should time permit discussion on the following additional subjects will be invited.

1. Notification: Difficulties Experienced; Value of.
2. Hospital Isolation and Accommodation required for Urban Sanitary Districts, Counties, and Rural Districts.
3. The Value of the Bacteriological Determination of Cholera.
4. Port Preventive Measures and the 1893 Cholera Epidemic in England.
5. Infant Mortality in Relation to Female Labour.

N.B.—It is hoped that gentlemen who have promised papers will kindly note the days on which it is proposed they shall be taken.

E. PSYCHOLOGY.

Lecture Room No 4—University College.

President: G. F. BLANDFORD, M.D. *Vice-Presidents:* S. R. PHILIPPS, M.D.; FLETCHER BEACH, M.B. *Honorary Secretaries:* C. S. W. COBBOLD, M.D., Bailbrook House Asylum, Bath; R. S. STEWART, M.D., Glamorgan County Asylum, Bridgend.

On August 1st the President will open the work of the Section by giving an address upon the "Prevention of Insanity," and a discussion is specially invited upon this subject.

On August 2nd at 11 A.M. it is proposed to hold a discussion upon "The Law in Relation to the Criminal Responsibility of the Insane;" L. A. Weatherly, M.D., has promised to open it, and members of the legal profession will be invited to join (as visitors) in the debate.

The following additional discussions have been promised: The Treatment of Neurasthenia, to be opened by G. H. Savage, M.D. The Status of Assistant Medical Officers in Lunatic Asylums, to be opened by C. Mercier, M.B. Points Connected with the Education of Feeble Minded Children, to be opened by G. E. Shuttleworth, M.D.

The following gentlemen are expected to take part in the discussions: Drs. Fletcher Beach, H. A. Benham, Bourneville, E. M. Cooke, A. N. Davis, A. S. Eccles, C. K. Hitchcock, M.D., D. Nicolson, R. Noot, Rees Philipps, T. D. Savill, J. B. Spence, Hack Tuke, T. S. Tuke, Outterson Wood, and Oscar Woods.

The following papers have been announced:

ANDRIEZEN, W. Lloyd, M.D. Contributions and Suggestions towards a Pathological Classification of the Insanities (with Microscopic Demonstration of Specimens).
BEACH, Fletcher, M.D. On Defects and Mental Diseases in Children.
BLAKE, Henry, M.B. (Great Yarmouth). Four Cases Illustrating the Origin and Possible Prevention of Different Types of Insanity.
BULLEN, F. St. J., M.R.C.S. The Influence of Reflex and Toxic Agencies in Insanity and Epilepsy.
CAMPBELL, Harry, M.D. Train Panic.
FOX, B. B., M.D. A Case for Diagnosis.
KERR, Norman, M.D. Probationary Curative Restraint of the Alleged Insane.
RUTTLEDGE, Victor J., M.B. Facial Expression in the Insane, illustrated by an Album of Photographs.
SHAW, James, M.D. (Liverpool). The Early Treatment of Mental Cases in Private Practice.
SMITH, Telford, M.A., M.D. Cases of Sporadic Cretinism Treated by Thyroid Extract with lantern demonstration.
STEWART, R. S., M.D. The Spastic and Tabetic Types of General Paralysis.

Members attending the Section will be invited to inspect the Bristol City and County Asylum at Fishponds, near Bristol, on Thursday afternoon August 2nd, H. A. Benham, M.D. Medical Superintendent.

There will be a Lantern Demonstration: 1. On the effects on nerve cells of electrical stimulation and fatigue, as illustrated by Dr. Hodge, Clarke University, Mass. 2. The histological changes in ganglion cells, the result of functional activity, by Dr. Gustave Mann, communicated by Dr. Batty Tuke.

Notices of resolutions to be proposed by Dr. L. A. WEATHERLY and Dr. CHARLES MERCIER:

1. That in the opinion of this meeting the present law relating to the defence of insanity in criminal cases as laid down by the Judges in 1843, is not in accord with modern mental science and should be reconsidered.
2. That in the opinion of this Association the time has arrived at which it is desirable that the House of Lords should again ask the opinion of the Judges as to the questions that ought to be left to the jury in criminal cases in which the plea of insanity is raised.
3. That the Lord Chancellor be asked to receive a deputation from this Association on the subject.

F. PATHOLOGY.

Chemical Lecture Theatre—University College.

President: G. SIMS WOODHEAD, M.D. *Vice-Presidents* JOSEPH FRANK PAYNE, M.D.; M. A. RUFFER, M.D. *Honorary Secretaries:* NORMAN DALTON, M.D., 4, Mansfield Street, London, W.; C. A. MORTON, F.R.C.S., 24, St. Paul's Road, Clifton, Bristol.

On Wednesday, August 1st, S. Monckton Copeman, M.D., will introduce a discussion on the Pathology of Vaccinia. A. Stanley Kent will read a paper on the Histology of the Vaccine Vesicle. Professor Chauveau, of Paris: Dr. Voight, of Hamburg; M. A. Ruffer, M.D.; H. G. Plimmer, M.R.C.S.; Professor R. W. Boyce; S. Coupland, M.D.; A. P. Luff, M.D.; and T. W. Hime, M.D., are expected to speak on the subject of the Pathology of Vaccinia.

On the same day it is expected that the following papers will also be read:

POWER, D'ARCY, M.A., F.R.C.S. An Experimental Investigation into the Causation of Cancer.
CLARKE, T. Jackson, F.R.C.S. The Sporozoa of Cancer and the Sporozoa of Variola—a comparison.
SNOW, Herbert, M.D. (1) Cancer and Phagocytosis. (2) Marrow Infection and other Novel Points in the Pathology of Cancerous Diseases.
SURVEYOR, N. F., M.D., and BOYCE, R., M.B. The Fungus Foot Disease of India.

On August 2nd the following papers will probably be read:

CAMPBELL, Alfred W., M.D. Degenerations Consequent on Destructive Lesions of the Human Cerebellum.
RUSSELL, J. S. Risien, M.B. Degenerations consequent on Lesions of the Cerebellum.
TURNER, Aldren, M.D. The Central Connections of Certain Cranial Nerves.
MOTT, Frederick T., M.D. The Pathology of Amyotrophic Lateral Sclerosis.
TREVELYAN, E., M.D. The Morbid Anatomy of an unusual Case of Infantile Palsy, involving the whole length of the Cord.
MACFADYEN, Allan, M.D. The Biology of the Ringworm Organism.

Macfadyen, Allan, M.D., and Blaxall, F. R., M.D. Thermophilic Bacteria.
McWeeney, Edmund J., M.D. A Chromogenic Bacillus, perhaps Identical with Bacillus Chromo-aromaticus.
Fyffe, W. Kington, M.B. The Influence of Creasote on the Virulence of the Tubercle Bacillus.
Ritchie, James, M.B. Relation between Chemical Composition and Antiseptic Action.
Bokenham, T. J., L.R.C.P., and Fenwick, William Soltau, M.D. A Contribution to the Chemistry of Enteric Fever.

On August 3rd the following papers will probably be read:

Auld, A. G., M.D. A further report on the Suprarenal Gland and the Causation of Addison's Disease.
Murray, George, M.D. The Effects of Thyroidectomy in Rabbits.
Hutchinson, Jonathan, jun., F.R.C.S. Tertiary Syphilitic Lymphadenitis.
Harrison, Reginald, F.R.C.S. The Pathology of Enlarged Prostate.
Blaxall, F. R., M.D. Amœbic Dysentery.

Surgeon-Major Smyth, M.D., and Norman Dalton, M.D., will show sections of Malarial Tissues, and Leonard A. Bidwell, F.R.C.S., will show sections of Skin Grafts.

J. H. Targett, F.R.C.S., will give a lantern demonstration in the Museum on Wednesday afternoon on Hydatids in the Bones.

There will be an exhibition of specimens, bacteriological cultures, instruments for pathological research, etc., in the museum attached to the Section.

Pathological Museum.

Drs. Plimmer and Blaxall will exhibit in the Pathological Museum a collection of cultures of the pathogenic and non-pathogenic organisms with microscopic specimens of the most important bacteria from the bacteriological laboratories of the British Institute of Preventive Medicine.

More than one hundred specimens of special interest have been selected from the hospital museums in Bristol for the annual Pathological Museum.

G. Ophthalmology.

Medical Lecture Theatre, Medical School.

President: F. R. Cross, M.B. *Vice-Presidents:* H. E. Juler, F.R.C.S.; Simeon Snell, F.R.C.S. *Honorary Secretaries:* C. H. Walker, M.B., 3, Leicester Villas, St. Paul's Road, Clifton, Bristol; J. Tatham Thompson, M.B., 24, Windsor Place, Cardiff.

The following papers have been announced:

Beaumont, W. M., M.R.C.S. The Soldier's Red Coat as a cause of Retinal Hyperæsthesia.
Chisholm, J. J., M.D. (Baltimore). On the Good Effects of Dressing one Eye only after Cataract Extractions.
Clarke, Ernest, B.S., F.R.C.S. The Association of Blepharitis with Ametropia, with Analysis of 100 Cases.
Da Gama, Sir J. A. (Bombay). Some remarks on Subconjunctival Mercurial Injections in Syphilitic and other Diseases of the Eye.
Doyne, R. W., F.R.C.S. The Influence of Education as a Cause of Eye Disease.
Edridge-Green, F. W., M.D. A New Spectroscope for the Quantitative Estimation of Defects of Colour Perception.
Gould, G. M., M.D. (Philadelphia). On Slight Degrees of Eye Strain: their Pathological Effects and Therapeutical Treatment.
Griffith, John, F.R.C.S. Criticism concerning Recent Views as to the Secretory Function of the Ciliary Body.
Hewetson, H. B., M.R.C.S. 1. Blepharitis and Asthenopia in German Jew Tailors in Leeds. 2. Asthenopia and Headaches in Girl Machinists in Leeds. 3. The effects of Electric Welding Operations upon the Eyes.
Johnson, G. Lindsay, M.D. The Influence of Prolonged Excessive Light on Vision.
Jones, H. E., L.R.C.P. 1. Double Shadow in Koroscopy. 2. Contracted Field in Reynaud's Disease. 3. Hysterical Squint.
Juler, H., F.R.C.S. On the Diagnosis and Treatment of the Three Chief Forms of Contagious Ophthalmia, namely, the Catarrhal, the Purulent, and the Granular Varieties.
Landolt, Professor E. (Paris). Some Rules to Simplify the Diagnosis of Ocular Paralysis.
McGillivray, A., M.B. The Therapeutic Value of Ice in Ophthalmic Surgery.
Russell, J. S. R., M.B. Experimental Investigation of Eye Movements.
Rutter, Robert, L.M.Dub. Report on Three Cases of Orbital Tumour.
Scott, Kenneth, M.B. The Treatment of Granular Conjunctivitis or Trachoma.
Snell, Simeon, F.R.C.S. On the Relations of Occupation to Eyesight.
Snellen, Hermann. Keratitis Punctata.
Stephenson, Sydney H. A., F.R.C.S. Cellulitis following Mules's Operation.
Stevens, Dr. G. T. (New York). The Maintenance of Equal Rotation of the Eyes after Operations on the Ocular Muscles.
Taylor, S. J., M.B. A case of Probable Disease of the Lenticular Ganglion.
Thompson, J. L., M.D. (Indianapolis). Observations on some Phases of Opacity and Luxation of the Crystalline Lens.
Thompson, J. Tatham, M.B. Keratomalacia in Acute Infantile Jaundice.
Wray, C., F.R.C.S. Mixed Astigmatism.

A paper has also been promised by T. J. Bokenham, L.R.C.P.

H. Laryngology and Otology.

Physiology Lecture Theatre, Medical School.

President: P. McBride, M.D. *Vice-Presidents:* W. H. Harsant, F.R.C.S.; Barclay J. Baron, M.B. *Honorary Secretaries:* P. Watson Williams, M.D., 2, Lansdown Place, Victoria Square, Clifton, Bristol; W. Milligan, M.D., 28, St. John Street, Deansgate, Manchester.

The following subjects have been proposed for formal discussion:

August 1st.—The Prognosis of Chronic Non-Suppurative Otitis Media (with Imperforate Membrane), to be opened by G. P. Field, M.R.C.S., London, and Thomas Barr, M.D., Glasgow.

August 2nd.—The Treatment of Acute and Chronic Laryngeal Stenosis, to be opened by David Newman, M.D., Glasgow, William P. Northrup, M.D., New York, and Joseph O'Dwyer, New York (paper to be presented by Dr. Northrup).

August 3rd.—The Diagnosis and Treatment of Empyema of the Nasal Accessory Sinuses, to be opened by Greville Macdonald, M.D., London; Charters Symonds, M.S.Lond., F.R.C.S.

Urban Pritchard, M.D.; Dundas Grant, M.D.; Wyatt Wingrave, M.R.C.S.; R. Fullerton, M.D.; R. Mackenzie Johnston, M.D., J. B. Ball, M.D.; Scanes Spicer, M.D.; T. Mark Hovell, F.R.C.S.Ed.; H. B. Hewetson, M.R.C.S.; G. W. Hill, M.D.; C. W. Warden, M.D.; John Bark, F.R.C.S.Ed.; Dr. Birkett (Montreal); W. F. Brook, F.R.C.S.; Felix Semon, M.D.; J. Ward Cousins, M.D.; Mayo Collier, F.R.C.S.; Lennox Browne, F.R.C.S.Ed.; Scanes Spicer, M.D.; G. Jackson, F.R.C.S.; and J. W. Downie, M.B, have intimated their intention to take part in the discussions.

Time will also be allowed for the reading and discussion of special papers.

The following papers have been announced:

Barr, Thomas, M.D. Note on Removal of the Malleus in Cases of Suppuration from the Attic and Antrum.
Bronner, A., M.D. 1. On Intratympanic Injections in the Treatment of, *a*, Chronic Dry Catarrh of the Middle Ear; *b*, Chronic Purulent Catarrh of the Middle Ear. 2. On the Use of the Curette in the Treatment of Tuberculous Laryngitis.
Downie, J. Walker, M.B. The Care of the Ear during the Course of the Exanthemata.
Drinkwater, H., M.D. Treatment of Rhinitis Atrophicans or Ozœna.
Collier, Mayo, F.R.C.S. On the Surgery of the Frontal Sinuses.
Dutton, Thomas, M.D. Voice Hygiene.
Grant, Dundas, M.D. A More Exact Appreciation of Rinne's Test.
Harsant, W. H., F.R.C.S. The Hearing Power of Deaf Mutes.
Hill, G. W., M.D. Otitis Media Acuta, a Personal Experience.
Love, J. Kerr, M.D. Deafmutism as a Clinical Study.
McBride, P., M.D. Coryza Caseosa.
Metcalfe, G., M.B. A Case of Rudimentary Auricle.
Milligan, W., M.D. Observation upon Excision of the Ossicula Auditus in Chronic Suppurative Otitis Media.
Murdoch, Burn, M.D. Case of Fibrinous Rhinitis.
Permewan, W., M.D. 1. Laryngeal Paralysis in Chronic Nervous Disease. 2. Deafness and Stupidity in School Children.
Spicer, Scanes, M.D. A Successful Method of Examining the Larynx and Removing Laryngeal Growths in very Young or Unmanageable Children.
Williams, P. Watson, M.D. The Larynx in Typhoid Fever.
Wingrave, V. H. Wyatt, M.R.C.S. Turbinal Varix: its Pathology, Symptomatology, Diagnosis, and Treatment.

Mr. Thomas Chater will exhibit a working model of the Larynx, to show the movements of the Vocal Cords in producing various tones of Voice. (Demonstrated by Dr. Scanes Spicer.)

I. Dermatology.

Lecture Room No. 3—University College.

President: A. J. Harrison, M.B. *Vice-Presidents:* Stephen Mackenzie, M.D.; H. Waldo, M.D. *Honorary Secretaries:* J. Hancocke Wathen, M.R.C.S., 16, York Place, Clifton, Bristol; H. Leslie Roberts, M.D., 46, Rodney Street, Liverpool.

Wednesday, August 1st, 10 A.M.—Lupus: its Etiology, Pathology, and Relations to Other Forms of Cutaneous Tuberculosis, introduced by Professor Leloir. H. G. Brooke, M.B.; Norman Walker, M.B.; Henry Waldo, M.D.; G. W. Potter, M.D.; James Startin, M.R.C.S.; and Dale James, M.R.C.S., have promised to take part in the discussion.

Thursday, August 2nd, 10 A.M.—Management of Eczema, introduced by Malcolm Morris, F.R.C.S.Edin. E. D. Mapother, M.D. (London), A. S. Myrtle, M.D. (Harrogate), T. D. Savill,

M.D., James Startin, M.R.C.S., David Walsh, M.B., J. Brown, M.D., and G. W. Potter, M.D., will take part in the discussion.

A paper by Dr. G. Echeverria will be read by Dr. Unna on Dr. Savill's Epidemic Disease, and preparations shown.

Etiology and Treatment of Acne, introduced by Stephen Mackenzie, M.D. Phin. S. Abraham, M.D., A. Eddowes, M.D., James Startin, M.R.C.S., Leslie Phillips, M.D., J. Brown, M.D., and Leslie Roberts, M.D., have promised to take part in the discussion.

Friday, August 3rd, 9.30 A.M.—The Nervous Origin of Diseases of the Skin and its Importance in Treatment. Radcliffe Crocker, M.D., T. Colcott Fox, M.B., Stephen Mackenzie, M.D., T. D. Savill, M.D., H. Handford, M.D., and G. W. Potter, M.D., have promised to take part in the discussion.

The following papers have been announced:

ABRAHAM, P. S., M.D. An Improved Apparatus for the Introduction of Germicidal Fluids into the Scalp under Pressure.
ANDERSON, Professor McCall. On the Necessity on the Part of the Student for the Clinical Study of Dermatology.
BOWLES, R. L., M.D. Observations on the Scientific Aspect of the Influence of Solar Rays on the Skin.
BROOKE, H. G., M.B. Trade Eczema or Dermatitis.
DUNBAR, Eliza L. W., M.D. The Use of Belladonna in Allaying Irritation and Healing Certain Skin Diseases.
EDDOWES, A., M.D. The Ways of Infections: their Importance as regards Treatment of Skin Affections and the Prevention of Relapses.
FOX, T. Colcott, M.B. Remarks on a Case of Mycosis Fungoides.
HUTCHINSON, Jonathan, F.R.C.S., F.R.S. On Certain Diseases of the Skin induced by Exposure to Sun.
JAMES, Dale, M.R.C.S. Some Relations between Psoriasis and Eczema.
ROBERTS, H. Leslie, M.D. The Present Position of the Question of Vegetable Hair Parasites.
STARTIN, James, M.R.C.S. Treatment of Psoriasis by Tar and Chrysophanic Acid.
TAYLOR, Stopford, M.D. Remarks on a Case of Mycosis Fungoides (will exhibit patient).
WALDO, Henry, M.D. Treatment of Favus of Scalp and Nails.
WALKER, Norman, M.B. Note on Pigmented Tumours of the Skin.
WALSH, David, M.B. A Case of Symmetrical Lupus in Seton Scars.

Dr. Unna will demonstrate various organisms associated with skin diseases.

J. DISEASES OF CHILDREN.

Lecture Room No. 5—University College.

President: W. HOWSHIP DICKINSON, M.D. *Vice-Presidents:* JOHN EDWARD SHAW, M.B.; FREDERIC S. EVE, F.R.C.S. *Honorary Secretaries:* R. W. MURRAY, F.R.C.S., 15, Rodney Street, Liverpool; BERTRAM M. H. ROGERS, M.D., 11, York Place, Clifton, Bristol.

On Wednesday, August 1st, a discussion on the Treatment and Complications of Whooping-Cough. To be opened by J. Carmichael, M.D. The following gentlemen have signified their intention to take part in the discussion: C. Elliott, M.D., E. Mansel Sympson, M.D., and F. W. Burton-Fanning, M.D.

August 2nd.—Diphtheria: Its Diagnosis and Treatment. To be opened by H. R. Hutton, M.D. The following gentlemen have signified their intention to take part in the discussion: J. Dacre, L.R.C.P., W. G. Black, F.R.C.S., W. P. Northrup, M.D. (New York), E. Mansel Sympson, M.D., A. Murray Gray, L.R.C.P., J. E. Shaw, M.B., F. Wethered, M.D., P. Watson Williams, M.D., H. D. Chaplin, M.D., (New York), T. Eastes, M.D., J. Broom, L.R.C.S., and T. Pagan Lowe, L.R.C.P.

August 3rd.—The Treatment of Tuberculous Disease of Joints. To be opened by Frederick S. Eve, F.R.C.S. The following gentlemen have signified their intention to take part in the discussion: J. Ewens, L.R.C.P., A. E. Barker, F.R.C.S., Noble Smith, F.R.C.S. Edin., D'Arcy Power, M.B., W. G. Black, F.R.C.S., A. Parkin, M.D., C. H. Milburn, M.B., R. Jones, F.R.C.S., E. L. Freer, M.R.C.S., W. Thomas, F.R.C.S., and Jordan Lloyd, F.R.C.S.

The following papers have been announced:

BROOM, John, M.D. Some Remarks and Experience on a New Remedy for the Topical Treatment of Infectious and Non-infectious Follicular Ulceration of Mucous Membranes.
CHAPLIN, HENRY D., M.D. (New York). A System of Infantile Measurements.
EWENS, J., L.R.C.S., and L.R.C.P. Deformities of the Lower Extremities (with Exhibition of Cases).
FREER, E. LUKE, M.R.C.S. 1. Some Notes on the Orthopædic Treatment of Deformities, with Illustrative Cases. 2. An Effective and Inexpensive Instrument for the after-treatment of Talipes.
JONES, H. R., M.D. How the Health of Infants is Influenced by their Food.
JONES, ROBERT, F.R.C.S. 1. The Treatment of Paralytic Joints. 2. The Treatment of Injuries about the Elbow-joint in Children.
LLOYD, Jordan, F.R.C.S. The Treatment of Curvatures of the Long Bones by Simple Fracture.
MACKEY, E., M.D. A Case of Multiple Neuritis in a Child, with Remarks.
MORGAN, GEORGE, L.R.C.P. Varicella Bullosa.
MILBURN, C. H., M.B. Osteotomy for Genu Valgum.
MURRAY, R. W., F.R.C.S. The Treatment of Rickety Deformities by means of Osteoclasis.
PARKIN, ALFRED, M.D. The Treatment of Spinal Caries and its Results by Laminectomy.
POWER, D'Arcy, M.B. The Value of Bursal Enlargements as Indications of Incipient Tuberculous Arthritis.
ROUÉ, BARRETT, M.D. The Study of Diseases of Children and its Place in the Medical Curriculum.
TUBBY, A. H., F.R.C.S. Craniectomy for Microcephaly and its Results.

Dr. Northrup will show for Dr. O'Dwyer (New York) an apparatus for artificial respiration.

Honorary Local Treasurer: W. JOHNSTONE FYFFE, M.D., Rodney Place, Clifton.

Honorary Local Secretary: E. MARKHAM SKERRITT, M.D., Edgecumbe House, Richmond Hill, Clifton.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 31ST.

9.30 A.M.—Meeting of 1893-94 Council.
11 A.M.—First General Meeting, Large Hall, Victoria Rooms. Report of Council. Reports of Committees and other business.
3 P.M.—Service in the Cathedral, sermon by the Rev. Canon Ainger.
8.30 P.M.—Adjourned General Meeting from 11 A.M. President's Address, and any business adjourned from Meeting at 11 o'clock.

WEDNESDAY, AUGUST 1ST.

9.30 A.M.—Meeting of 1894-95 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
11 A.M.—Organ Recital at the Colston Hall.
2 P.M.—Opening of the Clifton Spa and Pump Room. Luncheon by Mr. Newnes.
2.30 P.M.—Second General Meeting, Large Hall, Victoria Rooms. Address in Medicine by Sir Thomas Grainger Stewart, M.D. Presentation of Middlemore Prize.
4.30 P.M. to 6 P.M.—Garden Party given by Mr. Lewis Fry at Goldney House, Clifton.
8.30 P.M.—Reception by the President and the Executive committee [illegible] College. [illegible] Zoological Gardens.

THURSDAY, AUGUST 2ND.

9.30 A.M.—Meeting of Council.
10 A.M. to 2 P.M.—Sectional Meetings.
11 A.M.—Excursion round the City Docks by invitation of the Docks Committee.
3 P.M.—Third General Meeting, Lecture Room of Victoria Chapel (opposite Reception Room). Address in Surgery by Mr James Greig Smith, M.B.
4 P.M. to 6 P.M.—Garden Party given by Sir Greville and Lady Smyth at Ashton Court.
4.45 P.M. 7 P.M.—Garden Party given by the Head Master of the Grammar School and Mrs. Leighton at the Grammar School.
7 P.M.—Public Dinner of the Association.

FRIDAY, AUGUST 3RD.

9.30 to 11 A.M. Sectional Meetings.
11 A.M.—Concluding General Meeting, Large Hall, Victoria Rooms. Address in Public Medicine by Sir Charles Alexander Cameron.
1.30 P.M.—Luncheon at the Merchant Venturers Hall by invitation of the Society of Merchant Venturers.
1.30 P.M.—(Special train, Clifton Downs Station). Luncheon at the Assembly Rooms, Bath, by invitation of the Mayor and Corporation of Bath.
3.20 P.M.—(Special train, Clifton Downs Station). Reception at the Pump Room, Bath, by the Bath Section of the Bath and Bristol Branch.
4.1 P.M.—(Ordinary Fast Train, Bristol Station). Visit to Clevedon by invitation of Residents of Clevedon. Luncheon.
2.30 P.M.—Visit to the Bristol Waterworks Reservoirs at Barrow Gurney.
8 P.M.—Reception by the Mayor of Bristol in the Colston Hall. Concert by the Madrigal Society 8.30 P.M.

SATURDAY, AUGUST 4TH.

Excursions.

9.15 A.M.—To Berkeley Castle.
10.10 A.M.—To Chepstow, Tintern, and Symonds Yat.
9.25 A.M.—To Wells and Glastonbury.
9 A.M.—To Weston-super-Mare and Cheddar.
9 A.M.—To Lynmouth and Ilfracombe.

Places of Interest.—The Cathedral, College Green. St. Mary's, Redcliffe. The Mayor's Chapel, College Green. The Council House, Corn Street. St. Peter's Hospital, Peter's Street. The Museum and Library, Queen's Road. The Zoological Gardens, Guthrie Road.

Hospitals.—(Open to Members at any time). The Bristol Royal Infirmary, Maudlin Street. The Bristol General Hospital, Guinea Street. The Bristol Hospital for Sick Women and Children, St. Michael's Hill. The Bristol Eye Hospital, Lower Maudlin Street.

Clubs.—(On production of card of membership). The Clifton Club, The Mall. The Literary and Scientific Club, Berkeley Square. The Salisbury

Club, Queen's Road. The Constitutional Club, St. Stephen Street. The Liberal Club, Clare Street. The Commercial Rooms, Corn Street.

Theatres.—The Prince's Theatre, Park Row; *The Private Secretary*. The Theatre Royal, King Street; *Lost in London*.

Works, etc.—(Tickets to be obtained at the Reception Room.) Messrs. J. S. Fry and Sons, Chocolate and Cocoa Manufactory, 11 to 25, Union Street; August 1st and 2nd, 3 P.M. to 4.30 P.M., 30 each day. Victoria Pottery, St. Philip's Marsh; July 31st and August 1st, 11 A.M. to 1 P.M., unlimited. Messrs. Robinson and Co.'s Paper Factory, 1 to 4, Redcliffe Street, ; August 2nd, morning and afternoon, 3 parties of 20. Messrs. W. D. and H. O. Wills's Tobacco Factory, East Street; July 31st and August 2nd, 10.30 A.M. and 2 P.M., unlimited, in parties of 20. Messrs. Spillers and Baker's Flour Mills, Redcliffe Back; August 1st and 3rd, at 11 A.M., 15 each day, gentlemen only. Messrs. Edwards, Ringer, Bigg's, and Co.'s Tobacco Manufactory, 60, Redcliffe Street; August 1st and 2nd, at 10 A.M., unlimited. Atlas Engine Works, St. George; August 1st and 2nd, any hour, unlimited. Messrs. Llewellyn's and Laines's Bell Foundry, Castle Green; July 31st, August 1st, 2nd, and 3rd 10 A.M. to 1 P.M., 2 to 5 P.M., unlimited. Messrs. Price, Sons, and Co.'s Stoneware Pottery, 39-44, Thomas Street; August 1st and 2nd, 11 A.M. to 1 P.M., and 2 P.M. to 4 P.M., unlimited, in parties of 12. Bristol Wagon Works, Lawrence Hill; August 1st and 2nd, at 11.30 A.M. and 3.30 P.M., unlimited in parties of 20. Messrs. Champion and Co.'s Confectionery Works, Lewin's Mead; August 1st, 2nd, and 3rd, at 3 P.M., 40 each day.

Drives.—Cadbury Camp, Brockley Coombe, Penpole Point, Blaise Castle, Arbutus Walk, and Henbury, Leigh Woods, and Nightingale Valley.

RECEPTION ROOM.

A room at the Victoria Rooms, Clifton, Bristol, will be opened at 4 o'clock in the afternoon on Monday, July 30th, and on Tuesday, July 31st, and the following days at 9 o'clock, for the issue of tickets to members and for supplying all necessary information. It is particularly requested that members on their arrival will at once proceed to the reception room, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult the list of lodgings, hotels, etc.

DINNER TICKETS.

Dinner tickets may be obtained on application to Mr. J. Paul Bush, Vyvyan House, Clifton Park.

The exhibitors in the Annual Museum have arranged to open the exhibition with a *conversazione* on the evening of Tuesday, July 31st, to be held immediately after the President's address.

NOTICES OF MOTION.

Dr. JOHN INCE hereby gives notice that he will move:

That this meeting regrets the great and growing increase in the annual expenditure as compared with the income of the Association; and suggests to the Council the expediency of a careful and substantial reduction thereof in all departments, especially in the matter of the editorial and office expenses, which appear out of all proportion to the needs and nature of the BRITISH MEDICAL JOURNAL.

Dr. MEAD hereby gives notice that he will move:

(1) That a Committee be appointed to bring the matter of railway fares of members attending the annual and local meetings of this Association, before the railway companies, with a view to the obtaining of return first class tickets at single fares for all members attending such meetings. That a sum not exceeding be granted for the purpose of defraying the expenses of members of such Committee attending as deputation on the various railway authorities.

(2) That when practicable ladies be admitted to the dinner of the British Medical Association.

Dr. T. GARRETT HORDER hereby gives notice that he will move:

That this meeting strongly recommends the Council to constitute an Ethical Section at the annual meetings.

July 20th, 1894. FRANCIS FOWKE, *General Secretary*.

REGISTRATION OF MIDWIVES.

AT the annual meeting of the Bath and Bristol Branch held on June 27th, Dr. Flemming introduced the subject of the registration of midwives, which was discussed by Drs. Aust Lawrence, Markham Skerritt, Broom, Ewens, Harrison, and Alford; and it was resolved to postpone the further consideration of the subject until there was a Bill before Parliament.

THE French Society of Dermatology and Syphiligraphy will hold its fifth annual meeting this year at Lyons on August 2nd and two following days.

SPECIAL CORRESPONDENCE.

PARIS.

Paris and its Water Supply.—Medical Aid for Deep Sea Fishermen.—French Hospital at Constantinople.

THE Paris water companies have constructed on the heights of Montreuil-sous-Bois two large water reservoirs, each of a capacity of 10,000 cubic metres. These reservoirs are for filtered water, to be distributed among the communes situated at the east of Paris. An accident has happened at the moment the works are approaching completion. Two workmen were killed, and the filtered water cannot be distributed for another twelve months.

A circular of instruction, sent by the Minister of Marine to captains of fishing vessels giving them medical directions to be carried out in the absence of a medical man, is exciting the amusement and indignation of the medical press. The word "diachylon" is explained to mean bands used to bring together the edges of wounds, and an illustration is given of two large wounds dressed in this way. The Minister of the Marine evidently does not know that there is only one surgeon in Paris (whom it is unnecessary to name) who dresses wounds in this way. Neither the circular of instructions nor the surgical chests supplied are satisfactory. The *Progrès Médical* suggests that "private initiative" should organise "boat hospitals" to provide the sailors at sea on fishing vessels with immediate medical relief.

M. Cambon, the French Ambassador at Constantinople, has laid the first stone of the French hospital at Taxim. Most of the distinguished and influential members of the French colony were present, but all festivities were avoided on account of the tragic death of President Carnot and the still more recent catastrophe at Constantinople.

ST. PETERSBURG.

The Twelfth International Medical Congress.—Medical Conference in Saratof.—A Bicentenary.

IT has been finally decided to hold the Twelfth International Medical Congress in Moscow, and the University of Moscow has undertaken to make the necessary arrangements.

A conference of physicians representing the Governments of Saratof, Tambof, Voronezh, Astrakhan, Samara, Simbirsk, and the Don Cossack Territory will be held this autumn in Saratof.

On August 19th (31st) two centuries will have passed since the degree of Doctor of Medicine was first conferred on a native of Russia. In 1694 Petr Vassilievitch Postnikof, who was born in Moscow, obtained his Doctor's degree in the University of Padua. At that time there were no medical degrees granted in Russia. The University of Moscow was founded in 1755, but it was not until 1793 that it obtained from the Empress Catharine II powers to confer a degree of Doctor of Medicine. The first to receive it was Dr. Thoma Moiseëf, the subject of whose dissertation was "De Respiratione." He was afterwards Extraordinary Professor of Pathology and Dietetics in the same University.

CORRESPONDENCE.

"A GIGANTIC ABUSE."

SIR,—In April last you published a letter under the above heading from Dr. Rushton Parker, of Kendal, in which he stated that, a few years ago, while a regular attendant on the hospital practice at Moorfields, he, with a view to write a thesis for his M.D. degree, made a study of 100 cases of interstitial keratitis, which he collected in nine months out of a ninth part of the practice at that hospital; that he made a point of seeing the parents, and brothers, and sisters of most of his cases, in order to study the history and signs of syphilis in each family, and that he was confident that the vast majority were well able to pay reasonable fees; and that he still had the names and addresses of all his cases, and was ready to hand them over to anyone who would undertake to investigate this point. I wrote to Dr. Parker, and having

obtained the names and addresses, placed them in the hands of the Charity Organisation Society, from whom I have this week received a reply, to the effect that with regard to the Royal London Ophthalmic Hospital it appears to be almost impossible to make any new inquiries. The authorities at the hospital, it seems, now employ an inquiry officer to ascertain those patients who are *primâ facie* able to pay a consultant's fee of one guinea, and these are debarred from further attendance. "In fact, it appears," adds my informant, "that they are acting in defence of the staff of the hospital alone, and not in any way either in the interest of general practitioners, or of charitable work generally."

No doubt the staff of the hospital will feel bound to take notice of a statement made on such excellent authority.—I am, etc.,

Dulwich, July 21st. H. NELSON HARDY.

"THE HEALTH CONGRESS."

To the Editor of the BRITISH MEDICAL JOURNAL.

SIR,—I sent the following letter to the Lord Mayor on July 19th, but have not yet received any reply.—I am, etc.,

Brompton Square, S.W., July 24th. JOHN BRAYE.

44, Brompton Square, S.W., July 19th, 1894.

To the Right Hon. the Lord Mayor,

MY LORD,—Several months ago you sent a letter to the Vestry of Kensington inviting delegates to a Health Congress, to be held in the City from July 25th to 31st. Believing the letter to be an invitation to a *bonâ fide* congress to discuss matters of interest to the public I moved a resolution in the Vestry to appoint delegates. The Vestry agreed, and appointed myself as one. A few days ago I received a letter from the Vestry Clerks of Shoreditch and St. Giles's demanding 21s. for a delegate's ticket, offering as an inducement to hurry up with the cash a free visit to Messrs. Barclay and Perkins's brewery and a visit to the Small-pox Hospital at Long Reach, finishing up with a half price entertainment at Drury Lane Theatre.

My time is much too useful to spend time or money on such matters, and further I consider it a distinct breach of faith to invite people to a congress and then to demand money after the invitation has been accepted under the impression that time only was asked for.

I am, my Lord, yours truly,

JOHN BRAYE,
Member of Kensington Vestry.

THE PROPOSED REGISTRATION OF MIDWIVES.

SIR,—In the BRITISH MEDICAL JOURNAL of July 14th you publish a letter from Dr. Rentoul giving an epitome of his latest views on the registration of midwives for the benefit, as he says, of some inquirers. I say "latest" advisedly, for his views have changed so considerably that it is likely enough he should be asked to recapitulate them.

I have before me a letter written by him to the late Dr. James Aveling, who had asked for a categorical reply on certain points respecting Dr. Rentoul's views about midwives. The letter is dated December 2nd, 1890, and gives Dr. Rentoul's views, of that period, in his own words, which I will quote.

After advocating in this letter the appointment of a committee by the House of Commons, he goes on to say, "I should like the committee to take and collect evidence on the education, examination, registration, supervision, and practice of midwives, both at home and abroad;" and he adds, "If the committee reported in favour of a registration Bill ..... my opposition would be as chaff"; and he says still further, "If the Bill would be a good one ..... then I would work for it."

The committee was appointed, and was reappointed, and gave its verdict entirely in favour of legislation after having collected evidence on all the points mentioned. Dr. Rentoul has, however, changed. He now says that his aims are "to oppose any proposed legislation for the so-called registration of midwives."

It may be of use to point out some of the inconsistencies between Dr. Rentoul's aims and his arguments. He says in his letter in the JOURNAL of July 14th that one of his present aims is "to supply all pregnant women ..... with fully educated and qualified practitioners in their confinements." and refers to his pamphlet for further amplification of his views. I refer to his pamphlet (third edition), and find on p. 64 as follows: "The public are more than amply provided for" in respect to the present available means for supplying every poor woman with skilled medical aid in childbirth.

Another of his aims is "not to interfere with the present midwives, but to insist that no more midwives be created"—that is, no more midwives are to be trained, and the present untrained woman is to be allowed to go on handing down, as in former generations, to her descendants the legacy of ignorance and self-importance she herself inherited.

In the letter of 1890 Dr. Rentoul complains that the Bill then before the public (and long since withdrawn) dealt only with registration, and not with education, because "the rules relating to education are yet optional, and the training schools won't adopt them." He now proposes in a general manner to improve the education of obstetric nurses, and to register them in a manner which will have no legal force. A woman thus "registered" would be fully entitled to strike herself off the "register" and set up as a midwife, without the least guarantee as to her fitness. What benefit would such a registration be, either to the community or to the obstetric nurse?—I am, etc.,

Fellows Road, N.W., July 18th. J. ROWLAND HUMPHREYS.

THE PROPOSED AMENDMENT OF THE MEDICAL ACTS.

SIR,—As a member who has had some practical experience in dealing with quacks and other unqualified practitioners, I venture to say that there is one part of the proposed amendments to the Medical Act which ought to be carefully considered before it is finally approved. I allude to the following paragraph:

"1. He shall not be guilty of an offence under this Act:

"*a.* If he shows that he is not ordinarily resident in the United Kingdom, and that he holds a qualification which entitles him to practise medicine or surgery in a British possession or foreign country, and that he did not represent himself to be registered under the Medical Acts."

Now, Sir, it is well known to most practitioners that from time to time we are honoured with the presence of ladies and gentlemen who hold qualifications of an American origin. These persons do not hide this light under a bushel: they adopt means of advertising themselves which, if adopted by registered practitioners in their country, would certainly lead to their being struck off the *Register*. These persons again do not scruple to deliver lectures to women, which cannot be characterised as anything but improper and indecent: they do not hesitate to make statements about the profession generally which are anything but flattering to us; and yet it is seriously proposed to exempt such persons from any penalty under the proposed Amended Act. I will only say in conclusion that if we are going in for an amendment of the Medical Acts, let us by all means have such a measure as will protect the general practitioner from the encroachments of the bogus degree man as well as from the ordinary quack doctor.—I am, etc.,

Cardiff, July 24th. T. GARRETT HORDER.

THE HOLY WELL AT SHIREHAMPTON.

SIR,—A letter appears in the BRITISH MEDICAL JOURNAL of July 21st calling attention to the Holy Well here. If any members of the Association care to visit it I shall be most happy to act as their guide, and also to show them Pempole Point. The vicar would, I am sure, have been most pleased to have done this himself, but unfortunately he is away from home and I do not think he will be back in time.—I am, etc.,

Shirehampton, July 22nd. CHARLES HOLTOM, M.R.C.S.

PROFESSOR CROOKSHANK'S EVIDENCE BEFORE THE ROYAL VACCINATION COMMISSION.

SIR,—Surgeon-Major Pringle has been misled by the article in the BRITISH MEDICAL JOURNAL on my evidence before the Royal Vaccination Commission, and I must express regret that an article—I cannot call it a criticism—so one-sided and misleading, should have appeared in the JOURNAL of our Association. I have not recommended the old and dangerous plan of small-pox inoculation as a substitute for the present system of public vaccination. What I have recommended is clearly stated on p. 123 of my evidence. I would suggest that Surgeon-Major Pringle should read my work on the *History and Pathology of Vaccination*, and my evidence before the Commission, as I shall not be able to be

present at the Bristol meeting, and any discussion with Surgeon-Major Pringle would not, under the circumstances I have referred to, be of any value whatever.—I am, etc.,

East Grinstead, July 17th. EDGAR M. CROOKSHANK.

*** We shall be glad if Professor Crookshank will point out any points in which the article in question is misleading.

SHORTHAND IN MEDICINE.

SIR,—In order to promote the use of shorthand in medicine it is desirable that a list should be compiled of all those who use it. We would, therefore, ask each practitioner and student who is acquainted with phonetic shorthand to send his name and address to Dr. Neil, Warneford Asylum, Oxford. A printed copy of the list will be sent to each one whose name appears on it. The preparation of a list of medical phonographers is intended as a preliminary step towards such further measures for mutual help and encouragement as may appear advisable.—We are, etc.,

W. R. GOWERS, M.D., F.R.C.P.
EDWD. B. GRAY, M.D.
July 21st. JAMES NEIL, M.D.

THE DISPUTE IN THE MEDICAL DEFENCE UNION AND THE NEW MEDICAL DEFENCE ASSOCIATION.

SIR,—As mover of one of the resolutions passed at the largely-attended meeting of members of the Medical Defence Union, held on April 18th, space is craved to express regret that some members of the Union should seek to establish another defence association. Surely those who, like myself, considered the Council blundered in the matter of Collie *v.* Bloxham, will have opportunity enough to express and carry their views at the special general meetings shortly to be held; and again, at the annual general meeting for the election of councillors, the dissentients, if attending in sufficient force, would be able to fill the vacant seats with men of their own choice. The reforms needed—an entirely elective executive and a narrowing of the field of work—should be sought within the Union by constitutional agitation.

It is lamentable that within a few years two fresh societies should be started for medical defence, as a result of differences in the Medical Defence Union. In order to have a society strong to protect its members and feared and respected by the public, it is to be hoped none will "leave the old ship, seaworthy still."—I am, etc.,

Eltham, July 18th. H. HAVELOCK STURGE.

OBITUARY.

JOHN CAPORN SMITH, M.R.C.S., L.S.A., J.P.

MR. JOHN CAPORN SMITH died on July 15th at his residence in Great Yarmouth. Mr. Smith was born at Northampton in 1812. He was educated at Merchant Taylors' School and St. Bartholomew's Hospital, taking the diploma of M.R.C.S. in 1834, and that of L.S.A. in the subsequent year. He commenced practice in Great Yarmouth in 1836. He was early in his career appointed Surgeon to the Great Yarmouth Hospital; for many years he was Surgeon to the old East Norfolk Militia; and for the last thirty-nine years was Surgeon to the Great Yarmouth Workhouse, retiring from that position on account of failing health in March last, when he was unanimously voted by the guardians a superannuation annuity of two-thirds of his salary. Independently of appointments he had for many years an extensive private practice. He was a very old member of the British Medical Association, and some years since was President of the East Anglian Branch. Apart from his professional duties he was an alderman and senior magistrate for the borough. He was a prominent Freemason, three times master of his lodge, and on two occasions Senior Provincial Grand Warden of the Provincial Grand Lodge of Norfolk.

On the occasion of the fiftieth anniversary of his wedding day on January 12th, 1886, Mr. Smith was the recipient of handsome presents and addresses from the magistrates, brethren of his lodge and from his medical brethren; the address from the latter testifying to his high professional conduct throughout his long career. His funeral took place on July 19th at the parish church, Great Yarmouth, and was attended by many of his friends and late patients. Many members of the medical profession attended, and the Mayor and Corporation, as well as many of the Town Council, were present. The board of guardians were represented, and six staff sergeants from his old regiment attended from their headquarters at Norwich. He was attended during his last illness with the greatest kindness by his friend of many years, Mr. W. E. Wyllys. He has left a widow, one son—who is a member of the medical profession—and three daughters to mourn his loss.

MR. TOM BRISTOW, L.R.C.P.& S.Edin., whose death occurred at his residence, 50, George Square, Edinburgh, on July 2nd, was born at Halifax in 1860. He was left an orphan at an early age, and commenced his professional studies at Edinburgh, where he took the L.R.C.P. and L.R.C.S. qualifications in 1883. After a short period of work in a country practice, he was invited to undertake the duty of superintendent of the department of Midwifery and Gynæcology in the Marshall Street Dispensary, an appointment which he retained for nearly two years. In this office by his untiring and ceaseless devotion to work he laid the foundation of his successful after career as a general practitioner. He was an able and conscientious physician. The deceased took an active interest in the Edinburgh Branch of the British Medical Association, and in the promotion and prosperity of of the Edinburgh Yorkshire Association. At the time of his death he held the office of surgeon to the Edinburgh High Constables, and he leaves a widow and two children, the youngest only two months old.

DR. WILLIAM PEEL NESBITT, who died at Salisbury, near Adelaide, South Australia, on May 12th, aged 44, studied medicine at the University of Edinburgh, where he graduated in 1873. After holding the office of House-Physician at the Edinburgh Royal Infirmary, he went out to South Australia in 1875, and settled at Kooringa, where he was Surgeon to the Burra Hospital. In 1880 he removed to North Adelaide, where he was for a time Resident Surgeon at the Children's Hospital. Later he went to Salisbury, where he held the position of Medical Officer of the Yatola Labour Prison, which appointment he was compelled by failing health to resign about the middle of last year. Dr. Nesbitt was one of the most energetic members of the Adelaide Branch of the British Medical Association during the early years of its existence.

WE regret to announce the death of Dr. E. A. BRIGGS, at La Rocque, Jersey, on July 16th, when he was seized with serious illness during the night. Dr. Briggs, who was 54 years of age, took the degree of M.D.Edin. in 1866. He was the first to obtain the necessary permission to practise in the island under the existing law from the Royal Court on May 16th, 1878. Owing to ill-health, however, the deceased had not practised for the last ten years.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 8s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A SURGEON-CAPTAIN in one of the best stations in the Bengal Presidency, where officers can get the hills every year if they wish and there is no shunting about, having two years yet to put in to complete his six of Indian service, wishes to exchange home or with an officer in Gibraltar, Malta, Egypt, or Cyprus, or any Colonial station, who has about a similar time—namely, two years—to serve in any of the above mentioned stations. Address, "Exchange," William Watson and Co., Bankers, Kurrachee, India.

A SURGEON-CAPTAIN, who arrived home in May, 1893, wishes to exchange to India, Hong Kong, or Jamaica. Apply, with full particulars and approximate time of embarkation, to 3,016, care of Messrs. Holt and Co., Whitehall Place, S.W.

THE NAVY.

THE following appointments have been made at the Admiralty: ROBERT D. JAMESON, Surgeon, to the *Magnet*, July 18th; Joseph H. WHELAN, Surgeon to the *Warepite*, temporarily, July 23rd.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL EVIDENCE AT INQUESTS.

M.B., B.S LOND. complains that at a recent inquest the jury returned a verdict that the deceased died from the effects of lockjaw following injury to the hand from an accidental cause. Our correspondent medically attended the deceased, but he was not called to give evidence at the inquest, and he writes to ask, Is this fair?

*** It is quite within the province of the coroner and jury to call or to dispense with medical evidence, but we have often expressed the opinion that no inquest concerning the cause of death is complete without it, and often in the absence of medical testimony the verdict is not only unsatisfactory, but sometimes borders upon the ridiculous. In the present instance it is probable the verdict was a correct one, nevertheless we cannot but consider that the verdict must have been arrived at upon hearsay evidence which should not have been admitted when direct skilled evidence was at hand.

CERTIFICATES IN LUNACY.

MEMBER OF THE BRITISH MEDICAL ASSOCIATION writes: Lodgings are taken by the relatives of a person of unsound mind in an ordinary lodging house, and the person of unsound mind resides in these lodgings with a nurse, and attended by a doctor, the whole expense being defrayed out of the patient's own property. Is this procedure, without a licence, legal on the part of all the parties (relatives, nurse, and doctor) concerned; or are any of them (and, if so, which) bound by the present lunacy laws to report the case to the Commissioners of Lunacy, and to obtain a licence for the care of the patient?

*** The person who has charge of the patient should have sent to the Commissioners in Lunacy a notice of admission of the patient in the form prescribed by the Act, together with copies of the reception order and medical certificates under which the patient was so admitted into the lodging house; also a statement of the Christian and surname and occupation of the occupier of the house, and of the person who has charge of the patient. Also a medical statement, in the form prescribed by the Act, should have been sent by the medical practitioner who visits the patient. All the above should be sent within the time required by the Act. If the provisions of the Act have not been complied with, the lodging house keeper is by the Act guilty of a misdemeanour, and liable to a penalty not exceeding £50.

UNPROFESSIONAL CONDUCT.

L.R.C.P.I.—It is very difficult to advise our correspondent under the circumstances he details. The treatment he complains of is very unprofessional if the facts are correctly reported. No practitioner, however long established, has any freehold in his practice nor has he a tittle of right to treat as a trespasser on his preserves a brother professional so long as the latter practises his profession in a becoming manner in accordance with medical etiquette and uses no underhand means of gaining the patients of the former, but competes with him in an open and honourable manner. Hints on this point to our correspondent we may tell him that such conduct as he describes inevitably recoils on the head of the practitioner guilty of the same, that the public are very apt to gauge it at its true merit, so that the injured party is often a gainer by it rather than a loser in the long run.

NOTIFICATION DIFFICULTIES.

MR. H. AND DRS. A. AND T.—A dispassionate review of the correspondence, extending over twelve closely written 4to pages, which has passed between Mr. H. and Drs. A. and T., relative to the assumed duties of the two latter as medical officers of health—the last being also parish doctor for the district referred to—leaves but little doubt on the mind that Dr. A. in calling upon Mrs. - , and impressing her with the belief that she was liable to a fine "for not herself notifying to him the infectious case of her child, and causing her then to do so," notwithstanding that he had received a "notifying certificate" from the practitioner in attendance thereon; and further, in visiting, unasked, many of the villagers to inquire if there were "measles" in their respective houses, and "informing them that he was the right person to notify any case that might occur," he (Dr. A.) in our opinion, however unwittingly, misinterpreted the provisions of the Act, and laid himself open to the suspicion that he sought to anticipate the ordinary medical attendant of the families, in the matter of the notification fee, etc. Moreover, if we are correctly informed, the preceding remarks apply also to Dr. T., between whom and Dr. A. a more or less unhealthy fee contest would seem to have prevailed, regardless of any egitimate right on the part of the usual family doctor.

A DELICATE QUESTION.

C. E. H. writes: I am in partnership in equal shares with another medical man. Our practices are distinct, each keeping to his own patients. A patient of mine, who has never been seen by my partner, in the course of a long attendance, sends me a cheque and a grateful letter. The patient had never had an account from me, and I find on making it up that at the price I should have charged the amount was less than half that of the cheque. The intention of the patient was evident, as in speaking about it afterwards she said she meant to send more than the account, and did not want to give a "useless bit of furniture." What is my duty to my partner? Am I to credit the firm with the whole cheque, or only the amount the account would have been?

*** Generally speaking, and in the absence of agreement in the articles of partnership to the contrary, a partner is not accountable to his co-partner for a free gift made to him exclusively. Our correspondent's question is not free from doubt; but in all probability, on an explanation being given, his co-partner would willingly assent to the sum representing the excess over the account being retained by our correspondent, as in the nature of a gift.

COMPETITION FOR MEDICAL APPOINTMENTS.

ANTIMONOPOLY.—The rule prescribed by the *Code of Medical Ethics* is as follows: It is derogatory to the profession for any member.....to tender for a club or other paid appointment, or to apply or canvass for such before a vacancy has been declared." The question is whether the medical appointment in question is vacant within the meaning of this rule. The comments on "Competition for Medical Appointments" in the Medico-Legal and Medico-Ethical column of the BRITISH MEDICAL JOURNAL of July 7th were based on the reports referred to therein, and the accuracy of the reports has not, that we are aware of, been questioned.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

THE following gentlemen have passed the Second Professional Examination for the degrees of M.B. and C.M.:

J. Ballantyne, C. A. Bowker, H. G. Brown, J. Bruce, J. H. Bruce, W. J. Buchanan, B.A., N. Cane, W. H. Carse (with distinction), F. A. Clarke, C. B. Crampton, L. A. Crooks, J. H. Dixon, A. W. Easmon, W. F. Eason, W. A. J. Erskine, H. M. Eyres, A. M. Fleming, W. G. C. Geekie, T. Gibson, C. J. Gorringe, J. M. Grieve, M.A., F. A. Hardy, J. Henderson, P. Henderson (with distinction), W. Hewison, W. H. Hill, D. H. Hutchinson, L. V. Laurie, G. Lawrence, A. P. Low (with distinction), W. L. Martin, M.A., H. C. Pearson, W. T. Ritchie, W. H. Robb, J. H. D. Roberts, D. R. Rowlands, R. Roycroft, C. W. Ruston-Harrison, B. J. G. Sibbald, A. L. Pentland-Smith, M.A., E. R. Snijman, F. L. Stanwell, W. H. Steele, A. Stein, F. V. Sullivan, G. C. Taylor, W. M. Taylor, F. W. Twidale, E. F. Wyld.

The following gentlemen have passed in the First Division (Anatomy and Physiology) of the same examination:

F. Anderson, R. Craven, J. Dorman, H. Douglas, W. W. Fitzgerald, H. Malcolmson, J. R. Walker.

The medical classes in the University of Edinburgh, as well as those of the Extra-Academic School, rose for the summer recess on Friday, July 27th.

The Second Professional Examination began on Wednesday, July 18th, and the First Professional on Saturday, July 21st.

The Graduation Ceremonial in Medicine, Science, etc., will take place on Wednesday, August 1st.

UNIVERSITY OF GLASGOW.

THE following have passed the Final Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):

A.—Candidates who took Pathology in Final Professional Examination.—D. Beatson, P. S. Buchanan, A. Campbell, A. A. Clark, R. K. Currie, D. S. Dewar, A. S. Dick, R. S. Dickson, G. A. Eadie, W. C. Faulds, D. Ferguson, J. Forrester, R. Forsyth, A. J. Fraser, J. F. R. Gairdner, A. A. C. Grant, A. Lawton, J. Morrison, J. Munro, W. E. Macharg, A. Macphail, A. G. Nowell, D. E. Powell, D. Richmond, J. C. Robertson, M.A., B.Sc., J. Scott, R. N. White, A. G. Young.

B.—Candidates who passed Pathology in Third Professional Examination.—D. Blair, M.A., T. D. Brown, J. Brownlee, M.A., E. N. Burnett, A. Cameron, R. Cathcart, W. S. Cook, B.Sc., H. B. Currie, J. Drummond, J. T. Dunlop, J. W. Finlay, T. J. L. Forbes, R. W. Forrest, J. F. Gemmill, M.A., A. Girvan, D. Glen, J. Guy, C. B. Harrison, A. Kay, D. Ligat, J. Mair, J. Masterton, J. C. Matheson, R. Morton, J. Murray, F. M'Kenna, D. Maclean, A. N. M'Lellan, A. MacLennan, J. C. M'Neillie, C. Nairn, H. S. B. Nisbit, J. Pettigrew, J. Reid, W. Salmond, A. Shearer, R. Tennant, J. D. O. Wilson, J. M. Young.

Women Candidates.—Alice Lilian Louisa Cumming, Marion Gilchrist.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH, ROYAL COLLEGE OF SURGEONS, EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

THE Quarterly Examinations for the Triple Qualification in Edinburgh took place in July, with the following results:

First Examination, Four Years' Course.—Of 15 candidates the following 7 passed: M. O'Brien, J. Leveris, R. M. Powell, J. W. Norwood-Hudson, R. F. Noyes-Overton, J. McLachlan, and J. McElroy.

Of 4 candidates who entered for the respective divisions 3 passed.

Five Years' Course.—Of 28 candidates the following 19 passed: Margaret Grant Campbell Brodie, C. F. Ackland, Faith Philpot-Crowther, D. Graham, Harriette Frances Bailey, M. H. Babington, Elsie Rosa Cresswell Taylor, Mathilda Hetty Grace Russell, J. Hope, J. K. Calder, J. P. Owens, D. Heron, Alice Hutchison, Jane Mary Louisa Foley, W. S. Soutar, E. L. Munn, C. J. Greig, Tina McCulloch Alexander, and Jane Alice Craig.

Of 9 candidates who entered for the respective divisions 6 passed.

Second Examination, Four Years' Course.—Of 46 candidates, the following 27 passed: E. B. Hicks, H. Holden, J. W. Norwood-Hudson, H. J. M. Wyllys, G. C. Henry, W. D. McMurtry, E. F. de Jong, J. Minns, R. M. Johnson, H. S. O'Connor, R. M. Powell, C. W. Holmsted, E. Pearson, G. G. Irving, J. E. O'Ryan, T. F. Elmes, H. O'Donohoe, S. G. A. Jeffs, H. Highet, W. J. Spearing, T. Homer, W. J. Hayes, F. E. Richardson, G. A. I. Mackay, Beatrice Ann McGregor, D. Hennessy, and D. J. Duhig.

Of 4 candidates who entered for the respective divisions 3 passed.

Five Years' Course.—Of 21 candidates, the following 20 passed: J. St. J. Murphy, R. W. Mickle, J. M. Donovan, A. J. Laurie, E. C. Macintosh, Eliza McFarlane, E. B. Kitching, Elizabeth Morgan Johnson, P. Pearse, W. Robertson, J. Murray, A. Cameron, Robina McGregor, Euphemia Cumming, Janet Dorothy Gilfillan, Helen Wilett Stanley, Georgina Catherine Hogg, Christina Allison Mayne, Mary Ariel Stewart, and A. F. Jones.

Final Examination.—Of 115 candidates, the following 82 passed and were admitted L.R.C.P.E., L.R.C.S.E., and L.F.P.&S.G.: M. Wilson, D. D. Muir, J. Russell, E. A. R. Covey, T. H. Agnew, F. G. W. Deane, C. H. B. Armstrong, G. E. Douglas, A. Harry, P. Slack, T. Taylor, H. H. Osborn, W. Corkey, W. L. Crewdson, W. E. Bracey, J. Nelson, R. Dagger, H. Gillies, E. C. Hayes, A. O'Leary, C. S. Edwards, J. W. McGregor, G. G. Vatve, Ida Bowie, F. J. Farley, M. M. M. Joseph, Florence Ada Holt, W. Dill, G. Gibson, J. G. D'Mello, D. F. Blanchard, H. M. M. Mackenzie, P. Sheehan, E. R. A. MacDonnell, W. H. Penrose, C. E. Player, K. V. Kukday, W. G. Donald, J. B. D. St. Cyr, A. Duncan, J. P. Campbell, T. O. Jones, C. L. Hayes, T. Sand May Harrison, J. J. Hayes, H. P. W. Lincolu, E. J. H. Budge, J. J. Bell, T. D. Sullivan, F. A. Routch, F. S. Hogg, W. H. Thomson, D. H. Scott, L. Williams, W. P. McGrenahan, J. F. Sutcliffe, J. S. Gallie, J. O'Leary, W. C. Gent, F. G. Smith, P. J. O'Keeffe, and E. P. Aserappa.

Sixteen candidates entered for the respective divisions, and 9 passed.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, June, 1894. The following candidates passed in

Surgery.—L. C. Dillon, King's College; J. G. Faber, St. Bartholomew's Hospital; A. H. Grace, Bristol; T. S. F. Hudson, Birmingham; R. J. Hughes, Durham; G. A. Jelly, Manchester; G. H. Lansdown, King's College; G. M. MacDonald, King's College; E. D. Madge, Middlesex Hospital; H. G. T. Major, Guy's Hospital; J. A. Morgan, Charing Cross Hospital; C. W. Williams, St. Bartholomew's Hospital.

Medicine, Forensic Medicine, and Midwifery.—J. J. Edwards, St. Mary's Hospital; H. B. Falconar, King's College; H. Harvey, London Hospital; S. H. Long, University College; G. J. R. Lowe, St. Bartholomew's Hospital; G. W. B. Marsh, Durham; W. R. Meyer, King's College; W. P. Thomas, London Hospital.

Medicine and Forensic Medicine.—J. Friend, Leeds.

Medicine.—H. Litherland, Manchester; H. Richardson, Manchester; P. L. G. Skipworth, St. Bartholomew's Hospital.

Forensic Medicine and Midwifery.—H. G. Nichols, Birmingham; E. R. Sims, Glasgow.

Forensic Medicine.—D. D. Brown, St. Bartholomew's Hospital; R. J. Hughes, Durham; E. C. B. Ibotson, Guy's Hospital; E. D. Madge, Middlesex; T. Watts, Manchester.

Midwifery.—M. T. Archdall, Charing Cross Hospital; J. W. F. Graham, St. Bartholomew's Hospital; T. P. Stokes, Sheffield.

To Messrs. Brown, Edwards, Faber, Falconar, Harvey, Hughes, Jelly, Litherland, Long, Lowe, Madge, Marsh, Meyer, Richardson, Skipworth, Stokes, Thomas, and Williams was granted the diploma of the Society.

At the recent examination for the prizes in Botany for young women given annually by the Society of Apothecaries of London, the Silver Medal was awarded to Hilda Elizabeth Mary Webb, and the second prize to Jessica Laura Eliot. First class Certificates of Merit were awarded to seven other candidates.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.

Canine Rabies.—The EARL OF ROSSE called attention to a letter from M. Pasteur, read at a meeting at the Mansion House, London, on July 1st, 1889, and asked the Government whether they were not of opinion that the conferring upon a Government department powers for ordering the muzzling of dogs, which are at present vested in the local authorities only, were desirable with the view of stamping out canine rabies; and whether the simultaneous muzzling of dogs throughout the United Kingdom, recommended by that meeting, did not appear likely to be the most effectual, as well as in the end the simplest method of effecting the object.—LORD RIBBLESDALE said, in reply, that the returns now before the Board of Agriculture quite justified the noble lord in putting his question on the paper. These returns showed that in 1889 the number fell to 129, in 1891 to 79, and in 1892 to 38; but in 1893 it rose to 93, and in the 27 weeks of the present year, ended on July 7th, the number reported was 101. These figures he admitted gave the Board of Agriculture some anxiety, but it was that useful sort of anxiety which made them do something. The Board had tried to carry out Pasteur's recommendations, and had made vigorous efforts to deal with a state of things which they did not like. He was sorry that the Government had been obliged to withdraw the Dogs Bill—a measure which from its moderation would have commended itself to public opinion (a very important factor) and to Parliament—because of the mistaken interest taken in it by one or two members of the House of Commons. With regard to the first part of the noble lord's question, the Board of Agriculture did not think new legislation was necessary. Under the 3rd section of the Board of Agriculture Act, 1889, power was given to the Board to prescribe and regulate the muzzling and control of dogs, and also the seizure, detention, and disposal, including slaughter of stray dogs not muzzled and not under proper control. The Board, in pursuance of these provisions, issued the Rabies Order of 1892, delegating to local authorities powers to deal in the way prescribed with dogs suffering from rabies. But he wished to make it clear to the noble lord that although the Board delegated these powers it in no sense abrogated them. The view of the Board, however, was that local authorities must be trusted in this matter. If the central authority under the existing circumstances issued very strong orders as to muzzling, seizure, detention, and slaughter, it would probably find itself in the unfortunate position of not being able to enforce its own orders. He sat on a committee of their lordships' House which, under the presidency of Lord Cranbrook, inquired into this question in 1887. In their report that committee said that the time might come when the public would call upon the Privy Council (now the Board of Agriculture) to act on its own authority throughout the kingdom, that without that sanction the initiation of the necessary measures must be left to local authorities. The Board of Agriculture entirely agreed with that view. They thought the exigencies of each locality should be left to be dealt with by the local authority, who were likely to be cognisant with the facts and with the best method of dealing with them. The recommendation of the noble earl that there should be a simultaneous muzzling was a simple and an attractive plan in sound, but he feared that if they attempted to carry it out they would find that it bristled with great difficulties and complications. To enable such a course to be taken there must be a great and general concentration of public opinion in this country in support of it. During the ten years from 1800 to 1810 there were in Russia no fewer than 1,666 deaths from hydrophobia. If anything of the kind were approaching this calamity occurred in the United Kingdom the recommendation of the noble earl might be put in force, but the circumstances must be altogether different from what they were at present before they could deal practically with the evil in the way suggested. Whereas with a properly-fitting muzzle the discomfort of the dog was problematic, the resentment of the owner was certain. A noble friend had just told him of a poodle which, passing from one part of London to another, had six weeks' freedom from the muzzle. On returning within the muzzling area the dog came back with the muzzle in its mouth. Under existing circumstances, and with the facts and figures the Government had before them, they would not be justified in taking so extreme and difficult a course as simultaneous muzzling. The disease, he might point out, was very much localised in Lancashire, Lanarkshire, the West Riding of Yorkshire, London, Essex, Kent, Middlesex, and Surrey. Cases that arose in other parts of the country could be often traced to one or other of these eight counties. This would give some idea of the extreme localisation of the disease in this country. During the six and a-half years ending June 30th, out of 901 cases of ascertained rabies 669, or 74 per cent., occurred in the eight counties he had mentioned. The noble earl had referred to the Rabies Order of 1892, which gave to local authorities statutory powers to seize stray dogs. No doubt the local authorities would give instructions for carrying out those orders. At the same time, it was to be much regretted on this account that the Bill to which he had alluded had been lost in the House of Commons, because it would have given more particular powers to the London police to seize stray dogs. Great objection was taken by some hon. members to the police having these powers, which, however, would have been to the best interests of the community as well as of the dogs themselves. In conclusion, he feared that he could not give the noble earl any hope of adopting either simultaneous muzzling or any new legislation in the direction indicated. The Board of Agriculture were fully aware of their responsibilities, and would not in any way shirk their duty in attempting to deal in every possible way with a scourge that had been more or less in our midst since the days of the Conquest.

HOUSE OF COMMONS.

THE MASSAGE QUESTION.

In the House of Commons on Monday, July 23rd, MR. S. SMITH asked the Secretary of State for the Home Department whether his attention had been drawn to a statement made in the BRITISH MEDICAL JOURNAL that "massage shops" were in many cases used for improper purposes; whether this subject had attracted the attention of the police; whether quite recently one of the best known of these places had been raided and stopped, and whether the Government proposed to take any steps for the registration of massage shops.—MR. ASQUITH, in reply, said he had read the article referred to. Except by the statements in the article, the attention of the police had not been called to the subject. The matter had been, and was being, carefully investigated, but up to the present no sufficient evidence had been forthcoming to warrant police action, or to show the necessity of an amendment of the law.

Precautions against Cholera in Ireland.—MR. J. MORLEY, in reply to MR. FIELD, said that the Treasury authority was obtained last year for the employment of an additional inspector for a period of seven months for special work connected with precautionary measures against cholera. This term of employment expired on March 31st last. Application was made by the Local Government Board to retain the services of this temporary medical inspector for five months longer, but, as no positive necessity was shown at the time for the extra expenditure involved, he was of opinion, upon the information before him, that no case had been made out for then approaching the Treasury in the matter. In some localities much remained to be accomplished in the direction of improved water supply, efficient drainage, and the removal of nuisances, but these were matters for the attention of the Board's permanent staff, which contained four medical inspectors.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,012 births and 3,331 deaths were registered during the week ending Saturday, July 21st. The annual rate of mortality in these towns, which had been 16.1 and 15.9 per 1,000 in the preceding two weeks, rose again to 16.6 last week. The rates in the several towns ranged from 9.8 in Cardiff

and 11.0 in Hull to 22.0 in Preston and in Salford, and 23.5 in Liverpool. In the thirty-two provincial towns the mean death-rate was 16.4 per 1,000, and was slightly below the rate recorded in London, which was 16.8 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.9 per 1,000; in London the rate was equal to 3.7, while it averaged only 2.4 per 1,000 in the thirty-two provincial towns, and was highest in Nottingham and Sunderland. Measles caused a death-rate of 2.0 in West Ham and 3.4 in Sunderland; scarlet fever of 1.1 in Derby; whooping-cough of 1.4 in Nottingham; and diarrhœa of 2.2 in Leicester and 3.5 in Norwich. The 57 deaths from diphtheria in the thirty-three towns included 36 in London, and 2 each in West Ham, Croydon, Portsmouth, Liverpool, and Birmingham. One fatal case of small-pox was registered in London, 1 in Oldham, and 1 in Bradford, but not one in any other of the thirty-three large towns. There were 79 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, July 21st, against 132, 109, and 97 at the end of the preceding three weeks; 10 new cases were admitted during the week, against 16, 28, and 17 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,198, against 2,087, 2,099, and 2,143 at the end of the preceding three weeks; 264 new cases were admitted during the week, against 266 and 277 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, July 21st, 888 births and 481 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 16.9 to 15.4 per 1,000 in the preceding three weeks, rose again to 16.9 last week, and slightly exceeded the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 6.9 in Perth to 25.1 in Paisley. The zymotic death-rate in these towns averaged 1.7 per 1,000, the highest rates being recorded in Dundee and Perth. The 228 deaths registered in Glasgow included 10 from diarrhœa, 2 from diphtheria, and 4 from measles. Three fatal cases of small-pox were recorded in Edinburgh and 1 in Leith.

LUNACY CERTIFICATION OF WORKHOUSE PATIENTS.

G. F. W., a workhouse medical officer, writes, saying a woman with acute mania was sent into the workhouse infirmary at 9 P.M. on a Saturday, and when seen by him on the following day he advised her removal to an asylum, signed for the necessary power, and was then told that they were already filled up by a doctor in the town, and that the patient was going to the asylum early on Monday morning. He says under such circumstances he has the responsibility and the doctor outside receives the fee. He asks does this happen in other workhouses and what is the usual custom?

*** We think it not improbable that the signatory of the certificate in question who is described by G. F. W. as "a doctor in the town," had much more trouble with this case, that G. F. W. himself, who according to his own statement first saw the case the day after admission and when the patient had been already certified for the asylum. We cannot therefore see that G. F. W. had any very strong claim to the fee for certification, nor are we able to say what happens in other workhouses, though we believe that in the majority the medical officer would have been expected to attend a case of this gravity on the evening of admission. We are inclined to question the legality of sending this patient to the workhouse at all, and unless there was proper accommodation there for a case of this description, such procedure was certainly illegal.

SMALL-POX AND NOTIFICATION.

MR. GEORGE H. BATE (House-Surgeon, Queen Adelaide's Dispensary, Pollard Row, Bethnal Green Road, N.E.), writes: The following case may be of some interest to the readers of the BRITISH MEDICAL JOURNAL: On June 28th, whilst acting as medical officer of health, I was requested by one of the sanitary inspectors of the parish to visit a house for the purpose of investigating a supposed case of small-pox. On arrival I found a lad, aged 17, recovering from small-pox, having been ill five weeks, and under no medical man. I inquired if there was any other illness in the house, and was informed that a girl was ill upstairs. I requested to see her, and found her with well-marked small-pox. I reported to the vestry, who decided to prosecute, though anticipating defeat. The case came before Mr. Haden Corser on July 16th, and failed on account of the inability to prove that the person or persons were "aware" of the case being infectious. The mother was a waistcoat hand, and said she discontinued sending out her work, from which I inferred she must have been "aware" of the case being infectious. It is difficult to see how the wording of the Act can be altered unless it be "every rash or spot accompanied by fever or sickness." Certainly some precaution should be taken to prevent other similar cases arising, which I am afraid will be more likely after the dismissal of this case.

*** The difficulty caused by the plea of ignorance in such instances is a serious one, and no satisfactory remedy suggests itself. It seems reasonable that the offender should, at all events, be required to satisfy the magistrate of the *bona fides* of his ignorance, and especially when grave public danger has been incurred by his neglect to call in medical advice.

MULTIPLE SANITARY OFFICES.

NATURAL COMPETITOR.—We know of no rule of the Local Government Board which would prevent the posts of Poor-law medical officer, public vaccinator, and medical officer of health being held by one and the same person; but doubtless that Board would be guided in any case by the amount of time needed for any post that was in question.

MEDICAL NEWS.

DR. G. A. V. ROMMELAERE, Professor of Clinical Medicine in the University of Brussels, has been re-elected Rector of that seat of learning.

THE inaugural address of the course on Hygiene at the summer meeting of the university extension students at Oxford will be delivered on August 7th, by Dr. J. S. Billings. The address will have special reference to defects in the scientific foundations of practical sanitation. Sir Henry Acland, the Regius Professor of Medicine, has promised to take the chair.

GERMAN ANTHROPOLOGICAL SOCIETY.—The German Anthropological Society will hold its second general meeting this year at Innsbruck on August 24th to 28th. Among the addresses promised are Dwarf Races from the Atavistic and Pathological Points of View, by Professor R. Virchow; On the Brain of the Native Populations of East Africa, by Professor Waldeyer; and On the Somatology of the Tyrolese, by Professor Karl Todt, of Vienna.

M. PAUL BERGER, who has just been appointed Professor of Clinical Surgery in the Paris Faculty of Medicine in succession to the late Léon Lefort, was born at Beaucourt (Haut Rhin) in 1845. He won the coveted post of *interne* in 1867, and in 1871 the gold medal of the *internat* was awarded to him. He became *Professeur Agrégé* by competition in 1875, and surgeon to the Bureau Central two years later. In 1879 he was appointed surgeon to the Hospital for Incurables, in 1882 to the Lourcine, in 1883 to Bicêtre, in 1886 to the Hôpital Tenon, and in 1888 to the Lariboisière, to which he is still attached; he is also surgeon to the Hertford British Hospital. M. Berger has been engaged in teaching anatomy and surgery since 1871. He has been surgical editor of the *Revue des Sciences Médicales* since its foundation in 1873. He contributed a large number of articles to the *Dictionnaire Encyclopédique des Sciences Médicales*. In 1892 he was elected a member of the Académie de Médecine.

DURHAM UNIVERSITY MEDICAL GRADUATES' ASSOCIATION.—This vigorous Association, whose members now exceed 200 in number, held its annual meeting on July 12th at the rooms of the Medical Society. Many important subjects were discussed and the following officers appointed for the year 1894-95:—*President:* W. J. Tyson, M.D., M.R.C.P., F.R.C.S. *Vice-Presidents:* A. H. Robinson, M.D.; W. Gowans, M.D. *Council:* Professor W. C. Arnison, M.D.; R. C. Benington, M.D., B.S.; J. Crawford, M.D., M.R.C.P.; C. J. Cullingworth, M.D., F.R.C.P.; F. S. Palmer, M.D.; Professor G. H. Philipson, M.A., M.D., D.C.L., F.R.C.P.; G. W. Ridley, M.B., M.S., F.R.C.S.; W. Slater, M.D.; C. Vise, M.D.; W. G. Walford, M.D.; W. T. Wilson, M.A., M.D.; T. O. Wood, M.D., M.R.C.P. *Honorary Secretaries:* W. C. Beatley, M.D. (for North), and *Treasurer:* R. H. Milson, M.D. (for South). *Auditors:* H. B. W. Paige, M.D.; W. G. Richardson, M.B., B.S., F.R.C.S.; S. Morton, M.D. *Watch Committee:* W. C. Beatley, M.D.; T. H. Openshaw, M.B., M.S., F.R.C.S.; W. T. Wilson, M.A., M.D.; W. Travers, M.D., F.R.C.S. In the evening the members dined together at the Café Royal, Regent Street, and had amongst others the following guests: Mr. Christopher Heath, Dr. Barlow, Mr. Charters Symonds, Dr. Glover, Dr. Cagney, Dr. Phineas Abraham, and Dr. Harry Campbell. The dinner passed off exceedingly well, and was enlivened by good music ably conducted by Mr. Arthur Godfrey.

MEDICAL VACANCIES.

The following vacancies are announced:

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House-Physician. Salary, £65 per annum, with board, lodging, and washing. Applications to the Secretary by July 30th.

BATH EASTERN DISPENSARY.—Resident Medical Practitioner. Salary, £100 per annum, with furnished apartments, coal, gas, and domestic attendance. Applications to Colonel F. V. Eyre, R.A., Honorary Secretary, Rockville, Lansdown, Bath, by August 11th.

RUBERY HILL ASYLUM, Bromsgrove, Worcestershire.—Clinical Assistant. Applications to Medical Superintendent.

CAMBRIDGE UNIVERSITY.—John Lucas Walker Studentship. Applications to Professor Roy, New Museum, Cambridge, by September 30th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's Inn Road, W.C.—House-Surgeon. Rooms, coals, and light provided. Applications to the Secretary by August 7th.

CHARING CROSS HOSPITAL, Strand, W.C.—Assistant-Surgeon; must be F.R.C.S.Eng., and reside within three miles of the hospital. Applications to the Chairman of the Committee of Selection by July 28th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Physicians to In-patients, Physicians to Out-patients, and Pathologist. Forms of applications, to be returned to the Secretary, A. C. Davis, by August 6th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to Eugene Street, Secretary, by August 6th.

DUNDEE ROYAL LUNATIC ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with board and lodging. Applications to Dr. Rorie, Royal Asylum, Dundee.

GENERAL HOSPITAL, Nottingham.—Senior Resident Medical Officer; doubly qualified. Salary, £120 for the first year, with an addition of £10 a year up to £150, with board, residence, and washing. Applications to the Secretary by September 1st.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House-Surgeon, unmarried, doubly qualified. Salary, £50 per annum, with residence, board, and washing. Applications to Outis Webster, Secretary, by August 1st.

KINGTON UNION.—Medical Officer and Public Vaccinator for the Pembridge District. Salary, £30 per annum, with additional payments authorised by the Consolidated Order of the Poor Law Commissioners. Applications to Anthony Temple, Clerk to the Guardians, Union Offices, Kington, by July 30th.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer; doubly qualified, unmarried, and not less than 25 years of age. Salary, £150 per annum, with board and residence. Applications to W. L. Saunder, General Superintendent and Secretary, by July 28th.

NORTH LONDON CONSUMPTION HOSPITAL, Hampstead, N.W.—Resident Medical Officer; doubly qualified. Honorarium £40 per annum, with board, rooms, etc., in the hospital. Applications to Lionel F. Hill, Secretary, at the office, 41, Fitzroy Square, W., by August 4th.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—Honorary Surgeon. Applications to M. P. Fraser, 91, West Regent Street, Glasgow, by August 1st.

ST. OLAVE'S UNION.—Dispenser of Medicines and Medical Officers' Clerk at the Infirmary, Lower Road, Rotherhithe, S.E.; non-resident; must be L.S.A. and registered under Pharmacy Act. Salary, £90 per annum, with rations and allowance of £3 0s. 10d. per annum in lieu of beer. Applications, on forms provided, to E. Pitts Fenton, Clerk, Clerk's Offices, St. Olave's Union, 30, Tanner Street, S.E., by July 31st.

SEAMEN'S HOSPITAL SOCIETY, *Dreadnought*.—Junior House-Surgeon doubly qualified, for Branch Hospital, Royal Victoria and Albert Docks, E. Salary, £50 per annum, with board and residence. Applications to P. Michelli, Secretary, Seamen's Hospital Society, Greenwich, S.E., by July 30th.

STOCKPORT INFIRMARY.—Junior House-Surgeon. Appointment for six months, with board and residence. Honorarium of £10 after six months' satisfactory service. Applications to Lieutenant-Colonel S. W. Wilkinson, Honorary Secretary, by July 31st.

SUSSEX COUNTY HOSPITAL, Brighton.—House-Surgeon; doubly qualified, unmarried, and under 30 years of age. Salary, £120 rising to £140 per annum, with board, residence, and washing. Applications to the Secretary by August 7th.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House-Surgeon, unmarried and under 30 years of age. Emoluments are a salary not exceeding £30 per annum, with board, washing, and residence. Applications to the Secretary by August 15th.

UNIVERSITY COLLEGE, London.—Assistant to the Professor of Pathology. Applications to Professor Horsley.

WESTERN GENERAL DISPENSARY. Marylebone Road, N.W.—Junior House-Surgeon, unmarried. Salary, £50 per annum, with board and lodging. Applications to the Honorary Secretary by August 6th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Dermatologist. Applications to R. J. Gilbert, Secretary and Superintendent by August 1st.

WEST RIDING ASYLUM, Wakefield.—Fourth Assistant Medical Officer. Salary, £100 per annum, rising £10 annually to a maximum of £150, with furnished apartments, board, washing, and attendance. Applications to the Medical Director by August 18th.

MEDICAL APPOINTMENTS.

ALDOUS, Robert, L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Honorary Surgeon to the Beccles Hospital.

BOWLAN, M. M., M.B., B.S.Durh., L.R.C.S.Edin., appointed Medical Officer for the Workhouse and Infirmary of the St. George-in-the-East Union.

BREMNER, D. C., M.B., C.M.Edin., appointed Assistant Medical Officer to the East Riding Lunatic Asylum, Beverley.

CHEVES, Mr. T., appointed Medical Officer for the Third District of the St. Germans Union.

DOVES, Mr. R. A., appointed Medical Officer for the Brigg West District of the Glanford Brigg Union.

FENWICK, S. C. C., L.S.A., appointed Junior Assistant Medical Officer of the Workhouse and Infirmary of the Fulham Union, *vice* A. G. Shepherd.

GARDNER, Ernest, L.D.S., appointed Dental Surgeon to Westminster Hospital.

GILL, John, M.B., C.M., L.R.C.P.Edin., appointed Medical Officer to the Langholm Parochial Board, *vice* Dr. Carlyle, deceased.

GROVE, William Richard, M.D.St.And., M.R.C.S.Eng., reappointed Medical Officer of Health for the St. Ives Urban Sanitary District.

HATCH, H. Lincoln, M.R.C.S., L.R.C.P.Lond., D.P.H., appointed House-Surgeon to the Fleming Memorial Hospital for Children, Newcastle-on-Tyne, *vice* W. S. Carpenter, M.R.C.S., L.R.C.P.Lond.

HELSHAM, H. P., M.R.C.S., L.R.C.P.Lond., appointed Honorary Surgeon to the Beccles Hospital.

JOHNSTON, Dr. George F., appointed Physician to the Out-patients at the Hospital for Epilepsy and Paralysis, Regent's Park.

JOSCELYNE, Arthur E., L.R.C.P., L.S.A., appointed Surgeon to the South Metropolitan Gas Company, West Greenwich Works.

KEAY, John, M.D.Glasg., appointed Medical Superintendent to the Northern Counties District Asylum, Inverness.

KNAGGS, Mr. R. Lawford, M.A., M.D., M.C.Cantab., F.R.C.S., appointed an Honorary Assistant Surgeon to the General Infirmary, Leeds.

KNIGHT, John Tomlinson, M.R.C.S.Eng., reappointed Medical Officer of Health to the Carlton Local Board.

LODWIDGE, W. Charrote, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the West Butterwick District of the Gainsborough Union, *vice* Dr. W. C. Steen, resigned.

MACLEROY, Mr., appointed Medical Officer for the Kingsteignton District of the Newton Abbott Union.

MARSHALL, Charles Devereux, F.R.C.S., appointed Pathologist to the Royal London Ophthalmic Hospital, Moorfields, *vice* E. Treacher Collins, F.R.C.S., resigned.

MILLER, Mr. John, appointed Medical Officer for the Iver District of the Eton Union.

PROBYN, Percy J., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Medical Officer for the Workhouse and Infirmary of the Shoreditch Union.

PUDDICOMBE, W. N., M.R.C.S.Eng., appointed Honorary Medical Officer to the St. Albans Hospital, *vice* George Mowat, M.R.C.P.Edin., M.R.C.S.Eng., resigned.

RICH, M. R., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer for the Crowland District of the Peterborough Union.

THOMPSON, Mr. E. T., appointed Medical Officer for the Sixth District of the Bath Union.

THOMSON, Dr., appointed Medical Officer for the Eamont Bridge District of the West Ward Union, *vice* J. D. Robertson, M.D.

TONKIN, Arthur J., M.B., B.Ch.R.U.I., appointed Resident Medical Officer to the Clayton Vale Small-pox Hospital, Clayton Vale, Manchester.

WORTH, Erskine Herbert, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A., appointed Junior Assistant Medical Officer and Clinical Assistant at the Infirmary of the Wandsworth and Clapham Union.

YEARSLEY, P. Macleod, F.R.C.S., appointed Lecturer on Surgical Pathology to Westminster Hospital Medical School.

YOUNG, R., M.D., appointed Medical Officer for the Workhouse Schools of the Oldham Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

DINGWALL.—On July 18th, at 25, Belvidere Street, Aberdeen, the wife of Archibald Dingwall, M.B., C.M., Fraserburgh, of a daughter.

MARRIAGES.

GILKES—BROUGHTON.—On July 25th, at Preston Parish Church, Brighton, by the Rev. A. D. Freeman, vicar, assisted by the Rev. W. Thompson, curate, Ernest Osmond Gilkes, M.R.C.S., of 8, Stamford Avenue, Brighton, to Amy Lilian Broughton, granddaughter of the late Francis Broughton, of Springcroft, Preston, Brighton.

HEELIS—MCRAE.—On June 5th, at St. Luke's Church, Wandsworth Common, Robert Heelis, M.D., of Lenton, Nottingham, to Sarah, second daughter of the late John McRae, of Wallington Cottage, Surrey.

HUDSON—FLOWERDEW.—On July 19th, at the parish church, Billingford, Surgeon-Captain Ernest Hudson, F.R.C.S.Eng., 15th Bengal Lancers, to Forence Hannah, second daughter of A. J. B. Flowerdew, of Billingford Hall, Scole, Norfolk.

LODWIDGE—FORRETT.—On July 11th, at the Parish Church, Alfreton, W. Charrote Lodwidge, M.R.C.S.Eng., L.R.C.P.Lond., of Ouston Ferry, Lincolnshire, to Sarah Hannah, daughter of Thomas Forrett, Esq., of Alfreton.

STEEDMAN—NICHOLL.—On July 19th, at the Parish Church, Streatham, by the Rev. Canon Nicholl, Rector of the parish and grandfather of the bride, assisted by the Hon. and Rev. G. F. Vane, Vicar of High Ercall, Salop, and brother-in-law of the bridegroom, John Francis Steedman, F.R.C.S.Eng., second son of the late E. B. Steedman, of High Ercall Hall, to Mary Eveline, eldest daughter of Richard Nicholl, of Exmouth, Devon.

TAYLOR—NELSON.—On Thursday, July 19th, at St. Cuthbert's, Earl's Court, by the Rev. J. P. Davidson, Vicar of St. Mathias, John Cleasby Taylor, M.D.Edin., M.R.C.S.Eng., of Las Palmas, Grand Canary, son of the Rev. Dr. Taylor, D.D., Windermere, to Frances Anne, eldest daughter of James Nelson, Esq., of 14, Nevern Square, S.W., and of 8, Calle de Castillo, Las Palmas.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

J. D. M. asks whether a soft water, free from organic impurities, but containing 41.5 parts of carbonate soda per 100,000, is to be regarded as wholesome; and, if not, how it can be rendered so?

INQUIRER asks for advice as to the choice of a climate favourable to a patient suffering from from frequent attack of migraine. The patient has for some years been living in Norfolk, perhaps too dry and bracing a county. She has now the choice of residing in any of the following places: Derby, Bedford, Weymouth, Reading, Dunstable, Worcester, Leamington, Abingdon, Jersey, Guernsey, and London.

J. H. asks for suggestions in the treatment of a patient who complains of "coated tongue and a sweetish taste in the mouth." This has lasted for years, and there are no other symptoms of digestive disorder, the patient being otherwise in apparently good health. Various remedies have been tried, including calomel, rhubarb, and saline purgatives, but with no apparent benefit.

M. O. writes: I should feel greatly obliged if any of your readers could give me a list of books (1) treating of the fevers of India, (2) tropical diseases, and (3) syphilitic diseases of the nervous system. Nos. (1) and (2) are required as works of reference in writing a thesis on the subject.

*** There has been no book on the fevers of India published since Fayrer's *Climate and Fevers of India*, and in it the subject is not treated of from the standpoint of the malaria organism of Laveran. Chevers, Moore, Maclean, Aitken, Morehead, Martin, Annesley—all treat of the fevers of India. (2) Tropical diseases: Davidson's *Hygiene and Diseases of Warm Climates* is the most recent; Corre's *Maladies des Pays Chauds* and Roux on the same subject are the most recent French works. Our correspondent will find ample bibliographies in all of these works—particularly in the French works. He should also consult Hirsch's *Geographical and Historical Pathology* and Davidson's *Geographical Pathology*.

DIAGRAMS.

S. G. writes: Is there any society or company or private firm that lends out on hire large illustrations suitable to pin on a wall to illustrate popular medical lectures

*** Popular diagrams and illustrations to illustrate anatomical subjects may be had at the National Health Society, 53, Berners Street, Oxford Street, W.

ANSWERS.

MR. JAMES PEARCE should recommend his friend to consult a qualified medical practitioner.

M. D.—A full summary of the provisions in the new French medical law which affect foreign practitioners was given in the BRITISH MEDICAL JOURNAL of April 18th, 1891 (p. 871), and April 25th, 1891 (p. 924).

DR. A. G. OSBORN.—The exercises for spinal curvature, most of which are acknowledged as suggestions of Bernard Roth, were described by Sayre in a paper read before the New York State Medical Association in 1885, and subsequently published in the *Proceedings*. A copy of this paper may very probably be obtained from Angell of New York, and will be found in the library of the Royal College of Surgeons, *Pamphlets*, Vol. 423.

A SURGICAL QUESTION.

L. N. N.—(1) Greenstick fracture of the radius is usually the result of direct violence, and therefore might be caused by a stone.

(2) In a boy aged 12 a blow from a stone would be more likely to cause complete than partial fracture, but the possibility of the latter cannot be excluded.

(3) In such an injury as L. N. N. describes, one would certainly expect to find some immediate external marks of injury. (It seems odd that a "boy" was able to hit another boy with a stone weighing several pounds at a distance of twenty yards).

(4) The ecchymosis may be best attributed to the contusion of the forearm, caused by the injury, whatever the nature of this injury might have been.

(5) In case of fracture by direct violence the differences in the external marks of injury would be simply differences of degree. If the forearm were covered by clothing there would be less contusion, but not a total absence of redness, swelling, and ecchymosis.

(6) The convexity would be found on the opposite surface to that on which the blow was received; the concavity would be on the side struck.

(7) The convexity of the bent or fractured radius being in front, it is very probable, indeed almost certain, that the blow must have been applied to the posterior surface of the forearm. A blow on the front of the forearm would produce a posterior convexity which would, moreover, be favoured by the natural curvature of the radius.

THE STAINING AND MOUNTING OF URINARY DEPOSITS.

H. M. S.—Dr. Byrom Bramwell informs us that the solution of boracic acid employed by him in the first stage of the process of preparing urinary casts is saturated. It is only necessary to use the boracic solution in hot weather or when the urine has to be kept for some time. Under ordinary circumstances, particularly if the tube casts are abundant, there is no need to mix the urine with the boracic solution.

NOTES, LETTERS, Etc.

CORRECTION.

IN the memorandum on Dysentery and Tropical Liver Abscesses by Dr. C. M. Jessop, published in the BRITISH MEDICAL JOURNAL of July 21st, p. 127, second paragraph, third line, for "or diets" read "districts;" third paragraph, seventh line, for "meal food" read "meat food."

ERRATUM.—In our last issue, p. 81, column 2, line 23 from foot, for "small pox," read "typhus."

THE MASSAGE SCANDAL.

Truth publishes the following article on Massage: "Much praise is due to the BRITISH MEDICAL JOURNAL for having in its current issue called attention in plain language to a new social evil, or a new phase of an old social evil, which has of late developed in a manner calculated to excite amazement to those who still regard England as a moral country. For months past the advertisements of certain massage establishments, the character of which has now been exposed by the BRITISH MEDICAL JOURNAL, have been nothing less than a public scandal. The language in which they have been couched has been such as to convey its suggestion with scarcely a possibility of a mistake to all but those, if any there are, who pass through life without knowing what vice is; and a choice for a medium for some of the notices (one of the most suggestive has adorned the pages of a leading financial paper) would help to dispel any doubt as to the true 'inwardness' of the announcement. My own attention has been called to the question again and again and I have been appealed to from several quarters to expose certain parties engaged in the disreputable business. Two considerations have prevented my responding to such appeals. In the first place the subject is an unsavoury one which nobody cares to talk about, and the discussion of which in a newspaper offends many over-sensitive readers. In the second place from the nature of the case it is almost impossible to obtain witnesses in support of specific allegations against particular individuals or particular establishments, and unless it is possible to bring the matter to an issue by exposing and denouncing particular individuals I prefer not to attack an evil of the kind in detail.

"All my experience of journalism goes to prove that only by making specific allegations can any practical result be obtained. If a newspaper deals with a matter of this kind and confines itself to mere generalities, it is likely to do more harm than good. A medical paper, however, is in a very different position. The use and abuse of massage are professional questions which doctors are bound to face, and on which all members of the profession ought to be fully informed. A medical journal having thus broached the subject, I feel bound to add my testimony to the gravity of the evil. The inquiries which I have made leave no room for doubt (even if the professors of the business made less secret about it than some of them do) that under the name of massage treatment there has been carried on in various parts of London, both in the City and West End, an organised system of vice. Nor is there any room for doubt that it is a system peculiarly baneful in its effects, and the source of most pernicious demoralisation to men and women. One of the first who called my attention to the subject, now several months back, was a physician in one of the foremost London hospitals, who had gained his knowledge in the course of his professional experience; and the facts which he laid before me (facts derived directly from patients) were such as no decent person could contemplate without horror.

"I take it, therefore, that there is one question, and one only, in this case, namely, how the evil is to be put down. Primarily, the existence of the establishments where the name of massage is but a thin disguise for another business is a matter for the police. Such places are amenable to the law, and now that the truth about them has become notorious there ought to be no delay in putting the law in force against them. But when the law has done its utmost there still remains a probability that the immorality which has lately flaunted itself in the face of the public may continue surreptitiously, and in a form more difficult to deal with. Against that evil it is the duty of the medical profession to guard us. It is a good sign that the BRITISH MEDICAL JOURNAL partially recognises this duty by suggesting the registration of qualified massage practitioners, and though the writer discovers a good many difficulties in the way, they will hardly strike the unprofessional reader as insurmountable. The fact has to be recognised that the pro-

fession of a masseuse is not one for very young women or mere girls, and although to exclude them from it may entail hardship, such hardship is of infinitely less consequence than the evils which are to be apprehended from their admission.

"It is to be hoped that the attention which has at last been directed to these evils will lead to a clearer perception of the perils of the profession on the part of the girls desirous of entering it, as well as among their friends and advisers; for when once the danger is understood it may be expected that the women who wish to take up the work and who desire that the profession shall be an honourable one will be the first to approve of any reasonable regulations for repressing abuses. Massage has its proper place in medical treatment, and the healing art will suffer if it falls into permanent discredit. But it were better that massage should disappear for ever than it should continue to be practised in some of the forms which it has lately assumed."

The Dr. Tait Fund.

We are asked to state that the Treasurer of this fund has received £2 2s. from Sir William Jenner, Bart., which was accidentally delayed in transmission.

Barrack School Deputation.

Mr. Shaw Lefevre (says the *Daily News*) was unable to resist the case made out by the deputation which waited on him on July 23rd, for an inquiry into the administration of pauper schools generally. Nurse Gillespie's cruelties to the children of the Hackney Union Schools, and the sharp observations of Mr. Justice Day, made the inquiry now going on imperative. But it is now shown that other faults in such schools, besides possible cruelty, demand an inquiry into the conduct of workhouse schools generally. Mr. Shaw Lefevre told the deputation (says the *Daily Chronicle*) that he had come to the conclusion that an inquiry must be held, but whether it should be in the form of a Royal Commission or of a Committee of the House of Commons he could not yet say. We are very glad that Mr. Shaw Lefevre has seen his way to meet an imperative public demand. We have insisted that nothing short of a searching and independent inquiry would meet the case or satisfy the country that a system under which Nurse Gillespie could flourish, and the wholesale poisonings of the Forest Gate Schools could take place, did not cover other evils, and was not in itself a bad system. The deputation showed that hygienically, educationally, and morally there was a strong *primâ facie* case against these Bastilles, as Mr. Ernest Hart called these schools. We do not for a moment wish to prejudge individual schools, for there are cases where much good has been done faithfully under well-nigh impossible conditions. It is the system which is now on trial, and when we say that we recognise that the Local Government Board is face to face with the problem of a larger system, of which these schools are a part. But with the heavy arrears of administrative reform that are pressing for clearance in other parts of the Poor-law we will say nothing further at this moment.

The reply given on July 23rd by Mr. Shaw Lefevre will, says the *Times*, give the greatest satisfaction to all who are familiar with this side of Poor-law problems. The deputation was almost unprecedented as regards both quantity and quality. Members of Parliament, of the London County Council and School Board, of all the learned professions, and apparently of all the philanthropic and industrial associations of Toynbee Hall, of many boards of guardians, and of most trade unions were present. Mr. Ernest Hart made the strongest case against the system of big barrack schools, proving their hopelessly faulty administration and the grave physical and moral results to the children. Mr. Shaw Lefevre pointed out the legal difficulty that pauper children cannot be separated from their parents, and perhaps roused the suspicion of some of his hearers by a hint that more public attention and pressure might improve the big schools, but he finally agreed that the startling increase of ophthalmia and other diseases in the big workhouse schools, which could not be initiated without raising all the issues asked for by the deputation. The Government will determine whether the inquiry should be by Commission or Parliamentary Committee. Mr. Shaw Lefevre prefers the latter, but most of the deputation would prefer the former for the reasons that it could begin work much sooner, and would include some outside experts whose views are of more value than those of most members of Parliament.

The Pathology of Variola and Vaccinia.

Mr. J. Jackson Clarke (Old Cavendish Street, W.) writes: In your issue of May 18th, 1894, your report of the last meeting of the Pathological Society refers to my work on the most recent development of the above-named subject, but omits an important reference which will be indispensable to those who wish to examine the question. The work which I refer to is the *Behandlung und Prophylaxe der Blattern*, by Dr. Ludwig Pfeiffer, Jena, 1893. I shall be glad, therefore, if you will kindly find space for this note.

London and Manchester Industrial Assurance Association.

Member of Brit. Med. Association.—Our correspondent seems quite to mistake the drift of our remarks concerning the London and Manchester Assurance Society. Far from giving this Society a "puff," we strongly reprobated some of its reported practices; at the same time, if its medical department is only an adjunct to a *bond-fide* assurance business, which we believe to be the case, it is evident that in that respect it differs *toto cœlo* from a medical aid society.

Our correspondent is, perhaps, not aware that several well-known assurance and sick benefit societies, doing business chiefly among the working classes, have for many years had medical departments similar to this of the London and Manchester. Among these we may instance the Hearts of Oak Friendly Society; and, although we have repeatedly objected to the smallness of the medical fees, which average about the ordinary club rate—namely, 4s. per annum per member—we think that anyone who fairly considers the matter will be able to see a substantial difference between such societies and the other class.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(**A**) Messrs. Arnold and Son, London; Mr. R. Ahmad, London; An Anxious Inquirer; Dr. T. C. Akin, Woodbridge; Dr. R. S. Anderson, Spennymoor; Dr. J. A. Anderson, Strarraer; Antisweat. (**B**) Dr. R. Bowles, London; Sir W. Broadbent, London; Mr. G. H. Bate, London; Mr. F. Blorigg, Wicklow; Messrs. Burroughs, Wellcome, and Co., London; Mr. J. Busfield, London; Mr. W. Bernard, Londonderry; D. C. Bremner, M.B., London; Mr. G. Boggon, Seaham Harbour; Mr. F. C. Briggs, Jersey; Mr. T. Blair, Leeds; Mr. B. Baker, London; Mr. J. Braye, London; Mr. E. W. P. Baines, London. (**C**) Mr. A. M. Craythorne, Liverpool; Dr. J. M. Clarke, Clifton; Mr. E. Crossman, Hambrook; Mr. A. Cooper, London; Dr. J. Cantlie, Hong Kong; W. W. Chamberlain, M.B., Nailsworth; Mr. C. H. Cunningham, London; Mr. C. C. Child, London; Mr. T. E. Constant, Scarborough; Dr. A. Campbell, Rainhill; Professor Crookshank, East Grinstead; Dr. W. Colwell, Belfast; J. Carroll, M.B., Ilkeston; Mr. H. Cayley, Southampton; J. Jackson Clarke, M.B., London; Mr. E. Cotterell, London. (**D**) Miss D'Orsey, London; Mr. D. L. Davies, Criccieth; A Dispensary Hack Twenty-six Years in Harness; Mr. J. Dalton, London. (**E**) Dr. F. W. Edridge-Green, London; Dr. M. G. Evans, Caerphilly; Edinburgh Branch of the British Medical Association, Honorary Secretary of the, Edinburgh; Dr. W. Ewart, London; Mr. E. East, London; Mr. C. S. Edwards, Tunstall. (**F**) Mr. J. J. Fraser, Hessle; Mr. M. Ferguson, Burnley; Dr. J. Fawcett, London; Mr. C. S. Flemming, Freshford. (**G**) Mr. E. Gardner, London; Mr. E. Gaylor, Belper; G. C. L.; Dr. H. R. Greene, Knaphill; Dr. W. R. Gowers, London. (**H**) Dr. T. P. Harvey, St. Leonard's-on-Sea; Mr. H. L. Hatch, Manchester; Mr. G. H. Henry, Edinburgh; Mr. E. A. Hains, London; Mr. A. H. Hoffman, Newcastle-on-Tyne; Mr. J. L. Hamilton, London; Mr. C. Holtom, Shirehampton; Dr. R. Heelis, Nottingham; Mr. H. N. Hardy, London; Mr. H. J. Hildige, Pinner; Mr. W. H. Hughes, Ashton-under-Lyne; Professor V. Horsley, London; Mr. T. G. Horder, Cardiff; Mr. F. R. Humphreys, London. (**J**) Mr. W. Jessop, Rainhill; Mr. J. J. Johnson, Ouseburn; Dr. G. F. Johnston, London; J. H.; Mr. A. E. Joscelyne, London; Dr. Lewis Jones, London; Mr. H. Littlewood, Leeds; Dr. E. Jepson, Durham; Dr. E. Lloyd Jones, Cambridge. (**K**) Dr. K. Kheiralla, Suakin; K. H.; Dr. H. R. Kenwood, London. (**L**) Mr. W. C. Lodwidge, Basingstoke; Sir Joseph Lister, London; Dr. M. Little, Dumbarton; Mr. H. Liston, Sunderland; Mr. C. H. Leet, Liverpool. (**M**) Mr. M. J. Madden, London; Dr. W. Murrell, London; Surgeon-Major; Mr. A. Malatianoff, London; Mr. W. L. Morgan, Oxford; Member of the British Medical Association; Mr. W. J. C. Miller, London; Dr. R. Mackinlay, Santa Barbara; Mr. F. Maltby, London; Dr. D. Murray, London; Mr. Shirley Murphy, London. (**N**) Mr. F. F. Norman, Edinburgh; Mr. P. Newell, Crowborough; Dr. J. Neill, Oxford; Dr. A. Newsholme, Brighton. (**O**) Mr. A. G. Osborn, Dover. (**P**) Mr. M. Prate, Newtown; Dr. J. A. Philip, Boulogne-sur-Mer; Dr. T. L. Pennell, Shekhbudin; Dr. G. Philipson, Newcastle-on-Tyne; Mr. W. H. Payne, Ilfracombe; Dr. T. Partridge, Stroud; Mr. E. Pritchard, London; Dr. J. Priestley, Leicester; Mr. J. Pearce, London. (**R**) Dr. J. Robertson, St. Helen's; Dr. G. Ranking, Calcutta; Mr. R. Rauschke, Leeds; Mr. A. Ravenhill, London; Dr. J. Rowatt, Highworth; Royal College of Physicians, Edinburgh, Secretary of, Edinburgh. (**S**) S. G.; Dr. H. L. Smith, Soham; Mr. H. H. Sturge, New Eltham; Dr. M. Skerritt, Clifton; Dr. W. C. Sprague, Rajkot; Dr. W. J. Simpson, Calcutta; Mr. R. Snell, Beccles; Society of Apothecaries, Secretary of, London; Dr. E. Seaton, London; E. Stephenson, M.B., London; Mr. H. L. Smith, Isleham; Mr. W. J. Smith, Southport; Mr. J. P. Smith, Lowestoft. (**T**) Mr. A. J. Tonkin, Manchester; Mr. G. H. Turner, Derby; The Last Straw; Dr. F. J. Tresilian, Enfield; Mr. J. Treaver, London; Dr. J. B. Tuke, Edinburgh; Mr. Lawson Tait, Birmingham; Mr. J. M. Thomson, London; Dr. G. C. Taylor, Trowbridge. (**U**) Union Steam Ship Company, Secretary of, London. (**W**) Mr. E. H. Walker, Clifton; Dr. T. Williams, London; Mr. O. Withers, Sale; Mr. J. Wright, Birmingham; Mr. W. S. West, London: Mr. J. H. Wathen, Clifton; Mr. W. Wingrave, London; Mr. H. White, Manchester; C. H. Walker, M.B., Clifton; Dr. F. Warner, London; Mr. H. Waite, Leeds; Dr. A. G. Welsford, Dover. (**Y**) Mr. P. M. Yearsley, London, etc.

BOOKS, Etc., RECEIVED.

Refraction of the Eye, its Diagnosis and the Correction of its Errors. By A. Stanford Morton, M.B., F.R.C.S.Eng. Fifth Edition. London: H. K. Lewis. 1894. 3s. 6d.

The Law and Lawyers of Pickwick. A Lecture with an original drawing of Mr. Serjeant Buzfuz. By Frank Lockwood, Q.C., M.P. London: The Roxburghe Press. 1s. 6d.

Grundzüge der Arzneimittellehre. Ein klinisches Lehrbuch. Von Dr. C. Binz. Berlin: Verlag von August Hirschwald. 1894. 5 M.

Scientific Memoirs by Medical Officers of the Army of India. By B. Simpson, M.D. Parts I-VIII. Calcutta: Printed by the Superintendent of Government Printing, India.

*** In forwarding books the publishers are requested to state the selling prices.

PRESIDENT'S ADDRESS,

DELIVERED AT THE

SIXTY-SECOND ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

BY

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F.R.C.P.Lond.,

Consulting Physician to the Bristol Royal Infirmary.

ON THE MEDICAL MAN AND THE STATE.

Introductory.

My first duty is to thank the members of the Association for electing me to the post I occupy to-day. It is a very real honour to be allowed to preside over so important a body of medical men, whose lives are taken up in devotion to science and duty. And I know that I am only expressing the feeling of my professional brethren in this district in offering to all a very hearty welcome.

But the function of to-day is fraught with difficulties of no common kind. Not only am I bowed down by a feeling of hopelessness in the attempt to rival the many distinguished predecessors, who in my time have delivered addresses from the president's chair; but the tacit understanding as to subjects to be avoided, and the completeness with which all allowable subjects have been already exhausted, render the position of each recurring president more and more open to criticism. At first sight it would seem natural that the giver of the address should speak on something that he has made his life study. But the unwritten law of the Association forbids any interference with subjects that might become matters of controversy in any of the Sections; and these are now so numerous, and divide the human frame, and all things connected with it, into such minuteness, that there remains no organ, no smallest particle of body or mind, that can form the subject of an address such as this.

Nor this alone. On more than one occasion the question of medical education has formed the subject matter of an address; whilst once at least the speaker has indulged in prophecy as to the medical life of future generations.

The Thirty-first Meeting in Bristol, 1863.

But before I attempt to deal imperfectly with the difficulties I have suggested, it may be allowable to recall for a moment the last meeting of the Association in Bristol. It was just thirty-one years ago, before the work of the meeting was divided into Sections, when no one dreamed of the pecuniary condition of the Association ever being what it is to-day, or that Branches would be planted, as they are, in most of the British Colonies and dependencies.

We were favoured by having a unique president in the person of Dr. Addington Symonds. It is impossible to stand in the position in which you have placed me without carrying back my thoughts to my distinguished predecessor. He was a physician of the highest type, as remarkable for the delight he took in classical literature as in the diagnosis of disease; kind, benevolent almost to a fault, with a charm of conversation that was the natural outcome of a mind stored with all sorts of knowledge beyond the boundaries of his profession, and with a dignity and purity of life that formed a fitting coping-stone to the edifice of his useful and eminent career.

Other names of members present at that meeting recall themselves to my mind: Propert, the founder of the Medical Benevolent College; Turner, of Manchester, that prince of surgeons of his day, and as quaint as he was distinguished; our own William Budd, who read the Address in Medicine, whom we love to think of as almost the pioneer of microbal pathology in this country; Humpory, to whom Cambridge and England owe so much; Henry Marshall, who now takes high rank amongst us, and who then proved himself one of the best organising secretaries any annual meeting has ever known; and Augustin Prichard, whom we all honour to this day as the Nestor of surgery in Bristol.

The sands of time are sinking year by year for all of us; but the memory of the great ones in the past is a spur to further effort, an example for a truer and higher life in us all; and happy shall we be if we can pass on undimmed to our successors the lamp of high professional honour and of scientific attainment which has been handed down to us from our predecessors.

The City of Bristol.

It would be unseemly also not to say a word about the great city in whose precincts we are welcoming the Association. It is one of the oldest in England and some, especially those given more to legend than to history, suppose that it existed in an embryonic state 390 years before the Christian era. It is at least believed that our two Roman camps, one on each side of the gorge of Avon, were placed on the sites of British camps, and that the one on this side guarded the small town at the foot of the great rock.

Some think that its birth was coeval with the beginning of Christianity in England, and a tradition exists that Joseph of Arimathea, the reputed founder of Glastonbury Abbey, was the first preacher here. Any way it was a borough before the Norman conquest, and its chief magistrate, the Præpositus, equivalent of our present mayor, elected by free burgesses, was spoken of in Domesday Book. This is not the place nor this the fitting moment for touching upon the archæology of this interesting city, but Pryce speaks of the secular guilds, the associated fraternities of free burgesses, as existing from early times: and I think the idea embodied in such associations is more persistent with us than in many parts of the kingdom. What has been the course of our city life since the early Plantagenets? Encircled as the city came to be by an outer and an inner ring of monastic establishments, a city of churches down to the present day, the ecclesiastical sentiment has been moderated and turned to practical usefulness by the early importance, enforced by the charter of Henry III, of the office of Mayor of Bristol. By the combination of ecclesiastical devotion and the practical common sense of the lay rulers Bristol became and has remained throughout the centuries a city of charities. Nor can we forget that it was from this port that Sebastian Cabot started on his successful discovery of North America.

As a city, Bristol was mixed up for good or evil in most of the chief events in the history of the nation. Usually loyal to the throne, she had no opinion of her own on the subject of ship money; and no wonder, as having been in much earlier days almost London's equal as a port, finding for Edward III nearly as many ships and men as the metropolis itself; whilst in 1450 William Canynge was the largest ship owner in England. Many times has Bristol been besieged: more than once has the sturdy independence of the city culminated in riots; whilst in another aspect we boast of Wycliffe, Tyndal, Cranmer, and Latimer as having kindled the spirit of a pure faith within our walls; whilst Canynge, Colston, Reynolds, and a host of others, have in various ages done so much to foster the altruistic spirit, which is the prominent characteristic of the place. It would take many addresses to exhaust even some of the elements of her greatness. The faint sketch I have given—far too faint—serves merely as an introduction to the subject of the address, because an old city like this is for good or evil a type of the State itself; and it is of the State in its relation to medical science, or rather of medical men in their relation to the State, that I would speak.

It is probable that you will hear some wise words about our climate in the Section of Public Medicine. I may say that although our climate is somewhat relaxing for those engaged during middle life in the arduous struggle of professional and commercial work, we can point to a very exceptional number of nonagenarians; and we possess the healthiest schools in the kingdom. That our climate leads to a *laissez faire* existence is disproved by the enormous growth of Clifton in the last thirty years, by the magnificent opportunities of education for all classes and both sexes, second to none in the kingdom; by the energy and public spirit of many of those engaged in the commerce of the place; by the high position

of our citizens in the pulpit, in the law—and, looking round at my distinguished colleagues, may I not say in medicine?—and in the growth of that philanthropic spirit, cosmopolitan in its sympathies, cosmopolitan in its wide-spreading energies, that has not been content with making Bristol a city of charities, but is far reaching in its wise liberality towards the needs of the body and the higher interests of mankind in every region of the world.

MEDICINE IN PLATO'S REPUBLIC.

In the ideal republic formulated by Plato, he touched upon the place and duties of medical men. Whether his views were true even in his own day or whether he was peculiarly prejudiced towards our profession, it is certain that they could be held by no one at the present time. A physician, he says, is either a gainer of money or a tender of the sick; as to sick persons, such as are diseased in their bodies, they should let die. Of education, he tells us that physicians would become extremely skilled if from childhood upwards they would in learning their art gain experience from a large number of bodies, and these, too, of a very sickly character, especially if they should themselves be afflicted with all kinds of diseases, and not be altogether of a healthy constitution. Our position in Plato's republic would have been a humble one, and yet the common sense of Greece must have been largely guided by physiological ideas in their care for the education of their youth, by striking an even balance in the training of bodily and mental faculties. In what respect is our position more assured at this portion of the world's history, nearly twenty-three centuries after the time of Plato? He praises the sons of Asclepius in that they would have nothing to do with unhealthy and intemperate subjects whose lives were of no use to themselves or to others. "For the art of medicine was not designed for their good, and though they were as rich as Midas the sons of Asclepius would have declined to attend them." The progress of science and the spread of Christianity have changed all this.

MEDICINE AS THE ADVISER OF THE STATE.

What is the advantage of our numbers, what the use of our combination, what the benefit of our knowledge of the wants of mankind and of the modes of their relief if we are not from time to time to assert our claims to be, even more than we are at present, the advisers of the State? As a profession we are above party. Our highest aspirations tend to the formation of a pure commonwealth. The poor, the sick, the criminal are our daily study, primarily for the relief of the individual, but with nobler and farther-reaching aims, namely, that poverty may be mitigated by more healthy surroundings; that sickness may be diminished by the education of the nation in the wiser laws of health, by increased temperance, and by a knowledge from an early age of the common facts of physiology; and that the criminal class in the future may occupy narrower limits, because no longer the victims of a debased heredity. Poverty, disease, and crime—these are the objects of our investigations as a profession, these are the foul blots in the State for which we seek amelioration.

What numbers of intellectual people, whose work should be so high in poetry, in art, in political or professional life, in commercial undertakings, and even in manual labour, are unfitted for giving their best to the State by an unhealthy environment, by ignorance how to use and how to husband their brain power, or by yielding to this or that self-indulgence, the very yielding—a neurosis. It is but a truism to say that a model State needs the best intellect of each and all her children. We doctors have to work against hereditary influences, induced by the ignorance of many preceding generations—the "good old times," as they are so fondly and so falsely called. But the work is being done. I do not speak here of the *ars medicinæ*, though in common with all other subjects therapeutics are becoming scientific and intelligible. But from the highest to the lowest in the State each individual must be brought to recognise that their power of doing good, of duly filling their appointed place in the commonwealth, of carrying out the highest form of altruism, depends in wide measure on their ruling their lives in accordance with physiological laws, for a knowledge of which the world is mainly indebted to members of our own profession.

All science is cosmopolitan, and medical science, perhaps, specially so. This or that point may have been brought into prominent notice in our own country, on the Continent, in America, or elsewhere. But the profession in every State is quick to recognise everything that bears upon the subject it has at heart, the well-being of the human race.

Step by step the need of medical guidance is permeating more or less every branch of the public service. *Experientia docet.* What thousands of lives have been saved by the careful observation of the sources of disease by medical men in various parts of the world; by none more ably than by the medical officers of the naval and military services. In their observations upon cholera, yellow fever, and the various forms of malaria, for instance, especially such as in some of their symptoms simulate yellow fever, some of the best work has been done by the medical officers of the army and navy.

THE MEDICAL MAN AND THE STATE.

The medical man and the State! Is this too ambitious a theme for an address before this representative body of the profession? Not the position we take in titles, or honours, or rewards. These are probably less thought of by us than by any of the workers in the commonwealth. But the question is rather, of what use we are to the country? to what extent are we necessary to the State? to what degree, and by what means have we risen in the estimation of the public? in what manner does the position assigned us in Plato's academic idea of a republic seem at the present day totally inadequate?

The answer will lie in the nature of our work, and our methods of performing it. What are some of the chief needs of an ideal State? Apart from the legislative and executive departments, it is necessary that the people should be healthy, strong, temperate, and wise. Speaking without political bias, it may be said that whatever the form of government, whatever the strife of parties, it is simply a nineteenth-century axiom, that the nation, made up of individuals, is the only ruler. We as a profession have to deal first with individuals, and then with conglomerate bodies of men. Granted a strong development, founded partly at least on obedience to the facts of heredity and on good sanitary laws, we may be sure the race will and must advance in all physical and mental conditions. It is ours to teach the authorities in the State what those sanitary laws should be; and England may be congratulated on the fact that the Local Government Board numbers a skilled medical man among its highest authorities, able to be in touch with the profession, and to insist that medical views shall invariably be acted on.

There are many here to-day who can bear hearty witness to the value of that Local Government Board to the State. For the prevention of the spread of epidemic disease, for the cure of individual cases, for means of protection in town and country, for the use of all knowledge of microbal disease in the lower animals and in man, for systems of drainage, and good water supply, of purification of infected houses, and of all considerations that have to do with those diseases that may spread from one individual to another, the medical officers of health, with the tone of professional feeling that necessitated their appointment, have been, perhaps, the most prominent factors for good in the present age. We may emphasise the allusion to the tone of professional feeling. So far from being considered, as in Plato's time, as either gainers of money or tenders only of the sick, it is the proud boast of the profession that much of the medical thought of the day, and for many years past, has been devoted to the prevention of disease.

VACCINATION.

We stand to-day almost in view of that vale of Berkeley where, at the beginning of the century, the immortal Jenner, a quiet country doctor, brought to perfection by his accurate observations, and his skilled reasoning on those observations, the plan of vaccination for the prevention of small-pox. Our county, Gloucestershire, that produced such a man as Jenner, may well be considered worthy of honour, as he not only gave us a sure method for the prevention of the most terrible

scourge England has ever known, but unwittingly laid the foundation of all microbal pathology.

Was his a discovery that could be fittingly acknowledged by the thanks of Parliament, by sums of money, by titles and rewards, such as might be given by the head of the State? No! His reward was that each year he saved from death in England alone thousands of lives; and perhaps three times as many owed to him their immunity from the disfigurement and the local diseases consequent on small-pox. Is it not monstrous that in less than 100 years from the birth of vaccination, the great work of this benefactor to the State should be rendered partially ineffectual by the crazy cry of the liberty of the subject? Are we to leave untouched and unhindered the men who, from faddish fears of the evils of vaccination—evils that might be entirely avoided by the use of calf lymph—are endangering thousands of their fellow citizens, and doing their utmost to interfere with the only reward to which Jenner looked forward, the well-being of the human race?

Bacteriology and the State.

It is in the realm of investigation that our profession has given some of the best service to the State. It may be permissible for a few moments to touch upon some of the more remarkable of these investigations.

It would be too large a subject for the present occasion to do more than refer to the enormous advantages to the State conferred by the light thrown by many investigators on the subject of bacteriology. Already much is known about abscess, enteric fever, diphtheria, cholera, pneumonia, phthisis, tetanus, and glanders. Already M. Pasteur's investigations have brought the death-rate from rabies to less than 1 per cent. Already, through the efforts of the same great experimentalist, millions of sheep are being inoculated against anthrax in various parts of the world. Already antiseptic surgery, the splendid result of the work of Sir Joseph Lister, may claim to have made possible hundreds of operations hitherto too dangerous to attempt, and to have saved thousands of lives. The whole course of medical treatment is being revolutionised by these studies. The coming generation of doctors will have their time taken up, even more largely than in past years, in rendering persons immune to the attacks of disease.

It is known now that abscesses caused by staphylococci have a tendency to remain localised, whilst those from streptococci are often followed by metastatic abscesses, as in erysipelas, puerperal fever, and ulcerative endocarditis. We know now that the tubercle bacillus is found in chronic bone disease, and that if this bacillus exists alone the disease is a chronic one, whilst if the streptococcus pyogenes is present also the disease is more quickly fatal; that the suppurations accompanying tuberculosis are due, partly to the tubercle bacillus itself, or, rather, to the poisons resulting from the action of that bacillus, but partly also to other micro-organisms; that the bacillus diphtheriæ is found chiefly on the surface of the false membrane, and that the fatality of that disease depends on the poison secreted by the bacillus diphtheriæ, whilst the presence of streptococci renders the disease more grave, the increased virulence being due to the existence of both these organisms together. We find that acute pneumonia is caused by the pneumococcus of Talamon-Fraenkel, although often associated with the streptococcus pyogenes. This pneumococcus, too, may produce abscesses in patients free from pneumonia, as in purulent pleurisy, ulcerative endocarditis, and suppuration of the nasal fossæ. The fact that this microbe exists in the saliva of healthy people proves that these diseases have also a non-microbal element. Some condition of the sympathetic influencing the calibre of the blood vessels or some morbid condition of the vagus or of the accelerator nerves, or some inherited vulnerability, with all its possibilities, must probably be precedent factors.

The typhoid bacillus is often accompanied by other micro-organisms, especially the streptococcus pyogenes or the staphylococcus aureus and albus. The study, too, of tetanus might, if time permitted, open up a further story of the mode of destruction of these micro-organisms, as the leucocytes refuse to take into their interior the tetanic bacillus when other micro-organisms are present at the same time.

Those present who know something of bacteriology will at once perceive that the mere fringe of the subject has been touched upon; but perhaps enough has been said to show what good work is being done at many centres, and perhaps especially in England at the Research Laboratories of the Royal Colleges of Physicians and Surgeons and at the British Institute of Preventive Medicine, much of it by their distinguished directors, Dr. Sims Woodhead and Dr. Armand Ruffer, to the latter of whom, also, we owe much of the knowledge of the parasitic protozoa in cancer.

Is it not remarkable that in a practical country like our own the existence of such beneficial institutions is left to the liberality of private individuals? Is it not remarkable that the State has nothing to do with them, except by utilising the advances in preventive medicine, engendered by the labours of those that are connected with them?

The Medical Profession and Noxious Trades.

Perhaps next in importance to the study of bacteriology is the good work done by medical men, and in part acted on by Parliament, on the subject of noxious trades. Here especially does the State owe much to members of our profession. It is in the power of any to read the excellent lectures of Dr. Arlidge before the College of Physicians; and he does not stand alone in these useful investigations.

In those lectures he took up the trades in which the main evil is a pulmonary one. The investigation teems with useful information, but it will be easily recognised that it is too large a subject for our present purpose if we merely mention the various animal substances used in manufacture, silk, wool, hair, feathers, horns, hoofs, hides, and skins; or vegetable substances, cotton, flax, jute, rags, flour, tobacco, and charcoal, the last but one the most harmless, the last the most harmful; or minerals, coal, ironstone, lead, tin, copper, stoneware manufactures, and electro-plating. In cutlery, dry grinding is more harmful than wet, scissors-grinding more dangerous than that of forks, razors, and penknives; all three less harmful than needle-grinding. In brassfounder's ague the symptoms simulate those of intermittent fever, and depend upon the dense white fumes of oxide of zinc. These points touch only one branch of an important subject, but they are enough to illustrate some of the labours of the members of the profession. They are the more satisfactory in that in a large number of instances precautions have either been enforced by law, or have been taken by the good feeling of the manufacturers themselves.

Neurology.

There is now no portion of the human frame in which disease is not being traced to its source by medical philosophers with a view to its prevention or its cure. In no department has better work been done than in the investigations on the nervous system. In no department has the result of such investigations been of more permanent utility to the well-being of the State. Contrast our knowledge of to-day with the entire absence of differentiation in paralytic lesions that we elder ones can well remember.

We have now gained, partly by experiment, partly by careful clinical and pathological observation, a tolerably complete knowledge of the motor physiology of the brain, and of the centres for the special senses. Those who have studied this important subject, will know also how much we owe to our own Ferrier and Schäfer, and Horsley and Jackson, and to a host of others in this and other countries. Nor is it necessary, before a highly educated audience like this, to do more than refer to the value of these investigations for the surgery of the brain. Trephining for focal epilepsy, and for brain tumour and abscesses, nay, even for meningeal hæmorrhage, can now be ranked amongst common operations; and similar accurate observations are daily teaching us new things, such as for instance the limiting the centre of sight for the macular field to one small portion of the calcarine fissure. That the differentiation of the special seat of the intellectual faculties has not yet been determined in detail, may perhaps depend on their intimate relation to each other, but Broca's region for aphasia, and the centres which, when diseased, cause word-blindness and word-deafness are

already known, and the present generation is adding much to our knowledge in this direction.

The aspirations of Gall and his school, though founded upon an imperfect knowledge of minute anatomy, and disproved in every detail by modern research, are really the keynotes to all our investigations. Not directly with a view of illustrating final causes, but with ideas of a more modern teleology, that includes the various data of evolution, each investigator of the brain is constantly asking himself, as he passes from one group of cells to another, "*Cui bono?*" It is certain that each cell has its function.

As far-seeing sons of the mother State under which we live it is ours to know man more accurately. What we are still partially in need of for the brain itself has been in large measure accomplished for the medulla oblongata. How many lives have been preserved to the State by the more accurate knowledge of this small portion of the nervous system! Forming a connection between the brain and spinal cord, in some respects belonging to the spinal, in others to the cerebral system, how many centres are represented here! The ruling area of the reflex centres, of the vagus nucleus regulating respiration and cardiac movement, gastric digestion, and much of intestinal function and taking part in conjunction with the glossopharyngeus, the accessory, the hypoglossus, and some fasciculi of the trigeminus in the production of articulate tones, the centre of deglutition co-ordinating the above-named nerves and the facial, the centre of vomiting, according to Schiff, the centre of co-ordination of the abdominal muscles in defæcation, the vasomotor centre both for the contraction and the dilatation of the vessels, the trophic centre, the centre of salivation, and perhaps also partly for the regulation of temperature by inhibition of chemical action, all are contained here; whilst the knowledge that lesion of the restiform bodies leads to most of the phenomena of exophthalmic goitre, that in the floor of the fourth ventricle there are spots, injury of which causes diuresis, saccharine urine, and albuminuria, that bulbar paralysis depends on lesions primarily of the hypoglossal nucleus, and that hæmorrhage here is more frequent than in the spinal cord—all these important facts are due to careful physiological investigations, and go far to prove that this region of the nervous system has been a great training ground for neurologists, a necessary introduction to that more accurate knowledge of the higher centres, as to which the advice of the profession is so necessary to the State. More amenable to treatment, and thereby at present of more direct importance to the State, are the diseases, systemic and non-systemic, of the spinal cord; railway spine, for instance, depending on anæmia, possibly sometimes on hyperæmia of the cord, at any rate owning a factor as so much of hysteria does also, not fanciful, but yet not accurately determined pathologically, that depends presumably on abnormal relations of blood supply and nerve cell. It is enough to merely mention unilateral injury (Brown-Séquard's paralysis) with motor paralysis on one side and sensory on the other, inflammatory disease of the spinal membranes, almost certainly microbal in all its varieties, meningeal hæmorrhage and tumours, particularly in the region of the cauda equina, that strange condition, neurasthenia spinalis, so sad in its possibilities though so amenable to treatment, the various forms of myelitis, traumatic, central, transverse, disseminate, anterior poliomyelitis, and myelomeningitis in the acute form; the connection of tabes with syphilis, the exquisite points of differentiation of multiple sclerosis from paralysis agitans, tabes and hereditary ataxy, the non-inflammatory softening of the cord; and, not to be too tedious, syringomyelia, saltatory spasm, that form of tonic spasm called Thomsen's disease, malarial intermittent palsy, Landry's acute ascending paralysis, for which no lesion has been found, and the origin of which is probably toxic, and the numerous forms of peripheral neuritis, one of which may have much to do with Raynaud's disease. What an advance has been made in this direction, when we remember that all these paretic phenomena used to be classified under the simple term "paralysis."

And it is impossible at this portion of the address not to refer to one who was a frequent visitor at these annual meetings, whose brilliant work touched almost every portion of the nervous system, whose accurate differentiation and whose marvellous power of generalisation were remarkable even in France, whose observations on hysteria and hystero-epilepsy are marvels of accurate investigation, who did so much to separate the true from the false in the matter of hypnotism, and who, up to his dying hour, continued to show by his untiring energy, his accuracy, his love for scientific truth, how much a great scientist, a great physician, can do for the State—the late Professor Charcot.

It is supremely difficult to appraise the value of this or that line of investigation by the medical scientist, in his desire that his work should be of advantage to the State, in his care for the bodily and mental health of the individual. But it is impossible in this relation not to mention some of the more recent data that have come to light in connection with the brain itself. Pachymeningitis chronica externa is a recent addition to our knowledge, and so are the good results of basal tapping in distension of the lateral ventricles. Our knowledge of general paralysis is far more accurate, and the earlier stages more easily recognised. The whole question of the diagnosis in, and improved treatment of, the various forms of insanity is one that is pregnant with splendid results in these days. To most of us, who are not alienist physicians, this more accurate knowledge of the pathology of mental disease, this growing belief that every mental abnormality is connected with some cerebral lesion, is not only intensely interesting as saving many an intellect for the benefit of the country at large, but as initiating ideas as to the prevention of the destructive lesions. Alcoholic paralysis and alcoholic ataxy are both preventable diseases, the latter differing from locomotor ataxy in the absence of the Argyll-Robertson pupillary symptom, of girdle pains, of gastric crises, and of the affections of the joints. The improved knowledge of migraine has done much to save many a brain worker from defeat. The knowledge, too, of the visual path, such as has been formulated of late by Professor Henschen, of Upsala; the experience that at least one form of epilepsy depends on errors of refraction, and can be remedied by the use of proper glasses; the large subject of hemianopsia, which has been worked at with such brilliant results by members of this Association, and has thrown so much light on the positions of cerebral lesions; the discovery of the small portion of the pons involved in crossed paralysis; the phenomena of plug in the lateral sinus that have led to operation for its removal; the deeper acquaintance with the lesions of the internal ear, with the physiology of diabetic coma, of hemiatrophy of the face, of the modes of walking in various forms of hemiplegia, of cerebellar titubation, and a hundred other points, are not only matters of pathological interest, but are evidences of that enthusiasm in the pursuit of truth that has led medical scientists to results so marvellously beneficial to the best interests of a nation.

Internal Secretions as Therapeutic Agents.

Equally good work, though of a different kind, has been done in the medical investigations of acromegaly and myxœdema. The peculiar symptoms classed under the latter denomination have been spoken of at several of the later annual meetings, and are specially remarkable for the good results obtained by the injection of the organic liquid extract from the thyroid glands. This is only one instance of the benefit conferred by the use of these organic liquid extracts from the glands and other organs. The use of extract of brain in neurasthenia, tabes, and even in some cases of epilepsy, of thymus fluid in pseudo-hypertrophic paralysis, of a liquid extracted from the medulla of the bones in the treatment of anæmia, debility, and lymphadenoma, opens up a new line of thought both in physiology and therapeutics. The value and importance of such investigations are still *sub judice;* but where, as in myxœdema, some morbid condition of the system depends upon the absence or disease of a certain organ, it was not unreasonable to hope—though it remained for Dr. Murray, of Newcastle, to prove it—that the exhibition of this organ, or of healthy preparations from it, might be beneficial. And this mode of experimental therapeutics will lead to a better classification of disease, and to the power of generalisation of many morbid phenomena that hitherto have been absolutely unrelated.

Feeble-Minded Children.

This new idea of treating myxœdema leads up also to the question of feeble-mindedness in children, cretinism, and especially sporadic cretinism, which is only myxœdema in childhood. Here, if anywhere, are prolific proofs of the subject of to-day's address—the benefit conferred upon the State by the investigations of the profession. During the last century the attention of medical men in all parts of Europe and in America has been turned to the differentiation of the various forms of cretinism and idiocy, and to the possibilities of amelioration of the physical and mental feebleness of such cases.

The subject is, too, vast for anything beyond mere mention here, but it touches biologists on questions of heredity, surgeons with reference to the relief of synostosis, and physicians, legislators, and criminal lawyers in its various phases. We are at last obtaining more accurate data for work, by collecting real percentages of feeble-minded children in board schools, a work in which our Association has borne no ignoble part. We owe a debt of gratitude to Dr. Güggenbuhl for leading the way among the Swiss cretins, as Pinel did among the idiots in France. We are learning that, except in the case of the microcephalous, cranial developments do not help us much in these researches, nor even pathological appearances. The power of attention, and the consequent results of education, are almost the only trustworthy data for differentiation. But this benefit to the State, due mainly to members of the medical profession, obtains not only in raising some of these afflicted ones to a dim apprehension of the abstract, but many more to a condition in which they are, partially at least, able to earn their own living, and be no longer wholly a burden to the community.

This question too touches the great subject of criminology, one that has suffered from its most ardent supporters. Interesting as are Benedikt's observations on the lessened cubic area of the brain in criminals, interesting as are the minute investigations of every part of the human body by the great Italian savants, Lombroso, Gerofalo, and others, one rises from a study of their results with the idea that the human race is composed of two divisions of men: the criminals who have been found out and those that have not yet been found out. The criminal type, according to the notions of these learned men, would include too many of us to be of any practical use. And after all, in England most certainly, the criminals who are unable from physical abnormalities to resist temptations to crime, form an exceedingly small portion of our convict population. But among feeble-minded persons, who can be taught by object lessons alone, and who may not have had the advantage of this teaching in such splendid institutions as Earlswood and Darenth, and the like, the one object lesson they have been able to apprehend may have been some act condemned by law. What is the good of sending these poor creatures to prison over and over again? Instinct for food is their only faculty when they can no longer imitate their object lesson. They may be too old for idiot institutions, they are unfitted for asylums, they are anomalies in prisons. There is need for some homes for them, not asylums, not penal settlements, but places where they could be taught something a little useful, and where they could be tended with the kindness that should be the chief characteristic of a Christian State.

Remembering how small a portion of the results of medical investigation has been touched upon to-day, how much good work is being done in examining the nature of that great organ—the blood, with its power, within certain limits, of combating successfully bacterial attacks; how, in speaking of the diseases of the nervous system as perhaps the most important of all, no reference has been made to a vast number of other pathological processes that are receiving equally minute attention, is it not true that the medical profession has taken a high position of usefulness to the commonwealth? In every portion of the civilised world devotion to biological research in the widest sense is one of the chief characteristics of a doctor, the other being the desire to utilise the results of these investigations for the benefit of mankind. Science is almost infinite; and the stately centuries roll on, gifted with ever greater knowledge, with ever more abounding usefulness, each age helping the one to come by its successes and its failures; and in spite of the many quackeries and nostrums of to-day, the position of medicine stands higher than in any previous age, and is making sure advance towards being recognised by-and-by as an abstract science.

The Poor-law Medical Service.

One word more about its influence. It is a mere truism more or less generally recognised, that for hard work, for self-abnegation, for devotion to the good of others, the medical profession, from student life onward, is a type for the imitation of the nation at large. Plato spoke of us with some disdain as "gainers of money." Apart from the fact that we are no more so than members of other professions, and far less so than many engaged in commercial pursuits, it may be permitted to refer to a body of men, to whom at any rate that sneer can never be applied, the medical Poor-law officers throughout the whole kingdom. What would our poorer brethren, the people the Master came to live among, what would they do but for the devoted ministrations of these Poor-law officers? Many of us, in other branches of practice, have more material comfort, the luxury of interchange of thought with educated patients, a more recognised position in the esteem of men. Amid the constant pressure of hard work, amid difficulties of all sorts and kinds, with continual disturbance of rest, and with demands on their mental resources more incessant than is usually experienced among the rich, the Poor-law medical officer, either at the workhouse or in district work, knows no repose, and with a salary so inadequate that the State ought never to sanction it, becomes the hearty and untiring friend of the poor, a pillar of the State not only by the results of his devotion to his duties, but by the splendid example of his life. Much the same may be said of officers of clubs and dispensaries. These ill-paid offices are filled by men whose knowledge, with the education of the present day, leaves little to be desired, and whose influence for good excels, if possible, that of the rest of the profession, because exercised under greater difficulties.

Against Gluttony and Drunkenness.

But professional influence permeates the nation in many directions. It is the enemy of excess of all kinds. The public may have a kindly laugh when they hear one doctor advising abstinence from this and another abstinence from that. But this does not militate against the fact that the medical experience of the day has set itself against excess. And not only as to food. We may not claim a vast number of the profession as total abstainers from alcohol, but we do claim the majority of it as examples and as teachers of temperance.

They were medical men who made experimental observations that place this question on a basis of truth and common sense. What obligations did not Professor Parkes confer upon the State on this subject? How important is it for the nation to know that alcohol is, with certain exceptions, unfitted for childhood; that any excess in muscular work, as in the forced march of an army, is rendered far more difficult by its use; that it not only fails in giving power in the work of the muscles and the heart, but acts distinctly as a depressant; that it never enhances the temperature of the body, and that in its pure state it is in no sense a food. All this knowledge has been gained by the observation of medical men. As to using this drug to the extent of inducing intoxication, there is not a medical man in the kingdom that would not enforce an earnest warning against it.

Medical Influence in Social Life.

It is to medical influence that the sensible care of children, the due relation of muscular and of mental work in schools, the methods for regulating the health of body and mind amid the railway pace of modern life, the prolongation of existence to a ripe old age, are almost wholly due. What assistance, too, does it give so often to the law, though doubtless in this relation it would be better that in controversial cases the medical witnesses on each side should meet in consultation.

I ask your forbearance in that, within the limits of an hour, I have been able to say so little on a subject that one has so much at heart. Happy is that State that legislates, in all things concerned with the well-being of the people, in

dependence upon medical advice. As a profession, if not as individuals, we leave untouched treaties with foreign nations, many of the great commercial questions, nay even the unity of the Empire, to minds with a different bias from ourselves. We concern ourselves with the well-being of the masses of mankind, the possibilities of the advancement of the race, the annihilation of all things that militate against the progress of the nation.

To us the poor, the blind, the deaf, the feeble-minded are not merely divisions of the human family to be fed and cared for, but brothers and sisters of our own to be raised still higher in the economy of Nature.

Our thoughts are given to the prevention and relief of suffering; our highest ambition is to leave each generation better than we found it; and by the results of our investigations and by the influence of our lives to form foundations for our successors to rise higher still, and to elevate the race to a point impossible for ourselves, to deserve to have it said of each one of us, as it was of the great Head of our profession, "He went about doing good, healing all that were diseased, for God was with him."

ADDRESS IN MEDICINE,

BY

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At the Annual Meeting of the British Medical Association held in Bristol, August, 1894.

THE NATURE AND TREATMENT OF INFLUENZA.

IT is not my intention to ask you to consider to-day any question of medical politics or of medical education, for these are inappropriate to the address in medicine. Nor do I purpose to advance any wide general statements, for these are apt to be vague and wanting in practical utility; nor to lay before you the results of any recent work of my own, for that has not been of a nature suitable for our present meeting, but I desire to take up a subject which has of late years largely occupied the attention of the profession, and with regard to which it may be of some service if we can formulate views and conclusions fitted to throw light upon the nature of the process and its prevention and cure. The recent epidemics of influenza have been studied with a care hitherto unequalled, and by methods which the profession did not formerly possess; and I wish to consider what we have really learned with regard to the nature and treatment of this great morbid process.

REFERENCE TO OLD EPIDEMICS.

It is scarcely necessary to demonstrate nowadays to an audience such as this that influenza is no new epidemic. I shall cite evidence of only two unmistakable outbreaks—one occurring on the Continent and one on our own island. We learn from many sources that an epidemic broke out in Italy, and particularly in Florence, during the months of January and February, 1387, that that epidemic spread rapidly, so that by Lent it prevailed in Strassburg and throughout France, as well as in Southern and Northern Germany. Buoninsegni in his Florentine history speaks of it as "*una influenza*" which affected people with cold and fever, and was fatal to many, especially the old. Velascus of Tharanta observed that young children enjoyed a comparative immunity from its attacks; and Jacob von Königshofen tells us that in the Strassburg district it was marked by cough and running of the nose, that it attacked nine out of every ten of the population, and that it was fatal mostly to old people who were otherwise weak. No one can look into the records of the period without being satisfied that that outbreak was an epidemic of influenza.

For the instance which I select as proving its existence in our own island we are indebted mainly to a shrewd observer who was not a medical man, but a diplomatist, and who represented Queen Elizabeth at the court of Mary Queen of Scots. This Thomas Randolph or Randall was keen-witted enough to be worthy of working along with Cecil and the other great Ministers of Elizabeth, and one of his letters, dated from Edinburgh in 1562, contains the following passage:

"May it please your honour, immediately upon the Queen's arrival here, she fell acquainted with a new disease which is common in this town, called here 'the New Acquaintance,' which passed through her whole court, neither sparing Lord, Lady, nor damoiselle, not so much as either French or English. It is a pain in their heads that have it, and a soreness in their stomach, with a great cough that remains with some longer with others shorter time, as it findeth apt bodies for the nature of the disease. The Queen kept her bed six days; there was no appearance of danger, nor many that die of the disease, except some old folks. My Lord of Murray is now presently in it; the Lord of Liddington hath had it, and I am ashamed to say that I have been free of it, seeing it seeketh acquaintance at all men's hands. By reason of these occasions I have not seen her Grace since she came to town."

It can scarcely be doubted that this disease was influenza. Its sudden appearance, its epidemic character, its clinical features, its degree of fatality, all correspond to what we recognise as characteristic of that malady. And our ancestors gave it a name as suggestive as the more modern ones, "influenza" and "*la grippe*," for they speak of it as the "New Acquaintance." This is the earliest definite account that I have met with of its occurrence in our island, but since that time it has reappeared at longer or shorter intervals. It has thus been a subject of study to the physicians of each generation. Each successive epidemic has exhibited essentially the same features as those with which we have of late been only too familiar. The question which I wish to consider is, what use *we* have made of our opportunities, what real advance we have made.

CLINICAL FEATURES.

I must say a few words regarding the clinical history of the disease in order that we may understand one another clearly when we come to consider other more obscure points. I should not think of speaking in detail of matters familiar to every practitioner in regard to the ordinary features of the malady, its general characteristics of pains in the head, the back, the limbs; the sense of debility of body and mind which rendered exertion impossible, the degree of fever, and the long-continued weakness. Nor of the three great groups which we all came to recognise: that affecting chiefly the respiratory tract, that involving for the most part the gastro-intestinal mucous membrane, and that in which the aches and pains and nervous symptoms predominated over all others. But I cannot pass quite so lightly over the complications and sequelæ which arose in so many cases, and shall endeavour to sketch in bold outline some of my own experiences in regard to the involvement of the different systems of the body. In doing so I hope that I shall recall experiences that many of you have had, and I have no doubt that many present could supplement and extend what I say by describing cases which have fallen under their observation.

The *Alimentary System* was affected in a great variety of ways. Apart from the disturbance attending the acute attack or primary disease many patients suffered for weeks or months afterwards from various digestive troubles. As an example, I may refer to the case of a gentleman from Forfarshire who consulted me on several occasions. He seems to have a special proclivity to influenza, for he has had three attacks since 1890. The first was sharp enough, but left no serious effect behind. The second, which occurred in 1892, was much more formidable. During the primary stage the temperature reached 105°, and he manifested great depression. Having risen from bed and gone out too soon, he suffered a relapse, with sharp bronchial catarrh and severe cough. When I saw him first these conditions persisted, but his chief complaint was of gastric irritation. Every morning, whether he remained in bed or got up, whether he took food or abstained from it, he was taken at about the same hour with a chilliness, often amounting to rigor, followed by sickness and violent retching. He got no peace until the stomach was

emptied of any food he might have taken, as well as of a large quantity of glairy mucus sometimes mingled with bile. During the rest of the day he was comparatively free of the sickness, and able to go about in a feeble fashion. He was often chilly, and when he went to bed his feet and legs used to be cold and clammy, in a way that they had never been before—and towards morning he would break out into copious perspiration like that attending advanced phthisis. The illness lasted for many weeks and yielded only very gradually to treatment, but at last recovery was quite satisfactory, and during the past winter he had another attack of influenza which left no sequel behind it.

Now, no one who witnessed the facts could doubt that the gastric symptoms were due to influenza, but it was not easy to say whether the gastric mucous membrane was the structure primarily affected, or whether the nerves supplying the stomach were at fault. That an inflammatory condition existed was clear enough, but in my judgment it was equally apparent that the nervous system had an imperfect share in the process, considering that the phenomena occurred periodically and with such regularity. I do not mean that organic change in the branches of the vagus or at its roots necessarily existed, but that their functions were undoubtedly involved.

The *Hæmopoietic System* exhibited innumerable changes. Ordinary anæmia was commonly observed, and forms so severe as to warrant their being called pernicious now and then occurred. But among the most important of the blood changes which I noticed was Purpura Hæmorrhagica, of which I had an example under my care in the Royal Infirmary. I sifted very closely the evidence which connected the process with influenza, and was quite satisfied of its reliability. The patient, a man aged 31, had been suffering from chronic phthisis when he had his attack. He had so far recovered as to be able to go out for a short walk, but on coming home from his first attempt of that kind he felt uneasiness in one leg, and this was followed by swelling, evidently the result of thrombosis. The first purpuric blotches appeared in the area whose vein was blocked, but soon afterwards in other parts as well. Successive crops of hæmorrhages appeared under the skin, attended by the other symptoms peculiar to the disease. But gradually he improved, and about a month after admission he seemed convalescent, the hæmorrhages having passed off, and the thrombosis disappeared. The only anxiety was due to the condition of the lungs, which became more affected, the sputum containing tubercle bacilli, and fever also increasing, especially towards evening. Suddenly a fresh eruption of purpuric spots appeared, and along with them hæmorrhages from various mucous membranes, and particularly from the lungs. It was followed by a speedily fatal result.

It is difficult to say how these blood changes are brought about, but we must keep in view the fact that at least one of the structures standing in important relations to the blood is affected, namely, the spleen; that it is often enlarged in influenza as it is in so many fevers, and it is not unreasonable to suppose that the bone marrow and other structures may be similarly involved, and that the blood changes may be due to these.

But, apart from structural alterations of the blood, chemical changes have been frequently observed to result from influenza. Perhaps the most typical is the occurrence of Gout during convalescence from an attack. A patient of gouty constitution, who had perhaps suffered repeated attacks of the disease, was taken with influenza, and, without other cause that could be ascertained, suffered a fresh paroxysm of gout. We know that anything which causes debility may be followed by like effect in such a patient, and cannot wonder that a malady so debilitating as influenza should give rise to it.

Perhaps in connection with the blood changes I may also refer to Diabetes Mellitus. It has been found to stand related to the influenza process in two ways—for those who have been suffering from diabetes and have taken influenza showed a proclivity to diabetic coma, and, in a considerable number of cases, the diabetic process itself took origin just after influenza. On looking over the records of my hospital practice I find at least three cases in which, so far as one could judge, the influenza induced diabetes. Changes in the central nervous system may afford the explanation of this clinical fact, or it may be that organs such as the liver or the pancreas, which stand related to the transformation of sugar in the economy, may be directly affected by the process.

The *Circulatory System* exhibited some of the most interesting postinfluenzal phenomena. They presented considerable variety. I select as my first illustration the case of a member of our own profession, a man, aged 54, who during the winter of 1891 passed through an attack of influenza. The illness was so slight that he was never laid aside from his ordinary avocations, but he complained of catarrh, with aching of the limbs, the head, and great debility. During the weeks which followed he continued feeble and less fit for exertion than usual, but was able to perform all his professional duties, which were both varied and exacting. At length one evening he was startled to find himself very weak, and to notice that his heart's action was slow and irregular. Notwithstanding the most urgent advice he persisted in attending to his duties the following day, and after some hours of laborious work he was compelled to give in, feeling absolutely unfit for further effort. I had the opportunity of feeling his pulse then, and of watching its state occasionally during the subsequent weeks. It was sometimes as low as 36, rarely above 40 in the minute, and there was a curious irregularity as if there were occasional abortive beats, and then a slowly delivered but not weak or small one. The heart, which was somewhat enfeebled from old rheumatic disease, but not unequal to its ordinary duties, dilated rapidly and well marked murmurs developed in the mitral and tricuspid areas. There was even some suspicion of aortic incompetence. There was no cardiac pain and no faintness, but the sensation of delayed action of the heart with abortive attempts at systole, and the full bound of the organ when ventricular systole did take place produced a very unpleasant sensation. There was marked dyspnœa on exertion, but never a trace of pulmonary œdema or of swelling about the feet. During several weeks the heart showed very little improvement; only by slow degrees did it come up to 50 in the minute and act with greater regularity. Debility of the muscles generally attended that of the heart, and the patient, who had been an active man, described as quite a new sensation his reluctance to descend three or four steps from the dread of the cardiac effort which was involved in ascending them again. At the same time, so far as could be made out, the mental action and the functions of the body generally were little affected. Only at night his legs and feet became deadly cold, and towards morning he was troubled with violent perspirations and was often obliged to change his night dress more than once. These perspirations seemed in one sense to relieve, in another to exhaust, the patient. Under rest and careful treatment he gradually improved, and at the present time he is equal to all his old activity, both of mind and body. It was clear enough that at any time during the weeks he was at his worst a fatal result might easily have been induced, either by bodily effort, nervous shock, or mental excitement. The question is, What was the precise condition of the heart of that patient and how was it to be explained? Was the fault situated in the muscular fibre of the organ; was it in the motor nerves; was it in the inhibitory nerves? I believe that it was not in the muscle itself, because the action of the ventricles, although delayed, was vigorous and powerful when it did take place. It is not probable that the fault lay with the inhibitory nerves, because such changes as existed must have been due to an exaggeration rather than a diminution of inhibitory influence, and a diminution is a much more likely result than an exaggeration of function. Still, one might argue in favour of that view to a certain extent. But it seems most likely that the real cause was a diminution of the action of the motor nerves whereby the rhythm became irregular and the movements slow and delayed.

But there were many cases during and after the influenza epidemic which showed rapid rather than slow cardiac action. I might cite instances of this kind with pulses ranging from 80 to above 100 in the minute, with more or less irregularity of rhythm and without any marked tokens of backward pressure. Cases of that kind I was inclined to ascribe to morbid action on the part of the inhibitory

structures, the inhibition being diminished, the rate of action increased. If there were time I might narrate very interesting cases in which the heart showed rapid and irregular action, with marked dropsy as a result of increased backward pressure from failure of the heart's action. In some of these cases it is probable that degenerative changes occurred in the muscular fibre of the organ. And, lastly, I might describe certain cases in which a fatal result occurred from sudden failure of the heart's action, sometimes with, and sometimes without, fatty degeneration of the muscular fibre. I might dwell also upon the frequency of pericarditis, and the occasional occurrence of endocarditis, and perhaps of myocarditis also.

The *Respiratory System* suffered changes more frequently in connection with influenza than did any other organs of the body. We all noticed cases in which bronchitis persisted for a longer or shorter time. In some of these, no doubt, that inflammation was of a specific influenzal character, although so much prolonged, the bacilli being demonstrable in the sputum all the time. In others it was, perhaps, of a simple non-specific kind. I have seen the influenza process stand strikingly related to bronchitic asthma. In illustration of this I may refer to the case of a gentleman resident in the South of England, who happened to be in Edinburgh lately, and to consult me as to the state of his chest. I found that although hereditarily predisposed to asthma, he never had a serious attack until he was nearly forty years of age. He then had influenza, and it was followed by so severe and prolonged an attack of bronchitic asthma that he was obliged to winter in the South of France, and only gradually did he recover, so as to be able to stand, as he had formerly done, the severity of an English winter.

What was the explanation of this aggravation of this nervous malady? Probably it was to be found partly in the increased severity of the bronchitic irritation due to the local effects of the influenza process, but partly also to disturbance of the nerves supplying the bronchial tubes, which stand so definitely related to asthma.

Pneumonia was by far the most formidable sequel of influenza, and displayed, according to my experience, marked differences of type from the normal course of the disease. Moreover, its fatality appeared to vary in the recent epidemics. In 1890 I lost case after case in my wards, and found treatment of little value, while in two later outbreaks the deaths were extremely few. Ordinarily I am accustomed to receive into my department in the Royal Infirmary of Edinburgh from 6 to 12 cases of pneumonia in the year. In 1890 I admitted 14; in 1891, 38; in 1892, 27; and in 1893, 28 cases. Every variety of pneumonia presented itself, but the catarrhal was most frequent, and that of an acute and peculiar type.

The croupous form was also frequent, and pleurisy and empyema accompanied it in a considerable number of instances. In explanation of these complications we may assume that the catarrhal pneumonias were due to extension of inflammation from the bronchi to the ultimate air-cells. Possibly the bacillus of influenza was itself capable of inducing this inflammation. But in many of the cases of croupous pneumonia the organisms of Friedländer and Fraenkel were abundant enough, and streptococci were found in the empyema cases. There was no reason to suppose that these organisms were more abundant or more active during the influenza epidemic. The difference lay in the greater susceptibility to the action of these organisms induced by the influenza process.

The relationships between influenza and phthisis pulmonalis were equally striking and varied. I am satisfied that in not a few instances phthisis originated in an attack of influenza, and frequently phthisical patients, whose condition had been quiescent or scarcely advancing, suddenly developed pronounced symptoms, and went on rapidly to a fatal result. The relationship between the two processes seems to depend on the fact that influenza so affects the system as to render it more susceptible of the action of the tubercle bacillus.

Among the morbid conditions of the *Integumentary System* which attended upon the process, I may mention the critical efflorescence so often observed at the height of the disease, and the desquamation which speedily followed on that inflammatory action. But I must not omit to refer to the herpetic and various other eruptions, nor to the tendency to chilliness of the skin, and to copious and exhausting sweating which often persisted for months after the acute symptoms had passed away.

The *Urinary System* was affected in many ways: sometimes there was a mere passing albuminuria, sometimes a formidable hæmaturia or serious inflammation of the kidneys, and in some epidemics, as in one of those recently described in Egypt, such changes were frequent, and in a considerable number of instances proved fatal by uræmia. On the other hand, I found some patients exhibit a susceptibility to vesical inflammation. A member of our own profession sat down at a railway station overheated while still suffering from the exhaustion of influenza, and in a few hours developed a sharp cystitis which he had never had before, and which lasted for a month or six weeks.

The *Reproductive System* also showed manifest changes in both sexes—the functions becoming greatly impaired.

But the *Nervous System* suffered most frequently. In every case of influenza during the acute stage disturbance of that system was pronounced, and nervous sequelæ were extremely common, serious, and persistent. If I had time I should be interested to show in detail how nerves and spinal cord and brain, how membranes and deeper tissues, and how every kind of function of the system was altered. I should like to speak of the well-marked peripheral neuritis affecting the hands and feet which I have seen in some instances, of the changes in individual nerves—superficial and visceral—giving rise to important symptoms: of the changes in the functions of the cord and of the brain resulting in bodily and mental symptoms; of the periodic or irregularly recurring paroxysms of fever, with *malaise*, achings, loss of appetite, nausea, jaundice, and profuse perspiration, which I have seen occur and sometimes persist through a period of years. I should have liked to give you details as to typical examples of meningitis, and of congestive and inflammatory changes in the medulla, the pons, and other parts; and as to the mental alienations ranging from mere lowness of spirits to the most pronounced and dangerous melancholia, or other serious forms of insanity.

I should have liked to speak of the numerous eye changes which resulted from the process—inflammation and ulceration of the cornea, conjunctivitis, iritis, glaucoma, asthenopia, optic neuritis, optic atrophy, paralysis of accommodation, dischromatopsia, blepharo-spasm, and many more which have been observed by ophthalmologists. I should have liked to speak of the diseases of the ears, the deafness, from various causes, but especially the otitis which occurred during the epidemics. I select a single fact in illustration of the formidable character of this from Gubler's statistics of his hospital practice in Munich. In three months when influenza was not prevailing he treated in all 52 cases of catarrhal, and 44 of acute otitis. In three months when the epidemic of influenza was at its height, the catarrhal rose to 309, and the acute to 316. I should be glad also to tell you of changes in the sense of smell and of taste; sometimes in the way of diminution, sometimes in the way of perversion and sometimes in the way of exaggeration of function. One of the heads of our profession told me, in illustration of this last-named and rare variety, that during his convalescence he attained to an acuteness of perception of odours and flavours much in excess of his normal condition before or afterwards.

The *Locomotory System* also sometimes showed important changes in respect of bones, joints, and muscles, but upon them I must not linger.

Now, Mr. President, one would be inclined to say, unless we had ourselves witnessed the facts, that surely there must be exaggeration when so many processes are referred to a single cause, but I appeal to you as practitioners, I appeal to the general experience of the profession, whether all these sequels and complications have not been definitely proved to stand related to the influenza process. I am quite aware that loose thinking and loose talking have been indulged in in some quarters, but I am confident that the most critical analysis would vindicate the accuracy of all that I have said, and of much that I have not been able to mention, or that has remained unknown to me.

Sequelæ Referable to Many Different Causes.

When we look over this long and varied catalogue, it becomes clear that it includes morbid processes which arise in a great variety of ways. An etiological classification of morbid processes generally may perhaps serve to render this more distinct. We may recognise:

1. *Diseases which owe their Origin to the Invasion of Foreign Organisms, particularly Micro-organisms.*—Among the maladies which follow influenza there are undoubtedly several belonging to this group, as, for example, tuberculosis and pneumonia.

2. *Diseases due to Faulty Chemical Action within the Body*, either in respect of (1) the introduction of toxic substances from without; (2) faulty gastro-intestinal digestion; (3) faulty chemical transformation of the blood and other elements of the body; or (4) faulty elimination of waste products. This group is well represented among the after maladies of influenza, the gastro-intestinal cases affording illustrations of faulty digestion; the anæmias, purpura, diabetes, and many cases of gout affording examples of faulty metabolism; while in some instances gout and other maladies may be induced by faulty elimination.

3. *Diseases dependent upon Faulty Mechanical Conditions.*—We find illustrations of this group in the swellings of the limbs and other changes following upon thrombosis of veins, and in the dropsies and other results of backward pressure following upon dilatation of the heart.

4. *Diseases dependent upon Faulty Innervation.*—Of this group we have abundant examples, as in some of the cardiac and gastro-intestinal disorders, in the feverish attacks, and the profuse perspirations.

5. *Diseases dependent upon Morbid Nutrition of the Tissues, either in the way of Inflammation, New Formation, or Degeneration.*—Influenza has shown numerous illustrations of the inflammation, as, for example, in the cases of meningitis, pericarditis, pleurisy, neuritis, the inflammation of the skin, while the degenerations are illustrated by the fatty changes in the cardiac muscle.

From this outline it is apparent how numerous and how varied in their origins are the morbid processes which are entitled to rank among the sequelæ of influenza, and I think that we may claim that our knowledge of the malady, at least in this department of its clinical history, has been immensely increased during the recent epidemics.

Pathology.

If we can thus claim to have increased our knowledge of the clinical features of influenza, it is certain that still greater advances have been made in regard to the essential nature of the influenza process. We are now able positively to recognise its essential cause, by its presence or absence to test our diagnosis in cases otherwise doubtful, to judge better than formerly as to its mode of spreading, and with considerable confidence to explain many of its complications and sequelæ.

For the discovery of the essential cause of the process we are indebted to Dr. R. Pfeiffer, one of the chief members of the staff of the scientific department of the Institute for Infectious Diseases in Berlin. During the epidemic of 1889-90 he saw and photographed the bodies which are now known as Pfeiffer's bacilli, but their real import was not made out until two years later. In the end of 1891 he found, on examining the sputum, that it contained enormous numbers of bacilli which presented distinctive characters in respect of appearance, staining, and cultures.

Even to the naked eye influenza sputum is characteristic enough. Of a yellow-greenish colour, viscid and tough, generally brought up in lumps or balls, and presenting a nummular appearance in the dish, the sputum varies in quantity from a very small amount up to several c.c. in twenty-four hours. In almost every case it is derived from the nose and pharynx, but in those of any severity largely from the bronchial tubes down to their utmost ramifications, and even from the air-cells of the lungs. Now Pfeiffer, knowing that the mucous membrane of the mouth, nose, and pharynx constantly contains a great variety of micro-organisms, and that the bronchi under ordinary conditions are entirely free from these, sought to investigate specially bronchial expectoration, and there he constantly found the characteristic organism. From such bronchial sputum spread out on sterile glasses he cautiously selected purulent parts with a platinum loop, prepared coverglass films in the usual way, and proceeded to stain. Loeffler's alkaline methyl-blue did well, but the best preparations were obtained by steeping for five to ten minutes in a dilute solution of carbol fuchsine. The rodlets become very distinct with this staining, and are found free as well as within pus cells in the protoplasm round the nucleus, but never within the nucleus. They are short, slender rodlets: the extremities colour more distinctly than the rest.

With regard to their conditions of culture some very unusual facts were elicited. They can be cultivated only with great difficulty and upon quite special soils. Pfeiffer found that neither in gelatine nor agar plates could the colonies be got; neither by aërobic nor anaërobic process could he obtain colonies of the characteristic bacilli except when he inoculated the sputum itself or purulent matter from the lung direct upon the agar, and then he obtained minute water-clear colonies visible only with the lens, and composed of the fine rodlets.

I shall not follow in detail the beautiful observations by which Pfeiffer showed that the presence of blood in the agar soil was essential for the growth, and that in the blood it was the red corpuscles, not the leucocytes or the serum, that was essential; that in the red corpuscles it was not the stroma but the hæmoglobin that was the necessary part; and that the value of the hæmoglobin did not depend upon the oxygen-absorbing power, but upon the iron it contained. When once he had ascertained the conditions, he was able to carry on successive cultivations through a period of many months.

The proof that Pfeiffer's bacillus is the true essential cause depends upon the fact that the organism is met with constantly in the catarrhal discharges of influenza patients, and has never been met with under other conditions. The only evidence that is wanting to complete the chain demanded by Robert Koch in his famous rules is the demonstration that the cultures are capable of producing the disease when inoculated. Now the difficulty is that man appears to be almost the only animal which affords an appropriate nidus for the organism. It is true that, according to the experiments of Pfeiffer, rabbits were to a certain extent influenced by such cultures, for they got dyspnœa and a muscular debility, amounting almost to a paralysis, when they received such injections; but seeing that no multiplication of the organisms took place within their bodies, and that the effects were equally distinct when the bacilli had been killed by chloroform previously to their injection, it was certain that no true infection occurred in these animals, but that the effects were due to the toxins introduced along with the cultures.

Among apes he succeeded on several occasions in inducing disease, which presented such analogies to human influenza as made him believe that probably they are capable of true infection. For example, he injected into the trachea of a monkey a piece of typical influenza sputum of the size of a pin head containing bacilli rubbed up with 1 c.cm. of sterile bouillon. Some of the injection passed into the cellular tissue behind the trachea. On the seventh day the monkey was found dead, and, on examination, there was an abscess behind the trachea and a number of patches of collapse throughout the lung, the bronchi leading to these patches being blocked with greenish pus. These plugs, as well as the pus from the abscess, showed no micro-organism except the influenzal one, and that only in small quantity. But Dr. Klein, in a very able research, in most respects confirming Pfeiffer's conclusions, differs from him as to the results of experiments on animals. Among 30 rabbits into which he introduced influenzal material in no single instance did a disease recognisable as influenza make its appearance; while among 18 monkeys inoculated only in 1 did clumps of influenza bacilli make their appearance, and in that instance they were associated with other micro-organisms. It thus appears that we have no sufficient proof of the communicability of the disease to the lower animals, but this is the less important, seeing that other observations make it almost certain that influenza is incapable of affecting any animal excepting man, for Dr. Klein points out that while influenza was raging in London there was no increased sickness observable in domestic animals or in those in the Zoological Gardens, the monkey house in these gardens remaining

as healthy as usual. As experiments on the human subject are scarcely permissible, we are compelled to be satisfied without this kind of evidence.

With regard to the distribution of the bacilli in the bodies of those infected, they are as a rule present in enormous numbers among the mucus of the respiratory tract. They are to be found also in the mucous membrane, and to some extent in the neighbouring tissues. They are met with in the inflamed patches of the lung, along with the ordinary micro-organisms of pneumonic processes. They are occasionally found, but in comparatively small numbers, in the blood, and when there they appear to be dead or dying, being no longer capable of cultivation. Klein has shown that they may block blood vessels in patches of inflamed lung, and they have occasionally been found in different parts of the body, as, for example, in the kidney and the liver, but I am not aware that their presence has been determined in the gastric or intestinal mucous membranes in cases in which the stress of the disease falls on these parts.

How the Bacillus Acts.

Accepting, then, the fact that Pfeiffer's bacillus is the essential cause of the disease, we have next to inquire how it produces the various symptoms, and how it stands related to the complications and sequels. Does the bacillus itself, which so abounds in the sputum, produce the catarrh of the respiratory tract? I believe that it does. We know that the bodies of bacteria are capable of setting up inflammation and producing pus, as the experiments of Buchner have shown. We know that the bodies of the bacilli have the power of attracting white blood corpuscles towards them by positive chemotaxis, as was shown in the experiments of Gabritchewsky. This is typically seen in gonorrhœa, where the gonococci attract large numbers of white blood cells, which constitute the inflammation, and it is most probable that in the case of influenza the substances contained in the bodies of the micro-organisms so attract white cells and produce the characteristic inflammatory changes.

It cannot be said that this is absolutely demonstrated, for it is conceivable that the products of Pfeiffer's bacillus may be essential to the production of the inflammation. Passing, however, from the local to the general constitutional effects—the degree of fever, the aching pains, the general debility, which are ordinary symptoms of the malady—can these be ascribed to the direct action of the bacilli or to that of their products? The gonococcus has served as a type of direct action. I shall select the bacillus anthracis as a type of the indirect. That organism is injurious mainly by its action upon albuminous substances. When it develops in them it so acts as to produce from their materials albumoses and alkaloids. If it be cultivated upon a non-albuminous medium it does not evolve the very toxic substances which it produces when grown upon alkali albumen. Here, then, we have a type of the indirect effects of bacteria.

In the case of diphtheria it seems pretty certain that there is a double action: on the one hand certain changes locally produced by the Loeffler's bacillus itself, and on the other hand constitutional changes and changes disseminated throughout the system, results of the products of these bacilli.

Now it seems probable that the constitutional symptoms of influenza result indirectly, rather than directly, and that for several reasons:

1. That the bacteria are not found living, active, numerous in the blood and throughout the tissues of the body generally, and therefore cannot be supposed to be operating so widely.

2. That the character of the symptoms corresponds to those that we know to be due to such poisoning: or, in other words, that the analogy of diseases of which we can speak more positively points that way.

If such be our conclusion as to the general symptoms which occur in all cases of influenza, still more must it apply to the complications and the sequelæ. We have already traced and illustrated the chief groups of these; let us now go over them and see the bearings of each.

Our first group included complications and sequelæ which were due to the action of other micro-organisms. How does the influenza process stand related to these? I believe in a considerable number of ways:

1. By affording a nidus in which germs may readily multiply. We know well how a simple inflammation of the throat or that attending measles or scarlet fever provides a nidus in which the bacillus of diphtheria readily finds material in which to grow, and similarly it appears that the inflammation produced by the influenza process in the pulmonary tissue around ultimate bronchi affords a ready nidus for the development of Fraenkel's diplococcus or the bacillus of Friedländer, which are so closely related to pneumonia, or for the tubercle bacillus and its tuberculous consequences.

2. By lowering the general power of resistance to micro-organisms. The importance of this element has been demonstrated both by observation and experiment. One of the ships of our navy landed some men on a portion of African coast affected with malaria. A certain proportion of these men were soon afterwards exposed to great fatigue, while the others were resting quietly in their hammocks. The latter suffered slightly from malarious fever, while of the former many were severely affected. It seems reasonable to conclude that the exhaustion of the bodies of the overworked men rendered them less capable of resisting the action of the malaria organism. Experiment confirms this, as in the case of the white rats which Charrin and Roger have described. They inoculated eleven with anthrax bacilli, and of the eleven allowed five to rest, while the other six were put upon a species of treadmill. The five who were allowed to rest remained unaffected, while those who had been subjected to the peculiar form of exercise died in periods varying from twenty-four to thirty hours.

3. It is possible that some of these may illustrate the principle which is known to scientific workers as mixed infection. It has been found by experiments on rabbits that when two germs are simultaneously or in rapid succession introduced into the body, sometimes the one prevents the growth of the other, sometimes it renders the growth more rapid and luxuriant. Take first an example where the growth is checked. If we introduce the green pus bacillus and the bacillus anthracis into a rabbit they neutralise one another, and the danger to the animal is greatly lessened. On the other hand, I shall select two instances. Take first the green pus bacillus in association with the bacillus of tubercle—the combination leads to rapid and severe development of the tuberculous process within the body. Take again the case of erysipelas; the streptococcus which is the essential cause of this disease, if introduced into the ear of a rabbit, produces some local irritation which passes off in the course of a few days, without any blood infection or general result; but if at the same time 1 c.c. or less of the sterilised products of micrococcus prodigiosus, which is itself not a very dangerous organism, be injected subcutaneously at another part of the body, the process becomes generalised, and the animal dies. After death the streptococcus of erysipelas is found abundantly in the blood and throughout the organs generally. Roger states that even two or three drops injected into the blood stream sufficed to bring about the result, and the effect is believed to be due to the products of the organism.

Such facts being thoroughly well ascertained, it is reasonable to suppose that perhaps the bacillus of influenza or its products may be capable of conferring increased activity upon certain other micro-organisms when it happens to be associated with them.

Our second great group of morbid processes is that in which faulty chemical action is evolved. We have seen how some of the processes which pathology refers to faulty chemistry have occurred as complications or sequelæ of influenza. Take gout as a typical example. A patient of gouty constitution is very liable to have an attack after influenza. This may be explained by reference—

1. To the general debility whereby the gouty patient becomes more liable to the operation of the causes which induce his paroxysm.

2. The special depression of nervous system which has long been known to stand related to outbreaks of this sort.

3. To the interference with the processes of gastro-intestinal digestion from interference with the functions of that organ.

4. To interference with the chemical changes in the liver, in the blood, perhaps the spleen, and other organs, which interfere with metabolism.

5. To defective action of emunctories whereby waste products, failing to be removed by the natural channels of elimination, accumulate within the system, and exert a toxic influence.

6. Perhaps the chemical products of the influenza bacillus itself may interfere directly with chemical transformations, and so the gouty process be established.

In the case of others faulty chemical processes which have so often been seen to follow influenza, such as diabetes mellitus, similar explanations may hold good, or specific influences on the nervous system or on the liver or pancreas, with which we are not yet acquainted, may play a more important part.

It is not necessary for us to dwell upon morbid conditions due to disturbance of the mechanism of the body; but our next great group—that connected with faulty innervation—is certainly of great importance. The cardiac, the gastric, and the bronchial and the intestinal maladies all afford important illustrations of this group, for, as we have already seen, it is through the nervous system that these organs are most frequently disturbed. But we must ask in what way the nervous system itself becomes altered. I have no doubt that in most cases it is due to poisoning, without organic change which we can recognise, or with alterations which only the most recent methods are enabling us to make out, but sometimes it is a result of well-marked structural alteration.

Our fifth group includes the series of inflammatory and degenerative processes, and of these we have many illustrations in a great variety of tissues and organs. The inflammations of mucous surfaces, of serous membranes, and of solid organs, those of nerves, of nerve centres of the membranes of the brain and cord afford types; while of the degenerative changes the fatty degeneration of the heart affords, perhaps, the best example.

I have already shown reason for thinking that these morbid processes are due not to the bacillus itself but to its products. As yet we have no information as to the precise nature of these products and as to their modes of action. At the present time Dr. Pfeiffer is engaged in a research with regard to them; but meanwhile we can only judge by analogy with other diseases of kindred character. It is not to be wondered at that difficulty should be experienced in connection with this inquiry, considering how difficult the cultivation of Pfeiffer's bacillus is, how minute the colonies are which it produces on cultivation, and that its action appears practically limited to the human subject, and so experimental inoculations are almost impossible.

The diseases which by analogy throw most light upon this subject are anthrax and diphtheria, and the researches which seem to me the most valuable are those of Dr. Sidney Martin. He ascertained that the anthrax bacillus gives origin to two classes of products, one group of digested proteids, namely, albumoses, the other non-proteid, a definite organic base with a specific action. When the anthrax bacillus is introduced into the body, it begins to digest the proteids, the products of digestion cause local œdema, but the absorption of these products produces the symptoms of the disease, and the stupor, ending in coma and death, is due to the gradual accumulation of the anthrax base.

In diphtheria Sidney Martin found the albumoses associated with an organic acid and much more abundant than the acid. In the case of a child only a year old who died of diphtheria, he obtained 15 grs. of albumose from the kidneys. He found, further, that the spleen is the chief repository of the diphtheritic poison of the body. The albumoses of diphtheria cannot be distinguished from those of anthrax or peptic digestion by chemical means. Their physiological effect is the only method by which their specificity is made evident. When the diphtheria albumose is injected subcutaneously it produces local œdema, and in guinea-pigs no well-marked rise of temperature, while the anthrax and peptic albumoses produced distinct fever. Intravenous inoculation in single doses or in repeated smaller doses produced a varying amount of fever, but, what was much more striking and constant, paresis of the muscles. It did not amount to paralysis, and it affected the movements both of the limbs and respiration. There was no special wasting of muscles, no change of pupil, no sensory alteration and diminution of the knee-jerks was strictly in proportion to the paralysis. Another striking effect is loss of weight in the animal, and that not in proportion to the amount of fever; also diarrhœa; and attention further must be drawn to the remarkable prolongation both of the fever and of the general wasting. *Post-mortem* examination showed that the blood was slow of coagulation, and no wide distribution of germs throughout the body could be demonstrated by the microscope or by cultivations. Thus it was certain that not the germs but the products were the cause of the symptoms. Histological changes of the greatest interest were also discovered. The muscular tissue of the heart was found to undergo fatty degeneration in a marked degree by the action of the albumoses, but to some extent also by the action of the organic acid. The nerves also were found to undergo important organic changes. The white substance of Schwann was diminished or completely lost. Sometimes it was pale, granular, broken up; the axis cylinder was in many instances broken below the point at which the white substance disappeared. Not every branch was affected, and therefore only paresis and not paralysis resulted. Dr. Martin's general conclusion is that the diphtheria albumoses select for their action the peripheral nerves just as strychnine selects the motor cells of the cord: and it is probable that the effects may consist either simply in functional alteration or in true organic processes.

Now, applying this knowledge to the influenza processes, we seem entitled to conclude: (1) That the bacillus, which is not widely disseminated throughout the body, produces its constitutional effects by its chemical products. (2) That these chemical products may be of the nature of albumoses or of ferment-like bodies which may act directly or indirectly by converting albumens into albumoses, organic alkaloids, or even, it may be, organic acids. (3) It is probable that the production of these substances takes place to some extent in the spleen, which is so often found enlarged in cases of influenza. (4) That these poisonous products act upon nervous and other tissues, producing the great variety of functional and structural changes which are met with in the later stages of the influenza process. The peripheral neuritis affecting the nerves of the extremities we can well understand. A similar process affecting the phrenic nerve, or affecting the motor or the inhibitory nerves of the heart, affords an explanation of many of the clinical phenomena with which we have become familiar. Degenerative changes in the muscular tissue of the heart might account for other conditions. Changes in the nerves of the stomach and intestines, or in the mucous membrane itself, might account for the gastric and intestinal symptoms, while blood changes might result from affections of the spleen or of the red marrow spaces of bone. Such is in outline the view of the pathology of influenza which recent discoveries seem to me to justify; and in this respect we may safely claim that we have made immense progress during the recent epidemic.

Mode of Spread of the Disease.

Up to the time of the recent epidemics it may be safely asserted that little importance was attached to the spread of the disease by contagion, and much to its dissemination by the atmosphere. The striking and typical cases which have so long figured in the textbooks and lectures, in which ships at sea were suddenly overtaken by the disease, were vividly impressed on the minds of the profession and the public. What student of medicine is there who does not remember the story of His Majesty's ship *Stag*, which on April 3rd, 1833, the very day on which London was stricken throughout its length and breadth with influenza, was making its way up the English Channel along the Devonshire coast? At 2 o'clock it was off Berry Head, and all on board were well, but an easterly breeze sprang up and blew over the land to the ship, and in half an hour forty men were down with the influenza. By 6 o'clock the number was increased to sixty, and by 2 o'clock the next day another hundred of the crew had been rendered helpless. The story is alike telling and picturesque. The inference was obvious that that east wind blew over a district contaminated with influenza, and bore with it the contamination which induced the outbreak in the ship. The case seems at first sight conclusive. But when we consider the geography of Berry Head, it becomes

clear that the *Stag* must have been tacking far in to the estuary of the Dart before any easterly breeze could have blown over Berry Head so as to reach the vessel. In fact, it seems impossible to conceive that a vessel could have occupied the necessary position; and one cannot but suspect that some inaccuracy, due to faulty memory or exuberant imagination, had crept into the narrative. The extreme suddenness of the attack—forty men taken ill within half an hour—surpasses anything that I know of in the recent epidemics, and with our present knowledge one cannot help wondering whether at Falmouth or at Plymouth there had not been communication with infected people on the shore.

Many have searched earnestly for similar cases during our recent epidemics. In the masterly report by Dr. Parsons, published by the Local Government Board, we are told that every effort was made to discover instances of outbreaks occurring in ships at sea, among lighthouse and lightship keepers, who, having had no communication with the land, had become infected through the atmosphere: but not a single fact was elicited which lent support to that view. Inquiry was made among the trawlers, who often remain many days at sea, fishing on the Dogger Bank and other places which fish frequent; but in no instance was it found that they had become affected, unless when in contact with influenza patients. The same was true of the keepers of the lighthouses and the lonely lightships which mark the channels or indicate dangers.

While recent facts have thrown doubt upon the old belief in atmospheric spread of the disease, evidence of an overwhelming force has accumulated in favour of its spread by contagion. From Germany, from Switzerland, from Austria, from Bavaria, and from France innumerable instances have been put on record which prove that the malady spreads from the sick to contaminate the sound, but no evidence more important has been advanced than that of our Government officials, to whom I have already referred. No one who reads the report of Dr. Parsons can hesitate to accept the opinion which he so ably advocates. Not that the idea of contagion is new, for a hundred years ago Cullen described influenza as *catarrhus e contagio*, and every good observer since may be said to have recognised the same fact. Still, recent experience has given a fulness to our knowledge, and, I think, an exclusiveness to this method of spread which had not been formerly claimed for it. As Dr. Parsons says, we cannot but attach weight to the fact that the epidemic was independent of season and weather, that it spread contrary to the prevailing winds, and that it was never known to travel faster than men can travel, that it never occurred among persons so placed as to preclude communication by human agency, that, as a rule, it appeared first in each country in the ports of entry or in the frontier towns, and in the busy capitals which were most actively in intercourse with neighbouring lands which were already affected; that, as a rule, the country places remained longer free than the busy towns, even although they might be nearer the countries already invaded by the disease; that the individual members of communities who were most in contact with others were first affected, and that from them it spread to others with whom they were associated; that persons who were wont to congregate in crowded, and especially in ill-ventilated, buildings were specially involved, and that where people were closely associated as in public institutions, the disease came more speedily to its height and was sooner got over than when men were more secluded from one another.

Another important fact which has been definitely made out is the shortness of the period of incubation. Sometimes the symptoms appeared almost immediately after exposure. Professor Eichhorst, for example, states that he saw in consultation at Zurich four cases of severe influenza in a small and ill-ventilated room, and the circumstances seemed to him to indicate that the infection had not been in his system before. Half an hour later on his way home he was himself seized with symptoms of the illness. Although such extreme rapidity of action was rare, it was quite common to find the disease break out within twenty-four or forty-eight hours of exposure. Now, if we consider the brevity of this period of incubation, we can well conceive how its epidemic spread should be so rapid. Contrast its power of spreading from an individual patient with that of small-pox. The small-pox patient comes in contact, let us say, with ten susceptible individuals. At the end of ten days these ten may not improbably have taken small-pox; but one case of influenza has in two days produced its ten cases; in other two these ten may have infected a hundred; in other two the hundred has become a thousand; and in other two days ten thousand cases may have been produced. Moreover, as the great majority of people are susceptible of the action of this poison, and as one attack confers no immunity from another, and as it often spreads from cases which are not severe, and appear trifling and unimportant, its extension in a community, even by contagion, ultimately surpasses what anyone could expect.

But the spread is not exclusively by direct intercourse between the sick and the sound; it is often by means of fomites. Post office and railway officials were specially apt to suffer early, and from them as centres it sometimes spread through the community, and these facts afford instances of the tendency the disease had to spread by letters and by parcels. Such facts as these made most people confident that a micro-organism was the essential cause of the disease, and prepared the profession to accept the discovery of Pfeiffer as soon as it was announced.

Points in Life-History of Bacillus.

It cannot be said that our knowledge either of the laws of the epidemic or of the life-history of Pfeiffer's bacillus is so complete as to enable us to correlate all the facts together, but many points in the life-history are ascertained, and seem to me to be alike interesting and important.

The bacillus seems to be capable of affecting the human subject only. It requires quite special food elements for its growth. It cannot grow above 42° C.=107.6° F., nor at the utmost below 23°=73.4° or 24° C.=75.2° F. Now, as in temperate climates such a temperature is not often reached, and is certainly never maintained for any length of time, and as the disease spreads in cold weather as well as warm with little or no regard to temperature, it is clear that it cannot multiply outside the human body. This has been abundantly proved by Pfeiffer.

The question whether the influenza bacillus is capable of retaining its vitality in water and of reaching the human subject in that way, as cholera so often does, has also been worked out by the same investigator. He took some influenza bacilli and inoculated blood agar with the mixture. In due time colonies appeared. Twenty-four hours later, the water having been in the meantime kept at the ordinary temperature, inoculations were made on the same medium, but they produced little result. Eight hours later further inoculations were made, and all remained sterile. Thus certainly it cannot be communicated by water. But it may in some fluids retain its vitality for a longer period. In bouillon, for example, it will live for fourteen to eighteen days, and it is probable that if sputum retain its moisture it may live in it for at least as long a period. In this way we may explain the convection of the disease by fomites.

The influenza bacillus is extraordinarily sensitive to drying, and the more complete the drying the more rapid is its death. At 37° C.=98.6° F., there was a diminution of the number of colonies produced by inoculation, and in one to two hours no colonies could be obtained. In the rather moist air of Pfeiffer's laboratory the process of drying was slower.

The most careful search has failed to elicit evidence of any spore or resting form (*Dauerform*) of bacillus, and so we know at present no seat of its multiplication except the respiratory tract of the human subject, nor of spread except from that source.

Prevention and Treatment.

In conclusion, we have to inquire as to what real progress has been made in regard to the prevention and treatment of the malady. I shall speak first of prophylaxis. The facts just indicated are fitted to guide us in the inquiry as to how we shall be able to deal with the influenza bacillus itself. Outside the body of the healthy person it might be prevented from producing the effects, if we could effectively isolate those who have become affected with the disease. Every sneeze, and every cough probably, scatters the germs throughout the atmosphere, and if we could only isolate those

who are affected, the danger would greatly diminish. But isolation in a general way is impossible, and that because many cases of true influenza are so mild as to escape detection, and because even where the case is severe infection is often spread before diagnosis is possible. But, on the other hand, now that people have ceased to regard influenza as a trifling and unimportant malady, and have come to know that it is certainly contagious, precautions have often been taken that were scarcely dreamed of in former epidemics. Infected individuals have isolated themselves, and thereby have saved their neighbours from contamination. People suffering from heart or lung disease have been kept scrupulously away from the infected, and have thereby escaped what would have been to them a terrible danger. Schools have been closed, with the result of diminishing the severity of certain outbreaks, and I have no doubt that when the next epidemic of influenza occurs, precautions of this kind will much more generally be adopted.

But even where isolation is impossible much good may be done by destruction of the sputum and of the nasal secretion. If patients expectorate into vessels containing sufficient disinfecting fluids, or into pieces of linen which are immediately thrown into the fire, innumerable quantities of noxious germs may be destroyed in each case. So precautions as to the discharges, if once efficiently taken, would tell materially upon the epidemics. It may be asked what is the best disinfectant for destroying the bacilli. Fire and water are no doubt efficient, but considering the very sensitive nature of the bacilli, it is probable any of the antiseptics ordinarily in use will suffice.

If we can thus deal with the bacilli discharged from the body, the question next arises whether we might not deal with them within the bronchial tubes. If we could do so, we might prevent their multiplication, we might prevent the development of their toxins, we might greatly diminish the noxious power of the sputum. Inhalations of many antiseptics have been recommended for this purpose: eucalyptus and menthol have been, perhaps, among the most popular. For my own part I have decided to try, whenever I have opportunity, the injection into the trachea of such substances as have proved serviceable in other diseases of the respiratory tract. In some cases of bronchiectasis I have obtained most satisfactory results by the intratracheal injection of a 10 per cent. solution of menthol in olive oil, with or without 2 per cent. of guaiacol superadded; and I look forward with interest to trying the like method in cases of influenza.

It may be asked whether, during epidemics of influenza, such intratracheal injections might not confer a degree of immunity upon those who are exposed to the contagion; and I should certainly carry out this method of treatment among my phthisical patients if the epidemic should recur. I should incline, also, to give it a trial with others who may be necessarily exposed.

Another question which emerges is whether we could discover any means of conferring immunity by rendering individuals insusceptible to the action of the germs. Now the mere fact that one attack of the disease confers no immunity from subsequent attacks makes one less sanguine as to the probability of such a material being discovered, but I observe that Pfeiffer in his great paper remarks that it may perhaps be one day within our power to supply a preventive treatment by the use of the derivatives of the specific bacillus.

Again, it would be of great service if we could discover substances by means of which we might destroy or neutralise the poisonous products of the bacilli, and so prevent the secondary results. If we could in the case of a patient with prolonged debility of heart or with great nervous or mental depression neutralise the poison which is bringing about these results, we should rob the disease of many of its terrors. The antitoxins, which have been discovered to have the power of combating, as it is supposed by chemically destroying, the poison evolved by the "drumstick" bacillus of tetanus, afford a type of what may one day be accomplished in this way, but meanwhile no such material has been discovered. It is also conceivable that substances may be discovered which would act as physiological antagonists to the influenza toxins; but this also is in the meantime mere matter of conjecture.

The last question which I shall raise is whether we can so act upon the system generally or upon the organs specially affected as to combat the injurious effects. There is one lesson which most people have learned from the recent epidemics, namely, that those who are taken with the disease even in a mild form ought not to struggle against it and go on with their work, but should yield to the malady for the time, in the hope of escaping or lessening its after-effects. It appears as if tissue change and bodily exertion had an extraordinary power of favouring the action of the bacillus and the development of its toxines. I have found that when the after-effects manifest themselves rest from bodily and mental effort is essential, and that careful attention to diet, to protection from cold, to the moderate and wise use of stimulants by those who are accustomed to employ them, and of such tonics as nux vomica, quinine, arsenic, and iron, with special cardiac or other tonics when they are indicated, prove eminently beneficial.

On looking back over the field which I have thus hastily traversed, one is satisfied that real progress has been made, and that the profession are already better prepared to meet the next epidemic than they were to meet the last, and that we may yet hope for the promulgation of discoveries which may prove of more signal service.

ADDRESS IN SURGERY

BY

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At the Annual Meeting of the British Medical Association held in Bristol, August, 1894.

THE ART OF THE SURGEON.

It is, I am sure, a source of pride and of pleasure to many in this room besides myself that a Bristol surgeon and the teacher of surgery in the Bristol Medical School should have been chosen to deliver the Surgical Address at our meeting here. On behalf of our city and our school in the first place, and on my own behalf in the second place, I desire to make most grateful acknowledgment of the honour.

In seeking for a subject on which to address you I have been careful to consult precedent. The surgical orator has, I find, most often and most properly assigned to himself a task akin to that of the minstrel at the feast in old times. He has been our pæan-writer: he has sung of our victories over science, and he has glorified our scientific heroes. In telling the tale of good deeds done some of our orators have been able to point the way to new conquests; a few have been critics alone; and in almost every case the speaker has dealt with the science of surgery.

I have thought that I may for once leave the science of surgery alone—it is, indeed, well able to take care of itself—and, instead of the science, I shall speak of the art; instead of the making of surgery I shall speak of the making of the surgeon. The Art of the Surgeon, and how we train men to practise it—this will be my theme. My ambition is to keep fresh in your minds the fact that not only have we knowledge to acquire but also an art to learn. The art may be of little importance as compared with the science of surgery; there can be no dispute that it is; still, as the servant, the interpreter, occasionally even the improver of the science, it has its importance, and may be worth thinking about and worth discussing.

What is a surgeon? A stranger looking at the doorplates of an English town might reasonably infer that there was no lack of material on which to base an answer. But then the stranger does not know, as we do, that the title "Surgeon" on an Englishman's doorplate usually means that the possessor thereof is prepared to practise any and every branch of the healing art save and excepting surgery. This covering of the whole field of the healing art by the titular surgeon is the more remarkable that he alone amongst craftsmen should have retained the name "handworker"—χειρουργός. Not less remarkable, perhaps, is the fact that the physician should

have appropriated to himself the special epithet of "learned man"—doctor. Not his healing, but his learning, is his distinction.

In each of these extensions or perversions of meaning there may, perhaps, be ground for pride. In these days of grandiloquent naming the surgeon is almost unique in following a pursuit whose name of "handwork," "chirurgery" is humbler than it need be. This is certainly to his credit; and if, from his brethren, Doctors in Divinity, in Law, in Letters, and in Science, the public insists on singling out the Doctor of Medicine as "the doctor," that can scarcely be to the physician's discredit. It is this pre-eminence in learning, probably, and not any reality in fact that makes the public think that, when they say that "Doctors differ," they are speaking of physicians. The public goes further, and insists on calling us all, surgeons and physicians alike, "doctors," learned in most things, let us hope; learned in the healing art certainly. And the public is right.

The surgeon is, first and foremost, a physician, a man trained in the laws of health and disease, in the ways of preserving health and of curing disease. In person or by proxy he must lean finally on medicine. To his medical training is superadded a special and peculiar education in the treatment of certain diseases which lend themselves to cure by the help of handicraft. The surgeon is a man who can carry the treatment of a class—a small class—of diseases further than the physician, and that is all. The physician, on his side, goes beyond the surgeon. But both meet. In old times the surgeon was practically the slave of the physician; later on he struggled up to the dignity of being his enemy; to-day he is his equal and his helper. They join hands over the same patient, each seeking from the other some special help in healing. And herein to-day is the difficulty both of the surgeon and of the physician. Each is driven to his wit's end to meet the manifold demands made on him by the other. This is their only rivalry, a goodly and a wholesome one, leading to new victories over disease.

Amongst other arts and crafts the surgical stands alone in the extraordinary breadth of its foundation on science. The painter is not expected to know the sciences of chemistry, botany, geometry, and optics, which intimately relate to his art; nor is the sculptor supposed to be familiar with geology because he works in clay and marble. Possibly both painter and sculptor would be the better for a scientific knowledge of their materials; but such knowledge is subsidiary and unessential. To the surgeon wide scientific knowledge is of prime importance; it is, indeed, essential. His range is almost coterminous with abstract science—something of all of the sciences, a good deal of a few, and everything of two or three he must know. You know the subjects only too well, I need not recapitulate them.

We do indeed make a brave display; is it all genuine? Our examiners surely have their suspicions, so careful are they to catch the student at the end of every year of study, being fearful, apparently, that his knowledge will soon trickle away. It looks as if the student might play with knowledge as a cat does with a mouse; he plays with it and ultimately kills it, but, like the well-fed cat of civilisation, he refuses to convert the prey into food. He may assimilate the knowledge, but the process is not one of healthy cerebral digestion. As the liver of the goose of Strassburg is to the gustatory palate of the *gourmet*, so is the brain of the student of medicine to the intellectual palate of the examiner. There is artificial cramming and gorging, resulting in the formation of a temporary deposit of lowly organised material, which, in the case both of student and of goose, may soon be cast off on a return to healthy life. For us surgeons this is fortunate, for we have much real knowledge to pick up when our examinations are over; and we want to start on its acquisition with clear and unclogged brains.

In the meanwhile, those who arrange our curriculum go on adding to it; where is this importation of new subjects going to stop? We go on broadening the base, and adding to the foundation; might we not now give some thought to the raising of the building?

The rolling years add to our pile of knowledge, and the burden laid on us becomes heavier to bear. To some of us the burden is already too heavy; others carry it easily, and even voluntarily add new weight. How to deal with the pile so that it may best minister to our good is a problem always before us seeking solution.

Some would solve it by deliberately casting off part of the burden as being cumbersome and useless. These men say of anatomy that we have too much of it. If surgeons they say they cut where they have to cut, and if they divide a vessel they tie it. The right kidney they find in the right loin, and the left kidney in the left loin, and they cut down till they come on it. If facts must be borne in mind till examination, there are mnemonic rhymes and cabalistic formulæ to save the labour of the brain. There is, they say, too much anatomy. They say of physiology that it is unstable and uncertain, that it is burdened with an affectation of science called by its young votaries "research;" and they affirm that the young physiologist when he becomes a physician administers a dose of castor oil to his patient on very much the same principles as his grandmother followed when she gave a dose of the same drug to his father. Pathology also they despise. They tell us that this is the science of the "too late;" it helps us when the power of helping the patient is past. From the disintegrated remnants of the deadhouse they tell us we can no more work back to the beginnings of disease than from the shattered fragments of a fortification the artilleryman can work back to the powder and shot and ordinance which created the havoc.

These men are not few, and they are as honest as their opponents. The views they hold have been maintained on this very rostrum. Well, to-day, from the same place I venture in all humility, but with firm belief, to proclaim the very opposite. If I am asked of surgery, "Are we to lower it so that brains may not be strained; or are we to strain our brains that surgery be raised?" then I answer unhesitatingly, "Let surgery rise if brains fail." Let the weak, or the lazy, or the impatient fall out, but do not let us lower our standard because some men cry that it is too high. It cannot be too high; it can never be high enough. The claims of surgery, as I understand them, are such that no test of excellence can be too high for those who seek to qualify themselves for its practice.

I am not, therefore, for casting anything away; but I would select, rearrange, and raise. I would gladly see zoology and chemistry and botany turned out of the curriculum, and placed among the preliminary studies and made part of the preliminary examination. And I should like to fill their places in the curriculum with more anatomy and more physiology and more pathology. I would extend and raise our education in these branches simply and solely because I firmly believe that the fullest knowledge of them goes to provide the best practice of our art.

The world, in educating itself, sets us a bad example. The end of culture for the multitude would seem to be to nibble at science, to dabble in art, to drivel over the glorious advances of the century. This is just what the surgeon has to set his face against. Surgery tolerates no dawdling or dilettanteism; the philosophy of the make-believe has no place in the surgeon's system. His knowledge must be real, and thorough and practical, and his own, and he must carry it with him.

Knowledge of this sort is begotten only of personal labour. Distributed in cribs and mnemonics it is useless for the surgeon. He must have the real knowledge of the artist. Art distributed amongst the multitude in plaster casts and chromo-lithographs—art, that is to say, reduced in bulk and cheapened, may elevate the multitude, but it does not make the artist. Now, the surgeon is to be the artist, the craftsman; he is not the distributing middleman, nor is he the mechanical copyist. So of science; science made easy of digestion, reduced to a concentrated extract and administered in minute doses at frequent and stated intervals, may be good for tiding the student over the crisis of the examination fever, but it is not good as frame-forming food for the scientist.

The foundation of our art is knowledge of the material to be worked upon, the human body. Anatomy to its uttermost details; anatomy, naked eye and minute, normal and abnormal, healthy and diseased, is the foundation of all good surgery. There is no getting over this fact. The good surgeon must be armed at all points; his armour is weakest at the most vulnerable points who is not protected by a complete panoply of anatomical knowledge.

If I am asked when the surgical student is to cease learning anatomy, I think I should answer: Not during his lifetime. Again and again must he betake himself to the endless human body; and this not only to keep his own knowledge fresh, but because advancing surgery demands a more perfect anatomy. This anatomy the surgeon has to work out for himself. Every region and every organ of the body is indebted to the anatomical studies of the operating surgeon. Only the other day surgeons saw their way to correct the misdemeanours of that dangerous little organ, the appendix vermiformis. Once again they had to sit down and render our knowledge of its anatomy more perfect. It would seem as if centuries of observation by the scientific morphologist could not equal, for our purposes, a few months' work directed by the keen eye of the practical surgeon. The surgeon must indeed go on dissecting all his life long.

In physiology and pathology, again, what honest surgeon dare let himself remain ignorant of any new truth that may bear on his art? And what about bacteriology? Is it not full time that a course of this supremely important subject, as important to the physician as to the surgeon, be introduced into our curriculum? And where are we to stop? We must not stop while knowledge advances; we dare not stop anywhere. There is no hope in surgery for an easier life to its votaries; there is, on the other hand, a certainty of a harder one.

Now, in the persistent and overwhelming claims of its science, there is real danger that surgery may lose something of its art. It is an old story that a reformation in knowledge has meant ruin to art. Possibly the loss of the finest products of ancient art and literature has been more than compensated by the moral and intellectual improvements which accompanied them or caused them. This may be so; still it seems a pity that science should so often kill art. The process goes on to-day, and we help it. For example, the beautiful arts of the line engraver and of the etcher, of which some of the most exquisite specimens ever produced are to be found in old works of surgery, are being cruelly handled by the artistically crude, but scientifically interesting and exceedingly cheap, productions of the process block, which now artistically blot the pages of our books and magazines, but greatly add to their value. There is [no reason in this; science and art can well flourish together, and even help each other. Certainly it is so in surgery.

Much, very much, most indeed of surgery is science, but there is art in surgery as well, and the art is worth keeping alive, it is worth advancing. I trust I have not been unmindful of the claims of scientific foundation of the surgeon's training, and if I urge the claims of the art more strongly, it is because I am afraid of their being neglected.

The art of the surgeon may, for purposes of comparison, be viewed from two aspects. One is allied to the art of workers in wood and iron, and may be called mechanical. The other aspect has little of the mechanical about it, and is closely allied to a fine art. The mechanical side, the art of the application of tools, is an important but comparatively simple one, and need not detain us. Easily learnt as it is, it is still worthy of being taught. It is not, perhaps, a good thing that a surgeon should for the first time handle a saw or chisel, or a drill, or a trephine on a living human bone; and it would be well if we, who have much to do with apparatus, knew the qualities of the metals and other materials we employ, and the ways of jointing, and welding, and moulding them to meet the ends we desire. It would, in fact, be good for most surgeons to spend a month or two in a mechanic's shop under the severe discipline of a skilled British workman. With most of us it would certainly not be labour wasted. But I would not make tuition in the joiner's art compulsory because we use joiner's tools. In respect of technical skill in their handling, I would place the surgeon's tools on the level of the sculptor's spatula or chisel, or only a little higher. The chisel of the sculptor and the knife of surgeon are mere incidents or accessories in the work to be compassed by the brain-compelled hands. Still, as accessories they have their importance; we ought to be familiar with our tools. But the surgeon, I repeat, is more than a mechanic; he has work to do which brings him to the level of the true artist.

The other side of our craft I would venture to compare with that which produces what are known as works of art: and this side is by far the more important. Here the work of the fingers is of small moment as compared with the work of the brain. The brain is supreme, and yet in delicacy, deftness, and general preciseness of obedience to the brain's behests, the fingers and hands have great calls made on them. In painting, sculpture, or music, mere manual dexterity rarely is deficient to him who has the artistic soul: or, if there is deficiency, practice and education will do much to remove it. So in surgery the hands rarely fail to rise to the demand the brain makes upon them if they are trained. Let us look a little more closely into the surgical fine art, for it is nothing less than a fine art.

The highest part of the surgical art is more than handicraft; it is braincraft uttered through the fingers. It is not mere manual dexterity or cunning. In fact, mere manual cunning, being a result of routine practice which begets reflex movements, is detrimental to surgical art, which demands the widest possible scope and variety of action. I should not quote the marvellous manual dexterity of the button-maker as the highest education of the hand, any more than I should quote the clever work of the oak-grainer as the highest art in painting. The surgeon's art demands breadth and variety in manual training; the hands must have all-round capacity. The finger surgeon begins at the wrong end; he ought to have been a button-maker. No training, however, comes amiss to the surgeon's fingers. By many devices and practisings he may and ought to improve their capacity: but their final and most perfect training is in the actual work.

The skill of the hand depends greatly on the sense of touch and on what has been called the muscular sense. We are endowed with a sense of touch more delicate, perhaps, than is found in any other animal—the only sense in which we excel. The highest cultivation of the sense is essential to the surgeon.

Now the sense of touch is trained through the intellect as much as through the fingers; it is helped by comparative appeals to the other senses, and especially to sight. The blind have been found to have no special excellence in actual sense of touch; they excel in the intellectual interpretation of the sense impressions. We who can bring the sense of sight to help out the impressions of touch ought to surpass the blind in tactile power. Put it in this way. A blind man could scarcely map out in his trousers pocket the figure of Britannia on the back of a penny. But, after seeing the figure, the possessor of a trained finger will recognise by touch many of the details such as the shield and the trident and the limbs; and so he will identify the whole picture. The blind man cannot correct and verify his groping sense of touch by sight; the seeing man can. So I say that a man who can see might, if he were determined, and were loyal to the sense he seeks to train, cultivate his sense of touch to a higher pitch of delicacy than the blind man.

Now there are no limits to the demands made on the surgeon's tactile powers. Touch is to the surgeon what hearing is to the physician in diagnosis, and more in treatment. The exquisite delicacy of differentiation possessed by the ear of the physician we desire to have for the finger pulps of the surgeon. In diagnosis touch tells us what sight cannot; in operating in the dark depths of the body it goes where sight cannot, and sometimes it guides more truly than sight could. But always it is the intellect that interprets. It is as true to-day as it was twenty centuries ago that "Νοῦς ὁρᾶ καὶ νοῦς ἀκουει τ'ἄλλα κωφὰ καὶ τυφλά." "'Tis mind that sees and mind that hears: all other things are deaf and blind."

Amongst the plastic arts sculpture perhaps gives us most points for comparison with the surgical. Each deals with the human body. The sculptor has to know the body externally in architecture, in bulk, and in outline: the surgeon has to know it in the same ways, internally as well as externally, and in sections vertical, transverse, and oblique as well. Each art demands from its votaries absolute fidelity to form: the ignorance that misplaces a tendon in a statue will lead to grief on an artery in an operation. There are similarities in their ways of working, too. The inferior sculptor, by adding here and subtracting there, by measuring and squeezing and scraping, may, after long working, make a tolerable likeness, but never a work of the

highest art. The true artist goes straight to the stopping point and then stops. What this stopping point shall be we cannot define, but it gives us that sense of true balance between detail and mass which signifies artistic proportion. So in surgery; the surgeon-artist forms a clear conception of the work he has to do and makes straight for the ending of it. Between detail and bulk he determinedly keeps a true artistic proportion. His time is limited, and into this time he must put his best work. He wastes no time over trifles; he is very deliberate over difficulties. The most elaborate finish in both arts is visible where the technical difficulties are greatest. The clean straight strokes of a true artist are visible equally in the work of the surgeon and the sculptor.

The surgeon who is not an artist is devoid of a sense of true proportion. Where one bold cut is wanted, he will make a dainty nibbling dissection. He verifies his anatomy on the way to his work by the help of the director. He goes a little in this direction and retraces his steps; then a little in that direction and returns. He has hobbies, and he rides one or two well. One man turns the peritoneum in, the other turns it out, a third is careful to ignore it. Perhaps he gives one suture to peritoneum, one to muscle, one to fascia, and one to skin, and each suture is perhaps of a different colour or a different material, so that Nature may have no chance of making a mistake. His work is not towards one finished work of art, but to the making of half a dozen clever separate studies. Like the sculptor who is good at hair, and works out every one, or the painter who is good at eyes and puts in the dots in the iris, each sacrificing the whole to the part, our inartistic surgeon lingers over his fancies, and so fails to produce finished and harmonious work. His details are not all equally balanced; some are exquisite, some are mediocre, others are bad. The whole work, the whole operation, will not be the best possible for the saving of life; it is not all round a finished work of art. Therefore it is to be condemned.

The surgeon's art has in it not only the elements of boldness, honesty, and simplicity pertaining to the sculptor's art; it leads him in some of its departments into methods of working which may fairly compare with the most delicate amongst artistic pursuits. The finest work of the surgeon makes demands on the delicacy of the fingers little, if anything, less exacting than the demands made on the fingers of the etcher or the line engraver. The surgeon, as a painter, has to make pictures not only in life size, but in miniature; as a sculptor he has to do not only the full figure and the medallion; his work may also be compared to that of the graver of gems.

The operative art of surgery is truly a high art; the demands it makes on the hand, the eye, and the brain of the artist are the same for surgery and the fine arts. Surgery and fine art may indeed well be practised by the same man. We see it in our own time. The art in etching of Sir Seymour Haden, and the art in surgery of Sir Henry Thompson, each supreme in its way, have two sides only on the surface; they are identical at bottom. And we have seen this in past times, sometimes to the loss of surgery, sometimes to its gain. The world lost a great surgeon in Leonardo Da Vinci and gained a great painter; it lost a great artist in Sir Charles Bell and gained a great surgeon.

Now of this art of surgery, where and what is the teaching? Where and who are the masters who guide and correct the young artists in their work? It may be said at once, of masters there are plenty, but they do not teach. There is no real teaching of the art of surgery in our country. Here and there a favoured few, house-surgeons and assistants, are permitted to pick up what knowledge they can by looking on and by helping; but of personal guidance in the actual work on the living subject analogous to the guidance given in other arts, we in ours know nothing. We have to teach ourselves by experience alone. Think what this would mean in art training. It would mean that to paint a thousand portraits is the only way to become a first-rate portrait painter; to model a thousand figures is to become a perfect sculptor. It means in medicine that the midwife of 5,000 experiences is more to be trusted than the obstetric gold medallist of London University, who can boast of only 50. And note this further. The young sculptor may with impunity make and break figures to his heart's content; the young surgeon, in learning his art, is not supposed to damage or destroy human beings.

Artists, mechanics, craftsmen of all sorts learn their work in the workshops or studios with a master to correct their faults and guide their efforts. Surgeons alone have, unassisted, to grope their way to excellence in their art. In his science the student has guidance enough in all conscience, and in his notetaking and his dressing he is sharply looked after. But he is severely left to his own devices to pick up the technics of his craft.

Is this right? That the art of surgery is teachable there can be no dispute, that it is worth teaching is still less disputable. Why, then, is it not taught?

The art can be taught in only one way, the way of teaching all the plastic arts. The young artist must, while beginning the practice of his art have a master at his elbow, a master who will criticise his methods and correct them, who will guide him in the use of his hand, his eye, and his instruments; who will in the fullest sense make him his pupil and personally lead him on, step by step, towards such excellence in the art as he himself has acquired.

In no way do I seek to detract from the value of such knowledge as is got in the class of operative surgery, so called, or on the benches of the operating theatre. As a step between anatomy and surgery, the performance of operations on the dead body is of supreme value; it is indeed indispensable. It is the first step towards operative surgery, but it is not operating. For instruction in the living art of surgery, attendance in the operating theatre is of little value. The student sees little, and that little with uninstructed eyes. The student of surgery is just as likely to learn his art simply by attendance in the operating theatre as is the student of the violin to become a true artist simply by going to concerts. In both cases to learn the art the student must work at it; to attain to the highest degree of excellence he must work under a master.

If then the art of surgery is to be perfectly taught, it must be taught to the young surgeon actually operating. And here is our first difficulty. We cannot teach the art to unqualified men; students are not permitted to operate. We must begin our teaching after the student is qualified. As things are at present this is not easy. Our pupil of yesterday is our colleague of to-day; when qualified he is supposed to be our equal and therefore above our criticism. It is difficult to imagine a skilled senior in the operating theatre calling attention to the faulty methods of his young colleague; it is impossible to conceive him pushing him aside and showing him how to do it. And yet, if the living art is to be taught at all, this personal way is the only way. Why should the young surgeon more than any other young artist fear tuition in the operating theatre? Possibly the presence of young students, of whom he is probably a teacher, would be a chief objection. Then, if the humility of him who truly seeks after knowledge is not forthcoming, must the young students be excluded from operations at which open instruction is given to young surgeons. And it resolves itself into this, that the master has a few qualified pupils, and is present at the operations of these few. He guides them in their work; he points out faulty methods; he advises and, perhaps, assists; and this he does in the presence of all his pupils.

As a matter of fact I doubt if the young surgeon would fear tuition in public, if such tuition were given honestly and courteously by a man whom he could look up to as a master. There is no method of education in handiwork that can surpass fair criticism of the work before compeers. The mere pointing out of faults calls attention to details which the average onlooker would fail to see. But criticism is not all fault-finding; it calls attention to excellences as well as defects. The pointing out and correcting of faults, and the praising and holding up for imitation of any special excellence in operating might well, to the advantage of all and the discomfort of a very few, form part of the routine education of the hospital operating theatre.

What would you or I or any surgeon amongst us not give to have a Liston or a Syme at our elbows to teach us? Who that really has his soul in his art could fail to welcome an opportunity for such tuition? And why should we not have it? There is no lack of capable teachers, and surely they could easily be induced to teach. I can conceive no finer

ending to a great surgeon's career than to devote it to the education in his art of the men who are to succeed him. He has handed over his legacy of science to all mankind; he has laid aside his own knife, but his art will survive him, for, in the band of pupils whom he has trained in their work, his legacy of art will be as enduring as his legacy of science.

Am I suggesting a return to something like the old apprenticeship? Well, what then? The art of surgery is no new thing. Probably as an art, pure and simple, it was more perfect in the apprenticeship days of fifty years ago than it is to-day. For then, before the days of anæsthesia, the highest art was not only a saving of life but a merciful saving of suffering. If we have lost this stimulus to perfecting ourselves in the art that pain to the patient gives, we have still the saving of life to urge us on, and that is an even greater stimulus. How a surgical artist like Robert Liston, the greatest probably the world has ever seen, trained as he was in the cruel and exacting school of pre-anæsthetic days, would have revelled in all our "otomies," "ectomies," and "ostomies" of to-day! To imagine Liston, trained in practice as he was, living amongst us now, and having before him the science we possess, is to realise my ideal of the surgeon-artist.

If we did have the old apprenticeship back amongst us it would be for surgery a something. It would be at least better than the nothing we have now. But I am not asking for the old apprenticeship; I am pleading for something higher. We speak of apprenticeship rather as to a trade; I am pleading for pupilage as if to a fine art. I am simply asking for the surgical high art what is freely and abundantly given to all other parts; personal teaching in actual work by competent masters.

I make no complaints, and I offer no accusations. British surgery needs no apology. I simply seek to give it one more push upwards. We have reached a high degree of excellence, but we may reach a higher, and one way to this is through personal tuition in the art. We start as physicians; we are educated in the technical arts of the physician at the bedside and under masters. We are likewise obstetricians; here, also, we have personal instruction in the actual doing of our work. But in surgery, nowadays, and in operative surgery alone amongst all arts and crafts, we have no genuine personal instruction. If, on this foundation, British surgery has reached the height it has, to what eminence might it not rise if we were careful that every young surgeon were trained in the highly technical and highly important practical art of operative surgery?

Detailed suggestions as to how this training might be carried out would be out of place on an occasion such as the present. This matters little; for, if you think as I do, the result will surely follow. But we must fight for our own right hands. We must expect no help from the State. The State, like Providence, helps those that help themselves. When we have shown that we need practical teaching in our art; when we have proved that we can provide it; when in fulfilment of those powers with which we have been legally endowed we have created in our teaching centres some working process of practical instruction, then we might ask for more. We might ask to be put on the level of the fine arts, and seek for a Royal Academy of Surgery, as we have royal academies of painting, sculpture, and music. To such an academy a school with teachers would be attached. The school would be a surgical hospital endowed with every known excellence of hygiene and nursing and appliance; the teachers would be those who are supreme in our art; the pupils men already qualified who seek for practice in the higher walks of surgery. Do you believe me that this would be good for surgery? Then let us work for it.

And now I have finished. I have spoken of our art solely from the practical point of view, as to how it may be improved in *technique*: that is, as to how it may confer most benefits on others. I have not referred to any ennobling of ourselves. Indeed, I have little belief in it. All arts tend to elevate; this, the ultimate criterion of true art everywhere, has no more truth for the surgical than of the painter's or any other art. In the highest flights of the imaginative faculties, the faculties that make poets, and inventors, and musicians, we do not stand very high. Yet a previous generation can point to a surgeon who practically founded a new science; this generation can point to a surgeon whose purely surgical discoveries have created new laws for the preservation of health and the cure of disease. These are high aims, but they are not the highest. Our dealing is with the body; the painter, the poet, and the sculptor deal with the soul; their goal is higher than ours.

Art thrives on appreciation. There is no academy to bestow gold medals on the surgical artist, no crowds gather round to admire his finished work. In the finest and purest sense the surgeon's is an art of the home, almost of the fireside; it does not appeal to the populace. The surgeon's highest reward is the moistened eye and tremulous grip of the hand which bespeak thankfulness for the breadwinner restored to the home, the mother to the children, the child to the parents. His science may be trumpeted far and wide; his art is known to his own small circle; it has little recognition beyond, and we let it die with him. The art of the surgeon has its best reward in blessings not in fame.

It has its punishments, too, for surgery is a terrible taskmaster. The punishment is not a mere heart-burning over the rejection of a picture by an academy; it is a heart breaking over the losing of a life by our own work. Our worst punishments are self-inflicted; for every failure, even if incurred in the leading of a forlorn hope, means a personal criticism of a cruelty and thoroughness which no outer criticism can match; a criticism that condemns without chance of condonement, for our own conscience is judge. These things I hint at, but do not dwell upon. They are there, however, and their presence makes us better surgeons, and I trust better men.

More than 500 years ago Guy de Chauliac, the greatest of the surgeons of the Arabic period, wrote these words: "Knowledge is created by additions; the same man cannot lay the foundation and perfect the superstructure. We are as children carried on the neck of a giant; aided by the labours of our predecessors we see all that they have seen and something beyond." These words might have been my text. The burden of my theme has been to hold fast and care well for the old truths: in our love for the new science not to forget the old art. For in autumn the leaves fade and fall first from the youngest branches; they linger longest green on the old wood. Let us graft our new truths on the old stock; so will they live longest and flourish most.

INTRODUCTORY REMARKS

DELIVERED AT THE OPENING OF

THE SECTION OF MEDICINE.

At the Annual Meeting of the British Medical Association, held in Bristol, August, 1894.

By FREDERICK T. ROBERTS, M.D., F.R.C.P.,

Professor of Materia Medica and Therapeutics, University College; and Physician to University College Hospital.

ON BREADTH OF VIEW IN MEDICINE.

The distinction of being invited to fill the office of President of the Section of Medicine at this meeting of the British Medical Association is one for which I can truly say I was utterly unprepared, and which I humbly acknowledge is entirely undeserved, so far as regards any services rendered by me to the Association. I can only express my deep sense of the honour thus conferred upon me; my sincere gratitude for the friendly feelings which I know full well prompted the selection; and my earnest desire to prove myself worthy of the responsible position in which I have been placed. On the present occasion, I cannot avoid recalling a fact which probably will be of interest to all here, namely, that when I acted as Secretary to this Section at Manchester in 1877, the President was Sir William Jenner, whose great name still sheds lustre upon our profession; and among those who took an active part in the proceedings were Dr. Russell Reynolds, now the distinguished President of the Royal College of Physicians of London, as well as Sir (then Dr.) Andrew Clark, Dr. Wilson Fox, and Dr. Charcot, whose untimely death in the full possession of their remarkable powers we have to deplore, but whose names will ever stand out prominently among those of their contemporaries.

When I first accepted the invitation so kindly conveyed to me from the local committee by my old friend and pupil, Dr. Markham Skerritt, I was haunted by a feeling of terror and misgiving under the impression that I should be expected to deliver what is euphoniously termed a "presidential address." No words can adequately express the infinite sense of relief which I experienced when soon after I received a most polite and sensible intimation to the following effect: "Presidents of Sections to be requested not to deliver a formal address in opening their Sections, as complaints have been made of want of time for sectional work. Any introductory remarks should not occupy more than fifteen minutes." One cannot be much of a bore, or do a great deal of mischief, within that period of time, and I promise you not to exceed it.

It would be absurd to attempt to discuss any definite subject, or even to sound forth the triumphs of Medicine since the Association last met, or to tell of the advances and achievements of which it can boast. We certainly are living in stirring, not to say startling, times, and one might be easily tempted on an occasion like this to do a little in the way of boasting. I shall leave that performance, however, to others, and I have an impression that in this Section we shall hear some remarkable facts.

In the remaining time at my disposal my first impulse is to give expression to a feeling of personal satisfaction and congratulation on account of the fact that, having regard to the rapid march and development of events, which are familiar to you all, we still have left a Section of "Medicine" at all, that is, a Section which recognises the general significance of the expression, and which grants us the liberty of selecting for discussion, on a broad and comprehensive basis, any subject belonging to any branch which by common usage may fairly be regarded as coming within its scope. I cannot help expressing the hope that, whatever happens in the future, this Section may never cease to have a separate and independent existence. Whether you agree with me on this point or not, I feel sure you will acknowledge that those who have had the actual responsibility of arranging the business for this Section have done excellent service. In addition to procuring a number of most promising papers on a variety of subjects, they have managed to secure appropriate questions for discussion which, while differing widely in their character, are severally full of interest and importance, and, in my opinion, afford conspicuous illustrations of the advantages of a general section of this kind.

I shall not at the present moment touch upon either of these questions from a controversial point of view, but they have suggested to me two or three considerations, which I venture to submit to you, and which I think cannot be too strongly enforced in these days.

You must all be familiar with certain tendencies which prevail extensively among the laity at the present day, and which, I believe, are even now doing much harm, but are likely to lead to much more serious mischief in the future if not checked. It is a common notion that each system and organ in the body must be regarded and dealt with as a distinct entity, working independently of all the rest, while their relation to general conditions of the body is often entirely ignored. Another striking tendency is to attribute every disorder or symptom, whatever may be its nature, invariably to one particular organ, which differs according to the peculiar fad of the individual. I am not at all sure that the profession is altogether free from these tendencies, or, at any rate, that we realise to their full extent the pathological relations of organs and systems to each other, or adequately recognise their connections with various general morbid conditions. What a protest against narrow and erroneous views of this kind is such a subject as that of Functional Diseases of the Heart! Fancy a medical man entering upon the investigation of, or attempting to treat any case of this nature, guided by such absurd notions! I confidently look forward to the discussion on this subject as one that will teach both the profession and the public far wider and deeper lessons than those with which it is more immediately concerned, and that it will be the means of putting some check upon these dangerous modern tendencies which, as rational and conscientious practitioners of medicine, we dare not ignore.

Our second subject—namely, Pyrexia and its Treatment—grapples with a general pathological state of the utmost importance, and one which, in different degrees and in various associations, more or less constantly confronts every medical man in his daily practice, whatever may be its exact nature and scope, often puzzling him and baffling his best and most skilful efforts. What I venture to suggest with regard to this subject is that it cannot and ought not to be approached or studied from a narrow or one-sided point of view, and that no class of workers or investigators have any right to claim that they, and they alone, are capable of elucidating the intricate and difficult questions connected with it, and that their teaching must be accepted as absolute and sufficient. Pyrexia has its highly practical as well as its scientific aspects, and, while we welcome with gratitude any light thrown upon it by physiologists, experimental pathologists, or experimental pharmacologists, I submit that neither nor all of these can take the place of the clinical observer, the practical therapeutist, or the general practitioner, who in his daily life has to face and do battle with fever under all possible conditions. What more appropriate or comprehensive subject could we have for discussion in this general Section?

It must be cordially and gratefully acknowledged by every fair-minded observer, that the special study of certain branches of medicine, and of particular systems and organs, has within the memory of most of us here present, yielded remarkable and even astounding results, has often entirely revolutionised our knowledge and ideas, and has in fact opened to us new worlds. The nervous system affords one of the most striking illustrations of this statement, and when I contrast the present state of neurology with what it was in my student days, I feel positively overwhelmed with wonder and awe. Probably you will all agree with me that specialism is nowadays sometimes carried to a ridiculous point, but here is a specialism which is not only permissible, but inevitable, and which commands our respect and admiration. It is with the greatest pleasure and satisfaction that I welcome a discussion in this section on "Ataxia," which is so important a subject in itself, and which belongs to such an interesting branch of Medicine.

We have met together for mutual instruction, and I would like to add a few words as to certain kinds of teaching which I think we as a profession emphatically need in these days. There is no lack of ardent and enthusiastic workers, of competent and devoted scientific investigators, of careful and diligent clinical and pathological observers, or of prolific writers. Knowledge is being daily added to in a remarkable way, while eager and active research is striving to get at the truth and reality of things in every direction. But this is not enough. We want the instruction of men of practical experience, that is, of those who, having enjoyed adequate opportunities of studying the subjects which they assume to teach, having made good use of such opportunities, and having arrived at years of maturity, are able and willing to impart to the profession generally the outcome of their observations and thought. Then we are sorely in need of the help of those who possess the faculty of grasping and arranging methodically the vast accumulation of new facts and theories which threaten to overwhelm us, of systematising and condensing them in such a manner as to bring order out of chaos, and of presenting the subjects to which they pertain in a simplified and intelligible form to the minds of those who are not endowed with this capacity. And, lastly, we joyfully welcome the teaching of those who, be they young or old, having devoted themselves to the study of special subjects under favourable conditions, are prepared to give us the benefit of their knowledge and experience.

Looking over the lists of those who are to introduce the several subjects in this Section, and who have promised to take part in their discussion, I confidently affirm that they all come under one or other of the categories to which I have just referred, and I feel a justifiable pride in being associated with them as President. But let me add that we cordially invite the help of all present, for our subjects offer scope for the physiologist, the experimental pathologist, the bacteriologist, the pharmacologist and therapeutist, as well as for the general physician, and last, but by no means least, the general practitioner.

And now, let us proceed to the work set before us with energy and diligence, with hearty good will, and with practical common sense, recognising the value of time, and the

necessity of adhering as closely as possible to prescribed regulations. I earnestly hope that the outcome of our proceedings will be not only the promotion of good fellowship, but also the permanent advance of Medicine as a science and art, the clearing away of difficulties and obscurities which have hitherto obstructed its progress, and the establishment of knowledge and truth on a firm basis. Thus shall we help on in some measure the great objects for which, as a profession, we are all ultimately striving, and do our part in combatting disease in every form, in relieving suffering and distress, and in contributing to the general well-being of the human race.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OBSTETRIC MEDICINE AND GYNÆCOLOGY.

At the Annual Meeting of the British Medical Association at Bristol, August, 1894.

By J. G. SWAYNE, M.D. Lond.,

Professor of Midwifery, University College, Bristol, and Consulting Physician Accoucheur, Bristol General Hospital.

1863—1894.

It is now thirty-one years since Bristol had the honour of being selected by the British Medical Association as the place for one of its annual meetings. To this proposal my native city gladly responded, and gave our visitors a hearty welcome. The result was that our meeting in 1863 was an eminent success. I shall always have the most lively and pleasant recollections of that meeting, for I was at that time *calidus juventâ*, and more susceptible than I am now of such agreeable impressions.

To begin with, the choice of Dr. Symonds as president elect on that occasion was a most happy one. Since the days of our renowned fellow citizen, Dr. Prichard (the learned author of that well-known and now classical work on the *Natural History of Man*), Dr. Symonds had for some years stood *facile princeps* amongst the physicians of Bristol, indeed, I may say, of the West of England. He was a very able and accomplished practitioner of medicine, whose professional ability and industry had justly earned for him a large and lucrative practice. He was, moreover, a classical scholar, well versed in natural sciences, a lover of literature and of the fine arts, and, in short, possessed all those general attainments and social qualities which had long endeared him to a large circle of friends, and naturally rendered him eminently fitted for the office of president to such an Association as ours at its annual gathering here in 1863. I need not say how admirably he performed those duties on that occasion.

For some years afterwards it was a source of pleasure and pride to me to think that I was once his pupil when he was senior physician to the Bristol General Hospital, where I soon learned to revere him as a preceptor and to love him as a friend. But these agreeable feelings, alas! were destined in less than ten years after our meeting to be succeeded by those of profound regret at the somewhat premature death of so distinguished a man.

His mantle for a time fell upon the shoulders of a worthy successor, Dr. William Budd, a man of great ability, industry, and originality. He belonged to a renowned family, nine of whom were sons, and seven of these medical practitioners. On this occasion he was chosen to deliver the Address in Medicine. The subject he selected was Variola Ovina, and he showed in it the same amount of independent thought and originality of idea, combined with careful research, which characterised his other medical writings, more especially those relating to the spread and propagation of typhoid fever and cholera. He was born in Devonshire, but Bristol was his adopted city, and it may well be proud of him, although it had to regret his somewhat untimely loss not many years after that of Dr. Symonds.

The Address in Surgery in 1863 was delivered by my old schoolfellow, fellow-student, and friend, Mr. Augustin Prichard, who was then senior surgeon to the Bristol Royal Infirmary. As he is now, I am happy to say, alive and well, I feel that I cannot speak with the same freedom of his address, which was on the subject of the treatment of carbuncle, and was in every way worthy of him and of the high position to which he had attained, even then, amongst the surgeons of his native city.

Our meeting here in 1863 was particularly distinguished by one feature, which was that, in addition to the usual annual addresses on medicine and surgery, chemistry and obstetrics were also represented. The Address on Chemistry was delivered by a clever young fellow graduate of mine at the London University, Dr. Bird Herapath, who was formerly a student at the Bristol Medical School, when his father was the chemical lecturer there. The fact that, at a comparatively early age, Dr. Herapath had attained the high honour of becoming a Fellow of the Royal Society (which was a rather rare distinction in Bristol) by a clever paper on the polarising properties of the salts of quinine, was no doubt the motive which led to his selection by the Council. But it could have been no such motive which induced them to do me the honour of asking me to give the Address on Midwifery. The only one I can think of was that I had taken a new departure in practice some years previously by becoming an obstetric physician (a description of practitioner that was then unknown in Bristol), which step many of my friends regarded as a dangerous experiment on my part. What led me to take this step was that in 1854 a new and handsome general hospital had just been erected in this city, the governors of which, acting on the advice of my friend Dr. Tyler Smith, who had lately obtained such an appointment at the then new hospital of St. Mary's Paddington, determined to appoint an obstetric physician to the hospital here, and I was fortunate enough to obtain that appointment, the first of the kind which had been made in Bristol.

At the time when I gave the Address in Midwifery no branch of the healing art was making more rapid advance, if we may judge by the brilliant success which attended the opening of the Obstetrical Society some four years previously. It was but natural, therefore, that in my address at that time I should contend that midwifery ought to occupy a more important position, and stand decidedly next to medicine and surgery in the attention that was paid to it at our annual gatherings. I quoted in my address some very apposite remarks made by Dr. Tyler Smith in his address to the members of the Obstetrical Society the year before our meeting in Bristol: "There is a tendency to call us specialists, against which we should all contend. We are not specialists in the sense in which the ophthalmic or aural surgeon follows a speciality. Midwifery is one of the three great departments into which the wants of society and the lapse of time have divided the profession; and if the charge of speciality is brought against the obstetrist it might with equal justice be urged against the physician or surgeon." At the time when these words were spoken obstetric medicine and surgery had become far too wide to be considered a speciality: but how much more so is this the case now, when we look back at the wonderful progress which gynæcology has made of late years, and seen how, under the impetus imparted to it by the discovery of antiseptic surgery, it now performs safely and securely those extraordinary abdominal operations which, before this discovery, were considered so dangerous that our fathers, about the middle of this century, entertained serious thoughts of prohibiting them by law.

Now, however, under the auspices of antiseptic gynæcology, a number of difficult and important abdominal operations are performed with the happiest results, and a new race of gynæcological surgeons has arisen, who are developed out of these obstetric practitioners, who instinctively felt that they had sufficient skill and courage for these operations. But yet, at the present time, notwithstanding all these wonderful results, we find by looking back at the past records of our Society, that, during the last thirty or forty years, medicine and surgery are both, with scarcely an exception, represented by an annual address, whilst obstetric medicine and surgery stand, in this respect, on the same level, or even below, some of the specialities. For instance, in the ten years from 1858 to 1868 inclusive, I find that there were only two addresses on midwifery, and as many as three in

physiology. Nor is there any improvement in this respect at the present time. During the ten years from 1884 to the present year inclusive, there have been, as before, only two annual addresses on obstetric medicine, whereas there were as many as four on public medicine, irrespective of those on medicine in general, and three out of these four were given in consecutive years, namely, 1885, 1886, and 1887. There were also two on physiology, one on psychology, and, lastly, one on bacteriology in 1892! *Sic parvis componere magna solebam.*

I think, gentlemen, you will agree with me, that it is high time for obstetric medicine to reassert itself, and to obtain a greater recognition than it has hitherto done at our annual meetings.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PSYCHOLOGY.

At the Annual Meeting of the British Medical Association, held in Bristol, August, 1894.

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THE PREVENTION OF INSANITY.

THE prevention of insanity is a subject of so great importance that I need not apologise for bringing it before the Section of Psychology at a meeting of this Association. Some years have passed since it was considered at any of our meetings. In 1879 Dr. Herbert Major read an address upon it at Cork, and Dr. Rabagliati contributed a paper on the same occasion, and these were followed by a discussion. In 1890 Dr. Strahan read a paper before a quarterly meeting of the Medico-Psychological Association on the Propagation of Insanity and the Allied Neuroses, which bears strongly on my subject, and was also followed by a discussion. There has not been, however, with these exceptions, much writing or discussion thereon, and therefore I have ventured to bring it and my views upon it before you to-day.

For the due consideration of this subject I will begin by mentioning—though not exhaustively treating—another which has been discussed among us, which was discussed at this Section of the Association at Newcastle last year, that is, the alleged increase of insanity. The increase of the numbers of the insane, according to the returns made year after year, is so appalling, that many have considered and analysed them, in order to show that the increase is not due to the admission of new cases, but to the accumulation of chronic patients in asylums. The large apparent increase can, of course, be at once explained in this way. It is a lamentable way, for it means that there is a large number of patients whom we fail to cure in spite of our advance in knowledge, our modern asylums and our newest methods of treatment. We keep them alive but we do not cure them. The latest examination of statistics points rather to a slight diminution than to an increase. If we look at the tables contained in the fourth volume of the Registrar-General's Report on the Census of 1891 and the analysis thereof, we read that the discharge-rate, that is, the death-rate and recovery-rate combined as returned by the Commissioners in Lunacy, had fallen off in the last decade; that while in the decade 1871-80 it averaged 19.0 per cent. annually, in the decade 1881-90 it averaged only 17.83. It remains, therefore, says Dr. Ogle, to consider whether the amount of change in the discharge-rate is sufficient to account for the increase in living lunatics. "And," he says, "a simple calculation shows that it is so, for it will be found that with an annual discharge-rate of 19.00 per cent. of lunatics living at the beginning of the year, it would require an addition each year of 689 fresh cases per 1,000,000 population spread evenly over the year, to raise the ratio of living lunatics from 3.034 per 1,000,000, as it was in 1871, to 3.253 per 1,000,000, as it was in 1881; but that to raise the ratio from this level of 3.253 to 3.358 ten years later, as it stood in 1891, would require with a discharge-rate of 17.83 per cent. an annual addition of only 661 new cases per 1,000,000 population." The returns, then, lead to the conclusion that lunacy is not on the increase, but that there has been a slight decline. This is satisfactory so far as it goes, but it only relates to the patients registered and numbered as insane in the Reports of the Commissioners in Lunacy. It does not apply to the large body of unregistered and unnumbered lunatics that are kept in private care. It has been said that this body is diminishing through the increase of asylums, and the inducement to send patients to them which is held out by the 4s. grant. But county asylums have been in existence for many years, and the 4s. grant is twenty years old, so that this argument is weaker than it was once.

Passing from figures which are confessedly very imperfect, let us consider whether from *a priori* reasoning insanity is likely to be increasing or diminishing among us.

By a well-known law of evolution the brain of civilised man increases in complexity as time goes on. The brain of the child, the idiot, or the savage is a simple organ compared with that of civilised nations, and the complexity is such that we do not stand still, but become more and more complex as the environment becomes more complex, as the struggle for life gets more severe. The march of education demands that more shall be learned, and competition on every hand and in every walk and calling perpetually urges men to fresh efforts and new paths of enterprise. Such increased complexity must as a matter of course lead to frequent disturbance of the brain and its functions. The adjustment between all the different relations and related parts must be easily put out of order, as in any very complex piece of machinery; and, as in the latter, if the restoration is not speedily effected and the balance of the parts restored, the machine is spoiled irretrievably. Do we not see many a brain spoiled by what appeared at first to be a very trifling derangement, spoiled never to be the same again? Insanity is not increasing, we are told, but it is much to be feared that it is not decreasing. And insanity is only one of a long series of disorders which we call "nervous," or neuroses. I need not enunciate these. Indeed, merely to give the list of them which we find in modern authors would take up a great deal of your time. You all know them, or a great many of them, and you read about them every day. There is a special society which devotes itself to the study of such diseases; there are special hospitals for the relief of those who suffer from them, and many physicians practise almost exclusively among such patients. Is there anyone bold enough to say that neurotic disease is decreasing among us? Is suicide decreasing? In the year 1891 the suicides in England and Wales amounted in number to 2,483, according to the report of the Registrar-General. This number, he tells us, was in the ratio of 85 per million living, and he adds that it was the highest on record. It is significant to note that the number of suicides reported by the Commissioners in Lunacy as having occurred among registered lunatics during the same year amounted to 13 only, which is a strong corroboration of my opinion that a vast number of cases of insanity are never registered at all. We know that suicide is a symptom which is oftenest met with in the early stages of insanity, and although it does not follow that all these 2,483 persons were insane, it is to be feared that a large proportion of them were; and that our lunacy laws and the difficulties placed in the way of proper treatment are responsible for many of these calamities. All these nervous disorders, taken together with the undoubted and registered insanity with which so many of us are concerned, point to the same fact that in the evolution of our race the complex brain is becoming more and more unstable, and more prone to be upset by faulty surroundings or circumstances which would not be felt by a more stable organ.

Can we arrive at any reason for the increase of neurotic affections? Can anything be done to prevent such an increase? The medical profession has laboured long to prevent certain diseases, and with marked success. It has opened the eyes of the laity to the preventable character of many maladies which were the scourge of our land. Cholera we keep at bay, typhus is as rare as the plague. Typhoid is becoming rarer every year, small-pox might be stamped out were it not for the prejudices of a few crack-brained individuals which we have still among us. The tubercle bacillus

still defies our efforts, but improved hygienic conditions enable even the consumptives to live and propagate their race, a race delicate and liable to diseases of other kinds, but one which is prolific, and in whom the disease is peculiarly hereditary. Not only is zymotic disease lessened by hygienic measures, life is preserved in many other ways. Infant life has a far better chance than it had in former times. Zymotic disease, as you know, rarely attacks infants in the earlier months, but there is a vast mortality among them which may be reduced, and is being reduced, by improved hygienic conditions, by wider spread knowledge of feeding, and attention to warmth. The infant mortality is especially great amongst the poor and in the large towns, the chief causes of death being diarrhœal diseases, due, no doubt, to improper feeding, and convulsions and diseases of the nervous system, due to that increase of neurotic disease which I have already mentioned; but the death-rate is lessened, and is lessening for other reasons besides those already enumerated. The poor are better housed and better paid, consequently they are better fed. Workshops are rendered more healthy, and various trades and manufactures are less dangerous to those employed. Employers of all kinds of labour are liable for those in their service, and shortened hours and increased recreation add to the lives of all classes.

How does all this care for life and prevention of disease affect our race? One result is that natural selection which plays so important a part in racial change is altered in its course in various directions. Most of you have probably read the Milroy Lectures of Dr. J. Berry Haycraft on Darwinism and Race Progress, which were delivered at the College of Physicians this year. To those who have not I strongly commend them. He explains very clearly the part that natural selection plays in preserving the race, that "if we attempt to do away with its selective influence, namely, the elimination of the weak and the preservation of the strong, we must supply this selective influence by something else, or the race will tend to deteriorate.....As selection is the race changer, we must replace selection by the microbe by the selection of human forethought." And after considering the inherited weakness of such systems as the respiratory or digestive, he passes on to insanity, which, as we do not require to be told, is markedly hereditary. He points out that the depopulation produced by war and zymotic disease was so dreadful that only nations with great fertility survived. The problem of sickly diseased offspring had not arisen, for all such died in infancy, and the man was most blessed who had the greatest number of children. But nowadays conditions are changed and changing. The sickly and diseased marry freely and bear children without scruple or hindrance, and the effect even now is beginning to be seen. For by an analysis which he gives of the Registrar-General's figures for the years 1858 to 1890, as arranged in groups of five years, it can be shown that the cause of death per million of the population varies considerably. In the first group of diseases due to micro-organisms, or, as we call them, zymotic diseases, the death-rate was largely diminished. In the second group, such causes of death as convulsions, dentition, dietetic disease, disease due to parturition, accidents and negligence, have decreased, but those caused by intemperance, by constitutional disease, suicide, diseases of the nervous system, and diabetes have increased. Those from phthisis have decreased, but those from disease of the respiratory system have increased, which may be explained in this way, that the phthisical die of other intercurrent disease, or of diseases which are returned not as phthisis, but as other diseases of the respiratory system. There was a decrease in the death-rate from all causes, but while the death-rate for ages up to 40 is being lowered, after this the death-rate is increased. "This," he says, "has been going on to a marked extent in the past and is still continuing, and I do not see how we can shirk the fact that preventive medicine and civilisation between them have already deteriorated in a marked degree the healthy vigour of our race. If things continue in their present course it is fair to assume that in a hundred years or so the wretched products of our race—embodiments of every constitutional disorder transmitted by ancestry from whose ranks the diseased have not been weeded out before the child-bearing period was over by those natural agencies hitherto free to act—will drag out their lives, martyrs to surroundings which they have tried to mould; they who, as a race, should have been moulded by their surroundings. Preventive medicine is trying a unique experiment, and the effect is already discernible—race decay. But the experiment has gone quite far enough, and it should be modified to produce a different result. Why should the microbe select? Why not public humanity and public reason, since selection there must be. This appears to be the only possible solution of the difficulty, for it is not to be desired that preventive medicine should cease from making war upon the microbe, provided other selective agencies are used to replace them. Is it not our duty, by boldly facing facts and publicly stating them, to endeavour to bring about such strong public opinion as will force people to look upon the act of giving birth to a diseased child as one of the most cruel sins?"

I have quoted thus from Dr. Haycraft's lectures because they are the results of a careful observer, and they bear strongly on the question of the prevention of insanity, and corroborate fully the views I have for some time held on the subject.

I have long been of opinion that insanity is to be prevented chiefly by limiting the propagation of this most fearful disease through the union of affected persons. Various questions arise here. First, Who are the persons most likely to cause the disease in their descendants? Secondly, How are such people to be prevented from marrying? These problems come before us not infrequently, and it is often difficult to give answers and reasons which shall be satisfactory to those who consult us. I shall be glad to elicit the opinions of you who are present to-day on this important subject. Mr. Francis Galton, with whose writings on heredity probably most of you are acquainted, tells us in his book on *Natural Inheritance*, that when he issued his inquiries as to the "Records of Family Faculties" insanity was not specially asked about, as he did not think it wise to put too many disagreeable questions. The difficulty of arriving at any data on the subject is immense. It is not as if insanity, like consumption or cancer, were a disease which causes death. The deaths from the two latter causes can be tabulated and counted, and the Registrar-General gives the number of deaths occurring in a given time, and can tell us whether the number per million is increasing or diminishing, and in all Mr. Galton's tables the deaths from consumption are the data which he takes into account. But insanity does not cause death. All that we know is that a certain number of persons are confined as certified lunatics. When they die nine-tenths of them are registered as having died of consumption, bronchitis, pneumonia, paralysis, or some other bodily disorder. We have in this registration no evidence whatever as to hereditary taint; we have to pick this up as we can, believing or disbelieving what is told us, and thus it comes to pass that one observer puts heredity as markedly observable in 90 per cent. of the insane, while another cannot discover it in more than 25 per cent. Who, then, are the persons most likely to transmit insanity to their descendants? In a discussion on a paper read by Dr. Strahan before the Medico-Psychological Association in 1890, Sir B. W. Richardson gave it as his opinion that anything like continuous transmission of insanity comes through the male line and not the female. An insane woman may have an insane child, but if the insanity is traced back through the male line some connection or descent on the male side will be found. "I take it," he said, "that really and truly all taints come from the primitive man—all changes that are hereditary—and that it is impossible to suppose them originating from the woman." This theory seemed to me most extraordinary, and I have searched in vain for any corroboration of it. From my own observation of inherited insanity I should be inclined to adopt the very opposite view and to say that the taint is transmitted through the female rather than the male. It is certain that, if it is transmitted only through the male, the risk of inheriting the disorder must be far less than is generally supposed. Not being able to find any statistics which threw any light on the subject I applied to Mr. Galton, thinking that his special studies might determine the question. He replied that he was surprised to hear that the female is less likely to transmit insanity than the male, and that he did not at all

agree with the opinion expressed by Sir B. W. Richardson, for it is very rare that one sex has greater transmissive power than the other. Mr. Galton goes on to complain of all medical statistics, and says that they are incomparably the least trustworthy of any class of data that he has worked with. It is greatly to be wished that some of our psychologists would work out the family history of some of the thousands of patients who are under care and treatment and produce some statistics worthy of reliance. There are various points on which light would be thrown by such data, and conclusions, unexpected and expected, might be arrived at.

A child inherits partly from his father and mother, and partly from more remote ancestors; to what extent he does this, how far he partakes of his father's nature and how far his mother's we cannot say with anything like accuracy, because there is the ancestral inheritance also to be taken into account. We know that the children of an insane parent are not all insane. In one the taint predominates and causes insanity, in another the healthy ancestors or healthy parent prevent the outbreak, and a more stable nerve condition is the result; therefore it would be impolitic and impossible to prevent the marriage of all the children of a family where one parent had shown signs of insanity at some period of his or her life; but we must not forget that although not all the children of such a stock will show symptoms of the disease—nay even a minority only may do so—yet it is impossible to predict with certainty that this one or that one will escape. The most unlikely and most steady-going are often those who break down under excessive strain, while others who may have been obviously eccentric remain always eccentric, and never go beyond. Now, although we cannot forbid all such children to marry, it is most important that they marry partners who are themselves free from all nervous disorders and whose inheritance is untainted by any such disease. And here I may say in answer to some who have invoked legislation on such subjects that I have no hope whatever that our legislators will ever concern themselves with it. It would be very difficult for a much more judicial body to undertake such a problem. The utmost that we can hope for is that some day a man or woman may be able to dissolve the union which binds him or her for the rest of life to an absolutely hopeless and incurable lunatic. But if legislation is unattainable, to what must we look for the regulation of marriage of tainted persons? Clearly we have only public opinion to call to our aid, and public opinion requires to be educated for a long period before it will be of much service. At the present time the only thought which the public gives to the subject is how it may best conceal the fact of insanity occurring in a family. If the patient must be confined, let it be in an asylum remote from his friends' residence, or, if possible, let him be taken from the asylum and concealed in a village or abroad, where no one will hear of him. The education of public opinion rests mainly with our profession. If we oppose the marriages of the unfit and give our reasons, they will in time bear fruit. It behoves us to do this whether the persons about to marry and their relatives like it or not.

Suppose that we are consulted about the marriage of a child of a family in which insanity has manifested itself. There are various questions to be considered. First is the individual himself or herself healthy and fit to marry, free from at any rate any outward and visible signs of neurotic disorder free from any tendency to phthisis, free from anything like weakness or imbecility, from a tendency to drink, from strong emotional excitement, religious or otherwise? Secondly, if there has been insanity in the family, in how many members has it shown itself and in how many generations? If it has occurred in one of the parents only, what was the age of the parent at the time of its appearance? Was it prior to the birth of the child or subsequent? Was it an insanity which the parent had inherited, or was it acquired at a more advanced period of life? If all these questions can be answered favourably, above all if the individual himself or herself appears to be sound in nerve and limb, we may sanction his or her union. But what if the other partner of such union is in the same category and comes of a family tainted with insanity? Even supposing that the conditions are as favourable as they can be, yet the risk is too great. The conjunction of two such persons is eminently hazardous both to the offspring and themselves. Danger to offspring is the last thing which young people about to marry are likely to trouble themselves with, but the risk to themselves is great, for the effect of such knowledge of their respective families must have a potent moral influence on their lives. I have seen cases where one parent has ascribed the illness to the father's family, while the father has privately informed me that it exists on the mother's side. Conceive two people passing their lives perpetually on the watch for the disorder to show itself in one or other of them or their children, liable to misinterpret everything whether words or deeds in one another, and to bring up their children in an unwholesome way from over-anxiety.

Public opinion requires education that it may set itself against the concealment which lets such marriages take place—nay, endeavours to bring them about regardless of consequences. A family has a case of insanity occurring in it. A son or a daughter becomes insane. Forthwith the great question is how this can be concealed that it may not stand in the way of the marriage of the others, especially daughters. The insane member is hidden as far as possible. Certificates and Commissioners are to be avoided on account of the publicity and the indelible stamp, and the daughters are to be married with all haste before the news becomes known. Such parents consider very little the state of any family with which they wish to contract an alliance. They dare not investigate the family history for fear of raising inquiries as to their own, and it is left for the young man and young woman to find out for themselves the inheritance into which they have entered.

What are we to say about the marriage of a man or woman who has had an attack of insanity? Such a one had better remain single. It very often happens that the engagement of such a person is itself the exciting cause of the insanity. As soon as the attack passes away, and the patient can be said to be recovered, the friends urge on the marriage; and think that this, if only brought about, will be the sovereign remedy and a sure preventive of all subsequent attacks. Can anything be more extravagant than this hope? Such a proceeding is culpable in the case of a man, but ten times more so when the patient is a woman, probably a young woman whose insanity is not acquired but inherited, and who, with this inheritance and a previous attack, is doomed to face the excitement of marriage, the tedious discomfort of pregnancy, and the pains and perils of childbirth. Here the danger is to the individual herself, and not merely to the offspring. How many a girl do we see whose health and mind are sacrificed on the altar of marriage, who might have led a happy and useful life if compelled by public opinion and judicious advisers to remain single. The danger of the marriage of such persons is increased tenfold if they are cousins. Whatever may be said as to the marriage of cousins who are both healthy and come of a healthy stock, there can be no question that such a union of families in which insanity exists, or where one of the parties has already shown symptoms of nervous disorder, is fraught with the greatest risk. And cousins in such families show a curious proclivity to attach themselves to one another. Such people have known each other from childhood, they are less shy with each other than with strangers, and so they drift into an engagement often very much against the wish of the parents, who know the family history better than do their children. In two respects our neighbours in France are better off than we: in the first place, the Roman Catholic Church does not allow the marriage of first cousins; and, secondly, by French law sons and daughters have to obtain the consent of their parents to their marrying, even if they be of mature age.

Besides persons who come of families tainted with insanity and those who have already shown symptoms of the disease before marriage, there is another class who have attacks after they are married. It may be the husband or the wife. The latter may break down after her first or some subsequent confinement; the husband may show signs of the disorder at an early period of their married life. Now, if insanity is to be prevented, a woman who has had a puerperal attack ought, for the sake both of herself and of the community in general, to have no more children. The wife's own health here is seriously implicated. Can anything

be more lamentable than the spectacle of a woman breaking down again and again, having an attack of puerperal insanity after every confinement, and going on till, it may be, seven or eight children are born under these conditions? I have known this happen several times, and probably most of my hearers can point to similar cases. Now, I hold a very strong opinion that such people, and all threatened by insanity, ought not to continue to breed children. I have given such advice over and over again. Some are wise enough to follow it, others do not, and I could point to some disastrous instances where it has not been followed. People can adopt precautions and limit their families without the slightest hesitation if it is convenient for their pockets or their comfort and amusements. Ought they not much more to do it when the health and reason of the wife are at stake, when the children may prove a curse instead of a blessing, or may by their number and the anxiety attendant on their maintenance and education cause the father's breakdown, and so reduce the whole family to a state of pauperism?

Now, gentlemen, I do not expect that my views on the subject will meet with universal approbation. I shall be told that it is injudicious and inexpedient for medical men to interfere with the relations of the sexes, that it is still more inexpedient to interfere with or limit the number of children. I shall perhaps hear that the strength of the sexual instinct proves that the intentions of the Creator on this subject are unmistakable. I do not suppose that there is any argument that can be brought forward on the other side that I have not heard or read, but I am unconvinced by any of them, and am convinced that the only way to really diminish and finally stamp out insanity is by so educating public opinion that those who have been insane or are threatened with insanity shall in the face of such public opinion abstain from bringing into the world children who must certainly contain in them the potentiality of insanity, who will some of them develop it even if others escape, and so will hand on the heritage from generation to generation till the race dies out. If no insanity appears in the offspring of the first generation we know that it may in the next, according to the law of latency.

I now come to the second part of my subject, upon which I must be brief. If people who come of an insane stock, or themselves have been insane, should have children, what can be done to prevent insanity developing in the latter? Clearly many precautions may be taken if we have the opportunity of observing the offspring from the earliest time of life. The family medical man will have this rather than the specialist. What, then, are the matters to be observed? First, it is of great importance that the nutrition of such infants shall be carefully attended to. A nervous, emotional, irritable mother should not suckle her child, but a good wet nurse should be provided. If the child is in the country it may possibly be brought up by hand. It is important, too, to watch such a child and see if it gets the proper amount of sleep; regular hours for sleep, by day as well as by night, should be enforced, and this should be kept up for some years, for the habit once formed will be easily preserved. Convulsions are of grave moment in such children, especially at the time of dentition, and many a child who is sharp and intelligent at first becomes an idiot from this cause. As the child gets older it is necessary to guard against its being frightened in any way. Some children suffer from night horrors and nightmare either because they are timid or from some internal disturbance. Many are timid if left in the dark or left alone. Many are timid constitutionally, but more, I believe, are rendered timid by injudicious parents and nurses who frighten them by tales of robbers, murders or ghosts, and render them fearful for the rest of their lives. Such people, by their own example and their own cowardice, teach their children to be cowards, and it is lamentable and astounding to see the depths of fear exhibited by educated ladies concerning a number of every day objects and occurrences.

There is another thing to be guarded against even at this early age. Children must not be taught the habit of self-abuse by nurses or other children. Nurses teach it to make children go to sleep. The whole question of self-abuse and its prevention is of great importance, and requires the careful consideration of both doctors and parents. In the case of boys, they should, in my opinion, be cautioned against the habit before they go to school. In the case of girls, care should be taken that they do not learn or even hear of such a practice. As they grow older the question of school will arise. A boy naturally goes to school, and the choice of a preparatory school is quite as important as that of a public school. There is more bullying, as a rule, at the former than the latter, and a timid boy may suffer much, being too timid to inform either the master or his parents. The latter should closely question a boy during the holidays as to what goes on in the term time. Shall a girl be sent to school? Very much will depend on the character and habits, not only of the girl but her parents. The latter, or one of them, may be eccentric, irritable, unjust, making a favourite of this child and snubbing that, so that it may be the salvation of one to take her away from such an atmosphere and place her in the more wholesome sphere of a good school. Girls' schools are vastly improved, and in the large high schools of the present day we have a close approximation to the public schools of our boys. The numbers and the age of the elder girls form a consensus of public opinion which sets itself against what is low or mean or vicious, and a healthy spirit pervades the whole. There is one thing, however, to be avoided, both in girls' and boys' schools: that is, examinations. These nervous children are very often clever, often precocious. They will be seized upon by masters and mistresses to work and win scholarships and prizes and bring glory and honour to the school. If we go to one of our great public schools at the time of an election of scholars, we shall see dozens of little fellows of 12 or 13 who for several years have undergone the process of cramming. They have been worked beyond what they can bear, and as probably ten compete for each vacant scholarship, the nine have to undergo the disappointment and shame of failure, and to return to face their parents with this bitter feeling. Children, especially nervous and sensitive children, are too young for all this; their nervousness often causes them to fail, and adds to their sorrow at failing. This is one of the evils of large girls' schools. There is too much of examination and competition for scholarships at the universities. It is the same everywhere. In all professions examinations are divided and subdivided till the stream of them goes on incessantly for years. There is a rage for examinations in this country at present, and, if it goes on, we shall soon be as bad as the Chinese.

There is a class of young persons about whom I am often consulted. They are the backward and dull; not vicious, not imbecile, but backward for their years, having at the age of puberty the mind and capacity of children of 8 or 9 years. These require special care and education. It is of no use to merge them in an ordinary school, and to put them in classes with those of like age. They cannot compete with the latter. Their brains work slowly, and they become disheartened by want of success. Parents may be foolish enough to ignore the failing, and to put it down to idleness and obstinacy. Schoolmasters may think that punishment is the one thing needful, and an unfortunate boy may be seriously damaged by the infliction of unmerited castigation. Such children require the care and attention of a tutor or a governess, who will make a study of them, and find out that for which they have an aptitude, and not try to force them to learn things which are to them impossible.

In the case of boys and girls with a strong hereditary taint it is very important, I think, that they should be brought up to be total abstainers, and that the reason why this is enforced should be clearly explained to them when they are of sufficient age to go out into the world and choose for themselves. There is always a fear lest young persons so constituted may contract the neurosis of inebriety. Brought up in ignorance of strong drink they may be tempted on some occasion to try some. A very little may affect the unaccustomed head, and they may cause a scandal by getting drunk, or may like the taste of wine and the sensation caused by it, and so drift into drinking. It is better that they abstain and continue to do so, even when they attain to manhood, clearly understanding and recognising the reason why such abstinence is enjoined. It is far easier to abstain from childhood than to practise abstinence when the opposite habit is formed. And this applies to women no less than to men. Habitual drunkenness unfortunately, is not confined

to the latter. Women will not enter inebriate retreats voluntarily; but whenever the Legislature can find time to pass an Act for compulsorily confining habitual drinkers it will be found, if I am not much mistaken, that the number of females will equal, if it does not surpass, those of the other sex.

If the period of education is safely got over, there comes the still more important question, what calling or profession is the young man to choose. By this time it will be possible to gauge to some extent his character, and note his peculiarities, if there be any; we shall also be able to note his physique and bodily health and strength. Some are fitted for an outdoor life, for life in the colonies as farmers, horse breeders, or the like. They cannot bear the confinement of a desk or a sedentary occupation. Many are quite unfit for the professions of law or medicine. The work is too harassing, the labour too great if they are successful, and want of success brings disappointment and, it may be, pecuniary difficulties and trouble. Neither is the church well suited to the nervous man; he is beset with doubts and religious controversies. He has scruples of conscience and thinks himself an unworthy disciple. And he is beset not only with his own doubts and difficulties but with those of his flock, which they must lay before him. His work, too, is emotional. He is continually brought face to face with sickness and death, with sorrow and distress with which he cannot fail to sympathise but may fail to relieve. The army is a bad calling for these persons; it means, nowadays, the spending of many years in the tropical climate of India, perhaps in an unhealthy part, for to many of our healthiest colonies we no longer send troops. It is for the most part an idle life with nothing to do and great temptation to drink. A post like a Government or other office with regular hours, little responsibility, a fixed income, a retiring pension, and a long holiday—this is the post for the men who come before us. If they break down, they get well and go back to their work, and this is repeated again and again. Girls at the present time think that they too must have a calling. If they do not visit in the parish they must needs be nurses. Numbers of recovered patients think they would like to be nurses, having picked up some idea of it from those who have nursed them. Some do enter this calling and break down again, when perhaps they are in charge of a case. I need not tell you that a nurse's life is about the worst that neurotic girls, or girls predisposed to insanity, can choose. It means interrupted nights, much anxiety, trying and vexatious patients, and no less trying friends—everything, in short, which such people should scrupulously avoid. They had better be teachers of the young than nurses of the sick. If they are fortunate enough or wise enough to choose suitable families, they may pass their years in healthy homes and much comfort. And the next thing is that they want to marry. And so we come back to the question which I discussed just now. Which of them ought to marry, and which ought not? Which are fit to have children, and which are not? Here, as I have already said, not your opinion or mine will have much weight; but I hope that public opinion will in time declare itself on this point, and save our nation from the degeneration which some think is even now impending.

The Metric System in Pharmacy.—At a recent Council meeting of the Pharmaceutical Society of Great Britain Mr. W. Martindale moved the following resolution: "That after January 1st, 1895, a practical knowledge of the metric system of weights and measures shall be required of all candidates for the Minor Examination in the subjects of prescriptions and practical dispensing, and that the Board of Examiners be instructed to require from candidates a general knowledge of posology in terms of the metric as well as the British system of weights and measures as defined by the *British Pharmacopœia*, 1885; and in practical dispensing 'to weigh, measure, and compound medicines' by the metric as well as the British system of weights and measures." After some discussion the resolution was altered to the effect that the Board of Examiners should be requested to consider the advisability of acquiring a practical knowledge of the metric system of weights and measures for the Minor Examination. In this form it was carried.

AN ADDRESS

DELIVERED AT THE OPENING OF THE

SECTION OF LARYNGOLOGY AND OTOLOGY.

At the Annual Meeting of the British Medical Association held in Bristol, August, 1894.

By P. McBRIDE, M.D., F.R.C.P.E., F.R.S.E.,

Aural Surgeon and Laryngologist Royal Infirmary, Edinburgh; Lecturer on Diseases of the Ear and Throat, Edinburgh School of Medicine.

RECENT ADVANCES IN LARYNGOLOGY, RHINOLOGY, AND OTOLOGY.

Gentlemen,—I have much pleasure in welcoming you to the meetings of this Section, and I trust that all of us will derive both profit and pleasure from our *séances*. With the vast amount of business before us I feel extremely disinclined to trouble you with any lengthened remarks from the chair. Tradition, however, makes some preliminary observations incumbent upon me, and I do not think that I can do better than refer very briefly to some of the advances we have of late made, and touch lightly upon a few of the problems that lie before us.

In a region so open to universal inspection as the pharynx progress has not been altogether wanting, and signs are forthcoming that even now there is room for fruitful observation and research. Within the memory of many who have not grown old in the study of throat disease new names have appeared in our nosology. I may, perhaps, mention pharyngomycosis, pharyngeal tuberculosis, and scleroma, all of them comparatively recent additions, although probably not by any means new diseases. Again, physiology has also advanced our knowledge of the innervation of the soft palate. Most of us remember how the presence or absence of paresis of this part was supposed to be an important guide to the exact seat of a lesion on the course of the facial nerve, and now all of us are aware that to the seventh nerve is ascribed little, if any, part in the innervation of the soft palate. We cannot, however, help wondering how it occurred—if the new view be correct—that so many excellent observers recorded unilateral loss of power in the palate in cases of facial paralysis.

So much for new, but presumably settled, facts; let us now turn for a moment to questions which are still open. As you are aware, a distinguished physician not long ago recorded examples of "acute infectious phlegmon of the pharynx," and other observers soon attested the correctness of the clinical description he gave. The exact etiology of this affection, however, requires further elucidation, while its relation to or differentiation from erysipelatous sore throat leaves room for discussion and discovery.

Again, gentlemen, you are aware how indefinite is our clinical knowledge of diphtheria. It would almost seem here that in proportion as we have advanced on pathological lines we have receded in bed-side diagnosis. We all remember with something akin to regret how delightfully dogmatic were the older authors on this very question of diagnosis. Indeed, I am not sure that this dogmatism does not extend well up to date. Yet those of us who have studied recent developments are aware that we may have all the clinical features of diphtheria without the Klebs-Löffler bacillus, and, worse still, may have the dreaded organism in a case which presents all the symptoms of a mild tonsillitis.

Passing now from the pharynx to the larynx, we can still go on tracing the finger mark of progress. It is a very remarkable fact, but a fact nevertheless, that the subject of pachydermia was first brought into prominence by a pathological anatomist. This disease, in its typical form, is by no means very rare, and presents such a characteristic picture that it is little short of marvellous that we specialists omitted to classify it correctly, if, indeed, we did not actually overlook it. Again, it is not very long ago that phthisis of the vocal apparatus was looked upon as a *noli me tangere*, as an affection which meant certain and not far distant death. Yet quite a large number of cases have now been recorded

and demonstrated on the *post-mortem* table, in which tuberculous ulcerations have healed, leaving healthy cicatrices. It is not for me now to introduce controversial matter, and I shall therefore abstain from the tempting topic which is opened by reference to the treatment of tuberculosis. We may next fittingly pass to the subject of lupus, and it may not be amiss to remind you how rarely this disease was supposed to attack mucous membranes, and how comparatively common such cases really are, at least in some localities.

The existence of tumours of the larynx had been recognised not only since the introduction of the laryngoscope, but long before on the *post-mortem* table. Yet we find from time to time new varieties described, such as myoma and keratosis. In this connection, however, the subject of malignant disease has come most prominently before us of late years, and there can be no doubt that we have made progress both in the diagnosis and in the treatment of this condition. We have come to recognise how very guarded must be our diagnosis from microscopic examination of a fragment, and at the same time how important it is to arrive at an early recognition. Excision of half the larynx and even free removal of the diseased parts without attacking the cartilage have given the happiest results in cases where these measures have been adopted at a sufficiently early period, and yet all of us are aware how difficult it often is to distinguish a non-malignant from a malignant neoplasm at the stage most favourable for operation.

Perhaps one of the most striking steps in the progress of laryngology is to be found in the chapter which deals with nervous affections. I need not remind you of the important clinical points which have been established, nor of the very valuable physiological experiments which have had such an important bearing upon the study of laryngeal paralyses and other neuroses. Again the nervous affections of the vocal organ to which voice users are liable have been most carefully studied while that curious condition known as laryngeal vertigo has been described and discussed. Another very interesting and, as far as my knowledge goes, novel nervous affection is the respiratory croaking of infants which, while accompanied by appearances and signs of distressed breathing, seems rarely to injure the sufferers.

It would be out of place to do more now than name the important subject of intubation which we shall presently discuss. Whatever the ultimate verdict may be, we are, I think, entitled to look upon it at present as one of our most striking therapeutic novelties.

The laryngoscope has been found useful not only in detecting affections of the larynx itself, but also in studying the posterior part of the tongue. In this way attention has been drawn to the so-called lingual tonsil, and it has been found that this part has a pathology in most respects analogous to that of the tonsil proper. Perhaps it may seem absurd to recall the benefits derived from cocaine as a novelty, for probably most of us have come to regard this drug as quite an old friend, and it is startling to realise how recent has been its introduction. On the inestimable boon conferred on laryngology thereby I need not further dwell.

Of all the subjects embraced in this Section, rhinology is certainly the newest, and in connection with it there has been marked literary activity. Of course our means of examination have been improved and our methods of operating have become perfected, but I am not quite certain that our advances in this branch are as important as those which have been made in connection with either the throat or the ear. The best method of removing spines and deviations of the septum is still a point which may be said to be *sub judice*. With reference to inflammatory conditions, we have had certain new facts established. Thus, in all probability there exists a purely croupous affection of the nasal mucosa, which has been described as fibrinous rhinitis.

Again many intractable cases of post-nasal catarrh have been shown to depend upon inflammation localised in a cavity variously described as bursa pharyngea and the median recess of the pharyngeal tonsil. Atrophic catarrh, however, remains as obstinate as ever, nor has its pathology been yet clearly elucidated. I do not know that very much has been added to our knowledge of nasal tumours, excepting perhaps with regard to the occurrence of cysts—osseous and membranous. The employment of electrolysis in fibrous tumours seems also to promise success in a class of cases which have not yet often yielded thoroughly good results. Adenoid vegetations too, although perhaps not of sufficient novelty to be here mentioned, have of late years been assuming that prominence to which their importance entitles them.

A very important point to the clinician is the very curious tendency possessed by the anterior and lower part of the cartilaginous septum to undergo certain changes. As you are aware it is the most common site of hæmorrhage in the habitual nose bleeder, and it is comparatively common to find here a perforating ulcer, of which it is always difficult and often impossible to trace the history, and which has absolutely no connection with any dyscrasia. Perhaps among advances in rhinology we should insert the galvano-caustic treatment of hay fever, although even this method yields most uncertain results. Probably one of the most important of clinical novelties has been the recognition of latent empyema of the accessory cavities, more especially the antrum; but it would be anticipating our discussion to say more on the subject at present.

I have not so far spoken of nasal reflex neuroses, but there can be no doubt that the establishment of the fact that certain forms of asthma, cough, neuralgia, etc., may be benefited by treatment of the nose has been a most important era in rhinology. Only we must always remember that the nasal nerves are only one of the many possible channels of reflex irritation, and that the rhinologist cannot afford to leave other factors out of account.

With regard to the ear, our advances have not been very many, but some of them certainly have been of solid worth. As you are aware, one of the subjects upon which much has been written and asserted is the examination of the ear by exposing it to sounds of different pitch. I do not wish to be controversial, but it appears to me that we must have much larger and much more definite data from morbid anatomy before we can arrive at any dogmatic conclusions with regard to the value of this method in detecting labyrinthine disease.

I do not know that we can claim any very important advance with regard to the external ear. Perhaps I should, however, mention these curious cases of hæmorrhage from the meatus, periodic in character, and in certain of which no bleeding point is detectable, of which several have been described.

The recent epidemics of influenza have been of great interest to the aurist in furnishing very definite types of ear disease. Again, the relation of certain diseases to ear affection has recently been made a subject of close study, while carefully-conducted microscopic examinations of the internal ear have supplied much interesting information. Numerous operations have been practised in that type of deafness which is most commonly known as sclerosis of the middle ear, but the consensus of opinion has never yet been definitely in favour of any of them.

Of therapeutic advances without operation I may refer to the use of pilocarpin in certain affections of the labyrinth, and the employment of massage over the mastoid to promote absorption of inflammatory products within the tympanum.

By far the most important advance has, however, been made in the surgical treatment of suppurative ear disease. I need not tell you the various means which are used—removal of the ossicles, opening into the mastoid antrum, exposing the attic, removing the posterior wall of the meatus, etc. I would only like to point out how the application of the long-recognised principles of general surgery to the ear has been crowned with success. You are all fur the racquainted with the great strides which have been made in the treatment of intra-cranial suppuration and phlebitis. There can be no doubt that the progress we have of late made in the treatment of pyogenic ear affections and their complications completely overshadows all other otological novelties.

Gentlemen, I have so far ventured to name—I will not say review—some of what appear to me to be important advances in those branches of medicine we have met to discuss. I have no doubt that my list is very incomplete, and many of you will doubtless detect gaps; yet, if incomplete, it may, perhaps, still claim to be representative. It shows, I think, that we are advancing on sound lines, taking as our founda-

tions patient clinical research, physiology, pathology, and rational therapeutics. If we compare our methods of treatment to-day with those in vogue twenty years ago, we find that the tendency has been to substitute operative measures for treatment by drugs. I do not say that we have not had some valuable additions to our *Pharmacopœia*, but that the questions as to treatment which are most in evidence are surgical rather than medical problems. In this we reflect the tendency of the age as exemplified in other branches of medicine—for example, pulmonary disease, gynæcology, neurology, and even psychology. Our improved surgical methods have undoubtedly enabled the present generation of specialists to record successes which would have been thought impossible within the memory of living men, and humanity has benefited in proportion.

It is not uninteresting to note, however, that all our real progress in this direction has been made by applying the great general principles of surgery to the regions we have to treat. We may, I think, divide the operations with which we are particularly concerned into two great classes—namely, (1) those which are performed to carry out a distinct surgical indication; (2) those which are more or less experimental. There can be no doubt that those included in the former class have been a great boon to suffering humanity. Sometimes they have failed, but based as they are upon principles which are not only surgical but logical, the total effect has been good. Moreover year by year the modifications most suitable to aid us in applying the principles of surgery to the parts we have to treat have been further developed, and what long ago was thought impossible has become not only possible but easy.

Among the second class of operations we must include not only those which are purely and confessedly experimental, but also such as are based upon hypotheses, whether physiological or pathological. There can be no doubt, gentlemen, that in this second class of operations we may have a source of danger to our prestige. You know as well as I do that the struggle for scientific existence is keen; the long, weary, uphill road which leads through careful research and exact clinical observation to ultimate success is hard to travel and at best slow. A new operation is often easier to suggest and carry out than careful work, and so it is not inconceivable that we may have in these facts an element of danger, not only to ourselves but to the public. Experimental operations may, under certain circumstances, be perfectly justified, but they should not be too much lauded. We must scrutinise all work of this kind with a more than usually jealous eye. The man who thus experiments must have already gained a high position, the patient must know the experimental nature of the procedure, and its performance must rest upon a basis of perfect logic. I should feel inclined to go a step further, and say that such operations should only be carried out if *mutatis mutandis* the operator would have a like procedure practised upon himself. With these restrictions operative experiments may be, and often are, justifiable; without them they become a source of danger to specialists and their patients. The operations to which I have just referred may be considered as somewhat analogous to the exploratory procedures of general surgery. Like the latter, they may be justifiable or the reverse according to the circumstances of the case.

As I have endeavoured to show, we have made much progress in recent years, and in this our specialities compare favourably with other departments of medicine. Our permanent advances have been on the lines of anatomy, physiology, pathology, and exact clinical research, whilst our treatment has improved by applying general principles of recognised value to the parts with which we have to deal. These are also the lines on which we may expect to make further progress, and by adhering to them we shall strengthen our position, while when we depart from them we render ourselves liable to be successfully assailed.

Excessive attention to unimportant, even if interesting, details, a tendency to exaggerate the importance of one particular part to the exclusion of others, and above all too great therapeutic activity, seem to me to be the shoals which, if they cannot wreck us, may at least circumscribe our field of usefulness. On the other hand, the more we work on sound general principles, the less we exploit short-lived sensational methods of treatment, and the further we extend our specialities by lasting links, binding them to other branches of medicine, the more we may expect to see them thrive and retain an honoured and honourable position.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF DERMATOLOGY,

At the Annual Meeting of the British Medical Association at Bristol, August, 1894.

BY ALFRED JAMES HARRISON, M.B.LOND.,
Physician to the Bristol General Hospital.

ON THE GERM THEORY IN DERMATOLOGY.

OF course on an occasion like this when an individual is raised, for the time being at least, into a prominent position by having the honour conferred upon him of being requested to preside over an important Section of our great Association, it is naturally expected that he should make some remarks bearing upon the subject of that Section, and he must wish, as you would desire, that he were capable of saying something new and to the purpose, and of being able to throw some light upon problems which are still obscure but which are fast leaving behind the dark mists which had enclosed them. Of doing this the opportunity is rare, and the man to do it still rarer, but you on your part can stretch the veil of tolerance over his shortcomings and give him unlimited credit for what he would have wished to do and say. We have heard much about the extent of the skin, and therefore the amount of claim it has for consideration as a part of the whole medical entity, and it occurred to me in looking at a diagram of the skin, its layers, its glands, and its surroundings, that in these days, we are getting the roads and pathways in our busy and important towns into a somewhat complicated structure like the skin. There are the pavement and the macadamised street very much resembling the epithelial layers; there are the sewers and the drains leading into them, like the sudoriparous ducts and the glands; the water pipes, corresponding to the blood vessels, and telegraph and electric wires to exemplify the nerves, and a gas lamp here and there will do for the hair-like processes. Then you have complications and derangements of these various parts, which necessitate the breaking up the ground—now for a defective drain; now for a leaking gas or water pipe; again for a deranged wire—and which seem not less frequent and various in our streets, than the multitudinous skin affections and complications, which we meet with in the medical world. How vexatious and disappointing these are in the municipal as in the medical sphere—when one thing thing is remedied there is often a break out elsewhere!

The remedies in the civil world are more easily applied and with greater confidence than they were, because the thing that is wrong and the cause of the wrong are better understood; so we in our department think that we are more skilled than our ancestors. We pride ourselves that we comprehend better the part that is wrong, be it from under or over-function, or from deranged or disturbed action in some distant organ—that is, remote from the skin. But now our analogy speedily comes to an end. The processes in the human system are so intricate and interdependent: it is not a gas pipe here and a water pipe there, which, although running side by side, should never interfere with each other's function; but a blood vessel here may contain more or less blood than it ought to do, because a nerve at a distance is affected or the great centre of the circulation, the heart, is enfeebled, and the whole skin surface sympathises. The skin is like the advance guard, and therefore no wonder that it suffers. How prone it is to injuries! How exposed to various irritations, mechanical, chemical, physiological, and parasitical!

To dwell upon the last only now. Recent investigations have established more and more the germ sources of many skin affections, and hence, as in modern surgery, most by far of the recently applied remedies have been in the direction of antisepticism. Bacteriology will not account for, will not

explain, all phenomena, but look how much light it has thrown upon some forms of eczema, on porrigo contagiosa, boils, carbuncles, erysipelas, acne, lupus, and other skin manifestations.

But we must not ride the germ hobby too hard. Common sense must have its leavening power. Practical men in a practical age must not shelter themselves too much behind learned ideas and disquisitions on pathogenic microbes. "The most sober, most absolute, and most positive science of medicine," says Lord Salisbury, "must take a practical view."

What we want to know is not so much what we mean by the definition of the terms "eczema," "urticaria," "acne," "pellagra," etc., valuable as such definitions must ever be; but what causes these outward manifestations to which we apply our terms. We must not be content with looking upon skin affections as we should regard a landscape picture, but reflect upon them as though we were regarding a historical painting, full of import and value, when all the complicated circumstances and surroundings are duly considered. We are told that in many cases of acne, indican has been found in the urine in great excess. Is this excess due to the constipation which so often coexists in acne, or is it the result of intestinal putrefaction? In many of these cases much good has come from administering antiseptics, as menthol, resorcin, salol, etc., and with improvement in the skin affection, so the quantity of indican ceases to be found in the urine.

Then in that comparatively rare complaint, pellagra, the symptoms often pass off towards the end of the first summer of the attack, and through the succeeding winter the patient is apparently well, but in the next spring all the symptoms may reappear, and with increased intensity. The interval cannot have been a period of good health; it has only been so in shadow, not in substance. In this disease the sun's rays have some influence upon the skin, but much more perhaps their influence upon the diseased maize products, which seem to be the *fons et origo mali*. We have yet a great deal to learn from the action of the sun's rays upon skin affections. Dr. Geisler, of St. Petersburg, showed by experiments some two years ago that typhoid bacilli were but very little, if at all, affected by red rays of light, when light was decomposed by a prism, whilst the ultra-violet rays were very deleterious to their welfare. We may reasonably infer that skin affections are influenced by light, but we have papers to come before us upon this interesting phenomena, so we will not now pursue the subject more.

I alluded casually a few moments ago to the influence of nerve action upon skin affections. This is a source of much interest and difficulty. I knew the case of a young man who, whenever he ate a certain kind of pickle, had a curious reflex action demonstrated upon his left cheek. On this cheek was a small superficial mole, and, within a few minutes of taking this pickle, this spot would break out into a state of distinct perspiration, which would last for some little time. As he grew older the symptom ceased. Another somewhat similar case was that of an elderly man, when I knew him, and who through all his life, so far as he recollected, never ate black currants without very speedily displaying a very distinct erythematous rash across the brows and forehead. Why should these symptoms arise, and why confined apparently to only such limited skin areas? Why should herpes zoster involve in its outward development only limited nerve areas? Yet the attacks rarely follow the course of one nerve in its peripheral distribution, and they have their spots of greater or less intensity.

I do not remember ever seeing this unilateral disease confined to one cervical or intercostal nerve. Dr. Head, of University College Hospital,[1] has worked out very beautifully the relation between the pain areas in visceral disease and the distribution of herpes zoster, and it looks promising that before long we shall have this remarkable complaint grounded upon a more scientific basis. Let me exemplify this reference to Dr. Head's article a little more fully. He says:[2] "In three cases in which I was fortunate enough to see the patient before the eruption (herpes) was developed, I was able to make out an area on the skin which exactly corresponded to that seen in visceral disease, and I was unable at the time to say whether this area was due to reference from visceral disturbances or was the precursor of a herpetic eruption. Again, the herpetic eruption always makes its first appearance at certain points, from which in most cases it spreads. But even if the eruption spreads until it occupies the whole area, these points of first appearance are always the most affected. Now these points correspond to the positions of pain and maximum tenderness in visceral disease."

But there is one point that must, anyhow at present, remain unsolved. Why should second attacks of zona be so very rare? If we cannot explain the cause and the pathology of such a limited disease as herpes, what shall we say about that widespread and far more common disease eczema? The causes which give rise to it and the aspects it assumes are so multifarious, and its expression on the integuments so universal, that it has been well said that the practitioner who can treat eczema most skilfully can treat well almost all the diseases the body is liable to. One thing we can assert, and I may ask for the *imprimatur* of this influential gathering on this point, namely, that eczema, however long it may have been established on the body—10, 20, 30, nay, even 40 and 50 years—can be cured. There is no case of eczema that does not admit of cure; and, further, without any evil constitutional effects supervening. The question is not one of cure so much as one of time when the cure can be effected and here comes in the difference between the skill of physicians; the desideratum is how speedily and easily can the cure be wrought? This subject of eczema is one which is to be considered in our sittings, and therefore I will say no more about it now, beyond expressing this sincere hope that much valuable light may come out of our deliberations.

Before concluding, there is one other point I should like to emphasise, and that is rest in the treatment of skin diseases. Much, and very rightly, has been said of late years of rest as a factor in the treatment of diseases, whether surgical or medical, and the same good results are obtainable in dermatology. Many skin affections keep the patient confined to bed for a longer or shorter time as a matter of course, but there are many cases of severe eczema and extensive psoriasis, which permit patients to be up and about, either because they cannot afford the time to rest or have not the inclination for it: and yet if we confine them to bed for a few days there is often more progress made than arises from weeks of treatment, carried on whilst they follow their usual avocations, wholly or in part. Confine these patients in bed for a while, and the same treatment so far as applications and drugs are concerned—which produced only limited or slow effects—will now act thoroughly and rapidly, and the results are altogether very surprising and satisfactory. Above all is this rest desirable when the nervous system begins to flag and we begin to get broken sleep at night and impaired appetite and faulty digestion during the day. A schoolmaster or mistress gets an attack of eczema or psoriasis at a time when, in these days of educational strain, the nervous system has just about as much as it can bear, and now the skin affection turns the equilibrium the wrong way. Here there is nothing I know of which will bring about a satisfactory cure better than rest—absolute rest in bed for a short period. Rest with judicious treatment are the happiest conditions we can bring to bear. There can be no discrepancy of opinion here. The glory of science has been its capacity to improve the present out of the failings of the past, although we trust our present will be the foundation upon which a glorious future shall be built. Art is constantly putting new remedies within our reach. Let us accept them with great caution, and not recommend them until we are convinced of their utility. It is only in this way that true progress can be obtained and the permanent good of mankind, so far as we are concerned, brought about.

To paraphrase a little, remedies ever new are being advertised, most of them have their little day, and then they fade away and cease to be. One word more. We are met here to discuss different views, nay, we have met to differ, but let us trust that the divergencies will be only parts of a great truth, parts, perhaps, a little out of proportion, and sometimes in the wrong place—the red rays where green should be, the violet where ultra-violet would be better. Let it be ours to

[1] *Brain*, 1893.
[2] *Loc. cit.*, p. 8.

put them right, and to make them combine and form one harmonious truth, Light. Truth, said Plato, is the body of God, and light is His shadow.

REPORTS ON THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

SPECIAL COMMISSION OF THE "BRITISH MEDICAL JOURNAL."

X.

WREXHAM.

THE Wrexham Union is in the midst of a populous district; though the number of square miles is not large, the number of parishes grouped in the union is nearly as high as any in Wales. We were therefore not surprised to find a large workhouse with its separate infirmary and nursing staff. An introduction from the medical officer of the workhouse, Dr. Davis, secured us a cordial welcome and ready co-operation on the part of the master and matron, who took us over the house with pardonable pride in its cleanliness and humane management.

INFIRMARY BUILDINGS.

The infirmary is in a separate block, two storeys high, standing open all round, the wards extending like wings, having windows on each side, thus securing ample light and ventilation, and the cheerful aspect that goes with these prime necessities for the sick. The wards vary in size; the larger, on the first and second floors, hold as many as twenty-six beds; the smaller, twelve, six, or three. There are no day rooms for the sick or the infirm. On the ground floor we saw some imbeciles and idiots in a day room, but on the upper floors such patients as were up were grouped round the fires, or were sitting by the bedsides. There is an ample water supply, hot and cold water laid on to every floor, with water-closets, sinks, and bathrooms, all of which were wholesome and clean at the time of our visit.

WARDS AND PATIENTS.

The large wards are arranged with beds on either side, having a strip of matting down the middle of the ward; there are lockers, pictures, plants, and armchairs; we thought the supply of the latter rather scanty, as a large proportion of the inmates are infirm old people; but the whole appearance of the wards was comfortable, and betokened wise and humane management. The bedsteads vary in width; the bedding used is long straw. Those we turned up were quite clean and amply supplied with blankets.

At this time of the year the wards are not full; there are sixty-two beds on the male side, and sixty on the female side, with about sixteen isolation beds in various parts of the infirmary. Each group of wards seemed to have a separate ward attached for isolation, which is used for any offensive case; in one such ward we saw a man with cancer in the mouth, kept apart because of the effluvia. On another occasion these wards might be used for the controlling of an unruly patient, and besides the small wards there is a padded room, where a patient would be kept, guarded by inmates until removal.

We saw about ten inmates in bed; a woman with cancer of the breast, which was washed with boracic lotion, and dressed with the same ointment; another woman, who looked very ill, reported to have "some internal complication;" a case of rheumatism, a case of fits in a padded bed, paralysis and old age completing the number.

The lying-in ward is apart from the other wards, and has its separate offices; it is close to the nurse's quarters. The wards are warmed by coal fires and lit by gas.

SYSTEM OF NURSING.

There are two paid nurses, one on the male and one on the female side. The latter is a fully-trained nurse, and is the midwife; the former, though not hospital-trained, has had long experience in the work, and was reported to us by the matron as very capable in the management of her wards and patients; certainly in appearance her wards compare very favourably with the other side. There is no night nurse, nor as a rule are any inmates told off to sit up in the wards at night. The matron informed us that, when necessary, special paupers were employed as watchers; they had rest in the daytime, and some little extra tea or tobacco; the nurses were called up in the night if necessary. We asked what system was employed in the distribution of the paupers among the wards; the matron replied that when she found that an inmate was doing the work of the wards well, he or she was kept there unless proved guilty of unkindness towards the patients, in which case they were sent into the main building.

Such patients as can do so make use of the night stool or closet on the landing; the others are helped by the wardsman or woman. The paupers make the beds, help with the washing of the patients, wait on them, and do the cleaning.

We saw a card over each bed, and temperature charts were in use; the card, probably that issued by the Board, was hardly precise enough in its arrangement; there was very little space for the diagnosis, treatment, or result; it could not serve as a record of the case.

CLASSIFICATION.

The imbeciles, idiots, and cases of fits are on the ground floor, the sick on the first floor, and the infirm on the top floor. We did not see any separate wards for the treatment of children, and to the best of our recollection we saw some infants on the lower floors. It does not follow that they were with the idiots, but the nursery quarters were not up to the mark, as there was no reponsible attendant to look after them. Lock cases and patients with offensive disease are placed in the small wards off the larger ones.

DIETS.

The diets for the sick include soup, broth, rice puddings, and such extras as are ordered by the doctor; and milk or beef tea is left in the wards at night. We went the round at dinner time, when soup and bread were being served.

The matron informed us that she endeavoured to give the sick in bed such food as they could take, and they had tea extra in the afternoon for those who could take it.

RECOMMENDATIONS.

The tone and management of this house impressed us very favourably; the officers seemed to regard their charges as human beings to be cared and planned for. We would nevertheless recommend:

An increased staff of nurses for the sick, the employment of a night nurse, and the exclusion of pauper help in the actual nursing. The separation of the infants from the adults, the provision of special accommodation for them when sick, and of a paid official to take care of them. A paid attendant for the fit cases and imbeciles. Improved airing courts for the infirm; those now used are too much like back yards. More arm chairs and couches for the sick and infirm wards.

CHESTER: A CORRECTION.

We have received a letter from the medical officer of the Chester Workhouse (Dr. Archer), pointing out a few inaccuracies in the report of our Commissioner on that infirmary. We are as anxious as himself that there should be no exaggeration in the reports that we are publishing, therefore we give the sum of his letter. He first states that the number of patients reported as being under the charge of each day nurse is in excess of the facts; but as the report refers to the number of beds for which the infirmary is licensed, this may account for the discrepancy. The separate block for the lock and itch patients contains "four beds in the male lock, six in the male itch, five in the female lock, ten in the female itch." Dr. Archer traverses the statement that "a pauper is in charge of the children's ward," and states that "although a pauper sleeps in the ward with the children and helps to look after them, the ward is on the same floor as the nurse's room," this seems to us a question of degree, as it is evident that the nurse must rely on the pauper when her duties call her to other parts of the building, and for twelve or more hours the pauper is in sole charge. Our Commissioner commented upon the need of improved closet and bathroom accommodation, "especially in the lock and itch wards." The medical officer states that there is a separate closet and bathroom for each of these wards; we apologise for the mistake, and are glad to find that the need has already been met. With regard to means of communication with himself at night, this again is a question of degree, though every available means is taken by the master to bring the doctor as quickly as possible. Still we say that anything short of telephonic communication is insufficient. We are obliged to Dr. Archer for his comments, especially as they serve to accentuate the main facts of the case, which it was the duty of our Commissioner to ascertain.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, AUGUST 4th, 1894.

THE ANNUAL MEETING AT BRISTOL.

After an interval of thirty-one years, the British Medical Association again meets in Bristol, on this occasion under the accomplished and able presidency of Dr. E. Long Fox, Consulting Physician to the Royal Infirmary. This is the third occasion on which the capital of the West has hospitably received the Association. It met there for the first time in 1833, shortly after the formation of the Association. The number of members of the Association was then a little more than 400, whilst the attendance ran up to 200. It is curious to note that at present, when the Association numbers upwards of 15,000, the attendance at an annual meeting so interesting as this is not expected to amount to a proportion of as much as 5 per cent. of the total number of members as compared with 50 per cent. in the earlier days of the Association. Further, the general business of the Association was then conducted in the presence of nearly the full number of attending members, while on the present occasion the most important part of the business can only command the attendance, out of the 900 members in the town, of from 30 to 40 in the body of the hall, and, including the members of Council on the platform, of between 50 and 60 in all—a smaller number, in fact, than goes to make up an ordinary well-attended meeting of any of the larger Branches when similar subjects are under discussion. The fact appears to be that for all discussions of a political or business character the centre of interest is displaced from the annual meeting, which mainly concerns itself with scientific discussions in the Sections and the hearing of the annual Addresses, to the Branch meetings. The Branches have now become the main centres and determining power in the solution of the social and administrative problems with which the Association concerns itself. This decentralisation of power and the localisation of such discussions in the cities and the counties which are the seats of the Branches is in full accord with the democratic spirit of the times and the democratic constitution of the Association. Inasmuch as the executive body of the Association is elected by the Branches, each assembled in its own seat of residence, and is constituted of their representatives, the reports of the Council and its Committees, when approved by it, are really the authentic records of executive acts and administrative opinions derived from the true source of power in the Association—the wishes of the members as expressed by their elected representatives.

It has before now been suggested more than once that inasmuch as the constitution of the Association has been of late years placed upon a much more truly democratic and representative basis than formerly, it might be well to recognise the facts of the case by dropping some of the forms which belonged to the earlier state of things. During all the earlier years of the Association the Council of the Association was elected by a fortuitous concourse of members, varying very much in number and localisation, according to the attractions or facility of access afforded by the place of annual meeting. It was however found, after many years of experience, that the increasing number and importance of the Branches and the decreasing interest shown in questions of administrative and social interest by the bulk of the members attending such meetings, made it desirable that the Council of the Association should be elected by the Branches, and should derive its powers from them, and that all committees should be committees of the Council. Under these circumstances it is obviously logical that the reports of the Council and its committees should be further dealt with by those who elect them, if by anyone.

Obviously, the present mode of reporting to a general meeting, constituted at hazard and having no elective power, is superfluous and obsolete, and is contrary to any constitutional precedent, such as is afforded by Parliament, by county councils, by municipal bodies generally, or by any similar bodies appointed under a system of representative election. A "referendum" is always to the electors. The members generally in attendance at the annual meeting show their opinion on this matter and in this direction by quitting the hall in a body as soon as business is called, and leaving what are by courtesy called the discussions to a small number of gentlemen who represent only themselves, who number only a few score, and who repeat on these occasions arguments which they have already had the opportunity of urging upon their own Branches.

With this important and obvious qualification as to proceedings which add neither to the dignity nor the efficiency of general meetings of the Association, the Bristol meeting is proceeding in a manner which is entirely consonant with the dignity, the usefulness, and the reputation of the Association, and which is suitable to the high character, the large hospitality, and the admirable organisation of the City in which the meeting is held. We speak elsewhere of the general aim, tenor, and conclusions of the Addresses, and of the current of discussion in the Sections on the important and carefully selected subjects prepared for them. The Addresses, indeed, speak for themselves, and it will be admitted that they are of a very high order of literary and scientific merit. The orators selected have been worthy of their reputation, and the orations afford fruitful matter for future consideration.

The arrangements of the reception room, and of the Sections, are unusually complete. Nothing has been omitted which could well be provided for the convenience and comfort of those attending to the scientific business of the Association; whilst the medical profession in Bristol and the citizens are vying with each other in hospitality and entertainment, and in those little attentions which only a liberal and thoughtful courtesy could suggest.

The dignity and interest of the proceedings were enhanced by the presence of the President of the Royal College of Physicians of London, who has been assiduous in his attendance at all the more important scientific functions of the week. The lively and courteous interest which he has shown in all the proceedings augurs well for the brilliancy with which he is likely to play the important part assigned to him as the President-elect of the next annual meeting of the Association, which is to be held in London. Dr. Russell Reynolds headed the large and representative deputation from the Metropolitan Counties Branch, which tendered an invitation to the Council to hold the next meeting of the Association in the metropolis. That invitation was cordially accepted by the Council, and the President, Dr. Long Fox, and the President of the Council, Dr. Ward Cousins, heartily welcomed the proposal, and spoke in terms of just respect and eulogy of the President-elect.

THE PRESIDENT'S ADDRESS.

With the graceful modesty which is part of his own character Dr. Long Fox, in the opening words of his address, carried back our thoughts to the distinguished man who preceded him in the chair at the former meeting in Bristol thirty-one years ago—Dr. Addington Symonds. The memory of men like Dr. Symonds is sweet, not only for the strength and beauty of the character which is an example to us, but also because it recalls to us a type of physician differing widely from that of our own times. The dignity, purity, and wisdom of his life were, however, not peculiar to physicians of the past generation; the strength of that tradition is happily still moulding the lives of their successors; the good fortune of Bristol in its President to-day is not less than it was in the days of our fathers, and no President can claim with better grace than Dr. Long Fox to "pass on undimmed to our successors the lamp of high professional honour and of scientific attainments which has been handed down to us from our predecessors."

With some humour Dr. Fox referred to the increasing difficulties of successive Presidents who, by "the unwritten law of the Association," may not interfere with the subjects of the Sections, and may not therefore speak of things which they have "made their life study." We could wish Dr. Fox had shown less humility. There are restless spirits amongst us who would speak disrespectfully even of "the unwritten law of the Association" if by so doing they could hear from physicians of the eminence and culture of our President "something that he has made his life study." Personally, if we were to hear of the history of Bristol, we should have welcomed from the President some account of the remarkable effects of the Black Death upon the trade and government of the city.

Passing on from history to modern life, the President led us to consider the relations of medicine to the State, and eloquently vindicated the right of medicine to be heard in the councils of the nation, and the claim of medicine to a large share in the amelioration of the conditions of modern civilisation. The public recognises our services more and more fully every year, our influence is penetrating more and more deeply every year the masses of the people, the frameworks of Governments, and even the cortical investments of the legal mind; decorations and like splendours may come in due time, and other vanities, perhaps, with them; but meanwhile our instant and more practical duty is certainly to clamour not for these but for other worldly benefits; our duty is to clamour for such salaries as may both repay those public medical officers whose intellectual merits are often as great as their devoted services, and may also attract into the ranks of State medicine the best men of the day. Well does Dr. Fox say that, while devotion to research is one of the chief characteristics of a physician, the other is the desire to utilise the results of investigation for the benefit of mankind.

Yet while these qualities, as precious to the community as they are honourable to the physician, have insensibly gained for our profession a higher function in the State than the State itself has yet realised, medical officers of the State and of its incorporated parts are paid on a scale which took its rise in times when our duties were far more restricted, our education far more defective, and our means of investigation far less efficient than at present. Hence the tendency of the best men among us is, not to these higher services and posts of wider interests, but to "other branches of practice in which is more material comfort, the luxury of interchange of thought with educated patients, a more recognised position in the esteem of men;" while on the other hand "the ill-paid offices are filled by men whose knowledge leaves little to be desired, and whose influence for good excels, if possible, that of the rest of the profession, because exercised under greater difficulties." The salaries of the Poor law medical officers are especially indicated by Dr. Fox as most illiberal and insufficient. Now while we fully admit that there is not in the world as we find it any direct relation between high quality of work and high measures of pay—nay, that these variations are rather inverse—yet we ought not to rest until public medical salaries are readjusted in some proportion, let us say, to the legal, and thus the best men of the day drawn into our ranks and devoted to the service of the community.

We congratulate the Association on the presidency of one whose impulses and ideals are as high as his scientific attainments—attainments no less conspicuous in an address which in this brief space cannot receive its due appreciation.

THE ADDRESS IN MEDICINE.

Sir Grainger Stewart was eminently fortunate in the choice of a subject for the Address in Medicine to the annual meeting of the British Medical Association. Every medical man, whatever his department of practice, or whatever may be the special studies to which he may have more particularly devoted himself, has been compelled to take an interest, during the last three or four years, in the nature, symptoms, and treatment of Epidemic Influenza. An immense amount of information has been accumulated with regard to the etiology, the pathology, and the symptoms of the disorder; and the time is most opportune for a general review of our knowledge by an acknowledged master, such as the Professor of the Practice of Physic in the University of Edinburgh.

The address contained an admirable study of the clinical features of the disease, and of its most important complications; but the most striking part of the address was undoubtedly that which dealt with the pathology of the disease.

The section dealing with this part of the subject was, indeed, a most striking example of the light which may be thrown upon our comprehension of a specific disease process, by the correlation of knowledge gained in the laboratory and at the bedside. Though, as Sir Grainger Stewart said, enough is not even yet known either of the laws of the epidemic or of the life-history of Pfeiffer's bacillus to enable us to correlate all the facts, yet so many points have been ascertained that it is now possible to take a comprehensive view. Sir Grainger Stewart recognises in Pfeiffer's bacillus the essential cause of the disease, and accepts the opinion that by its presence or absence we can test our diagnosis in cases otherwise doubtful, while the peculiarities of the life-history of the bacillus enable us to judge better as to the mode in which the disease spreads, and afford grounds for explaining with considerable confidence many of its complications and sequelæ. His summary of the bacteriological and experimental observations made by bacteriologists will be read with much interest. It will be seen that he holds the view that the bacillus which is not widely distributed throughout the body, produces its constitutional effects through its chemical products, which are probably of the nature of albumoses, associated with organic acids or alkaloids, perhaps produced indirectly by a ferment secreted by the bacillus. The application of this doctrine to explain the striking effects produced, often with so much rapidity, was worked out with great skill and acumen.

The application of recent bacteriological observations to the question of prevention of the disease was equally striking. This afforded, it was shown, strong confirmatory evidence of the truth of the conclusion reached by Dr. Parsons in his now classical Report to the Local Government Board. We may presume that the view that influenza is disseminated mainly by personal intercourse, with, perhaps, some occasional assistance from fomites, is now generally accepted. Further, it has been proved that strict isolation of the individual can be effective in preserving him from the disease, even in the midst of an epidemic, and in this way, as Sir Grainger Stewart observed, persons suffering from heart or lung disease have escaped what would have been to them a terrible danger. He urged, also, that precautions as to the discharges from patients suffering from the disease, would, if efficiently taken, tend materially to diminish the extent of epidemics. Considering the very sensitive nature of the bacillus, as proved by bacteriological observation, he advised that any of the antiseptics in ordinary use would suffice for the disinfection of sputum and other discharges.

In dealing with the treatment of the disease when once developed, Sir Grainger Stewart was not able to speak with the same fulness and confidence; but he recommended the trial in any future epidemic of intratracheal injections of solutions of menthol in olive oil, with or without the addition of guaiacol. Further, he suggested that during epidemics of influenza such intratracheal injections might confer a degree of immunity upon persons exposed to the contagion. Finally, he expressed the hope that in the not distant future an antitoxin may be discovered which will have the property of destroying or neutralising the poisonous products of the bacilli in the body, and thus preventing the secondary results to which much of the danger of the disease attaches.

The address itself gave a striking proof of the assertion with which it concluded, that during the recent epidemics real progress has been made, and that we are better prepared even now to meet future epidemics, while at the same time cheered by the reasonable hope that the future has in store further discoveries which will prove of signal service.

THE ADDRESS IN SURGERY.

Mr. Greig Smith's eloquent address offers much matter for thought and discussion. It is not a mere record of recent advance and of new methods of surgical treatment, but the elaborated expression of an opinion that, whilst the teaching of surgery is now based on wide scientific knowledge, the practical instruction of the surgeon in one important part of his work is still far from satisfactory. We speak of the science and the art of surgery, but in the persistent and overwhelming claims of the former in surgical education there is a risk of the latter being neglected. Very much, indeed most, of surgery, Mr. Greig Smith allows, is science, but there is, he points out, an art in surgery as well, which is worth keeping and worth advancing. The science of surgery is, therefore, left alone, and the theme of the Address is "the art of the surgeon, and how men are to be trained to practise it."

In discussing the medical education of the present day, Mr. Greig Smith holds with good reason it must be confessed—that there is too much cramming for examinations, and that the knowledge thus laboriously imparted to the student soon trickles away. An old acquaintance is here brought into literary use, and a humorous though not very complimentary comparison is drawn between the modern student of medicine and the Strassburg goose, both of which long-suffering beings are said to acquire by cramming and gorging a temporary deposit of lowly-organised material which may soon be cast off on a return to healthy life. The standard, however, it is urged, should not be lowered. Mr. Greig Smith would cast nothing away; but he would select, rearrange, and raise. His remarks on the study of human anatomy are especially valuable just now, when there is so decided a tendency in the teaching of this important branch of surgical education to substitute book work for dissection. The study of anatomy, he suggests, should not cease when the degree or diploma has been obtained, but should be carried on during his lifetime by the practical surgeon, whose keen observation will often discover more than the research of the scientific morphologist. The claims of physiology and pathology are also fully recognised, and it is full time, it is thought, that the supremely important subject of bacteriology should be added to the curriculum.

In his remarks on the art of surgery, Mr. Greig Smith, recognising the nature of the surgeon's work as implied in the name given to his calling, considers at length the elements of this work, and claims for it more than the respect due to simple labour of the hands. Part of it, he allows, is merely mechanical, and allied to the art of workers in wood and iron. There is another part, however, of much greater importance, which is regarded not as an art only, but as a fine art. This is more than handicraft: it is brain-craft uttered through the fingers, like the art of the sculptor

in the elements of boldness, honesty, and simplicity; and like that of the etcher and line engraver in its demands on the delicacy of the fingers. In these remarks there is much that should lead surgeons to bear in mind the dignity of their calling. Many perhaps might feel disposed to claim for it still greater privileges, and to regard their profession as one in which the combined aims of utility and æsthetics are influenced and ennobled by the desire to relieve suffering humanity. Mr. Greig Smith states in one part of his address that he has no belief of the ennobling of ourselves in the work of practical surgery. We do not understand this, for certainly there can be no more eloquent tribute to the nobility of its aims, its discipline, and its rewards than that presented in the closing sentences of this able address.

The chief object of Mr. Greig Smith in his address is to advocate an altered and improved system of teaching operative surgery. Instruction on the dead subject is regarded as a step between anatomy and surgery, and attendance in the operating theatre he states—justly we think—is of little value. The mechanical part, though easily learnt, is, it is held, still worthy of being taught. It would, he states, be good for most surgeons to spend a month or two in a mechanic's shop under the severe discipline of a skilled British workman. With regard to the higher element in operative surgery, there is, we are told, no real teaching in this country. This portion of the address is full of interest, and merits serious consideration. If the art of surgery, it is asserted, is to be perfectly taught, it ought to be taught in actual practice by a skilled senior, in fact by a master. Many, perhaps, will doubt whether the finer elements of such work, on which so much stress is here laid, can be thus imparted. Mr. Greig Smith gives opportunity for much discussion as to whether now, as formerly, individualism holds good in modern surgery. He believes that it does, and that in these days of anæsthetics, of bloodless methods, and of antisepsis, we should gladly welcome the practical teaching of a Liston or a Syme.

THE ANNUAL MEETING.

On Monday evening Dr. E. Long Fox entertained at dinner, at the Queen's Hotel, Bristol, the members of the Council of the British Medical Association, the Mayor of Bristol, the High Sheriff, the Master of the Temple (Canon Ainger), and numerous other guests, to the number altogether of sixty-five.

The new *Guide to Bristol and Clifton*, edited by Mr. James Baker, F.R.G.S. (Clifton: J. Baker and Son), was adopted by the Local Committee as the official guide. In addition to the ordinary information commonly to be found in a guide book, the volume contains a comprehensive and well written historical sketch of the city and an article on the botany of the district. The liberality which placed so excellent a guide book at the disposal of members was generally recognised and highly appreciated.

The buildings in which the business of the annual meeting is carried on lie close together; the reception room and the hall for the general meetings being in Victoria Rooms, and the various Sections in the Lecture Rooms of the University College and Medical School. All the arrangements made by the Local Committees for the convenience of members have been conspicuously successful.

The Pathological Museum, which has been growing in importance for some time, shows this year a further advance. It is established in a large and well-lighted room in the University College, and contains a large number of specimens, drawings, and photographs of great interest and value. The arrangements have been carried out by a small committee, of which Dr. Shingleton Smith is chairman and Mr. Morton secretary, the other members being Dr. Edgeworth, Dr. Fisher, Mr. Mole, and Mr. Munro Smith. A special catalogue has been issued, and in the preface to it we read that the "great aim in the preparation of the museum has been to collect only specimens which are of special interest; not such as might find a place in any medical school museum, but rather those specimens which are either rare or have some unusual features, or are associated with some interesting clinical fact." A large number of specimens have been selected from the museums of the infirmary, the General Hospital, and the Children's Hospital by their respective pathologists, and have been arranged by the committee in a series of sections, the classification being anatomical. Thus, under the head of Diseases of the Central Nervous System including Insanity, we find a large and highly instructive collection of naked-eye and microscopical specimens, drawings, and photographs. It would take too long at the present moment to enumerate a tithe of these, but we may mention two portfolios, collected by Dr. E. Long Fox, the one containing illustrations of a great variety of deformities depending on diseases of the nervous system, and the other portraits of idiots and cretins from various parts of the world. Dr. Michell Clarke shows a long series of microscopical specimens of degenerations of the spinal cord, very beautifully prepared, mostly by Weigert's method. The specimens of diseases of the heart and large vessels are numerous, and many of them afford instances of very rare affections. Many specimens of aneurysm are shown, including two extremely interesting examples of aneurysm of the basilar and of the posterior cerebral artery by Dr. Watson Williams. Diseases of the gastro-intestinal tract are also illustrated by a series of extremely interesting and in some instances very rare specimens, and the same remark applies to the collection of specimens illustrating diseases of the bones and joints, of the spine, and fractures and dislocations. Dr. Harrison, Dr. Colcott Fox, Dr. Henry Waldo, and Dr. Norman Walker exhibit many interesting drawings of rare skin diseases, and Mr. Henry M. Chute, of King William's Town, Cape of Good Hope, exhibits a large number of photographs of leprosy, leucodermia, framboesia, and small-pox in negroes. A particularly striking photograph is that of a case of leucodermia in a negro. A small but interesting collection of diseases and injuries of the eye has been brought together, and among miscellaneous exhibits mention should be made of a series of charts and photographic slides illustrating the effects of various antipyretics, exhibited by Dr. Shingleton Smith, of Bristol.

In a separate room Dr. G. Parker has brought together a loan exhibition of ancient human crania, illustrating the races of Great Britain and Ireland, together with casts of human crania of various races for comparison, with drawings lent by Dr. Long Fox. Amongst those who have lent crania are General Pitt Rivers, Dr. Beddoe, Mr. Augustin Prichard, Mr. Ellis, Professor Alex. Macalister, Professor T. M. Hughes, and the Bristol, Weston, Sheffield, and Gloucester Museums. Professor Victor Horsley exhibits a model of the brain *in situ*, showing foci of cerebral localisation, distinguishing those determined by direct electrical excitation in the course of operations for focal epilepsy and those determined by unimpeachable clinical evidence or by the translation of the results of the electrical excitation of the cortex in the bonnet monkey and the orang-outang.

In that part of the Museum which illustrates bacteriology the principle of accepting only rare or unusual specimens

has been departed from, as it was rightly felt that many members attending the annual meeting would be glad to see cultures and microscopic representations of ordinary micro-organisms. In this division Mr. F. W. Stoddart exhibited and demonstrated the apparatus used by him in a series of highly-interesting experiments on the influence of water in modifying the sterilising action of sunlight. He made use of large tubes, coated internally with agar gelatine and inoculated with the typhoid bacillus. These tubes were placed obliquely in tanks of water, so that the distance of their various parts from the surface varied from 1 to 5 inches. It was found that a tube thus exposed in perfectly bright water to sunshine was sterilised throughout within twenty-four hours, that is to say, after exposure to the action of sunlight for about eight hours. On the other hand, tubes immersed in peaty or muddy water were sterilised only for a part of their length, the action extending, even at the end of week, only for about 2 inches. Other experiments showed that a tube was sterilised by the action of sunlight through 10 inches of clear water almost as rapidly as in the air. The bearing of these experiments upon the sterilisation of the water of rivers and lakes will be apparent. Professor McWeeney, of Dublin, exhibited a series of growths in various media of a chromogenic bacillus, probably identical with the bacillus chromo-aromaticus (Galtier). Dr. Plimmer and Dr. Blaxall exhibited a series of cultures of the pathogenic and non-pathogenic organisms, with microscopic specimens of the most important bacteria, from the bacteriological laboratories of the British Institute of Preventive Medicine, and Dr. Macfadyen demonstrated the method of cultivating anaërobic organisms.

An interesting collection of medical and surgical antiquities brought together by Dr. Luigi Sambon have been arranged by him in a small room which Messrs. Oppenheimer and Co., who made arrangements for the exhibition, have provided for the purpose. The collection (which is selected from objects shown at the International Medical Congress in Rome) includes numerous specimens of terra cottas found in various parts of Italy, some of the most interesting having been obtained from the bed of the Tiber. Many representing individual organs were doubtless votive offerings, but the collection also includes various guttas, some of which are believed to be infants' feeding bottles. These last were found in the tombs of children who died during extreme youth, and are generally in the shape of the mamma. They are so constructed that no flies or dust can reach the liquid, which was introduced by a hole at the bottom of the bottle. There are also a number of glass cosmetic pots, and a collection of murano glass, used in pharmacy. The collection contains, also, over a hundred specimens or models of Roman surgical instruments, including a collection of trephining instruments. There are also a few examples of mediæval surgical instruments and votive offerings, and a number of copies of miniatures and pictures, from MSS. preserved in Italian museums.

There is something akin to the pathetic in Mr. Augustin Prichard's severance of his close connection with the Eye Dispensary in Orchard Street, Bristol, after his sixty years' work there. The institution was founded by the late Dr. Estlin, a local practitioner of note, and was distinct from the Eye Hospital in Lower Maudlin Street. Mr. Augustin Prichard, the son of the famous Dr Prichard, became voluntarily connected with the philanthropic work nearly sixty years ago, and so faithfully has he carried it on through those long years that, despite other and larger efforts, it is a vital institution at the present day, doing excellent work amongst the poor. Recently Mr. Prichard, who must now be an octogenarian, issued a little circular to the subscribers to the effect that after his sixty years of labour there he felt obliged to retire, but he left the work to his sons. The subscribers felt that they could not allow the veteran surgeon thus to retire without some recognition of his valued work, and on Tuesday, July 31st, the Rev. S. W. Wayte, Messrs. Clarke, James, and Abbott, representing the subscribing friends, presented Mr. Prichard with an address testifying to their esteem and regard, and they also asked his acceptance of his portrait, to be placed in the Dispensary. They have further given a portrait of Mr. Prichard to the University College, in the medical school of which he was an eminent teacher. The Eye Dispensary is now under the care of Mr. Prichard's sons and of Dr. C. H. Walker, of the General Hospital.

The Annual Museum of Foods and Drugs, Instruments, Books, and Sanitary and Ambulance Appliances is established under very favourable conditions in the Drill Hall, and the various exhibits have been visited by a very large number of members. On Tuesday evening, after the President's address, the exhibitors gave a *conversazione*, which was attended by many members of the Association, ladies, and other guests. Dr. Philipson, in a short speech, thanked the exhibitors for affording so agreeable an opportunity of visiting the exhibition; and Dr. L. M. Griffiths, Chairman of the Museum Committee, expressed the opinion that the collection was the best which had been organised for many years. Mr. Charles Townshend, M.P., responded briefly on behalf of the exhibitors. The band of the Royal Marine Artillery played during the *conversazione*.

On Tuesday afternoon a special service was held at the Cathedral, the great nave of which was crowded by an attentive congregation. The sermon was preached by Canon Ainger, Master of the Temple, who took for his text the passage in the ninth chapter of St. Matthew, which describes the healing by Christ of the woman with an issue of blood. After painting in graphic language the incident described in the sacred text, he said that the superstitious view of the healing art had never died out; but even in these closing days of the nineteenth century still existed, so that within the last twelve months it had shown itself in most revolting forms. Superstition existed, however, not alone in exceptional and sensational shapes. The credulity which believed in any pretender to the physician's art led people to rush to purchase any new medicine warranted to cure some disease which had baffled the researches of the most learned men for centuries, or, perhaps, to cure half a dozen different diseases with equal certainty, led them also to run after electrical appliances with high-sounding names. Such a state of things, he said, was by some attributed to widespread intellectual deficiency, but in its deepest causes it was in reality a moral rather than an intellectual deficiency. Man loved the marvellous for its own sake, and preferred it to the slow and patient tracking out of the secrets of man's constitution. The history of religion contained many instances of its corruption under the slow corroding influence of this vice in human nature. Christ was the true example, and therefore the true type of the human physician, because He came to declare the goodness and justice of His Father's laws; He came to show man that there was no escape from these laws, that they might be ignored or even innocently overlooked, but never with impunity, for "Whatsoever a man soweth that shall he reap." As Bacon had said, "Nature is conquered by obedience," by faithfully and earnestly watching and studying her methods, not contesting and resisting, but following and imitating; tracking out her laws, and then submitting to them. Hence the growth of medicine had been by this path—out of theory and empiricism into the knowledge, sure if slow, that comes through the drudgery of observing and registering facts. He then touched upon the life work of Sir Andrew Clark, who had loved to declare the limitations as well as the achievements of medicine, the supremacy of the laws of the body's well-being, and the folly of attempting to ignore them. True it

was that there were patent medicines in religion as in physic, quack religious medicines which traded upon the ignorance and superstition of men. Here was an analogy between medicine and religion not without importance. The desire of those who were teachers of religion or practitioners of medicine should be neither to make proselytes nor to gain patients, but to teach those who resort to them for help the eternal significance and responsibilities of life, to make them desire "to have life, and to have it more abundantly.'

The local temperance advocates in Bristol, taking advantage of the special opportunity of hearing the opinions of the medical profession on the temperance question, invited some of the leading medical visitors to a meeting held at the Young Men's Christian Association on Wednesday evening. The meeting acquires additional interest from the fact that the President of the British Medical Association (Dr. E. Long Fox) is an abstainer. But a further interest developed to attract exceptional attention. Mr. Joseph Storrs Fry, who had arranged to preside, is the President of the local Antivivisection Association and a member of the British Women's Temperance Society, who are also members of the Antivivisection Association, on learning that amongst the principal speakers was Professor Victor Horsley, who defended vivisection at the Church Congress at Folkestone, raised an indignant protest against this invitation. Letters passed, followed by a deputation to Mr. Storrs Fry, who, it is said, was ultimately called upon to decline to preside if the invitation to Professor Horsley was persisted in. Mr. Storrs Fry, instead of complying, is stated to have tendered his resignation as President of the Antivivisection Society.

The general meeting for business had once more the pleasure of hearing Dr. Ince at length. It was said by Sheridan of a speaker of his day that he trusted to his imagination for his facts, and to his memory for his jokes. Whence Dr. Ince draws his comic effects it is not necessary to inquire: the laughter which punctuates his observations is more sincere than complimentary, and usually attends his most seriously intended flights. His imagination was, however, wholly unfettered by fact, and Mr. Butlin had no difficulty in proving by the dry light of the published figures that Dr. Ince's fears for finance were unfounded, as indeed from an elementary analysis of the published figures (showing a surplus steadily growing every year, and amounting this year to the respectable sum of £5,000) was self-evident to any but a critic *pour rire*. The speaker was not less unintentionally amusing in his interpolated and irrelevant criticisms of the Journal. His defence of the worthy Mr. Harness was greeted with Homeric laughter, and the vigorously-worded denunciations of that person which he quoted, for the purpose of illustrating the grounds of his disapproval, from a leading article (written by an eminent barrister, and revised by the solicitor to the Association), were emphatically and categorically adopted each in succession, as he quoted them, by his auditors. His praise of "modesty and self-effacement" would have been a piece of well-conceived self-satire if it had been so conceived, but being seriously intended, as far as Dr. Ince knows how to be serious, it rebounded. Before an audience, not happily selected for the purpose, he expressed his preference for a medical contemporary. He may have good personal reasons for that preference, and it is possible that our able contemporary may feel flattered. We should in any case consider it no ill compliment to us to be compared so closely with a journal having so ancient and so excellent a record, still worthily maintained. But his hearers could but reflect that, if they did not individually altogether endorse the view put before them, they had with them the flowing tide of professional opinion at home and abroad, and that in the period of editorship to which the gallant gentleman referred the British Medical Journal has advanced the number of its subscribers from 2,800 to 18,000, while that of the journal which he prefers stands now, it is understood, at one-third of that number. Such a comparison on such an occasion would have hardly been challenged by a more modest, judicious, and reticent orator. Nor was it well advised for a gentleman who, according to his own account, objects to "personality" in any shape, to have devoted himself chiefly to personal attack provocative of contemptuous laughter. The withdrawal of his motion alone averted its crushing defeat, but he succeeded in wasting one hour of the two set apart for business at the opening meeting. Such statements ought not to be put forward to waste the time of serious men brought together from great distances to discuss serious subjects, unless good ground can be shown on which to base them. Their mere withdrawal without an apology, and with the frivolous remark that their main object was to "draw" the persons attacked is inadequate; it is neither gracious nor respectful, and in future it may be proper to mark the general sense of the impropriety of this buffoonery at the cost of the all too scanty time at the disposal of the meeting.

A very large audience assembled in the Section of Medicine on Wednesday to hear Dr. Douglas Powell introduce a discussion on the subject of Functional Diseases of the Heart. The speaker illustrated his remarks by reference to diagrams and tables containing a careful logical classification of his subject, and upon this basis a prolonged and interesting discussion took place. Subsequently papers on various subjects in connection with heart disease were read by Dr. Sansom, Dr. Shingleton Smith, Dr. H. Campbell, Dr. Gibson, of Edinburgh; Dr. Wethered, who described the method of treatment employed at Nauheim; and Dr. Theodore Fisher.

The Section of Surgery on Wednesday was also well attended, and great interest was shown in the discussion on the operative treatment of perforative ulcer of the stomach and intestines, introduced by Mr. Pearce Gould. The general tenour of the discussion showed that the surgeons present were disposed to attach more importance to the toilet of the peritoneum than to the actual searching out and sewing up of the point of perforation.

The Section of Obstetrics and Gynæcology was well attended at its opening, when Dr. Robert Barnes introduced a discussion on the necessity of inducing labour in certain conditions of the mother not obstructing delivery. This discussion was followed by the reading of a series of papers by Mrs. Scharlieb, M.D., Dr. Stewart Nairne, and Dr. Smyly, Master of the Rotunda Hospital, on the Surgical Treatment of Uterine Myoma, which gave rise to an interesting and well-sustained debate.

In the section of Public Medicine the President, Prof. W. H. Corfield, opened the proceedings by a short address dealing with the lessons to be learnt from the public health point of view from the incidents and vital statistics of last year. He drew attention in particular to the high zymotic death-rate in the thirty-three largest English towns. This was due in great measure to the enormous increase in the death-rate from diphtheria (which was in fact more than double the average), and in the death-rate from diarrhœa, which had increased 43 per cent. Papers on the Ventilation of Sewers were then read by Dr. Neech, of Atherton, and Dr. Sidney Davies, of Plumstead. Brigade-Surgeon Pringle read an interesting paper on Hindu pilgrimages and their bearing on epidemic cholera, and Mr. Mahomed submitted a scheme for a Civil Medical Service in Great Britain. The business of the first day was concluded by a discussion on Cremation, papers upon which were contributed by Sir

Henry Thompson and Dr. E. Stevens, of Chard. A discussion ensued, and the following resolution, proposed by Mr. Ernest Hart, seconded by Brigade-Surgeon-Lieut.-Col. Notter, M.D., was unanimously adopted, and directed to be forwarded to the Council of the Association :

That this Section calls the attention of the Council to the defects of the present imperfect system of procedure for the certification of deaths, a procedure which (in the words of the report of a recent Committee of the House of Commons) "plays into the hands of the criminal classes." This Section is much impressed with the serious possibilities of a system which permits death and burial without the production of satisfactory medical evidence of the cause of death. It urges the Council to press upon the Government the importance of carrying out the recommendation of the Select Committee, to which Sir Henry Thompson has called attention, viz., the appointment of medical officials who should investigate all cases of death which are not certified by the medical practitioner in attendance.

In the Section of Psychology an animated discussion followed upon the reading of Dr. Blandford's Presidential Address on the Prevention of Insanity. Dr. George Savage subsequently read a paper on Neurasthenia and its Treatment, which also gave origin to a good discussion. Subsequently Dr. Mercier raised the subject of the status of assistant medical officers in asylums, and the matter was further discussed by Dr. Rees Philipps, Dr. Conolly Norman, Dr. Batty Tuke, and others.

In the section of Pathology a discussion took place on Wednesday on Vaccinia, introduced by Dr. Monckton Copeman. Among others who spoke subsequently were Dr. Voigt (of Hamburg), Dr. Armand Ruffer, and Dr. Hime. There appeared to be a general consensus of opinion that vaccinia should be looked upon as modified variola. Mr. J. H. Targett gave a lantern demonstration on Hydatids in the Bones.

In the Section of Ophthalmology the question of the relation of occupation to eyesight was raised by Mr. Simeon Snell, by a paper with that title, and Dr. Lindsay Johnson and Dr. Beaumont contributed papers to the discussion, which was continued among others by Prof. Landolt (of Paris), Dr. G. M. Gould (of Philadelphia), and Dr. de Schweinitz and Dr. Risley (also of Philadelphia). Subsequently Prof. Landolt read a paper on the Diagnosis of Ocular Paralysis, and Dr. G. T. Stevens (of New York) and Dr. Risien Russell contributed papers on ocular movements.

In the Section of Laryngology and Otology the greater part of the first session was taken up by a discussion on Chronic Non-suppurative Otitis Media, introduced by Mr. George Field and Dr. Thomas Barr, of Glasgow.

The first paper read in the Section of Dermatology was contributed by Professor Leloir, of Lille, on the etiology and pathology of Lupus. The paper dealt largely with the experimental evidence of the tuberculous nature of lupus, which he held was one of the typical forms of tegumentary tuberculosis. In the discussion which followed general exception was taken to the use of the term "true tuberculosis." Dr. Unna demonstrated sections of drawings illustrating the fat-forming functions of the sweat glands in health and disease, and also specimens of the bacillus of trichorhexis. Dr. Leslie Roberts read a valuable and original paper on the saprophytic origin of fungi, and demonstrated hairs from different domestic animals attacked in this way. Dr. Robert Bowles discussed in a valuable paper the influence of the sun's rays on the skin, and showed that red and certain other colours had the effect of cutting off the chemical and injurious rays. The session of this Section on Thursday was chiefly given up to a discussion on the Management of Eczema, introduced by Mr. Malcolm Morris, and to a further discussion on the Etiology and Treatment of Acne, introduced by Dr. Stephen Mackenzie.

After the reading of the President's Address in the Section of Diseases of Children, a vote of thanks to Dr. Dickinson was proposed by Mr. J. Ewens, and seconded by Dr. Barrett Roué. Subsequently the greater part of the remainder of the first day's session was occupied by a discussion on the treatment of whooping-cough, introduced by Dr. Carmichael.

Members of the Association visiting Bristol have been presented with a copy of a pamphlet on the Bristol Medical School, which contains a very interesting account of the early history of the School from the pen of Mr. Augustin Prichard, consulting surgeon to the Royal Infirmary. The pages are illustrated with portraits of some of the early teachers in the school, photographs of the new school buildings, and an engraving of the seal of the school, designed by Dr. George Downing Fripp, who in 1844 succeeded Dr. W. B. Carpenter, afterwards so well known as a teacher and writer on physiology, in the lectureship on that subject.

A joint meeting of the Sections of Laryngology and of Diseases of Children was held on Thursday morning, for the discussion of the treatment of diphtheria. Dr. Northrup, of New York, described the precautions to be taken in performing intubation; and the use of antitoxin was discussed by Dr. Hutton, Mr. F. Eastes, and others.

Amongst foreign visitors present at the annual meeting are Professor Osler, of Baltimore; Dr. de Schweinitz, Dr. Riseley and Dr. George M. Gould, of Philadelphia; Dr. Unna and Dr. Voigt, of Hamburg; Dr. Landolt, of Paris; and Dr. Snellen, of Utrecht. The annual meeting has been attended by numerous members of the Association practising in Canada, who have been warmly welcomed. Among these gentlemen are Dr. Armstrong, Dr. Perrigo, Dr. Birkett, Dr. Roddick, Dr. James Stewart, Dr. Finlay, Dr. McCarthy, Dr. Smith, Dr. Gurd, and Dr. Blackader.

On Wednesday afternoon a large party of members of the Association and other guests were entertained at luncheon by Mr. and Mrs. Newnes, to celebrate the opening of the Grand Pump Room and Spa, Clifton. The mineral spring had attained a wide reputation many centuries ago, but had been largely lost sight of when alterations were made for the widening of the river. It is due to the enterprise of Mr. Newnes that the present buildings have been erected, and the mineral water made more available. In addition to the mineral water there is a very complete hydrotherapeutic installation. The buildings, which have involved a large outlay, will, it is expected, do much to attract patients to Clifton for whose cases the mineral water and treatment may be suitable.

On Wednesday evening the President and local executive committee gave a *conversazione* at Clifton College. The Orpheus Society gave a glee concert, the excellence of which fully sustained its high reputation. The gardens of the Zoological Society were thrown open, and a display of fireworks was given. On the afternoon of the same day Mr. Lewis Fry and Miss Fry gave a garden party, which was attended by a large number of members. The attendance in the Sections has been remarkably good, and the debates, as a rule, well sustained. The number of members actually registered up to mid-day Thursday was over 900.

It has now been definitively settled that the next meeting of the International Medical Congress shall take place in Moscow in August, 1896.

THE ROYAL NAVAL SCHOOL AT ELTHAM.

THE break up of the Royal Naval School at Eltham (owing to the outbreak of diphtheria and sore throat amongst the boys) before the termination of the midsummer term and distribution of prizes by the Duke of York would seem to indicate local insanitary conditions calling for inquiry. We trust, in the interests of the parents and relatives of pupils, that if such insanitary conditions exist, early remedy of defects will be carried out.

FOUNDER'S DAY AT EPSOM COLLEGE.

FOUNDER'S day at this College was celebrated on Monday, July 31st, and was favoured by fine weather. Indeed, an air of rejoicing prevailed at the meeting to quite a remarkable degree. The College was full of pupils. The head master's report showed that the number of scholarships won had been most encouraging, and that each of the Epsom pupils who had recently gone up to Cambridge had had his scholarship either added to or extended. Amongst those present were Sir Edward Sieveking Sir Trevor Lawrence, Sir David Evans, Colonel Gordon Watson, and other members of the founder's family. These gentlemen kindly co-operated with the head master in presenting the prizes and in addressing the boys. The Rev. T. N. Hart-Smith, who was received with most gratifying applause, said that the present marked a new era in the history of the College. A new Act of Parliament had been obtained by the Council, and this Act conferred upon them increased powers. It had been determined that they should, if means were forthcoming, carry out a scheme of extension, which would include the building of a lower school and the enlargement of the College chapel—two wants which we know have been sorely felt. A large gathering of the friends of the institution and of the pupils contributed to the gaiety and brightness of the meeting. After the numerous prizes and rewards had been distributed there was a display of gymnastics and an assault-at-arms.

SEASIDE LODGINGS.

THE sanitary condition of seaside lodgings is at this time of the year a question of pressing importance. If necessary its importance might be emphasised by the quotation of instances in which infectious disease has been acquired by families in seaside lodgings. Such a calamity, when it occurs, may be looked at from the point of view of the lodging-house keeper or of the lodger. For the former it implies the cessation of his earnings for a time and the disorganisation of the arrangements made with other intending lodgers. For the latter it implies an enormously-increased expenditure, not to speak of the misfortune of illness instead of the recuperation of health which had been hoped for. First as to the ailments such as typhoid fever, which may be due to an insanitary condition of lodgings. In the watering places in which a system of sanitary registration of lodgings is in force a certificate of sanitary condition may be demanded before taking lodgings; and even when no such system exists, it is well to inquire whether the drains, etc., have been recently examined and whether a certificate to that effect is forthcoming. Failing such evidence, every paterfamilias may be reasonably expected to possess sufficient sanitary knowledge to detect double-pan closets, waste pipes connected directly to the drain, untrapped surface drains, a dustbin close to the house, or other similar defects. Even more important than these are the water supply and milk supply, and, in the absence of trustworthy evidence on these points, boiling of all drinking water and milk should be insisted upon. Next as to infectious diseases. A town in which the Infectious Diseases (Notification) Act is in force should be chosen by preference. Happily this holds good for the great majority of health resorts, and this fact constitutes a great safeguard to intending visitors. It does not, however, remove one danger against which this Act has shown itself in a large measure helpless. This is the occurrence of slight cases of infectious disease, the nature of which is unrecognised by the doctor, or more frequently by the parents, no doctor having been called in. A slight "sore throat" or "feverish cold" occurs, and the patient is taken to the seaside to recruit, oblivious of the infection which is being scattered broadcast. Such cases cannot be brought within the range of "wilful" exposure, but it appears very desirable that the law on the subject should be strengthened, and that ignorance should only be allowed as a plea for a smaller penalty than provable wilful exposure. The greater portion of the risk occasionally associated with seaside lodgings would be obviated did lodging-house keeper and lodger both act in the spirit of the rule of doing unto others as they would others should do unto them. The carelessness as to the spread of disease must cease as conscience becomes cultivated, and a higher standard of conscientiousness appears to us to be an even more pressing hygienic need than a more complete acquaintance with the laws of health. For those who are not amenable to this higher law, the law of the land is a valuable schoolmaster, and for their benefit it may be quoted: "Any person who knowingly lets for hire a house or rooms in which there has been a case of dangerous infectious disease without having had the same disinfected to the satisfaction of a medical man, certified in writing, is liable to a fine not exceeding £20." This applies to keepers of hotels and inns, as well as to lodging houses; and a similar penalty is incurred for making a false statement on this subject, or by the lodger for leaving his lodgings after suffering from an infectious disease without having them disinfected, or informing the owner or master of the house.

THE SICK POOR IN PROVINCIAL WORKHOUSES: WREXHAM.

THE large building on the other side of the level crossing is the workhouse, and one morning, armed with an introduction from Dr. Davis, we asked permission to see the inside of it. We were welcomed by the master and matron, the latter kindly conducting us round. Our interest lay chiefly with the sick and infirm, and we asked to be taken to the infirmary first. This is a separate block; the wards are on the ground, first, and second floors, well lit with windows on each side, and the ample supply of light and air gives a most cheerful aspect to the wards. The infirm patients are on the top floor, the sick on the first, and the imbeciles and those subject to fits on the ground floor, where also we saw the nursery department. The wards were bright with plants, pictures, and sunshine; matting was laid down along the middle of the floor, the old people were grouped around the fires, and they appeared contented and happy and on good terms with their officers. We thought a few more armchairs and a couch or so would add to the comfort of the wards, for this is the only room in which the old people spend day and night; their feeble bodies must feel weary of sitting up all day, and lying on the beds is not to be recommended. We should also recommend an increase of the nursing staff, especially at night: two responsible nurses for 126 patients, not counting isolation wards, must mean a large proportion of pauper help, which is not nursing; and it is sad to think of these old people, many of them helpless, with no responsible officer to look after them at night. Any accident might happen; an old person might roll out of bed, or, having got out of bed, fail to get back, or become worse at night, the only immediate help being that of an inmate sleeping in the same ward. It is sailing very near the wind to remain satisfied with such a state of things; it seems a pity to wait for a catastrophe before setting it to rights. The outdoor recreation provided for these infirm patients is very meagre. We should like to picture them sitting in sunny spots, in sight of flowers and grass. They have in reality dreary back yards, with a few bushes or perhaps turf—enclosed and gloomy places—for

their recreation grounds. This house is so well to the front in the provision made for the care of the children that we hope that more liberality will be shown to the sick. It is money well spent, for efficient nursing means quick recovery, to the relief of the ratepayers, of many who would otherwise become chronic invalids. The tone of the house is clearly that the utmost should be done for the inmates within the limits imposed by circumstances, but it seems to have been overlooked that the sick have to be nursed, as well as sheltered and visited by the doctor. If this necessity comes to be recognised this infirmary may be made a complete little hospital for the treatment of the sick, and for the instruction of nurses in workhouse nursing.

THE INSTITUTE OF PREVENTIVE MEDICINE.

At the meeting of the London County Council on July 31st, on the consideration of a memorial asking the Council to take steps to prevent the erection of an institute of preventive medicine in Chelsea or in any other place under the jurisdiction of the Council on the grounds of health, Lord Monkswell moved:

That the memorialists be informed that the Council is of opinion that the erection of such an institute in the midst of London would constitute a danger to public health, and that, if any such institute is required, it should be erected in a sparsely-populated district; and that the Council heartily sympathises with the desire of the memorialists to prevent the proposed erection.

The motion was defeated, but only by a small majority. Lord Monkswell is a very able and well-informed man, but on this occasion he evidently took no trouble to ascertain the facts, otherwise he would have known that the statement set out in the resolution which he moved is absurd, groundless, and contrary to facts. In fact, he may be expected, for instance, to know that laboratories for bacteriological investigation of morbid germs exist already in the most crowded parts of London and all other great cities, and that no danger has ever been experienced from them, nor is any to be apprehended. In London such laboratories exist at King's College, in the Strand, on the Embankment, and more or less in connection with every metropolitan hospital, and from these experiences, and that of all other such institutions in all the great cities of the world, it may be seen that such institutions are innocuous, and Lord Monkswell's boldly-expressed fears are purely imaginary, and not such as so well-informed a person might be expected to publicly indulge in without reasons and without facts.

KISSING AS A SANITARY SIN.

Johannes Secundus in his *Basia* might be thought to have dealt with kissing from every conceivable point of view, but he lived in prehygienic days, before the fear of the ubiquitous bacillus had eclipsed the gaiety of nations. Preachers of asceticism used to condemn kissing on the ground of its danger to the soul, but to the "average sensual man" the added spice of sin probably made it all more delightful. Now the apostle of sanitary perfection is denouncing kissing for its danger to the body. The Japanese, he tells us, are a hygienically-minded people, and they never kiss. The Sanitary Committee of the Orange (New Jersey) Board of Health has recommended that a circular be sent out to all whom it may concern "urging everyone to desist as much as possible from kissing, as the touching of lips is likely to convey contagion." That foul and deadly disease may be, and often is, propagated in this way is of course a fact as to which there can be no sort of doubt. Many a mother has, like the Princess Alice, caught infection from the lips of her child dying or dead of diphtheria. There is every reason to believe that the seeds of tuberculosis may be implanted by kissing, and the too common beslobbering of children by friends of the family and by effusive strangers cannot be too strongly condemned on hygienic grounds. It cannot therefore be denied that kissing is dangerous, but will "Sanitary Committees" be able to put it down, as a too sanguine magistrate once undertook to "put down" suicide? Will love-making be conducted on antiseptic principles? "Kissing goes by favour" we are told—is it for the future to be by favour of the county council? Great no doubt is Hygeia, but we will back human nature with some confidence against her.

THE HARTLEPOOLS HOSPITAL.

We have received from a correspondent, who apparently does not wish his name to be published, some strictures on the article in the British Medical Journal for July 21st on the Hartlepools Hospital, together with the sketch of a scheme which he wishes us to put forth as our own for remodelling the constitution of that hospital. We must respectfully decline to admit that there is anything in our article which requires modification, or to publish as our own suggestions from which we entirely dissent, and which seem to us to rest largely on considerations of the interests of private individuals. Such considerations seem to us to have too largely influenced the management of the hospital in the past, and should, in our opinion, be entirely set aside in the future. Into the detailed history of these private squabbles we decline to enter. Our contention is very simple—namely, that in a well managed hospital the offices of physician and surgeon should be kept separate, that the medical patients should be attended by the former and the surgical by the latter, and that no consideration of private interest or convenience should lead the governors to set aside the general rules of the hospital.

SMALL-POX IN LONDON.

The outbreak of small-pox in St. John's Wood is one of considerable interest. The epidemic is strictly localised. Of 134 cases in St. Marylebone notified between July 23rd and 30th, only 12 were outside the area of Portland Town. Portland Town itself is a small densely populated area near St. John's Wood Chapel, to the east of High Street. The population of this area is about 6,000, and it is mainly tenanted by the working class. About 18 per cent. of the cases had never been vaccinated, hence the population must be considered as one imperfectly protected. The cause of the outbreak is ascribed by the medical officer of health to the retention at home of a fatal case of small-pox, of which we have ascertained the following particulars. X., a tradesman's son in Henry Street, was taken ill about July 1st, and seen by Dr. Goullet; the symptoms were those of intense fever, with but little pain in the back, and about the fourth or fifth day of the illness a miliary rash appeared, which was not definite. Small-pox was suspected, and Dr. Goullet had a consultation with another medical man, and as the rash further developed they diagnosed small-pox, and as soon as possible notified the case. Pneumonia supervened, the friends opposed removal to hospital, and seeing the condition of the patient such removal could not be enforced. The notification was on July 6th; the young man died on the 12th, and was buried three days afterwards. On the 15th, an hour after burial, everything in the room was disinfected by fumigation with sulphur dioxide, and subsequently most things in the room were destroyed by fire. The patient was throughout his illness treated in a room over his father's shop, and when the nature of the case was known he was isolated as far as conditions would admit; no person serving in the shop or having anything to do with the business entered the room. Still, under such conditions, effectual isolation was not possible; even if it were possible, it is certain that for some five days previous to the diagnosis no special or effectual precautions were taken. Under these circumstances it is not surprising that the medical officer of health suggests that there is some connection between the case notified on July 6th and the cases which have developed between the 23rd and the 30th. Obviously there was a centre of infection in the very heart of the

area from July 1st or 2nd up to the 15th (the date of burial), and a centre daily visited by a considerable number of persons. This supposition is strengthened by the fact that in a large number of the cases direct communication with the house where X. was treated can be traced; that the immediate neighbourhood of X. was the most severely affected; and, lastly, that the course of the epidemic fully agrees with the removal of the one source of infection on the 15th. For example, the numbers day by day of cases were as follows: Monday, July 23rd, 4; Tuesday, 11; Wednesday, 28; Thursday, 32; Friday, 37; Saturday, 13; Sunday, 9; and Monday (July 31st), 1. Hence the infection had exhausted itself by Sunday, the 30th. The numbers given and the dates are to be referred to the date of notification. As a rule small-pox cases are diagnosed about the third or fourth day of the disease; it follows therefore that the 134 cases are all referable to a centre of infection between July 8th and 15th. The means taken to arrest the epidemic reflect credit alike on the Asylums Board, the Vestry of St. Marylebone, and the guardians. On Monday Mr. Wynter Blyth recognised the probably serious nature of the outbreak; communicated with the guardians as to vaccination, established an office in the affected district, and made such arrangements that cases all throughout were removed as rapidly as their nature could be ascertained, with the result that without exception all are in hospital. This prompt removal and disinfection, combined with the considerable number of persons who have been revaccinated, has probably saved St. Marylebone, and possibly the metropolis, from a serious epidemic.

ENTERIC FEVER AT POONA.

There has been an inquiry into the prevalence of enteric fever at Poona, but nothing special has been discovered. It has, however, been pointed out that the sources of contamination of aërated waters and milk are so various, and contamination may occur at so many points, that a revised law should be passed ensuring the issue of only such milk and water for consumption as may reasonably be assumed to be pure. The committee of inquiry advise that encouragement should be afforded towards the establishment of regimental dairies.

CRÈCHES AND BABY FARMS.

We find a new development of baby-farming reported as occurring at Acton. There a *crèche* was established and licensed to receive seven children by the day, for whom 8s. a week was charged. This is very well, and such places are of great assistance to labouring women who are occupied at their work all day. In addition to acting in this legitimate manner, however, illegitimate infants were received or adopted for a lump sum of in two instances £10 each, and £14 in the case of a third child. This was brought to light by a coroner's inquest on one of these, the illegitimate child of a servant, aged 2 months. Three infants had died there in a few months, and it is easy to see the fatal influence that adopting children for a lump sum must exercise on the minds of those who do this, as well as on the fate of the children. If the child which is received for the day only pays over £20 a year, how long is a child expected to require the care of the baby farmer for which £10 only is paid? We have on former occasions expressed a hope that the adoption of children for lump sums may be made illegal; and we again direct the attention of the London County Council to this subject. It was clearly a subterfuge for the proprietress to carry on this place as a *crèche* and then convert it into a baby farm. Such a place must come under the inspection of the local authority, and must conform to the provisions of the Infant Life Protection Act, which prohibits "any person to retain or receive for hire or reward, in that behalf, more than one infant, and in the case of twins more than two infants, under the age of 1 year, for the purpose of nursing or maintaining such infants apart from their parents for a longer period than twenty-four hours, except in a house which has been registered as herein provided." The Act purposely limits the time for retaining more than one infant to twenty-four hours, so that thereby *crèches* would not be brought under its provisions. The inquiry by the coroner was adjourned that the register of the *crèche* might be inspected.

THE COMPULSORY NOTIFICATION OF MEASLES.

The difficulties inherent in any attempt to answer the question of the compulsory notification of measles are many, and not easily surmountable. At Newcastle-on-Tyne Dr. Armstrong has been asking his authority to reconsider the question with a view to adopting notification of the disease; at Manchester Dr. Niven has come to the conclusion that on several grounds measles should not be placed on the list of notifiable diseases; at Edinburgh notification of measles since 1880 has only resulted in a statement by Dr. Harvey Littlejohn that he does not consider that the system has been useful in checking spread of infection—indeed the death-rate from measles has increased in that city; at Coventry the system is considered to be of doubtful value, though the mortality-rate from the malady has fallen from 0.50 per 1,000 population in 1884-89 to 0.19 in 1890-93. These are but samples of very divergent opinions on the whole question. We have before us now two reports of measles epidemics last year, one at Blackburn, the other at Eastbourne. Both were exceedingly heavy, and both were largely spread by the agency of schools. In neither case had closure of schools any very marked effect on the epidemicity of the malady. The highly infectious nature of measles in its pre-eruptive stage is one of the chief means of spread of the disease in schools, since by the time it has shown signs of having invaded the establishment, the mischief is so far done that all children who are liable to attack are probably already infected. Dr. Reginald Dudfield goes so far as to say that since the slightest coryza will spread the infection, it would be necessary for prevention of the disease to quarantine all children who had been exposed to infection for three or four weeks. This would interfere with any scholastic business very materially. To rely on notification by the medical attendant only would in the case of measles be of but little use, seeing that so very many cases of the disease are never attended by any medical man at all. To enforce on the parent or householder the notification of the malady would need some special inducement. It is in great degree the ignorant masses who would have to perform this duty; and they would look for some *quid pro quo*. To offer any inducement to notify in the shape of advice by sanitary officers would be to lead persons too often to refrain from seeking that advice which they at present seek at the hands of private practitioners. And yet any scheme which has anything less than fairly complete records will be of but little avail. Where experts in sanitary matters differ so widely as is the case in respect of measles notification, it is only some central authority that can be looked to to compile statistics which will go to show what is the system most to be relied upon, and the best method of going to work to perfect that system. It is on these grounds that we are glad to see it stated that the Local Government Board have undertaken an inquiry into the whole question.

An Interesting Jubilee.—The fiftieth anniversary of the signing of the abstinence pledge by Mrs. Theobald was celebrated by the presentation to her of an illuminated address from the Leicester Temperance Society. This lady was for some time a well-known public speaker, but for the past thirty years has been the proprietor of Tower House, Leicester, where she has a Home for Female Inebriates. In this institution, as in all genuine establishments of the kind conducted on sound principles, the practice has been to withdraw immediately alcoholic intoxicants from the inebriate inmates.

SIXTY-SECOND ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

First General Meeting of Members.—Tuesday, July 31st.

The first general meeting was held on Tuesday morning, July 31st, at the Victoria Rooms, the President, Dr. George Hare Philipson, D.C.L., in the chair.

The minutes of the last general meeting were taken as read and confirmed.

Retirement of President.—The President said that in vacating the chair he availed himself of the opportunity of again expressing his sense of the honour conferred upon him last year by being placed in the presidential chair of the Association. The remembrance would be one of the heartiest recollections of his life, in that he had occupied the chair of the greatest medical association in the world. In retiring he did so with a warm feeling of gratitude to the Association, its members, and its officers for the confidence which had been reposed in him, and for the support which he had invariably received in carrying out the duties of his office. He offered his congratulations to the members of the Association on its continued progress. Although the past year might be regarded as an uneventful one, still the Association had steadily increased in numbers and in its influence upon the profession. That was a fair indication that the tide of prosperity was still in the ascendant. He offered the members his congratulations upon the meeting in Bristol, and especially upon the choice of the distinguished physician who had the honour of being elected their President. In that large and noble Association there was no one more worthy and more proper to occupy the Presidential Chair. He felt sure that in Dr. Long Fox the interests of the Association would be advanced, and that he would occupy the chair with dignity and efficiency. It was now his pleasure to invite Dr. Long Fox to assume the honoured chair of the Association, and to offer to him in his year of office every good wish that he might have a happy and a prosperous year.

Installation of New President.—Dr. Edward Long Fox, President for 1894-5, then took the chair amidst loud applause.

The President, who on rising was received with renewed cheers, expressed his appreciation of the very cordial reception of Dr. Philipson's introduction. It was a very great honour for anybody to preside over that great Association.

Vote of Thanks to Retiring President.—Dr. Bridgwater said it was his duty to rise to propose a vote of thanks to the retiring President, and to express in a few words the high appreciation they had of all that he had done for the Association during the last twelve months. They knew the reputation of Dr. Philipson in the North, and they knew the number of engagements which he had to fulfil, and by that means they could gauge the immense effort it must have been to him to devote so much of his time to the affairs of the Association. He proposed:

That the cordial thanks of the Association be presented to Professor George Hare Philipson for the admirable way in which he has performed the duties of President during the past year, and that he be and is hereby elected a Vice-President of the British Medical Association for life.

He hoped that Dr. Philipson would long be spared to enjoy that honour, and that the Council might long have the privilege of his able assistance.

Dr. Holman said it gave him very sincere pleasure to second the resolution, because Dr. Philipson was a very old colleague of his. He was afraid to say how many years Dr. Philipson had been the secretary of his Branch, and it was a great delight to all who had the welfare of the Association at heart to see secretarial work duly and properly considered.

The motion was carried by acclamation.

Dr. Philipson in returning thanks said he esteemed very highly the position to which he had been elected. He took that opportunity of tendering his thanks to the profession in the North for the support they had given him at the meeting at Newcastle.

The Report of Council.—Dr. Ward Cousins (President of Council) then proposed:

That the financial statement for the year ending December 31st, 1893, be received and adopted.

He said that July 19th, 1832, was a very proud day for the medical profession, when the forefathers of the British Medical Association were assembled in the infirmary at Worcester to consider the proposition of Sir Charles Hastings in reference to the formation of the Provincial Medical Association. On that occasion there were 140 gentlemen present. The first annual meeting was held in Bristol in 1833, and there were then 418 members of the Provincial Medical Association, of whom 200 attended that meeting. The next meeting held at Bristol was in the year 1863, when the members of the Association numbered 2,217, and the Journal was a very small publication indeed. Now what was their position? They came to Bristol again with a membership of over 15,000, with an organisation scattered throughout the world, and with branches in India, Australia, New Zealand, Canada, South Africa, and throughout the Colonies. When they considered that every week they sent out a Journal of 18,000 copies all over the world, reflecting the spirit of their great Association, he thought they had something to be proud of in the successful labours of their eminent editor, Mr. Ernest Hart. The Branch organisation during the past year had considerably increased. They had had Branches formed in Canada, India, South Africa, and Scotland, and others were in the process of formation. A most interesting incident had occurred during the past year—namely, the admission of forty-one lady members. He wished that all the lady graduates in medicine were members of the British Medical Association, and he believed in the course of time they would be. The strength and stability of the Association depended in a great measure on the integrity of the Branch organisation. The administering to such an enormous organisation was impossible by one centre; and they had a number of secondary centres, which were fortunately represented on the Council, and every matter of importance which occurred at the circumference of the Association could be brought up by that system of representation, and receive the attention of the Council at the centre. There were social forces in their midst which were reflected from any portion of the wide circumference to the centre, and then back again to the extreme limits of the Association. They were aware that the Council during the last four years had established a library, and that it contained a large number of eminent works, classical works, works of reference, and the members had open to their gaze 250 contemporary journals. That was administered by a special committee of the Council, and he thought it his duty to state that they were greatly indebted to the energy and ability and liberality of Mr. Ernest Hart, who had from the first acted as honorary librarian. During the past year there had been a very large increase in the attendance—more than 12 per cent. It seemed a little home for the members when they came to town, and the committee would only be too glad to see a still greater number. Let them look, too, at the splendid financial condition of the Association. In the year 1871 they had no surplus at all, whereas now they had a surplus of £55,000. He should like to point out a singular coincidence which should have its full effect upon them, namely, that the balance had steadily gone up from 1871 to 1893, and that was the period during which Mr. Francis Fowke had held the position of General Secretary. The Parliamentary Bills Committee had been hard at work during the past year. Prominent questions had been before them; among others, the Penal Clauses in the Medical Acts. They all knew they could not get convictions under them, and the intention of the Parliamentary Bills Committee was to get legislative interference so that those penal clauses might be very active. What they wanted was to prevent the assumption of all sorts of letters which assumed a medical title. Then, again, they were considering the question of

the University scheme. The Academic Council would have extraordinary powers, and they felt that the medical profession should have full influence on the Council. The Committee would labour to produce such a modification that general practitioners who had been long practising might have an opportunity of graduating, if they thought proper, in the new London University. With regard to the health influence of the employment of married women in factories, the health of the future population depended upon the mothers, and the Committee were of opinion that the returns clearly showed that some supervision must be exercised in that direction, and efforts were therefore being made to curtail the hours of labour of married women. The Committee had also been endeavouring to make proprietors of patent medicines put the word "poison," on every medicine which contained a poison, and now they were compelled to do so. That was a move in the right direction, but he would like to see the whole prescription on the bottle, as was done in France. He had been much annoyed during the last twelve miles of the journey to Bristol by the advertisements in the fields on either side of the line; surely the proprietors, knowing the Association was meeting in Bristol, might have turned the Boards round just for the week. With reference to the Scientific Grants Committee, one of the purposes for which the Association was originally established was to promote research. The Council selected gentlemen to hold research scholarships, and large sums of money were granted for scientific research. He need not tell them that there were lots of questions still to be settled, and the Council was doing its utmost to get good and mature reports upon many scientific problems of very great interest to all. During the past twelve months the Inebriates Legislation Committee had been very active indeed, and had taken a step in the right direction, the most influential members having waited upon the Home Secretary with regard to the therapeutic treatment of habitual drunkards. It was a most important question, and it was very satisfactory, after a life of labour in a certain direction, to find that one's opinions were being adopted, more or less, by one's professional *confrères*. That was the position of Dr. Norman Kerr, who had long laboured to establish the treatment of inebriates upon a scientific and therapeutic basis. Drunkenness, as Dr. Kerr had told them, was sometimes a disease; a large number of persons who gave way in that direction had lost all self-control, and what was loss of self-control but disease? Drunkenness was generally condemned as an immoral act, but it was more than that with a large number—it was a disease of the nervous system, and unfortunately they knew that hereditary taints in that direction were transmitted from father to children. The British Medical Association, therefore, sympathised with the work of the Committee, and it was something for the friends of temperance to feel that they had the heart of the great British Medical Association helping them on. With reference to the action of the Council on the important question of the eyesight of railway servants, they had not obtained the full benefit of the recommendations of the Committee by general adoption at present, but he had no doubt it was the intention of the Council to extend its inquiry during the next year to seamen and mariners. With regard to the abuse of medical charities, the Committee had had a vast amount of favourable correspondence with the London hospitals, and he only hoped that their inquiries would be extended into the provinces, because provincial hospitals were as much abused as those in the metropolis. Medical charities would doubtless always be abused, but they were trying to reduce the abuse to a minimum. With reference to the recommendation from the annual meeting at Nottingham on the question of the medical profession getting complete control of the nurses—surgical, medical, and midwifery—throughout the country, the Council had given it their full consideration, but of course it was a very difficult matter. The Council felt that much might be done individually and locally. They knew that the old Sairey Gamps were dying out, and if all the provincial hospitals became institutions for the development of good nurses the present evils would be corrected. The question of expunging the word "unqualified" assistants from the advertisements in the JOURNAL had been referred to a subcommittee, which came to the conclusion that it would be much better to leave out, as the General Medical Council directed, the word "unqualified" and to substitute the words "dispensary" assistant and "surgical" assistant. There were plenty of unemployed medical men in the profession, and they knew that those persons who desired to make their wants known through the instrumentality of the BRITISH MEDICAL JOURNAL would not object to use those terms instead of the old-fashioned term "unqualified" assistant. Surveying the work of the year, he thought they had made great progress. They were always advancing as an Association, they were always increasing in numbers, they were always extending their bounds, and always improving in their pockets. Unfortunately during the past year they had lost many of their associates, who had passed away in the midst of the battle, and whose genial faces they sadly missed. Individual life might fall, and human life even at the longest was uncertain when measured by moral wants and intellectual cravings, but after all their great Association would go on; it would increase all along the line, gathering together men from every clime, defending the interests and the honour of the profession throughout the world, and being at the same time the diffuser of those splendid sciences which aimed at the common good and the universal happiness of mankind.

The TREASURER, in seconding the motion, said he was sorry to have to correct Dr. Cousins in one statement which he had made—namely, that they had a surplus of £55,000, the real amount being £42,000. The value of the assets as calculated over the liabilities was £55,000, but that was a totally different thing. The year 1893 had been a very important one from a business point of view to the Journal and Finance Committee, and to the General Secretary and himself. It had been decided during 1892 to increase the price of advertisements, although they knew perfectly well that by so doing they might seriously affect the number of advertisers, and receive a smaller amount of money from them than for some years past, but he was happy to say that they found that the advertisements had brought in more money than ever before by some hundreds of pounds, and that, as a consequence of increasing the price of advertisements, they had had to print fewer pages of advertisements in the JOURNAL, so that the experiment had been an undoubted success. In consequence of that the Journal and Finance Committee had allowed to the editorial department two more pages of literary matter each week, so that all members of the Association might benefit by the change which had been made.

Dr. RENTOUL pointed out that in the portion of the report dealing with advertisements for unqualified assistants it was stated that "Fourth year students, being recognised by the General Medical Council as assistants, should be simply advertised as such." The recognition of the General Medical Council referred not to fourth year, but to fifth year, students. Further, they had not held that even fifth year students should be recognised as assistants, but only as pupils and apprentices. The report should therefore be corrected in that respect.

Surgeon-Major INCE moved the following amendment:

> That this meeting regrets the great and growing increase in the annual expenditure as compared with the income of the Association, and suggests to the Council the expediency of a careful and substantial reduction thereof in all departments, especially in the matter of the editorial and office expenses, which appear out of all proportion to the needs and nature of the BRITISH MEDICAL JOURNAL.

Dr. INCE commenced by a criticism upon the JOURNAL, which he said was not the golden article it had been represented to be. The tone of some articles he considered as undignified, often vulgar. He objected, for example, to a leading article written upon the Harness case, and in response to cries of "Read, read," he quoted sentences from the article in which Harness was referred to as—[cheers and cries of "Hear, hear!"]—"that champion impostor"—[renewed cheers]—"this egregious quack,"—[hear, hear]—the sentiments contained in the quotations being apparently warmly endorsed by the audience. Dr. Ince would leave Mr. Harness and pass on to criticise an article headed "A

Superior Person, and the Journalism of the Future," which appeared on January 28th, and which he described as "arrogant and satirical." The JOURNAL was outdone in size by the *Lancet*, which contained 3,212 pages of reading matter last year as against 3,024 in the JOURNAL, or 188 pages in excess. He commented on the "undisguised personality" of the Editor of the JOURNAL. Mr. Ernest Hart, in his last year's address on journalism, had spoken of "modesty and self-effacement." He added that he thought that would "fetch them." With regard to the financial statement, he complained that it was meagre. There was no statement of the investments, while their furniture was put down at its cost, without any allowance for depreciation. There was something wrong in the accounts. He absolved the Treasurer in every way. Mr. Butlin was reappointed last year at his (Dr. Ince's) suggestion, and he had the fullest confidence in his integrity, his probity, and discrimination. There was, however, still room for retrenchment, and it was a great mistake not to allow individual members who were desirous of doing so to inspect the accounts. One item that should be cut off immediately was the expense incurred by the peregrinations of their editor. Dr. Ince having by this time somewhat exhausted the patience of his audience, was called upon to conclude, which he did by moving the resolution.

After a long pause, Mr. BRINDLEY JAMES seconded the amendment.

Dr. BRIERLEY then rose. Starting on the assumption that the JOURNAL was the organ of the Association, he said it should, if possible, avoid any appearance of partiality on at any rate large questions affecting the nationality, he might so call it, of their profession. No doubt it should be quite within the power of the Editor and the Reference Committee to exclude letters referring to any petty matters, but, on the other hand, communications dealing with large questions, for instance, those affecting the profession, should have due consideration. For instance, on the question of the registration of midwives, he had been somewhat struck with what he considered unquestionable partiality on the part of the JOURNAL. Not only were letters by recognised partisans of the scheme inserted, but also "leaderettes," showing, to his mind, pronounced leaning in that one direction. At the meeting of the General Medical Council in May, one member said the whole opposition to the proposed registration was preposterous; there was no Bill in Parliament, and therefore no Bill before the profession. The fact was, that in the JOURNAL of the same week it was announced that there was "a scheme" *in embryo*, and that it would be published the following week. The following week the scheme of the Midwives' Registration Association was not published *in extenso*, but its pith and marrow was published. They were told at the General Council there was no Bill before the world: within a fortnight of that statement this "scheme" was published, and no doubt it was well known to have been in existence. The Chairman of the Committee of the House of Commons took the same line, and made a special point of intimating to witnesses that there was no Bill before Parliament or for the consideration of the profession. That was not a fair way of dealing with the question. He did not feel that he could endorse Dr. Ince's amendment. If the Editor was not a man to whom they could entrust their work, or with whose holiday on the Continent or elsewhere they need to interfere, the sooner they parted with him the better. He apprehended that they had in their Editor a man of very different calibre to that, and these were details in which he should be left a free hand.

The TREASURER said he was of course prepared to meet and answer an attack on the financial aspect of the Association, but to his perfect astonishment this resolution had been put forward really to cover a downright personal attack upon the Editor of the JOURNAL. He thought if that was the intention it would have been very much more manly to have given notice of it in different terms, so as to give the Editor some notion of what was going to be said against him, and give him the chance of answering it. The motion in its terms meant that the expenditure of the Association had increased out of proportion to the revenue. He (Mr. Butlin) was naturally a little astonished at this, because, though every now and again reviewing the financial position of the Association, he had not observed this comparative increase, and he took the precaution to get out some of the figures. Taking the three years 1893, 1883, and 1873, and comparing the total expenditure of those years with the revenue, he found in 1873 the expenditure was 87 per cent. of the revenue, in 1883 it was 88 per cent, and in 1893 86 per cent. Comparing the profits in the different years the total income in 1873 was £8,637, and the profits £1,003; in 1883 the total income, deducting interest on investments, was £18,936, and the profits £1,936; and in 1893, out of a total revenue of £34,162, they had saved £3,945, again deducting interest. Therefore, out of a revenue very much less than double that in 1883, they had been able to save more than twice as much as was saved in that year. Of course, in considering the total expenditure of the Association, it must be taken into account that within the last few years they had moved from very small and insignificant premises into large and really very important premises; also that it had become necessary to employ a larger staff in all departments to do the work of the Association. In 1873 also no money was given for scholarships or scientific grants, and whilst at that time they paid their people as well as they could, they were very poorly paid compared with the work they actually did. Dr. Ince specially referred to the expense of the office and the editorial department. The proportion of the total office expenditure to revenue was: in 1873, 15 per cent.; in 1883, 16 per cent.; and in 1893 it had decreased to 14 per cent. In 1873 the proportion of editorial expenditure to revenue was 16 per cent.: in 1883, 15.9 per cent.; and in 1893 15.7 per cent.—less than in either of the two former years. Their general expenses were naturally increasing. The staffs were larger owing to the greater wants of the departments, and if they went on increasing in numbers, and their business grew, they would have to expend still more. He hoped, however, that they would be able to keep down the expenses as compared with the revenue, and that their savings as time went on would be larger in proportion. He quite admitted that the editorial department was very expensive. The Editor had been with them more than twenty years. He found the JOURNAL in a very poor condition, and had raised it to be, if not the best, at any rate on a level with the best medical journals in the world. He was acknowledged on all hands to be the most capable of editors. As to the number of pages in the JOURNAL, that was regulated by the Journal and Finance Committee, and not by the Editor, and the editorial department was kept down to a certain number of pages. As to the illustrations, a late order of the Journal and Finance Committee was that the illustration were to be what were called purely scientific. The department of the General Manager had gradually increased in cost owing to the very much larger amount of work he had had to do, and his salary had in the course of the year been increased, and also the salary of the assistant secretary. Their work had increased enormously, and their responsibility was out of all proportion to their former responsibility. When Mr. Fowke came to them twenty-three years ago the Association was actually in debt, and it was to the very great care which he had expended upon the general management of the Association that a large part of its success was due. It was said that the JOURNAL was really the origin of the success of the Association. No doubt they had made money through the JOURNAL, but if they had not had a man such as Mr. Fowke as manager of the Association they could not have expended their money with the same good result. There were two facts as showing how well the affairs of the Association were managed financially. The excess of their assets over liabilities was put at £55 906. Of this £42,605 was invested, leaving a working capital of £13,301. out of which they made a profit for the year, excluding interest on investments, of £3.945, or very nearly 30 per cent. He would ask, What business house would not be proud of having done so well? Then again their investments, which if realised on March 24th would have yielded £41,296, were originally purchased for £37,149, making a clear profit of more than £4,000. This was not the result of a mere lucky speculation in one or two things: not one of their investments had gone down in value save one in which money was placed last year, and which had diminished in value to the important amount of £1 in £1,000. It would be admitted

that the affairs of the Association were not badly managed under such circumstances. It might have been thought of course that this attack upon the finances of the Association without better grounds than it had was rather malicious. He knew better than that; he knew perfectly well that Dr. Ince from the very beginning did this in order to give an opportunity to the Treasurer of explaining the finance, and of correcting one or two errors and drawing attention to one or two points which had been on his mind for a long time, but which he had never been able to give out to a large general meeting. It would therefore be seen that he was really very much indebted to Dr. Ince. In his speech last year Dr. Ince spoke of the Association as a "rich Association." He was sorry to say that that was the one point on which he (Mr. Butlin) had a quarrel with the Editor, who had said in various places and had allowed it to be printed in the JOURNAL again and again that the Association was now so rich. It could quite be recognised that looking back on the last twenty years or more, and seeing the condition in which it was when he came as Editor, Mr. Hart might magnify the wealth of the Association. The fact was they had about £40,000. They were constantly asked what they were going to do with it. There would soon arise the question whether they should get a renewal of their lease in the Strand for some sixty or eighty years or should remove from their present premises, buy a freehold, and build. If they adopted the former course, and purchased an eighty years' lease outright, it would cost them a great deal more money than they had in hand, and after paying for a mere lease of the premises and spending some £5,000 or £6,000 in adapting them to their rapidly growing wants they would be in debt to the amount of some £15,000, and yet theirs was a "rich Association!" They could not even afford to buy a lease of their house. On the other hand, if they should buy a piece of freehold ground, and build a house upon it adapted merely to their official wants, and not a club, it would result in a debt of £25,000 or £30,000 before it was finished. He was very anxious to make this statement, because the constant reference at those meetings and in the JOURNAL to the wealth of the Association had caused a large number of very excellent people to be constantly throwing out hints as to what might be done with it. They were asked, for instance, to reduce to one-half the subscription of the Colonial Branches; to undertake the legal defence of all the members of the Association; to suppress quacks of every kind; to use all the surplus money for scientific purposes; to pay the railway fares of the Parliamentary and all other Committees; to devote £1,000 to the work of the medical examination of 50,000 more school children; to provide a fund for aged and poor members; and, lastly, to build a house worthy of the Association, with bedrooms with all the offices for country members particularly, showing that they were the British Medical Association; and all this for the sum of one guinea a year.

Mr. ERNEST HART said, like Mr. Butlin, he was greatly indebted to Dr. Ince and to the gentleman who had just followed him, although for different reasons. He was especially indebted to Dr. Brierley for the perfect fairness and courtesy with which he stated his case. He entirely agreed, and so did every member of the Reference Committee, that on every controversial or controverted question, the utmost impartiality should be shown by the Editorial Department, and especially by him as responsible Editor. He could only say that for twenty-eight years that had been the course which to the best of his ability he had followed. They could not always hope to convince those whose communications were not published that their non-publication was due to considerations wholly outside of any personal partiality or prejudice, but the President of Council here present and the past President of Council, who were weekly present at the Reference Committee of the JOURNAL, would be able to confirm the statement that in respect to the question of the registration of midwives, every letter or document which had come to the JOURNAL had been placed before them, as, indeed, was the case with every letter or document not published, and that in a great number of cases where they seemed of special interest they were put in type and circulated among the Reference Committee beforehand, in order that, after a careful consideration, an impartial decision might be arrived at. These communications on a subject which, after all, was only one amongst many, had been so numerous that, having regard to other pressing matters, the whole of them could not be published. In every case the object of the Committee and the Editor had been to publish every communication which seemed to bring any new fact or argument to light, and was not a mere repetition of what had been said before in the JOURNAL over and over again. So far as he knew, no argument or statement which would throw light upon the matter had ever been omitted. (Cheers.) Now, as to Dr. Ince, he might be thanked for having added to the gaiety of the meeting. He quite agreed that modesty and self-effacement were valuable public qualities, and of this Dr. Ince this year, as in previous years, had given remarkable practical illustration. He was not a very good judge how far they were practically exemplified by himself, but he could state he was responsible for a great deal of work for which he carefully gave other people the credit. When he became Editor his personality was officially thrust upon them every week, and the name of the editor was printed every week in the front of the JOURNAL. He had so far carried out the principle of self-effacement that he had removed that name, but if his personality was hidden under an anonymous mask would Dr. Ince be able to hurl his personalities? He did not desire anonymity. With regard to Dr. Ince's picture of a luxurious editor roaming about the world spending the funds of the Association, it might be interesting for him to know that his winter holidays were taken at his own expense, and that during twenty-eight years, with the exception of a small voluntary contribution by the Council towards the expenses of one foreign journey in which he was officially requested to represent the Association, he had never had one farthing for his foreign holiday in the winter, which was the only holiday he took. That expenditure referred to was, on Dr. Ince's part, purely imaginary. As to the question of editorial expenditure, it was the fact that for twenty years—from 1866 to 1886—he practically did the whole work without a salary. There was a nominal honorarium, not sufficient to pay horseflesh, of £250 a year. He did the work for many years, at a time when he refused £1,500 a year elsewhere, absolutely for £250 a year. The income he had received from the JOURNAL at any time had been until lately a ridiculous trifle, seeing that his whole life had been given to the work of spreading the influence of the Association and increasing its numbers.

Mr. GEORGE BROWN asked Dr. Ince to withdraw his amendment after the explanation that had been elicited. He thought that they ought to leave the matter where it was. He begged to congratulate the Council on the very excellent work generally that they were doing for the profession. He hoped the example set by the JOURNAL in refusing to insert advertisements for unqualified assistants would be followed by other journals. He appealed to Dr. Ince to withdraw his motion.

Dr. INCE said his object had been completely satisfied. It was to "draw" the two or three persons on the platform. He had done so, and would now withdraw his amendment.

Medical Aid Associations.—Dr. DOYNE said he had been specially requested by the Oxford and District Branch to bring up the subject of medical aid associations. He specially mentioned the case of the Banbury Medical Aid Association, which high and low, rich and poor, were all solicited to join, and of which a year or two ago the Mayor of Banbury was a member, and many others of like standing. That association paid the medical officer £200 or £250 a year, and whether he saw 1 000 or 3,000 patients he still got the same amount of money and no more. The balance of profit went into the pockets of the association, and it was a typical case of an association sweating the medical man, and making a profit out of his labours. The Branch thought that the only body which could take action in the matter was the British Medical Association. The General Medical Council had the matter before them a year ago, but though their intentions were good they were practically impotent. In that case they they did do something—they moved for a committee, and the Committee reported their suggestion. The Scotch and Irish Colleges were appealed to, and they passed resolutions that their Members should not serve such associations. He be-

lieved the same example had been followed in England, but all without effect, and therefore they appealed to the only Association that could do it. The Council had been appealed to, but they declined to express an opinion on the matter. He moved as an amendment:

That this Association regrets that the report contains no reference to the matter of medical aid associations as urged upon the Council by the Oxford Branch.

Dr. Mead, in seconding the amendment, said that the London and Counties Medical Protection Society had passed the following resolution:

That the Council of the London and Counties Medical Protection Society, while thanking the General Medical Council for taking action in the matter of medical aid societies, ventures to express regret that the report of the Committee on Medical Aid Societies was not accepted by the General Medical Council.

Dr. Ward Cousins said that the matter brought forward by Dr. Doyne had been before the Council at the last meeting. The Oxford Branch sent up their resolution to the Council, and full consideration was given to it, the following resolution being passed:

While declining to express any opinion on the question, the Council suggests that the Branch should bring the matter before the annual meeting by giving notice in the usual way.

He was very glad the matter had been brought forward. This was the resolution of the Oxford Branch:

That in the opinion of this meeting medical men ought not to meet in consultation medical officers of medical aid associations as defined by the Committee of the General Medical Council, and that the Branch Council should bring the matter before the central Council, and that the central Council be urged to bring the matter before the annual meeting.

Mr. Nelson Hardy thought that there was a good deal to be said both for and against the view which the Oxford Branch had laid before them, and suggested that the Council should appoint a Committee to collect evidence and report to a future meeting.

Mr. George Brown suggested that Mr. Nelson Hardy should extend his motion, and recommend the Council to refer that and other questions of a similar character to an Ethical Committee to be appointed by the Council.

Mr. Nelson Hardy objected to the proposed extension.

Dr. Ward Cousins said that he was sure the Council would be very glad indeed to appoint a Committee to consider the question.

Dr. Doyne then thanked the Council and withdrew his amendment.

The motion for the adoption of the report was then agreed to.

Parliamentary Bills Committee.—Mr. Ernest Hart, in moving the adoption of the report of the Committee, said it was sufficiently full of detail to dispense with any observations. He wished simply to mention that they had succeeded in introducing, and he hoped in passing, some important clauses in the Factories Acts Bill, and also had received a communication from the Home Secretary, announcing that he would receive a deputation in October on the subject of infant mortality as the result of the working of females in factories, to which the report referred.

Dr. Winterbotham, in seconding the motion, repudiated the suggestion which had been made that the Parliamentary Bills Committee only consisted of one man. Mr. Ernest Hart assimilated the facts of the various matters brought before the Committee for their digestion, and upon those facts the Committee decided.

Dr. Horder then moved the adjournment of the meeting.

Dr. Mead seconded the motion, which was agreed to.

Adjourned General Meeting.

The adjourned general meeting was held on Tuesday evening, when a very large number of ladies and gentlemen attended to hear the President's address; the Mayor of Bristol, Mr. R. H. Symes, was present, occupying a seat on the President's right.

President's Address.—The President, Dr. Long Fox, delivered his address, which will be found on page 237.

Dr. Russell Reynolds (President of the College of Physicians), in proposing a vote of thanks to the President for his address, said that there was no more difficult task that could be imposed upon anyone than that which had been imposed upon the President in the preparation and delivery of that address, going as it did over a wide range of subjects. The President had drawn attention to one point which had not been sufficiently observed by civilian practitioners in England—namely, the great utility that had been conferred upon the medical profession by the work of their naval and medical officers, some of whom had been brought into contact with diseases of which general practitioners saw but rare examples, and were familiar with conditions under which some of those diseases occurred, and who could therefore impart to the general practitioners information which they would otherwise be almost entirely deprived of. The President had alluded to the researches of Edward Jenner, and although he was the founder in this country of that school of medicine and of therapeutics in its practical sense which had become of late not only the fashion but the passion of the physiologist and the pathologist, the microbic, it had also been foreseen by Harvey, who very distinctly pointed out in his treatise the possibility of the germ theory of disease. The remarks made by the President with regard to the public health question and other matters required to be pondered with an amount of care which could scarcely be bestowed in the few minutes during which he delivered them, but they were of very great value. With regard to the treatment of idiots and criminals, it was very important that the Association should express from the medical point of view an opinion upon that most miserable farce of repeated imprisonments of those who, by disease or by deformity, were the victims of crime. He moved:

That the warm thanks of this Association be given to the President, Dr. Edward Long Fox, for his most interesting and able address.

Mr. White, in seconding the motion, said that, great as had been their pleasure in hearing the President's able address delivered, it would be supplemented by reading it when published, for it was not only exhaustive but instructive on many points, and required study.

The motion was carried by acclamation.

The President said it was quite impossible for him adequately to return thanks for the vote which had just been passed, but there was one reason why the members would be contented with a simple expression of his very earnest thanks, namely, that they were immediately to form themselves into an adjourned meeting from the morning, and discuss some very important business. Dr. Horder would resume the discussion upon the Parliamentary Bills Committee.

Parliamentary Bills Committee.—Dr. Horder proposed as an amendment:

That the Report of the Parliamentary Bills Committee referring to the proposed amendment of the Medical Acts be referred back to them for reconsideration.

He said that in the opinion of many gentlemen of the British Medical Association those amendments were not good enough. Dr. Ward Cousins had said that they might drive a coach-and-four through the Medical Acts. What the profession wanted was that men outside the profession, who did not assume titles, but who practised the medical and surgical professions without calling themselves doctors or licentiates of midwifery or surgery, or accoucheurs or anything else, should be prevented from practising. The amendment as proposed by the Metropolitan Branch provided that if, after the passing of the Act, any person other than a person whose name was for the time being on or entitled to be on the *Medical Register*, or who prior to the passing of the Medical Act, 1886, would have been entitled to be registered, should practise any branch of medicine or surgery, or should pretend to be or take or use the name or title of doctor, etc., or any description implying that he was registered under the Act, or was qualified to practise medicine or surgery, or any branch thereof, should upon summary conviction for any such offence pay the sum of not less than £20, nor more than £40, for the first offence, and on further conviction should be fined for each offence the sum of not less than £40, nor more than £60, or be imprisoned for not less than three, nor more than six, months. With regard to one of the exceptions set down by the committee, "a person shall not be guilty of an offence under this Act if he

shows that he is not ordinarily resident in the United Kingdom, and that he holds a qualification which entitles him to practise medicine or surgery in a British possession or foreign country, and if he do not represent himself to be registered under the Medical Acts"—under that exception they might be flooded with practitioners holding bogus qualifications from all parts of the world. At present they had ladies—it was doubtful whether they were entitled to the term—and gentlemen coming from America delivering lectures in all the large towns to males and females which could only be characterised as indecent to the last degree. They advertised themselves largely, they got puffs in the local papers, they hired large halls, and appealed to the passions of the working and middle classes, and then simply swindled the people out of their hard-earned wages. If these exceptions to the 40th clause which now existed were maintained the country might be flooded by such people. If they were going to amend the Medical Acts—and it was high time they did so—why not make a good business of it at once, and insist that there should be reciprocity with regard to practising in other countries. No English practitioner could practise in France, however high his qualifications, without undergoing the ordinary examinations for a doctor of medicine, and it was not fair that that state of things should continue seeing that medical practitioners from other countries—France, Germany, Italy, and Switzerland—were able to come here and have their qualifications registered on the foreign register. Let them deal with the Medical Acts *in toto*, and not deal with the 1858 Act alone.

Dr. Mead, in seconding the amendment, mentioned, with regard to qualifications, the case of the Hindu oculists who were prosecuted at the Old Bailey. As Secretary of the Medical Protection Society, it had been his duty to have frequent interviews with the authorities at Scotland Yard. He had brought before them a number of cases, and gone into them very minutely, and his firm opinion was that, if they only had upon the Bench some firm and just judges who would, instead of trying to find a hole in an Act of Parliament, consider that that Act of Parliament was passed for the specific purpose of preventing fraud upon the public by the obtaining of money under false pretences, they would have no difficulty whatever in dealing with a very large and a very dangerous class of practitioners, even under the present law. A very short amendment of the Act, he believed (and in this particular he was only stating the opinion of eminent detectives) making a little clearer what was meant by obtaining money under false pretences, would put an end to the very dangerous system of quackery which enabled men to extort from the ignorant and the uneducated very large sums of money. They wanted first a reform of the views of the English judges, and secondly, some plain statement of the law. They also required some amendment of the law with regard to the recovery of costs.

Mr. Ernest Hart said that instead of the Parliamentary Bills Committee or himself being in any way desirous of settling the matter themselves or on their own responsibility, the first thing they did was to put all the facts before the solicitor of the Association, and to ask him for his advice in drafting a new amendment clause. They had the benefit of that advice, and then, as they thought that hardly went far enough, they took the benefit of the advice of the gentlemen who had been instrumental in framing the Dentists Act, which was more recent, and in many ways more effective than the Medical Act, and with that assistance the clause was further extended and amended. After it was so extended and amended and discussed by the Committee, which included representatives of all the Branches, a copy was sent to the secretaries of every Branch, including Dr. Horder's, with the request that they should submit it to their Branch, and with a special request, which was emphasised in the Journal, that each Branch would favour the Committee with its comments, criticisms, and suggestions upon the clause. They received a few comments—he was sorry to say they had been very few. He did not remember the purport of any communication with which Dr. Horder's Branch might have favoured them.

Dr. Horder said that a letter from himself had appeared in the Journal last Saturday, commenting upon the matter.

Mr. Ernest Hart said it appeared they had received a communication from Dr. Horder individually, which was published, but that was not quite the same thing, and was a less regular and authoritative procedure. He had received as Chairman of the Parliamentary Bills Committee a great number, which had all been laid before the Committee; they were for the most part in full approval. Those that had not replied would be again asked to do so. The only communication they had received in any detail was from the Metropolitan Counties Branch, for they had two printed, the second an amended and improved one. Thus the amendments suggested by the Committee had been framed by the ablest lawyers whom they could consult: a copy of it had been sent to every Branch; their views, so far as expressed, had also been put before the most able legal advisers, and, as they were aware, at the present moment the whole of the documents and the clause were about to be subjected to scrutiny by Mr. Muir Mackenzie, Mr. Costelloe, and Mr. Turner, the three barristers who had all been concerned in drawing or dealing with most recent amendments to the Medical Act and the Dentists Act, and who would carry weight on the General Medical Council, with whom it was essential, in the matter of amending the law under which the Council existed, they should have at any rate some sort of friendly communication. Those amendments were under the advice of those three barristers, and they were before the Branches. If they could have their own medical Parliament and pass laws exactly to please themselves, he had no doubt they might adopt draft clauses drastic and exclusive enough to please Dr. Horder; but as practical men they had to consider what all the most experienced persons told them stood a chance of passing in the House of Commons, and what members would undertake and Parliament accede to. If Dr. Horder really thought they could get the House of Commons to pass an Act not allowing anybody to practise bone-setting or herbalism under any circumstances who had not got a registered degree and placed themselves under the jurisdiction of the Government, the Committee would give precedence to his Bill and assist him so far as was possible; but all the advice was that such an extreme Act would stand no chance of passing, and would only retard immediate reforms which were much needed and which were within their reach. "The best was often enemy of the better." They aimed at the better. They would be glad if Dr. Horder would communicate with them—not as a critic but as a friend—and they would heartily welcome any assistance he could give them.

Mr. George Brown said it was not their duty to employ solicitors to tell them what they required and what Parliament would pass, but to tell Parliament what they wanted.

A motion referring back that portion of the report dealing with the amendment of the Medical Acts for reconsideration was then put and carried.

Mr. Ernest Hart said the Parliamentary Bills Committee had not the slightest objection to the matter being referred back. The draft clauses which were read were only presented as a preliminary proceeding, and not in a final form. The report explicitly stated, together with the fact that the first draft, together with the resolutions of Branches, were at this moment ordered to be put before counsel for their report on all the documents. He hoped that gentlemen who seemed interested now would show their interest in their Branches, and would favour the Committee with the suggestions for which they had asked, but which in many cases had not yet been received.

The amendment was then put as a substantive motion, and agreed to.

Registration of Midwives.—Dr. Lovell Drage said the question of midwives' registration was specially referred by the Parliamentary Bills Committee to the annual meeting. The subject was one which had received very scant justice, legislation being introduced without preliminary inquiry and investigation. It was only in the last year or two that there had been any fair or adequate discussion. In the case of all legislation they had a right to require that cause should be shown for change. He had very great difficulty in ascertaining at all the reason upon which this demand for legislation was passed. It was said that it would benefit the poorer portion of the community, but it was no

very difficult to show that it could not possibly achieve that object. Dr. Norman Walker showed in an article which the British Medical Journal had published that the effect of the practice of midwives in Austria was that the very poor in the villages still remained in the hands of women who were utterly incompetent, and it would always be the same where there was poverty. He claimed that in England the poor received very considerable assistance from those who were the proper persons to administer it—namely, the doctors—and he was very anxious to know how the proposed measure could be in the interests of the poor, when it was shown by the returns that in every foreign country not only was the puerperal death-rate higher than in England, but the mortality from puerperal sepsis was also higher in Spain. Puerperal mortality ranged from 5½ to 13 per cent., whilst in this country it was only 4. So far, therefore, from the new system being likely to benefit the poor, it was likely to do just the reverse. It was said by the supporters of the measure that the mortality statistics of lying-in character where midwives were employed were very much better than those in general practice. It was rather hard that that should be said, because not so many years ago lying-in hospitals had occasionally to be closed altogether on account of puerperal fever. On the other hand in a return from Salford, which might be taken as a typical town, the medical officer reported 30 cases of puerperal trouble, none of which he said required special notice. In his own district (Hatfield) during five years there was only one death in the puerperal period out of 1,000 cases. Statistics reflecting on the practice of midwifery were brought forward from out of the way places such as in Wales, but they were not found to be very bad in any parts of England. Dr. Drage's time for speaking having expired he concluded by moving:

That this meeting disapproves of the principle of registration of midwives.

Dr. More Madden seconded the motion. He thought their opposition to any such Bill should rest mainly upon the fact that it would not be in the interests of the population at large, or desirable in the interests of humanity. He thought Dr. Rentoul deserved great credit for the stand he had taken under great difficulties, and at great personal expense and trouble. Having had considerable experience of midwifery practice and the training of midwives in the great institution with which he had been connected in Dublin, he was prepared to say, having had ample opportunity of contrasting the practice of midwives in favourable and unfavourable conditions with that of medical practitioners under the same circumstances, that if the poorer classes of women in their parturient distress were left to the sole care of women, possibly armed with a diploma entitling them to registration, but only qualified to attend natural labours, the result would be extremely disastrous in any cases of complication or emergency.

Dr. Woodcock said there had been a good deal of misunderstanding as to the position of those who opposed registration. They were not for leaving things as they were, for nothing could be worse than the existing state of things whereby women had been certificated or had diplomas issued to them, indicating at all events that they were worthy of the confidence of the poor who employed them. These were entirely days of higher education. In every other profession there was an indication that people were requiring the very highest form of training, and it was a monstrous thing to propose to impose the responsibility of practising the obstetric art on women who gave no evidence of culture, after they had undergone some three months' instruction. He had been more than surprised at the sort of testimony given of the qualifications of those certificated midwives by gentlemen who certainly had been interested in issuing diplomas. At a meeting of the Lancashire and Cheshire Branch it was stated by one gentleman connected with one of the Liverpool colleges that he found these women infinitely superior to the gentlemen he had to examine; whilst another teacher in the Liverpool school urged that they should be careful in what they were doing because these midwives were ladies, they were widows and sisters and daughters of medical men. He was quite sure some one had been imposing on that gentleman's credulity. He (Dr. Woodcock) asserted that in Manchester and other large towns the obstetric practice was thrown into the hands of people who were altogether unworthy of the confidence of the poor, and it was simply a reproach to the Legislature that they should be continued. The present midwife was as much out of date as the barber-surgeon and the cunning leech of the past, and he maintained that those who were to practise the obstetric art should be as well trained in medicine and surgery as those practising any other branch of the profession. It was a libel upon those who opposed registration to say that they were against the higher education of women. He was very glad to hear that they had more than forty lady members of the Association; but what would they think of being brought into competition with this inferior class of people, who after three months were to be allowed to practise? Let them once for all say that people who were to practise midwifery should be fully educated and trained. By so doing they would raise the dignity of the profession and safeguard its interests, whilst on the other hand they would also safeguard the interests of the community and afford to parturient women and their offspring that sort of advice and assistance to which they were entitled in a civilised country.

Dr. Boxall said, in considering a question of this kind, they must look at practical utility. He agreed that the present condition of affairs was really disgraceful: how, then, could it be improved? Could they get rid of the present midwives? If that were practical, it would be the best solution of the difficulty, but he was afraid it was not practicable. The question was a national one, affecting the community very largely. The Select Committee of the House of Commons took evidence from all sides, and they reported very distinctly in favour of registration. The point was whether that would improve the present condition. Before they could get at that they must have certain facts clearly before them. It had been said that there was no considerable puerperal mortality throughout the country, but the Registrar-General's returns showed that puerperal fever was not on the decrease. Where certain conditions were fulfilled puerperal fever could be to all intents and purposes practically stamped out, but throughout the kingdom generally it was not so. The high mortality was not due to the medical profession, but to the leaven produced by the midwives, who increased the mortality. Those certificated were very few in comparison with those who had had no training. No doubt there were bad ones amongst the certificated, and that showed that it was necessary to exercise some control over the women practising, whether they were certificated or not. It was desirable to get them under control, but how could that be done unless there was some form of registration? He did not see how this was likely in any way to injure the medical profession. It would not create a lot of midwives; they did not want a single extra one, they would rather get rid of them altogether. He hoped by such legislation as seemed practicable the condition of the poor would be improved and the interests of the profession would be duly conserved.

Mr. George Brown said the way in which the Committee of the House of Commons conducted their inquiry showed clearly that their sympathies were entirely with those who approved the registration of midwives, and he was surprised that their report was not even more decidedly in favour of the immediate passing of a measure for the registration of Sairey Gamp. Those who proposed the Bill were believed by the Committee to be doing so on mercenary grounds. He protested against such an inference. In his evidence before the Committee he gave it as his experience of twenty years that no person should go into a lying-in chamber to conduct a case of midwifery unless they were thoroughly educated in every branch of medicine, surgery, and midwifery, with a distinct and clear knowledge of human anatomy. It was proposed to sweep away the Act of 1858 altogether by licensing persons partially educated for three months. It seemed absurd on the face of it. Dr. Atthill told the Committee that he was supposed to have trained more midwives than any other man in the kingdom, but that in three months he could not even begin to teach them anything. It was absurd for members of Parliament sitting on that Committee to go behind the experience of a man like Dr. Atthill and recommend the Legislature to sanction the registration of women after three months' education. As

long as he was able to oppose the passing of the measure he would do so, and for that reason he asked the meeting to declare that these women were not fit to practise and take charge of such cases.

Dr. Jones Morris said Wales had been referred to. As a medical officer of one of the largest districts in North Wales, extending in one direction 15 miles from his place of residence, his opinion was that the midwives who had to practise in the absence of the doctor should have some knowledge of the art they had to practise. Seeing that the doctor had to go sometimes a journey of two, three, or even four hours to reach a patient, it was of the greatest importance that the aid at first hand should have had some training in obstetrics. If that was granted, was it not well that that training should be under the direction of some legally constituted authority, to give the woman some diploma showing that she had that elementary knowledge in the absence of a medical practitioner? He was in favour of the registration of these women, and the North Wales Branch, at its annual meeting held last week, passed a resolution unanimously to that effect. He suggested that the whole question should be postponed, seeing that there was no possible chance of legislation on this matter for the next two years.

Dr. Brierley opposed the proposed legislation. One of the chief arguments for registration was that there was a class to be provided for between the pauper and the person who could obtain ordinary medical and surgical skill. He contended that that class was already provided for by the medical aid societies. It might be said that his policy was destructive, but how could it be otherwise on the facts before them?

Dr. Bridgwater said, after some thirty or thirty-five years' practice of midwifery, he felt most strongly the necessity for a change, but not the radical change which a Registration Bill pure and simple proposed. He believed that by registering midwives as such and under that name they might be foisting on the public a power which did not really exist, making them believe that these were qualified practitioners when they were after all only qualified nurses. The remedy was not far to seek. Those who had to do with the poor knew that there was vast improvement to be obtained from good nursing. By simple training they might have nurses capable of recognising a difficulty, and who might in cases of emergency protect the life of the woman and yet not take the place of the doctor. The General Medical Council had solved the question by talking of "nurse midwives"—not a midwife in the strict acceptation of the term, but one recognised as a nurse and trained in the lower stages of attendance on midwifery cases. He believed that was the happy solution of one of their difficulties—to drop all notions of having registered midwives and to have nurse midwives properly trained and who could be relied upon. As an old practitioner, he had strongly felt from the beginning that on this question he could have walked arm in arm with Dr. Rentoul. He hoped the result of their deliberations would be to see the way out of their difficulties by diffusing the benefit of improved nursing throughout the country.

Dr. Rentoul said nine Branches of the Association, with 2,394 Members, had given a majority against the registration of midwives, whilst only three Branches, with 329 members, voted for it. Seven Branches, with 1,079 members, had declared their neutrality. Eight medical societies unconnected with the Association, with 954 members, had also passed resolutions against registration.

The resolution was then put and carried by a majority of 34 to 13, this being the total number present.

The report as amended was then adopted.

Second General Meeting.

The second general meeting of members was held on Wednesday in the Large Hall, Victoria Rooms; the President (Dr. Long Fox) in the chair.

Foreign Visitors.—The President announced that the Association had welcomed the following guests: Dr. H. D. Chaplin (New York), Dr. Geo. M. Gould (Philadelphia), Dr. E. Landolt (Paris), Dr. Luigi Sambon (Rome), Dr. G. C. Savage (United States), Dr. G. E. de Schweinitz (Philadelphia), Dr. H. Snellen (Utrecht), Dr. Geo. T. Stevins (New York), Dr. J. L. Thompson (Indiana), Dr. Leonard Voigt (Hamburg), Dr. Norfolk (New York), Dr. Osler (Baltimore), and Professor Unna. There were also present as representatives of Colonial Branches: Dr. Archer and Dr. H. J. Wolseley (Barbados), Dr. Eldon Harvey (Bermuda), Brigade-Surgeon-Lieutenant-Colonel S. H. O'B. Banks and Surgeon-Major W. K. Hatch, M.B. (Bombay), Dr. W. H. Sutherland (Rangoon), Dr. Stevenson, Dr. T. Douglas, and Surgeon-Colonel J. J. A. Colahan (Cape of Good Hope), Mr. W. H. W. Strachan (Jamaica), Dr. John Freeland (Leeward Islands), Brigade-Surgeon-Lieutenant-Colonel J. Macartney, M.D. (Malta), Surgeon-Major Smith and Brigade Surgeon-Lieutenant-Colonel Drake-Brockman (South India and Madras).

Annual Meeting, 1895.—The President of Council stated that the Council had that morning received a very large deputation from the Metropolitan Counties Branch, headed by Dr. Russell Reynolds, to invite the Association to hold its next annual meeting in London. The Council, according to By-law 20, recommended the Association to accept this invitation. He need not state that the Council would do all in their power to help the development of that meeting so as to give entire satisfaction not only to the whole Association, but to their metropolitan associates. He was sure that it would be a matter of congratulation throughout not only to their Association, but to the entire profession, that the distinguished President of the Royal College of Physicians, Dr. Russell Reynolds, had been selected as their President-elect. He moved, in accordance with the recommendation of the Council:

That the cordial invitation of the Metropolitan Counties Branch to hold the annual meeting for 1895 in London be accepted, and that Dr. Russell Reynolds be nominated President-elect.

The President seconded the motion. He was sure they could not have a better President-elect, and certainly they could not have a better place to meet than London.

The resolution was carried by acclamation.

Address in Medicine.—The Address in Medicine, which will be found on page 242, was then delivered by Sir Thomas Grainger Stewart, M.D.

Dr. Frederick Roberts then moved:

That the best thanks of the Association be given to Sir Thomas Grainger Stewart, M.D., for his able and interesting Address in Medicine.

He said he was sure they would all agree that it was a most able and interesting address from various points of view. They had been given a most graphic description of the clinical history of the "New Acquaintance," and a most excellent account of the effects that were produced upon the different systems by the disease now known as influenza. He thanked Sir Thomas Stewart also for having referred in his address to Dr. Sidney Martin, whom he knew very well, and who had done excellent work on the subject. They were all interested in the matter of temperance, and they had now been furnished with an additional argument in its favour, seeing that the bacilli of influenza could not live in water. As one of the deputation which had met the Council that morning, he took the opportunity of thanking the meeting for receiving their invitation so cordially.

Dr. Shingleton Smith, in seconding the motion, said that they congratulated themselves upon the fact that Sir Thomas Stewart had so willingly responded to the call to do duty upon that occasion. They had heard of the two great Scotchmen, William and John Hunter, and he thought Sir Thomas would not be offended if he said that they had evidence before them that another great Scotsman had arisen.

The motion was then carried by acclamation.

Sir Thomas Grainger Stewart then briefly returned thanks for the cordial vote of thanks which had been passed to him.

The Middlemore Prize.—The President said the Council had awarded the Middlemore Prize to Mr. Edward Treacher Collins, F.R.C.S., for his researches in ophthalmology. Mr. Collins was at present in Persia.

Payment of Railway Fares of Parliamentary Bills Committee.—The President of Council moved:

That the report of the Council upon the constitution and payment of the railway fares of the Parliamentary Bills Committee be received and adopted.

He said the matter had received the most careful considera-

tion of the Council, and they now recommended that the railway fares of the members of the Parliamentary Bills Committee should not be paid by the Association. He pointed out the difference between the Committee and the Council. They, no doubt, were both representative; they were both in great measure made up of representatives elected by the Branches, but there the likeness ceased. The Council had to deal with the general administration of the whole Association, and it was because the Council and the Association thought it would be desirable in the future that members from the different Branches should be present that they decided to pay their travelling expenses to meetings of the Council. The Parliamentary Bills Committee was representative, but there was nothing in the essential character of its business to make an exception in its case in respect to payment. With regard to its organisation, the Committee proposed that it should in future be constituted of twelve members, together with one representative from each of the Branches.

Mr. Butlin seconded the motion.

Dr. Douglas moved as an amendment:

That the report of the Committee on the Payment of Railway Fares of Members of the Parliamentary Bills Committee be accepted, with the exception of the paragraph advising that railway fares be not paid. This meeting is of opinion that railway fares of the Parliamentary Bills Committee be paid when attending meetings of the same.

He said the question was the representation of the general practitioners and of the provinces. The natural tendency was for the consultant and the specialist to take a disproportionate share in the government of the Association. The report spoke of the Committee as a Committee of the Council, but many of them were of opinion that it was a Committee composed of representatives of the Branches, to whom were added a certain number of gentlemen who were supposed to be specially useful thereon. He urged that it was entirely a committee by itself, that its work was analogous, and at least equal in importance, to that of the Council. With regard to the expense, he estimated that it would be an extremely small sum, because many of the members of the Committee had to come to attend the Council. Taking for example the last two meetings of the Committee, the extra expense in paying the travelling expenses of gentlemen who had not also to come up for other purposes would have been only between £10 and £11 for each meeting, and this could not be said to be much in comparison with their yearly profit of £5,000. He believed that by adopting the amendment the interests of the Association would be considerably advanced.

Dr. Brierley seconded the amendment. He said that the Council had a good advocate, but he had an exceedingly bad case. The Council had acceded to a proposition which he apprehended would be approved by the meeting, namely, that the Parliamentary Bills Committee should be reduced by about half. His experience had always told him that the idle man was almost always a worthless man—the busy man was the most valuable, and if they expected such a man to give up his time to committees, and also to pay his own expenses, it was a most unreasonable demand to make.

Dr. Verrall, on behalf of the South-Eastern Branch, expressed their disagreement with the amendment. It was a matter of principle and not of money.

Dr. Ince said that a gentleman's only motive in sitting on a Committee should be to serve his brethren, and the principle moving him should be an utter contempt for a few coppers. He strongly opposed the amendment.

Dr. Norman Kerr thought there was nothing dishonourable in taking payment for any proper and efficient services. He granted at once that the Parliamentary Bills Committee did stand on a different footing from the other Committees, but still the great question remained of financial responsibility. It was possible that if the amendment were carried it would be the thin end of the wedge for the payment of all other Committees.

The Treasurer, in reply, said it had never been a question of money, but one of principle. The whole expense would be under £40 a year, and of course that would be no weight with a treasurer who had an annual surplus of £5,000 at his command. They had gone into the matter very carefully indeed, and had come to the conclusion that there was no sufficient reason for the payment of the railway fares of the Parliamentary Bills Committee. He hoped that the report would be passed, because it had been drawn up with great care by the President of Council and himself, and had been submitted to the Committee and to the Council.

Dr. Horder said he had always understood that the objection to paying the Committee was that it was such an enormously large one, but it had now been considerably reduced. The question to be considered was whether the work of the Committee was as important and as valuable to the Association as that of the Council. He thought it was quite as important.

The amendment was then put to the meeting and lost; the original motion was then carried.

The meeting then adjourned.

THE MECCA PILGRIMS.

Surgeon-Major George Ranking, I.M.S. (Secretary to the Board of Examiners, Calcutta), writes: Dr. Thorne Thorne's letter in the British Medical Journal of June 9th leads me to write to you on the subject of the Hajj, in case no other more competent to treat of this subject should address you. The real point at issue, as pointed out by Dr. Thorne Thorne, is whether Mohammad laid it down as a hard-and-fast rule for all Moslems that they must make the pilgrimage once in their lives, *without reference to their worldly condition and their power to provide themselves with the necessaries of life for the pilgrimage and the return journey.* The point was laid, it appears, before the Sultan, who was advised that no regulation or interdiction of the Hajj was possible, "inasmuch as it is one of the five fundamental commandments of the Mussulman religion." And here the matter rests for the present. But it is most important to know what the real state of the case is, and to settle this question we must have recourse to two sources of information: (1) The law itself as laid down in the Qu'rán, and (2) the exposition of the words of the law as made by subsequent commentators. But, before entering upon this, it will be as well to clear the ground by stating that whatever be the prescribed duty as regards the Hajj it is equally incumbent upon all Muslims, irrespective of the particular sect, Sunné, Shiah, or Wahhábé. Any person whatsoever who rejects any article of faith (Imán) or of practice (Amal) is not a Múmia (believer), but a Káfer (infidel).

The Hajj is one of the five pillars of the *practical* religion (Amal). Whatever decision may be arrived at therefore as to the requirements of the Hajj, this will apply to all Muhammadans.

With this proviso let us examine the authorities, beginning with the Qu'rán. The direct injunction in the Qu'rán, with reference to the Hajj, are very few considering the size of the book. The first mention occurs in the second chapter (of the Heifer), and runs as follows: "And fulfil the pilgrimage and the visitation to God, but if ye be besieged then (give) what is easiest for you by way of gift *provide yourselves for your journey.*"[1] We may notice that in this verse the Hajj is enjoined, a state of siege alone being mentioned as exempting from the duty, in which case a gift must be made in place of performing the Hajj.

In Sura 3 is the next mention, and it is this: "There is due to God from man a pilgrimage unto the House *for whosoever can find his way there.*" The words in italics represent Professor Palmer's translation. The original Arabic runs: "Man istitáa ilaihe sabilan," which also admits of being translated "those who are able to go thither" (Sale), or "men who are able to journey thither" (Rodwell). There is a little ambiguity in the English, but it will doubtless be admitted by Arabic scholars in general that the "ability" referred to is one of *means*, not of *physical power*. The root from which this verb is derived signifies "*having full and ample pasture*," and the primary meaning of the "ability" which this word denotes would be that arising from sufficiency of means. We shall have more to say on this when

[1] The pilgrimage is the Hajj, while the visitation is known as the 'Umrah: the latter is meritorious, but not to the same extent as the Hajj. The 'Umrah may be performed at any time when convenient, except on the eighth, ninth, and tenth days of the month Zul Hijjah, these being days reserved for the Hajj.

we come to speak of the commentaries. Further, the last mention of the Hajj is to be found in Sura 22 of the Pilgrimage. It is somewhat long, but it will be as well to quote the following passage:

And proclaim amongst men the Pilgrimage, let them come to you on foot, and on every slim camel, from every deep pass, that they may witness advantages for them, and may mention the name of God for the stated days, over what God has provided them with of brute beasts, then eat thereof and feed the poor and needy. Then let them finish the neglect of their persons, and let them pay their vows and make the circuit round the ancient House. That do, and whosoever magnifies the sacred things of God, it is better for him with his Lord. (Palmer's translation.)

These three quotations embrace all the direct injunctions to be found in the Qu'rán, and it will be seen that the quotation from Sura 2 is the most important for the settlement of the question as to the duty of pauper Muslems to make the Hajj. From the words alone of this Sura above referred to it seems almost certain that Muhammad intended that the possession of sufficient wealth should be the primary condition of undertaking the pilgrimage.

In many places he urges the principle that wealth is to be expended in God's service, especially in aiding the poor, and he also enjoins almsgiving in these words: "They will ask thee what they shall expend in alms: say 'the surplus.'"

Surely if almsgiving is not incumbent save when there is a surplus of wealth to give from, the same principle may apply to the Hajj. He also distinctly says, "Provide yourselves for your journey." This injunction can only apply to those who have the requisite means. Further, he says: "God desires for you what is easy, and desires not for you what is difficult."

All these point the same way, so far as I am able to judge. Now let us turn to authorities outside the Qu'rán, other than that quoted by the Moulvie Rafiuddin Ahmad.

Let us take a doctrinal work, entitled *Ghaneyatun litalibi*, by Abdul Qadir. Al Gilano, in the chapter on the Hajj, states as follows, speaking of the rules for performing the Hajj:

He must be a Muslim; he must be a free man, of sound intellect and of full age, with means of providing sustenance and means of transport: and the road must be open for him, free from enemies who would oppose him. Further, travel must be possible for him; he must have ample leisure to perform the Hajj; he must have bodily health, so that he may deny himself without discomfort; he must have power to provide food and transport, and that can only be after he has obtained sufficient to support his family until he returns to them; he must also have a home for them; he must have paid any debts he may owe, and must have a sufficiency after his return, either of surplus wealth, or from the rent of lands, or stock-in-trade. Verily if he disobeys, and fails to provide for his family, or is prevented from paying his debts, and yet goes out on the Hajj, it is a detestable wickedness.

This is tolerably plain speaking, and leaves no doubt as to the view held by Muslem divines on this part of the sacred law.

The next quotation is taken from the *Fatawa ul Alamgire*: the word "Fatawa" may be explained as meaning decisions on points of religious law. In the chapter on religious duties of the Hajj, the author writes as follows:

It must be performed at once, and it is not lawful to put it off till the following year, when it is possible to perform it. This statement is in accordance with the Khizanat ul Muftica.

As to the time of performing it, he gives the months in which it is lawful, and goes on to say that it is essential that the Hajé should be a Muslim, sane, of full age, free, and continues as follows:

And one condition is ability to provide food for the journey and means of transport, either arising from property or from rent, not borrowed or given, unless it be given by one to whom you lie under no obligation for it, as your parents or children, or other kinsfolk. It must not be received for the purposes of the Hajj from any other person. And the meaning of possessing means for the journey and transport is that he should have wealth over and above what he needs, and that, too, apart from his dwelling place and clothes and servants and furniture; sufficient to take him to Makka, both going and returning, riding and walking, and besides what will pay his debts, and support his family and repair his house and its surroundings till his return. And by "support" is meant the mean between extravagance and parsimony, and by "family" is meant all those whom he is bound to support.

It is hardly necessary to quote anything further. It need only be said that these same principles, with verbal differences, are to be found in all commentaries on the Mohammedan sacred law.

There is, it will probably be agreed, ample authority for dissuading poverty-stricken Moslems from attempting the Hajj, a course of action most desirable on sanitary grounds.

REGISTRATION OF MIDWIVES.

NORTH OF IRELAND BRANCH.

AT the annual meeting of the North of Ireland Branch, held at Monaghan on July 19th, the following resolution was passed on the motion of Dr. HENRY O'NEILL:

That, in view of the fact that a Midwives' Registration Association has been formed—ostensibly for the purpose of promoting legislation for the registration of midwives, but in reality for the creation of an independent order of midwifery practitioners—this meeting, while anxious to improve the training of monthly nurses, and recognising that duly qualified medical women already exist, records its emphatic protest against any such proposed legislation, as such would:

(*a*) Endanger the lives of pregnant women and infants.
(*b*) Interfere with the training of medical students in practical midwifery.
(*c*) Repeal the Educational Section of the Medical Act, 1886; and
(*d*) Prevent newly qualified practitioners from perfecting their knowledge of obstetrics and diseases of infants.

That a copy of this resolution be sent by the Branch Secretary: (1) To the General Medical Council; (2) to our five direct representatives on the General Medical Council; (3) to our Branch representatives on the Council of the British Medical Association; (4) to the Council and Parliamentary Bills Committee of our Association, earnestly requesting them to consider and strenuously oppose such proposed legislation.

BORDER COUNTIES BRANCH.

AT the annual meeting of this Branch, held at Carlisle on July 20th, Dr. SOMERVILLE introduced the subject of the registration of midwives, and after a long and irregular discussion, during which much difference of opinion was expressed, it was decided to refer the matter to the Council for consideration and report.

ASSOCIATION INTELLIGENCE.

BORDER COUNTIES BRANCH.

THE twenty-seventh annual meeting of this Branch was held at Carlisle on July 20th, Dr. MITCHELL, of Cockermouth, in the chair. Fifteen members were present.

Report of Council.—The annual report of the Council, which had been circulated among the members, was adopted.

Election of Officers.—The following were elected officers for the ensuing year: *President-elect:* Dr. Smith (Dumfries). *Representative on the Council of the Association and Parliamentary Bills Committee:* Dr. Somerville (Galashiels). *Council:* Dr. Lockie (Carlisle), Dr. Lorraine (Dumfries), Dr. Bowser (Penrith), Dr. Barnes (Carlisle), Dr. Ross (Dumfries), Dr. Thomson (Penrith), Dr. Helm (Carlisle), Dr. McLachlan (Lockerbie), Dr. Haddon (Hawick). *Honorary Secretary and Treasurer:* Dr. Altham (Penrith) was reappointed.

Future Meetings.—It was decided to hold a meeting in October at Gilsland in conjunction with the North of England Branch, another at Penrith in the spring, and the question of holding a special meeting at Carlisle was referred to the Council. The next annual meeting will be held at Dumfries.

Local Government (Scotland) Bill.—Dr. SOMERVILLE moved, and Dr. Ross seconded, the following resolution, which was adopted, and the Secretary was directed to send a copy to the members of Parliament for each of the constituencies in the area of the Branch, and to the members for the Scottish Universities:

That this meeting of the Border Counties Branch of the British Medical Association has learned with satisfaction that the proposal of the Local Government (Scotland) Bill to appoint a medical member of the Local Government Board has been approved by the Scotch Grand Committee, and the meeting earnestly hopes that this feature of the measure will be retained when the Bill becomes law.

Installation of New President.—Dr. MITCHELL then vacated the chair, which was taken by Dr. CONNEL (Peebles). The thanks of the meeting were accorded to Dr. Mitchell on the completion of his year of office, and he was appointed a Vice-president for life.

President's Address.—Dr. CONNEL then delivered his Presidential address, for which he was cordially thanked; he was

also requested to print and distribute copies to the members of the Branch.

Dinner.—The members afterwards dined together.

[The resolution arrived at regarding the proposed registration of midwives will be found at p. 284].

READING AND UPPER THAMES BRANCH.

The annual meeting of this Branch was held at the Wellington Hotel, Wellington College Station, on July 26th.

Election of Officers.—The following officers were elected:—*President:* Dr. Isaac, Broadmoor. *President-elect:* Dr. Guilding, Reading. *Council:* The President; the President-elect; Mr. O. C. Maurice; Mr. H. G. Armstrong, Wellington College; Dr. Bateman, Whitchurch; Dr. Dickson, Great Marlow; Dr. W. J. Maurice, Dr. Tench, Dr. Shettle, Dr. Price; Dr. Phillips, Hon. Secretary. *Representative of Branch on the Council of the Association:* Dr. Isaac. *Hon. Secretary and Representative on the Parliamentary Bills Committee:* Dr. H. H. Phillips.

The British Medical Association and the Profession.—The question of the British Medical Association acquiring power to regulate the medical profession in the same way that the Incorporated Law Society does the legal profession was brought before the meeting, and it was resolved to endorse the resolution passed by the South-Eastern Branch.

Visit to Broadmoor.—A number of members and their friends accepted the kind invitation of the medical staff of Broadmoor Criminal Lunatic Asylum, and were shown over that institution.

Dinner.—The annual dinner was held later at the Wellington Hotel.

NORTH OF IRELAND BRANCH.

Annual Meeting.—The sixteenth annual meeting of this Branch was held in Monaghan on July 19th, the President (Dr. J. Campbell Hall, of Monaghan), in the chair.

Confirmation of Minutes.—The minutes of the previous annual meeting were read and confirmed.

Secretary's Report and Treasurer's Statement.—The secretary's report and treasurer's statement were, on the motion of Dr. M'Alister, seconded by Dr. Calwell, taken as read, and adopted by the meeting.

Election of Office-bearers.—The following were then elected as office-bearers for the year 1894-5:—*President:* Dr. Dempsey, Belfast. *Vice-Presidents:* Dr. J. A. Lindsay, Belfast; and Dr. M'Alister, Carrickfergus. *Members of Council:* (Belfast) Professor Cuming, Surgeon Fagan, Professor Sinclair, Dr. J. Walton Browne, Dr. W. A. M'Keown, Dr. Calwell, Dr. Henry O'Neill, and Dr. M'Caw; (Country) Dr. Palmer, Armagh; Dr. St. George, Lisburn; Dr. Gaussen, Dunmurry; Dr. E. C. Thompson, Omagh; Dr. J. Campell Hall, Monaghan; Dr. O'Hara, Ballymena; Dr. Dunlop, Holywood; and Dr. Stuart, Ballymena. Dr. George Gray, Castlewellan, was re-elected *Honorary Treasurer;* and Dr. John Campbell, Belfast, *Honorary Secretary.* Dr. Dempsey and Dr. John Campbell were elected *Representatives of the Branch on the Council of the British Medical Association;* and Dr. Henry O'Neill and Dr. Stuart, Ballymena, *Representatives of the Branch on the Parliamentary Bills Committee.*

Communications.—The President (Dr. Hall) showed (1) a case of Excision of the Elbow-joint; (2) a case of Osteotomy for Genu Valgum; (3) a case of Genu Valgum. Mr. Fagan congratulated Dr. Hall on his successful results.—Mr. John Fagan read a paper on the Rational Treatment of Ruptured Urethra. He advocated the employment of suprapubic aspiration in preference to the use of catheters. Remarks were made by Dr. Hall and Dr. Henry O'Neill.—Dr. J. A. Lindsay gave an account of a case of Peripheral Neuritis in which there was no history of excessive use of alcohol. He referred to the value of diet, and recommended suitable exercise and local applications when the acute stage had passed. In reply to remarks by Dr. Calwell, Dr. MacCormac, and Dr. Dempsey, Dr. Lindsay said that the patient had not had influenza, and that he had used tobacco, but not to excess.

Luncheon.—At the conclusion of the business the members of the Association were entertained to luncheon at Rowantree House by the President and Mrs. Hall.

Visits to Places of Interest.—Dr. Hall then drove the party to the infirmary, where some time was spent in inspecting the wards. The Cathedral was next visited, and the Rev. Mr. Lynch kindly conducted the members through the magnificent edifice and pointed out many of the most interesting features. The splendid interior elicited warm expressions of admiration from those present. After a drive through Rossmore Park, the members returned to Rowantree House, where tea was served.

[The resolution as to the registration of midwives will be found at p. 284.]

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

The following additional candidates have passed the Second Professional Examination for the Degrees of M.B. and C.M.

E. J. Bray, J. Eason, S. J. Gunillan, M.A.; J. B. Hay, B. L. L. Learmouth, S. M'Donald, J. D. G. M'Pherson, R. L. Moorhead, W. Movatt, R. Owen, A. J. Park, S. H. Richards, D. Roger, A. H. Rutherford, T. D. Sadler, F. O. de Souza, G. E. Stewart, A. Wallace, H. J. Cardale, J. M. Coates, G. E. Elliott, R. M. Hall, K. Halton, P. T. Herring (with distinction), A. Y. Greenwood, L. Ker, G. F. Lundie, M.A.; P. C. Lüttig, A. Macdonald, F. B. Macdonald, J. A. Milroy, M.A.; F. J. R. Mompie, W. A. W. Moore, H. M. Morton, O. St. J. Moses, W. A. Potts, B.A.; R. J. Ralston, G. L. Roberts, F. M. Simmonds, J. A. Thwaits, J. B. Tough.

The following candidates have passed in the first division of the same examination:

P. W. Shephert, J. W. Simpson, T. H. Stevenson, A. E. Williams.

The following candidates have passed the First Professional Examination:

A. L. Anderson, W. Bennett, G. Liddell, W. E. Roberts, E. M. Carlyle, S. Faed, H. C. Gibson, A. D. Grange, H. Malius, O. Raith, R. H. White-Jones, J. B. Wilson, C. J. Wotherspoon, S. C. Rose, R. W. T. Ewart, C. L. Maude, H. H. Roberts, J. H. Hunter, E. M. Lithgow, G. Thomson, A. E. B. Wood, P. H. Henderson, W. Lockerbie, P. E. Millard, A. B. Shed, W. N. Barker, J. M. Bowie, J. M. Campbell, G. Dick, C. King, G. E. T. King, R. King, P. L. M'All, J. W. Mackenzie, T. R. Matthews, *W. P. Meldrum, G. A. Rosie, I. Shalaby, J. A. C. Smith, W. Smith, H. Wade, D. Wardrop, D. B. Waters, W. J. Baird, C. M. Pearson, D. Logan, H. Macfarlane, A. G. M'Gilchrist, T. B. H. Scott, R. Ashbury, D. D. Farquharson, A. G. Hamilton, E. C. Peake, I. Aird, J. Alcindor, T. C. Caldwell, C. H. Durrant, C. H. G. Gard, F. J. Gray, A. A. Grinn, G. de Laba, D. A. MacVean, H. J. Patchett, A. de St. L. F. Perigal, *J. H. Rhodes, *A. C. Sandstein, L. J. M. Deas, R. Ritchie, C. H. G. Ritter, G. Fournie, E. R. Grey, A. E. Brookes, A. D. Fordyce, T. E. Hincks, J. M'Gibbon, A. S. Parker, G. B. Pemberton, C. M. Roberston, G. N. W. Thomas, C. S. Brebner, J. M. Cuthbert, J. Munroe, T. A. Price, W. C. Pritchard, G. W. Smith, R. C. Verley, A. S. Allum, T. R. W. Armour, W. Craig, C. H. Elmes, O. A. Gee, R. Gibson, A. Gilmour, A. C. Renwick, T. Henderson, M. Johnston. The asterisk denotes distinction.

Botany, Zoology, and Physics.—T. J. T. M'Hattie, R. M. Dalziel, J. Mason, M.A.

Botany and Chemistry.—A. M. Joy, J. Downey, J. A. Thomson, J. M. Ross, C. S. Stevenson.

Chemistry, Zoology, and Physics.—C. W. Donald.

Botany.—T. F. Blake, F. H. Dommise, E. G. Firench, P. A. Leighton, F. N. Menzies, F. A. Georgeson, W. J. M. M'Farlane, J. G. Bell, P. J. Bodington, G. J. R. Carruthers, E. W. Martin, R. Bruce, F. Burns, R. Cameron, R. G. Carr, M. Carthew, C. S. Clark, A. Dods, J. P. Douglas, C. Forsyth, A. W. Fuller, W. A. Gilbert, T. E. Gilbert, G. Hamilton, W. D. S. Harrison, H. T. Holland, W. A. B. Horford, A. Hunter, B. S. Hyslop, J. Jellery, S. H. Johnston, A. C. Kirkpatrick, P. H. Macdonald, J. C. M'Conachy, E. M'Culloch, J. M'Gregor, D. N. M'Lagan, R. A. M'Neill, E. C. G. Maddock, T. Meldrum, G. H. Menzies, M.A.; J. R. Munro, F. Myers, H. N. Paxton, W. Raine, C. F. T. Scott, A. Shearer, C. E. Smith, F. H. Stirling, F. T. Thomson, H. E. Varenhorn, A. C. Brown, A. D. Cameron, F. G. Martin, F. P. Bester, E. F. Cyriax, G. E. V. K. Davidson, W. W. Garthwaite, P. Pattison, W. Purves, R. Rutherford, J. W. N. Thomson, P. G. E. M. Toit, A. Tweedie.

Botany and Zoology.—L. Kingsford, A. Macleod, R. M. Skinner, F. G. Ralston, G. H. Boyden, A. G. Boyden, L. D. H. Baugh, G. H. J. Brown, J. Cary, W. Darling, A. H. Griffith, G. G. Hay, W. E. Hutchison, D. B. King, A. Livingstone, J. M. M'Donald, R. C. M'Lachlan, L. C. M'L. Wedderburn, F. C. Matthew, J. G. Munro, A. C. Murray, C. F. Noble, J. Orr, W. Park, M.A.; L. J. L. de Pavillet, J. Pender, W. Rogers, J. A. Small, A. J. Spiganovicz, W. J. Stuart, C. H. Watson, A. Whittome.

Zoology.—J. W. Falconer, A. Whyte, E. R. Branch, J. Husband.

Chemistry.—E. R. S. Hale, B. B. Head, J. Vare, J. M. Benson, G. O. Rowles, T. R. Robertson, J. S. Bostock, C. E. Hutson, F. G. Middleton, J. P. Thorne.

Physics.—W. W. Thom, H. H. Broome, H. G. P. Raeburn, J. R. Robinson, J. E. Rateliffe.

Botany, Zoology, and Chemistry.—A. M. M'Intosh, H. W. Borcham.

Botany and Physics.—J. Cullen, W. J. Jones, D. M. Walker, P. S. Hopkins, F. E. Robinson, W. E. Tellet, A. H. Thomas, H. W. Young, E. A. Brown, D. A. Callender, H. G. Carlisle, H. L. Clift, B. J. Courtney, J. Craig, Y. A. Djidjizian, H. Faulkner, D. Ferrier, J. J. Galbraith, T. B. Gornall, G. Haddow, D. J. Hughes, H. C. Kerm, K. W. Konzinopoulos, G. D. Laing, G. R. Laing, J. Luckhoff, R. N. M'Donald, W. H. Mackay, M. Mackelvie, G. C. M'Leavy, C. W. F. Melville, M. C. Morgan, A. Mouat, T. P. Oates, D. Robertson, G. B.

Robinson, H. D. Shepherd, A. B. Slater, A. K. Smith-Shand, N. D. Walker, H. D. Wilson.

Chemistry, Botany, and Physics.—A. R. Buchanan, L. Crossley, G. A. Mackay.

UNIVERSITY OF GLASGOW.

DEGREES CONFERRED ON JULY 26TH, 1894.

Doctors of Medicine (M.D.).—I. With Commendation: J. M'C. Johnston, M.A., M.B., C.M. (thesis: The Prognosis of Acute Lobar Pneumonia in the Pauper Class). II. Ordinary Degree: J. Alexander, M.B., C.M. (thesis: Abnormal Uterine Hæmorrhage, with Notes on Cases); G. G. Gillon, M.B., C.M. (thesis: Surgical Cases in Wellington Hospital, New Zealand); A. Johnston, M.B., C.M. (thesis: Fifteen Cases of Diphtheria, with Remarks); D. Macartney, M.A., M.B., C.M. (thesis: Excision of the Elbow-Joint, with Thirty Cases in Illustration); F. Rees, M.B., C.M. (thesis: Puerperal Embolism and Puerperal Thrombosis); T. Rees, M.B., C.M. (thesis: On the Treatment of so-called Cases of "Periostitis" in Growing Bone by Trephining); J. Sandilands, M.A., M.B., C.M. (thesis: Medical Work among the Villages of the Central Provinces, India); J. Stevenson, M.B., C.M. (thesis: Observations on Influenza, with Complications and Sequels); J. W. Wallace, M.B., C.M. (thesis: Fibroid Tumours of the Uterus; A Retrospect).

Bachelors of Medicine and Masters in Surgery (M.B., C.M.).—I. Honours: A. MacLennan,[1] W. S. Cook, B.Sc.; J. C. Robertson, M.A., B.Sc.; J. M. Young; J. F. R. Gairdner. II. High Commendation: J. D. O. Wilson, J. F. Gemmill, M.A.; Marion Gilchrist, H. B. Currie, A. Macphail, A. S. Dick. III. Commendation: J. Brownlee, M.A.; J. Morrison, C. Nairn, R. W. Forrest, R. K. Currie, W. E. Macharg, A. G. Newell, W. Salmond. IV. Ordinary Degrees: D. Beatson, D. Blair, M.A.; T. D. Brown, P. S. Buchanan, E. N. Burnett, A. Cameron, A. Campbell, H. Carmichael, A. A. Clark, Alice Lilian Louisa Cumming, O. S. Dewar, R. S. Dickson, J. Drummond, J. T. Dunlop, G. A. Eadie, W. C. Faulds, D. Ferguson, T. J. L. Forbes, R. Forsyth, J. J. Fraser, A. Girvan, D. Glen, A. A. C. Grant, C. B. Harrison, A. Kay, J. Masterton, J. C. Matheson, J. Munro, J. Murray, D. Maclean, A. N. M'Lellan, J. C. M'Neillie, H. S. B. Nisbet, J. Pettigrew, D. E. Powell, J. Reid, D. Richmond, J. Scott, A. Shearer, R. Tennent, R. N. White, A. G. Young.

UNIVERSITY OF ABERDEEN.

THE following candidates have received Degrees in Medicine and Surgery:

Degree of M.D.—W. Bulloch, M.B., C.M. (thesis: The Central Connections of the Optic and Ocular Nerves in the Higher Mammalia); R. J. Gladstone, M.B., C.M. (thesis: Intracranial Suppuration complicating Disease of the Middle Ear); J. F. Innes, M.B., C.M. (Old Regulations); J. B. Lendrum, M.B., C.M. (thesis: Acute Traumatic Malignancy); J. E. Milne, M.A., M.B., C.M. (thesis: General Paralysis of the Insane); H. Rogers Tilstone, M.B., C.M. (thesis: The Position of Antiseptics in Midwifery); W. W. Webb, M.B, C.M. (Old Regulations).

The thesis of W. Bulloch was considered worthy of "Highest Honours," and the theses of J. B. Lendrum and J. E. Milne were awarded "Commendation."

Degrees of M.B. and C.M.—T. I. Bonner, M.A., J. M. G. Bremner, W. Bromilow, G. Bruce, M.A., J. Dawson, M.A., W. E. G. Duthrie, M.A., W. C. Edmonston, F. P. Elliott, D. Grant, G. Grant, M.A., R. Johnston, J. S. Laing, E. L. Mansel, C. L. Morrison, M.A., H. Munro, E. Oliphant, C. E. P. Owen-Snow, A. Reid, *D. Ross, D. H. Rowe.

* Graduated with honourable distinction.

Degree of C.M.—H. M. Barker, M.B.

The John Murray Medal and Scholarship, to the most distinguished graduate of the year, has been awarded to P. Macdonald, M.A., M.B., C.M.

Diploma in Public Health.—W. Cruickshank, M.B., C.M.Aberd., F. MacRay, M.B., C.M.Aberd., W. R. C. Middleton, M.B., C.M.Aberd.

Degree of Bachelor of Science (B.Sc.).—P. Edward, M.A., W. A. Keys, M.A., P. M'Leod, M.A.

First B. Sc. Examination.—J. W. Duncan, M.A.

First Professional Examination: Division I.—(Old Regulations): T. D. Bright, R. H. Gray, J. C. Macbean, W. M. Smith. (New Regulations): H. Adams, R. J. Cheves, D. Dewar, J. M. Duncan, F. W. Ellis, J. E. Esslemont, T. Fraser, W. N. Houghton, R. F. Hutchison, J. Irwin, F. Kinnear, W. W. Lewis, J. W. Lindsay, H. J. M'Grigor, D. M. Maciver, J. R. Macleod, A. D. Macqueen, T. N. Mitchell, D. R. Moir, E. H. Nash, R. S. Robson, A. B. Simpson, H. P. Sleigh, J. Smart, A. Urquhart, A. B. Walker.

First Professional Examination.—(Old Regulations): J. H. Abrahams, F. J. Alexander, R. A. Batchan, R. A. Coles, M. Connon, A. Cruickshank, A. B. Cruickshank, A. M. Fiddes, T. Harper, J. Innes, W. A. Kinloch, W. Lumsden, A. Mowat, J. S. Purdy, W. Sinclair, G. T. Stewart. (New Regulations): D. H. Ainslie, J. S. Chapman, W. H. Clark, W. S. Clark, R. H. Clarke, J. M. Cowie, H. W. Garden, J. Gordon, W. S. Hall, D. A. Hutcheson, D. J. Kelly, W. E. Lawson, *W. I. Moir, G. Mowat, G. F. Petrie, J. M. Petrie, *F. Philip, G. J. Saunders, G. A. Turner, E. Weatherhead, E. B. Wilson, A. W. C. Young.

Second Professional Examination.—(Old Regulations): F. Beetham, C. Cameron, *W. Cockburn, H. W. A. Cowan, W. Cowie, W. P. Crombie, J. C. T. Crowden, R. W. Cruickshank, T. D. Cumming, J. L. Dickie, H. Duffus, G. M. Duncan, A. Falconer, H. R. Gardner, P. Grant, D. V. Haig, L. G. Haydon, L. J. Helmrich, P. W. Ironside, G. H. Johnston, J. MacCulloch, R. C. Macfie, J. MacLennan, J. G. S. Macpherson, J. Mansie, W. R. Matthews, J. A. Mearns, W. A. Milligan, A. G. Milne, *J. W. Milne, A. Mowat, *W. Murray, H. Osborne, P. Prebble, G. A. Reid, C. Ritchie, *A. Robb, T. M. Ross, J. R. Smith, **A. G. A. Thomson, C. F. Weinman. (New Regulations): *R. G. Henderson, P. MacKessack.

* Indicates that the candidate has passed "with credit," ** "with much credit."

[1] Mr. MacLennan gains the Brunton Memorial Prize of £10, awarded to the most distinguished Graduate in Medicine of the year.

THE VICTORIA UNIVERSITY.

FACULTY OF MEDICINE, EXAMINATION LISTS, July, 1894.

First M.B.—Part II.—Biology: D. A. Alexander, University; D. A. Ashton, Owens; R. G. Baker, Owens; J. W. Barber, Yorkshire; S. W. Battle, Yorkshire; R. Beesley, Owens; J. E. Bolton, Yorkshire; H. N. Bridge, Owens; W. H. Broad, University; A. M. Carmichael, Owens; H. M. Cockroft, Owens; J. Craig, Owens; E. C. Dutton Owens; R. J. Ewart, University; H. M. Fletcher, University; P. A. L. Foulds, Owens; J. P. H. Greenhalgh, Owens; A. Green wood, Owens; E. M. Hime, Yorkshire; J. C. Hindley, Owens; J. A. Howard, University; F. Hoyle, Owens; E. Hudson, Owens; E. C. Hulme, Owens; F. W. Inman, University; W. G. Kinton, Owens; J. E. W. McFall, University; H. H. McNabb, Owens; A. S. McNeil, Owens; E. J. Martin, Owens; R. A. Needham, Owens; R. S. Nichol, Owens; E. Newhouse, Yorkshire; J. B. O'Donoghue, Yorkshire; H. Osborne, Owens; P. Pollard, Yorkshire; C. E. Preston, Owens; S. Pritchard, Owens; J. A. Reed, Yorkshire; H. Richardson, Owens; W. Rigby, Owens; A. Spong, Yorkshire; W. A. Stott, Yorkshire; D. Taylor, Owens; E. Trotter, Yorkshire; G. Unsworth, Owens; H. West, University; R. N. West, Owens; T. H. Wignall, Owens; A. G. Wilkins, Owens; O. H. Woodcock, Owens.

First M.B.—Part I: H. E. Annett, University; T. W. Arnison, Owens; S. R. Christophers, University; A. V. Davies, Owens; W. Dyson, Owens; O. B. Goldschmidt, Owens; A. Greenwood, Owens; J. P. Hall, Yorkshire; A. Hartley, Owens; T. May, University; F. B. G. Holmes, Owens; W. A. Kidd, University; J. P. Lowe, Owens; J. E. McDougall, University; D. W. Main, University; J. T. Marsden, Owens; T. H. Miller, Owens; P. Nelson, University; G. S. Nickerson, Owens; J. H. Renshaw, Owens; T. A. Rothwell, Owens; W. L. Spink, Yorkshire; F. J. de C. Veale, University; B. V. Watkins, Owens; J. D. Whitaker, Owens; H. de C. Woodcock, Yorkshire. Part II: A. Hartley, Owens; T. May, University; F. B. G. Holmes, Owens; W. A. Kidd, University; J. P. Lowe, Owens; J. E. McDougall, University; D. W. Main, University; J. T. Marsden, Owens; T. H. Miller, Owens; P. Nelson, University; G. S. Nickerson, Owens; J. H. Renshaw, Owens; T. A. Rothwell, Owens; W. L. Spink, Yorkshire; F. J. de C. Veale, University; B. V. Watkins, Owens; J. D. Whitaker, Owens; H. de C. Woodcock, Yorkshire.

Part III: S. W. Brook, University; J. B. Carter, Owens; W. W. Clemesha, Owens; F. Radcliffe, Owens; J. H. Ray, Owens; F. C. Scotson, Owens; O. B. Trumper, Yorkshire.

Sanitary Science.—J. H. Crawford, J. H. Crocker, H. G. Garrett, R. M. Littler, A. Sellers, W. H. Sharples, J. B. Wilkinson.

Intermediate B.Sc.—W. D. Braithwaite, Yorkshire; A. H. Burtt, Owens; A. E. Horsfall, Yorkshire; E. Turton, Yorkshire.

Sanitary Inspection Certificate.—F. H. Cable, Manchester Technical School; J. Kewley, Manchester Technical School; H. J. Wood, Manchester Technical School.

Second M.B.—Anatomy and Physiology: E. Baldwin, Owens; R. W. Bolland, Yorkshire; J. B. Clarke, Owens; F. Darlow, Yorkshire; J. W. Dearden, Yorkshire; W. A. Helm, Owens; H. M. Henderson, University; G. R. Howarth, Owens; A. T. Lakin, Owens; J. R. Lambert, Yorkshire; A. Lomas, Owens; N. Neill, Owens; T. O'Neill, Owens; A. M. Pilcher, Owens; and W. H. Tomlinson, Owens. Materia Medica and Pharmacy: F. H. Allen, Owens; G. P. Barff, University; W. H. Bateman, Owens; T. Coyne, Owens; E. Bennett, Owens; R. Bennett, Owens; R. Bleasdale, Owens; W. Bradley, Owens; A. G. S. Broughton, Yorkshire; H. M. Crake, University; H. J. Crompton, Owens; H. R. Cross, Yorkshire; H. Davies, Owens; J. E. Dutton, University; H. Hamer, Owens; J. E. Healey, Owens; J. F. Hodgson, Owens; G. R. Howarth, Owens; E. Hutton, Owens; K. H. Jones, Owens; A. T. Lakin, Owens; E. E. Laslett, University; A. Lomas, Owens; F. E. Marshall, University; J. G. Martin, University; H. Mason, Yorkshire; A. Milne, Owens; H. G. H. Monk, Yorkshire; J. Mooney, Owens; C. H. Moorhouse, Yorkshire; A. E. Normington, Owens; W. F. Oyston, Yorkshire; G. C. Phipps, Owens; A. M. Pilcher, Owens; F. S. Pitt-Taylor, University; J. Prestwich, Owens; G. Renshaw, Owens; J. S. Ross, Owens; S. T. Rowling, Yorkshire; J. E. H. Scott, Yorkshire; A. B. Smallman, Owens; J. E. Smith, University; E. Stott, Owens; W. H. Tomlinson, Owens; G. C. Walker, University; A. Wightwick, Owens; J. H. Willett, University; J. Williamson, Yorkshire; A. A. Wood, University; and D. S. Wylie, Owens.

ROYAL COLLEGE OF PHYSICIANS.

THE ordinary quarterly comitia of the Fellows was held on Thursday, July 26th, at 5 P.M.; Dr. J. Russell Reynolds, F.R.S., President, in the chair.

It was announced that Dr. H. D. Rolleston had been appointed Goulstonian Lecturer, Dr. G. Fielding Blandford Lumleian Lecturer, and Dr. W. S. Greenfield Croonian Lecturer for 1895.

The following gentlemen were then admitted Members: J. K. Barton, L. Freyberger, M.D.; A. J. Hall, M.B.; T. A. Helme, M.D.; C. E. Shelly, M.D.

The licence of the College was granted to 117 gentlemen, of whom only 4 did not present themselves under the regulations of the Conjoint Board.

The diploma in Public Health issued conjointly with the College of Surgeons was granted to the following gentlemen: A. Banks, L.R.C.P. and M.R.C.S.; L. G. Barbeau, M.B.Edin.; D. N. Cooper, L.R.C.P. and M.R.C.S.; W. A. Dow, L.R.C.P. and M.R.C.S.; J. B. Footner, F.R.C.S. and

L.R.C.P.; S. S. Smith, L.R.C.P. and M.R.C.S.; S. H. Snell, M.D.Lond.; H. A. Stonham, L.R.C.P. and M.R.C.S.; J. O. Symes, M.B.Lond., L.R.C.P., and M.R.C.S.; Surgeon-Captain C. J. W. Tatham, M.R.C.S. and L.S.A.; G. A. Watson, M.B.Lond., L.R.C.P., and M.R.C.S.; T. E. White, L.R.C.P. and S.I.; J. Williamson, M.B.Lond., L.R.C.P., and M.R.C.S.

Dr. Robert Harvey, Surgeon General Civil Department, Bengal, was elected a Fellow on the nomination of the Council.

Communications were received from the Royal College of Surgeons relating to the joint affairs of the two Colleges; from the Foreign Office, enclosing a list of addenda to the Netherlands *Pharmacopœia*; from the British Institute of Public Health inviting the College to send delegates to the Congress; and from Dr. K. R. Reutoul, enclosing a petition against the proposed registration of midwives.

A letter was read from Mrs. Mockler inviting the College to purchase her collection of relics and mementoes of Dr. Edward Jenner. The value and importance of the collection were fully recognised, but, as it was understood that a very large sum was named, it was felt that in the present state of the finances of the College it was quite impossible to entertain any proposal on the subject, and a reply to that effect was directed to be sent to Mrs. Mockler.

A letter was read from a lady claiming descent from a brother of Dr. William Harvey praying the College to grant her a small annuity. It was decided to take no action in the matter.

The President, on behalf of the subscribers to the "Sir Andrew Clark Memorial Committee," presented to the College a portrait of the late President, the uncovering of the portrait being the signal for loud applause.

On the recommendation of the Council, the Moxon Medal, which is awarded triennially to one pre-eminently distinguished in observation and research in clinical medicine was awarded to sir William Jenner, Bart., G.C.B., M.D., F.R.S.

On the nomination of the President and Council the following appointments were made:—Censors: O. Sturges, M.D., S. J. Gee, M.D., P. H. Fye-Smith, M.D., T. T. Whipham, M.D. Treasurer: Sir D. Duckworth, M.D. Emeritus Registrar: Sir H. Pitman, M.D. Registrar: E. Liveing, M.D. Harveian Librarian: W. Munk, M.D. Elected Members of the Library Committee: J. F. Payne, M.D.; L. B. Yeo, M.D.; N. Moore, M.D.; W. H. Allchin, M.D. Curators of the Museum: W. H. Dickinson, M.D.; H. C. Bastian, M.D.; C. Bayley, M.D.; N. Moore, M.D. Finance Committee: G. F. Blandford, M.D.; W. Wadham, M.D.; F. Taylor, M.D. Examiners:—Chemistry and Chemical Physics: W. Odling, M.B.; W. R. Dunstan, F.C.S., C. E. Groves, F.R.S., S. Rideal, D.Sc., R. T. Plimpton, Ph.D. Materia Medica and Pharmacy: T. L. Brunton, M.D., D. J. Jones, M.D., S. P. Phillips, M.D., F. Willcocks, M.D., F. G. Penrose, M.D. Elementary Biology: C. G. Parsons, L.R.C.P., P. C. Mitchell, B.A., M.B., T. Oliver, M.D., and F. W. Mott, M.D. Osteology and Anatomy: H. D. Rolleston, M.D.; C. Stonham, F.R.C.S. Medical Anatomy and Principles and Practice of Medicine: P. J. Hensley, M.D., L. B. Yeo, M.D., G. V. Poore, M.D., J. M. Bruce, M.D., F. Taylor, M.D., S. Mackenzie, M.D., W. Ewart, M.D., S. J. Sharkey, M.D., J. K. Fowler, M.D., R. Saundby, M.D. Midwifery and Diseases Peculiar to Women: J. W. Black, M.D., T. C. Hayes, M.D., P. Horrocks, M.D., W. S. A. Griffith, M.D., W. R. Dakin, M.D. Surgical Anatomy and Principles and Practice of Surgery: T. Langton, F.R.C.S., J. N. C. Davies-Colley, F.R.C.S. Public Health: Part I: C. H. Ralfe, M.D. Part II: W. Pasteur, M.D.

A report was received from the representative of the College on the General Medical Council on its proceedings during the session in May last.

The consideration of the reports of the Visitor and Inspector of the General Medical Council on the conjoint final examinations was then resumed. The Registrar gave a summary of the reports in question and of the replies which had been received from the examiners, and it was resolved that no further step need be taken, but that in future the examination in surgery conducted by the College alone should be made similar in all respects to that of the Conjoint Board.

A report from the Committee of Management containing a synopsis for the examinations in Forensic Medicine and Public Health which, under the new curriculum, would be required for the Licence was received and adopted.

The quarterly report of the Laboratories Committee was received and adopted.

In bringing up the quarterly report of the Finance Committee, the Treasurer announced the recent purchase for the College of a miniature (which was handed round) of Dr. Chambers, one of the eight founders of the College, and physician to Henry VIII. The miniature is a copy by Isaac Oliver at the end of the sixteenth century after a picture by Holbein in Vienna.

The annual report of the Library Committee announcing the gift by Lady Clark of 1,000 volumes from the late President's medical library was received and adopted.

The annual report of the Curators of the Museum, containing a reference to the death of Dr. Wigg, was received and adopted.

The quarterly report of the Examiners for the Licence was received and adopted.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel A. Anderson is granted the temporary rank of Surgeon-Colonel, while officiating as Principal Medical Officer of the Madras District.

INDIAN MEDICAL SERVICE.

Surgeon-Captain G. T. Thomas (Surgeon-Major Indian Medical Service), is appointed Surgeon-Major Moulmein Volunteer Rifles.

Surgeon-Major W. Coates (Surgeon-Major Indian Medical Service), is appointed Surgeon-Major North-West Railway Volunteer Rifles, from May 25th, to complete the establishment.

The following Volunteer Medical Officers are appointed Surgeon-Lieutenant-Colonels: Surgeon-Lieutenant O. Baker (Surgeon-Lieutenant-Colonel I.M.S.), to the Rangoon Port Defence Volunteers; Surgeon-Major H. Johnstone (Surgeon-Lieutenant-Colonel I.M.S.), to the Rangoon Volunteer Rifles; Surgeon-Captain E. Lawrie (Surgeon-Lieutenant-Colonel I.M.S.), to the Hyderabad Volunteer Rifles.

Surgeon-Lieutenant W. R. Edwards (Surgeon-Captain Indian Medical Service) is appointed Surgeon-Captain to the Beloochistan Volunteer Rifles.

THE VOLUNTEERS.

The undermentioned Surgeon-Captains are promoted to be Surgeon-Majors, July 21st:—R. J. Garden, 1st Aberdeenshire Artillery; J. Meredith, M.D., 2nd Volunteer Battalion the Prince Albert's (Somersetshire Light Infantry); C. W. Thorp, 2nd Volunteer Battalion the Lancashire Fusiliers.

Mr. Ernest Solly, M.B., is appointed Surgeon-Lieutenant to the 1st Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment), July 21st.

Surgeon-Major H. G. Dyer, M.D., 4th Volunteer Battalion the Hampshire Regiment, has resigned his commission, with permission to retain his rank and uniform, July 21st.

Mr. Robert Crosbie, from Surgeon-Lieutenant, is appointed Captain 5th Volunteer Battalion the Durham Light Infantry, July 21st.

THE YEOMANRY CAVALRY.

Surgeon-Captain H. P. Symonds, Oxfordshire (Queen's Own Oxfordshire Hussars), is promoted to be Surgeon-Major, July 21st.

THE DEBATE ON THE ESTIMATES.

Sir Trevor Lawrence, Bart., M.P., writes: The Secretary of State for War in answer to Mr. Hanbury's strictures on the want of proper peace training and transports and for the Medical service in war, retorted that he had consulted competent "military advisers" on the subject (mentioning two), and they did not endorse the many irresponsible press criticisms on this subject. I would remind him his said advisers scarcely possess the confidence of the medical department, and surely its own head was the best person to consult. When army medical officers are allowed to manage their own affairs, then we may see proper field medical arrangements. But it is so easy for "military advisers" to blame the medical department when a breakdown in the field occurs.

WEARING OF SWORDS IN HOSPITALS.

A.M.S. writes: H.R.H. the Duke of Cambridge, as Commanding the Regular Army, issued an order, which is still in force, against wearing swords at inspections of hospitals. He also limited the number of officers entering the wards to the inspecting and medical officer and one other. This excellent order might with advantage be extended to the Queen's Regulations and so generally followed.

"*" The thoughtful order of His Royal Highness might indeed be universally adopted. The Karachi "incident" was, however, connected with medical officers wearing swords on ordinary parades.

SUBSTANTIVE RANK AND SALUTES.

A Correspondent writes: In a recent communication in the British Medical Journal I find the following remarks: "For instance, guards turn out to combatant officers of the rank of major-general, but medical officers of that rank only receive a field officer's salute. The rank is not recognised." This statement is not quite correct, inasmuch as the surgeon-major-general who was principal medical officer in India for 1885 to 1890 was invariably received as a general officer when inspecting military stations by guards turning out, his substantive army rank being thereby duly recognised.

"*" We are glad to hear it; but, as far as we have learned, we fear our first correspondent's remarks are but too true at other stations.

WOUNDS BY THE NEW BULLETS.

Surgeon-Major will find full information as to "weapons of small calibre" in the following:

(1) *Treatise on Military Small Arms and Ammunition, 1888.* London: Harrison and Sons, St. Martin's Lane, W.C. A new edition of this is in preparation.
(2) *Musketry Instruction, 1894.* Lee-Metford Rifle and Carbine.
(3) *Musketry Instruction 1894.* Martini-Henry Rifle and Carbine. Martini-Metford Carbine. Both of these are published by Harrison and Sons.
(4) *Journal Royal United Service Institution.* Various papers, more particularly those by Captain Nathan in issues of December, 1892; March, 1893; and February, 1894.
(5) *Les Projectiles Modernes au point de vue de la Chirurgie Militaire.* Berlin, 1894. Libraire de August Hirschwald, 68, Unter den Linden. Prepared by Minister of War. With 17 plates.
(6) *Études Expérimentales sur l'Action du Projectile Cuirassé du Fusil Mannlicher.* Par le Docteur A. Demosthen. Bucharest, 1894. Gobl Fils, Passage Romain, No. 12. With 120 plates.
(7) Delorme's *Traité de Chirurgie de Guerre.* Paris: Felix Alcan, 108, Boulevard Saint Germain.
(8) *Gunshot Injuries.* By Sir Thomas Longmore. New edition in preparation. London: Longmans Green and Co.

Inebriate Wards.—The Conseil Général of the Seine has decided to erect a large asylum at Ville Evrard. The establishment is to include a special quarter for the accommodation of 500 male inebriates. This will be the first institution of the kind established in France.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

VITAL STATISTICS OF LONDON DISTRICTS DURING THE SECOND QUARTER OF 1894.

In the accompanying table will be found summarised the vital and mortal statistics of the forty-three sanitary districts of the metropolis, based upon the Registrar-General's returns for the second or spring quarter of this year. The mortality figures in the table relate to the deaths of persons actually belonging to the various sanitary districts, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the various sanitary districts in which the patients had previously resided.

The 32,007 births registered in London during the three months ending June last were equal to an annual rate of 29.5 per 1,000 of the population, estimated at 4,349,166 persons in the middle of this year. In the corresponding periods of the preceding five years, 1889-93, the birth-rate averaged 32.1 per 1,000; and the rate last quarter showed a marked further decline from that recorded in the second quarters of recent years. The birth-rates last quarter in the various sanitary districts showed, as usual, wide variations, owing principally to the differences in the sex and age distribution of the population. In Kensington, St. George Hanover Square, St. James Westminster, Hampstead, St. Martin-in-the-Fields, London City, and Lee the birth-rates were considerably below the average; while in St. Luke, Bethnal Green, Whitechapel, St. George-in-the-East, Mile End Old Town, Newington, Bermondsey, and Plumstead the birth-rates showed a marked excess.

The 18,417 deaths of persons belonging to London registered during the quarter under notice were equal to an annual rate of 17.0 per 1,000; this death-rate was, with one exception, lower than in any corresponding period on record, and as much as 2.1 per 1,000 below the average rate in the June quarters of the preceding five years, 1889-93. The lowest death-rates in the various sanitary districts were 9.3 in Hampstead, 9.6 in Stoke Newington, 10.9 in Plumstead, 11.8 in Wandsworth and in Lee, 12.5 in Lewisham (excluding Penge), and 13.1 in St. James Westminster; in the other districts the rates ranged upwards to 20.9 in St. Luke and in Mile End Old Town, 21.3 in St. Olave Southwark, 22.2 in Whitechapel, 22.5 in St. George in-the-East, 24.1 in St. George Southwark, 24.2 in St. Saviour Southwark, and 25.6 in Limehouse. During the quarter under notice 3,577 deaths were referred to the principal zymotic diseases in London; of these, 34 resulted from small-pox, 1,743 from measles, 284 from scarlet fever, 644 from diphtheria, 607 from whooping-cough, 126 from different forms of "fever" (including 1 from typhus, 119 from enteric fever, and 6 from simple and ill-defined forms of continued fever), and 139 from diarrhœa. These 3,577 deaths were equal to an annual rate of 3.3 per 1,000, a higher rate than in the corresponding period of any of the preceding nine years, and 0.8 per 1,000 above the average rate in the June quarters of the preceding five years 1889-93. The lowest zymotic death-rates during last quarter in the various sanitary districts were 0.5 in Stoke Newington, 0.7 in St. Luke, 1.3 in Woolwich, 1.4 in Lee, 1.5 in London City, 1.8 in Plumstead and in St. George Hanover Square, and 1.9 in Hampstead; in the other districts the zymotic death-rates ranged upwards to 5.3 in Rotherhithe, 5.6 in Limehouse, and in St. Olave Southwark, 5.7 in Mile End Old Town and in St. George Southwark, 6.1 in Fulham, and 6.6 in St. Saviour Southwark.

Thirty-four deaths from small-pox of persons belonging to London were registered during the three months ending June last, of which 8 belonged to Poplar, 4 to Pancras, 3 to Bethnal Green, and 2 each to Islington, Newington, and Camberwell sanitary districts. Measles showed the highest proportional fatality in Fulham, Limehouse, Mile End Old Town, Poplar, St. Saviour Southwark, St. George Southwark, Newington, St. Olave Southwark, Rotherhithe, and Battersea; scarlet fever in Marylebone, Hackney, Limehouse, Greenwich, Woolwich, and Plumstead; diphtheria in Paddington, Fulham, Marylebone, Bethnal Green, St. George-in-the-East, St. George Southwark, Bermondsey, and

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Distribution of Deaths occurring in Public Institutions, during the Second Quarter of 1894.

SANITARY AREAS.	Estimated Population middle of 1894.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Deaths of Children under 1 year of age to 1,000 births.
LONDON	4,349,166	32,007	18,417	29.5	17.0	3.3	3,577	34	1,743	284	644	607	1	119	6	139	126
West Districts.																	
Paddington	121,583	702	438	23.2	14.4	2.9	89	—	30	5	29	15	—	5	—	4	121
Kensington	167,350	902	661	21.6	15.8	2.3	94	—	57	2	16	15	—	2	—	2	166
Hammersmith	105,696	683	441	25.9	16.7	2.7	72	—	39	2	12	11	—	6	—	2	111
Fulham	110,993	919	531	33.2	19.2	6.1	170	1	109	7	25	22	—	—	—	6	155
Chelsea	99,052	697	417	28.2	16.9	4.0	100	—	53	6	16	16	—	—	1	8	118
St. George Hanover Square	75,033	372	286	19.9	15.3	1.8	33	—	19	4	4	5	—	—	—	1	118
Westminster	54,414	325	283	24.0	18.4	2.0	27	—	18	1	3	2	—	—	—	3	108
St. James Westminster	23,571	121	77	20.6	13.1	2.6	15	—	7	—	3	2	—	2	—	1	132
North Districts.																	
Marylebone	138,554	1,101	652	31.9	18.9	3.1	106	—	39	15	30	13	—	5	—	4	114
Hampstead	75,443	361	174	19.2	9.3	1.5	29	1	10	4	6	8	—	—	—	—	102
St. Pancras	233,739	1,713	1,005	29.4	17.2	2.1	120	4	42	9	24	35	1	3	—	2	123
Islington	331,900	2,348	1,285	28.4	15.5	3.4	284	2	120	23	62	60	—	7	—	10	115
Stoke Newington	34,172	193	82	22.7	9.6	0.5	4	—	—	1	1	2	—	—	—	—	57
Hackney	211,493	1,448	824	27.5	15.6	3.1	161	1	77	24	27	20	—	6	—	6	114
Central Districts.																	
St. Giles	38,144	286	174	30.1	18.3	2.5	24	1	10	—	4	7	—	2	—	—	84
St. Martin-in-the-Fields	13,783	59	61	17.2	17.8	2.6	9	—	7	—	—	1	—	—	—	1	169
Strand	23,179	135	117	23.4	20.2	2.6	15	—	7	—	1	5	—	2	—	—	185
Holborn	32,438	208	157	25.7	19.4	3.1	25	—	5	—	5	10	—	4	—	1	130
Clerkenwell	65,312	531	302	32.6	18.5	2.3	38	—	19	—	8	10	—	—	—	1	132
St. Luke	41,168	427	215	41.6	20.9	0.7	7	1	1	1	2	1	—	—	—	1	117
London City	34,832	134	162	15.4	18.7	1.5	13	—	3	2	1	4	—	1	—	2	201
East Districts.																	
Shoreditch	123,186	1,027	615	33.4	20.0	3.1	96	1	34	12	21	22	—	3	—	3	132
Bethnal Green	129,840	1,153	646	35.6	20.0	4.7	151	3	78	6	33	18	—	9	—	4	140
Whitechapel	75,498	854	418	45.4	22.2	4.3	80	—	40	5	11	19	—	1	—	4	136
St. George-in-the-East	45,360	456	255	40.2	22.5	4.6	52	—	17	3	15	13	—	1	—	2	149
Limehouse	57,000	443	304	31.2	25.6	5.6	59	1	45	12	11	6	—	1	—	4	169
Mile End Old Town	103,242	1,015	564	37.6	20.9	5.7	154	3	77	11	20	27	—	2	2	12	131
Poplar	170,217	1,403	796	33.1	18.8	4.3	183	8	104	9	27	23	—	8	—	4	141
South Districts.																	
St. Saviour Southwark	26,712	162	161	24.3	24.2	6.6	44	—	32	3	6	2	—	—	—	1	185
St. George Southwark	60,060	491	361	32.8	24.1	5.7	85	—	51	5	16	7	—	2	—	4	141
Newington	118,312	1,013	563	34.3	19.1	3.9	114	2	74	8	11	11	—	3	—	5	134
St. Olave Southwark	15,884	89	69	27.5	21.3	5.6	18	—	13	2	—	2	—	—	—	1	124
Bermondsey	84,053	730	429	34.8	20.5	4.7	98	1	47	7	23	12	—	—	—	3	138
Rotherhithe	40,365	324	184	32.2	18.3	5.3	53	—	26	2	14	7	—	1	—	3	136
Lambeth	282,574	2,236	1,186	31.7	16.8	3.0	213	—	104	23	25	37	—	11	—	13	116
Battersea	161,558	1,218	622	30.2	15.4	4.4	178	2	109	9	27	20	—	7	1	4	127
Wandsworth	179,518	1,093	530	24.4	11.8	2.4	108	—	50	6	17	23	—	6	2	4	96
Camberwell	248,893	1,833	974	29.5	15.7	3.6	223	2	107	12	39	54	—	1	—	8	133
Greenwich	173,128	1,320	686	30.6	15.4	2.7	115	—	44	20	19	23	—	8	—	1	120
Lee	38,172	190	112	20.0	11.8	1.4	13	—	—	3	5	2	—	1	—	2	68
Lewisham	79,903	481	249	24.1	12.5	2.2	44	—	18	5	9	8	—	3	—	1	108
Woolwich	42,309	309	168	29.3	15.9	1.3	14	—	1	7	2	2	—	1	—	1	113
Plumstead	59,233	502	161	34.0	10.9	1.8	26	1	—	7	8	5	—	5	—	—	74

Rotherhithe; and whooping-cough in Strand, Holborn, Whitechapel, St. George-in-the-East, Mile End Old Town, and Camberwell. The mortality from "fever" showed no marked excess in any of the sanitary districts.

Infant mortality in London last quarter, measured by the proportion of deaths under one year of age to registered births, was equal to 126 per 1,000, against an average rate of 124 in the corresponding periods of the preceding five years. Among the various sanitary districts the rates of infant mortality were lowest in Westminster, Hampstead, Stoke Newington, St. Giles, Wandsworth, Lee, and Plumstead; while they showed the largest excess in Kensington, Fulham, St. Martin in-the-Fields, Strand, London City, Limehouse, and St. Saviour Southwark.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar General has just issued his return relating to the births and deaths registered in England and Wales during the second, or spring, quarter of this year, and to the marriages during the three months ending March last. The marriage-rate was equal to 12.9 per 1,000 of the population, and with one exception exceeded that recorded in the corresponding period of any of the preceding ten years.

The births registered in England and Wales during the three months ending June last numbered 229,861, equal to a proportion of 29.5 annually per 1,000 of the population, estimated by the Registrar-General to be rather more than thirty millions of persons. This rate was below that recorded in the second quarter of any year since civil registration was established in 1837, and as much as 3.0 per 1,000 below the mean rate in the corresponding period of the preceding ten years 1884-93. The birth-rates in the several counties during the quarter under notice ranged from 23.1 in Westmorland, 23.4 in Rutlandshire, and 24.0 in Surrey to 33.0 in Northumberland, 35.2 in Staffordshire, and 35.3 in Durham. In thirty-three of the largest English towns the birth-rate last quarter averaged 30.4 per 1,000, and was 0.9 above the general English rate. In London the birth-rate was 29.5 per 1,000, while it averaged 30.4 in the thirty-two provincial towns, among which it ranged from 18.1 in Huddersfield, 23.7 in Croydon, and 24.4 in Halifax to 35.3 in Wolverhampton, 35.7 in Sunderland, and 35.8 in Liverpool.

The births registered in England and Wales during the quarter ending June last exceeded the deaths by 102,349; this represents the natural increase of the population during that period. It appears from returns issued by the Board of Trade that 64,206 emigrants sailed during last quarter from the various ports of the United Kingdom at which Government officers are stationed. Of these, 25,184 were English, 3,765 Scotch, and 16,796 Irish. Compared with the mean proportions in the corresponding periods of recent years, the proportions of emigrants from each of the three divisions of the United Kingdom showed a very marked decline.

During the second quarter of this year the deaths of 118,412 persons were registered in England and Wales, equal to an annual rate of 15.2 per 1,000 of the estimated population; this rate was lower than in the second quarter of any year on record, and 3.0 per 1,000 below the mean rates in the corresponding periods of the preceding ten years. In the urban population of the country, estimated at about twenty and a-quarter millions of persons, the rate of mortality during the period under notice was 16.2 per 1,000; while in the remaining and chiefly rural population of nearly ten millions it was 13.0 per 1,000. These rates were respectively 3.3 and 2.6 per 1,000 below the mean rates in the corresponding quarters of the preceding ten years. Among thirty-three of the largest English towns the mean death-rate was 17.4 per 1,000; in London the rate was 17.4 per 1,000, while in the thirty two provincial towns it averaged 17.5, and ranged from 11.5 in Croydon, 12.3 in Portsmouth, and 12.9 in Derby to 19.6 in Manchester, 21.6 in Salford, 22.5 in Wolverhampton, and 22.7 in Liverpool. In sixty-seven other large towns, with an estimated aggregate population of about three and a-third millions, the mean death-rate was 14.6 per 1,000, or 2.8 per 1,000 below the rate in the thirty-three great towns.

The 118,412 deaths registered in England and Wales during the three months ending June last included 4,108 which resulted from measles, 2,325 from whooping-cough, 1,826 from diphtheria, 1,224 from scarlet fever, 1,124 from diarrhœa, 950 from "fever" (including typhus, enteric, and ill-defined forms of fever), and 268 from small-pox; in all, 12,891 deaths were referred to these principal zymotic diseases, equal to an annual rate of 1.72 per 1,000, against an average rate of 1.81 in the corresponding quarters of the preceding ten years. The mortality from measles and diphtheria showed an excess, while that from each of the other principal zymotic diseases was below the average. Of the 268 fatal cases of small-pox, 53 occurred in Birmingham, 34 in London, 28 in West Ham, 16 in Manchester, 23 in Willenhall, and 11 in Hinckley.

The rate of infant mortality, or the proportion of deaths under 1 year of age to births registered, was equal to 121 per 1,000, and was 8 per 1,000 below the mean rate in the corresponding periods of the preceding ten years. In London the rate of infant mortality was 126 per 1,000, while it averaged 136 in the thirty-two provincial towns, among which it ranged from 94 in Derby, 96 in Brighton, and 101 in Portsmouth to 161 in Salford, 166 in Preston, and 177 in Nottingham.

The mean temperature of the air during last quarter at the Royal Observatory, Greenwich, was 53.3° and was 1.0° above the average in the corresponding periods of 123 years; the mean temperature showed an excess of 4.8° in April, and of 0.3° in June, while in May it was 2.3° below the average. The rainfall amounted to 5.00 inches, and was 0.73 of an inch below the average amount.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 5,978 births and 3,409 deaths were registered during the week ending Saturday, July 28th. The annual rate of mortality in these towns, which had been 15.9 and 16.6 per 1,000 in the preceding two weeks, further rose to 17.0 last week. The rates in the several towns ranged from 9.5 in Gateshead and 11.3 in Plymouth to 21.5 in Sunderland, 22.1 in Wolverhampton, and 24.4 in Liverpool. In the thirty-two provincial towns the mean death-rate was 16.9 per 1,000, and was slightly below the rate recorded in London, which was 17.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3.1 per 1,000; in London the rate was equal to 3.6 per 1,000, while it averaged 2.8 in the thirty-two provincial towns, and was highest in Liverpool, Salford, and Sunderland. Measles caused a death-rate of 1.9 in Sunderland and 2.0 in West Ham; scarlet fever of 1.1 in Burnley; whooping-cough of 1.5 in Sunderland; and diarrhœa of 2.8 in Salford, 3.6 in Liverpool, and 4.1 in Leicester. The 73 deaths from diphtheria in the thirty-three towns included 52 in London, 3 in Liverpool, and 3 in Huddersfield. Four fatal cases of small-pox were registered in Birmingham, and one death each in London, Plymouth, and Manchester, but not one in any other of the thirty-three large towns. There were 207 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, July 28th, against 109, 97, and 79 at the end of the preceding three weeks: 182 new cases were admitted during the week, against 28, 17, and 10 in the three preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,198, against 2,099, 2,143, and 2,198 at the end of the preceding three weeks; 241 new cases were admitted during the week, against 277 and 261 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, July 28th, 983 births and 478 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 15.4 and 16.9 per 1,000 in the preceding two weeks, declined again to 16.1 last week, and was 1.5 per 1,000 below the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 12.0 in Perth to 23.3 in Greenock. The zymotic death-rate in these towns averaged 1.7 per 1,000, the highest rates being recorded in Dundee and Perth. The 165 deaths registered in Glasgow included 12 from diarrhœa and 4 from measles. A fatal case of small-pox was recorded in Edinburgh.

LEITH PUBLIC HEALTH AFFAIRS.

LEITH Town Council will shortly proceed to the election of a medical officer, who will begin his duties on October 1st. [illegible] entire time to his office, and shall receive a salary beginning at £400. The inspecting officer of the Board of Supervision has been inquiring into the difficulty as to the removal of the sanitary inspector of Leith. As the result of his visit, a short minute had been agreed to on the part of the subcommittee of the town council, the sanitary inspector, and the inspector of the Board of Supervision, by which the sanitary inspector was to resign and receive £200 in compensation. Thus far the town council has not ratified this arrangement on the ground that the compensation is excessive; the meeting indeed broke up because a quorum had ceased to be present. Further the medical officer has written to say that he continued in office till October 1st, on the distinct understanding that the sanitary officer be removed, and indicates that he now demits of office. To this the Board of Supervision retorts that the medical officer cannot demit office till his resignation has been accepted by the town council. At this juncture the matter stands.

SMALL-POX IN EDINBURGH.

EIGHT cases of small-pox were reported in Edinburgh last week and none in Leith. Nor were there any deaths in either town. The death-rate in Edinburgh last week was again very low, [illegible] while that of Leith was 13.7 per 1,000.

THE NEED FOR ISOLATION HOSPITALS.

DR. S. B. MASON [illegible] in his report shows no real cessation of opinion upon the part [illegible] necessity. It is the duty of the local sanitary authority to provide hospitals for infectious diseases, and [illegible] be well to call the attention of the County Council to the want of such an institution. The guardians are responsible for pauper cases, but if there was an isolation hospital for the district the proper course would be to send to it all pauper small-pox cases at the cost of the Poor law authorities in the sanitary authority decline to accept the charge of such patients. There are [illegible] objections to the treatment of small-pox in workhouses, and [illegible] Government Board [illegible] there [illegible] prejudice to [illegible] being done. [illegible] tramp suffering from [illegible] obtain and apply a [illegible] there seems to have been a tendency to [illegible] removed to the workhouse, with due precautions.

SPECIAL CERTIFICATES IN PAUPER PRACTICE.

IN [illegible] we [illegible] in the BRITISH MEDICAL JOURNAL of April 21st last paper, we [illegible] to say that the guardians have declined to pay 3s. and the [illegible] for the certificate in question, as they consider the giving of [illegible] a district medical officer and 4 Art. 2 (6) No 3 of Consolidated Order, July 24th, 1847.

*** We are still of opinion that it does not come within this Order, which has reference to the sickness of paupers. The patient for whom the certificate was required is described as a healthy child, and we are not aware that it is any part of the duty of a district medical officer to attend a patient in health and solely for the purpose of giving a certificate.

UNUSUALLY LOW DEATH-RATE IN EDINBURGH.

IN a paragraph in the BRITISH MEDICAL JOURNAL of July 21st p. 164, headed as above, the last sentence ought to have [illegible] Edinburgh was hardly ever a safer place for [illegible] safe a place," and not "hardly ever a safe place" as printed.

MEDICAL NEWS.

MR. G. VERE BENSON has been appointed deputy coroner for Middlesex (Western Division), in place of Dr. Wynn Westcott, by Dr. Gordon Hogg, the coroner.

MR. GEORGE HEATON, M.A., M.B.Oxon., F.R.C.S., has been elected honorary surgeon to the General Hospital, Birmingham, in the place of the late Mr. Robert Jolly.

AT the meeting of the American Medical Association held last June in Washington, Sir Spencer Wells was elected as an Honorary Fellow.

DONATIONS AND BEQUESTS.—Dr. John Terry, of Bath, has recently given a donation of £200 to the British Medical Benevolent Fund.

THE Cambridge County Council has appointed Miss Annesley Kenealy, lecturer to the National Health Society, their representative at the Liverpool Congress of Hygiene and Sanitation.

DR. WYNN WESTCOTT, Coroner for the North-Eastern Division of the County of London, has, with the approval of Sir John Hutton, Chairman of the London County Council, appointed Dr. G. E. Yarrow to be his deputy.

AT the sixty-second annual meeting of the Sheffield Public Hospital and Dispensary, held on July 23rd, it was determined to make an immediate appeal for £50,000 for the rebuilding of the hospital.

DR. FRANK ASHBY ELKINS, Senior Assistant Physician to the Royal Edinburgh Asylum, Morningside, has been appointed Medical Superintendent of the Sunderland Borough Asylum.

THE fifth annual report of the Queen Victoria Nursing Institution at Wolverhampton presented to the annual meeting at which the chair was taken by Mr. Vincent Jackson, surgeon to the infirmary, showed that the institution had maintained and extended its work during the year. The staff numbered thirty-two, including twenty-five private nurses, two district nurses working in Wolverhampton, and five probationers in training at various hospitals. The appeal for funds for the erecting of a permanent home has been so well met by the public, that a site has been purchased, and a tender has been accepted for the building. The district nurses in Wolverhampton nursed nearly 500 patients, and the report made by the inspector of nursing sent by the Queen's Jubilee Institute was most satisfactory.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN ROYAL INFIRMARY.—Ophthalmic Surgeon. Applications by August 31st.

BATH EASTERN DISPENSARY.—Resident Medical Practitioner. Salary, £100 per annum, with furnished apartments, coal, gas, and domestic attendance. Applications to Colonel F. V. Eyre, R.A., Honorary Secretary, Rockville, Lansdown, Bath, by August 11th.

BURGH OF LEITH.—Medical Officer of Health. Salary to commence at £350. Applications and testimonials to T. B. Laing, Town Clerk's Office, Leith.

CAMBRIDGE UNIVERSITY.—John Lucas Walker Studentship. Applications to Professor Roy, New Museums, Cambridge, by September 30th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's Inn Road, W.C.—House-Surgeon. Rooms, coals, and light provided. Applications to the Secretary by August 7th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Physicians to In-patients, Physicians to Out-patients, and Pathologist. Forms of applications, to be returned to the Secretary, A. C. Davis, by August 6th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to Eugene Street, Secretary, by August 6th.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications and testimonials to the Secretary before August 29th.

EVANGELICAL PROTESTANT DEACONESSES' INSTITUTION AND HOSPITAL, Tottenham, N.—House-Surgeon. Salary, £40, and board. Applications and testimonials immediately to the Secretary.

GENERAL HOSPITAL, Nottingham.—Senior Resident Medical Officer; doubly qualified. Salary, £120 for the first year, with an addition of £10 a year up to £150, with board, residence, and washing. Applications to the Secretary by September 1st.

GLASGOW MATERNITY HOSPITAL.—Indoor and Outdoor Surgeons. Applications to Arthur Forbes, Secretary, 146, Buchanan Street, Glasgow, by August 8th.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £100 per annum, with furnished apartments, board, washing, and attendance. Applications and testimonials before August 23rd to Committee of Visitors, Knowle, Fareham.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Board and lodging, but no salary. Applications and testimonials to C. W. Carver, Hon. Secretary, by August 18th.

NORTH LONDON CONSUMPTION HOSPITAL, Hampstead, N.W.—Resident Medical Officer; doubly qualified. Honorarium £40 per annum, with board, rooms, etc., in the hospital. Applications to Lionel F. Hill, Secretary, at the office, 41, Fitzroy Square, W., by August 4th.

SUSSEX COUNTY HOSPITAL, Brighton.—House-Surgeon; doubly qualified, unmarried, and under 30 years of age. Salary, £120 rising to £140 per annum, with board, residence, and washing. Applications to the Secretary by August 7th.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House-Surgeon, unmarried and under 30 years of age. Emoluments are a salary not exceeding £30 per annum, with board, washing, and residence. Applications to the Secretary by August 15th.

SWANSEA HOSPITAL.—Resident Medical Officer; doubly qualified. Salary, £100 per annum, with board, furnished apartments, coals, gas, laundress, and attendance. Applications to J. W. Morris, Secretary, 9, Castle Street, Swansea, by August 7th.

WESTERN GENERAL DISPENSARY. Marylebone Road, N.W.—Junior House-Surgeon, unmarried. Salary, £50 per annum, with board and lodging. Applications to the Honorary Secretary by August 6th.

WEST RIDING ASYLUM, Wakefield.—Fourth Assistant Medical Officer. Salary, £100 per annum, rising £10 annually to a maximum of £150, with furnished apartments, board, washing, and attendance. Applications to the Medical Director by August 18th.

MEDICAL APPOINTMENTS.

BOTHWELL, Mr. G. Granville, appointed House-Surgeon at Croydon General Hospital.

CLARKE, Henry R. S., M.R.C.S., L.R.C.P.Lond., appointed Assistant Medical Officer to the Infirmary of the Parish of Birmingham.

DEWHURST, John H., M.A., M.B., B.C.Camb., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Campden District of the Shipston-on-Stour Union.

DUFFETT, Edwin D., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Illogan District of the Redruth Union.

FULLARTON, Dr., appointed Visiting Surgeon for the Treatment of Diseases of the Throat, Nose, and Ear at the Greenock Eye Infirmary.

HEATON, George, M.A., M.B., F.R.C.S., appointed Honorary Surgeon to the General Hospital, Birmingham, in place of the late Mr. Robert Jolly.

PAYNE, Mr. William A., appointed Medical Officer for the No. 7 District of the Barnstaple Union.

WILSON, George R., M.B., C.M.Edin., appointed Medical Superintendent at the Mavisbank Asylum, Lasswade.

WILSON, S. Wesley, L.R.C.P.I., L.R.C.S.I., appointed House-Surgeon to the Dorset County Hospital, Dorchester.

YARROW, G. E., M.D.Heidelb., L.R.C.P.Lond., M.R.C.S.Eng., appointed Deputy Coroner for the North-Eastern Division of the County of London.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

FOSTER.—On July 29th, at Cambridge, the wife of Michael George Foster, M.B., M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

CRESSEY—DAY.—On May 17th, at Nelson, N. Zealand, George Henry Cressey, M.R.C.S., L.R.C.P.Lond., to Mary Pelham, widow of the late J. C. N. Day.

DRUITT—CHIENE.—At St. Thomas's Church, Edinburgh, by the Rev. W. W. Hough, brother-in-law of the bridegroom, and the Rev. W. L. Holland, Arthur Druitt, M.A.Oxon., youngest son of the late William Druitt, F.R.C.S., of Wimborne Minster, to Isabella Barbara, elder daughter of John Chiene, Professor of Surgery in the University of Edinburgh.

VAN RYCK DE GROOT—PARKE.—On Wednesday, July 25th, at the Parish Church, Fulham St. Mary, by the Rev. W. H. Cleaver Stanley, Henry Reginald, Surgeon H.M. Colonial Government, and youngest son of E. B. R. M. Van Ryck de Groot, Esq., of Georgetown, British Guiana, to Adelaide Rebecca, youngest daughter of William Parke, Esq., of Fulham St. Mary, Norfolk, and Brome, Suffolk. [No cards.]

DEATH.

WINTER-FISHER.—On the 23rd May last, of consumption, while on a voyage to Australia for the benefit of his health, Stephen Henry Baker Winter-Fisher, aged 24, only son of the late Stephen Winter-Fisher, M.D., and Mary, his widow, late of 136, Marine Parade, Brighton, but now of Campton Grange, Shefford, Beds. Deeply mourned.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not later than Midday Post on Wednesday. Telegrams can be Received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal and not to his private house.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any Circumstances be Returned.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

H. H. asks for a suggestion for the treatment of a troublesome case of pruritus ani, for which there is apparently no cause beyond a slight fissure, which, however, is now better. The itching, however, still remains. He has tried cocaine, hazeline, boric acid, etc., with only temporary benefit.

Medical Aid Societies.

A. B. C. asks whether any of the licensing bodies object to licentiates holding medical aid appointments (that is, attending women and children for very low fees).

*** We believe that the Royal College of Surgeons has passed a resolution condemning the practice in question. Our correspondent should communicate directly with any other of the licensing bodies whose qualification may be concerned.

ANSWERS.

T. Cumming Asher.—See under heading of "Cheap Temperance Drinks," British Medical Journal, July 28th, p. 209.

Removal of Nitrate of Silver Stains.

Dr. Walter Laitey (Southam) recommends for this purpose that the skin should first be painted with tincture of iodine, and liq. potassæ should then be applied.

British Army Ambulances.

Dr. Manual Salazar will find information relating to various kinds of ambulance and other transports as used in the British Army in the *Manual of Ambulance Transport*, by Sir T. Longmore, published by Harrison and Sons, St. Martin's Lane; 2nd edition, edited by Surgeon-Captain Morris, 1893, price 6s.

Appliance for Umbilical Hernia.

Dr. Maurice G. Evans (Caerphilly) writes: In reply to Mr. W. F. Jordan's inquiry in the British Medical Journal of July 21st, I recommend Bailey's abdominal belt before all others for the condition of things he describes. A pad can be easily attached to restrain the hernia. However, I believe Bailey has a belt for that purpose similar to the one advertised in the same journal with pad.

Mr. R. Rauschke (surgical instrument maker, 35, Bond Street, Leeds) writes to say that he makes appliances for such cases on the principle of the late Mr. T. Eagland.

Science Books for Artisans.

C. C. asks to be recommended elementary works on hygiene and on physiology suitable for men of the class of artisans.

*** Dr. Willoughby's *Public Health and Demography* and Professor Huxley's *Lessons in Elementary Physiology*, companion volumes published by Messrs. Macmillan at 4s. 6d. would probably best meet our correspondent's requirements.

"Tennis" or "Golf" Arm.

Dr. Percy Newell (Crowborough, Sussex) writes: In answer to your correspondent "Obelisk," I would refer him to the British Medical Journal, 1888, vol. ii., p. 742, where he will find a contribution from Dr. C. R. Illingworth on "tennis leg," which I should say was an analogous affection. The treatment recommended is to find the exact site of pain, pass a stout, sharp needle down into the substance of the affected muscle—avoiding superficial veins of course—and the relief is immediate and permanent. In a case occurring in the arm some twelve months ago in my own practice I tried this with satisfactory result. Other treatments were tedious, and did not seem to relieve much.

NOTES, LETTERS, Etc.

Immoral Massage Establishments.

The British Medical Journal, says the *Christian*, is shedding light upon a grave social scandal in the use that is made of some houses where massage is practised as a cure. They are traps for the young women who have spent their last penny in learning the art, and who, engaged ostensibly for honest and useful work, are really compelled to submit to a life of sin. If they have conscientious scruples they are discharged. Their pay is nominal, but they are at liberty to accept presents. Our contemporary is of opinion that nothing could be done in the way of registering massage establishments "unless the ground had been previously cleared of what is undoubtedly a great social scandal." Besides the danger to these young women, one cannot overlook the danger to good people who might ignorantly go to one of these houses for treatment. To us it is a new pitfall among innocent things.

One daily and two weekly papers having called attention to the objectionable character of some of the massage establishments in London, says the *Bradford Observer*, it might be expected that the police would have taken action on the subject. Unfortunately, Scotland Yard does not care to take advice from the press, and as a matter of fact, although the police are quite well aware of what is going on, they have some difficulty in taking proceedings, inasmuch as the massage houses are conducted under similar medical sanction. It is expected, however, that as soon as the superintendents send in their reports on the subject something will be done. The houses of the worst class are those in the West End. One of the most notorious is not far from Regent Street.

The British Medical Journal has not unnaturally something to say in its current number, says the *Newcastle Daily Chronicle*, on the subject of the recent scandal respecting some massage establishments in London. To avoid any likelihood of similar scandals in the future our medical contemporary suggests a simple remedy. It is that male operators in massage should be employed for patients of their sex and female operators also for patients of their sex, with as rigid an observance of the division as in the case of bathing machines at English sea side resorts. The remedy is simple and efficacious enough, but the mischief of it is that there are more masseuses than masseurs, while it has also been found that the masseuse is generally more dexterous and clever at the business.

A New Medical Defence Association.

The *Financial News* of July 21st contains the following: "New Medical Defence Association, Limited. Registered July 10th. Capital, £10,000, in £1 shares. Objects: To protect and advise medical men, members of the Company."

The Children of the Deer.

We confess to a certain sympathy with Mr. John Burns in the protest which he raised at the last meeting of the London County Council against the proposal to introduce deer into Victoria Park. No one can hesitate about the charming addition to the æsthetic delights of such a park as that at Richmond, given by the presence of the deer, who wander freely over ample space; but ample as the space may seem on certain days at Victoria Park, on other days the place is crowded to the utmost. Deer should be contemplated at a distance; to come to close quarters with them almost verges upon cruelty, and certainly is opposed to their shy and retiring nature. The great objection, however, to the proposal is that it will diminish the space now open for recreation. Even flower beds and shrubberies, beautiful as they are, tend to curtail the area of the playgrounds, and, after all, the real benefit of open spaces, outside and beyond their action as mere ventilators, lies in their being places in which to play, not merely to saunter round and round, but to use the muscles in exercises which, however violent and exhausting they may seem, at any rate are free, untrammelled by the necessity of keeping pace with a machine, or of doing a certain work within a certain time. The best work done by our parks is in giving to children and young people some opportunities for outdoor exercise, and we fear that the free *abandon* of play, as distinct from the monotony of work, are largely incompatible with both flowerbeds and deer enclosures.

The Diagnosis of Tubal Pregnancy before Rupture of the Tube.
Mr. Lawson Tait (Birmingham) writes: Will you permit me to repudiate the views attributed to me by Dr. J. W. Taylor in The British Medical Journal, July 21st, p. 129? I sum up what I have always taught in p. 457 of my book on *Diseases of Women and Abdominal Surgery*, by saying that it "is messy, because the patients do not claim our attention." Personally I have no chance of making such a diagnosis, because I am called to cases of tubal pregnancy only after the onset of severe symptoms. That the patients have no symptoms before rupture is a rule which demand examination is proved by this, that in all my exceptional experience the existence of the lesion was suspected before rupture in one case only, and the patient in that case was the wife of a medical practitioner in Yorkshire who, anxious to know if his wife was pregnant (and for no other reason), examined her and found an enlarged tube. Curiously enough, two friends who were summoned to his assistance discarded his diagnosis, and it was not till some time afterwards that I confirmed his opinion by removing the ruptured tube. On this subject I am frequently misrepresented, and I should be very grateful if critics would really read what I have said, and not take opinions second-hand.

Sanitation in Egypt.

Pyramid writes: Sir W. T. Marriott has done good service to the cause of sanitation in Egypt by his article in the *Pall Mall Gazette*. With a cash balance amounting to upwards of three and a half millions (£E.3,554,000) which, to quote Lord Cromer, "in one form or another belongs to the Egyptian Government," it is difficult to understand why an undertaking of such extreme urgency as the drainage of Cairo should be allowed to fall into the limbo of Oriental procrastination. In January,

1890, a scheme for the complete sewerage of the city was proposed by Mr. Baldwin Latham, the total of his detailed estimate being £565,700; but although an International Commission subsequently characterised the project as *une solution élégante du problème qui est posé*, it was nevertheless rejected chiefly on the score of being *très coûteux*. The Commissioners then suggested a plan of their own which, somewhat illogically, they said, would necessitate an expenditure of, at most, £500,000; but on subsequent examination it was found that this vague estimate was far too low, and that to carry out their ideas the sum required would be £E.1,010,000. In one of his annual reports (1892) Lord Cromer says that as regards a proper system of drainage for Cairo, "the financial difficulty, which at one time appeared almost insuperable, has been overcome," but notwithstanding this authoritative statement the actual commencement of the work seems as far off as ever. As Dr. Rogers Pasha observes, in the report which Sir William Marriott says he cannot find in any Blue Book, "the whole subject bristles with difficulties, and will have to be most carefully considered and dealt with." This is perfectly true, but at the same time it is in order to cope with subjects bristling with difficulties that the English are in Egypt, and further procrastination may lead to an accusation that we are finding the task too much for us.

Post Hoc Ergo Propter Hoc.

Dr. Henry Liston (late M.O.H. Soultwick, Sunderland) writes: In a note in the British Medical Journal of July 21st, Dr. Ashmead, of New York, draws attention to "Preventive Inoculation of Immunised Scarlet Fever Blood Serum." He states that one of his sons, aged 7, took scarlet fever. He inoculated the others, aged 2 and 5, with blood serum, drawn from another child, aged 9, who had had scarlet fever six years before. This is a very interesting experiment, but I hardly think that blood serum drawn from anyone would, six years after an attack of scarlet fever, render persons exposed to infection immune. For practical results, and to show that it would do so, only one child should have been inoculated, the other child being used as a control experiment. Dr. Ashmead further states that there was "no real isolation; separate bedrooms during the night, but free intercourse during the day." It does not follow that if the children had not been inoculated they would have taken scarlet fever. How often do we find, especially in a working-class population, one child in a family having scarlet fever and the rest of the family, although living in two or even one room escaping? Scarlet fever may be infectious during the whole course of the disease, but the most infectious period is when desquamation sets in.

The Card of a Fourpenny Dispensary.

A correspondent sends us the following card, which we print as an example of what not to do. We have not yet seen a card of a threepenny dispensary, but at the present rate of descent we may expect that fee for "advice and medicine" to be advertised very shortly. What the irreducible minimum may be we cannot say, but even the most short-sighted practitioner can hardly go much lower than the depth now reached:—

SURGERY:

71, Long Lane, Boro'.
Near the "Coach and Horses."

Consultation Hours:

Mornings ... ... 10 to 1. Evenings ... ... 6 to 9.30.

Sundays:

Morning ... ... 11 to 12 Evening ... ... 7 to 9.

Fees:

Advice and Medicine ... ... 4d.
Visit and Medicine... ... ... 1s.
Attendance and Medicine per week at Patient's Home, from 2s. 6d.

Midwifery from 10s. 6d. Vaccination. Teeth extracted.

London and Manchester Industrial Assurance Company.

Anti-Sweat and Dr. James Busfield.—Our correspondents do not seem quite to appreciate the above assurance society. We would specially point out that we do not by any means approve, except in the most qualified manner, of the work of this society; at the same time it is only right to show the difference between a society of this kind and an ordinary medical aid society. With regard to the remarks of "Anti-sweat," we would point out that we believe he is inaccurate in stating that the medical officers of the London and Manchester Assurance Company are paid 2d. per week only. We have before us one of the quarterly lists sent regularly to each medical officer, on which the names of members entitled to attendance appear. This distinctly states that 1s. will be paid per quarter by the society for each member on the list. This is by no means munificent payment, but it must not be forgotten that it is at least as much as that paid by the ordinary club or benefit society among the working classes. With regard to the acceptance of members without any medical examination, we understand that the society will always strike off the name of any member who has joined when suffering from disease on due notice being given by the medical officer, so that the latter is not bound to keep on his list such members. As to the want of wage limit and the "touting" carried on by agents of the society, often, as our correspondent shows, in the name of the medical officer of the district, these, we confess, are serious faults, and we have always condemned them. No medical officer of the society ought, under any circumstances, to allow his name to be used in this manner; nor, if he does so, can he wonder if he comes under the ban of his professional brethren. We believe our correspondent is mistaken in attributing the commercial success of the London and Manchester Assurance Company solely to its medical department. Doubtless this affords a considerable attraction to its policy holders, but probably its chief success, from a pecuniary point of view, arises from the inordinate number of "lapses," which take place invariably in the ordinary business of assurance companies of this kind.

Treatment of Anthrax in Man.

Dr. J. D. Mortimer (Horley, Surrey) writes: In reference to the case of anthrax reported in the British Medical Journal of July 14th, I may mention that last year I employed successfully the remedy of excision in three instances, one being in an advanced stage. I believe this method is still recommended by those who in this country have the best opportunities of forming an opinion, and, indeed, it is considered that to do otherwise is running a dangerous risk. There are no doubt rare instances in which recovery takes place even if no treatment at all be adopted; and although I would by no means imply that the local treatment in the case recorded was altogether inoperative, I think it is evident that no such marked and immediate benefit resulted as may be generally expected after excision. I would also draw attention to the fact that as outbreaks of the disease have in recent years often occurred amongst cattle, cases from inoculation may be met with in any part of the country, or any kind of practice. This should be borne in mind as bearing upon early diagnosis.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(**A**) Messrs. G. Abbot and Sons, London; A. M. C.; Anonymous; Mr. F. Adam, Builth Wells; Dr. R. Anderson, Spennymoor; Mr. H. G. Ashwell, Nottingham. (**B**) Dr. G. H. Bristow, London; Mr. J. Broom, London; Mr. A. H. Blake, Digby; Mr. C. E. Bernard, London; Mr. G. V. Benson, Chiswick; Mr. E. W. Bliss, Birmingham; J. H. Bridges, M.B., London; Mr. W. C. Burns, Waltham Cross; Mr. W. S. Byrne, Brisbane; Mr. W. H. Bull, Stony Stratford. (**C**) Constant Reader; Mr. A. Cory, Geneva; Mr. W. S. Caine, M.P., London; F. W. Clark, M.B., Lowestoft; Mr. H. N. Custance, London. (**D**) Domen Belts Company, London; Mr. C. F. Dowsett, London; Mr. R. Denman, Bournemouth; Messrs. Down Brothers, London; W. Dudley, M.B., Birmingham; Mr. W. Dalton, Blackpool. (**E**) Mr. E. S. Edwards, Tunstall; Dr. A. Eddowes, London; Mr. J. Ellis, Sandown. (**F**) Dr. W. H. Fenton, London; F. C.; Dr. E. Long Fox, Clifton; Mr. G. Fischer, Jena; Mr. G. H. Fosbroke, Worcester; Dr. P. Flemming, London; F.R.C.S.E. (**G**) Mr. F. Goodridge, Paignton; Mr. J. A. Galloway, Glasgow; Mr. S. Greenwood, London; Mr. F. R. Giddy, Scarborough. (**H**) Mr. H. Hiscott, London; W. A. Hatton, M.B., Bolton; Dr. L. Henry, Melbourne; Mr. H. Hine, Brough; Mr. W. R. Huggard, Davos Platz; W. Hardman, M.B., Blackpool; Mr. F. P. Hearder, Wakefield. (**J**) Mr. H. C. Jones, London; J. W. B. (**K**) Miss A. Keneály, Watford. (**L**) Mr. S. Lane-Poole, Bedford; Dr. L. J. H. Langdon-Down, London; Dr. R. A. D. Lithgow, London; Dr. E. Liveing, London; Dr. W. Lattey, Southam; L. N. N.; Messrs. Lever Brothers, London; Messrs. E. B. Law and Co., London. (**M**) G. H. Mapleton, M.B., St. Kitts; J. B. McLaren, M.B., Manchester; Mr. R. R. Martin, London; Member B. M. A.; J. D. Mortimer, M.B., Horley; Mr. T. Maltby, London; Dr. J. A. Mackenzie, London; Member; Mr. A. A. Macfarlane, Bournemouth. (**N**) Mr. J. T. Neech, Tyldesley; Mr. W. D. Newton, Tottenham; Mr. W. G. Nash, Bedford. (**O**) Mr. E. M. O'Connor, Kingstown; Mr. D. Owen, Manchester. (**P**) Mr. A. Paxton, Bedford; Dr. H. H. Phillips, Reading; A. J. Prentice, M.B., Lanark; Police Surgeon; Dr. A. Paterson, Bridge of Allan; Professor G. H. Philipson, Newcastle-on-Tyne. (**R**) Dr. J. C. Russel, Southport; Dr. R. R. Rentoul, Liverpool; W. Rivington, M.B., London; Mr. F. W. Rolfe, London; Mr. A. Roche, Dublin; Dr. J. M. Rhodes, Manchester; Mr. J. E. Ruck, Betley; R. S. (**S**) Mr. T. S. Sutton, Canterbury; Mr. G. Smith, London; Messrs. Sumner and Co., Liverpool; Messrs. Squire and Son, London; Mr. W. H. Sims, Washington; Mr. W. T. Stead, London; Mr. E. Street, London; Mr. M. Sheild, London; Mr. T. Smith, London; Mr. W. W. Stocker, London; Miss B. M. Smith, Kelso; Messrs. W. Schacht and Co., London. (**T**) Mr. G. Tocher, Brighton; Mr. A. S. Tindall, London; Dr. A. Taxford, Boston; Mr. C. S. Tomes, London; Mr. H. S. Taylor, Guildford. (**W**) Mr. T. M. Watt, Hovingham; Mr. V. H. W. Wingrave, London; Messrs. Warrick Brothers, London; Mr. G. V. Worthington, London; Mr. H. Waite, Armley; Mr. C. Whitehouse, London; Mr. W. S. Wesley, Dorchester; Mr. G. T. Willan, Melton Mowbray; Dr. F. J. Waldo, London; Dr. C. Wakefield, London; Mr. F. F. White, Coventry; W. (**Y**) Dr. G. E. Yarrow, London; etc.

BOOKS, Etc., RECEIVED.

Bibliographie der klinischen Helminthologie. Hefte 7-8. Von Dr. J. C. Huber. München: J. F. Lehmann. 1894.

Report on Dry Cells of the Obach and E. C. C. Types. By Professor A. Jamieson. London: Siemens Brothers.

De l'Agrandissement Momentané du Bassin (Rapport lu au Congres International des Sciences Médicales tenu a Rome). Par Professor A. Pinard. Paris: G. Steinheil. 1894.

Précis de Clinique Thérapeutique. Par Dr. A. F. Plicque. Paris: G. Steinheil. 1894.

Vade-Mecum du Praticien: Diagnostic et Traitement des Maladies Internes. Par Dr. F. Roux. Paris: G. Steinheil. 1894.

The Sanitary Arrangement of Dwelling Houses. By A. J. Wallis-Taylor. London: Crosby Lockwood and Son. 1894.

*** In forwarding books the publishers are requested to state the selling prices.

ADDRESS IN PUBLIC MEDICINE

BY

SIR CHARLES A. CAMERON, F.R.C.S.I.,

Professor of Chemistry and Hygiene, Royal College of Surgeons in Ireland; M.O.H. Dublin.

At the Annual Meeting of the British Medical Association at Bristol, August, 1894.

SANITARY SCIENCE AND THE PREVENTION OF ZYMOTIC DISEASE.

It has been said humorously, yet not without a touch of sarcasm, that the physicians desire for their patients great longevity and frequent illness. Some years ago a writer in the *Scotsman* objected to the appointment as medical officers of health of medical men engaged in practice on the ground that "no sane body of men can bring themselves to believe that medical practitioners, whose livelihood depends upon sickness, are likely to exert themselves in exterminating it." To such an audience as that which I have the honour of addressing, no arguments or proofs are necessary to refute this writer's assertion. Those of us who devote ourselves solely to curative medicine are as anxious as those who practise only preventive medicine to prolong human life and avert disease. The desire to discover and eradicate the causes of disease, so as to convert man almost into a race of terrestrial immortals, has for centuries been characteristic of the professors of medicine. Even in our own time we witness the revival of the old idea of the *elixir vitæ* in the testicular juice of Brown-Séquard, and in Malincanico's search for the bacillus of senility.[1] Are there not enthusiasts amongst us who, grasping the conception of Weismann,[2] that there are somatic unicellular organisms endowed with the potentiality of everlasting life, believe in the possibility of conferring upon the multicellular organism, man, the immortality of the unicellular organisms which form portions of every living being?

But leaving this region of speculation, and dealing only with solid facts, we may claim that medical men stand pre-eminent amongst those who devise means for prolonging life and lessening sickness. They were the first to show that pure water was indispensable to health, that the efficient drainage of houses and of towns was a prime requisite to the maintenance of the health of communities, that overcrowding spread disease if it did not develop it, that the high mortality associated with many industrial occupations might be lessened by the adoption of certain precautions. The lives saved by the adoption of Jenner's sublime discovery of vaccination amount to millions. Why is bacteriology so eagerly cultivated by thousands of medical men, and by many of them with no view to pecuniary reward? Partly, no doubt, for the desire of enlarging the boundaries of the science of biology, but chiefly as a means of counteracting disease. Prophylaxis wholly, and etiology chiefly, are studied for the purposes of preventing disease, and consequently of diminishing the employment of the medical practitioner. No doubt some work for medical men is afforded by the appointment, in recent times, of officers of health; but this kind of work engages the time of but a very limited number of the profession.

So important do medical men regard preventive medicine that they have constituted special diplomas for proficiency in that department, and many who hold them have no intention of becoming medical officers of health. Plato, in his *Republic*, shows a high appreciation of public hygiene and State medicine. The government of a community was, in his opinion, incomplete unless a State physician took an active part in it.

In the government of modern communities the medical man plays, even from a public health point of view, a very subordinate part in these countries at least. When they are appointed on public boards—which is rarely the case—they usually occupy the lower positions. No medical man has a place in the Treasury, the Home Office, the Colonial Office, the Council for India, the Board of Trade, or the Charity Commission. He is never made even a Master in Lunacy. The only medical man who occupies a position which gives him a direct share in the government of any great department of the State is Sir Walter Foster, Parliamentary Secretary to the Local Government Board. There are upwards of 250 Privy Councillors in Great Britain and Ireland, but only one of them has a medical qualification, namely, Professor Huxley. In Germany medical men are constantly created Privy Councillors, and the government of that empire is largely in the hands of those who possess the highly prized titles of professor and doctor. The Prime Minister of Hungary is Dr. Alexander Wekerle. In Ireland medical men seem to have a better chance of attaining to the higher posts in the public departments. One of the five members of the Local Government Board must be a medical man. Two of the Commissioners of Control of Lunatic Asylums are physicians, and they constitute the inspectors of those institutions. The Registrar-General was once a practising physician.

As the present tendency in the social world is the upheaval of the lower strata of society towards its "upper crust," as the working man has become a senator and mechanics are being metamorphosed into justices of the peace, we may hope soon to find some of the members of our profession following in the wake of Sir Walter Foster and taking high places in the Executive Government of the country. Hitherto we have only been permitted to suggest measures for the promotion of the public health; it is time that we should have a more direct influence in sanitary legislation and in the administration of the sanitary laws. There are many medical men eminently fitted by their culture, experience, and ability to hold the office of Minister of Public Health—aye, even with a seat in the Cabinet!

WHY IS LIFE IN TOWNS SHORTER THAN IN THE COUNTRY?

In 1893 the death-rate in England and Wales was 19.17 per 1,000 persons living. In the thirty-three largest towns the rate was 21.57. In England and Wales, less the thirty-three towns, the rate was 17.9. The ages of the people in the towns are more favourable as regards mean expectation of life, and the proportion of females—who have in the country at large a lower death-rate than males—is greater in the towns. Corrected for age and sex distribution, the death-rate in the thirty-three towns was 23.32, and in the rest of the country 17.62. Thus, the mortality rate in the towns was 5.7 per 1,000 in excess of that in the rest of the country. The difference between the rural rate and that in some of the towns was appalling. For example, the difference as regards Liverpool amounted to no less than 13.17 per 1,000. In that city there died, in 1893, two persons for every death in equal population in many parts of England. For example, in the outer ring of London, population 1,543,296, the death-rate in 1893 was only 15.4.

Why has one British town twice as high a mortality as another, and why is the average duration of life so much greater in rural districts than in the towns? These are problems of momentous import, the solution of which should be the aim of the sanitarian. The causes are, no doubt, highly complex, and many of them are local. Some of them are easily discoverable—such as overcrowded tenements, ill-ventilated houses, defective sanitary accommodation and drainage, accumulations of filth, ill-kept slaughter-houses and dairy-yards, noxious effluvia from factories and workshops, and imperfect combustion of fuel. The close approximation of persons to each other in towns favours the spread of infective diseases. But with all our knowledge of these causes of high death-rates, we still are at a loss to account for great differences between towns which appear to be placed under almost identical conditions as regards their salubrity.

Amongst the poor in all towns birth and death-rates stand highest. Their greater fecundity and high marriage-rates compensate for their enormous mortality. The poorer a man is the more likely is he to marry. It is a remarkable but

[1] Trattato sulla Possibilità della Prolongazione illimitata della Vita Umana.

[2] *Weismann's Essays*. Translated by E. B. Poulton, S. Schönland, and C. E. Shipley. Clarendon Press, Oxford, 1889.

undeniable fact that a man's desire for matrimony is in the inverse proportion to his ability to maintain a family.

In the city of Dublin the birth-rate in 1893 was 32 per 1,000 of the population, and the death-rate was 29.1. In the townships which surround the city, and in which the proportion of the poorer classes is small, the birth-rate was 18.7, and the death-rate 21.

In Dublin, in 1893, 15,579 persons were, together with their families, classified as "professional and independent." Their general death-rate was 21.6; their zymotic death-rate 1.3; 81,469 persons belong to the middle class; their death-rate was 20.3, and their zymotic death-rate 2.7. There are 83,472 labourers, hawkers, porters, etc., and their families; their death-rate was 32.1, and their zymotic death-rate 4.4.

The death-rate of children under 5 years old in those classes was as follows: Independent and professional, 19.5 per 1,000: middle class 43.4; hawkers, porters, labourers, etc., 104.

These figures show the appalling mortality of the children of the poor. It is the high mortality of infants which chiefly raises the urban death-rates. If the deaths of children under 5 years old were excluded, there would only be a difference of about 2 per 1,000 between the town and country death-rates.

A large proportion of the lower classes in the towns is underfed, insufficiently clothed, and badly lodged. These unfavourable conditions tell most severely upon the very young, amongst whom I have shown death's harvests to be so abundant. It is not so much the infective diseases which thin the ranks of the toilers of the great towns—it is constitutional maladies which mow them down. The means for lessening the excessive mortality of the very poor do not lie altogether in the domain of public medicine. They must also be worked out by the political economist, aided by those philanthropists whose pecuniary resources enable them to gratify their benevolent instincts. Just in proportion as the people are well fed, clad, and lodged, will they, by reason of their consequent higher vitality, be able to resist the assaults of both constitutional and infective diseases.

Comparative Poverty of Towns in Relation to Death-Rates.

As higher death-rates prevail amongst the poor than obtain in the case of the well-to-do classes, an undue proportion of very poor people in a town must necessarily cause a higher death-rate than where the poor are comparatively few. This will be the case even where the general hygienic conditions of both towns are much alike.

Mr. Sergeant, in a paper published in the *Journal of the Statistical Society* for June, 1864, argues that in estimating the death-rate of Birmingham, as compared with that of London, an allowance of 1.5 per 1,000 should be made in favour of the former city, on account of the comparatively small proportion of the affluent classes which inhabit it.

The recorded death-rates of towns are corrected for age and sex distribution. The death-rates of persons arranged in groups according to ages in England and Wales are determined. It is known that females enjoy a longer period of life than males. If the proportion of persons whose mean expectation of life is greatest in a town exceeds that in the county at large, a correction is made for this condition of things. So, also, if females are, relatively to males, more numerous in a town than in all England and Wales, a correction is also made for that state of the population. The recorded deaths for the English towns are, with few exceptions, below the rates when corrected for age and sex distribution. If a similar correction could be made in cases where the poor classes (amongst whom everywhere the death-rate is highest) are in excess it would be most desirable. I have endeavoured to find in the Census Reports of 1891 materials for such a correction, but the results are disappointing. It may be considered that the comparative poverty of towns might be to some extent determined by ascertaining the proportion of the population who were domestic servants. On the whole, we find that in the towns where the domestic servants are very numerous the death-rates are low. Croydon, for example, had the lowest death-rate of the great towns in 1893—namely, 16.99 (corrected), and the highest proportion of domestics—namely, 8.8 per cent. of the population, or in the ratio of 44 per cent. to the heads of families. Bath and Hastings[3] are the only two of the 62 largest towns which exceed Croydon as regards proportion of domestics. In Bath the domestic servants constitute 11.4 per cent. of the population, and 49 to every 100 heads of families; in Hastings, 11.11 per cent. of the population and 59 to every 100 heads of families. As a rule, in the towns where but a small proportion of the population are domestic servants, death-rates are high, and *vice versâ*; but there are some exceptions. In the 62 largest towns the average percentage of domestic servants is 4.6. The 10 great towns which had the highest death-rates in 1893 have a mean percentage of 2.86, whilst in the 10 great towns with lowest death-rates the percentage is 4.81.

Towns.	Percentage of Domestic Servants. To Heads of Families.	Percentage of Domestic Servants. To Total Population.	Towns.	Percentage of Domestic Servants. To Heads of Families.	Percentage of Domestic Servants. To Total Population.
Aston Manor	11	2.2	Newcastle-on-Tyne	23	4.7
Barrow-in-Furness	22	4.0	Newport	23	4.4
Bath	49	11.4	Northampton	19	3.8
Birkenhead	30	6.0	Norwich	20	4.5
Birmingham	14	2.9	Nottingham	16	3.4
Blackburn	10	2.0	Oldham	9	1.6
Bolton	10	2.0	Plymouth	22	5.1
Bradford	12	2.6	Portsmouth	21	4.5
Brighton	41	9.0	Preston	12	2.4
Bristol	26	5.7	Reading	28	5.6
Burnley	11	2.2	Rochdale	10	2.2
Bury	11	2.3	St. Helens	16	2.8
Cardiff	20	3.9	Salford	14	2.8
Coventry	14	3.0	Sheffield	17	3.6
Croydon	44	8.8	South Shields	17	3.5
Derby	19	3.9	Southampton	23	5.2
Devonport	15	3.4	Stockport	11	2.5
Gateshead	14	2.8	Sunderland	17	3.7
Grimsby	19	4.0	Swansea	21	4.3
Halifax	11	2.4	Tottenham	16	3.3
Hanley	14	2.7	Walsall	17	3.2
Hastings	59	11.7	Warrington	14	2.6
Huddersfield	14	3.1	West Bromwich	13	2.5
Ipswich	29	6.5	West Ham	14	2.8
Kingston-upon-Hull	18	4.0	Wigan	14	2.6
Leeds	13	2.8	Willesden	31	6.5
Leyton	18	3.7	Wolverhampton	20	3.8
Leicester	14	3.0	York	29	5.9
Liverpool	19	3.9	Ystradyfodwg	16	2.9
London	27	6.1			
Manchester	15	3.1	62 Towns (including London)	21	4.6
Merthyr Tydvil	19	3.7	61 provincial towns	18	3.7
Middlesbrough	17	3.1			

The percentage of tenements which consist each of a single room might, one would suppose, offer an indication of the poverty of a town. I find, however, the most extraordinary differences in towns, salubrious and otherwise, as regards one-room tenements. In Plymouth, which is a fairly healthy town, 24.4 per cent. of the tenements consist of one room each, and 27 per cent. of two rooms. In Preston, which has nearly the highest death-rate in England, there are only 5 per cent. of the tenements consisting of a single apartment. Devonport, a moderately healthy town, has the largest percentage of one-room tenements—namely, 25.2; Hanley has only 0.1 per cent. of these tenements. Thus, one-room dwellings are 252 times more numerous in Devonport than in Hanley. In London 18.4 per cent. of the dwellings are one-room tenements. Here I may mention that in the sixty-two largest towns there are, on the average, 12.5 per cent. of one-room tenements, or excluding London, 3.8. In the provincial towns, with the exception of Liverpool (7.7 per cent.), all the high death-rate towns have very few one-room dwellings.

In Hanley the local authorities will not permit the erection of one-room dwellings. Although a manufacturing town—the principal in the potteries districts—and its industrial occupations admittedly unhealthy, its death-rate in 1893 was only 20.2.

In the Scotch towns one-room houses, as they are termed

[3] Birth-rate in Bath, in 1893, 19.5; death-rate, 18.5. Birth-rate in Hastings, in 1893, 19.3; death-rate, 14.27.

there, are even more common than in England. In 1873 Dr. Russell found that they constituted 32.8 per cent. of the total houses; but the proportion has been steadily diminishing since that year.

In Dublin I have estimated that one-third of the families live in single rooms.

Towns.	Of each 1,000 Tenements the Number consisting of				Of 100 Tenements of 4 Rooms, or under, the Number consisting of			
	1 Rm.	2 Rms.	3 Rms.	4 Rms.	1 Rm.	2 Rms.	3 Rms.	4 Rms.
Aston Manor	12	20	231	166	3	5	53	39
Barrow-in-Furness ...	15	129	95	100	4	39	28	29
Bath	94	147	119	136	19	30	24	27
Birkenhead	53	77	60	198	11	20	15	51
Birmingham	11	43	369	166	2	7	64	27
Blackburn	3	24	16	596	1	4	3	92
Bolton	2	87	40	563	0.3	13	6	81
Bradford	25	185	308	196	3	26	44	27
Brighton	95	114	84	108	24	28	21	27
Bristol	89	153	130	123	18	31	26	25
Burnley	24	90	66	534	3	13	9	75
Bury	9	79	114	589	1	10	15	74
Cardiff	22	141	77	119	6	40	21	33
Coventry	8	123	135	214	2	28	28	44
Croydon	36	50	50	110	15	20	20	45
Derby	4	38	40	170	2	15	16	67
Devonport	252	295	167	90	31	27	21	11
Gateshead	102	370	231	153	12	43	27	18
Grimsby	8	33	27	248	3	10	9	78
Halifax	54	272	191	171	8	39	28	25
Hanley	1	34	34	263	0.3	10	10	80
Hastings	51	99	75	71	17	34	25	24
Huddersfield	50	206	269	185	7	29	38	26
Ipswich	18	53	28	156	7	21	11	61
Kingston-upon-Hull ...	24	87	120	341	4	15	21	60
Leeds	14	176	218	259	2	26	33	39
Leyton	27	39	103	156	8	12	32	48
Leicester	3	66	31	150	1	25	12	60
Liverpool	77	108	126	177	16	22	26	36
London	184	202	163	123	27	31	24	18
Manchester	15	97	52	300	3	18	9	70
Merthyr Tydvil	7	139	158	331	1	21	23	55
Middlesboro'	26	102	146	432	4	14	21	61
Newcastle-on-Tyne ...	132	304	208	146	17	38	26	19
Newport	21	143	89	99	6	41	25	28
Northampton	19	64	71	139	6	22	24	48
Norwich	21	79	85	155	6	23	25	46
Nottingham	9	35	130	146	3	11	40	46
Oldham	7	83	24	650	1	11	3	85
Plymouth	244	270	137	81	33	37	19	11
Portsmouth	40	75	60	192	14	27	22	37
Preston	5	27	53	374	1	6	12	81
Reading	11	33	42	103	6	18	22	54
Rochdale	18	213	102	397	3	29	14	54
St. Helen's	9	87	72	427	2	15	12	71
Salford	23	104	39	390	4	19	7	70
Sheffield	6	67	230	248	1	12	43	44
South Shields	104	444	211	115	12	49	25	14
Southampton	62	91	87	125	18	26	19	37
Stockport	10	119	37	505	2	18	6	74
Sunderland	91	292	281	133	12	36	36	16
Swansea	27	131	73	262	5	27	15	53
Tottenham	53	76	117	132	14	20	31	35
Walsall	5	63	80	361	1	12	16	71
Warrington	7	81	32	310	2	19	7	72
West Bromwich	5	101	184	388	1	15	28	56
West Ham	53	97	193	211	10	17	35	38
Wigan	6	174	112	400	1	25	16	58
Willesden	108	165	184	117	19	29	32	20
Wolverhampton	3	89	86	341	1	17	17	65
York	28	98	69	258	6	22	15	57
Ystradyfodwg	9	142	134	122	2	35	33	30
62 Towns (including London)	125	201	200	267	16	25	25	34
61 Provincial Towns ...	38	117	139	242	7	22	26	45

Although I have shown that in many salubrious towns the one-room dwellings preponderate, very bad accounts of this kind of dwelling have been given by competent observers. Carnelly and Anderson have shown that the death-rate from diarrhœa per 10,000 of the population was 19.6 in four or more room dwellings, 27.6 in three rooms, 39 in two rooms, and 59.8 in one-room dwellings. Körösi, of Buda-Pesth, has, in an elaborate memoir, demonstrated the bad influence on health produced by living in one or two-room tenements. Dr. Russell, of Glasgow, stated that in 1885, whilst the general death-rate of that city was 25, the rate amongst the occupants of one-room houses was 27, of two rooms, 26, of three rooms, 20, and of four rooms, 18.

It is stated that in 1885 there were only 75,000 out of 1,315,000 of the population of Berlin living in single rooms, yet that they contributed nearly one half of the deaths in that city.

The high death-rate which characterises the denizens of single-room dwellings is largely the result of the miserable conditions of the people themselves, apart from the state of their dwellings. If they exchanged their one-room dwellings for four-room tenements, they would still have a high death-rate by reason of their poverty and its concomitant evils, and, alas! I fear, from their intemperance.

Wherever one-room dwellings can be obtained the poorest, idlest, and most intemperate classes of the population will secure them; but no matter where they live their residences, unless under strict supervision, will be filthy, and suffer from insanitary evils. In towns, at least, the vitality of the people will, in a general way, be directly proportional to their means of procuring the necessaries and comforts of life.

Back-to-Back Houses.

Dr. Tatham, lately Medical Officer of Health for Manchester, published some statistics which seemed to prove the insanitary character of houses which were built back-to-back without any intervening space. Dr. Bell, of Bradford, has also published statistics in reference to that town, which appeared to show that the people who lived in those kind of houses enjoyed better health than those whose dwellings had through ventilation. I think the recent interesting investigations of Dr. Herbert Jones has decided this question in favour of Dr. Tatham's view. He has compared the two classes of houses in Ripley and Saltaire, where the social status and other conditions of the inmates were identical. In Saltaire the annual general death-rate in a period of six years was 16.6, and the zymotic death-rate 1.08 in the through houses, whilst in the back-to-back houses the two rates were 21.1 and 1.7 respectively. The deaths from phthisis were in the ratio of 2.3 per 1,000 of the population of the through houses and 3.4 in the back-to-back houses. As these statistics apply to a population of more than 20,000 we may accept them as clearly proving the insanitary state of houses which have not a through ventilation. It is to be regretted that the local authorities still allow such houses to be built. In Dublin they could not be erected, there being a by-law directly prohibiting their construction.

The Housing of the Working Classes Act, 1890.

This important statute has greatly stimulated the local authorities in reference to the clearing of unhealthy areas and the erection of dwellings for artisans and labourers. As such operations entail great expense on the ratepayers, the money devoted to them should be judiciously expended. The demolition of insanitary dwellings under the provisions of this Act is a costly proceeding, for undoubtedly more than their market value has to to be given in compensation for them. It seems to me that houses unfit for human habitation might be more frequently dealt with under the provisions of the Public Health Act, and consequently without cost to the public. In Dublin 2,700 houses have been detenanted and closed—about 1,000 of them never to be re-opened without any compensation to the owners. If a man has a house unfit for a human dwelling, why should he be compensated for its disuse? We prevent a butcher from disposing of the carcass of an animal unfit for the food of man, but we do not compensate him for his loss.

If a municipality be wealthy they could do no better work than the providing of good dwellings for artisans and labourers; but if their means are limited they should look only to the wants of the labouring and still poorer classes. In all towns there is a by no means inconsiderable proportion of the population who live from hand to mouth—who are often even in a state of semi-starvation. These unfortunates include old men and women, still capable of doing a little work if they can get it; hawkers, the lowest class of porters, street vendors, widows with or without children, messengers, "sandwich men," and other strugglers for existence. Then the mendicants, prostitutes of the lowest order, and the criminal classes must live somewhere, and we can easily

imagine what their abodes must be! It is in the dwellings of the very lowest classes that the seeds of infective disease are nursed as if in a hotbed. These places are pest spots, and any amelioration of their condition must be a gain to society at large. With, perhaps, the exception of the utterly disreputable persons, it is for these people that healthful dwellings should be provided at very moderate rents. It has been alleged that the providing of model tenements at rents of 3s. 6d. per week, and upwards, causes the vacation of tenements which must then be let at reduced rents to people poorer than the previous occupants. This may be the case, but certainly only to a limited extent. Artisans are a fairly independent class, and are well able to provide good dwellings for themselves; but the most dependent portion of the community ought to have the first claim on local authorities, and certainly upon the sympathy of men of the Lord Iveagh and Peabody type. The Corporation of Dublin have been able to provide two-room tenements, with separate sanitary accommodation of the most modern style, at 2s. per week, and without loss to the City Treasury.

I can present no more striking description of the deplorable state of the houses of the lower classes than that given by Dr. Hope, Medical Officer of Health for Liverpool, in the July number of *Public Health*. He says that 578 houses are about to be demolished. They consist each of three rooms, one over another, and without any intermediate landing, so that the same atmosphere pervades the entire house. They are back to back and side to side, and their sanitary accommodation is outside and for common use. They have bulging walls, broken window sills, crumbling mortar, rotten woodwork, walls and ceiling stained by saturation with vapours of breath, and foul smelling. The death-rate in the three streets of insanitary houses was 63.1, 67, and 71 respectively.

WATER IN RELATION TO DISEASE.

The disuse of town wells and the filtration of public water supplies have done much to lessen the urban mortality. The filtration of water practically commenced only close to the middle of this century, and it is within this period that the great reduction in the death-rates of towns has taken place—a reduction not altogether due to improved water supplies, but, I believe, largely from that cause. The value of filtration through mere sand has until recently been underestimated, but the researches of chemists and bacteriologists, more especially those of Dr. Percy Frankland, have shown that filtration through sand and gravel can be made almost as perfect as through charcoal. It has been demonstrated that a fresh sand filter acts merely mechanically, and prevents the passage of the grosser particles; but a filter some time in use has its superficial layers permeated with a jelly-like mass of microbes which acts as the real filter. These microbes convert the nitrogen of the organic matter into nitrates, and they arrest the passage through the filter of other microbes. I believe that there are many persons in charge of filter beds who are not aware of these facts, who do not know that new filters let microbes pass freely through them, that the sand layer should not be more than 30 centimetres in thickness, and that the rate of flow of water through the sand should be uniformly four inches per hour. The medical officers of health are not usually consulted about filtering beds, but it would be desirable that they should ascertain whether or not the new views with regard to them are known to the waterworks officials.

Wolffhügel found that the 3,000 colonies per cubic centimetre in unfiltered Berlin water were reduced by filtration to 107, which, however, are 57 in excess of the number assigned by Koch to good water. In the Dublin pipewater the number does not exceed 25.

Dr. Percy Frankland states that sand particles, averaging 0.06 inch in diameter, allowed from 26 to 40 per cent. of bacteria to pass through; whilst sand grains, averaging 0.006 inch permitted 14 per cent. to pass through. When very fine sand (silver silt) 5 feet in depth was used 95 per cent. were retained. Garden soil and peat are perfectly efficacious filtering materials, but the water passes too slowly through them. I cannot avoid here passing a eulogium upon the magnificent treatise of Dr. and Mrs. Percy Frankland on the micro-organisms in water which has just been published. Beside being a record of the admirable researches of the authors, it is a valuable epitome of the literature of this subject.

Professor Koch has expressed very strong views as regards the inferiority of surface drainage to subsoil water for potable purposes. He considers natural filtration through layers of soil as more efficacious in removing organisms than any system of sand filtration. The process in the former case is slow, and the amount of filtering material considerable. There is no doubt that the water of deep wells, though often excessively hard, and therefore not suitable for domestic purposes, generally contains the merest trace of organic matter, and is practically free from microbes.

The great importance of water filtration was painfully demonstrated during the last epidemic of cholera at Hamburg. This city, Altona, which is close to it, and Wandsbeck, virtually a suburb of Hamburg, derive their water supplies from the Elbe and a lake. F. Reiche, Resident Physician to the General Hospital, who has published a very elaborate account of the epidemic, states that there were 17,972 cases and 7,610 deaths. In Altona and Wandsbeck there were few cases. Hamburg derived its water from the Elbe, above the town, and it was not filtered. Altona used filtered water taken from the river below Hamburg, and Wandsbeck's supply was taken from a lake and filtered. Analysis proved the pollution of the Hamburg water and the purity of the supplies to the two other towns. Here, surely, we have a strong proof of what Dr. Ernest Hart terms waterborne cholera. It is, however, remarkable that Koch was unable to detect a single cholera bacillus in this highly-polluted water. Another remarkable point in connection with this epidemic is that the water used by Altona contained the sewage of Hamburg, the second largest town in Germany. Can there be a more wonderful proof of the purifying power of proper filtration?

At the same time one cannot help asking, Is there anything to be gained by tracing what has been termed the "pedigree" of water? It is stated that a better opinion as to the purity of water can be formed by knowledge of its sources than by the results of its analysis. It seems inconceivable that any amount of filtration could make river water pure that contained the sewage of an enormous town.

It must, however, be observed that Altona is situated on much higher ground than Hamburg, that it is not, like the latter, permeated with stagnant canals, and that it is a healthier town. It seems not unlikely that the deplorable insanitary condition of Hamburg was the principal cause of the ravages of cholera. The correspondent of the *Lancet* in the number of that journal for July 7th, 1894, describes the condition of the purlieus as almost indescribably bad. Official statistics showed that the deaths in the population were influenced by their incomes. The upper classes, though they drank the polluted water, suffered but little.

The fitness of a water for potable purposes is generally determined by its chemical, and rarely by its biological, examination. The chemists, as a rule, believe that their method is the surer one, whilst the bacteriologist considers his process as the only really reliable one. The chemical analysis is much more cheaply obtained than the bacteriological one, if the latter be thoroughly carried out; therefore the general public will continue to have water chemically, rather than biologically, examined. It is, however, clear that both methods are desirable, and I have no doubt that at no distant date the water analyst will be able to carry out both processes, as, indeed, a few of them now do.

We have not yet determined, in relation to chemical analysis, the line which divides a bad from a good water, nor do I believe that such a line can be drawn. One that contains very little organic matter may be dangerous to drink, whilst, on the contrary, water with a large amount of organic matter has been drunk with impunity for years. In the eleventh annual report of the Local Government Board an account is given of the failure to detect pollution in water. 0.05 gramme of typhoid dejection was added to a litre of pipe water and half that quantity of the dejection to another litre of water. Both, together with unpolluted water, were analysed by distinguished chemists, who were aware of the nature of the articles submitted to them. In the unpolluted water the free ammonia was 0.0021, and the albuminoid ammonia 0.0075 grain per gallon, which quantities

were raised to 0.0025 grain of free and 0.0095 grain of albuminoid ammonia in the least polluted water, and to 0.0027 grain of free and 0.0123 grain albuminoid ammonia in the more polluted water; thus the addition of 0.5 gramme of typhoid dejection to a litre of water, or 1.7 grain per gallon, had almost no appreciable influence upon the composition of the water, which before and after pollution would be passed by the chemist as a good one. As only about 8 per cent. of typhoid dejection is solid matter, of which about 6 per cent. is soluble, the addition of 1 grain of typhoid excreta to a gallon of water would add only 0.06 grain of soluble matter to the liquid. It may be said, then, of what utility is water analysis if it passes as good a water to a gallon of which 1.7 grain of typhoid stool had been added? It is unfortunate that there is no accurate chemical method for determining the precise nature of the organic matter found. As a rule, the larger the percentage of nitrogen contained in the organic matter the more likely is it to have been derived from an animal source. Analysis certainly shows the amount of organic matter present, and although such matter is usually innocuous it is sometimes the reverse. The greater the amount of organic matter, or rather of albuminoid matter, the greater the chance that it may include infective substance. When we have a water with a very small amount of nitrogenous organic matter, there is no likelihood that typhoid dejections will be present. Under the ordinary conditions affecting our water supplies, it is improbable that typhoid stools would be mixed with them, as was done in the experiments just quoted. They are thrown into waterclosets, privies, ashpits, manure heaps, the soil, ditches, rivers, etc. From all these media they may find their way into rivers or wells, furnishing potable water, but with rare exceptions there must, under such circumstances, be large quantities of other kinds of organic matter associated with the typhoid excreta and carried with it into the water. In short the passage of unmixed excreta into potable water must be a circumstance of rare occurrence. In the ordinary cases of pollution by typhoid or other dejecta, the analysis of water proves its unfitness for use.

Dr. R. Bruce Low, in a report to the Local Government Board, states than Penrith has a water supply which chemical analysis shows to be pure, but which, he is satisfied, is liable to excremental pollution, likely to produce enteric fever and other maladies.

The number of micro-organisms in water is regarded by most bacteriologists as a measure of its purity, regardless of its chemical composition. For example, Professor Leeds, of the United States, condemned a water which, in every chemical respect, was much superior to another which he passed as good, because the former contained a very much larger number of organisms than the latter.

As minute doses of virulent poisons have had no bad effect upon the animal economy, it is likely that very small numbers of pathogenic microbes or very small quantities of toxins and microzymes may also be impotent for evil. In the great centres of population it is not unlikely that the inhalation and swallowing of disease-producing micro-organisms is a common occurrence.[1] That they do not always produce disease is because the organism which takes in the micro-organism is strong enough to master the latter, or because a few individual microbes are unable to do much, if any, harm. Professor Ray Lankester says: "One typhoid bacillus passing into or even reaching the intestines would not be able to hold its ground."

The epidemic of enteric fever in the Tees Valley in 1890 and 1891, investigated by Dr. Barry, of the Local Government Board, has been held to prove conclusively that this disease is propagated by water. On an area of 1,103 square miles, with a population of about half a million, 1,463 cases of the disease were reported. It was ascertained that 219,181 persons were supplied with the Tees water, whilst the remaining portion of the population drank water derived from other sources. Amongst the former, attacks of enteric fever were fifteen times more numerous than amongst the latter. Dr. Barry shows that the Tees is liable to extensive pollution, one town and about twenty villages discharging their sewage into it.

Dr. Barry's conclusions have, of course, been questioned by the water companies, for the water had been subjected to sand filtration; and Dr. Mitchell, of Castle Barnard, and Dr. Creighton, of Cambridge, have controverted them. Dr. G. H. Ganett, in a pamphlet on the water of the Severn, says of the Tees outbreak that it may have been caused by some accidental fouling of the water; but that the whole of the water of the Tees was infected by typhoid bacilli, derived from a very small amount of possible pollution at a point nearly twenty miles above where the water was removed for drinking, as suggested, is an idea that cannot be entertained.

The question as to the Tees Valley outbreak being really due to polluted river water came before the Commission appointed in January, 1892, to inquire into the quality and quantity of the water supplied to London. Mr. Wilson, who was examined as a witness, appeared to represent the Stockton and Middlesbrough Water Board. He pointed out that in a village of 162 houses no case of enteric fever had occurred during the outbreak, though the Tees water was used in all the houses; and further, that before this village got a supply from the Tees it used to suffer greatly from the ravages of typhoid fever. Mr. Wilson challenged the accuracy of the statistics, which, he said, were got by three different methods—compulsory notification, voluntary notification, and by replies to Dr. Barry's question. Mr. Wilson attributed the prevalence of typhoid in the district to general insanitary conditions.

This Water Commission sat a large number of times from May 16th, 1892, to June 30th, 1893. It comprised Lord Balfour of Burleigh (chairman), a geologist, a chemist, three engineers, and a medical man devoted to statistics—all eminent in their respective professions. They examined 92 witnesses. In their report the Commission state that the evidence produced before them proved that the pollutions to which the rivers Thames and Lee are subjected are very numerous, and that filth is illegally and unnecessarily discharged into these rivers. They also state that the methods of filtration in use by the different water companies "differ enormously," and that some of them are quite inadequate.

With admitted extensive pollution and defective filtration, the surprising thing is that the Commission report that the water as supplied to the consumer "is of a very high standard of excellence and purity." They do not believe that any danger exists of the spread of disease, provided, however, that the water is properly filtered.

The medical and statistical evidence submitted to the Commission proved that London had a comparatively low typhoid fever death-rate, and that outbreaks of this disease, or even solitary cases, were not clearly attributable to the use of the London pipewater. So far as my observation of the London tenement houses goes, it seems extraordinary how their inmates escape enteric fever if water be the usual vehicle of its poison. An intermittent water supply, with storage cisterns placed on the roofs of waterclosets in small close yards, is a common state of things in thousands of tenement and, indeed, in other kinds of houses. There seems to be no evidence that the bacilli of typhoid fever find their way into these cisterns, notwithstanding that they are exposed to foul emanations and are often uncovered; there may be other diseases caused by the water in some of those exposed cisterns.

In many towns supplied with well-filtered water, complaints are made that it is occasionally impure. Dr. Victor Despeignes states that the water at Lyons, though filtered under good conditions, when it arrives at the taps contains so many bacilli as to constitute it a danger to health. Cisterns are the cause of much pollution of water, and therefore, if possible, they should not be used.

The Organisms in Sewer Air.

The results of recent investigations in reference to the composition of sewer air seem to show that it is superior, bacteriologically at least, to ordinary air. Some of the accounts of its purity are so roseate that one might naturally conclude that a sewer outfall would be an excellent health resort. Dr. John Billings, of the United States army, goes so far as to

[1] Dr. W. D. Miller, of Berlin, discovered thirty-one different pathogenic organisms in the mouth, and Professor Leeds found per cubic centimetre of his own saliva six hours after taking food 10,775 colonies of bacteria. Peroxide of hydrogen and solution of saccharin are excellent disinfective washes for the mouth.

doubt whether there is conclusive evidence to prove that sewer gases have ever produced disease. Professor Koch found only 3 to 4 micro-organisms in 100 litres of the air of a Berlin sewer, whilst the atmosphere above the sewer teemed with them. Haldane detected only 20 microbes per 100 litres of air in a Bristol unventilated sewer. In a school in Dundee Carnelly and Haldane found 1,510 bacteria and 10 moulds per 10 litres; whilst in a sewer in that town the number was less than 100 micro-organisms.

Mr. L. Parry Laws has recently made two investigations as to the number and kind of the organisms in the air of the London sewers. He finds that they do not differ in nature from those in the atmosphere; they consist of moulds and micrococci only, whilst the sewage itself contains mostly bacilli.

As sewage when quite recent rarely has a bad odour, we can easily understand that in the case of well-constructed and constantly flushed sewers the air in them would not differ from ordinary atmospheric air. It is the emanations from stagnant sewage in ill-kept sewers that are to be dreaded. In any case, be sewers well kept or badly kept, it seems the safer plan to prevent their gaseous contents from entering our houses. It is an old story that the persons who work in the sewers enjoy as good health as other workmen of the same class, but recent and accurate statistics show that this is not the case. The medical department of the Paris Bureau of Public Works has shown that there is an abnormally large amount of sickness amongst the workers in sewers, and that great precautions have to be observed in order to preserve their health.

In curious contrast to Koch, Carnelly, Haldane, and Laws' observations, we have quite a sensational account of an evolution of pathogenic bacilli from New York sewers, given to us by Dr. Fischer of that city. He examined bacteriologically sewer air which had passed into private and tenement houses where cases of diphtheria had occurred, and detected virulent organisms in it. In forty examinations of moist sewer air he detected, in twelve instances, pathogenic bacilli, of which some were Klebs-Loeffler's diphtheria microbe, and one was the bacillus typhosus.

Dr. J. Bruce Low considers that he has proved to demonstration that sewer air caused a great mortality from typhoid fever in the districts of Sheldon and East Thickley. During an epidemic of that disease in 1893 there were 224 cases and 41 deaths in a population of 10,000. Although some of the cases were caused by infected milk and exhalations from middens, the greater number were due to the entry of sewer gases into houses.

Dr. Davies, medical officer of health for Plumstead, is disposed to blame the street sewer ventilators for the recent increase of diphtheria in London.

Alessi has shown that the gases of putrefaction rendered animals peculiarly liable to infection from doses of typhoid cultures, which had no effect upon the great majority of animals not exposed to those gases.[5] Sewer air might have a similar action.

The Ventilation of Sewers.

No sanitary subject has been so much debated of late as that relating to the ventilation of sewers and drains. The present system allows communication between the sewers and the atmosphere, for the purpose of preventing the air in the former from acquiring a greater tension than that of the latter, and also for the dilution of the sewer gases by fresh air. This system converts what were formerly sealed conduits of sewage into open sewers, but with this difference, that the emanations from the sewers are evolved through openings 100 yards or so apart, and are, therefore, concentrated at a limited number of points. From a health point of view we may regard a perfectly open sewer as obviously less objectionable than one which is open at a limited number of points. It is contended than in unventilated sewers the gases generated by decomposition of organic matter force the weak traps on house drains and pass into the houses. From my own experiments on air pressure in the Dublin sewers, I have come to the conclusion that it is extremely slight when the weather is calm; if there is a strong breeze then the pressure increases because large volumes of air are blown into the sewers through the ventilating openings. Mr. Baldwin Latham—a great authority on sanitary engineering—and Professor Attfield say that large quantities of air entering a sewer displace equivalent amounts of foul air, which must escape somewhere.[6] Latham considers that too much stress is laid upon the subject of ventilation of sewers, and believes that it is only necessary to give the air sufficient vent to prevent pressure upon the traps of the houses.

The ventilating openings in the streets are generally objected to by those who live opposite to them, and undoubtedly from some of them malodorous effluvia are noticed and often complained of. The trite remark that it is better to have the sewer effluvia in the street than the house is, of course, quite true; but the traps on drains ought to be strong enough to prevent the sewer air from entering the house. In every town there ought to be registered plumbers as sanitary officers, whose duty should be to see that the connections between the drains and sewers are properly made, and that the traps are sufficient and efficient. I have no doubt but that in most towns much soil pollution is the result of faulty house drains leaking their contents.

Bristol is, perhaps, the only one of the large towns in which the sewers remain unventilated. As they discharge their contents into a tidal river, and, therefore, are sealed for some hours daily, it might be supposed that the backing up of the sewage would cause pressure upon the air in the sewers. The medical officer and city surveyor are, however, quite satisfied to allow them to remain as they are, and deprecate every proposal to ventilate them into the street. As typhoid fever is the disease which is, as asserted, the most likely to be produced by sewer emanations, Bristol ought to have more than an average amount of the disease if the sewer ventilation theorists are correct. In 1892 I collected statistics which showed that the mean death-rate from enteric fever in the period 1887-91, in fifty large British and Irish towns, was 21.3 per 100,000. In Bristol the rate was 12.6. The highest rate was in Belfast, namely, 53.6; the lowest in Plumstead, 7.3. Five towns had smaller rates than Bristol, and 44 had higher rates. If Bristol has made a mistake in not ventilating its sewers, it has not paid apparently any penalty, for in the period 1881-90 only one of the large towns had a lower zymotic death-rate. I should feel disposed to adopt the Bristol plan were it not that there might be difficulty, in some towns at least, in cleansing the sewers. In Dublin, before they were ventilated, great care had to be taken in allowing the men to enter them, as the air was sometimes found to be mephitic. The proposal to ventilate sewers by causing pipes from them to pass up the front of the adjacent houses is not likely to meet with much favour. The plan has been tried in Sydney, Australia, and it is stated that the sewer organisms showered down from ventilating outlets on the windows and other parts of the house. Mr. J. M'Garvie Smith, who has made those observations, recommends that sewer air should be cremated and the open grids in the streets closed. Dr. Arthur has a very unfavourable opinion of sewer air, and suggests the exit end of drains might be made to act as efficient traps by causing them to dip below the sewage level in the sewers. In narrow streets and other close places I certainly am in favour of abolishing the open grids. In cases where there are no ventilators great care should be taken to keep the sewers free by thorough flushing, and disinfectants should be occasionally put into them, especially in warm weather. Ventilating shafts and pipes are slowly superseding the grids. In wide streets shafts of considerable height should be erected, and a few of them would suffice to, at least, prevent pressure in the sewers, though it would not ventilate them much. Dr. Kenwood's system of cremating the gases is a good one, but, I fear, too expensive for general use. The ventilation of house drains is considered to be of even more importance than that of sewers. A trap prevents the entrance of sewer gases through the drain into the house, but on the house side of the drain it is usual to have two free openings. One of these is placed just inside the trap, the other is at the end of a pipe which passes from the drain to a point higher than the house. The idea is that pure air always enters the lower opening and passes out through the upper one, thereby ventilating the drain. It often happens that the fresh air inlet becomes a foul air outlet, for if the air in the ventilating pipe be warmer than

[5] *Centralblatt für Bacteriologie*, B xv, No. 7.

[6] *Transactions* of the Seventh International Congress of Hygiene, 1891.

the air in the drain the latter will not pass up to the higher opening. Very often, too, especially in the case of 4-inch bore drains, the flush from a watercloset may force foul air out through the so-called fresh air aperture. In my experience I often find these air inlets, when situated in deep areas and other confined places, a great nuisance. If the inlets cannot be placed in proper places it is better to do without them. The ventilating pipes will certainly prevent pressure being put upon the traps, and the drains can be kept free from foul air by thorough flushing.

It has occurred to me that instead of an opening for air ingress, a porous, unglazed earthenware chamber might be used. We know that gases diffuse readily through plaster-of-paris and biscuit porcelain. A vessel of this kind placed on the drain would allow air to go through it, but would not allow the passage of microbes or solid particles. It would sterilise the foul gases of the drain. I attached to a large vessel, containing wort in rapid fermentation, a porous earthenware vessel. No pressure, or a trifling one, took place in the air in the vessel unless the connection between it and the porous vessel was cut off; then the pressure became considerable.

Persistence of Typhoid Fever and its Cause.

Typhoid fever is not so prevalent in these countries or on the Continent as it formerly was; but it has not decreased in the same ratio as typhus fever, small-pox, and almost every other zymotic disease, except diphtheria. The general improvement in the sanitary condition of all our great towns has reduced the zymotic death-rate to nearly one half of what it was at no distant date; but in some towns typhoid fever has not declined, and in a few it has increased. The etiology of this disease is of great interest to the sanitarian; and it has been said, perhaps not on good grounds, that the general sanitary state of a town is directly as its typhoid fever death-rate.

There is a very general belief that this disease is almost wholly propagated through the media of water, food, and sewer air. Whenever a case of typhoid fever occurs, the condition of the sanitary accommodation and drains is the first thing to be called in question. If nothing wrong is detected in those directions, then the water is accused. If the water is found to be pure, the blame is laid upon the milk. I have no doubt that localised epidemics of this disease are frequently caused by infected water or milk; but I believe that the greater number of cases arises from the *materies morbi* of the disease being absorbed from the air.

Up to the present pathogenic micro-organisms have not been frequently detected in the atmosphere, but neither have they been found, except rarely, in water or milk, suspected to have produced disease. There are, however, some clear cases of detection of poisonous microbes in the air. Dr. R. Wurtz and Dr. S. Lodge proved the existence of the bacillus anthracis in air. According to Klein, the bacillus of swine fever is transmitted through the atmosphere. The bacillus of tuberculosis has repeatedly been detected in the dust of rooms, and therefore must have been in the air.

Vailland relates a case in which typhoid fever was apparently propagated through the air.[7] Russian soldiers quartered in certain barracks were found to suffer much from enteric fever. A bacteriological examination of the dust in the barrack rooms resulted in the discovery of immense numbers of the bacillus typhosus.

Justyn Karlinski, an authority on typhoid fever, relates that the prevalence of enteric fever in Stolac, a town in Bosnia, was due, not to polluted water, but to exhalations from a filthy soil.

The recent epidemics of typhoid fever in Havre have formed the subject of much discussion in the French Academy of Medicine. Brouardel considers that they were mainly caused by polluted water. On the contrary, Dr. Gilbert asserts that they were chiefly due to a polluted condition of the soil. He says that in Havre the soil is not purified, the houses are not drained, and but two elements of salubrity exist—namely, pure water and undoubtedly pure milk.

The effects of soil pollution on the health of a community are strikingly proved in the case of the City of Ahmedabad, Bombay Presidency. When the excreta of the population were deposited in the soil of the city, and kept there for an indefinite period, the death-rate averaged in 1874-80, 54.75. Then the night soil was systematically removed to points just outside the city, and in the next six years the death-rate fell to 44.74. Lastly, the excreta were removed to points some miles from the city, upon which the death-rate fell to an average of 40.43.

Dr. Bertin, of Nantes, whilst believing in the transmission of typhoid fever through the medium of water, points out (giving an example) that it may be caused by infected dust from filthy soils.[8]

In my annual report on the health of Dublin for 1891, I gave a map showing the distribution of 1,988 cases of typhoid fever in Dublin. I pointed out that on the gravels the ratio of cases to the population was 1 in 92.8, and on the clays 1 in 145.3. This proved that the clays were safer to live on as far as typhoid fever was concerned. I expressed my belief that these facts appeared to show that the organisms that produce typhoid fever escape into the air more readily from the gravels than from the stiff and usually moist clays.

I have just prepared a map showing the distribution of 3,461 cases. The difference between the gravel and the clays, though not so great as previously pointed out, is shown very decidedly. This is probably due to the exceptionally hot and dry year of 1893, in which the superficial layers of the clays dried to a greater extent than usual, and permitted of the escape of the typhoid organism.

—	Population of the City of Dublin by 1891 Census.	Per Cent.	Number of Persons affected by Typhoid Fever in 12 years ended 1893.	Per Cent. of Total Number of Cases.	Ratio of Cases to Population.
Living upon gravel soils ...	75,486	[illegible]	1,292	37.3	1 in 58.4
Living upon the clay ...	169,615	[illegible]	2,169	62.7	1 in 78.2
Total	245,[illegible]		3,461	[illegible]	1 in [illegible]

I believe that typhoid fever is a disease of the miasmatic class, and that it becomes endemic in certain localities in which the conditions of the soil are favourable to the development of the micro-organisms which cause the disease. That the typhoid bacillus can exist apart from man for an indefinite period is shown by the prolonged cultivation of this deadly organism in nutrient materials. If it can live and multiply on broth and potatoes it can, for a season at least, exist in soils containing organic matter. Uffelmann's very recent experiments show that the typhoid bacilli can resist drying for a considerable time. After eighty-two days in white sand, they were still capable of culture. In house sweepings they continued intact for a month. They can be blown about in dust, and in this way get into milk or water, and be directly swallowed or inhaled.[9]

Karlinski found typhoid bacilli alive after five months' retention in earth. He says that the part which the soil plays in epidemics should not be underestimated. He noticed a fact of great etiological interest, namely, that when the soil was saturated with rain water the bacilli perished. I think it will be found that, however salubrious the gravels and sands may be in a general way, there are some diseases which prevail more upon them than on the stiff and cold clays. This, at least, is the case in Dublin, where typhoid is more prevalent on the gravels than on the clays.

The gravels in Dublin lie low, and are nearest to the river Liffey, which flows through the city into a bay. The clays, which occupy the higher parts, rise to a height of 70 feet above low water in the river, whilst the gravels are only about 24 feet above low water. I caused three wells to be sunk in the gravels and four in the clays, and noted the height of the ground water in them. In the low-lying gravels, generally believed in Dublin to be water-logged,

[7] *Revue Scientifique*, January 25th, 1890

[8] *Journal d'Hygiène*, July 12th, 1894.

[9] *Centralblatt für Bakteriologie und Parasitenkunde*, 1894, xx, 133.

the water remained low, whilst in the clays it came much nearer to the surface of the ground. The condition of the tide has only a trifling influence on the height of the ground water, although the bottoms of all the wells in the gravels and of one in the clays are below high water.

OBSERVATIONS ON THE HEIGHT OF GROUND WATER IN SEVEN DUBLIN WELLS, 1893-4.

Wells in the Clays.

Marrowbone Lane (height of ground above low water,[10] 68 feet).—Greatest depth of water surface from ground surface, 7 feet 7¼ inches, April 17th, 1894; extreme of fluctuation, 2 feet 1¼ inch.

Stanley Street (height of ground above low water, 52 feet).—Greatest depth of water surface from ground surface, 6½ feet, July 7th, 1894; greatest depth from surface, 5 feet, April 17th, 1894; extreme fluctuation, 1⅓ foot.

Mansion House (height of ground above low water, 43 feet).—Greatest depth of water surface from ground surface, 9⅔ feet, September 23rd, 1893; least depth, 7⅔ feet, July 11th, 1894; extreme of fluctuation, 2 feet.

Fishamble Street (height of ground above low water, 30 feet).—Greatest depth of water surface from ground surface, 7 feet 4 inches, November 29th and 30th, and December 4th, 1893; least depth, 6 feet, May 21st, 1894; nearly the same up to July 17th, 1894; extreme of fluctuation, 1⅓ foot.

Wells in the Gravels.

Portland Row (height of ground over low water, 23⅔ feet).—Greatest depth of water surface from ground surface, 12 feet; all winter, 1893; least depth, 8 feet 2 inches, October 5th, 1893;[11] extreme of fluctuation, 3 feet 10 inches.

Hanover Quay (height of ground above low water, 24 feet).—Greatest depth of water surface from ground surface, 16 feet 10 inches, July 17th, 1894; least depth, 15½ feet, April 16th, 1894; extreme of fluctuation, 1 foot 7 inches.

Essex Quay (height of ground above low water, 19½ feet).—Greatest depth of water surface from ground surface, 12⅔ feet, July 7th, 1894; least depth, 8 feet 11½ inches, April 18th, 1894; extreme of fluctuation, 3 feet 9½ inches.

Mean of *maximal* depths from ground surface of water surface of wells in the clays	7 feet	$7\frac{55}{56}$	inches.
Ditto, *minimal*	6 ,,		
Difference	1 ,,	$7\frac{55}{56}$	,,
Mean of *maximal* depths from ground surface of water surface in wells in the gravels	13 ,,	$10\frac{1}{2}$	,,
Ditto, *minimal*	10 ,,	$9\frac{1}{2}$	,,
Difference	3 ,,	$0\frac{7}{9}$	,,

On the whole the ground water lies lowest when typhoid fever prevails most in Dublin.

Until lately the great majority of the houses of Dublin were provided with privies and ashpits, from which much filth percolated into the soil, and, although waterclosets have almost completely been substituted for privies, it will be long before the soil and subsoil become purified, and at present they are just the kind in which the typhoid bacilli would find a congenial habitat. It has been suggested that the waterlogged condition of Dublin is the cause of the prevalence of typhoid fever, and that the obvious remedy is subsoil drainage. It is, however, a fact that the low-lying portion of Dublin, where there is most typhoid fever, is not damp, and that the ground water lies low there, and that in the parts where the ground water comes much nearer to the surface there is least typhoid fever. The explanation of this is not difficult. The cold wet clays are unfavourable to the bacillus of the disease, whereas they have a better feeding ground in the loose and well aërated gravels. The greater movement of air in the gravels, and the action of strong winds upon them, favour the evolution of the microbes from the soil, the superficial layers of which dry more readily than those of the clay. In hot dry seasons Dublin suffers, like other towns, most from typhoid. The highest death-rate from this cause occurred in 1893, a year phenomenally hot and dry.

Dr. David Hardie, in a pamphlet on the atmospheric pathology of typhoid fever in Queensland (Brisbane, 1893), shows a connection between this disease and the soil. High barometric pressure and temperature favour the development of typhoid fever. A heavy rainfall in summer lessens the amount of disease, not only in that season but in the following winter. This effect appears to be due to the rain interfering with the germination of the bacilli, and the rain also washes them out of the soil.

The Dublin pipe water is supplied continuously to the houses, and storage cisterns have fallen completely into disuse. The water is admittedly of a high degree of purity, and is collected in a mountainous region twenty-three miles distant from the city. London, on the contrary, derives its water from rivers into which the sewage of a considerable region is discharged, sometimes with but slight, if any, purification. The water is generally stored in exposed cisterns. Yet the typhoid fever death-rate is more than three times as great in Dublin as in London. The drainage of London is superior to that of Dublin, and its soils are not so polluted. It is in the highest degree improbable that faulty sanitary accommodation and house drainage is the cause of the high typhoid fever death-rate in Dublin. In this respect it is neither worse nor better than many large towns which have very little typhoid fever. The distribution of typhoid in this city shows that soil conditions have an influence upon it, and I believe that by far the greater number of cases owe their origin to emanations from a filthy soil. The reduction of the amount of typhoid fever in Dublin and Belfast (which is placed under somewhat similar conditions as to soil and drainage) can only be accomplished by keeping soil, air, food, and drink pure. The prompt and complete removal of filth, the continuous flow of sewage in the mains, the prevention of leakage from drains and sewers, are obvious measures for lessening the mortality caused, not only by typhoid fever, but by many other maladies.

It is perhaps worth remarking that since the introduction of stone pavement into the Dublin streets typhoid fever has increased. It is most prevalent amongst persons whose working hours are spent in offices and warehouses in the streets which are paved or asphalted. The bacilli of typhoid fever or their spores, which escape into streets that are macadamised, cannot get through the paved roadways, and are therefore more likely to be drawn into the interior of the houses through the basement floors, which are rarely concreted. The rain washes the soil beneath the macadamised roads, but the soil beneath the paved streets receives no purification of that kind. I believe there would be little or no typhoid fever in Dublin if the city rested on a stratum of asphalte.

During the 10 years ended in 1893, 1,699 deaths ascribed to typhoid fever were recorded in Dublin; of these, 24.2 per cent. were registered in the first quarters of the year, 16.8 per cent. in the second, 19.7 per cent. in the third, and 39.3 per cent. in the fourth.

The limits of this address do not permit of any discussion on the biology of the so-called typhoid bacillus, and whether or not it is capable of permanent independent existence apart from man. There is reason to believe that at least its spores can retain their vitality for lengthened periods outside man. The possibility of the evolution during successive generations of harmless bacilli of disease-giving properties is highly probable. The innocuous coli communis is the possible ancestor of the virulent typhoid organism, and both are almost indistinguishable. If this be so, there must be many transitional forms between the two bacilli, and consequently many forms of typhoid fever or diseases resembling it. Professor Von Babes has detected in the bodies of persons who had died from typhoid fever bacilli which, though morphologically resembling Eberth's organism, differed from it under cultivation and in other respects. Dr. M'Weeney and myself have cultivated an organism exactly resembling the typhoid bacillus, and which we found in polluted water believed to have caused an outbreak of typhoid fever. This organism was precisely intermediate in its reactions between the typhoid bacillus and the coli communis:[12] and quite recently

[10] Low water means the Ordnance datum line, which is 8.094 feet below mean sea level, and was the level of the low water in Dublin Bay on April 8th, 1837.

[11] This well was only 12 feet in depth, and it dried up in October, and remained dry all the winter.

[12] *Journal of State Medicine*, July, 1894.

Dr. M'Weeney[13] found, in a similar kind of water, a bacillus which almost, but not quite, comported itself like the typhoid bacillus.

It is stated that typhoid prevails most among the upper classes. This is not the case in Dublin. During the years 1892 and 1893 the following were the mean death-rates from enteric fever amongst the different classes of society :

	Deaths per 1,000 of the Class.
Professional and independent class ...	25.7
Middle class	71.1
Artisan class...	57.3
General service class	51.3
Hawkers, porters, labourers, etc. ...	57.5

Clerks, commercial assistants, civil servants, traders, and business managers make up the great bulk of the middle class; and amongst persons following those occupations which keep them mainly within doors, enteric fever is most prevalent.

Treatment of Typhoid Dejecta.

I am of opinion that typhoid stools are sometimes not completely disinfected before they are allowed to pass into the sewers. Phenol is generally mixed with them, but this body has not a very strong action upon them. Bacteriologists, dealing with mixtures of the typhoid and other bacilli, have killed the latter by phenol solutions, leaving the typhoid bacillus separate and alive. I have cultivated typhoid dejecta which had been treated with carbolic acid, and succeeded in developing the bacilli in large numbers. The small portions of excreta in the stools sometimes are not completely permeated by the disinfecting solution. A 5 per cent. solution of sulphuric acid, with a little permanganate of potash, is a good steriliser. It should be added in equal volume to the stool. Smooth porcelain vessels are the proper receptacles for the mixture, and they should not be emptied for one or two hours. To prevent the action of the acid upon drain and sewer, lime should be added to it before the mixture was thrown out. Dr. Day, Resident Physician Cork Street Fever Hospital, has adopted this treatment of typhoid dejecta, and considers it satisfactory.

Undoubtedly the best way to dispose of infected excreta is by burning it in a destructor, as was first, I think, done by Dr. Sergeant at the Bolton Fever Hospital. A destructor for this purpose costs about £100, and it should be attached to every hospital where fever patients are treated.

The Extinction of Infective Diseases.

The domain of public medicine is steadily enlarging in every direction. Investigations into the intimate nature of the infective maladies, the mystery of the immunity from some diseases shown by certain individuals, races, and countries, and the conditions affecting contagion, are going on wherever science is cultivated. Surely the time must come when the results of these researches will enable man to extirpate some or all of the diseases which even now we consider and term "preventable."

The slow growth of population in mediæval times was mainly due to plagues and pestilences the great majority of which have ceased to exist. In our own times we may probably witness the extinction of two diseases which in former days cost an enormous loss of life—I refer to typhus fever and small-pox. Leprosy and ague, once common diseases in Britain, have died out. The frightful mortality in our towns, lasting well into the eighteenth century, was mainly due to zymotic diseases. Public medicine and private hygiene have lessened the death-rates in our towns by 20 to 50 per cent. Let us contrast the England of to-day with the India of to-day, which, so far as relates to sanitation, resembles the England of the Middle Ages. In England from 2 to 3 persons per 1,000 of the population die every year from zymotic diseases; in India in 1891 the death-rate from all causes was 30.14, whilst the zymotic death-rate was 18.27, or equal to the death-rate from all causes in England. In the vast Province of Bengal the zymotic death-rate was 23.04.

England has been described by foreigners as the birthplace and home of sanitary science, and it surely deserves the compliment. Its general and fever death-rates are amongst the lowest in the world. This is the more remarkable when one considers the large proportion of the people who live in towns—for towns everywhere are less salubrious than the open country.

[13] British Medical Journal, May 5th, 1894.

Death-rates from the Principal Zymotic Diseases per 1,000 Persons living.

Year.	England and Wales.	Large English Towns.	Year.	England and Wales.	Large English Towns.
1870	4.52	5.63	1882	2.76	3.61
1871	4.61	6.48	1883	2.32	2.80
1872	4.03	4.83	1884	2.80	3.61
1873	3.07	3.90	1885	2.23	2.88
1874	3.77	4.46	1886	2.42	2.98
1875	3.47	4.32	1887	2.42	3.33
1876	3.14	4.05	1888	1.87	2.49
1877	2.73	3.52	1889	2.23	2.87
1878	3.43	4.40	1890	2.16	2.89
1879	2.47	3.20	1891	1.91	2.40
1880	3.36	4.04	1892	2.01	2.64
1881	2.33	3.36			

The mean zymotic death-rate in England and Wales in the decade ended in 1879 was 3.524, and in the great towns 4.479. In the decade ended in 1892 the rate in England and Wales was 2.037, and in the great towns 2.890.

Never before in the history of the world were 30 millions of people located on 50,000 square miles, as is the case with the England of to-day. Of these millions two-thirds reside in the towns, which yearly have a quarter of a million added to their teeming population. In Germany 42 per cent. of the population live in towns containing 2,000 and upwards. Only every tenth Russian lives in a town. Notwithstanding the great and continuous increase in its urban population, Great Britain grows healthier and healthier from decade to decade. Amongst the various influences which have contributed to bring about this exaltation of the national health, the work of the British Medical Association has not been least effective. Judged by its past, we may surely expect that the voice of the largest and most powerful medical association in the world will continue, trumpet-tongued, to advocate the cause of sanitary progress.

AN ADDRESS

DELIVERED AT THE OPENING OF THE

SECTION OF PUBLIC MEDICINE.

At the Annual Meeting of the British Medical Association held in Bristol, August, 1894.

By W. H. CORFIELD, M.A., M.D.Oxon.,

Professor of Hygiene in University College; M.O.H. St. George's Hanover Square; President of the Section.

REMARKS ON THE VITAL STATISTICS OF 1893.

As an address on public health is to be delivered to the Association by Sir Charles Cameron, it is only necessary for me to address you very briefly in opening the work of this Section, and I would therefore merely say a few words to you about the lessons we can learn from the incidents of last year from a public health point of view. By noticing what diseases are diminishing in fatality and what are increasing we may always learn something.

The year 1893 was a very hot and very dry year: during it the death-rate of the thirty-three largest English towns was 21.6 per 1,000, a little higher than the average of the previous ten years, which was 21.3, instead of being lower, as it ought to have been; but the death-rate in London shows a still greater increase, namely, from an average of 20.4 to 21.3, or nearly 1 per 1,000 higher than in the last ten years, and 1.2 per 1,000 higher than in the last five years.

The zymotic death-rate in 1893 was for the thirty-three largest English towns 3.18, as against an average of 2.91 during the previous ten years, while in London it was 3.08 as against 2.82 during the previous ten years.

It seems at first sight surprising that with continual improvements in sanitary arrangements generally there should be not only an increase in the general death-rate in any

given year, but an increase in the zymotic death-rate in the large towns. It is therefore important to consider what zymotic diseases have increased in fatality and what have decreased during the hot and dry year in question.

In the thirty-three largest English towns there has been an enormous increase in the death-rate from diphtheria, which has in fact been more than double the average, and the death-rate from diarrhœa has increased 43 per cent. On the other hand, the death-rate from measles has decreased 30 per cent, that from whooping-cough 19 per cent., and that from scarlet fever 12 per cent. Small-pox and the continued fevers have each shown a very slight increase.

In London the results are very similar except that there has been an outbreak of scarlet fever which has increased the death-rate 27 per cent. above the average, and that small-pox, instead of having increased, has decreased slightly.

The increase of the death-rate from diarrhœa in London and in the other large towns may be dismissed in a very few words. It was due to the exceptionally hot weather, the mean temperature of the year having been 51.1 degrees, or 2.5 degrees above the average of the last 122 years, and 1.9 degrees above the average of the last 52 years, the mean temperature of every quarter of the year having been above the average, that of the spring quarter of the year having been no less than 4.7 degrees, and that of the summer quarter 2.2 degrees above the average of the last 122 years.

The most remarkable phenomenon that we have to consider in the increase of the death-rate from zymotic diseases has been due to the increase of the death-rate from diphtheria in London and some other large towns. This increase has been attributed by Dr. Thorne Thorne and others to the increased aggregation of children in schools, and it has been shown by Dr. Sykes that the increase is largely among children at school ages, but we must not refuse to admit defective sanitary arrangements as an important cause in the spread of diphtheria. It is on all hands admitted that sore throats are caused by such defective arrangements, and that these predispose to diphtheria.

There is no doubt that sore throats are caused by foul air of any kind, as by sewer air, by the air of badly ventilated hospitals, and, as I have pointed out, by coal gas.

With regard to sewer air, the existence of ventilators from the main sewers in the neighbourhood of houses has been pointed out as a possible cause of diphtheria by Dr. Adams of Maidstone, by Dr. Francis Clark of Lowestoft, and by Dr. Davis of Plumstead, of whom the latter informs us that diphtheria is far more prevalent in Plumstead, where there are manhole ventilators to the sewers, than in Woolwich, where there are none; and even goes so far as to suggest that the improved sanitary arrangements, with manhole ventilators to the sewers, may have actually increased the diphtheria death-rate.

Dr. Sykes, in his most interesting report on this subject, points out that while the mortality from diphtheria has increased during the ten years 1881 to 1891, the mortality from other throat diseases has decreased, and suggests that although this may be partly due to the fact that many cases are now certified as diphtheria which would otherwise have been recorded as sore throats, it may perhaps also be due to a change of type in the disease.

It is, however, a most remarkable fact that although the death-rate of diphtheria has increased to so great an extent in London and in some other of the large towns—as Croydon, Cardiff, Manchester, Halifax, Bradford, Leeds, Gateshead, and even Bristol, although it is still very low in Bristol—there has been a decrease in other large towns, amounting in Huddersfield to 75 per cent., Portsmouth 29 per cent., Liverpool 25 per cent., and Salford 12 per cent. It is, therefore, evident that we should study very carefully the conditions of those towns in which this disease is decreasing, and thus we may better be able to understand why it is increasing in so many of the other large towns.

We had a few imported cases of cholera in England in the year 1892, but there was no spread of this disease, but in 1893 there was a limited outbreak of cholera in the neighbourhood of Grimsby, and it remains to be seen whether a further outbreak will take place in the same neighbourhood this year.

With regard to the diagnosis of cholera from a bacteriological point of view, we are still a good deal in the dark. In cases otherwise known and recognised as genuine cholera Koch's comma bacillus is usually found. In some cases which would not otherwise be known or recognised as genuine cholera the same bacillus is found. In other doubtful cases of cholera the bacillus is not found, and of these Dr. Klein says: "Whether cases in which these bacilli cannot be demonstrated by the usual tests are or are not cases of true Asiatic cholera cannot, in the present state of our knowledge, be satisfactorily answered."

The present severe outbreak of cholera in St. Petersburg shows, I am afraid, that the disease has become endemic there, and the same is by some authorities believed to be the case in Paris. We shall perhaps see this autumn whether it is so in any part of England. We have, however, the satisfaction of knowing that every possible precaution has been and is being taken to prevent its spread in this country. Prevention is not only better but cheaper than cure, as is shown by the fact that the outbreak at Grimsby last year cost at least £5,000 to the local authority.

We are great believers in cleanliness, and it is therefore very satisfactory to us to learn from Dr. Jolles in the *Zeitschrift für Hygiene* that a dilute solution of any soap is fatal to cholera germs—an observation which, however, I need hardly say, requires confirmation.

The Oriental plague, which one had almost got to consider as an extinct disease, broke out again in Hong Kong in May this year. We have had no cases of it in Europe since the plague of Marseilles in 1720, which has been described to us in a literature which leaves nothing to be desired on the score of quantity; but we are now unpleasantly reminded, as we have been once or twice since that date, that the disease still exists in the East, and we can have little doubt that it has never ceased to exist in the interior of China, from which it has occasionally spread to Persia and to Asiatic Russia.

It is a disease which has been long ago recognised, spreads among filth and overcrowding, and is diffused by personal contact. When one reads that in China large towns are so overpopulated that the main streets are ordinarily as full of people as the Strand on Lord Mayor's Day, one can hardly be surprised that such a disease as this has not yet disappeared.

After the plague it is natural to refer to typhus fever, a disease which is now getting rarer and rarer in this country as overcrowding is being abated, but of which cases have been noted during the past year by Dr. Alfred Robinson of Rotherham, and of which an outbreak in Cardiff has been described by Dr. Edwin Walford, an outbreak consisting of no fewer than 47 cases with 10 deaths and of which the first known case occurred in a house the back apartments of which were used by a dealer in rags. A subsequent outbreak of 18 cases with 6 deaths was recorded by Dr. Ashby in Reading, and he suggests that a tramp may possibly have brought the disease from Cardiff.

Enteric fever, which has been decreasing for some years past in the large towns, has been the cause of a serious outbreak in Worthing, with 1,411 cases and 186 deaths. This has been traced to the water supply of the town, the water supplied by a new heading to one of the wells having been contaminated by polluted water from a fissure above it. Dr. Theodore Thomson, of the Local Government Board, had a ton of salt in solution poured into the fissure with the result that the chlorine in the well was raised from 5.0 to 35.08 per 100,000 parts within one hour and a-half. Dr. Klein found not only bacterium coli commune in the water, but also the enteric fever bacillus. An interesting outbreak of this disease was also traced by Dr. Priestley, of Leicester, to the drinking of herb beer prepared in a room where there was a case of enteric fever.

Attention has been drawn by Dr. Armstong, Dr. Sergeant, and others to the dissemination of small-pox by vagrants, and a conference has recently been held by the London County Council at which resolutions were passed aiming at a more complete system of medical inspection of casual wards and common lodging houses, with view to the prevention of the spread of this and other infectious diseases by means of vagrants.

An interesting discussion has taken place in *Public Health* between Drs. Ransome, Liveing, Parkes, and Paget, with regard to the question of the desirability of certifying phthisis as a dangerous infectious disease, and the following resolution was passed by the Society of Medical Officers of Health:

That the Society of Medical Officers of Health, while accepting the view that phthisis is an infective disease, in the prevention of which active hygienic measures should be taken, think it premature to recommend the compulsory notification of a chronic disease like phthisis. They are, however, of opinion that it is incumbent on medical officers of health to take such steps as may secure (*a*) the voluntary notification of cases of phthisis by medical officers of public institutions and such medical practitioners as agree that precautionary measures are desirable; (*b*) the adoption of such precautionary measures, including the disinfection of rooms, as can be arranged in conjunction with the medical practitioner. For this purpose the memorandum prepared by the North-Western Branch of the Incorporated Society of Medical Officers of Health would give an excellent basis of action.

Influenza is a disease which has reappeared among us during the last few years. It caused in London 652 deaths in 1890, 2,336 in 1891, 2,264 in 1892, and 1,526 in 1893, as against an average of the ten years 1880 to 1889 of only 6.3, and this without considering the great increase in the number of deaths from pneumonia and other lung diseases, which was, no doubt, due to influenza.

This is a disease of which our sanitary authorities have taken no cognisance, and for which there is not even a column in the tabular form issued by the Local Government Board for medical officers of health to use, but the frequent outbreaks of it make us wonder whether by doing away with the conditions under which certain infectious diseases spread we may not be actually producing a state of conditions favourable to the spread of other infectious diseases. If this is so we cannot help it, and all we have to do is to study the conditions of spread of the new diseases as they arise and to take measures for their prevention.

Although in a particular year, owing to exceptional climatic conditions the general death-rate may have been slightly raised and the zymotic death-rate still more so, there is no doubt that since the passing of the Public Health Act in 1875 the general death-rate has been gradually diminishing, and it is interesting to consider how far this may go. A few weeks ago the death-rate of London, the average of which was 20.4 during the ten years 1881 to 1892 was only 15.2 per 1,000 per annum for a particular week.

There is a general impression, which is largely shared, even among sanitarians, that if the death-rate were reduced to 10 per 1,000 per annum it would imply that the mean length of life per individual would be 100 years, but this opinion is based upon pure fallacy. The mean length of life does not depend upon the death-rate alone, but upon the death-rate taken together with the birth-rate. It is quite true that with a death-rate of 10 per 1,000 per annum and a birth-rate also of 10 per 1,000 per annum, that is to say, with a stationary population, the mean length of life would be 100 years, but with a death-rate of 10 per 1,000 per annum and a birth-rate of 30 per 1,000 per annum—about that of London at present—the mean length of life would be 55½ years; with the same death-rate and a birth-rate of 40 the mean length of life would be 47 years; while with a birth-rate of 50 per 1,000 per annum and a death-rate of 10, the mean length of life would be 41 years, very much what it is in London at present, so that there is no reason whatever why the death-rate of any city should not be reduced to 10 per 1,000 per annum, if not lower.

I had not intended to say anything special about small-pox, which has been apparently dormant for a time, but since the above remarks were penned a sharp outbreak of this disease has taken place and is in progress in Marylebone; although the most vigorous measures are taken to suppress it we cannot be by any means sure that it will not extend itself widely. Just as in the last century small-pox became epidemic once every three years, waiting, as it were, the arrival of a fresh crop of susceptible infants, so now the disease appears to wait until there is a sufficient crop of persons who have not been revaccinated; and we shall never have the least chance of preventing its recurrence from time to time in this country in the form of serious epidemics, unless we make revaccination compulsory, as the Germans did twenty years ago, when a law was passed making not only the vaccination of infants, but also the revaccination of "children of riper years" compulsory throughout the whole of the German Empire, with the result that small-pox has been practically exterminated in that country; but we are not likely to do this until we emerge from the wave of sickly sentimentalism which is passing over this and some other countries, with its exaggerated ideas of the sacredness of the liberty of the subject to do what he pleases, not only with his own life and the lives of the members of his family, but with those of the public at large. The same sentimentalism, under the disguise of public morality, has taken away from us the means of protecting our soldiers and sailors against venereal diseases, and has tied the hands of our physiologists in their researches into the causes of diseases, not only of man, but of the lower animals themselves.

SIXTY-SECOND ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

PUBLIC MEDICINE.

Professor W. H. Corfield, M.D., President, in the Chair.

Wednesday, August 1st.

Recent Mortality Returns.

The President (Professor Corfield) delivered the opening address, which is published at page 301.

On the motion of Brigade-Surgeon-Lieutenant-Colonel Pringle, seconded by Dr. Spottiswoode Cameron, a vote of thanks to the President for his suggestive address was passed.

Sewer Ventilation: Air in Sewers.

Mr. J. T. Neech, L.R.C.P. (Atherton) read a paper on this subject. He said: How to ventilate sewers and obviate the nuisance caused by street manholes is a problem which is at present engaging the attention of sanitarians. Several methods have been tried, some of which have been more or less successful, but I am inclined to think that no one system of ventilation would be found successful in every case. Conditions existing within the sewer ought to be taken into consideration, such as the rapidity of the flow of sewage, the rate and direction of movement of the air in the sewer, because I believe both these can be utilised under certain conditions to assist in ventilating the sewer.

The general consensus of opinion seems to be in favour of the application of pipe ventilators to sewers for the purpose of ventilation, the idea being that such ventilators act as outlets of foul gas and cause the street openings to act as inlets of fresh air. The idea is doubtless a sound one, because in every scientific method of ventilation there must be both an inlet and an outlet; therefore it appears that street openings form an essential part of a proper system of sewer ventilation, and that the question is how to convert these openings into inlets only and maintain them as such. One drawback urged against the system of pipe ventilators is the difficulty experienced in obtaining a sufficient number of these shafts to carry out the object in view. I have tested the action of pipe ventilators, and I find that their power to carry foul air out of the sewer depends very much upon the height and position of the shafts, their relation to surrounding objects, and their exposure to the action of the wind and air currents. Pipe ventilators do not always all act to an appreciable extent: sometimes one shaft or those in a certain position act most forcibly, at others another shaft or those in another position work with greater effect. This variability of action appears to be due to the exposure of these shafts or otherwise to the air currents. That being so, it seems to follow that ventilators should, if possible, be so placed that they may be constantly

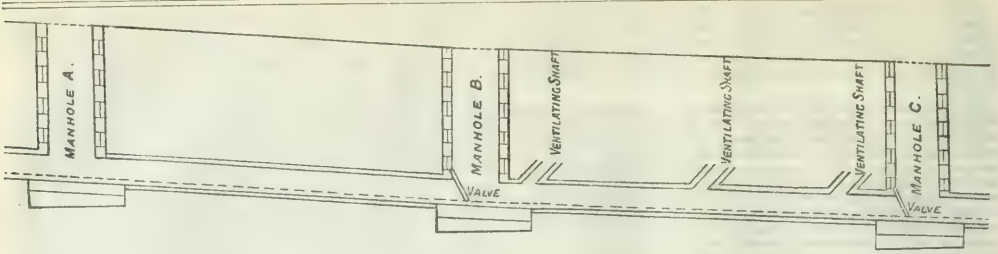


Fig. 1.—Section showing position of valves in manhole.



Fig. 2.—Elevation showing valve applied to sewer.

exposed to the action of the wind, from whichever direction it may blow, and out of the way of objects that would alter or break its course, and that, could this be attained, fewer shafts would in consequence be needed to effect the desired purpose.

Again, in a sewer in which there is a rapid flow of sewage the stream of sewage will carry with it the air in the sewer. Suppose a shaft be connected with such a sewer, the wind blowing over the top of that shalt will tend to produce a current up the shaft, while the rapid stream of sewage will tend to produce a current down the shaft, and counteract more or less the action of the wind. This fact I have corroborated by experiment, and where such conditions exist I believe this also is a cause why pipe ventilators are not so effectual as they would otherwise be, and explains why under such conditions more shafts appear to be needed. The sketch (Fig. 1) shows three shafts which have been constructed between the two manholes B and C in Howebridge Atherton. The sewer here has a considerable fall, a very rapid flow of sewage, and a quick movement of sewer air with the sewage. As soon as these shafts were constructed, I tested them by putting a smoke rocket into the sewer at manhole A. The smoke was quickly carried down the sewer, some of it rising out of manhole B; some also passed up each shaft, but I found that the stream of sewage acted powerfully upon the smoke, carrying it with the flow. Some of it escaped out of manhole C, and the remainder, a considerable quantity, passed down the sewer.

The idea struck me that if some means could be devised to prevent the sewer air from being carried down the sewer, the propulsive action of the stream of sewage could be utilised to assist in ventilating the sewer. An automatic valve suggested itself to me as being the most likely means of attaining the object desired; and Mr. Clough, the Atherton surveyor, at my request, had valves inserted into the sewer at manholes B and C in the position in which they are shown on the drawing. The valves are made of galvanised metal, and their lower border stops short of the bottom of the sewer, so as to allow the ordinary and constant flow of sewage to pass beneath them. They are also made in segments jointed together, so that, as the stream of sewage rises in height, each segment opens as that rise takes place, and allows the sewage to flow on without opening the entire valve. Soon after these valves had been put in, I again tested the action of the shafts. A smoke rocket was introduced into the sewer at manhole B, and the manhole cover replaced in the ordinary way. The smoke was carried down the sewer and up the shafts, the first shaft acting very much more than the rest upon this occasion, it being at the time more fully exposed to the wind. No smoke came up through the manhole cover, proving that at the time, at any rate, if there was not an indraught at the manhole, there certainly was no outdraught, which is a very important point to note.

I have tested this section of sewer upon several occasions, and always with a satisfactory result. I also found that the time which elapsed between the introduction of the smoke into the sewer and its appearance at the top of the shafts after the valves were connected was less than half what it was before that was done, and, moreover, a much larger volume of smoke emanated from the shafts. This shows that the valves cause the shafts to act more quickly and more efficiently. In connecting ventilating shafts with a sewer in which the movement of air is with the sewage, the junctions connecting the shafts with the sewer should be so placed that their axis may form an acute angle with the stream of sewage as shown on the plan before you, because that position is better calculated to assist ventilation under such conditions. Since the above shafts have been constructed and the valves connected no offensive smell has been perceived to emanate from manhole B, while during the same time upon several occasions many manholes in the immediate neighbourhood have been offensive. Again, when the cover was taken off manhole B no smell was felt, but when the valve was opened and the sewer air allowed to pass into the manhole and sewer beyond the smell of sewer gas was at once perceived.

I do not suggest that the principle I have just described is applicable generally to sewer ventilation, but under certain conditions I believe it will be found extremely useful, if not absolutely effectual, and these conditions are a fairly quick flow of sewage, and a constant movement of sewer air with the stream of sewage. The advantages claimed for these valves are:

1. They divide the sewer into sections for purposes of ventilation.

2. They arrest the movement of sewer air produced by the current of sewage, which I think in itself is an important matter, because I have proved that a rapid flow of sewage is capable of carrying sewer air for nearly half a mile along a sewer at least, and how much further I cannot say.

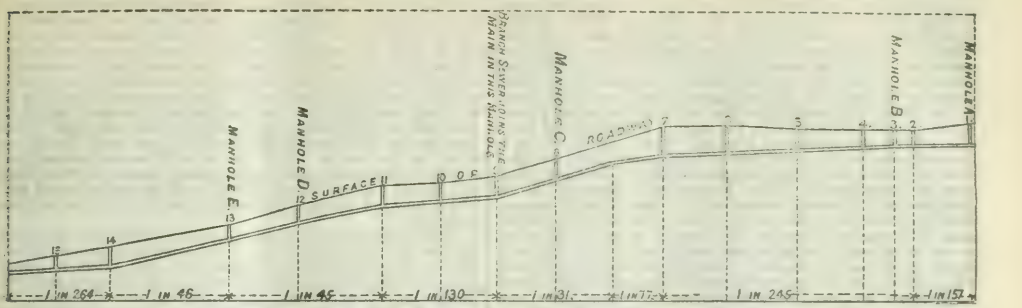
3. By arresting the movement of sewer air they cause the stream of sewage to assist instead of counteracting the action of the ventilating shafts.

4. They cause the street openings to pretty constantly act as inlets of fresh air.

In carrying out the above experiments I have to acknowledge the valuable services of Mr. Clough, the surveyor of Atherton.

On the Movement of Air in Sewers.

Mr. Neech also described some experiments carried out by himself last year, and shortly discussed the chief causes of the movement of sewer air. The plan shown



Plan of sewer; horizontal scale 400 feet to 1 inch, vertical scale 40 feet to 1 inch.

represents a section of the sewer operated upon. Smoke was introduced into the sewer at A, and it travelled down the sewer towards B, appearing at No. 2 manhole in its course thither. None of the smoke passed up the sewer, or at any rate none appeared at the manhole above A. Smoke was also introduced into the sewer at B, and it travelled down the sewer towards manhole No. 7, appearing at each successive manhole in its course. Also in this case no smoke passed up the sewer to manhole No. 2. It was thus clear that the air in the sewer was moving down the sewer from manhole No. 1 to No. 7. Smoke was next introduced into the sewer at C, and it also travelled down the sewer to D, showing itself at each manhole in its course thither. Smoke was next put into the sewer at D, with the result that it passed down the sewer towards manhole No. 14. Smoke was further introduced at E, and it was also carried down the the sewer, appearing at manholes 13 and 14. Along this sewer, between manholes No. 1 and 7, the average flow of sewage, when tested, was about 18 feet per minute, while the movement of sewer air between the same points was about 12 feet per minute. Between manholes Nos. 8 and 13 the sewage was found to be flowing at the rate of 370 feet per minute and the sewer air moving at the rate of 50 feet per minute. Between manholes No. 13 and 15 the average flow of sewage was at the rate of 136 feet per minute and the movement of sewer air 24 feet per minute. Several different forces are concerned in producing the movement of air in sewers and in causing it to escape from the street gratings.

1. *Aqueous Vapour.*—Watery vapour is lighter than air, and it is being constantly given off from the sewage. It diffuses itself throughout the sewer air, causing it to expand and rendering it lighter, and in consequence it tends to escape from the sewers.

2. *Barometric Pressure.*—A rising barometric pressure increases the tension of air in sewers, and when the barometer falls, sewer air expands and tends to escape from the sewers.

3. *Temperature.*—In winter the temperature of the sewage and sewer air is mostly higher than the outer air. Last October we found the average temperature of the sewage to be 57° F., that of the sewer air 54° F., while that of the atmosphere (during the day) was 52° F. on the days when the experiments were conducted. During the summer months the temperature of the sewage would be generally lower than that of the atmosphere, with increase of temperature air, and of course, sewer air, expands and tends to escape from the sewers. Then, again, air, when warm, being lighter than when cold, rises, and cold air descends to take its place, so that, when the sewer air is warmer than the outer air, there is a tendency for such air to escape therefrom, and the outer air to take its place, but these conditions are generally present in winter only, and it is in summer during warm weather that the sewer emanations become a nuisance, so that we must look a little further for the cause of this. It is evident that the higher temperature is the cause of the nuisance, because it occurs during the summer. Increased heat gives rise to an increased amount of decomposition, to which the greater offensiveness of sewer air must be due. I calculate that sewage will flow from manhole No. 1 to manhole No. 15, on an average, in a little less than two hours. Now this length of time is not sufficient to allow of any great amount of decomposition to take place in the sewage as it flows. Where, then, does the decomposition take place? The rise and fall in the height of the stream of sewage will leave some amount of organic matter upon the inside of the sewers above the surface of the sewage, which in the presence of warmth and moisture will decompose. Then in sewers where the flow is very slow a sediment tends to deposit from the sewage, which will decompose, especially in warm weather, and the sewage will carry away in solution and otherwise the gases resulting therefrom. Then, again, dirty water, standing in yard and other gullies and traps, and the filthy liquid of middens, will undergo rapid decomposition in hot weather, so that when such water passes into the sewers it is charged with putrefactive gases. More or less of this gas will escape from the sewage as it flows along, and mix with the sewer air, thereby intensifying its offensiveness. These ideas are borne out by the fact that, after a heavy rain, the sewers for a time are much less offensive. A heavy fall of rain washes out and cleans gullies and traps, dilutes the sewage, and carries away gases. It cleanses the inside of sewers, and the sewers, running more or less full, sewer air is removed, to be replaced by outside air. The temperature of the sewers will also be reduced. As a result, the offensiveness of the sewers is temporarily removed.

4. *The Rise and Fall of Sewage.*—When the stream of sewage rises air is driven out, and when it falls outside air passes into the sewers.

5. *Wind.*—Wind tends, no doubt, to move the air in sewers, either by blowing directly into street openings or blowing over them, thus producing a vacuum and an outflow of sewer air. The situation of the street opening, its relation to surrounding buildings, etc., and the direction and force of the wind all tend to modify the action of the wind in this direction, and are frequently concerned in determining the direction of the movement of sewer air, that is, as to whether that movement shall be with or against the stream of sewage. But the latter can occur only when the flow of sewage is slow.

6. *The Motion of the Sewage.*—In the experiments described in the beginning of this paper we found the flow of sewage a very important factor in producing movement of sewer air, for we ascertained that sewer air followed the course of the sewage, and we also found, by putting smoke into an empty sewer, that in such a sewer the air was practically stationary; at least, when the experiments were performed such was the case. Then, again, with a more rapid flow of sewage we got a more rapid movement of sewer air. We, however, also ascertained that in sewers with very little fall and with a consequent slow current of sewage sewer air sometimes moves with and at other times against the flow of sewage. This variation in movement is undoubtedly due to the action of the wind as referred to above.

The fact that a more rapid flow of sewage produces a more rapid movement of air in the sewer, under certain conditions, plays an important part in driving sewer air through the street gratings. Between manholes 11 and 14 is situated a

small village called Howebridge, and great and frequent complaints have been made of the offensive smell arising especially from manholes 11 to 14. Now, between manholes 8 and 13 we found sewer air to be moving at the rate of 50 feet per minute, while between manholes 13 and 15 we found that movement to be 24 feet per minute, consequently a greater quantity of sewer air, during a given time, would flow down to the village of Howebridge than could be carried away from it, and hence any excess in the amount brought down must rise out of the manholes situated there. Again, when a branch sewer with a good flow of sewage joins the main in a manhole, that particular manhole is liable to be more offensive in consequence. Take, for example, manhole 9. In this manhole a branch sewer with a quick flow of sewage, and 21 inches in diameter, joins the main, so that coming into this manhole besides this branch sewer is the main sewer 18 inches in diameter, and leading out of it is the main sewer 21 inches in diameter. Now, it is pretty certain that two sewers of 18 inches and 21 inches respectively will bring more sewer air into this manhole than the 21-inch sewer can carry away, and the excess in the amount brought will flow out of the manhole.

Dr. Sidney Davies (Medical Officer of Health, Plumstead) contributed a paper in which he urged that whether or not microbes were present in it, sewer gas was undoubtedly injurious. He held that thorough ventilation in large sewers was only needed for the men who worked in them. Ventilation did not diminish but perhaps increased the formation of fœtid gases. Shaft ventilators up houses were not much less objectionable than open manholes. All houses should be disconnected from sewers, and only so much ventilation supplied as might be requisite to serve as safety valves. This was very little, for the danger from pressure of gas had been much exaggerated. He advocated giving sewers sufficient vent to relieve pressure, but said better no vent than too much ventilation.

Dr. Heaven read the following letter:

Health Department,
Town Hall, Lowestoft.
July 24th, 1894.

Dear Dr. Corfield,—I much regret that I am unable to be present to take part in the discussion on the ventilation of sewers, for I have recently devoted considerable attention to the medical aspects of this important question, as you will see from the report which I enclose.

I would like, however, to be allowed to say that, in my opinion, surface ventilators are undoubtedly one cause of the spread of such diseases as diphtheria and enteric fever in urban districts; and that to create draughts throughout the length of the sewers, as is done by the modern system of inlets and outlets, is one of the surest ways of contaminating the atmosphere we breathe with such germs as must find their way into the sewers by the discharges of patients suffering from these diseases.

Much misconception has, I believe, arisen from the belief that the smells from sewers indicate the evolution of gases in considerable quantity, with the natural result of an increased pressure; but all the evidence gathered on this subject distinctly negatives such a conclusion; and, to my mind, the method of providing surface gratings as fresh air inlets, and shafts as outlets, can best be compared to the action of a druggist, who takes out the bung or provides a couple of openings in the stopper, of a carboy of carbon disulphide, with the object of "purifying" the contained liquid. In either case the sole result is to foul the atmosphere without in any way abolishing the cause of the offence.

Sanitary authorities must recognise that it is possible to have smells without increased pressure, and that it is better to bottle a smell than to dilute and so "purify" it by spoiling a large bulk of pure air. Just as we have found that to purify sewage by turning it into a running stream is a most expensive and extravagant policy, and a ready means of distributing disease germs broadcast, so in the same way we are finding out that there are better ways of dealing with sewage emanations, whether gaseous or particulate, than that of forcing them down the throat of "the man in the street" by mixing them with the atmosphere we breathe.

The foul odours which at present emanate from street gratings or grid ventilators must be confined to their proper place—the sewer, and instead of clumsy and inelegant shafts, we should have a few 3½-inch or 4-inch pipes at intervals, which shall act solely as "safety valves," to equalise the internal and external pressures, for the power must necessarily vary with the floor of the sewage and the periodical accession of storm water or of trade refuse to the sewers. Surely it is a strange anomaly that the very authority whose duty it is to secure to the citizens pure air, equally with pure food, pure water, and I would add advisedly pure soil, should so often be the one to vitiate the air with sewer emanations, which are infinitely more harmful than smoke, or even than the fifth of a grain of hydrochloric acid per cubic foot of air, which may not be exceeded, under the Alkali Works Regulation Act.

Whether the sewers be old brick constructions or the more modern glazed pipes, I believe that, with adequate flushing, little or no ventilation is required, and that fresh-air inlets are a serious mistake, for the more fresh air you suck or pump into your sewers, the more foul air will there be emanating at other points, and contaminating the atmosphere, without in any way benefiting the sewer or its tributaries.—I am, Sir, faithfully yours,

Francis W. Clark, M.O.H., M.B., D.P.H.,
Lowestoft.

The Chairman of the Public Medicine Section,
British Medical Association Meeting,
Bristol, 1894.

Dr. Kemp gave an account of the experience in a modern-sized town of 40,000 persons in one of the Australian colonies—Adelaide. It was flat and not far from the sea; it was formerly notorious for unhealthiness; it was a hotbed of typhoid and diphtheria. A good water supply was brought in, and yet the disease went on. Then the authorities put in sewers through the whole town, and laid it down as one essential that they should be ventilated by open grids in the middle of the roads. It was provided they should be of sufficient size and in sufficient number so that there should be no offensive smell. Intercepting traps between the main sewer and the houses were put in by the corporation. The loss of life by preventable disease was enormously decreased. The system had been more or less adopted in other towns in the Colonies, and the effect in all cases, where the system was carried out thoroughly—and the thoroughness consisted of a multiplication of these openings—was that they got the air in the sewer practically as pure as outside. The death-rate had fallen enormously, and had kept down since the system was introduced.

Dr. Slade King (Ilfracombe) described the result of an experiment carried out at Ilfracombe. In 1875 they had at Ilfracombe no ventilation of sewers. An outbreak of diphtheria, originating in importation, spread rapidly, and the deaths amounted to a quarter of the attacks. The difference of the death-rate above a line 100 feet above the level of the sea was extreme. Not only in mortality, but also in the ratio of cases the proportion was something like 5 to 1 in the district above the line. The greater mortality was at the higher level. The better class of houses—the newer houses—were on the higher level; whereas the worst class were the cottages in the low levels. Ventilating shafts 4 inches in diameter, well above the windows of the houses, were connected with the drains and sewers. House ventilators were introduced, and along the crowns of the roads open manholes were put in, and every gully communicated with the sewer. A most complete and perfect system of open ventilation of sewers had thus been instituted. In August, 1893, there was at Ilfracombe an initial case of diphtheria after a long absence of that disease. At the lower levels there was scarcely any diphtheria at all; above the 100 feet level cases began to increase in number and in intensity, and, notwithstanding this system of open ventilation, it could not be shown that there was any difference between the intensity of the cases and the number of them compared with the period when this system did not exist. There was immunity below the level he had indicated, and above that level there was no doubt that the attacks were numerous and could not be accounted for except by the aërial diffusion of the disease. It had been found that the only way to check diphtheria in Ilfracombe was not only to

open two isolation hospitals, but to detain the children in the isolation hospitals for a period of three weeks or a month after they were supposed to be cured. As soon as a child was allowed to go back without this quasi-quarantine there was a recrudescence of the disease. For the last six weeks the town had been without a recurrence of the disease. A remarkable thing was that outside the limits of the drainage system of the town there was not a single case.

In reply to the PRESIDENT, Dr. KING said that he could not establish any connection between the diphtheria and sewer ventilation.

Dr. DAVIES (M.O.H. Bristol) said that it seemed rather remarkable that some experts, at any rate, were coming round to the plan which was many years ago adopted in Bristol, and which was considered to be old-fashioned and extremely wrong—the plan of having sewers which were entirely ventilated by street grids or by shafts. All the sewers in that city were constructed, roughly speaking, between 1850 and 1870 on the principle of taking sewage and storm water. They had no external means of ventilation by means of grids and shafts, but the road gullies, after being water-trapped, were carried direct to the sewers. The houses were of course cut off from the sewers, and the ventilation of the house portion was carried out in every instance where a new house was built or where the attention of the authority was called to an old house. If there was any excess of pressure in the sewer it might either escape by passing through the water trap of the street gully or if it forced the disconnection trap of the house it escaped by the house shaft. It was prevented entering the house by the trap in the apparatus. With regard to diphtheria and typhoid fever, Bristol occupied a very satisfactory position. Although the increase noted in all urban districts had been noticed in Bristol in the past few years, yet the increase was proportionately less than in most of the large centres of population. There had been, in his experience, no serious epidemic of diphtheria, and with the exception of one localised epidemic of typhoid in 1885, this latter disease was rare. Most of the cases of typhoid fever occurred a few weeks after people returned to Bristol from their autumnal holidays. The prevalence of these diseases was largely due to the condition of the water supply. The Bristol water supply was brought fifteen or twenty miles from deep springs in the Mendips, and the city was therefore exceptionally well placed. Dr. Haldane, who had examined the air in the Bristol sewers some years ago, found it free from any offence, and bacteriologically it contained nothing.

Dr. SPOTTISWOODE CAMERON (M.O.H. Leeds) said that the discussion disclosed diametrical opposition on the part of medical men and engineers on these questions. It seemed that one very important point to be considered was this—everyone acknowledged sewer gas was bad. But what was sewer gas? Was it a little sulphuretted hydrogen and a little carbonic dioxide sewer gas or the microbes floating about in the air of the sewers? He supposed the latter was meant. Then came the question whether it was better to pass air through the sewers to dilute these organisms. It was only when these organisms attacked with great force they were able to effect an entry. A four-inch ventilating pipe was practically nothing bearing in mind the friction of the air. Why should they have large quantities of microbes in the sewers at all? Why was a sewer offensive? The reason it was disagreeable was because they kept the sewage hanging about. They kept it in the small cesspools they called traps in the neighbourhood of the houses; there it remained many hours; it fermented, and when washed away in part by fresh fluid coming down the pipe, enough of the ferment remained to continue the action in the fresh material. If they got a lot of the sewer gas they must draw it out and burn it—a very expensive method—or prevent its formation in the sewers. He suggested that they should diminish the number of these little cesspools (traps), and in the towns have one for every three or four houses instead of one for every house. It was desirable to limit the number and the size of these sewer gas producers.

Professor LANE NOTTER (Netley) said there was good deal of misunderstanding on the use of the terms gas and sewer air. Sewer air was practically harmless; sewer gas was different. Sewer gas was the result of deposit, of bad laying, and bad gradients. In properly-constructed sewers there should be no sewer gas. There was one thing which we sometimes overlooked—the influence of temperature. It was the temperature of the sewer air that produced increased virulency of microbal life in the sewer itself. Sixty degrees Fahrenheit allowed these organisms their great test chance of existence and virility. That was a point which had not received the attention it might have in regard to autumnal diseases. How rarely they met with these microbe organisms in well-constructed sewers. They stuck to the damp surface of the sewers; they did not float about in the sewer air. With proper construction and flushing they would hear less of the nuisance of sewer gas than at the present time.

Brigade-Surgeon-Lieutenant-Colonel PRINGLE thought something more needed to be done to prevent choking substances passing into the waste. He could quite believe that often the sanitary trap was a very insanitary institution.

Dr. NEECH remarked that they could not prevent air currents in the sewers. The motion of the sewage itself produced air currents. He thought in the ordinary way air was carried down with the stream of sewage, and did not travel to the high ground.

The PRESIDENT said they had had an interesting discussion on an extremely important subject, and one which forced itself forward more and more every day. Some years ago a plan used to be adopted of not ventilating sewers at the level of the roads, in fact of ventilating little or not at all. The result was there was a good deal of foul air in the sewers, and it got into the houses through the untrapped house drains or defective traps. Enteric fever was largely prevalent in towns where sewers were not ventilated. The result was they took to ventilating sewers at the level of the roads, and then the foul air from the sewers, which were not properly laid in many cases, and not properly flushed, in places escaped in the roadways. The attempt was made to prevent this by placing trays of charcoal in the manholes to filter the air. That did not answer; and it had to be abandoned. Then it came to be found if they had manhole ventilators at the level of the streets it was absolutely necessary to have the sewers self-cleansing. The discussion seemed to show this, and if it was a fact they might have to have recourse to another system. Many sewers with manhole ventilators at the level of the streets were not self-cleansing, and a considerable amount of foul air was formed in them. This foul air, although Dr. Neech disagreed, usually escaped in the upper portions of the sewer. The lower ventilators in a town became inlets and the upper ones outlets. This was all very well for the people living in the part of the town where the inlets were, but it was different for those where the outlets were. Hence if they could not keep sewers in such a condition that the air that came out was innocuous, some other system must be adopted. Thus they might have to go back to the old system based on the idea that the proper place for sewer air was the sewer. He did not think they could decide the matter that day. It must be decided with a great many facts more before them than they had now. If they could not keep air innocuous, they would have to abandon the present system of ventilators at the level of the streets.

THE SEASONS AND SITES OF HINDU PILGRIMAGES IN BENGAL AND THEIR BEARING ON EPIDEMIC CHOLERA.

Brigade-Surgeon-Lieutenant-Colonel PRINGLE, M.D., said that for the first time in the history of epidemic cholera a strictly scientific and practical effort had been made, if not to stamp out the scourge in its home in the Bengal Presidency, at least to limit its extension by removing, as far as possible, all those causes which unquestionably tended under favouring circumstances, to originate an epidemic of the disease by rousing into activity disease germs lying apparently dormant.

Seasonal Influence.—This factor, if not fully understood, would upset all calculations in their relation to the probable outcome of a religious festival. Festival and not fair was the proper term for these vast religious gatherings. They were held, as a rule, throughout the year with but little reference to the slack time in agricultural employment, from the vast assemblage early in the year at Pryág, or The Meeting of the Waters at Allahabad, to the large local gatherings at the close of the year on the banks of the Ganges and Jumna from where the rivers leave the Hima-

layas to where they unite at Pryág. At Hardwàr, for instance, the fair was the mercantile adjunct to the religious festival, and might dwindle down to a few booths owing to a rumour that the festival might be interdicted. The festival, on the other hand, unless this interdiction was very peremptory, was but little affected by rumour. As a rule, the seasonal influences for cholera development at these festivals, when held in the cold weather months, November to the end of February, were at a minimum, but the end of March and the first week in April—as was the case at Hardwàr on April 12th—altered the case entirely. This it was which made the gathering at Hardwàr especially dangerous to the public health. If heavy rain set in for a few days at the end of March the risk was infinitely increased. The seasonal influence might be innocuous, so that, though the festival was well attended, it passed off frequently without the cholera. The very reverse, however, was often seen, and the seasonal influences favouring propagation and dissemination had not infrequently been such as to convert a comparatively speaking small gathering into a very fatal one as regards the public health of the country. Festivals held on the banks of the Ganges or Jumna in the cold weather were rarely dangerous to the public health, but at Allahabad or "Pryág" the case was different, owing, no doubt, to the favouring influences of proximity to a large native city. Vast gatherings of 500,000 or 1,000,000 human beings took place annually on the banks of the Ganges, at Anoopshur, Ghurmookteshur, etc. These gatherings were in the middle of the cold weather. Sacred cities like Benares, Juggernaut, Muthura, and Bundrabund had pilgrims going and coming all the year round; the gatherings for the car festival at Juggernaut in May and June were exceptional. The railway had altered entirely the character of these festivals at Benares and Muthura. These two important sacred cities had been converted into places of constant pilgrimage. In Juggernaut, of which Dr. Pringle spoke from five years' local knowledge, it was quite different, though cholera might start from Juggernaut it rarely became epidemic for any great distance from it. Limited and bad food with little or no shelter and the susceptibility from consequent weakness combined to reduce the numbers of the panic-stricken pilgrims, and the disease, like a fire, died out from want of fuel. At Saharanpur, in 1879, on the contrary, the railway was the means of spreading the disease in a manner unheard of before by means of the cholera-stricken pilgrims from Hardwàr.

Local Influences.—In the Bengal Presidency the local conditions varied from the unlimited sanitary space at sites such as Anoopshur or Ghurmookteshur, on the Ganges or Jumna, to the *cul-de-sac* at the sacred steps at Hardwàr, on the Ganges. The sites least liable at any season to organic epidemic cholera by the force of crowds acting on local conditions, were those on the banks of sacred rivers, removed by wide beds of sand, from the towns after which they were called. These encampments might stretch for miles along the banks of these rivers, as the whole river was sacred at these places, which was not the case at the various pryágs. At Allahabad, for instance, the sacred site was the meeting of the waters, and to it all movements converged. At Juggernaut, Dr. Pringle stated, he had seen a dense mass of pilgrims stretching for two miles rush into the sea at a given signal, but here there was no special sacred spot. The pilgrims, however, would not encamp near the sea on the sand, but crowded into the dirty suburbs, or, worse still, were densely packed into the houses of "the pilgrim hunters," where cholera found the most favouring conditions, and where, aided by the "Mahapurs hand," or holy food, a compound of vegetables, chiefly melons, often unfit for food, which nevertheless all must eat, the cholera influence was quickly fanned into a flame, though epidemics did not spread far from Juggernaut, as those cholera influences died out on the return march from that sacred spot. The sacred bathing steps, or "ghauts," at Benares, Mulhura, and Bindrabund were sites almost certain to fan the cholera influences of a few cases into a flame of epidemic cholera if the seasonal and atmospheric conditions were favouring. But of all the bathing steps in the Bengal Presidency, none could equal the *cul-de-sac* of Hardwàr, terminating, for religious purposes, in the sacred steps, not 50 feet wide; 1,000 or 10,000 sweepers, owing to special local causes, in a gathering like that of 1879, of which Dr. Pringle had personal knowledge, would have had no more beneficial influence than a wall of sand against the breakers of the Atlantic.

Other Influences.—Dr. Pringle had observed a coincidence repeatedly throughout the twenty consecutive years from 1864, during which, as sanitary officer of the circle, he had studied the question of the Hardwàr Festival; during this time he had witnessed two "khoomb," or twelfth year festivals—namely, those of 1867 and 1879. The coincidence in question was the fact that, though the number attending the festivals during these twenty years had a very marked influence on the mortality among the pilgrims themselves during years of severe cholera prevalence, yet the influence of the epidemic on the population of the districts through which they passed seemed to follow other lines altogether, and, for want of a better term, Dr. Pringle called this influence atmospheric. For instance, this influence was seen in the most terribly fatal outbreaks of the disease at certain places, and in certain directions after the pilgrims had passed. At others, such as Saharanpur, one of the most important stations and railway centres in the North West Provinces the outbreak, even with the railway and other station wells shamefully polluted with cholera dejecta, was very slight. It must therefore be concluded that the absence of some such atmospheric cholera influence made the "khoomb" festival of 1891 so different from that of 1879, for the crowding, judging from the numbers said to be present must have been the same, and the personal state of the pilgrims similar no doubt. There were two or three cases of cholera to start the outbreak in 1891, but these 2 or 3 cases alone occurred. To credit this exemption from epidemic cholera to the sanitary arrangements of 1,000 sweepers among 1,000,000 pilgrims (for all these remain over April 12th), to those who knew Hardwàr and its crowds of hungry, ill provided, and ill sheltered devotees, was to ensure a rude awakening to the fallacy of this line of argument at no distant date. Dr. Pringle knew Hardwàr well, and having seen it, under every condition of crowds, from 20,000 or 50,000 to, some said, 2 millions, he felt convinced that whatever could be done at the sites of other religious festivals, Hardwàr was one that, under a true cholera atmospheric influence, coupled with local and personal favouring conditions, as was seen on April 12th and 13th, 1879, no army of sweepers could have made the least impression upon from a sanitary point of view, from the simple fact that they could not have moved among the masses wedged into this *cul-de-sac*. The contrast to the escape of Saharanpur in 1879 was strongly dwelt upon. Speaking of the cholera-stricken pilgrims rushing eastwards, "nothing," said he, "could convey any impression of the horrors of this return journey, not only to themselves, but to the population of the districts through which they passed." The panic-stricken pilgrims were forbidden even to approach the villages in the plains to buy food, and thus numbers died from starvation and neglect. No better fate awaited them when they entered their own district, that of Kumaon in the Himalayas. Here the news of their sufferings, which had preceded them, instead of softening the hearts of their relatives and friends, so terrified them that the very ties of affection and kindred were severed, and numbers died close to their own homes of hunger and exposure. Nothing will ever obliterate the horrors of the Hardwàr "khoomb" of 1879, and yet no such fatality was seen in the districts to the north-west through which these pilgrims passed, though cholera continued with those journeying on foot till it died out for want of fresh cases. Not so with those travelling by railway from Saharanpur; in forty-eight hours the pestilence was spread broadcast by express trains owing to the scandalous neglect of the very simplest rules of sanitation at Saharanpur, the then most important railway station in India with reference to cholera dissemination.

Dr. LESLIE MACKENZIE (Newton-Stewart, Wigtownshire) asked if Dr. Pringle excluded soil and drinking water as a means of communicating cholera from person to person? What part did he believe the atmosphere played? Mr. Ernest Hart had maintained that they could eat cholera and drink cholera, but could not catch cholera. What did Dr. Pringle say on the third point? Was cholera to be regarded as an infectious disease, practically contagious where the comma

bacillus found suitable condition in the body, or had they to accept the proposal that the condition of the soil and atmosphere must supply preliminary something quite independent of the presence of the cholera bacillus before an outbreak of cholera took place? Were there grounds for suggesting that the outbreak at Hamburg was not explained by the bacillus at all—that it was practically harmless except with certain conditions of soil, or water, or atmosphere?

Dr. G. A. Buckmaster (London) referred to the water carriage of the disease and the importance of preventing the contamination of drinking water.

Dr. Davies (M.O.H. Bristol) pointed out that in discussing the question of cholera, observers in England and in India were upon a somewhat different ground. Conditions, climatic and other, were very different at home and abroad, and a rule could not be laid down for England that necessarily also applied to India. As far as experience in England was concerned, the evidence was most strong against aërial communication; the evidence was very strong that whenever cholera had got a good hold and spread itself, it had spread through water carriage. They had not been without experience of cholera in Bristol. In 1832 it was very prevalent, but the records were difficult to obtain. In 1849 it killed in a few months 2,000 people. In 1854 it returned again and killed 500 or 600. In that time Bristol had been served by shallow wells, and there was a horrible insanitary condition—cesspools, open ditches carrying sewage, etc. A public water supply became established, wells were largely done away with, and the reduced number were safeguarded. Then the sewer system began to be made. Cholera returned in 1866, and, although introduced in more than twenty places, the total number of cases amounted to 29, and the deaths, he thought, were 19. Of course the conditions were entirely different. The drainage was better, the water supply was good, and cases were dealt with promptly. He thought in Europe at any rate the spread of this disease was generally through water. In India, possibly, where the poison might be diffused in the air in the form of dust, it might be carried in this way somewhat widely.

Professor Notter said he did not think they had gained much by simply attributing epidemic cholera to atmospheric conditions. It had something to do with the soil, with the temperature, and the moisture of the soil, and they never found cholera present when there was a saturated soil. It was when there was a certain amount of water short of saturation, and then certain conditions of which they were ignorant, the tendency was to produce the disease. There were cycles of cholera. As to its diffusion there could be no doubt. Once started, they certainly had reason to know its diffusion was rapid. After reading Dr. Koch's facts with regard to the Hamburg epidemic, no one could come to any other conclusion than that it was a gigantic case of water poisoning. One protection was to see that the water supply was not contaminated. Another point of diffusion was milk. In India that question had not been sufficiently made out. A third important matter was the proper disinfection of the excreta of cholera patients. In India they had to deal with a surface soil positively sterile in many cases. The argument was that the soil must contain a nitrifying ferment to destroy and burn up the cholera. In parts of India the soil contained almost no nitrifying ferment whatever. In that way cholera might gain access to the water supply or food.

Sir Charles Cameron said they were to a certain extent bound to believe cholera was not propagated by any one medium. It seemed incredible and altogether opposed to common sense to have attributed mainly to the water supply of Hamburg the 1,750 cases of cholera in that city and at the same time to state Altona escaped simply because it happened to use filtered water. Hamburg water was not shown to be liable to extensive pollution before use in Hamburg. It seemed an extraordinary thing that this water, which had received the sewage of 800,000 people, by mere filtration through sand became so pure as to be almost innocuous. Hamburg was densely inhabited. It was full of miserable purlieus and stagnant canals. Altona was in hygienic condition incomparably superior. He believed cholera was spread by water, but he thought there might be other circumstances far more potential than water.

Dr. Mackenzie remarked that some hundreds of Hamburg workmen were resident at Altona; these probably drank the Hamburg water.

Dr. George H. Broadbent (Manchester) referred to cases which seemed traceable to partaking of shell-fish. He had some cases at Manchester of this kind.

Dr. Pringle, in replying, referred to grossly polluted wells in India which he had known, and said, although people drank without filtering the water, no harm seemed to result. Under other circumstances cholera had occurred. Shell-fish feeding on the deposits of rivers might become dangerous under local conditions. In India there was a national diarrhœa, and people were constantly susceptible to cholera. England was the country of all countries that had tackled the whole question of cholera from a scientific point of view. It had spent millions in producing a high state of personal sanitation and health and good water supply, and could afford to wait without fear conditions which would produce a cholera epidemic.

Should there be a Civil Medical Service for Great Britain?

Mr. A. G. Mahomed read a paper on this subject.

Present Arrangements.—Many different bodies employ part of the time of many medical men, an arrangement which was generally unsatisfactory to employers and employed. There were many objections to the method of election, which gave effect too often to the *vox diaboli*. There was no inspection of the work in most cases. Square pegs remained in round holes, and there was no gradual advancement or promotion. After training a servant, the State lost his services when most valuable, and began again on a new servant elected haphazard. Where it was desirable to employ the whole time of an officer as medical officer of health, this was often impossible, owing to the difficulties of local administration and the absence of central organisation. For the same reasons much that ought to be done was not done: for example: (*a*) inspection and drill of police, railway servants, and others in first aid; (*b*) appointment of *médecins vérificateurs:* (*c*) appointments of medico-jurisconsults.

Proposed Service.—Dr. Mahomed urged that a Service should be formed having a head responsible to the Government through the President of the Local Government Board. Under him should be a director of the department. The service should consist of three grades of officers. The first grade would approximate to district medical officers, police surgeons, and medical officers of health. The second grade should be reached after further examination, and its members should be disallowed private practice. It would consist of officers discharging in more populous centres similar duties to those of the first grade; jurisconsults, assistant medical officers of lunatic asylums, prison surgeons. The third grade should consist of inspectors, advisers of the Privy Council, medical visitors in lunacy, superintendents of asylums. As to the question of finance, the expense would remain practically the same as now. Most of these officers existed and were paid. They would, under the scheme proposed, be paid through the director, and appointed by him.

Mr. A. G. Mahomed, at the conclusion of his address, moved:

That this Section favours the adoption of a Civil Medical Service, and calls upon the Council to bring the question before the Association for discussion at as early a date as possible.

Dr. Woodcocke did not see there was much to be gained by establishing a new order of things.

Dr. Broadbent suggested that this resolution was sprung upon them rather suddenly.

Dr. Slade King (Ilfracombe) doubted the wisdom of passing the resolution.

Dr. Brassey Brierley took exception to reflections he thought the paper had cast upon the competency of the medical officers of the Local Government Board.

Mr. Mahomed said he was a medical officer, and he did not think there was the supervision of his work there should be.

Dr. W. R. Thomas (Bournemouth) seconded the motion.

The resolution was voted upon, and only two hands were held up in its favour. The motion was lost.

CREMATION.

Cremation and Death Registration.

Mr. E. Stephens, L.R.C.P. (Ilminster) said: My object is to prove that cremation, from a sanitary point of view, is superior to any other form of the disposal of the dead at present adopted or recommended. It is nothing new or faddish; in fact, it is a practice of great antiquity. The custom seems to have arisen out of friendship to the deceased, whose ashes were preserved. The first mention of cremation in the Bible is in the first book of Samuel, 31st chapter, 12th verse, where the Jews, it is stated, cremated the bodies of Saul and his sons. It was also a common practice amongst the Greeks and Romans. The Hindus still adopt it. It was strongly advocated by Professor Richter, of Dresden, in 1856. A very able article on the subject was written by Sir Henry Thompson, and published in the *Contemporary Review* for January, 1874. The Cremation Society of England was formed during that year, whose members sign the following declaration: "We disapprove the present custom of burying the dead, and desire to substitute some mode which shall rapidly resolve the body into its component elements by a process which cannot offend the living, and shall render the remains absolutely innocuous. Until some better method is devised, we desire to adopt that usually known as cremation." Cremation societies are now established in most countries, and in some cities "the crematorium" is erected in the most beautiful part of the suburbs, the arrangements, both externally and internally, being planned and executed with great taste. In England, at present, there are only two crematoriums—at Woking and Manchester. The best plan appears to be that adopted by Messrs. Siemens—complete incineration of an adult body is effected in about one hour, and is so perfectly accomplished that no effluvia escape, and the resulting ash is also absolutely free from odour, and weighs only a few pounds. It was, I believe, during the month of March, 1885, the first adult human body was cremated at Woking. Apparently the prejudice against cremation is becoming year by year less, as I find that during the year 1893 131 bodies were cremated in England. Suitable buildings are always attached to the crematoriums for the performance of a religious service, besides waiting rooms for the accommodation of friends and other visitors. The ashes, being perfectly innocuous, are at the disposal of the friends, and may be either deposited in a sealed urn in a niche of the chapel, or buried in the soil. Why is cremation superior, in a sanitary point of view, to the present mode of disposal of the dead? Because the process of putrefaction after burial goes on for years, in some cases undoubtedly disseminating germs which may propagate disease wherever they find an appropriate nidus. Cremation, on the other hand, ensures rapid decomposition, destroys all offensive impurities, rendering inert all that is infectious; in fact, as Sir Spencer Wells very appropriately terms it, it is "Purification *v.* Putrefaction." There is only one rational objection which can be raised against cremation, namely, the medico-legal one. In order to meet this objection, the Cremation Society have drawn up a code of very stringent rules, which have in all cases to be complied with before cremation is allowed to take place. At the same time, we must not forget that many poisons are decomposed, or become associated with some new septic poisons developed in the body after death. I presume we are all satisfied that the germs of anthrax or splenic fever may be brought to the surface from buried animals whose death was occasioned by that disease, and become fatal to the herds feeding there. Whatever sanitary precautions are taken by drainage and ventilation after contagious disease has occurred, those germs which destroyed the body "in question" are simply treasured so as to propagate and multiply and work like ruin to others. How many bodies are daily committed to the grave fully charged with poisons—the poisons of enteric or typhoid fever, malignant cholera, diphtheria, small-pox, scarlet fever, and may I not include that most deadly scourge to our race, tuberculous disease? Is it not notorious that watercourses and wells in the proximity of churchyards and cemeteries are sources of disease to the neighbouring population? Each body, the life of which has been destroyed by either of the before-mentioned contagious diseases, should undoubtedly, from a sanitary point of view, be cremated. In America, as we might naturally expect, the history of cremation is interesting. The United States Government have already erected a crematorium on an island in New York Harbour for the incineration of those who die from contagious diseases. The Local Government Board, backed up with the—may I say—unanimous opinion of the public health officials, should render every assistance in order to make this system of the disposal of the dead popular, although at the same time I need hardly state I am opposed to any grandmotherly legislation in order to make it compulsory. In choosing between inhumation and cremation we must not be content to bury our dead out of our sight, in selfish or foolish disregard of consequences. Only imagine a water area in which lie many bodies, all more or less in a state of putrefaction, and what the consequences must be from drinking the water taken therefrom! We are all, I conclude, satisfied on this point—that the earth was made for the benefit of the living, not the dead. Yet thousands of acres of valuable land are already withdrawn for ever from the food-producing area of this country, and naturally this area is yearly increasing. Some 600 000 bodies have to be disposed of yearly in England, Scotland, and Wales, and, supposing the process of interment to be carried out with only reasonable decency—one body to one grave—some 600 acres of fresh land would be required yearly, a loss of agricultural land greater than we surely can afford. Can any rational human being imagine for one moment that any doctrine is affected by the manner in which, or the time in which, this mortal body of ours crumbles into dust? Cremation, properly carried out, is preferable to inhumation on sentimental as well as on scientific grounds. In choosing between inhumation and cremation, we must face the following facts: the serious dangers to which, in a greater or less degree, according to circumstances, we expose the living. Cremation is free from the objections which have been raised against inhumation. In the modern crematorium the process of dissolution of the body is always conducted with decency and reverence. The body is placed in a receptacle, with no contact with fuel or any other foreign matter; it is then exposed to an intense heat, by which it is rapidly reduced to ashes, which are simply the indestructible lime from the bones. What the earth does slowly, offensively, and dangerously, cremation does quickly, decently, and safely. The directors of cemeteries might erect "crematoriums," utilising the chapels as before, reserving small spaces for the conservation or burial of the ashes. The greater part of the area would then be available for ornamental gardens for the benefit and recreation of the living. Land obtained for purposes of burial has to be taken farther and farther away from large towns, funeral expenses are therefore increasing, instead of decreasing, and the land, as I have before stated, is lost for ever, so far as the fruits of the earth are considered. There is yet another advantage from this mode of disposal of the dead, namely, the extra precaution enforced as to the cause of death. The necessity of this extra precaution you will clearly understand when we find that 20,770 deaths were registered during one year in England, Scotland, and Wales as not certified; by that I mean no legally qualified medical man had been in attendance. During the same year, 68,140 deaths were registered as coming under the list of zymotic diseases. What is the cause of many, if not all, zymotic diseases? The introduction into the system of microscopic organisms from without, which multiply in the blood or tissue, and give rise to disturbances which constitute the phenomena of each disease. Under suitable conditions of moisture and temperature many of these organisms multiply themselves in the earth, or their germs, when buried in the earth, retain their vitality, and, when brought to the surface, either by earth-worms or spade, or placed in conditions in which they mingle with the air we breathe and the water we drink, again can therefore enter the animal system and renew the cycle of their pestilential existence. If you place a body swarming with organisms of cholera or yellow fever into the earth, as recommended in the "earth to earth" system, the utmost facility is afforded for the conveyance of the organisms into the watercourses in the way best calculated to spread disease. The sentimental associations of a rural graveyard we can all understand; but how many of the population can expect to be buried under such conditions? The majority must be interred in some large cemetery. It is difficult indeed to associate any

tinge of sentiment with such burials. The deceased is carried to some place entirely removed from all family, personal, or religious associations; the poor were buried coffin upon coffin, with hardly a foot of earth separating them from each other. Can we, then, have the slightest doubt about the water in the immediate neighbourhood of big cemeteries in time becoming totally unfit for dietetic purposes, caused undoubtedly through these pits of putridity? Cremation yielded obedience to the laws of Nature, which must in every case be fulfilled in the end, although men might retard their action. Whenever the question of cremation has been discussed, the overwhelming consensus of scientific opinion has been in its favour, not only on sanitary but on economic grounds as well. The popular idea that the body rests in the grave is a delusion. Immediately after death the activity of the forces of Nature goes on, resolving the body into its various constituent elements. We have no eternal monopoly of these elements of which the body is at any time composed, either during life or at the moment of death. The great question is how we can best help the work of Nature, which will avenge herself for any breach of her laws. I claim on behalf of cremation four advantages over the present mode of disposal of the dead: (1) By cremation all bodies are rendered incapable of communicating any maladies to the living. (2) The assignment of large tracts of valuable agricultural land for the purposes of burial, and thereby permanently lost, would be rendered needless. (3) The use of the crematorium for the disposal of the dead belonging to the thickly-populated towns would materially diminish funeral expenses. (4) Cremation would prevent numbers of people losing their lives as they do now, having to be present at funerals in bleak and cold churchyards and cemeteries in all sorts of weather. A little sentiment—false sentiment it is—has to be eradicated, and then we see how completely cremation answers every reasonable wish or desire for the proper Christian, reverential mode of the disposing of the dead. The question resolves itself into one of public health, to be settled in the public interest, though with every due regard for the memory of the dead.

Cremation: Its Progress at Home and Abroad, and the Medical Responsibilities which it Entails.

Sir Henry Thompson, M.B., F.R.C.S., said: I desire to offer you in the first place a brief epitome of the results of an inquiry I have recently made as to the progress of cremation generally throughout Europe and America during the last twenty years or thereabouts; and in the second place it will be my object to draw therefrom conclusions which appear to be peculiarly important in relation to the action which should be taken regarding it, especially in our own country.

I may commence by stating that so far as I have been able to learn the first society organised in Europe for the special purpose of advocating the employment of incineration for the dead body instead of burying it in the soil, as a necessary hygienic reform, especially in densely populated districts, was formed in London early in 1874, under the title of the Cremation Society of England, and it has certainly been actively employed ever since.[1] The Society, however, was unable to perform cremation in this country until 1885, owing to their uncertainty as to the requirements of the English law in relation thereto. This, however, was cleared up shortly before this date by a well-known judicial decision, which determined that there was no existing statute hostile to cremation. The result of this will appear in its place hereafter.

A few years before the first-named period some well-known sanitarians in Italy had advocated the practice,[2] and experiments were successfully made with the human body and exhibited in public.[3] Soon after this date cremation found distinguished support in Paris,[4] and although its performance has been adopted comparatively only at a recent date, it has since been largely practised there.

I shall now read in very brief terms the following details which I am able to offer as the result of numerous reports I have recently received.

In Paris the employment of cremation was made legal about five years ago (1888-89).

The number of bodies cremated during the past year, namely, in 1893, was, of private individuals	189
Unclaimed bodies from hospitals and the schools	2,261
	2,450
In addition to these were included, according to the annual report of 1893, the incineration of small bodies, the produce of conception resulting from miscarriage up to the end of the fourth month of gestation, but reported as individuals	1,561
Making thus a total of	4,011

The sum of the five years' cremation of Paris, similarly classified is between 15,000 and 16,000.

The present system is conducted at the establishment in Père-la-Chaise, and at no other place, under the direct supervision of the "Conseil Municipal" of Paris. A committee of engineers and others has been appointed by that body for the purpose of facilitating and improving the practice of cremation in all its details. The procedure adopted is a very efficient one, and is suitable for continuous use, that is, in a furnace which is constantly employed day and night. It is there known as the "système Fichet."[5]

In Italy about twenty-five crematoria are actively employed in different parts of the country, among the chief being those of Milan, Rome, Florence, Bologna, Venice, and Padua; while at Varese, Brescia, Cremona, Lodi, Asti, and other places they also exist. These vary in kind; in some wood only is used and very successfully, in others wood and coke, in others gas. In none does the demand suffice for continuous furnace work. But the number of incinerations throughout Italy amounts to a very considerable figure annually.

In Germany the first crematorium constructed was that of Gotha—an early one in the history of modern cremation. The first incineration took place in 1878. For many years it was the only one existing in the Empire. Up to the present time about 1,500 bodies have been cremated there. Heidelberg is recent, but is the next in order; 183 cremations have taken place to the end of 1893. At Hamburg the first took place in April, 1892, since which about 100 have been performed. Numerous societies exist throughout Germany in most of the large cities and towns, and are very active in Berlin especially. Upwards of twenty have been reported to me by name. An elegant columbarium has been constructed in Berlin, but cremation is not yet legally practicable.

In Austria, the sanitary committee of the House of Representatives in Vienna has passed by a majority a resolution in favour of cremation. So also has the Austrian Rural Sanitary Council.[6]

In Switzerland, the chief crematorium is that of Zurich, an excellent establishment in active operation; 172 cremations have taken place there since its commencement.

Sweden: In Stockholm during the last year, 1893, 265 bodies were cremated, and at Gothenburg 46.

Denmark: At Copenhagen a crematorium has recently been erected, and a few bodies have been cremated during the past year.

In Holland, cremation is not yet permissible, but bodies are frequently sent thence for incineration at crematoria in adjacent countries.

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[1] A few persons interested in the subject met on January 13th, 1874, and agreed to form a society for the purpose of advocating cremation. The declaration now used to constitute membership was drawn up, and Shirley Brooks, William Eassie, Ernest Hart, Rev. H. R. Haweis, G. H. Hawkins, Cordy Jeaffreson, F. Lehmann, C. F. Lord, W. Shaen, A. Strahan, Henry Thompson, Major Vaughan, Rev. C. Voysey, T. Spencer Wells, and Mrs. Crawshay subsequently formed the committee. The Society was formally constituted at a meeting on April 29th, and an acting committee was at once formed. Sir Henry Thompson was elected president and Mr. Eassie secretary, the annual subscription to be one guinea. The declaration was as follows: "We disapprove the present custom of burying the dead, and desire to substitute some mode which shall rapidly resolve the body into its component elements by a process which cannot offend the living, and shall render the remains absolutely innocuous. Until some better method is devised, we desire to adopt that usually known as cremation."

[2] Various Italian memoirs in and after 1866.

[3] Professor Brunetti, of Padua, exhibited his method and results, with a model of a furnace, in the Vienna Exhibition of 1873. Gorini and Polli published experiments in 1872.

[4] Dr. de Pietra Santa, of Paris, reported the Italian practice and supported it heartily as a sanitary reform in 1873.

[5] I am indebted to M. Georges Salomon, Hon. Secretary of the Society for the Propagation of Cremation, Paris, for these and other details above given, and to personal observation of the working of the arrangements at Père-la-Chaise.

[6] I am indebted to Herr Professor Adolf Kronfeld, of Vienna, for the latest information respecting Germany and Austria.

In the United States there are numerous crematoria in operation. The number of incinerations has gradually risen during the previous eight years to 592 for the year 1893; of these, 245 took place in New York. There are also numerous societies formed for promoting interest in this subject and propagating knowledge respecting it.

At Buenos Ayres the cremation of bodies of those who have died by certain infectious diseases is decreed by the Government; 230 incinerations took place in 1893.

In this country the crematorium erected at Woking, Surrey, has been in operation nine years, commencing as soon as the late Sir James Stephen had declared cremation not illegal. There were 3 incinerations in 1885, and over 100 in 1892. During the present year to this date, July 25th, the number is 64. The total since commencement till the present date amounts to 522.

In Manchester a very complete and handsome edifice has been erected, and was opened in October, 1892. Three bodies were cremated during the end of that year. During 1893 30 cremations took place, and in the first six months of the present year 29 more; in all to present time, 62.

It is worthy of note that in several great centres where at present cremation is not legally practicable, not only societies exist, but columbaria have been built for the reception of funeral urns and caskets, in the confident belief that they will soon be required, as in Berlin for example.

After this brief survey of the widespread interest taken in cremation, and the great geographical area over which it extends, as manifested by the numerous societies and crematoria which exist throughout the civilised world, I beg permission to ask you to note the remarkable change in public opinion and practice in relation to the disposal of the body after death which has taken place during the period named—namely, the last twenty years. For few persons, perhaps, have had better reason than myself to remark that twenty years ago its realisation in this country was regarded, and then only by some very sanguine individuals, as a barely possible event at some remote future, while by the general public the proposal was regarded as impracticable, if not repulsive—terms which describe more or less correctly the state of European sentiment and opinion generally at that time. To day it is impossible not to acknowledge how great is the change. I have a vivid recollection of the reception a serious proposal to introduce cremation here, which I ventured to make in January, 1874, met with, and the storm of opposition which it aroused.[7] Yet to-day I find myself standing in the midst of the largest and most powerful organisation of medical men and sanitary authorities in the British Empire—men whose chief aim avowedly, and by general acknowledgment is to improve the various social conditions affecting the human health; to diminish suffering and render life more effective—engaged to present a summary of this considerable experience of cremation in our own and in foreign countries. Now it is this extraordinary change of feeling with regard to cremation, as well as the rapidity with which it has taken place, which constitute the powerful motive for my begging your attention to the gravity of the situation which is forced upon our consideration at the present moment.

It consists in the fact that in this country there is no trustworthy system enforced by law of ascertaining the cause of death in every case alike, nor *necessarily in any case* in which the fatal event occurs. That our country ought to be provided with such a system equally, whether the body be disposed of by burial in earth or by cremation, appears to me to be one of the greatest needs of our time; and I believe that this will be admitted—indeed, that it will be endorsed—by us all. This being so, I venture to affirm that this important question demands solution before we are permitted to undertake the practical resort to cremation of human bodies *on a large scale*. Up to the present time I have myself in every instance been responsible for the careful investigation of the papers connected with every case sent to Woking for cremation, having drawn up a special short series of questions constituting the death certificate on which we rely as the initial step in the process.[8] Then, having considered the evidence thus brought before me, I have declined every case not free from doubt or objection, and demanded an adequate necropsy sufficing to solve it as an indispensable condition of cremation. This is not a matter of difficulty with small numbers, but with larger numbers it is obvious that some such stringent method must be made legally binding in all cases.

Advocate as I am and long have been of cremation as one among the most important and necessary reforms, I would discourage (as I have, indeed, for years persisted in doing) a wide and general application of the process until the law demands a proper examination of the circumstances of death in every case. The present method of certifying the cause of death throughout Great Britain is grossly inadequate, and is now widely known to be so. When first advocating cremation twenty years ago (if I may be forgiven for once more alluding to the effort then made), I did not dare to do so without then prominently stating "that the authorised precautions in the matter of the death certificate ..... are defective and inadequate to the end proposed, and much less efficient than those adopted by foreign Governments," adding that if "the public is earnest in its endeavour to render difficult or impossible the crime of secret poisoning, the sooner some measures are taken to this end the better, whether burial in earth or cremation be the future method of treating our dead."[9]

Again and again I have endeavoured to attract attention to this want of provident care on the part of the State to detect, and therefore to avert, crime by ensuring a *bonâ fide* and not a merely nominal investigation in every instance of the cause of death. It may be in the memory of many here that the well-known case of Matilda Clover, which occurred about two years ago, happily caught the public ear, thanks in great measure to the energy of the *Times* newspaper[10]; and in consequence of it a deputation, at which it fell to my lot to bring forward the subject of Death Certificates, was received at the Home Office, when our present Home Secretary, Mr. Asquith, granted an inquiry by a Committee of the House of Commons, under the presidency of Sir B. Walter Foster, Parliamentary Secretary to the Local Government Board. This Committee, after examining numerous witnesses and expending much labour in prolonged inquiry and discussion thereon, came to the following conclusions, quoted verbatim from the

REPORTS OF THE SELECT COMMITTEE ON DEATH CERTIFICATION.

Page 3. So far as affording a record of the true cause of death and the detection of it in cases where death may have been due to violence, poison, or criminal neglect is concerned, the class of certified deaths leaves much to be desired (numerous illustrations of which are given on page 4).

Page 4. Certification is extremely important as a deterrent of crime, and numerous proofs are given at length in support of the statement.... ...Contrast this class with that of uncertified deaths, when the result is such as to force upon your Committee the conviction that vastly more deaths occur annually from foul play and criminal neglect than the law recognises.

Page 8. Great uncertainty in resorting to the coroner's court and want of system in connection with the practice of it are affirmed to exist. (Of this numerous remarkable examples are quoted.)

Page 10. It is stated that the opportunity for perpetrating crime is great in the considerable class of uncertified cases.... "in short, the existing procedure plays into the hands of the criminal classes."

The Committee are much impressed with the serious possibilities implied in a system which permits death and burial to take place without the production of satisfactory medical evidence of the cause of death.

Page 12. The Committee have arrived at the conclusion that the appointment of medical officials who should investigate all cases of death which are not certified by a medical practitioner in attendance is a proposal which deserves their support.

In considering CREMATION, the Committee has reported as follows:

Page 22. Your Committee are of opinion that there is only one question in connection with this method of disposing of a dead body to which it is necessary for them to refer. That question is the supposed danger to the community arising from the fact that with the destruction of the body the possibility of obtaining evidence of the cause of death by *post-mortem* examination also disappears.

The modes of proceeding adopted by the Cremation Society of England having been described,

Your Committee are of opinion that with the precautions adopted in

[7] "Cremation, the Treatment of the Body after Death," by Sir Henry Thompson, followed by a second paper, entitled "A Reply to Critics, etc." (*Contemporary Review*, January and March, 1874).

[8] *Vide* copy of Cremation Society's certificate on next page.

[9] *Contemporary Review*, 1874, March, Second Article on Cremation by Sir Henry Thompson.

[10] Correspondence and leader thereon, *Times*, October 24th, 31st, and November 7th, 1892.

CERTIFICATES OF THE CAUSE OF DEATH,

AND CIRCUMSTANCES CONNECTED THEREWITH.

(To be filled in by the nearest Relative or Friend.)

Statement by relative or friend.

Name of the deceased in full ——

Place of residence ——

Age —— *Date of death* ——

Married or Single —— *Widower or Widow*

Did —— *die at* —— *own residence* ——

If not, at a friend's house, lodging-house, or hotel ——

Boarding or nursing house, or hospital ——

Public institution, school, college ——

Employer's house, or other place, to be named ——

The following to be answered by the Medical Man who personally attended the Deceased:

Certificate No. 1.

1. *How long have you professionally known and attended* ——
2. *Did you attend h in h last illness, and on what date did you see h last?* ——
3. *Did you personally ascertain that death had taken place, and that the body was that of the above-named?* ——
4. *What was the nature of the disease or injury—privation or neglect, if any—causing death [mentioning its duration in years, months, or less]?* ——
5. *What was the immediate or proximate cause of death [mentioning the duration of the final stage or attack in days, hours, or less]?* ——
6. *Had any surgical operations been performed during the last few months, and if so of what nature?* ——
7. *Is the above report, regarding the questions marked *, based on a necropsy, or on your personal knowledge of the course of the disease during h last illness?* ——
8. *With your knowledge of h age, constitution, and habits, does the character of the fatal attack suggest any doubt as to its cause, or is there any circumstance leading you to believe that a further examination of the body is desirable?* ——

Registered Qualification.

Date *Signed*

The Medical Attendant will sign here.

Certificate No. 2.

I CERTIFY that I have, in relation to the expressed desire that the deceased be Cremated, carefully and separately investigated the circumstances connected with the death. I declare that there are no circumstances connected with the death which could, in my opinion, make exhumation of the body hereafter necessary.

Signed

Profl. Title

Address

Date

The second opinion to be signed here.

N.B.—The CREMATION SOCIETY reserves to itself the right of refusing to carry out Cremation in any case without assigning any reason.

connection with cremation as carried out by the Cremation Society there is little probability that cases of crime would escape detection, but inasmuch as these precautions are purely voluntary, your Committee consider that in the interests of public safety such regulations should be enforced by law.[11]

Such, gentlemen, is the very remarkable and most complete endorsement which the labours of the Cremation Society have received as the outcome of this judicial inquiry by the Government. Henceforth it is only a question of time for the realisation of our hopes, and justified demands for an efficient inquiry enforced by law in every case of death. And then the question of cremation may safely follow. I take it, it is not necessary here to do more than point out the manifest advantage to the body politic of effecting thereby an absolutely safe transference of the animal matter composing the dead body, in the space of a few short hours, to a new and active existence in the vegetable world, and thus wholly escaping the long stage of putrefaction, always dangerous to the living, which must inevitably first take place when the body is buried. Nor that I should do more than assert that this change should be made imperative by legal enactment in all cases of death by infectious diseases, such as small-pox, scarlet fever, diphtheria, cholera, etc. The very fact of our discussing the subject in its present form shows what must be the convictions of sanitary authorities generally respecting it. But they cannot be too often submitted to the consideration of the general public as the grounds on which cremation is advocated.

I ask you, then, to agree that it is our duty to press the Government to carry into effect the recommendations of the Parliamentary inquiry they have ordained. There are but two obstacles. The first is the extreme difficulty of getting anything done in the House of Commons, although it be a matter of national importance, which is not "politics" in any sense of the word. Were it only a Scotch or an Irish, or even a Welsh question, it might have a chance. But it is one of serious consequence to every man, woman, and child in the three kingdoms; it is not in one of these minor cate-

[11] Reports on Death Certification, 1893. Eyre and Spottiswoode, London (373, 472).

gories. But I appeal to you, in spite of such a disadvantage, to make a determined effort to be heard on this subject.

The second, a smaller difficulty, is the financial one. A few words will suffice to treat of this. Hitherto a small amount of work has been performed by the profession in connection with death certification, upon which, besides the question of personal safety to each individual, our entire scheme of national statistics in regard to mortality arising from the chief diseases identifiable by name depends. For this no kind of payment has been made or, I imagine, thought of, least of all, probably, by medical men themselves, accustomed as they are, and in the nature of things must be, to much unremunerative labour. But in this matter of determining the cause of death, new conditions, the result of advancing civilisation, more complicated, more difficult to unravel than half a century ago, have gradually arisen, laying greater responsibility on the medical man who certifies. A serious mistake or two in recording the cause of death may be as prejudicial to his reputation as a serious mistake in the practice of his art during life. Hence a moderate fee should be paid by the State for this service to every man, always to be qualified, whose duty it is to certify the cause of death; the inquiry to be adequate, and to be applied in every case of death without exception. The fact of payment made will mark the duty of certifying as an important one, and not a mere matter of form, which latter view has been tacitly suggested by the State itself in hitherto declining to regard it as work worth paying for! However, it must henceforth rank in that great and increasing category of duties which relate to the prevention of disease now engaging so large a share of medical life and activity. The fresh cost thus expended, while it lends powerful aid also in the work of preventing crime, can only prove a desirable investment, even if regarded merely in view of the material interests of the large and increasing population of this country.

This initial and pressing reform accomplished, the dead body may be disposed of without risk. Science may safely be trusted to determine whether burial, cremation, or even some new and better process shall if any such should come to light, be finally adopted.

Mr. ERNEST HART commented on the paper, and referred to what Sir Henry Thompson had done in the matter. The first crematorium at Woking was that for which Sir Henry Thompson, Sir Spencer Wells, and himself found the funds. It was now taken over by the Council. The moment they began to carry out cremation it was evident it could only be done under a strict system of death certificates. That led them to consider the present system of death certificates. It was easily shown that the present system was absolutely no protection in a great number of cases against crime. The large number of uncertified deaths and the great number of inaccurately and loosely certified deaths afforded a serious opening for crime, and were seriously detrimental to the vital statistics being correct. The murderer and the poisoner had full play at the hands of the law. That was the only country in which there was not a compulsory system of adequate certification, the only country in Europe in which an unqualified person could take part in the certification of a death, and in which it was left to registrars and those who had little knowledge of the subject to determine what the cases were which should or should not be inquired into. The whole subject was brought under the notice of the Home Secretary, a Select Committee of the House of Commons followed, and adopted their (the Cremation Society's) system of registration as to what ought to prevail and made certain definite recommendations. That, however, possibly meant the adjournment of the question to the Greek calends. No tribunal was more dilatory than a select committee, nine-tenths of whose recommendations went into the limbo of oblivion. These recommendations afforded, however, a fair basis of pressing upon the Government these matters, and they ought not to be shelved. He moved:

That this Section calls the attention of the Council to the defects of the present imperfect system of procedure for the certifying of deaths, a procedure which, in the words of the report of the recent Committees of the House of Commons, "plays into the hands of the criminal classes." This Section is impressed with the serious possibilities implied in a system that permits death and burial without the production of a satisfactory medical evidence of the cause of death; it urges the Council to press upon the Government the importance of carrying out the recommendation of the Select Committee of which Sir Henry Thompson has called attention—namely, the appointment of medical officers who should investigate all cases of death which are not certified by a medical practitioner in attendance.

Mr. Hart, when referring to the registration of the Cremation Society, handed round a form, of which a copy is on the previous page.

Professor LANE-NOTTER said he most cordially agreed with what had been said. He only wished this system could be introduced into military life, and especially on the field of battle. He knew no conditions under which the *morale* of the men was more affected than in burying their comrades. The sanitary condition of Sedan and Metz were a disgrace to the nations engaged in the conflict. Cremation satisfied every sanitary requirement, and with the suggestions of Sir Henry Thompson and Mr. Ernest Hart there could be no better method of disposing of the bodies. He had great pleasure in seconding the resolution.

Mr. BROWNE remarked that cremation could be arranged so as to be as inexpensive as an ordinary funeral. There was a great misconception on the part of the public on this matter.

Brigade-Surgeon-Lieut.-Col. PRINGLE spoke in support of cremation, which he said became more and more necessary. Places in India, which he had referred to in his paper, would have been simply uninhabitable but for cremation; the fires were going all the time.

Dr. WALFORD expressed hearty approval of the papers and of the resolution of Mr. Hart. He mentioned that the port sanitary authority of Cardiff had power to insist on the use of their crematorium on the Flat Holmes (an island in the Bristol Channel), which was provided for cholera cases. This was under a private Act; the soil on the island was insufficient for the purposes of interment.

Dr. MACKENZIE hoped the Section would unanimously pass the resolution. He spoke from experience of the great laxity in matters of registration. It might be thought dying was a matter of indifference to the community. It was high time there should be reform in the certification of deaths.

The PRESIDENT said, although he agreed with the sanitary advantages of cremation, it would deprive future antiquarians and anthropologists of their natural means of existence. The question of expense must not be lightly passed over; he did not, however, insist on this point, for great sanitary benefits must of necessity be paid for. As a friend of his said last year, coal in London was 42s. a ton, whereas an acre of land could be bought for 26s.

The resolution was carried unanimously, and the Section adjourned.

THURSDAY, AUGUST 2ND.

W. H. CORFIELD, M.D., President, in the Chair.

DIPHTHERIA AND INSANITATION.

MR. L. BROWNE, F.R.C.S.E., read a paper on "The Etiology of Diphtheria in Relation to Insanitation." Dr. Wilks taking occasion of the republication of Sir William Jenner's delightful "Lectures and Essays" wrote to the BRITISH MEDICAL JOURNAL on November 11th, 1893, to support the views of that distinguished physician's "remarkable and original observations on the independence of diphtheria of bad hygienic conditions." He also asserted that the fact has now been demonstrated to be absolutely true by Dr. Thorne Thorne, who in his work on diphtheria[1] "showed incontrovertibly that the disease was spread by contagion, and apparently had no relation to bad sanitary conditions as regards water supply, drainage, and sewerage." Dr. Wilks finishes by repeating an opinion of his own given in 1873, which was to the same effect regarding an epidemic at Folkestone of which he had experience. Sir George Johnson[2] replied that "no one doubts that diphtheria is an infectious disease; but that it is often a result of defective drainage he believes to be as clearly proved as that typhoid fever, pneumonia, puerperal fever, and albuminuria may have such an origin." He quotes numerous cases in his own practice, in which

[1] BRITISH MEDICAL JOURNAL, vol. ii, 1893, p. 1078.
[2] BRITISH MEDICAL JOURNAL, vol. ii, 1893, p. 1126.

diphtheria occurred in houses where no infection from without was possible, and in all these grave sanitary defects were discovered, which when remedied put an end to the diphtheria and sore throat. He affirms that "not to recognise the frequent filth origin of diphtheria may in practice be as disastrous as to ignore the infectiousness of the disease." A very interesting correspondence followed, and among other contributors Dr. Davies[3] insisted on the abundance of the evidence proving "the dependence of diphtheria in the past in both town and country on dampness and foulness of soil." Dr. Cordwent,[4] of Milverton, was inclined to "substitute the words 'defective drainage' for the more specific one of 'privy odours,'" while Dr. Sykes[5] insisted on the power of moist air, and for that matter of dry air also, to carry micro-organisms. This last point has received independent attention, and has been enforced with ability, in relation especially to diphtheria, by Dr. F. P. Atkinson,[6] of Surbiton. The fact, however, is—as pointed out by Dr. Davies in the correspondence in question—that Dr. Wilks in stating his proposition went far beyond what Dr. Thorne Thorne had stated, for Dr. Thorne admits[7] "that dampness of site.....and a surface soil favourable to the retention of wetness and of organic refuse, tend apparently to the fostering and the fatality of diphtheria." In another place Dr. Thorne[8] thinks that site and soil have "very possibly some relation with its beginnings;" and again," "there remain certain instances in which the occurrence of diphtheria has been in such association with sanitary defects of special gravity, that the contention as to the existence of a definite relation between the two sets of circumstances cannot be lightly set aside." Still further,[10] "Possibly qualities occasionally attaching to drain air may in much the same way prepare the human system for the reception of specific infections such as diphtheria." Dr. Thorne Thorne's position may be fairly stated by a quotation from a review of his lectures in the British Medical Journal.[11] He "confirms a suspicion which has long been growing that the connection between diphtheria and faulty drainage though real is not of the close and invariable character which at one time was assigned to it." Briefly, the object of this communication is to enforce and re-establish this close and invariable connection. Having been for many years in the habit of receiving all the published reports of the Local Government Board of their deputed medical inspectors on the various outbreaks of diphtheria throughout the country, it has occurred to me that an analysis of them in relation to this important subject would be of both interest and utility. I have been obliged to be satisfied to simply record in brief the prevailing causes and conditions as may be gathered from a fair reading of each report, and have been compelled to resist the temptation of quoting any of the numerous special paragraphs of striking interest with which they all abound. The result of examination of these tables combined with the relation of certain cases in my own experience will, I venture to think, justify the opinions I have formed on the subject, albeit they differ somewhat from those of such eminent authorities as Sir William Jenner, Dr. Wilks, Dr. Thorne Thorne, and some of his colleagues, notably Dr. Parsons. My conclusions are as follows: 1. Insanitation may be directly and primarily responsible for diphtheria, even though acceptance of this view may involve that of a *de novo* origination of the disease, a proposition capable of more powerful support by the bedside practitioner than can be readily disproved in the laboratory of the scientific investigator. 2. In cases of diphtheria attributable to contagion or importation, the infection element is highly influenced in the development by antihygienic conditions of individual or local surroundings. 3. Such antihygienic conditions are not only responsible for development of diphtheria, but unfavourably influence the gravity of an epidemic or of an individual case. 4. Much of what is called "family constitution" as an element favouring the development of the disease is explicable on the ground that in the majority of cases where different members of a family have more or less simultaneously been exposed to identical insanitary surroundings. 5. Readily admitting the importance of infection by personal contagion and "school influence," I cannot think that this element is other than one of propagation and dissemination. Where by this agency epidemics of "simple sore throats" develop into outbreaks of true diphtheria, marked evidences of insanitation in the school buildings or in the dwellings of the pupils attacked, have invariably been noted. This, of course, suggests agreement with the views of Dr. Airy and Dr. Thorne as to a "progressive development of the property of infectiveness," to which as a clinician I cordially give adhesion; only I go further in expressing my conviction that not only are epidemics of "simple sore throat" almost invariably the result of insanitation, but also that their development into true diphtheria is rapid and complete in proportion to the degree of insanitation of the surroundings of the infected district, and of the individuals first attacked—to which may be added of course the season of the year and other contributory circumstances—and the "school influence" is naturally more pronounced with the increased virulence of the infectiveness. Finally, whilst of course concurring in the modern view that the essential element in all cases of true diphtheria is the presence of a specific organism, I especially desire to exclude, on the present occasion, any consideration of the subject from the bacteriological aspect, the more especially since in none of the reports under criticism is that subject at all mooted.

The number of reports is 43.

Of these 41 are published by the Local Government Board, and two are abstracts of reports to that body published in the British Medical Journal.

The first report in my possession is that of Gedney Drove End, December 26th, 1882, and the last that of Rainham, April 27th, 1894.

In 40 reports there were undeniable evidences of defective sanitation, although in only 28 is such cause assigned by the medical inspector.

The nature of these defects may be still further classified as follows:

Cases due to insanitation or polluted water	28
,, ,, infected milk supply	4
,, ,, contagion in schools, etc.	10
,, Doubtful	1
Total	43

General Condition of Drainage or Sewerage.

Defective, etc., in	40 cases
Good or fairly good in	2 ,,
And not imputed in	1 case
Total	43

In the cases assigned to infected milk we find that three epidemics out of four were associated with grave defects in the drainage of the locality where the outbreak occurred.

In the ten epidemics assigned to contagion the whole were found to be associated with sanitary defect of some kind. In addition cases were noted in which insanitation was given as the principal cause, dissemination by schools was also noted.

Water Supply.

The water supply was either deficient in quantity, of bad quality, polluted, or exposed to pollution in ...	33 cases
Good in	5 ,,
Fairly good in	2 ,,
Reported good in	3 ,,
Total	43

Condition of Waterclosets and Privies.

The condition of waterclosets and privies was defective, foul, inadequate, or bad in ...	37 cases
The condition was not noted or unimputed in ...	6 ,,
Total	43

Emanations from accumulations of organic and other refuse which were foul and offensive were reported in 19 cases. The outbreaks were associated with scarlatina in 3 and enteric fever in 2 cases.

The reviewer whom I have quoted has spoken adversely of those who draw "a strained analogy between enteric fever and diphtheria"; but considering the overwhelming majority of instances in which in the outbreaks under consideration the sanitary defects were just those which would be held responsible for a typhoid epidemic, it is difficult to see the force of the objection. It would be more reasonable to inquire how anyone could avoid acceptance of this analogy, considering in how many cases typhoid fever is more or less endemic in the districts subject to outbreaks of diphtheria. Sir William Jenner[12] himself has drawn attention to the close affinity of diphtheria to typhoid fever, in special rela-

[3] British Medical Journal, vol. ii, 1893, p. 1127.
[4] *Ibid.*, p. 1181.
[5] *Ibid.*, p. 1334.
[6] The Etiology of Diphtheria, *Edin. Med. Journ.*, June, 1894.
[7] *Diphtheria, its Natural History and Prevention*, London, 1891, p. 215.
[8] *Ibid.*, p. 18.
[9] *Ibid.*, p. 84.
[10] *Ibid*, p. 90.
[11] British Medical Journal, vol. i, 1892, p. 20.
[12] *On Fevers and Diphtheria*, p. 198.

tion to the fact that that the local symptoms may predominate, and that the patient may die from the severity of one of its local consequences. I have quoted in my book[13] the case of a young lady who died from perforation of the bowel due to diphtherial enteritis—at least, that was the diagnosis of the late Dr. Wilson Fox who saw the case—her illness occurring during an epidemic of diphtheria in which her sister, and other residential pupils in a school, suffered in the throat. This case occurred during an epidemic assigned in its origin to "infected milk," but it is by no means an isolated instance. Again, the connection between diphtheria and scarlet fever is very close, and the undoubted influence of insanitation with the specific fever, as with typhoid, does not admit of a doubt. [Mr. Browne then quoted several cases, published by him in the book mentioned, illustrative of the local origin of diphtheria.] I may also also allude here to the evidence of Dr. Herman, of Cape Town, as to the occurrence of diphtheria in proximity to manurial and vegetable deposits or to cow stables. He points out that diphtheria appears in isolated farms in the sheep and cattle districts, where the animals are often herded in kraals, and where decaying refuse is not only in proximity to the dwelling houses, but also close enough to contaminate the water supply. In the townships diphtheria is comparatively rare but typhoid is frequent. The opinion has recently become prevalent that the ventilation of sewers on the street level and—as Dr. Biddle has pointed out—the disposition of small children to play about the gully-holes may be in some measure responsible for the increased prevalence of diphtheria in urban over rural districts, the converse having been formerly the case. The cases quoted favour this view of direct local infection. However that may be, it appears as imperative on us to convey the ventilation pipes of public sewers above the level of ordinary respiration as is admitted to be the case in relation to the ventilation of waterclosets in private houses. I have no intention of claiming anything original in the facts and opinions which I have brought forward in this paper; but, considering the well-recognised difficulty in enforcing on the public the direct influence of insanitation on disease, I do feel justified in urging that it is a very dangerous doctrine to preach an exception of this directness in relation to diphtheria, a malady which is so seriously on the increase and so devastating in its ravages.

Dr. B. H. Mumby (M.O.H. Portsmouth) supported the author of the paper in protesting against the view that there was little connection between insanitation and diphtheria. It seemed a dangerous doctrine, and one not borne out by the facts of the case. On inquiring into a considerable number of cases he, with few exceptions, had been able to discover some insanitary conditions of the houses in cases of diphtheria. This seemed to show the two went together. He had been twice attacked himself, and in one case he was pretty certain he contracted the disease on examining an old pan closet. There was no diphtheria in the town at the time, and there had not been for six weeks. He had a slight sore throat before. He thought medical officers should enter a protest against the idea that insanitation and diphtheria were not connected.

Dr. Bond said that "insanitation" was an extremely vague term. If it was meant to assert that all cases of diphtheria or a large number of cases of diphtheria should not be connected with any obvious serious sanitary defects he was bound to say that was not his actual experience. But the more he saw of diphtheria the more convinced he was it was an affection in which sanitary defects such as were referred to played by no means so important a part as had been ascribed to them. In a rough classification of the conditions which seemed most important in the propagation of diphtheria direct personal communication with the disease should be placed first; secondly, personal and family proclivity. The third place should be given to general insanitary surroundings. This was the result he had been driven to by more than fifty years' experience in districts partly urban and partly rural. During the first six or seven years of his residence in the district in which he lived the number of cases were extremely few. Then the disease came in epidemic form, and from that time cases of it had become more and more frequent. A considerable improvement had been made in the sanitary condition of the district, and, tested by typhoid fever cases, that improvement was enormous. Yet diphtheria had increased. It was difficult to go into any cottage in the country in which they would not find conditions described as more or less insanitary. The existence of personal proclivity—a condition of the throat tissues which rendered them apt to be attacked by the specific infection—was of great importance. He saw no means of drawing a line between the mildest sore throat, and the marked form known as diphtheria cases formed a continuous chain of connection between the extremes.

Dr. Buckmaster said that if bacteriological investigation was relied upon, diphtheria and sore throat appeared distinct from true diphtheria by a specific form. In one case a certain microbe was found, in the other it was not. There was, however, a considerable combination of the diphtheria microbes with other forms. He then referred to the importance of the statement that 31 days after the subsidence of fever in diphtheria patients it was possible to find in the throat the definite diphtheria microbe which was not only capable of growing but capable of spreading the disease. The crowding of people together was one of the most important conditions in the transference of the disease. He was not quite convinced that the actual insanitary condition of houses played a great part in the spread of the disease.

Dr. Davies (M.O.H. Bristol) thought that Mr. Browne had a little misunderstood Dr. Thorne Thorne's attitude. Dr. Thorne Thorne did not say insanitary conditions had no effect, but that it was an effect of a secondary kind. Insanitary conditions, the ordinary conditions of filth and dirt, no doubt formed one of the causes of diphtheria, but there were many causes working together. There must be the specific poisons, if specific poison there be, the filthy condition of dirt or damp, the individual susceptibility, and perhaps other causes. He agreed with Dr. Thorne Thorne that a wide-spread outbreak of diphtheria was due to personal communication for the most part, and took place amongst school children mixing closely together in school. Bristol did not suffer in a marked degree from the disease. The figures since 1886 per 100,000 had gone up; they were 6, 7, 7, 16, 23, whereas the figures of the thirty-three great towns were 26, 24, 21, 27, 43; the 43 corresponded with Bristol's 23. As to the possible influence of open grids ventilating the sewers, Bristol held a somewhat unique position in not ventilating her sewers at all. The houses were cut off of course, and the house drains ventilated. The question arose whether their unventilated sewers, laid down with good gradient, flushing fairly well, had any relation to the satisfactory position in regard to diphtheria.

Dr. Mackenzie (Wigtownshire) mentioned that he had found diphtheria supervene on throat congestion; cases which looked harmless had turned out fatal. The only hope of differentiating cases was the bacteriological method. The connection between diphtheria and insanitation was an indirect one. Otherwise, where the insanitation was very bad, cases would occur by twenties and thirties, instead of twos and threes. The problem must be still looked upon as open.

Brigade-Surgeon-Lieutenant-Colonel Lane Notter remarked that the rareness with which diphtheria was found in England where insanitary conditions should lead to its prevalence was a curious fact; another point was the prevalence of diphtheria in towns compared with a few years ago, when it was more limited to country districts. The sanitation in towns had improved, and yet diphtheria had increased along with this improvement. He did not wish to say insanitary conditions did not exercise some influence, but he did not think too prominent a part should be assigned to them. He thought that possibly the disease was, comparatively with the towns, communicated more freely in country districts before the School Board system came into force, because the children were then more generally in attendance at school in the country than in the town. Now the School Board system in the towns had sent the children to the schools, they were brought more into contact than formerly.

Brigade-Surgeon-Lieutenant-Colonel Pringle attached great importance to the question of school attendance.

[13] *The Throat and Nose and their Diseases*, p. 348. Fourth Edition. London, 1893.

The PRESIDENT said he was very glad there had been such a strong expression of opinion that insanitary conditions had something to do with diphtheria. It had been proved recently that diphtheria had been communicated by personal contact to a much greater extent than they formerly believed to be the case, or, perhaps, than was the case formerly. Still they ought not to run away with the idea that insanitation had nothing to with it. Their "improvements" might not be improvements to some extent, and thus diphtheria might be a proof of it—as in the ventilation of sewers in the streets. They had no right, because of that supposed improvement, to say, therefore, as diphtheria was increasing, it had nothing to do with insanitary arrangements. There were certain large towns where diphtheria was not increasing at present. The proper thing to do was to make an accurate comparison with the state of those town as regards school attendance, sanitary arrangements, etc.

Mr. BROWNE, in replying, said some of those suffering from streptococcal complaints became affected with true diphtheria. Thus simple sore throats might become as they went on the possible commencement of an epidemic of diphtheria. Increased school attendance was one reason of the prevalence of diphtheria, but that did not get away from the fact that all these cases must have an origin.

DIARRHŒA IN 1893.

Dr. SPOTTISWOODE CAMERON (M.O.H. Leeds) said that the autumn of 1893 had a conspicuously high mortality from diarrhœa. According to the Registrar-General for England and Wales, the mortality of the kingdom and principality rose from 1.6 deaths per 1,000 per annum (which it had averaged during the ten autumn quarters which preceded) to 2.8 in the third quarter of 1893. This was increase of some 75 per cent.: but somewhat curiously that increase did not show itself most markedly amongst the towns of usually highest mortality from this zymotic. The thirty-three great towns had a rate of 3.5 in the autumn of 1893, and practically the same rate obtained in the twenty-eight towns for which previous figures were published. The rate in these twenty-eight towns rose from 2.5 to 3.5, or 40 per cent., considerably a smaller proportionate increase (though an increase to a higher figure) than in the country as a whole. In the group of sixty-seven other town districts the autumn diarrhœa mortality rose from a decade one of 1.7 to one last autumn of 3.8, a little in excess of that of the three biggest boroughs of the kingdom. This increase from 1.7 to 3.8 was one of nearly 124 per cent. Leaving out both groups of large towns, the rest of England and Wales had still an increased diarrhœa mortality of 110 per cent., considerably greater than that of the largest, though less than that of the group of towns next in size. While in the great towns the actual death-rates varied from 1.20 in Bristol to 9.36 in Preston, the percentage of increase upon the ten years' autumn average also varied very greatly. It was − 9 in London + 6 in Plymouth, 9 per cent. in Brighton, Bristol, and Leicester, 10 per cent. in Norwich; while in Halifax, Blackburn, and Hull the 1893 rate was 150, 176, and 180 per cent. above the decade average. Dividing these towns into two groups—those whose previous ten-year average death-rate was under 2.5 and those whose death-rate was above that figure—there were equal numbers in each group, namely, fourteen in each; those with the smaller average had an increase last year of 62, and those with the higher 68 per cent. It is a little remarkable that the increase in the towns with the habitually high rate from diarrhœa was not greater. Altogether twelve of the twenty-eight towns increased their diarrhœa death-rate last autumn 62 per cent. (or more) above their decade average, and nine of these twelve were in Lancashire or Yorkshire. The remaining three were Portsmouth, Sunderland, and Wolverhampton. It has, of course, to be remarked that the manufacturing North of England contributes a large number of towns to the Registrar-General's group of twenty-eight. Still, it is noteworthy that so many of the towns with a highly increased rate of death from diarrhœa were situated in the two northern counties. It must be remembered that increased death-rate does not necessarily mean a high rate. Halifax and Huddersfield, for instance, had rates for the autumn of the ten years of 0.6 and 0.9 per cent. respectively, and, though these towns increased their diarrhœa rates 150 and 67 per cent. respectively, these increased rates only amounted to 1.54 to Halifax and 1.53 to Huddersfield. Still, that some special influence was at work in the North seems more probable when we consider the mortality last autumn from diarrhœa in the ten divisions into which the Registrar-General has divided England and Wales. It will be found, on comparing the deaths from diarrhœa with the populations that two of these divisions had a death-rate from diarrhœa, estimated upon the 1891 population, of more than 4.4 per 1,000. These were the North-Western, which includes Cheshire and Lancashire, and the York division, which includes the counties of Durham, Northumberland, Cumberland, and Westmoreland, with a rate of 3.8, followed by the North-Midland division, including the counties of Leicester, Rutland, Lincoln, Nottingham, and Derby, with a rate of 3.4. None of the other seven divisions had a death-rate of 3 per 1,000 from this cause. Comparing in the North-Western and York divisions the separate registration counties, it will be found that Cheshire had a rate, on the 1891 population, of 3.4, and Lancashire of 4.7, the West Riding of 4.1, the East of 7.1, and the North of 3.4. These numbers, if calculated upon the population estimated to the middle of 1893, would be somewhat smaller. It is, however, evident that the great divisions, no less than the great towns, showed a special prevalence of diarrhœa last autumn in the counties of Lancashire and Yorkshire. It is generally admitted that a high earth temperature generally accompanies an increased prevalence of diarrhœa. The returns of the Meteorological Office do not, however, contain these data. Many of the reports for 1893 for large towns I have examined (said Dr. Cameron) contain this information, but not frequently enough to allow of comparison. The means of highest air temperature for the quarter were greatest in this country between 51° and 53° of latitude, but the minimum means were also (if we except the parallel of 54° and 55°) the lowest, and the daily range of temperature (if we again except the northern parallel) was greatest between 51° and 53° of latitude. Of the 33 towns 21 had their maximum diarrhœa mortality in the four weeks of July, 17 of the 21 in one or other of the two weeks ending July 15th and 22nd. Many of these towns had a second but less acute maximum in the last two weeks of August. Ten of the 21 July maximum towns were in Lancashire and Yorkshire. Huddersfield, Halifax, and Hull were the three towns in these counties with a later maximum. The mortality in the two former was, as we have seen, very slight. Hull had a death-rate of 11 in the third week of July: of 7 the week before, and 8.5 the week after. In the third week of August its diarrhœa mortality again rose to 11.5, then in the fourth week to 12.7. Leeds, although its rate increased only 40 per cent., suffered severely from diarrhœa. Like most northern towns it had two maxima—July's second week (8.3) and the fourth week of August (7). As elsewhere, the deaths were chiefly amongst children. I have analysed the condition found as to feeding, nursing, and housing, of 153 deaths of infants under 1 year of age registered in the last six weeks of the quarter. As a general result, with the exception of four cases, all the 153 were heavily handicapped by one or more of these conditions. In several cases the mother had been ill; in some the mother followed an employment outside the house; in a good many more the mother was not in the house at all, the child being out at nurse. In several cases the child was delicate from the first; in a large number the feeding was from the beginning artificial; in a good many of these the feeding bottle was not sterilised, and even amongst those in which this had been done the tube or brush contained unsterilised matters; in others, again, the bottle was rendered alkaline by the use of washing soda or soap. In a very large number the houses were not severed from the sewer, while in several offensive middens or other closets existed close by. Several of these conditions were present together in some cases. In four cases, as just said, none of these conditions existed. There were quite 12 deaths under 1 month old. I am strongly of opinion that a very large proportion of deaths from diarrhœa arose from entirely preventible circumstances, some of them structural as to the houses, others the result of imperfect scavenging. By this I do not mean to imply that the cleansing

department had in any way neglected the duties imposed on them. Last year an experiment was made by emptying the middens and ashpits and cleansing the street gullies more frequently in one particular district of Leeds (the South-East). Had this been done throughout the whole town, and had the diarrhœa death-rate of 1892 not decreased in 1893, it would have been open to anyone to have objected that the extra scavenging had not done anything to prevent diarrhœa. Fortunately the extra scavenging was principally confined to the South-East registration district, though the cleansing of gullies was carried out more frequently than formerly to some extent in the North District. While the death-rate from diarrhœa in the third quarter of 1892 increased in the whole borough from 3.42 to 5.20, in 1893 it increased also considerably in all the ten districts except two. In the North District it increased in the second decimal place, an amount which it is scarcely worth while to consider. In the South-East District the death-rate from diarrhœa fell from 7.00 to 6.47. This was the only district in which the diarrhœa-rate was lower in the autumn of 1893 than in that of 1892, and this was the district in which the extra scavenging was carried out. While the death-rate in South-East Leeds decreased from 7.01 to 6.47 the death-rate in the rest of Leeds, less the district specially scavenged, increased from 3.07 to 5.08. Figures of this kind for a single year are not greatly to be relied upon, but they at least make out a case for the continuance of the experiment. Diarrhœa is, of course, an expression of debility. But such debility is too often caused by remediable conditions. It is often rather a mode of dying than the real cause of death, and the true cause is finally to be found in foul drains, uncleansed traps, filth accumulations, and the like; things that have no right to be. These remediable nuisances find the soil for the cultivation of the microbe which attacks the weaker members of the community, often already rendered weak by the very conditions which manufacture the poison that kills them.

Dr. Mason (M.O.H. Hull) said his experience of diarrhœa was that it was essentially dependent upon temperature and the care bestowed upon infants. He also referred to the Yorkshire midden system, and the necessity of not only a weekly but a bi-weekly collection. He approved the suggestion that diarrhœa should be placed under the Notification Act.

Dr. Davies remarked that Bristol, in common with other places, watched with interest, if not apprehension, the remarkable increase in diarrhœa in northern towns in the autumn of 1893. Bristol experience for the third quarter of 1893 was remarkable; it had the lowest figures of any of the thirty-three great towns. To what their special exemption was due it was difficult to say. With regard to infants, the conditions in the seaports and South of England towns in regard to female occupation were very different to the circumstances in the northern towns, and a great deal of infant mortality must be due to the neglect by the mothers who were engaged in industrial occupations. The condition of water supply was also important.

Brigade-Surgeon-Lieutenant-Colonel Pringle alluded to the danger arising from the great quantities of fruit eaten in the autumn.

Dr. E. Walford (M.O.H. Cardiff) mentioned that the Irish population at Cardiff had almost immunity from infantile diarrhœa, due, he thought, to mothers suckling the infants for prolonged periods.

Dr. Davies said this was so in Bristol also with the Irish women population.

Brigade-Surgeon-Lieutenant-Colonel Lane Notter said that where artificial feeding of infants was necessary it would be a good thing if the food was given direct from the bottle, which could be easily cleansed and sterilised, and the tube and fittings, which were very difficult to cleanse, were done away with.

Dr. Spottiswoode Cameron remarked that although Bristol last year had the best records in ten years the honour belonged to Yorkshire towns—Huddersfield and Halifax.

(To be continued.)

La Correspondencia Medica de Filipinas is the title of a medical journal which has recently come into existence in the Philippine Islands.

EXCURSIONS FROM BRISTOL.

After the conclusion of the scientific labours and business of the annual meeting, Saturday was devoted to excursions, all of which were successful even beyond the wont of such expeditions. A short account of the principal excursions is subjoined:—

Wells and Glastonbury.—Sixty-five persons availed themselves of the opportunity of paying a visit to these far-famed places. At 9.25 A.M. the party assembled, under the guidance of Mr. L. M. Griffiths, of Bristol, at the joint railway station (Temple Meads), whence they were conveyed to Wells in a special train consisting of first-class, saloon, and other carriages. Upon arrival there Dr. Fairbanks, of Wells, welcomed the visitors, who were at once conveyed in carriages to Glastonbury, stopping on the way to view the Lake Village, discovered in 1892 by Mr. Arthur Bulleid, who was present to explain the details of the parts to be already seen and of the excavations which are still in progress. Glastonbury was reached about midday. Under the direction of Mr. J. G. L. Bulleid, the President of the Glastonbury Antiquarian Society, a visit was paid to the abbey and the museum, which contains, in addition to much of local interest, several of the things found in the Lake Village. The party was then driven back to Wells, where an excellent lunch was served at the Swan Hotel. Directly after some attended the cathedral service, and the others visited the grounds of the Bishop's Palace. After service all met in the choir of the cathedral, where Canon Buckle described with great lucidity the general characteristics of the cathedral, and afterwards pointed out the details of the building, both interior and exterior. With him still as their able guide, a visit was paid to the Vicar's Close, and the interesting chapel connected with it. At 5 o'clock the larger portion of the party was courteously entertained at tea by the Dean of Wells and the ladies of his family, who afterwards showed the visitors over the deanery and its grounds. The other members of the party were hospitably received by Dr. Fairbanks. The visitors, deeply sensible of the kind attention shown them by the different persons who had rendered their day such an exceedingly pleasant one, left Wells in the special train at 6.5. The whole details of the excursion had been admirably arranged by Mr. Hancocke Wathen, the Honorary Secretary of the Excursions Committee.

Weston-super-Mare.—About forty members visited Weston-super-Mare by invitation of the local practitioners. They were conducted over the ancient British encampment on Worlebury Hill, after which a visit was paid to the Grove Park and other popular places of resort in the town. Subsequently a visit was paid to the Royal West of England Sanatorium, which was thoroughly inspected; and returning thence the party were entertained at luncheon at the Grand Atlantic Hotel. At the conclusion of the repast, Surgeon-General Sir Wm. Moore, on behalf of his *confrères*, proposed a vote of thanks to the local practitioners for the entertainment afforded them, and alluded to the pleasure the visitors experienced in visiting Weston-super-Mare. At 3 o'clock a start was made in breaks for Cheddar, where the visitors were received and entertained by Dr. Statham. The caves and other attractions were inspected with considerable interest, the visitors subsequently departing per rail for the "City of the West."

Berkeley Castle.—A very few minutes after the appointed hour of 9.15 the five four-horse coaches conveying their full complement of 100 started from the reception room, taking the route by Pembroke Road over Durdham Down *viâ* Southmead and Felton to Almondsbury Hill, where the first halt was made to enjoy the magnificent panorama of the Severn and Welsh hills. By 11.45 Whitfield was reached, where the party, under the guidance of Mr. Hart (Lord Ducie's estate agent), turned into Torthworth by the new private road to the head of Cromhall Lake, when they dismounted, and walking up to the Court inspected the pleasure grounds and gardens, meeting the carriages again upon the high road. Unfortunately, the one and only *contretemps* of the day occurred here. Three of the party, by an unaccountable error, imagining themselves at Berkeley Castle, found an entrance to the Court and there sat down to await luncheon. Meanwhile the carriages were speeding their way to

Berkeley, and only upon arrival at the gates of the Park and dismounting to view the old oak mentioned in Doomsday Book was the absence of three of the party recognised. A carriage was sent back from the Berkeley Arms Hotel, and the truants recovered before luncheon was over. Arrived at Berkeley Castle, Lord Fitzhardinge received the gentlemen in the courtyard, and Lady Fitzhardinge, accompanied by her niece, Lady Jenkinson, awaited the ladies on the Terrace. No time was lost in adjourning to the baronial hall, where luncheon was laid for the whole party. Luncheon over, and the thanks of the Association having been offered to the noble host by the President of Council (Dr. Ward Cousins), the company divided into two parties; one, conducted by his lordship in person, turned to the right, and the second, under the direction of Mr. Petre (the steward), turned to the left, to view the points of interest in the castle, the church, the cowshed of Jenner, and finally the far-famed pack of hounds in their kennel, when leave was taken of his lordship and of the castle and town of Berkeley. Up to this time the weather was fair, but during the drive from Berkeley to Thornbury rain came down heavily, and Thornbury was reached under umbrellas; notwithstanding which Mr. Howard showed the party round the castle and grounds, where a large garden party from the surrounding neighbourhood was assembled to do honour to the Association, with the band from the *Formidable*, and other entertainments. The church was inspected under the direction of the rector, and finally, at a few minutes before 7 o'clock, the carriages once more started on their return journey to Clifton.

Chepstow, Tintern, and Symond's Yat.—On Saturday Mr. Hancocke Wathen conducted a party of about eighty to Chepstow, Tintern, and Symond's Yat. At Chepstow they were met by Dr. Yeats, LL.D., and Dr. King, and the former, after a few words of welcome, took them over Chepstow Castle. He drew attention to the surrounding ruins, to the limestone rock on which they stand, and to the river Wye below. Rather more than half a century ago, M. Leitch Ritchie narrated his trip to the sources of the Wye and the Severn, near the summit of Penllumon or Plinlimmon, "the beacon head" (2,481 feet), on the south-west border of Montgomeryshire. There were neither peaks nor precipices, but table-land blackened with turf and the morass wherein Owen Glendwr maintained himself, A.D. 1401, with 120 men. His entrenchments may still be traced by the brazen spearheads and broken sword blades found beneath. An estimate of the age of the Wye, British Gwy, or Wy-Water, traceable in Upwey, Weymouth, etc., appeared in the *Edinburgh Philosophical Journal*, 1856, and again in a paper read before the Bristol Naturalists Society, March 31st, 1881, by Charles Richardson, of Bristol, an eminent engineer. The investigation showed that the rate of wear and waste of a Wye cliff at Ross, Hertfordshire, which cliff appears to be worn backwards at least 300 yards, averaged 1 inch in 118 years. Hence the time required for the removal of those 300 yards, or 10,800 inches, must be 1,274,000 years. The Wye at the lower part of its course is the natural frontier of the country westwards. Here an assailant might be resisted, if not successfully repulsed. About A.D. 43 Cæsar formed a plan to make great rivers the boundaries of the Roman Empire. Here, chiefly, the Silures took their stand against the Romans, and here British blood flowed most freely.

After having inspected the ruins, the party drove to Piercefield Park, which, by the permission of Mr. H. Clay, they were allowed to visit, and thence to the Wyndcliff, where the scenery and geological formation of the basin were described by Dr. Yeats, and the Wyndcliff was descended to Moss Cottage. There they were met by the brakes, which took them on to Tintern. Luncheon was partaken of in the grounds of Tintern Abbey, by the kind permission of Mr. Lorain Baldwin. Dr. King, whose hospitable contribution to the luncheon table was greatly appreciated, presided, and after the loyal toasts had been submitted and duly honoured, Mr. Burdett rose, and on behalf of the visitors said how much they had enjoyed themselves. He mentioned the names of Dr. Yeats, Dr. King, and Mr. Hancocke Wathen (the excursion honorary secretary). Dr. Murdoch Cameron, who also spoke, referred in very high terms to the manner in which the Bristol meeting had been conducted and the hospitality shown, and said that in his experience the meeting was one of the most successful held. Mr. Hancocke Wathen, in a few well-chosen words, acknowledged the compliment. After luncheon Tintern Abbey was visited. Dr. Yeats again being the guide, and pointing out the various objects of interest in an eloquent and learned address. A vote of thanks to him was proposed by Dr. James Barr of Liverpool, and most cordially responded to. Leaving Tintern by a special train, the party proceeded to Symond's Yat, where they were met by Mr. Edmond Turner and Mr. Henry Southall, F.R.Met.Soc., both of Ross. After tea the party were conducted to the top of Symond's Yat by Messrs. Turner and Southall. The path to the summit is somewhat rough, steep, and stony, and on the way up a locality for the deadly nightshade (*Atropa belladonna*) was shown by Mr. Southall, who also pointed out some of the principal points of interest in the magnificent panorama of rock, woodland, and river scenery visible from the precipitous headland, which is 592 feet above mean sea level, and surrounded on all sides except a narrow neck of land by the river Wye. The name of Yat evidently means gate, since the miners in the neighbouring Forest of Dean still call a gate "yat" or "yatch," and the same thing occurs in Wales and the North of England. It was called "Symonds" after an old man who tenanted a cottage on the hill-top towards the close of the last century. Mr. Southall then gave a brief account of the bone cave called "Arthur's Hall," on the Great Doward Hill immediately opposite, which was found to contain a large number of fossilised bones of extinct animals similar to those found in Kent's Cavern, Torquay, and including those of the cave bear, lion, mammoth, and the long-haired rhinoceros, and the old British bull (*Bos longifrons*). Allusion was also made to the stalactite and stalagmite caves a mile and half down to the river, to the old Romano-British camp of Great Doward, as well as the portion of Offa's Dyke, easily traceable in the neighbourhood. It was also stated that the district was exceedingly rich in botanical treasures, and that in early summer and autumn especially the great variety of trees, many of native growth, gave extraordinary beauty to the view from the great contrasts of tint and the otherwise marvellous effects of fern and colour. The party returned *viâ* Pontypool Road and Newport to Bristol, all expressing thorough pleasure and satisfaction with the day's excursion.

Lynmouth and Ilfracombe.—The saloon passenger steamer *Ravenswood* had been specially chartered for a run down Channel, and at 9 A.M. a party of over 100 ladies and gentlemen joined the boat at Cumberland Basin. The weather, though cloudy, kept generally fine, and the fresh breeze was not too strong to interfere materially with the comfort of the travellers. The visitors were welcomed by Drs. Davies, Blagg, and Paul Bush, and the voyage commenced auspiciously with a fine run beneath the Suspension Bridge down the beautiful Avon Gorge. At Avonmouth the Docks the Granaries, and the Hospital Ship claimed notice, and a fine view of Portishead, Clevedon, and of the Welsh coastline and hills across the Channel was obtained. At Weston Pier some forty visitors disembarked under Dr. Blagg's guidance, and were welcomed and *fêted* by the local members of the Association. The steamer then passing between the Steep and Flat Holm islands, headed for Lynmouth, and hugging the English shore afforded a lovely sunlit panorama of woodland, meadowland, and headland on the Somerset and Devon Coasts. Especially charming was the view of Porlock Bay, flanked by the villages of Bossington and Porlock, with the woods of Cloutsham and the rolling upland behind fading into the misty heights of Dunkery Beacon. A capital lunch was provided on board, after which Lynmouth was reached, and was invaded by a small exploring party, who enjoyed the beauties of Lynton and Lynmouth till time came to be called for on the homeward journey. The steamer then proceeded to Ilfracombe, where a stay of two hours permitted the exploration of the sea walks round the Capstone and the Torrs; and at four o'clock the return journey was commenced. A sea-fog obscured the first part of the voyage, but after tea the weather held up, and a remarkably quick run with wind and tide, skirting the Welsh Coast, and permitting a view of Barry Dock, Penarth, and Cardiff, the Cholera Hospital and Crematorium on the Flat Holm Island, landed the party in excellent humour soon after eight o'clock.

BRITISH ASSOCIATION MEETING AT OXFORD.

The opening meeting of the British Association took place on Wednesday evening, August 8th; when, after a few introductory remarks from Professor Burdon Sanderson, the retiring President, the Marquis of Salisbury, was inducted into the Presidential chair, and delivered his address to a large and brilliant audience.

After welcoming the Association to Oxford as Chancellor of the University, he alluded to the changes in thought which had taken place since the last visit of the Association thirty-four years ago. At that time feelings ran high between the partisans of science, as represented by the Association, and that of the University. To some extent, no doubt, deep divergence upon questions of religion was the motive force of those high controversies; but Lord Salisbury was of opinion that these only marked the resentment of the older learning at the appearance and claims of its younger rival. *Tempora mutantur:* and the old learning no longer contests the share in education which is claimed by the new, or is blind to the supreme influence which natural knowledge is exercising in moulding the human mind. Lord Salisbury then proceeded to draw attention to the condition in which we stand to some of the most important physical questions which it has been the effort of the last century to solve. He began by considering the enigmas which still attach to the nature and origin of the so-called elementary substances of chemistry, next to those connected with what is called the ether. This naturally brought him to consider the obscurities which hung over the subject of life. In reference to this he spoke of Mr. Darwin's work as "certainly the most conspicuous event in the scientific annals of the last half century," and pointed out some of the lasting and unquestioned effects of it. He next dealt with some of the difficulties which still remain to the acceptance of natural selection as the sole or even the main object of whatever modifications may have led up to the existing forms of life, and to account for the origin of the infinite variety of life. Of these the time required for working out the process and the impossibility of demonstrating it in detail were critically examined by his lordship. In connection with this part of his subject he referred to the works of Lord Kelvin and to the views of Weismann recently delivered in Oxford and elsewhere, and he expressed the sorrowful regret felt at the death of Professor Romanes, the distinguished antagonist of the latter. Biologists will doubtless feel grateful to Lord Salisbury for his masterly and independent criticism of so important a subject.

Address on Anthropology.

Sir William H. Flower delivered his opening presidential address of the Anthropological Section on Thursday, August 9th, and took for his subject the history and present position of anthropology in this country, and especially what the British Association has done in the past and is doing to promote it. The history of the gradual recognition of anthropology as a distinct subject by the Association, he said, is an epitome of its gradual growth, and the recognition of its position among other sciences in the world at large—a process still in operation and still far from complete. The influence which the Anthropological Institute had exerted in furthering its systematic study has been most important and deserves very much wider support than it receives. An important means of registering facts and making them available for future study and reference is the collection of skeletons illustrating the physical structure of man and its variations in different races, and, secondly, the collection of objects showing his characteristic customs and methods of living, his arts, arms, and costumes as developed under different circumstances, and also modified by different racial conditions. He alluded to the work which had been done in these directions at Oxford through the exertions of Sir Henry Acland, the late Professor Rolleston, General Pitt Rivers, and Mr. E. B. Tyler; also to that done by the British Museum. Passing on to the teaching of anthropology, he pointed out how important a knowledge of the subject is to physicians as well as statesmen and others who have to do with the government of people, and how much ignorance still prevails. Our educational machinery in this subject, though lamentably deficient, is showing signs of improvement. At Oxford, Cambridge, Edinburgh, and Dublin, systematic instruction is given in it, and it is more or less recognised. In London, on the other hand, the new University scheme ignores it; the College of Surgeons, notwithstanding the magnificent material at hand for its illustration, has done absolutely nothing for the last ten years to promote instruction in it; the managers of the Imperial Institute, casting about for some worthy object for their energies, do not appear to have taken into consideration the value to the world and the appropriateness to their design of a great school of anthropology. The progress of anthropological science in recent years has been undoubtedly great, notwithstanding that it has secured little assistance by endowments, State aid, or, till very recently, from our great scholastic institutions. Sir Wm. Flower then proceeded to trace the advancements which have been made in physical or anatomical anthropology. Generalities which were formerly used to express the differences between various subjects compared have been replaced by terms conveyed in almost mathematical precision. The exact method of modern anthropology has not only led to important advancement in studying the race characters of man, but has led to practical applications undreamt of by its earlier cultivators, in the elucidation of various social problems, such as the laws of growth, of heredity, of comparative capacities of individuals within a community, the effects of different kinds of education and occupation, and in a still more concrete application as an aid in the administration of justice by the methods perfected by M. Bertillon in Paris and now about to be introduced into England. The value of observations made in the anthropometric laboratory of the Association and in that of Mr. Francis Galton at South Kensington were alluded to, and to the important and comprehensive ethnographic survey of the United Kingdom now going on under the auspices of the Association. Among the services rendered to anthropological science by the British Association not the least has been the aid it has afforded in the publication of *Notes and Queries on Anthropology*, a work which is invaluable to investigators in directing their observations in a systematic channel, and which contains a number of medical sections of the greatest importance to members of the medical profession, both at home and abroad. Among other useful and important studies recently made were mentioned those of Mr. H. H. Risley, carried on under the Government of India on the various tribes under British rule there, also those of Mr. Mair and Mr. M. V. Portman on the Andamanese.

LITERARY NOTES.

A Treatise on the Diseases of the Ear, by Mr. T. Mark Hovell, Aural Surgeon to the London Hospital, will shortly be published by Messrs. A. and J. Churchill.

The Southern Medical Monthly is the name of a new "monthly journal of medicine and surgery," published at Houston, Texas, and edited by Dr. N. J. Phenix.

The students of the Yale Medical School are about to issue a medical journal of their own. In addition to the matter supplied by the students it is proposed to have contributions from physicians and surgeons in Connecticut and New York.

The August number of the *Law Students' Journal* contains the prize essay for the year. The subject is "The Personal Responsibility of Judges," and the author is Major Greenwood, M.D., LL.B., who has taken a considerable interest in medico-legal questions, and who was lately one of the selected candidates for a London coronership. The essay is specially interesting to members of the medical profession, as it bears on the case Anderson *v.* Gorrie, now before the Court of Appeal. Dr. Major Greenwood shows that the claim to absolute irresponsibility on the part of a judge to a private suitor is not countenanced by the Civil Law nor by the early history of English Law. He sums up the subject as follows: "Absolute irresponsibility to private suitors, if it may offer some advantages, opens the door to evils which far outweigh them: and that, however well exercised may be the power by which the executive controls judicial misconduct, to enable it to discharge this function it requires the co-operation of the injured party by private action, who may in his turn rightly demand that he shall personally have a share in redressing his own wrong."

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, AUGUST 11th, 1894.

THE CHELSEA HOSPITAL FOR WOMEN.

It is not without pain that we refer to the charges brought against this hospital by the medical officer of health for the district, and which are in substance supported by the report of a Committee of Inquiry, which included medical members of the highest standing. That report was considered at a special meeting of the governors, reported in the British Medical Journal for July 28th, a meeting at which the resignation of the whole staff was received and accepted. We have waited to see whether the members of the staff would come forward to in any way challenge or mitigate the censure which is certainly implied on them by the report of the Committee; but, as this has not been done, we feel that we are bound to state some opinion on the matter, glad as we should have been to decline the duty. It is rarely indeed that a medical officer of health feels it his duty to take action against one of the hospitals in his district. Still more rarely that a medical man of the position of Dr. Louis Parkes feels bound to criticise adversely the practice of the staff. Yet the investigation of a most competent and independent Committee has upheld Dr. Parkes's action in both these respects, and the staff have felt that they had no alternative but resignation. We need hardly say that critics of the school which is now using the daily press as an engine for attacking our hospital system have been eager to seize on this incident, and to represent that hospitals are in the habit of using their patients as subjects for unjustifiable surgical experiments.

We may dismiss this part of the case at once by saying that nothing of the sort is even hinted at by the report of the Committee. Dr. Parkes, in his letter to the Chelsea Vestry, had made use of the following words: "It is evident that the question of the justifiability of such operations (that is, operations of expediency) must arise, unless it is possible to reduce the risk of fatal issue from such operations to an extremely low figure"; but by this sentence Dr. Parkes says that he only meant to call in question the fitness or propriety of the operations under the special insanitary circumstances which he conceived to be then existing in the hospital; and as this is certainly not the obvious meaning of his words, he "quite frankly takes blame for not having made the matter quite clear in his report." So we may take it that whatever irresponsible newspaper scribes may say, no responsible person has made or countersigned the terrible imputations against the surgical staff to which we have alluded. There remain the two charges which Dr. Parkes made, and which the Committee held to be proved—namely, (1) that the hospital was faulty in construction and its drainage was in a dangerously unhealthy state, and that the staff made no effort to amend this condition, even when it was pointed out; and (2) that they continued to practise operations involving grave danger in spite of numerous deaths from septicæmia. On the first head the staff seem to have allowed judgment to go by default. The medical officer of health had his attention called to the state of the hospital by cases of scarlet fever breaking out among the nurses; then, on examination, found that the drains were leaky, and that sewer air escaped into various parts of the hospital. All this, of course, could have been detected by any competent person; and surely the frequent occurrence of septicæmia should have attracted the notice of the surgeons practising in the building, even apart from the fever cases. Then again, apart from defects of drainage, the patients were improperly crowded, and this was surely more within the province of the surgeons to detect than of the medical officer of health. When the sanitary defects had been pointed out, a very regrettable delay took place in acknowledging and acting on Dr. Parkes's statements, but we do not gather that the reception of patients continued after the authorities of the hospital were convinced of the unhealthiness of the building. The laxity of the committee of management is, however, in this matter inexcusable, and they are at least as much to blame in the matter as the medical officers, for they are the special guardians of the fabric and the custodians of its population.

The second charge is that which has excited greater interest. The odious charge of performing operations in themselves unjustifiable as surgical experiments—human vivisection as the newspapers call it—must, we presume, be dropped after the committee's report, but the performing such operations as hysteropexy or ventral fixation of the womb, curetting the uterus, and exploratory abdominal section, in insanitary conditions, in an ill sewered building, such as produced a very considerable mortality is amply proved, if the report of the committee be adopted, and Dr. Fenton's statement makes no attempt to impugn its facts or conclusions. We fear, therefore, that no valid defence of the staff can be made in these respects, anxious as we should be to give full weight to such defence, and anxious as we are even now to hear anything they can say on their own behalf, and to judge it with all the favour to which their position, in our opinion, fairly and justly entitles them.

Another very interesting aspect of this lamentable incident is the light which it throws on the question of the merits and demerits of special hospitals. Space fails us at present for the adequate discussion of this grave subject; but the case of the Chelsea Hospital for Women will no doubt be a "leading case" in the discussions in future, for it favourably exemplifies some of the chief dangers and objections which we have from time to time pointed out as imminent or inherent in such institutions.

Dr. Deroubaix has resigned the Chair of Anatomy in the University of Brussels on the ground of his advanced age. He has been a teacher in the University for fifty-two years.

BARRACK PAUPER SCHOOLS.[1]

Causes of Failure.

In a recent number we dwelt on the moral and economic failure of the children—especially the girls—brought up in the barrack or associated schools. In explanation of this fact, the supporters of associated schools reply that these failures are caused by defects in the management, and they urge that large institutions, when benevolently conducted by an enlightened board and conscientious officers, can be made as effective as any other method of education for dealing with the difficult human material. To this we would answer that it is not the faults and accidents of the system, but the system itself, that is to blame. Sympathetic consideration of the needs of little children will convince anyone that to bring them up in herds of hundreds under one roof is not a method calculated to enable their bodies to grow healthily, or their characters to develop freely; while, as to their happiness, it need hardly be said that the happiness of a little child is almost in direct proportion to the amount of personal attention it receives from someone who loves it.

It is this personal attention which the barrack system renders impracticable. The schools vary in construction, plan, and methods of working; but taking them generally they are—supposing they contain about 600 to 700 children—managed by a superintendent and a matron. In certain instances the latter is the wife of the former. This, Mr. Knollys, during his inquiry at Hackney, is said to be, in his opinion, a good plan, but in this matter we venture to differ from him. In cases where the matron is independent the superintendent is liable to criticism should he lapse in his duty, or should his standard become lowered, and if his rules or arrangements interfere with those considered advisable by the matron, the board is informed and appealed to for a remedy. But if the matron is the wife of the superintendent, this useful spur is removed from his side, and as their interests are identical, it becomes desirable that both should shield the faults or failings of the other. Below the two head officers are the schoolmasters and mistresses, each keeping to their own work, their own lives, their own quarters. Their duties of teaching are peculiarly heavy, as they not only have to instruct the permanent children, in whose education they can take an interest and pleasure, but they have also to endeavour to teach the "ins and outs," some of whom come in but for a few weeks, or go out for as many months.

The constant influx of these children, the poverty of whose lives before they were driven to the shelter of the "house" made them unfit to imbibe the education that the School Board offered them outside, is a source of trouble and difficulty. They are unaccustomed to discipline, and resent the restraint that is obligatory if the effort to teach them anything is to meet with even a small measure of success. But, besides their duties as teachers, these officers, both male and female, have other work to do. The men have to do such duties as superintending playgrounds, overlooking dormitories, and they have also to be present at the children's meals. The women have to see to the bathing, the changing of pinafores, the giving out of garments, and the conduct in the dining hall—all duties that no one could object to do if they were part of the daily round of trivial acts incidental to a home life, but which, when multiplied by the hundred, become an extra labour and a considerable burden, impossible to perform in an orderly manner without discipline—a discipline which readily assumes the guise of cruelty when administered by such hands as those of Ella Gillespie.

In favour of these schools it has been argued that their educational results compare favourably with those of other children in a similar class, and after due weight has been given to the ever-recurring difficulty of the "ins and outs," that statement might be borne out by figures which give 84, 79, and 82—say an average of 80 per cent. of passes, always bearing in mind that the best board and denominational schools boast of 98, 99, and 100 per cent. But the comparison is worthless, owing to the fact that the standards are different—those that prevail in the board schools emanating from the Education Department, while the children in pauper schools are still inspected and classified by the Local Government Board. As long as this condition of things exists, it is not possible for the advocates of barrack schools to uphold them on their intellectual results; for until those results are tested by the same authority they are for purposes of comparison useless.

In no branch of social science has there been more advance than in elementary education, and it is to be regretted that the pauper children should be excluded from participation in these progressive advantages by being kept under a Department which even its most ardent defenders cannot pretend is infused with the spirit of adaptability, or imbued with the desire to adopt changes. Until this change is made it is impossible also to get for the pauper children the best teachers; shortly, they will not enter such schools. The extra duties, the long hours, the mixed and changing character of the children taught, the ever recurring "ins and outs," the strict rules (made necessary by the numbers congregated together), all are influences which combine to keep most of those members of the teaching staff who have character, experience, and capacity enough to enable them to choose their sphere of work away from the pauper schools.

Besides the teachers there are in these barrack schools many other officers and servants. There are the drill master and instructress, the needle mistresses, the haircutter, the bandmaster, the yardsmen, the trade trainers, the laundry women (sometimes as many as seven or eight), the housemaids, the boys' attendants and the girls' waitresses, the infants' attendants, the ward attendants, the cook, the kitchenmaids, the stores porter, the engineer, the corridor woman, the plumber, the drying-room man, the night watchman, and the chaplain. Every one is specifically engaged to do a specific duty, and most of the staff are amply worked, for the hours are long and the off duty times few, but it is all done, and must necessarily be done, while the numbers are large, mechanically and perfunctorily, for the officials are hedged about with difficulties. Even supposing they try to treat the children as individuals, or consider them as they would their own if they had them, their power to do so is checked in many ways. If they are tender to a delicate, sensitive child, they are warned against "favouritism." If they use the force sometimes necessary to subdue a robust little rebel, they are at once branded as "cruel."

[1] The previous articles of the series appeared in the British Medical Journal of July 7th, p. 30; July 21st, p. 149; and July 28th, p. 211.

The reform most urgently asked for from the best among the staff employed by the School Board of London is the reduction of the number of children in the school classes. "How can we," say the teachers, give to each child the individual treatment he requires when we have to teach classes of sixty or even a hundred together?" If this is the plea of school teachers, how much more strongly may it be urged by those who have to teach children, not geography or spelling, which can be learned more or less by rote, but all the little graces and refinements of home life—all the personal habits and thoughts which go to form character? That the children would, perhaps, not learn refinements and grace in their parents' homes, supposing it to exist, is doubtless only too true. But there the genuine parental love, which is seldom wanting; the sense of family unity—often strongest among the poor—supplies elements which must be lacking in school-bred children, without either the robuster natural training or the more refined artificial one. These barrack-bred boys and girls go out but poorly equipped to battle with the complicated world.

The people most competent, both from experience and natural causes, to bring up children are those who are or who have been themselves parents. But the entire organisation of the barrack schools precludes its officers from marriage. In the central school district there are 69 resident officers and servants, not counting those specially engaged in the ophthalmic department, and 68 non-resident officials. Those who are inmates of the house are necessarily most closely connected with the children, of whom the average number is 779, but these are necessarily living in celibacy and homeless. The schools are their workshop. They do not adopt the profession for life or consider themselves permanently bound to it. On the contrary, they take it but for a short time or leave it to settle in marriage when opportunities occur. Unsuitable by age and condition to do the special work of "mothering" these children, these officers and servants cannot, even if they would, give their time to the children. It is the business of the housemaid to clean the house not to comfort a child. The laundry women are employed to wash clothes, not to warm sad hearts. The kitchen maid dare not allow her pots to be found dirty because she has stopped to coax a child out of a fit of temper, and the same is true of all the officers in a greater or less degree. Surrounded with children all day long—children whose character needs call loudly to the good hearts of many a kind officer or servant, they are yet unable in direct proportion as they do the duties for which they were engaged to respond to or even notice such needs. They are paid to do things for the children, not with them.

THE UNIVERSITIES AND THE PROFESSIONS.

The address delivered at Cambridge by Dr. Jebb at the fourth summer meeting of the Cambridge University Local Lectures Association[1] was not merely a scholarly survey of the relations of the older universities to the nation in past times, but, as was fitting, a declaration of the functions and purposes of the universities in respect of modern studies. It is difficult to say which part of the address was the most interesting, and happily we now have it before us as a whole, a whole which enhances the value of each part.

In one of those light sketches of the past which are only valuable when executed by the hand of one who is at the same time a fine scholar and an artist having the skill to select those details which tell, Dr. Jebb shows us that mediæval dialectic, however barren of permanent results, had not only the uses of an instrument of mental discipline and of a formative agent in shaping our language and modes of expression but had also above all things this virtue that it fired the best intellects and engaged the enthusiasm of all ardent spirits of that age and so taught men to rejoice in the exercise of their higher faculties and to pursue for its own sake the knowledge which these faculties should attain by this way or that.

As the scholastic philosophy grew impotent it also with years grew hard, and religious freedom was suppressed at the cost of intellectual life. Wyclif's gallant struggle at Oxford was defeated, an age of torpor and sterility set in at the universities, and law and medicine found new homes in larger cities. Had it not been that the colleges grew in strength and proved themselves loyal supporters of the new learning—of the classical revival—the universities might have lost their place in our national history.

In the seventeenth century again we find them not prospering as seats of learning, though many great leaders and scholars issued from their schools, and the only excuse for the academic shortcomings of the eighteenth century is that the universities suffered from the lack of ardour, the chilling correctness of the nation at large. If in the early part of our own century the universities have been too exclusive in their traditions, too little open to modern opinion outside them, Dr. Jebb reminds us most wisely that the English value character more than intellect, and ability more than learning.

In our time the accusation of oligarchical fastidiousness cannot be thrown at Oxford or Cambridge; these universities have not only freed their methods of thought and teaching from the weight of the "dead hand" and from formalisms of all sorts; not only have they taken up into the sphere of their labours such technical subjects as engineering and the like, but they have also gone forth to evangelise beyond their own gates. There are thoughtful men who think that the universities have erred in this expansion and have also erred in teaching men their professions or their trades, but we cannot by any means accept such a conclusion and would have the universities press forward in the new paths. Their labours without their own walls will arouse the desire of men to come within their special influence who would otherwise have never felt the desire for higher culture, and within their walls they will not descend to the level of a mere adaptation of men to certain technical duties, but, taking their stand as teachers upon any one department of life, they will raise the study of it and teach it in due relation to other fields of knowledge.

A pupil may be so fitted to a special calling as to be unfit for anything else; it is the honour and the function of a university, on the other hand, to lead him to see general principles in every detail of his work. The danger is not in the technical bent; on the contrary, it is by such hard tests that the value of methods is known. The danger is

[1] *The Work of the Universities for the Nation.* By R. C. Jebb, Litt. D., M.P., Reg. Prof. of Greek, Cambridge. Price 1s.

lest technical subjects be taught as if they illustrated no principles, as if they were worth nothing apart from the money they bring in. We look to our universities to prove that there is no calling which is not worth pursuing for its own sake, no calling which has not its side of liberal education.

THE Library of the Obstetrical Society of London will be closed from August 20th to September 20th.

AMONG the recipients of honorary degrees from the University of Halle on the occasion of the bicentenary of its foundation, celebrated last week, was Mr. Victor Horsley, on whom the honorary degree of Doctor of Medicine was conferred.

WE regret to announce the death of Dr. Daniel Cornelius Danielssen, Chief Physician to the Leper Hospital at Bergen, and well known throughout the whole medical world by his lifelong researches on leprosy. He was born at Christiania in July, 1815. In 1847 his great work on *Spedalskhed*, written in collaboration with W. Boeck, was published. In this work were embodied the fruits of a most laborious investigation of leprosy undertaken at the request of the Norwegian Government, not only in Norway, but in all the countries of Europe where scattered foci of the disease were still to be found. It was by the researches of Danielssen and Boeck that the identity of the Norwegian *Spedalskhed* with elephantiasis Græcorum was definitively established.

CHELSEA HOSPITAL FOR WOMEN.

WE understand that the resigning staff of the Chelsea Hospital have applied for re-election. How many will be replaced on the staff depends on the views which the Board of Management take of the report of the Committee of Inquiry. Some annoyance, we learn, is felt because the Committee did not indicate more clearly whom they intended to bear blame in their report. Over twenty others have applied, including Drs. O'Callaghan, William Duncan, Heywood Smith, and Ewen Maclean, Mr. Skene Keith, and Mrs. Scharlieb.

THE MICROBE OF PLAGUE.

THIS new microbe—or, more correctly speaking, this most ancient but recently discovered microbe—made its first appearance in Europe at the Museum of the Pathological Section of the British Medical Association at Bristol. It was shown by Mr. Ernest Hart from specimens transmitted to him by Dr. Cantlie, of Hong Kong. According to Dr. Sims Woodhead, the superintendent of the laboratory of Colleges of Physicians and Surgeons, the microbes appear almost like diplococci enclosed in a delicate capsule, or as a short bacillus, deeply stained at the ends, which are somewhat rounded, with a clear band or space in the centre; but the predominant form is distinctly that of an encapsuled diplococcus. We shall publish engravings of them next week.

AN EPIDEMIC OF MILK SCARLATINA AT BLACKHEATH.

MR. SHIRLEY MURPHY has investigated the outbreak of scarlatina at Blackheath which we recently announced, and which, although it extended to 89 cases in twelve days, was "officially denied." It has certainly, as we intimated, been caused by the consumption of milk from a particular dairy, but by what means the milk in question obtained its infective quality has not been ascertained. At first sight one is reminded of the Hendon disease of cows, which was found by Mr. W. H. Power a few years back to have definite relations with scarlatina in man; but this view is dispelled to some extent by the admission of Mr. Murphy that the facts of the case, so far as he has been able to obtain them, do not fit in with the hypothesis of infection of the milk by two cows which, nevertheless, were suffering from disease of the udder at the time of the sudden outbreak which he records. The outbreak commenced on March 19th, when 3 cases occurred in consumers of the milk, followed by 4, 17, 19, and 19 on the four days next succeeding, special incidence of attacks ceasing after the 24th—this according with the stoppage of the supply of milk on the 22nd. The milk was in the hands of two dealers, one being the owner of the dairy and the other his only trade customer, the owner, A., selling 27 and B. 17 gallons daily. A. had most cases on his rounds, and they were attacked earlier in point of time. Of a total of 89 cases known in the twelve days ended April 1st, 55 were customers of A., 24 those of B., and only 11 were among other vendors, all in Greenwich. The case against the milk is clear. A. never doubted it and at once stopped his milk supply. Human infection could not be demonstrated as at all likely, and the condition of two cows, newly calved and arrived from Eltham on March 17th, was the more carefully considered in consequence of failure to find other source of infection. A week after discovery of the illness of one of these and of another cow two additional cows were found to be also affected; but study of the ascertained facts as to the milking of these particular cattle and of the distribution of their produce has left on Mr. Murphy's mind the impression that the hypothesis of infection of the milk by these cows having ulcerated teats cannot be maintained. Two special points remain for statement, namely, that no one using "nursery" milk from certain cows was affected, and that of those using only milk sold by B., but obtained elsewhere than from A., not one was attacked. How did the implicated milk get its quality of infectivity? One conclusion is certain: the disease was spread by the agency of the milk from A.'s dairy. In Mr. Ernest Hart's paper published in the *Transactions of the International Medical Congress*, 74 groups of such cases are recorded. Since then there have been probably half as many again, so that the dairy is still a source of public danger, requiring the utmost watchfulness.

THE NEXT ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

THE next Annual Meeting of the British Medical Association will be held in London. The President of the Royal College of Physicians, Dr. Russell Reynolds, is the President-elect. This will undoubtedly be an important professional gathering. The last meeting of the Association in London was held in 1873, the President on that occasion being Sir William Fergusson. The former meeting included 3,000 members of the Association, and it is probable that on this occasion the number will be at least double. At the meeting of 1873 Mr. Gladstone delivered his famous speech on the supremacy of the medical profession: its great advances in knowledge of recent years, and the large prospect which lies before it. Sir Richard Quain was then Chairman of the Metropolitan Branch and of the Reception Committee, a post which will now be held by Sir William Priestley.

THE LAW OF INSANITY.

AT the Bristol meeting of the British Medical Association, in the Section of Psychology, on Thursday, August 2nd, the following resolution, proposed by Dr. Weatherly, and seconded by Dr. Mercier, was passed unanimously:

That in the opinion of this meeting the present law relating to the defence of insanity in criminal cases as laid down by the judges in 1843 is not in accord with modern mental science, and should be reconsidered.

Mr. Ernest Hart, speaking as Chairman of the Parliamentary Bills Committee, recommended that the Lords be requested once more to take the opinion of the Judges as in 1843, and to ascertain their present views at the end of fifty years, during which much progress had been made both in scientific knowledge and in legal experience. Mr. Pitt Lewis

thought the proposal practical and probably likely to be successful. Subsequently the following resolution, moved by Dr. Mercier, and seconded by Dr. Weatherly, was passed unanimously :

That a Committee be nominated to confer with the Parliamentary Bills Committee of this Association and with the Committee appointed by the Medico-Psychological Association to consider the best method of obtaining the earliest possible action of the House of Lords, or any other means, as they may deem advisable.

Whereupon the following resolution, proposed by Dr. Mercier, and seconded by Dr. W. Douglas, was adopted unanimously :

That the following be appointed a subcommittee in accordance with the foregoing resolution : Dr. Orange, C.B., Dr. Nicolson, Dr. Conolly Norman, Dr. G. F. Blandford, Dr. G. H. Savage, Mr. Ernest Hart, Dr. L. A. Weatherly, Dr. C. A. Mercier.

REGISTER! REGISTER!

The General Medical Council has published its annual advertisement calling the attention of every registered practitioner to the regulations with regard to the maintenance of the *Medical Register*. Every change of address should be at once notified to the Branch Registrar by whom the practitioner was originally registered. Mr. W. J. C. Miller, B.A., 299, Oxford Street, London, W., for England; Mr. James Robertson, 1, George Square, Edinburgh, for Scotland; and Dr. R. L. Heard, 35, Dawson Street, Dublin, for Ireland. If this notification is not made the name may be erased from the Register, and, as a matter of fact, is so erased if it be ascertained, either by failure to reply to a letter of inquiry or otherwise, that the practitioner does not reside at the address registered. The official advertisement, with the full particulars, together with a statement of the resolutions of the Council with regard to "covering" unqualified persons, and the employment of unqualified assistants, will be found in our advertisement columns on p. 9.

OPHTHALMOLOGICAL CONGRESS IN EDINBURGH.

The eighth International Ophthalmic Congress began its sittings in the New University Buildings, Edinburgh, on August 7th. The last Congress, it will be remembered, was held at Heidelberg. At the opening meeting there was a large attendance of delegates, and Dr. D. Argyll Robertson was nominated President of the Congress. Vice-Presidents and Secretaries were appointed. Lord Provost Sir James A. Russell welcomed the delegates to Edinburgh, and was thereafter elected an honorary member of the Congress. Various papers were read and discussed. The afternoon was given up to excursions to places of interest in the city. In the evening the Lord Provost, Town Council, and magistrates gave a reception in the Museum of Science and Art. On Wednesday afternoon the Lord Provost gave a garden party at Woodville, Canaan Lane.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

The British Institute of Preventive Medicine, which has been but a short time in existence, had an exhibition of bacteria at the Bristol meeting of the British Medical Association, which was the most complete and comprehensive which has ever been brought together in this country. The cultivations, which number over 1,000, and the fifty odd specimens under as many microscopes, were all made by Mr. H. G. Plimmer, F.L.S., the pathologist to the Cancer Hospital, and Dr. F. Blaxall, the lecturer on bacteriology at the Westminster, both of whom are doing research work at the Institute. The exhibition was a complete representation of our present morphological knowledge of bacteriology, and was visit during the meeting by a very large number of the members who were present, to many of whom the opportunity of seeing the living cultures, and the microscopic appearances of the various micro-organisms, must have been of great value. Not only were there cultures of all the known micro-organisms, but they were each shown growing upon various media, agar, gelatine, potato, and in streak and puncture methods of inoculation, so that their various characteristics, according to the medium and way in which they were grown, could be compared. In the case of the moulds, they were also shown growing upon bread and beer wort, in flasks, so as to expose a lower surface to view. The cultivations were arranged in groups, so as to afford a better and easier chance of comparison. All those pathogenic in man were arranged together, including Campana's leprosy bacillus, the bacillus of eclampsia, and other varieties; then those which are pathogenic to animals; then those pathogenic to both animals and man. There was a collection of over sixty varieties of chromogenic organisms, aranged along two sides of the room, together with all the known phosphorescent varieties, and two large tables were filled with the various saprophytic organisms. In the centre of the room was a large collection of moulds in tubes and flasks. Under the microscopes were many specimens which demonstrated the more ordinary micro-organisms associated with tubercle, pneumonia, erysipelas, gonorrhœa, and many others, whilst a few were devoted to showing the rarer organisms, such as the plasmodia of malaria, the protozoa of cancer, and the various kinds of flagella. These, which are amongst the most difficult objects of microscopical technique, were shown upon the cholera, typhoid, and ferret plague bacilli, and other organisms. Dr. Macfadyen showed the various methods of cultivating anaërobic organisms, the bacillus of quarter-evil was exclusively used, so that the various methods could be the better compared. This exhibition certainly indicated that the British Institute of Preventive Medicine bids fair to become, as its prototype the Institut Pasteur is in France, the centre of bacteriological research in England, and the Institute has shown great energy in being able so quickly to get together such an exhibition.

THE SICK POOR IN PROVINCIAL WORKHOUSES: DARLINGTON.

Our Commission on the occasion of a recent visit to this workhouse infirmary had the advantage of the escort of one of the ladies on the Visiting Committee, whose quiet work has done so much for the improvement of the sick wards in those details where a woman's eye and training enable her to advise. The infirmary buildings are well planned and suitable for their work; the wards are large and airy, well lighted, and with cross ventilation; they look cheerful with flowers, plants, pictures—may we conclude that we there see the hands of the ladies' committee? There were not many sick in bed, this being the slack time in the infirmary. There was a poor little child with gangrene of its legs, that was the most serious case that we saw; another with consumption; a case of senile debility; and two men with ulcerated legs; the other patients were in the day rooms attached to the wards. In all there were about fifty beds in this department, for which only one nurse is provided, and she has the midwifery also on her hands, so that these hands must be pretty full. Wardswomen or men are the only people in the wards at night to attend to the helpless patients; officers they are not, for an inmate can never be an officer, nor can they be held responsible. The nurse is fully trained, but no amount of training can enable a nurse to be in two places at one, or give her the physical ability to work by day and night. It is disappointing to find that the efficient appointments of the building were not supplemented by an adequate nursing staff. The various wards contain a good sprinkling of imbeciles and idiots among the other patients, for whom there seemed to be no special provision; certainly they were quiet and well behaved at the time of the visit, but as some of them had fits, and some were loquacious, they are hardly fit company for the sick. In the "isolation hospital" which is a little hospital quite apart, there was a tramp infected with the itch, who appeared to be his own attendant, as he was at

some distance from the infirmary, where was the nurse who is responsible for him. Fortunately he accepted the situation quietly. This hospital is the only one available for the separation of any offensive case, but the master stated that it was condemned. There is no separate ward for the children, the little patient above referred to being in the women's ward. This, surely, is objectionable. The nursery arrangements were in the hands of a pauper, and, from the look on the infants' faces, the amount of care given to them might be increased. We would ask the ladies' committee to see if they cannot do something for the babes. There is so much to admire in this infirmary compared with others of the same size, that we should like to see the human machinery, upon which, after all, the efficiency rests, brought up to the necessary standard.

VISIT OF THE DUKE OF YORK TO ABERDEEN.

In spite of his many other duties as President of the Highland and Agricultural Society, the Duke of York found time to visit the Royal Infirmary and the Sick Children's Hospital. The visits that the Duke of York considerately paid to these institutions will fix his memory deeply in the minds of the various patients with whom he talked and sympathised. The Duke expressed to the directors and to the medical officers of both institutions his high satisfaction with all he saw. He chatted with grooms and veteran "salts," who waxed talkative on horses and ships; he received button-hole bouquets and booklets from child patients in the Children's Hospital, shook hands, and kindly petted them, and was amused at their play. Before leaving the Sick Children's Hospital he was pleased to agree that two of the wards in the hospital should be named the one after himself and the other after the Duchess, the latter to be named the Princess May Ward. At both the institutions the various members of the medical and surgical staff were presented to the Duke.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

Looking to the great and increasing mortality from diphtheria and the difficulty which has been experienced in applying to its prevention the troublesome and costly methods of quarantine and isolation, it is in the highest degree satisfactory to find that there is some reason to believe that biological science promises to furnish us with an antidote somewhat of the character of the Jennerian and Pasteurian methods, but having the advantage apparently of being not merely a prophylactic in the sense of securing immunity, but of being curative after the onset of the disease. It is an "antitoxin" or antidote prepared from cultivations of the diphtheria bacillus. Of the extent and ravages of diphtheria it is sufficient to note that last year alone no fewer than 3,265 deaths were attributed to this disease in London, and that there have been no fewer than 598 fatal cases in the metropolis during the last thirteen weeks. Under these circumstances the favourable results attained by the three general practitioners in different parts of the country, of whose cases we give some details, must be considered as at least holding out favourable hopes, especially when taken in conjunction with similar results which we have recorded as already achieved elsewhere. Dr. James E. Blomfield, of Sevenoaks, sends us the following brief note of a case in which he thinks that antitoxin showed itself as useful as those cases recently recorded in the British Medical Journal. On July 28th he was called to a child, aged 3 years, with well-marked diphtheritic membrane on the tonsils and uvula. In spite of vigorous treatment, locally with sulphur and carbolic acid inhalations, internally with liquor ferri perchloridi and liquor hydrargyri perchloridi, the disease spread on to the soft palate and into the nose, though there was no evidence of the larynx being involved. On July 30th Mr. Harris Butterfield, medical officer of health, kindly saw the case with Dr. Blomfield, and agreed that the prognosis was bad. Dr. Blomfield therefore injected 8 minims of antitoxin in the muscles of the thigh. In twenty-four hours the membrane was looser, with undermined edges and defined border, and in forty-eight hours a good deal had come away, while the discharge from the nose stopped, and convalescence practically began. In Dr. Blomfield's experience similar cases have done badly from involvement of the larynx and trachea even when the throat has got better. Dr. H. Urquhart Walker, of Worksop, also sends us a report—of which we shall publish the text next week—of a case of diphtheria in which antitoxin was used with complete success. The temperature was reduced four degrees within a few hours, and the constitutional disturbance was at once checked, and recovery followed. Dr. Waylen, of Devizes, also sends a report of a case in which tracheotomy was necessary, and in which the disease was spreading down the windpipe and threatening death till the symptoms were relieved by the use of antitoxin.

PROFESSOR BILLROTH'S WIDOW.

The Emperor of Austria has granted to the widow of the late Professor Billroth a yearly pension of 2,000 florins. This is to be interpreted as a mark of special favour, because according to the law of Austria the pension allowed to widows of professors is only of 600 florins. As the distinguished surgeon is understood to have left little or no private fortune, the Emperor's grateful act has given general satisfaction.

DR. GRIFFITHS, OF SWANSEA.

On Monday, July 30th, a well-attended meeting was held of the subscribers to the "Griffiths Defence Fund," at the Albert Minor Hall, Swansea. Mr. M. B. Williams, the High Sheriff of Glamorganshire, presided. Lord Swansea presented Dr. Griffiths with a cheque for £500, and an illuminated address, expressive of sympathy with him and his family in their recent trouble, and of congratulation on the brilliant manner in which he had vindicated his character of professional integrity against the unfounded charges which had been preferred against him. Sir John Williams, as the spokesman of the medical subscribers, also addressed the meeting, concluding his remarks by observing that members of the medical profession had especially to thank Dr. Griffiths for the stand he had made; in fighting his own cause he had fought that of his profession at large, as, had he not insisted on publicly bringing this case to a successful issue, similar false charges against medical men would have been yet more frequent in the future than they are at present. Dr. Griffiths suitably responded, and the meeting closed with the customary votes of thanks. The address was signed on behalf of the 218 subscribers by the following: W. Pike (Mayor of Swansea), Morgan B. Williams (High Sheriff), Lord Dynevor, Lord Swansea, Sir John J. D. Llewelyn, Bart., Sir William Jenner, Bart., Sir John Williams, Bart., Miss E. A. Dillwyn, John Coke Fowler (stipendiary magistrate), and E. Le Cronier Lancaster, M.B.Oxon., and W. F. Brook, F.R.C.S.Eng. (Honorary Secretaries to the Medical Fund).

FOREIGN DEGREES.

The Honorary Secretary of the Brussels Medical Graduates' Association, Dr. Major Greenwood, M.D.Brux., contributes to the July number of the *Medical Magazine* an article entitled "A Plea for the Registration of Foreign Degrees by Duly Qualified English Practitioners." The grievance of which the Association complains is that medical practitioners in this country are not entitled to register any foreign medical degrees which they may have obtained since the passing of the Medical Act, 1886, while they may register such degrees if obtained before that date. Any British degree may be added to the qualifications of a registered practitioner; but foreign degrees, unless obtained before June, 1886, may not be. It is argued that this is unfair, and

that it is practically impossible for most practitioners to go to, and so obtain a degree from any university in this country, except the University of London: while a degree can be obtained from Brussels under conditions with which they find it more easy to comply. As some two hundred practitioners have been able to register the Brussels degree, they are anxious that the same right should be extended to their junior brethren. The claim is that all degrees granted by State-authorised universities should be registrable by persons who are "already on the *Register* for some recognised English qualification." The *Register* already contains a good deal beyond the mere fact that the persons named in it are legally qualified to practise, and foreign graduates wish to be allowed to announce there such distinctions as they have obtained. The article concludes with what purports to be an examination of the law applicable to the question of the right of a registered practitioner to assume a title other than that by which he is registered. Section 40 of the Medical Act, 1858, imposes a penalty on any person who shall wilfully and falsely pretend to be . . . . a physician, ... or take or use . . . . any name, title, addition, or description implying . . . . that he is recognised by law as a physician or surgeon, etc. Under this section proceedings have frequently been taken, and some have reached the superior courts. In two or three cases, at any rate, the question has been whether a registered practitioner had become liable to the penalty by reason of assuming a title other than that for which he was legally registered in England. One of these cases, Ellis *v.* Kelly, was decided by the Court of Exchequer in the year 1860, and another, Regina *v.* Justices of Aston, in 1891. In the earlier case Mr. Kelly, who was registered as M.R.C.S.England and L.S.A.London, styled himself "Dr. Kelly," and justified the use of the title by the production of a diploma from the University of Erlangen, in Bavaria. The justices found that he could not be said to have assumed the title of "Dr." wilfully and falsely, and the Court declined to overrule their decision. In the second case Mr. Smith, who was registered as L.S.A., styled himself "M.D." on the strength of a licence from the Beach Institute of Indianapolis, U.S.A. The justices convicted, holding that this was a mere bogus degree, and the Court on appeal upheld the conviction. The writer in the *Medical Magazine* apparently had not the regular reports of these cases before him, and, as far as can be gathered, has failed fully to appreciate their effect. He is disposed to quarrel, if not with the actual decision, at any rate with the reasons given by the judges in the later case, and asserts that, in spite of it, the possessor of a foreign M.D. degree may with impunity style himself "Dr." in this country. That point has never been expressly decided. But in Ellis *v.* Kelly, where the defendant was held, under the circumstances there proved, entitled to an acquittal, Baron Bramwell significantly added at the end of his judgment this sentence, "I do not say that if he continues to use that description (doctor) after what has taken place, he may not be responsible." Both cases show clearly that a registered practitioner is not at liberty in addition to his legal qualifications to assume any other title which may mislead the public into thinking him to be what he is not. The question of the right to use an unregistrable foreign degree has not been finally determined, but those who use such degrees to advertise themselves as specially qualified certainly expose themselves to risk. Those who possess and wish to benefit by them should certainly join in the endeavour to obtain an alteration in the Medical Acts which shall remove all such risks, and make clear what now is at best doubtful, their right to assume their foreign titles in this country.

THE NEW QUINQUENNIAL CENSUS.

A VERY important precedent has been established by the assent of the House of Commons to the proposal of the Government that a quinquennial census should be taken in the metropolis, the general principles of which were approved on August 8th, but of which the details have yet to be settled. The principle of a quinquennial census for the whole country has repeatedly been urged upon the Government, owing to the impossibility of arriving at satisfactory estimates of the population in the intermediate and later periods from a census which is only decennial; and quite recently a deputation of the Statistical Society waited on the President of the Local Government Board to urge the taking of an intermediate census at the end of at least every five years, the difficulties felt in giving assent being purely of a financial character. It has now been resolved to adopt this course for London, inasmuch as the Registrar-General has declared himself altogether unwilling to furnish estimates, which would necessarily be very defective, but which would be required for the purposes of the Equalisation of Rates (London) Bill. As now arranged a clause will be introduced by the Government requiring the first quinquennial census to be taken in 1896. The expense of this will fall on the County Council, and will amount to between £6,000 and £7,000, and for each succeeding year the Registrar-General will furnish an estimate of the growth of the population until the following decennial census of Great Britain, which will, of course, supply the necessary data and save the cost of the next special census for London. It will be followed again by a special quinquennial census of London provided that before that time the whole census of Great Britain is not taken every five years, as it should be. We have reason to believe, however, that other great towns and cities will long before that time have followed the example of London, and it is believed that some of them could do this without applying for any fresh powers. At any rate, what is now about to be done for London will be not only in itself valuable for the completion and correctness of our vital statistics and for general municipal purposes, but will also be an excellent precedent.

DR. WIGLESWORTH STABBED BY A LUNATIC.

DR. WIGLESWORTH, the medical superintendent at Rainhill Asylum, near Liverpool, was, on Tuesday, August 7th, going his rounds in the men's wards, when an inmate suddenly sprang on him, and stabbed him in the neck with a knife which he had concealed up his sleeve. The wound is a dangerous one. We are informed by telegraph by Dr. Menzies that Dr. Wiglesworth passed a fair night on Wednesday, that there is no hæmorrhage, but that he is not yet out of danger.

A COMMISSION ON BARRACK SCHOOLS AND THE EDUCATION OF PAUPER CHILDREN IN LONDON.

IT will be gathered from the statement of the President of the Local Government Board in the House of Commons, that he has lost no time in fulfilling his promise to the deputation which waited on him recently to ask for a public inquiry into the metropolitan barrack schools, their system of management, and their relations to the Local Government Board, at which Sir John Gorst, Mr. Ernest Hart, Mrs. Barnett, and others made a statement of the matters and reasons which were held to call for investigation. Mr. Shaw Lefevre was at first, as he informed the deputation, disposed to favour the appointment of a Select Committee of the House of Commons to carry out the inquiry, but as such a Committee could not assemble until next year, and the result of its investigation would not probably be arrived at for some months, this was felt to involve an undesirable delay even if such a tribunal should be considered best fitted for the purpose. On the other hand, it was felt that the Royal Commission might prove to be a somewhat cumbrous and slowly-acting machine, which would be all the more disadvantageous, that the question of the best method of providing for the education of pauper children is one which urgently presses for a very

early solution. Already the accommodation provided is considerably below the growing necessities of the situation, and some steps must be taken with the least possible delay to advise and direct guardians in some more satisfactory solution of the problem than has thus far been achieved. The present inquiry will be limited to the metropolis where the matter is in an acute stage, and where most of the recent troubles have arisen. It will, however, include an inquiry into methods of boarding out as in Ireland and Scotland into cottage homes and establishments such as those existing on a more or less important scale in the Edmonton Schools, at Enfield Chase, and at Sheffield and other parts of the country, so far as these will throw light on the best methods of attaining the best results. There are other collateral subjects, such as those of emigration and industrial training, which will necessarily come into the inquiry. The Committee or Commission which will be nominated by the Secretary of State will be an independent Commission or Committee, and not a departmental committee in the ordinary sense of the word, and it will, it is understood, be selected in such a manner as to inspire general confidence in the eminence and practical knowledge of the persons selected.

DR. ANDERSON'S CASE.

The case of Anderson *v.* Gorrie and Others has passed another stage upon the road to the House of Lords, and once more the English law has done Dr. Anderson an injustice which is obvious to everybody except the lawyers, and which must, we should think, be obvious even to them. It will be remembered that the jury in the Queen's Bench found a verdict in Dr. Anderson's favour against Mr. Justice Cook, and assessed the damages at £500. This verdict the late Lord Chief Justice thought fit to overrule, upon the grounds of the earlier cases upon the subject of judicial irresponsibility, and it was against this decision of the judge that Dr. Anderson appealed. The appeal was unsuccessful; but the one advantage of it has been that it has put the point at issue in the clearest possible light. There was some difference of opinion as to what the jury had themselves decided. The Master of the Rolls, however, settled to begin with, in Dr. Anderson's favour, that the jury must be taken to have declared as a fact that Mr. Justice Cook had wilfully and maliciously misused his judicial authority in order to inflict an injustice upon Dr. Anderson. Nevertheless it was contended on behalf of Mr. Justice Cook that the injured suitor had no redress against him by the British law, and this monstrous contention has now been affirmed by the whole Court of Appeal. The Master of the Rolls decided it upon the basis of the recorded cases, but we regret to see that he thought fit to add to it the weight of his own authority. It remains for the House of Lords to relieve the English constitution from what cannot fail to be a grave reproach wherever justice is considered to be the object of law. It is to be remembered that the Master of the Rolls did not confine his decision to the case of Colonial judgeships, for which, as it happens, there exists a practicable and, sometimes, swift machinery by which malpractices may be punished with dismissal. The doctrine applies with equal force to the Master of the Rolls himself, and to all his brethren of the English Bench, although it is notorious that all of them from the least to the greatest are practically irremovable. If the present decision stands, it will be established that any English judge who may be weak enough or wicked enough to ruin a suitor for his private ends may do so with impunity. Every one knows that it is practically hopeless for an injured individual to carry an address for the removal of a judge through both Houses of Parliament. The Master of the Rolls suggests, of course, that it is quite unthinkable that any English judge should do what an English jury has just found that Mr. Cook in fact has done. We do not, it is true, expect to see in our own day any revival of the misdeeds of Scroggs and Jeffreys, though they were in their day as high authorities as Lord Coleridge or Lord Esher. But it is idle to say that a case cannot arise in which a judge may be tempted by his very irresponsibility. No class of men can be trusted to stand above the law, and we are not without hope that Lord Herschell and his colleagues, who are unfettered by the decisions of the inferior courts, will decide in Dr. Anderson's favour a question which closely touches the liberties of us all.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

The annual provincial meeting of this Association was held on Wednesday, August 1st, at University College, Bristol, Dr. Richard Heath, President, in the chair. Among those present were Drs. Mapother, Helen Webb, Jane H. Walker, Abraham, and O'Callaghan, of London: Sir William Stokes, Drs. William Smyly and Franks, of Dublin; Davison and Thomas, Bournemouth; and the honorary secretaries, Drs. Stewart (Clifton) and Cagney (London).

The President expressed his pleasure at meeting so large a number of members from all parts of the world. He regretted, however, that they had not with them their excellent Chairman of Council, Sir Thomas Crawford, who was detained in Ireland. He had requested him to propose the following resolution:

This Association cordially renews at this meeting—the first held in Bristol—the expression of its indebtedness to Mr. Coe, F.R.C.S.Eng., and the other members of the consulting staff of the Bristol General Hospital, for their advocacy of the repeal of the restrictive rule formerly in force in that institution—the rule which prevented fully qualified Irish diplomates from competing in it for any honorary staff appointment.

Sir William Stokes seconded the resolution. He said the system of "boycotting" to attain political objects had been condemned—and rightly condemned—by the representatives of every shade of public opinion in England. Yet one found a similar system of exclusive dealing held up in many English hospitals as regarded their honorary appointments. Was that consistent? They should not rest till they had induced the governors of every hospital in England in which monopoly still existed to purge themselves of such a discredit to the English love of fair play.

Dr. O'Callaghan said he was sure that the suggestion of the last speaker to attack one of the strongholds of monopoly among the London hospitals without further delay would be adopted by the Council if funds permitted. He felt so strongly on the point that he would be prepared to obtain among his own friends the sinews of war.

The resolution—having been supported by Drs. Franks and Smyly, of Dublin, Stewart and Elliott, of Clifton, and Cagney and Helen Webb, of London—was carried unanimously.

The President announced that in future years the summer meeting would be held on the Thursday of the British Medical Association week, instead of Wednesday as hitherto. He also announced that the next general meeting, to be followed by a banquet, would take place in London towards the end of October.

The proceedings then terminated.

SMALL-POX AND VACCINATION.

Recent Statistics at Birmingham.

Dr. Hill reports that during the past quarter the number of cases of small-pox notified at Birmingham was 651, and the registered deaths from the same disease 54, the cases and deaths arranging themselves in respect of vaccination as follows:—Vaccinated cases, 560; deaths, 26; mortality, per cent., 4.6. Unvaccinated cases, 63; deaths, 18; mortality, per cent., 28.6. Doubtful cases, 28; deaths, 5; mortality, per cent., 17.9. The data for this city, when the small-pox epidemic comes to be fully reported on by Dr. Hill, will not be pleasant reading for the antivaccinator.

SIXTY-SECOND ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in BRISTOL July 31st, and August 1st, 2nd, and 3rd.

Third General Meeting.

The third general meeting of members was held in the Lecture Room, Victoria Chapel, on Thursday, August 2nd, the President (Dr. Long Fox) in the chair.

The Address in Surgery.

Professor James Greig Smith, M.B., delivered the Address in Surgery. See p. 249 of the Journal.

Mr. Reginald Harrison said he rose with very great pleasure to propose:

That the best thanks of the Association be given to Professor James Greig Smith for his able and interesting address in surgery.

A resolution of that kind but inadequately expressed the obligations they felt they were under for the admirable address with which they had just been favoured. Mr. Greig Smith had most fully availed himself of the rich theme which the progressive and successful surgery of to-day provided him with. He had presented it to them in a manner which alike expressed his devotion to his cause and the consciousness that in the art of surgery in its various departments he had a subject which both in its triumphs and its shortcomings he, as the orator of the day, might well be proud of. He had been in the habit of attending those meetings for some years, and of listening to addresses of that kind as time and the work of surgery rolled on, but he could not say that they ever lost their freshness, their variety, or their interest, so unlimited was the field over which they zealously rolled. In the address they had listened to, who could fail to recognise the many charms which graced its delivery, and the practical character of the information it contained? More than that, Mr. Greig Smith had shown them some of the characteristics of the surgery of the present day, its boldness, yet at the same time its gentleness. After a most successful address he (Mr. Harrison) asked their enthusiastic endorsement of the resolution he had had the honour to propose.

Mr. Nelson Dobson said it was a peculiar pleasure and privilege to him to be called upon to second the vote of thanks to his distinguished friend and neighbour, Professor Greig Smith. Especially was it so upon that occasion and in the presence of that large and representative assembly. Mr. Reginald Harrison had spoken with truth and eloquence and with such wise and well-chosen words of the high character of the address that nothing further was required; but as a local member of the profession he should like to say in the name of his brother practitioners in the neighbourhood that it was to them a source of pride and gratification that one of their number should have been chosen for the important office and honourable distinction which had fallen upon their friend that day. In the surgical history of the good old city of Bristol there had been in times past famous men of the name of Smith. Dick Smith and Nat Smith were names familiar to them even to this day, and he ventured to predict that in that illustrious line of Smiths, when many of them were forgotten, Mr. Greig Smith would be in coming generations of Bristolians proudly and deservedly remembered, not only for his general achievements in surgery but also for the address which he had had the honour of delivering before that great Association in the year of grace 1894.

The motion was carried by acclamation.

Professor Greig Smith in reply thanked the members for their kind reception of his address.

Scientific Grants Committee.—Dr. Ward Cousins (President of Council) moved:

That the Report on the Scientific Grants for the year 1893 be received and adopted.

The resolution scarcely required many words from him. They knew that one of the great objects of the Association was the promotion of research and scientific investigation, and the British Medical Association, above all other medical associations probably in the world, had a better prospect of being great in that department. Some of the most important researches had been made during the past year. For the large number of problems yet to be solved there were plenty of workers; and the Council was only anxious to get good and mature work to place before the annual meeting every year. The communication made before the International Congress by Dr. Michael Foster clearly showed the importance of large associations like their own doing all they could not only to promote what might be termed researches in their midst, but to help on the great work of international research.

Dr. Roberts Thomson, in seconding the motion, said he thought the division of the expenditure of the Committee into two parts, individual research and foundation scholarships, was such as to command their sympathy and support.

The motion was agreed to.

Inebriates Committee.—Dr. Norman Kerr, in moving

That the report of the Committee on Legislation for Inebriates for the year 1893 be received and adopted,

said that in the eloquent and inspiring address with which the President opened the meetings, and which was supplemented and carried on to a still higher plane of tone and thought at the breakfast that morning, he (the President) had referred very feelingly to the great question of those unfortunate persons who had had repeated convictions of various kinds and who seemed unable to prevent themselves from committing the same offence again. That defined almost exactly the work of the Inebriates Legislation Committee. That Committee had usually carried on its work in a very quiet and modest way. Since he had been Chairman he had set his face resolutely against any public demonstration or anything of that kind, appealing only to the reason and enlightenment of the public at large. But this year they had been dragged a little out of their comparative quietness because it had been necessary for them to approach the Home Secretary in order to ask him for some crystallising of the work that had been going on, and they were happy to be able to state in the report that they were supported by the great professions of law, represented by Sir William Charley, Q.C.; and of religion, represented by the Dean of Hereford and Canon Duckworth, one of Her Majesty's chaplains; and also by temperance reformers, represented by Lady Henry Somerset; nearly all of which classes 25 years ago were against the restraint of habitual drunkards. Mr. Asquith heard them very graciously and indicated that he would bring in a Bill based on the suggestions of the Departmental Committee, which was appointed largely in consequence of the labours of their body and others who joined with them in going through the Government report. The instructions for the Bill had been sent out from the Home Office to the draftsmen, and he was sure it would not be the fault of the Government if the Bill was not introduced in the House of Commons before the end of this session. Both of the great political parties were thoroughly united on the question, and they owed as much to the Conservative party as to the present Government. The Government had granted, through the Secretary of Scotland, a Royal Commission to take evidence in various towns in Scotland as well as in London in dealing with the question of habitual and criminal inebriates and offenders of all kinds. As showing that the work was going on in other countries, the Report mentioned that the second reading of a very drastic Bill indeed had passed the Legislature of Natal. All parties were agreed, so that they might be sure that the Bill would pass. He hoped that nobody would be disappointed if the Committee did not get all they wanted, because their position was different from that of the Secretary of State and the Government—they stated what they wanted, and looked to the Government to give them all they could in the present state of affairs. He had reason to state that there would be a substantial instalment, such as would satisfy the desires of the Association and all friends of those diseased inebriates who had lost all will power of their own. Instead of the work being nearly accomplished the fact was it was only beginning, because if the Bill were brought forward, however able

it might be, the Government could do nothing if the country at large, and especially the medical profession, did not bring their influence to bear in order that the Government might be backed up by the sound basis of public opinion. He was quite sure that if the Government were supported, as they hoped it would be, by the medical profession, by the Association, and various other learned bodies, now that many of the highest judges on the bench, such as the Lord Chancellor, Lord Herschel, and others were committed to the question, they were within reach of a very important instalment of legislation; but if they folded their arms now and took no further interest in the matter, their hopes would be disappointed, and deservedly so; and therefore he appealed to the members of the Association not to cease their efforts, but to strengthen the hands of the Government in asking the country to give a measure of justice to a very weak, helpless, and diseased portion of the community.

Mr. HEMMING said that, although he was not a member of the Inebriates Committee, he rose with the greatest pleasure to second the motion. If the public, and especially the drinking section of the public, imagined that they as a profession were going to confine them in gaol because they were convicted once or twice of drunkenness, the consequences would fall back upon the profession; but he was quite sure that, with their quiet way of going on and with the assistance of all good temperance reformers, the progress of legislation would be advanced. All details would be improved by the constant attention, not merely of the Committee for Inebriates, but also the Parliamentary Bills Committee.

The motion was agreed to.

Therapeutic Committee.—Professor PHILIPSON then moved:

That the report of the Therapeutic Committee for the year 1893 be received and adopted.

He said it was a very important report, especially with reference to antipyretic remedies, pointing out that much respecting those remedies had been misunderstood, failure resulting from overdosing. He felt sure that the action of the Committee in directing the attention of the profession to those remedies was an indication of the help of the Committee, and an anticipation that they would receive some further suggestions from that very important Committee in the future. They also pointed out the importance of the continuation of their duties respecting modifications and alterations in the future *Pharmacopœia*.

Deputy-Surgeon-General FYFFE, in seconding the motion, said he was very glad to observe that the investigations of the Therapeutic Committee had ended in what might be called smoke—that is, it had been observed that the unhappy results which had followed the application of the antipyretic remedies had not been the result of the remedies themselves, but of overdosing.

The motion was agreed to.

Medical Charities Committee.—Mr. BRINDLEY JAMES, in moving

That the report of the Medical Charities Committee for the year 1893 be received and adopted,

said that when the members looked over its pages and saw the amount of work that had been done during the past year, they would be satisfied with it, and especially with the labours of the subcommittee, consisting of Dr. Henty, Dr. Hugh Woods, and Mr. George Brown. Those gentlemen had worked very hard and arduously for the cause, and they had done wonderfully well. They could not possibly have found a better set of gentlemen to form that subcommittee than those three he had mentioned, and if those suggestions were carried out which they had put forward, he was sure it would be to the interest of the general practitioner and also of the public.

Dr. HORDER, in seconding the motion, said he was very glad to see that the Committee wished to be reappointed. They had evidently gone to work in a very practical manner, and certainly had done much more than could have been expected considering the short time they had been at work. He hoped they would extend their work into the provinces because, as far as his knowledge went, the same abuse existed there as in the London district.

The motion was then agreed to.

Railway Servants' Eyesight Committee.—Mr. VERRALL moved:

That the report of the Committee on the Efficient Control of Railway Servants and Mariners' Eyesight for the year 1893 be received and adopted.

Whatever doubt they might have as to the need for reform in other departments, there could be no doubt as to the need of reform in that department. Although they might have difficulty in persuading the public as to the necessity for alteration with regard to the control of inebriates they would have no difficulty in persuading them as to the need of testing the eyesight of railway servants and mariners, seeing how much danger they would otherwise be exposed to. Further, it was evident from a perusal of the report that the need for further vigilance was not absent. The Committee were still of opinion that the railways employ men whose eyesight had been tested by fallacious tests; and with regard to seamen, also, Mr. Mundella stated that new regulations for testing seamen's eyesight had been decided upon, and were to be issued shortly. Until they were issued, and until the railway companies employed only men whose sight was beyond suspicion, he thought there could be no question that the money was well spent on such a Committee.

Dr. ALFORD, in seconding the motion, said it must have come to their notice how very frequently people had defects in their sight, either colour blindness or shortness of sight, or some other defect, without their being aware of it. And that was a matter which appealed to them all, to the public in general, and to medical men, who were in the habit of travelling as much as they got a chance of doing. The Committee's work was one of the most important points they could possibly attend to. The motion was agreed to.

Committee on the Examination of School Board Children.—Dr. POPE moved:

That the report of the Committee on the Examination of School Board Children for the year 1893 be received and adopted.

He said that those who had read the report would see what an immense amount of work the Committee had done. They had already examined, under the efficient chairmanship of Dr. Warner, 50,000 children. They could not doubt that when the report was published upon that examination they would have a collection of most interesting facts.

Dr. WARD COUSINS (President of Council), in seconding the motion, wished to remind them of the important work that had been carried on by the Committee and its practical result already. They were aware that Dr. Warner and the Committee, in association with the Committee appointed by the International Congress, had been examining 50,000 children, reporting on their mental and physical state, and the question of their surroundings. Dr. Warner was present, together with many other representatives of the Association, and Mr. Ernest Hart, at a deputation with reference to barrack schools, where pauper children were massed together with most unhealthy results, and Dr. Warner had then shown from the investigations that the physical and mental condition and the aptitude for education was far higher per cent. in the board schools than in the wretched barrack schools. The motion was agreed to.

Anæsthetics Committee.—Dr. ROBERTS THOMSON in moving

That the interim report of the Anæsthetics Committee for the year 1893 be received and adopted,

said that he hoped before the next annual meeting the report itself would be ready.

Dr. NORMAN KERR seconded the motion, which was agreed to.

The Proposed Ethical Section.—The PRESIDENT called upon Dr. Mead for the motion of which he had given notice; but Dr. Mead not being present his motion fell through. The President then called upon Dr. T. Garrett Horder for the motion of which he had given notice:

That this meeting strongly recommends the Council to constitute an Ethical Section at the annual meetings.

He said he was sorry that there was so very small an attendance to discuss what he considered a very important question—a question which, he believed, was before the general meeting at Nottingham, and was carried by a majority.

The GENERAL SECRETARY: You mean in the section. It was sent up to the Council and referred to the Council, and they threw it out. It was voted upon and not carried.

Dr. HORDER: Who was it sent up by?

The General Secretary: By one of the Sections. I do not know which.

Dr. Pope called attention to the fact that there was not a quorum present.

The President accordingly left the chair.

Annual Meeting for 1895.

At a Council meeting held on Wednesday, August 1st, in the Council Room, Victoria Rooms, Bristol, an influential deputation from the Metropolitan Counties Branch was introduced, consisting of Dr. Russell Reynolds, Dr. Bridgwater, Mr. Geo. Brown, Mr. Butlin, Surgeon-General Cornish, Dr. Cullingworth, Mr. Eastes, Dr. De Havilland Hall, Mr. Ernest Hart, Dr. Holman, Mr. Harrison, Dr. Norman Kerr, Dr. Stephen Mackenzie, Dr. Oswald, Dr. Douglas Powell, Dr. F. T. Roberts. Dr. Sansom, Mr. Noble Smith, Dr. Wethered, Dr. Dawson Williams, Mr. Wallace, and Mr. Andrew Clark (Hon. Secretary). The object of the deputation was to invite the Association to hold its annual meeting in 1895 in London, and to propose that Dr. Russell Reynolds be President for that year.

Dr. Russell Reynolds said he regretted exceedingly that the President of the Branch (Mr. Henry Power) was unable to be present, because he was much more familiar with the work of the Branch than he himself had been of late years. In that gentleman's name and in the name of the Metropolitan Counties Branch he had the honour to invite the Association to meet in London in the year 1895. That would be the third meeting of the Association in London within his recollection, and he thought there were very many reasons why it was desirable that the Association should again meet in London. It would be twenty-two years next autumn since the Society met there, and those years had been very full of events,—events of no common interest to the profession, and some of them of the very widest interest. During that time there had been many changes in the profession. Some of those revered faces and forms which they knew so well would be no longer with them. But deeply as they regretted that, they must remember that, although some were getting old, the Association was ever young and ever growing, and was probably in more robust health than it had ever been in any previous part of its history. Many who had gone whose reputations were world-wide had had their places filled by those who at the last meeting had no reputation except that which lay before them in the future. Their reputations were still in their infancy, but twenty-one years had brought them to maturity, and many of them, in physiology, in medicine, in surgery, and in gynæcology, to world-wide fame. Those would be among them, and would take important parts in the meeting. But there was another point to which he wished to draw their attention, namely, the growth of sundry institutions connected with the objects of the Association. Since the meeting in London the conjoint scheme of examination, which had been discussed for so many years, had taken not only a form of active work, but had a local habitation as well as name on the Thames Embankment, and he had no doubt that many members of the Association would not be uninterested in visiting that building. There was another point which he thought was of very great importance to the profession, which the members would have opportunities of seeing in London—namely, in all their large schools there had been an enormous development of the laboratory work, in chemistry, physiology, and pathology, and also, in some of the schools, in electrical and mechanical engineering, with other allied sciences and technical instruction. He thought the members of the country institutions would be able to see in what way they exceeded the London institutions, and in what way the latter might perhaps teach them a few lessons. The hospitals had been enlarged. To those who belonged to Guy's, it would be exceedingly interesting to see the new colleges which had been erected in connection with that noble institution. To those who were at St. Thomas's it would be a pleasure to see what had been done there. The University College men, many of whom he saw around him, were familiar with what had been done in the way of laboratory work there, and the immense advancement that had taken place in other institutions, and in the Conjoint Board building on the Thames Embankment there were laboratories in active work. There was the great Imperial Institute, which had been opened since the last meeting, and the South Kensington Museum and the Natural History Department of the British Museum had been enormously improved and added to. He was not suggesting for a moment that all those places should be visited by the members in a body—they would be too numerous for anything of that sort to be done—but there would be plentiful opportunities for members from the country to visit those institutions and see them at their leisure in working trim. For those reasons and many others which he thought would prove of great interest to the Association he had the honour to invite it to meet in London next autumn, in the year 1895. That would be 22 years after its previous meeting in London.

The President of Council said that the Council would be very happy to hear anything from any other member of the deputation. If not, he would proceed to say that he had the honour of thanking Dr. Russell Reynolds for his able speech of invitation, and desired briefly to propose the following resolution:

That it be recommended to the general meeting of members of to-day that the annual meeting for 1895 be held in London, and that Dr. Russell Reynolds be nominated the President-elect.

The President, in seconding the motion, said he well remembered the last meeting in London as being very admirable and instructive. It was a great satisfaction to know that a man so very distinguished in his profession, and who was a personal friend of his own, should be suggested by the members of the Metropolitan Counties Branch as the new President for 1895. If they sought all London over he did not think they could find anyone whose nomination would be accepted more cordially than the nomination of Dr. Russell Reynolds.

The motion was then put from the chair, and carried by acclamation.

The President of Council thanked Dr. Russell Reynolds in the name of the Council for the handsome invitation to hold the annual meeting in 1895 in London, and rejoiced to think that he (Dr. Reynolds) was the President-elect. He hoped the meeting would redound to the honour of the Association and the progress of medical and surgical science.

Dr. Russell Reynolds expressed his obligation for the kind words which had been uttered in response to the invitation. It would give him personally great pleasure to do everything he could to promote the success of the meeting in London.

The deputation then withdrew.

The Dinner.

The annual dinner, attended by about 300 members, was held on Thursday, August 2nd, at the Victoria Rooms. The President, Dr. E. Long Fox, was supported by the Mayor of Bristol and the High Sheriff, Colonel Sir Edward Hill, K.C.B., M.P., Sir Thomas Grainger Stewart, Sir William Stokes, Sir Charles Townsend, M.P., Rev. Canon Ainger, Sir Charles Cameron, Colonel G. Salis Schwabe, the Master of the Society of Merchant Venturers, etc. The gallery was occupied by ladies.

On the removal of the cloth the usual loyal toasts were given from the chair and duly honoured.

Sir Thomas Grainger Stewart, M.D., in proposing the toast of the bishop, clergy, and ministers of all denominations, said it was a great satisfaction to the proposer of a toast to find himself thoroughly in sympathy with that toast, and no toast could be more in sympathy with himself than that which he had the honour to propose. It was always delightful to see how admirably the profession of the clergyman worked along with that of the medical man. They all knew how, when having fought the best fight they could with sickness, they were compelled to say to the sorrowing friends that hope was over, it was a comfort in such surroundings to have the clergyman to fall back upon, and never had he found the clergyman to fail. In this particular instance it was very satisfactory to have coupled with the toast the name of one who was honoured everywhere as a distinguished member of his profession, and a man of wide and varied culture. Canon Ainger was one who had distinguished himself in many departments of literature, and had made his

name dear to the whole English-speaking people for that keen critical faculty, that kindly power of appreciation, and for that gift of literary culture of which he was so eminent a master. He proposed that toast, coupled with the name of their distinguished guest, Canon Ainger.

CANON AINGER, in responding, said his very modesty forbade him to take any notice of the very flattering things which Sir Thomas Grainger Stewart had said of himself personally, and to speak only in the name of the great profession that he so unworthily represented. He had wished that it were more worthily represented on that occasion. It was, however, a great pleasure to him to have the opportunity of saying how very much they of the Cathedral, the Mother Church, so to speak, of Bristol and of the diocese, regretted that they had not been in a position to welcome the Association under more favourable circumstances. The Cathedral was under a process of restoration. If it could have been arranged that the process could have been deferred until after the visit of the Association, it would have given the greatest possible pleasure to the Cathedral authorities, but that was not possible, for at least it would have involved a loss of time and money which the Association would not have required at their hands. They had not maimed rites at the Cathedral, but they at present had a maimed Cathedral, and they were obliged to offer half of the Cathedral instead of the whole. That was their misfortune, but he hoped that with kind generosity their visitors would admit that the Cathedral authorities, with the material at their disposal, did as well as could be done under the circumstances. At all events, on behalf of his colleagues and himself, he might say that no function could have been more acceptable than that of welcoming the British Medical Association to the Bristol Cathedral. He begged to return his most sincere thanks.

Dr. HENRY MARSHALL, in proposing "The Army, the Navy, and the Auxiliary Forces," said that he thought his chief qualification for proposing the toast was that he was altogether ignorant of naval and military matters, and therefore could have no prejudice. Englishmen were proud of their army and navy. They not only looked upon them with pride, but they knew that they could be trusted to maintain the honour of their country and the sacredness of their homes. The soldiers and sailors of to-day were worthy successors of those who fought under Nelson and Wellington, of those who in their own times refused to acknowledge themselves beaten by the overwhelming hordes at Inkerman, who charged into the jaws of death at Balaclava, and who redeemed India from the Mutiny. If of late years they had had no great wars, they could still feel that in many spots in Africa there were bloodstains which showed that the soldier of to-day was in all respects worthy of his predecessors. As members of the British Medical Association they naturally had a special feeling of interest in the medical departments of the army and navy, and there again they could with the most perfect satisfaction see that with increased requirements and responsibilities their medical officers were well able to sustain the honour of their double profession as doctors and soldiers. Some who, like himself, were laymen, who were not exposed to any sort of danger, might feel that perhaps it was not the most felicitous way of designating these officers to call them "non-combatant," seeing that they were exposed to equal danger with their comrades in the times of battle, and perhaps to more fatal dangers after the battle was over. Nevertheless, they need not shrink from welcoming the epithet "non-combatant" in its highest sense. It was their glory as doctors to feel that suffering humanity had a special claim upon them. So long as a man was ill, or suffering, or wounded they knew neither friend or foe. It was sufficient that a man needed help, and it was their duty as well as their pleasure and high privilege to attend to that man, irrespective of the flag under which he might have fought. In that sense they were non-combatant, combating only with disease. There were many present upon whom they could look with pride and satisfaction as well representing the army and navy medical staffs, and it would have been very pleasant to have been able to call upon each and all of those gentlemen to return thanks. As time, however, was limited, he would associate with the toast the name of the gallant officer, the commandant of the district, who was known to many of them, and those who knew him felt with pride that he was an ornament to his profession, well representing the army and reserved forces, and having a very warm sympathy with the medical departments. In asking them to drink this toast, he had the honour to couple it with the name of Colonel Schwabe.

Colonel G. SOLIS SCHWABE said when a sailor was in foreign parts, or when a soldier was serving abroad, nothing gave to one or the other greater pleasure than getting the mails and newspapers from home, and seeing by those mails and those newspapers that he was not forgotten. It was very pleasant to think that at festive gatherings such as those the sailor and the soldier who was on guard in that Empire over which the sun never set was not forgotten, but was toasted in the good old-fashioned manner. The auxiliary forces—the yeomanry, the militia, and volunteers—had made the very greatest strides in the last few years. An attempt had been made to weld them into the army. They had responded gladly, and now they were more efficient than they had ever been in the past. They were not amongst those who said they wished to rest and be thankful, but were every day asserting themselves still further in order to be always present when called upon to defend the safety of the country which was committed to their charge. It was therefore very satisfactory and pleasant to them also that they should be remembered on such an occasion. One point he would like to mention was that under the present system there were 14,000 young men of 25 years of age sent back out of the army every year to make their way in civil life, with nothing except £20 in their pockets and a character. In order to help these men to take up their position in civil life, the Government had during the last two years instituted a number of offices in large towns and the headquarters of regimental districts at which registers were kept of these men, and they could be supplied on application. There was no profession requiring so many servants as the medical profession, and he therefore asked those who had responded so kindly to the toast to bear in mind that they could individually do a great deal towards helping on the soldier by sending to the registry offices when they had a vacancy in their service, and possibly giving an ex-soldier a chance of finding respectable employment. He was even more modest than Canon Ainger with regard to what the proposer had so kindly said about himself, and would therefore only return his thanks for the kind manner in which those remarks had been received.

Dr. F. T. ROBERTS proposed "The Mayor and Corporation of Bristol." He said he was present as a very humble substitute for Dr. Dickinson, and yet he could not say that he was altogether unprepared. As a matter of fact, on Sunday morning last he received a telegram requesting him to take Dr. Dickinson's place, and propose this toast. It filled him with great astonishment and with not very pleasant feelings. One of his earliest recollections was that of the great awe, respect, and admiration that he entertained for the Mayor and Corporation in the very little Welsh town from which he originally came: and he thought that to have to propose the toast of the Mayor and Corporation of the great City of Bristol was more than he could actually stand. On coming to Bristol he took part in that most delightful service in the Cathedral, and his task appeared to him to be made still more difficult by seeing the array of the Mayor and Corporation as it passed out of the aisle: and still more so, on hearing from the eloquent address of the President how ancient the Corporation was, and the power it had acquired, and what it had done for Bristol in time past. But his awe had entirely gone. He still preserved the respect and the admiration, but he had lost all fear, and he would tell them why. He had been staying with, and had been most hospitably treated by, one of the members of the Corporation, who was a member of their own profession, and a member of the British Medical Association Council. There he had met with the gentleman who had formerly occupied the position of Mayor of Bristol for many years. Still further, he had met the actual living Mayor himself. He shook hands with him, he spoke with him, he heard his hearty laugh: and if they could hear that they would have no fear of the Corporation of Bristol in the future. He was sure that the toast of the Health of the Mayor and Corporation would be drunk with the greatest enthusiasm. If an additional reason was wanted it would be

found in the fact that they were indebted to them for hospitality on the following evening, and naturally, if the toast was cordially received, it might be expected that the Corporation would receive them in a most affectionate manner to-morrow. They were providing the Association with the delightful music which Bristol could give, but more than that, they were actually providing a ball, and to see the British Medical Association dance was a sight for the gods. He was sure that after the week they had passed through a little gentle exercise of that sort would do them all good. In proposing this toast he wished to draw attention to the fact that the Mayor and Corporation of the great city had been in the past of great service to the medical profession, and to impress upon them that they might be of still greater help in the future. There were many questions coming forward in which their help was needed in order to fight against ignorance, prejudice, and various things that the medical profession had to contend with. He asked the Bristol authorities to set an example to other places, to help on the medical profession in doing good to the world and to those who came under their supervision. He asked them first to drink to the Mayor, who was an extremely kind and good man, and he was sure that they would find it so on the following evening. He also asked them to drink to the Corporation as a body and individually, and to the success of the municipality. Finally, he asked them to drink to all that was good in Bristol in relation to the medical profession, hoping that in the future as in the past they would help on all charity with practical common sense, and would do all that they could to help on the medical profession. He coupled with the toast the name of the Right Worshipful the Mayor of Bristol.

The toast was drunk with musical honours.

The Mayor of Bristol, in responding, said his first words must be an appeal as to how he could respond to the very eloquent way in which the toast had been proposed in the time allotted to each speaker. He found it indeed very difficult adequately to respond. It was hardly possible to express to their President the thanks that were due for the very high compliment which had been paid to himself by inviting him to dine with the Association. He looked upon it as a compliment to the whole of the city of Bristol to have been invited as one of their guests. Bristol considered it as a very great honour indeed to have had the privilege of this visit of the British Medical Association. The proceedings of the Association had been followed with the utmost interest, especially seeing that the newly-elected President was one of the most respected, the most honoured and the most worthy of Bristol citizens. If he might be allowed he would publicly, as the chief magistrate of the city, offer to Dr. Long Fox on behalf of the citizens their most sincere and heartfelt congratulations on the very distinguished position that he occupied as President of that important Association. He wished to express his thanks for being allowed to listen to the very eloquent and instructive address which the President delivered on Tuesday evening, and to recognise with gratitude the very kind, complimentary, and generous remarks that he had made about their ancient city. The President had referred to the city's history. The citizens of Bristol were proud of their city's history, they were proud of its historical importance. They were pleased that the President of the British Medical Association should still speak of it as the city of churches. They were thankful that it had been also spoken of as a city of charities, a city full, he might be allowed to say, of good deeds, and ever ready liberally to support and sustain the highest interests of the people. There was one thing which had certainly exercised him very much as Mayor. In his address, the President stated something about the criminal classes, and referred to the teaching of two great Italian *savants*, the result of whose studies seemed to show that mankind was divided into two classes, one the criminals who had been found out, and the other, criminals who had not yet been found out. That was the only subject which had caused him anxiety that week, and he had been a little depressed by it. He thanked them sincerely for the honour that had been done in toasting him in so cordial a manner, and hoped that all visitors to that city and members of the Association would have to look back on a very pleasant week spent in Bristol.

Colonel Sir Edward Hill, K.C.B., M.P., said he rose with feelings of great appreciation of the honour which had been done to him in placing in his hands that which they must all feel to be the toast of the evening, namely, "The Health of the British Medical Association" That feeling, however, was very much overshadowed by another, namely, the apprehension of want of ability to do the toast full justice. He was sure that all those who did not belong to the medical profession would agree with him that there was no class to which they owed so much as they did to the members of the medical profession. They facilitated their entry into the world, they defended them from, and frequently cured them of, those ills to which poor human flesh was subject during its its passage through the world, and they were present to soothe and to comfort when the moment came for departure out of the world. And those benefits were not confined to the rich, because it was in the power of the poor to command the skill of the most skilful in the cheerfully-given services of not only the rank and file, but the heads of the profession in their noble institutions and hospitals. The profession commended itself to their consideration from the nobility of its aims: for what more noble office could there be than that of alleviating human distress? It also commended itself to his mind by the humanity with which the members of the profession exercised their calling. They were ready at all times to obey the call of duty, no matter at what personal inconvenience or at what hour of the day or night the call came, and they did so, he feared, very often with but slender hope of receiving any kind of reward for the trouble and exertion which they were called upon to undertake. Then, again, much was owing to their patient research and to the care with which they examined those scientific matters which must lead to the benefit of the human species. Wonderful advances had been made both in surgery and medicine. It would ill become him to attempt to mention those by name who had taken foremost rank in this matter, but he could not help alluding to one name which had ennobled itself to a remarkable degree, that of Sir Joseph Lister, the inventor of the antiseptic treatment in surgery, which put to fight those hitherto unseen armies of bacilli which appeared to be ever ready and ever present to attack the unfortunate bodies of mankind. The result of those and other great discoveries in medical and surgical science was that operations which used to be considered desperate had now lost their terrors, and were performed with the maximum of success and the very minimum of failure. Diseases which formerly baffled all human skill and were considered incurable would now yield to medical treatment. This, however, was not all. Aided by the civic authorities, the medical profession had been able to institute a series of regulations of a sanitary character for the guidance of their great towns and for the larger and smaller centres of population. The result was this, that cholera, plague, and other horrors no longer were able to stalk the length and breadth of the land with impunity. Life had been rendered robust, and the average of life had been lengthened and made more sweet and enjoyable. Speaking of the many benefits that the public had derived from the medical profession, it seemed to him that gratitude was a word far too mean and not sufficiently expressive. The British Medical Association, which they had the honour of welcoming in the old city of Bristol, was a very large and powerful Association. He was told that it numbered something like 15,000 members, that it was possessed of large means, and that a great portion of its power and wealth was used in assisting those who are making scientific researches which might still lead to further benefits to the human race. The annual gathering of the Association could not be otherwise than fraught with the greatest possible advantage, seeing that distinguished practitioners in the provinces thus had the opportunity of meeting with their distinguished friends from the metropolis, a meeting which would no doubt tend to their mutual encouragement, and to the advance of science and their art in general. He understood that the Association had accepted an invitation to meet in London next year. No doubt in the metropolis great splendours of entertainment could be offered, but there was one thing, he would venture to say, that in London could not be offered, and that was a heartier welcome than

they as citizens of that ancient city respectfully offered. This was the third time that the Association had honoured Bristol with its presence, and he was sure that every Bristolian present would join in expressing the hope that it was by no means the last time. He asked them to drink "Long Life and Prosperity to the British Medical Association," coupled with the name of the distinguished gentleman, Dr. Ward Cousins, President of the Council.

The toast was drunk with all honours.

Dr. Ward Cousins said he wished to thank them most heartily on behalf of the British Medical Association, scattered as it was all over the world, for the way in which the toast had been received. When the founders of the Association were watching it from its early infancy and its period of foundation, they little dreamt of the power and the vitality which they were inaugurating, or that they were founding an Association which would extend its influence, he might say, throughout the medical world. They little thought that they were generating a power which, in the space of sixty years, would be so strong as to influence public opinion on medical matters and even the Parliament and the legislature of the country. The rapid rise and progress of the Association during the last few years had caused them the very greatest satisfaction. He need not speak of their world-wide organisation. They had over sixty Branches. Forty of these were within the British Islands, and twenty-three were scattered throughout India, Australia, New Zealand, South Africa, and Canada. They had an organisation specially adapted for collecting materials for investigation and helping on the progress of medical and surgical science. In every clime they were gathering together men who were trying to unravel the mysteries of human suffering, being impelled at any rate by a high enthusiasm, kindled by the fascination of their studies and by the influence of their world-wide fraternity. He was sure he was reiterating the sentiments of those he had the honour to address in saying that he wished that all men felt as Sir Edward Hill did towards the medical profession. The fact was this, that even at the present moment there were people who did not like doctors at all, but they were very glad indeed to think that there were a great many that did. A hundred years ago physicians of that time were laughed at for their pills and powders, and the superstitions which surrounded their science; but in the present day they were not laughed at, although they were called faddists by some. It was to be regretted that, after all, their science was one that could not be worked out by systematic study, but their only hope of progress was by persistent experiment and observation, and it was only by multiplying experiments that they could multiply their chances of bringing about the happy combination. They were quite willing to be called "faddists," because, if faddism consisted in profuseness of energy let loose upon a field of research, which had a surpassing charm, then this sort of faddism was an element in the character of those who had most distinguished themselves in the progress of their science. It was a fact that the outward world in great measure had no sympathy at all with their researches, and cared not at all for the energy with which their studies were prosecuted. But they of the medical profession had their experience to themselves, and they knew that they were trying to search out means by which to stem the torrent of disease and to overcome human suffering. It was to be regretted that theirs was not a positive science like that of the mathematician and the engineer, who, in commencing a task, knew that they would be able to carry it on to a successful issue. Medical science laboured much in the dark. Its means were often uncertain. Still, he maintained that they were working for more light, and whether their working was by the bedside or in the physiological laboratory or in endeavouring to stop disease by hygienic measures, they were labouring with human hearts and human sympathies, as well as with human brains. He had pleasure in reminding them that the Association had undergone a most remarkable and agreeable change during the last twelve months. Up to that period it was composed of a body he was bound to say of most estimable gentlemen, but now they could rejoice that they had amongst them many most estimable ladies. They had long passed the time of struggle for existence. They had passed through the time of what he might term their youthful frolic, and had now arrived at mature years; and he thought as an Association this last stage would be more brilliant than any that had preceded it. It seemed to him that, under the guidance it might be of the superior ethics, they would be carried on to a higher state of development, in which the reign of science within them would mingle with the spirit of victorious devotion. There was a time when they were cowards, and they thought that this new innovation might captivate medicine and carry it away, that it would give wings to pathology and surgery. What a mistake! Surely they loved their science more, and it was more precious to them now that they had these for their companions. The British Medical Association was a grand arena in which they could watch the progress of science. Let them look back for thirty years and see what were the principles that guided them then. Let them compare their knowledge at that time with the knowledge they enjoyed at the present moment. What were their guiding lines as compared with those which had preceded them? Medical science had been rewritten; pathology had been reconstructed, preventive medicine had taken giant strides, and treatment in many departments had been absolutely revolutionised. They might be sure, after all, that the British Medical Association had a splendid future; it had enormous possibilities before it. Sir Edward Hill had referred to their surplus capital, to the power of a Journal which sent 18,000 copies throughout the length and breadth of the world every week. These might be forces, but these were not the forces upon which he built the future hope of the British Medical Association; he believed that the Association would endure and would continue to flourish because the sciences that they professed and those which they cultivated were growing forces in the world. Everywhere they were the foes of oppression, the foes of tyranny, the foes of bigotry, the friends of peace, the friends of progress, the friends of development. They were something more, they were faithful handmaids of that heaven-born light which was silently and slowly, it might be, binding nation to nation and helping on the moral evolution of the race.

Sir Charles Cameron, in proposing "The President," said as an Irishman he certainly could not but feel bashful upon the present occasion. The great honour had been conferred upon him of asking him to deliver one of the public addresses and the still greater compliment had been paid him of asking him to propose a toast which with all respect for the gallant Colonel, Sir Edward Hill, he ventured to claim as the toast of the evening. Seeing that his distinguished fellow townsman, Sir W. Stokes, was also to propose a toast, he could not but come to the conclusion, as an Irishman, that in the parliament of the medical profession, if in no other Parliament, Ireland was over-represented. The toast which he had the honour to submit was one which required no artifices of the rhetorician, no eloquence of the orator to ensure an enthusiastic and cordial welcome. In selecting Dr. Fox to be the President of that great and powerful Association—the largest medical organisation in the world—they had come to a right conclusion, for in addition to the highest professional culture, Dr. Fox possessed an irresistible charm of manner and a kindliness of disposition in which could be found ample explanation of the popularity he had attained amongst all classes of the citizens of Bristol, and the esteem of his professional brethren. It would be agreed by all that it was only in a man's own profession that a just estimate was formed of his character and ability; and in placing Dr. Fox in that position, his own profession had paid him the highest compliment which possibly they could pay him. He asked them to drink to the long life and happiness of their President, to whose personal exertions the success of that meeting was so largely due.

The toast was enthusiastically honoured.

The President, in responding, said he wished to spend one moment in setting the Mayor free from one misapprehension. What he (the President) said in his address was that the natural result of believing the views of the Italian *savants* referred to would certainly end in the sentences that he quoted. Was it likely, he might ask, with the Mayor of Bristol sitting by his right hand, that he could look upon him as "a criminal not yet found out?" (Laughter and cheers.) It was to him the greatest possible gratification

that this toast should have been proposed in such flattering terms by Sir Charles Cameron and had been received so cordially. He hoped that any who did him the honour of hearing his address would feel that at least he honoured his profession, and that he loved the members of it. Few men in the profession owed more to the kindliness of their professional brethren, and especially to their professional neighbours, than himself, and he wished to take this opportunity of earnestly thanking the members of that Branch of the Association for their strenuous efforts to make that meeting what he hoped would be considered a great success. (Cheers.) These meetings were becoming more important and more scientific every year. The year's produce of work was brought up on these occasions to be reaped and winnowed and stored, and, God be thanked, they needed to build greater and even greater barns each year for its storage. He concluded by expressing the hope that the good science of those meetings and their good fellowship might ever go on increasing and the medical profession continue, as long as time should last, to be a blessing to the world.

Sir William Stokes proposed "The Branches in India and the Colonies." He expressed his great gratification at the inclusion of this toast in their list, as a marked recognition of the pleasure they felt at the great and signal success that had attended the formation of Branches in India and the colonies. Those Branches doubtless would aid largely in furthering the creation of a professional brotherhood which had no parallel in any profession, in any country, or in any era of the world. Through the medium of their excellent Journal the pulse of the Association could be felt beating strongly, steadily, and without intermission. Not alone here, but in the most distant colonies, it told of the triumphs and the disappointments, the successes and the failures, experienced by all who traversed that path of science to which their lives were devoted. The Association, which had its birth not very far distant, in the city of Worcester, from very small beginnings, without State aid or sympathy, had now become a power, not alone in this country, but wherever the British flag was unfurled. It had taught the great value of unity and cohesion, showing that they were united in their sympathies and in the great cause of intellectual liberty in the endeavour to clear away those obstacles to progress which prejudice, folly, and false sentiment had so often raised, and therefore in the sacred cause of loyalty to truth. The Association had done one thing more: it had shown, and its Branches had shown, that the good that was obtained was not confined to an individual or to a country, nor to an age, but for all time. The formation of their Branches in India and the colonies was hailed with satisfaction; they had already done good work, and they looked forward to greater work in the future. Long might they flourish and strengthen, furnishing the golden links that would keep together a great and united profession.

Brigade-Surgeon-Lieutenant-Colonel Drake-Brockman responded. He said in doing so he wished to acknowledge the honour which had been conferred upon him in his election upon the Council as the representative of the South Indian and Madras Branch. He might on that occasion be looked upon somewhat in the light of a "Universal Provider" of thanks, for he had to respond, not only for India, but also the Colonies. Although knowing little of the Colonial Branches, he did know something of those which pertained to the Indian Empire, especially in its southern part. The Colonial Branches numbered twenty-two or twenty-three, of which six might be said to belong to the Indian Empire. These could not be regarded as strictly Colonial Branches, although they had been so classified, for India was not a colony, and therefore the distinction should be clearly marked between the Branches of the Indian Empire and those of other parts of the world. He was sure it would be a matter of extreme satisfaction to the members of the various Branches to know that at the annual meeting of the Association at Bristol they had been remembered and their health proposed in this most cordial manner. He therefore returned, on behalf of the Indian and Colonial Branches, their sincere thanks for the manner in which the toast had been received.

Mr. Ernest Hart said, in a Babylonian journal published, he believed, some thousands of years ago, it was currently reported, and it was still traditionally believed, that when Daniel entered the lions' den he consoled himself by the reflection that whatever other hard fate might await him, at least he was not in for an after-dinner speech. He (Mr. Hart) was not able to console himself in that way, for he was aware before entering the room that he was in for a speech. He was told then that the room abounded with "lions" from all sorts of foreign parts, from Asia and from Africa, and from the prairies and mountains of America, and that he was expected to parade them and to put them through their intellectual gymnastics. He was encouraged somewhat by remembering the answer of the American boy who was asked why the lions did not eat Daniel, and his answer was said to have been that he had "too much grit in his backbone, and that they would be afraid to raise his dander." As he (Mr. Hart) was not altogether invertebrate and boneless, though he did not know that he had any "dander," or it would have been raised at several stages of the recent meeting, he felt a little reassured, and especially because he knew that just after the "lions" were fed they were most placable, and that the feeding time was 7 o'clock, while his speech was not due until 10.30. The lions, however, fed more reasonably, and had only one course for their dinner, while the humans had had rather too many. He was specially gratified and made happy by seeing that the gentleman who was to reply to the toast was Dr. Gould of Philadelphia. Dr. Gould was not only a most eminent physician and ophthalmologist, but he was a leading journalist of the United States, conducting the *Medical News* of Philadelphia, a journal of the highest character and repute. He had also shown himself a sincere friend and warm admirer of the Association, holding it up as a model in its skilful combination of local activity with federal union. In Dr. Gould the Association had a good friend personally, and it was very gratifying to find that the Americans as represented by him regarded the British Medical Journal as the leading medical journal of the world, even going so far as to describe its Editor as the "Napoleon of medical journalists." He (Mr. Hart) therefore felt sure that Dr. Gould would "roar as gently as a sucking dove." But at the last moment he was informed that Dr. Gould was unfortunately in bed with the British complaint, influenza, and another gentleman would have to take his place, Dr. Osler. Well, Dr. Osler was a lion only in his skin. He really was a John Bull. He had now found his apotheosis in America where all citizens were kings. It was therefore as an American that they had to receive him as a guest. But Dr. Osler was a Fellow of the Royal College of Physicians of London. His latest achievements in working out the etiology of miasmas were well known in this country, and he could show the advantage of being trained in England, living in America, for he had written a textbook elaborated by his own inimitable researches which had achieved this remarkable distinction that it was a standard book wherever the English language was spoken, and he was told that it brought in an income of £2,000 a year. (Cheers). Then Dr. Osler was, he believed, pregnant with a very important proposition, and one which made him particularly interesting to them. When in Canada during his annual winter holiday he (Mr. Hart) had the happiness some years ago of initiating and promoting the formation of four Canadian Branches, which had since become extensive, numerous, and powerful. Dr. Hingston came over in the following year to deliver the address in surgery, and was most warmly received, and now Dr. Osler came with the suggestion that the Association should hold one of its annual meetings in Montreal, following in the footsteps of the British Association, which held a meeting there with the most marked success. That hope was expressed and was most warmly endorsed at Montreal at a dinner of welcome with which the profession there honoured him on the occasion of the formation of the Montreal Branch. It had repeatedly been expressed since. It would be a great event and a great success. As such a visit would tend more than anything else to increase the numbers of the Association, and to give it an altogether imperial position, he hoped that Dr. Osler's proposal might ultimately be successfully and warmly responded to. He asked them to drink to the health of their

guests, coupled with the names of Dr. Osler and Professor Voigt.

Professor VOIGT, in reponding, wished to offer his thanks to the Association for the hospitality he had received, and for the opportunity afforded him of taking part in their discussions.

Dr. OSLER said when Sir Charles Cameron said modesty was the special privilege and prerogative of Irishmen he evidently had never crossed the water; for there could be no question that that most distinguished Irishman, Bishop Berkeley, who knew more of Irish woes and how to cure them than any man who ever lived, when he went westward took with him, as one of the most distinguished qualities of the Irishman of that day, modesty, and implanted it in America, and there alone it had since flourished. (Laughter.) He might naturally be expected to say something of the profession in the United States, and on the other side, he was happyto be able to state that since the welcome and important visit of Mr. Ernest Hart, a remarkable and striking change had come over the profession of that country. They had known Mr. Hart as an editor, they had known him in his Parliamentary and other work, but the British Medical Association did not know him in what should be his life-work —that of a medical missionary; for he came to Canada and preached a gospel of good professional ethics, and a high standard of conduct in their relations to each other and the public. He had done a great work and one of which the Association might be proud. It would be an admirable plan if a yearly interchange took place, the British Medical Association lending Mr. Ernest Hart as a preacher of professional righteousness to those on the other side, say for six months of the year, whilst they on their part sent someone to England to show up their little errors and like peccadilloes. In that way they would be receiving a mutual benefit. With regard to the British Medical Association itself, he thought it was strong enough—especially if all its members were as fit in head and stomach as the men who had been present at Bristol—to stand the perils of an Atlantic voyage, and he would suggest that at an early date the Association should boldly face the perils of the deep and cross the Atlantic Ocean. They had in Montreal a flourishing Branch, who would give them a warm and hearty reception. Though he was a resident in the United States, the best years of his life were spent in Montreal, and he was sure that their professional brethren in that city would do all in their power to make such a meeting of the Association as brilliantly successful as had been the great meeting of the British Association for the Advancement of Science. In conclusion, he said this was the seventh or eighth meeting of the Association that he had had the pleasure of attending, and at no one of them had he had such a delightful time both above and below the diaphragm. (Laughter and cheers.)

The company then separated.

CONCLUDING GENERAL MEETING.

THE concluding general meeting was held on Friday, August 3rd, in the Large Hall, Victoria Rooms, the PRESIDENT in the chair.

THE ADDRESS IN PUBLIC MEDICINE.

The Address in Public Medicine, which will be found on p. 293 of the JOURNAL, was delivered by Sir CHARLES ALEXANDER CAMERON, F.R.C.S.I.

Professor CORFIELD proposed:

That the best thanks of the Association be given to Sir Charles Alexander Cameron for his able and interesting Address in Public Medicine.

He said the address had gone over so great an extent of ground that one could only refer to a very few points. They would all, however, hope to read the address, and to give it the attentive study it deserved. One point of interest was the practical extinction of typhus fever in Dublin, the reason apparently being that insanitary tenements had been abolished in Dublin by thousands. When they asked who it was that had those insanitary tenements abolished, the answer was that it was Sir Charles Cameron, and it was due to him that typhus fever was, as he had stated, now so rare a disease there. The same had been the case in Liverpool, under the advice of Dr. Hope, the present medical officer of health. With regard to the important matter of the ventilation of sewers, they knew that in recent years diphtheria had been spreading in many large towns to a very alarming extent. The causes might be several: one that found favour with the officers of the Local Government Board was that it was due to the increased aggregation of children in schools, and the blame must therefore be put down to the school boards. This, no doubt, had a great deal to do with the spread of diphtheria, but it was also urged that it might be partly due to the escape of so much foul air from the sewers in the streets in close proximity to the houses. They were going now, in virtue of a recent resolution of the General Medical Council, to teach all medical students public medicine, the way to prevent the spread of the diseases by which they gained their livelihood. That was the position the medical profession had always taken up, and in no case more strongly than in the matter of small-pox. It was sometimes thrown in their teeth that they advocated vaccination because of the fees. Let vaccination be abolished, as he was sorry to say it appeared very likely to be in this country, and the public would find that they would require half as many more medical practitioners. He had great pleasure in proposing this vote of thanks.

Dr. DAVIES (M.O.H. Bristol) seconded the motion. He said the address was valuable for its extremely suggestive character. There was hardly a point of importance that Sir Charles Cameron had omitted. He had brought before them points of the greatest interest and value, and, when they had the paper in full before them, and could read and digest it at their leisure, it would be to them a source of great profit.

The resolution was carried by acclamation.

Sir CHARLES CAMERON, in responding, said he begged to thank most cordially his old and esteemed friend Dr. Corfield for so kindly proposing the resolution which the medical officer of health of the ancient city of Bristol had been good enough to second. He wished to add how greatly he had enjoyed the visit of the Association to Bristol, and how thoroughly he, in common with gentlemen who had come from other parts of the country, appreciated the almost unbounded hospitality they had received. Amidst so much kindness it would be, perhaps, invidious to particularise; but he was sure they would allow him to make an exception in the case of the distinguished President of the Association, who on three separate nights had fed not only the lions, not only the great men, but even the very humblest members, regaling the rank of file of the Association with most princely hospitality at his hospitable board.

AN ETHICAL SECTION.

Dr. T. GARRETT HORDER again brought forward the motion of which he had given notice:

That this meeting strongly recommends the Council to constitute an Ethical Section at the Annual Meeting.

He said this annual concourse of the medical men might be considered a parliament of the medical profession, and as a parliament it was only fair that opportunity should be given to discuss all questions relating to the welfare of the interests of the profession at large. He had heard from time to time that there had been a general feeling amongst the members of the Association that some opportunities should be given such as did not at present exist to discuss the ethics of the profession. It had been been pointed out to him that he must explain what he meant by an "ethical" section. It was very easy, indeed, to ask a man what he meant by the ethics of the profession, but it was a very difficult question to answer. He took it, however, that it meant generally their relations with each other, their relations with the medical institutions, and with such institutions as provident dispensaries, family clubs, and also with questions relating to the medical profession in the Legislature. If the Council would in their wisdom give a favourable consideration to this motion a great deal of good might result. They would derive themselves some guidance and benefit from a full and free discussion at a section at the annual meeting on various public questions which were mooted from time to time in the medical journals, but very imperfectly argued

because of the exigencies of space. He thought there would be a great many gentlemen who would be prepared to read papers in such a section, and interesting and instructive discussions might ensue on various questions which had been brought to the front so much during the last few years. He was given to understand that at Nottingham a resolution of this sort was passed. It was afterwards referred to the Council, but was not by them considered in a favourable light. As the annual meeting was announced to be held in London next year, the Council might very well in their wisdom give it a trial there. They could get papers from the various gentlemen perfectly well able to speak in the name of the general practitioners, and some good might result. At all events it might be tried for a year or two, and if it did not succeed it could then be quietly dropped. He understood that the principal objection of the Council to the motion would be that the various sections were already too numerous. His reply was that if there was any subject which interested a very large proportion of the members, the Council should give those members an opportunity of discussing questions which affected the material interest and welfare of the members. He moved the notice that stood in his name.

Dr. Ward Cousins, as President of Council, said he had much pleasure in seconding the resolution. He would promise the members who were interested in this topic that it should come before the next Council meeting, and he was confident it would receive full consideration.

The resolution was then carried, with a few dissentients.

Votes of Thanks.—The following votes of thanks were then passed on motion from the chair:

That the cordial thanks of the Association be given to the Right Worshipful the Mayor and the Mayoress of Bristol for their brilliant reception on Friday, and also to the Mayoress for an "At Home" at the Mansion House, on the occasion of the sixty-second annual meeting of the British Medical Association.

That the best thanks of the Association be given to the Rev. Canon Ainger for his eloquent sermon on Tuesday last.

That the hearty thanks be given to the Master of the Society of Merchant Venturers for his hospitality in entertaining members at a luncheon.

That the warm thanks of the Association be given to the President of the Association and the Executive Committee for their entertainment and pleasant evening at a reception at Clifton College and the Zoological Gardens.

That Mr. Lewis Fry and Miss Fry, Sir Greville and Lady Smyth, the Head Master of Bristol Grammar School, and Mrs. Leighton be warmly thanked for their enjoyable garden parties on the occasion of the visit of the British Medical Association to Bristol.

That the warm thanks of the British Medical Association be given to the Mayor and Corporation of Bath for their hospitality to the members of the Association; and to the members of the Bath Section of the Bath and Bristol Branch for entertaining the members at a reception.

That the best thanks be given to the residents of Clevedon for their kind entertainment to members visiting them from the Bristol meeting.

That the warm thanks of the Association be given to the Right Hon. Lord and Lady Fitzhardinge for their hospitable entertainment to members visiting Berkeley Castle; to the Rev. J. L. Stackhouse, for his kind attention in showing matters of interest to the members of the Association; and to Mr. E. Stafford Howard and Lady Rachel Howard, for their kind hospitality.

That the cordial thanks of the Association be given to the members of the Branch resident in Weston-super-Mare, and to Drs. Statham and Openshaw for their entertainments; to the Dean of Wells and Dr. Fairbanks for their hospitality to the members visiting Wells and Glastonbury.

That the best thanks of the Association be given to the Docks Committee of the Corporation of Bristol for their courtesy in providing the excursion round the docks; to Mr. F. B. Girdlestone, for his kindness in conducting the party; to the Secretary of the Bristol Water Works, Mr. A. J. Alexander, for personally conducting the party over the works; and to Mr. and Mrs. Newnes, for their hospitality to the members of the Association visiting Clifton; to the Committee of the Colston Hall Company, for the organ recital during the meeting; and to Dr. Eager and Mr. and Mrs. Seymour for their garden party.

That the cordial thanks of the Association be given to the Council of the University College, Bristol, for their kindness in granting the use of the College for the purposes of the meeting.

That the best thanks of the Association be given to the Museum Committee of the Corporation of Bristol for the use of the Lecture Theatre and Library.

That the best thanks of the Association be given to the Trustees of the Victoria Chapel, Clifton, for the use of their Lecture Room for the general meeting of members on Thursday last.

That the hearty thanks of the Association be given to the Bristol members of the Bath and Bristol Branch of the executive for their labours in connection with this most successful and brilliant meeting.

That the hearty thanks of the Association be given to Dr. E. Markham Skerritt, the Honorary Local Secretary, and to Dr. Johnston Fyffe, Honorary Local Treasurer, for their most successful labours in connection with this meeting.

That Mr. L. M. Griffiths, Chairman of the Museum Committee; Mr. J. Dacre, Secretary of the Museum Committee; Mr. F. R. Cross, Chairman of the Entertainments Committee; Dr. W. H. C. Newnham, Secretary of the Entertainments Committee; Dr. A. J. Harrison, Chairman of the Reception Committee; Mr. J. Taylor, Secretary of the Reception Committee; Dr. D. S. Davies, Chairman of the Excursion Committee; Mr. J. H. Wathen, Secretary of the Excursion Committee; Dr. H. Marshall, Chairman of the Dinner Committee; Mr. J. P. Bush, Secretary of the Dinner Committee; Mr. Munro Smith, Chairman of Printing and Publishing Committee; Mr. R. G. P. Lansdown, Secretary of Printing and Publishing Committee; Mr. A. Prichard, Chairman of General Purposes Committee; Dr. B. Rogers, Secretary of General Purposes Committee; Dr. A. B. Prowse, Secretary of Finance Committee; Dr. Shingleton Smith, Chairman of Pathological Museum; and Mr. C. A. Morton, Secretary of Pathological Museum, be cordially thanked for the able and willing help in rendering the meeting so successful.

That the warm thanks of the Association be given to the Committee of the following clubs, which have been thrown open to the use of members:—Clifton Club, Literary and Philosophic Club, Salisbury Club, Constitutional Club, Liberal Club, Commercial Rooms, Clifton Golf Club, and Henbury Golf Club.

That the warm thanks of the Association be given to the various firms who have so kindly thrown open their works to members during the meeting.

The President then vacated the chair, which was occupied by the President of Council.

Dr. Ward Cousins then moved:

That the warmest thanks of the Association be given to Dr. Edward Long Fox for presiding so ably and so courteously over this the sixty-second annual meeting.

He was sure members would agree with him when he said that the ladies and gentlemen who composed the British Medical Association were very sensitive and kind-hearted individuals. They felt deeply the hospitality they had received in that ancient city of Bristol, and also the kind and courteous manner in which they had been treated by their President. This was the third time they had visited Bristol, thirty years having separated their visits on both occasions. They would agree that this meeting was the best of all three, and they deeply appreciated the honour that Dr. Fox had done the Association by presiding with great ability and distinction over its proceedings.

Dr. Winterbotham said it was a great pleasure to him to have the privilege of seconding this resolution of thanks to their President, more especially because he wished to offer to the President on their behalf as well as his own the thanks of those who were more or less residents in the neighbourhood—the general practitioners of the West, who always for years had looked up to Dr. Fox, not only with respect, but with love. Those who came from a distance could now to some extent appreciate those feelings, for a chairman should be regarded from two aspects: they should love him and they should fear him. Those who heard his address on Tuesday could understand from his language, from his methods of expressions, how it was that they in the West had learned to love him. Those who remained after the address and saw during rather a heated discussion the courage and care with which he conducted and checked that discussion would know that the love which was implanted in the earlier hours was tempered by fear, which made those who were to be ruled by him careful of his ruling. Possessing two such qualities, it would be understood that he, speaking as one of the Western practitioners, had come not only to love but to honour and to respect their President, and that they had dropped the fear. He had great pleasure in seconding the resolution.

The resolution was carried by acclamation.

Dr. Long Fox said he had no more words at his disposal.

He had had during the week to express his thanks on several occasions. He felt those thanks, and he should feel them as long as he lived. He could only say in conclusion that if the Association went away having received satisfaction for instruction from the various Sections and from the noble museum which Bristol possessed—which he believed was the very best that they had ever seen at an annual meeting, and if at the same time the members had really in various ways enjoyed themselves in less serious hours, he was sure that the Committee and the whole of the local Association, together with himself, would feel more than satisfied at the results of any little efforts that they had made. In conclusion, he said he believed that the reason why these meetings had become so very important was because they brought together the best thought of the whole United Kingdom upon various topics. They there brought people together in a way which, if they had differed on scientific matters, made them see that after all they might differ on individual matters and yet be uncommonly good fellows at the same time. He was sure that the good fellowship of those meetings was more than half the battle. He begged on his own behalf and on behalf of his colleagues to return the Association his hearty thanks.

Dr. WARD COUSINS proposed that the best thanks of the Association be presented to Dr. Markham Skerritt for the able way in which he had carried out all the duties of Local Secretary. It need not be said that the duties of Honorary Secretary to these great annual meetings entailed an amount of labour and energy on the part of the gentleman who undertook it which one could scarcely appreciate without seeing the range of work through which he had had to proceed. Dr. Skerritt had been working for the Association every night and day for many months, and a great deal of the success of the meeting was due to his able services.

Mr. HEMMING, in seconding the motion, said he was sure there was not the slightest necessity for his intruding his presence, except that he himself had experienced the hospitality and kindness of Dr. Markham Skerritt, and no doubt many others had done the same. He knew that Dr. Skerritt had been for some time most anxiously and constantly employed in furthering the objects of the great meeting. If London, at the next meeting, was able to find better men to conduct the business of the Association than they had had at Bristol, he was sure that London might well be proud.

The resolution was carried by acclamation.

Dr. MARKHAM SKERRITT said he wished to thank the Association most heartily for the kind way in which the resolution had been received. If it should have been passed at all, which he did not say it should, it ought to have been made very much wider, because there had been a number of gentlemen associated with him in the work of preparation. It was not right that he should receive credit far beyond what was due. However, he would accept their kind expressions on behalf of the whole local committee.

Dr. WARD COUSINS then declared the session of 1894 closed.

THE ANNUAL MEETING OF THE MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

THE eleventh annual general meeting of this Society was held in University College, Bristol, on Wednesday, August 1st, Mr. ERNEST HART in the chair. Present: Dr. Aldridge, Plympton; Dr. Brierley, Manchester; Dr. Callaghan, Colyton; Dr. Cotton, Bristol; Dr. Crowe, Worcester; Dr. Cureton, Shrewsbury; Dr. Evershed, Penzance; Dr. Forrest; Dr. Griffiths, Bristol; Dr. Gubb, London; Dr. F. de Havilland Hall, London; Mr. Ernest Hart, London; Dr. de Vere Hunt, Cardiff; Dr. Jackson, Plymouth; Dr. Brindley James, London; Dr. McArthur, Luton; Dr. Preston, Manchester; Dr. Rabagliati, Bradford; Dr. Sincock, Bridgwater; Mr. Noble Smith, London; Dr. Pye-Smith, London; Dr. W. Smith, London; Dr. Staple, Bristol; Dr. Thomas, Birmingham; Dr. Wall, Pembroke; Dr. Wallace, London; Dr. Wilding, Bristol.

SUMMARY OF ANNUAL REPORT AND MEMBERSHIP.

The annual report presented showed that the total membership of the Society was now 1,467, having increased during the year by 140.

PAYMENTS AND RESERVES.

The Society has paid in sickness claims since 1884 the sum of £25,197. During the last year, £4,271 11s. 8d. was paid on this account. The total reserves now amount to £77,578 5s. 6d., the increase of the funds during the year just ended being £11,209 0s. 2d.

CASH BONUS.

The valuation just completed shows a surplus of £7,137 in addition to the saving in the management fund of £4,409. From this a cash bonus of £5,000 is about to be allotted to the members, a return of 10 per cent. on premiums.

THE FOUNDER OF THE SOCIETY.

Mr. ERNEST HART, the founder of the Society, being compelled, by pressure of other public duties, to retire from the office of Chairman, has been requested to accept the post of President of the Society.

THE NEW CHAIRMAN.

Dr. DE HAVILLAND HALL, the Deputy Chairman, who has given so much time and energy to the service of the Society, has been elected Chairman in the place of Mr. Hart. Sir T. Spencer Wells, one of the Trustees of the Society, having retired, the post has been accepted by Sir James Crichton Browne.

UNPRECEDENT ECONOMY OF MANAGEMENT.

One element of the great success of the Society is the very economical manner in which it is worked, less than 5 per cent. of the premium income being spent in management; no funds have ever been expended in agency charges, commissions, advertisements, or building, and the total number of staff salaries is less than 5 per cent. on the premium incomes. The Committee have thought it right to mark in some small degree their sense of the benefits thus accruing to the management and the remarkable economy which has thus been effected in the conduct of the business of the Society by allotting the sum of two hundred guineas from the surplus of the management fund which has been so largely due to Mr. Hart's efforts for the purpose of supplying the means of permanent record of the value of those services in founding the Society, and placing it in a position of assured prosperity.

On the proposal that the report be received and adopted, the question arose as to out of what funds the sum mentioned was voted, and whether it would be more graceful that this recognition should be made by a general voluntary subscription among the members, to which several speakers expressed themselves desirous of contributing. It was explained that the large balance of £4,000 which had accrued to the management fund, as a saving out of the sum legally set apart for management, had been largely due to the basis which Mr. Ernest Hart had arranged, the economical working of the Society, and the methods which he had devised and facilities which he had placed at their disposal for avoiding the usually large outlay on commissions, advertisements, or cost of buildings, and officers' salaries. The most suitable course, therefore, was considered to be that a small fraction of the surplus, which was under direct control of the Executive Committee, should be devoted to the purchase of a work of art which would remain as a permanent but slight recognition of those services.

Mr. NOBLE SMITH said he was one of the original members of the Society and remembered what took place at the meeting called at Liverpool for the founding of the Society. Mr. Ernest Hart was the prime mover and organiser of the Society, and had skilfully elaborated all the details and brought them into working. Letters had been published in the BRITISH MEDICAL JOURNAL at intervals for many years suggesting that such a society should be formed, but nothing ever came of it until Mr. Hart came forward with the details of a working scheme and took the helm. If he had not been prepared to take the burden on his shoulders, and but for the confidence which his known ability and habit of success inspired, the Society would never have existed. To Mr. Hart was due the credit of having carried a most difficult enterprise

through with unqualified and unparalleled success. As far as original organisation and the carrying through of the matter they were indebted to him for having done so. He believed that, according to the practice of such Societies Act, there was a minimum allowance of 10 per cent. for management. Many societies ran up to 30 and 40 per cent. of their premium income. It was an exceptional thing, and a very great thing that they, a young society, starting with funds and with a very low rate of interest, had been enabled to keep down the management expense to less than 5 per cent., and thus accumulate a balance of more than £4,000. Great thanks—he could hardly express how great—were due to the Chairman, the Vice-Chairman, and the Committee, who gave their services also freely for the purpose of carrying out the organisation of the Society. He had great pleasure in moving:

That the report presented be received and adopted,

which was seconded by Dr. De Vere Hunt, and carried.

Mr. Noble Smith said he had much pleasure in proposing the following resolution:

That the best thanks of this general meeting be and are hereby given to the officers and committees of the Society for their valuable and honorary services during the past year.

Dr. Wall seconded this resolution, which was carried amid loud applause.

On the proposal of Dr. Wilding, seconded by Dr. Cotton, the following resolution was carried:

That the list of officers and members of the committees be and are hereby elected.

Dr. Griffiths said he had a resolution which would, he felt sure, be passed with acclamation, and, in order to give it the most graceful character, the Executive Committee had exercised their power of making a grant for the purchase of a work of art from the Management Fund under their control, to mark their sense of the great service rendered by the Chairman; but it would be a more graceful sequel if the annual meeting now endorsing also added something of their own to this action. Those who were cognisant of the fact knew the large time, unceasing care, and peculiar skill which Mr. Hart had given to this great professional work. He had been able to bring to notice the benefits of the Society from month to month in a way in which no other person would have been able to have done, and had won for it, not only a striking success, but universal popularity. It seemed peculiarly proper that the small testimonial which he was about to propose on behalf of the members generally should come from the surplus funds—funds which had gained so much from Mr. Hart's care and attention.

That this meeting learns with regret that Mr. Ernest Hart, the founder and Chairman of the Society from its commencement to the present date, feels it necessary, owing to the pressure of his other public duties, to resign the Chairmanship of this Society; that it approves of the proposal of the report that he be requested to accept the office of President, and that the warmest thanks of the members of this Association are due and are hereby tendered to him for the energy, ability, and public spirit with which he initiated the foundation of this Society, and for the continuous skill and care with which he has so successfully conducted its affairs; that it congratulates him on the Society's present prosperous condition, and that an ornamental address be presented to him on behalf of the members of the Society expressing their individual and collective sense of the valuable services which he has thus rendered to the Society and to the profession. The expense of the presentation to be limited to £25.

This resolution was seconded by Dr. Brindley James, and on being put to the meeting was carried with acclamation.

Mr. Ernest Hart, in reply, said he was heartily indebted to Dr. Griffiths for the wording of the resolution and for the sentiment which it conveyed, and to the members for the gracious way in which they had put it in action. He and those who came after him would value such a record.

It was proposed by Dr. Walter Smith, seconded by Dr. de Havilland Hall, and carried unanimously:

That the best thanks of this meeting be, and hereby are given, to the British Medical Journal for the kind assistance so freely given to the Society.

The *Columbus Medical Journal* has recently been considerably enlarged, and will henceforth appear every fortnight instead of once a month as before. Dr. R. Harvey Reed is the new editor.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XI.—DARLINGTON.

The workhouse stands on the edge of the busy town, tall chimneys and whirling mills all around it. It draws its inmates principally from the town, with a small sprinkling from the country. The operatives are employed in weaving, which is the chief industry of the place; and also in the coal pits of the locality. The operative or skilled artisan is a very different inmate to the agricultural labourer, and the work that he does in the house is that of a skilled workman. In going round the workhouse we were struck with the greater intelligence of the faces of the inmates, especially of the men; among the women, the type of face, while indicating a higher order of intellect, betrayed coarseness and hardness of character. Having an introduction from the vice-chairman of the board, our request to see the infirmary department was readily acceded to by the master. We were sorry that the the absence of the matron deprived us of the advantage of her escort.

Building and Wards.

The infirmary is a detached block, standing only the width of a roadway from the main building; this entails the loss of a certain amount of light and air. The distribution of the wards is two long wards, holding 18 beds each, male and female, with smaller wards for four or six beds; the wards are on the ground and first floor. They have windows on each side, and the beds are ranged facing each other between the windows; the wards had a bright and cheerful appearance, with pictures, flowers, and other ornaments, the work, as we were informed, of the Ladies' Committee. At the time of our visit, which was in the afternoon, we found the wards rather empty, this being the slack time of the year in workhouse life. In the large female ward there were four patients in bed; one a child in a cot in the centre, suffering with gangrene of both legs, an offensive case for which iodoform was used; a pauper inmate was straightening the bed as we entered the ward, and there was an unpleasant effluvium from it; a patient with consumption, whose temperature was taken night and morning, and charted; a woman with fits; and a case of senile debility. About three other women were in the ward, but the rest were in the day-room. On the men's side there were two cases of "bad legs," and one of old age, and the other patients were in the day-room.

The bedsteads are of the full width, the bedding is a cocoa-nut mat over the laths, and beds of flock or chaff, with an ample supply of blankets; such beds as we saw were clean and fit.

There are no wards for isolation, but there is a separate block called the isolation hospital, which we were told is condemned; it is not kept in a state of readiness for use, but the master informed us that a bad lock case would be placed in this hospital, and be nursed by the nurse of the infirmary. It has a complete set of separate offices, and it struck us that a little soap and water would soon make it serviceable; a tramp was in one of the rooms infected with itch.

System of Nursing.

The infirmary is licensed for 72 beds; that includes 12 in isolation hospital; there is one trained nurse, who is also the midwife; the nurse whom we saw had only been a week in the department, having succeeded a trained nurse who has left; she has pauper help—a wardsman or woman to each ward. During the night the inmates are supposed to help each other, and such of them who can go out to the closets on the landings are supposed to do so. We did not see any provision of dressing gown or slippers for this nocturnal walk. One or more paupers would be told off to watch beside a patient seriously ill, or the nurse would be called up. The tramp isolated with the itch would be his own

warder in the night. There did not seem to be any means of communication with the nurse's quarters, nor with the responsible officers for night use.

CLASSIFICATION.

In answer to inquiries, we were informed by the master that the only means of isolation was the separate hospital mentioned above; it is condemned, and therefore not put in order for the reception of patients. Besides this building, there is no means for the keeping apart of the lock cases; there are small wards in the infirmary, but we could not ascertain that the patients were classified in them. The imbeciles and idiots were among the patients in both the large and small wards. We did not see any ward for sick children; the child with gangrene referred to above was in a cot in the large ward. There is a lying-in ward of six beds with separate offices, where the mothers can remain until quite convalescent.

THE INFANTS.

The infants are lodged in rooms close to the women's quarters; the nursery is a small room, rather bare of furniture, but warm and comfortable. There were six infants in the room—three in cradles and three running about. They were in the care of an inmate, but the management seemed faulty, for their mothers could have access to them as they came to and from their quarters, and there was no means of knowing whether the infants were properly and systematically fed. At night they slept with their mothers in small bedsteads. No bathrooms or separate offices were provided for the nursery. The poor little things looked as if they would do better under the care of a paid nurse. This department is supervised by the trainer, but her time is fully occupied with the care of the older children.

DIETS.

The diets are under the direction of the medical officer, but on analysing the dietary for the sick we were surprised to see how very little milk was allowed. On the "milk diet" the amount was $2\frac{3}{4}$ pints for the males, $2\frac{1}{2}$ for the females, and $2\frac{1}{4}$ for the children; this diet does not include pudding. On the "milk and beef-tea diet," 2 pints of milk and $\frac{1}{2}$ pint of beef-tea per male, the same for the females, and $2\frac{1}{4}$ pints of milk and $\frac{1}{2}$ pint of beef-tea for the children. The adults have a pint of tea and a pint of coffee besides, with 6 or 7 ounces of bread at breakfast or supper. In this diet there is not much to make or repair the human frame, especially in the case of the sick; but, though it does not appear on the dietary, the doctor can doubtless order extra milk for the night.

GENERAL ARRANGEMENTS.

The water supply is ample; hot and cold water are laid on to the ward landings and bath rooms; the fittings of the waterclosets are old, and the flush did not appear to be sufficient. There is the usual difficulty in keeping the paupers from soiling the baths. We saw some litter in some of the bath rooms, and the nurse complained of the wilful want of cleanliness on their part.

The wards are ventilated by means of windows; the ventilation of the ward where the gangrene patient lay was defective. There always is a difficulty in keeping sweet wards where there are a number of old people. The wards look bright with strips of brick-red linoleum down the middle, and there seemed a fair supply of arm chairs. The airing courts are yards with turf in the centre and a few bushes at the sides.

RECOMMENDATIONS.

The structure of the infirmary leaves little to be desired, but we would recommend: An increase of the nursing staff for the day, and the appointment of a night nurse; the separation of the idiots and imbeciles from among the sick and infirm; provision for the isolation of the offensive and lock cases: a paid attendant for the infants, and the provision of sleeping cots for them at night; bath room and separate offices for the nursery department; improvement of the ventilation of the wards by Tobin tubes or other similar method.

THE next meeting of the Anatomical Congress will be held at Basle, April 17th to 19th, 1895.

THE CHOLERA.

THE official bulletin issued at St. Petersburg on August 7th showed that between July 29th and August 4th, 313 cases of cholera and 240 deaths occurred in that city.

From July 22nd to July 28th there were 159 cases and 83 deaths in the city of Warsaw, and 394 cases and 212 deaths in the government of Warsaw.

There were 44 cases of cholera and 19 deaths in Galicia on August 3rd, including 3 cases and 1 death in the Bukowina.

Our St. Petersburg correspondent writes: The following are the statistics of the epidemic, in continuation of the table in my last note. They indicate a marked and rapid decline in the prevalence of cholera. The figures, as before, apply to periods of twenty-four hours, ending at noon on the dates named:

Date (old style).	Fresh cases.	Deaths.	Remain under Treatment.
July 8th	182 ...	82 ...	885
,, 9th	152 ...	78 ...	873
,, 10th	144 ...	63 ...	867
,, 11th	151 ...	93 ...	827
,, 12th	146 ...	68 ...	814
,, 13th	120 ...	62 ...	773
,, 14th	105 ...	69 ...	748
,, 15th	83 ...	59 ...	715
,, 16th	79 ...	49 ...	679
,, 17th	57 ...	51 ...	604
,, 18th	50 ...	36 ...	550
,, 19th	63 ...	38 ...	482
,, 20th	50 ...	32 ...	451
,, 21st	30 ...	33 ...	400

The total number of cases of cholera in the present epidemic has been 3,355, and of deaths 1,583.

Two fatal cases of cholera occurred at Amsterdam on August 7th, and at Maastricht three new cases and two deaths. The total to the present time is forty-seven cases and twenty deaths.

The steamship *Balmore*, from St. Petersburg for London, arrived off Gravesend on August 7th and reported the death of one of her crew. The port sanitary medical officer went on board, and after an examination of the body declared that the cause of death was cholera, and ordered all the necessary precautions, including the disinfection of the vessel, to be taken immediately. It is reported that when the *Balmore* left St. Petersburg her crew were in perfect health, and not a case of sickness occurred until 8 o'clock on Monday night, when the deceased was seized with violent pains and died within two hours. The other members of the crew are well. Dr. Collingridge, medical officer of health of the port of London, visited the steamship *Falmore* on Wednesday, and removed another suspicious case from the vessel. Dr. Klein's examination of the intestines of the fatal case on the ship confirms the diagnosis of Asiatic cholera. The bacteriological test has also proved the diagnosis in one other case from the same vessel. Four patients are now detained under treatment.

NAVAL AND MILITARY MEDICAL SERVICES.

THE ARMY MEDICAL SCHOOL, NETLEY.

THE sixty-eighth session of the Army Medical School, Netley, was brought to a close on Monday, July 30th, when the prizes were distributed, and an admirable address was delivered by Dr. Weir Mitchell, of America. The results of the examinations were read by Professor J. Lane Notter in the presence of a distinguished company, which included Sir Joseph Fayrer, Surgeon-General W. E. Maclean, C.B., Surgeon-Colonels McLeod, Cruickshank, and Tandy, of the Indian Service, and the military and medical staff of the Royal Victoria Hospital. A large number of visitors were also present. The prize in pathology was, as on many former occasions, presented for competition by Sir Joseph Fayrer, K.C.S.I., who was present at the distribution for the last time in his official capacity as a member of the Senate of the school.

Dr. Weir Mitchell, in his address, said that he was the first of his countrymen honoured by an invitation from the Senate of the Army Medical School to distribute the prizes awarded to-day. It was a commonplace among them to say on such an occasion that the British-American did not find himself here quite a stranger in a strange land, and the repetition of this commonplace did not make it less true. He would add that the feeling of being peculiarly at home with them had for him trebly strengthened, as being an honorary member of the British Medical Association, he came among them to talk to men of his own profession. Then, too, he was for four years an army surgeon in the American War, and he owed much to the success he had had in life to the chances which that war threw in his way. They could thus see why he could so deeply sympathise with the thoughts, feelings, and ambitions of men about to carry into the army the best training and traditions of the most progressive and most highly vitalised of all the professions. A great soldier—General Sherman—once said to him that the

most interesting thing in any war was to see the young recruits going into action. He had somewhat of this feeling of interest, and all the varied thoughts which went with it, as he thought of men like those he saw before him, who were about to scatter and, through the army, to follow so many lines of pursuit. He thought, as a veteran, of the new lands they would see, of the trials, temptations, and success which lay before them, and also of the possible failures of one or another kind which awaited most men at some sad hour of life. The prizes he had been the honoured medium of presenting to them that day represented, with their commissions, the hard results of years of work—they were both pledges and rewards. Before them was a freer existence, more choice of the ways they would tread, and relatively a larger independence. How were they going to use that? Plenty of men had intellect enough for success in life, but a far smaller number possessed in full competency the moral quantities without which the best mental endowments were truly crippled. Above every characteristic he desired for all of them was persistent energy, and what they should try for was to do everything in the best way. He had had experience that they who were called non-combatants were always in battle, and, he might say, in the great civil strife in his country the Medical Corps suffered in killed and wounded relatively as to numbers as much as did the line officers of equal rank. In the hours of disappointment which came to all of them they should remember that failure was a relative term, and if promotion in rank was a good thing promotion of character was much better, and they should be animated with a desire to justify their belief in their own fitness. Duty honestly done was the keynote to all their desires. How that little word with its wealth of meaning rings clear through the great history of this wonderful nation! It was not of glory that their great Admiral reminded his fleet, but of duty; and yet not once nor twice in the old old story the path of duty was the path of glory. As a stranger who loved and honoured England, who believed his profession and theirs to be the best test of character and affording the highest opportunities of usefulness, he wished them heartily, one and all, every true success in life.

(The publication of the lists of gentlemen who have obtained commissions is unavoidably postponed.)

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

DEGREES CONFERRED ON AUGUST 1ST, 1894.

Doctor of Medicine (with title of thesis).—*D. H. Anderson, England, M.B., C.M., 1887; The Etiology of Acute Rheumatism. **R. J. A. Berry, England, M.B., C.M. (with Second-Class Honours), 1891; The Vermiform Appendix; its Anatomy, Macroscopic and Microscopic; Physiology, Pathology, and Surgery; an original and experimental research. F. L. Brown, M.A.(France), M.B., C.M., 1890. The Sulphur Springs of Béarne and Bigorre. ***L. C. Bruce, Scotland, M.B., C.M. (with First-Class Honours), 1889; Effect of Thyroid Feeding in some Forms of Insanity. R. C. Buist, M.A., Scotland, M.B., C.M., 1888; Acute Liver Atrophy. *J. Cameron, Scotland, M.B., C.M. (with Second-Class Honours), 1887; Paranoia. J. W. Compton, England, M.B., C.M., 1891; The Medical Aspect of Conventual Life. H. Dardenne, Mauritius, M.B., C.M., 1889; Fibrino-Plastic Bronchitis. *H. R. L. Davies, England, M.B., C.M., 1891; Rheumatoid Arthritis. *R. J. Drummond, India, M.B., C.M., 1888; The Intestinal Antiseptic Treatment of Cyelon Sore Mouth (*in absentia*). *F. A. Elkins, England, M.B., C.M., 1888; Remarks on Twenty-eight Cases of Adult Female General Paralysis admitted to the Royal Edinburgh Asylum during the Five Years 1889 to 1893. *A. Elliot, M.A., Scotland, M.B., C.M., 1888; Transfusion, with Special Reference to Intravenous Infusion of Saline Solution. S. Elliot, Scotland, M.B., C.M., 1890; An Account of an Epidemic of Enteric Fever in its Diagnostic, Therapeutic, Dietetic, Etiological, and Sanitary Aspects. O. F. Evans, Wales, M.B., C.M., 1890; Hæmatemesis; its Various Causes, Symptoms, Diagnosis, and Treatment. H. N. Everard, England, M.B., C.M., 1890; On Diphtheria (*in absentia*). J. A. Ewan, M.A., Scotland, M.B., C.M., 1888; The Influence of Sex and Heredity in the Causation of Mental Disease; and a Short Account of the Insanity of Adolescence. **E. C. Fischer, Scotland, M.B., C.M. (with Second-Class Honours), 1891; Toxic Amblyopia. F. T. Foster, New Zealand, M.B., C.M., 1891; The Manufacture of White Lead, Recent Hygienic Improvements; Clinical History of a few Cases of Plumbism; Suggestions for Improving Health of White Lead Workers. W. Gordon, England, M.B., C.M., 1892; The Morbid Condition in Disease. B. Griffiths, Wales, M.B., C.M., 1891; Observations on Antifebrin or Acetanilid. A. J. Haslam, England, M.B., C.M., 1891; Occult Glanders, Some Unrecorded Symptoms. E. Hawkins, M.A., England, M.B., C.M., 1892; Some Introductory Notes concerning the Nature of Rheumatism. S. Hillier, England, M.B., C.M., 1891; A New Epidemic Skin Disease. ***W. M. Hutton, Scotland, M.B., C.M. (with First-Class Honours), 1891; Empyema, with Special Reference to Sudden Death and Treatment. J. L. Jackson, England, M.B., C.M., 1893; Anæsthetics and their Administration. J. W. Johnston, Scotland, M.B., C.M., 1892; Counter-irritation, with Special Reference to the Theories on which its Employment is based. R. Kirkpatrick, India, M.B., C.M., 1891; Malaria, its Nature and Origin (*in absentia*). **J. L. Lackie, Scotland, M.B., C.M. (with First-Class Honours), 1889; The Clinical and Pathological Features of Hydro-, Pyo-, and Hæmato-salpinx. E. S. Littlejohn, B.A., Canada, M.B., C.M., 1892; A Study of Asthma (*in absentia*). *J. M'Donald, Wales, M.B., C.M., 1888; Pelvic Hæmatocele, mainly concerning its Etiology. J. R. M'Intosh (B.A.), Canada, M.B., C.M., 1888; Some Forms of Increased Hardness of the Eyeball associated with Syphilis and their Treatment. *H. J. Mackay, Scotland, M.B., C.M., 1894; Clinical and Pathological Observations in Nervous Disease. H. V. M'Kenzie, India, M.B., C.M., 1890; Astigmatism. J. M. M'Lennan (M.A.), Scotland, M.B., C.M., 1885; Physiology considered in Relation to Human Knowledge and Responsibility. D. Macmillan (M.A.), Scotland, M.B., C.M., 1891; Periostitis and Necrosis as Sequelæ of Typhoid Fever. A. H. M. Macmorran, Scotland, M.B., C.M., 1892; The Diagnosis of Typhoid Fever. ***A. K. Melville, Scotland, M.B., C.M. (with Second-Class Honours), 1891; Hypnotism and its Relations to Medicine. ***J. A. Menzies, Scotland, M.B., C.M. (with First-Class Honours), 1890; Methæmoglobin. A. W. T. F. Mickle, England, M.B., C.M., 1892; Febrile Conditions during the Puerperium. W. C. Milroy (M.A.), Scotland, M.B., C.M., 1891; Epidemic Influenza, with Special Reference to the Last Two Epidemics; a Contribution to the Pathology of the Cell; Observations on Malarial Fevers (*in absentia*). J. M. Reid, Scotland, M.B., C.M., 1890; A Contribution to the Pathology of the Cell; *J. B. Ridley, England, M.B., C.M., 1885; Clinical Observations on Typhoid Fever. *S. A. Shiach, Scotland, M.B., C.M., 1891; Small-pox Vaccination, Revaccination with Special Reference to the Bradford Epidemic of 1893. *E. M. Smith, England, M.B., C.M., 1888; The Trustworthiness of the Present-day Preparations of the Digestive Ferments, as Tested Experimentally and Clinically, with Some Introductory Comments upon the Recent Physiology connected with the subject. J. Smith, Scotland, M.B., C.M., 1888; Abdominal Cases Illustrating the Relation of Medicine and Surgery. ***J. D. Stanley, Ireland, M.B., C.M. (with First-Class Honours), 1889; Splenic Anæmia; its Clinical Course and Pathology. K. T. Stewart, England, M.B., C.M., 1889; Beri-beri. G. T. Tate, England, M.B., C.M., 1888; Some Considerations to be taken by a Medical Officer of Health in the Construction of a Fever Hospital for a Town or District of 50,000 Inhabitants, the Population being on the Increase. **A. L. Turner, Scotland, M.B., C.M. (with Second-Class Honours), 1889; Internal Derangement of the Knee-Joint: a Pathological and Clinical Study. *G. Wade, Scotland, M.B., C.M., 1892; The Thyroid Gland and its Relation to Myxœdema and its Treatment. *J. C. Whyte, Scotland, M.B., C.M., 1891; Some Complications of Chronic Suppuration in the Middle Ear. H. T. Wickham, England, M.B., C.M., 1888; On the Difficulties Connected with the Feeding of Infants. D. Wield (M.A.), Scotland, M.B., C.M., 1891; Acute Follicular Tonsilitis. *J. J. Wilson, Scotland, M.B.; C.M., 1891; Hemophilia. R. Wyse (M.A.), Scotland, M.B., C.M., 1889; Some Practical and Scientific Uses of Palpation and Auscultation. *W. Young, New Zealand, M.B., C.M., 1892; Tuberculosis of the Urinary Bladder.

***Those who have obtained gold medals for their dissertations.

**Deemed worthy of competing for the dissertation gold medals.

*Commended for their dissertations.

Bachelor of Medicine and Master in Surgery.—W. D. Adams (M.A.), Scotland; C. F. Adamson, Australia; C. G. Aitken, Scotland; C. J. H. Aitken, Scotland; J. A. Alexis, West Indies; S. B. Allison (B.A.), Ireland; J. W. Anderson, New Zealand; R. Y. Anderson, Scotland; J. C. Atkinson, Chili; C. Ayres (B.A.), Australia; A. Balfour, Scotland; T. M. Bartlett, Jamaica; H. Bateson, England; J. M. Beattie, (M.A.) (with First-Class Honours), New Zealand; R. W. Beesley, (with Second-Class Honours), England; W. Bethune, Scotland; R. St. George S. Bond, England; W. H. Borrie, New Zealand; A. Brenner, Scotland; R. W. Briggs (with Second-Class Honours), England; B. W. Broad, England; H. R. Brown, M.A., Scotland; R. T. Bruce, Scotland; W. H. Bryce, Scotland; M. Burnet, Scotland; D. J. S. Burt, New Zealand; A. J. Campbell, Scotland; A. K. Campbell (with Second-Class Honours), Scotland; C. S. Cantrell, New Zealand; O. H. Chapman, England; P. F. Chapman, England; R. M. Clark, Scotland; S. Cochrane, M.A., Scotland; J. A. Coutts, Scotland; C. Craig, M.A., Scotland; D. M. R. Crichton, Scotland; H. M. Crosby, Tasmania; A. Dall, M.A., Scotland; R. T. Davidson, Scotland; G. A. Dickson, Scotland; E. R. Dodds, England; E. A. W. English, England; T. Evans, Wales; J. H. Ewart, India; F. H. Fairweather, England; R. W. Fell, England; J. Fenton, Scotland; P. J. H. Ferguson, West Indies; C. Finlay, Scotland; J. S. Flett, M.A., B.Sc., Scotland; J. V. Forrest, Antigua; E. J. H. Fraser (with First-Class Honours), England; S. Fraser, Scotland; W. C. Fraser, Scotland; G. B. French (with First-Class Honours), England; J. W. Geddes, Scotland; A. J. Gibson, Scotland; T. Gibson, M.A. (with First-Class

Honours), Ireland; H. H. Gill, England; J. R. Gilmour (with First-Class Honours), Scotland; J. O. Goldie, England; A. D. M'K. Grant, Scotland; L. Grant, Scotland; W. Y. Grant, Scotland; G. D. Gray, Scotland; J. Gray, England; H. M. Green, England; J. D. Gregorson, Scotland; R. Grieve, England; W. Haig, Scotland; F. H. Hardman, England; J. Henderson, Scotland; R. T. Herdman, Scotland; J. E. Hewlett, England; A. Heys, England; E. R. Holmes, England; G. Hudson, England; P. T. Hughes, England; J. K. Jamieson, Scotland; T. H. Jamieson, Scotland; D. A. Johnstone, England; W. E. Johnstone, M.A., Scotland; H. H. Jones, Wales; T. H. Jones, England; J. W. Keighley, England; B. C. Kelly, England; T. B. Kenny, West Indies; A. E. Kidd, Scotland; D. F. Laidlaw, Australia; G. C. Laing, Scotland; J. A. Laing, New Zealand; C. F. Lassalle (with Second-Class Honours), West Indies; J. Lawrie, Scotland; R. E. Legat, Scotland; G. F. Leicester, England; W. Leslie, Scotland; J. M. Lincoln, Mauritius; T. G. Lusk, Ireland; D. G. MacArthur, Scotland; A. J. MacDougall, Scotland; C. J. R. MacFadden, Ireland; J. A. Macfarlane, Trinidad; A. J. M'Ilroy, New Zealand; J. Maciver, Scotland; J. F. Macphail, M.A., Scotland; J. F. Macpherson, Scotland; J. D. Macrae (with Second-Class Honours), Scotland; C. M'Vicar, M.A., Scotland; W. Mailer, Scotland; H. B. Mapleton, B.A., England; H. H. Marshall (with Second-Class Honours), Australia; W. R. Martine, Scotland; G. N. Moll, India; D. Menzies, Scotland; S. Mitchell, Turkey; A. Mitchell, Scotland; W. Mitchell, Scotland; K. W. Monsarrat, England; E. C. Moore; R. O. Morris, M.A., Wales; R. S. Mowat, England; J. R. Muir, Scotland; H. V. Münster, Australia; G. A. Murray, Scotland; T. M. Nair, India; J. Nicholson, Scotland; F. B. Oliphant, England; D. Orr, Scotland; C. W. Owen, Wales; A. A. Palmer, Australia; R. Parkhurst, England; G. W. S. Paterson, Scotland; J. B. Pearson, England; T. C. Penfold, England; A. F. Percival, Hong-Kong; H. Pereira, India; T. Pettey, England; C. E. Potter, Scotland; D. R. Price, Wales; A. M. N. Pringle (with Second-Class Honours), Scotland; F. G. Proudfoot, M.A., Scotland; E. de C. Prout, England; P. M. Ragg, England; A. Reid, Scotland; W. Riach, Scotland; J. K. Richards, Australia; A. Richardson, Scotland; W. H. Robertson, Scotland; A. Rodger, Scotland; L. Rose, M.A., Scotland; H. B. Rose, England; F. Fenton-Harrison, England; J. M. Rutherford; J. Scott, Scotland; T. M. Scott, Scotland; P. J. Sharp, Scotland; G. Shaw, Scotland; T. D. S. Shaw, England; T. R. S. Sibbald, Scotland; C. M. Simpson, Scotland; S. S. Skinner, B.A., Canada; P. D. Smith, Tasmania; R. W. I. Smith, Scotland; W. E. Smith, Scotland; A. M. Stafford, Scotland; J. G. Standing, England; W. A. Stephen, M.A. (with First-Class Honours), Scotland; M. B. Stewart, Scotland; W. Stewart, Scotland; W. L. Stevenson, Ireland; J. P. Stewart, M.A. (with First-Class Honours), Scotland; W. R. Strapp (with Second-Class Honours), Natal; J. Struthers, Scotland; F. W. Taylor, England; W. S. S. Titterton, England; M. L. M. Vaudin, England; G. D. De Waal, Cape Colony; J. S. H. Walker, Scotland; J. W. T. Walker, Scotland; F. T. Walmsley, England; F. Ward, England; J. Watson, Scotland; E. C. Watts, England; E. T. Whitaker, England; A. Whyte, Scotland; E. D. Williams, Wales; J. M'K. Wishart, Scotland; J. J. H. Wood, India; H. M. Woodhead, England; R. J. T. Wright, M.A., Scotland; and G. P. Yule, Scotland.

Thesis Gold Medallists: L. C. Bruce, M.D.; W. M. Hutton, M.D.; G. Mann, M.D.; J. A. Menzies, M.D.; and J. D. Stanley, M.D.

The Ettles Scholarship has been awarded to J. P. Stewart, M.A., M.B., C.M. The Beaney Prize in Anatomy and Surgery has been awarded to J. P. Stewart, M.A., M.B., C.M. The Freeland-Barbour Fellowship in Anatomy, Physiology, and Pathology has been awarded to R. W. Briggs, M.B., C.M. The Stark Scholarship in Clinical Medicine has been awarded to R. Hutchinson, M.B., C.M. The Gunning Victoria Jubilee Prize in Physiology has been awarded to G. Mann, M.D. The Gunning Victoria Jubilee Prize in Pathology has been awarded to R. C. Dun, M.B., C.M. The Gunning Victoria Jubilee Prize in Surgery has been awarded to R. J. A. Berry, M.D. The Buchanan Scholarship in Gynæcology has been awarded to R. W. Beesley, M.B., C.M. The James Scott Scholarship in Midwifery has been awarded to W. A. Stephen, M.A., M.B., C.M. The Wightman Prize in Clinical Medicine has been awarded to K. W. Monsarrat, M.B., C.M.

The address to the graduates was given by Professor T. R. Fraser, Dean of the Faculty of Medicine. He offered some counsels on their prospective duties to themselves, to the public, and to brother practitioners. He denounced in the most severe terms the prevailing evils of self-advertisement, among which was the "unbearable load of chaff" with which medical literature was burdened, and which was not far removed from the quackery which obtruded itself in the advertisements of vulgar charlatans. He referred to the dangers of new and quack remedies, to the new research Fellowships in the University, to the desire for seeing what was going on in other medical schools, to additional lectureships, and to the unique position which the University of Edinburgh still occupied.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following gentlemen, having previously passed the necessary examinations, and having conformed to the by-laws and regulations and attained the legal age of 25 years, were at the ordinary meeting of the Council on Monday, July 30th, admitted Fellows of the College:

A. M. Daldy, M.B., B.S.Lond., L.R.C.P.Lond., Guy's Hospital, diploma of Member dated November 12th, 1891; F. V. Bunch, L.R.C.P.Lond., University College, London, diploma of Member dated August 1st, 1892; F. C. Scotson, M.B.Lond., L.R.C.P.Lond., Owens College and Royal Infirmary, Manchester, diploma of Member dated August 1st, 1892; H. E. Durham M.B., B.C.Cantab., Guy's Hospital, not previously a Member.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The following gentlemen having conformed to the by-laws and regulations, and passed the required examinations, have been admitted Licentiates of the College:

*Adams, E. C., St. Bartholomew's
Andrews, H. R., London
Archer, S. A., Liverpool, Westminster, and St. Thomas's
Bailey, F. W., Liverpool
Beach, H. W., Guy's
Borchcrds, W. M., Cambridge and St. Bartholomew's
Briggs, R. W., Edinburgh
Brown, J. N., University College
Burgess, T. W. W., St. Bartholomew's
Byers, H. S., Durham and St. Bartholomew's
Campbell, J. H., St. Mary's
Carpmael, C. E., Guy's
Chavasse, H. S., Birmingham and St. Mary's
Clendinnen, W. M'E., Birmingham
Clindinning, F. T. D., St. Bartholomew's
Cock, G. J. E., Charing Cross
Coldicott, W. R., Charing Cross
Collins, J. B., St. Bartholomew's
Copeman, A. H., St. Thomas's
Cornish, S., St. Bartholomew's
Cosens, F. R. S., London
Cotton, H. H. P., Westminster
Couzens, A. E., St. Mary's
Cowen, A., University College
Creak, A. B., Guy's
Crookshank, F. G., University College
Davis, A. E., University of Durham College of Medicine, and University College
De Castro, G., St. George's
Dobell, C. B., Edinburgh and St. Bartholomew's
Drake, W., University College
Ducat, A. D., St. Bartholomew's
Dukes, E. S., Guy's
Emery, W. d'E., Birmingham and St. Bartholomew's
Evans, D. E., St. Mary's
Evans, R., Manchester and University College
Evans, R. D., St. Mary's and Guy's
Faber, J. G., St. Bartholomew's
Fooks, E. V. R., Charing Cross
Freeland, A. R. S., London
Gibbs, F. R., St. Mary's
Goodman, H. C., Cambridge and London
Haines, J. W., St. Bartholomew's
Hammond, F. A. L., Charing Cross
Harcourt, G. R., St. Thomas's
Harding, C. H., Guy's
Hargreaves, W., Middlesex
Haward, H. H., St. Thomas's
Hepworth, J., Manchester
Hewer, C. M., St. Bartholomew's
Hibbert, J. C., University College
Hills, W. C. D., Charing Cross
Horton, T., University Durham College of Medicine and University College
Hosford, A. H., University College
Howes, G. S. O., Guy's
Howse, C. B., London
Hughes, H. S., Birmingham
Hunnard, A., University College
Hunt, G. B., University College
Jimenez, G., Guy's
*Johnson, H. J., M.B.Lond., St. Bartholomew's
Kinnersley, G. E. St. Thomas's
Lang, A. J., University College
Laver, J. W., St. Thomas's
Law, J., Manchester
Lockyer, C. H. J., Charing Cross and St. Thomas's
Longinotto, M. J., St. Thomas's
Lucas, C. R., Guy's
McCullough, H. A., Toronto
Melland, C. H., Manchester
Middlemist, R. C., London
Moreton, F., Melbourne and Westminster
Munro, H. A., Oxford and Guy's
Nattle, W. R., University College
*Nicholson, E., Middlesex
Norman, R. H., Westminster
O'Flanagan, M. J., B.Sc.Lond., Manchester
Oliver, L. W., St. Mary's and Leicester Infirmary
Orella, F. R., Cooper Medical College, San Francisco, and St. Bartholomew's
Panting, C. H., London
Pawlett, E. L., St. Bartholomew's
Pettey, T., Edinburgh
Phillips, C. F., Cambridge and St. Bartholomew's
Pomeroy, W., St. Thomas's
Poynder, F. C., Oxford and St. Bartholomew's
Pring, H. R., St. Thomas's
Propert, W. A., Cambridge and St. George's
Raper, M. H., Middlesex
Ray, J. H., Manchester
Revell, H. S., University College
Roscoe, H., Manchester
Scharlieb, H. J., University College
Seccombe, P. J. A., Cambridge and St. Thomas's
Shepard, R. H., St. Bartholomew's
Shields, O., St. Mary's
Skipworth, P. L. G., St. Bartholomew's
Stableford, F. B. G., Birmingham and St. Thomas's
Stainsby, C. A., London
Steinhaeuser, J. R., Guy's
Stephenson, W. A., Charing Cross
Stevens, R. C. J., St. Bartholomew's
Stewart, J. P., Edinburgh
Sturges-Jones, W. E., Guy's
Swinhoe, A. C., St. Thomas's
Thorp, A., Manchester
Tilsley, J., Bristol
Tippett, S. G., Westminster
Trethewy, A., Cambridge and St. George's
Vinter, C. H. S., Cambridge and St. Mary's
Walker, H. J. L., Guy's
Wallis, C. E., King's College
Way, G. H. C., University College
Webb, F. E. A., St. Bartholomew's
*Westrup, J. P., King's College
Wilson, W., London
Withers, P., Manchester
Wright, H., Manchester
Wright, W. S., Bristol and St. Mary's

* Candidates who have not presented themselves under the Regulations of the Examining Board.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

The following gentlemen passed the First Examination of the Board at the quarterly meeting of the Examiners in Part II—that is, *Practical Pharmacy*, under the Five Years Regulations:

J. Ainscow, Owens College, Manchester; K. B. Alexander, Guy's Hospital; L. A. Baiss, St. Bartholomew's Hospital; P. C. Barham, St. Bartholomew's Hospital; E. R. Barton, University College Hospital; V. Bateson, Yorkshire College, Leeds; W. H. I. Bathurst, King's College Hospital; D. Bellhiss, St. Mary's Hospital; H. M. Berneastle, Guy's Hospital; E. F. B. Beyer, Owens College, Manchester; S. O. Bingham, St. Thomas's Hospital; F. J. G. Blake, Yorkshire College, Leeds; E. C. Bourdas, St. Thomas's Hospital; W. F. Boyle, Charing Cross Hospital; J. Bradley, Mason College, Birmingham; C. H. S. Brown, St. Thomas's Hospital; J. W. Brown, Charing Cross Hospital; C. P. Burd, St. Bartholomew's Hospital; A. E. Cardwell, London Hospital; G. H. Collard, Westminster Hospital; A. J. McN. Cuddon-Fletcher, St. Bartholomew's Hospital; J. A. P. Cullen, London Hospital; R. I. Cuming, St. Thomas's Hospital; T. D. Dawson, St. Bartholomew's Hospital; R. H. Dixon, St. Mary's Hospital; J. C.

Douglas, Middlesex Hospital; E. B. Dowsett, Guy's Hospital; E. P. H. Dudley, St. Bartholomew's Hospital; C. S. S. Dunlop, University College, London; W. A. Durance, Westminster Hospital; H. Durbridge, Guy's Hospital; H. Dyer, St. Mary's Hospital; H. L. Eason, Guy's Hospital; D. R. Edwards, University College of South Wales, Cardiff; H. D. Everington, St. Bartholomew's Hospital; C. B. Fairbank, University College, London; H. A. T. Fairbank, Charing Cross Hospital; M. H. G. Fell, St. Bartholomew's Hospital; C. E. Fenn, King's College, London; W. C. Fowke, Guy's Hospital; C. L. Francis, St. Bartholomew's Hospital; A. E. Francis, University College, London; J. R. Frost, University College, Bristol; W. H. Galloway, Yorkshire College, Leeds; S. W. Garne, Charing Cross Hospital; G. E. Gask, St. Bartholomew's Hospital; E. A. Gates, St. Thomas's Hospital; H. B. Gibbins, St. Bartholomew's Hospital; E. G. Goddard, Guy's Hospital; G. P. T. Groube, St. Mary's Hospital; F. A. Hadley, King's College, London; C. A. Hammond, St. Mary's Hospital; R. Hatfield, St. Bartholomew's Hospital; R. S. F. Hearn, St. Bartholomew's Hospital; G. H. Herbert, London Hospital; W. T. Hillier, Middlesex Hospital, and University of South Wales, Cardiff; H. F. N. Hine, Middlesex Hospital; T. Hoban, St. Thomas's Hospital; C. E. Hogan, St. Bartholomew's Hospital; J. G. F. Hosken, St. Bartholomew's Hospital; B. F. Howlett, St. Thomas's Hospital; J. W. W. Hunter, Otago University and London Hospital; R. Jones, Middlesex Hospital; S. Jory, St. Bartholomew's Hospital; E. C. Lambert, Westminster Hospital; R. A. R. Lankester, University College, London; R. C. Leaning, St. Mary's Hospital; W. H. Leonard, St. Bartholomew's Hospital; C. T. Lewis, King's College, London; L. Lindop, St. Mary's Hospital; H. E. D. Lloyd, St. Bartholomew's Hospital; W. C. Long, St. Bartholomew's Hospital; J. H. Longbothan, Yorkshire College, Leeds; E. A. Loghurst, Guy's Hospital; S. A. Lucas, St. Thomas's Hospital; O. Marriott, Guy's Hospital; F. J. H. Martin, Guy's Hospital; C. J. Mayhew, King's College, London; G. D. Maynard, Geneva University; W. Meade, St. George's Hospital; P. E. Middleton, Yorkshire College, Leeds; S. A. Millen, St. Bartholomew's Hospital; R. R. Mowell, King's College, London; S. Neave, St. Bartholomew's Hospital; H. Norman, London Hospital; A. C. Oliver, University College of South Wales, Cardiff; J. Orford, Mason College, Birmingham; A. Orme, London Hospital; V. S. Partridge, Charing Cross Hospital; W. F. Peach, St. Mary's Hospital; S. B. A. C. C. Pennington, Guy's Hospital; H. J. Pickering, St. Bartholomew's Hospital; R. W. C. Pierce, St. Thomas's Hospital; W. G. Porter, Charing Cross Hospital; S. E. Price, Mason's College, Birmingham; R. Raines, St. Bartholomew's Hospital; J. H. Rhodes, St. Bartholomew's Hospital; G. C. Roberts, King's College, London; H. S. Roch, King's College, London; O. H. Rogerson, Yorkshire College, Leeds; W. T. Rowe, St. Bartholomew's Hospital; P. W. Rowland, St. Bartholomew's Hospital; H. H. Scott, St. Thomas's Hospital; F. W. Sheppard, St. Bartholomew's Hospital; J. E. Simpson, private study; H. D. Singer, St. Thomas's Hospital; T. W. Smith, Charing Cross Hospital; C. H. Straton, St. Mary's Hospital; G. F. Stunton, Mason's College, Birmingham; H. J. Taylor, Owens College, Manchester; W. H. Unwin, Charing Cross Hospital; H. E. Utting, Mason's College, Birmingham; A. D. B. Von Rosen, St. Mary's Hospital; P. Vosper, King's College, London; C. B. Wagstaff, Charing Cross Hospital; H. E. Waller, St. Bartholomew's Hospital; C. G. Watson, St. Bartholomew's Hospital; L. W. W. Weaver, University College, Bristol; P. G. S. Williams, University College, London; E. B. Wortley, St. Bartholomew's Hospital; E. A. Wraith, Yorkshire College, Leeds; A. O. B. Wroughton, St. Bartholomew's Hospital; E. Young, London Hospital.

The following gentlemen passed the First Examination of the Board at the quarterly meeting of the Examiners in the subjects indicated:—

Passed in Part I. *Chemistry and Physics* (under the Five Years' Regulations).—H. T. D. Acland, St. Thomas's Hospital; H. C. Adams, Middlesex Hospital; H. S. A. Agate, St. Mary's Hospital; J. Ainscow, Owens College, Manchester; W. Alcock, Firth College, Sheffield; H. J. Aldous, King's College, London; T. P. Allen, St. Bartholomew's Hospital; R. H. Allport, St. Thomas's Hospital; L. A. Baiss, St. Bartholomew's Hospital; W. L. Baker, Guy's Hospital; M. R. Barker, St. Mary's Hospital; J. A. Barnes, St. Thomas's Hospital; H. P. W. Barrow, Guy's Hospital; F. R. Barwell, University College, London; A. St. J. Bateman, King's College, London; G. L. Bates, Charing Cross Hospital; F. Bawtree, St. Thomas's Hospital; S. Bentley, Firth College, Sheffield; E. N. Berryman, St. Bartholomew's Hospital; A. H. Brewer, St. Bartholomew's Hospital; V. E. J. Bristowe, St. Thomas's Hospital; E. A. Bullmore, University College, London; M. C. Buzzard, St. Mary's Hospital; G. Campbell, St. Bartholomew's Hospital; G. E. Cathcart, St. Bartholomew's Hospital; G. B. F. Churchill, Guy's Hospital; H. H. R. Clarke, St. Thomas's Hospital; F. Coleman, Pharmaceutical Society of Great Britain; C. V. Cornish, St. Bartholomew's Hospital; E. P. Court, St. Bartholomew's Hospital; A. Croucen, Guy's Hospital; A. W. Curteis, Yorkshire College, Leeds; D. Davies, University College of South Wales, Aberystwith, and St. Bartholomew's; M. B. Dawson, Middlesex Hospital; G. Dewick, St. Thomas's Hospital; J. C. C. Douglas, Middlesex Hospital; C. D. A. Dowman, St. Bartholomew's Hospital; W. A. Durance, Westminster Hospital; J. N. Dyson, Guy's Hospital; G. W. H. Edglow, London Hospital; E. A. Edgington, University College, London; D. R. Edwards, University College of South Wales, Cardiff; H. J. Edwards, St. Thomas's Hospital; A. G. Eldred, London Hospital; R. F. Ellery, St. Bartholomew's Hospital; H. H. Elworthy, Westminster Hospital; A. J. Evans, University College, London; R. J. De G. Ferguson, University College, London; H. W. Fisher, London Hospital; J. K. S. Fleming, St. Bartholomew's Hospital; J. R. Frost, Merchant Venturers' School, Bristol; L. O. Fuller, University College, London; C. M. Goodbody, St. Thomas's Hospital; H. Goodman, St. Bartholomew's Hospital; A. G. Graham, St. Thomas's Hospital; A. W. H. Grant, Charing Cross Hospital; H. S. Greaves, St. Bartholomew's Hospital; P. B. Grenfell, St. Bartholomew's Hospital; G. P. T. Groube, St. Mary's Hospital; H. V. Gwynn, St. Bartholomew's Hospital; R. C. B. Hall, Queen's College, Birmingham; L. V. Hakansson, St. Mary's Hospital; A. E. Hamerton, Yorkshire College, Leeds; W. G. Hamilton, St. Bartholomew's Hospital; C. A. Hammond, St. Mary's Hospital; S. W. Hanry, St. Thomas's Hospital; H. N. Harness, King's College, London; W. B. Harris, St. Mary's Hospital; J. D. Hartley, St. Bartholomew's Hospital; E. Hearn, Firth College, Sheffield; W. A. Henshaw, Queen's College, Birmingham; G. A. Herklots, University College, London; C. J. Hewlett, Guy's Hospital; A. G. Higgins, St. Bartholomew's Hospital; W. S. Hillier, Middlesex Hospital and University College of South Wales, Cardiff; H. Hipwell, Middlesex Hospital; W. B. Hope, Guy's Hospital; F. Horridge, St. Bartholomew's Hospital; F. M. Howell, St. Bartholomew's Hospital; J. Howells, Guy's Hospital; B. Howlett, St. Thomas's Hospital; L. Humphry, Guy's Hospital; G. A. Hutchinson, St. Mary's Hospital; C. W. James, Clifton Laboratory; F. W. James, University College, London; D. Jeaffreson, Epsom College; A. Johnson, University College, Liverpool; W. E. Jones, Owen's College, Manchester; A. H. B. Kirkman, Guy's Hospital; E. C. Lambert, Westminster Hospital; T. H. W. Landon, Guy's Hospital; W. H. Leonard, St. Bartholomew's Hospital; A. D. Lewis, Guy's Hospital; H. S. Libby, St. Thomas's Hospital; J. H. Lightfoot, St. Mary's Hospital; H. P. Lobb, St. Bartholomew's Hospital; S. A. Lucas, Cambridge University and St. Thomas's Hospital; A. R. McEnnery, Dublin; L. H. McGahan, Guy's Hospital; D. McIntyre, Owens College, Manchester; A. R. McLachlan, Guy's Hospital; W. E. G. Maltby, St. Bartholomew's Hospital; H. T. Mann, St. Mary's Hospital; M. M. Martin, St. Bartholomew's Hospital; S. Mason, St. Bartholomew's Hospital; R. Milnthorp, Yorkshire College, Leeds; I. L. Morris, St. Bartholomew's Hospital; E. F. Morris, University College of South Wales, Cardiff; E. E. Nicholl, St. Thomas's Hospital; R. P. Nicholson, University College, London; J. O'Hea, St. Bartholomew's Hospital; H. J. Orford, Queen's College, Birmingham; L. E. Orton, Queen's College, Birmingham; C. D. Outred, Guy's Hospital; S. Page, Queen's College, Birmingham; G. Paira-Mall, London Hospital; V. S. Partridge, Charing Cross Hospital; R. W. Pearson, Firth College, Manchester; W. F. Pemberton, St. Thomas's Hospital; R. A. G. Penny, St. George's Hospital; J. Perks, St. Bartholomew's Hospital; M. G. Pettigrew, Firth College, Sheffield; H. J. Pickering, St. Bartholomew's Hospital; W. G. Porter, Charing Cross Hospital; J. E. Powell, Guy's Hospital; C. H. Pring, University College, Bristol; R. J. Pritchard, Guy's Hospital; A. Reid, Guy's Hospital; T. B. Rhodes, Mason College, Birmingham; F. Richards, St. Bartholomew's Hospital; J. B. Richardson, Mason College, Birmingham; W. S. Richardson, Guy's Hospital; G. A. Roberts, King's College, London; J. H. Roberts, Guy's Hospital; H. H. Robinson, Owens College, Manchester; E. F. Rose, St. Bartholomew's Hospital; B. S. Sanders, University College and South Wales, Cardiff; L. D. Saunders, King's College, London; E. C. Sawdy, St. Mary's Hospital; A. H. Saward, Guy's Hospital; T. Shadden-Smith, St. Mary's Hospital; W. S. Sheldon, University College, London; E. W. H. Shenton, Guy's Hospital; J. Sherren, London Hospital; G. S. Simpson, Guy's Hospital; G. V. Smallwood, Mason College, Birmingham; J. N. Smith, Guy's Hospital; P. N. Smith, St. Mary's Hospital; S. Smith, University College, London; F. H. Sprague, St. Mary's Hospital; H. F. Stilwell, St. Bartholomew's Hospital; G. W. Stone, St. Bartholomew's Hospital; C. H. Straton, St. Mary's Hospital; T. H. Talbot, St. Bartholomew's Hospital; T. W. Tetley, Yorkshire College, Leeds; A. R. Thomas, Guy's Hospital; H. M. Thomas, University College, Bristol; W. A. Thompson, Owens College, Manchester; C. B. Thomson, Guy's Hospital; C. E. Thwaites, St. Mary's Hospital; W. J. P. Tripp, University College, Bristol; N. Unsworth, St. Thomas's Hospital; H. E. Utting, Mason College, Birmingham; A. D. B. Von Rosen, St. Mary's Hospital; W. J. Waters, St. Thomas's Hospital; A. J. Watson, St. Mary's Hospital; R. N. Watson, Westminster Hospital; H. G. Webster, University College, Liverpool; E. W. Williams, St. Mary's Hospital; W. F. Willis, St. Mary's Hospital; H. G. Wood-Hill, St. Bartholomew's Hospital; T. L. Wyndham, St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH

The following gentlemen, having passed the requisite examination, have been elected Fellows of the College:

R. C. Wakefield, M.R.C.S.Eng.; H. Bawa, L.R.C.P. and S.E.; J. R. Arthur, L.R.C.S.E.; J. Musgrove, F.R.C.S.Eng.; J. Freeman, M.R.C.S.Eng.; E. T. Davies, M.R.C.S.Eng.; C. L. Sansom, M.R.C.S.Eng.; and E. G. March, M.R.C.S.Eng.

The following gentlemen, having passed the requisite examination, have been admitted Licentiates of the College:

J. G. Laing and J. D. Small.

The following gentlemen passed the First Examination for the Licence in Dental Surgery:

J. A. Young, A. Lamyman, S. W. N. Swales, G. Crichton, J. A. Duncan, C. H. Fox, B. Cumming, T. T. Tinley, J. W. Bell, W. F. Tulloch, and W. Jones.

The following gentlemen passed the Final Examination, and were admitted L.D.S. Edinburgh:

K. J. Roy, R. A. Hudspeth, A. Leeming, A. Heron, A. Cromar, and F. C. Dopson.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

At the July sittings of the Scottish Conjoint Examining Board, held at Glasgow, the following candidates passed the respective examinations, as follows:

First Examination—Five Years' Course.—H. Chaffers, Todmorden; W. W. Dickie, Glasgow; F. H. Foulds, Chesterfield (with distinction); E.

H. Harrison, Belfast; I. A. Jackson, Burton-on-Trent; H. A. Marquis, Padiham; S. V. Robinson, Ulverston; J. Ross, Ballymena.

Four Years' Course.—H. N. Barnett, co. Devon; J. Boyd, Kilrea; P. J. Carty, Ireland; J. L. Cormac, India; J. Dunlop, Neilston; P. Heanen, Keady; R. H. Hunter, Repton; E. R. Keilett, Karlow; E. J. Ling, Scarborough; B. F. Murphy, Cork; M. P. O'Brien, Cork; R. M. Quin, Portadown; W. Simpson, Cullybrackey; W. J. Turner, Cambridge; A. P. Walker, Glasgow.

Second Examination—Five Years' Course.—A. M'Credie, Stranraer; H. Macpherson, Oban; J. R. Riddell, Glasgow; G. H. A. Taylor, Ayrshire.

Four Years' Course.—P. J. Calnan, co. Cork; R. A. Cameron, Glasgow; M. Cleary, Mayo; T. J. Dickson, Buxton; H. Dodd, Ayrshire; A. H. Field, Baildon; E. F. Fitzsimons, Tralee; T. Gallacher, Port-Glasgow; J. Johnson, Lancashire; J. A. E. A. Lavery, Birmingham; A. S. Marr, Glasgow; T. J. Perkins, Ballina; W. G. Pritchard, Carnarvonshire; T. S. Rees, Carnarvonshire; D. L. Spillane, co. Kerry; J. R. N. Witherspoon, Durham.

Final Examination (and admitted Licentiates of the Three co-operating Authorities).—E. Allan, Kilwinning; J. T. Armstrong, Glasgow; S. Basham, Newcastle-on-Tyne; Margaret C. Dewar, Ceylon; T. Donaldson, Paisley; H. B. Ellis, Liverpool; H. T. Galbraith, Londonderry; W. J. Gray, Edinburgh; Mary C. Horner, Glasgow; G. Hill, Pollokshaws; E. Jeffery, Falmouth; M. F. Lyden, Edinburgh; J. J. M'Coll, Ruthergien; H. W. Macdonald, Edinburgh; L. Macdonald, Glasgow; H. Marmion, Glasgow; J. H. Robinson, Glasgow; Rukhmabai (of Bombay), London; Margaret Georgina Todd, Edinburgh; G. E. Watson, Sunderland.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,229 births and 3,455 deaths were registered during the week ending Saturday, August 4th. The annual rate of mortality in these towns, which had increased from 15.9 to 17.0 per 1,000 in the preceding three weeks, further rose to 17.2 last week. The rates in the several towns ranged from 8.4 in Derby and 9.8 in Portsmouth to 21.8 in Manchester, 27.3 in Liverpool, and 28.0 in Preston. In the thirty-two provincial towns the mean death-rate was 17.0 per 1,000, and was 0.6 below the rate recorded in London, which was 17.6 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3.2 per 1,000; in London the rate was equal to 3.5 per 1,000, while it averaged 3.0 in the thirty-two provincial towns, and was highest in Liverpool, Leicester, and Preston. Measles caused a death-rate of 1.5 in Sunderland, 1.6 in Bristol, and 1.7 in Halifax; "fever" of 1.1 in Gateshead; and diarrhœa of 0.7 in Sheffield, 5.0 in Liverpool, 5.5 in Leicester, and 5.6 in Preston. The 80 deaths from diphtheria in the thirty-three towns included 57 in London, 3 in Manchester, and 3 in Leeds. Five fatal cases of small-pox were registered in London, 2 in Birmingham, and 1 in Manchester, but not one in any other of the thirty-three large towns. There were 215 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, August 4th, against 97, 79, and 207 at the end of the preceding three weeks; 40 new cases were admitted during the week, against 17, 10, and 152 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,221, against 2,143, 2,198, and 2,197 at the end of the preceding three weeks; 259 new cases were admitted during the week, against 264 and 241 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, August 4th, 813 births and 466 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 16.9 and 15.1 per 1,000 in the preceding two weeks, rose again to 16.3 last week, but was 0.9 per 1,000 below the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 11.1 in Paisley to 17.6 in Glasgow. The zymotic death-rate in these towns averaged 2.3 per 1,000, the highest rates being recorded in Dundee and Leith. The 232 deaths registered in Glasgow included 13 from diarrhœa, 5 from diphtheria, and 5 from whooping-cough. Two fatal cases of diphtheria were recorded in Edinburgh and 2 in Leith.

AMERICAN PUBLIC HEALTH ASSOCIATION.

The American Public Health Association will hold its twenty-second annual meeting this year at Montreal on September 25th and three following days. Among the subjects proposed for discussion are "Protective Inoculations in Infectious Diseases," "National Health Legislation," "The Restriction and Prevention of Tuberculosis," and "Animal Diseases and Animal Food."

VACCINATION IN BELGIUM.

From a report recently presented to the Belgian Government by the State "Office Vaccinogène," it appears that during 1893, 874,900 doses of vaccine were sent out from that institution. The vaccine was obtained from 197 calves. The number of applications for vaccine was 17,625. The total expenditure was 21,692 francs, so that the cost of the vaccine supplied by the State was about three centimes a head.

VACCINATION IRREGULARITIES IN IRELAND.

An investigation has been held by the Local Government Board regarding the deaths of five children who died last year in the Aghadowey dispensary district. During the inquiry it was stated that the midwifery nurse of the district had been in the habit for many years of vaccinating children. She used an ordinary needle for the purpose, being supplied with lymph by the medical officer of the district, who entered the cases as vaccinated by himself, and received payment for them. This arrangement was distinctly irregular, although sanctioned by the medical officer of the dispensary district.

THE STOCKPORT WATER SUPPLY QUESTION.

We must congratulate Dr. Porter on the high compliment which he has received at the hands of the Town Council of Stockport in the matter of his report presented to them some two months ago concerning the public water service of the borough. The company have made a "few remarks" extending to sixteen pages, made after "cursory examination" of Dr. Porter's report, but issued only some seven weeks subsequently to its publication. In this they lay stress on some misstatements on the subject of reservoirs—quite immaterial even if uncorrected—but altogether ignore the corrections made in an errata slip issued a month prior to the date of the reply. In the face of this terrible-looking indictment, Dr. Porter has had the satisfaction of securing the thanks of his Council for his report, and the passing of a vote of confidence in him and an assurance that "they will at all times support him in any movement for the benefit of the health of the town." It is quite refreshing to see such a resolution in a matter so local as the water supply of a borough whose service is in the hands of a company.

FEE FOR CERTIFICATION OF DISTRICT LUNATICS.

PAROCHIAL, a district medical officer, asks whether he is entitled to 10s. 6d. above the usual fee of one guinea ordered by the magistrate if he is obliged to travel a long distance, perhaps more than once, for the same case.

*** Only the fee ordered by the magistrate can be claimed. If our correspondent considers one guinea not sufficient on account of distance, he should have obtained an order from the magistrate for a higher fee.

OBITUARY.

ANDREW MILLER, M.D.,
Hampstead.

It is with great regret we have to record the death of Dr. Andrew Miller, of Hampstead, at the age of 52. He was staying with his family at Henley-on-Thames. He did not intend to go for a ride but to walk his horse by the side of his daughter, who was learning to ride. His horse appears to have been troublesome and he was obliged to let it trot and was soon out of sight. The horse became restive and about three-quarters of a mile from his house he was thrown. He was brought home by his groom and was able, with the help of two men, to walk upstairs to his bedroom. Drs. Moore and Baines, of Henley, were soon in attendance, but in spite of all efforts at restoration he died of syncope in about half an hour. His only son was at Charterhouse and could not be summoned in time to be present at his father's death.

Dr. Miller (who was the son of Andrew Miller, late of Cannon Street and Arundel Square, who was well known throughout Great Britain for his evangelistic work), after matriculating at the University of London, entered at King's College, and subsequently went to Edinburgh University. Having taken his degree and the Membership of the Royal College of Surgeons of England, he studied in Paris and Vienna, and returned to London and commenced practice in Finchley Road in 1868. An excellent opening being offered him in Adelaide, South Australia, he went there in 1869, established a lucrative practice, and returned to England in 1875, when he commenced practice in Hampstead.

He was a man much valued by his patients, to whom he was always most devoted, and his many good qualities were highly appreciated by his many friends. His artistic tastes were of a high order. His house was illustrated in the *Builder*, when it was building, and subsequently was the admiration of all his neighbours and friends. He had a thorough knowledge of French, which he could speak with the greatest fluency. He had been a member of this Association for many years. Surgery was his favourite side of practice, and his knowledge and dexterity as a gynæcologist were of a very high order. For several years he had rooms in Grosvenor Street for the convenience of his patients, for whose comfort he was always most anxious.

He had lately consulted Sir William Broadbent, and (during his illness) Dr. Sydney Phillips, who found some tricuspid insufficiency, and both warned him to be very careful, and to take little or no exercise, and it was to carry

out these instructions that he was at Henley when the fatal accident happened. He leaves a widow and two children.

During the recent Stock Exchange and financial troubles he had been a severe sufferer, and had lost a considerable part of his life's savings.

MEDICO-LEGAL AND MEDICO-ETHICAL.

BONDS AND CONTRACTS NOT TO PRACTISE.

In compliance with the request of a correspondent, we append a form of bond to be given by an assistant, which may be found suitable:—

FORM OF BOND.

KNOW all men by these presents that I (the assistant, A. B., of, etc.) am held and firmly bound to (the principal, C. D., of, etc.) in the sum of (double the amount intended to be claimed), to be paid to the said C. D., his executors, administrators, or assigns, for which payment well and truly to be made I bind myself, my heirs, executors, and administrators, firmly by these presents. As witness my hand and seal this day of , 189 .

WHEREAS the said C. D. has for many years past exercised and practised his profession or business of a surgeon and apothecary (or general medical practitioner) at aforesaid; and whereas it has been agreed between the said C. D. and A. B. that the said A. B. shall become the assistant of the said C. D. in the exercise and practice of the said profession or business of a surgeon and apothecary, at the annual salary of £ , payable (quarterly or monthly, as the case may be), such engagement to be terminable at any time by either party giving to the other calendar months' notice in writing, and whereas it was agreed as part of the terms of such engagement that the said A. B. should not, at the termination thereof, practise, or assist in practising, as a surgeon or apothecary at , or within miles in any direction therefrom, without the consent in writing of the said C. D., and that the said A. B. should enter into the bond or obligation hereinbefore contained.

Now the condition of the above-written bond or obligation is such that if the said A. B. shall, either as principal or assistant, or either alone or in co-partnership with any person or persons, exercise or practise, or assist in exercising or practising, the said profession or business of a surgeon or apothecary, or either of them either at aforesaid or within the distance of miles in any direction therefrom, at any time after the termination of his said present engagement with the said C. D., without the consent in writing of the said C. D., or, in case of his death, of his executors or administrators first had and obtained; then, and in such case, if the said A. B., his executors, or administrators, shall and do forthwith pay, or cause to be paid, to the said C. D., his executors, administrators, or assigns the sum of (half the penal sum) as and by way of liquidated damages, then the said bond or obligation shall be void and of no effect, otherwise it shall remain in full force and virtue.

Signed, sealed, and delivered by the above-named A. B. in the presence of ... ... (Seal)

Bonds are required to be stamped as follows:

				s.	d.
If the amount limited to be recoverable does not exceed			£25	0	5
If such amount exceeds	£25	but does not exceed	£50	1	3
" "	£50	" "	£100	2	6
" "	£100	" "	£150	3	9
" "	£150	" "	£200	5	0
" "	£200	" "	£250	6	3
" "	£250	" "	£300	7	8
In any other case				10	0

THE ADMISSION OF PATIENTS TO SMALL-POX HOSPITALS.

In the Queen's Bench Division on July 19th (before Justices Mathew and Day), Sir E. Clarke, Q.C. (with whom was Mr. Macmorran) said he had (*ex parte* the Guardians of Haslingdon Hospital for Infectious Diseases) to move, on behalf of the Guardians of the Haslingdon Union, Lancashire, for a rule *nisi* for a mandamus directed to the Mayor and Corporation of the borough of Rawtenstall commanding them to receive into a hospital, which had been provided by the Corporation under the powers of the Public Health Act, persons suffering from small-pox without regard to any question as to whether they presented themselves for admission or were sent by the guardians. The case, the learned counsel said, raised a question of very great importance indeed, upon which a conflict of opinion and practice had lasted for some years between the different authorities concerned, and which became a serious public danger whenever small-pox broke out. The Corporation of Rawtenstall had, under the powers of the Public Health Act, provided a hospital for infectious diseases for the use of the inhabitants of their district. The affidavit on which he was moving showed that in certain cases of small-pox, although there was plenty of room in the hospital, persons had been refused admission on the ground that they ought to be provided for by the guardians, they being admittedly, or as the Corporation contended, paupers. The guardians had only the accommodation of the workhouse infirmary in which they could provide for these people, and of course, were in serious difficulty in treating cases of small-pox there. It was not a question of money, but a question of the relative liabilities of public bodies. The affidavit of the clerk to the guardians showed that five cases of small-pox had been refused admission into the hospital, with the result that there was serious danger of the disease spreading. Mr. Justice Mathew.—There is a hospital, but the Corporation refuse to admit these people because they are paupers? Sir E. Clarke.—Yes, but the guardians contend that they are bound to take them in whether they are paupers or not. Mr. Justice Day.—Does the Act say these hospitals are for persons who are not paupers? Sir E. Clarke.—No. The Act says any expense of maintaining persons who are not paupers shall be deemed to be a debt due from the patients to the local authority. That shows that these hospitals are intended for paupers. Mr. Justice Mathew.—You may take a rule, and as the matter is obviously urgent it may be argued in a week's time.

AN OBJECTIONABLE CIRCULAR.

WE have received our correspondent's letter enclosing a circular recently sent to the mess of an infantry regiment in India. The circular in question is headed "Avoid Quacks and Quack Medicines," and proceeds as follows: "Permanent cure guaranteed to sufferers from nervous and physical debility, spermatorrhœa, diabetes, epilepsy, and other secret diseases by a legally qualified surgeon of twenty-eight years' Indian and Colonial experience. Advice and medicine by post. Private advice form." The "private advice form" is annexed to the circular, and contains a list of questions (strictly confidential) relating to nervous debility, diseases of the urinary and sexual organs, etc., of the type usually emanating from quack sources. The circular and private advice form bear the name and address of a duly registered practitioner, L.R.C.P.Edin., L.F.P.S.Glasg., and L.S.A.Lond. We refrain from giving the name, as it is almost incredible that the documents should have been issued from such a source. We shall at once, however, send the circular and form to one of the above bodies for transmission to the General Medical Council with a view for inquiry being made.

MEDICAL HERBALISTS.

H. W.—We have received our correspondent's letter, with the *Pudsey and Stanningley News* of July 20th, containing the report of an inquest on the body of one John William Bottom, who, it appeared, had been attended by a herbalist. The case calls for particular notice, mainly because of the extraordinary statement reported to have been made by the Secretary of the Society of Medical Herbalists, to the effect that "the members of that society were giving notifications all over the country without demur." He himself signed one quite recently, and the registrar in Bradford did not say a word about it. In other words, as we understand it, the members of the society in question are in the habit of giving certificates of death, which are generally accepted. We may have some further comments to make in reference to this case, but in the meantime we commend the above statements to the consideration of the Registrar-General of Deaths.

EMPLOYERS AND EMPLOYED.

J. D. M.—If, apart from any question as to membership of a friendly society, it is quite clear that the employer would have been liable; we concur in the view taken by our correspondent that the membership of the friendly society, although entitling the man to be attended free of expense, so far as they are concerned, should not, from that fact alone, relieve the employer from the claim.

ADVERTISING.

PERPLEXED writes: A medical man has taken a shop not far from my house, where I have been in practice for years. On the window of the shop is printed in large letters "Surgery" (with hours of consultation). Handbills are being sent from door to door advertising this surgery, the hours of attendance, and the fees, as follows:

Advice and Medicine at Surgery ... ... 1s.
Visits ... ... 1s.

This gentleman's name is not on the handbill, only the address of the surgery, but a plate with his name is on the door. He is registered. Is there any penalty for this system of advertising? Has the General Medical Council any power in the matter? If so, what steps should be taken?

*** It is doubtful whether the General Medical Council has power to take notice of the practice referred to. The bodies from whom the practitioner holds his qualifications should be communicated with.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.

THE PAUPER CHILDREN INQUIRY.

MR. BUCHANAN, on behalf of Dr. FARQUHARSON, asked the President of the Local Government Board whether he could let the House what was to be the form of his promised inquiry into the conditions under which pauper children were educated in barrack or associated schools.

Mr. SHAW LEFEVRE: I have now found it impossible to deal with the matter during the present session by a Parliamentary Committee, and as the question is important, it would not be well to postpone it till next session. For the same reason it is desirable not to appoint a large Royal Commission, whose sittings might occupy several years. It has been decided, therefore, that a Committee be appointed, to consist of five or six members to be nominated by the Government. Its ... will be directed to the case of London, where the large workhouse ... exist, and where there is an increasing difficulty in providing ... number of children. I hope in a few days to be able to give the ... the persons who will form the Committee.

MR. CYRIL DODD: Will the right hon. gentleman put a lady on the committee?

Mr. SHAW LEFEVRE: That is a matter for consideration.

MEDICAL NEWS.

VACCINATION GRANT.—Dr. Fraser, of Totnes, has received a Government grant for efficient vaccination in his district.

AT the recent sitting of the Conjoint Examining Board for Scotland, three women candidates passed the final examinations, and were admitted L.R.C.P., L.R.C.S.Edin., and L.F.P.S.Glas. Among them was the authoress of *Mona Maclean*.

MR. CHARLES E. CASSAL, F.I.C., Public Analyst for Kensington and St. George Hanover Square, has been elected an Honorary President of the VII (Food) Section of the forthcoming International Congress of Hygiene and Demography at Buda-Pesth.

THE Secretary of State for India has appointed Miss Annette Benson, M.D.Lond., of the London School of Medicine for Women, to be First Physician to the Kama Hospital, Bombay, in succession to Mrs. Peechey Phipson, who has resigned. Miss Benson has lately held an acting appointment as Resident Medical Officer in the Claybury Asylum, under the London County Council.

THE CONTAGIOUSNESS OF CONSUMPTION. — The Toronto courts have recently had the question of the contagiousness of consumption before them. A health officer demanded the dismissal from school of a child suffering from phthisis, and his action led to legal proceedings. The judge sustained the action of the health officer, deciding that the disease is contagious.

THE HIGHER EDUCATION OF WOMEN.—The University of of Rome has just, for the first time, conferred the degree of Doctor of Laws on a woman, in the person of Signorina Teresina Labriola, a young lady, aged 18, who took as the subject of her thesis, "Honour from the Legal Point of View." Signorina Labriola is the daughter of a professor well known for his Socialistic opinions.

PRESENTATIONS.—Dr. J. A. Mackenzie, upon the occasion of temporarily giving up practice in Balham, has been presented by the members of the sick clubs with a handsome writing cabinet in silver and oak, bearing a suitable inscription.—Dr. J. Brown, one of the divisional medical officers attached to the Wandsworth Postal District of London, was recently presented by the members of the New Wandsworth Postmen's Ambulance Class with a handsome gold pencil case in grateful acknowledgment of his kindness in voluntarily conducting the class, and for the valuable instruction given.

CONGRESS OF THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF THE SCIENCES.—The French Association for the Advancement of the Sciences held the opening meeting of its twenty-third Congress at Caen on August 9th, under the presidency of Professor Mascart, member of the Institute of France. Among the communications promised in the Section of Natural and Medical Sciences we note a report by Dr. Le Genole on the question proposed at the meeting of the Association at Besançon, of the dangers of athletic sports in the case of children. Dr. F. Regnault, of Paris, will contribute a paper on the Causes of the Attitude Assumed by Women during Parturition; Dr. Cartaz one on a Special Variety of Stenosis of the Œsophagus; Dr. Galliard, of Paris, on the Treatment of Certain Non-syphilitic Headaches by Calomel; and Professor Raphael Dubois, of Lyons, one on the Mechanism of Sleep.

HOSPITAL SUNDAY AWARDS.—At the Mansion House on August 7th the Hospital Sunday Fund for the present year, amounting to £41,800, was distributed among 127 hospitals and 55 dispensaries, £2,000 being set apart to purchase surgical appliances. The principal awards were to the Charing Cross Hospital £1,006, the French £383, the German £574, Great Northern Central £335, Guy's £431, King's College £1,485, London £3,538, Temperance £622, Metropolitan £584, Royal Free £862, St. George's £1,293, St. Mary's £2,012, Seamen's £888, Middlesex £2,060, University £1,293, West London £575, Westminster £1,054, Victoria Park £939, Brompton £1,437, East London Hospital £479, Evelina £498, Sick Children £766, Victoria Hospital for Children £523, Hospital for Women £383, Samaritan £555, Cancer £670, Fever £431, Paralysed and Epileptic £718, Royal London Ophthalmic £536, Sea Bathing Infirmary £383, Metropolitan Convalescent Institution £622, and Eastbourne Convalescent £527.

THE TRAINING OF SANITARY LECTURERS.—The special course of training lectures instituted by the National Health Society, and carried on year by year in the lecture rooms of the offices at 53, Berners Street, W., will recommence in October next. The training is intended to qualify educated women to compete for lectureships on nursing and health, undergo the County Council scheme for technical education or for appointments as sanitary inspectors. Candidates must either be already hospital trained nurses, or willing to undergo a period of six months' training in some recognised hospital, and all must attend the course of lectures, which includes the subjects of anatomy and physiology, sanitation, hygiene, first aid in accidents, and nursing. Candidates for lectureships are trained in the art and manner of imparting knowledge, and their capability of speaking and teaching tested, after which theoretical and practical examinations are held, and diplomas granted to successful candidates. The success of the Society's training is evinced by the many public posts which those holding the Society's diploma have gained; and we would advise our readers who are able to go through such a training to visit the secretary at the above address, in order to make further arrangements for the coming session, and to obtain syllabuses and full particulars. Many well-known ladies of rank and wealth have previously entered for the training in order to gain a knowledge of such important questions as concern the health and happiness of the nation, and have thus set an excellent example to others of their own standing who would otherwise lead a typical and butterfly existence.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN ROYAL INFIRMARY.—Ophthalmic Surgeon. Applications by August 31st.

BATH EASTERN DISPENSARY.—Resident Medical Practitioner. Salary, £100 per annum, with furnished apartments, coal, gas, and domestic attendance. Applications to Colonel F. V. Eyre, R.A., Honorary Secretary, Rockville, Lansdown, Bath, by August 11th.

BURGH OF LEITH.—Medical Officer of Health. Salary to commence at £350. Applications and testimonials to T. B. Laing, Town Clerk's Office, Leith, by September 1st.

CAMBRIDGE UNIVERSITY.—John Lucas Walker Studentship. Applications to Professor Roy, New Museums, Cambridge, by September 30th.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications and testimonials to the Secretary before August 29th.

DURHAM UNION WORKHOUSE.—Medical Officer. Salary, £50 per annum, with certain extra medical fees. Applications to William Lisle, Clerk to the Guardians, Durham, by August 17th.

GENERAL HOSPITAL, Birmingham.—Assistant-Surgeon. Appointment for three years, with eligibility for re-election. Honorarium, £100 per annum. Applications to Howard J. Collins, House-Governor, by September 1st.

GENERAL HOSPITAL, Nottingham.—Senior Resident Medical Officer; doubly qualified. Salary, £120 for the first year, with an addition of £10 a year up to £150, with board, residence, and washing. Applications to the Secretary by September 1st.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £100 per annum, with furnished apartments, board, washing, and attendance. Applications and testimonials, endorsed "Application for Appointment of Medical Officer, before August 23rd to Committee of Visitors, Knowle, Fareham.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Board and lodging, but no salary. Applications and testimonials to C. W. Carver, Hon. Secretary, by August 18th.

PARISH OF ST. MARYLEBONE.—Assistant Medical Officer for Infirmary at Rackham Street, Ladbroke Grove Road, Notting Hill; unmarried, and not to exceed 30 years of age. Salary, £130 per annum, with furnished apartments, rations, and washing. Applications, endorsed "Applications for Appointment of Infirmary Assistant Medical Officer," to Henry T. Dudman, Clerk to the Guardians' Offices, Northumberland Street, W., by August 11th.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House-Surgeon, unmarried and under 30 years of age. Emoluments are a salary not exceeding £30 per annum, with board, washing, and residence. Applications to the Secretary by August 15th.

WEST RIDING ASYLUM, Wakefield.—Fourth Assistant Medical Officer. Salary, £100 per annum, rising £10 annually to a maximum of £150, with furnished apartments, board, washing, and attendance. Applications to the Medical Director by August 18th.

MEDICAL APPOINTMENTS.

Bott, William, M.R.C.S.Eng., appointed Medical Officer for the Willenhall District of the Willenhall Union, *vice* J. P. Tildesley, M.R.C.S., L.R.C.P.Lond., resigned.

Butcher, Thomas W., M.B., C.M.Edin., appointed Surgeon to the Blackpool Hospital.

Dick, James, M.D.Glas., L.R.C.S.Edin., reappointed Medical Officer of Health to the Harrington Local Board.

Donaldson, Tom C., M.D.R.U.I., M.Ch., appointed Medical Officer for the Cranford District of the Staines Union.

Ealand, Hugh F., L.R.C.P., L.R.C.S.Edin. L.F.P.S.Glas., appointed Medical Officer for the Braughing District of the Bishop Stortford Union, and Medical Officer for the No. 1 District of the Ware Union.

Elkins, Frank Ashby, M.B., C.M.Edin., appointed Medical Superintendent to the Sunderland Borough Asylum.

Heslop, F. A., L.R.C.P., L.R.C.S.Edin., appointed Surgeon to the Blackpool Hospital.

Hill, Mr. C. H., appointed Medical officer of the Box District of the Chippenham Union, *vice* T. Fitzherbert Snow, M.R.C.S.Eng., deceased.

Hill, G. William, B.Sc.Lond., M.D.Lond., appointed Surgeon in Charge of Aural Out-patients at St. Mary's Hospital.

Home, George, M.B., C.M.Edin., appointed Assistant House-Surgeon to the Northern Hospital, Liverpool.

Hutchinson, S. J., M.R.C.S.Esq., L.D.S., appointed Consulting Dental Surgeon to the University College Hospital, *vice* Mr. Ibbetson, deceased.

Kingsbury, G. C., M.D., B.Ch.Dub., appointed Consulting Physician to the Blackpool Hospital.

Lodwidge, William Charrott, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the West Butterwick District of the Gainsborough Union.

Middleton, W. R.C., M.A., M.B., C.M., D.P.H.Aberd., appointed Medical officer of Health for Singapore Straits Settlements.

Molloy, W. J., M.B., B.Ch., appointed Surgeon to the Blackpool Hospital.

Mussen, A. A., B.A., M.B., B.Ch.Dub., appointed House-Physician to the Northern Hospital, Liverpool.

Parry, L. V., L.R.C.P., L.R.C.S., appointed House-Surgeon to the Flintshire Dispensary, *vice* R. T. Davies, L.R.C.P., resigned.

Percival, Thomas, M.R.C.S.Eng., appointed Medical Officer for the Knottingley District of the Pontefract Union.

Richardson, W. R., M.R.C.S.Eng., appointed Surgeon to the Blackpool Hospital.

Ruxton, John, M.D., C.M.Aberd., appointed Consulting Surgeon to the Blackpool Hospital.

Simpson, J. Pollock, M.D., C.M.Glasg., appointed by the London County Council Medical Officer to the Metropolitan Fire Brigade, No. 9 District.

Smith, Mr. Henry L., appointed Medical Officer for the No. 8 District of the Newmarket Union.

Whitelaw, William, M.D.Aberd., appointed Medical Officer for London County Council District, No. 10.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

Cormack.—On July 31st, at Villa D'Alsace, Vichy, France, the wife of Dr. C. E. Cormack, of a daughter.

MARRIAGES.

Blomfield—Colbeck.—On August 1st, at Fryston Church, Ferrybridge, by the Rev. A. H. B. Lees, M.A., George Wills Blomfield, M.R.C.S., L.R.C.P., L.S.A., of Pontefract, to Charlotte Elizabeth, daughter of Edwin Colbeck, Esq., of Maromme, Rouen, France.

Godfrey—Didier d'Ambléon.—At St. Peter's Church, Eaton Square, on Tuesday, July 10th, Thomas Henry Godfrey, M.B., L.R.C.P., M.R.C.S., of Inglenook, Stockton-on-Tees, youngest son of J. Godfrey, Esq., of Northampton, to Marguerite Norah Marie, eldest daughter of the late Vicount Charles Henri Didier d'Ambléon.

Rorie—Miller.—At 23, South Tay Street, Dundee, on the 2nd August, David Rorie, M.B., C.M., Auchterderran, Fife, to Margaret Elizabeth, second daughter of James W. Miller, M.D., Dundee. At home, Annfield, Cardenden, after 3rd September. No cards.

Sugden—Samuel.—August 1st, at Shotwick, by the Hon. and Rev. C. F. Cross, M.A., assisted by the Rev. J. F. Sugden, M.A., of London, E. Scott Sugden, M.D., M.R.C.S., of Aintree, Liverpool, to Ada Frances, eldest daughter of Mr. Thomas Samuel, of Woodbank Hall, Shotwick, Cheshire.

DEATHS.

Bancroft.—On June 16th, at Brisbane, Queensland, Joseph Bancroft, M.D., M.R.C.S.

Hare.—On July 30th, at Darlington, Frederic John Hare, B.Sc., M.B., C.M.Edin., aged 24 years.

Stewart.—On August 4th, at Bank House, Cheetham Hill, the house of his son-in-law, Dr. Rodger William Stewart, M.D., of Bank House, Blackp, aged 79 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not later than Midday Post on Wednesday. Telegrams can be Received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal and not to his private house.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any Circumstances be Returned.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

H. H. asks if any member has had experience of the use of strontium nitrate in chronic rheumatism, and what dose is employed.

R. S. asks if any member can inform him of a convalescent home for a boy who about two months ago suffered from epileptic fits, and is now suffering from debility.

F.E. asks whether or no it is illegal or unadvisable for a medical man to attend his own wife at her confinement?

*** Certainly not.

Climate for a Consumptive in Australia.

F.R.C.S.E. wishes to know the best places in Australia for a consumptive (consolidation of one apex); one, if possible, where his profession of solicitor could be exercised.

*** It would be wiser for the gentleman referred to to settle nothing without taking local advice in Melbourne or Sydney; and he should be careful to obtain introduction to reliable persons there. It is obvious that such information as is asked for, to be worth anything, can only be obtained in Australian centres, where the present state of the interior of the colony is well known.

Unusual Rapid First Labour.

G. writes: A strong healthy young woman, first pregnancy, gone full time, is taken suddenly in the night with rapid labour pains, arouses her husband, the only other occupant of the house, sends him with all possible speed for the previously-engaged midwife residing in the same village. During husband's absence she wants to defæcate, gets to night stool, has a very strong pain, feels something pass away, becomes unconscious. Midwife arrives in a few minutes, and finds patient has given birth to a well-developed, full-time, female infant, quite dead, head downwards in excreta in chair pan, funis unruptured. She sends for the doctor, also previously engaged, who arrives in due course. The mother says the infant did not cry or make any noise that she heard. Should a coroner's inquest be held on the child's body, or is the medical man justified in giving certificate of still birth? Length of labour about half an hour.

*** Our correspondent should lay the facts before the coroner, and leave it to him to judge whether an inquest should be held or not.

ANSWERS.

Pruritus Ani.

W.P., M.B., in reply to "H. H.," recommends the internal use of arsenious acid and aloin.

Indian Medical Service.

J. F. S.—Full details as to examinations, etc., for admission to the Indian Medical Service will be published in our Students' Number, which will appear on September 1st. Copies of the questions set at former examinations could, no doubt, be obtained on application to the India Office.

A Surgical Question.

L. N. N.—We are not in possession of the whole evidence bearing on this case. The professional points as stated by L. N. N. suggest that the injury was due rather to a fall than to a blow received from a propelled stone.

Treatment of Disease in Cattle.

A Member B. M.A.—The medical treatment of cattle is on the same lines as that of man. The first essential is diagnosis. Absence of subjective expressions must render this even more difficult in dumb animals than in man. As a rule the amateur treatment of so-called "slighter ailments" of cattle is a means of establishing serious ailments. Perhaps the least dangerous publication on the subject is *Animals of the Farm* [illegible]

Health and Disease (second edition, 1892), by G. T. BROWN, M.R.C.V.S., to be had of Mr. John Murray, 50A, Albemarle Street, London, W.

MEDICAL AID ASSOCIATIONS.

DR. LESLIE PHILLIPS writes: The College of Physicians of Ireland has absolutely forbidden its Licentiates from holding office of surgeons to medical aid associations.

NOTES, LETTERS, Etc.

BARRACK SCHOOLS.

ERRATUM.—In the report of the deputation to Mr. Shaw Lefevre on the subject of barrack schools, published in the BRITISH MEDICAL JOURNAL of July 28th, from the word "Hanwell" in line 45 from the top of the second column, down to "worked" in line 52 inclusive, were the words of the speaker, Mr. Ernest Hart, and were incorrectly placed in quotation marks. The quotation from Dr. Bridge's report should have commenced at "The history" in line 52 down to "prone" in line 3, first column page 213.

PROVIDENT ASSOCIATION OF WAREHOUSEMEN, TRAVELLERS, AND CLERKS

WE have received a communication from Mr. C. C. Greenwood, the Secretary to the Provident Warehousemen's Association. We fail to see anything in Mr. Greenwood's reasoning to make us alter the opinion we have already expressed (BRITISH MEDICAL JOURNAL, July 21st, p. 146). We consider the rate of remuneration he quotes very inadequate, although we know it is about the average paid by such institutions. The pleasing fiction that the medical officer of a society of this kind is usually called in to attend the family of the members as private patients may look very well on paper, but we can assure our correspondent that it has no foundation in fact; having had overwhelming medical attendance for their families, as in their own case, namely, to get it as cheaply as possible.

As to wage limit, Mr. Greenwood says: "It is impossible to deal with this matter with our members, such as warehousemen and clerks, who in the majority of cases only earning small salaries have families to maintain." But how about the others, "in a splendid position?"

We must also protest against the issue raised, by imputing doubtful motives to our correspondent of last week. Doubtless if he had become "one of the medical staff" we should "never have heard of the matter," at least from him. Still, if we grant this, it does not follow that want of a wage limit is not a serious blot on the organisation of this Association, as we pointed out last week.

We are very pleased to hear that out of a membership of 5,200 there are only 38 members who wish for the services of homœopathic practitioners, as this affords evidence of the generally healthy tone of the public in this respect. Nevertheless we cannot help expressing our surprise that for the sake of so small a contingent this institution should have thought it desirable to adopt so doubtful a policy as to endeavour to enrol homœopathic practitioners among its medical officers. We believe that such an experiment has not hitherto been tried, and we shall watch the result with considerable interest.

We have also received a letter from Dr. Francis Warner, one of the consulting staff of the Association referred to. He says: (1) "I have no reason to think the medical attendance is abused by richer members. (2) A homœopathic patient can consult a homœopathic surgeon; but we have nothing to do with that; it is the affair of the members."

As to (1), much as we might respect a statement from Dr. Warner, we can hardly think it will have much weight in the face of the very emphatic admission of the secretary to this institution that no wage limit was to be taken into consideration.

As to (2), we do not quite see the drift of Dr. Warner's argument. We have always been under the impression that our profession did not associate with homœopaths—that the practice of so-called "homœopathy" was not considered to be a legitimate branch of medicine. Will Dr. Warner maintain that acting as consulting physician to a society that counts among its medical officers professed homœopaths is not associating with them? There is nothing in the rules implying that homœopathic patients cannot claim the services of the consulting staff; rather the reverse, as we find no homœopathic consultant on the list. Neither do we think the matter can be so readily dismissed with the casual remark that this "is but the affair of the members." Either homœopaths ought to be admitted into the ranks of the profession or they ought not to be; if the latter proposition is the right one, we cannot help thinking the leaders of the profession at least should be most careful as to the example they set.

It appears to us that all Dr. Warner urges would apply equally if this Association were to appoint herbalists, or bonesetters, or any other class of irregular practitioners, for such of their members as might desire to employ their services. Although we are aware that there is a legal question might arise, from a professional point of view there is very little difference, and the matter might just as readily be dismissed, as being "only the affair of the members."

Another question, too, is worthy of consideration. If we grant that medical aid is absolutely necessary to all classes of society, that owing to widespread poverty this must be afforded at a remuneration within the means of the recipient, does it follow that with all our wealth of hospitals and charitable institutions there is the same necessity for the reduction of consultant fees? Are we to expect in the not remote future that every club and benefit society will have attached to its ordinary medical department a machinery for supplying consultants to the members at, we presume, correspondingly reduced fees?

From whatever point of view we regard it, it is hardly likely to add to the dignity of the consultant branch of the profession; nor can we believe that if the twenty-second annual report of the Provident Association of Warehousemen, Travellers, and Clerks were brought under the notice of the Royal College of Physicians of London, that body would be at all proud of seeing its Fellows placed side by side on the same list with professed homœopaths.

NEW NAMES FOR PARISIAN STREETS.

THE Municipal Council of Paris is again engaged in its favourite work of renaming streets. Two streets in the neighbourhood of the Salpêtrière are to be called after Charcot and Ulysse Trélat respectively, and a prolongation of the Rue S. François de Sales is to be called after Trousseau.

ABSCESS OF THE ANTRUM.

DR. T. E. CONSTANT (Scarborough) writes: The case of "Abscess of the Antrum after Influenza, complicating Empyæ," contributed by Mr. Armstrong Todd to the BRITISH MEDICAL JOURNAL of July 21st, is strongly suggestive of alveolar abscess. None of the symptoms given would contraindicate alveolar abscess excepting the lachrymation and the discharge from the nose (for which the condition of the nasal cavity would fully account), and none are symptomatic of empyema of the antrum. The termination of the case, moreover, is almost characteristic of alveolar abscess, for I do not believe there is another recorded instance of an antral empyema discharging itself spontaneously "somewhere about the situation of where the first and second molar teeth should have been," unless the empyema were consequent upon an alveolar abscess.

LETTERS, COMMUNICATIONS, ETC., have been received from: (**A**) A Correspondent; An Ex-Midwife. (**B**) E. E. Blomfield, M.B., Pontefract; Dr. J. Brydon, Hawick; B. J. C.; Mr. C. Burch, London; Mr. R. H. Barlow, London; Mr. W. L. Blenkarne, Leicester; J. E. Blomfield, M.B., Sevenoaks. (**C**) Dr. W. Collingridge, London; Dr. A. C. Coles, Bournemouth; Messrs. Cheavin and Co., London; Professor E. M. Crookshank, East Grinstead; Mr. T. R. Collins, Harrogate; Country Practitioner; Condal Water Co., London. (**D**) Dr. J. Daniel, Cheadle; D. S. Davies, M.B., Clifton. (**E**) Dr. F. Edge, Wolverhampton; Messrs. Evans, Lescher, and Webb, London; Mr. J. Ellis, Sandown. (**F**) Mr. W. T. Freeman, Reading; F.R.C.S.; Mr. J. Fisher, Matlock; Mr. E. A. Fenton, Clogheen; Messrs. D. J. Fox and Beames, London; Dr. H. M. Fernando, Colombo. (**G**) Mr. J. Gairdner, Crieff; Dr. H. R. Greene, Knaphill; T. H. Godfrey, M.B., Stockton-on-Tees; Mr. G. R. Griffiths, Carnarvon; Mr. L. M. Griffiths, Clifton. (**H**) Mr. R. Harrison, London; Dr. T. G. Horder, Cardiff; Mr. W. Hadley, Warwick; W. Hardman, M.B., Blackpool; Mr. G. F. Hilcken, London; Mr. J. T. Hislop, Ripley; Mr. E. C. Hearne, London; Mr. H. W. Haydon, Wadebridge; Dr. Howard, London; Mr. C. H. Haycraft, Bow. (**I**) Dr. H. J. Ilott, Bromley. (**J**) J. B. B. (**K**) Mr. A. F. S. Kent, Salisbury. (**L**) Mr. N. B. Langley, Cricklade; Mr. C. Lunn, Evesham; Mr. F. Lewis, Newport. (**M**) Dr. C. W. M. Moullin, London; M.R.C.S.; Dr. R. Maclaren, Carlisle; M.D.; R. Morton, M.B., Nenagh; Dr. L. W. D. Mair, Croydon; Mr. R. W. Murray, Liverpool; Mr. W. J. C. Miller, London; Dr. C. Müller, Buda Pesth. (**N**) Mr. B. Nugent, Stafford; Mr. T. V. Nicoll, London; Mr. J. E Newton, London. (**O**) Mr. E. C. Osborn, London. (**P**) Mr. F. B. Palmer, Yarmouth. (**R**) Mr. W. A. Ross, Belfast; Mr. W. Roscoe, Bristol; Mr. J. Robertson, Edinburgh; Mr. N. Ryan, London; Messrs. Richmond and Co., Warrington; Dr. C. H. F. Routh, London; Mr. J. Rogerson, London. (**S**) Messrs. Street Bros., London; Mr. M. Scott, London; Mr. C. L. Sansom, London; Spongy Iron Filter Co., London; Messrs. F. Stearns and Co., London; Dr. W. S. Steele, Torquay; Messrs. G. and G. Stern, London; E. S. Sugden, M.B., Liverpool; Mr. J. Stewart, Clifton; Mr. W. Summerskill, London. (**T**) Dr. J. S. Taylor, Liverpool. (**W**) W. P. M. B.; Mr. C. J. Wright, Leeds; Mr. J. Weir, Padiham; Mr. R. Walker, Leicester; Mr. H. U. Walker, Worksop; Dr. W. Whitelaw, London; etc.

BOOKS, ETC., RECEIVED.

Ministère des Affaires Etrangères. Conférence Sanitaire Internationale de Paris, 7 Février-3 Avril, 1894. Procès Verbaux. Paris: Imprimerie Nationale. 1894.

Pus et Suppuration. Par Dr. M. Letulle. Paris: G. Masson. 1894.

Le Cancer. Par Dr. Critzman. Paris: G. Masson. 1894.

La Chimie de la Cellule Vivante. Par A. Gautier. Paris: G. Masson. 1894.

The Jewish Method of Slaughter compared with other Methods from the Humanitarian, Hygienic, and Economic Points of View. By Dr. J. A. Dembo. London: Kegan Paul, Trench, Trübner, and Co. 1894. 2s. 6d.

Archiv für Dermatologie und Syphilis. Herausgegeben von Prof. F. J. Pick. Heft 2 und 3. Wien und Leipzig: W. Braumüller. 1894.

The English Riviera: a Guide to Sidmouth, with Remarks on its History, Climate, Amusements, etc. By N. Macvean, M.A., and L. Williams, M.B. Sidmouth: Day Bros. 1894.

Sandow on Physical Training. Compiled and edited under Mr. Sandow's direction by C. M. Adam. London: Gale and Polden. 1894.

*** In forwarding books the publishers are requested to state the selling prices.

SIXTY-SECOND ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF PSYCHOLOGY.

G. F. Blandford, M.D., President.

A DISCUSSION ON THE LAW IN RELATION TO THE CRIMINAL RESPONSIBILITY OF THE INSANE.

I.—By Lionel A. Weatherly, M.D.

The Judges' Dictum in 1843.

In the year 1843 the judges were asked by the House of Lords to give definite answers to certain definite questions concerning the plea of insanity in criminal cases. Their answers have since that day constituted the law of England.

As mental science has advanced, as we have gained in practical experience of the working of the insane mind, and as individual cases have time after time proved that this law is not generally applicable, attempts have been made to have it placed on a more logical and just basis. Books have been written, papers read, discussions started; medical experts have indited long letters to the press, judges have penned articles in magazines, representations have been made from learned societies to the Government: but, so far, without effect. How embarrassing, then, must be my position to-day when, attempting to deal with the perplexities of a question which, however easy it may be to find fault with, is yet most distinctly difficult of solution.

The honour I feel in being permitted to bring this subject before your notice, and the interest I have always taken in it, is, however, an ample recompense, whilst my task is rendered lighter by reason of the fact, that for the first time this question will have the benefit of being discussed, not only by the presumably biassed members of our branch of the medical fraternity, but also by gentlemen of a profession which has been often declared, and in high places stated, to be distinctly and hopelessly antagonistic to us on this debatable point. From this opinion, however, I beg most respectfully to differ, and I trust the presence of so many of our legal brethren, and the part we hope they will take in this discussion, will prove that I am not mistaken.

We mental physicians maintain that the existing law is wrong, and that it is not in accord either with our practical experience or with the advance of mental science. You of the legal profession answer us that your duty is simply to act in conformity with the law as it stands: and yet, I fully believe, that you will as heartily welcome a change in the ruling of those judges in 1843 as we shall, being all animated with but one desire—that justice be done to the unfortunate criminal whose mental disease has either directly or indirectly caused his criminality.

Now, what is this law which we so generally condemn? Into its details I need not go: it will suffice to sum it up in this one question: Was the accused at the time of the commital of the act labouring under such a defect of reason or disease of mind as not to know the nature of the act he was doing, or that he was doing that which was wrong? This is the question the judge has to put to the jury; and it is to this question only that medical experts have to give an answer, and prove by facts elicited by them or sworn to by witnesses.

No one can complain that this law is not definite enough. It is its very want of latitude that brings it under condemnation; and though it may seem paradoxical to say so, it is this too defined ruling which has almost made the sentencing to death of a lunatic depend upon chance.

Its Application in Individual Cases.

How many of you present this day can deny that if you have been interested in the case of a criminal, for whose defence the plea of insanity is to be raised, your grave anxiety has been to find out before which judge your unfortunate client will have to be tried. For whereas one judge will place this law before the jury in all its strict and definite reading, leaving the defence no chance of proving the prisoner's true mental condition, another, taking a more common-sense view and apparently forgetful of the answers those judges gave in 1843, will sum up in a manner which gives the jury no alternative but to bring in the humane and just verdict of "Guilty, but insane."

Yet, again, how often may it happen, that as Lord Blackburn so truly said, "in spite of what the judge may tell the jury of the law, in spite of his giving them no loophole by which they might give the prisoner the benefit of the doubt as to his sanity, they take the bit between their teeth, and, defying guidance, prove by their verdict that at least in their opinion the prisoner at the bar is not responsible for the crime for which he stands indicted." This is what happened in the case of the Queen *v.* Hitchens, tried at the Taunton Assizes on November 22nd, 1887, before the then Mr. Justice Field. No case could more clearly prove how utterly the present law is at variance with scientific knowledge. No trial that I am aware of so plainly demonstrated the wisdom of Maudsley's remark: "The judges may well consider whether their own dignity, and what they feel to be of more importance than that, the authority of the law which they administer, will not suffer in public esteem if they do not get rid of false dicta and bring legal doctrine into accord with observation and common sense."

No one who was present at this trial could easily forget it. There in the criminal dock stood, or rather crouched, a pitiable object. His attitude, his facial expression, his semi-idiotic stare, all proved his mental deficiency. The trial proceeded. It was evident that the plea of insanity was the only defence. The prisoner's counsel disputed none of the facts which the prosecution disclosed. The prisoner had undoubtedly shot his sister while she lay in bed. The tragedy had been premeditated, as the letter he wrote so clearly proved: "I leave everything that belongs to my dear mother. I have been treated so badly by that beast, my sister Constance, that I feel I must put an end to her life by shooting, and knowing that I shall have to die for it, I also shoot myself. Goodbye to all, hoping you will have a happy time of it. Goodbye, dear father and mother."

And his motives. His poor sister had passed him in the street without taking notice of him: she had forgotten to hand him the Bristol paper across the breakfast table! Near the judge sat a number of medical experts, all ready to go into the witness-box and give evidence—of what? Not of his want of knowledge of the difference between right and wrong. Not of his want of appreciation of the punishment which would follow his criminal act—for how could they attempt such a task in the face of that letter? Their evidence would have been that he was a hopeless epileptic imbecile, and could not possibly in the light of mental science and common sense be held responsible for the gruesome deed.

One of the medical witnesses was a doctor who now holds the post of Lunacy Commissioner, and he had been sent down by the Treasury to examine the wretched prisoner; but the prosecution had in the meantime found out that his evidence was for, not against, the plea of insanity, and they did not call him. And this took place in the nineteenth century, and in a court of justice of this enlightened England of ours! The defence put him in the witness-box. The counsel for the prisoner attempted to examine him, but the moment the judge heard the word "opinion" he stopped that witness's mouth, saying "he would have no opinions in his court." It was pointed out that here was a Crown witness specially retained as a skilled person, and that he could not give facts without drawing the necessary skilled deductions from them—to no purpose. And he left the box, and he has since placed it on record that, as he walked down those steps, he felt very much as if he had been helping in one of the uproarious and indecent exhibitions which are said to have occurred in Judge Jeffreys's Courts.

Those of the other medical men who were called to give

evidence were treated in the same way: the counsel for the defence and prosecution duly made their speeches to the jury. The summing-up commenced. The law, and nothing but the law, of the judges in 1843 was laid down in the most definite and impressive manner, and at the end of the determined and powerful oration, sounding "wondrously" like the speech of a prosecuting counsel rather than a calm judicial review of the facts of the case, the jury were left to consider their verdict. Thanks be to the common sense of those Somerset men, it did not take them long. "Guilty, but insane," said they.

In angry tones were they dismissed from further duty, and the wretched prisoner left the dock—not to be taken to the prison from whence he came, and there to be hanged by the neck till he was dead—but *en route* for the gates of the more merciful Broadmoor.

Recent Judicial Opinions.

Now let us glance at the case of William Burt, tried before the late Mr. Justice Stephen at the Norwich Assizes, in 1885, on a charge of causing grievous bodily harm. The prisoner was jealous, he was a passionate man, he was an epileptic. The judge told the jury the law, but went on to charge them: that in the case there seemed to be a mixture of motive; and that if a man acted partly from a common motive and partly from disease, he would suggest it was for a humane jury to give the man the benefit of the doubt, and take into consideration whether they would not have him taken care of instead of subjecting him to punishment. "If there was epileptic fury and insanity mixing with ordinary resentment and causeless jealousy, and a man acted from both motives," his lordship thought, "the general spirit of the law and its administration suggested that the prisoner should have the benefit of any doubt which arose."

Mr. Justice Cave, Mr. Justice Hawkins, and the late Lord Chief Justice Coleridge have all, at certain trials in which the plea of insanity has been raised, denounced the ruling of 1843 as wanting in applicability to individual cases. In 1888, at the Worcester Assizes, the late Lord Chief Justice made use of strong words—words which should indeed carry weight and help forward the alteration we are striving for. "There was," he said, "no more painful part of the duty of those who had to administer the law than the matter of insanity. The law which existed upon the subject, and which he was going to lay down to them as law, was not incapable of being so interpreted as to do terrible injustice," and his lordship went on to quote a case, in his own experience, in which a murderer was unquestionably mad, but was hanged. "God forbid that he should say justly, but certainly according to law, and that law was, as far as he knew, still the law of England."

Take these cases, note these opinions of some of the judges, and then ask whether Maudsley was not justified when in 1876 he wrote: "Nevertheless, juries often, and judges occasionally, out of a natural humanity repudiate this dogma (the knowledge of wrong) in particular cases; and so far from any certainty of result having been secured by its application, it is notorious that the acquittal or conviction of a prisoner where insanity is alleged, is rather a matter of chance; were the issue to be decided by tossing up a shilling, instead of by the grave procedure of a trial in court, it could hardly be more uncertain." These are strong words, but I feel candidly that they are not exaggerations, and I take it, this uncertainty of justice is the most potent reason we have on our side for demanding a reconsideration of the law in these cases.

Medical Experience in Asylums.

Out of the mouths then of some of the highest administrators of the law has this "knowledge of right and wrong test" been condemned. Does it then require that we in our branch of medicine should still further prove its condemnation by logical deductions from our practical experience with mental disease?

Yet if it be thought needful, let us ask any of you who may doubt these arguments to walk through the wards of any large asylum, and, excluding the idiots, the low-class imbeciles, and a few of the chronic dements, speak with all the inmates, and one can with confidence assert that you will find comparatively few of whom it can be truthfully said that they have no proper knowledge of right and wrong. We can show you cases of general weakening and deficiency of the intellectual powers, of the will and of the control of emotion, and yet the capability of knowing right from wrong still exists. We can ask you to examine a patient whose mind is full of delusion, hallucinations, and illusions of one or all the senses, and yet defy you to prove the absence of this specific knowledge. We can point out to you patients who are at times the subjects of transitory fury, and of whom, if we were put on our oath, we could not affirm that they did not know that they were acting contrary to the law of the land. We can take you to one man who reasons insanely on sane premisses, to another whose sane reasoning is built up on insane foundations, and yet to another who bases his insane reasoning on insane grounds, and yet all will have that knowledge which makes them in the eyes of the law responsible beings. Any one of these people may commit a crime by reason of their mental disease and may well know at the time that such act is wrong and against the law of the land. Should we hold them responsible for their insane condition? Certainly not. Why, then, should the law consider them responsible for a crime which can be proved to be directly the outcome of their brain affection?

Medical Expert Evidence.

With our daily and hourly experience of such cases we are to be silenced by the dictum of Lord Westbury, "that any ordinary man of the world is as good a judge of insanity as anybody else." We have good reason to quarrel with this opinion, and yet we must all realise that the differences of expert evidence are often sufficiently striking to place us in a rather unsatisfactory light. To the legal mind, to the mind of the general public, it must seem strange to find, as in the recent celebrated trial of the Queen *v.* Monson, evidence by eminent surgeons of so contradictory a nature; and it is not to be wondered at that much of this divergence of opinion was put down to distinct partizanship. If such a thing can happen with regard to the more or less definite science and practice of surgery, how much more likely is it to take place when the more theoretical and undefined questions of mental physiology are the subject of our cross-examination.

I am afraid there will be always a drawback to expert evidence, whether medical or otherwise, from the fact that it is almost against human nature for an expert to remain perfectly unbiassed. He is called for the defence, and he leaves no stone unturned to get at evidence bearing upon that defence; he tries his hardest to find some facts by which to defeat the theory of the prosecution, and *vice versa*: and, on the principle of "two sides to all questions," is perhaps a little too often tempted to say, "but my side for choice."

With regard to our evidence in those cases in which the plea of insanity is raised, we are I think justified in maintaining that the law must be unsatisfactory, which, while limiting our answers in the witness box and thereby securing the conviction of a prisoner, admits our opinion of his mental state, when after sentence of death has been passed representations for a reprieve are made to the Home Secretary, and on these opinions the prisoner is sent to a provincial asylum instead of being given over to the hangman's noose. Yet I cannot myself see how this anomalous position of affairs can be altered while the law remains as laid down by these judges in 1843.

Proposals for Alterations in the Dictum.

I hope that I have given cogent enough reasons why some change is necessary: the difficulty in the pathway of reformation is not then the proof of need, but rather the mode of procedure. Dr. Victor Parant of Toulouse kindly sent me a very able paper which he read at the International Congress of Charities, Correction and Philanthropy at Chicago in 1893, on The Irresponsibility of the Insane under the Laws of France, and I find that Article 64 of the Penal Code reads as follows: "There is no crime or misdemeanour when the accused was in a state of dementia at the time of the commission of the act, or when he was under the control of a force he was not able to resist." By dementia is not meant either the abolition or profound diminution of the intellectual faculties, but rather any mental alieniation. For my part I think this ruling of the French law errs on the side of too great latitude, quite as much as our law errs on that of too narrow a limit.

As I stated in the opening of the paper, various suggestions for the betterment of the law have from time to time been made, nearly all of them emanating from the Psychological Association of Great Britain. Most of these suggestions have aimed at the appointment either of a medical assessor of competence, skill, and knowledge, or of a body of medical experts whose joint opinions should be laid before the judge.

In the first place, I do not see if such suggestions were carried out that we should be any nearer a solution of the main difficulty; and, in the second place, I rather fancy such suggestions savour too much of an attempt to abolish trial by jury in these cases—an attempt that I do not for a moment believe would ever be successful.

I would respectfully put forward what, after very careful thought and consideration, seems to me a reasonable and just plan to adopt; and I shall be most interested to find out the feeling of the meeting on this point.

The questions I would rather see placed before the jury and the questions upon which the medical experts should be examined are as follows:

1. Was the accused at the time of the commission of the act with which he is charged, and before that time, labouring under such mental disease as to render him certifiably insane?

2. If insane, how far was the crime the outcome of his insanity?

The last question is to my mind of some importance, for it is quite conceivable, though doubtless more or less rare, that a person of unsound mind may commit a crime in no way caused, or led up to, by his mental condition.

If, then, it be proved to the satisfaction of the jury that the accused was certifiably insane; and, further, that the crime for which he stands charged was the outcome of his mental disease, he should be entitled to their verdict, and be at once placed under care and treatment.

I have tried my best in this short paper to steer clear of the intricate mental details which have so often been the subject of debate when this question has been raised. I have endeavoured to base my conclusions for the necessity of alteration of the existing ruling on broader and more general grounds. My difficulties have been great, my consequent efforts I admit feeble; still, I shall be more than satisfied if, in the discussion which follows, and by the resolutions which will be proposed, and I hope unanimously carried, something is done to place once and for all this present most unsatisfactory, illogical, and unjust ruling on such a sure basis that no longer will uncertainty reign supreme, but in its stead confidence that in all criminal cases in which the plea of insanity is honestly and truthfully raised the prisoner will be looked upon rather as an object of pity, requiring care and treatment, than as a criminal to whom deterrent punishment should be meted out.

II.—Charles A. Mercier, M.B.,
Lecturer on Neurology and Insanity, Westminster Hospital.

How the Law Came To Be As It Is.

In recommending that the law should be altered it is important that we should know precisely what the law is and how it became law. The questions put by the House of Lords to the judges in 1843 were five in number, of which the last was a question purely of procedure. The other four questions referred, not to cases of insanity, but to persons afflicted with insane delusions. To this particular class of insane persons the questions were limited, but the answer of the judges had reference, not to this particular case, but to the general case of a defence "on the ground of insanity." In short, they were asked about one thing and they answered about another.

The Objections to the Present Law.

The reasons why we claim that the law should be reconsidered are four.

First, *it does not cover all cases.* I do not propose to argue this from the medical point of view. There is abundant evidence in the dicta of high legal authorities that the present law does not excuse persons who are undoubtedly insane. In addition to the authorities cited by Dr. Weatherly, I may mention Lord Bramwell, who, in giving evidence before a Committee in 1874, said: "The present law lays down such a definition of madness that nobody is hardly ever really mad enough to be within it." Mr. Justice Hawkins, in Reg. *v.* Ware (1885), said: "The law with respect to the responsibility of criminal lunatics appeared to him to be in a very unsatisfactory state.....he did not suppose there was a man living—lawyer or layman—who would say that this unfortunate man, who had caused the death of a fellow creature, was responsible for the act in the eye of the law in any sense, and yet in the face of the evidence they could not say that he did not know the nature of the act, or that he was doing a wrong act.....He was not speaking his own views only in the matter—the judges generally had expressed similar opinions before—that the whole subject should be reconsidered, and that they should have some better definition of what constituted a defence on the ground of insanity."

Mr. Justice Blackburn, in recounting to a Select Committee his experience, said, "The prisoner clearly knew right from wrong, and knew the character of her act, and was quite aware of what she had done, but I felt it impossible to say that she should be punished. I told the jury that there were exceptional cases." The difficulty is that, if I may use an Hibernicism, the exceptional cases are the rule.

The second objection to the law is that it *leads to great variety and even contrariety of interpretation and of practice.* In their dealing with this law the judges may be divided into two classes—those who adhere to the literal text of the law, and those whom I may term latitudinarian judges, who read into the law meanings into which it does not seem capable of being interpreted by the lay mind. As a specimen and type of the judges who adhere to the text of the law in its most literal sense, there is no better instance than Lord Field, whose rulings in the Hitchens case have already been referred to by Dr. Weatherly. Such judges will admit no evidence of the sanity or insanity of the prisoner, even at the time of the trial. "The question," said Mr. Justice Field, "is one of fact, whether, at the time of the murder, when this witness was not present, the prisoner was responsible for his actions. That must be answered by the jury on evidence of what occurred at the time or before." Counsel for the defence suggested that the opinion of a medical man regarding the state of the prisoner's mind now might assist the jury in concluding as to his state of mind at the time the act was committed. To this the judge said, "I shall rule clearly not." On the other hand, Mr. Justice Day, in the case of Gouldstone, allowed the fellow-workmen of the prisoner to state their belief in his insanity; allowed evidence of the insanity not only of the prisoner himself, but of his mother and sister, of his aunt, and of a second cousin once removed. Mr. Justice Field would allow no opinion as to the sanity or insanity of the prisoner to be given. "I am determined," he said, "not to allow any medical gentleman, however eminent, to be substituted for the jury. When trial by medical men comes into vogue, well and good; but so long as trial by jury is the law of the land, I will not allow a medical man to be substituted for the jury. The medical men are not to give their opinions; they are to state to the jury the facts upon which their opinions as to the state of the prisoner's mind are founded, and on those facts the jury are just as competent to come to a conclusion as the expert witnesses." The judge proceeded to question the witness minutely as to what passed between him and the prisoner, and required the exact conversation as far as possible to be repeated. On the other hand, at the trial of Maclean, before the late Lord Chief Justice Coleridge and Baron Huddlestone, the Attorney-General put these questions to a witness who had not seen the prisoner until after the crime: "What do you say as to his knowledge of an act he is committing? Would he be aware of what he is doing? What do you think as to his competency to know whether he is doing right or wrong?" "It is difficult," said the witness, "to enter into the mind of another person." "But what is your own opinion?" "My opinion is that he would be competent to distinguish between right and wrong. Decidedly he would know at the time he fired the pistol that he was doing a wrong act." Here the Lord Chief Justice interposed: "That is not quite what the Attorney-General asked. He asked whether he was aware of the act

he was committing, and then he asked whether he was aware that the act he was committing was wrong."

The Attorney-General: "Did he know whether it was a right act or a wrong act to commit?"

It is important to observe that this evidence of opinion was asked for not by the counsel for the defence but by the counsel for the prosecution, who in this case was the Attorney-General, and that his demand for an opinion was endorsed, corroborated, and insisted upon by the judge; and that this opinion demanded was not a mere general opinion as to the sanity or insanity of the prisoner, but was on the very point—the knowledge of right and wrong—which was to be specifically left to the jury. In another part of the same case the ruling of the judge was contrary to that of Mr. Justice Field. So far from requiring the witness to state what passed between him and the prisoner, the Lord Chief Justice, addressing a witness, said: "What I want to hear from you is not, strictly speaking, what passed between you and him. You are to tell us, as a man of great science and experience, what is your scientific conclusion."

The ruling of Mr. Justice Cave in the case of Brocklehurst was even more emphatically contradictory of the literal interpretations of other judges. When counsel for the prosecution was about to address the jury on the subject of the prisoner's insanity the judge interposed with the remark that the doctor had said distinctly that the prisoner was of unsound mind. Counsel suggested that the question for the jury was whether the prisoner was capable of appreciating the difference between right and wrong. The judge said "No; the question is whether he was insane at the time—(laughter)—and if a man is suffering from the delirium that his wife tries to poison him and is unfaithful to him, and attacks her in consequence, it is as clear as anything can be that the man is mad." Turning to the jury, he said, "Do you feel any difficulty about it, gentlemen?" "Not the slightest," said the foreman. (Loud laughter.)

The third objection to the present state of the law is that *it leads to the stultification of judicial trials by the subsequent certification of the convict*. The whole of the formalities of arraignment and trial, the addresses of counsel, the examination and cross-examination of witnesses, the summing up of the judge, the verdict, and the dreadful sentence of death, are all parts of a solemn but undignified farce. The whole procedure is nullified by the subsequent reports of two medical men. The judges say that they will not allow trial by jury to be superseded by trial by medical men: but the system that they uphold leads directly to, and involves, an appeal from trial by jury to trial by medical men: and on appeal the case is tried in private, is tried by an unsworn jury of two, without a judge, without counsel, without witnesses. By this private and irresponsible, this amateur court, the verdict and judgment of the court of assize is set aside and superseded.

The last objection to the present interpretation of the law is that *it sets up a test of insanity which is inherently incapable of being satisfied*. The question of the life or death of an individual is determined by guessing at what he knew and what he thought at the time the crime was committed. It is manifestly impossible for one person to get inside the mind of another person and to witness the operations that are passing therein. What a person knows and what he thinks are known to him alone, and by other people can only be guessed at more or less approximately.

It does not fall within the terms of the resolution to propose a substitute for the existing law, but such a substitute would not be hard to find, and may be based upon a statute passed a few years ago. By this statute the verdict of the jury in cases of lunatic criminals is not "Guilty, but he did not know right from wrong." It is not "Guilty, but he did not know the nature and quality of his act." It is not "Guilty, but he did not know that he was committing a crime." It is "Guilty, but insane."

Why should not, then, the questions be left to the jury: Did the prisoner commit the crime with which he is charged? Was he insane at the time? They would not then have to find whether the man was capable of forming this or that particular judgment, a finding that can never be more than a guess, for which safe guidance can rarely be obtained, the facts bearing on it being necessarily few and equivocal; a finding which, when found, is not a trustworthy criterion of his sanity. They would have to conclude, not merely from the opinion of experts, but from the whole mass of evidence before them, whether the man was sane or insane. Should it be said that such a finding would relax too much the rigour of the law, and that all insane people are not irresponsible on all points, it would be easy to add a limitation. Let it be left to the jury to say whether the man's mind was so disordered that the crime with which he is charged can fairly be considered the result of his insanity. Such an issue would surely satisfy the requirement of the law that no guilty person shall escape conviction; and, on the other hand, it would to a large extent provide against the occurrence, which is a reproach to our legal system, of a conviction followed by the admission that the prisoner was insane when tried. A minor advantage would be that it would relieve expert witnesses from the heavy responsibility of saying that a prisoner can in all probability distinguish right from wrong, and in so saying being understood to make the admission that he is sane, when their opinion may be most positive that he is mad.

III.—Sir Frederic Bateman, M.D., LL.D.,
Senior Physician to the Norfolk and Norwich Hospital.

Criminal Anthropology.

Sir Frederic Bateman said in reference to a statement that had been made that the legal profession was opposed to any alteration of the law, he would call attention to the fact that quite recently the subject had engaged the attention of the New York Medico-Legal Society, in consequence of a paper read before the Society by Mr. Clark Bell. It was as well to bear in mind that the New York Medico-Legal Society was not a purely medical society, but comprised American judges and medico-legists. It was impossible to disconnect this question from the subject of criminal anthropology, which was just now engaging the attention of Continental observers, especially in Italy, where there was a school of scientists who maintained that murderers and other hardened criminals were not responsible in consequence of some structural change in the brain. It had been stated that in malefactors there had been observed an unfolding or reduplication of the second frontal convolution, thus increasing the number of the frontal convolutions from three to four, as occurred in the carnivorous animals. Sir Frederic Bateman said that he had investigated this matter, and his essay upon this subject had been discussed at the Medico-Legal Society of New York. He had arrived at the conclusion that science did not support this dangerous doctrine. He pointed out that this was a most opportune time for discussing this matter, as it was attempted to be proved that Vaillant and other French Anarchists were not responsible beings. In reference to certain remarks that had been made as to the fate of an accused person depending upon the caprice of a particular judge, he mentioned a case which occurred a few years ago in Norwich, where an insane murderer was condemned to death, and would undoubtedly have been hanged, but some days after the trial the medical superintendent of the County Asylum, feeling very strongly that justice was not being done to the man, intervened in the matter, with the result that his life was saved. Sir Frederic Bateman maintained that the evidence which saved this man from the gallows should have been given to the jury, and not after the sentence was passed.

IV.—Ernest Hart, D.C.L.

Mr. Ernest Hart said that he had been asked to attend the discussion as Chairman of the Parliamentary Bills Committee of the Association, to whom he understood that it would be proposed to refer any resolutions which might be arrived at requesting them to take action in the matter. He should be obliged to leave in the course of a few moments, and would ask leave now only to say that he did not anticipate much good result, and certainly no very early result, either from the appointment of a select committee of the House of Commons, which would be a very slow affair, or from the drafting of a parliamentary bill which would lead to much contentious discussion, and of which both the tenour and the conclusion might be unsatisfactory, and would certainly be

long deferred. He would venture to suggest that the House of Lords should be moved with the assent of the Lord Chancellor once more to put to the judges a series of questions such as those which were put in the MacNaughten case. To such questions as had been suggested they might now return replies which, consonant with the advance of knowledge and the long experience attained, might considerably improve the present practice and lead to the abolition of many of the existing anomalies. He would like to ask Mr. Pitt Lewis, whose knowledge of this matter was very considerable, whether he would favour such a course.

V.—Mr. W. C. H. Cross.

The Wild Beast Theory.

The rule in MacNaughten's case cannot be treated as expressing the whole law of the land. Mr. Justice Stephen treated the fact that the crime was the result of uncontrollable impulse as a sufficient defence. It is not very likely that a case will arise in which there is a conviction when there is a man who is insane—if it does arise the Court for Crown Cases Reserved will almost certainly lay down the law in the more liberal spirit of Sir James Stephen. If it does not arise, I think we may be sure that there will not be among the rising race of judges adherence to the view taken by Mr. Justice Field in the Hitchens case, but rather to that stated by Sir James Stephen. The rule in MacNaughten's case will go the way of the "wild beast theory," and of the theory that the test of insanity is the capacity to distinguish right from wrong generally. On proof of insanity the burden of proving that the crime was not the effect of the insanity ought to lie on the prosecution.

VI.—G. H. Savage, M.D., F.R.C.P.,

Late Physician and Superintendent, Royal Bethlem Hospital.

The Question Ripe for Action.

I came rather to hear legal opinion than to express a medical one. The time for change is approaching, and I believe we can help this change forward. Experts are, in my experience, treated very differently by various judges. I have been at one time encouraged to give my opinion, and this has been accepted in its entirety; in another case nothing but facts observed have been admitted. We must consider whether all insanity, partial or complete, is enough to bar a crime. Some lawyers say "No." Yet we have to recognise that a man may have perfect sensory impressions and perfect recognition and memory, and yet may have an insane method of thought. In some cases, as in that of a parricide, I think Mr. Justice Denman ruled that a man may have perfect recognition of his act, and yet be irresponsible because his acts followed on insane delusion. The whole question is ripe for action, and I trust this meeting will help it forward.

VII.—Mr. Goodwin Norris.

Insanity to be Treated Medically.

So far as the law attaches no responsibility to those who are incapable of judging right from wrong, it is right and just, and should be upheld until one can be found that will give a better and a wider justice. All insane persons are held equally irresponsible; should they not then be held equally free from blame? The medical treatment will necessarily differ, but to classify them is unjust. How can one who is mentally incapable of judging right from wrong be guilty, seeing that the true and ordinary acceptation of the term is to commit a crime wittingly? There can be no middle line between guilt and innocence. One who is insane is innocent of all crime; then should he not, with the necessary precautions being taken, be treated as such?

VIII.—R. H. Nootт, M.D.

Variations in Judicial Interpretation.

The chief point in connection with the law in relation to criminal responsibility is this, that the present law is interpreted in so many different ways by different judges. The late Sir James Stephen interpreted the law in a very free sense, but unfortunately the majority of the judges on the bench at the present time interpret it in a very literal sense. Dr. Nootт went on to review shortly Sir James Stephen's opinion on the subject as found in his book on *The History of the Criminal Law of England*.

IX.—J. Batty Tuke, M.D.,

Morrisonian Lecturer on Insanity, Royal College of Physicians, Edinburgh.

Scottish Practice.

Dr. Batty Tuke said the practice in Scotland was for judges to direct the jury to consider whether *libertas arbitrii* existed in the prisoner's mind at the moment of the act.

Resolutions.

The following resolution, proposed by Dr. Weatherly, and seconded by Dr. Mercier, was passed unanimously:

That in the opinion of this meeting the present law relating to the defence of insanity in criminal cases, as laid down by the judges in 1843, is not in accord with modern mental science, and should be reconsidered.

Subsequently the following resolution, moved by Dr. Mercier, and seconded by Dr. Weatherly, was passed unanimously, after some observations from Mr. Pitt Lewis, Q.C., and Dr. Batty Tuke:

That a committee be nominated to confer with the Parliamentary Bills Committee of this Association, and with the Committee appointed by the Medico-Psychological Association, to consider the best method of obtaining the earliest possible action of the House of Lords, or any other means, as they may deem advisable.

Whereupon the following resolution, proposed by Dr. Mercier, and seconded by Dr. Douglas, was adopted unanimously:

That the following be appointed a subcommittee, in accordance with the foregoing resolution: Dr. Orange, C.B.; Dr. Nicolson, Dr. Conolly Norman, Dr. G. F. Blandford, Dr. G. H. Savage, Mr. Ernest Hart, Dr. L. A. Weatherly, Dr. C. A. Mercier.

PUBLIC MEDICINE.

Professor W. H. Corfield, M.D., President, in the Chair.

Thursday, August 2nd.

The Filtration of Potable Water.

Brigade-Surgeon-Lieutenant-Colonel Lane-Notter said that the filtration of potable water was a subject much discussed, and one which had assumed a position of importance owing to the evidence of waterborne disease having grown stronger each year, and from the fact that the necessity of providing a pure water supply was now absolutely recognised. He had made a series of investigations with regard to the chemical constituents of water passed through filters. These results showed clearly that filters were limited both as to their power of filtration in regard to the time occupied, and the quantity of water passed through them. They showed clearly also that when they were dealing with a subject like filtration through animal charcoal they were dealing with a substance that was always open to suspicion. Animal charcoal added both to the nitrogen and to the phosphates of water. He need not say these alone formed nutrient media for the growth of lower organisms. Much better, perhaps, than this sort of filter was polarite or manganous carbon, both of which came out well in these experiments. Later he had examined water bacteriologically. He had on the table two filters—the Chamberland-Pasteur filter and the Berkefeld filter. The Berkefeld filter followed the Chamberland in principle and method. They were not intended to produce any chemical action on the water, but to sterilise the water by filtering out all the germs which existed in it. The Chamberland-Pasteur filter was made of fine china-clay. It was hard, and could be readily cleansed. The Berkefeld, on the contrary, was made of infusorial earth. It was soft, more friable, and perhaps there was some greater difficulty in cleansing. With regard to the Chamberland-Pasteur filter, he made a great number of experiments. He might remark upon the introduction of this filter into the French military service. It was

found in France that when the epidemic of typhoid fever broke out the water supply was the cause of it. Now in 1867 the cases of enteric fever in the French army reached a total number of 6,881; the total in 1889 had fallen to 4,112; in 1890 the number was 3,491; the total in 1891 was 3,225; that was to say, cases of enteric fever in the French army had decreased since 1867 by 52 per cent. On December 31st, 1891, 200,000 quarters were provided with these Chamberland filters, of which 185,000 were in Erance and 15,000 in Algeria and Tunis. It was estimated that the deaths from enteric fever in 1892 were 50 per cent. fewer than the average in 1886 and 1887, and the cases 60 per cent. fewer, and the only new circumstance was the simple introduction of filters of this class into the French army. In the experiments he made with these bougies, as they were commonly called, all waters were rendered sterile. There were a few growths, only eight in number, in the filtered water, but these were due perhaps to contamination from the air. The filter—and this was an important part of the matter—acted much more efficiently when the action was continuous than when it was intermittent. He made similar experiments with the Berkefeld filter with like satisfactory results. One of the great difficulties in connection with it was the pressure or head the water required to pass through the filter. They placed the filter on the ordinary tap. There was a bougie which fitted on the inside, and the water passed from the outside into the middle, and came out in a perfectly clear and limpid condition. As to the cleansing of these filters, this was an important point. The filter could be easily cleansed by washing and then burning the filtering material either over a Bunsen burner or a charcoal stove. This destroyed all organic matter in it. The Berkefeld filter was similar to the Chamberland. On the other hand, it was more brittle. He did not think it was so easily cleaned, and it was liable to fracture, points, as far as his own military experience was concerned, of vital importance in regard to filters.

Dr. Bond said all the conditions which the Chamberland and Berkefeld filters presented might be realised more largely through asbestos. The control of the rate of flow was a most important point in connection with a filter. If control was exercised with intelligence, results of the most satisfactory character could be got from materials which, under ordinary conditions, would not purify. If the water was not allowed to rush through results were obtained which could not be obtained otherwise.

Mr. Kenwood, M.B. (London) said that Dr. Notter's results entirely bore out what, on a much smaller scale, had been carried out at the University College. The Berkefeld filter had been carefully tested in the laboratory. It was found that, as with the Chamberland filter, the filtrate was sterile invariably. A further point was that the water from the Berkefeld filter, immediately it passed through, had a much more pleasant taste than that from the Chamberland-Pasteur filter. He attributed it largely to the fact that the water from the Berkefeld filter was better aërated than with the Chamberland filter.

Brigade-Surgeon-Lieut.-Col. Pringle asked what was the pressure necessary to secure the thorough working for the filter. Would a pressure be sufficient, say, of a 100 gallon tank raised 10 feet from the ground? Might the filter be fitted to the tank itself, or must there be a head of water?

Mr. F. Wallis Stoddart (City Analyst of Bristol) said, as regarded the effects of continuous filtration, they made some extensive experiments in Bristol some years ago on the first introduction of the Chamberland filters; they were adopted by numerous manufacturers and firms with a view to preventing subsequent microbic change in certain products. They found in no case was the issuing water absolutely sterile to begin with. This fact was attributed to imperfections in the fittings. Further, after a lapse of some weeks deterioration in the quality of the filtered water was very marked indeed. He inquired whether Dr. Notter's experiments had lasted as long as several weeks. The filters were discarded because, first, the amount of water filtered was not sufficient; and, secondly, because the quality, as determined by bacteriological examination, was not good after prolonged use.

Dr. Buckmaster referred to the exceeding delicacy of Kitasato's filter, an appliance o much the same make as the Chamberland filter; not only microbes and visible substances were kept back by it, but also molecules of large size—proteids such as caseinogens and albumins of milk.

Brigade-Surgeon-Lieutenant-Colonel Lane-Notter replied to Dr. Bond's questions by stating that he had had no experience of asbestos filters, except in so far as asbestos was used in the construction of another kind of filter, and certainly in that case it did not appear to him to act beneficially. However, he saw no reason why asbestos should not be employed. He had noticed the more pleasant taste of the water from the Berkefeld filter than that which had passed through the china clay. He was inclined to think the reason was the china clay was very close in texture, and it actually kept back bubbles of gases. It seemed to take away some of the natural carbonic acid. He had noticed it had a flatter taste. He had also noticed often the air bubbles upon the surface. A jar of water, 8 or 10 feet high, would be filtered, although slowly, through the Berkefeld filter. He was not sure about the pressure, but he knew what was recommended in the French army was from one to two atmospheres. These filters were generally placed on the water tap, and the pressure was amply sufficient. Anyone could limit the pressure by a cock.

The Storage of Rain Water for Drinking Purposes.

Brigade-Surgeon-Lieutenant-Colonel Pringle pointed out the initial difficulty in the storage of rain water for drinking purposes, namely, the securing, by some automatic process of the purification of this water previous to entering into storage. He exhibited a model and drawings of a simple apparatus to effect this.

Origin and Spread of Enteric Fever.

Mr. H. R. Kenwood, M.B. (London), read a paper on this subject. He said evidence was adduced in support of the view that typhoid fever might spring from acute diarrhœa, more especially of the epidemic summer type, and that the specific organism might proceed from an evolution of bacterium coli commune.

1. With regard to the bacteriological evidence he asked Was Eberth's bacillus the *vera causa*? If so were we justified in assuming that it it could proceed from an evolution of bacillus coli communis? There was evidence that even greater changes than were represented by the slight differences between the Eberth-Gaffky bacillus and the bacillus coli communis, both functional and morphological, might be artificially induced in bacteria. Again, in typhoid, there were many other bacteria possessing characters which filled up the narrow gap of difference between the two organisms in question.

2. As to the clinical evidence it all pointed to the closest relationship between typhoid and acute summer diarrhœa, if the two conditions were compared in those age periods upon which typhoid and acute summer diarrhœa both had a fatal incidence (that is in childhood). Further he urged that the morbid anatomy of the two conditions fully supported this contention.

3. The epidemiological evidence tended to establish a close similarity between the respective mortality charts and a rise in the typhoid mortality was preceded by a rise in the diarrhœal. The autumnal rise of typhoid fever in the fourth quarter was always preceded by a summer rise in diarrhœa in the third quarter, quite irrespective of the varying climatological conditions of different years, and generally when one was high the other was high, and *vice versâ*.

Mild unrecognised types (diarrhœa, ambulatory typhoid) frequently accounted for the origin and spread of typical typhoid fever. Mild types were due to the fact that the community was susceptible to the virus in varying degrees, and there was a considerable amount of natural and acquired immunity. Personal experiences were related of mild cases giving rise to typical and fatal typhoid fever; and cases were mentioned in which antecedent "diarrhœa" has been the only discoverable cause. Dr. Kenwood next discussed the difficulties in the way of deciding what were the sanitary defects in and around houses most likely to result in the evolution of the specific organism. It was easy to find defects that might be held to be responsible for the disease, in most

houses, and these frequently led the investigator away from the true cause. A closer bacteriological study of the natural history of the specific organism in and around houses, as opposed to its artificial existence in the laboratory, was desirable. There was evidence that dogs might be responsible for the origin of the disease. A note was given of four cases which seemed to make the hypothesis probable. Some bacteriological corroboration was afforded by an examination of the very typical typhoid stools passed by a dog, prior and subsequent to the appearance of typhoid fever in a household in which there was no other discoverable cause. The chemical analysis of water remained a valuable means of gauging the probability of typhoid infection. Bacteriological methods when applied to water were unsatisfactory. The bacillus typhosus in drinking water must always be accompanied by some fæcal contamination, however slight, and this a careful analysis should detect. In conclusion he discussed some of the additional preventive measures that were desirable.

Dr. Buckmaster observed that no one, before the ninth day, had, as far as he knew, recognised the microbe of typhoid fever in the dejecta of the patient. The problems connected with the subject were very obscure.

Brigade-Surgeon-Lieutenant-Colonel Lane-Notter said he did not mean to say there was not a great deal to be learned from the chemical analysis of water, but he did not think they could altogether pin faith on the ordinary chemical analysis. Only in the last Worthing epidemic they had the water subjected to the examination of an experienced chemist, who analysed it and pronounced it pure in quality, and yet it was the cause of disseminating this very disease to a large extent. These germs were scattered through water in somewhat infinitesimal quantity, and the means he had found best in collecting them was to pass the water through one of the filters, washing the sediment off by means of a sterilised brush and cultivating in the ordinary way. That was an extremely easy way of cultivating micro-organisms in water.

Dr. Bond said it was not the epidemics that were puzzling, but the cases in which one was compelled to ask "What is typhoid fever?" There was a class of cases which it was very difficult to pronounce for typhoid fever. As in the case of diphtheria, the connection was forced upon him that we had to deal, not with a specific bacillus but with a type susceptible of a large amount of modification.

Remarks were also made by Mr. F. Wallis Stoddart, Dr. Walter Dowson, and the President, and Mr. Kenwood replied.

Friday, August 3rd.

Does Baking Sterilise a Loaf?

Mr. Walsh, M.B. (London) read a paper which had been prepared by Dr. Waldo (Southwark) and himself upon the question "Does Baking Sterilise a Loaf?" The paper was based on a large series of experiments. Its main conclusion was that baking does not necessarily destroy the vitality of micro-organisms contained in dough. With regard to temperature, they had found that the average maximum temperature in the centre of a quartern loaf varies from 103.4° to 186° F., and in a half-quartern from 186.8° to 203° F. As the heat increases steadily in the centre of the loaf, any organisms present are exposed for a short time only to the maximum temperature reached. The average micro-organism will withstand a prolonged exposure to a much higher temperature without being destroyed. Spores are much more resistant again, so that on theoretical grounds alone, having ascertained the maximum temperature in the centre of the loaf during baking to be those mentioned, they might venture to predict that organisms (or their spores) would not be destroyed by the process of baking. By the method of plate cultivations they succeeded in obtaining thirteen different species of micro-organisms from the centre of recently baked (a few hours after baking) loaves. The latter were obtained from bakeries in different parts of London, rich and poor. Numerous experiments were carried out for them by Mr. Walter Severn on sixty-two loaves. [Mr. Walsh here called the attention of the Section to a row of test tubes containing cultures of the varieties of bacilli found, and also exhibited microscopic slides of certain forms.] It is clear then (the speaker continued) if our results are trustworthy that certain non-pathogenic organisms (or their spores) are able to survive the process of baking. Reasoning by analogy we arrive at the important inference that pathogenic organisms (or their germs) may also survive the ordeal of the baker's oven. We have made numerous experiments with pathogenic organisms but are unable as yet to publish results. If our contention that bacteria (or their spores) may retain their vitality in the freshly-baked loaf this fact would at once place the regulation of bakehouses on a different footing. Sewage pollution of such a place would mean that bread might be sent out to consumers charged with specific organisms. In conclusion we may say that there is no particular reason, so far as we can see, why the origin of many mysterious septic invasions of the human body may not eventually be traced to the agency of bread. A generation ago milk was not suspected of spreading disease. At any rate the subject seems to us well worthy the attention of those who are interested in the scientific development of preventive medicine no less than in the protection of the public than that of the consumer of bread.

The President acknowledged their indebtedness to Dr. Walsh for his contribution on this important subject.

Mr. George Brown (London) had been under the impression for many years it was to the bread supply of the public they must look for the causation of many cases of outbreak of disease, especially sporadic outbreaks of intestinal disease. He had met with many cases of choleraic diarrhœa and troubles of that kind where, after investigating every probable cause, he had come to the conclusion the bread was at fault. He found it was of inferior quality, mouldy, doughy, tenacious, and disagreeable to the taste. Pursuing the question further as to what the bread was composed of he came to the conclusion to put medical officers of health and sanitary officers on the track for finding out means by which very improper food was distributed among the poorer classes of the community, and that was the use of flour which had been kept in warehouses and stores, often damp and very unfit for the storage of food. Wheat would keep in the grain, unless exposed to unfavourable conditions, for many years, but flour began to deteriorate after two or three days, and that went on. Often it was taken from barrels, and had to be cut with a hatchet, and could only be used by mixing it with other flour. It was almost invariably crowded with organisms, vegetable and animal, and it was well known billstickers would not use the flour—they would have fresh ground flour. Yet it was used in poor neighbourhoods. Officers of health should be given power to visit warehouses to examine the flour before it got into the bakers' shops.

After some remarks from Dr. Mackenzie (Wigtownshire), and Brigade-Surgeon-Lieutenant-Colonel Pringle,

Dr. Davies (Bristol) remarked that the importance of the supervision of bakehouses had not escaped the attention of the sanitary authorities of most, if not all, the large towns. In Bristol they commenced systematic inspection in 1884. Then there were 342 cases necessitating special action being taken in consequence of their dirty condition, defective drains, defective repairs, and other circumstances. The number had decreased steadily year by year, and last year there were only thirty-six of such matters requiring to be dealt with.

Dr. T. W. Hime (Bradford) thought flour might of course be bad, but the evidence was not forthcoming that specific disease had been produced by its use. He did not think Mr. Brown had given them reason to suppose flour, as it came from America, Hungary, Turkey, and elsewhere, was anything but perfectly useful food. Micro-organisms might be present, but he need not remind the Section they could not live without them. They were as essential to human existence as the atmosphere.

After some remarks from the President,

Dr. Walsh, in reply, said the paper dealt with non-pathogenic organisms only. They had not proved bad results by clinical observations. They had only taken the preliminary step in the inquiry. As to Mr. George Brown's remarks and his suspicion that sporadic outbreaks of disease—especially of diarrhœa—should be ascribed to bread, he would

say a moist sour loaf meant that the person who ate it was taking bacteriological products, and there was a tendency to trace dyspeptic and other troubles to these matters. He believed Mr. George Brown's remarks went to the root of the matter when he spoke of the flour. He (Dr. Walsh) believed flour deteriorated from the moment it was ground.

THE AERIAL CONVECTION OF SMALL-POX.

Dr. ARNOLD EVANS (Bradford, Yorkshire) read a paper upon the aërial convection of small-pox. He first handed to members present at the Section some tabulated figures, by which he said they would be guided when they were listening to his paper.

Table showing incidence of Small-pox on Houses during Epidemic of 1893.

Rate per 100 Houses in each Area.

Whole of Borough.	Special Area.	Other Parts outside Special Area.
1.6	3.6	0.6

No. of cases remaining in Hospital.	Period. Fortnight ending 1892	Within 1 Mile of the Hospital. Houses becoming Newly Invaded. Total such Houses.	Of which Situated. Under ¼ Mile from Hospital.	In Ring ¼ to ½ Mile from Hospital.	In Ring ½ to ¾ Mile from Hospital.	In Ring ¾ to 1 Mile from Hospital.	The Same in Rates per Cent. of Houses. Rate on Total Houses.	Rate on Houses ¼ to ½ Mile.	Rate on Houses ½ to ¾ Mile.	Rate on Houses ¾ to 1 Mile.	Whole of the Borough.
4	Jan. 14	3	—	1	2	—	0.01	—	0.02	0.02	—	0.00
7	,, 18	1	—	—	—	1	0.00	—	—	—	0.02	0.00
10	Feb. 11	4	—	2	2	—	0.02	—	0.05	0.02	—	0.00
12	,, 25	2	—	1	1	—	0.01	—	0.02	0.01	—	0.00
11	Mar. 11	2	—	1	1	—	0.01	—	0.02	0.01	—	0.00
10	,, 21	5	1	—	4	—	0.02	0.06	—	0.05	—	0.01
34	April 8	3	1	—	2	—	0.01	0.06	—	0.02	—	0.00
31	,, 22	11	3	2	5	1	0.06	0.18	0.05	0.06	0.02	0.01
43	May 6	27	11	7	4	5	0.15	0.70	0.19	0.05	0.11	0.02
91	,, 20	31	7	7	11	6	0.18	0.45	0.19	0.14	0.13	0.02
97	June 3	19	8	4	6	1	0.11	0.51	0.11	0.07	0.02	0.01
108	,, 17	33	9	16	5	3	0.19	0.57	0.45	0.16	0.06	0.01
79	July 1	25	8	10	2	5	0.14	0.51	0.28	0.02	0.11	0.10
55	,, 15	13	3	6	2	2	0.07	0.19	0.16	0.02	0.04	0.01
56	,, 29	34	13	9	8	4	0.19	0.83	0.25	0.10	0.08	0.03
68	Aug. 12	18	8	5	3	2	0.10	0.51	0.14	0.13	0.04	0.02
58	,, 26	20	5	7	7	1	0.11	0.32	0.19	0.09	0.02	0.01
66	Sept. 9	35	11	16	7	1	0.20	0.70	0.45	0.09	0.02	0.01
12	,, 23	36	10	20	4	2	0.20	0.63	0.56	0.05	0.04	0.01
7	Oct. 7	54	17	26	9	2	0.31	1.10	0.73	0.11	0.04	0.02
161	,, 21	35	10	11	9	5	0.20	0.63	0.31	0.11	0.11	0.18
12	Nov. 4	30	7	12	10	1	0.17	0.45	0.33	0.13	0.02	0.03
176	,, 18	101	15	48	28	12	0.58	0.96	1.30	0.36	0.26	0.04
122	Dec. 2	40	6	12	19	3	0.23	0.37	0.33	0.25	0.06	0.04
82	,, 16	28	9	13	5	1	0.16	0.57	0.36	0.06	0.02	0.01
38	,, 30	16	—	8	7	1	0.09	—	0.22	0.10	0.02	0.00
		626	162	242	163	59	3.6	10.4	6.8	2.1	1.00	

Continuing, Dr. Evans said: It is, I think, admitted that the presence of a hospital for the isolation of cases of small-pox is, during the period of its operations, often attended by an unusual and continued prevalence of the disease in its vicinity. The moot point is the manner in which such disease is carried, for conveyed in some way or other from the hospital it assuredly is. Those who do not believe in the direct convection of the germs of the disease through the atmosphere endeavour to explain the continued prevalence of the disease around such a hospital by pointing out the many possible channels of conveyance by the passing to and fro of the members of the hospital staff and callers of one kind or another. It is not my intention here to address you on the general question of the influence of small-pox hospitals, nor to bring under your notice the investigations of Power and others who have worked on the subject, but to put before you as briefly as possible the conclusions to which I have been led by a study of the incidence of small-pox during the epidemic in Bradford in the year 1893. The Bradford Fever Hospital, which was used during the greater part of

No. of cases remaining in Hospital.	Period. Fortnight ending 1893.	Within 1 mile of the Hospital, Houses becoming newly invaded. Total such houses.	Of which situated in four quadrants of ¼-mile zones. North-East.	North-West.	South-East.	South-West.	The same in rates per cent. of houses. Rate on total houses.	Four ¼-mile quadrants. North-East.	Four ¼-mile quadrants. North-West.	Four ¼-mile quadrants. South-East.	Four ¼-mile quadrants. South-West.
4	January 14th	3	—	1	—	2	0.01	—	0.01	—	0.03
7	,, 18th	1	—	—	—	1	0.00	—	—	—	0.01
10	February 11th	4	2	1	1	—	0.02	0.12	0.01	0.02	—
12	,, 25th	2	1	—	1	—	0.01	0.06	—	0.02	—
14	March 11th	2	—	2	—	—	0.01	—	0.03	—	—
19	,, 25th	5	—	3	2	—	0.02	—	0.04	0.05	—
24	April 8th	3	—	2	1	—	0.01	—	0.03	0.02	—
31	,, 22nd	11	—	6	2	3	0.06	—	0.08	0.05	0.05
43	May 6th	27	7	7	1	12	0.15	0.12	0.11	0.02	0.29
91	,, 20th	31	3	12	4	12	0.18	0.18	0.19	0.10	0.20
97	June 3rd	19	2	5	2	10	0.11	0.12	0.08	0.05	0.17
108	,, 17th	33	5	14	5	9	0.19	0.20	0.23	0.13	0.15
82	July 1st	25	—	12	6	7	0.14	—	0.19	0.16	0.11
67	,, 15th	13	1	4	4	4	0.07	0.06	0.06	0.10	0.06
86	,, 29th	34	—	13	6	15	0.19	—	0.21	0.16	0.25
66	August 12th	18	—	6	6	6	0.10	—	0.09	0.16	0.10
58	,, 26th	20	2	5	11	2	0.11	0.12	0.08	0.30	0.03
66	September 9th	35	9	2	22	2	0.20	0.54	0.03	0.60	0.03
12	,, 23rd	36	4	3	19	10	0.20	0.24	0.04	0.51	0.17
7	October 7th	54	8	4	25	17	0.31	0.48	0.06	0.68	0.29
161	,, 21st	35	8	10	8	9	0.20	0.48	0.16	0.21	0.15
12	November 4th	30	7	8	8	7	0.17	0.42	0.13	0.21	0.11
176	,, 18th	101	46	11	34	10	0.58	2.80	0.18	0.93	0.17
122	December 2nd	40	10	8	8	14	0.23	0.60	0.13	0.21	0.23
82	,, 16th	28	2	2	13	11	0.16	0.12	0.03	0.35	0.18
38	,, 30th	16	4	4	4	4	0.09	0.24	0.06	0.10	0.06
		626	116	145	193	172	3.64	7.06	2.40	5.28	2.93

the year for the isolation of small-pox, is pleasantly situated on an eminence on the eastern side of the town, and is about 400 feet above the sea level. It covers about 11½ acres of ground. Although occupying a comparatively isolated position twenty years ago when it was built, it is now closely surrounded except on the northern side with houses inhabited by the working classes; indeed, during the last three years building operations in this neighbourhood have been very active; one mile area contains over 17,000 houses. The hospital buildings consist of an administration block and four one-storeyed pavilions connected by a covered corridor. There is also a detached block containing six wards so arranged that four can be used for any one disease, and two for isolation purposes. The outbuildings consist of steam laundry, mortuary, stable, and coachhouse, and disinfecting house fitted with Lyon's steam disinfector. There was, however, completed about the commencement of 1892 another block of buildings specially designed for the safe isolation of small-pox. It consisted of two wards placed side by side and so arranged that the vitiated air from the wards was drawn out by a central flue and passed through a furnace before being allowed to escape into the external atmosphere. Of this, however, I have given a description elsewhere, and do not propose to dwell further upon it. These special wards were only a very short period in use for small-pox before it was found necessary to use the ordinary wards for the same purpose, and I have no evidence to show whether or not the arrangement was a safe one. As to the prevalence of small-pox around the hospital in pre-

vious years, I have not been able to gather any reliable information. There does not appear to have been any considerable number of admissions since the year 1874, during which year there were 249 cases under treatment. A reference to the hospital register shows that infection of patients under treatment for scarlatina was not an uncommon occurrence, but in many of the entries the address of the patients is either indefinite or the houses referred to have been pulled down or the name of the street changed. During 1890 and 1891 the borough of Bradford was quite free from small-pox, not a single case in these two years coming to my knowledge. It was not until May, 1892, that the first case of the recent epidemic appeared. From May to the end of the year there occurred 23 cases, most of them being found either in common lodging houses or in the casual ward of the workhouse. During the first quarter of 1893 isolated cases cropped up, most of them, it is true, occurring in the one-mile radius, but not in numbers large enough to attract attention to the hospital as being the disseminator of the disease; indeed, the greater number of the cases were those of tramps admitted from common lodging houses. In all 35 cases were admitted to the hospital, and treated in the wards specially built for the purpose at a distance of about 90 yards from the nearest scarlatina pavilion. Up to this time there had been no communication of small-pox to patients under treatment for other diseases. However, the cases of small-pox became too numerous for the limited number of beds in special hospital, and on April 1st one of the ordinary wards was opened for small-pox. Three weeks later we heard that a patient discharged cured of scarlet fever had commenced with small-pox about four days after leaving the hospital, consequently it was decided to admit no more cases of scarlatina or typhoid, but to use the whole hospital solely for small-pox; and it was entirely clear of fever patients on June 7th, not, however, before two of them had become infected with small-pox. It was not till after the week ending April 29th that suspicion pointed to the hospital as being concerned in the rapid extension of the disease which was now taking place. During this week 20 fresh cases came to my knowledge, 15 of which were located in the one-mile radius. From this time onwards until admission of small-pox to the fever hospital was discontinued the chief incidence of the disease was in the special area. On May 1st there remained 43 cases under treatment, and 37 fresh cases had been admitted during the preceding fortnight, of which 26 came from the one-mile area; 35 houses had become newly invaded, 27 of which were in the special area and 18 within a half-mile radius of the hospital. During the next fortnight, at the end of which there remained 91 cases in hospital, 58 houses had become newly invaded, of which 31 were situated in the one-mile area, giving a percentage of invaded houses of 0.18 for the special area as compared with 0.02 per cent. for the whole borough, and a reference to Table II shows that the percentage of newly-invaded houses, which is greatest in the quarter-mile zone, gradually diminishes as we pass from centre to periphery of the special area during most fortnightly periods for the remainder of the year. The figures for each successive fortnight present a remarkable similarity. They clearly show that for the houses situate in close proximity to the hospital there is a much greater probability of their becoming infected with small-pox than those more remote. In consequence of the continued prevalence of the disease in the neighbourhood of the hospital the sanitary authority determined to erect a temporary hospital for small-pox on a site as sparsely populated as it was possible to find. Accordingly a suitable piece of land already in possession of the Corporation, situate on the west side of the town, was selected, and accommodation for 40 cases was provided by the first week in July. Unfortunately during that week there was a sudden and extensive outbreak of scarlatina due to infection of milk, and great pressure was brought to bear on the sanitary authority to take into this hospital some of these cases. In accordance with this request and in view of the fact that the small-pox cases had during the past fortnight not been quite so numerous as formerly, the new hospital was appropriated for scarlatina. Small-pox was still admitted to the old hospital, which, during the latter part of July and August, seemed to be as much a centre of infection as before. It was now determined to admit no more scarlatina to the temporary hospital, but to empty it as quickly as possible, and use it for the isolation of small-pox. It had in the meantime been extended, the number of beds being increased from 40 to 63. On September 8th the newly-reported cases of small-pox were removed to the temporary hospital, those that were already admitted to the old Fever Hospital being permitted to remain there to be discharged as soon as they were considered free from infection. Towards the end of the month a more healthy state of things was observed to be setting in around the old Fever Hospital, when unfortunately, on October 2nd, a great disaster occurred; a large part of the temporary hospital was destroyed by fire. This necessitated the transference of 45 cases to the old Fever Hospital, and the further admission of any new cases afterwards occurring. Although those attracted to the spot by the fire were kept at a distance of at least 50 yards from the burning building, yet that the fire was in a great measure the disseminator of the disease is sufficiently proved by the fact that the number of newly-invaded houses outside the special area during the fortnight ending October 21st numbered 59, the average for the three fortnights preceding being 5.7. The majority of these newly-invaded houses were within one mile of the recently destroyed hospital, and about three-fourths of the patients removed from them admitted having been present as onlookers at the fire. The temporary hospital was rebuilt, and again opened for small-pox on December 4th, and from this date towards the end of the year, with the exception of slightly increased prevalence in the vicinity of the temporary hospital, the epidemic showed indications of quickly subsiding. The sequence of events as I have narrated them, supported by a careful perusal of Table II, make it, I think, sufficiently clear that an abnormal prevalence of small-pox existed in the one-mile radius around the Leeds Road Fever Hospital during the time that it was being used for the isolation of small-pox; also that on the cessation of its operations, whether temporary or permanent, the incidence of small-pox in the same area underwent a marked decrease; that there was occasioned by the fire at the Scholemoor Hospital an increased prevalence of the disease in that locality, although the crowd of onlookers was kept at a distance of about 50 yards by a cordon of police. It remains now to consider in what manner the serious spread of the disease can be best explained. There is, of course, the possibility that the hospital staff may have carried away the disease to houses visited by them when on leave of absence. I am not prepared to say that such was not the case; in fact, I can mention three instances at least in which such communication of the disease appeared to have taken place. One case was that nurse who was sent away temporarily on account of ill-health; she visited her family at a distance of about forty miles from Bradford, with the result that on the sixteenth day after her arrival at her mother's house her mother was attacked with small-pox, and during the next week two more of her relatives sickened with the disease. There was no small-pox at the time in the town to which she went. Prior to her departure from the fever hospital all her clothing was disinfected by steam, and she herself had been disinfected by taking baths containing bichloride of mercury. Another case was that of a household infected probably by a Roman Catholic priest, who usually made a call at the house on his way to the hospital, but, on one occasion, finding the house closed, he called after leaving the institution. On the twelfth day after this visit two members of the family sickened with small-pox. A third instance was that of a wardwoman who absented herself without permission, and stayed one night at the house of her daughter, who on the fourteenth day afterwards commenced with small-pox, and had a very severe attack: but the occurrence of a few isolated cases of this kind will not explain the existence of the large proportion of cases occurring in the special area. It is well known that the members of the hospital staff have on several occasions conveyed infectious diseases other than small-pox to their friends, yet there has been no such outburst of these diseases in the neighbourhood of the hospital, as happened during the epidemic of small-pox. And if the disease had been extensively spread by tradesmen and other callers at

the administration block of the hospital, or the ambulance had distributed the disease broadcast, it would have been an extraordinary circumstance, as pointed out by Dr. McVail, that the "houses to which these infected people returned should have been arranged in numbers diminishing regularly according to the distance from the hospital to which the van was travelling." As a matter of fact, the streets habitually traversed by the ambulance on its way to the hospital gate were situate on the western side, and the number of infected houses during the whole of the epidemic was nearly 100 per cent. greater on the eastern than on the western side of the hospital. Nor can it be said that patients were discharged from the hospital before being free from infection. The cases were kept under treatment till all crusts had disappeared and the skin was quite smooth. Prior to discharge their clothing was disinfected by steam and they themselves well washed in a bath containing a solution of perchloride of mercury. The average stay of a patient in hospital was thirty-three days. Throughout the whole of the epidemic there occurred no case that could be compared with the well-known "return" cases of scarlatina, although many members of an infected household refused to protect themselves by revaccination. Taking all things into consideration, it seems to me that the most likely manner to account for the extensive prevalence of small-pox over the special area is that the poison was conveyed aërially direct from the wards of the hospital. I think at least one confirmatory circumstance in favour of this view can be adduced by a study of the meteorological conditions prevalent throughout the year. The circumstance to which I refer is the direction of the prevailing winds. In order to demonstrate the influence exerted by the wind in determining which side of the hospital shall receive for the longest period the infected air from the hospital wards, I have divided each quarter-mile zone of the special area into quadrants, by drawing lines north and south, and east and west, and have got out the percentage of infected houses in each set of four quadrants, which are therefore placed N.E., N.W., S.E., and S.W. of the hospital. A glance at the bottom line of figures in the table shows that in the N.E. quadrant 7·06 per cent. houses were infected; N.W., 2·40 per cent.; S.E., 5·28 per cent.; S. W., 2·93 per cent. A further calculation also shows that the percentage of infected houses in the special to the east of the hospital amounts to 5·6 per cent. as compared with 2·9 per cent. on the west side. These figures are, I think, readily explained by the fact that on 250 days of the year the prevailing winds were westerly, and only on 83 days was the wind persistently from the east. The table further shows that during the first half of the year, when easterly winds were more common than during the second half, the proportion of cases occurring on the western side of the hospital was relatively greater than during the remainder of the year, when east winds were less frequent.

SOME LESSONS TO BE LEARNT FROM AN EPIDEMIC OF SMALL-POX IN AN ILL-VACCINATED COMMUNITY.

JOSEPH PRIESTLEY, M.D., D.P.H. (M.O.H. Leicester) said: At present the tendency of some boards of guardians is to allow the vaccination laws to become dead letters. The favourite excuse offered is that, pending the report of the Royal Vaccination Commission, they do not feel justified in enforcing the laws of the land—a process of reasoning it is somewhat difficult to follow, more especially in the case of men who are appointed to carry out such laws.

Passing over, however, such human inconsistencies, passing by the unfortunate delay in the issuing of the Commission's report—a report, by the way, which, I feel sure, be it what it may, will not influence in one iota some (if any) of the strongholds of antivaccination—it seems to be a favourable opportunity to bring forward a few suggestions as to the lines of action that must be taken by such health officers as may be the advisers of sanitary authorities, who do not see their way, whether from a view of policy or benefit, to enforce such vaccination laws. Such lines of action are at once apparent if we study the history of a small-pox epidemic in an unvaccinated or, as fortunately only exists at present, a semi-unvaccinated community. Leicester is such a semi-unvaccinated community (not yet wholly unvaccinated, thank heaven!), and has lately suffered from a limited epidemic of small-pox, and the lessons to be learnt by all are interesting and will, I feel sure, be of advantage, if studied at a meeting such as the present and by practical health officers such as I see before me.

I divide my paper into various sections, not only as a matter of convenience for myself, but to enable those of you who wish to take part in the discussion to deal with the subject-matter of one or more sections of this somewhat complex subject, our time being limited. In the remarks which I am about to make, it must be distinctly understood that I am referring to Leicester's recent experience, quoting her statistics and drawing my inferences strictly therefrom.

SECTION I.—VACCINATION AND REVACCINATION.

The value of vaccination and revaccination in modifying and preventing small-pox attacks is the first great lesson to be learnt. Primary vaccination (efficiently performed) is a preventive against small-pox in early childhood (that is, under 7 to 10 years), and even in adult life would appear to exert its influence for good in the way of modifying (for example, aborting) small-pox attacks. Out of 347 cases of small-pox at Leicester, there has not been a single case of a vaccinated child under 10 years of age treated for small-pox at the hospital. Two vaccinated children under 10 years were taken to the hospital and watched, but they were found not to be suffering from small-pox at all. It is absurd to state that there are no vaccinated children under 10 years in Leicester, for out of a total of 362 children who passed through our quarantine 91, that is, 25 per cent., were vaccinated. It is equally absurd to classify as "vaccinated" children those who were vaccinated during incubation, that is, after they had actually contracted the small-pox. Yet such are some of the arguments that have been used against my statistics by the antivaccinators!

Again, amongst the 347 cases, 15 struck me forcibly, as showing the beneficial effects of primary vaccination, even extending into adult life. In these 15 cases the spots aborted in a very characteristic manner, so much so that, seeing the patients on the second or third day of the rash, they appeared to be suffering from severe confluent small-pox, their faces all swollen, and the spots apparently commencing to maturate. A few days afterwards, however, the appearances presented are very different; the spots have aborted, the temperatures are normal, and what appeared serious cases are now practically convalescent. Such changes have only occurred in cases that have been primarily vaccinated, as shown by definite scars on the arm or arms. Can this possibly be only a coincidence? Is it possible that this branding of these particular patients means nothing: that the effects of the inoculation of vaccine virus completely passes away in a year or two; and that the blood of the person inoculated is then unchanged, giving no degree of immunity against the germs of small-pox? Surely such an idea is contrary to all bacteriological experience. These characteristic changes are more pronounced than and distinct from, those that take place in the ordinary aborted cases such as have occurred in the majority of the well vaccinated and in a few (7.8 per cent.) of the vaccinated patients.

It is indeed, I think, a fortunate fact that, even in antivaccination centres, the adult population is for the most part semi-protected. Certain towns may not always be so fortunate. There is a large unprotected young generation growing up so that the time may come when there will be a much larger unprotected element than at present—unvaccinated children and unvaccinated adults. When such comes to be the case, sanitary authorities must at all times not only be well prepared to act, but must be made to act. This leads me to Sections II and III. most important ones, requiring the careful consideration of all, vaccinationists as well as antivaccinationists,

SECTIONS II AND III.—ISOLATION, DISINFECTION AND QUARANTINE.

Isolation, disinfection, and quarantining are important allies in fighting against the small-pox foe, but such allies must be staunch, always at hand, and ready to be called into action at any time. Isolation must be compulsory, disinfection must be compulsory, quarantining must be compulsory; nor are these compulsory measures of use unless they are preceded by the compulsory notification of infectious diseases and the compulsory provision of proper and suitable

isolation hospitals, not only in large centres of population but universally. This picture of compulsory everything will, I am afraid, not suit certain sections of the community; indeed, it will be considered a little hard for them to have to give up one compulsory ill (vaccination), and fly to others they thought not of. Still, it will have to be done—the leek will have to be eaten—even by the anti-everything section of the community, if small-pox epidemics are to be successfully grappled with in unprotected communities.

The present epidemic wave, 1892-4 has forcibly shown one thing—the utter unpreparedness of many authorities, urban and rural, for thus grappling with small-pox. Tents, sheds, barns, shanties, all sorts and conditions of isolation hospitals, have been put up on any plots of land which could be got hold of; money has been spent lavishly, but not in all cases wisely; indeed, there has been an almost general stampede amongst sanitary authorities, no doubt in their laudable endeavour to act promptly. All this precipitate action has, as a rule, failed to stem the epidemic tides, so that it must be remembered in future that what is needed is:

1. A notification Act, well carried out.
2. An isolation hospital, situated well away from inhabited houses.
3. Efficient means of disinfection.
4. A carefully planned system of quarantine or medical inspection.

The subject of quarantining is important and is a branch of our subject that must be not only carefully but rigorously carried out. By "quarantines" are meant practically persons in small-pox infected houses, for it is clear that such inmates must, more or less, have been exposed to the contagium. Such persons may be quarantined (1) in separate hospital wards and reception houses specially provided, —a method, by the way, I do not recommend, whether from a point of view of economy or practicability; or (2) at their own homes, —a method I have found satisfactory, both financially and otherwise.

The incubation period of small-pox varies from twelve to fourteen days (inoculation small-pox may be somewhat less), and it must be remembered that infection may take place not only (if at all) during the period of scabbing but also in the early stages of the disease, even in the pre-eruptive stages, when the patients have the backache, headache, high temperature, sickness with occasional vomiting of yellowish material like yolk of an egg, and that peculiar smell (? sweat) which is so characteristic. Such being the case difficulties in the way of promptly isolating cases may arise and thereby prevent the rapid stamping out of an epidemic. "Quarantines," therefore, who complain of any symptoms about the end of the second week of their quarantining ought to be carefully isolated and watched medically, so that they may be removed instantly to the small-pox hospital, that is, as soon as the diagnosis is certain. For such a purpose a proper system of isolation or watch wards is all important—wards or places in which doubtful quarantine cases can and must be placed pending their developing definite small-pox symptoms. The value of quarantining has been well shown during the Leicester epidemic, and I have been able, with care, by means of my inspectors, to quarantine hundreds of persons at their own homes with a success that has been gratifying both financially and otherwise: 1,261 persons were quarantined, and of these 123 sickened, that is, 9.7 per cent. Each infected house was visited daily by one or other inspector for fourteen to sixteen days, and they reported any sickness to me at once. Other persons who had come into contact with small-pox were also watched in the same way.

These "quarantines" are strongly urged not to go to work for the whole or part of their quarantine period of fourteen to sixteen days, and during that time have been made such monetary allowances as the committee have thought fit, the sum advanced in each case being no more than sufficient to cover rent and maintenance. In the event of clothes, bedding, etc., being destroyed, fresh ones have been provided. The "quarantines" were allowed to go about, but were advised not to enter anybody's house, any public institution or meeting, under penalty of forfeiting their monetary allowance. The working expenses of this system were less than 2s. 3d. per head per adult weekly. At first we quarantined in special wards at the hospital, and the expenses were 25s. per head for an adult and 12s. 6d. per head for a child weekly. The contrast is striking.

Such, then, are the means by which our small-pox epidemics will have to be stamped out, and it is interesting in this peep into the future to note that, though anticompulsory vaccination may become a thing of the past, anticompulsory notification, anticompulsory isolation, anticompulsory disinfection, anticompulsory quarantining must of necessity spring up, and the various societies and leagues for the carrying out of such anticompulsories come into being. Where their headquarters may be is another matter: suffice it, however, to say that I sincerely hope not in Leicester; for personally I am satisfied on one point, and that is that unless such compulsory means of battling with small-pox are at hand sanitary authorities will be baffled in their endeavours to carry out their duties in grappling with small-pox epidemics. This picture of "compulsory everything" makes me at least shudder, and ought, I think, to make the foreshadowed minority on the Royal Vaccination Commission pause before committing themselves to a line of action that will certainly be difficult to have carried out. Compulsory vaccination and its interference with the liberty of the subject fade into insignificance comparatively.

Section IV.—Smallpox in Unvaccinated Subjects.

Under Section IV I propose to deal with the subject of the treatment of small-pox in unvaccinated subjects, more especially contenting myself by giving a few general conclusions drawn from Leicester's experience, conclusions which cannot fail to be accepted by all who have had any experience in the actual treatment of small-pox cases.

(*a*) Length of stay in hospital (under 10 years): Vaccinated, 14·5 days; unvaccinated, 47.3 days. Ten years and over: Vaccinated, 28.6 days; revaccinated, 26.8 days; had previously small-pox attack, 14.0 days; unvaccinated, 44.2 days.

(*b*) Complications arising in the course of the disease (under 10 years): Vaccinated, 0 per cent.; unvaccinated, 64.7 per cent. Ten years and over: Vaccinated and revaccinated, 23.1 per cent.; unvaccinated, 66 per cent.

(*c*) Tendency to abscess formations (under 10 years): Vaccinated, 0 per cent.: unvaccinated, 49.5 per cent. Ten years and over: Vaccinated and revaccinated, 2.1 per cent.: unvaccinated, 44 per cent.

(*d*) The severity of the disease in the unvaccinated. 11.2 per cent. of the vaccinated and 88.7 per cent. of the unvaccinated were severe, whilst of these unvaccinated 26.1 per cent were of a malignant or semimalignant type—that is, were accompanied with extravasations of blood in various parts of the body—for example, the skin, lungs, eyes, etc.—Leicester's unvaccinated children suffered the most severely, 88 out of 105 were severe or very severe, 16 dying.

(*e*) The all-importance of a stimulating treatment (for example, quinine and alcohol). My Leicester death-rate was only 4.3 per cent., though the severity of my unvaccinated cases was striking. My unvaccinated death-rate was only 12.3 per cent., though the type of the cases was very severe.

Section V.—The Nursing of Smallpox Cases.

This section must be devoted to what may eventually become an important consideration—namely, as to who will be found, or who must be made, to attend upon small-pox patients in hospital. I need not remind my present audience of the all-importance of revaccination of all hospital (small-pox) staffs, nor need I weary you with the extraordinary statistics of Leicester on this point—statistics which I have already published, and which my antivaccinating friends have found it impossible to dispose of, save only by the simple, but hardly satisfactory, method of denying them. If the time should again come when everybody is unvaccinated, what will have to be done? The answer is an easy one—namely, fall back upon those who are protected, not by vaccine virus (a method which is simplicity itself, and harmless), but by a previous attack of small-pox, as shown by extensive pitting and scarring (a method which is not only harmful, but may be attended even with death). For if there is one fact more certain than another, it is that the danger attendant upon the nursing of small-pox by unprotected subjects is enormous, and may de described as suicidal, or

(shall we say) such an act would be criminal on the part of those who might engage them. I feel sure that few, if any, even antivaccinating authorities, will dare to send totally unprotected nurses into small-pox wards; certainly no intelligent medical officer or superintendent would be found to do such a mad thing.

SECTION VI.—THE UNVACCINATED ELEMENT.

Had time permitted I was going to deal at some length with the unprotected element under 10 years of age, a susceptible material which is enlarging in many centres in England and elsewhere. I will, however, content myself with saying that such an element is Leicester's weak point, and has proved so during our recent epidemic, the unvaccinated children under 10 having suffered eighteen times as much as the vaccinated of the same age period.

I have endeavoured in the short time allowed me to sketch out the future unvaccinated communities, pointing out the lines of action that must of necessity be adopted, if we desire to effectually deal with small-pox epidemics. I have pointed out the important *rôle* that compulsion will have to play, and how the liberty of the subject will have to be seriously interfered with; how communities will be always in part "protected," as shown by small-pox pittings that will be left on some of the individuals; what important and responsible officials the medical officers of health will become; how necessary it will be for authorities to be at all times prepared and ever watchful for a small-pox outbreak; how antinotification, anti-isolation, antidisinfection, antiquarantining, anti-everything societies must crop up.

And now in conclusion let me add that personally I have a feeling of intense relief when I remember that I can never be a medical officer of health in a purely unvaccinated community—be the antivaccination movement ever so prosperous—as fortunately there is still a large semi-protected adult population, and a generation at least must pass away before the antivaccinator's millennium appears. I cannot, however, refrain from feeling pity for the medical officers of health yet to come, at the same time rejoicing that my lot has been cast in the nineteenth century.

[The papers of Dr. Evans and Dr. Priestley were discussed together.]

Brigade-Surgeon-Lieutenant-Colonel PRINGLE remarked that what they had heard was one of the most serious matters that could possibly be laid before the public, and at a meeting like that. If these statements regarding the spread of small-pox at Bradford were supported as they had been by such evidence as they had heard, it exhibited one of the most appalling conditions of unpreparedness in the country for resisting small-pox they could possibly imagine.

Dr. SLADE KING (Ilfracombe) mentioned an instance bearing out Dr. Evans's theory. In the town of Crediton last year small-pox was imported. There was no proper mode of isolation and hospital tents were borrowed from Exeter for three cases. They were erected in a field. It was not an uncommon thing in the neighbourhood of Okehampton for parties of Royal Artillery to march out and encamp there. On the Saturday following the erection of the hospital tents the boys from the national school believing these tents were the tents of the Royal Artillery, ran down to a neighbouring field, a considerable distance away from the hospital tents, and there played. The wind was blowing in the direction from the tents to them. An outbreak of small-pox occurred among the lads, and among the lads alone 25 cases were notified within a fortnight of their playing there.

After some remarks from Dr. HEAVEN,

Dr. VOIGT (Hamburg) remarked that the only thing they could do to meet small-pox was to revaccinate the public. In Germany they had revaccination, and were wholly protected, although surrounded by people who had no compulsory vaccination—Russia, France, Switzerland, and Holland, all countries infected with small-pox. Germany had many travellers from these countries, yet small-pox did not at all spread in any great manner, and the returns showed the cases of that disease to be very few, bearing in mind there was no natural frontier such as England had.

Dr. DAVIES remarked that their experience in Bristol was that just as infant vaccination protected thoroughly for a certain time, and less thoroughly for a certain time further, so, possibly, with revaccination. People again became susceptible to attacks, so revaccination must have a limit to its protection.

Dr. HIME said small-pox was essentially a disease of childhood. If they tided over early life they were much less susceptible in later life. Infantile vaccination was often imperfectly done. With a greater number of inoculations their chances of success were greater. He asked whether the area around the hospital at Bradford was not a very poor area—a large part of it, at all events, wretched slums, where people got every kind of disease?

The PRESIDENT said the effects of revaccination were much more permanent than they were apt to suppose. In 1871 in the metropolitan hospitals they had over 17,000 cases treated and there were only 4 revaccinated cases.

Dr. EVANS, replying, said the kind of people living in the area he had indicated was good, bad, and indifferent. One part of the district contained rather bad slums, but another part was composed of very good and many of them newly-built houses of the working classes. Vaccination varied in equal degree. As to vaccination, up to a few years ago Bradford was a fairly well protected town, but owing to the lectures of antivaccinators the proportion of unvaccinated had been gradually increasing and now there was 20 or 30 per cent. of children unvaccinated.

DIPHTHERIA: IMPORTANT COMMUNICATION FROM NEW YORK.

The PRESIDENT introduced Dr. Hermann M. Biggs, of the New York bacteriological department, who, he stated, had a communication to make which they would be pleased to listen to.

Dr. BIGGS first explained that in New York physicians were supplied from the bacteriological division of the Health Department of New York with a culture outfit, and there were forty stations where these could be obtained with explicit directions for their use. The culture medium was blood serum, and physicians were instructed in a case of diphtheria or suspected diphtheria to apply a cotton-wool swab, part of the outfit, to the throat or other organs of the patient, and rub the swab on the culture material. The inoculated cultures were collected by the bacteriological department, taken to the laboratory, put into an incubator, and left until the following morning, about twelve hours. They were then microscopically examined and a written report forwarded to the physician, and also a report to the health officer for the district in which the case occurred. Six thousand primary examinations were made of cases, and of secondary and subsequent examinations 5,000 or 6,000 more. They found that one important means of disseminating diphtheria was from the convalescent cases of diphtheria. For long periods after the disease had entirely disappeared, when the patient was perfectly well in appearance, and, mingling with other children, there were still virulent organisms in the throat. These remained from two or three days up to seven weeks after the disappearance of the membrane. Seven weeks after complete convalescence virulent organisms would be found still existing in the throat. These tested by experimentation were proved to be as virulent as at the height of the disease. After these observations had been made on a considerable number of cases the rule was adopted by the health department requiring second or subsequent bacteriological examinations in every case before it was discharged from observation. Disinfection was not done until that second bacteriological examination, or the third or fourth, as the case might be—sometimes as many as seven or eight if there was the continued presence of organisms in the throat—showed the patient free. The average examinations were about fifty a day. After a very short time the work became of such a routine character as to be extremely simple. Men with little training in bacteriology, and with some training in microscopical work, did perfectly well in these examinations, and the reliability was such that errors were very few. Two of the official documents in use in New York were shown. They were as follows:

HEALTH DEPARTMENT.

No. 301, Mott Street,
New York..... 188...

Division of
Pathology, Bacteriology
and Disinfection,
No. 42, Bleecker Street.
(Telephone, 1,191 Spring.)

To
Dr.....

Sir:

During the last few months a series of investigations have been made in the bacteriological laboratory of the Health Department, to determine how long the Loeffler bacilli remain in the throat after the disappearance of all false membrane in cases of diphtheria. The results obtained are extremely significant, and have caused the Department to establish a new rule regarding the discharge from observation of patients who have suffered from diphtheria, and regarding the time of disinfection of the premises.

During the past three months 105 cases of true diphtheria have been subjected to repeated bacteriological examinations performed at short intervals during the course of the disease and during convalescence. In all of these cases cultures were made at the beginning of the disease, again after the lapse of three or four days, and finally at short periods after the complete disappearance of the false membrane, until the throat was found to be free from the diphtheria bacillus. In 245 of these 405 cases the diphtheria bacilli disappeared within three days of the complete separation of the false membrane: in 160 cases the diphtheria bacilli persisted for a longer time, namely, in 105 cases for seven days, in 34 cases for twelve days, in 16 cases for fifteen days, in 4 for three weeks, and in 3 for five weeks after the time when the exudation had completely disappeared from the upper air passages. In many of these cases the patients were apparently well many days before the infectious agent had disappeared from the throat. These results show that in a considerable proportion of cases persons who have had diphtheria continue to carry the germs of the disease in their throats for many days after all signs and symptoms of the disease have disappeared. No doubt the disease is largely disseminated by those persons who are apparently well, and who mingle with others while their throat secretions still contain the diphtheria bacilli.

These experiments have led the Health Department to adopt the rule that no person who has suffered from diphtheria shall be considered free from contagion until it has been shown by bacteriological examination, made after the disappearance of the membrane from the throat, that the throat secretions no longer contain the diphtheria bacilli, and that until such examinations have shown such absence all cases in boarding houses, hotels, and tenement houses must remain isolated and under observation. Disinfection of the premises, therefore, will not be performed by the Department until examination has shown the absence of the organisms.

Secondary cultures, as in the case of primary cultures, may be made by the attending physician, if he so desires; otherwise they will be made by the inspector of the district in which the case occurs. This applies only to cases occurring in boarding-houses, hotels, and tenement houses —not to those in private houses.

In this connection an interesting observation has been made showing that in diphtheria cases which have been subjected to frequent irrigation with antiseptic solutions from the beginning of the disease, the bacilli disappear far more rapidly than in those in which such irrigations have not been employed. The Department would feel grateful for any data which the physicians of this city may furnish as to the treatment employed in each case, in order that more reliable conclusions may be reached as to the best mode of treatment.

It has been also noticed that occasionally when culture tubes are inoculated immediately after irrigation of the throat with antiseptic solutions, the cultures do not show any Loeffler bacilli, although subsequent examinations may demonstrate their presence. This observation should be noted in making inoculations.

Very respectfully,
Hermann M. Biggs, M.D.,
Chief Inspector of Pathology, Bacteriology, and Disinfection.

Approved by the Board of Health.

Emmons Clark,
Secretary.

Charles G. Wilson,
President.

Laboratory No. .....

HEALTH DEPARTMENT.

Division of
Pathology, Bacteriology and Disinfection.
Bacteriological Laboratory:
Centre, White, Elm and Franklin Streets.

New York,..... 188 ....

Dr.....

Dear Sir:

The examination of the culture made by inoculating the tube from the throat of .....
..... shows the presence of the diphtheria bacilli.

The case is therefore not yet ready for disinfection, but needs a further culture.

.....
Chief Inspector.

.....
Inspector of Diphtheria.

Dr. Slade King (Ilfracombe).—Is the second examination made of the larynx and pharynx, or are the teeth, tongue, and gums examined?

Dr. Biggs.—In pharyngeal and laryngeal diphtheria from the throat only. Where it is nasal diphtheria secondary examinations are from the nostrils. The organisms remain longer relatively in nasal diphtheria.

A special vote of thanks to Dr. Biggs for his important communications was moved by Brigade-Surgeon-Lieutenant-Colonel Pringle and carried with applause.

Notes on an Outbreak of Bubonic Plague in the British Ghurwal Himalayas in 1864.

Brigade-Surgeon-Lieutenant-Colonel Pringle said that his observations in an outbreak bubonic plague in the British Ghurwal Himalayas in 1864, and his subsequent experience of twenty consecutive years' observation in the Himalayas, led him to believe that, everything else being equal, certain localities alone were liable to outbreaks of this true plague. The disease which proved so fatal under similar conditions of insanitation, in other parts of British and Native Ghurwal was not the true plague but a very fatal type of true typhus fever. During the entire twenty years of Dr. Pringle's experience in native or Tirri Ghurwal, the district which adjoins British Ghurwal to the north-west, not a single case of true plague came to his knowledge, but villages were frequently visited by this fatal type of typhus fever, and though he never saw a village actually abandoned on account of it, yet the terrible evidence of such having been the case in the years previous to 1864 was too frequent and too clear to admit of any doubt. In the cases of this type of typhus fever which came under Dr. Pringle's personal knowledge the thorough ventilation — evidenced by the rapid exodus of the flies — and sanitation of the villages, and the special diet of milk and rice given to the cases, which got over the first shock of the attack, combined with kind treatment and nursing such as it was, acted in a remarkable manner. The evidence of the success of this line of treatment of the locality and patients was such that the ventilation and sanitation part of the treatment, with a view to prevention of the disease, was in many cases carried out by the villagers themselves. The outbreak of the true bubonic plague was described in detail, though the rapidly fatal termination of the attacks, and the mode of disposal of the body in that climate made any remarks the result of personal observation of the fatal cases difficult, while the few recoveries gave but little opportunity of studying the disease to any extent. A remarkable coincidence, however, was pointed out which was in strange contrast to that met with in Hong Kong lately, and that was that the rats in the villages which were attacked beat a hasty retreat from them ere the plague broke out. The villagers fully admitted the value of this warning, though they did not always avail themselves of it. Yet they lost no time in leaving the village when the first case appeared. As the insanitary conditions were local other cases occurred, and what with panic, exposure, and in some cases desertion, the recoveries were very few. Another coincidence noted by Dr. Pringle, which might account for the reluctance of the poor villagers to leave their villages on the rats' warning, and tempted them to entertain the hope that the rats might be false prophets, was the invariable fact that when the villagers left the village the bears entered and took possession of all the grain stored under the thatches. There was therefore not only a question of death, but also one of starvation to be faced. In British Ghurwal the nature of the insanitation at fault was one common to all hill villages, and that seemed to be the housing of cattle in the houses, under the sleeping rooms above, partly no doubt for protection from wild animals; but the unhesitating way in which the villagers stated that one of the objects of this housing was to produce a sufficiently powerful manure, as regards decomposition, for the fields, was ample evidence of the true condition of the grossness of the insanitation present. Stringent orders on this point were not only issued but rigidly enforced, with the result that the outbreak in 1864 was in these districts the last of true bubonic plague. In the adjoining district of Tirri or Native (hence independent) Ghurwal, of which he was the sanitary officer, Dr.

Pringle succeeded in persuading many of the villagers to house their cattle at a distance from the village, and by some other simple method to obtain the special quality of manure they wanted for their fields. If a general system of improved sanitation were impracticable in places like Canton or Hong Kong around the sites of these outbreaks, abandonment of the locality altogether, or for a long period, should be made imperative, as in those places where this disease not only originated it seemed to linger. Dr. Pringle felt certain that there were some obscure local conditions which, after originating the outbreak, aggravated and prolonged the fatal consequences of it.

The Interpretation of Water Analyses.

J. C. Thresh, D.Sc., M.B. (M.O.H. Essex County Council) said: Of the numerous substances found in potable waters, it is now generally admitted that only those of organic origin are a serious source of danger, and that by far the greatest risk is incurred in using water liable to contain certain living organisms, which, when introduced into the system, are capable of producing specific disease. Of the presence or absence of such organisms, chemical analysis can give us no information. The presence of organic matter may be chemically demonstrated, but, inasmuch as its nature, whether poisonous or innocuous, is beyond the power of the analyst to reveal, it is obvious that a mere chemical analysis may often be worthless or even misleading. This point cannot be too strongly emphasised, since the popular impression that the chemist, by performing a few mysterious experiments with a water in his laboratory, can pronounce at once whether it is pure or impure, safe or dangerous, is shared alike by the ignorant and the learned, and must be dispelled. This opinion has been, and continues to be, fostered by analysts, who rarely hesitate to pass judgment upon a water from the determination of the chlorides, nitrates, phosphates, and ammonia, of the organic carbon and nitrogen, of the oxygen consumed, and of the ammonia derivable from the organic constituents. All these factors are of more or less importance as an index of the degree of pollution, recent or remote, but their real value can in very few cases be assessed without some previous knowledge of the source of the water. The inorganic constituents can easily be determined, and whether, either in quality or quantity, they are objectionable, the chemist may safely express an opinion. They are, therefore, chiefly of interest to us in so far as their presence tends to throw light upon the source of the organic matter, which in greater or lesser quantity is always present. Only under certain circumstances has the determination of chlorides any significance, and pure water from some sources may contain a larger amount of chlorides than the same water when contaminated. The importance of an estimation of nitrates was for a long time undervalued, at the present time the tendency is to greatly exaggerate it. The amount of nitrates which would condemn a water from one source may be absolutely without significance in a water from another. At certain schools it is taught that the presence of nitrites is conclusive evidence of the dangerous character of a water, yet these compounds may be derived from the most innocent sources, as by the reduction of nitrates by metals, cement, new brickwork, etc. Erroneous conclusions may also be drawn from the determination of phosphates, free oxygen, ammonia, and albuminoid ammonia. In the table of analyses [exhibited but not reproduced] the erroneous conclusions which may be deduced from a too great dependence upon analytical data are fully exemplified. The table is compiled from reports of the medical inspectors of the Local Government Board, from the results of analyses made by well-known chemists, and from my own report books. In nearly every instance chemical analysis failed to find such evidence of pollution as would justify the analyst in condemning the water, yet these very waters were proved to have caused more or less serious outbreaks of disease. Although a mere chemical examination cannot guarantee that a water is pure and can be used without risk, yet it can very frequently reveal to us impurity and danger. Chemical analysis, therefore, has its use; it is only when it is made the sole arbiter between safety and risk that it is abused and is liable to lead to errors fraught with most disastrous consequences. Let the analysis be as carefully made and as complete as possible, but let the results always be interpreted in the light afforded by a searching examination of the source of the sample. Let all so-called standards be abandoned as absurd, and let the opinion as to whether a water is dangerous or safe be based upon a full consideration of other more important factors. With the discovery of the fact that such diseases as typhoid fever and cholera are due to the introduction into the system, not of dead organic matter but of living organisms, faith in the chemical analysis of water began to be shaken. When, still more recently, the actual microbes causing these diseases had been identified, and processes had been devised for isolating them from the multitude of other organisms found in water, it seemed as though the examination of water for sanitary purposes had passed from the domain of the chemist into that of the bacteriologist. Further experience, however, is teaching us that the results of bacteriological examinations may be as misleading as those of chemical analyses. The cholera bacillus could not be demonstrated in the water poisoning the inhabitants of Hamburg and Altona; neither could the typhoid bacillus be found in the water supply which last year produced the epidemic in Worthing. Koch even falls back upon a standard of quantity, which is as illogical as the older chemical standards. Both depend upon quantity when the real point at issue is the quality. In reputedly good waters it has been observed that the micro-organisms present, capable of liquefying gelatine by their growth, are few in number, whilst in sewage polluted water they abound. But this fact is of little value, since it only enables somewhat gross pollution to be detected, and most of these liquefying organisms are perfectly harmless. Bacteriology, like chemistry, may tell us something of impurity and hazard, but neither can be depended upon to determine with certainty whether a water is actually injurious to health. The possibility of occasional pollution is a point too often overlooked, yet it is to such accidental pollution that outbreaks of disease are most frequently attributed, and of the liability to this the examination of samples of water, prior to the occurrence of the contamination, may tell us little or nothing. The danger of such pollution does not, unfortunately, vary with the amount of any constituent found in the water, and a source yielding a water of great chemical and bacterial purity may be more liable to occasional fouling than a source yielding water containing excessive quantities of chlorides and nitrates, unoxidised organic matter, or even living organisms. Bacteriological and microscopical examinations, as well as chemical analyses, must therefore always be associated with a thorough investigation of the source of the water to determine the possibility of contamination, continuous or intermittent, and a guardedly-expressed opinion given only after a full consideration of the bearing of the one upon the other. When a water is known to be fouled by sewage, or known to be liable to such pollution, any form of examination is superfluous, and as neither bacteriology nor chemistry can be depended upon to prove that a water is free from all dangerous pollution, such examinations are, in many cases, quite useless.

Retirement of Professor Stellwag von Carion.—Professor Stellwag von Carion, the distinguished Professor of Ophthalmology in the University of Vienna, delivered his last lecture and took leave of his students in July. He resigns his chair on the completion of his 70th year. A large number of past and present pupils of the Professor and almost the entire body of his colleagues of the professorial body, with Professor Ludwig, the Pro-Rector, were present. The lecture room was gaily decorated, a portrait of the Professor occupying a conspicuous position. The Vice-Dean, Professor E. von Hofmann, expressed the best wishes of the professorial body, and a representative of the students spoke in the warmest and most appreciative terms of the beloved and venerated teacher whom they were about to lose.

A New Italian Medical Society.—A Medico-Chirurgical Society has been established at Pisa under the auspices of the Medical Faculty of the University of that city. The proceedings of the new Society will be published in a special *Bolletino*, which is to appear every two months.

MEMBERS PRESENT AT THE ANNUAL MEETING.

The following names of members and visitors attending the annual meeting were entered in the books provided for the purpose:

Abraham, Phineas, M.D., London
Ackland, Jno. McK., M.R.C.S., Exeter
Ackland, Wm. R., M.R.C.S., Clifton
Acland, T. D., M.D., London
Adams, J. D., M.D., Martock
Aldrich-Blake, Miss Louisa B., M.B., Ross
Aldridge, Russell, M.D., Yeovil
Aldridge, Charles, M.D., Plympton
Alford, G. E., L.R.C.P.Edin., Weston-super-Mare
Allfrey, Chas. H., M.D., St. Leonard's-on-Sea
Anderson, Miss Annie, M.S., M.B., Manchester
Anderson-Berry, David, M.B., Clevedon
Anderson, Mrs. E. Garrett, M.D., London
Anstie, T. B., M.R.C.S., Devizes
Antrobus, Edmund, M.B., Great Malvern
Appleton, Henry, M.D., Sneyd Park, Bristol
Appleton, T. A., M.R.C.S., London
Arbuckle, H. W., M.D., Thorne, near Doncaster
Archer, F. B., M.B., Barbados
Armstrong, Henry G., M.R.C.S., Wellington College
Armstrong, G. E., M.D., Montreal
Arthur, James, L.R.C.P., Wingate
Ashford, E. C., M.R.C.P., Bath
Atchley, G. F., M.B., Tyndall's Park, Clifton
Atkinson, Thomas R., M.R.C.S., Sherborne
Atwood, Wm. T., M.R.C.S., Torquay

Bacque, W. J., L.R.C.P., Bristol
Bagshaw, Frederick, M.D., St. Leonard's-on-Sea
Balding, D. B., F.R.C.S., Royston
Banks, W. M., F.R.C.S., Liverpool
Banks, S. H., Brigade-Surgeon-Lieut.-Colonel, F.R.C.S.I., Bombay
Bannatyne, Gilbert A., M.D., Bath
Barclay, W. M., F.R.C.S., Clifton
Barclay, Wm. B., L.R.C.P., Bacup
Barker, George H., M.B., Redland
Barnes, J. W., F.R.C.S., London
Baron, Barclay J., M.B., Bristol
Barling, Gilbert, F.R.C.S., Birmingham
Barnes, R., M.D., Lyss
Barr, James, M.D., Liverpool
Barr, Thomas, M.D., Glasgow
Barrow, R. W., M.D., Clifton
Bartholomeusz, Surg.-Lieut.-Colonel M. L., M.B., I.M.S., Ahmedabad, India
Basset, Walter, M.R.C.S., Newport, Mon.
Bateman, Sir Fred., M.D., Norwich
Battersby, Charles Hy., M.R.C.P.I., Cannes, France
Baxter, W. W., L.R.C.P.Edin., Manningtree
Beach, Fletcher, M.B., London
Beaumont, W. M., M.R.C.S., Bath
Beddoe, John, M.D., Bradford-on-Avon
Belfield, C. W., M.R.C.S., Bristol
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Marsh, Howard, F.R.C.S., London
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Monckton, Wm., L.R.C.P., Como, Portishead
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Morgan, T. W. S., M.R.C.S., Bristol
Morgan, George, L.R.C.P., London
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Morton, S., M.D., Croydon
Morton, Alex., M.D., Glasgow
Morton, C. A., F.R.C.S., Clifton
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Nicholson, Thomas B., M.D., Clifton
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Ogilvy, Alex., M.D., Dublin
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O'Neill, H., M.D., Belfast
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Ormerod, H. L., M.B., Bristol
Ormerod, J. A., M.D., London
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Parry, Thos. W., M.R.C.S., Ferndale
Partridge, Thos., M.R.C.P.I., Stroud
Pauli, G. C., M.R.C.S., Bristol
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Peake, G. A., M.R.C.S., Cheltenham
Peake, F. E., M.R.C.S., Bristol

Pearse, T. F., M.D., Southsea
Pearson, A. E., M.R.C.S., Leeds
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Stewart, John, M.B., Nova Scotia
Stewart, R. S., M.D., Bridgend
Stewart, Sir Thomas Grainger, M.D., Edinburgh
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Stevenson, W. F., M.B., Nelley
Stevenson, E. S., M.D., Cape Town
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Stockwell, Frederick, M.D., Bruton
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Stokes, Sir William, F.R.C.S.I., Dublin
Stowers, J. H., M.D., London
Street, Surgeon-Major A. W. F., M.R.C.S., Bath
Surveyor, N. F., M.D., Bombay
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Sutton, Frederick, M.R.C.S., Willingham-by-Stow
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Thomas, J., F.R.C.S., Swansea
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Thomson, John R., M.D., Bournemouth
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Tivy, W. J., F.R.C.P.Edin., Clifton
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Tothill, Frederick C., M.B., Staines
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Trend, T. W., M.D., Southampton
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Trevelyan, E. F., M.D., Leeds
Tribe, Miss Ethel Newton, M.B., Bristol
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Tucker, J., M.R.C.S., Thulmleigh
Tuke, H., M.D., Hanwell, London
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Tyson, W. Joseph, M.D., Folkestone

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Wallace, W., M.B., Glasgow
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Warner, E. H., M.D., Bristol
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Webster, Thomas, M.R.C.S., Redland, Bristol
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White, J. W., L.R.C.P., Nailsea
White, Joseph, F.R.C.S.Edin., D.C.L., Nottingham
White, C. H., M.R.C.S., Nottingham
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Williams, H. E., M.R.C.S., Newport
Williams, J., M.D., Cardiff
Williams, Dawson, M.D., London
Williams, P. W., M.D., Clifton
Williams, J. T. C., L.R.C.P., Whitland
Williams, Henry W., M.D., London
Williams, W., M.B., Cardiff
Williamson, R. T., M.D., Manchester
Willmore, F. W., M.R.C.S., Walsall
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Wilson, F., M.R.C.P., Hull
Wilson, Robert, M.B., Wallsworth
Wilson, C. B., M.D., Florence
Wilson, Thomas, M.D., Birmingham
Wilson, Wm., M.D., Florence
Wilson, Mrs. Helen M., M.B., Sheffield
Wilson, Edwd. T., M.B., Cheltenham
Windsor-Aubery, M.R.C.S., Bristol
Wingrave, Wyatt, M.R.C.P., London
Winterbotham, W. L., M.B., Bridgwater
Willett, Geo., M.R.C.S., Keynsham
Wintle, C., M.R.C.S., Bishopston
Wise, R. S., M.D., Banbury
Wohlmann, Arthur S., M.D., Bath
Woodcock, Sam., M.D., Manchester
Wood, Nevill, M.R.C.S., London
Wood, T. Outterson, M.D., London
Wood, C. G. Russ, M.R.C.S., Southport
Woodhead, G. S., M.D., London
Wray, Charles, F.R.C.S., London
Wright, G. A., F.R.C.S., Manchester
Wright, C. J., M.R.C.S., Leeds

Young, J., M.D., Bristol

Guests who registered their names:

Ashton, W. E., Philadelphia
Buckmaster, G. A., M.D., London
Chapin, H. D., M.D., New York
Clark, Chas. F., M.D., Columbus
Gould, Geo. M., M.D., Philadelphia
Griffiths, William, Cincinnati
Harris, F. E., Newport, R.I.
Herrick, James B., M.D., Chicago
Hitchcock, C., Market Lavington
Knapp, Herman, M.D., New York
Landolt, E., M.D., Paris
McCrea, Philip W., M.D., Bristol
Northrup, W. P., New York
Pflüger, Professor Dr. Ernst, Berne
Riseley, Samuel D., M.D., Philadelphia
Sambon, Dr. Luigi, Rome
Sartain, Paul J., Philadelphia
Savage, G. C., M.D., Nashville
Schweinitz, G. E. de, M.D., Philadelphia
Snellen, H., jun., M.D., Utrecht
Stevins, Dr. Geo. T., New York
Stowell, Mrs. Sarah R., F.M.M.S., Boston
Stowell, Dr. E. C., F.M.M.S., Boston
Thompson, J. L., M.D., Indianapolis
Trutything, F., M.B., Otago
Unna, Dr. P. G., Hamburg
Voigt, Leonard, M.D., Hamburg

MESSRS. G. L. K. PRINGLE, M.B., and C.M., and William Bruce Bell, M.B., C.M., have been appointed Resident Physicians in the Royal Edinburgh Hospital for Sick Children, from November 1st next.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

PUBLIC HOSPITAL, KINGSTON, JAMAICA.

IMPERFORATE ANUS: OPERATION NINE MONTHS AFTER BIRTH; RECOVERY.

(By HENRY STRACHAN, Senior Medical Officer, to the Hospital.)

J. B., aged 9 months, had never passed a stool, but the mother had noticed that fluid fæcal material in small quantity passed away from the "front passage." There was never any "back passage." The infant had only begun to suffer during the past two or three weeks.

It was found that there was an imperforate anus; deep pressure did not define the rectum, but a fistulous canal just large enough to admit the passage of a small director, led from the fourchette, upwards and backwards, to what was evidently the blind end of the rectum. The abdomen was distended, and evidently tender but the general condition was not grave. I decided to operate from the anal site.

Operation.—An incision was made in the pigmented spot of skin which occupied the usual position of an anus; and a careful dissection reached the end of the rectum, which was about an inch from the skin surface, without opening the peritoneal cavity. The gut was incised with scissors, and the wall of the rectum brought down and stitched to the skin. An enormous evacuation of solid and semi-solid fæces followed. The child made a rapid and perfect recovery.

REMARKS.—The case is interesting as showing how long an infant could exist, passing only a little fluid fæces daily through a fistulous passage about the size of a crow quill. It was only when the accumulation of gradually solidifying fæcal matter began to distend the abdomen that any symptoms of obstruction manifested themselves, and this, not until the child was nine months old. The rapid and complete recovery is satisfactory, for the mortality following this operation is usually high. Perhaps the greater age and development of the child at the time of operation placed it in a better situation for recovery than obtains in infants operated on when only a few hours or days old.

SIALKOT STATION HOSPITAL.

A CASE OF HYPERTROPHY OF THE SPLEEN AND LIVER, WITH COMPLICATIONS, THE RESULT OF MALARIAL CACHEXIA: DEATH.

(By W. M. COURTNEY, F.R.C.S.I., Surgeon-Lieutenant-Colonel, I.M.S.)

SEPOY R., of the 38th Regiment Bengal Infantry, aged 28, service 6½ years, height 65 inches, chest 33½ inches, a Hindu of the Dogra caste, and a native of the Kangra District in the Punjab, served at Dera Ismail Khan and at Edwardesabad, both of them malarious sites on the north-west frontier of the Punjab, from November, 1885, to November, 1889. When at these places he was six times admitted to hospital for quotidian ague, the last attack at Edwardesabad being very severe, and lasting from October 19th to November 24th, 1889. On March 19th, 1891, he was transferred to Sialkot, in the Rawul Pindi District, and was then in a fair state of health, though somewhat anæmic and suffering from enlarged spleen. On September 8th, 1891, he was admitted to hospital at Sialkot for ague, with the spleen much enlarged and indurated, this condition being due to the unhealthy climate of his former stations, and not to that of the cantonment of Sialkot, which is considered rather healthy as regards malarial affections. On September 25th, 1891, as he was not improving under treatment, but seemed to be getting weaker every day, he was sent to his home on four months' sick leave; he was then in a weak anæmic state. On his return to duty in January, 1892, he seemed worse than before, anæmic and emaciated, and the spleen occupied the left half of the abdominal cavity, extending 1 inch to the right of the umbilicus. He also suffered from attacks of fever every evening; the highest temperature recorded was 102.4°. He did not at any time complain of headache, nor were cerebral symptoms manifested.

About 4 A.M. on February 2nd, 1892, while under treatment in hospital, he suddenly became unconscious, with symptoms of compression of the brain, as if due to cerebral hæmorrhage. There was bleeding from the nose, dilated pupils, stertorous and puffing respiration, profound insensibility, and no power of deglutition. These symptoms continued until 7.45 A.M. on February 2nd, when he died. A *post-mortem* examination was made five hours and a-half subsequently, with the following result: Placid appearance of face; no external marks of violence; body emaciated, but not to an extreme degree; *rigor mortis* well marked; a small quantity of frothy mucus about the lips. On removing the calvarium the dura mater was found intimately adherent to the surface of the brain on each side of the mesial line; no openings in dura mater. On reflecting this membrane several large clots, apparently of recent origin, were found on the outer surface of the left anterior frontal lobe; a cavity about the size of a pigeon's egg occupied the interior of this lobe, with an aperture about half an inch wide on the external and anterior aspect; the margins were ragged, and the cavity contained some coagulated blood, which was also found in small quantity in the left lateral ventricle. The other parts of the brain were healthy. The organs weighed as follows: spleen, 8½ lbs.; liver, 6 lbs. 6 ozs.; brain, 2 lbs. 14 ozs.; right kidney, 6 ozs.; left kidney, 7 ozs. There were no signs of abscess in the spleen or liver; both were uniformly enlarged. The cerebral hæmorrhage was probably the result of extreme attenuation of the vessels from malarial cachexia of long standing. As the spleen was so enormously hypertrophied the case may be considered worthy of record.

REPORTS OF SOCIETIES.

BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

J. MACINTYRE, M.B., President, in the Chair.

Friday, July 13th, 1894.

CASES.

DR. EDWARD LAW exhibited a case of Chronic Laryngeal Disease of Doubtful Nature in a diabetic man, aged 48.—Mr. MAYO COLLIER showed a Polypus attached to a Portion of Bone, which he had removed by trephining the wall of the frontal sinus.—Dr. DUNDAS GRANT exhibited (1) a patient from whom he had removed a Fibroma from the Right Vocal Cord, with very satisfactory results.—In discussing this case Dr. HOLBROOKE CURTIS, of New York, referred to the presence of attrition nodes on the cords of singers who habitually practised the so-called stroke of the glottis, to which he attributed their origin. He maintained that vocal exercises would remove the nodules more satisfactorily than operative treatment.—(2) A case (shown at a previous meeting) of Suppuration of the Frontal Sinus, which he had opened freely from its orbital aspect for purposes of better drainage. (3) A case of Suppuration of the Sphenoidal Sinus, which he had treated by removing the enlarged middle turbinated body, and subsequent irrigation, with excellent results.—Mr. MAYO COLLIER said he preferred to trephine in the middle line. This afforded greater facilities for establishing nasal drainage.—(4) A case of Paralysis of the Left Vocal Cord associated with Hemiplegia, probably Syphilitic.—Dr. ARTHUR SANDFORD read notes of the following cases: (1) Death from Convulsions Six Hours after Scraping Postnasal Adenoids under Cocaine in a Child. (2) A case of Removal of a Button which had been in the Posterior Nares for Eight Years, and simulated Ozæna. (3) A case of Intracranial Abscess originating in Caries of the Sphenoidal Cells occurring in a man aged 78.—Mr. WYATT WINGRAVE exhibited a case of Malignant Growth of the Larynx of six months' duration in a man aged 64. Also a case of Probable Tuberculous Disease of the Larynx in a woman aged 43.—Mr. FRANK MARSH showed Multiple Adenomatous Growths which he had removed from the larynx of a woman, aged 22, by the operation of thyrotomy without a preliminary tracheotomy.—Dr. MILLIGAN described (1) a case of Primary Lupus of the Septum Nasi in a female aged 35. It was successfully treated with the galvano-cautery and pyoktanin. (2) A case of Suppuration of the Anterior Ethmoidal Cells, which was successfully treated by irrigation of bichloride of mercury solution.

FOLLICULAR TONSILLITIS.

Dr. NORRIS WOLFENDEN opened a discussion on the nature of follicular tonsillitis and inflammations of the throat due to micro-organisms, together with their relation to general infective disorders. He stated his belief that follicular tonsillitis was a desquamative process in the crypts of the tonsils, the follicles taking no part in the process and only exhibiting a secondary hypertrophy, as recently maintained by Sokolowski and others. He further showed that there were forms of infective tonsillitis associated with the exudation of fibrin, and the presence of streptococci, staphylococci, and pneumococci in such definite proportions as to suggest the inference that each specific organism was associated with characteristic clinical symptoms. Although many of these

presented the clinical aspects of diphtheria, Loeffler's bacilli were wanting. He maintained that there was a lacunar tonsillitis and a lacunar diphtheria, which could be differentiated only by a bacteriological investigation, since pseudo membranes, in all respects resembling diphtheria, might be produced by other organisms, and albuminuria with glandular enlargements and even paralysis might occur in non-diphtheritic cases. It was manifest therefore that clinical evidence was in itself inadequate for a diagnosis. The author expressed a doubt as to the possibility of contagion in non-diphtheritic tonsillitis, but considered that defective drainage was responsible for the epidemic.

Drs. MACKINTYRE, WHISTLER, HOLBROOKE CURTIS, DUNDAS GRANT, A. SANDFORD, EDWARD LAW, and Messrs. LENNOX BROWNE, MAYO COLLIER, R. LAKE, and WYATT WINGRAVE took part in the discussion.

REVIEWS.

PRACTICAL PHOTOMICROGRAPHY. By ANDREW PRINGLE, F.R.M.S. London: Iliffe and Son. (Fcap. 4to. pp. 160. 5s.)

THE scientific importance of the art of photomicrography is now becoming recognised both by microscopists and by those who are interested in the art of photography. It seems only a few years since photomicrography was looked upon with contempt by microscopists who preferred to sketch their views of what they saw or wished to see, with camera lucida, neutral tint reflector, or some other drawing instrument under the microscope. The opposition was great from those who could draw well, but few are sufficiently gifted in this art to ensure success, though we have recently published some admirable specimens. Mr. PRINGLE's book professes to be a manual, brief, explicit, practical, and at a moderate price, and we think that the writer's aims have been fully achieved. The book is divided into eighteen chapters, the first six are devoted to the instrument, the next six to procedure, and the last six to various modes of printing and lantern slides, microscopical *technique*, and to an appendix with prices of various articles. The book appears to be very complete in a small compass. Without unduly dilating upon the theoretical part of the science of microscopy, which can be found in such works as Dr. Dallinger's new edition of Carpenter's well-known book by Dr. Dallinger and the work of Dr. Henri Van Heurch, Mr. Pringle points out well that photomicrography is not only the graphic science of to-day, but will in even greater measure be the graphic science of the future; at the same time he warns those who wish to take up photomicrography seriously and aim at the best results, that much time and earnest attention must be given to it. This book is intended for those who are in earnest. Mr. Pringle points out that for the best work two things are necessary: first, thoroughly good apparatus; second, careful study and pretty constant practice. We should like to add a third, great patience, but suppose this to be included in "pretty constant practice." In Chapter II the microscope and its parts are considered. The great importance of the stand is insisted on, and most valuable advice is given on this head. Steadiness is the all important point, and several instruments with large tripod base, such as those of Powell and Lealand and similar instruments, are recommended. Chapter III is devoted to photomicrographic apparatus; the horizontal and vertical arrangements are described, but we do not notice any mention of the inclined, such as the apparatus by Leitz, of Wetzlar. The fourth chapter is on objectives and oculars. On the question of correction, that is, the coincidence of the actinic and visual foci, Mr. Pringle places the achromatic objective lowest, the semi-apochromatic (the semi-apochromatic objective differs from the apochromatic in the absence of fluorite from the combination of lenses) next, and the apochromatic as the finest objective at present obtainable. He considers that Dr. Abbe, by a combination of compensating, ocular and objective, eliminates the whole of the residual spectrum. Most of the achromatic lenses of modern make answer very well without eye-pieces, especially if the orthochromatic plates are used. We next come to the condenser. By this it is not meant an ordinary bull's eye, which the author well distinguishes by calling a paralleliser, but the substage achromatic condenser; this is equal in importance to the objective; in fact Mr. Pringle points out that good objectives may be used as condensers with the best results. The chief point to note is that the condenser objective should be about the same numerical aperture as the objective used. Chromatic condensers are cheaper and act fairly well in general work.

In discussing illumination, after considering the various sources of light, Mr. Pringle recommends an oil lamp or the limelight, the latter in preference as being more actinic and lessening the exposure; this is important not so much for economy of time as for lessening the risk of tremor. In the next chapter we find examples of procedure and general routine, instructions to centre the condenser, on the use of the paralleliser (bull's eye), the glass cell for screen or light filter, and modes of focussing. Chapter IX treats of the colour treatment of various objects. With stained and coloured objects it is difficult to get a contrast between object and gound. Here directions are given for using various coloured screens with orthochromatic plates sensitive to different colours, the principle being to use a plate comparatively insensitive to the stain colour, and a screen cutting off more or less of that colour. Chapter X treats of black backgrounds, the Lieberkuhn cell and the polariser. Chapters XI to XV deal with on developing the image, fixing, reducing, and intensification, printing and enlarging. The next chapter discusses the production of lantern slides. Chapter XVII is on microscopical *technique*, section cutting, and staining, and the production of preparations. The Appendix will be found useful as it gives the prices of apparatus mentioned in the work. We have said enough to show that Mr. Pringle's book treats of all points that are essential in the science and art of photomicrography which is now becoming more and more important in the study of medical science. The book is well and lucidly written: it is printed in good type and handsomely got up. There is only one small printer's error on page 50 that we have noticed. We can strongly recommend Mr. Pringle's book to those who wish to succeed in photomicrography.

REPORTS ON THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

SPECIAL COMMISSION OF THE "BRITISH MEDICAL JOURNAL."

XII.—WAKEFIELD.

ON arriving at Wakefield, we visited the medical officer of the workhouse, hoping that he might be able to accompany us to the infirmary. Unfortunately he was out of town, but his assistant kindly telephoned to the master stating the purpose for which we wished to visit the infirmary, when an answer was immediately returned that we were welcome to do so.

INFIRMARY ARRANGEMENT.

The Wakefield Workhouse Infirmary is in two blocks, standing apart from but near to the main building. There is accommodation for 130 patients in all; in the main block are the general cases, and in the smaller block the offensive and lock cases are isolated. The lock patients are placed in small wards at each end of the block for offensive cases; there are 2 beds for the female and 4 beds for the male patients, having separate offices. In the general wards on the female side the bedsteads are of the full width, and the bedding is straw or flock according to the nature of the case; sometimes a water mattress is supplied to avert the danger of a bedsore. The nurse turned down such beds as we desired; they were all quite clean and were amply supplied with bedding. The wards are of various size, distributed through a two-storeyed building; they all presented a comfortable home-like appearance, with cushioned arm chairs for the old people when out of bed; we did not see any couches. We were much pleased with the ample supply of nice handy rail-screens, some of which were shielding off a draught and others around beds whose occupants required

quiet; they made a bright feature in the wards, with the coloured chintz cover neatly fastened on and easily removed. The system of ventilation is chiefly by means of the windows on the ground floors; on the upper floor there are also ventilators in the roof. We noticed that some of the beds were placed along the walls of the ward, the head of one to the foot of the other; this was allowed to economise space: but it seemed to us that the more healthy plan would be to have a bed or two less in the wards. On the male side some of the bedsteads are of the narrow width which should never be used in an infirmary; the bedding was the same as that supplied to the females.

ISOLATION BLOCK.

We were not so pleased with the appearance of these wards: there was a look of neglect in all their appointments, as though, because these poor creatures were helpless and, in workhouse language, "dirty cases," they did not need so much care as the other patients. We were particularly struck by the beds; these were of all sizes, the foundation being laths, over which was a thin chaff or straw mattress, not by any means sufficient as a cushion for the patients to lie on all day and night. The ward also lacked the look of finish that we saw in the other wards. Is it that these poor creatures are treated as naughty children who must be punished for their infirmity as for a fault? The wards themselves were gloomy; they wanted something to brighten them up.

SANITARY APPLIANCES.

Of these there is an ample allowance on each floor and to each ward for use at night; on each floor there is a fixed wash basin, hot and cold water; each set of wards has its bathroom. Here we found the wise precaution of having these kept locked, for the average pauper looks upon a bathroom as a receptacle for all rubbish and as a place where he may do any washing of clothes, etc., that pleases him. The closets have a good flush, and were clean at the time of our visit, which was about 10 A.M.

THE NUMBER OF NURSES

employed to nurse in these wards is two: one nurse has the main block, and the second nurse the isolation block. The nurse in the main block has received hospital training; the nurse in the isolation block has been trained in a lunatic asylum. The board had just engaged one night nurse; her quarters were being prepared at the time when we saw the infirmary. The nurses took us round their wards and gave us every facility of seeing their work after we had been introduced by the matron. Pauper help is largely made use of in the infirmary; each ward—and there are about sixteen in the blocks—has its wardsman or woman, and they do the nursing under the nurses; this follows as a matter of course, as it is beyond the powers of any nurse, however energetic, to attend individually upon over 90 patients. Until quite recently there was no trained night nurse; such an officer has now been appointed and will be responsible for the hundred or more patients scattered up and down in the wards. On conversing with the nurse in charge of the isolation hospital, she told us that the air of her wards when she came on duty in the morning was very foul. These poor bedridden patients being in the charge of inmates during the night, their beds were not properly cleansed, nor was the very necessary ventilation looked after by the inmates. Besides the usual duties of a nurse, each nurse has her laundry, for the working of which she is responsible.

THE PATIENTS

are the usual admixture of acute and infirm cases. We saw a girl up for the first time after pleurisy: her temperature chart showed an acute and somewhat prolonged attack; she had made a very good recovery. We saw a wardsman who had pleuritic effusion; we should not like to say how many pints had been taken from the chest, but his recovery was excellent: there was no perceptible flattening nor deformity, and he stood up straight, with a good physique. There were not many in bed. We saw a case of advanced phthisis, rheumatism, and heart disease (the man had lain in bed for seventeen years; his skin was quite whole); a case of pneumonia recovering, paralysis, and several bad cases of old age; speaking from recollection about six of these were charted. In the isolation block, holding 40 beds, nearly every patient was in bed, and they all required the nursing of a child.

LYING-IN WARD.

This ward is in the house department, but the nurse of the infirmary is the midwife. She explained to us that when she is called over to this ward in the night she calls up a man and a woman for each side, and leaves them in charge whilst she is occupied with the confinement. There is accommodation in this ward for three patients, and it has a small ward attached holding two beds for convalescents. These wards have separate offices. There are no means of communication through the building for use at night; as before mentioned, there is a telephone to the doctor's house.

CHILDREN'S AND IMBECILE WARDS.

There is a nice ward for the children in the infirmary; at the time of our visit this was occupied by little patients with whooping-cough: they had plenty of toys and books for play. None of them were in bed.

The imbeciles are kept apart in a separate ward on the male and female side, but the communication between these and the other wards was quite easy.

DAY ROOMS AND AIRING COURTS.

There are no day rooms in the infirmary; the airing courts are of the nature of back yards; the patients are not allowed in the garden. We always feel great pity for the patients whom time after time we find kept to these dreary courts for their recreation; four brick or stone walls, a few benches, the sky above them, and the asphalte beneath them; how can they be any the better for fresh air thus doled out?

RECOMMENDATIONS.

We have here a sick department as large as some of our smaller hospitals, with three nurses as the nursing staff. We recommend that the staff be doubled at the least, and that the infirmary be made use of for training purposes for probationers; that the paupers be used for the ward service only. We heard that the board is purposing to build a new infirmary; in this case, in all probability, it will be their intention to increase the nursing staff, and we hope that they will make the hospital into a separate department under its trained matron: for with the amount of acute cases that are admitted in the year there would be ample material for the training of probationers in the first part of their duties.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

WE have received the following reports of cases of diphtheria successfully treated by the antitoxin method:—

I.—H. URQUHART WALKER, L.R.C.P. and S.Ed., late Medical Officer of Health, Worksop, Notts, writes: I was called in to see M. J., a girl, aged 8, on July 27th. I was told she had been ill for a day or two. She had passed a very restless night, and had been quite delirious. In the morning she had complained of her throat. Her temperature was 102° and her pulse 130. On examination, the tonsils and fauces generally were red and swollen, and on the right tonsil was a patch of membrane, but not very large. On the 28th the breathing was more difficult; the throat presented much the same appearance as on the previous day. On the 29th the breathing was worse, and the fauces on the right and left sides were covered with membrane. In the evening the respiration was very quick. On the 30th the membrane was well formed, even extending well over the soft palate and hanging down into the mouth. Up to this time the child had been treated with iron and chlorate of potash internally, and the constant use of the lime water spray. It was evident that something more must be done, so I resorted to antitoxin, a supply of which I had procured on reading Dr. Goodhart's case in the BRITISH MEDICAL JOURNAL of July 28th. Eleven minims of antitoxin were injected into the forearm with strict antiseptic precautions. The temperature at the time of injection was 103° and the pulse 140. Four hours after the injection the child was much improved. There was no fever and the pulse

quite quiet. She had a good night, and had to be roused by the nurse to receive her nourishment. On the 31st the same improvement continued, although the membrane was still present, although loosening on the right side. The temperature was normal. During the day much of the membrane came away. The last patch to form had disappeared. All that was to be seen was on the uvula and on the left side. On August 1st all signs of membrane had disappeared. From that date uninterrupted recovery took place. I wish to call attention to the fact that within a few hours after using the antitoxin the temperature was reduced 4°, and remained normal. The constitutional disturbance was at once checked, although the membrane still remained on the uvula and left side of the throat. The new patch on the soft palate at once disappeared, and the appearance generally became more normal. The injection was followed neither by local nor by general disturbance. I should add that I was induced to try the effect of antitoxin in this case by Dr. Norman Walker of the Edinburgh Royal Infirmary then on a visit to Worksop.

II.—G. S. A. Waylen, L.R.C.P.Lond., M.R.C.S., Surgeon Devizes Union Workhouse, writes: W. H., aged 5 years, a strong boy, was admitted into the isolated diphtheria hospital at the Union Workhouse on July 25th, with small patches of membrane on both tonsils. The next day laryngeal symptoms showed themselves, and the usual remedies were tried. On July 28th, after consultation with Dr. Raby, whose patient the child had been previous to admission, I performed tracheotomy, the breathing previously being very laboured (32), with great drawing in of chest walls and stridor. For the first two days after the operation the child did well, but on July 31st the external wound became very red and brawny, with a great deal of swelling in the subcutaneous tissues of the neck. The respirations, which the previous day had been 18, with pulse 116, and temperature 100°, rose to 24, with pulse 120, and temperature 100°. At 5 P.M. the temperature was still going up, and the wound looked more red and angry, and was beginning to be covered with membrane. I then injected 4½ c.c. of Aronsen's diphtheria antitoxin, using an ordinary subcutaneous syringe which had been previously sterilised as directed. At 11 P.M. the same evening the respirations were 22, pulse 100, and temperature 99.8°. The following day there was no mistake as to the completely diphtheritic character of the external wound, but the most noticeable feature of the case was the ease with which the child was coughing up large flakes of diphtheritic membrane, in one instance quite a cast of half the circumference of the trachea, nearly an inch long, being coughed up. Previous to the injection there was a small patch on the right tonsil; this had not disappeared, but had not increased, as purposely no local remedies had been used. On August 1st the wound was less red and angry, and the general condition improved, and on August 2nd the child was coughing up blood-stained mucus, showing that the surface of the trachea, from which the membrane had separated, was raw and sore. The external wound gradually improved and became healthy, and on August 6th the tube was removed, the child still remaining in the hospital, and appearing to be going on well. I am certainly of opinion that the use of the antitoxin largely assisted in the case, by causing the membrane to become softer, and by enabling the child to cough it up with greater facility. I used a fairly large dose for so young a child, much larger than was used by Dr. Still at Guy's. As there were no local symptoms at the places of injection, I was obliged to make two injections, as my syringe was not large enough, and in filling it I lost about ½ c.c. of the fluid contained in the 5 c.c. bottle.

III.—Eber Caudwell, M.R.C.S.Eng., L.R.C.P.Lond. (Harleston, Norfolk), writes: On July 31st I was called to see a boy, E. Y., aged 9, who had been ailing for several days. I found him suffering from an apparently mild attack of diphtheria. Under treatment—namely, liq. ferri perch. in 10 minim doses every four hours, and the local application of a diluted solution of the same and glycerine to the throat—he improved, so that by August 3rd he was considerably better. On the evening of that day I was sent for hurriedly, and on my arrival found the boy much worse. He complained of great pain in his throat, which was livid, œdematous, both tonsils being covered with ashy-grey membrane, very adherent; glands at the angles of the jaw tender, greatly enlarged; tissues of neck infiltrated. The boy had been very sick and was still so. Temperature 104°, pulse 132, small, weak; complains of great pain in his head. The next day he was worse. The urine contained one-tenth albumen; only 8 ounces passed in twenty-four hours. Epistaxis twice during the night. Temperature 104°, body bathed in a profuse clammy perspiration, child very listless, apathetic, drowsy; tongue dry, covered with sordes. I now wired to Messrs. Zimmeman for Schering's antitoxin. Patient remained in much the same condition, and as the breathing was very embarrassed I stayed the greater part of the night with him, ready to perform tracheotomy. August 5th, 10 A.M. No improvement. I injected 15 minims of antitoxin. 6 P.M. Temperature 101°, pulse 120, a little stronger; sickness less, passed a fair amount of water, seemed a little brighter, had taken more nourishment, and said that it caused him less pain to swallow; throat appeared the same. August 6th, 11 A.M. Had passed a rather restless night, but in other respects was about the same. I injected 8 minims of antitoxin. At 8 P.M. he had considerably improved, and had coughed up several pieces of membrane. The swelling at angles of jaw subsiding; tonsils, uvula, soft palate were not nearly so swollen; membrane easily detached, sickness entirely abated, is cheerful and takes nourishment well. Temperature normal, pulse 92. The improvement continued, and on August 9th the patient was convalescent, all inflammation in the throat subsided, no membrane to be seen. During the whole time the local treatment (applications of diluted solutions of perchloride of iron, permanganate of potash—gr. iii, ad. ℥ij, sulphur insufflations, etc.) to the throat was continued, but until the use of antitoxin the patient got gradually worse.

THE BACILLUS OF PLAGUE.

The following is the report of Dr. Woodhead on the specimens handed to him at the Bristol meeting by Mr. Ernest Hart. The text of this report was unavoidably held over last week owing to great pressure on our space.

"The specimens submitted to me for examination from Dr. Cantlie are microscopic preparations of the softened material taken from the liver and spleen of a mouse that had been injected with the blood from the centre of a femoral bubo. One of them had been stained with a watery solution of gentian violet; the others I stained with alcoholic glycerine solution of fuchsin. These organisms—which have been drawn under a Leitz $\frac{1}{12}$ oil immersion objective, with a No. 8 Zeiss compensation ocular with a tube length of 180 mm.—appear almost like diplococci enclosed in a delicate capsule, or as a short bacillus with the ends somewhat rounded; there is a clear band or space in the centre; but the predominant form is distinctly an encapsuled diplococcus or short bacillus. The size varies very considerably according to the staining method employed, the



Fig. 1.

organism appearing rather smaller in the watery gentian violet solution (stained by Dr. Cantlie) than in the glycerine fuchsin solution (stained by myself). In the preparation made from the splenic pulp we have almost a pure culture of the bacillus; the few cells scattered throughout the preparation take on a somewhat deep stain and are apparently somewhat swollen, though this, of course, may be due to the method of preparation.

"It is evident, from a careful examination of these speci-

mens, that the size of the capsule and its staining capacity vary very considerably, and it is quite possible that this appearance of a capsule is like that which is sometimes met

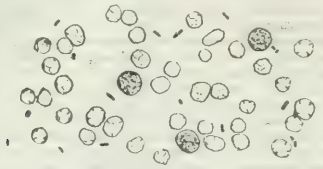


Fig. 2.

with around the anthrax bacillus stained in special solutions, or that it may be simply a retraction of the albumen from the constricted bacillus due to the drying and other processes of preparation.

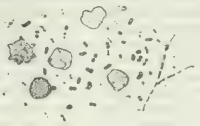


Fig. 3.

"Figs. 3 and 4 represent the growth of an organism—whether this be the characteristic organism or not—that has

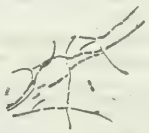


Fig. 4

probably gone on after the time of death. Here are distinct leptothrix filaments, accurately represented by my assistant, Mr. Binnie."

At a meeting of the Académie des Sciences last week M. Duclaux communicated a letter from Dr. Yersin, formerly assistant in M. Pasteur's laboratory, who at the beginning of June was sent to Hong Kong on a scientific mission by the French Colonial Minister. Dr. Yersin claims to have isolated in the tissues of plague-stricken patients a small bacillus, difficult to stain by the usual reagents but easy to cultivate on gelose. The micro-organism is particularly abundant in the inguinal glands, the enlargement of which is the characteristic lesion of the disease. The bacillus is easily inoculable in rats (the mortality amongst these rodents has been remarkable during the epidemic), mice, and guinea-pigs; all these animals die quickly after inoculation. Feeding the animals on portions of the organs taken from human sufferers who had died of the plague was also rapidly fatal to them. M. Chantemesse, in announcing M. Yersin's discovery to the Comité d'Hygiène, stated that the latter had sent to M. Roux at the Pasteur Institute a number of preparations and sections showing the bacillus described by him.

LEGAL GUARDIANSHIP FOR INEBRIATES.—Under a statute which provides that certain courts named therein shall have power to take care, custody, and management of all idiots, insane persons, and all who are incapable of conducting their own affairs, and of their estates real and personal, the maintenance of themselves and families, and the education of their children, the Supreme Court of Washington decided in a recent case that a guardian may be appointed for anyone who, through drunkenness or other cause, has become incapable of managing his affairs.

REGISTRATION OF MIDWIVES.

NORTH WALES BRANCH.

AT the annual meeting of the North Wales Branch, held at Bangor on July 26th, a discussion on the registration of midwives took place, in which many members took part. The resolution already passed by this Branch in 1891,

That in the opinion of this Branch the registration of midwives as proposed will not tend in any marked degree to render more efficient the nurses practising as midwives unless steps be taken first to improve their education, and considers that the proposed registration of all women at present practising as midwives would be a most dangerous proceeding,

was generally considered an appropriate solution of the question, but ultimately it was unanimously resolved to postpone its consideration to the next meeting.

"A WORD IN SEASON TO BATHERS."

THE article under the above title which was published in the BRITISH MEDICAL JOURNAL of June 30th and the letter from Dr. Clement Dukes which appeared in our issue of July 14th have been the means of bringing us several interesting communications relating for the most part to the mechanism of the sudden death which sometimes overtakes swimmers to all appearance in the fulness of their strength. What is the true explanation of these accidents? Dr. C. E. Shelly, of Hertford, thinks it extremely probable that one, and perhaps the most frequent, cause is laryngeal spasm. He cites the case of a naval officer who did "return to tell the tale," because, in his case, the laryngeal spasm due to a sudden inhalation of particles of spray occurred while he was in water so shallow and so near the shore that, by a strong effort of will, he was enabled to struggle ashore just as impending unconsciousness caused him to fall, and produced relaxation of spasm. A few similar cases have been recorded, and the accident may really be less uncommon, and not so certainly fatal, as has hitherto been believed. Dr. Shelly believes that in all the recorded cases the swimmer was using the breast stroke, and that in most cases there was at least a ripple on the water caused by a wind blowing more or less directly in the swimmer's face. It would be well, therefore, for all bathers to accustom themselves to inspire through the nostrils, especially when swimming on the chest and against a head wind.

Dr. George Thomson, of Oldham, takes exception to the statement that "swimming in the open sea is really a violent form of exercise." Swimming, he says, properly practised, is as easy as walking. This is true enough; but there are very few swimmers who would not feel much more distressed after swimming five miles than after walking fifteen. Most people at the beginning of the bathing season are more or less out of training as regards this particular form of exercise, and for them in these circumstances it may without exaggeration be called "violent." Dr. Thomson's view is that the victims of the sudden accidents referred to are not really expert swimmers. According to him, the very large majority who swim and who venture into deep water are faulty swimmers, who either have an imperfect stroke or who do not know how to manage their respiration when swimming.

Dr. Thomson says that a swimmer who should take his breath at long intervals, as advised by Dr. Dukes, would be in serious difficulties in a very short time. Respiration in swimming ought to be as regular as the swimmer's stroke, and as artificially managed. The act of expiration must be synchronous with the forward stroke of the arms, the interval with the swimmer's rest upon his stroke, and the act of inspiration with the downward and backward movement of the arms, which helps to expand the chest and also raises the mouth clear above the surface of the water at the proper moment. It is obvious, says Dr. Thomson, that each expiration and inspiration is thus slightly forced, that the air in the lungs is never exhausted, and that it is renewed with rhythmical regularity. On this, in Dr. Thomson's opinion, more than on anything else, depends the swimmer's safety.

Dr. Herbert Snow thinks nothing less than a sharp attack of angina pectoris will account for these cases of sudden drowning. The subjects, he says, are always well-seasoned

swimmers in whom the heart cavities must at each diastole be distended to the maximum. Dr. Snow points out that before theorising on the subject it would be more rational to ascertain the result of necropsies. He asks whether anyone has yet collated and tabulated the evidence thus procurable.

THE FORTY-EIGHTH REPORT OF THE COMMISSIONERS IN LUNACY FOR THE YEAR 1893.

Much has been written of late about the "Alleged Increase of Insanity" in this country, and whatever may have been said for or against the assertion that lunacy is on the increase, we are face to face with the fact that during the year 1893 the year's statistics show that no fewer than 92,067 lunatics, idiots, and persons of unsound mind have come into "official cognisance." This number the Commissioners say is 2,245 in excess of the corresponding number on January 1st, 1893, and shows the largest annual increase in the number of officially known lunatics we have had yet to record.

The summary of these statistics shows that the increase was 111 in the private, 2,132 in the pauper, and 2 in the criminal class. The increase has been fairly general throughout England and Wales, but the predominant feature of the figures is the great increase shown for the County of London, the pauper lunatics in the county on January 1st last numbering 800 more than they did a year previously, and it is in the county asylums and not in workhouses or district asylums the increase chiefly occurs. This to a great extent may be accounted for by the increased accommodation provided to make up deficiencies, so that a large provision of beds becoming available cases were poured into the asylum beds at last ready to receive them. Many of these were old and mentally worn-out persons. There were 442 60 years of age and over.

As we have frequently pointed out, the accumulation of pauper lunatics in our county asylums is largely controlled by the death-rate and percentage of recoveries, and, as the Commissioners point out, had the recovery-rate in 1893 been the same as in 1892 260 more patients would have been discharged. Add to the 59 fewer deaths, and we account for 360 of the increase in the annual accumulation. The Commissioners give it as their opinion that although there is an increase of the pauper patients from 4.14 per 10,000 of the population in 1885 to 5.28 in 1893, it is only a proof that larger numbers of the insane are yearly brought into official cognisance, and they remain, and the opinion is expressed in previous reports that there is no disproportionate increase of insanity, or, at all events, none at all material, in this country. The total admissions into county and borough asylums were 17,374; of these, 15,279 were new cases, and there were 8,568 discharged, of these 5,698 were discharged recovered. The deaths numbered 5,963, and *post-mortem* examinations were made in 4,701 cases. The average weekly cost per patient in these county and borough asylums amounted to 9s. 6¾d., as compared with 10s. in the previous year.

PROVINCIAL WORKHOUSE INFIRMARIES.

Newton Abbot.

If any one has thought that in the strictures which we have from time to time felt called upon to pass on the doings of the guardians and their subordinates at Newton Abbot we have been guilty of exaggeration, we would refer him to the report recently issued by the Local Government Board, where will be found full confirmation of all that we have said on the subject. The interest and importance of the report lie largely in the fact that in apportioning the blame full measure is meted out to the guardians themselves, and emphasis is laid on the responsibility which attaches to those who, after accepting such a position, neglect the trust imposed upon them. However much the evils which have been laid bare have arisen from bad administration, their continuance has been due to defective supervision and failure on the part of the guardians to recognise their personal responsibilities. Medical officers of workhouses will also do well to note that they will not be held blameless if they delegate their work to others, however well qualified.

The report is long, but the following will give an idea of the main points:

The evidence appears to the Board to leave no room for doubt that both the majority of the guardians and of their officers have altogether failed to appreciate the serious responsibilities that rest upon them as regards the welfare of the inmates under their care. The Board consider that beyond all question there have been cruel ill-usages in individual cases, many abuses of a serious character affecting the comfort and well being of many of the in mates, more especially of the sick, the imbeciles, and the children. As regards the first of these it is only necessary to refer to the statements as to the conduct of pauper assistants who, by the use of so-called "jumpers" have tied sick and infirm persons in bed and have struck the sick and infirm under their charge, and to the cases where the treatment of inmates is stated to have been of a filthy character..... The use of the articles known as "jumpers" as a means of restraint appears to the Board most reprehensible under any circumstances, and the Board find it difficult to understand how their continual and frequent use can have been practised without some information of the fact having come to the knowledge of those whose duty it was to have prevented it.

One of the most distressing features of the disclosures which have resulted from the recent inquiry has been, in the opinion of the Board, the apparent callousness of the late matron to the abuses which were brought before her .....The evidence also shows that the nursing arrangements in connection with the lying-in wards were clearly of a most unsatisfactory character, and those who were in a position to remedy this appear entirely to have failed to realise their responsibility. As regards the abuses in the administration which had been brought to light the following appear among the more serious:—(1) The failure to obtain the certificates required under the Lunacy Acts to justify the detention of imbeciles and lunatic persons in the workhouse, and the apparently almost total absence of control over them which has resulted in frequent violence to one another and towards other inmates. (2) Payments made by inmates in food or money to other inmates for services rendered. (3) Neglect as regards the bathing of the inmates. (4) Chamber utensils being used in some of the wards to wash in for want of proper appliances. (5) A case in which a girl brought into the workhouse that she might be removed from bad home influences was placed in a ward with three young women of immoral character. (6) The workhouse generally being allowed to get into a dirty condition .....(7) A child suffering from scarlet fever was allowed to remain from Monday until Wednesday with other children before being separated. (8) Inmates suffering from itch, both children and adults, were allowed to remain with other inmates. (9) It is also necessary to refer to the introduction of lice into the workhouse, the existence of bugs, the dirty and unsatisfactory condition of the boys and girls, the want of a proper supply of clothing for some of the children and of the other inmates, the absence of the sufficient provision of baths, the general lack of proper washing accommodation, the insufficient supply of towels, and the admission of persons to the various wards of the workhouse without having first been given a bath and a change of garments.....

From the state of things which has been found to have existed it is clear that much blame must attach to those who have been responsible for the administration of the workhouse Mr Cawse, the master, is certainly culpable. Even if it be admitted that he was ignorant of much that was going on, it must be pointed out that it was his duty to know what was passing in the workhouse. He has been reappointed by the guardians, but the Board, under the circumstances, do not feel justified in assenting to his appointment. As regards the medical officer, Dr. Haydon, it appears that during a considerable period he almost entirely neglected his duties and allowed them to be performed by his deputy, Dr. Nisbet..... The Board cannot accept as in any way satisfactory the statement that he regarded the performance of his duties by his partner as a sufficient compliance with the requirements of the regulations. The Board at the same time recognise Dr. Haydon's endeavour to remedy matters in 1893, and as he has now resigned it is unnecessary for them to make any further comments on his conduct. As regards the large majority of the Visiting Committee and of the guardians, the Board must condemn the apathy which they have shown in the discharge of their duties as guardians, and the want on their part of such supervision of the workhouse as would have prevented the conditions of things which has been shown to have existed, and which the Board cannot but feel has brought discredit on the Poor-law administration.

One might not unreasonably expect that with the reception of such a report the incident was now closed, that nothing more was left to the guardians but to put their house in order and deal fairly with the inmates. We hope such may be the case, but signs were not wanting, on the reading of the report, that many of the guardians were by no means inclined to receive the rebuke in a humble spirit, and we should not be at all surprised if even now the old spirit of opposition to improvement were again to show fight.

American Academy of Medicine. — The American Academy of Medicine will hold its nineteenth annual meeting at Jefferson, N. H., on August 29th and 30th, under the presidency of Dr. George M. Gould, editor of the *Philadelphia Medical News*. The meeting will be devoted to the discussion of subjects connected with the dependent classes in their medical aspects. Among the papers promised we notice one by Dr. H. Webster Jones (of "London, England") on "The Provident Dispensary in England"; one on "The Relation of Food Adulteration to the Dependent Classes," by Dr. H. Leffmann, of Philadelphia; and one on "The Retrogressives: What Produces Them? Classification," by Dr. Bayard Holmes, of Chicago.

THE NURSING QUESTION IN WORKHOUSES.

The Case of the Bedford Workhouse.

The difficulty which has arisen between the Bedford Board of Guardians and the Workhouse Infirmary Nursing Association involves many points which are of considerable interest in regard to workhouse management, but more especially does it raise the two questions, first, as to the standard of nursing which it is proper to provide for the sick in workhouses, and next as to the machinery by which the efficiency of this nursing can be maintained. It is a comparatively easy matter to combat obvious abuses; and when cruelty and oppression can be proved, as in the case of Newton Abbot, and Brentford, public opinion readily responds to a demand for reformation. There are, however, many evils and abuses in the working of the Poor-law system, which, although the cause of much suffering and misery, and really incapable of defence when once understood, are nevertheless allowed to go on, because their existence is hidden or their importance minimised by their occurring in the midst of a great deal that is good. The standing example of this class of evil is the use of pauper help in the nursing of the sick.

It is impossible to conceive that old and feeble paupers who are themselves in the "house" because they are incapable of work, who have no prospect of reward if they do well, and no fear of punishment if they do ill, and who, whatever injury they may inflict, have the standing excuse of absolute ignorance, can be fitting persons to whom to hand over the delicate task of nursing the sick and attending to frequent, and often wearisome, little wants of the aged, the feeble, and the dying. And yet it is in regard to this that the difficulty arises at Bedford.

There is a great deal in the Bedford workhouse that is admirable. Doubtless it is of an old type; the sick wards are scattered about the house on various floors; the sanitary and lavatory arrangements are in some cases offensive and badly placed, and the seventy-two children might well be sent out to the ordinary elementary schools for their education. Still, on the other hand, the whole place is thoroughly clean; there are evidences on many sides that the comfort of the inmates is considered; improvements in various departments have been made during recent years; although the closets are in several cases badly placed, they are of comparatively modern type (wash-out), and the soil pipes have been carried outside the building. Whatever may have been the case at other times, on the occasion of our visit there was a judicious opening of windows, and, with the exception of some of the closets, the air throughout was sweet; there was no evidence of penurious economy. The whole matter then resolves itself into this question of nursing. Is it right that from fifty to eighty sick people, so sick that about thirty-five die per year, should be left entirely without skilled supervision at night, and that the nurses in the day time, trained though they may be, should have other non-nursing duties thrust upon them, attendance upon which makes it necessary to delegate the nursing itself to untrained paupers? There is no doubt about this absence of night nursing. No attempt is made to hide it; there is no reticence concerning it; it is accepted in Bedford as right. The question is, Is it right? On the male side a pauper "sits up" through the night; on the female side, on ordinary occasions, no one even "sits up," not to mention keeping awake. Now we are free to confess that on the occasion of our visit there was a remarkable absence of what are called acute cases, meaning thereby febrile cases: paralysis and old age formed the staple of those who stayed in bed. But surely these, of all others, are the cases which require constant attention through the night. Those of us who know what is done in many homes and in all hospitals to make the long hours of the night endurable to such patients, may well commiserate those poor old women of Bedford without even a pauper "sitter up"; and we cannot believe that the guardians, with their evident desire to do what is right in many directions, will long think it right to continue their present system of neglect of those old people during the hours when pain and restlessness are hardest to put up with.

Even in the day, and even though the nurses be trained, we see in the imposition of non-nursing duties a complete misconception of what nursing means. It is not as if these duties could be performed at any odd time. To imagine that the pains and wants of the sick can be so arranged as to leave the nurse free to leave her wards whenever the clock comes round to certain hours is absurd. At every meal the nurse must go down into the kitchen to see it served out; twice a week, at a fixed hour, she must go into the kitchen for the ridiculous purpose of weighing out dough for dumplings; every Wednesday from 4 to 4.30 she must attend in the able-bodied women's day room; she must attend to the admission and discharge of all females, and see that every female is bathed once at least a month, which process takes about two hours every Friday; she must also take charge of all the linen on the female side of the house, and superintend the work of the female inmates throughout the house, except in the scullery and laundry. All who know anything about nursing know well the difficulty in arranging time even for meals; to throw all these fixed time duties upon a nurse is absolutely to destroy her utility for her special work.

This brings us to the question regarding the Nursing Association. Mr. Peel, one of the inspectors of the Local Government Board, seems to have attended a meeting of the guardians, where he put forward a characteristically legal official view of their relations with the Association, referring to this body as "like any other register office," and ignoring altogether the fact that its work involves not only the supplying of nurses but the training of them; and, more important still, such a supervision of their work as shall ensure their continuing efficient. Experience on every side shows that the mere fact of guardians employing a nurse who has been trained is but a temporary advantage, and is no guarantee that the nursing so provided shall continue efficient. It is of the highest importance that nurses should retain their connection with the association by whom they are sent out, and should continue under the influence of the body by which they have been trained. When in large unions guardians erect separate infirmaries with proper superintendents of nurses, who are trained nurses themselves, then they have a system which can run on of itself and remain efficient; but where infirmaries are so small that they cannot have a trained superintendent directly responsible to the board, and especially where the sick wards are, as at Bedford, scattered through the workhouse, there even the best trained nursing tends rapidly to deteriorate.

To get a nurse from the Association and then ask her to throw up her connection with it, is to show a want of understanding of the very work the Association undertakes to do. Mr. Peel is reported to have said: "It is clear enough that she (the nurse) is at the beck and call of the Association as well as that of the guardians, and the committee say in this report distinctly enough that they cannot depend upon her for remaining here, and rather than submit her appointment for the approval of the Local Government Board they would prefer to have someone who is entirely free."

This may to the Bedford Guardians sound like common sense, but it shows ignorance of the very essence of the question. It is as desirable that a nurse should retain her connection with the Association as that a physician should retain his with his College. No better example of the deterioration of the nursing which is inevitable in small institutions without the intervention and supervision of some such independent body as this Association could well be found than this at Bedford. It is idle to say that the guardians can always get good nurses "in the market," or to maintain that, when they have got them, the standard of their work will be kept up, so long as their employers, whom we presume they ought to please, understand so little the necessity for nursing that they occupy the nurses' time on other work when they should be in the wards, encourage the use of pauper help in the treatment of the sick, and provide no nursing at all through those long hours of the night during which old people mostly die. What nurse who wishes to please such masters could long remain efficient?

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, AUGUST 18th, 1894.

DROWNING.

The public is taking an increasing interest in the treatment of the apparently drowned; this is not surprising at a season when so many fatalities from this cause are registered, and attention is now more and more attracted to the subject by the rapid increase of swimming, boating, and skating clubs, and by the energetic action of the "Life Saving Society" in drilling their members in the various methods of rescue work. From statistics collected by that Society, it appears that, during the year 1893, 6,000 inquests were held in Great Britain and Ireland on deaths from drowning, 400 of these occurring in one month in Great Britain alone. Two so-called new methods or sets of instructions have been advocated recently;[1] the one, said to be the most efficacious, is that of Dr. Laborde and Dr. le Coquil, which consists in opening the jaws as widely as possible with a stick or knife-handle, then firmly grasping the tongue with or without a cloth between the thumb and index finger, and pulling it strongly and rhythmically fifteen or twenty times a minute, letting it go back again each time. These pulls, the report says, should act on the root of the tongue, and draw the tongue well out of the mouth. They should be continued for at least a quarter of an hour, and, when the breathing is accentuated and sure, artificial respiration, warming, flagellation, and such like better known remedies should be applied. Artificial respiration is carried out, as usual nowadays, with the patient on his back, open jaws, and the tongue well out of his mouth—in fact, by the "Sylvester method." The second method originates with Dr. Maas, of Göttingen, who has succeeded with it in three cases of apparent death from chloroform. It consists simply in striking violently on the region of the heart, when it is said "the pulse begins again;" if it stops, this violent striking is to be resumed until the respirations are regular and decided. These two methods, rough and ready enough certainly, act simply on the reflex nervous system, and were thoroughly investigated and applied by Dr. Marshall Hall forty years ago, as preliminaries to all other action, but applied more gently and more wisely. A person nigh unto death may easily have what little life remains in him extinguished by rough handling; moreover, in neither of these methods is any provision made for the expulsion of the water or mucus from the chest, nor a sufficiently safe provision for the removal of the tongue and epiglottis from the posterior wall of the pharynx.

Dr. Bowles has for many years pressed these points on the attention of the profession, and there has been a committee of the Royal Medical and Chirurgical Society now for a long time at work in the hope of settling authoritatively the relative merits of the three best known methods of resuscitation. The report of this Committee is anxiously awaited by the profession and all life-saving societies. Dr. Bowles maintains that for the recovery of the apparently drowned, and, indeed, of all cases of paralysis and unconsciousness, three conditions must be fulfilled—(1) the removal of all foreign matters from the mouth and throat, such as dirt, sand, weeds, and the regurgitated contents of the stomach; (2) the effectual removal of the base of the tongue and the epiglottis from the posterior wall of the pharynx, and their maintenance in that distant position; (3) the removal of water, froth, mucus, the inhaled contents of the stomach or other foreign matters from the trachea and bronchial tubes, prior to the introduction of air, or at least of only so much air as will take the place of the foreign matters which have been expelled or extruded. The first of these conditions is fairly easily effected, but the second is by no means easy in the supine position of the body; indeed, it is almost impossible in the hands of a non-medical person; for the opening of the mouth, which means the depression of the lower jaw, is the very action which drags the tongue by its attachments to the symphysis down to the pharynx; and the pulling of the tongue forward, which, of course, can only be done with the mouth open, does not affect the base of the tongue or the epiglottis sufficiently to be effective, that is, it cannot be depended upon, in consequence of the frænum and the other attachments of the tongue to the lower jaw acting as a check. The third condition, the emptying of the bronchial tubes is as impossible in the supine position as the second. The turning on the face for a few seconds is only useful for those few seconds; froth will not "run out," it must be gently and gradually *squeezed* out, and then air *allowed* to enter, not pumped in by force; and these means must be long continued, for the irritant effects of matters foreign to the bronchial tubes, and the delayed circulation in apnœa, give rise to a continuous secretion of mucus which of itself is sufficient to suffocate the unfortunate victim. Now, it is contended that all these difficulties are met by the gentle use of the Marshall Hall method, the patient always being kept on one side for the reasons indicated above; the side should not be changed, as was formerly recommended. The public, which after all must be the first doctors in such cases, will readily grasp these simple principles of action, and carry them out with the best of all intelligence, an intelligence begotten of a clear understanding of natural causes and their effects.

[1] *Bulletin de l' Académie de Médecine.*

ARE WE DEGENERATING?

More than one recent writer is endeavouring to prove that the people of Europe are degenerating mentally, morally, and physically. Such views have been maintained by some of each generation of our forefathers since the time of Homer.

Whether we are losing the delicacy of our literary and

artistic tastes is too uncertain an inquiry, and if Europeans are diminishing in mental power they are certainly not diminishing in mental activity. The patience with which our studious youth submits to the often unreasonable exactions of examiners is a proof that at least they are willing and sometimes eager to labour under very heavy loads. But, leaving such difficult inquiries, let us rather take the data which the more exact observations of biological science have given us. Though the evidence is no doubt conflicting, the presumption that we are, on the whole, not degenerating seems to be strong. The working classes receive in the amount and purchasing power of their wages twice as much as they did fifty years ago; their food is better, and their houses healthier. In points of food, sanitation, and means of changing air and scene it may be safely said that every class now lives under better sanitary conditions than it did at the beginning of this century. Preventable diseases have much diminished; some, like scurvy and small-pox, have well-nigh disappeared; others, like syphilis, are milder in their attacks. The Registrar-General's reports also show a decrease in deaths from phthisis and scrofula.

Studies in anthropology do not confirm the legends of giants in ancient times. It has been inferred from the size of old armour that the men of to-day are bigger than their ancestors. Broca maintained, from accurate observations, that the Parisians of the present time have larger skulls than those of the Middle Ages, but some of the skeletons of primeval man, especially those found in the South of France, have large and well-formed crania. Dentists generally hold that the teeth are now more prone to decay than formerly; but this may be owing to some changes in the nature of the food, not entailing degeneration in other respects.

It is well known that the average duration of human life has much increased, but this may be owing to greater care, better hygiene, and increased skill in medicine, adding to the lives of the more weakly members without increasing the tale of years of the healthy ones. During the controversy actively carried on about fifty years ago as to the efficacy of bleeding by some eminent physicians in inflammatory diseases, it was asserted that the type of disease had changed. Men could no longer bear the loss of blood as they could in previous generations. It is, however, to be noted that this assertion was made only by the advocates of phlebotomy, and only after experiments had proved that blood-letting could be discontinued without any increase in the mortality or duration of inflammatory diseases. A great surgeon, the late Professor Syme, used to say that he totally disbelieved in this change of type, because men could bear surgical operations as well as they did thirty years before. That this also holds good of the present day is not wholly due to the mere improvement of surgical methods and treatment. We may safely say that men can bear up under severe shocks and injuries quite as well as they did in the last century. Considering the strain that modern civilised life exerts upon the nervous system, it would not be surprising if nervous diseases had become more common, though it has been found difficult to prove this by statistics. It has often been asserted that insanity is commoner than it used to be, but the studies of Dr. Hack Tuke and Dr. Rayner, which were noticed in these pages some time ago, tend to show that the increase in the number of the insane is due to the accumulation of lunatics in asylums, where they live longer under care than they used to do. It appears, however, that the average number of recoveries in asylums is less than it used to be—an unwelcome piece of statistics somewhat difficult to explain. On the other hand, there are dangers to the healthy growth of some classes in our population, which would be foolish to leave out of sight. The diminution of the rural population and of employments which harden the muscles, and the prevalence of intemperance in food and drink threaten to lower the tone of public health. In the large manufacturing towns we already see the results in a stunted and anæmic population. These sources of degeneration must be combated by putting in operation healthy influences, and teaching the people to attend to the laws of hygiene.

On the whole, however, the healthy influences at work appear to be stronger than the morbific. So far from a general survey of society giving support to the belief that the rising generations are degenerating, the evidence appears to point to an opposite conclusion. The young people of our time are fonder of athletics than their parents were, and seem always to be creating more and more opportunities for outdoor exercise. Such tastes are spreading from the upper and middle to the working classes, and the achievements recorded in the journals devoted to athletics and outdoor sports show an actual increase in physical power. In running, jumping, skating, bicycling, swimming, and rowing, there is no record which has not been beaten in the past ten years, as far as Europeans are concerned. In the beginning of this century people made much of Lord Byron swimming the Hellespont, but in our own day Captain Webb swam the Straits of Dover; and not long ago a member of our own profession, Dr. J. Daland, of Philadelphia, swam across the Straits of Messina.

Girls in their teens now take much more healthy active exercise than their mothers or their grandmothers did, engaging in games and sports, such as lawn tennis, golf, rowing, and skating, which will have a good effect in the improvement of coming generations. The volunteer movement has had an invigorating effect upon our young men, and the prevalence of the military conscription upon the European Continent, though not without its evils, tends to cultivate physical strength, endurance, and manliness of character.

Although causes are in operation which justly cause grave anxiety for the future there are as yet no serious proofs that the population of Europe is degenerating, and there are many gratifying signs of improvement.

SURGEON-COLONEL A. F. PRESTON, A.M.S., has been elected Vice-President of the Hong Kong Branch of the British Medical Association.

THE Linnean Society has awarded to Professor Ernst Haeckel, of Jena, the gold medal which it gives every ten years to the person whom it judges to have rendered the most distinguished services to biological science during that period.

PASTEURISM IN VIENNA.

Antirabic inoculations, according to M. Pasteur's method, are now, we are informed, carried out in the Rudolph-Stiftung Hospital in Vienna. The inoculations are performed daily between 10 and 11 A.M. They are at present entirely free, but we gather that a scale of charges is under consideration. The inoculation service is under the direction of Professor Paltauf.

THE MEMORIAL TO SIR JOHN C. BUCKNILL.

The *World* states that nearly twenty designs have been sent in to the committee which is entrusted with the selection of the memorial to Sir J. C. Bucknill, M.D., who is now recognised as the founder of the Volunteer movement. Of these three have been selected for further consideration. The public monument will be erected on a prominent site in Exeter. The subscribers to the memorial include a long array of public men, among them the Duke of Coburg, the Lords Lieutenant of Devon and Cornwall, the Adjutant-General, and the civic dignitaries of nearly every city and town in the West.

HOME CISTERNS.

Attention has been directed from time to time to the desirability of abolishing the old storage cisterns when a house is placed on constant, as opposed to intermittent, water supply. If this is not done it is urged that the last state of the house is worse than the first, as the cistern is rarely or never entirely emptied, and the water is exposed for a greater length of time to contaminating influences. An ingenious theorist has now propounded the doctrine that the autumnal prevalence of certain diseases is attributable to the fact that when people return from their holidays they drink water which has been allowed to remain in the cistern for a considerable period of time, and has thus been rendered potent for mischief. This notion is somewhat far-fetched, and is not supported by any body of evidence; there can be no doubt, however, that holiday makers are sometimes inclined to be more critical concerning the water supply of the places they visit abroad than mindful of the risks they incur through neglecting to devote attention to the condition of their cisterns at home.

INAUGURATION OF OUR QUEENSLAND BRANCH.

A meeting to celebrate the inauguration of the Queensland Branch was recently held in Brisbane. The Hon. W. F. Taylor, M.D., M.L.C., President of the Branch, was in the chair. The President was supported by His Excellency Sir Henry Wylie Norman, G.C.B., etc., Governor of the Colony; the Hon. A. C. Gregory, M.L.C., President of the Australian Association for the Advancement of Science; the Hon. A. S. Conley, Speaker; Major-General Owen, Rev. G. D. Buchanan, and Mr. Drew, Chairman of the Civil Service Board. There was a large and representative gathering of medical men and of scientific and political notabilities. The President delivered a short address explaining the objects of the British Medical Association, and giving a short account of its formation and growth, and of the formation of the Queensland Branch. The usual loyal toasts were enthusiastically pledged with musical honours. The President proposed "His Excellency the Governor," drawing attention to Sir Henry Norman's willingness on all occasions to assist at the meetings of the scientific societies of Queensland, and also to his generous and kindly assistance to the charitable institutions of the colony. Dr. Taylor concluded by expressing a wish that Sir Henry and Lady Norman would remain many years among the people of Queensland to carry out the noble work in which they had so heartily engaged. His Excellency replied. Dr. Lyons proposed the "Ministry and Parliament of Queensland," which was responded to by The Hon. T. Macdonald-Paterson, on behalf of the Legislative Council, and by Mr. Kingsbury for the Legislative Assembly. His Excellency the Governor proposed "The Queensland Branch of the British Medical Association." He congratulated the members on the formation of the Branch, and trusted that it would prosper. A spirited ode, which had been specially written for the occasion by Mr. J. Brunton Stephens, and set to music by Professor Allen, was then sung. Dr. Jackson, Treasurer of the Branch, replied to the toast. He mentioned as matters requiring the immediate attention of the Branch, the establishment of an Inebriate Asylum, the necessity of a hospital beyond the coast range for the treatment of consumptives, and the necessity of an inspector of charities. Dr. Connolly proposed "Kindred Societies," which was responded to by the Hon. A. C. Gregory, C.M.G., M.L.C. Dr. E. O'Doherty proposed "The Press," and Mr. S. W. Brookes replied. A musical programme was very ably carried out by Messrs. Powell, Aplin, Stewart, and Cowell, and Drs. Paul, Tilston, and Thompson, under the direction of Professor Allen.

THE "BRITISH PHARMACOPŒIA."

We are officially informed that in connection with the subject of the Imperial extension of the *Pharmacopœia*, replies to the proposal of the Medical Council to extend the usefulness of the work to the Colonies and India, have been received by the Council, through the Colonial Office, from the Bahamas, Barbadoes, Bermuda, British Honduras, the Cape of Good Hope, Cyprus, Jamaica, Malta, Queensland, St. Helena, Sierra Leone, South Australia, Tasmania, Western Australia, Zululand; and replies from other colonies are expected. A representative from Canada has visited London and has had interviews with members of the Council on the subject. In all cases the proposal of the Council has been accepted. In some of the Colonies neither climatic nor other conditions point to any special adaptations of the *Pharmacopœia*, but offers are made to collect and forward any desirable information. In others, medical and pharmaceutical committees have been appointed to consider and report on the matter. In some colonies the prevailing high temperature leads to requests for ointments of commensurate melting point, for extracts having the minimum of moisture, and for pill masses less liable to became hard. The omission of costly drugs that are without special advantages and can easily be replaced by others is recommended in some of the communications. Several suggestions concerning individual preparations are made. Most of the valuable indigenous materia medica seems, as might perhaps be expected, to have already found its way into the *British Pharmacopœia*.

THE INTERNATIONAL OPHTHALMOLOGICAL CONGRESS AT EDINBURGH.

The Eighth International Ophthalmological Congress, which was held in Edinburgh last week, was attended by about 150 members, including many of the most distinguished ophthalmologists of Great Britain, America, and the Continent. The President, Dr. Argyll Robertson, in his opening address referred to the fact that ophthalmology was the first department of medicine to institute such a Congress 37 years ago. The deaths of Donders and Becker since the Heidelberg Congress of 1888 were deplored, and the illness of Helmholtz (the greatest physicist of the day) was sympathetically alluded to. The Lord Provost of Edinburgh, Sir James A. Russell, welcomed the Congress to the ancient city of Edinburgh. The practical business of the Congress began with a paper by Professor Snellen (Utrecht) on the Subconjunctival Treatment of Operative and Traumatic Wounds of the Cornea and Sclerotic. Among the other communications presented were the following: Dr. Knapp (New York) on Cataract Extraction; Mr. Priestley Smith (Birmingham) on An Adjunct to Iridectomy in the Treatment of Glaucoma; Professor Leber (Heidelberg) on Injuries to the Eye caused by Copper Chips; Professor Panas, on the Traumatic Paralysis of the Motor Nerves of the Eye; Dr. Mules

(Bowden, Cheshire), on a New Operation for Ptosis, and on the Immediate Cure of Corneal Ulcers; and Professor Pflüger (Berne), on the Drainage of the Eyes. In the evening the Lord Provost and Corporation of Edinburgh gave a *conversazione* in the Museum of Science and Art, for which 3,000 invitations were issued. On Wednesday microscopical demonstrations were given by Dr. Dimmer of Vienna, Mr. Juler of London, Dr. Frank of Hamburg, and others. Dr. Darier of Paris demonstrated some instruments, and papers were read by Mr. Gunn of London, Dr. Abadie of Paris, Mr. A. Benson of Dublin, and others. In the afternoon the members visited Heriot's Hospital and Craigmillar Castle. In the evening the Royal College of Physicians entertained the Congress members to dinner, and later the President of the Congress and Mrs. Argyll Robertson held a reception at their house in Charlotte Square. On Thursday Dr. Landolt of Paris read a paper on Strabotomy. Other communications on the value of mercury and iodide of potash in ocular therapeutics and in the treatment of syphilis, etc., were presented. In the afternoon the members visited the Forth Bridge, and in the evening attended a *conversazione* given by the Royal College of Surgeons. The fourth day (Friday) was taken up with various communications of a technical kind. It was later resolved that the next Congress should meet at Utrecht in 1900. Closing votes of thanks were given, and the Congress dinner, at which 120 were present, took place in the evening.

THE MODEST INSPECTOR.

IN a striking article in the *New Review* entitled "In a Woman's Doss-house," an article well worth reading by all who are interested in the status of women workers, a sentence occurs descriptive of the visit of an inspector, which has an application much wider than to doss-houses alone. "If he is a modest man his stay is short, and to their credit presumably most of them are. Herein is their uselessness emphasised. A cursory survey, and the rest is taken for granted. It shows a trustful disposition, but leaves much to be desired." But this is just as applicable to the inspection of workhouse infirmaries and paupers' beds, and the sanitary arrangements of lying-in chambers by the barristers and others employed by the Local Government Board. All inspection of such places should be in the hands of experts on such matters, medical men, and women who have been thoroughly trained as nurses, and, if possible, have held office as matrons or ward-sisters.

GARDEN PARTIES AT THE ANNUAL MEETING.

THE vote of thanks passed at the concluding general meeting at Bristol to Mr. Lewis Fry and Miss Fry, Sir Greville and Lady Smyth, and the Head Master of Bristol Grammar School and Mrs. Leighton for the garden parties at which they entertained the members of the Association was something more than a formal act of courtesy. It was generally acknowledged that these garden parties contributed in no small measure to the social success of the meeting. Although the rain made outdoor enjoyment difficult at Ashton Court, the graceful hospitality with which Sir Greville and Lady Smyth did the honours of their beautiful house made their guests, who numbered nearly six hundred, indifferent to the frowns of Jupiter Pluvius. The rain also interfered to some extent with the hospitable intentions of the Head Master of the Bristol Grammar School and Mrs. Leighton. In spite, however, of the continuous downpour, a large number of members and residents, including many ladies, enjoyed the entertainment provided by them. The band of the 1st Volunteer Battalion Gloucestershire Regiment, the services of which were kindly given by Colonel Methuen and the officers of the regiment, performed under the direction of Bandmaster Webb at the entrance. In the large and handsome central hall Mr. Riseley gave an organ recital, his performance being alternated with a vocal selection by a glee party conducted by Mr. W. Ernest Young. The commodious laboratories and class rooms provided ample accommodation for refreshments, and the efforts of all concerned were much appreciated. At Goldney House, Clifton, Mr. Lewis Fry and Miss Fry entertained a large number of members, visitors, and residents. Here, also, at one time it seemed as if the festivities were to be marred by the inexorable rain, but fortunately the sky cleared in time. Admirable arrangements had been made, and the guests thoroughly enjoyed themselves in the beautiful grounds, where, in addition to the other attractions, a promenade concert was given on the lawn by the Clifton Zoo Band.

THE ANTITOXIN TREATMENT IN DIPHTHERIA.

DR. URQUHART WALKER, of Worksop, whose interesting case of diphtheria successfully treated by antitoxin is published at page 368, has since written to us to suggest that it is worth considering whether it might not be advisable to give hypodermic injections of antitoxin as a prophylactic measure to those in attendance on cases of diphtheria. Supposing that immunity can be conferred this way, it will be important as Dr. Urquhart Walker points out, to determine how long the immunisation would last before a repetition of the process became necessary.

THE NURSING OF PROVINCIAL WORKHOUSES: A FURTHER INFIRMARY SCANDAL.

THE importance and public value of reports on the nursing and administration of provincial workhouses and infirmaries are being collaterally justified by such occurrences as that which recently took place in Oldham. An inquest was held on a man who had jumped through a window on the third storey, and received injuries from which he died, shortly after. Strong comments were made at this inquest on the nursing arrangements, there being only one night nurse to three blocks of buildings, containing over 200 patients. The same day (at night) on which the injured man died the night nurse unfortunately gave a teaspoonful of atropine solution in mistake for whisky. The doctor had informed the coroner that the patient was suffering from heart disease and general dropsy, and would probably soon have died; and he had also stated that the nurse was much distressed and harassed in consequence of the suicide of one of the patients under her charge. After evidence of identification, the nurse, who was much affected, gave evidence, and stated that at midnight on Wednesday she was sent for to attend to the deceased, who was taken worse. Whisky had been prescribed for her, and it was kept in a bottle in the cupboard, where there was a bottle containing atropine. The bottles were of similar shape, and she gave what she thought was a teaspoonful, of whisky. She found the mistake out after going off duty, through the day nurse coming to her. She knew that poisons were kept in this cupboard, but she had not been herself since the suicide case occurred, and on Wednesday she felt very unwell. She had no sleep that day, and had no extra assistance at night. Her hours were from 8 at night to 8 in the morning, except on Sundays, when they were from 10 to 8. The coroner thought that although the nurse was responsible, it was a case of error of judgment, and that a verdict of death by misadventure would be the right one. He said a matter which must have struck the jury was that a deadly poison like atropine should have been placed in a bottle similar to that containing whisky, and in the same cupboard. It was usual in infirmaries to have poisons in bottles thoroughly dissimilar from those containing medicines for internal administrations, and it was curious this was not done in this case. When they considered that one professional nurse had charge of three blocks of buildings with over 200 beds, with no assistance beyond that supplied by such weakly invalids as they had seen at the previous inquest, he thought they could not hold the nurse responsible for such mistakes and accidents.

The only surprising thing was that more accidents than they knew of had not happened. The chairman of the board of guardians said that the nursing staff had been doubled within the last five years. The coroner said that was a step in the right direction, but further development was necessary. They could not expect an overworked nurse to do her duty. After further remarks the jury returned a verdict of "Death from misadventure," with a recommendation that in future poisons should not be kept in bottles similar to those containing medicines for internal administration, and they also recommended the guardians to increase the nursing staff for night work.

A STATUE TO SYDENHAM.

At the Oxford University Museum last week, during the meeting of the British Association, Lord Salisbury unveiled a statue to Sydenham. Sir Henry Acland, on behalf of the Warden of All Souls, begged the acceptance by the University of the statue, on the occasion of the meeting of the British Association, under the Chancellor's presidency, for the fourth time in Oxford. Lord Salisbury, in accepting the gift, said it came at a time when they were able to see how great had been the growth and renewal of the study of Nature, of which that museum had been the outcome and was the seed. That building marked the growth of the new study which had arisen chiefly by the efforts and under the authority of Sir Henry Acland himself, the great representative of medical science in the University. In honouring Sydenham they were honouring his great successor, to whom, more than to any other man, the renewal of the study of Nature in that seat of learning was due. This ceremony may fairly be regarded as a tardy act of reparation on the part of the University and the medical profession to the memory of an illustrious man. Very little indeed is known of the history of Thomas Sydenham, especially in his earlier years. He was, it is true, a Fellow of All Souls, but owing, perhaps, to his Roundhead connections, he must have been snubbed by the loyal Oxonians, for he took his degree at Cambridge. When he came up to London the same influences were at work against him, and the College of Physicians left him out in the cold. Though he enjoyed a higher reputation and a larger practice than any doctor of his day, he never obtained the distinction of F.R.C.P. He did, however, acquire what he valued far more—the friendship of Locke, Boyle, and all the leading intellects of the Restoration. Sydenham lived on the north side of Pall Mall, then a rural road, having Nell Gwynne for a *vis-à-vis*. Next door was the sign of the "Pestle and Mortar," which survived till this century. According to a story told by Fox to Rogers, as the genial physician sat one evening at his window smoking a pipe, with a silver tankard before him, a thief boldly snatched the latter article from the sill, and ran off with it. He was pursued until he got among the bushes in Bond Street, where the trail was lost. Sydenham died in Pall Mall in 1689, and lies buried at St. James's, Westminster.

THE HACKNEY SCHOOLS INFIRMARY SCANDAL.

So much depends on points of view that one is glad of any opportunity of discovering how the "irregularities" at these schools are regarded by those in authority. It was with some interest, therefore, that we read the report of some remarks made by the Rev. L. E. Shelford, chairman of the Infirmary Committee, on the occasion of the clerk's presenting to the guardians a supplementary account of some of the irregularities alluded to. To some extent he apologised for the defaulting steward. "He was glad to be able to state, as the result of the investigation, that whatever defalcations might have been committed, much more was due to carelessness, neglect of duty, and inefficiency, than to anything else. . . . . It did not in the least follow that there was anything worse." This is all very well as regards the steward, but it only makes the discredit fall with all the greater force upon the guardians. Rascality will occur occasionally anywhere, but will usually, in the long run, meet with proper punishment. It is, however, quite a mistaken notion to look on "idleness, ignorance, and blundering," as lesser evils; they are the very curse of Poor-law administration, and they are the very things the guardians are appointed to prevent. In the succeeding portion of his speech, this most outspoken chairman threw a curious light on the difficulty felt by guardians, "who lived in glass houses," in finding fault with their subordinates. "He did not want them to think he was unduly shielding the steward, but he thought it only right he should place this view of the matter before them. They lived in glass houses, and none of them were altogether in a position to throw stones. The Infirmary Committee were compelled, because of the fluctuating population of the infirmary, to give orders for bread, meat, and milk for the week. This was the last they knew about the matter as the resultant bills went before the Finance Committee. The accounts were never checked by the Infirmary Committee; they never saw them, nor did they have the slightest idea of them. . . . . There was not a single member of the Board who could not have found the matter out for himself, as the particulars of the consumption of provisions were published and laid before them at every meeting. . . . . Then there was a further irregularity. Formerly the Infirmary Committee took stock once a quarter. Latterly the steward had never asked for a stores committee, wherefore no stores committee had been chosen. When audit came, therefore, the steward had gone to any member of the Board he could find, and members who had nothing to do with the infirmary had signed the book. One member of the Infirmary Committee had done likewise. The signature was a solitary one, and the consolidated orders required two signatures, and yet the auditor had passed it." What a confession! Guardians such as these do, indeed, live in glass houses, and it is idle to expect men so situated to wage war with mismanagement and jobbery. Every fresh development bears out the truth of what we have all along urged, that it is not the dismissal of an official here and there which will do good, but a recognition of the fact that errors among subordinates mean culpable negligence on the part of those who employ them.

A "MASSAGE COMPANY."

We have received the prospectus of an "American and Parisian Massage Company," which it is proposed to float with a capital of £10,000 in 2,000 shares of £5 each. Why it should be called the "American and Parisian" Company it does not appear. As a list of directors is given and as a solicitor and secretary have been appointed, we presume that the document is to be taken seriously, although at first sight it reads suspiciously like a somewhat feeble attempt at a practical joke. Massage, we are informed, is "the application of sentient living matter to sentient living matter in multifarious ways"—whatever that may mean. It is stated that arrangements have been made for the acquisition of suitable premises in the West End of London and at various fashionable resorts, and that the purchase money to be paid to the vendor, who is also the promoter, is fixed at £5,000. What the vendor has to sell and why he should receive this or, for the matter of that, any other sum, we do not clearly apprehend. The staff, it appears, is to be engaged under the superintendence of a duly qualified physician, who is stated to be a specialist on diseases of the skin, and who will be in daily attendance at the various establishments for consultation. Whether the specialist is identical with the gentleman whose name is prominently put forward as the medical officer we are not informed. One of the proposed establishments, however, is to be in London, and another in Edinburgh. It is also stated in the prospectus that it is a well-known fact that "certain individual experts in these and kindred businesses earn from £5,000 to £15,000 nett profit yearly." What is implied by the expression "kindred businesses" we do not

know, but if it is meant to imply that anyone in this country earns, or has ever earned, even the smaller of these sums by the practice of legitimate massage, that statement is incredible. It is possible that under the cloak of massage certain individuals may have made considerable sums by practices which it is not necessary to particularise, but that is quite another matter, and cannot here be intended. On reference to the *Medical Directory* we find that the only director who has a medical qualification acquired it as recently as 1893, and at the beginning of this year was "travelling." The prospectus of this very peculiar company was sent to us for insertion as a full-page advertisement, an honour which the BRITISH MEDICAL JOURNAL promptly declined.

MASSAGE ESTABLISHMENTS.

A CORRESPONDENT writes: There seems to me to be very little doubt that many of the massage establishments in London are run practically on the lines which have for some time past been adopted in Chicago. In that city, as is well known, the massage shops are licensed and are the recognised houses of ill fame. There is no concealment about it and they do a thriving business. They are advertised quite openly in the daily papers and there are often a score or more of these notices to be seen in a single issue. Here are a few examples selected haphazard from a recent number of the *Chicago Dispatch*: "Massage Parlours. New attendants, young and beautiful; licensed." "Two young actresses during vacation would give treatment; refined party. Apply, etc." "The talented young French lady presents her compliments to all and wishes to state that she is still giving treatments. The little lady is pleasant and cordial." "Two young ladies employed during the day will be pleased to give treatment to a few select gentlemen in the evening." "Miss Amy Amcalle, young (18) and handsome, will give treatment to select parties at her own home." "A genial young lady, educated and refined, still in her teens, will treat a few nice parties." "A prepossessing young widow would treat a few select parties at her own home." One establishment is described as the only genuine Turkish bath in the world with lady attendants; another is "open day and night;" whilst a third boasts of "a pleasant corps of lady assistants." Some of our London daily papers are indiscreet enough, but as yet they do not go quite so far as this.

THE VISITING OF WORKHOUSES.

AMONG the various evils of our present workhouse system few are so dangerous, or so apt to lead to wide spread abuses, as the absolute authority given to the master, especially in regard to the power he wields of excluding visitors from the house. Who is to know what goes on inside a workhouse which has no independent visiting committee, and where even visitors to individual inmates on the appointed visiting days are refused admission by the fiat of the master if this official is supported in his action by the board? We can quite believe that the admission of visitors at irregular hours might occasionally interfere with the work of the house or of the infirmary, but when a public visiting time is appointed, it is a very strong measure to refuse admission to a lady applying at such hour to see an individual inmate, even though she may have extended her ministrations beyond the individual she asked to see, and it is difficult to avoid the conclusion that such a course could be adopted only in consequence of a dislike to independent inspection of the arrangements within the building. The legality or otherwise of such a proceeding is a matter we will not here enter upon, but we would strongly insist upon the necessity of appointing an independent ladies' visiting committee, acting under the express sanction of the guardians, and having the right of entry in every union where the slightest inclination is shown by the master to close the doors of the institution. Unless there is something to hide we can see no reason for turning a workhouse into a prison. In a letter we publish to-day from the secretary of the Northern Workhouse Nursing Association this same point is insisted on, namely, the evil arising from the absolute power of the master.

THE SICK POOR IN PROVINCIAL WORKHOUSES: WAKEFIELD.

OUR Commissioner's report of the visit to Wakefield Union Infirmary gives a picture of humane and thoughtful management on the part of the officials, and in some of its appliances, such as the screens and the children's ward it compares favourably with other workhouses. This report appears in another column of the BRITISH MEDICAL JOURNAL, and it tells of comfortable wards with groups of patients seated in their cushioned armchairs round the fire or at the windows. From the nature of the work that is done in that infirmary—a patient recovering from an acute attack of pleurisy, a case of advanced phthisis, patients crippled with rheumatism or suffering from some form of heart disease, ulcerated legs, and many cases of infirmity—we can estimate with a fair amount of accuracy the nursing that is requisite in the infirmary, especially in the winter when poverty and cold weather fill the wards. At this time of year (June) the workhouses are at their lowest, and yet there is plenty of nursing for the two nurses who are responsible between them for 130 beds. Our Commissioner finds a block containing 40 beds set apart for the reception of the offensive cases—patients who, from the nature of their infirmities, are as helpless as children, and whose sad condition asks for pity and consideration at the hands of the officials. The bedding on which they lie is insufficient for comfort, the mattresses too thin, and though the bedding is warm it all looks neglected, giving an idea of patients in disgrace. These helpless bedridden old folk are left at night without any attendant, and there is only one nurse by day with her pauper assistants; in the nature of things there cannot be that scrupulous cleanliness that such work demands, and it needs no stretch of imagination to picture the state of that ward during the night. Until the present time there has been no night nurse up in any part of the infirmary; such actual nursing as the sick required has been done by the nurse or the inmates appointed to watch beside a critical case. The labour ward is in the house, and when the nurse's services are called for by a confinement case we read that her practice is to call up a man and a woman, who are to perambulate the wards during her absence. We are not informed what they are to do if a patient is dying or in immediate need of her care; one or the other, the confinement or the patient, will have to suffer. We can only say that we are surprised that some tragedy has not happened to show the hollowness of such nursing: it is due to good fortune, and not good management. We are glad to read that the guardians are purposing the building of a new infirmary; in that case doubtless these deficiencies in the nursing will be remedied, and we trust that these remarks, which are made in no captious spirit, will serve as suggestions as to the particular direction in which improvements are most needed.

THE ASSAULT ON DR. J. WIGLESWORTH.

OUR Liverpool Correspondent sends us the following particulars as to the murderous assault on the medical superintendent of Rainhill Asylum, which was mentioned in the BRITISH MEDICAL JOURNAL of August 11th. Dr. Wigleswortb's assailant was a man who had for some time been repeatedly applying for his discharge. On the morning in question, Dr. Wiglesworth was conversing with him in the airing court, telling him that his case would be brought before the Committee, and, as he turned to leave, the man

inflicted the stab from behind. Dr. Wiglesworth was sensible of the instrument (an old iron staple about 7 inches long), striking the jaw bone; and, realising that a large vessel was wounded, with great presence of mind applied pressure with his own hand to control the bleeding, and walked into the building, accompanied by the head attendant. He then sent the latter for one of the assistant medical officers, Dr. Buss, who was engaged in a neighbouring part of the institution, and in the meantime walked to his own house, having to pass through a corridor and a long ward, and to open three doors on his way. He reached the breakfast room just as Dr. Buss arrived, and, feeling faint, was laid on the floor. Pressure was maintained to control the bleeding until the arrival of Mr. Damer Harrisson, nearly two hours after the injury was received. The pressure was considerable, and must have occasioned much distress. The patient was quite livid at the end of the time. On Mr. Damer Harrisson's arrival Dr. Wiglesworth was placed under the influence of an anæsthetic. Mr. Harrisson then enlarged the wound downwards, and ascertained that the bleeding came from the internal carotid. The wound was still further enlarged, and a ligature passed under the common carotid at the seat of election. Pressure between the ligature and the finger being found to control the hæmorrhage completely, the artery was tied and no more bleeding took place. It was quite hopeless to think of tying the carotid at the wounded point on account of its deep situation and complicated relations, so a plug was placed in the upper part of the wound in the hope that its pressure would lead to occlusion of the distal part of the vessel. Mr. Rushton Parker saw the patient next day in consultation with Mr. Harrisson, and together they removed the plug without any return of bleeding. The wound was syringed out with one in twenty carbolic, and a piece of double cyanide gauze, wrung out of carbolic lotion, was inserted. On the evening of the 8th the temperature was 100.6°: on the evening of Thursday and Friday 99.4°. Since then it has been normal. The wound has been successfully kept aseptic, and has so far filled up from the bottom as to make the onset of secondary hæmorrhage very improbable. Since the day of the injury one of Dr. Wiglesworth's four assistants has been constantly in his room, and Mr. Harrisson has stayed every night on the premises. As we go to press we are pleased to learn that Dr. Wiglesworth continues to make satisfactory progress.

OVER-CORRECTED DEATH-RATES.

The "corrected" death-rates of the Registrar-General are, as all our readers probably know, obtained by means of a factor which neutralises the fictitious advantage or disadvantage consequent on undue preponderance of individuals of either sex and different ages, and show at what rate the particular population would die under actual sanitary conditions if constituted as regards age and sex as the population of the whole kingdom; and the "standard" death-rate is that at which a community, constituted as they are, would die were their surroundings no better or worse than the average. Dr. Ogle, in his calculation of the "comparative mortalities" of the chief trades and occupations, has rendered invaluable services, not the least of which is the exposure of the fallacies incident to "mean age at death," etc. But Dr. Spottiswoode Cameron, in his report as medical officer of health for Leeds, proposes a further correction, namely, a factor deduced from the comparative mortality of occupations and the relative preponderance of persons following these. He argues that allowance should be made for persons following employments tending to shorten life, as for persons who have reached ages of high mortality. But there seems to be a fallacy lurking here, for the tendency to death in advanced life is beyond human control. Indeed, the more ideally healthful the conditions of life, the greater will be the difference between the mortalities in adult and in old age: whereas in the case of industries the different mortalities are the very question with which the health reformer has to deal. Health does not depend on drains alone, nor even on dwellings and wages. The fact that the mortality among operatives in the pottery trade is 50 per cent. higher than in the textile industries points to the need for improvement in the conditions under which it is carried on, or the methods employed in the manufacture, whether the actual remedy lies in the hands of the health officer or of the factory inspector, the Local Government Board or the Home Office or the Board of Trade. Dr. Cameron suggests no limit (save, of course, the knowledge of the facts) to his method of "correction," which pushed to its logical conclusion would, by eliminating all disturbing influences arising out of the relative proportions of persons living under more or less favourable conditions, reduce all to one uniform rate—that of the general population of England and Wales.

INEFFICIENT RESULTS OF INFANTILE VACCINATION.

A correspondent has placed a case before us touching those too frequent instances in which vaccination, intended to have results commensurate with the insertions of lymph, turns out to be more or less of a failure. Our correspondent inquires, as many have from time to time inquired, what is to be done in a case like the following: A child having been vaccinated in four places with calf lymph, of presumably fresh quality, has one resulting scar, of a good and typical nature it is true, but only one all the same. Is the child to be immediately revaccinated, or told to come again, or is the case to be let alone? It seems to us that since there has been a resulting scar, even though it be only one-fourth of the desired number, the legal requirements of the case have been satisfied. Vaccination has been performed "successfully," but with disappointing consequence, inasmuch as the child, having been operated upon, it must be left for some time in its semi-protected state, for the reason that, having one scar of typical quality, the child is doubtless for, it may be, some years proof in like degree against vaccination and variola. To submit the child to further vaccination in a week's time, or in a month or two, would under the circumstances be most probably useless. If the resulting scar be an inefficient one its evidence will no doubt soon fade away, and in that case the operation could be performed with much greater certainty of success. Thus, for all practical purposes, nothing can be done to undo the mischief which has accrued to a person by reason of his inefficient vaccination. This at once. But as to what should be done at a later stage of the child's existence we have strong views on the matter. We would see every such child subjected to revaccination at 10 years of age, or if small-pox threaten, at an earlier age, that is, when the chance of infection has been much increased by the immediate presence of small-pox. If persons seeking vaccination for their children and revaccination for their offspring or themselves could but be persuaded to resort to our public stations, these inefficient results would soon sink into numerical insignificance, and in the small percentage of cases in which they might continue to occur, would be in great measure met by the addition of compulsory revaccination to our Statute Book.

THE MAYOR'S RECEPTION AT THE ANNUAL MEETING.

The Annual Meeting terminated with the most brilliant of the many brilliant "functions" which will make the meeting of 1894 at Bristol one of the most memorable of these gatherings to all who had the privilege of taking part in it. The reception at the Colston Hall by the Mayor and Mayoress of the City, Mr. and Mrs. R. H. Symes, on Friday evening, is described by residents as the most imposing gathering of the kind which has been seen in Bristol for years. The hall and its approaches were magnificently decorated, and the assembly was a very large one, over 1,800 ladies and gentlemen being present. The reception was

given by the Mayor and Mayoress with the co-operation of Sir George Edwards and a few other leading citizens. The arrangements were made and carried out by a reception committee, consisting of the Mayor, the High Sheriff (Colonel Coates), the Mayor's chaplain (Rev. J. G. Alford), Sir George Edwards, Dr. Hancocke Wathen, and other gentlemen. The guests, in addition to several hundred members of the Association, included the members of the Town Council and the local bodies, many public functionaries of the city, and the officers of the regular forces quartered in the city and of the various volunteer battalions. A specially charming feature of the entertainment was a concert given by the Bristol Madrigal Society. At the close of the concert dancing was commenced, the music being supplied by Mr. Webb's band. Supper, which was on a scale of the most lavish and refined hospitality, was served at 11, the guests sitting down in batches of 500. The reception was from every point of view a great and unqualified success. It may be said without exaggeration that the members of the British Medical Association have never been more splendidly entertained than they were on this occasion by the Mayor and Mayoress of Bristol.

ANTHRAX IN LONDON.

A COMPREHENSIVE report has been prepared by Dr. Hamer, assistant medical officer of the London Council on the prevalence of anthrax in London. Help has been generously afforded by the medical staff of the various London hospitals, who have supplied particulars of cases during the last ten years. By this means and other records information has been collected of 118 cases of anthrax (26 fatal), which have occurred in London during the last twenty-one years. As to whether there has been any increase of this disease in man during recent as compared with earlier years, Dr. Hamer has felt some difficulty in arriving at any positive conclusion. There has been an undoubted increase in the recorded cases, but with this has to be considered an increase of knowledge of the appearances of the local lesion, enabling cases of the malady to be better recognised. During recent years London tanners have practically ceased to use dry foreign hides, and their men have, during this period, been much more free from anthrax, while cases of this disease have been recorded with undiminished frequency among the sorters and labourers engaged in the brokers' warehouses where dry foreign hides are manipulated. Mr. Spear and Dr. Hamer both place in the very first rank of defensive measures the dissemination of a knowledge of the danger among workmen in order that remedial measures should be adopted at the earliest moment. In his report Dr. Hamer gives an outline of the history of anthrax since the year 1847, from which it is seen that but little value can be attached to any statement as to anthrax prevalence in London prior to 1880. The alterations in the Bermondsey hide and skin trade, as affecting liability to anthrax infection, have worked for good. During the last ten years there has been a considerable growth of knowledge concerning the practice of disinfection. There seems to be no doubt, however, among those engaged in the leather trade, that exposure to steam or to reliable chemical disinfectants would materially damage hides. It is felt that this question might well be made the subject of experiment. In many of the places where hides are stored they cannot be brought under the special requirements of Section 8 of the Factory and Workshops Act; hence every effort ought to be made to enforce the adoption of the practice of exhibiting notices by all persons engaged in trades in which there is risk of anthrax infection.

A FARM COLONY FOR EPILEPTICS.

THIS long-desired scheme, says the *Charity Organisation Review*, is at last an accomplished fact. Before these words appear the National Society for the Employment of Epileptics hope that their new buildings at Skipping's Farm, Chalfont St. Peter's, will be actually occupied by the staff and a few epileptics. These have been selected from a large number of applicants with much care, preference being given first to those who are considered most likely to benefit by residence on the farm, and, secondly, to those whose character and circumstances render them most eligible, regard being had in all cases to the ability and willingness of the applicant to do suitable work, in which, it is believed, lies his best chance of obtaining good results from the treatment. The first inmates are mostly working men, and the task of selection has been no easy one. Many applications were received from both men and women, but the latter must, unfortunately, be rejected until the funds of the society permit of the erection of separate buildings for their reception; while of the former the committee has been obliged to refuse many who are otherwise suitable candidates in consequence of the limited accommodation at present available. It is hoped that in time the society may also be able to provide a home and school for children. As the erection of a permanent building would have been a matter of some time, and would have greatly delayed the commencement of the work of the society, the committee thought it right to erect a iron building as a temporary home for the first inmates, which has been constructed with a view to its being subsequently converted into workshops, etc. It accommodates eighteen patients, the matron, trained nurse, male attendant, and necessary servants, and consists of a large dining room and kitchen adjoining, dormitories and suitable accommodation for the staff. Arrangements have been made for the immediate employment of the inmates in useful and suitable work on the farm, under the superintendence of a bailiff. Several acres have already been planted with fruit trees and bushes, and also vegetables, some of which will be at once available for the support of the inmates. One kind donor has presented to the society two horses and carts, some fowls, and a number of farm implements. For the amusement of the inmates it is desired to have a piano, bagatelle board, and other games, as well as books and pictures, and any gifts of such things would be most gratefully received. That the need of such an institution as the National Society for the Employment of Epileptics is great, and that its proposed scheme of management approves itself to unfortunate sufferers from this dreadful disorder and their friends is shown by the large number of applicants of both sexes, and all that is wanted to give the undertaking a fair chance of success is sufficient support to enable the society to erect buildings adequate to the large demands for admission to the colony. It has been found that in most cases the patients or their friends are willing to contribute to their maintenance; it is therefore hoped that when in the course of time buildings have been erected, and the operations on the farm and the cultivation of fruit and vegetables have begun to realise profit, the institution may become self-supporting. The scheme is a great experiment, and, as in the case of all experiments, its originators cannot expect, in spite of the great care, time, and trouble which have been bestowed upon it, to avoid making some mistakes; still, they must remember that such mistakes are the experience of the future, and that the man who never made a mistake probably never made anything else.

THE report of the librarian of the Paris Académie de Médecine states that the library of the Academy contains 95,520 works, or a total of 147,404 volumes and pamphlets. The number of volumes added to the library in 1893 was 8,164, and some valuable manuscripts were presented by MM. Delens, Duché, Bucquoy, and others. On the initiative of the librarian, a fund was raised by subscriptions among the members of the Academy for the purchase of a collection of 5,000 portraits of medical men which added to those already in the possession of the Academy makes a collection which is said to be unique.

THE CHELSEA HOSPITAL FOR WOMEN.

The New Staff.

In consequence of the recent resignation of the entire staff of the Chelsea Hospital for Women, it became necessary for the Board of Management to elect new officers. This they proceeded to do on Wednesday, August 15th. The Committee of Selection, consisting of Sir Spencer Wells and Mr. Jonathan Hutchinson, Consulting Surgeons, and Dr. Robert Barnes, Consulting Physician, Mr. Brookes, Vice-Chairman, and Mr. Wood and Major Probyn, members of the Board of Management, having considered the claims of the various candidates, reported to the Board of Management, Lord Cadogan, the President, being in the chair. The following gentlemen were then elected: As Physicians to In-Patients, Dr. William Duncan and Dr. William Hugh Fenton; as Physicians to Out-Patients, Dr. J. Inglis Parsons, Dr. Arthur E. Giles, Dr. T. W. Eden, and Dr. R. T. A. O'Callaghan.

It will be observed that the numerical strength of the staff has been reduced, there now being two physicians to in-patients instead of three, and four physicians to out-patients instead of the six there were before; also, that neither pathologist or registrar has as yet been appointed.

Dr. William Duncan is Obstetric Physician and Lecturer on Obstetric Medicine at the Middlesex Hospital, and Examiner in Midwifery and Diseases of Women at the Conjoint Board. Dr. O'Callaghan has been Surgeon to the County Infirmary at Carlow. The other gentlemen appointed have already held office at the hospital. It should be added that, in making their selection, the Committee had before them the full evidence taken by the Committee of Inquiry which recently investigated the results of the operative work at the hospital, and were therefore in a position to know the facts upon which the Commission of Inquiry reported.

THE CHOLERA.

The Town Clerk of Edinburgh has just sent out a circular letter to the medical men of Edinburgh, requesting them for the next two months to report cases of British cholera and choleraic diarrhœa, in addition to the diseases at present requiring to be notified.

Dr. Collingridge has removed another suspicious case from Gravesend. Dr. Klein's examination of the intestines of the fatal case on the ship confirms the diagnosis of Asiatic cholera. The bacteriological test has also proved the diagnosis in one other case from the same vessel. Four patients were detained under treatment. Up to August 10th there were no further cases officially reported.

There were only 22 cases of cholera and 14 deaths in St. Petersburg on August 9th. Between August 5th and August 11th 156 cases of cholera and 101 deaths occurred. An official denial is given to the report that the disease has broken out at Nijni Novgorod. The fair at that place is far more numerously attended than it was last year, and neither in the town itself nor at the fair has any case of cholera occurred. At Warsaw there were 139 cases and 75 deaths between July 28th and August 4th, and, during the same period, 125 cases and 72 deaths in the Government of Petrikau, and 321 cases and 104 deaths in that of St. Petersburg. In the Government of Radom 575 cases and 288 deaths occurred between July 22nd and 28th.

Reports received from Galicia and Bukovina, on August 8th, show that cholera prevailed in seventeen administrative districts in these provinces. Sixteen cases occurred in the district of Zaleszczyki, and 14 cases and 8 deaths in the district of Horodenka.

The most prolific centre is the town of Zaleszczyki, which has become a very hotbed of cholera. Nothing like it has, at all events, been known in Austria for the last two years. In the brief space of about two months no less than 5 per cent. of the entire population in the town have been attacked by the disease. At the present time ten districts in Eastern Galicia are declared infected, they form one united area, subject to the same sanitary regulations. These districts lie in the basins of Dniester and Pruth. The same spot formed the cholera centre of last year. The reason that the epidemic has remained confined to this region may very possibly be that it is not intersected by any railway, and that there is very little traffic with the outer world.

In the last few days the number of daily cases in Galicia averaged from 70 to 80, and nearly half the attacks ended fatally. According to the latest official returns 165 cases of cholera and 74 deaths had occurred in Galicia, and up to August 14th there had been 33 cases and 20 deaths in Bukovina.

According to reports from Mietzwedzen, in the district of Lyck, in Prussian Poland, the malady among the population there is Asiatic cholera, and not, as was supposed, caused by the eating of diseased herrings. Eighteen persons have died. Up to August 12th, in Prussia there have been reported 45 cases and 15 deaths. In the Vistula district, near Danzig, there had been 11 cases since the 9th of the month, 3 of which ended fatally. Cholera having been proved to have been the cause of the illness in two cases at Cologne, the authorities ordered an examination of the water from the Rhine, and insisted on the adoption of strict precautions. These two cases were brought up the Rhine from Holland.

On August 8th, a fatal case of cholera nostras was registered at Lucena in the province of Cordova, Spain.

ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF THE COUNCIL.

At a meeting of the Council, held in the Council Room, Victoria Rooms, Bristol, on Tuesday, July 31st, 1894:—

Present:

Dr. J. Ward Cousins, President of the Council, in the chair.
Dr. G. Hare Philipson, President.
Dr. E. Long Fox, President-elect.
Mr. Henry T. Butlin, Treasurer.

Dr. J. Barr, Liverpool.
Dr. M. Beverley, Norwich.
Dr. T. Bridgwater, Harrow-on-the-Hill.
Mr. Langley Browne, West Bromwich.
Dr. J. S. Cameron, Leeds.
Mr. Andrew Clark, London.
Surg.-Gen. W. R. Cornish, London.
Dr. H. R. Crocker, London.
Dr. G. W. Crowe, Worcester.
Mr. G. Eastes, London.
Dr. W. T. Edwards, Cardiff.
Dr. W. A. Elliston, Ipswich.
Sir B. Walter Foster, M.D., M.P., Birmingham.
Dr. J. H. Galton, Upper Norwood.
Dr. Bruce Goff, Bothwell.
Dr. W. Gordon, Exeter.
Mr. J. H. Hemming, Kimbolton.
Dr. C. Holman, London.
Mr. Evan Jones, Aberdare.
Mr. Jordan Lloyd, Birmingham.
Sir W. Moore, K.C.I.E., London.
Mr. R. H. B. Nicholson, Hull.
Mr. C. H. W. Parkinson, Wimborne Minster.
Dr. F. M. Pope, Leicester.
Dr. W. Russell, Edinburgh.
Dr. R. Saundby, Birmingham.
Dr. A. Sheen, Cardiff.
Dr. E. Markham Skerritt, Clifton.
Mr. Noble Smith, London.
Dr. R. Somerville, Galashiels.
Dr. J. Roberts Thomson, Bournemouth.
Dr. T. W. Trend, Southampton.
Mr. T. J. Verrall, Brighton.
Dr. W. F. Wade, Birmingham.
Mr. F. Wallace, Upper Clapton.
Mr. C. G. Wheelhouse, Filey.
Mr. Joseph White, Nottingham.
Dr. W. L. Winterbotham, Bridgwater.

The minutes of the last Council meeting having been printed and circulated, and no objection taken thereto, were signed as correct.

Letters of apology for non-attendance were read from Dr. Withers Moore, Mr. Jessop, Dr. Parsons (of Dover), and Dr. Francis Bateman.

Read letter from Dr. Rentoul, of which the following is a copy:—

78, Hartington Road, Liverpool, S.
July 22nd, 1894.

Will you please bring the enclosed notice before the Council of the Association at its first meeting. If the Council will agree to adopt this suggestion relating to the proposed reconstruction of the Parliamentary Bills Committee, it will facilitate matters. You will see it would reduce the Parliamentary Bills Committee from 77 to 41. I think it would not be right to give the same number of representatives to a Branch, say with 48 members, as is given to a Branch with 900.—Yours faithfully,

R. R. Rentoul.

That as it has been recommended by the Council of the Association that each Branch should return only one representative to the Parliamentary Bills Committee; and as By-law 17 of the Association enacts that each Branch shall elect one representative to the Council of the Association, and an additional representative for every complete 200 members of a Branch, and as there should always be a proper relation between the number of members of a Branch and the number of its elected representatives, this meeting agrees that each Branch elect one representative to the Parliamentary Bills Committee, and an additional representative for every complete 300 members of a Branch—thus reducing the present number of members of the Parliamentary Bills Committee from 77 to 41.

Resolved: That in proposing the appointment of the committee the suggestion of the Lancashire and Cheshire Branch on the constitution of the Parliamentary Bills Committee be adopted.

Resolved: That the 116 candidates whose names appear on the circular convening the meeting, with one exception, be and they are hereby elected members of the Association; and those candidates whose names appear on the list in the Daily Journal of Tuesday, July 31st, be provisionally elected, subject to confirmation at the October meeting of the Council.

The General Secretary reported the names of the Colonial representatives expected to be present during the meeting:

Burma Branch: Dr. W. H. Sutherland, Health Officer, Rangoon. Barbados Branch: Dr. Archer, Dr. H. Wolseley. Jamaica Branch: W. H. W. Strachan, Malta Branch: Brigade-Surgeon-Lieutenant-Colonel J. Macartney, M.D., A.M.S.

Read petition from the South-East Hants District of the Southern Branch on the subject of the registration of midwives.

To the President and Members of the Council of the British Medical Association.

The petition of the undersigned members of the South-East Hants District of the Southern Branch of the British Medical Association humbly sheweth—

That at a meeting held at Southsea on Tuesday, May 8th, 1894, and adjourned to Tuesday, May 22nd, 1894, the following resolution was adopted:

"That this meeting is of opinion that the action of the Midwives Registration Association in endeavouring to obtain legislation to secure the registration of midwives is entirely uncalled for, and would prove injurious to the public welfare and to the best interests of the medical profession.

"And that whilst desirous of granting increased facilities for the efficient training of monthly or midwifery nurses, hereby records its emphatic protest against any such proposed legislation."

Because—

First.—That the number of registered medical practitioners (which number continues steadily to increase) is quite sufficient to undertake the midwifery practice of the country, and that it would be injurious to the well-being of the public to legalise the practice of midwifery by partially qualified practitioners.

Secondly.—That the legislation proposed for the registration of midwives will not prevent the practice of midwifery by unqualified women. This class still continue to practise as at present; and the position now occupied by the registered medical practitioner as accoucheur will be much encroached upon if not gradually filled by the registered midwife.

Thirdly.—That if legislative action be required for the public good it should be in the direction of making it penal for anyone to undertake the duties of an accoucheur (except in an emergency) who is not a registered medical practitioner, and that your Petitioners believe this to be the only means of checking or preventing the practice of midwifery by ignorant women.

Fourthly.—That whilst your Petitioners feel it to be their duty as medical practitioners to protect the public and themselves by protesting against the proposed legislation of such a class of partially educated accoucheurs as registered midwives, they are desirous that increased facilities should be accorded to women (who so desire) to be thoroughly and efficiently trained in the duties of a monthly or midwifery nurse, so that these would be competent to conduct an ordinary case of labour in an emergency.

In connection with this your Petitioners would point out, as having an important bearing on the case, that the General Council of Medical Education and Registration, at a meeting held on May 22nd, 1894, agreed unanimously with Mr. Brudenell Carter's amendment:

"That in the opinion of this Council the issue to women of any certificate of competency or other document so framed as to bear colourable resemblance, either in appearance or phraseology, to a diploma conveying a right to be registered as a medical practitioner, is a proceeding in direct contravention to the spirit of the Medical Act of 1886, and one which will be liable to be visited with the condemnation of the Council. The President is therefore requested to repeat a warning already given to certain institutions, and to urge the registered practitioners connected with institutions granting these certificates to nurse-midwives to reconsider the terms in which they are framed, and to bring them into harmony with this resolution."

Your Petitioners feel that this is surely a step in the right direction, and that should this warning be neglected, the Council in the future will be likely to approve of Mr. Wheelhouse's motion, namely:—

"That after January 1st, 1895 (or a certain date), the Council will consider any registered medical practitioner who shall sanction the issue to any midwife or other person who has not passed a qualifying examination in medicine, surgery, and midwifery, as provided by the Medical Act, 1886, of a certificate or diploma which shall imply a qualification to practise midwifery, as guilty of infamous conduct in a professional respect."

And your Petitioners humbly pray that the President and Members of the Council of the British Medical Association will give this matter their fullest consideration, and use the great influence and power which they possess to oppose any Bill that may be brought before Parliament for the registration of midwives, and also to support the proposal of Mr. Wheelhouse, as noticed above, in the event of the warning by the President of the Medical Council being evaded or neglected.

Your Petitioners, in urging this, wish to impress upon the President and Council of the British Medical Association that they are actuated by no mean or selfish motive.

They firmly hold to the opinion that it is the duty of the members of the medical profession to alleviate, as far as lies in their power, all human suffering, and especially the suffering of the ignorant poor, who by their want of knowledge require special care in sickness. But your Petitioners also maintain that in order to do this it is not necessary to display a reckless indifference to their own interests, or to allow themselves to be the victims of a great injustice, and that they feel this the more strongly in the present instance, because they believe that such a course of action would be as disastrous to the well-being of the public as to the medical profession.

And your Petitioners will ever pray.

(Signed by forty-five Members.)

Resolved: That the consideration of the memorial be postponed until the meeting of the Council of to-morrow.

Read letter from Mr. R. W. Doyne enclosing notice of an amendment or rider to the resolution for the adoption of the report on the subject of medical aid associations.

Read list of attendance of Members of Council for the past twelve months, as follows:

LIST OF ATTENDANCES OF COUNCIL—SEVEN MEETINGS.

	Total Attendances.
Dr. G. H. Philipson, D.C.L., 7, Eldon Square, Newcastle-on-Tyne, President	6
Dr. E. Long Fox, Church House, Clifton, Bristol, President-elect	5
Dr. J. Ward Cousins, Portsmouth, President of Council	6
Mr. H. T. Butlin, D.C.L., London, Treasurer ...	7
Sir H. W. Acland, K.C.B., Oxford, Vice-President ...	7
Sir J. T. Banks, Dublin, Vice-President	0
Dr. James Barr, Liverpool, R.	4
Dr. G. B. Barron, Southport, R.	3
Mr. B. Barrow, Ryde, Vice-President	0
Dr. F. Batenan, Whitechurch, R.	0
Dr. R. W. Bates, Gloucester, R.	3
Dr. M. Beverley, Norwich, R.	4
Dr. J. Mackenzie Booth, Aberdeen, R.	0
Dr. T. Bridgwater, Harrow-on-the-Hill, Vice-President	6
Dr. J. S. Bristowe, London, R.	2
Mr. Langley Browne, F.R.C.S., West Bromwich, R. ...	5
Dr. J. W. Byers, Belfast, R.	2
Dr. J. S. Cameron, Leeds, R....	6
Mr. Andrew Clark, London, R.	7
Surgeon-General W. R. Cornish, London, R... ...	6
Dr. H. Radcliffe Crocker, London, R....	7
Dr. G. W. Crowe, Worcester, R.	3
Dr. J. Cuming, Belfast, Vice-President	1
Dr. A. Dempsey, Belfast, R.	1
Dr. E. H. Dickinson, Liverpool, R.	3
Mr. E. Donaldson, Londonderry, R....	0
Dr. J. Langdon H. Down, London, R.	4
Dr. D. Drummond, D.C.L., Newcastle-on-Tyne, R. ...	0
Mr. George Eastes, London, R.	7
Dr. W. T. Edwards, Cardiff, Vice-President ...	1
Dr. W. A. Elliston, Ipswich, R.	5
Sir B. W. Foster, D.C.L., M.P., Birmingham, Vice-President	2
Mr. R. S. Fowler, Bath, R.	3
Professor W. T. Gairdner, Glasgow, Vice-President	1
Dr. J. H. Galton, London, R....	6
Dr. C. E. Glascott, Manchester, R.	3
Dr. Bruce Goff, Bothwell, R....	7
Dr. W. Gordon, Exeter, R.	6
Dr. Ogilvie Grant, Inverness, R.	4
Dr. H. Handford, Nottingham, R.	6
Mr. John D. Harries, Shrewsbury, R.	3
Mr. J. H. Hemming, Kimbolton, R.	5
Dr. Holman, London, Vice-President	4
Professor Sir G. M. Humphry, Cambridge, Vice-President	0
Mr. T. Vincent Jackson, Wolverhampton, R. ...	3
Mr. T. R. Jessop, Leeds, R.	5
Mr. Evan Jones, Aberdare, R.	5
Dr. P. G. Lee, Cork, R.	0
Mr. Jordan Lloyd, Birmingham, R.	4
Mr. C. N. Macnamara, London, Vice-President ...	3
Sir W. Moore, K.C.I.E., London, R.	7
Dr. W. Withers Moore, D.C.L., Burgess Hill, Vice-President	5
Mr. W. Jones Morris, Portmadoc, R.	2
Mr. R. H. B. Nicholson, Hull, R.	7
Mr. C. H. W. Parkinson, Wimborne Minster, R. ...	6
Dr. C. Parsons, Dover, R.	6
Dr. F. M. Pope, Leicester, R.	5
Dr. J. Rolston, Devonport, R.	4
Dr. W. Russell, Edinburgh, R.	3
Dr. A. W. Sandford, Cork, R.	1
Dr. R. Saundby, Birmingham, R.	5
Dr. A. Sheen, Cardiff, R.	4
Surgeon-Major D. Sinclair, Bristol, R.	0
Dr. E. Markham Skerritt, Clifton, R.	7
Mr. Noble Smith, London, R.	6
Dr. R. Somerville, Galashiels, R.	6
Dr. C. J. Stawell, Carlow, R.	0
Mr. Henry Stear, Saffron Walden, R.	4
Dr. J. Strachan, Dollar, R.	1
Dr. M. J. Symons, Dumfries, R.	0
Mr. J. Taylor, Chester, R.	6
Dr. J. R. Thomson, Bournemouth, Vice-President ...	4
Mr. W. Thomson, Dublin, R....	1
Dr. T. W. Trend, Southampton, R.	5
Dr. A. R. Urquhart, Perth, R.	3
Mr. T. J. Verrall, Brighton, R.	5
Dr. W. F. Wade, Birmingham, Vice-President ...	4
Mr. F. Wallace, London, R.	5
Dr. A. T. H. Waters, Liverpool, Vice-President ...	0
Mr. C. G. Wheelhouse, Filey, Vice-President ...	1
Mr. Joseph White, F.R.C.S., Nottingham	7
Mr. G. E. Williamson, Newcastle-on-Tyne, R. ...	3
Mr. Alfred Winkfield, Oxford, R.	1
Dr. W. L. Winterbotham, Bridgwater, R.	5

* The letter R signifies Representative of a Branch.

At a meeting of the Council held in the Council Room, Victoria Rooms, Bristol, on Wednesday, August 1st, 1894:—

Present:

Dr. J. Ward Cousins, President of Council, in the chair.
Dr. E. Long Fox, President.
Dr. Russell Reynolds, President-elect.
Mr. H. T. Butlin, Treasurer.

Dr. M. Beverley, Norwich.
Dr. T. Bridgwater, Harrow-on-the-Hill.
Mr. Langley Browne, West Bromwich.
Dr. J. S. Cameron, Leeds.
Mr. Andrew Clark, London.
Dr. H. Radcliffe Crocker, London.
Brig.-Surg.-Lieut.-Col. E. F. Drake-Brockman, London.
Mr. George Eastes, M.B., London.
Dr. W. A. Elliston, Ipswich.
Dr. J. H. Galton, London.
Dr. Bruce Goff, Bothwell.
Dr. W. Gordon, Exeter.
Dr. H. Handford, Nottingham.
Mr. J. H. Hemming, Kimbolton.
Dr. C. Holman, London.
Mr. H. J. Manning, Salisbury.
Mr. W. Jones Morris, Portmadoc.
Mr. R. H. B. Nicholson, Hull.
Mr. C. H. W. Parkinson, Wimborne Minster.
Dr. G. H. Philipson, Newcastle-on-Tyne.
Dr. F. M. Pope, Leicester.
Dr. W. Russell, Edinburgh.
Dr. A. Sheen, Cardiff.
Dr. E. Markham Skerritt, Clifton.
Mr. Noble Smith, London.
Dr. R. Somerville, Galashiels.
Dr. J. Roberts Thomson, Bournemouth.
Dr. T. W. Trend, Southampton.
Dr. T. J. Verrall, Brighton.
Dr. W. F. Wade, Birmingham.
Mr. F. Wallace, London.
Mr. C. G. Wheelhouse, Filey.
Mr. Joseph White, Nottingham.

The minutes of the last meeting were read and signed as correct.

Letters of apology for non-attendance were read from Dr. Mackenzie Booth and Mr. James Taylor.

The General Secretary reported that at the adjourned General Meeting, held on Tuesday evening, the report of the Parliamentary Bills Committee was carried, together with two resolutions:

(1) That this meeting disapproves of the principle of Registration for Midwives.

(2) That that portion of the Report of the Parliamentary Bills Committee referring to the amendment of the Medical Acts be referred back for reconsideration.

Dr. Bridgwater introduced Mr. H. J. Manning, representative from the Southern Branch.

Mr. Eastes introduced Brigade-Surgeon-Lieutenant-Colonel Drake-Brockman, representative of the South Indian and Madras Branch.

A deputation from the Metropolitan Counties Branch was then introduced to the Council, consisting of the members whose names are as follows: Dr. Russell Reynolds, Dr. Bridgwater, Mr. Geo. Brown, Mr. Butlin, Surgeon-General Cornish, Dr. Cullingworth, Mr. Eastes, Dr. M. Havilland Hall, Mr. Ernest Hart, Dr. Holman, Mr. Harrison, Dr. Norman Kerr, Dr. Stephen Mackenzie, Dr. Oswald, Dr. Douglas Powell, Dr. F. T. Roberts, Dr. Sansom, Mr. Noble Smith, Dr. Wethered, Dr. Dawson Williams, Mr. Wallace, and Mr. Andrew Clark (Hon. Sec.).

Dr. Russell Reynolds then, on behalf of the Metropolitan Counties Branch, gave a cordial invitation to the Association to hold its annual meeting in 1895 in London (see page 331).

Resolved: That it be recommended to the general meeting of members of to-day that the annual meeting for 1895 be held in London, and that Dr. Russell Reynolds be nominated the President-elect.

The deputation then withdrew.

Resolved: That the four candidates whose names appear on the list on page 99 in the Daily Journal of Wednesday, August 1st, be provisionally elected members, subject to confirmation at the October meeting of the Council.

The memorial from the South-East Hants District of the Southern Branch on the subject of the Registration of Midwives was further considered.

Resolved: That the South-East Hants District of the Southern Branch be informed that the following resolution was passed at the annual meeting:

That this meeting disapproves of the principle of registration of midwives.

The President of Council reported that the following members were appointed new representatives of their respective branches: Dr. D. W. Finlay, Aberdeen Branch; Dr. A. M. Paterson, Dundee Branch: Dr. J. B. Isaac, Reading Branch; Dr. A. M. Paterson, Dundee Branch; Dr. J. B. Isaac, Reading Branch; Dr. J. Stawell Cooper, South-East of Ireland Branch: Brigade-Surgeon-Lieutenant-Colonel Drake-Brockman, South Indian and Madras Branch; Mr. William Nettle, South-Western Branch; and Mr. H. T. Manning, Southern Branch; the remaining representatives being reappointed.

The General Secretary reported that the following gentlemen had been elected representatives of the various Branches for the ensuing twelve months:

Aberdeen, Banff, and Kincardine Branch.—D. W. Finlay, Aberdeen. *Adelaide and South Australia Branch.*—(No return.) *Barbados Branch.*—(No return.) *Bath and Bristol Branch.*—R. S. Fowler, Bath; E. Markham Skerritt, Bristol. *Bermuda Branch.*—(No return.) *Birmingham and Midland Counties Branch.*—Langley Browne, West Bromwich; Jordan Lloyd, Birmingham; Robert Saundby, Birmingham. *Bombay Branch.*—Sir Wm. Moore, K.C.I.E., London. *Border Counties Branch.*—R. Somerville, Galashiels. *British Guiana Branch.*—(No return.) *Burmah Branch.*—(No return.) *Cambridge and Huntingdon Branch.*—Henry Stear, Saffron Walden, Essex. *Cape of Good Hope Branch.*—(No return.) *Colombo, Ceylon Branch.*—(No return.) *Cork and South of Ireland Branch.*—A. Sandford, Cork. *Dorset and West Hants Branch.*—C. H. W. Parkinson, Wimborne Minster. *Dublin Branch.*—Wm. Thomson, Dublin. *Dundee and District Branch.*—A. M. Paterson, Dundee. *East Anglian Branch.*—M. Beverley, Norwich; W. A. Elliston, Ipswich. *East York and North Lincoln Branch.*—R. H. Nicholson, Hull. *Edinburgh Branch.*—William Russell, Edinburgh. *Glasgow and West of Scotland Branch.*—Bruce Goff, Bothwell. Lanarkshire. *Gloucestershire Branch.*—R. W. Batten, Gloucester. *Grahamstown and Eastern Province Branch.*—(No return.) *Griqualand West Branch.*—(No return.) *Halifax (Nova Scotia) Branch.*—(No return.) *Hong Kong and China Branch.*—(No return.) *Jamaica Branch.*—(No return.) *Lancashire and Cheshire Branch.*—James Barr, Liverpool; G. B. Barron, Southport; E. H. Dickinson, Liverpool; C. E. Glascott, Manchester; James Taylor, Chester. *Leeward Islands Branch.*—(No return.) *Londonderry and North-West of Ireland Branch.*—E. Donaldson, Londonderry. *Malta and Mediterranean Branch.*—(No return.) *Manitoba and West of Canada Branch.*—(No return.) *Melbourne and Victoria Branch.*—(No return.) *Metropolitan Counties Branch.*—J. S. Bristowe, F.R.S.; Andrew Clark; H. Radcliffe Crocker; George Eastes; Noble Smith; Frederick Wallace; London. *Midland Branch.*—H. Handford, Nottingham; F. M. Pope, Leicester. *Montreal Branch.*—(No return.) *North of England Branch.*—David Drummond, D.C.L., Newcastle-on-Tyne; G. E. Williamson, Newcastle-on-Tyne. *North of Ireland Branch.*—J. W. Byers, Belfast; A. Dempsey, Belfast. *North Wales Branch.*—W. Jones-Morris, Portmadoc. *Northern Counties of Scotland Branch.*—Ogilvie Grant, Inverness. *Oxford and District Branch.*—Alfred Winkfield, Oxford. *Perthshire Branch.*—A. R. Urquhart, Perth. *Punjab Branch.*—(No return.) *Reading and Upper Thames Branch.*—J. B. Isaac, Crowthorne, Berks. *Shropshire and Mid-Wales Branch.*—John Davies Harries, Shrewsbury. *South-Eastern Branch.*—J. H. Galton, Upper Norwood, S.E.; C. Parsons, Lewes; T. J. Verrall, Brighton. *South-East of Ireland Branch.*—J. Stawell Cooper, Bagnalstown, co. Carlow. *South Indian and Madras Branch.*—Brigade-Surgeon-Lieutenant-Colonel Brockman, London. *South Midland Branch.*—J. H. Hemming, Kimbolton. *South Wales and Monmouthshire Branch.*—Evan Jones, Aberdare; A. Sheen, Cardiff. *South-Western Branch.*—Wm. Gordon, Exeter; William Nettle, Liskeard, Cornwall. *Southern Branch.*—H. J. Manning, Salisbury; Theophilus W. Trend, Southampton. *Staffordshire Branch.* T. Vincent Jackson, Wolverhampton. *Stirling, Kinross, and Clackmannan Branch.*—John Strachan, Dollar, N.B. *Sydney and New South Wales Branch.*—(No return.) *Trinidad and Tobago Branch.*—(No return.) *Thames Valley Branch.*—J. Langdon H. Down, London. *West Somerset Branch.*—W. L. Winterbotham, Bridgwater. *Worcestershire and Herefordshire Branch.*—G. W. Crowe, Worcester. *Yorkshire Branch.*—J. S. Cameron, Leeds; T. R. Jessop, Leeds.

At a meeting of the Council held in the Council Room, Victoria Rooms, Bristol, on Thursday, August 2nd, 1894:—

Present:

Dr. J. Ward Cousins, President of Council, in the chair.
Dr. E. Long Fox, President.
Dr. Russell Reynolds, President-elect.
Mr. H. T. Butlin, Treasurer.

Dr. M. Beverley, Norwich.
Dr. T. Bridgwater, Harrow-on-the-Hill.
Mr. Langley Browne, West Bromwich.
Dr. J. S. Cameron, Leeds.
Mr. Andrew Clark, London.
Dr. H. Radcliffe Crocker, London.
Brig.-Surg.-Lieut.-Col. E. F. Drake-Brockman, London.
Mr. George Eastes, M.B., London.
Dr. W. A. Elliston, Ipswich.
Dr. J. H. Galton, London.
Dr. Bruce Goff, Bothwell.
Dr. W. Gordon, Exeter.
Dr. H. Handford, Nottingham.
Mr. J. H. Hemming, Kimbolton.
Dr. C. Holman, London.
Mr. H. J. Manning, Salisbury.
Mr. W. Jones Morris, Portmadoc.
Mr. R. H. B. Nicholson, Hull.

Mr. C. H. W. PARKINSON, Wimborne Minster.
Dr. G. H. PHILIPSON, Newcastle-on-Tyne.
Dr. F. M. POPE, Leicester.
Dr. W. RUSSELL, Edinburgh.
Dr. A. SHEEN, Cardiff.
Dr. E. MARKHAM SKERRITT, Clifton.
Mr. NOBLE SMITH, London.
Dr. R. SOMERVILLE, Galashiels.
Dr. J. ROBERTS THOMSON, Bournemouth.
Dr. T. W. TREND, Southampton.
Mr. T. J. VERRALL, Brighton.
Dr. W. F. WADE, Birmingham.
Mr. F. WALLACE, London.
Mr. C. G. WHEELHOUSE, Filey.
Mr. JOSEPH WHITE, Nottingham.

The minutes of the last meeting were read and found correct.

Read letter of apology for non-attendance from Dr. J. S. Bristowe.

Resolved: That the following be appointed the Journal and Finance Committee, in accordance with By-law 29:

The President, the President-elect, the President of the Council: the Treasurer, *ex-officio*; Dr. J. Barr, Dr. J. S. Bristowe, F.R.S., Dr. J. S. Cameron, Dr. H. R. Crocker, Dr. A. Dempsey, Dr. W. A. Elliston, Dr. Bruce Goff, Dr. Ogilvie Grant, Mr. T. R. Jessop, Dr. Withers Moore, Mr. R. H. B. Nicholson, Dr. C. Parsons, Dr. R. Saundby, Dr. J. Roberts Thomson, and Dr. W. F. Wade.

Resolved: That in accordance with the report of the Council on the constitution of the Parliamentary Bills Committee and the recommendation of the Lancashire and Cheshire Branch, namely, that each Branch shall have one representative, and an additional one for every complete 300; the Parliamentary Bills Committee consist of the President, the President-elect, the President of the Council, the Treasurer, Dr. Bateman, Dr. Bridgwater, Mr. Eastes, Dr. Esler, Dr. Holman, Dr. Mickle, Dr. Reid, and Mr. Wallace, together with the representatives of the Branches.

Resolved: That the following be appointed the Scientific Grants Committee:

The President, the President-elect, the President of Council; the Treasurer, *ex-officio*; Mr. Wm. Anderson, Dr. T. L. Brunton, Dr. H. R. Crocker, Dr. H. Handford, Dr. C. Holman, Professor V. Horsley, Sir Joseph Lister, Mr. N. C. Macnamara, Dr. W. Withers Moore, Dr. C. Parsons, Dr. W. Russell, Dr. R. Saundby, Professor E. A. Schafer, and Dr. G. Sims Woodhead.

Resolved: That the amount voted to the Scientific Grants Committee be £400, and the three scholarships of £150 each, making a total of £850 for the year.

Resolved: That the following be appointed the Inebriates Legislation Committee:

The President, the President-elect, the President of Council; the Treasurer, *ex-officio*; Dr. T. Bridgwater, Mr. D. B. Balding, Mr. R. W. Branthwaite, Dr. C. Cameron, M.P., Dr. G. B. Clark, M.P., Dr. C. R. Drysdale, Mr. George Eastes, Dr. J. W. Eastwood, Dr. R. Farquharson, M.P., Professor W. T. Gairdner, Dr. W. C. Garman, Dr. J. Hill Gibson, Dr. Alexander Grant, Mr. F. J. Gray, Dr. C. J. Hare, Dr. A. Jamison, Mr. H. R. Ker, Dr. Norman Kerr, Dr. A. E. T. Longhurst, Surgeon-Major G. K. Poole, Brigade-Surgeon R. Pringle, Fleet-Surgeon G. Robertson, Dr. G. D. P. Thomas, Dr. Wynn Westcott, and Dr. H. W. Williams.

Resolved: That the following be appointed the Premises and Library Committee:

The President, the President-elect, the President of Council; the Treasurer, *ex-officio*; Dr. T. Bridgwater, Dr. J. S. Cameron, Dr. C. Holman, Mr. N. C. Macnamara, Dr. W. Withers Moore, Dr. W. F. Wade, Mr. C. G. Wheelhouse, and Mr. Ernest Hart, Honorary Librarian.

Resolved: That the following be appointed the Trust Funds Committee:

The President, the President-elect, the President of Council; the Treasurer, *ex-officio*; Dr. T. Bridgwater, Mr. N. C. Macnamara, Dr. W. Withers Moore, Dr. R. Saundby, and Mr. C. G. Wheelhouse.

Resolved: That the following be appointed the Therapeutic Committee, and a grant be made to the Committee of £25:

Sir W. H. Broadbent, Dr. Mitchell Bruce, Dr. T. Lauder Brunton, Professor T. Cash, Dr. M. Charteris, Professor T. R. Fraser, Professor W. T. Gairdner, Dr. W. Hunter, Dr. D. L. Leech, Dr. James Little, Professor D. MacAlister, Dr. E. Mackey, Dr. Sidney H. C. Martin, Dr. M. McHugh, Dr. W. Murrell, Dr. C. Y. Pearson, Dr. C. D. F. Phillips, Dr. Sydney Ringer, Sir William Roberts, Dr. R. Saundby, Dr. R. Stockman, Dr. N. I. C. Tirard, Dr. W. Hale White, and Dr. W. Whitla.

Resolved: That the following be appointed the Committee for Investigating the State of Children unfit from mental and nervous conditions for ordinary school teaching:

Dr. H. Ashby, Dr. Fletcher Beach, Dr. T. Bridgwater, Dr. J. L. H. Down, Dr. C. Holman, Dr. W. W. Ireland, Dr. F. Needham, Dr. G. H. Savage, Dr. G. E. Shuttleworth, Dr. D. Hack Tuke, Dr. F. Warner, and Dr. D. Yellowlees.

Resolved: That the following be appointed the Medical Charities Committee, and that a grant of £10 be made towards the printing expenses:

The President, the President-elect, the President of Council; the Treasurer, *ex-officio*; Dr. F. H. Alderson, Mr. J. Wickham Barnes, Mr. W. G. Bott, Dr. T. Bridgwater, Dr. J. B. Brierley, Dr. Bristowe, Mr. George Brown, Dr. G. W. Crowe, Dr. J. L. H. Down, Dr. Ogilvie Grant, Mr. Major Greenwood, Dr. F. de H. Hall, Mr. Ernest Hart, Dr. G. Henty, Mr. J. Brindley James, Dr. W. Withers Moore, Dr. J. W. J. Oswald, Dr. J. R. Thomson, Dr. F. Wallace, and Dr. Hugh Woods.

Resolved: That the Reference Committee be reappointed, pending any action of the Council as to its continued existence.

Dr. J. Ward Cousins, President of Council; the Treasurer, represented by Dr. T. Bridgwater; Dr. D. Mac Alister, and Dr. I. Owen.

Resolved: That the Committee on the Use of Anæsthetics on the Human Subject be reappointed as follows, with a grant of £50 for expenses:

Professor T. Annandale, Dr. Joseph Bell, Mr. Woodhouse Braine, Professor G. Buchanan, Mr. H. T. Butlin, Dr. Dudley W. Buxton, Dr. J. W. Byers, Professor M. Cameron, Professor John Chiene, Dr. C. Childs, Hon. Secretary; Mr. John Croft, Professor E. Duncan, Mr. A. E. Durham, Mr. George Eastes, Dr. A. L. Galabin, Dr. Frederic W. Hewitt, Mr. Jonathan Hutchinson, Chairman; Sir Joseph Lister, Professor William Macewen, Mr. J. Mills, Professor A. Ogston, Mr. G. Rowell, Dr. W. V. Snow, Mr. T. Pridgin Teale, and Mr. David Wallace.

Resolved: That the Committee on Railway Servants' and Mariners' Eyesight be reappointed as follows, namely:

Mr. W. M. Beaumont, Mr. T. H. Bickerton, Mr. G. A. Critchett, Dr. C. E. Fitzgerald, Dr. J. B. Lawford, Dr. D. Little, Mr. N. C. Macnamara, Dr. George Mackay, and Mr. Priestley Smith.

Resolved: That the Branch Organisation Committee be reappointed as follows:

The President, the President-elect, the President of Council; the Treasurer, *ex officio*; Dr. J. L. H. Down, Dr. Bruce Goff, Dr. W. Withers Moore, Sir William Moore, Dr. C. Parsons, Dr. R. Saundby, and Dr. T. W. Trend.

Resolved: That the President, the President-elect, the President of Council, the Treasurer, Mr. Andrew Clark, Dr. Isambard Owen, Mr. George Eastes, Dr. L. W. Sedgwick, Mr. H. Power, Sir William Priestley, Dr. Skerritt, and Dr. Saundby, be appointed a Committee for making the arrangements for the annual meeting of 1895.

SPECIAL CORRESPONDENCE.

PARIS.

The Disinfection of Rooms.—The Birth of Private Initiative in France.—The Operating Theatre at La Pitié.—General News.

DR. LAVERAN, Professor of Bacteriology at the Val-de-Grâce, well known from his researches on paludism, has studied experimentally the question of disinfection, and states that pulverisations with disinfecting apparatus, even at distance of 4 centimetres from the wall, do not kill the bacilli, and virulent cultivations can always be obtained from them. Rooms thus disinfected which have been inhabited by a tuberculous patient are dangerous to others. M. Laveran declares that the only means of disinfecting is to wash the walls with a 5 per cent. solution of carbolic acid, or with a 2 per 1,000 acidulated solution of corrosive sublimate. The carbolic acid solution is, according to Dr. Laveran, preferable to that of acidulated corrosive sublimate.

Private initiative, that quality in which the clever French people has hitherto been so much wanting, is showing some signs of coming into existence. The following subjects, all savouring of an embryonic spirit of personal initiative, will be dealt with at the Lyons International Congress of Higher Education, which is to be held in October: How to change the uniformity of the University's programme of educational studies in order to develop individual aptitudes and idiosyncrasies according to the racial tendencies of the different regions; How to recruit the professorial staff and to offer them a position similar to that of foreign countries; The equivalence in merit of French and foreign degrees and diplomas.

The Paris Municipal Council, whatever may be its shortcomings in other directions, is indefatigable in seeking out and trying to remedy abuses of every kind. At a recent meeting M. Dubois stated that the operation theatre of the Pitié Hospital is in a most unsatisfactory condition. By a combination of *pari mutuel* funds and help from the Assistance Publique a new amphitheatre will one of these days probably be provided for the hospital.

A section of the Ardèche medical men petition parliament to forbid suckling women to take a second child until their last infant is 14 months old. This law would, it is affirmed,

complete the Roussel law and decrease by 7 per cent. infant mortality.

M. Donsen, interne at the Lariboisière Hospital, has died of typhoid fever contracted during the performance of his duties.

Dr. Vaillard, of the Val-de-Grâce Military Hospital, has been promoted to the fourth class of the Osmanieh Order of Turkey.

CORRESPONDENCE.

CHELSEA HOSPITAL FOR WOMEN.

Sir,—In your leading article of August 11th on the Chelsea Hospital for Women you invite an explanation from the members of the late staff of their position with regard to the report of the Committee of Inquiry. We have not hitherto felt at liberty to act individually, for while we were members of the late staff we felt that joint action was alone admissible. The time has now come for personal explanation; and as our positions are identical we submit the following joint statement:

1. At the end of 1893, when the hospital was closed, we had been on the staff for 5½ months, our duties being charge of out-patients and pathological work respectively.

2. As there was no recognised Medical Committee we had no voice at all in the management of the hospital.

3. We had no beds in the hospital; and such operations (mostly minor) as we performed in the temporary absence of our colleagues were unattended by mortality or septicæmia.

4. Our work was not called in question by the Committee of Inquiry.

5. The association of the deaths from septicæmia with the sanitary conditions of the hospital was not at the time obvious, and even now may be considered a matter of opinion. There was, therefore, nothing to lead us to call attention to the matter.

Hitherto no one, from the medical officer of health to the Committee of Inquiry, has ventured to apportion blame for anything that has been faulty. We have so far borne the imputation of common blame; but justice to ourselves demands that we should now publicly state that we had no personal share of responsibility in the matter.

We feel that our position has been further justified by the fact that we have been re-elected to the staff of the hospital.

—We are, etc.,

Arthur E. Giles, M.D., M.R.C.P.,
T. W. Eden, M.D., M.R.C.P.,
Physicians to the Out-Patients, Chelsea Hospital for Women.

August 15th.

Sir,—You state in your leader of August 11th that you are anxious to hear anything that the staff of the Chelsea Hospital for Women may have to say in defence of the two charges which Dr. Parkes made, and which the Committee held to be proved—namely, (1) that the hospital was faulty in construction, and its drainage was in a dangerously unhealthy state, and that the staff made no effort to amend this condition even when it was pointed out; and (2) that they continued to practise operations involving grave danger in spite of numerous deaths from septicæmia.

As to the first of these charges, whatever the defects in the drainage or in the construction of the hospital may have been, it is nowhere stated in the report that "the staff made no effort to amend this condition even when it was pointed out:" the Committee state, on the contrary, that since the time of Dr. Parkes calling attention to the matter "the hospital authorities have since thoroughly overhauled the whole of the sanitary arrangements of the building, and it is represented to us that they have been put into as complete a sanitary condition as is possible at the present time."

It fell to my lot to be one of the representatives of the staff on the House Committee at the time Dr. Parkes made his report. I welcomed it as an opportunity of pressing upon the lay authorities who had the control of the funds the importance of putting the hospital in the most complete sanitary condition possible. Not a moment was lost: I attended every meeting of the House Committee, and attended with the Treasurer day after day to consider the various plans, estimates, specifications, etc. There was not the slightest disposition on the part of any of the authorities to do aught but get the work commenced as soon as possible.

But the lay members of the board very rightly as guardians of public money did their utmost to make sure of their ground. Funds were low, we wanted to be economical but at the same time to shirk no necessary expense and to put in nothing that would not stand wear and tear. Not only as a representative of the staff did I place my time and advice at the service of the House Committee, but I obtained more than half the sum necessary to defray the cost of the improvements we were making. The report omits to say that we have done many things beyond the recommendation of Dr. Parkes to improve the hospital and to set it on a plane of comfort and utility considerably higher than any other hospital in London.

Much has been made of the leakage in the main drain of the hospital. Unquestionably it did not stand the hydraulic pressure of the water test, but where the water was forced through at the time of testing the surrounding gravel was quite clean, and unstained by any previous pollution. Moreover, this drain lay 7 feet below and outside the basement of the hospital, and separated from it by a layer of concrete which was like a bed of rock. No in-patients were treated within two floors of this. The water closets, though kept in perfect order, were not up to the sanitary ideal of 1894. I question whether those put in this year in accordance with Dr. Parkes's recommendation will in turn come up to the ideal of the medical officer of health for Chelsea in 1904. As to Charge 2 as set forth in your article, I do not believe the so-called insanitary state of the hospital had such an influence on the temperatures of the cases and the death-rate that it was unjustifiable to perform such operations as were undertaken.

The Committee of Inquiry say that "as it has a bearing upon the general sanitary state of the hospital, it should be noted that septic temperatures did not prevail in the practice of every member of the staff." Further, a special quotation is made in the report from Dr. Parkes as follows:—"It is evident that the question of the justifiability of such operation must arise *unless it is possible to reduce the risk of fatal issues from such operations to an extremely low figure.*" (The italics are mine.)

Now, Sir, I claim that at all events in my practice this was done.

By referring to Questions 523, 548, 553, 554, and 574 in the evidence taken by the Commission it will be seen it was admitted that "there was no fault to find with my cases."

The facts are these: I performed 65 operations, losing two patients—G. S., a hysterotomy for fibro-cystic tumour, complicated by aortic incompetence, the patient dying of syncope on the fourth day, maximum temperature 100.4°; the other, R. F., a case in which I set out to remove what I believed to be a multilocular ovarian tumour. It proved to be a malignant mass, involving both the broad ligaments and ovaries and the whole pelvic floor. There was also a secondary deposit in the transverse colon. I was only able to remove the upper portion of the mass, which was cystic, and make such a stump as was possible under the circumstances and bring it out of the wound. She died thirty-four hours afterwards with a rapidly rising temperature.

I performed successfully 7 complete ovariotomies—all recovering without high temperature. One further case of broad ligament cyst I was unable to remove, as the patient was so collapsed after section on the table. She made, however, a very easy and rapid recovery from the abdominal section, and is alive to this day. This has been classed amongst the exploratory incisions.

In 4 cases I removed diseased ovaries and appendages without a death. I performed 4 ventrofixations of the uterus without a death, and with no rise of temperature or other symptom to cause anxiety. Two other cases of abdominal section coming under none of these groups made capital recoveries.

If such results as these could be obtained, where was the necessity to stop doing such operations or to ask for the closure of the hospital?

I confess that if other gentlemen knew that they were losing cases from septicæmia on a high scale, or were having

septic temperatures amongst their successful cases, it lay with them to make a special report. No such report, however, came before either the House Committee or Board of Management. Had it done so it would have received the most careful consideration and would have been followed by prompt action.

There remains yet the question of overcrowding. I have looked up a large number of authorities on hospital management and construction and find they vary in their statements as to the amount of cubic space necessary per patient between the figures 850 and 3,000 cubic feet. Each authority between these wide extremes is equally dogmatic, but none give their reasons. The standard depends on the *ipse dixit* of any one we choose to call an authority for the time being. Our cubic space per bed varied from 776 to 1,270, but as we only averaged 42 patients in the hospital at a time the cubic space per patient was very much higher. It must be noted, too, that cases for abdominal section placed in the small wards by themselves would average well over 2,000 cubic feet. The Board of Management are at this moment trying to approach a higher ideal in this matter, as well as on the question of ventilation.

During my ten years' service at the hospital I have found the gentlemen constituting the Board unsparing of trouble, time, and money, to do what they might to make the Chelsea Hospital for Women a real boon to the class it is designed to relieve.—I am, etc.,

W. H. FENTON, M.D., M.A.

George Street, Hanover Square, August 15th.

THE ANNUAL MEETINGS.

SIR,—Whilst congratulating the Bath and Bristol Branch most heartily on the admirable arrangements that were made for the comfort and enjoyment of their guests, it may be as well to mention the desirability of making fresh arrangements for the conduct of the business of the Association before another gathering takes place.

In the first place it must be evident to all the members that a good deal more business could be transacted on Tuesday. If it is considered desirable to have a church parade at each annual meeting, is there any reason why it should not take place either on Monday afternoon or early on Tuesday morning? Again, would it not be better to ask the President to deliver his address immediately after he has been installed in the chair? The whole of Tuesday afternoon and Tuesday evening could then be devoted to the ordinary business of the Association. Probably it would be found that that time would be sufficient to complete the programme.

It would simplify the arrangements if the three other addresses are delivered in the mornings also. Members would then have rather over an hour on Wednesday, Thursday, and Friday mornings, and the whole of the afternoons of those days for sectional work. It is hardly fair to advertise entertainments of any sort to be given when general or scientific work is being done. I dare venture to assert that the ladies would be contented if three evening functions were arranged for. Why should not the President hold a reception after the public dinner? Perhaps these questions could be ventilated in the pages of the BRITISH MEDICAL JOURNAL with advantage.—I am, etc.,

Cardiff, August 6th. T. GARRETT HORDER.

MIDWIVES' REGISTRATION.

SIR,—Permit me to correct a paragraph in your report of my remarks upon this question at Bristol. I did not make reference to medical aid societies. I spoke of ladies' lying-in charities as clubs, where the patient pays a small part of the fee of the medical attendant, and thereby simply becomes a beggar, and holds a less dignified position than the pauper who, probably through no fault of his own, is too poor to pay a private doctor, and has paid, and no doubt still contributes to the rates. He may, and often does, apply for medical aid without receiving parish pay. The Local Government medical service is a complete organisation for administering skilled aid to the sick poor.

It has been contended for years by the majority of the profession that midwifery nurses should be trained in our Poor-law infirmaries. The Committee of the House of Commons recommends this, and further suggests that such women should be attached to all Poor-law districts, and, under the direction of the district medical officer, attend to the cases under his care. I venture to suggest that were such a proposal carried out we should hear no more of the dreadful evils of the lying-in charities of the child-bearing poor.

How is it the prime movers in this "registration" so persistently avoid these recommendations? What is the explanation of Dr. Woodcock's astounding revelation that in ten years he had not had half a dozen confinements in his district, which is densely populated, and in some parts with the very poorest? What are the forces attracting these poor people from the medical aid the State thinks fit to provide for them, and to which they are entitled? The pay compares favourably enough with private work in working-class neighbourhoods—10s. for an ordinary and £2 for an instrumental case.—I am, etc.,

Old Trafford, Aug. 7th. JAS. BRASSEY BRIERLEY.

DIPHTHERIA AT THE ROYAL NAVAL SCHOOL.

SIR,—Much alarm has been caused, even among those cognisant of the facts, by your paragraph on p. 272 concerning the recent illness at Eltham College. Under the circumstances, may I ask you of your courtesy to allow me to make known the following facts?

1. The first mention of a suspicion of diphtheria was made to me verbally by the medical officer of the College on the evening of July 24th; one case was confirmed at a consultation the next morning.

2. The parents of the boys were at once informed by circular, and a date suggested—July 28th—for the boys to disperse.

3. A special Council meeting was convened by telegram for July 26th, and decided that Dr. Louis Parkes should be invited to make an investigation and report.

4. Dr. Parkes was at Eltham on July 31st and August 1st, when with the College surveyor, and in consultation with the local health authorities, he thoroughly examined the sanitary system and its working.

Dr. Parkes has not yet reported, and it is not right that I should refer to any general remarks made at the time of his investigation. But meanwhile I may mention that a year ago Dr. Francis J. Allan, after an exhaustive survey, not only pronounced the sanitation of the College good in plan and execution, but also reported in terms of high praise of its general health conditions, the air space, light and ventilation of dormitories and class rooms; and several small improvements then recommended were at once carried out.

The inner knowledge of the school life has suggested a history of the recent infection which is now under Dr. Parkes's consideration.—I am, etc.,

Perranporth, Aug. 8th. R. PERCIVAL BROWN, Head Master.

HOSPITAL APPOINTMENTS.

SIR,—The following advertisement appeared lately in the BRITISH MEDICAL JOURNAL:

SURGEON for the SURREY DISPENSARY, Southwark, S.E.—A meeting of the Committee of Management of this institution will be held at the institution, Great Dover Street, E.C., at 5 P.M., on Tuesday, the 24th inst., for the purpose of selecting candidates for the position of Surgeon to this institution. The candidates must be present at the meeting.

At a Court of Governors, to be held at the institution at 6 P.M. on the same day, a Surgeon will be appointed. Canvassing, directly or indirectly, will absolutely disqualify. Every candidate should send in his application, with testimonials, addressed to the Secretary, by the 20th inst. Candidates must have such qualifications in Medicine, Surgery, and Midwifery as shall be satisfactory to the committee. The honorarium is fifty guineas per annum. A copy of the rules and any further particulars can be obtained at the institution.

Dated July 11th, 1894.

WM. R. MILLAR, Secretary (*pro tem.*).

53, Borough High Street, Southwark.

We, the undersigned, attended at this institution at the time requested, and were detained there for over two hours, being each of us in the meanwhile interviewed by the committee. We were then informed by a medical gentleman on the board, who was deputed to see us, that it was with great regret that the board had to tell us that we were none of us successful, owing to the fact that the advertisement had been incorrectly drawn up, and that they intended to elect only a F.R.C.S., and they had accordingly elected a Mr. Cheatle, who had never put in an appearance at all, and whose name

had been frequently called, and there was no answer. The following is the rule concerning the appointment of surgeon to this institution, and the present surgeons hold only the M.D., and L.R.C.P., and M.R.C.S.E.

Surgeons and Accoucheurs.

Rule 22.—The surgeons must have such qualifications in medicine, surgery, and midwifery as shall be satisfactory to the Selecting Committee. One of them must be a Fellow of the Royal College of Surgeons, a member of the staff of one of the leading hospitals of the metropolis, and not practising pharmacy; he shall attend especially to such serious or special surgical cases as may be submitted to him by the other members of the staff. The other two must be surgeon-accoucheurs, residing and practising within the limits of the dispensary—one in the eastern, the other in the western, division, as defined in Rule 13; they shall attend to all cases, medical as well as surgical, registered to them on their days of attendance, but may transfer to the obstetric physician or to the hospital surgeon respectively such cases as may require special treatment by them; they shall also instruct the midwives of the charity, and attend all difficult labours when summoned by them. All the surgeons shall regularly and punctually attend the dispensary at the times directed by the Committee of Management to examine and prescribe for the out-patients, and afterwards visit such home patients as may require their attendance.

An honorary consulting surgeon—in addition to those provided in the preceding section of this rule—may be appointed at a general meeting of the governors on the recommendation of the Committee of Management; he must be a Fellow of the Royal College of Surgeons, England, of acknowledged eminence in his profession, and, other qualifications being equal, preference shall be given to a gentleman who shall have held the office of surgeon to this charity.

It was with no little inconvenience to ourselves that we attended at this meeting, and in asking you to be so good as to publish the matter in the Journal we are actuated only by a desire to call attention to the injustice of such treatment and the unreliability of the advertisements which the authorities of the Surrey Dispensary issued. As one of the candidates was an M.D., B.S.Lond., it is absurd to suggest that an eligible candidate was not present, whilst appointing a gentleman who did not even appear to be a candidate requires some explanation.—We are, etc.,

S. S. Mesquita, M.D., B.S.Lond.
Lewis Lewis, M.D., L.R.C.P.Lond.
F. Horton, L.R.C.P., L.R.C.S.Edin.
W. C. Steele, M.D.Brux., M.R.C.P.Edin., M.R.C.S.Eng.
R. W. Ceely, M.R.C.S., L.S.A.
H. de Burgh Dwyer, M.R.C.S., L.R.C.P.Lond.
W. Lansdale, M.D.Durh., M.R.C.S., L.R.C.P.Lond.
R. D. Muir, M.R.C.S., L.R.C.P.Lond.

July 30th.

THE NEED FOR REFORM.

Sir,—It is probable that many medical men would be glad to support any real movement in the profession that had for its watchword, "Fairplay amongst practitioners and reasonable remuneration." Surely the time has come for some united action. On all sides we see medical men accepting contracts on almost impossible terms, and to-day (July 21st) we see in the British Medical Journal that even well-known consultants are not above giving their support to a "provident association" which has absolutely no wage limit. Twenty years ago dispensaries were being started by charity for the relief of the poor; now they are being run as trading associations, and the wage-limit is very generally discarded. In one of the largest dispensaries the remuneration to the medical officers for the year 1892-1893 was at the rate of less than one-third of a penny per week per member. But the financial position is not the only consideration. Some regard should be paid to the effect of the new system upon the life and progress of our art and science.

The existence in any town of a large dispensary which invites everybody to enjoy its benefits for a trifling payment is a terrible obstacle in the path of any medical beginner. There is indeed some excuse for him if he accept an offer of patronage from one of the medical aid associations. Almost everyone would be glad to shake off this new form of slavery. Is the medical profession to remain powerless in a matter which concerns nobody more than themselves?

I believe the best chance of emancipation lies with the Colleges and the General Medical Council. Certain Colleges have already pronounced against medical aid associations. Is it too much to hope that, if properly approached by a representative body of medical men—say, a committee of the British Medical Association—the other licensing Colleges might pronounce similar judgments? And when the Colleges had spoken, the General Medical Council might, perhaps, be moved to endorse their utterances, and exert its authority in suppressing improper medical contracts.—I am, etc.,

F. Faulder White, F.R.C.S.,
Surgeon to the Coventry and North Warwickshire Hospital.

THE EDUCATION OF PAUPER CHILDREN.

Sir,—May I ask for space in the British Medical Journal to point out the way in which the Nottingham Board of Guardians educate the pauper children under their care?

Our school consists of 220 children, and is situated about a mile from the workhouse. It is managed by a superintendent and matron assisted by subordinate officers. The ages of the children range from 3 to 14 years. Those who attend school go unattended to the nearest board schools and return for their meals. They are neatly dressed in clothes such as the children with whom they mix at school wear. Those who have left school are instructed in various trades, as tailoring, shoemaking, baking, farm work, laundry work, cooking, etc. The whole of the bread, clothing, and boots are made for the workhouse (over 800 inmates) and for the school itself, as well as the bread required for out-relief. The cost of each child's maintenance, including everything and not deducting anything for profits for baking, tailoring, shoemaking, and farm account (which would reduce the cost one-third) is £18 4s. per annum.

The hours of work are from 8 A.M. to 12 noon, and from 1 P.M. to 5 P.M. When not at school or at work the children are at liberty to play and amuse themselves as they please.

The choir-master attends twice weekly to teach singing. The boys have a brass band consisting of twenty-three performers. The band-master attends twice a week, and the band boys are allowed to practise when they please when not at work.

The games most indulged in are cricket, football, hockey, giant-stride, swings, trapeze, etc.; we have not at present a racquet or fives court.

There are plenty of animals about the place, and some of the boys are allowed to keep pigeons, rabbits, guinea-pigs, and other pets of their own.

The children are bright, happy, and contented, and most healthy. Ophthalmia is unknown. I have seen no case since I have been medical officer—a period of over six years. The same may be said of diphtheria and eczema.

When the children are old enough to leave the school situations are most easily found for them. Their addresses are kept, and their future progress noted. They are constantly coming to the institution to tell us how they are getting on and to see their old school.

There is no society of ladies (A.B.Y.S.) to look after the girls, because they don't need it. Here and there we hear of one going wrong, but we know that this will occasionally happen in all ranks of society.

The school is open to anyone's inspection whenever they like in reasonable hours.

Each child is provided with a separate clean towel every day, and each one has its own hair brush. The washing of the children at running jets of water is personally attended to by the master and matron. The bed linen is changed as often as is required, not only once a week. The boys have clean collars and the girls clean pinafores every day.

I think it must be admitted that this state of things is more satisfactory than that which the deputation to the Local Government Board described. In my opinion, the good health and happiness of the children are due to (1) a most excellent superintendent and matron, (2) scrupulous cleanliness, (3) the freedom which the children are allowed, (4) the encouragement which is given them to play games and amuse themselves, (5) good diet.—I am, etc.,

H. G. Ashwell,
Medical Officer of the Nottingham Children's Training Institute and Nottingham Union Workhouse.

July 31st.

NURSING IN WORKHOUSE INFIRMARIES.

Sir,—The revelations that have taken place in regard to the treatment of the poor in some of our workhouses must have convinced a great many people that poor Tom Hood's poem containing the line "He's only a pauper whom nobody

owns" is too true, not only as regards the dead, but, unfortunately, still more so as regards the living.

The public conscience appears to have been aroused, and there is a strong desire that something should be done to make our workhouse infirmaries worthy of being what they really are—the State hospitals of England.

The object of the Northern Workhouse Nursing Association is to attain this devoutly to be wished for consummation, and for several years they have been doing their best to improve the nursing in workhouses by providing trained nurses thoroughly acquainted with the duties in a workhouse. It has been found by experience that nurses trained in first-class workhouse hospitals like Birmingham, Chorlton, Manchester, Marylebone, and several other places, are better suited for the work than those obtained from general hospitals. Already the Association has been able to provide twenty-three unions with nurses, and in only one union has there been any friction between the Association and the guardians, and in that case we think the public will scarcely blame the Association when they know the manner in which the nurses were treated.

For instance, the stove upon which the nurses cooked their food was in their bedroom; the paupers' bathroom answered a double purpose, serving as it did as a pantry in which to keep the nurses' food, such as it was. The cleanliness of the institution can be judged from the fact that one nurse was considered extravagant because she wanted the counterpanes in the lying-in ward to be washed at least once in three months on hygienic grounds. Draw sheets were washed in the patients' lavatories and dried at night in the patients' day room. Hot water was only available for the bathrooms once a-week.

Not long since a very experienced union clerk expressed the opinion that the greatest impediments to the employment of trained nurses in workhouses are the master and matron.

In some of the large workhouses the persons occupying the positions named are ladies and gentlemen, but even then it is only in very rare cases that the matron understands anything about really scientific nursing, and unfortunately they are too often ignorant of their own ignorance, and do very much less than they might do to make the nurses comfortable.

It is impossible to imagine a more shortsighted policy on the part of guardians than that of neglecting to make proper provision for the comfort of their officials. I remember Mr. Basil Caine once saying that "it pays the public to make their officials comfortable, because by so doing they attract the best class of officers, and therefore the work is better done."

Now, if we are to make our workhouse nurses comfortable it will be necessary to place the government of the sick wards on a basis similar to that in force in Scotland, where the Board of Supervision require one trained nurse for every twenty cases, and if the number amounts to upwards of sixty a lady superintendent must be appointed in addition, and in these cases the matron has no authority of jurisdiction, and, of course, no responsibility. If the Local Government Board would issue a similar order the work of the Northern Workhouse Nursing Association would be made much easier in one direction, and it would also be made much easier in another direction if the public would assist us financially.

The Association is doing its best to assist alike the guardians, the nurses, and the sick poor, but funds are needed to carry on the work, as the training of each nurse costs about £20. Knowing as we do the good work that has been accomplished, we feel that we have a right to appeal to all sensible people to assist in doing our best to cause these horrible workhouse scandals to be only a sad memory of a melancholy past, and not a dreadful reality.—I am, etc.,

JOHN MILSON RHODES, M.D.,
Chairman of the Northern Workhouse Nursing Association.

Manchester, Aug. 1st.

UNIVERSITIES OF RUSSIA.—The number of Universities in the Russian Empire at the present time is ten, with a total student population of 16,202. These are distributed as follows: Moscow has 3,888 students; Kieff, 2,244; St. Petersburg, 2,225; Helsingfors, 1,875; Turjeff (formerly known as Dorpat), 1,650; Warsaw, 1,335; Charkoff, 1,200; Kasan, 825; Odessa, 555; and Tomsk, 405.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.

Inquiry into Workhouse Schools.—Mr. SHAW LEFEVRE, in reply to Mr. BUCHANAN, said that when, a few days ago, he promised an inquiry into the workhouse schools, he stated his preference for the appointment of a Parliamentary Committee. He had, however, found it impossible to deal with the subject in this manner this session, and the question as regards London was one which it was not desirable to postpone until next session. For the same reason it was not expedient to appoint a large Commission, with the result, probably, of a protracted investigation lasting over two or three years. The Government, therefore, considered that the inquiry would be best conducted by a committee of some five or seven persons nominated by the Government, but not consisting of officers of the Department. The inquiry would be directed to the case of London where the large workhouse schools chiefly existed and where there was very great difficulty at the present time in providing for the increasing number of children. He would only add that he believed this form of inquiry would be satisfactory to the right hon. member for the University of Cambridge, who introduced the deputation to him. He hoped in a few days to be able to give the names of the persons who would form the committee.

Medical Examination of Military Candidates.—Mr. BARTLEY asked the Secretary of State for War whether he would arrange that candidates for commissions in the Army might, if they wished, by paying a special fee to cover the cost, be officially examined as to their medical fitness before undergoing the competition.—Mr. WOODALL, in reply, said that a very full statement of the physical conditions required of candidates for the Army had been prepared, and might be obtained by candidates on application to the War Office. With that statement before him, any qualified surgeon would be able to inform candidates whether they were likely to pass the medical examination. It was, therefore, unnecessary, even if it were practicable, to authorise any official medical examination of candidates before the examination which followed successful competition for commissions.

MEDICO-LEGAL AND MEDICO-ETHICAL.

TOUTING CARDS.

WE note with especial regret the persistence of young practitioners in seeking to obtain practice by such means as the trade-like card issued from 6, Portland Place, Clapham Square, S.E., in which the announcement is made that "Dr. F. B. Bremner, M.B., C.M., carries on business (*sic*) at the above address;" fees, etc. If such persons could but realise how greatly this system tended to mar their future prospects and to isolate them from social and professional intercourse, we doubt not but that they would reflect ere committing themselves to so impolitic a line of conduct.

CONSULTATIONS AND THE SUBSEQUENT CARE OF PATIENTS.

W. J. S.—In reply to our correspondent's supplemental appeal for further advice, we would observe that although the courteous letter and intimation addressed by B. to A. failed to elicit a direct acknowledgment, it does not follow that the principle enunciated in the comments referred to will prove alike ineffective, in so far as we doubt not that the practitioner in question will have noted the paragraph, and will, in future, be more or less guided by the advice tendered therein; indeed, it often occurs that practitioners err from simple want of the essential medico-ethical knowledge, and not from lack of principle. We would therefore advise B. to abstain from further action in the matter and note events.

GUARDIANS AND PAUPER LUNATICS.

MEDICUS writes: The following was sent to me the other day: "I may say we have been informed through our clerk to the guardians there is not sufficient accommodation for persons of unsound mind in the workhouse at ——." What I want to know is whether the guardians are not compelled to make accommodation for their pauper patients who may become of unsound mind?

"*.* In general terms, under the existing law, all pauper lunatics who are proper objects for the care and treatment which can only be obtained in lunatic asylums or other institutions for the reception of the insane ought to be sent to such institutions, and not kept in the workhouse. Except in the cases mentioned in the Lunacy Act, 1890, it is the law, by the same Act, that certain statements should be duly certified to by the medical officer of the workhouse, to enable and justify the detention of a lunatic in the workhouse for fourteen days, at longest, or for a less space of time. And, subsequently, further detention of the lunatic in a workhouse can only be made by order under the hand of a justice having jurisdiction in the place where the workhouse is situate, which may be made on application by the relieving officer supported by medical certificates from the medical officer of the workhouse and some other medical practitioner. Otherwise the lunatic must be sent to

an institution for lunatics. But for detention of a lunatic, even for fourteen days or less, in a workhouse, it is necessary (always subject to the exceptions referred to above) "that the accommodation in the workhouse is sufficient for his proper care and treatment," which appears not to be fact in the instance referred to us by "Medicus."

IRISH DISPENSARY MEDICAL OFFICERS AND CERTIFICATES IN LUNACY.

W.—A registered practitioner who is appointed to act as *locum tenens* for a dispensary doctor is entitled to sign a certificate in lunacy if called upon. We regard the action of the magistrates in committing upon his certificate as quite legal, and the guardians were right in paying the fee.

"FRIENDLY VISITS."

S. G.—Our correspondent's best course will be (1) to pay the money and have done with correspondence and litigation; (2) not to have anything more to do with a person whom he thinks guilty of "sharp practice;" and (3) when he next asks attendance from a medical man not related to him to have a clear understanding as to what payment is expected for such attendance.

FEES TO MEDICAL WITNESSES.

Police Surgeon.—The Public Prosecutor has correctly stated the effect of the rules under which fees are payable to medical witnesses in criminal cases. The payment is per diem and not per case. The rules are most unsatisfactory, but there seems to be no immediate prospect of getting them amended.

TESTIMONIALS TO TRADESMEN.

Wondering writes: What should be the attitude of the profession towards local shopkeepers in small towns who request testimonials for their goods from the local medical men, to be published and scattered broadcast over the neighbourhood—by placard, by distribution from hand, etc., etc., with the name and qualifications of the local practitioner in heavy leaded type, and about the most prominent thing in the advertisement next to the issuer's own name.

*** The professional rule in relation to the question submitted will be found in the *Ethical Code*, chap. ii, sect. 1, rule 4. As to "the attitude of the profession towards the shopkeepers," it had, in our opinion, better be determined by a consensus of the affected practitioners.

CLUB FEES.

A. M. C. writes: I am practising in a rural district where the agricultural element prevails, and the rate of wages is 15s. a week. The club fees are 3s. per annum per member. I have been asked to accept the wives of the members at the same rate (confinements not included). Would this be a fair remuneration, and if not, at what rate should the wives be charged?

*** We cannot recommend any practitioner to accept male or female members at the rate of 3s. per annum. A club that pays no more than this can hardly be worth having, and we should advise our correspondent to take neither male nor female members at such a rate. With regard to the amount that male or female members of a club or benefit society ought to pay respectively, we are of opinion that the rate for female members should be somewhat higher than for males; for even if confinements are specially excluded, miscarriages are not, as a rule; and among the working classes experience shows that there is a considerable amount of sickness affecting the female portion that may be more or less traced to their child-bearing functions. There is, also, more need of a medical examination of women previous to their admission to a club than in the case of men.

"STORES" AND "COVERING."

A Member writes: 1. I should be glad to know if medical men, in entering into an arrangement with the Civil Service Stores to charge their members at a lower fee than they would otherwise do, are guilty of conduct "infamous in a professional respect," and whether it would be considered by the General Medical Council as a species of covering.

2. When, in giving decisions regarding disputes, etc., you refer to the *Medical Code*, giving chapter and section, do you refer to the book entitled *Code of Medical Ethics*, published by Dr. Styrap?

*** 1. We understand that no case similar to that described has come before the General Medical Council. It would be well to address a question on the subject to the President, 299, Oxford Street, W.

2. The *Code of Medical Ethics* referred to is that by Dr. Styrap, published by Mr. H. K. Lewis, Gower Street.

Albert Smith, in his *Physiology of the London Medical Student*, gives some extracts from an abstract of medicine and surgery in verse composed for examinational purposes by a candidate for the "College and Hall" with whom he was acquainted. Fr. Bassermann, a Munich publisher, has just brought out a booklet, *Der kleine Accoucheur*, in which the principles and practice in midwifery are dealt with on the same lines by "Dr. Concurtius" for the benefit of "matured (we presume this is a polite equivalent of "chronic") medical youth."

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

The following appointments have been made at the Admiralty: Francis H. A. Clayton, Surgeon, to the *Dryad*, July 26th; Norman J. Smith, Surgeon, to the *Impregnable*, lent, July 26th; Montague H. Knapp, Surgeon, to the *Lion*, July 26th; Everard H. Saunders, Staff-Surgeon, to the *Britannia*, August 15th; Horace X. Browne, Staff-Surgeon, to the *Raleigh*, August 13th; John L. Bagnall Oakeley, Surgeon, to the *Phœbe*, August 13th; Joseph H. Whelan, Surgeon, to Keyham Yard, August 13th.

Deputy Inspector-General John Ward died at Southsea on August 1st, aged 73. He was appointed Surgeon, July 11th, 1843; Staff-Surgeon, October 11th, 1851; Fleet-Surgeon, December 2nd, 1868; and Deputy Inspector-General, February 4th, 1876. He retired from the service, July 30th, 1875.

ARMY MEDICAL STAFF.

Surgeon-Captains Sinclair Westcott, Hayward R. Whitehead, F.R.C.S.Eng.; Bruce M. Skinner, Charles R. Bartlett, John D. T. Reckitt, Thomas A. P. Marsh, Roger Kirkpatrick, M.B.; Harry S. M'Gill, Augustus A. Pechell, M.B.; Charles R. Tyrrell, James Hickman, Wilfred B. Thomson, Herbert E. Deane, and Sidney O. Stuart, F.R.C.S.Ed., having completed twelve years' full pay service, are promoted to be Surgeon-Majors, from July 29th.

Surgeon-Major General Philip Broke Smith, M.D., having attained the age of 60, is placed upon retired pay, July 18th. He was appointed Assistant-Surgeon, September 15th, 1857; Surgeon, December 2nd, 1871; Surgeon-Major, March 1st, 1873; Surgeon-Major ranking as Lieutenant-Colonel, September 15th, 1877; Brigade-Surgeon, May 7th, 1882; Surgeon-Colonel, November 17th, 1886; and Surgeon-Major-General, October 27th, 1892. He has no war record in the Army Lists.

Consequent on the retirement of Surgeon-Major-General Smith, Surgeon-Colonel T. Walsh, Principal Medical Officer at Madras, obtains promotion to be Surgeon-Major-General, which rank he has been holding temporarily.

Quartermaster and Honorary Captain Samuel Evans is also placed on retired pay, July 22nd. He was appointed Lieutenant of Orderlies, June 9th, 1877; Quartermaster Medical Staff, July 1st, 1881; and Honorary Captain, June 9th, 1887. He served in the China war in 1860 with the Royal Artillery, and was present at the capture of the Taku Forts and the surrender of Pekin, receiving the medal with two clasps.

Sergeant-Major Arthur Freshwater, Medical Staff Corps, is appointed Quartermaster, with the honorary rank of Lieutenant, *vice* Honorary Captain S. Evans, July 22nd.

Quartermaster and Honorary Captain Charles Johnson is also placed on retired pay. He was first commissioned as Lieutenant of Orderlies, October 6th, 1875; and was appointed Quartermaster Medical Staff, July 1st, 1881; and received the honorary rank of Captain, October 8th, 1885. He served in the Soudan campaign in 1885, was mentioned in despatches, and has the Egyptian medal with clasp, and the Khedive's bronze star.

Sergeant-Major Charles Crawley, Medical Staff Corps, is appointed Quartermaster, with the honorary rank of Lieutenant, *vice* Honorary Captain C. Johnson, August 8th.

Brigade-Surgeon-Lieutenant-Colonel W. D. Wilson, who has been serving as Senior Medical Officer at Kurrachee, in the Bombay Command, is transferred to the Madras Presidency, *vice* Surgeon-Colonel A. C. Gaye, deceased, and is appointed Principal Medical Officer Belgaum and Bangalore Districts.

Brigade-Surgeon-Lieutenant-Colonel W. F. Burnett, who has been officiating as Principal Medical Officer Belgaum and Bangalore Districts, is transferred to the Madras District as Principal Medical Officer.

Surgeon-Colonel E. C. Markey, C.B., now serving in the Madras Command, is appointed Honorary Surgeon on the personal staff of the Governor-General of India.

Inspector-General of Hospitals William Dick died at West Brighton on July 28th. He was appointed Assistant Surgeon, May 13th, 1836; Surgeon, August 7th, 1846; Surgeon-Major, October 31st, 1855; Deputy-Inspector-General, March 17th, 1863; and Honorary Inspector-General, December 7th, 1870. He retired from the service, October 23rd, 1867. He served with the 12th Regiment in the Kafir war during portions of 1851-52, and had received the South African medal.

The under-mentioned Surgeons, on probation, are appointed Surgeon-Lieutenants, dated July 28th: Percy Evans, M.B.; Arthur Edward Miller, Claude Kyd Morgan, M.B.; John Payzant Silver, M.B.; Herbert Wynne Vaughan-Williams, M.B.; John Martin Burst, M.B.; James Walker, M.B.; Frank Dove; George St. Clair Thom, M.B.; Stephen Westrope Sweetnam.

Surgeon-Major W. J. Baker is placed on temporary half-pay on account of ill-health, August 7th. He was appointed Surgeon, February 5th, 1881, and Surgeon-Major twelve years thereafter.

Brigade-Surgeon-Lieutenant-Colonel W. S. M. Price, who is serving in India, is appointed to officiate on the administrative medical staff of the Bengal Army, with the temporary rank of Surgeon Colonel, from January 2nd.

ARMY MEDICAL RESERVE.

Surgeon-Captain Arthur C. Keep, M.D., having resigned his volunteer appointment, ceases to be an officer of the Army Medical Reserve July 25th.

Surgeon-Major Henry G. Dyer, M.D., having resigned his volunteer appointment, ceases to be an officer of the Army Medical Reserve August 8th.

INDIAN MEDICAL SERVICE.

The promotion of Surgeon-Colonel C. Sibthorpe, of the Madras Establishment, to be Surgeon-Major-General, which has been already announced in the British Medical Journal, has received the approval of the Queen.

The promotion of Surgeon-Captain E. R. DA COSTA, of the Madras Establishment, to be Surgeon-Major, is antedated to April 2nd, 1893.

The retirement from the service of Surgeon-Major-General W. F. DE FABECK, M.D., of the Madras Establishment, has been sanctioned by the Queen.

The tenure of the appointment of Surgeon-Colonel W. P. WARBUTON, M.D., in the administrative grade of the Bengal Medical Service, will reckon from January 17th.

Surgeon-Captain H. THOMSON, M.B., Madras Establishment, is appointed Secretary to the Surgeon-General with the Government of Madras, sub. *pro tem.*

We understand there are ten vacancies in Bengal, three in Bombay, and one in Madras for officers lately appointed to the Indian Medical Service. They will proceed to India towards the close of next month.

Surgeon-General JOHN HENRY ORR, C.B., M.D., Honorary Surgeon to Queen, died at Southbourne-on-Sea on August 4th, at the age of 80. The deceased gentleman passed a large portion of his life in India, entering the Medical Department of the Madras Army as Assistant-Surgeon, February 22nd, 1837. From 1842 to 1862 he was employed in the service of the Nizam of Hyderabad; he served in the Malwa campaign of 1857, under Brigadier-Surgeon Sir C. Stewart, and in the Central Indian campaign of the following year under General Sir Hugh Rose. From 1863 to 1865 he was Deputy-Inspector-General of Hospitals with the Nagpore Force, was appointed Honorary Surgeon to the Queen in 1868, and retired in 1871 with the honorary rank of Inspector-General of Hospitals. He was created a C.B. in 1858.

MILITIA MEDICAL STAFF CORPS.

MR. ARTHUR REGINALD CHATER is appointed Surgeon-Lieutenant, August 15th.

THE YEOMANRY.

SURGEON-LIEUTENANT E. W. WELCHMAN, Staffordshire (Queen's Own Royal Regiment) Yeomanry, is promoted to be Surgeon-Captain August 1st.

THE VOLUNTEERS.

SURGEON-LIEUTENANT C. F. RUDD, 1st Devonshire Artillery (Western Division Royal Artillery), has resigned his commission, July 25th.

Surgeon-Captain J. L. CROMBIE, 7th Volunteer Battalion the Royal Scots (late the 1st Haddington), is promoted to be Surgeon-Major, July 25th.

Surgeon-Captain J. A. ADAMS, M.D., 1st Lanarkshire Rifles, is also promoted to be Surgeon-Major, July 25th.

Surgeon-Lieutenant S. FARMER, 1st Volunteer Battalion the Loyal North Lancashire Regiment, has resigned his commission, which was dated July 15th, 1893.

Mr. EUSTACE MAUDE CALLENDER, M.D., is appointed Surgeon-Lieutenant to the 12th Middlesex (Civil Service) Rifles, July 25th.

Surgeon-Major (ranking as Lieutenant-Colonel) JAMES FINEGAN, 5th (Irish) Volunteer Battalion the King's Liverpool Regiment, retired, has been awarded the Volunteer Officers' Decoration, July 25th.

Mr. DANIEL ROBERT BOWEN is appointed Surgeon-Lieutenant to the 1st Glamorganshire Artillery, August 1st.

Surgeon-Captain W. DRAPER and Surgeon-Lieutenant T. McC. FOLEY, 1st East Riding of Yorkshire Artillery (Western Division Royal Artillery), are promoted to be Surgeon-Major and Surgeon-Captain respectively, August 1st.

Mr. JOHN CROSSLEY WRIGHT, M.B., is appointed Surgeon-Lieutenant to the 2nd West Riding of Yorkshire Artillery (Western Division Royal Artillery), August 1st.

Surgeon-Lieutenant W. K. AITKEN, 7th Volunteer Battalion the Royal Scots (Lothian Regiment), is appointed Lieutenant to the same corps, August 1st. Lieutenant Aitken joined the regiment as Surgeon-Lieutenant, December 10th, 1892.

Surgeon-Lieutenant W. C. STEELE, M.D., 3rd Volunteer Battalion the Royal Fusiliers (City of London Regiment), has resigned his commission, which bore date October 24th, 1891.

Surgeon-Lieutenant H. D. HAY, 5th (Fifeshire) Volunteer Battalion the Black Watch (Royal Highlanders), has also resigned his commission, which was dated June 15th, 1894. Surgeon-Lieutenant D. H. KYLE, M.B., of the same Regiment, is promoted to be Surgeon-Captain, August 1st.

Surgeon-Lieutenant J. STRANG, M.B., 3rd (Renfrewshire) Volunteer Battalion Princess Louise's Argyle and Sutherland Highlanders, is promoted to be Surgeon-Captain, August 1st.

Surgeon-Captain C. W. MACGILLIVRAY, M.D., The Queen's Rifle Volunteer Brigade the Royal Scots (Lothian Regiment), is promoted to be Surgeon-Major, August 8th.

Surgeon-Lieutenant E. C. DRAKE, 2nd Volunteer Battalion the Queen's Royal West Surrey Regiment, has resigned his commission, August 8th.

Surgeon-Lieutenant E. LLOYD WILLIAMS, 4th Middlesex (West London), is promoted to be Surgeon-Captain, August 8th.

The services of Surgeon-Lieutenant C. SANDERSON, 2nd Cinque Ports Artillery (Eastern Division Royal Artillery), are dispensed with, August 5th. His appointment dated from July 4th, 1891.

Surgeon-Lieutenant J. V. W. RUTHERFORD, 1st Northumberland Artillery (Western Division Royal Artillery), is promoted to be Surgeon-Captain, August 15th.

Mr. JOHN LYNN THOMAS is appointed Surgeon-Lieutenant to the 2nd Glamorganshire Artillery, August 15th.

Second Lieutenant HENRY ROBINSON, M.B., 2nd East Riding of Yorkshire Artillery (Western Division Royal Artillery), is appointed Surgeon-Lieutenant, August 15th. He joined the corps as Second-Lieutenant, December 3rd, 1892.

Surgeon-Captain D. THOMSON, M.D., 3rd Volunteer Battalion the Bedfordshire Regiment (late the 1st Bedfordshire), is promoted to be Surgeon-Major, August 15th.

Surgeon-Lieutenant J. T. THOMAS, 1st Volunteer Battalion the Duke of Cornwall's Light Infantry (late the 1st Cornwall), is promoted to be Surgeon Captain, August 15th.

VOLUNTEER MEDICAL STAFF.

SURGEON-LIEUTENANT J. F. BUTLER-HOGAN, of the London Companies, has resigned his commission, which was dated January 20th, 1894.

Quartermaster G. ROBERTSON, London Companies, is granted the honorary rank of Captain, August 1st.

Mr. JAMES HARPER, M.D., is appointed Surgeon-Lieutenant to the London Companies, August 1st.

NETLEY.

INDIAN MEDICAL SERVICE.

THE following is the list of surgeons on probation in Her Majesty's Indian Medical Service who were successful at both the London and Netley examinations. The prizes were awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of the gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:—

*Ramsey, G.	5,804	Hayward, W. D.	4,562
¶‡Sutherland, D.	5,690	Russell, A. W. F.	4,435
**‡Selby, W.	5,224	Bennett, V. B.	4,404
§Granger, T. A.	4,828	Scott-Moncrieff, W.	4,310
Bamfield, H. J.	4,818	Moore, H. M.	4,252
Grant, J. W.	4,691	Johnstone, D. C.	4,218
Moorhead, A. H.	4,585	Pearce, C. R.	4,084

* Gained the Martin Memorial Gold Medal.

† Gained the Herbert Prize of £20, with the Prize in Pathology presented by Sir Joseph Fayrer, K.C.S.I., and the Prize in Clinical Medicine presented by Surgeon-General Maclean, C.B.

‡ Gained the Parkes Memorial Bronze Medal.

Received honourable mentioned as distinguished in the department of Military Medicine.

¶ Received honourable mention as distinguished in the department of Hygiene.

** Received honourable mention as distinguished in the department of Pathology.

§ Received honourable mention as distinguished in the department of Military Surgery.

BRITISH MEDICAL SERVICE.

The following is the list of surgeons on probation of the Medical Staff of the British army who were successful at both the London and Netley examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:

*Evans, P.	5,400	Buist, J. M.	4,576
†‡Milner, A. E.	4,734	Walker, J.	4,446
Morgan, C. K.	4,666	Dove, F.	4,340
Silver, J. P.	4,633	Thom, G. St. C.	4,207
Vaughan-Williams, H.	4,598	Sweetnam, S. W.	3,940

* Gained the Montefiore Medal and Prize of Twenty Guineas, and the de Chaumont Prize in Hygiene.

† Gained the Montefiore Second Prize.

‡ Received honourable mention as distinguished in the department of Hygiene.

THE CASE OF SURGEON-MAJOR GARDNER.

WE have received further communications respecting the case of Surgeon-Major H. G. Gardner, who has our sympathy, though we are still unable to suggest a remedy for his personal misfortunes and grievances Although the military authorities gave no reason for refusing him three months' privilege leave without pay, yet we presume it must have been, as we only now learn, because he had, in October 1890, just returned from six months' leave at home.

We do not say that was a sufficient reason for refusal under the pressing family difficulties, but it no doubt influenced the decision. His retirement, although in a measure forced upon him under painful circumstances, was none the less voluntary and must be so construed.

But the further question now prominently arises, that Surgeon-Major Gardner's liability to recall to service operates as a bar to his receiving civil public appointments. He therefore states that he labours under a double disability, namely, that while he cannot be restored to the service, his continued nominal connection with it operates against him in civil life. On the one hand he is officially told from the War Office that "no case is known of a retired departmental officer having suffered disadvantage in civil life from his liability to be recalled to service up to the age of 55 in time of national emergency;" while on the other, in applying for appointment as a medical inspector under the Local Government Board, he is informed: "Mr. Shaw Lefevre observes that 'Surgeon-Major Gardner is still liable to be called upon for military service. In dealing with his application for employment here, Mr. Shaw Lefevre would feel bound to take this circumstance into consideration."

These two opinions, issuing from different Government offices, are in direct conflict, and we have little doubt the latter is the true one. We think it quite right that an officer who voluntarily retires on a pension should be liable to recall up to a certain age, but we do not think one who retires on a gratuity, as Surgeon-Major Gardner did, should be so liable. At the age of 44 this gentleman finds that with eleven years of service liability before him he is distinctly handicapped in civil life. This should not be; the money gratuity on quitting the service should have terminated his connection with the State, and enabled him to start in civil life entirely unfettered. His case is on all fours with men in the Reserve, who often find difficulty in getting fixed appointments, just because they are reservists. We cannot but think that pension only should warrant any hold by the State on a man's civil career, and that the regulations should be so amended. It may be some satisfaction to Surgeon-Major Gardner if his misfortunes lead to better and freer regulations on this point.

MR. GIBSON BOWLES AND THE MEDICAL STAFF.

The infelicitous and somewhat irrelevant speech by this gentleman on the Army Medical Vote has aroused considerable resentment among medical officers. One correspondent writes: I take exception to a paragraph in a letter in the British Medical Journal of July 14th. There was no need to laud the superior diagnostic skill of an army surgeon over his civilian brother; it can only give occasion for the enemy to blaspheme. But I agree with the writer's explanation that the abolition of the regimental system is largely responsible for the custom which now prevails of military officers calling in civilian practitioners in preference to medical officers. The regimental officers cannot be blamed, nor does the fault lie in the lack of ability among army medical officers. It is a serious matter for all concerned, and one which on a future occasion I may be permitted to go more fully into; but a survey of causes and effects embraces a wide range of army medical officers.

M.D. writes: The calling in of civil practitioners by military officers is not the fault of the medical officers; the abolition of the regimental system, and the desire to bring the present system into disrepute, have much to do with it. Another cause is the unfortunate estrangement and strained relations existing between regimental officers and the medical staff. Nor is it that civilian practitioners wish to be called in among the garrison; many would rather avoid it for sufficient reasons.

"Ut Prosim" writes: The animus displayed in the speech is only part of the determination of a certain clique of military officers to disparage medical officers either directly or through a mouthpiece.

"Old Regimental Doctor" writes: If the present army medical officer is so unpopular or incompetent as some would fain paint him, then he is but the product the War Office chooses to make him. The regimental system was abolished, not by him, but by reasons chiefly economical, and ever since he has been a target for the shafts of abuse. But if he is so bad, why is it ardently desired to restore him to regiments? Originally and undoubtedly a good specimen of the medical schools, how can donning a uniform make him so objectionable and incompetent? The truth is the coterie of military officers who make it a point to abuse the medical department through their spokesman are themselves are constantly overdoing it.

APPROACHING CHANGES IN THE ARMY MEDICAL STAFF.

We have it on good authority that the following changes will very shortly be brought into effect in the Army Medical Staff: Surgeon-Major-Generals will be allowed to serve on to 62 years of age, and brigade-surgeons to 57; in the latter rank, however, no officer who has attained 52 years of age will be promoted to higher grade. Many senior officers' prospects will be seriously affected by these alterations in existing arrangements, but medical officers may be assured that these changes will be officially promulgated not very long hence.

THE MEDICAL DIVISION OF THE WAR OFFICE.

Notwithstanding Mr. Campbell-Bannerman's opinion of the criticisms which have from time to time appeared in the military and professional press on the Medical Division of the War Office, we have been placed in possession of correspondence which, beyond doubt, proves that the closest attention of the Secretary of State for War must be given to reforms in the direction to which we pointed some time ago in an article in the British Medical Journal. To say more is needless. The roster should absolutely and wholly be in the hands of a military medical officer, and the movements of the Medical Staff similarly controlled.

THE ARMY MEDICAL SERVICE IN PARLIAMENT.

On August 2nd and 3rd, Mr. Hanbury questioned the Secretary of State for India and the Secretary of State for War respectively on subjects connected with the Medical Service, and it is with regret we state that in both cases the answers were unsatisfactory.

On the 2nd, Mr. Hanbury queried the Secretary of State for India on charge pay for station hospitals in India, and Mr. Fowler's reply that "there is no record that the claim for such allowance was considered by the Secretary of State for India in 1888 to be a just claim" is inaccurate. Correspondence, which has already been embodied in an article which appeared in these columns a few weeks ago, distinctly points to the fact that Sir John Gorst considered the claim for charge pay as a just claim; no fencing, therefore, on the part can gainsay that point.

The Secretary of State for War's reply to Mr. Hanbury on August 3rd respecting field medical transport gives solid support to the contention of the Medical Department, that in war their transport will not be safe from assignment, if necessary, for combatant purposes by the military authorities. The possibility of field medical transport being bandied about from day to day between medical and military uses must tend to disorganise the medical arrangements in war, in which case the responsibility for such disorganisation would surely be thrown on the medical department. Every effort must be made to obviate such a deplorably unsatisfactory state of things.

Mr. Campbell Bannerman says that, as far as can be ascertained, field medical transport was not used in the Boer war for combatant purposes. All we can say is that if it was not so used reports which have come into our possession from medical officers with experience of South African service give a denial to Mr. Bannerman's assertion. No doubt "my military advisers" put into the Secretary for War's mouth words which were meant to throw dust in the eyes of the public. The public, however, will not be blinded and the question must be further pressed.

THE SANITARY CONDITION OF ALDERSHOT.

The grossly insanitary condition of the North Camp, Aldershot, was exposed at length in the British Medical Journal so far back as 1891, since which, apparently, no improvement has taken place. The military papers of August 4th severely criticise the state of things noted in Dr. Seaton's report to the Surrey County Council, and ask on whom responsibility for it should be fixed. The military authorities cannot excuse themselves on the ground that their medical and sanitary advisers had not for years past represented the ill effects on health of the sewage marsh. It is high time the Army Sanitary Committee, or at all events the army medical member of it, should give the public some information of any suggestions or recommendations made to rectify a grave defect which has been permitted to exist too long.

VOLUNTEERS AMBULANCE CHALLENGE SHIELD.

The annual competition for the Ambulance Challenge Shield was held on July 28th on the parade ground of Wellington Barracks in the presence of a large company. The various competing squads were put through a testing examination in stretcher and waggon drill, first aid, anatomy, and bandaging. The examiners were Surgeon-Major Sir James Clark, Bart., A.M.S.; Surgeon-Majors W. C. James, Fraser Stokes, and Wm. Collingridge; Surgeon-Captains J. Edward Squire, Reginald Sieman, and Valentine Matthews. The arrangements were carried out by the Honorary Secretaries of the Volunteer Medical Association (Surgeon-Captain Dundas Grant and Surgeon-Lieutenant Alfred Eddowes), assisted by the ex-Secretary, Surgeon-Captain Squire. After a close competition the shield was awarded to the 12th Middlesex (Civil Service) Rifles, with a score of 331 points out of a possible 400. The 1st Bucks Rifles came second with 324 points, the 2nd Volunteer Battalion Liverpool Regiment being third with 305 points; 3rd Hants fourth with 286. After the distribution of badges to the leading squads by Mrs. Squire, Sir James Clark congratulated the competitors on the excellent manner in which they had acquitted themselves, and remarked that he thought it would be well if every soldier were to undergo some training in ambulance work. In all 23 teams competed, including squads from the metropolitan, midland, and southern districts.

TRANSPORT FOR MEDICAL STAFF.

The claim for special transport for the Medical Staff has received force from the fact that during the manœuvres in the North-Eastern District the ambulance waggons and water carts were entirely horsed and driven by civilians. Where, on this occasion, was the Army Service Corps transport?

ANNUAL REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR THE YEAR 1892.

This lengthy volume, containing some 460 large foolscap pages, is mainly a statistical summary of vital statistics relating to European and native troops, prisoners, cantonments, and the general population throughout the Indian Empire. A section of it, mostly statistical, is devoted to vaccination; and two other sections give a brief summary of civil and military sanitary work executed during the year. The "general remark," which form the subject of a separate and concluding section, relate to the condition of the Lazaretto at Cameran, and Dr. D. D. Cunningham's paper on the comma bacilli found in cases of cholera which has been already commented on at length in the British Medical Journal. As a compendium of statistical information this report is admirable, and its late appearance is inevitable, considering the vast area and population with which it deals, and the multiplicity of sources from which the information is drawn. The value of the statistics contained in the report varies. Those relating to troops and prisoners are accurate and reliable, and are set forth in great elaboration by Dr. David Wilkie in an appendix comprising 280 pages.

The forms devised by the late Dr. Bryden are preserved, but useful modifications and additions have from time to time been made, as experience has indicated advisable. The most noteworthy of these is the introduction of a series of decennial statements of sickness and mortality, embracing the ten years previous to that under report. The statistics of cantonments, large municipalities, and vaccination are fairly correct, but those relating to the general population are still very far from satisfactory. The recorded birth-rates of the provinces varied from 17.56 to 39.9 per mille, and death-rates from 16.55 to 49.48. The excess of male over female births varied from 3.89 to 5.37 per cent., and in four provinces the birth-rate exceeded the death-rate to an extent of from 2.16 to 11.30 per mille. These figures show that both birth and death registration are still very defective and untrustworthy. The death-rates of 1892 are, on the whole, considerably higher; but whether that is due to better registration or higher mortality is a question. The meteorological features of the year were "an undisturbed and nearly rainless cold weather, an early and intense hot season, especially in Northern India, an early monsoon with unusually heavy rain in many stations, especially in Northern India, a rather early cessation of the rains followed by unusual coolness." These conditions are favourable to the prevalence of malarious fever, which "caused more deaths in most provinces than all other causes put together." Cholera was also widely diffused and very severe. "In Bengal, Punjab, Rajputana, Mysore, and Coorg the number of recorded deaths from cholera was never so great as in 1892." The year was therefore a very unhealthy one, and the sickness and mortality among troops and prisoners were consequently very high. In the European army the admission rate was 1,517 per 1,000, the constantly sick rate 81, and the death-rate 17.07.

Sickness was, as usual, due mostly to ague, venereal diseases, injuries, skin diseases, and simple continued fever, and deaths to enteric fever, cholera, remittent fever, hepatic abscess, heat stroke, tubercle of the lungs, dysentery, and pneumonia. An epidemic of influenza added considerably to the sick rates and slight to the death-rates of troops and prisoners. Cholera caused 2.5 admissions and 1.78 deaths among European troops, 3.3 and 2.14 among native troops, and 8.7 and 4.73 among prisoners. The disease contributed 10.4, 14.3, and 12.8 per cent. to the mortality of the three classes. Enteric fever accounted for 22.1 admissions and 5.52 deaths per 1,000, and constituted 32.3 per cent. of the deaths. The subject is discussed at considerable length but no new light is thrown on the etiology of the disease. The admission-rate from venereal diseases was 410 per mille, the same as last year, but lower than that of 1889 and 1890. Very little good in the way of prevention is expected of the voluntary arrangements now existing in cantonments, because the women do

not attend the hospitals. The death-rate among officers was 17.69, among women 19.05, and among children 48.56. The statistics of native troops show an admission-rate of 1,092, a constantly sick rate of 37, and a death-rate of 18.67; 54 cases and 16 deaths (0.4 and 0.13 per 1,000) from enteric fever were recorded. Among prisoners the admission-rate was 1,186, the constantly sick-rate 41 and the death-rate 36.83. Ague, dysentery, abscess, diarrhœa, and influenza were the chief components of the sick-rate, and dysentery, pneumonia, and cholera of the death-rate. A comparison of the statistics of the three bodies brings out the greater preponderance and fatality of fever among European troops, of respiratory diseases among native troops and prisoners, and of bowel complaints among the latter. Two interesting subjects are specially discussed in this report, namely, the sanitation of fairs and the relation between anchylostomiasis and beri-beri. The conclusions drawn from reports on the latter subject are that the presence of the anchylostoma duodenale does not necessarily give rise to serious symptoms, and that the parasite is not the cause either of *beeta acar* or beri-beri. Rs.90,88,203 were spent on military sanitary works of a useful description greatly benefiting the comfort and health of troops, and many important projects connected with drainage and water supply were in progress in the civil department in addition to large expenditure on scavenging and other necessary sanitary business.

From this cursory sketch of Surgeon-Major-General Rice's most able and valuable report it will be gathered that it teems with interesting and important facts relating to the health of Indian communities during the year under report.

SECONDING OF BRIGADE-SURGEONS.

SURGEON-LIEUT.-COLONEL, as an anxious inquirer, asks: Could you inform a number of interested officers why the Professors at the Army Medical School, Netley, who are extra-regimental officers under ART. 551 of the Royal Warrant, have not appeared as such in the *Gazette*, as is the custom with all other medical officers? The filling-up of these vacancies by seconding would give two steps to senior officers.

*** We cannot say; but if these officers should be seconded under the article quoted it is a clear injustice withholding the steps. Promotion in the brigade rank is slow enough in all conscience, without being unnecessarily retarded.

SUBSTANTIVE RANK AND SALUTES.

A CORRESPONDENT points out that in the recent issue of the Queen's Regulations, Section III, para. 34, the following important revise occurs: "All guards and sentries will pay compliments to the commissioned officers of the departments of the army according to their ranks or corresponding ranks, as the case may be." This is a great advance, and surgeon-major-generals can now insist on the same salutes as other major-generals.

*** We thank our correspondent for pointing out the above revise of regulations; it will be the fault of medical, ranking as general officers, if they do not receive the customary salutes.

MEDICAL OFFICERS IN THE CRIMEA.

ARMY MEDICAL STAFF writes: The Royal Engineers are to erect a handsome monument at Cathcarts Hill, near Sebastopol, to those of their number—officers and men—who died during the siege. Should not a similar monument be erected by the Medical Department to those of their order who perished in the Crimea?

*** It is highly honourable to the Royal Engineers to erect a monument to their predecessors—for very few can now claim them as comrades—who are buried in the Crimea. We fear it would be very difficult, at this date, to get the Medical Department to move in a similar manner.

INDIAN APOTHECARIES.

THE LAST STRAW writes: The Indian Government has ordered that the apothecaries of the subordinate medical service are in future to be styled "assistant-surgeons." The senior apothecaries, who have hitherto been honorary lieutenants and honorary captains in rank, but not in designation, are now to be called honorary surgeon-lieutenants and honorary surgeon-captains. Moreover, it is ordered that the prefix honorary is to be used only in certain official correspondence, and for the rest they are to be dubbed surgeon-lieutenant or captain pure and simple. Now, however estimable, these gentlemen are absolutely devoid of any medical qualification or licence to practice. Is it not, therefore, illegal and *ultra vires* for the Indian Government to bestow such titles, and are they not bringing themselves in conflict with the corporations who alone have the right to bestow them? This is a sad cheapening and depreciation of our titles.

*** The matter has, no doubt, a legal aspect; probably the Government think they have some lien on the term "surgeon," forgetting that it is a purely civil and not a military title at all.

EXAMINATION OF SURGEON-CAPTAINS FOR PROMOTION.

G.—The following books should be studied for the examination for promotion of surgeon-captains: In Military Law the following—all published by authority of the War Office: *Manual of Military Law*, *Abbreviated Manual of Military Law*. For Medical Staff Corps administration: The Queen's Regulations, and Regulations for Medical Services, together with the *Manual for the Medical Staff Corps*. All recent Warrants or General Orders regarding the Army Medical Staff and Medical Staff Corps should also be mastered. Riordan's book is not up to date, and would be insufficient. It was published many years ago, and no recent edition, that we are aware of, has appeared.

WEARING SWORDS IN HOSPITALS.

ALPHA writes: Swords are always worn at parades and inspections, and medical officers must appear with them; it rests with the general at hospital inspections to dispense with them—his own first. But I fail to see any inconvenience in wearing them in walking through a hospital. The sword is a symbol of discipline, which has to be maintained in hospital as elsewhere.

*** We presume the object of dispensing with swords at hospital inspection is to lessen noise and clanking; that, however, can be avoided by carrying the sword or hooking it up.

THE MILITARY SCANDAL AT BIRR.

UT PROSIM asks: May not this grave scandal be in part ascribed to the fact that many combatant officers appear to have persuaded themselves that the rank of medical officers can be ignored with impunity? The rioters broke into a surgeon-major's quarters. Would they have done the same to one of their own field officers?

*** We hardly think this disreputable frolic would have been attempted with any but a medical officer. Imagine the roysterers to have been surgeon-lieutenants, and the quarters a field officer's of the privileged caste!

UNIVERSITIES AND COLLEGES.

ROYAL UNIVERSITY OF IRELAND.

FACULTY OF MEDICINE: SUMMER, 1894.—The following candidates have been adjudged to have passed the First Examination in Medicine:

J. F. Begley, University College, Dublin; N. J. Blaney, University College, Dublin; D. Brown, Queen's College, Belfast; J. W. Brown, Queen's College, Belfast; F. C. Bullen, Queen's College, Cork; P. J. Burke, University College, Dublin; P. Canning, B.A., University College, Dublin; J. J. S. Carbery, University College, Dublin; W. V. Coppinger, School of Physic, Trinity College, Dublin; J. J. Crowley, B.A., Queen's College, Cork; J. Daly, Queen's College, Cork; R. A. L. Graham, Queen's College, Belfast; A. J. Hewitt, Queen's College, Galway; G. Jefferson, Queen's College, Belfast; R. Kerr, Queen's College, Belfast; A. E. Knight, Queen's College, Belfast; J. Monaghan, University College, Dublin; K. McGahey, Queen's College, Belfast; A. B. M'Master, Queen's College, Belfast; J. W. D. Megaw, Queen's College, Belfast; D. Murphy, Queen's College, Cork; W. O'S. Murphy, Queen's College, Cork; J. Murray, University College, Dublin; E. O'Callaghan, University College, Dublin; W. Paisley, Queen's College, Galway; O. M. Pracger, Queen's College, Belfast; F. S. Scott, Queen's College, Galway; A. M. Staunton, Queen's College, Galway; R. Steen, Queen's College, Belfast; Isabel A. Tate, Queen's College, Belfast; J. Walsh, Queen's College, Cork; S. H. E. Waishe, Queen's College, Belfast; K. H. White, Queen's College, Cork; and R. Whyte, Queen's College, Belfast.

HONOURS.

Botany.—First Class: P. Canning, B.A., University College, Dublin; J. Murray, University College, Dublin; and J. F. Begley, University College, Dublin. Second Class: N. J. Blaney, University College, Dublin; and W. V. Coppinger, School of Physic, Trinity College, Dublin.

Zoology.—First Class: N. J. Blaney, University College, Dublin; and P. Canning, B.A., University College, Dublin. Second Class: J. F. Begley, University College, Dublin; and J. Murray, University College, Dublin.

Chemistry.—First Class: P. Canning, B.A., University College, Dublin; and N. J. Blaney, University College, Dublin. Second Class: J. F. Begley, University College, Dublin; J. W. Brown, Queen's College, Belfast; P. J. Burke, University College, Dublin; and J. Murray, University College, Dublin.

Experimental Physics.—First Class: N. J. Blaney, University College, Dublin; J. W. D. Megaw, Queen's College, Belfast; P. Canning, B.A., University College, Dublin; J. W. Brown, Queen's College, Belfast; and J. F. Begley, University College, Dublin. Second Class: W. V. Coppinger, School of Physic, Trinity College, Dublin; and J. Murray, University College, Dublin.

Exhibitions (Candidates who upon their answering were qualified for exhibitions, the names of those disqualified by standing or otherwise are printed in italics).—First Class, £20: *P. Canning*, B.A., University College, Dublin; and N. J. Blaney, University College, Dublin. Second Class, £10 each: J. F. Begley, University College, Dublin.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

THE following gentlemen passed the First Examination of the Board at the quarterly meeting of the Examiners in the subjects indicated, under the Five Years Regulations:

Part III. *Elementary Biology.*—H. T. D. Acland, St. Thomas's Hospital; W. T. Allen, London Hospital; G. W. Alltree, King's College, London; H. P. W. Barrow, Guy's Hospital; C. E. Blackstone, Middlesex Hospital; F. J. G. Blake, Yorkshire College, Leeds; W. N. Blatchford, University College, Bristol; T. T. Blythe, St. Thomas's, Guy's, and London Hospitals; E. A. Bullmore, University College, London; H. H. R. Clarke, St. Thomas's Hospital; F. A. Coates, University College, Bristol; F. Cox, University College, Bristol; W. C. C. Davies, St. Mary's Hospital; G. B. De Feitas, King's College, London; E. B. Dowsett, Guy's Hospital; A. C. V. Duben, St. Thomas's Hospital; G. M. Eastment, Middlesex Hospital; A. R. Evans, University College of South Wales, Cardiff; T. A. E. Fawcett, Yorkshire College, Leeds; F. R. Featherstone, Guy's Hospital; H. W. Fisher, London Hospital; E. J. Fleming, Westminster Hospital; J. Forbes, St. George's Hospital; W. E. Fowke,

Guy's Hospital; J. R. Frost, Merchant Venturer's Schools, Bristol; L. O. Fuller, University College, London; P. Gardiner, Middlesex Hospital; G. A. H. Gee, Merchant Venturers' Schools, Bristol; J. O. Harvey, Mason College, Birmingham; R. J. Hogan, London Hospital; W. G. Hopkins, St. Mary's Hospital; H. N. Horton, Middlesex Hospital; J. E. Howroyd, Yorkshire College, Leeds; N. A. A. Hughes, Yorkshire College, Leeds; P. D. Hunter, Guy's Hospital; G. H. Irvine, University College, Bristol; D. Jamieson, Epsom College; J. A. Johnson, University College, Liverpool; W. Johnson, Guy's Hospital; W. E. Jones, Owens College, Manchester; D. F. Kennard, St. Mary's Hospital; T. H. W. Landon, Guy's Hospital; A. C. Lewis, Guy's Hospital; W. Lister, Yorkshire College, Leeds; J. H. Longbotham, Yorkshire College, Leeds; D. V. Lowndes, London Hospital; R. M. McQueen, University College, Bristol; T. Mansell, St. Thomas's Hospital; E. Merry, London Hospital; R. R. Milliar, University College, London; A. S. Morley, St. George's Hospital; R. E. Mounsey, St. George's Hospital; J. H. Mules, Guy's Hospital; H. B. G. Newham, St. Thomas's Hospital; C. H. Newton, St. Thomas's Hospital; C. D. Outred, Guy's Hospital; V. S. Partridge, Charing Cross Hospital; R. W. Pearson, Owens College, Manchester; S. G. Penny, St. George's Hospital; A. Perks, Guy's Hospital; J. Phillips, University College, Bristol; N. E. Pratt, London Hospital; J. E. Powell, Guy's Hospital; R. J. Pritchard, Guy's Hospital; S. C. Pritchard, King's College, London; G. W. M. Pritchett, University College, London; A. Read, Guy's Hospital; C. R. Rickard, Middlesex Hospital; J. H. Sanders, London Hospital; J. Sherren, London Hospital; H. Smith, Mason College, Birmingham; J. N. Smith, Guy's Hospital; J. E. Soderburg, Westminster Hospital; F. R. Tarbet, University College, London; D. J. Thomas, London Hospital; H. M. Thomas, University College, Bristol; P. A. Ward, Guy's Hospital; W. J. Waters, St. Thomas's Hospital; C. G. Watson, St. Bartholomew's Hospital; R. N. Watson, Westminster Hospital; S. J. Willcox, Merchant Venturers' School, Bristol; N. Williams, Guy's Hospital; A. H. Wilson, Mason College, Birmingham; C. H. Wood, University College, London; H. C. Woodyatt, Owens College, Manchester; E. A. Wraith, Yorkshire College, Leeds; E. Young, London Hospital; G. A. Yvanovich, St. Thomas's Hospital.

Part IV. *Elementary Anatomy.*—A. T. Abadgian, London Hospital; W. H. Agar, University College, London; W. Andrus, London Hospital; H. T. Baron, Westminster Hospital; H. H. Bignold, Guy's Hospital; C. E. Blackstone, Middlesex Hospital; W. N. Blatchford, University College, Bristol; F. P. Bond, Westminster Hospital; S. H. Brewer, St. Bartholomew's Hospital; W. E. J. Bristowe, St. Thomas's Hospital; P. J. Cammidge, St. Bartholomew's Hospital; W. R. Cazenove, Guy's Hospital; G. B. F. Churchill, Guy's Hospital; A. E. Clarke, Guy's Hospital; E. C. Clements, Middlesex Hospital; F. A. Coates, University College, Bristol; F. W. Cotton, University College, Bristol; E. J. Crew, Guy's Hospital; D. Davies, University College, London; T. S. Davies, University College, Bristol; W. E. C. Davies, St. Mary's Hospital; J. T. De Couteau, Guy's Hospital; Q. B. De Freitas, King's College, London; A. M. Dodd, University College, Liverpool; C. S. S. Dunlop, University College, London; C. M. Ekins, University College, London; A. G. Eldred, London Hospital; H. H. Elworthy, Westminster Hospital; E. J. Fleming, Westminster Hospital; J. K. S. Fleming, St. Bartholomew's Hospital; F. A. French, St. Mary's Hospital; P. Gardiner, Middlesex Hospital; S. Gaster, London Hospital; J. H. Gibbon, Firth College, Sheffield; W. W. Harrison, Guy's Hospital; J. H. Hart, St. Thomas's Hospital; R. Hatfield, St. Bartholomew's Hospital; A. G. Higgins, St. Bartholomew's Hospital; L. V. Hill, Firth College, Sheffield; H. Hipwell, Middlesex Hospital; P. S. Hope, St. Thomas's Hospital; A. A. Hughes, Yorkshire College, Leeds; L. Humphrey, Guy's Hospital; A. W. D. Hunt, Middlesex Hospital, J. W. W. Hunter, Otago University and London Hospital; P. D. Hunter, Guy's Hospital; G. H. Irvine, University College, Bristol; D. F. Kennard, St. Mary's Hospital; J. A. Kilpatrick, University College of South Wales, Cardiff; T. H. W. Landon, Guy's Hospital; R. M. McQueen, University College, Bristol; W. E. G. Maltby, St. Bartholomew's Hospital; F. Noakes, Charing Cross Hospital; J. W. Nunn, St. Bartholomew's Hospital; W. Oram, London Hospital; G. Paira-Mall, London Hospital; E. E. Parrett, Guy's Hospital; V. S. Partridge, Charing Cross Hospital; S. G. Penny, St. George's Hospital; R. G. Pritchard, Guy's Hospital; F. G. Richards, St. Bartholomew's Hospital; C. R. Rickard, Middlesex Hospital; J. H. Roberts, Guy's Hospital; H. H. Robinson, Owens College, Manchester; W. B. Silas, Westminster Hospital; C. W. B. Smith, St. Bartholomew's Hospital; S. S. Smith, Mason College, Birmingham; A. R. Spencer, University College, London; C. S. Stolterfoth, University College, Liverpool; P. R. Tarbet, University College, London; H. J. Taylor, Owens College, Manchester; W. A. Thompson, Owens College, Manchester; H. S. Turner, Guy's Hospital; C. F. Watson, Guy's Hospital; G. H. R. Welsh, London Hospital; J. F. West, Mason College, Birmingham; L. E. Whitaker, St. Bartholomew's Hospital; N. Williams, Guy's Hospital; C. H. Wood, University College, London; and H. C. Woodyatt, Owens College, Manchester.

The *London Gazette* of August 3rd announces that the Queen has been pleased to give directions for the appointment of David Palmer Ross, Esq., M.D., C.M.G. (Colonial Surgeon, Sierra Leone), to be Surgeon-General of the Colony of British Guiana.

First Cremation of a European in India.—The first cremation of a European in Calcutta was (according to the *Indian Medical Record*) performed recently by the Bengali Bramo Somaj on the body of Mr. Karl Hammergren, a Swede, who was a member of their communion.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE ILKESTON HEALTH OFFICERSHIP.

The absurd method by which health officers are appointed for terms varying from twelve to five years has rarely had such a flagrantly scandalous exemplification as in the case of Ilkeston, where quite recently the Town Council have by the bare majority of one vote thrown over their health officer of ten years' standing. Only one fault can be found with him, and that is he has had more regard for the public health than for the pockets of property holders. He seems to be suffering from the operation of the law of vested interests. Dr. Carroll, the officer in question, has, during these ten years of duty well done, been remunerated during seven of them by the nominal salary of £30 per annum, and for a part of the time by £50, and for a few months by £75 per annum. He has brought the district through the trying period of last year's cholera invasion, and has, in only too many ways for his own interest, tried to gain the assent of his council to the carrying out of those remedial measures which are still needed in the district, even though, so far as we can learn, members of his authority are concerned in property to the condition of which Dr. Carroll has had to take exception in his official capacity. Now, when the district is disposed to spend £100 a year on the salary of its sanitary medical adviser, a certain section of the Town Council proceed to discard the faithful servant who has served them so well in less happy circumstances, and have elected to appoint as Dr. Carroll's successor one who seems to have been a member of every council up to the moment of his candidature for the post. We sincerely hope he will see his way to refuse, even at this eleventh hour, the post thus offered him. So far as we can find, the Central Board have but little power in the matter, if only the qualifications of the person who is to fill the office are of a requisite nature. The more's the pity. Power should long ago have been vested in some central controlling board, be it a county council or a department of State, for dealing cases of this sort on a proper basis of equity. To throw over a man because he has had the common honesty to declare that such and such things, bad in themselves, should not be allowed to persist, is to put a heavy premium on sanitary progress; and the matter therefore at once assumes a national importance. As for this Ilkeston job—for it is nothing else—we most sincerely trust that if it do not right itself by the refusal of the new officer to accept office, the Town Council will have the good grace to discuss the matter in full meeting in order that the sense of the authority may be taken after a free and full consideration of the whole business. It is not long since a Yorkshire local board acted in a like shabby manner towards a good servant, but they repented of their ingratitude, and reappointed him. We may charitably believe that Ilkeston will do likewise. There are those features in the town which are such as the council would not care to contemplate if cholera again appeared in their midst; and seeing that the months which have elapsed since that disease was in the district have seen but little activity in the way of remedy for the very causes of cholera spread, we shall feel no surprise if one morning news arrive not only of reappearance of the disease, but of its having fastened on the town. In such unhappy circumstances the Town Council will doubtless mournfully turn to Dr. Carroll's unheeded recommendations, and will do under the influence of panic that which would have been far better and far more economically done in the absence of sickness. For the rest, Dr Carroll will not have suffered in vain if his case serve to draw public attention to the ever-growing evil of these limited periods of appointment, and if it serve to lead to demand for abandonment of the vicious principle in favour of life appointments.

ENGLISH URBAN MORTALITY IN THE SECOND QUARTER OF 1894.

The vital and mortal statistics of the thirty-three large English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending June last 79,288 births were registered in these thirty-three towns, equal to an annual rate of 30.4 per 1,000 of their aggregate population, estimated at nearly ten and a-half millions of persons in the middle of this year. In the corresponding periods of 1893 and 1893 the birth-rate in these towns was 32.0 and 31.6 per 1,000 respectively. In London the birth-rate last quarter was equal to 29.5 per 1,000, while it averaged 31.0 in the thirty-two provincial towns, among which it ranged from 18.1 in Huddersfield, 23.7 in Croydon, 25.5 in Portsmouth, and 25.8 in Oldham, to 34.4 in Salford, 34.5 in Hull, 35.3 in Wolverhampton, and 35.7 in Liverpool and in Sunderland.

During the quarter under notice 45,401 deaths were registered in the thirty-three large English towns, corresponding to an annual rate of 17.4 per 1,000, against 19.5 and 19.8 in the second quarters of the preceding two years 1892-3. In London the rate of mortality was equal to 17.4 per 1,000, and was slightly below the average rate in the thirty-two provincial towns, among which the death-rates ranged from 11.5 in Croydon, 12.3 in Portsmouth, 12.9 in Derby, and 13.2 in Leicester, to 19.4 in Birmingham, 19.6 in Manchester, 22.2 in Wolverhampton, and 22.8 in Liverpool. The 45,401 deaths registered in the thirty-three towns last quarter included 6,735 which were referred to the principal zymotic diseases, equal to an annual rate of 2.6 per 1,000; in London the zymotic death-rate was equal to 3.3 per 1,000, while it averaged 2.1 in the thirty-two provincial towns, among which it ranged from 0.4 in Derby, 0.6 in Brighton, and 0.8 in Plymouth, to 3.1 in Liverpool, 3.4 in Wolverhampton, 3.7 in Birmingham and in Salford, and 3.8 in West Ham. The 6,735 deaths referred to the principal zymotic diseases included 2,722 which resulted from measles, 1,542 from whooping-cough, 904 from diphtheria, 588 from scarlet fever, 448 from diarrhœa, 382 from "fever" (principally enteric), and 149 from small-pox. The fatal cases of measles, which had been 773 and 1,392 in the preceding two quarters, further rose to 2,722 during the three months ending June last; in London the rate of mortality from this disease was equal to 1.01 per

1,000, while it averaged 0.64 in the thirty-two provincial towns, among which measles was proportionally most fatal in Leicester, Salford, Wolverhampton, Nottingham, London, Birmingham, and West Ham. The 1,542 deaths referred to whooping-cough were equal to an annual rate of 0.59 per 1,000; in London the whooping-cough death-rate was equal to 0.56 per 1,000, while it averaged 0.61 in the thirty-two provincial towns, among which this disease showed the highest proportional prevalence in Bristol, Salford, Sheffield, Newcastle-upon-Tyne, and Cardiff. The fatal cases of diphtheria, which had been 1,377 and 1,105 in the preceding two quarters, further declined to 904 during the quarter under notice; in London the death-rate from this disease was as high as 0.60 per 1,000, while it averaged only 0.17 in the thirty-two provincial towns, and was highest in Croydon, Burnley, Huddersfield, West Ham, Wolverhampton, and Cardiff. The deaths from scarlet fever, which had been 889 and 598 in the preceding two weeks, were 588 during the three months ending June last; in London the scarlet fever death-rate was equal to 0.26 per 1,000, while it averaged 0.20 in the thirty-two provincial towns, among which this disease showed the highest proportional prevalence in Burnley, Swansea, Liverpool, and Wolverhampton. The 448 fatal cases of diarrhœa were equal to an annual rate of 0.16 per 1,000, and were considerably below the average; this disease showed the highest proportional fatality in Hull, Liverpool, Blackburn, and Manchester. The deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of fever), which had been 936 and 518 in the preceding two quarters, further declined to 382 during the three months ending June last; in London the "fever" death-rate was 0.12 per 1,000, while it averaged 0.16 in the thirty-two provincial towns, among which it was highest in Preston, Burnley, Blackburn, Salford, and Liverpool. The fatal cases of small-pox in the thirty-three towns, which had been 141, 172, and 161 in the preceding three quarters, further declined to 149 during the three months under notice, of which 53 were recorded in Birmingham, 34 in London, 28 in West Ham, 16 in Manchester, 4 in Portsmouth, and 3 in Bradford.

The rate of infant mortality in the thirty-three towns, measured by the proportion of deaths under one year of age to registered births, was equal to 132 per 1,000 and was slightly below the average. The lowest rate of infant mortality was 100 per 1,000, while it averaged 156 in the thirty-two provincial towns, among which it ranged from 81 in Derby, to 241 in Brighton, 191 in Portsmouth, and 186 in Croydon, to 159 in Oldham, 161 in Salford, 166 in Preston, and 177 in Nottingham.

The causes of 749, or 1.6 per cent., of the 45,401 deaths in the thirty-three towns during the second quarter of this year were not certified, either by a registered medical practitioner or, by a coroner. The proportion of uncertified deaths in London did not exceed 0.8 per cent., while it averaged 2.3 per cent. in the thirty-two provincial towns. The causes of all the deaths in Croydon during the quarter were duly certified; in the other towns the lowest proportions of uncertified deaths were registered in Plymouth, Bristol, Bradford, and Gateshead, and the highest in Birmingham, Liverpool, Preston, Halifax, and Hull.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 5,429 births and 3,527 deaths were registered during the week ending Saturday, August 11th. The annual rate of mortality in these towns, which had increased from 15.8 to 17.2 per 1,000 in the preceding four weeks, further rose to 17.6 last week. The rates in the several towns ranged from 9.8 in Croydon and 10.0 in Derby, to 23.3 in Preston and 29.2 in Liverpool. In the thirty-two provincial towns the mean death-rate was 17.7 per 1,000, and slightly exceeded the rate recorded in London, which was 17.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3.6 per 1,000; in London the rate was equal to 4.0 per 1,000, while it averaged 3.6 in the thirty-two provincial towns, and was highest in Sunderland, Liverpool, and Preston. Measles caused a death-rate of 1.4 in Bristol and 1.5 in Sunderland; scarlet fever of 1.8 in Wolverhampton; whooping-cough of 2.3 in Sunderland; and diarrhœa of 3.3 in West Ham, 3.5 in Salford, 6.3 in Leicester, 6.8 in Liverpool, and 9.4 in Preston. The 81 deaths from diphtheria in the thirty-three towns included 62 in London and 4 in West Ham. Ten fatal cases of small-pox were registered in London, and 1 each in Plymouth, Birmingham, and Manchester, but not one in any other of the thirty-three large towns. There were 209 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, August 11th, against 79, 207, and 215 at the end of the preceding three weeks; 28 new cases were admitted during the week, against 10, 152, and 40 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,193, against 2,198, 2,197, and 2,221 at the end of the preceding three weeks; 208 new cases were admitted during the week, against 241 and 259 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, August 11th, 841 births and 444 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 15.1 and 16.3 per 1,000 in the preceding two weeks, declined again to 15.6 last week, and was 2.0 per 1,000 below the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 7.9 in Leith to 21.7 in Greenock. The zymotic death-rate in these towns averaged 2.5 per 1,000, the highest rates being recorded in Glasgow and Leith. The 193 deaths registered in Glasgow included 28 from diarrhœa, 5 from whooping-cough, and 3 from measles. Three fatal cases of scarlet fever were recorded in Edinburgh and 1 of small pox in Leith.

SMALL-POX IN EDINBURGH.

Seven fresh cases of small-pox were notified in Edinburgh last week, none in Leith, and no death in either town. Two cases of small-pox are reported from Greenock.

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the Second Quarter of 1894.

Towns.	Estimated Population middle of 1894.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
33 Towns	2,611,412	79,288	45,401	30.4	17.4	2.6	6,735	149	2,722	588	904	1,542	382	448	132	1.6
32 Provincial Towns	2,190,276	47,281	26,579	31.0	17.5	2.1	3,141	115	977	303	253	924	251	302	136	2.3
London	4,349,166	32,097	18,822	29.5	17.4	3.3	3,594	34	1,745	285	651	608	131	140	126	0.8
West Ham	238,184	1,940	919	32.7	15.5	3.8	228	28	130	5	20	28	10	7	122	3.1
Croydon	111,921	682	321	23.7	11.5	1.6	45	—	7	3	9	25	1	—	106	0.0
Brighton	118,715	771	402	26.0	13.6	0.6	18	—	4	2	4	1	2	5	88	2.0
Portsmouth	170,973	1,088	525	25.5	12.3	0.9	37	4	3	3	5	12	4	6	101	1.3
Plymouth	87,931	608	341	27.7	15.6	0.8	17	1	—	1	2	10	1	2	128	0.0
Bristol	226,578	1,528	949	27.0	16.1	2.1	117	1	40	5	8	55	2	8	135	0.7
Cardiff	148,890	1,260	598	33.9	16.1	2.3	84	—	2	2	23	49	1	7	156	1.5
Swansea	95,399	716	372	30.1	15.6	1.8	42	—	13	10	2	15	—	2	119	0.8
Wolverhampton	85,036	748	476	35.3	22.5	2.3	71	3	27	19	8	10	2	2	170	0.0
Birmingham	492,301	3,867	2,377	31.5	19.4	3.7	451	53	212	17	22	92	22	32	153	4.2
Norwich	105,645	797	434	30.3	16.5	1.1	28	—	8	5	1	8	2	4	128	1.5
Leicester	189,136	1,465	821	31.1	13.2	1.8	85	—	52	14	3	3	5	8	122	2.6
Nottingham	223,584	1,628	1,011	29.2	18.2	2.1	172	—	89	9	2	51	8	13	177	1.2
Derby	98,796	737	317	29.9	12.9	0.4	10	—	1	1	—	1	3	4	81	1.6
Birkenhead	105,827	813	480	30.9	18.2	2.1	56	—	21	2	7	20	5	1	122	1.0
Liverpool	507,230	4,521	2,876	35.8	22.7	2.1	396	1	112	55	15	102	68	43	149	3.7
Bolton	118,303	915	597	32.0	17.2	0.9	25	—	—	4	2	13	4	2	120	0.8
Manchester	520,211	4,247	2,544	32.7	19.6	2.1	272	16	91	19	26	81	16	33	124	1.4
Salford	205,828	1,795	1,110	34.4	21.6	3.7	190	1	57	28	10	50	18	15	161	2.4
Oldham	138,755	893	612	33.8	17.7	1.8	61	2	23	7	9	10	5	5	159	1.3
Burnley	96,478	741	425	30.8	17.7	1.4	33	—	2	9	3	1	6	7	145	2.4
Blackburn	125,797	894	529	29.5	16.9	1.2	39	—	1	2	—	12	6	6	166	1.3
Preston	111,425	857	484	30.8	17.4	1.7	47	1	20	2	—	12	6	6	155	3.5
Huddersfield	98,511	444	372	18.1	15.1	1.6	38	—	2	3	8	19	4	2	155	3.2
Halifax	92,861	564	388	24.4	16.8	0.9	21	—	14	1	—	1	—	2	142	5.2
Bradford	223,985	1,513	880	27.1	15.8	1.1	90	4	11	19	4	14	3	5	123	0.5
Leeds	388,761	3,191	1,590	32.9	16.4	1.1	104	—	8	15	24	39	9	9	131	1.1
Sheffield	338,316	2,661	1,377	31.5	16.3	1.8	153	—	16	7	12	92	15	11	135	2.7
Hull	212,679	1,830	852	34.5	16.1	1.3	70	—	8	7	7	25	7	16	117	3.9
Sunderland	126,101	1,212	610	35.7	18.0	1.6	55	—	11	6	1	21	5	8	123	0.8
Gateshead	93,372	779	398	33.5	16.7	1.0	23	—	1	2	5	5	4	6	123	0.3
Newcastle-on-Tyne	201,947	1,598	930	31.7	18.5	1.9	93	—	15	8	5	56	5	4	135	1.3

SMALL-POX IN DUBLIN.

There has been a decided increase in the number of cases of small-pox in Dublin. Recently a child was admitted from a tenement house, and on investigation it was discovered that a whole family of nine was suffering from the disease. The child, which had not been vaccinated, died, and it was also found that the other members had not been vaccinated. Two hospitals are now devoted to the reception of small-pox patients—the Hardwicke and Cork Street. There are about seventy under treatment. About thirty have been admitted within the past few days. In 1870-72 there were 20,000 cases, and in 1880 2,480, of whom 244 died. In the vaccinated cases the death-rate has been so far *nil*, but two or three of the non-vaccinated have died.

PORT OF LONDON SANITARY AUTHORITY.

The Corporation of London, as the port sanitary authority, have issued to masters and officers a compulsory notification ordering, by virtue of the power vested in them by section 56 of the Public Health (London) Act, 1891, that, as from the 4th instant, "the provisions of the said Act with respect to infectious diseases shall apply in the district of the said port sanitary authority to the disease known as diarrhœa, in addition to the diseases specifically mentioned in section 55 of the said Act or any order extending or amending the same, and that such order shall remain in force until September 30th next." Every case of diarrhœa occurring on board any vessel within the limit of the port of London must be forthwith reported to the medical officer of health, Port Sanitary Offices, Greenwich, and a penalty will be enforced in case of non-compliance with the order.

THE SANITARY CONDITION OF ILFRACOMBE.

In view of certain statements which have been made relative to the sanitary condition of Ilfracombe, we are asked to give publicity to the fact that, as proved by a certificate from the Chairman of the Urban Sanitary Authority and Dr. Slade-King, the medical officer of health, the town is at present entirely free from infectious disease of any kind. The Infectious Diseases Notification Act has been rigidly enforced for some months.

THE NOTIFICATION OF INFECTIOUS DISEASE.

J. W. B. writes: A doctor is called into consultation in a house where two children are ill with scarlet fever. The cases are then reported to the medical officer of health by the family physician. Is the other doctor (consultant) obliged to notify also, and can he claim payment of notification fee if he does so?

*** The words of the Act are "*every* medical practitioner attending on or called in to visit the patient shall forthwith, on becoming aware that the patient is suffering from an infectious disease.....send to the medical officer of health a certificate," etc. The consultant is therefore bound to send it as well as the regular attendant. The local authority must pay the fee of half-a-crown to each practitioner for every certificate which he sends in regular course.

INFECTIOUSNESS OF SMALL-POX.

E. C.—Any case of small-pox may cause infection.

POOR-LAW ANNUAL EXPENDITURE.

E. P. P.—Perhaps the best record of such expenditure so far as England and Wales are concerned will be found in the annual reports of the Local Government Board, the pages of their last issued, that for 1892-93, devoted to the matter being lxxiv-lxxvii, and 292-335 of the Appendix, especially the table on p. 335. We assume that the Irish and Scotch Boards will have like statistics in their volumes.

OBITUARY.

JOSEPH BANCROFT, M.D.,

Brisbane.

We regret to announce the death of Dr. Joseph Bancroft, of Brisbane, who died recently somewhat suddenly of heart disease at the age of 58. He was born in Manchester in 1836, and in 1859 became a member of the Royal College of Surgeons, and took the degree of Doctor of Medicine at St. Andrews. He started in practice at Nottingham, where he remained till 1864. Finding the English climate too trying for his health he emigrated to Queensland and settled in Brisbane. Since 1864 his name has been familiar to all classes in that town, and he had an extensive practice. He also found time to make original researches on filarial disease, leprosy, and other subjects, and he discovered the medicinal properties of *Duboisia myoporoides*. At the time of his death he was a member of a subcommittee appointed by the Medical Society of Queensland to assist in the revision of the *British Pharmacopœia* by the recommendation of indigenous substances which have been found useful in Australia.

Nor were his intellectual interests limited to the field of medicine. His contributions to the scientific knowledge of Australian plants and animals gained for him the reputation of a leading authority on the subject. He took the keenest interest in economic botany. He made numerous experiments with a view to getting a rust-proof wheat, and at one time he had numerous varieties growing in his experimental garden. Viticulture he also took a special interest in, and he raised many hybrids in the endeavour to get a grape suitable to the climate. Oyster culture was another subject which he studied both scientifically and practically, and his oyster beds at Deception Bay are regarded as an excellent object lesson on the subject.

Among Dr. Bancroft's contributions to industrial progress was the invention and preparation of Australian pemmican or desiccated beef. Latterly he had spent some time in experimenting on the artificial production of pearls, and his method is said to have yielded very promising results.

Dr. Bancroft had been President of the Queensland Medical Board since 1882, and of the Board of Health since 1884. He was the first President of the present Medical Society of Queensland, and was an active member of the old Philosophical Society (the first scientific society in Queensland), and past President of the Royal Society, which succeeded it. He was Vice-President of the Section of Hygiene and Public Health in the Association for the Advancement of Science. He was for many years Visiting Physician to the Lady Bowen Hospital, and Visiting Surgeon and latterly Consulting Surgeon to the Brisbane General Hospital.

Dr. Bancroft's funeral was attended by all the medical men of Brisbane, who feel that in him they have lost a kind and thoughtful friend and the example of a devoted seeker after scientific work.

In Dr. Michele Lessona, who died recently at the age of 71, the medical profession in Italy has lost one of its most distinguished members, and biological science one of its foremost representatives. He was Professor of Comparative Anatomy and Zoology in the University of Turin, where his teaching had the greatest influence for good, in the moral as well as in the intellectual sphere, over the pupils who had the good fortune to attend his lectures. He published a large number of papers on medical and scientific subjects, and his researches in comparative anatomy and physiology won for him a position of recognised authority. He was one of the earliest and most ardent disciples of Darwin in Italy. To the public he was equally well known as the author of a most successful book, somewhat on the lines of Mr. Samuel Smiles's writings, entitled *Volere e Potere*, which has gone through innumerable editions and has had a marked influence on the social and industrial regeneration of Italy. Professor Lessona was a member of most of the leading scientific societies, Italian and foreign. Some years ago the dignity of Senator of the Realm was conferred on him.

On July 28th, Dr. Charles Petre Lovell, B.M.Oxon., M.R.C.P., D.P.H., of 43, Porchester Square, was drowned at Cookham while boating on the Thames. This sad accident has, at the early age of 32, cut short the life of one who gave every promise of reaching a high position in his profession. He was originally educated at the Merchant Taylors' School, and after gaining a foundation scholarship entered St. John's College, Oxford. After taking his degree in the National Science Schools he obtained an Entrance Scholarship at St. Thomas's Hospital. There he had a brilliant career, gaining several prizes and medals, and eventually holding the appointment of house-physician. A few years ago he settled in practice at Wimbledon, but still continued to work in the special departments for diseases of the skin at St. Thomas's and University College Hospitals. Dr. Lovell moved from Wimbledon to London about a year ago, and was rapidly obtaining a good practice. The sad accident, which has come as a shock to all who knew him, has suddenly destroyed a life full of ability and industry.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. William G. Austin, of New

Orleans, formerly superintendent of the Charity Hospital of that city, where he was in charge during the terrible outbreaks of yellow fever in 1867 and 1868, aged 80; Dr. Phelippeau, Mayor of Maillezais, in La Vendée; Dr. Solomon van Etten, one of the oldest and best known physicians in Orange County, U.S.A., aged 65; Dr. Jean Anten, President of the Medical Committee of Province of Liége, and member of the Municipal Council of Liége; Dr. H. J. Schoenfeld, of Brussels, President of the Belgian Medical Pension Fund, and well known by his labours for the improvement of the condition of the working classes, and other philanthropic projects; Dr. J. D. Level, formerly medical inspector of the schools of Paris and a member of its Municipal Council, Sub-Prefect of the National Defence at Valognes in 1870-71, and a pioneer of the cremation movement in France, aged 82; Dr. F. C. Maillot, the oldest military surgeon in France, and a distinguished hygienist, author of numerous papers on paludism, and of *A Treatise on Intermittent Fevers*, published in 1836, and formerly President of the Army Sanitary Council, aged 91; Dr. Charles Moinet, Member of the French Senate, formerly a surgeon in the French navy, aged 58; Dr. H. E. de Rasquinet, a leading dental surgeon of Liége, aged 75; Dr. J. L. Morel, Professor of Physiology in the Medical Faculty of Rheims, and physician to the Hôtel Dieu of that city; and Dr. A. Molina, Professor of Medicine in the University of Guatemala.

HOSPITAL AND DISPENSARY MANAGEMENT.

OPENING OF A NEW EYE INFIRMARY AT GREENOCK.

A COTTAGE hospital for the treatment of diseases and injuries of the eye has been opened at Greenock. A special department for ophthalmic work was opened in Greenock Infirmary some fourteen years ago, and an oculist—Dr. N. G. Cluckie—appointed, under the terms of a bequest of £6,000, the Ferguson Eye Bequest. The interest of that bequest was only sufficient to pay the expenses of the department. But the need of such a department in the years that have since elapsed, during which some 35,000 patients have been treated, has been so abundantly shown that it became clear that either an addition to the infirmary or a special building for eye cases was needful, and Mr. Anderson Rodger, a Clyde ship builder, has generously taken upon himself the whole cost of the latter. The hospital is built of patent terra-cotta glazed brick, with a red tiled roof. A waiting-room, capable of accommodating 100 persons, leads to the dispensary for out-door cases. On the main floor there are two wards, one for males and one for females, each with six beds, with separate dining and sitting rooms adjoining, and also with separate bathroom and lavatory accommodation. On this floor there are also the ophthalmoscopic room and business rooms. Upstairs are two private wards and sitting-room. Full accommodation is also provided for matron and servants. Apart from the main building are a washhouse and laundry. The total cost of the building has been £2,000. The opening of the hospital was made the occasion of a public demonstration, in which the people testified to their appreciation not only of the value of the institution but of the generosity of the donor.

CORBETT HOSPITAL, STOURBRIDGE.

AT the annual meeting of the Corbett Hospital at Stourbridge, founded by Mr. John Corbett, it was stated that Mr. Corbett was willing to give £1,000 towards a children's ward at the hospital, if other support was given to the scheme.

THE CARMARTHEN ASYLUM.

DR. FREDERIC P. HEARDER (West Riding Asylum, Wakefield) writes: It was with much regret that I read a letter in the issue of the BRITISH MEDICAL JOURNAL of July 21st, complaining of the appointment of medical superintendent made by the committee of the above asylum over twelve weeks ago. The arguments put forward by your correspondent against the appointment are fallacious. The vacancy was thrown open to competition, and of course the speaking of Welsh was taken into consideration in the making of the appointment. That a man should be made a superintendent because he could speak Welsh is absurd. I may inform your readers that my father, the late Dr. D. J. Hearder, medical superintendent of Carmarthen Asylum for twenty-seven years, was an Englishman who did not speak Welsh. On his appointment he began the study of the Welsh language, but found that, although advantageous to know it, it was not by any means a necessity. Having personally worked in that asylum, I found on asking questions in Welsh that the reply would frequently be made in English. Your correspondent shows ignorance of the district about which he writes, as he says no monoglot Englishman would settle in practice in the district which sends patients to the Carmarthen Asylum with any hope of success. So far is this from being the case that within the last five years a monoglot Englishman has settled in general practice in Carmarthen, and with considerable success.

The *Archiv der biologischen Wissenschaften* of St. Petersburg, which has hitherto been published with a Russian and a French text in parallel columns, will henceforth appear in two separate editions, Russian and French.

LITERARY NOTES.

WE announced some time ago that a memoir of the late Sir Andrew Clark is in preparation. The book cannot fail to be exceptionally interesting, as material relating to his private friendship with the eminent physician will be supplied by Mr. Gladstone, who will also write on certain aspects of Sir Andrew's character. The professional part of the memoir will, it is understood, be in the hands of Dr. W. H. Allchin.

Dr. Poore has reprinted with some additions (London, Stanford, 1s.) an article which he contributed to the *Builder* last year on Dry Methods of Sanitation. The pamphlet is illustrated by a series of sectional drawings, showing various methods of fixing dry closets. We are quite disposed to believe that Dr. Poore is doing a good service by hammering away at our present craze for sewering villages and little country towns. The cry at present, he writes, is "*Tout à l'egout*, a cry which is bred of ignorance, moral cowardice, and despair." This is, perhaps, rather strong language, but we are yet very far from acting up to the old sanitary adage—rain to the river, sewage to the soil.

The first volume for 1894 of Braithwaite's *Retrospect of Medicine* has been issued, dealing with the literature of the first half of the current year. The serial is so well known, and has so well established its claim to public favour by reaching the 109th volume, that it will not be necessary for us to do more than to mention the appearance of this new volume.

We have received a copy of the "London Season Special Appeal Number" of the *Philanthropist*, which is described on its title page as "the first representative journal of all philanthropic movements and institutions." The letter-press is bright and readable, the illustrations are good, and reliable information is given to the charitably disposed as to the needs and merits of the various charitable institutions in the kingdom. An account, with coloured illustrations, is given of the opening of a new balcony at the National Hospital for the Paralysed and Epileptic.

Trusses for rupture are referred to in general terms by Celsus, Galen, and other ancient medical writers, and, according to a writer in the *Revue Médicale*, M. Alfred Danicourt recently showed a specimen of an ancient truss found in the course of some excavations in the Gallo-Roman cemetery at Marchélepot in Picardy. The truss, which was complete, was made of iron covered with leather, and was fitted with a spring adapted for the left side. The truss was found on a skeleton. A piece of the pad was found still adherent to the spring. Other ancient trusses have, it is stated, at various times been found. Dr. Colson, of Noyon, found one in a tomb, dating from the Gallo-Roman period. M. Darly, of Amiens, found two in the Merovingian cemetery of Fluy, in the department of Somme, but M. Danicourt appears to be the first discoverer in whom the archæological sense has been sufficiently developed to lead him to attach any importance to these relics of antiquity.

The following is the translation of a letter addressed by the celebrated German poet Heine to a homœopathic physician of his acquaintance:

Monsieur le Docteur,—Your investigations have established as a scientific truth that millionth parts produce the most serious effects. Accept then herewith enclosed the millionth part of a Lyons sausage, which our friend Ernst has asked me to hand to you. If homœopathy is a truth, this small portion will produce on you the same effect as the whole sausage.—HEINRICH HEINE.

From the opening words of this letter we may perhaps hazard the conjecture that the letter was addressed to no less a person than Hahnemann himself, who, like other prophets, finding himself unappreciated in his own country, spent the last year of his life in Paris, where he died in 1843.

On June 24th, the centenary of the birth of Francesco Puccinotti was celebrated at Urbino. Puccinotti was professor in the Medical Faculty of Florence, and author of many works of great merit, among which his *Storia della Medicina* is the best known. A memorial tablet was uncovered bearing the following inscription: "A Francesco Puccinotti per Fede, per Scienza, per Umanità Emulo dei più Grandi Italiani la Patria MDCCCXCIV." The Italians have evidently not lost the tradition of noble simplicity in their lapidary inscriptions which they inherit from their "antique Roman" forbears.

MEDICAL NEWS.

Vaccination in Austria.—According to an official report recently published the number of vaccinations in Austria is increasing steadily, though not in proportion to the growth of the population. In 1891 the ratio was 1 vaccination to 31 inhabitants, in 1892 it was 1 in 29, in 1893 1 in 32 for the whole of Austria. Taking separate divisions of the country we find that in 1893 the proportion of vaccinations to population in Lower Austria was 1 in 41; in Upper Austria 1 in 45; in Vorarlberg 1 in 77. The animal lymph was almost without exception procured from the Imperial-Royal Vaccine Institute at the expense of the State. In 1891 the proportion of successful vaccinations was 83.7 per cent., in 1892 85.1, and in 1893 90.3.

A Medical Student Charged with Anarchism.—A Russian student of medicine, named Margoulis, was arrested at Montpellier as being a member of a society of malefactors and an apologist of murder. Experts in handwriting gave it as their opinion that a placard expressing exultation at the murder of President Carnot, which had been posted up in a public place, was in the prisoner's handwriting. Margoulis was on the eve of passing his final examination for the degree of Doctor of Medicine, and lived very quietly with a small colony of fellow students of his own nationality. The charge of posting the Anarchist placard broke down, but the Montpellier police warned Margoulis that he must leave the district within five days. He has appealed to the prefect of the department.

The Medical Profession in Bulgaria.—Statistics recently published by Dr. G. Malochades, of Sophia, in the sanitary service of Bulgaria, show that during the last fifteen years the number of medical men established in that principality has progressively increased year by year. In 1879 the total number of medical practitioners was 95; at the end of 1893 it was 283. Of this number only sixty-three were private practitioners in the strict sense of the term. All the others were in the direct service of the State, either as municipal medical officers or military surgeons. Of the seventy-five districts into which Bulgaria is divided thirteen, representing a population of 400,000 souls, are without a doctor of any kind. In case any enterprising young Britons should feel inclined to go to the rescue of these poor people, it may be well to state that before anyone is allowed to practise the healing art in Bulgaria he must pass an examination before a medical commission.

The Opium Vice in Australia.—The abolition of the dens where opium is smoked not only by the Chinese but by many young Australian women is, we learn from the Melbourne *Argus*, one of the objects which the Victorian Premier hopes to accomplish by means of his Opium Bill, which has been read a first time in the Legislative Assembly. It differs from the Bill which was under consideration last session in one important point—it does not propose to stop the growth of poppies, nor even the manufacture of opium in the colony. Sir James Patterson states that the Victorian opium has the reputation of being the finest in the world, and he proposes that its production shall not be interfered with so long as the opium is used only for medicinal purposes. The Bill provides that Victorian opium must not be exported. If the Bill becomes law, it will be penal for anyone in the colony to smoke, swallow, drink, or take internally opium, except when made up or compounded by a pharmaceutical chemist or a qualified medical practitioner.

Sculpture as a Handmaid of Medicine.—The medical staff of the Salpètrière have conceived the happy idea of enlisting sculpture in the service of medical science, and particularly neurology. A series of busts and heads, illustrating the principal types of pathological deformities, has been executed by Dr. Paul Richer, chief of the laboratory attached to the clinic of nervous diseases, whose artistic skill is well known. The last number of the Salpètrière *Iconographie* contains a photograph of one of these busts, representing a patient the subject of progressive primary myopathy. The case was often shown by M. Charcot as a perfect type of the "myopathic countenance," as shown by MM. Landouzy and Déjerine. The advantages in clinical teaching of such works of plastic art, in which the sculptor's chisel is directed by the scientific knowledge of the pathologist need not be dwelt upon. Reproductions of the figures can be obtained from M. Battaile, publisher of the *Nouvelle Iconographie de la Salpètrière*, 23, Place de l'Ecole de Médecine, Paris.

American Jottings.—The number of medical colleges in the United States is estimated at 100, and the number of medical students at 19,000.—The graduating class of the Harvard Medical School this year consisted of 127 men, and was the largest class ever graduated.—In a recent suit against a certain "catarrh cure" for non-payment of the reward offered in case of failure to cure, the defence was that it was a mere wager; but the Supreme Court of Tennessee held that the contract was valid.—The Brooklyn "high school" girls recently refused to submit to vaccination inspection by male practitioners, as they were mostly vaccinated on the leg, and lady doctors have in consequence been appointed inspectors for public school girls.—The New York *Medical Record* states that a man in San Francisco has brought an action for damages for 25,000 dollars for the loss of some strips of skin removed from his thigh and grafted upon the head of another patient. He alleges that the grafts were taken without his knowledge or consent while he was under the influence of an anæsthetic, given, as he was led to believe, to save him from the pain of a surgical examination.—At a meeting of the New York County Medical Association, on June 18th, Dr. J. Marshall Hawkes presented a young man whom he had trephined for persistent localised headache. From early boyhood he had suffered from intolerable frontal headache, and every treatment had been tried without avail. Thinking that the trouble might possibly be due to eye strain, Dr. Hawkes first sent him to an ophthalmic surgeon, who, however, found that there was no difficulty of the kind. On examining the head the only abnormality that could be detected was a slight indentation of the bone in the right frontal region. As a last resource Dr. Hawkes determined to trephine at this spot, and a button of bone about two-thirds of an inch in diameter was removed with antiseptic precautions. It was found that in the situation mentioned there was a depression of the inner table of the skull pressing on the brain. The operation, which was performed on June 30th, 1892, gave complete relief, and there had been no recurrence of the headache. Dr. Hawkes quotes Starr as stating in his recent work on brain surgery that this operation had been performed only twice for headache, once in London, and once in New York by Dr. Robert F. Weir. Dr. Starr, we presume, does not take into account the operations done in the prescientific days of the seventeenth and eighteenth centuries, when surgeons seem to have trephined patients on the slightest pretext, and sometimes in mere lightness of heart for "ventilation of the brain," etc.—At a recent examination for the position of *interne* at the Indianapolis City Hospital, a negro won the appointment over the heads of a large number of white candidates. He is 21 years of age, a graduate in arts of the State University of Missouri, and an M.D. of the Medical College of Indiana. The appointment of a negro, though fairly won by merit, has caused much ill-feeling and scandalous abuse, both of the young man himself and of all concerned in his appointment. In the surgical wards, where his services began, the pay patients left, and the charity patients complained bitterly of what they called the indignity of being ministered to by a black man. The violence of the prejudice against a man solely on the ground of a difference of a colour of the skin is disgraceful to people claiming to be civilised, and distressing to all lovers of humanity. It is remarkable that in this country, where we are not accustomed, as the citizens of the great and enlightened republic of the West are, to be shaved, and bathed, and nursed by "coloured persons," there is not such an amount of prejudice, even among the poorer classes, against medical practitioners with an extra amount of pigment in their skin. We have known not only "black men" in the wider sense of the term which Lord Salisbury seems to attach to it, but true "niggers" of the full-blown type serve their term as dressers, clinical clerks, and obstetric assistants without the least demur on the part of the patient.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN CITY HOSPITAL.—Resident Physician at the City (Infectious Diseases) Hospital. Salary, £50 per annum, with board and lodgings at the Hospital. Applications to W. Gordon, Town Clerk, Town House, Aberdeen, by August 27th.

ABERDEEN ROYAL INFIRMARY.—Ophthalmic Surgeon. Applications by August 31st.

BURGH OF LEITH.—Medical Officer of Health. Salary to commence at £350. Applications and testimonials to T. B. Laing, Town Clerk's Office, Leith, by September 1st.

CAMBRIDGE UNIVERSITY.—John Lucas Walker Studentship. Applications to Professor Roy, New Museums, Cambridge, by September 30th.

COUNTY ASYLUM, Prestwich, Manchester.—Pathologist. Salary, £200 per annum, with board, residence, and washing. Applications and testimonials to the Superintendent.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications and testimonials to the Secretary before August 29th.

GENERAL HOSPITAL, Birmingham.—Assistant-Surgeon. Appointment for three years, with eligibility for re-election. Honorarium, £100 per annum. Applications to Howard J. Collins, House-Governor, by September 1st.

GENERAL HOSPITAL, Nottingham.—Senior Resident Medical Officer doubly qualified. Salary, £120 for the first year, with an addition of £10 a year up to £150, with board, residence, and washing. Applications to the Secretary by September 1st.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £100 per annum, with furnished apartments, board, washing, and attendance. Applications and testimonials, endorsed "Application for Appointment of Medical Officer, before August 23rd to Committee of Visitors, Knowle, Fareham.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Board and lodging, but no salary. Applications and testimonials to C. W. Carver, Hon. Secretary, by August 18th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer, doubly qualified. Appointment for six months. No salary, but board, washing, and residence in the Hospital provided. Applications to E. Wilson Taylor, Secretary, by August 24th.

LYTHAM URBAN SANITARY DISTRICT.—Medical Officer of Health. Salary at the rate of £55 per annum. Applications endorsed "Medical Officer" to Charles A. Myers, Clerk, Commissioners' Office, Lytham, by August 20th.

MACCLESFIELD GENERAL INFIRMARY.—Senior House-Surgeon, doubly qualified. Salary, £100 for the first year, with increase of £10 the second, with board and residence. Applications to the Chairman of the House Committee by August 22nd.

MEMORIAL HOSPITAL, Jarrow-on-Tyne.—House-Surgeon, age not under 25, and to reside and board free in the hospital. To come under a three years' engagement at a progressive salary of £130, £150, and £170 respectively. Applications and testimonials to J. Campbell, Secretary, by September 4th.

METROPOLITAN ASYLUMS BOARD.—Dispenser at the Northern Fever Hospital. Salary, 35s. per week, with dinner daily; must not be more than 40 years of age, and qualified under the Pharmacy Act. Applications (on printed forms to be obtained at the office) to the Secretary Metropolitan Asylums Board, Norfolk House, Norfolk Street, Strand, W.C., by August 23rd.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Physician; must be Fellow or Member of the Royal College of Physicians of London, or Graduate in Medicine of a University recognised by the General Medical Council. Applications and testimonials to be sent not later than August 20th.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer, qualified. Salary, £30 per annum, with board, attendance, and washing; tenable for six months, with prospect of re-election as Senior. Salary, £60 per annum. Applications and testimonials to Major-General G. R. Roberts, Honorary Secretary, by August 31st.

NORTH DISPENSARY, Liverpool.—Head Surgeon. Salary, £200 per annum, with apartments, board, and attendance. Applications and testimonials to R. R. Greene, Secretary, Leith Offices, Moorfields, Liverpool, by August 27th.

PARISH OF LOCHGOILHEAD AND KELMORLCH.—Medical Officer to attend the poor of the parish. Salary, £60 per annum; in addition, £40 per annum (exclusive of practice) will be guaranteed by the residents. Applications to the Chairman of Parochial Board, Inverary, Douglas Pier, Lochgoil, by August 24th.

ROYAL ORTHOPEDIC HOSPITAL, 297, Oxford Street.—Resident House-Surgeon. Candidates must be M.R.C.S.Eng. and L.R.C.P., unmarried. Salary, £100 per annum, with residence and partial board. Applications and testimonials to the Secretary by August 28th.

RUBERY HILL ASYLUM, Bromsgrove, Worcestershire.—Clinical Assistant. Applications to the Medical Superintendent.

ST. BARTHOLOMEW'S HOSPITAL.—Ophthalmic Surgeon, must be F.R.C.S.Eng. Applications and testimonials to W. Cross, Clerk, by September 10th.

ST. LUKE'S HOSPITAL, E.C.—Clinical Assistant, must be qualified. Appointment for six months, with board and residence. Applications to Percy De Bathe, M.A., Secretary.

ST. PETER'S HOSPITAL, Henrietta Street, Covent Garden, W.C.—House-Surgeon for six months. Salary at the rate of 50 guineas a year, with board, lodging, and washing, and an allowance for wine, etc. Applications and testimonials to Irwin H. Beattie, Secretary, before September 1st.

SOUTH DISPENSARY, Liverpool.—Head Surgeon. Salary, £200 per annum, with apartments, board, and attendance. Applications and testimonials to R. R. Greene, Secretary, Leith Offices, Moorfields, Liverpool, by August 27th.

SOUTH DISPENSARY, Liverpool.—Assistant Surgeon. Salary, £80 the first year, and £90 per annum afterwards, with apartments, board, and attendance. Applications and testimonials to R. R. Greene, Secretary, Leith Offices, Moorfields, Liverpool, by August 27th.

STAFFORDSHIRE COUNTY ASYLUM, Stafford.—Medical Officer to act as *Locum Tenens* for two or three months. Salary, 2 guineas per week, with board, etc. Applications to the Medical Superintendent.

TOWNSHIP OF TOXTETH PARK, Liverpool.—Resident Medical Officer of the Workhouse and Infirmary. Salary, £100 per annum, with board, washing, and apartments. Applications and testimonials, marked "Assistant Medical Officer," to J. Moulding, Clerk to the Guardians, 15, High Park Street, Liverpool, by August 23rd.

WEST RIDING ASYLUM, Wakefield.—Fourth Assistant Medical Officer. Salary, £100 per annum, rising £10 annually to a maximum of £150, with furnished apartments, board, washing, and attendance. Applications to the Medical Director by August 18th.

MEDICAL APPOINTMENTS.

ALLARDICE, Wm. C., M.B., C.M.Glasg., appointed House-Physician to the North Staffordshire Infirmary and Eye Hospital, Stoke-upon-Trent.

COWAN, J. J., M.B.Edin., appointed Medical Officer for the No. 3 District of the Bromyard Union.

DOWNES, Harold, L.R.C.P.E., L.R.C.S.E., L.F.P.S.Glasg., appointed Assistant House-Surgeon to Branch Hospital, Seamen's Hospital Society, Victoria and Albert Docks.

HODGSON, V. J., L.R.C.P.Lond., M.R.C.S.Eng., D.P.H.Cantab., reappointed Assistant Medical Officer of Health to the Port of London.

LISTON, Prosper, L.R.C.P., L.R.C.S.I., appointed Medical Officer of Balrothery Workhouse, Lusk, co. Dublin; and also Consulting Medical Officer of Health for Balrothery Union, *vice* Dr. Fullam, resigned.

MACLURE, Herbert W., M.B., B.S., B.A.Cantab., M.R.C.S.Eng., L.R.C.P. Lond., appointed Medical Officer to the Metropolitan Fire Brigade, District No. 6, by the London County Council.

MOLLOY, L. G. S., M.D.Dublin, appointed Surgeon (for one year) to Blackpool Hospital.

O'DRISCOLL, Michael, L.M.I., appointed Medical Officer for the Union Hall Dispensary District, *vice* Dr. Kearney, deceased.

PALM, Theobald Adrian, M.D.Edin., reappointed Medical Officer of Health to the Wigton Local Board.

ROYDEN, William, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health to the Rural Sanitary District of the East and West Incorporation.

TAYLOR, Arthur S., B.A., B.C., M.D.Cantab., F.R.C.S.Eng., appointed Honorary Medical Officer to the Surbiton Cottage Hospital.

WHITE, John A. T., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Hatfield District of the Dunmow Union, *vice* R. Croly, L.R.C.S.I., resigned.

WILLETT, George G. D., M.R.C.S.Eng., reappointed Medical Officer for the Hilton and Marksbury District of the Keynsham Union.

YOUNG, Meredith, M.B., C.M.Edin., Medical Officer of Health to the Halifax Rural Sanitary Authority, appointed Medical Officer of Health to the Corporation of Brighouse, Yorks.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

POWELL.—On August 10th, at Glenarm House, Upper Clapton, the wife of Herbert E. Powell, M.R.C.S., L.S.A., of a daughter.

MARRIAGES.

DOVE—CLARKE.—At St. John's, High Fell, Gateshead-on-Tyne, on July 5th, by the Rev. J. W. Hooper, R. Atkinson Dove, M.B., C.M., L.R.C.S. Edin., Brigg, Lincolnshire, youngest son of George Dove, J.P., Stancoix, Carlisle, to Lila, third daughter of the late William Clarke, J.P., and Mrs. Clarke, The Hermitage, Gateshead-on-Tyne.

WAKEHAM—LOGAN.—At St. Mary Redcliffe Church, Bristol, on Saturday, July 28th, by the Rev. Canon Cornish, Charles Henry Wakeham, M.R.C.S., L.R.C.P., of London, to Augusta Sibthorpe Logan, younger daughter of the late James Logan, M.D., of Redcliffe, Bristol.

YOUNG—REID.—On Wednesday, August 8th, at the Parish Church, Shipley, Yorks, by the Rev. E. M. Young and the Rev. H. T. Young, brothers of the bridegroom, Meredith Young, M.B., C.M., Medical Officer of Health Brighouse Corporation, and son of the late Rev. James Young, to Emily, youngest daughter of William Reid, of London.

DEATH.

BEATON.—On August 8th, at Ryde, Daniel Beaton, M.D., aged 89 years

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

JUVENAL asks where in London a Russian bath can be had.

GALEN writes: A lady, the subject of slight inguinal hernia (right), with some weakness of the left inguinal region, and wearing a truss, fails pregnant. Will the continued wearing of the truss do any damage, or should anything in the form of an abdominal belt be used instead? What special precautions should be taken at the time of the confinement?

FROTHY URINE.

W. P., M.B., writes: Is it right to conclude from "frothy urine" that a patient is suffering from albuminuria? Can it not be produced by a "corkscrew stream"?

*** The persistence of froth on the surface of urine for some time after it has passed or agitated does not prove the presence of albuminuria. All that it indicates is that the frothy urine contains some ingredient which gives it the power of forming bubbles. The commonest substances which impart this power are albumen and bile. If there is no tendency to jaundice in the patient frothy urine probably indicates the presence of some albuminous substance in the urine, and this may be derived either from the kidneys or the genito-urinary passages. A "corkscrew stream" may increase frothing by causing greater agitation of the urine during its passage, but will not make any permanent frothing unless some abnormal ingredient is present in the urine.

ANSWERS.

J. D. R.—It scarcely lies within our province to give information about fly-fishing.

CLIMATE FOR A CONSUMPTIVE IN AUSTRALIA.

DR. W. T. GARDNER (Bournemouth) writes: I can strongly recommend "F.R.C.S.E." to send his friend to Coomabarabrau. All information can be obtained from Dr. Failes, who resides there, and has benefited very greatly from the place.

THE CLIMATE OF BLOMFONTEIN.

A.—Blomfontein, the capital of the Orange Free State, South Africa, lies about 4,000 feet above sea level, with some shelter to the north in the open veldt country. It is as well supplied with the requirements for invalids as any South African health station, and has been the scene of several recoveries from phthisis in the early stage. Limited tuberculosis of the lungs does well there.

INEBRIETY "CURES."

DRINK.—The alleged "cure" to which our correspondent refers is secret, and therefore unworthy the patronage of honourable members of the profession. Moreover, it has been the subject of legal proceedings in a British colony, where a fine was imposed. There are a large number of similar secret "cures," all of which are stated by their proprietors to have cured all, or nearly all, of the cases treated. We strongly advise our correspondent to have nothing to do with these "cures."

NOTES, LETTERS, Etc.

ERRATUM.—In Sir Charles Cameron's address on public health, published in the BRITISH MEDICAL JOURNAL of August 11th, the death-rates from typhoid fever in different classes of society (p. 301) should have been per 100,000 instead of 1,000.

MRS. MARIAN MARSHALL and assistant were present at the British Medical Association meeting at Bristol for the purpose of copying papers, etc., on the Remington typewriter, as in previous years, and the new Greek typewriter in use at her office in Cambridge was on view, creating much interest among members.

THE "VONDA" LADIES' SYRINGE.

*** We feel indebted to our correspondent "M.D." for calling our attention to the suggested use of the "Vonda" ladies' syringe that appears in a printed circular issued, we assume, by the manufacturers thereof. From a purely professional point of view we commented on the syringe in the BRITISH MEDICAL JOURNAL of August 19th, 1893, but this, with other like notices, has been unwarrantably used to promote its sale. Among the various advantages—seven in number—claimed for it is that "(7) By using this syringe *at the proper time* a lady has complete control over her person, and can, if necessary, influence its state." Comment on such a suggestion is superfluous. We have referred the matter to the solicitor of the Association, with instructions to communicate with the persons responsible for the issue of the advertisement, requiring the publication of the commendatory notice to be discontinued, as we decline to allow our review of the article to be in any way associated with the suggestion conveyed in the above extract.

THE BRITISH MEDICAL ASSOCIATION AND ITS WORK.

DURING the past few days, says the *Morning* of August 8th, the papers read at the annual meeting of the British Medical Association have added more to the public stock of knowledge and done more to promote the welfare of the masses than the deliberations of Parliament for a twelvemonth. Take, for example, small-pox and influenza, and the mode of propagation of these diseases. Has any deliverance from either of the front benches since the election of the present Parliament equalled in practical importance what Dr. Priestley and Sir T. Grainger Stewart have had to tell us upon these subjects? Which is the more fraught with public advantage and happiness—a mumbling of the dry bones of the Newcastle programme, or the assurance that both influenza and small-pox are contagious diseases, and that their spread from person to person can absolutely be checked by proper sanitary measures?

SHORTHAND IN MEDICINE.

WE have been asked by Dr. Gowers to state that, in order to promote the use of shorthand by medical students and practitioners, by enabling them to increase their knowledge, at the same time, of the art and of their profession, a small sheet of Clinical Teaching in Lithographed Phonetic Shorthand has been Printed. It can be obtained, price 6d., post free, from Messrs. Sir I. Pitman and Sons, 1, Amen Corner, and is also sold by Mr. H. K. Lewis of Gower Street.

BOYCOTTING THE NURSE.

BOARDS of Guardians seems just now to have an unenviable knack of getting into trouble, says the *St. James's Gazette*. According to the BRITISH MEDICAL JOURNAL, not usually an inaccurate authority, the Bedford Guardians have dismissed a qualified nurse, on the ground that she belongs to the "Workhouse Infirmary Nursing Association," a philanthropic body under the presidency of the Princess Mary of Teck, which has in the last dozen years supplied over 300 highly-trained nurses to unions all over the kingdom. They might as well object to a medical officer because he was a Fellow of the College of Surgeons. Unless the Bedford Guardians can show a better cause than this, it is about time the Local Government Board turned their attention to a town which, with all its educational apparatus, appears to be deficient in the elements of common sense, at least in the selection of some of its guardians.

LONDON AND MANCHESTER ASSURANCE COMPANY.

WE have received several further communications relative to this society.

Dr. Rotheroe confirms and points out some very objectionable features of this institution, on which we have often commented. We are sorry for the difficulties in which he has become involved in this matter, but are of opinion that anyone buying a practice in which there was an appointment of this nature with 1,300 members, might have foreseen pretty accurately what has in fact come to pass, while the action of the agents under the circumstances detailed can hardly be said to have been unusual. The management of the society, however, should practically be in such hands as to be condemned, and affords another reason why medical men should be very cautious in accepting such appointments, as it may often happen that the injury done to their private practice by such an appointment will far outweigh the emoluments of the latter.

We quite agree with Dr. W. Woodley Stocker in condemning the practices he reports. Such action on the part of the agents is most improper, and cannot be too strongly condemned, and under the circumstances detailed the profits accruing to the practitioner must be meagre in the extreme.

It would appear that the agents of this society are under very little control, and act very differently in different localities, and only on this view can we understand their conduct, which is very differently described by individual correspondents. In reply to "Anti-Sweat" we can assure our correspondent that in most cases this society pays its medical officers quarterly by cheque from headquarters at a stated rate per quarter per member, so that agency commission cannot possibly reduce the amount in any way. The instances he refers to are probably due to improper behaviour on the part of the agents, though how they can have the power to act as our correspondent describes it is not easy to see.

As to our correspondent's views on the subject of the insurance of

infants, this is a big subject, and has been very much discussed, and we are of opinion that a good deal might be said against some of his propositions.

We must add that a slight error appears to have been made in saying that the quarterly lists of this society specifically state that 1s. per quarter is paid per member. We have recently seen a form of contract which we understand is usually signed by the medical referee, in which the amount to be paid by the society for each member is stated, but we notice that this is written in a space left in the form for that purpose, so that it would seem that the amounts paid to medical referees throughout the country are not uniform, and that special contracts are made with various practitioners. Under these circumstances we would advise all practitioners to refuse to accept less than the minimum of 1s. per quarter, which is miserable enough, especially when there can be no doubt that 1s. per quarter is paid in many cases by this society.

The Decoration of Hospital Wards.

F. R. G.—In answer to an inquiry as to the treatment of the internal walls of hospital wards, of course a great deal depends on the material of which they are constructed; but if they are plastered there can be but little doubt that a hard oil paint, or paint coated with varnish, forms the best finish, as it can easily be dusted or washed. As regards colour that will depend to some extent on the amount of window space; where there is plenty of light one can afford to make the walls of such a tone as to be restful to the eyes; a very common defect in hospitals is making their walls too light. Ordinary hanging pictures are certainly inadmissible; if they were properly dusted, which they never are, they would be knocked to pieces in three months. If pictures are desired certain spaces should be reserved for the purpose, and the pictures should be pasted to the wall and varnished over. The same should be done with all tables of rules and regulations which one so often sees hanging on cards. They should all be pasted to the wall and varnished over, the object being that the wall and all upon it should be cleaned at one sweep.

Temperance Drinks.

Dr. Wm. Hardman (Blackpool) writes: I quite agree with your praise and recommendation of ginger beer, that "in penny stone bottles" or "home made." It is a wholesome, invigorating beverage, and need not be indigestible if well fermented. Often it is bottled before fermentation is complete, and then it is liable to cause flatulence and acidity. Of course it contains alcohol in small but inappreciable amount. A spurious ginger beer is largely sold consisting of sugar, tartaric acid, carbonic acid, and a little tincture of ginger. In many places it is the only kind procurable, and is usually sold in glass bottles with press-in glass india-rubber stoppers. It is vile stuff, and is not ginger beer at all.

Have you ever tried nettle beer? It is a delicious and wholesome drink, and is made in much the same way as ginger beer, but using a strong infusion of nettles instead of water. In hot weather there are worse drinks than the favourite cockney beverage, a penny ice-cream in a glass of home-made ginger beer. I am glad you are taking this useful matter up. He who invents a good and palatable non-intoxicating drink will do more for the cause of temperance than all the teetotallers, with their repressive legislation, who have ever existed.

Dr. Henry Taylor (Guildford) writes: In a paragraph in the British Medical Journal of July 28th, you lament the want of a "cheap, palatable, and popular teetotal beverage." And I agree with you in condemning most of the summer drinks now in use as being either unpalatable or sophisticated with alcohol. The lime-juice cordial is too often primed with salicylic acid to prevent fermentation, and moreover has not the flavour of fine lime as obtained from the fresh fruit. Why then do we not borrow some of the beverages of our Continental neighbours, made with lemon or currant syrups, or the syrup of tamarinds so much used in Italy? These mixed with water, plain or gaseous, are more refreshing and wholesome than the bottled drinks sold at our refreshment bars, as well as being cheaper. Lastly, there is the soured milk that one meets with only in the north of England and in Norway, one of the most refreshing and invigorating draughts for the tired traveller, and far more digestible than fresh milk. The taste for it is soon acquired, if the acetous fermentation is duly carried on at a low temperature and away from the light. I make a present of this suggestion to the advocates of total abstinence.

On the Venomous Bites of some Kinds of Gad-flies.

Surgeon-General G. Bidie (retired) (Glen Dochart) writes: I wish to place on record in your columns the venomous nature of the bites of some of the gad-flies, popularly known in the North as "clegs." I am at present residing in a deep, rugged glen in the south-west of Perthshire, traversed by a river, but having little cultivated land and but few trees; and I do not recollect having ever seen gad-flies so numerous and so aggressive in any other part of the Highlands. When walking along the public road as many as half a dozen may be found clinging to one's clothing, and if a sharp outlook be not kept down three more will probably be busy blood-sucking about the head or the hands. Like mosquitoes, they are very insidious in their attacks, generally selecting some spot such as the back of the neck or under surface of the wrist, where they are not likely to be seen. The puncture of the skin by the cleg is done so quickly, and with such a small amount of uneasiness, as to render it likely to escape notice, and the subsequent act of sucking is also conducted so gently as to rarely attract attention. If the fly be killed at once, or shortly after the puncture of the skin, no bad effects follow, but if unmolested it injects, as it sucks, a venom which causes a good deal of swelling and intense smarting like the stinging of nettles, with a considerable amount of local and even general irritation if the bites are numerous. These disagreeable effects always last for several days, and often for a week, and rubbing or scratching the bites, to allay the itching that ensues, does not do so, but causes a stinging sensation that seems to run along the nerves and induces general irritability. In my own case I have not found the application of ammonia of any use in preventing the bad effects of the bites; in fact, the only thing (at hand) that has given temporary relief has been tincture of opium rubbed into the part. Perhaps some of your readers may be good enough to suggest a more efficient remedy. Being away from books of reference, it is difficult to say precisely to what species the fly belongs, but I believe it to be the Lesser Breeze fly (*Hæmatopota pluvialis*). The flies are about in all sorts of weather, but are most in evidence and most troublesome in sultry days and in showery days with blinks of sunshine. They do not seem to trouble the shaggy-haired Highland cattle much, but give great annoyance to the thinner-skinned dairy cows. So far as my observation goes, it is not the Breeze Flies that excite a stampede among cattle and horses, causing them to rush madly about. Such a panic seems to be due rather to the attacks and buzzing of the Warble or Bot-fly (*Hypoderma bovis*).

Letters, Communications, Etc., have been received from:

(**A**) Mr. G. Adkins, Paignton; A.W.H.; W. C. Allardice, M.B., Macclesfield; A.; Messrs. Arnold and Sons, London; Messrs. Allan and Hanburys, London; Dr. R. G. Alexander, Bradford; Messrs. Armour and Co., London. (**B**) Mr. W. Berry, Wigan; Mr. A. B. Brewster, London; Mr. H. Blair, London; Mr. B. Bentley, Leicester; Dr. G. A. Buckmaster, Teddington; Mr. R. P. Brown, Perranporth; Mr. L. A. Bidwell, London; Dr. J. B. Brierley, Manchester; Bovinine Co., London. (**C**) Dr. J. Chiene, Edinburgh; Mr. E. Cotterell, London; Mr. E. Carnall, London; Constant Reader and Member; Mr. E. Caudwell, Harleston; Messrs. T. Christie and Co., London; Mr. K. Cameron, Montreal; Miss M. A. Cleaves, New York; Mr. H. H. Crickitt, Reading; Clubs are Trumps; Mr. S. Craddock, Bath; E. M. Cooke, M.B., Powick. (**D**) Mr. H. Downes, London; Mr. A. E. Davis, Gateshead; Mr. P. Drought, Crookwell; R. A. Dove, M.B., Brigg; Mr. T. V. de Denne, Cradley Heath. (**E**) Dr. F. Edge, Wolverhampton. (**F**) Dr. W. H. Fenton, London; F. G. P.; Mr. C. M. Fegen, London; Dr. W. Frazer, Bournemouth; Messrs. Ferris and Co., Bristol; Dr. A. Frazer, Totnes. (**G**) Dr. W. T. Gardner, Bournemouth; Galen; Mr. T. H. Gibson, Kirkby Stephen; G. H. B.; Dr. A. O. Grosvenor, London; Dr. B. Goff, Bothwell; W. T. Gardner, M.B., Bournemouth; Dr. H. R. Greene, Knaphill; Mr. T. Gilchrist, Omagh. (**H**) Mr. V. J. Hodgson, Sheerness; Mr. R. C. Holt, Burnley; House-Surgeon; Mr. R. Hartley, Thirsk; Messrs. C. J. Hewlett and Son, London; Dr. A. Hill, Wroughton; T. Handy, M.B., Probus; Mr. W. R. Huggard, Davos Platz; Mr. S. J. Hutchinson, Borth. (**I**) Inquirer; Dr. F. Isdell, London; Dr. C. R. Illingworth, London; Mr. F. G. Ingall, London. (**K**) Dr. L. Kidd, Enniskillen; Kennington; Dr. A. F. S. Kent, Salisbury. (**L**) Dr. J. Lynch, Walsall; Mr. J. Lawrence, London; Mr. A. Leche, Axbridge; E. Le C. Lancaster, M.B., Swansea; Mr. T. Leeds, London; Mr. H. Liston, Sunderland. (**M**) H. W. Maclure, M.B., London; W. H. Maidlow, M.B., London; Dr. G. L. Molloy, Blackpool; M.R.C.S.; M.D.; Messrs. Mayer and Meltzer, London; Mr. H. G. H. Monk, Scarborough; Mr. M. Marshall, Cambridge; Magnetic Filter Co., London; Mr. J. J. Mooney, Manchester; Mr. W. J. Morris, Portmadoc; Mr. S. C. H. Moberley, Warrington; Member, B.M.A. (**N**) Mr. H. Nestle, London; Dr. E. Neumann, Vienna; Dr. Van Niessen, Wiesbaden; Mr. W. G. Nash, Bedford. (**O**) Messrs. Oppenheimer, Son, and Co., London. (**P**) Rev. E. D. Pollock, Rhyl; Mr. H. E. Powell, London; Messrs. Pickard and Co., London; Mr. J. Parkes, London; Mr. H. G. Plimmer, Bristol; Mr. L. V. Parry, Holywell. (**R**) Mr. J. D. Reckitt, Dover; R.R.G.; Mr. J. Rogerson, London; A. Rennie, M.B., Hong Kong; R.M.; Mr. A. W. M. Robson, Leeds; Mr. J. Rothschild, Paris; Dr. J. Rowat, Highworth; Dr. W. B. Rotheroe, London. (**S**) Mr. W. Sammes, London; R. Stephens, M.B., Edinburgh; Dr. A. Stuart, Sydney; Mr. E. M. Swanwick, West Hartlepool; Dr. A. E. Sansom, London; Mr. J. Stewart, Clifton; Dr. J. F. Sutherland, Glasgow; Silicated Carbon Filter Co., London. (**T**) Dr. G. Thomson, Oldham; T. E. G.; Mr. G. W. Thomson, Lichfield; Mr. J. W. Taylor, Birmingham; Mrs. S. Theobald, Leicester; Mr. H. S. Thom, London; Dr. A. S. Taylor, Surbiton; T. R. B.; G. Turner, M.B., Broxbourne; Mr. J. Terry, Guildford. (**V**) Mr. A. B. Vesey, Magherafelt. (**W**) Mr. R. M. West, London; Dr. C. T. Williams, Vevey; Mr. F. H. Weekes, York; Mr. H. White, Manchester; Mr. H. U. Walker, Worksop; W. P., M.B.; Mr. A. Wright, Westport, N.Z.; Mr. G. S. A. Waylen, Devizes; D. Walsh, M.B., London. (**Y**) M. Young, M.B., Grange-over-Sands; etc.

Books, Etc., Received.

On Puerperal Fevers. By Dr. Lovell Drage. London: Adlard and Son. 1894.

The Insane in Workhouses. By Dr. M. J. Nolan. Downpatrick: *Down Recorder* Office. 1894.

The Insanity of Over-Exertion of the Brain: being the Morison Lectures, delivered before the Royal College of Physicians of Edinburgh, Session 1894. By Dr. J. Batty Tuke. Edinburgh: Oliver and Boyd. 1894. 6s.

Atlas of the Diseases of the Skin. By Dr. H. Radcliffe Crocker. Fasciculus V. London: Young J. Pentland. 21s.

*** In forwarding books the publishers are requested to state the selling prices.

AN ADDRESS

READ AT THE OPENING OF

THE SECTION OF DISEASES OF CHILDREN.

At the Annual Meeting of the British Medical Association at Bristol, August, 1894.

By W. HOWSHIP DICKINSON, M.D., F.R.C.P.,

Consulting Physician to St. George's Hospital, and to the Hospital for Sick Children; President of the Section.

ON SOME OF THE CHARACTERS OF DISEASE IN CHILDHOOD.

In the brief introduction which it behoves me to make to the more important business of this Section, I have been much exercised in the choice of a subject. Many special matters will be dealt with in the course of our meeting I doubt not, with more special knowledge than I possess. But as antecedent to disquisitions which, however deep, must necessarily be narrow, I have thought it might be to the purpose to offer a few remarks of a general nature which might help to illustrate the peculiarities of disease in early life, and the differences between the morbid proclivities of youth and age. I shall not limit myself to any class of disorders, but touch upon several, and refer to matters which are common to all.

An obvious physiological consideration underlies the pathology of childhood. In the period of growth the processes of nutrition are necessarily more active than when the fabric is stationary; the demand is greater and returns at shorter intervals, and any failure in supply is more immediately and more severely felt. Hippocrates expressed this fact in a well-known aphorism, to the effect that old persons endure fasting most easily, next adults, young persons not so well, and infants worst of all. Young animals have been shown by experiment to bear starvation worse than older ones; and we are told that at the siege of Paris those who suffered most from want of food were the very young, nursing mothers, the sick and the wounded. At the siege of Lucknow, also, where the privations were great, disproportionately great was the mortality among the children. Dr. Johnson said that he had "fasted from the Sunday's dinner to the Tuesday's dinner without any inconvenience."[1] As a child he certainly could not have done this "without any inconvenience." Young children and boys and girls are often insufficiently fed; they want more than their elders, and generally get less. "Send the children to bed and lay the goose to the fire," is a somewhat selfish proverb which indicates the practice of our ancestors.

The substantial late meal formerly called supper, now dinner, is perhaps not exactly suited to childhood; but there should be some substitute for it. The fast from, perhaps, a 5 o'clock tea to the next morning's breakfast is too long. A growing and hungry child may get meat only once a day, while the gouty parent partakes of it three times. The esurient flunkey sometimes has meat five times a day, with accompanying and intermediate beer; how much both would be benefited if each overfed menial were made to relinquish a portion of his meat in favour of some pale-faced child, perhaps an out-patient at the hospital for sick children in this city. The arrangement would be twice blessed, blessing him that gives and him that takes. I have often thought that schoolboys are not fed well enough, and that not from want of means but want of knowledge. Warren Hastings attributed his diminutive stature to this cause; but it is not necessary to go back to the last century for examples of the fault to which I refer. Children in the nursery, beyond the age of infancy, should have a little light food, such as milk or beef-tea, with toast, bread, or biscuit, just before going to bed. Schoolboys, or the like, who dine in the middle of the day, ought to have a little meat by way of supper.

[1] Conversation with Edwards, *Boswell's Johnson*, vol. iii, p. 307.

Before crossing the imaginary line between physiology and pathology, I may touch upon a matter of ancient experience which has received modern illustration; I mean the special need for warmth in infancy. The old story of John Hunter and the bookseller is probably not new to anyone present, but will bear repetition.[2] The bookseller had had five children, all of whom had died under his attempts to harden them. A sixth being expected, John Hunter dropped into the bookseller's and bluntly asked him whether he intended to kill this as he had killed all the rest. The bookseller asked Hunter what he meant, whereupon he took up the parable of the hen and chickens, dwelt on the temperature in which the latter lived, and the need for warmth with young animals. The bookseller was convinced, and the infant, which arrived in due course, was saved. Now, we know that babies are not like steel blades—cold does not harden them, but the reverse—and we make literal use of Hunter's parable by the employment of the incubator.

With the call for frequent nourishment in childhood is a corresponding liability to rapid exhaustion from discharge. The apparently disproportionate prostration from loss of blood is one of the peculiarities of infancy, and the quickly fatal effect of diarrhœa is sometimes painfully noticeable. Common as diarrhœa is among infants it can never be regarded without some anxiety. One of the most painful experiences of medical life is the rapid and unexpected collapse which occasionally takes place from this cause—and that, possibly, when the escape *per anum* has ceased, and to the uninstructed eye the attack appears to be coming to an end; and so it may be, but not to the end desired. Relatives and nurses may be deceived, but the physician will find warning in the failure of the pulse and the coldness of the extremities. As another instance of the results of discharge in childhood, though of a more chronic nature, suppuration causes lardaceous disease more rapidly at this time of life than afterwards, which organic consequence is at this time more amenable to treatment.

A matter of diet which I designedly postponed, is the effect of alcoholic drinks in childhood. The younger the child the more harm they do. The most exaggerated examples of cirrhosis are to be found in youth, and sometimes from alcohol. The administration of strong drink, even in that most injurious form of distilled spirit, to children of tender years, is by no means unknown among the lower classes. The irritant effect is most declared upon young tissues, and necessarily upon the liver next after the stomach, according to the course of the circulation. Hence the overgrowth of fibrous tissue which constitutes the disease is, in these circumstances, luxuriant, and great the nodulation and obvious the transformation of the organ which ensue. I could refer to three instances of cirrhosis from this cause, one which proved fatal at the age of 11 years, one at 7, and one, I think, somewhat younger. In all these cases the liquor was spirit. While upon the subject of cirrhosis of the liver, I will take the opportunity of referring to what I suspect to be another cause of this disease in childhood, a cause which has not received the recognition which I think is its due. I took occasion to allude to it in the year 1889 in a publication which has since become extinct—the *Illustrated Medical News*. Cirrhosis of the liver sometimes follows rapidly upon the exanthemata, much as does the corresponding affection of the kidney. I knew of two instances in which the sequence thus presented itself—measles, scarlatina, cirrhosis, the cirrhosis occurring so promptly upon the latter exanthem that it was not possible to dissociate it. The respective ages of the patients at death were 3 years and 1 year and 9 months. In a third case measles and scarlatina also preceded the cirrhosis, but less closely. There are other causes of the cirrhosis of childhood, one of which may be syphilis and another rickets, the last more chronic and less declared than those first mentioned. The cirrhosis of childhood, attended as it is with rapid and profuse cell growth, causes much increase of bulk, and furnishes a very convincing proof, if one be still wanting, that the disease is essentially one of growth, not of atrophy. The rapidity of the process in these circumstances has analogies in other disorders of early life. All diseases which consist of overgrowth or cell formation partake at this period of the activity

[2] Hunter's Works, vol. i, p. 29.

of nutrition which distinguishes youth from age. This is seen with renal fibrosis and in the quick growth of sarcomata. Hypertrophy of the heart as a result of renal disease proceeds the faster the younger the patient. I have often detected cardiac hypertrophy in an unmistakable form within six weeks of the outset of the renal disease which gave rise to it. Such cases in which the cardiac change comes on in young and previously healthy subjects in obvious and immediate sequence to the renal, supply a sufficiently convincing proof that in them, at least, the renal and the cardiac alterations are directly related as cause and effect.

In continuance of the design I have in view of showing wherein the morbid conditions of childhood differ from those of adult life I will venture to touch upon a few other disorders. Vulnerable as children are in some respects, there are others in which their powers of resistance are greater than in their elders. Great as is the mortality from the exanthemata among them, an individual attack is usually less dangerous than in later life. This applies especially to measles. The same rule applies also to the continued fevers, to typhoid, and, above all, to typhus. The late Dr. Murchison showed that at the London Fever Hospital the mortality from typhus under the age of 10 was 3.27 per cent.; the mortality after the age of 50 was 57.03 per cent. It would be idle to speculate on the cause of this remarkable difference.

As to affections of the respiratory organs, I need not dwell upon what is well known, the great mortality in infancy and early life which is due to inflammation of these organs, especially the several forms of pneumonia and bronchitis. More deaths are attributed to pneumonia in the first 5 years of life than in any subsequent 20, and more between 5 and 10 than in any subsequent period of the same length. Lobular pneumonia or capillary bronchitis has especial frequency in early childhood, and perhaps lobar pneumonia, or at least pneumonia with consolidation, is more common than is generally supposed. But this form of pneumonia, however common, is relatively less fatal than afterwards. It is not always easy to distinguish during life true lobar pneumonia from lobular pneumonia with consolidation; but speaking clinically of pneumonia with consolidation, I may give the following particulars in reference to its mortality in early and later life.[3]

I was able to collect from my own experience at St. George's Hospital and the Hospital for Sick Children 91 cases of pneumonia from birth to the age of 12, and 89 of 21 years old and upwards. I found that the younger series gave a mortality of 1 in 9, the older series a mortality of 1 in 5. Thus inflammation of the lung appears to be nearly twice as fatal in adult life as in childhood.

It is not my purpose to dwell upon the treatment of disease so much as upon its incidence and characters at different ages; but I may venture to interpose a word as to the treatment of pneumonia, with regard to which there are still differences of opinion. I believe that external applications are utterly useless in pneumonia and bronchitis. The orthodox poultice and the quack embrocation may be alike discarded when the disease is on the inner side of the pleural cavity. As to ice, probably the effect does not penetrate very deeply into the living body, the temperature of which is equalised by the circulation; and if it did so penetrate we are not sure whether it would do good or harm. Whether I had pneumonia or not, I should think twice before I took a block of ice to bed with me.

Coming to internal remedies—or, rather, medicaments—I have been led, partly by studying the practice of my predecessors and partly by applying it in a form so modified that it would excite their contempt could they be made aware of it, to the conclusion that their system of depletion was not entirely devoid of reason, though sometimes carried too far—even to the length of homicide. As to pneumonia, the physician may say with Desdemona, "I do here perceive a divided duty." We must obviate the tendency to death by cardiac failure and keep the heart going. But there is a vast amount of exudation to be got rid of, possibly pounds, and that is to be removed more by absorption than expectoration. We must see that the vessels are not overloaded and that the exits are free. Of late I have given stimulants less liberally than was once my practice, and I have reverted to the use of mercury, distributing that metal somewhat widely though with a strict regard to economy. I have been in the habit of giving blue pill, calomel, or grey powder, in grain doses, once, twice, or three times a day, not clogged with opium, as used to be the practice, but so as to keep up a little looseness of the bowels. Cautious as I am in drawing conclusions from treatment, I may at least say that I have treated many patients on this plan, and they have done well. Experiment appears to confirm what reason indicates, that where much is to be absorbed it is as well to have regard to the conditions of absorption, and not to load the vessels to repletion wherein is excess, but leave a little room in them for the contents of the air cells.

The pulmonary phthisis of children may find a brief mention. The tubercle is more minutely divided and generally distributed than with grown people; the disease partakes of the character of lobular pneumonia, with which it is often associated, and from which it is sometimes with difficulty distinguished. The course of the disease is, as a rule, the more rapid the younger the patient.

With regard to empyema two observations cannot fail to present themselves. The first is the comparative readiness with which the pleura undertakes suppuration in early life, so that what in a grown person would eventuate only in dry pleurisy or serous effusion gives rise to empyema in a child. The second is the greater frequency with which the empyema of childhood is cured by simple aspiration as compared with the same disease in after-life.

While upon the chest I may say a word about a disorder which too often affects it—the acute rheumatism of childhood. This, at this time, is remarkable for the frequency with which it attacks the heart, and its forbearance towards the limbs. A little "growing pain," as mothers are apt to regard it, or a little pain in a joint scarcely enough to interfere with its movement, may be all that declares the disease to be articular, while a little rancid odour is all that declares it to be rheumatic. The heart and the joints vary inversely. In middle life the joints may be angry, painful, and obstinate, while the heart is unconcerned. The "joint-racking rheums" foreseen by our first parent among the consequences of his indiscretion are of middle life, and often have a touch of gout in them. We perhaps can do without the phrase "rheumatic gout," but we might with frequent reason talk of gouty rheumatism. In childhood the heart bears the brunt, and is in the clutch of the disease often before there is anything else to reveal its nature. Here, as in many other points of pathology, the old are better off than the young. It is better that old limbs should be racked than young hearts spoilt. The frequency of pericarditis is well known with the rheumatism of children, as also is the mitral endocarditis which is destined in after-years to be succeeded by stenosis, and possibly to become the subject, if not of a presystolic murmur, at least of presystolic controversy. In an address of this nature it would ill become me to introduce controversial matter, for there is none to say me nay; but I should be unfaithful to my experience and convictions if I did not take the opportunity of insisting on the value of alkalies, whether with or without the salicylates, in keeping down the endocarditis, which leads to such disastrous results.

I will touch but briefly upon renal and urinary diseases in early life. I have already alluded to the rapid growth of sarcomata at this period; none exemplify the rule more than those of the kidney. Diabetes insipidus is chronic and harmless; diabetes mellitus rapid and fatal. In 1871[4] a female child, then 2½ years old, came under my care with diabetes insipidus in an extremely severe form; the daily flow of urine exceeded half the weight of the body; the maximum in twenty-four hours was 13 imperial pints. In the year 1891, just twenty years afterwards, I heard that she was "in fair robust health, though still with traces of her old complaint."

I mention this as showing that a case even of exceptional severity is not bound to do badly. The loss is chiefly of water, and so long as this is supplied the patient is little the worse. It is not thus with diabetes mellitus. Here is no simple loss of what can be easily replaced, but a perversion which cannot be made good. As nutrition is rapid and exacting in early life so is any deficiency of supply or anything

[3] I have given some particulars relating to this comparison in a lecture in the *Lancet* of November 3rd, 1888.

[4] See *Renal and Urinary Affections*, vol. i, p. 217.

that interferes with its proper use especially felt at this time. I might give other instances of the sensitiveness of childhood to alimentary faults, whether, as in diabetes, faults, as it is to be presumed, in the organism which make it incapable of dealing properly with proper material, or shortcomings in the material itself. Rickets and scurvy are instances of the latter. There is land scurvy as well as sea scurvy, and to land scurvy infants are peculiarly liable. Scurvy is often so clearly developed under artificial food as to declare emphatically that primæval practice is a safer guide than modern advertisements. We are all born conservatives whatever we may become afterwards; children do not take kindly even to the innovation of Noah. "Milk for babes" is an old rule, and the milk is best unsophisticated. Why infants should thrive on fresh milk and become scorbutic, as they sometimes do, on what professes to be made from it is not fully known. The innermost secret of scurvy has not yet been revealed; it is probably a piece of very simple chemistry.

To return from this digression to the renal aspect of childhood, I may say a word about a form of albuminuria which may be hereditary and even congenital. The granular kidney as it presents itself in middle life is sometimes inherited. When thus inherited the condition of diffuse nephritis which leads to it may present itself in early childhood or even at birth. I brought before the Pathological Society[5] in the year 1889 some remarkable particulars in the recent history of an ancient family in which albuminuria appeared to have been transmitted as if by entail. My information relates to the last five generations; of these, comprising 28 individuals, 15 were known to have been the subjects of albuminuria, 2 were suspected to have been so, 10 of the number died of, or at least with, kidney disease.

This remarkable history would have been nothing to my present purpose were it not that it illustrates the albuminuria of infancy and childhood. In all these instances the affection came on without ostensible cause and mostly in early life: in 5 cases at ages varying from 7 to 18 years, in 1 at 9 months, in 1 at 6 months, and in 1 at or before birth. It is sufficiently clear that the common condition was one of chronic nephritis. Marked symptoms of renal disease, dropsy, retinitis, etc., were frequent; casts were found in several cases: and in the only one in which I am acquainted with the results of a *post-mortem* examination, the kidneys were in a characteristic condition of interstitial nephritis. The disease in these cases was exceedingly chronic and mostly permanent, though in one of the series the albuminuria which had presented itself in early boyhood disappeared before the age of 23.

Children are more immediately affected by aerial influences, whether good or bad, than are grown people. The greater susceptibility of the young to malaria is well known. I have been told in that district notorious for ague—Romney Marsh—that there the children are especial sufferers. Young soldiers more readily succumb to the malarial influences of the tropics than do veterans, and judicious commanders have regard to this in determining the composition of forces destined for specially malarious regions. Children "in populous city pent" suffer more than their elders and profit more from change. Pure air, and especially sea air, is, as regards the chronic ailments of childhood, our greatest remedy; it is to be regretted that it is not more constantly at our command. It comes nearest to the nature of a panacea. Drugs may do good or harm. Though we believe in the treatment of our own time, we are keen to detect the erroneous practice of our predecessors; so may our successors do for us. The opinions of the faculty are continually shifting; iron may supersede mercury, a thousand nostrums may flourish or may fade; but if there are any eternal truths in medicine, one of them must be that fresh air is better than foul, and the breezes of the Atlantic more salubrious than blasts from the sewers. The air of the North Sea will never cease to bring healing on its wings, or the Bristol Channel to work cures which even the Bristol Hospitals cannot accomplish. It is said that charity begins at home, but I have often thought that it is better bestowed on seaside hospitals and country resorts than on institutions where medicine is paramount and the curative influences of nature wanting. These considerations apply more to the young than to the old. Old persons often do well in cities; they seem to become impervious to their injurious influences. The elderly gentleman who never leaves town if he can help it, and seldom goes further than a walk from his club, may have good health and a rubicund countenance, and insist with truth that no place suits him like London.

In conclusion, I will touch upon a matter of observation which carries with it a certain amount of satisfaction. Children, like the aged, are less susceptible of suffering than persons who are neither very young nor very old. A great physician, who did not obtain his wish, once told me that he desired to live to be old in order that he might die easy. So it is with children; they shuffle off this mortal coil with comparatively little friction. Their grasp of life is but feeble, and they soon lose hold. Among the most distressing conditions of disease is dyspnœa; I have thought it the *most* distressing. The prolonged agony, say from tracheal obstruction, in a person who has attained, and not yet begun to lose, his full vigour, makes it one of the worst of all the forms of torture which Nature has invented. With young children, obstructive dyspnœa, though unhappily common among them, is less agonising and sooner over. Children have no fear of death, and, indeed, no expectation of it. They take short views; the present is enough for them, without regard to the future.

[5] *Pathological Transactions*, vol. xl., 1889. The summary here given includes one death, which had not occurred when the Pathological paper was published.

SIXTY-SECOND ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

DISEASES OF CHILDREN.

John Edward Shaw, M.B., Vice-President, in the Chair.

DISCUSSION ON THE TREATMENT AND COMPLICATIONS OF WHOOPING-COUGH.

Introduced by

James Carmichael, M.D., F.R.C.P.Edin.,

Physician to the Royal Hospital for Sick Children, and University Lecturer on Disease in Children, Edinburgh.

The Fatality of Whooping-cough.

The public have a right to demand from us not only a careful consideration of all questions connected with whooping-cough, but also a clear opinion as to the newest and most approved methods of combating this, one of the most fatal of all the zymotic diseases. In England, statistics show that of all diseases, of whatever kind, in the city of London, it is the third most fatal. On the Continent and in America, very much the same tale can be told. In Scotland, the monthly reports of the Registrar-General always show a similar record. Taking the report for last April, he says: "Whooping-cough was again the most fatal epidemic, having caused 131 deaths, or 5.4 per cent. of the whole mortality." During the month of May last, he says: "Whooping-cough continued to be the most fatal epidemic, having caused 145 deaths, or 6.0 per cent. of the whole." An analysis of the fatal cases shows that they are almost invariably complicated, the general experience showing that in its uncomplicated form the disease is rarely speaking directly fatal.

Etiology.

No one now doubts that whooping-cough is a zymotic disease of an eminently contagious nature, epidemic in its visitation, running a definite course in its uncomplicated form, with an

incubation period, and conferring immunity from second attacks. The true nature of the virus is as yet undetermined, but we know that it attacks the upper part specially of the respiratory tract, producing a specific catarrh of the mucous surface, and associated with this we have numerous micro-organisms. Poulet and Letyerich have made important investigations in regard to the flora of whooping-cough, and his researches of Affanassieu have resulted in the discovery of a bacillus of which pure cultures have been obtained, and which, when inoculated upon the respiratory surfaces of animals, has developed a specific catarrh which has run a like course and been attended by similar complications to those seen in man. The bacillus has been termed *Bacillus turcis convulsivée*. Afanassieff's experiments show that the poison, when injected into the windpipe of animals, produces all the usual effects, thus demonstrating the probability, amounting to tolerable certainty, that in man the virus enters the system by the respiratory surface; whether it may do so through the digestive tract by ingestion, the virus gaining access to the respiratory mucous membrane through the blood, is not proved so far as I am aware. The importance of arriving at a solution of this question will be obvious when we consider the subject of treatment, as if inhalation is the ordinary mode of access, the likelihood of mitigating the severity of this disease by local treatment of the nasal, tracheal, and bronchial membranes is evident. Another point deserving of notice, and I think bearing out this contention, is the very slight amount of pyrexia in uncomplicated whooping-cough as compared with other zymotic diseases. This would point to the improbability of the virus developing and circulating to any extent in the blood, and thus affecting more directly the heat centre. From all we know of the effects of the poison on organs and tissues, it seems more likely that it spreads from the mucous surface through the lymph rather than the blood vessels.

COMPLICATIONS AND SEQUELÆ.

General Disturbance of Nutrition.—Like all other zymotic diseases, one of the most serious effects on the child is the general disturbance of nutrition. This is brought about in two ways: by the direct influence of the poison on organs and tissues, and by the starving process to which the child is exposed by the more or less constant rejection of food by vomiting after the paroxysm. It is impossible to overestimate the importance of fully realising the effects of the serious derangement of the nutritive processes produced by zymotic diseases in children, and the predisposition which this exercises in leaving the child, so to speak, a prey to subsequent chronic ill-health and disease. The most important complications are referable to the circulatory, respiratory, nervous, and lymphatic glandular systems.

Circulatory Complications.—Probably less attention has been given than is deserved to the evil effects of the paroxysms of whooping-cough on the heart and blood vascular system generally. The enormous strain put upon the heart during a paroxysm of cough is easily proved. The most obvious and immediate effects of the paroxysm on the circulation are shown by sphygmographic tracings after the fit, which exhibit very well marked dicrotism, and sustained tidal wave and alteration in the cardio-arterial intervals. Subcutaneous and submucous hæmorrhages: local œdema, especially of face and eyelids; passive congestion and effusion of internal organs, giving rise in the kidney to albuminuria, and in the brain to convulsions, are further evidence of cardio-vascular derangement of function.

Respiratory Complications.—In uncomplicated whooping-cough, so far as we are aware, the catarrhal condition of the tracheo-bronchial mucous surface is limited to the trachea and larger bronchi, when it extends further into the bronchial ramifications, and a fully-developed bronchitis is set up, the child's condition becomes serious, and we have all the risks attendant upon an extensive bronchial catarrh, but more aggravated and persistent. Pulmonary collapse to a greater or lesser extent, I believe, always complicates this disease in very young children, owing to the force of the expiratory effort and the obstruction in the inspiration from closure of the glottis; along with this we usually have emphysema. Catarrhal pneumonia almost invariably follows extensive bronchitis in the young child. The patches are generally small, and disseminated through both lungs. The onset of this complication may be generally diagnosed by the febrile movement, perverted pulse respiration rates, and altered cough. Laryngismus with tonic prolonged spasm of the glottis is common in infants, and is always a dangerous symptom.

Nervous Complications.—The complications referable to the brain are usually indicated by convulsions due to interference with the cerebral circulation during the paroxysms of cough. Presumably they are the result of defective blood aëration, congestion of the cortical pia, with or without serous effusion or sanguineous extravasation and dropsy of the ventricles.

Digestive Disturbances.—Complications associated with the digestive system are less common and not so dangerous. During the acute stage we often meet with an irritative gastro-intestinal catarrh, and as a sequela a more chronic intestinal derangement, so well described by Dr. Eustace Smith.

Glandular Enlargements.—One of the most constant complications in whooping-cough is bronchial glandular adenopathy, presumably due to the irritating effects of the poison which is carried to the glands by the lymphatics draining the mucous surface of the bronchial tubes. In delicate children the glands are apt to remain in a chronic state of hyperplasia.

Tuberculosis.—Whooping-cough is one of the most common predisposing causes of tuberculosis, and the reason of this is not far to seek. We have all the conditions favourable for the reception and multiplication of the tubercle bacillus, depressed nutrition, lowered nerve tone, and a diseased mucous surface with enlargement of the bronchial gland.

TREATMENT.

In this connection we must bear in mind that we are dealing with a zymotic disease running a certain course. Our efforts must be to guide the patient as safely as possible through the various stages and avert complications. To this end the child should be kept in a well-ventilated room of mean temperature. As to whether it is desirable or necessary to keep the child in bed in uncomplicated cases during the premonitory stage and height of the disease, practice seems to vary infinitely. In my opinion, we must be guided by the season of the year and the general condition of the patient. It cannot be doubted that it is the side of safety to keep the patient confined to bed until the disease begins to decline. It is more likely to be cut short in this way, and it is easier to carry out the treatment by inhalants and otherwise, and avoid the risk of complications. There are few diseases that have been so much, so variously, and so unsatisfactorily drugged as this, a tolerably certain indication of the powerlessness of any of the remedies to arrest or cut short the disease. As in all other diseases, each case must be dealt with on its own merits; the patient must be treated as well as the disease. In the prodromal and early convulsive stage alkaline diaphoretic mixtures with mild counter-irritant and sedative liniments to the chest seem to be indicated. When the paroxysmal stage is developed, respiratory sedatives are of decided service, of which opium, belladonna, and antipyrin may be taken as types. In the stage of decline, to restore nutrition, quinine, alum, and sometimes ferruginous preparations of the milder kind are serviceable; later on cod-liver oil in one form or another is undoubtedly of great value. As to local treatment of the mucous surface by spray, inhalants, etc., I am in the habit of prescribing these from the very first, or to the decline of the convulsive stage; and in my hands, if any method of treatment helps to cut short the disease it is this. Douching of the nostrils should be systematically carried out several times a day with dilute solution of perchloride of mercury or boracic acid: the atmosphere of the room should be impregnated with volatile antiseptic vapours. Those in which carbolic acid is the basis are the most useful, such as creoline or cresoline, or carbolic acid itself. Eucalyptus, benzol, and thymol are also useful. The most thorough way of allowing the child to breathe an antiseptic atmosphere is to let it sleep in a tent into which the vapour is introduced continuously.

Diet I consider of great importance. It should be light, nourishing, and digestible, and not given in too large quan-

tities; sweets, fruits, and farinaceous foods should be largely excluded.

Prophylaxis.

In conclusion, I desire to allude to the most important part—the prophylaxis of the disease. In obedience to the teaching of sanitary science, our health authorities, armed with the powers of the Public Health Acts, have come to close quarters with most of the zymotic diseases, with the result that some of them, such as typhus fever and small-pox, have been almost stamped out of our large communities and the other diseases are kept at bay to a very large extent. Strange to say, there has been no attempt on a large scale to deal with whooping-cough, and, so far as I know, no local authority has yet placed this disease in the compulsory notification list. Children are allowed to play in the public streets, go in tramcars, 'buses, railway trains, attend public entertainments, and in fact go about unrestrained. The masses of the people are still imbued with the idea that it is just as well that every child should have whooping-cough and measles, to "get it over," as the saying is, little realising the great mortality which attends it. There can be no doubt that of all the preventible diseases it is the most difficult to deal with. This is largely due to the fact that the uncomplicated disease does not disable the child, and the poorer classes practically ignore its risks or the necessity of treating it. In addition to this a very large proportion of cases are never seen by a medical man at all, and therefore there is no opportunity afforded of dealing with them.

In all epidemics it is a well-known fact that it is the mild cases which never come under medical supervision that spread the disease. Mild cases of measles, scarlatina, and small-pox are going about at all times in our large towns, and what holds good with such complaints obtain much more largely with whooping-cough. What, then, is to be done? I think we as a profession should let the public know what manner of disease this is, and what measures are necessary to deal with it, and once and for all relieve ourselves of responsibility in the matter. The substance of our advice is comprehended in two words—notification and isolation. There is comparatively little difficulty in carrying out prophylaxis in public institutions and among the middle classes. The great question is how to reach the masses, the poor, the ignorant classes of society. It is one of the most difficult questions the sanitarian has to face, and by some has been said to be insoluble. This cannot be admitted until the experiment has been tried. We want the public to provide us with isolation hospitals and powers to reach all cases. At present the onus of notification rests on the doctor, but as we know so large a proportion of the cases are never seen by a medical man, they must be reached by other means if any good is to be effected.

It seems to me perfectly evident that the onus of reporting infectious disease should be thrown on the householder as well as the doctor, and that this system should be effectually supervised, and nothing short of periodical and frequent house-to-house visitation in poor districts by sanitary inspectors will suffice to ensure this. No doubt this will throw an increased burden on the ratepayers. Nevertheless, our course as a profession is, I humbly think, very clear. We should divest ourselves of all responsibility in the matter by letting the public know the necessities of the case. In Edinburgh, I am glad to say, the public health authorities have already recognised the urgency of the case by providing whooping-cough wards in one fever hospital.

Dr. E. Mansel Sympson remarked on the curious rarity of ordinary cerebral paralysis after pertussis, even though the blood pressure during the paroxysms was high. Probably there was not much affection of blood vessels, either from direct action of poison or from high temperature, as in other acute febrile diseases. As to treatment, he preferred that the patient should live in two rooms—one for day and the other for night. He used cresoline vapour in both rooms, with eucalyptus oil sprinkled on the pillow and on the child's clothes, so as to afford a constant supply of eucalyptus vapour. He prescribed belladonna almost invariably in the spasmodic stages of the complaint, and occasionally added some chloral hydrate in small doses. One way of combating the exhaustion produced by the constant vomiting was to give food, such as soup and beef-tea, directly after an attack of vomiting. The stomach was not much upset, and was ready for food at once. A symptom which he had noticed early in whooping-cough, and so thought of value, was a swelling of the lower eyelids.

Dr. C. Elliott thought the question whether the notification of whooping-cough should be compulsory was still open to a difference of opinion; for, as Dr. Carmichael had pointed out, many mild cases frequently existed in a district before the disease was recognised, and for this reason as well as for others he did not think notification was likely to be of as much practical value as in the case of other diseases. Further, he feared the public authorities would not care for the extra and heavy expenditure which would be incurred thereby. He was in favour of isolation, but he was not in favour of invariably keeping a child confined to one room during the four or five weeks of its illness. Provided the child did not mix with other children, and the weather was warm and fine, and there was no complication, he thought patients recovered from whooping-cough more rapidly by living in the open air as much as possible. One fact he had noticed was that when a child suffering from whooping-cough was by accident admitted into a ward of the Bristol Children's Hospital, the other children seldom took it. This had also been noticed by other observers, such as Sturges of London, and Ashby of Manchester, and seemed to point to the necessity of close contact for the propagation of the disease. In the medicinal treatment of whooping-cough, he thought it was always well to keep in mind the three stages of the disease, and to adapt the treatment accordingly. In the premonitory stage all that was necessary was to give small doses of ipecacuanha wine, and of the solution of acetate of ammonia or of antipyrin. In the second, or spasmodic, a shoal of remedies were recommended, but, though none could be called a specific, he thought belladonna was still the most generally useful. During recent years the internal administration of antiseptics, especially of carbolic acid, had been advocated. Given by itself, carbolic acid did not appear to him to control the fits of coughing to any great extent, but it relieved the sickness, and he found it most valuable when given in combination with belladonna and some syrup of tolu or squills. Iodoform was another antiseptic which he had used largely during the past two years. It quickly allayed the spasm and soothed the cough. He found it especially valuable in cases where there was any tuberculous tendency, and the presence of bronchitis was no contraindication to its use. He prescribed it in doses of half a grain, made into pilules, which small children took readily. Antipyrin was of use in simple uncomplicated cases, but where there was bronchitis or much weakness he preferred other remedies because of its depressing effect on the heart. From the good results obtained with iodoform he had been led to try guaiacol, but he had been disappointed with it, and found it of no value whatever. Besides the internal administration of drugs, he believed the inhalation of hot antiseptic solutions was a most valuable proceeding. For this purpose he had employed most of the usual antiseptics, and a favourite combination was equal parts of eucalyptus oil and friar's balsam. For very young patients, who were unable to use an inhaler, he ordered the eucalyptus oil to be poured on a handkerchief, which was left during the night somewhere near the child's head, or he had it sprinkled on the pillow, as the inhalation of the fumes of sulphurous acid produced by burning powdered sulphur was an old but excellent remedy, and he believed we possessed no more efficient means of combating the micro-organisms in the respiratory passages, which he believed were the cause of the disease. It was especially valuable for hospital out-patients, and the plan he followed with them was to order a large piled-up teaspoonful to be burnt in the bedroom night and morning, or oftener, according to the severity of the attack. When the disease entered on the third stage, or that of decline, efforts should be directed to build up the general system, and repair the waste of tissue, and combat the debility which so commonly accompanied this disease. For this purpose the use of tonics such as the mineral acids, iron, quinine, cod liver oil, and the hypophosphites were most invaluable, and it was in this stage we should derive most advantage from them.

Dr. Barrett Roé said that whooping-cough was a zymotic

disease, neither a neurosis nor a bronchitis. An important point to decide was whether whooping-cough could be carried from one patient to another by a person not actually suffering from the disease. He was inclined to think it could. With regard to treatment, a mixture of bromide of potassium and belladonna was most valuable in the second stage. Sulphur burnt in a room acted powerfully as a disinfectant.

Dr. N. J. Fyffe asked if Dr. Carmichael had often observed the presence of ulceration of frænum of the tongue in cases of whooping-cough, and whether it was a symptom which could be depended upon in clearing up diagnosis in the absence of the whoop. With reference to the question of isolation and notification of cases of this disease Dr. Fyffe remarked that, although agreeing in the main with the suggestion, the question of carrying it into effect was surrounded with great difficulty, and he expressed the opinion that until the better classes of society led the way in this matter and showed their willingness to isolate cases of zymotic disease occurring in their homes, and to provide infectious homes for their reception, there would be great difficulty in carrying out among the poorer classes a system of isolation of cases of a disease such as whooping-cough, which was generally regarded by them as a comparatively trifling one.

Mr. J. Ewens did not think the disease could be carried from one child to another without the intermediary having it himself. He relied mainly on bromide of potassium to modify the severity of the attack.

Mr. R. Sterling observed that the difficulty sometimes experienced in making a diagnosis would militate against the usefulness of notification.

Dr. Hopkinson mentioned a case of cerebral hæmorrhage, causing left hemiplegia and rhythmical movements of the right arm, in a case of whooping-cough, complicated with extensive bronchopneumonia. The case ended fatally, but a necropsy could not be obtained. Dr. West recorded a similar case, which, however, resulted in recovery. With regard to the conveyance of infection by a third party, Dr. Hopkinson recalled the positive observations of Dr. Bristowe on the point.

Dr. F. W. Burton-Fanning only wished to invite the trial by others of a drug which he had already advocated elsewhere. In view of the large number of remedies already recommended, he was somewhat diffident in mentioning another. He had now given bromoform in over 100 cases, and, speaking from this experience, he found that it lessened the severity and number of paroxysms, in mild cases stopping them altogether; that it checked vomiting, epistaxis, and other hæmorrhages, and improved bronchitis, easing expectoration. He had contrasted bromoform with other drugs vaunted in this disease, by alternating the administration of the former with the latter, and was satisfied of the superiority of bromoform. As to its mode of action, he could only say that the drug combined the action of an antiseptic and a nerve sedative.

Dr. Lyndon drew attention to the necessity of detecting whooping-cough as early as possible, in order to prevent the spread of the epidemic, and said that every child suffering from cough, with vomiting, ought to be regarded as having whooping-cough, and isolated at once. He pointed out that treatment of cases must of necessity vary with the social condition of the patient, and although, in the upper classes, antiseptic treatment by inhalations was very valuable, yet in the poorer classes it was impossible to carry it out in the thorough way which alone rendered it of any value. Bromide of potassium in full doses he considered of extreme value, and often found it allay the cough at once after all other drugs had failed. He disagreed with Dr. Elliott thinking it unnecessary to keep the patient indoors in an equable temperature for the first few days. He pointed out the insuperable obstacles to isolating all cases in infectious hospitals, more particularly in country districts, owing to the great expense which would be entailed, although theoretically isolation was undoubtedly the right course.

Dr. Wood thought ulceration of the frænum linguæ was rarely of diagnostic value, as it occurred late and only in well-marked cases. It was simply the result of pressure. The treatment must vary according to the severity of the case. Mild cases did better out of doors, severe ones in bed. In severe cases predigested food was practically essential. As to drugs, it was desirable to consider which of the elements—zymotic, catarrhal, or spasmodic—was to be attacked. Our knowledge of the bacteriology of pertussis was so slight that treatment from this standpoint was empirical and unsatisfactory. The catarrhal element was best dealt with on general principles. The spasmodic cough and vomiting could be held in check by carbolic acid in the later stages, and by bromide and belladonna earlier.

Dr. Henry D. Chapin (New York) stated that all the preparations spoken of in the discussion had been tried in the United States. For internal use he had found bromide of potassium as useful as any drug. An important point to remember was the great susceptibility of children, with and after pertussis, to tuberculosis. Extra care should be taken that these children were not exposed to contagion from the tubercle bacillus. Recent studies by Dr. Koplik and others showed that the strain upon the heart was very great during the paroxysms of pertussis, and hence remedies that had a depressing effect upon this organ should be given with care.

Dr. Fielding observed that previous speakers had been town practitioners. As a country practitioner he was surprised at the mortality indicated. He sent his patients out of doors freely, and unless they were only just able to live before this disease they did well in the country. This fact indicated the benefit of fresh air. He was accustomed to direct the pillow to be sprinkled with carbolic lotion, and to give carbolic acid and bromide of potassium, with ipecacuanha, in the early stages.

Mr. Hall thought that during the acute stage the cases ought to be kept at a temperature not below 63° F. in doors; in fact, isolated for their own benefit as well as that of others.

Dr. Grippper held that with ordinary precautions children might be allowed to go out of doors as much as possible. Sulphur fumigation was as useful as any. Belladonna, bromide of potassium, and chloral were valuable internal remedies, but must be given in full doses. Peptonised food was most useful.

Mr. Morgan wished to emphasise the importance of keeping the child indoors during the first stage, and also, as Dr. Carmichael had said, the importance of educating the public in all cases to carry this out carefully. Cases were frequently sent to the seaside much too early, and cases living at the seaside were often by their attendants allowed out from the first with disastrous results to themselves and the public in general.

TREATMENT OF SOME DEFORMITIES OF THE LOWER EXTREMITIES.

By John Ewens, L.R.C.P.Lond., L.R.C.S.Edin.,
Senior Surgeon, Bristol Hospital for Women and Children.

Mr. Ewens began by apologising for bringing forward the subject again after doing so at Bournemouth and Nottingham in 1891 and 1892, and explained that his reason for so doing was the opportunity afforded of illustrating his previous observations and subsequent experience by exhibition of cases bearing on the question. He then proceeded to speak of the various deformities of the bones so commonly met with not only in large towns but in country districts: 1. *Curvatures of Shaft of the Femur.*—These, occurring in any part of the shaft, should be treated by horizontal section and extension on a long splint, or in young children by bringing the child's nates down to an upright board and elevating the legs, making extension by a pulley fixed on the top of the board. It was not necessary to remove a wedge from the bone. 2. *Genu Valgum.*—He distinguished two varieties—(*a*) Owing to overgrowth of the inner condyle; (*b*) owing to overgrowth of the inner tuberosity of the head of tibia. Either of these conditions existed distinct from the other, and required special and individual operative treatment, to be referred to further on. 3. *Curvatures of Shaft of Tibia.*—These occurred in any part of the bone, and assumed any shape from extreme curves, convexity either forwards, backwards, or lateral, to a less severe degree of the deformity; or the bone might be twisted on its axis as well. Each case required treatment according to situation and extent, as well as the age of the patient. 4. *Talipes.*—He distinguished five varieties: (*a*) equinus: (*b*)

varus; (*c*) calcaneus; (*d*) valgus; and (*e*) cavus. The two first forms would be specially referred to later on. Talipes calcaneus was rarely met with; Mr. Ewens had met with only one case. Treatment consisted in division of the tendons of the tibialis anticus and extensors of toes, and application of a splint to the front of the leg and dorsum of the foot. Talipes valgus was rarely met with in young children, but very frequently in young adults. It was best treated by elastic support and a well-made boot, so as to take off pressure from the centre of the foot. Talipes cavus should be treated by free division of the plantar fascia and any opposing tendons, and by allowing early walking after operation. Mr. Ewens then proceeded to point out the importance of the consideration of the two deformities on which alone any question of the nature of an operation could possibly arise: (1) Since reading his paper at the Nottingham meeting in 1892 his attention had been drawn particularly to genu valgum owing to overgrowth of the inner tuberosity of the head of the tibia. He had found that in a very large proportion of cases in which the inner condyle was mainly at fault, there was also a considerable enlargement of the head of the tibia, not, however, so great as to prevent a rectification of the limb by Macewen's operation alone, but amply sufficient to establish the principle he then inculcated, that it was more common than generally supposed. Cases were then shown with photographs of patients before operation, two of genu valgum and three of tarsectomy on both feet. The difficulties and dangers of removing a wedge from the head of the tibia were then referred to, and due stress laid on them, but the operation was maintained as justifiable, in spite of drawbacks, no case as yet having had an ultimately unfavourable termination. (2) The early treatment of talipes by various methods, such as tenotomy, Scarpa's shoe, and plaster-of-paris, was well understood, the general practice at Bristol Hospital for Children being tenotomy, followed in a few days by the application of plaster-of-paris bandages. Good results were obtained, the treatment by apparatus being too expensive and tedious for the bulk of hospital patients. The application of plaster-of-paris alone, without division of tendons, was full of risk in many cases, as inordinate pressure on prominent points, resulting in sores, was easily induced. The treatment of advanced cases by tenotomy, fasciatomy, and syndesmptomy was referred to. All had been tried by the speaker and his colleagues without good results, and tarsectomy was now generally adopted in the hospital. The age limit was not to be observed so much as the amount of bony overgrowth. If that was considerable, the operation might be performed at an early age, but the bulk of cases requiring tarsectomy did not generally come under observation before the age of 5 or 6 years. The general principles of the operation were careful removal of thick hardened skin, and free removal of a large wedge of bone. The apex of the wedge should terminate at the most prominent point on the dorsum of the foot, the situation and size of the base being regulated by the extent and position of the deformity, the parts removed being generally a large slice of the calcis, sometimes the cuboid. The apex invaded the astragalus, and occasionally the scaphoid, but this was not material as long as the wedge removed admitted of due rectification of the foot, the edges of the bones being well adapted, and skin brought together. It was often necessary to divide the tibialis anticus tendon and the inner part of the plantar fascia, in order to ensure straightening of the inner border of the foot, and thus avoid inversion of the great toe.

Great care was necessary in maintaining good position, and if possible to avoid removal of the dressings for a week or ten days, as disturbance of the parts might interrupt the healing process and induce suppuration, which might lead to delay in union of bone, and occasionally necessitate a further operation. Rapidity of cure was the goal aimed at, and in the case of the poor and hospital patients generally, this was a very important consideration, as expensive, cumbrous, and easily broken appliances were quite beyond the reach of such people.

Mr. R. W. Murray congratulated Mr. Ewens upon the excellent results he had obtained, and agreed with almost all Mr. Ewens had said. He would emphasise the importance of early operative interference and advocated free division of the calcaneo-scaphoid ligament which he (Mr. Murray) considered to be the chief factor in maintaining the deformity. Its non-division accounted for a large proportion of the relapses. He performed tarsectomy in older children who had already learnt to walk. Failure after this operation was usually due to insufficient removal of bone at the time of operation.

Mr. Robert Jones (Liverpool) differed in some respects with Mr. Ewens. He always commenced the treatment as soon as the child was born, and even divided the tendo Achillis at the age of a few days. The importance of this in the case of subsequent inversion could not be overestimated. Each time the foot was bandaged the leg above the ankle and below the knee should be grasped and firmly twisted so as to turn the foot outwards. In more intractable cases he always overcame the inversion by osteoclasm. This obviated the use of the elaborate instruments so much in vogue. He very rarely had recourse to tarsectomy, as he had found the wrench so simple and effective. With regard to genu valgum, he condemned the apparatus generally in use. Many were fitted with a joint at the knee which was absolutely destructive of utility. As flexion invariably masked the deformity, it was obvious that a rigid splint was essential to ensure constant rather than intermittent pressure. He recalled an interesting case in which the development of knock-knee from enlargement of the tubercle of the tibia could be observed clinically. The patient had a blow on the inner side of the tubercle. This enlarged from osteitis, and the knock-knee developed while the patient lay in bed. Mr. Jones recommended osteoclasm for bow legs, but he did nothing in the case of anterior curvatures, as they generally disappeared in later life.

CASE OF MULTIPLE NEURITIS IN A CHILD, WITH REMARKS.

By E. Mackey, M.D.,

Senior Physician to the Alexandra Children's Hospital, Brighton.

When the subject of peripheral neuritis was discussed at the Nottingham meeting (having been ably introduced by Dr. Bristowe) it was remarked by Dr. F. Taylor, who himself had published an able summary of our knowledge up to 1888 (in a volume of *Guy's Reports* apparently overlooked by Ross and others) that "in relation to this disorder we were still in the position of waiting and recording cases," and although ideas are now clearer on the subject, as evidenced for instance in Charlton Bastian's article in the last edition of *Quain's Dictionary*, and Debove, in the *Manuel de Medecine*, 1894; yet that remark still expresses our position and induces me to record the following case. There are still but few on record of children, if I exclude the sequels of diphtheria. Of Dr. Ross's collection of 93 cases of so-called Landry's paralysis, which he accepts as a form of the malady in question, 4 are of children—2 quite young—after measles, 1, aged 8, indefinite in detail, and 1, aged 12, with some resemblance to the case before us: no cause for it is assigned, but recovery ensued in seven months. Of the very few other recorded cases some are alcoholic, or, as in Dr. Carr's case at the Clinical Society, of doubtful type (if the absence of tenderness in nerve tracks do not definitely exclude).

My case, a boy, aged 6, was only just recovering from a prolonged attack of pertussis, itself subsequent to measles, when he began to complain of pains in the limbs, which so far simulated rheumatism as to be called by that name, but there was no history of exposure to cold. It is of interest to record that the boy was first admitted into a hospital by a competent physician as a case of Landry's paralysis, and it was the prognosis of death within seven days, coupled with the recommendation of cautery to the spine, that led to the child being hastily transferred to the Children's Hospital, when he came under my observation on December 19th, 1893. The illness dated from the beginning of November, when he had acute pains in the arms and legs, and before the end of that month was unable to stand. After admission he lay in bed, generally on his left side, with his legs flexed and lying over to whichever side he lay on. They could not be even partially straightened without his crying out with pain, especially in the left thigh and hip and over the course of the sciatic nerve, which was tender. To extend them

completely was impossible, and to stand on them equally so. When sitting on the edge of the bed there was marked foot-drop, and the patellar reflexes were completely lost. The boy was pale, timid, and neurotic, and so far feared to be touched that the limbs seemed hyperæsthetic, but sensation was practically not altered. There was no plantar reflex nor ankle clonus, but the cremasteric reflex was obtainable. He was quite unable to move the toes; the leg muscles were flabby, and he was said to be thinner, but there was no definite wasting. The muscles of the trunk were also weakened, and he could not turn himself in bed. Pain and tenderness were present over the lumbar spine, and to the left of it, but not elsewhere, nor in the joints.

The arms were limp, the right one almost powerless, and there was little or no grasping power in the hands, which when extended assumed the position of *main en griffe*: the supinator reflex was absent, the facial muscles were not affected, and pupils reacted to light. In the throat the only abnormality was a relaxed uvula, and the voice was somewhat nasal, but there was no dysphagia, no regurgitation of fluids, and absolutely no history of diphtherial injection; the urine contained no albumen or other abnormal ingredient: it was acid, specific gravity 1.025. There was no difficulty in micturition and defæcation, but in the course of the next few days this occurred involuntarily on two occasions only. There were some catarrhal signs in the lungs, but no dyspnœa. The pulse was at first 128, and the temperature 101°; it became normal or subnormal in a few days. There was no heart trouble. The tongue was somewhat furred, breath offensive, and bowels rather confined.

The electrical observations were not made with the complete accuracy that could be wished, for there was no galvanometer available, but a faradaic current stronger than could be borne, and which was felt by the child so acutely as to cause tears, did not produce any contraction, whilst the continuous current from forty cells of a Weiss battery caused only feeble ones. Besides general treatment adapted to the symptoms he was ordered iodide of iron and Thomsen's cream of hypophosphites.

On January 9th the weakness had increased. On two occasions involuntary twitching of the left leg had been observed. Some red raised papules had appeared on face and hand (left), possibly from the iodide; small doses of strychnine with aromatics were substituted for it and Virol for the cream.

On January 14th he seemed to grasp and move better, but diarrhœa set in (there were several cases in the ward), and weakened him markedly till controlled (by zinc and bismuth); there was again less power in the limbs, and sensation seemed less in the left than the right. There was more catarrh, and the voice was more nasal.

On January 16th the treatment was altered to a mixture of perchloride of iron, and within two or three days he seemed markedly better.

On January 23rd he could use his hands a little in eating, and move his toes, but a muco-purulent discharge began from the right ear and the nose. Faradism still caused no contraction of muscles; the interrupted continuous current slight ones.

By February 2nd there was general improvement, stronger grasp, and straighter legs: foot drop still persisted. More deliberate testing showed CCC with 25 cells, ACC with 21, the characteristic reaction of degeneration. He began to gain flesh, and move more toes; the left hand was markedly stronger than the right: a few scattered red large papules have recurred, and the ear and nose discharges have continued more or less, but by March 2nd these were well. There was more movement of hands, but the wrist and elbow reflex still absent: still unable to quite straighten legs, and cries on attempting to stand, which he does on toes, that is, has difficulty in putting down heels. The leg muscles and flexors of fingers did not contract with continuous 40-cell current nor applied directly or to peroneal nerve.

March 17th. Up to this date the average temperature had been normal, but a rise now to 103° F. was accompanied with the physical signs of congestion, if not pneumonia of right lung, which developed without evident cause. He was very ill with cough, dyspnœa, etc., for several days, but crisis occurred on the fifth day. Subnormal temperatures continued till the 27th, by which time the lung had cleared up, but he was very weak and had rather lost power again in movement. Quinine and iron did not seem to help much, and seeking for some other mode of strengthening nerves, I was inclined to try injections *à la mode* Brown-Séquard.

However, I began in preference with phosphate of sodium, 10 minims of a 10 per cent. solution, being injected into the lumbar muscles. This was on April 2nd, and certainly benefit seemed to follow, though the other medicines were continued together with frictions and galvanisms by the ward sister. By April 17th there was marked improvement; he could almost stand alone and could walk a little with assistance; but the right heel was jerked up and the tendo Achillis tense, so that he inclined to walk on the toes of the right foot.

A faradaic current, stronger than required for the same effect in the healthy, caused now some contraction of the leg muscles and the thumb flexors, and the galvanic current contractions were obtained with fifteen cells—more rapidly when applied to peroneal nerve than to muscles.

Ordered to increase to 20 minims of sod. phosph. sol. injections, May 1st. Walks a few steps, can put down heel, but with pain: can write.

On May 11th he could walk without pain, though the right heel was still drawn up. On the 17th walked round garden with assistance. Injections omitted.

At the end of the month he was discharged convalescent, and on June 12th walked up to be examined, putting both heels to ground, and having only some difficulty in moving left leg. Frictions have been continued, but no other treatment.

When I saw the boy last week he had gone through an attack of varicella, but was said to be very well; his arms and legs were available for all practical purposes, but there was still no patellar reflex.

If we classify the known cases of neuritis into (1) external poisons—alcohol, arsenic, lead, etc.; (2) microbic—diphtheria, measles, influenza, etc.; and (3) intrinsic poisons, as developed from chill, rheumatism, diabetes, etc., we fail to find pertussis in any list: so that its occurrence as an antecedent in this case deserves note.

Diagnosis from amyotrophic sclerosis will be evident, and that from poliomyelitis anterior was fairly clear on account of the more gradual onset of paralysis and abolition of reflexes. Hysteria could be practically excluded: nor were the symptoms severe or complete enough for general spinal paralysis: the question was practically between Landry's paralysis and the less severe form of neuritis, and diagnosis of the latter was made, but only after several days' observation, by the greater severity of sensory symptoms, the absence of reflexes, and of definitely "ascending" character in the paralysis.

A DISCUSSION ON THE TREATMENT OF TUBERCULOUS DISEASE OF JOINTS IN CHILDREN.

I.—FREDERIC EVE, F.R.C.S.,
Surgeon to the London and to the Evelina Hospitals.

PRINCIPLES OF TREATMENT.

WHATEVER diversities of opinion may exist in regard to the general treatment of tuberculous disease of joints, there can be no doubt regarding the principle which should guide us—namely, to assist the tissue cells to circumscribe and ultimately to obliterate the disease by rest, extension, and other measures, and to invigorate the cells by good feeding, by placing the patient in the best hygienic conditions, and possibly by the exhibition of certain internal remedies.

It is hardly necessary to remark that the cure of tuberculosis by the natural processes is mainly due to the organisation of connective tissue cells. These, under favourable conditions, develop into fibrous tissue which at first circumscribes and ultimately obliterates the tuberculous foci. They doubtless also act as phagocytes. Without entering fully into the undoubted therapeutic value of rest and its mode of action, I would suggest that "rest" of any inflamed joint leads to diminution of active congestion and of synovial

effusion into its cavity, so that the pabulum for the growth of the bacilli is diminished. In the analogous case of tuberculous peritonitis incision and the withdrawal of ascitic fluid is often followed by good results.

Since Koch's tuberculin definitely failed to fulfil the expectations at first formed regarding it, numerous substances have been introduced either as local injections into the diseased tissues (intra-parenchymatous injections), or as subcutaneous injections intended to act generally.

Local Injections.

Although local injections have gained a strong position on the Continent and in America, they do not appear to have been employed to any large extent in this country. And I fear that tuberculous disease of joints in its early stages is too often neglected, and valuable time is lost by treatment carried out in crowded out-patient rooms by pressure, Scott's dressing, and immobilising apparatus, the object of which is defeated by the neglect and carelessness of parents.

The extent of the trial of the above-mentioned treatment by injection may be gauged by the following list of no fewer than fifteen substances used as local injections; creasote, guaiacol, benzoate of soda, phosphate of lime, naphthol and camphor, perchloride of mercury, arsenious acid, copper salts, tincture of iodine, carbolic acid, arsenious acid, cinnamic acid, tannin, balsam of Peru, and last, but of most importance, chloride of zinc and iodoform.

The Iodoform Treatment.

The injection of iodoform as a 10 per cent. emulsion in glycerine or olive oil has been so fully tried and carefully reported on, that there can no longer be any doubt as to its value as an adjunct to the usual remedies, or as a preparation for operative measures. Koenig estimates that 30 per cent. of cases are cured by iodoform treatment, and that 50 per cent. may be cured by ordinary physical means. The following case of tuberculosis of the elbow-joint, which I recently saw nearly two years after treatment, affords an illustration:

The child, then aged three years, was admitted to the Evelina Hospital in September, 1892, for synovial disease of the left elbow. She had previously been treated as an out-patient with a splint, Scott's dressing, and strapping, but the disease steadily progressed. Altogether eight injections were used, extending over a period of two months. When she left the hospital the joint had recovered to a great extent the power of flexion and extension. She returned in July, 1894, with a tuberculous abscess the size of a filbert over the ulna at the base of the olecranon, and entirely unconnected with the joint. There was no swelling of the synovial membrane, and, on examination under an anæsthetic, the breaking of a few adhesions enabled the joint to be freely moved. This mobility has been maintained.

The emulsion should be sterilised by heat. Symptoms of iodoform poisoning do not occur if glycerine or olive oil be used as a suspending medium, but ether is not free from this danger and should not be employed. One to two drachms may be injected at intervals of one to two weeks; and an improvement is observed after the second or third injection if the treatment is likely to be successful. Senn, who has given this method an extensive trial and is a strong advocate of it, states that a moderate use of the limb is compatible with it. Further, "that this treatment may prove successful in primary osseous tuberculosis followed by involvment of the joint, provided the osseous foci are small." I have seen marked benefit and even cure follow the injection of iodoform into the affected bones themselves in recent tuberculosis of the carpus and in tuberculous dactylitis.

The "Sclerogenic" Method.

The injection of chloride of zinc, known as the "*methode sclerogène*," introduced by Lannelongue I look upon as being more rapid and decisive in its results than iodoform. Unlike the latter the injection is not thrown into the joint but into the margin of the synovial membrane as near the periosteum as possible, the object being to obliterate the vessels entering the synovial membrane and to excite a new formation of connective tissue by the destruction of the tuberculous tissue. The technique and results may be gathered from the brief recital of the following case:

A girl aged 12 years was admitted into the Evelina Hospital in February 1893 with typical synovial disease of the right knee. It began five years before, after a fall; and for a short time had been treated with a splint. The joint measured over the patella 1 inch more in circumference than its fellow, the synovial membrane was greatly swollen and semi-gelatinous in consistence, and flexion much limited. No evidence of bone lesion. Under chloroform a 10 per cent. solution of chloride of zinc was injected around the margin of the synovial membrane, the needle being passed through the skin at convenient spots, and then moved about subcutaneously from point to point, 2 minims being injected at each point. The punctures were dressed with gauze, pressure applied by a Martin's bandage, and a back splint was adjusted. The injection was repeated on two occasions, at intervals of a fortnight, 12 to 20 minims of the fluid being injected at each sitting. She was discharged on May 13th, with a plaster case, the swelling having almost disappeared. In July the joint was painless and fairly movable. But in January, 1894, she returned with a distinct recrudescence of the pulpy disease confined entirely to the inner and lower part of the joint. Perhaps, under the influence of pique, at the return of the disease I proceeded to operate instead of pursuing the treatment further. The joint was exposed by an incision reaching from the internal condyle to the outer side of the ligamentum patellæ, which was divided. Only the synovial membrane on the inner lateral aspect of the the joint was pulpy; this was removed. But the noteworthy feature of the case, and that which, perhaps, warrants me in bringing it to your notice, was that the *cul-de-sac* above the patella was obliterated, and the whole of the synovial membrane above the patella and on the outer side of the joint was transformed into healthy-looking, non-vascular, softish connective tissue. The wound healed by first intention, and the joint at the present time is perfectly healthy.

The reaction after the injections is in some cases considerable; and where large caseous or softening foci exist suppuration may supervene in a very few days. This occurred in a case of tuberculosis of the dorsum of the foot over the cuneiform and scaphoid. The resulting abscess was opened and scraped, when it was found that the tuberculous material was liquified and broken down by the action of the fluid. Direct union took place. Six months after there was no return of the disease, although the patient, a young girl, had been using the foot for some months.

The injection treatment is applicable more especially to the superficial joints, *i.e.*, the elbow, knee, ankle, carpus, and tarsus: and to cases of synovial disease in which there is no evidence of extensive bone lesions. The hip joint is not so favourable, partly from the greater difficulty in reaching the diseased area, but chiefly from the much larger proportion of cases in which a sequestrum is present.

Further experience must show which cases are most suited for the injection of iodoform, and which for chloride of zinc. In cases of apparently pure synovial disease of superficial joints I prefer the latter.

Bier's Method: Artificial Induction of Venous Hyperæmia.

I should like to call attention for a few minutes to a novel method of treating tuberculosis by the artificial induction of venous or engorgement hyperæmia, not only because it was grounded on a well-known pathological fact, but also because so good an observer as Mikuliez has given it a fair trial and reported favourably upon it. It is only applicable to tuberculosis of joints at a distance from the trunk. Venous hyperæmia is induced by constricting the limb with a gutta-percha tube placed immediately above the affected part. Abrasion from pressure on the skin is avoided by frequently changing the position of the ligature, and by placing beneath it a layer of cotton wool or a bandage. The limb below the affected part is first bandaged. The treatment should be persevered in for weeks or months, and not broken day or night, but later often at night. A dependent position of the limb is advisable; and in most cases the patient may be permitted to use it. This treatment was suggested by the fact that a hyperæmic lung is very rarely affected with tuberculosis.

The originator, Bier, of Kiel, who tried it in Esmarch's clinic, believes that the good effect of the hyperæmia is to be sought in the formation of connective tissue which it excites. It has also been suggested that the excess of serum induced by the hyperæmia has a germicidal action; or that the tuberculin is retained and accumulates in the part. In most cases the pain diminishes at once, and a good effect is observed in from eight to fourteen days. The first case of eight reported by Mikulicz is remarkable in that healing of a suppurating knee-joint took place after the failure of iodoform treatment, incision, drainage, etc.

Operative Measures.

Setting aside, for lack of time, the difficult and vexed question as to when operative interference is necessary, I will now briefly glance at some of the various operative procedures ap-

plicable to special joints, with the view of suggesting points for and stimulating discussion. It will be generally admitted that the results of operative treatment of tuberculous joint disease have greatly improved during the last few years. This improvement may probably be mainly ascribed to modifications in *technique*, such as the use of flushing (either with sterilised hot water or antiseptic solutions) during and at the close of the operation, the more complete removal of the diseased tissue, the practical abolition of drainage tubes, and we must add the more general appreciation of, and attention to, aseptic details. The omission of the use of drainage tubes in aseptic cases is a distinct advance, in that it lessens the tendency to the formation of sinuses, and allows of the limb being placed at once in a plaster-of-paris case, since changing of the first dressing in twenty-four or forty-eight hours for the purpose of removing the drainage tube is rendered unnecessary. It is not advisable, as a rule, to employ a tourniquet, on account of the oozing following its removal.

Modifications are constantly taking place in the various operations themselves. Arthrotomy or simple incision into a joint has for the most part fallen into disuse, but it may be advisable in acute cases of abundant sero-purulent effusion into a joint. The evacuation of the fluid should be combined with scraping, and the injection of iodoform emulsion or packing with iodoform gauze. I would lay some stress on a certain class of cases in which the onset of the disease is acute and sudden, and accompanied by abundant effusion into the joint, since the error of diagnosing simple synovitis may readily be fallen into. For cases with copious effusion I prefer Senn's method of treatment. He taps the joint with a trocar, washes it out with boric acid solution, and then injects iodoform emulsion. In some cases thus treated the disease entirely disappears; but in one case the joint subsequently assumed all the appearance of tuberculous synovial disease, and on opening it I found that the whole of the outer half of the epiphysis of the femur had been destroyed. Resection was performed with good results, and I think the previous treatment contributed to it by permitting the acute symptoms to subside.

ARTHRECTOMY.

The typical resections, to which we still accord a traditional veneration, have given place, for the most part to arthrectomy or partial resection. By the latter (partial resection) I mean, of course, excision of such of the articular surfaces of a joint as are too extensively implicated for the disease to be removed by erasion. Again, in regard to incisions, we should select those which best expose the disease in each particular case rather than allow ourselves to be hampered by any hard and fast rules. The character of our operations must be guided chiefly by the following considerations, namely, the extent of the disease, especially of any osseous lesions, the desirability of obtaining movement or firm ankylosis in each particular joint, and, lastly, the probable ultimate result as regards shortening. The extent of the disease can usually only be gauged when the joint is laid open, but the considerations in respect of mobility and of shortening are chiefly influenced by the individual joint.

Hip.—In the hip-joint, resection of the head of the femur is indicated for the purpose of exposing the acetabulum and the cavity of the joint, and on account of the frequency of bone disease. According to Riedel, sequestra are present in one of the articular surfaces in 70 per cent. of cases. Further, the shortening in resection above the trochanter is not considerable because, as Ollier asserts, the growth at the upper epiphysis of the femur is only half that at the lower after the age of 4 years. He estimates that if the operation be performed at the age of 4 years, the resulting diminution in length from removal of the upper epiphysis will be about 3 ins. I think that arthrectomy is not likely ever to gain a following in operations on the hip, owing to the frequency of bone lesions, the slight disadvantages as regards shortening following removal of the head alone, together with the great frequency of recurrence, even after resection.[1] Tiling suggests exposing the joint by resection of the great trochanter, and subsequently, after performing arthrectomy or partial excision, replacing it and fixing it by bone pegs or sutures. This method appears worthy of a trial.

[1] In 81 per cent. of cases (Poll er).

Knee.—In the knee the conditions are much more complicated, for the removal or destruction of the intermediary cartilages leads to great shortening, which amounted in one case recorded by Pemberton to 9 inches, of which 3½ were made up by the bone actually removed. This is accounted for by the fact that the lower epiphysial line of the femur and the upper of the tibia are responsible for twice the amount of growth to that provided by the upper end of the femur and the lower end of the tibia respectively. Even resection of the articular surfaces within the epiphysial lines (intra-epiphysial resection) leads to considerable shortening. This is proved both by clinical observation and by the experiments of Ollier, who found that removal of the cartilage and of a thin layer of bone from the lower ends of the radius and ulna of rabbits led in 2½ months to a shortening of the radius by 5 mm. and of the ulna by 2 mm. It should, however, be borne in mind that in all such experiments the limb can obviously not be used; and we must, therefore, reckon disuse as one of the factors leading to diminished growth. The effect of impaired function in diminishing the growth of a limb is manifest after disease of a joint, such as the knee, treated by conservative methods. In a case observed by Hoffa, it amounted to 18 cm. (7 inches) in 12 years. Infantile paralysis furnishes another familiar and well-marked example of arrest of growth from disuse. But impaired function and trophic disturbance constitute only factors; and I incline to agree with Hoffa that the marked shortening in some cases both after intra-epiphysial resection and after conservative treatment is mainly due the effects on the intermediary cartilages of tuberculous foci and sequestra in the epiphyses. I do not see how the great differences in the amount of shortening after intra-epiphysial resection can otherwise be explained. Thus in the three cases with the least amount of shortening (of the 130 cases collected by Hoffa), the diminution amounted to 6 cm. in 12 years, 3½ in 8 years, and 2 in 6 years, whereas the greatest shortening was in one case 13½ cm. in 6 years, and 12 cm. in 4 years. In the last case only a thin layer of the articular surfaces is stated to have been removed. I find on examining these cases that suppuration and subsequent fistula formation appeared to have no influence on the result; and all the operations were performed in the pre-antiseptic period.

Now, as regards the results of arthrectomy, it is abundantly proved that no shortening follows as a rule.[2] Of 44 cases of arthrectomy of the knee-joint in which the result was satisfactory, out of 70 collected by Mandry, in none could shortening to any degree be detected. But in three cases there was lengthening of 1 to 1½ centimetres. Unfortunately, the operation of arthrectomy in the knee has certain drawbacks of such a serious nature as to cause Lucas-Championnière and others still to practise resection, even in children. These disadvantages are the greater difficulty of removing the diseased synovial membrane, especially from the posterior aspect of the joint, the danger of overlooking osseous foci lying beneath the articular surfaces, and the fact that ankylosis is much less firm; there is, therefore, a greater liability to the occurrence of flexion. That these objections are not ill-founded is evident from the statistics of Mandry above referred to. Thus, of the 70 cases, in 19 the disease returned, ankylosis was only obtained in 32, and a movable (!) joint in 8, whilst flexion or contraction took place in a number of cases. Nevertheless, the indications as regards children are clearly in favour of arthrectomy; and when this is impossible, partial resection, which has been found to lead to much less shortening than typical resection (Neugebauer). The latter should be reserved for the worst cases of osseous disease. Senn suggests that where an osseous focus necessitates the excavation of a large cavity in an articular surface the cavity should be filled up with decalcified bone chips (mixed with iodoform) to form a framework for the reparative material. I do not despair of our ultimately obtaining, in the most favourable cases, a movable joint, but it is evident that to make the attempt with any chance of success the crucial and the lateral ligaments must be preserved, or the latter sutured after division;

[2] It must be remembered that in cases where this operation is carried out no extensive bone lesion would exist, otherwise resection or partial resection would be necessitated.

but in the majority of cases, where firm ankylosis is desired, I think it may be advantageous to remove the cartilages only by shaving with a knife. It will be of interest and value to hear the opinions of those present as to the incision by which the best access to the joint is obtained. For my own part, I have always found the old flap incision sufficient, dividing the ligamentum patellæ, and subsequently suturing it. The division of the patella has this disadvantage, that in case of recurrence it exposes a fresh osseous surface to the risk of infection. In resection I consider fixation of the sawn surfaces by silver wire or pegs unnecessary, especially if the limb be placed in a plaster case. Even when primary union occurs wire sutures frequently lead subsequently to troublesome ulceration of the skin, and sometimes to caries of the bone. It is hardly necessary to insist here on the necessity of excising the capsule, of removing every particle of diseased tissue, and of searching carefully for softening patches in the bones; and not only should caseous foci themselves be removed with the sharp spoon, but also any surrounding osseous tissue affected with rarefactive osteitis or with sclerosis. Such cavities may be touched with the thermo-cautery. Ulcerations of the articular surfaces may be shaved off, for Watson Cheyne has shown that the tuberculous disease only extends to the depth of $\frac{1}{8}$ of an inch.

Ankle.—In operations for tuberculosis of the ankle-joint and astragalus I have used with advantage a single incision, extending from the centre of the anterior surface of the joint outwards and downwards to the external malleolus, and curving round that process to its posterior surface. No tendons need be divided, the peronei being removed from their groove and turned upwards, while the extensor tendons are pulled inwards towards the internal malleolus with a hook. After division of the external lateral and anterior ligaments, the foot can readily be turned inwards on the inner side of the leg, the whole joint surface being thus exposed to view. The division of all the extensor tendons and anterior tibial artery by an incision over the front of the joint I look upon as an unnecessary mutilation. I have found it necessary in five consecutive cases to remove the astragalus, and think it usually advisable, as this bone is frequently diseased; and by its removal a freer access to the joint cavity is obtained. The articular surface of the tibia and the malleoli are left if unaffected, otherwise erased or resected, according to their condition. The results as regards firmness and mobility of the joint afterwards are excellent.

Os Calcis, etc.—Time will not permit me to speak of operations on the tarsus, but I may mention, in regard to the remarkable repair which takes place after erasions and excision, that Le Dentu records a case of excision of the os calcis, astragalus, and scaphoid in which he implanted a piece of decalcified bone. "It was followed by abundant new formation of bone, with almost complete restoration of function."

Shoulder.—In dealing with the joints of the upper extremity we must bear in mind that the growth of the limb is mainly effected by the upper epiphysis of the humerus and the lower epiphyses of the radius and ulna, while the epiphysial lines on each side of the elbow-joint grow only half as quickly as those at the opposite ends of the bones. Hence the importance, in operations on the shoulder and wrist, of preserving intact the epiphysial lines and, if practicable, the articular surfaces of the humerus or radius and ulna respectively. For the purpose of exposing the shoulder-joint without removing the head of the humerus it has been suggested to combine with an anterior incision temporary resection of the acromion, which is subsequently fixed in position by sutures.

Elbow.—In dealing with tuberculosis of the elbow-joint arthrectomy or partial resection is the line of treatment to be aimed at in practice. I think it of great importance in regard to the ultimate power and mobility of the joint to preserve the olecranon process, although, unfortunately, the ulna is more often the seat of osseous lesions than any of the other bones; and that in a joint in which about 75 per cent. of the cases are examples of primary osseous tuberculosis. In one case in an adult I scraped away a large caseous focus from the ulna and obtained a permanent cure with good movement. The joint was opened by two lateral incisions on each side of the olecranon: and this procedure I consider much better than a posterior incision with division and subsequent suture of the olecranon. The latter operation I performed in 1888, and in two or three subsequent cases, but found, after resection of the humerus, a great tendency to ankylosis between it and the line of division of the olecranon.

Wrist.—As regards partial excision of the wrist I am glad to have the opportunity of showing you a case in which four years ago I removed the first row of the carpus only and a wedge-shaped piece on the ulnar side of the radius, including the radio-ulnar articulation. This appeared to be the primary seat of disease. The restoration of function is so good that the patient—a young lady—plays the piano with facility, and there is only 2 cm. shortening on the radial side.

The word amputation—too often the signal of failure—has not been mentioned; nor have I spoken especially of neglected cases in which suppurating sinuses have been allowed to form. The subject, indeed, on which, at the invitation of our Secretaries, I have been privileged to make these fragmentary remarks is an extremely extensive one—of great importance and familiar to every surgeon. It is also one on which the widest divergencies of opinion and of practice exist on many questions. For these reasons I look forward to a valuable discussion.

II.—D'Arcy Power, M.A., M.B., F.R.C.S.,
Demonstrator of Practical and Operative Surgery, St. Bartholomew's Hospital.

Mr. D'Arcy Power, after congratulating Mr. Eve on his excellent results obtained in his case of partial excision of the wrist, stated that he had employed sclerogeny in the treatment of early tuberculous arthritis which had not yielded to rest. He preferred the method adopted by Professor Lannelongue, of injecting a 1.15 solution of zinc chloride into the periarticular tissues to the injection of iodoform into the cavity of the joint itself. Mr. Power asked Mr. Eve what he considered to be the proper course to be adopted in sclerogeny for cases of mixed tuberculous injection in which sinuses existed. The treatment of tuberculous inflammation by producing chronic hyperæmia of the limb had not yielded satisfactory results in his hands, and he had therefore abandoned it. He fully agreed with Mr. Eve's statement that a drainage tube was not required as a routine method, and that it was often most advisable to endeavour to obtain union by first intention. He had specially drawn attention to this point and its importance in the paper which he was contributing to the Section upon Bursal Enlargements as Indications of Incipient Tuberculous Arthritis. Mr. Power drew attention, in conclusion, to the very excellent results which Mr. Clutton had obtained by arthrectomy. He said that he believed in the most satisfactory cases, there was no operation which yielded so useful a limb, though rest in the most carefully selected cases also gave as good results.

III.—J. Ewens, L.R.C.P.Lond., L.R.C.S.Ed.,
Senior Surgeon Bristol Hospital for Women and Children.

Mr. Ewens spoke favourably of Scott's dressing. He had obtained very favourable results from it: also from application of potass. c. calce. in cases of tarsal disease: also in a case of tibio-tarsal disease. He had also had good results from free gouging of the ends of long bones not involving the articular surfaces. His own results of arthrectomy were not favourable. He advocated early excision of joints in which reasonable time had been allowed for rest. Thomas's splint so often disappointed because patients would not give due attention, but admirable results were obtained where the method was duly carried out. He recommenced excision of elbow-joint in preference to arthrectomy.

IV.—Noble Smith, F.R.C.S.Edin.,
Surgeon All Saint's Children's Hospital.

Mr. Noble Smith said that in cases of diseased joints in which disorganisation of the joint surfaces had not taken place, and the disease seemed chiefly in the bones, he had injected solutions of carbolic acid into the bones in the neighbourhood of the diseased joints, with very good results as regards rapidly subsiding inflammation. Subsequently he had drilled into the bones without injecting anything, and

with equally good results. In cases of sinuses he had found daily injection of antiseptic solution effectual in curing them, but in recent years he had combined scraping the surfaces on first injecting (once) a solution of 1 in 20 or 1 in 30, so as to destroy the unhealthy surface, and subsequently keeping up the effects by injection of the weaker solution. In cases of greater disorganisation of joints, arthrectomy or excision had been performed, but he thought that the object of the surgeon should always be to operate with a view to relieving and curing the joint, and not of removing a supposed centre of infection.

V.—ROBERT JONES, F.R.C.S.Edin.,
Surgeon Royal Southern Hospital, Liverpool.

MR. ROBERT JONES laid stress upon the advantages of rest. He rarely even excised. Excision should be done early to be effective, and to do it early would be to remove the potentialities of recovery in many cases. He had not derived much benefit from injections of antiseptics. He thought that one would less frequently hear of recurrence of disease if a test of recovery were pretty generally recognised. He described the methods of testing the various joints for recovery from disease, and the methods of judging as to the permanence of ankylosis. Every case should be treated at complete rest until all inflammatory symptoms had subsided. Passive movements directly contradict the theory of rest. Prolonged fixation does not *per se* give rise to ankylosis. He drew attention to some of the erratic positions in which joints, notably the wrist, are placed in regarded to subsequent utility.

VI.—E. LUKE FREER, M.R.C.S.,
Late Surgeon Birmingham Royal Orthopædic Hospital.

MR. FREER congratulated MR. EVE on the result in the case shown of wrist excision. He was glad to find that much greater discrimination was exercised than formerly in the selection of cases for excision and arthrectomy. Koch's method enabled them to judge of those cases that were or were not tuberculous, but it was not a popular system at the present time. He would, however, mention one particular case of arthritis of the knee in which, after wearing a Thomas's knee-splint for two years, the disease still remaining in a subacute state, he made about forty injections in two months, with the most satisfactory result. The patient was able to leave off the splint a short time after, and her father stated that the child's health was better than it had ever been. Passive movements should be avoided while any mischief remained in the joint. He used iodine for injection into sinuses. Perfect physiological rest was the most important matter, but was not always sufficiently carried out.

ON THE VALUE OF BURSAL ENLARGEMENTS AS INDICATIONS OF INCIPIENT TUBERCULOUS ARTHRITIS.

By D'ARCY POWER, M.A., M.B.Oxon., F.R.C.S.,
Surgeon to the Victoria Hospital for Children, Chelsea; Demonstrator of Surgery at St. Bartholomew's Hospital.

I HAVE recently had under my care several cases of enlarged bursæ in the neighbourhood of the hip-joint in children. There was nothing to indicate that the joint was affected at the time I first saw the patients. They did not limp, they did not complain of pain, there was no muscular fixation, and the head of the bone moved freely in the acetabulum. I did not pay much attention to them in the earlier cases, but it has recently been brought home to me that such passive enlargements of bursæ are often of very serious import, and are of great diagnostic value, for they are frequently the first indication of tuberculous mischief, occurring in a patient who otherwise appears sound. The tuberculous trouble thus starting in the bursa will spread rapidly to the joint unless care be taken to prevent it. The joint may be affected by the direct spread of tubercular inflammation from the bursa, as by the bursting of an abscess into its cavity, but this extension does not happen if ordinary care be taken. The second method is the more insidious, but at the same the more frequent. The child is on the verge of tubercle, for the bacillus has located itself in a single bursa, and there causes a passive effusion. This lodgment the tubercle bacillus has been able to effect owing to some slight injury to which the bursa has been subjected, leading to a diminished resistance on the part of the tissues. The congestion produced in the neighbouring parts by the inflammation of the bursa is sufficient to enable the tubercle bacillus to effect a farther lodgment, and thus an arthritis is started. The newer pathology would explain the sequence of events in a somewhat different manner.

The congestion leads to increased multiplication of the tubercle bacilli, increased multiplication means increased invasion of the affected tissues by the various forms of leucocytes attracted owing to their chemiotaxic properties by the bacilli. The destruction of phagocytic leucocytes which then takes place gives rise to the caseating masses which we know as tubercle. These masses are destructive to the functions of the joint in which they are formed, and, if they become septic, are even inimical to life itself.

The following cases which have been under treatment at the Victoria Hospital for Children during the present year well illustrate the main features of these interesting cases.

I must here thank my colleagues, Mr. Pick and Mr. Waterhouse, for the readiness with which they each gave me permission to use the notes of a case which had come under their observation.

CASE I.—A delicate girl, aged 4 years, who had suffered from superficial keratitis was admitted under my care into the Victoria Hospital on June 4th. Her left buttock was noticed to be swollen eight days since; she walks well but cannot sit with comfort. It was found on examination that the left buttock distinctly fluctuated and that the swelling extended from the crest of the ilium to three or four inches below the great trochanter. An incision was made into it and about eight ounces of shreddy pus were let out. It was clear when a finger was put into the cavity that the abscess had been formed in the multilocular bursa situated between the gluteus maximus and the great trochanter. The abscess wall was thoroughly scraped away, the cavity was washed out with boracic lotion and the wound was closed with horsehair sutures. It healed by first intention; the child went home cured, and she has remained well ever since.

CASE II.—A girl, aged 6 years, was admitted into the Victoria Hospital under the care of Mr. Pick. She began to halt on left leg five weeks before admission. She had a large fluid swelling behind the left hip. The joint was freely movable, and did not appear to Mr. Pick to be in any way affected, as there was neither shortening, flexion, nor adduction of the limb. An incision behind the great trochanter allowed of the removal of much caseous material. The cavity which then remained extended beneath the gluteus maximus as far as the finger could reach. It had no connexion either with the hip-joint or with the bone. The wound remained open for some time, but the child was kept at rest and with an extension apparatus. She was discharged six weeks later in a plaster-of-paris case and with a patten on the sound foot.

CASE III.—A girl, aged 1 year, was admitted to the hospital under my care with a fluid swelling about the size of a hen's egg situated over the great trochanter. The movements of the hip were absolutely unimpaired, the child was in good health and had digestive troubles. An incision was made into the swelling, and 3 ounces of yellowish red pus were let out. It was again clear, when the finger was introduced into the cavity, that the abscess had been formed in the bursa. Three weeks later the wound had almost healed, but the thigh was flexed at the hip and there was much lordosis. An extending weight of a pound was attached to the leg. Three days later the child's condition had greatly improved, both generally and locally. She had regained her appetite, the leg was straight, and she had no lordosis. Six weeks later her usual posture in bed was on her back, kicking both legs freely in the air. She was therefore sent home as cured. It is obvious that this child just escaped an attack of tuberculous arthritis.

CASE IV.—A boy aged 4½ years was admitted into the hospital under the care of Mr. Waterhouse on account of an enlarged patellar bursa. The knee appeared to be unaffected. The bursa was dissected out, and was found to be the seat of tuberculous disease. Primary union of the wound took place at every part except where a small drainage tube had been inserted, and there a sinus formed. The knee became affected with pulpy degeneration, and six weeks later it was found to need excision. On opening the joint for this purpose the synovial membrane was seen to be invaded everywhere by tuberculous granulation tissue. There was no disease either of the cartilages or of the bones. A continuous track of disease, however, could be traced from the old scar at the site of the prepatellar bursa to a spot in the synovial membrane of the knee just above the patella, where the tuberculous material had undergone caseation. This case differs, therefore, from the preceding ones in the fact that the joint became affected by direct extension from a tuberculous focus.

CASE V.—I was asked to see a boy aged 17, employed as a gardener in a healthy village, who had developed a painless fluid swelling in the situation of the bursa over the great trochanter. He evinced an unconquerable aversion to leaving home or to any form of treatment by rest. He continued his occupation from the time I saw him in March until the end of July. His hip then became affected with acute arthritis, and in two months he was dead of general tuberculosis.

CASE VI.—Ten days ago an exactly similar case came under my notice whilst acting in Mr. Bowlby's place as surgeon to the Alexandra Hospital for Hip Disease. A girl, L. D., aged 8, was admitted with a large cold abscess in the bursa over the great trochanter. It was opened and much tuberculous material was scraped away. The wound healed by first intention and the patient has been discharged.

It may fairly be said that if so many cases have come under

the observation of a single surgeon in a comparatively short time they cannot be of infrequent occurrence. It may be so, but although the passive enlargement of bursæ is incidentally mentioned in most textbooks of surgery I have never seen much stress laid upon it from a diagnostic standpoint, yet it is evidently of considerable importance both in diagnosis and in prognosis. In diagnosis, because effective treatment should at once be adopted; in prognosis, because it is clear that unless great care be taken the worst results are to be apprehended. The treatment to be adopted is that given in the successful cases. It follows directly from the pathology. If the passive effusion into the bursa be seen before suppuration has occurred the fluid should be let out by means of an incision rather than by aspiration. Why, we know not, but we do know that in such passive effusions due to tubercle, and notably in tuberculous peritonitis with simple effusion, a cure more often follows from a free incision than from a puncture, even though the wound afterwards heal by first intention. If suppuration has occurred the abscess must be opened, scraped, thoroughly cleansed, and every effort must be made to get it to heal at once. Union by first intention is of vital importance in these cases, for if it can be secured the patient will in all probability escape further trouble. Suitable precautions are to be taken at the same time to secure physiological rest for the joint, whilst the general hygiene of the patient must be improved, for it should never be forgotten that when the bursæ are enlarged in this manner the patient has already passed the threshold of tubercular disease. If the wound fail to heal by first intention there is danger lest the slight increase of inflammation thus produced may hasten the tubercular process, and thus the operation will have done more harm than good. It is perhaps better for this reason not to insert a drainage tube, but to close the wound in its whole extent.

I do not know whether such cases are common in the practice of others, and I have read this account to you for the purpose of eliciting the opinions of those surgeons whose experience is greater than mine. Rare cases often occur in sequences, so that the experience of an individual may be fallacious when it is taken as the test of a rule. It happens, on the other hand, that, with the spread of surgical knowledge amongst the laity, children are brought earlier to the practitioner, and one does not often see those disastrous results of neglected joint disease which were not infrequent even ten or twelve years ago. It may be, too, that as one's experience becomes more extensive trivial points are noted with greater care. Be this as it may, however, the facts remain, and the cases form an interesting and an instructive series.

THE TREATMENT OF RICKETY DEFORMITIES BY MEANS OF OSTEOCLASIS.

By R. W. Murray, F.R.C.S.,

Surgeon Liverpool Infirmary for Children.

Rickets is such a common disease in the large towns of England and Scotland, and crooked legs (the result of rickets) so well known to everybody, that I thought it might be of interest to relate to you the results of our experience at the Liverpool Infirmary for Children respecting the treatment of these deformities. I do not propose to deal with rickets as a general disease, but will confine my remarks to the treatment of crooked legs resulting from it; and I wish it to be clearly understood that my remarks will refer only to the treatment of crooked legs occurring in quite young children, that is to say, in children under 5 years of age, and to those a few years older who are markedly rickety. In the older children I correct the deformities by doing a simple osteotomy, or by taking a wedge-shaped piece out of the tibia. I will not burden you with a criticism of the numerous explanations that have been advanced as to why in one case the tibiæ curve outwards, in another inwards, and in a third knock-knee results. I will only remind you that the extreme deformities one sometimes sees in very rickety children about 4 or 5 years of age and who have only just commenced to walk, their legs resembling corkscrews more than anything else, are undoubtedly due to the way in which the child has been accustomed to sit, with the legs tucked away in tailor fashion; and if you place the child on the floor it will assume this position, and demonstrate to you how it made its legs crooked.

A very large proportion of the children treated as outpatients at the Children's Infirmary are rickety, and up to the year 1888, if a child was brought to be treated for bow legs or knock-knee, the treatment adopted was that which I take it is still most generally practised; suitable splints were applied projecting well below the feet, so as to prevent the child from walking and to gradually straighten its legs: the rickets, of course, at the same time being treated generally. The results obtained were on the whole fairly satisfactory, but only fairly satisfactory, for it is a very easy matter to apply splints and tell the mother to keep the child off its feet, but quite another thing for the mother to carry out these instructions. The children are usually in good health, and strongly resent being kept off their feet, and at the end of a month or so the mother, not seeing any marked improvement in the state of the legs, loses heart, and the treatment is not carried out as rigidly as one would wish.

In 1888 the late Mr. Rhinallt Pughe, appreciating these difficulties, adopted the more radical method of at once bending the bones straight with his hands, producing a greenstick fracture at the maximum point of the curve, and then applied splints. These were removed next day, and plaster-of-paris substituted. This was taken off at the end of four weeks, the child kept off its feet for four weeks longer, and then allowed to walk; constitutional treatment being, of course, carried out at the same time. The results were most satisfactory, and I think I am justified in saying that, as a consequence, there has of recent years been a large increase in the number of children brought to the Infirmary to have their legs straightened, as the following figures, taken from the records of the hospital, will show:

In 1888 Mr. Pughe straightened 30 legs, and in 1893 I straightened 311, the total number since 1888 being 778. These numbers include, beside knock-knees and bow-legs, a peculiar but by no means uncommon rickety deformity, which very seriously interferes with the child's walking, and for which I have with great advantage performed osteoclasis of the lower end of the femur. I refer to rotation outwards of both lower limbs, so that when the child is lying on its back the patella, instead of looking forward and outwards, looks directly outwards: and the foot, instead of resting on the heel, rests on the whole of its outer border. Though osteoclasis for rickety deformities is by no means a novel method of treatment, and was practised somewhat extensively in France and Germany fifty years ago, still, so far as I can learn, it was practised on children older than those whose cases I have related to you, and the bones were broken by means of some form of osteoclast, and not by the hands alone: in fact, osteoclasis was substituted for osteotomy, rather than substituted, as I have done, for splints.

At the Glasgow meeting of the British Medical Association Professor Ogston strongly recommended the immediate and forcible straightening of knock-knees and bow-legs in young children, and though many surgeons in England, I believe, practise osteoclasis for curved tibiæ, comparatively few do so for genu valgum. The objection, it is said, being that in forcibly straightening a knock-knee you produce a separation of the lower epiphysis of the femur and so interfere with the subsequent growth of the limbs. And in a deservedly popular work on diseases of children the practice is condemned in the strongest terms. Now, I have on several occasions forcibly straightened a knock-knee on one side only and examined the children eighteen months afterwards and found absolutely no difference in the length of the limbs: and, further, I have made it a practice to examine carefully at the time of operation for the seat of fracture, and find that it almost invariably takes place at a point where the lower end of the femur joins the shaft and quite an inch above the epiphysial line. Rickety bones while soft can be readily fractured at the exact point at which you wish to break them, and are easily moulded into good position, even the anterior curvatures of the lower end of the tibiæ can be thus straightened; and, further, by straightening the soft and growing bones, one obviates the necessity of performing the more serious operations of osteotomy and the taking out of wedge-shaped pieces of bone in later childhood.

Again—and I take this to be a matter of considerable im-

portance, in gradually straightening a knock-knee with splints—there is a great tendency lor the ligaments to yield as well as the bones, a flail-like joint resulting, whereas in osteoclasis the bone alone gives way. My hands are the only osteoclasts I have ever used, and there are one or two practical points worth bearing in mind in thus performing osteoclasis. First, as regards curved tibiæ, if it is a simple lateral curve, to break the bone at its greatest convexity one should not attempt to break it as one would a stick, but grasping the limb (say it is the right leg) firmly with the left hand at the point at which you wish to produce the fracture, and, keeping the left hand perfectly steady, using the thumb as a fulcrum, slowly over-correct the deformity with the right hand until the bone is fractured. It is important that the bone should be fractured and not merely bent, for the tendency of the bent bone to resume its former position is so great that the bandages are apt to become tight and the foot to swell, or the child's delicate skin to blister at the points where the splint presses. In an anterior curvature of the tibia I fracture the bone laterally, and then immediately mould the limb into good position and apply a back splint with a footpiece, it being usually necessary in these cases to at the same time divide the tendo-Achillis. In forcibly straightening a knock-knee (say of the right side) I grasp the thigh firmly with my left hand about two inches above the patella, using my index finger supported by my other fingers as a fulcrum, and holding the thigh perfectly steady with this hand gradually straighten the limb, the knee-joint being kept over-extended the whole time. There is no doubt that in children over 4 years of age considerable force is sometimes necessary, but it is not entirely a question of strength, there is some little knack in doing it, for I have known house surgeons who were much stronger men than I am fail where I succeeded. And I can much more easily straighten legs now than I could three years ago. If, however, in attempting to forcibly straighten a crooked bone one has to use so much force as to render it uncertain where the fracture will take place, then, as the object is to straighten the bone and not simply to break it, you had better desist and perform an osteotomy.

In conclusion, gentlemen, I would submit that the immediate straightening of rickety deformities is a much more rational mode of treatment than the more gradual method of splints alone, for not only is it absolutely free from risk—there has been no single mishap in the whole of my series of cases—but it also in the long run diminishes the amount of suffering and enables the children to be running about with straight legs months before they otherwise would be.

ANNUAL MUSEUM.

"A.B.C." SYSTEM OF BOOKKEEPING.—At Stand 59, Mr. B. Allsop, publisher, Shipley, Yorks, was engaged in explaining the working of the "A.B.C." system of medical bookkeeping, which has now gained a firm footing among medical practitioners in many parts of the world. A daybook, ledger, and collector's book were exhibited.

Messrs. ALLEN AND HANBURYS, LIMITED (London), claimed a good share of attention with their exhibit of Improved Pharmaceutical Products and Aseptic Surgical Instruments. Amongst the newer and recently introduced remedies were to be found Tetanus Antitoxin, the antitetanic serum discovered by Professor Tizzoni, of Bologna. The products of the Thyroid Gland, now so well known in the treatment of myxœdema, psoriasis, etc. were shown as Tabellæ, Cachets, and Elixir. Thyroidin is a purified extract of the gland. The glands are freed from blood and inert connective tissue, which speedily decompose. The firm had the usual display of Malt Extract and Combinations. The application of the vacuum pan to pharmaceutical manufacture was the invention of the late John Barry, a partner of William Allen. This firm was one of the first to introduce the manufacture of the now popular malt extract and its combinations into this country. They also showed Compressed Medicines; all the nauseous medicines being enclosed in a coating of sugar. Messrs. Allen and Hanburys also showed a large and varied assortment of surgical instruments which they manufactured entirely at their workshops at Bethnal Green, London, E. Among these were Midwifery Forceps, made on true aseptic lines entirely of metal, the handles being made of aluminium, and easily detachable for sterilising purposes; Midwifery Bags, fitted with movable linings, an advantage in cleaning the interior of bags whilst being economical. Sterilisers were shown for sterilising instruments, dressings, etc., suitable for operating theatres of hospitals, also smaller ones, for private use. A new combined Throat Spray and Curette, suggested by Dr. Pagan Lowe, of Bath, for treatment in diphtheria, was also shown; also Dr. T. S. Ellis's Modification of Sir Spencer Wells's Forceps for Compression of Uterine Fibroids with wire snare, and is a most simple and useful appliance. The wire serves as a guide to direct the blades between the tumour and the uterine walls as a means of drawing between the blades that part of the tumour farthest from the operator, to prevent undue pressure of the points of the blades against the uterine wall beyond the tumour. The blades may be introduced separately. Anastomosis Buttons as suggested by Mr. J. B. Murphy are also shown, as also is the new Colotomy Dilator designed by Mr. E. C. Ryall. An improved Portable Binaural Stethoscope, the rubber tubes of which are fitted with bayonet catch mounts, thus enabling the tubes to be readily detached, whilst the adjusting thumb-screw enables the user to easily regulate the required pressure to the ears. In addition to the above were a large assortment of Throat Sprays, Dental Instruments, Carriage Cases, etc., and, lastly, Dr. Tucker Wise's Spring Tape Chest Measurer for measuring the respiratory movements of the chest, comparing one side with the other in a single observation.

The ANGIER CHEMICAL COMPANY (London) showed Angier's Petroleum Emulsion—a preparation containing a purified petroleum oil combined with the hypophosphites, lime, and soda. The oil used is taken from selected wells and so purified by special manipulation as to be deprived of taste and odour and rendered acceptable to both palate and stomach, while retaining unimpaired and in a concentrated form all the virtues of the crude oil.

The ANGLO-SWISS CONDENSED MILK COMPANY (Cham, Switzerland, and London) showed their Ideal Milk, Condensed Milk, and Condensed Milk and Cocoa.

APOLLINARIS was there, its blushing honours thick upon it from Paris, placed first in purity in the recent report to the Academie de Médecine, and claiming and showing on the figures stated to be incomparable in popularity as in purity.

Messrs. ARMOUR AND CO.'s (Chicago and London) stand consisted of a front counter with a background formed by a glass case, flanked with steps, on which were displayed their Extract of Beef and Pharmaceutical Preparations. Special attention was drawn to the fact that the standard strength of their pepsin has been raised to 3,000 *U. S. P.* test. They guarantee it to be five times *B. P.* strength, that is to say, if tested according to the conditions of the *B. P.*, one-fifth of a grain of Armour's standard pepsin will be equivalent to 1 grain of pepsin *B. P.* Another special feature is the non-hygroscopic and odourless character of their soluble pepsins. Their extract of beef was served hot in cups and also iced with soda water. Their latest preparation, Desiccated Thyroids, prepared from fresh sheep's glands, was also shown. Six grains of this desiccated product represent one entire gland and contain all its active principles. The fat has been carefully removed by a degreasing process. Another recent product, Armour's Lactated Pepsin—a combination of all the various ferments which take part in the digestive processes—was also prominently exhibited.

Messrs. ARTHUR AND CO., manufacturing chemists (London) exhibited New Preparations made in accordance with suggestions and prescriptions of members of the medical profession: Lin. Tannici Co., indicated in dermatitis of various kinds, and said to be especially useful in osmidrosis, sore throat, hay fever, soft corns, etc. Mist. Calcis. Chlor. c. Ferro; a neutral and non-saccharine preparation, prescribed for delicate women and children. Mist. Calcis. Chlor.; a solution containing pure Calcic Chloride in pure water. Ung. Hamamelidis Co.; a compound ointment for use in cases of hæmorrhoids. It is put up in collapsible tubes, with detachable introducer. Massage unguent; a preparation of deodorised Ol. [illegible] bromse. Patients object to the smell of crude cocoa butter, but by

deodorisation all offensiveness is removed. Sedative Snuff; as prescribed for influenza and catarrh. Antiseptic Handkerchiefs, intended for use in cases of phthisis, measles with coryza, influenza, etc. They are destroyed after use, and thus prevent the dissemination of the disease. Being made of paper they are easily burned, and they are sufficiently soft to be used without discomfort. The cost is far less than that entailed by the washing of ordinary handkerchiefs. Lin. Iodoglycerol; a non-volatile preparation of iodine and its salts, without any irritating effect on the eyes. The combination with glycerol promotes the absorption of the iodine, and it never hardens nor cracks the skin. Used for gouty joints, or any case where iodine is employed externally. Lotio Picis Carbonis Co.: an application for nettlerash. Lin. Pinus Aceticum; a strong stimulating terebinthinate liniment of a thick creamy consistency, which renders it very agreeable to the patient. Lotio Capitis; a remedy for loss of hair, and an excellent stimulant for ordinary use. Ol. Morrhuæ Etheris; a clear and limpid preparation of oil and ether, which can be taken by persons unable to assimilate the plain oil. Bacillus Staining Fluids; Messrs. Arthur and Co. are making a specialty of stains for microscopic work. Those exhibited were Fuchsine and Blue, but they undertake to make them according to any formula, and stock them for the convenience of physicians.

The Aylesbury Dairy Company (London) exhibited their Humanised Milk, Special Milk Food, Peptonised Milk, Sterilised Milk and Cream, Koumiss, and Mutfler's Food.

Messrs. Billington Brothers (Liverpool) showed their Patent Epileptic Bedstead, Patent "Asylum" Bedstead, Invalid's Bedstead with adjustable headrest, fitted with patent design chain and spring mattress, Portable Folding Bedsteads with woven-wire spring mattress, Portable Folding Bedsteads with chain and spring mattress, Various Designs of Bedsteads, Leg Rests, etc., Bournemouth Couch or Lounge, Infirmary or Institution Locker, Bedstead with Spring Mattress, suitable for Medical or Administrative Staff, and sundry designs of Institution Bedsteads.

Messrs. H. T. Bishop and Son (Bristol) showed the Gem Automatic Apparatus for disinfecting and deodorising water-closets.

The Bovinine Company (London) showed Bovinine, a preparation of the juices of lean uncooked meat prepared by a cold process, whereby all the nutritious albuminoid elements are preserved, in addition to the meat salts and extractive matter.

The Bovril Company (London) showed a variety of their productions, including Bovril, a concentrated extract of beef: Invalid Bovril, for use especially in the sick room; Beef Jelly, prepared from matured ox beef extracted by gentle heat without added water; Vril Food, for infants and invalids; Special Emergency Foods, similar to those prepared for Dr. Nansen and Mr. Jackson for use during their expeditions to the North Pole; Kudos Cocoa and other preparations, such as Bovril Wine, Bovril Lozenges, Bovril Chocolate, etc.

Messrs. Boyd and Co. (Belfast) exhibited their Doctor's Ulster Coat and Doctor's Mackintosh, with special pocket for instruments; the Eiderdon Rug and Ladies' Golf Cloaks, etc.

Messrs. Brand and Co. exhibited their well-known specialities for invalids, including Essences of Beef, Mutton, Veal, and Chicken, consisting solely of the juices of the finest meats, without the addition of water or any other substance: Concentrated Beef Tea, Mutton, Chicken, and Veal Broths. One of the most recent introduction is their Meat Juice, prepared from English meat, which is said to be of great nutritive value, and agreeable to the palate. They also showed peptones of Beef, Mutton, Veal, and Chicken. These preparations are stated to contain not only the soluble and stimulating constituents of selected beef, etc., but also the otherwise insoluble though nutritious fibrine and albumen necessarily rejected from beef tea and other extracts.

Messrs. Brightman (Bristol and Cardiff) had an exhibit of Scafe's Patent Leather and Rubber Combination Boots. The advantages claimed for them are that they are dry, warm, elastic, non-slipping, durable, and noiseless.

The British Medical Temperance Association showed literature on the temperance question, and diagrams of the results of alcoholic action.

Messrs. Burroughs, Wellcome, and Co. occupied two stands. The smaller of these was devoted entirely to the new, handy, and economical Tea Tabloids, where tea was supplied gratis to thirsty visitors. The tea tabloids, which were much appreciated by all who tried them, contain none of the woody or uncooked portion of the leaf, and but little tannin, consequently the chief evils attending tea as a beverage are removed. The larger stand was prettily decorated with flowers and three large pyramids of show bottles containing specimens of the firm's pharmaceutical products and medical appliances—Tabloids of Organic Principles of animal origin, Tabloids of Thyroid Gland, Tabloids of Cerebrinin, Tabloids of Didymin, Tabloids of Red Bone Medulla, Tabloids of Suprarenal Capsules, and Tabloids of Zymine: the Kepler Extract of Malt, a powerful diastasic digestant and concentrated carbo-hydrate food; Kepler Solution of Cod-Liver Oil in Malt Extract, containing 45 per cent. of oil, easily assimilated, and can be taken by the most fastidious patients. Kepler Essence of Malt, a non-alcoholic diastasic liquid malt, cheap, and of an excellent character. Kepler Bitter Essence of Malt is a concentrated bitter ale: when mixed with aërated water a most pleasant sparkling beverage is obtained. Hazeline, Hazeline Cream in collapsible tubes, with rectal pipe in one piece, Hazeline Snow, and Hazeline Suppositories. Emol-Keleet, a new formula for dusting and toilet powder recommended by Dr. Allan Jamieson at the Newcastle meeting[1]: Lanolin and Lanolin Toilet Preparations: Hypodermic Tabloids, which are quickly soluble in cold water, and unirritating. Fairchild's Pepsin, in scales or powder, is odourless and very active: 1 grain will digest 3,000 grains of egg albumen in acidulated water at 120 per cent. within six hours. Zymine, Zymine Peptonising Powders. Glycerinum Pepticum, Zymine Tabloids coated with Keratin: These Tabloids, in common with others when it is desirable for the tabloid to pass through the stomach into the intestine without being dissolved, are coated carefully with Keratin, which, while insoluble in the gastric fluid, is quickly dissolved in the intestinal secretion. The sugar-coated Tabloids are a distinct advance in pharmacy: the coating of pure white sugar gives a more elegant appearance to the tabloid, and renders it easy of deglutition. Ichthyol. Unguentum Ichthyolici, 25 per cent. Ichthyol Lanolin Soap, and Ichthyol Tabloids: Ophthalmic Tabloids, Photographic Tabloids, the new synthetical products of Messrs. Meister, Lucins, and Bruning. Lovetin, an odourless substitute for iodoform: Phenosalyl (a combination of carbolic, salicylic, and benzoic acids in lactic acid) is a powerful, pleasantly aromatic germicide: Agathin, a new analgesic: Alumerol, a penetrating antiseptic that does coagulate albumen: Hypnal, Migranin (caffeine-antipyrin citrate), and Dermatol: among the new medical appliances are the Burroughs, Wellcome, and Co.'s improved adjustable powder insufflators.

Messrs. Cadbury Bros. (Bournville, near Birmingham) showed their well-known Pure Cocoa and Chocolate, and also specimens in various stages of manufacture.

Messrs. F. Canton and Co. (London) showed their excellent Pure Grape Brandy, a report on which appeared in the British Medical Journal of June 2nd, 1894.

Messrs. Carnrick and Co., Limited (London) exhibited, in conjunction with the Maltine Manufacturing Co., Limited, their Beef Peptonoids, representing in powder form the flesh-forming elements of beef, wheat, and milk sterilised and partially peptonised; Liquid Peptonoids, representing beef peptonoids in the form of a cordial, all constituents being entirely digested and ready for assimilation; Liquid Peptonoids, with Coca: Peptonoids; Iron and Wine: and Carnrick's Soluble Food.

Mr. Alfred Carter (London) exhibited his various patents for invalids, including: Invalid's Commode Couch: "The Farringdon" Invalid Couch: Invalids' Couches, screw and back movements; New Combination Couch, invented 1888: Hospital Screens; Invalid's Bedstead; Couch Chairs, with leg-rests and adjustable backs: Reading Machine (North's Patent), registered 1893 by Alfred Carter: Various descriptions of Reading Stands: Adjustable, Revolving, Sliding Bed Tables: Invalid's Bed Lift: Hospital Lift for Typhoid Cases: Dropsy and Heart Disease Chair: Portable

[1] See British Medical Journal, 1893, vol. ii.

Turkish Bath; Speculum Chair; Bed Rest for Contagious Cases; Bed Baths; Patent Portable Water Closet; The Viaduct Ambulance Litter, as used for the London Street Accident Service; Invalids' Carriages and Bath Chairs; Bath Chair for Paralysis; Iron Bath Chairs for Tropical Climates; Bath Chair for Self-propulsion; Wicker Carriages on Cee Springs; Jinrickshas; Spinal and Hip Disease Carriages; Walking Machine, for use in Paralysis, Locomotor Ataxy, etc.; Self-propelling Chair, adjustable back and leg-rest; Merlin or Self-propelling Chairs; Carrying and Self-propelling Chair combined; Hospital Wheel Chaise; Carrying Chairs (new pattern), mounted on Alfred Carter's registered wheel castors and folding-back handles; Adjustable Carrying Chair and Stretcher; Light Bamboo Carrying Chairs; Gynæcological Couch; Litter for Operating Theatre; Operating Table; Surgical Couch; Aseptic Table in iron and glass; New Hospital Dresser's Table, A.C.L.; Guy's Hospital Ward Couch.

Messrs. Cassell and Co., publishers (London), showed numerous clinical manuals for practitioners and students of medicine.

The Cerebos Salt Company exhibited their Cerebos Nutritive Salt, a delicately fine and dry table salt, with which is incorporated a fixed amount of mixed phosphates, as found in bran. The object of this salt is "to supply to the food an equivalent for the nutritious elements which ought to exist in bread but which are eliminated from white flour with the bran."

The Chemists' Aërated and Mineral Water Association (London, Bristol, etc.) showed the Camwal Gold Medal Table Waters in bottles and siphons bearing labels stating the exact strength of the waters, of which two qualities are prepared—one for use as an ordinary beverage, and the other for prescribing purposes. They showed also fruit syrups, lime juice cordial, etc.

Messrs. Thos. Christy and Co. (London) showed their Adeps Lanæ, N.W.K., a preparation of wool fat, and all the intermediate products in the manufacture of this product. They also exhibited Analgen, and all the intermediate products in the preparation of it; Benzoinol Atomiser, especially constructed to spray benzoinol; Cachets (Morstadt) for the administration of nauseous powders in a tasteless form; Cushman's Menthol Holder, for conveying mentholised air to the nose, throat, and air passages; Christia, a water, oil, spirit, and grease-proof material, flexible, soft, and strong; Christia-backed Lint, an absorbent lint, covered at the back with Christia tissues, rendering it proof against spirit, chloroform, oil, grease, as well as hot and cold water; Fluid Extract of various Rare Drugs; Pure Dried Papaw Juice; Papaine Christy; Lozenges, especially Cocaine and Papaine, Cocaine, Menthol, Euphorbia, Kola Pichi, Salix Nigra, Papaw.

The Civil and Military Stores (Clifton) showed Coleman's Wincarnis or Liebig's Extract of Meat and Malt Wine.

Clark's Bread Company, Limited (West Brighton) showed the "Ne Far" Biscuits, Registered, free from starch. Analysis: Moisture, 6.16 per cent.; albuminoids, 49.46 per cent.; fat, 19.09 per cent.; mineral matter (principally soluble phosphates), 5.84 per cent.; cellulose (very finely divided), 3.93 per cent.; extractive and soluble matter, 14.51 per cent.; reducing sugars, 0.96 per cent.; starch, absent. Total, 99.95.

The Condal Water Company, Limited, exhibited samples of the Condal Spring. The published analysis shows that the water is a highly mineralised one.

Messrs. Corbyn, Stacey and Co. (London) showed a variety of Pharmaceutical Preparations, including Medicated Collodions, Liquors, Syrups, Wines; Elixirs, Granular Effervescing Preparations; Chaulmoogra Oil, and Gynocardic Acid and Gynocardiates; Hypodermic Injections (Sterilised), Saccharoles. Ext. Malt and Preparations, Miscible Liquid Extracts, Extract Colocynth Comp. (Corbyn), Liq. Opii Dialysat. (Corbyn), Liq. Cinchona Rubræ (Corbyn), Liq. Bismuth Rub., Liq. Bismuth Rub. c. Pepsine, Linctus Tuss. Rub., Perles, Pills, Thyroid Gland Preparations.

Messrs. Coxeter and Son (London) had a display of Surgical and Electrical Apparatus.

Messrs. Curry and Paxton (Bristol, London, and Liverpool) exhibited Couper's Optometer with full series of Spherical and Astigmatic Lenses for the quick determination of refraction; McHardy's Perimeter, geared for automatic registration; Priestley Smith's Perimeter; Landolt's Trial Frames: Lang's, Rockliffe's, and other Trial Frames; Test Cases; Frost's Artificial Eye; Electric Branch with Langes's Resistance.

Messrs. Dawson and Sons (London) showed the "Ceres" Automatic Letter and Card Files. The system is worked in file boxes, letter cabinets, writing tables, and other receptacles, holding from 500 to 25,000 papers in a single index throughout. There are movable division guides either alphabetical, numerical, or in subjects, and the letters and papers are simply dropped in between them in any desired order.

J. Defries and Sons, Limited (147, Hounsditch, London, Sanitary Department) exhibited an important series of samples of the invaluable Pasteur Germ Filter for Water, and photographs of the Geneste-Herscher Steam Disinfection Apparatus. The Pasteur filters were shown working with or without pressure, in forms suitable for domestic use, in pocket cases for travellers, in large cells for hospitals, ships, barracks, and large institutions, and as applied to stand and wall pipes, with provision to prevent waste, for schools and artisans' dwellings. A filter as adopted by the English War Office and French Government was shown in action. The claims put forward for this filter are accompanied by references to published documents such as the annual departmental reports of the French Government, and experiments and practical use by leading bacteriologists and sanitarians on the Continent such as Dr. Miquel, Dr. Vallin, Dr. Arnould, and many others; and the evidence, which was amply confirmed by the recent experiments of Dr. Notter, described by him in his paper read to the Section of Public Medicine, supports the claims. The filter actually prevents the passage of microbes of any kind, is difficult to break and easy to clean, and its application for some years in 200,000 quarters of the French army has shown that it is effectual in preventing epidemics of cholera, typhoid fever, diarrhœa, and similar diseases. The Geneste-Herscher apparatus consists of disinfecting stoves for clothes, bedding, etc., surgical instruments, walls, ceilings, cattle pens, etc. They are in wide use in France, Germany, Austria, Prussia, Turkey, Egypt, and elsewhere. They were designed originally at the request of the French Government, and have been the subject of exact investigation by two scientific Commissions appointed by the French Government and the Hospitals Committee of Lyons for the purpose of comparing their action with that of the principal apparatus already in use. The result appears to have been favourable on all points to the Geneste-Herscher apparatus; and as it is stated that nearly 1,000 of the large bedding and clothing disinfection stoves have been put in, it appears that experience has confirmed the impression of these Commissions.

The Domen Belts Company (London) showed their new "Domen" Varicose Circlet for the treatment of varicose veins. In appearance it resembles a garter, which is fitted with a curved watch-spring steel, and contains a pad filled with glycerine. The circlet is worn so that the pad rests upon the distended vein, the spring being curved to prevent pressure upon any part except where the pad lies. The same firm showed the "Domen" Abdominal Belts for pregnancy, hypogastric support, spinal support, umbilical hernia, floating kidney; the "Domen" Belt Corset; the "Domen" Stoop Cure for round shoulders in children and adults, is worn beneath the dress, and quite unobservable; and the "Domen" Safeguard.

Messrs. Dowie and Marshall (London) showed various arrangements for the support of weak ankles and flat feet, arrangements for directing a distorted great toe into its right line, Surgical Soles and Sandals, various Casts of Feet, and also a selection of Boots and Shoes.

Down Brothers exhibit consisted chiefly of Surgical Instruments and Appliances, designed so as to be capable of being rendered aseptic, the instruments themselves being either forged out of one solid piece of steel or made so as to take apart in order that they might be thoroughly cleansed and rendered aseptic by boiling. These aseptic instruments were also shown in sets for amputation, minor operations, cleft palate, eye operations, tracheotomy, etc.; the instruments themselves being fitted into metal racks, the racks fitting into metal trays, suitable for laying the instruments

in antiseptic solution during operation, the trays forming an inner lining to the usual outside wooden cases. They also exhibited various forms of Sterilising apparatus for Sterilising Instruments, Bandages, and Dressings. Among the new instruments, those commanding most attention were the Intestinal Anastomosis Buttons, designed by Dr. Murphy, of Chicago; these are made in several sizes, suitable for the small or large intestine, for cholecystotomy, etc., and are intended to supersede the bone plates and other similar methods now in use. A new Parallel Intestine Clamp, by Dr. Swain, and a pair of Forceps with Separable Blades for Removal of Gall Stones, by Mr. Anderson. Compression Forceps in various forms and sizes, by Mr. Greig Smith. Scalpels with Dissectors or Scoops at end of handle, designed by Mr. Jordan Lloyd, and useful for general operative work, and a fine Dissector or Probe, made for Mr. Watson Cheyne, intended for fine dissections such as isolating the veins in operations for varicose veins, and in exposing small veins. The Automatic Retractors, designed by Mr. Jordan Lloyd, intended to act automatically by taking their hold on the skin when an assistant is not at hand. Screws for repair of oblique fractures, by Mr. Lane, with a set of Awls, Rimers, and Screwdrivers for use with them. A new form of Douching Curette, by Mr. L. A. Dunn, with sliding handle for use in long sinuses. Angular Scrapers for Laminectomy, by Mr. Hopkins Walters. An Osteotome, by Mr. Ballance, for cutting through the tympanic ring, and avoiding injury to the aqueduct of Fallopius. A new Middle Ear Syringe, by Dr. Robertson, of Newcastle-on-Tyne. Nasal Punch Forceps, by Dr. Adolph Bronner. Mr. Watson Williams, Syringe for Subcutaneous Laryngeal Injections. A new Lithotrite for Crushing Large Stones, made for Mr. Milton, of Cairo; and a Steel Bellied Olivary Bougies for Dilation of Urethral Strictures, by Dr. Nicholl, of Glasgow. Wire Urethral Speculum, by Mr. Lucy, of Plymouth, for treatment of penile ulcers. Symphysiotomy instruments and a new "Desideratum" Midwifery Bag containing a complete set of Obstetrical Instruments in very compact and practical form.

Messrs. Duncan, Flockhart, and Co. (Edinburgh) exhibited Pharmaceutical Preparations, comprising Chloroform, Liquors, Liquid Extracts, Syrups, Effervescing Preparations, etc.: also Capsules, Cachets, Cachets Pills, "Plastic" Pills, Coated Pills, Perles, etc.; also Baumol Superfatted Soap.

Messrs. Evans, Lescher and Webb (London) showed Savaresse's Capsules, made of membrane, and free from the objection to all gelatine capsules. It is clear that they do not dissolve until they have left the stomach for the intestine, thus avoiding all nausea and eructations. Oleum Santali Flavæ Ang., Oleum Caryophylli Ang., and Oleum Carui Ang. Cascara-Hawley (in capsules); its nauseous taste is covered by enclosing an inspissated fluid extract in gelatine. One capsule for a dose, each containing equal to 30 drops of the fluid extract of the *B. P.* Cubeb Cigarettes (Savar's); these cigarettes are composed mainly of Cubebs, recently ground and of sound quality, with definite and well-judged proportions of Stramonium and Cannabis Indica. Savar's Coca Wine; with a fixed percentage of Cocaine, standardized to contain ½ grain pure alkaloid per ounce. Ol. Ricini Sine Sapore (Evans'): prepared by a special process, whereby the disagreeable odour and taste of Castor Oil are removed. Elixir Cinchonæ Rub. Amar. (Hawley's): a strong, flavoured tonic bitter, from East Indian cinchona succirubra. Extract. Cascara Sagrada Fluid (Evans'). Extract. Buchu Comp. (Hawley's); a fluid extract of Buchu Uva Ursi, Pareira brava, Juniper berries and Taraxacum. Asthma Relief Powder. Syrup Tolu et Codeiæ (Hawley's). Saline, Effervescing (Evans'). Troch. Fructi. Laxativ. (Hawley's); containing chocolate and black currant paste in combination with delicate but efficient laxatives. Pills, Coated (Evans'); covered with a thin, non-metallic, and pearl-like coating, which renders them tasteless. Small Liver Pilules. Arrowroot (Montserrat), and "Montserrat" Pure Lime Fruit Juice.

Messrs. Feltoe and Smith (London) showed their "Specialité" Lime Juice Cordial and their "Specialité" Lemon Squash, guaranteed pure, and made from the freshly-squeezed English juice of the finest lemons and the best loaf sugar. The pulpy particles of the lemons are removed by a special process. The utensils used in its manufacture are of porcelain, specially designed so as to render impurity or contamination next to impossible.

Messrs. Ferris and Co. (Bristol) had an important exhibit, which attracted a large share of attention. Among the pharmaceutical specialities shown were the following: Anodyne Amyl Colloid, topical application in neuralgia, sciatica, lumbago, etc. Antiseptic Healing Powder, a dressing for ulcers, burns, and wounds of all kinds. Antiseptic Sublimate Powders, for the preparation of solution of perchloride of mercury for obstetric and other purposes, safer and more convenient than tablets or tampons; formula suggested by Dr. C. J. Cullingworth, F.R.C.P. Antiseptic Cyanide Powder, a dusting powder, containing 5 per cent. of Professor Lister's double cyanide of mercury and zinc. Capsules, Medicinal Gelatine. Coca Wine, tonic and restorative. Cascara Sagrada Preparations: Cascara Chocolate Bonbons, Elixir, Tablets, Capsules, Pills, and Tasteless Fluid Extract. Codeia and Glycerine Jelly and Codeia and Glycerine Pastilles for chronic laryngitis, phthisical cough, etc. Duroleum and Compounds, a cleanly basis for ointments. Emplastrum Belladonnæ Fluid, cleaner and said to be more efficacious than the common belladonna plaster. Ipecacuanha (Pulv.) sine Emetine (in dysentery), prepared at the suggestion of Surgeon-Major G. A. Harris, I.M.D. Liquores: Ferris and Co.'s improved soluble and active preparations of Pepsine, Euonymin, Podophyllin, in simple form, and also in combination with Bismuth, Cascara, and other remedies; Malt Extract: Malt Extract and Cod Liver Oil; Malt Extract with Cod Liver Oil and Hypophosphites; and Nepenthe. Organic Fluids (Sterilised), prepared by Messrs. Chaix and Rémy, Paris, according to the processes of Dr. Brown-Séquard, Dr. D'Arsonval, and others; particulars on application. Pepsines: One grain of the Pepsin. Porci pur. (Ferris) will dissolve 2,500 grains of coagulated albumen. Saxol: a bland, liquid hydrocarbon intended especially for application in the form of a spray to the naso-pharynx. Syr. Hypophosph. Comp. Thyroid Preparations: Thyroid Extract, Thyroid Elixir, Thyroid Powder, Thyroid Tablets, Thyroid Capsules, and Thyroid Pills. Wines of Beef and Iron, and of Beef, Iron, and Quinine; Whortleberry Wine for use as a mouth wash. Messrs. Ferris and Co's exhibition of new drugs and chemical, Galenical, and pharmaceutical preparations was remarkable for its completeness and for the fine quality of the drugs shown. They also exhibited a large variety of suppositories, bougies, pessaries, etc.: anatomical specimen jars, ambulance appliances, artificial limbs, orthopædic appliances, bandages, etc. Among the surgical apparatus and instruments shown were Mr. Greig Smith's Operating Table, arranged specially for hospital work: Mr. Greig Smith's Ovarian Instruments and Clamp and Knife for Colpohysterectomy, Reel Holder with platinised reels, Suture Instruments, etc.: Dr. T. W. A. Napier's Aseptic Metal Vaccinator; Debove's Sterilising Hypodermic Syringe, for use with the Organic Fluids; Aseptic Metal Pocket Dressing Cases: Electro-Medical Apparatus (by Mr. K. Schall), Eye Trial Lenses, etc. Messrs. Ferris and Co. exhibit also included their patent "Ever-Ready" Plaster Caddy for keeping spread plasters, lints, gauzes, etc.: the Perpetual Visiting List and Medical Ledger; Dr. J. Michell Clarke's Portable Case for the Clinical Detection of Micro-organisms in Blood, Sputum, Urine, etc.

The Flitwick Chalybeate Water was exhibited at stall No. 10. This water is obtained from an English medical spring in Bedfordshire, which contains a large amount of iron entirely in the "ferric" state. A report on this water appeared in the British Medical Journal of Feb. 11th, 1893.

Messrs. Fortt and Son (Bath) showed their Bath Oliver Biscuits; and also Sulis Water, the natural mineral water of Bath.

The Frame Food Company (Battersea) exhibited their Frame Food Extract, the nutritious matter extracted from the cellulose of wheat bran, proved by analyses to contain over 10 per cent. phosphate matter. It is soluble and therefore easily digestible. "Frame Food" Diet, a cooked food strengthened with the Extract. "Frame Food" Jelly, made of the "Frame Food" Extract and pure cane sugar. It is a substitute for extract of malt; and "Frame Food" Stamina Tablets containing a large proportion of "Frame Food" Extract.

Messrs. J. S. Fry and Sons (Bristol) had a stall where they dispensed cups of their pure concentrated cocoa.

Messrs. G. Gale and Son (Leeds) showed their different style of wire spring mattresses and bedsteads.

Messrs. Wm. Glendenning and Sons (Newcastle-on-Tyne) showed their Beef and Malt Wine prepared from: (1) Alto-Douro Port Wine, shipped by one of the first houses in Oporto and imported direct. (2) Kepler Malt Extract, a well-known preparation. (3) Mosquera Beef Jelly, containing 53.40 per cent. of Albumen, chiefly peptone. Coca Wine, prepared from the leaves of the Erythroxylon Coca, in combination with a wine of high quality. St. Hermes Tannin Wine (Vin de St. Hermes tannique), a Tonic and Hygienic Wine. "Salzbach," a sparkling Table Water.

Messrs. Godfrey and Cooke (London) showed their Patent Chloride of Ammonium Inhaler for catarrh of the mucous membrane; Godfrey's Menthol Inhaler for hay fever, etc.; Oleum Rusci (Russian birch tar), useful in chronic skin affections, especially eczema; Liquor Rusci Detergens, an alcoholic solution of the oleum Rusci—mixes well with water; and Sapo Rusci of Russian Birch Tar.

Messrs. Grierson, Oldham, and Co. had a large display of their California Clarets and Burgundies, as well as Hocks Sauterne, of the "Big Tree" brand. These wines are of good flavour and body.

Mr. A. W. Griffin (Bath) showed his Nutritive Suppositories, prepared from freshly-peptonised English beef by his original process, which preserves intact the albuminoids and nutritious bases of the meat, carefully sterilised, and presents them in the easiest form for immediate assimilation. One of these suppositories is equal to nearly 5 ounces of the ordinary peptonised beef-tea, or the alimentary equivalent of 2 ounces of meat. They are said to keep for five or six months unchanged in a fairly cool place.

Messrs. C. R. Harker, Stagg, and Morgan (London) exhibited Cascara Jelly, an agreeable substitute for the liquid extract of the *Pharmacopœia*, Codeine Glycerine, and Tangerine Jelly: Deëmetinised Ipecacuanha, recommended as a remedy in dysentery; Edulcorated Castor Oil, a palatable form of castor oil; Miscible Liquid Extract of Cascara; Liquor Papain et Iridin. Liquor Caulophylli et Pulsatillæ, and Mist. Bismuthi Co.: Liquor Santal Co., miscible with distilled water, and containing an unusually large proportion of the finest santal oil; Nitrous Elixir, an economical substitute for spt. æther. nit.; Syrup Eastonii, Syrup Hypophosph. Comp., Syrup Ferri Phosph. Co.

The Harrogate Corporation had an exhibit comprising a case of residues of their famous Sulphur and Chalybeate Springs and samples of the waters of the Sulphur Springs, strong and mild, of the Harrogate Kissingen Spa, and of the Harrogate Chloride of Iron Spring. They also showed five photographs of the New Montpellier Baths, the Victoria Baths, and other views of Harrogate.

Messrs. Hertz and Collingwood showed the Sans-Sucre Champagne (Laurent-Perrier). It is claimed for this wine that it is produced without any added alcohol or liquor of any kind. This wine is also the basis of the Coca Tonic Champagne, a pure champagne, with the addition of coca leaf extract standardised, so that each glass contains a definite amount of cocaine. They exhibited the following certificate of Professor Fresenius: "I have submitted both samples to an exhaustive chemical analysis, with the following results: A. Appearance and condition: The samples were perfectly clear excepting, of course, bubbles of carbonic acid, which were copiously evolved when the bottles ware opened. Both smell and taste of the samples were perfectly clean and quite free from sweetness. The chemical analysis gives the following result:

	Grand Vin Brut.	Coca-Tonic Champagne.
Specific gravity of the wine freed from carbonic acid	0.9908	0.9908
Polarisation	nil.	nil.
100 cubic centimetres of the wine freed from carbonic acid contain:	Grammes.	Grammes.
Alcohol	11.19	11.10
Corresponding to per cent. by measure	14.10	14.00
Total dissolved matter	2.16	2.19
Mineral matters	0.13	0.12
Total acidity, calculated as tartaric	0.787	0.772
Volatile acid, calculated as acetic	0.031	0.035
Non-volatile acid, as tartaric	0.784	0.728
Glycerine	0.72	0.71
Tannin	0.022	0.020
Sugar, calculated as dextrose	0.17	0.17
Saccharine	none	none
Salicylic acid	none	none
Sulphurous acid	0.0055	0.0058
Cocaine	none	0.0048
Carbonic acid (in original wine)	0.59	0.86

The results of the analysis show that both wines are perfectly fermented, and may be regarded as free from sugar. In other respects their composition fully agrees with that of pure champagne produced by fermentation in bottle. The relation between alcohol and glycerine, considering the conditions of fermentation in bottle, lies within the limits observed in genuine wines, and the analysis, therefore, does not indicate any addition of alcohol. These results are quite in accordance with the statements that the samples are made by fermentation in bottle, without addition of alcohol, and that they are free from sugar. It may be inferred from the analysis that this champagne will produce all those stimulating effects of champagnes which depend upon the presence of alcohol and of carbonic acid, and at the same time can be taken in all cases in which the presence of sugar, even in small quantities, has to be considered as injurious. In the case of the sample marked 'coca-tonic champagne,' the physiological effect of cocaine must also be expected in proportion to the amount of cocaine specified in the analysis." The same firm also showed Rosbach, Franz Josef, and Levico mineral waters.

Messrs. C. J. Hewlett and Son (of 40-42, Charlotte Street, E.C.) exhibited many of their well-known compounds, such as Mist. Pepsinæ Co., Liq. Santal Flav. c. Buchu et Cubebæ, Liq. Ergotæ Purif. etc. Amongst the new combinations of this class Mist. Hepatica Conc. appears to be a useful preparation of cascara, rhubarb, podophyllin, etc. A large and varied assortment of flexible capsules attracted attention, as they are daily growing in favour for the administration of nauseous drugs, such as guaiacol, extract of male fern, turpentine, creasote, etc. Messrs. Hewlett made a special feature this year of their tests for the clinical examination of urine, and a very complete collection of urine-testing apparatus. Amongst the latter was the apparatus recently suggested by Dr. Harris, and illustrated in the British Medical Journal, for the collection of organic deposits in urine. There was also displayed a histological cabinet containing upwards of 100 microscopical specimens of organs and tissues, most of which are doubly stained, which they have introduced at the moderate price of 42s. It is a unique collection, and invaluable for students. Preparations of Thyroid Gland, Cortex Cerebri, Suprarenal Capsules, etc., were exhibited, together with Spermine (Pochl), Neurodin (Merck), etc. Amongst antiseptic preparations, Messrs. Hewlett and Son displayed Antiseptic Jellies, containing 1 per 1,000 of perchloride of mercury, in collapsible tubes. They have also introduced a disinfecting liquid, perfectly miscible with water, containing a large percentage of cresylic acid, and which has been found by bacteriological examination to be a powerful antiseptic and germicide.

Mr. Leopold Hoff exhibited his well-known "Hamburg Hoff's Malt Extract," a preparation which seems to hold its own in the market.

Messrs. Horlick and Co., 39, Snow Hill, E.C., showed their "malted milk"—a sterilised milk food for infants and invalids said to be unaffected by climatic conditions. The feature to which attention was particularly called was the ease with which it is prepared—mere solution in water at the feeding temperature, producing a perfectly cooked food. An arrangement of cylindrical glasses to which several reagents had been added was shown, proving the absence of starch with iodine and non-coagulation of the food in contact with hydrochloric acid.

Mrs. B. Hunter, of Bristol, exhibited the Hunter patent grips and splints, and an obstetric binder and general wide bandage grip for obtaining an easily and instantly regulated and maintained support or compression for a patient of any size without the employment of pins or straps, and allowing an ordinary strip of any suitable material to be used for the binder without fear of rucking while in use.

Messrs. A. Hurst and Co. (London) showed various Dry Cells, Physiological Induction Coils, Electrodes, three Resistances, Galvanometers, Electrodes and Needles for Electrolysis, Bichromate Batteries, Accumulators, Rheostats, Cautery Handles and Burners, Electric Centrifuge, High frequency Induction Coils.

Messrs. Idris and Co. (London) had on show the Idris Lime Juice, Idris Fruit Cordials, and other specimens of aerated waters.

Jeyes's Sanitary Compounds Company (London) exhibited their various disinfecting preparations, among which were Creolin, a refined preparation of Jeyes's Fluid, and a non-poisonous substitute for carbolic acid, corrosive sublimate, or iodoform; Creolin Surgical Powder; Creolin Gauze; Creolin Surgical Soaps; and Creolin Capsules.

The Johannis Water Company exhibited the Johannis Water.

Messrs. S. J. Kepple and Son (Bristol) showed the "Wittmann Filter." This filter is easy to cleanse, filtration is more rapid, and the filter can be kept in constant use without the slightest trouble.

Miss St. Clair Stuart Knox (Clifton) showed a patent Bedpan for the use of paralysed patients.

Messrs. Krohne and Sesemann (London) exhibited: a new Cephalograph by Professor Oliver of Newcastle-upon-Tyne for taking pulsation of the brain; a Plebograph by Dr. J. Mackenzie for taking tracings of the venous pulse; and Dr. J. Mackenzie's Clinical Polygraph for taking, at the same time and on the same recording surface, tracings of the radial pulse, with tracings of the apex beat, carotid, venous or liver pulse, or the respiratory movements, for ready employment for general practice. New and improved Instruments for Laryngology, Otology, and Rhinology. Maxillary Antrum Tubes by Dr. Milligan; Operating Speculum, Mastoid Probe, and Paracentesis Knives by Dr. Grant. Soft Rubber Tubes for lateral irrigation of nasal cavities. New and improved Instruments for Operations on the Bladder; new Perineal Evacuating Tubes, and Lithoclasts for large stones, by Mr. Harrison. "Caisson" Tubes, Forceps, Guages, and Knives, for removing adenoid and other growths from the bladder, by Mr. Fenwick. New Ointment Introducer, with flexible rubber tube for the rectum and prostatic bougies for keeping open an incised stricture of the urethra. Recent improvements in Inhalers for precise, economical and safe administration of chloroform and kindred anæsthetics. These improvements give the administrator perfect control over the anæsthetic, and ensure the patient automatically a due supply of air. A new handy Inhaler for precise administration of chloroform by the use of one hand only; and a new Pair of Bellows for artificial respiration, by Sir B. W. Richardson.

Mr. B. Kühn (London) showed a specimen of Papain (Dr. Finkler and Co.), a purely vegetable digestive ferment, obtained by a special process from the juice of the Carica Papaya. Exalgine (Brigonnet), for the relief of neuralgic headaches, sciatica, rheumatic pains, rachialgia after influenza. Somnal (Radlauer), Methylated Chloral, Urethane; an efficient soporific remedy. Antinervine (Radlauer); Salicyl Bromanilid. Ethyl Chloride (Dr. Bengué), and Anestile (Dr. Bengué), in painless dental and minor surgical operations; also for immediate relief of neuralgic headache, sciatica, lumbago, etc. Ethyl Chloride (Dr. Bengué), an anæsthetic rapid in action, convenient to use, always reliable, harmless, and inexpensive, for producing local anæsthesia. Anestile (Dr. Bengué), an anæsthetic evaporating at a lower temperature than ethyl chloride; local anæsthesia is therefore produced quicker and over a larger surface, thus allowing of more extended surgical operations.

Messrs. S. Kutnow and Co. (London) exhibited Kutnow's Anti-Asthmatic Powder (Pulvis Kutnovii Anti-Asthmaticus), and Kutnow's Anti-Asthmatic Cigarettes, for asthma, bronchitis, catarrh, influenza, hay fever, and ordinary colds. Kutnow's Improved Effervescent Carlsbad Powder is a pleasant and effective aperient, and embodies the therapeutic virtues of the Carlsbad mineral waters.

The Leamington Town Improvement Association showed the Natural Aperient Alterative Mineral Water from that town.

Mr. H. K. Lewis, publisher (London) showed a large collection of Medical Books, written by some of the leading authorities of the day, and published by him.

Liebig's Wine Company (Liverpool) showed their Beef Wine and Vivo.

The Liquor Carnis Company (London) showed Virol, a preparation devised to supersede cod-liver oil and also to supplement the heat-producing capabilities of oleaginous substances by the introduction of nitrogenous and bone-forming ingredients. Caffyn's Malto-Carnis. Formula: ℞ Liquor carnis (Caffyn), 66 parts; cocoa essence (Cadbury), 10 parts; ext. malti, 24 parts. Misce sec. art. (L.C.C.). Malto-Carnis contains the tissue-forming properties of liquor carnis (Caffyn), the fat and heat producing carbohydrate—extract of malt—with the refreshing stimulant of cocoa. Liquor Carnis Suppositories (Caffyn), a raw beef-juice suppository; and Caffyn's Liquor Carnis, a raw meat juice.

Messrs. T. Howard Lloyd and Co. (Leicester) showed Soluble Pearl-Coated Pills; Granular Effervescent Preparations; Compressed Drugs in Tablet Form; Liq. Secalis Ammon.; Liq. Papain Co., Papain, Euonynim and Nux Vomica; Ext. Aletris cum Hydrastis, an invaluable uterine tonic; Liq. Opii (denarcotised), same strength as *P.B.* tincture, but free from narcotine; Liq. Bismuth cum Pepsin; Liq. Copaibæ Co.; Liq. Copaibæ Co. cum Matico; Liq. Picis Co., a powerful antiseptic and disinfectant; Liq. Santal. Flav. Co.; Syr. Hypophosph. Co., invaluable, formula given; Syr. Ferri Phosph. cum Limone; Liq. Vesicatorius; Tinct. Strophanthi; "Bromo-Chloral;" Codeia and Glycerine Jelly; Cod-liver Oil Emulsions of various combinations; "Pepsifer," a new ferruginous digestive condiment; "Anti-catarrhal" Bouquet; Fluid Extracts of the U.S. and other Pharmacopœias; Concentrated Liquors for Syrups and Tinctures; Portable Dressings; Hæmorrhoidal Dressings, applications for rectum medication, in collapsible tubes fitted with rectum pipe; Medicated Pessaries, Suppositories and Bougies; The New "Colloid" Flexible Capsules; "Unnacloth."

Mr. Jordan Lloyd, F.R.C.S., M.B., Surgeon to the Queen's and the Children's Hospitals, Lecturer on Operative Surgery in the Mason College, Birmingham, showed a Portable Operating Table. The table is of hard wood of the ordinary operating table size—6 feet long 20 inches broad and 30 inches high. It is strong enough to carry the heaviest patient. It is arranged so as to fold up into a space 3 feet long 20 inches broad and 6 inches deep, so that it may easily be carried either by hand or in any ordinary vehicle. It is fitted with flaps at either end which may be lowered for operating in the lithotomy position. This table has been for some years in regular work and has been found satisfactory in every way.

The Longford Wire, Iron, and Steel Company, Limited (Warrington), showed Wood's Patent Wire Mattresses, Invalid Couch, and Patent Bedstead and Wire Mattress.

Messrs. Lorimer and Co. (London) showed Lac Magnesia (Lorimer's), Magnesia Milk (Mistura Magnesiæ c. Saccharo). Each ounce contains the equivalent of 10 grains of pure calcined magnesia oxide in the form of freshly-precipitated hydrate. This is diffused in pure distilled water without the addition of any suspending or emulsifying agent whatever, the natural properties of the magnesia hydrate, as exhibited in this preparation, being such as to render this unnecessary. "Dermoplastin" (Lorimer's), or Eczema Cream, lately introduced for use in the treatment of eczema. Vin Cocæ (Lorimer's). Syr. Hypophosh. Co. (Lorimer's), in ½ and 1 lb. bottles. Each fluid drachm contains lime hypophosphite 2 grains, sodium hypophosphite 1½ grain, potassium hypophosphite 1 grain, iron hypophosphite ⅔ grain, manganese hypophosphite ¼ grain, quinine hypophosphite ¼ grain, and strychnine hypophosphite $\frac{1}{12}$ grain. Ol. Iodi (Lorimer's), for outward application only. Each fluid ounce represents 10 grains of iodine. When necessary, the strength can be increased by the addition of tinct. iodi or diminished by the addition of water. Among the advantages claimed for it is that it is readily absorbed, does not stain the skin, and may be applied to the most delicate skin without irritation. Ext. Hamamelis Dist. (Lorimer's)—a clear aqueous liquid, obtained by distilling the fresh green bark of the hamamelis virginica. It is non-poisonous, of sweetish taste, and pleasant odour; it does not stain linen nor cause irritation. Fels's Germicide Soap.

The Lungili Company (Birmingham) showed their Lungili—a new preparation for the treatment of dysentery and diarrhœa.

Messrs. B. Maggs (Clifton) had on exhibition samples of their Purified Bedding, and also samples of Feathers, Wools, etc., as they appear before and after being purified by their process.

The Maltine Manufacturing Co., Limited (London) showed: Maltine, an extract of malted barley, wheat, and oats. Maltine, with Cod-Liver Oil, a palatable and digestible form of cod-liver oil. Maltine, with Pepsine and Pancreatine: pepsine equivalent to 40 grs. sacch. pepsine; 15 grs. pancreatine to the fluid ounce. Maltine, with Lime: 3 grs. hypophos. soda, and 2 grs. hypophos. iron to the fluid ounce. Maltine, with Cascara Sagrada: 60 grs. extract of cascara to the fluid ounce. Malto-Carrageen: 1 oz. carrageen and 1 oz. yerbine to the pint. Maltine, with Alteratives: 5 grs. chloride calcium, 5 grs. chloride magnesium, 5 grs. bromide sodium, 1 gr. iodide potass., $\frac{1}{4}$ gr. iodide iron to the fluid ounce. Maltine, with Iron: 8 grs. pyrophos. iron to the fluid ounce. Maltine, with Easton's Syrup: 4 grs. phosph. iron, 1 gr. quinia, $\frac{1}{20}$ gr. strychnine to the fluid ounce. Maltine, with phosphorus: each teaspoonful contains $\frac{1}{120}$ gr. phosphorus. Maltine, with Phosphorus compound: $\frac{1}{60}$ gr. phosphorus, 1 gr. sulphate quinia, $\frac{1}{30}$ gr. strychnine to the fluid ounce.

Mayer and Meltzer (London) exhibited Carwardine's Saccharometer, a notice of which appeared in the British Medical Journal of June 30th, 1894. The apparatus is also fitted with a case with Doremus's Ureameter and Esbach's Albuminometer. Whitmore's Universal Dressing Tray, also shown, is an appliance used in dressing and irrigating wounds, being supplied with a central drainage tube to convey the fluid to a receptacle; the patient and bedding are kept perfectly dry and clean. Aseptic Cases, for the carriage of instruments to operations, will be found invaluable, as, being made in the form of a box with a moyable lid, both top and bottom of the same can be used to immerse the necessary instruments in an antiseptic fluid at the time of operation. A portable form of Faradic Battery, with a sealed cell, which lasts some months without renewal, will be found more convenient than the ordinary forms of batteries, which need constant renewal of fluid; it is both small and inexpensive. A complete assortment of Laryngeal Instruments, including Kelly's Tonsil Punch, for removal of small pieces of tonsil. Nasal Instruments, including Macdonald's latest form of Ecraseur, which can be made to tighten a loop quickly, and then slowly cut through the turbinated bone. Major's Knives, for the removal of nasal spurs. Aural Instruments. Cheatle's Auscultation Tube, which can be fixed on the heads of both aurist and patient, leaving the hands of the operator at liberty. Sexton's Scissors, Forceps, and Knives, for operation on the ossicles. Cleft Palate Instruments, in accordance with Mr. Tom Smith's latest patterns. A selection of Forceps, Saws, Elevators, Needles, and Cystometers, as used by Messrs. Horsley, Dean, Cheyne, and Rose. Gynæcological Instruments, comprising the most recent patterns, with Lloyd Roberts' Improved Pressure Forceps, and a Combined Uterine Sound and Dressing Forceps.

The proprietors of the Medical Magazine showed specimen copies of the *Medical Magazine*, specimens of Charts, Photo-Process Printing and Pamphlets, Books, etc.

Messrs. Mellin exhibited their well-known food for infants and invalids, their Lacto-Glycose, Mellin's Food Biscuits, Emulsion of Cod-Liver Oil and Hypophosphites, an emulsion cream-like in appearance and slightly flavoured, obtained by a mechanical process of trituration of oil, with solution of gum Arabic and sugar. It is guaranteed to contain 50 per cent. of Norwegian oil. They also showed Vin de Coca and Coca "Mellin."

Mr. Henri Nestlé (Vevey, Switzerland, and Snow Hill, London) exhibited his two well-known products—Nestlé's Food for Infants and Invalids and Nestlé's Swiss Milk.

The Nisbestos Filter Co. (London) showed a variety of filters, including those for the army, navy, farm, household, and for travelling.

One of the most interesting exhibits was that by Oppenheimer, Son, and Co., Limited. Their preparations were arranged in three tiers, and included a complete assortment of their well-known pharmaceutical preparations, of which may be mentioned their Concentrated Liquors, Cream of Malt, plain and in combination with the Hypophosphites and Cod-Liver Oil; Ergot, prepared from Spanish ergot of rye, and claiming to be the most concentrated preparation of ergot yet presented, and neither nauseating or irritating; Palatinoids and Bipalatinoids, and the various digestive ferments, among them Pepsin, manufactured by the Webber process, ranging from the ordinary requirements of the *British Pharmacopœia* to the fancy strength of 30,000. This product claims to be odourless and not hygroscopic, permanent and soluble. The smallest palatinoid yet made was here shown, and is put up under the name of Lapactic (derived from λαπακτικός from λαπασσώ, "I open the bowels with laxative medicine"), a word which has been adopted to represent a stated combination of agents for the treatment of chronic constipation. An instrument was shown for nebulizing balsamic solutions and for application to the throat, and the "Globe Nebulizer" and Improved Hypodermic Syringe are ingenious contrivances, and efficient. It might not be out of place in this connection to state that at the International Congress in Rome this was the only English firm which received a gold medal. One of the most interesting features of this exhibition was the Museum of Antiquities allied to medicine and pharmacy as practised in the time of the Romans, and includes all kinds of surgical instruments and terra-cottas from pre-Christian days down to the fifteenth century. This valuable collection, which includes over 300 different surgical instruments used in the time of the Romans, was in charge of Dr. Sambon, a gentleman who for some years past has been delegated by the Italian Government to make scientific antiquarian research. Of this we shall give a further account.

Messrs. Parke, Davis, and Co. had, among other exhibits, a selection of Gelatine Coated Pills, and Empty Capsules for the administration of disagreeable medicines. They also exhibited the Cascara Sagrada Aromatica, which they claim to be free from bitterness; and also Esencia of Coca and Esencia of Calisaya. They called special attention to their Syrup of Iron Chloride (Weld), which is claimed to have all the benefits of the perchloride without its astringent properties and without discolouring the teeth. The gelatine coated pills are in various forms. The advantages claimed for these are that, being coated by suction, they contain no pinholes and have no objectionable ends from where the pill has been suspended. The same firm exhibited Pepsins of various strength, and an automatically worked Test for various strengths of pepsin. The Mosquera Beef Jelly, Meal and Cocoa, and the Fluid Beef Jelly were also on view at this stall.

The Peat Industries Syndicate (London) showed various articles manufactured from Peat Wool. It is claimed for peat wool dressing that it not only possesses natural antiseptic properties, but also that it is cheaper, more efficient, and more absorbent than any other known dressing. The dressings shown were of various degrees of fineness, from a condition resembling tow to that of the finest down suitable to any required method of application. From this wool the Syndicate manufactures blankets, mattresses, ambulance litters, hygienic socks and belts, and a variety of sanitary articles. A Patent Peat Closet was also exhibited, and the Peat Powders in various degrees of fineness for use in the same.

Mr. Young J. Pentland, publisher (Edinburgh and London), had on view a number of Medical Books of which he is the publisher.

Mr. L. Rawsthorne (Preston) showed his Limona Food (wheat grain with hypophosphites). This food is said to contain all the nutritious properties of wheat, the branny portion being retained and very finely prepared, combined with hypophosphites of lime, soda, and iron in approved proportion. In places where the water is deficient in lime it is recommended for daily use. It has received a prize medal at the Food and Cookery Exhibition, London, the gold medal from the Scientific Society, Brussels, and a gold medal from the European Scientific Society at their International Exhibition held in June of this year. Limona food is easily prepared, and can also be made into puddings and biscuits, thus affording a desirable variety in invalid dietary.

Mr. F. J. Rebman, Publisher (London) exhibited a series

of Books on medical subjects published by him. He also showed Anatomical Models made of *papier mâché* for use in classes, and also Pure Animal Lymph and Vaccine Cream in tablets, tubes, and phials.

Messrs. John Richardson and Co. (Leicester) showed their Gold Medal Soluble Pearl Coated Pills and Granules; Compressed Tablets of Pure Drugs, plain and coated, including Thyroid Extract, Bichromate of Potassium, Stomachic, Extract of Cascara, Diuretin, etc.; Compressed Hypodermic Tablets, including Bimeconate of Morphine, Homatropin, Morphine with Atropine, Cocaine, etc.; also Pocket Cases containing tubes of various tablets; Antiseptic Tablets of various strengths for obstetric purposes, including Biniodide of Mercury and Perchloride of Mercury; one tablet placed in water at 90° F. dissolves completely in two minutes; Medicated Gelatine Discs for ophthalmic use; Medicated Pessaries, Suppositories, and Bougies, prepared with either a cocoa butter or gelatine base, including extract of hamamelis with cocaine, quinine, morphine and belladonna, lead and opium, chloral hydrate with bromide of potassium, iodoform and eucalyptus, etc.; Solidified Glycerine Suppositories, in two sizes (for children or adults), for the treatment of habitual constipation; Peptonised Nutritive Suppositories for rectal feeding; Hollow Cocaine Cones, of various strengths, for obstetric purposes; "Anapnine," an igneous cone for inhalation in asthma, etc.; Medicated and Toilet Soaps (superfatted), including "Thymolodyne," Cream, Carbolic, Sulphur, and Coal Tar; Granular Effervescent Preparations in variety, including Ferri Ammon. Cit., Caffein Hydrobrom., Phenacetin, Piperazin, Ferri Carb. Sacch., Antipyrin, Papain with Bismuth, Antifebrin, Carbo. Ligni, Piperazin with Phenacol, etc.; Improved Flexible Capsules, in all sizes from 2½ minims to 1 drachm, including Bichromate of Potassium, Compound Salicylate of Colchicine, useful in gout, rheumatism, etc.; Pepsin, Morrhuol with Creasote, Eucalyptus Oil, Salol, Santonine, Nesbit's Specific, Iodide of Iron, Apiol, etc.; Improved Gelatine Perles; "Exorrhoid" and other Hæmorrhoidal Jellies in collapsible tubes, with specially designed rectum pipe; "Thymolodyne" and other Antiseptic Jellies, including Carbolic Acid, Eucalyptus, Perchloride and Biniodide of Mercury, etc.; Fluid Extracts of the *U.S.P.*; Solutio Ammon. Aromat., a substitute for spt. ammon. co.; Liquor Nitritum, a substitute for spt. æther. nit.; Alkaloidal Salts and Principles, including Aloin, Iridin, Codein, Leptandrin, Podophyllin, Salicylate of Quinine, Gingerin, Scammony Resin, Sulphate of Atropin, etc.; Pure Chemicals, Bichromate of Potassium, Picrate of Ammonium, Benzoate of Lithium, Salicylate of Bismuth, Natural Salicylic Acid, Guaiacol, Paraldehyde, etc.; Medicated Gauzes and Wools, including Double Cyanide, Iodoform, Boric and Sublimated; Medicated Lozenges, including Garrod's, "Peptocolos," Cascara, Krameria, etc.; Medicine Chests; Medical Specialities, including Liq. Potassæ Iodinata, Elixir Ferri Iodid., Elixir Ipecac., Tinct. Pulsatillæ, Tinct. Bryoniæ, Tinct. Convallariæ "Hypnopoietic," Tinct. Cacti Grandiflor., Essence Sennæ Aromat., Ext. Cascara Liq., Liq. Copaibæ Co., Liq. Copaibe c. Matico, Liq. Kava Kava Co., Liq. Papain Co., Liq. Picis Co., Liq. Rosæ Dulc., Liq. Croci Dulc., Liq. Santal Flav., Liq. Secalis Ammon., "Mikozone," "Peptocolos." "Thymolodyne," Sol. Bismuth c. Pepsin., Syr. Boracis Co., Syr. Chloral hydrat., Syr. Ferri Phosph. Co., Syr. Hypophosh. Co., Tinct. Gelsemin., Tinct. Strophanthus, "Wytchlyne," Ext. Aletris Co., Tinct. Lachanthes, Ext. Senecio Jacobœa Liq., Apiol, etc. The same firm showed Aseptic Cases and Instruments, Sets of 6 knives fitting one handle, Sets of 6 and 12 Scalpels, all metal, Sets of Pocket Dressing Instruments, Set of Minor Operating Instruments, Vaginal Speculums, Midwifery Forceps, Dressing Scissors, Amputation Instruments, Hypodermic Syringe; Improved Spamer's One and Two-Cell Batteries, Improved Exploring Aspirator, Improved Solid-Eye Catheters, electro-plated, Improved Portable Anæsthetic Apparatus, Eye Instruments, Improved Magnet, combined with Spud and Gouge, Sets of Eye Instruments, Improved Mouth Gag. Patent Powder Insufflator (by Ehrhardts). The advantages claimed over the ordinary insufflators are, that it can be regulated to give the exact quantity, that it is clean, inexpensive, and that it is always ready for use. Laryngeal Instruments—Improved Flexible Laryngeal Forceps (by Mois), Laryngoscopes, Laryngo-Ophthalmo-Otoscope. Pessaries—Improved Ball Pessary (by Dr. Cash Reed), Improved Hodge's Pessary, in aluminium. Pocket Dressing Cases in great variety. Improved Regulating Spray, Stethoscopes—Improved Portable Binaural in leather case. Tonsil Guillotines, Uterine Douches, and Richardson's Prize Cabinet for Dispensing purposes. The Cabinet is manufactured in best polished walnut, and is divided into three compartments. The base, enclosed by folding doors, contains seven large and four small drawers, and seven divisions for dispensing bottles, mortars, etc. The middle division (the front of which lets down and forms a most convenient dispensing counter) has space for 12 inch pedestal scales, graduated measures, ointment slabs, test tubes, compressed tablets, and other small bottles, and one drawer for instruments, etc., three drawers for labels, and a hinged sloping desk. The top portion of Cabinet is fitted with shelves made to carry twelve 16 oz., fourteen 12 oz., and thirty 8 oz. bottles. The inside of the folding doors is also divided into compartments for sixteen 8 oz. ointment pots, and seven 4 oz. ditto. The size of this Cabinet is 7 feet 3 inches high, and 4 feet 2 inches wide at base. The front is highly finished, and is divided into 17 moulded panels, and has a 3½ inch moulded and dentilled cornice.

Messrs. Alexander Riddle and Co., the proprietors and manufacturers of Stowers' Lime Juice Cordial, had a very attractive exhibit of their well-known preparations.

Mr. J. Rogerson (London) showed a patented undervest which he calls the Riphokam. The front of the vest is made of a single weaving, while the back is woven in a diced fancy or ribbed style without doubling the material, but adding to the warmth-giving properties of the garment with only a slight increase in weight.

Messrs. Ross and Co. (London) showed a Wenham Radial Microscope Stand, with new compound binocular prism and lamp complete; a No. 2 Ross Patent Pillar Microscope Stand, with best stage, substage, swinging tailpiece, etc.; a series of the new "Eclipse" Microscopes for students' and laboratory use; these are efficient instruments, in two different patterns, and very low in price; Specimens of a new series of Oil Immersion Objectives; and one of the Ross Portable Divided Cameras, and a few specimens of Ross Lenses, and also Ross-Zeiss and Ross-Goerz Anastigmats.

Messrs. Salamon and Co. (Rainham, Essex) exhibited their purest Chloroform, *B.P.*, and their Absolute Ether Puris, *B.P.*, both of which have been reported on in the British Medical Journal.

Messrs. Salmon, Ody, and Co. had a collection of Belts, Artificial Limbs, Trusses, and various surgical appliances. Their speciality was their Patent Self-adjusting Trusses, whereby two-thirds of the weight are saved in the metal work. They also showed a Truss in which the spring is covered with xylonite to prevent rust, and can easily be cleaned; it is fitted with aluminium plates or ordinary metal. The same firm exhibited a variety of Ladies' and Gentlemen's Belts.

The Sanitary Wood Wool Company showed a variety of their patent wood wool preparations, including Hartmann's Patent Wood Wool Wadding: Wood Wool Tissue in a continuous roll, consisting of a layer of Hartmann's Patent Wood Wool Wadding between two pieces of Sublimate Gauze; Sanitary Wood Wool Sheets for Accouchement, etc., in three sizes; Wood Wool Towelettes, antiseptic, for menstruation, and for use during accouchement; Wood Wool Vaccination Pads; The Guinea Complete Sanitary Outfit for Accouchement; Wood Wool Antiseptic Sponges; Sterilised Wood Wool Wadding, Tissue, etc.; Wood Wool Gonorrhœa Bags; Sanitary Wood Wool Infant Napkins in two sizes; Sublimate Lotiforms for general use; Sublimate Gauze; Iodoform Gauze; Hartmann's Catgut. Hartmann's Pure Absorbent Cotton Wool; this cotton wool can also be had to order, sterilised and packed by their patent process; carbolised, salicylic, boracic; sublimated and iodoform 10 per cent. They also showed a Drainage Tube consisting of catgut woven together, so as to form hollow, openwork, cylindrical tube of any suitable size, which can easily be sterilised by immersing it in carbolic acid or other similar fluid.

The Sanitas Company (London) exhibited a series of all their disinfectants, including Kingzett's Patent Sulphur Fumigating Candles, for disinfecting sick rooms, hospital wards, etc.

Amongst the exhibits of publications at Bristol was an interesting collection of Medical and Scientific Books published by the SCIENTIFIC PRESS (428, Strand). This company devotes much attention to literature relating to the institutions and to medicine and science generally. Its catalogue already comprises some valuable works in all these branches.

Mr. A. S. SCULL (Bristol) had on view some Specialities in Sanitary and Hospital Appliances. Among them were a Patent Portable Closet or Commode Pan, fitted with air-tight cover, easily secured and hermetically sealing the contents; a Patent Wood Fibre Bath for invalids; several Automatic Flushing Closets for hospitals and asylums, etc.; also Patent Water Filter; a special Safety Joint on Earthenware Closet Arms, whereby the lead is, by patent process, soldered to the earthenware, making a perfectly indestructible joint.

Messrs. SHANKS AND Co. (London) showed their Patent *Fin de Siècle* Rolled-edge Bath, enamelled inside and decorated outside, with open accessible sanitary waste and fittings complete; Patent "Modern" Bath; Patent "Modern" Bath, with plain flange for wood enclosure; Patent "Times" Rolled-edge Bath, second enamel, and with Bristol interlocking fittings, No. 102B; Patent No. 352 Self-cleansing Lavatory Basin, with open accessible sanitary waste and taps complete, with fancy iron frieze and brackets complete; Patent "Modern" Angle Lavatory Basin, with patent open accessible sanitary waste, plated fittings, and with fancy iron frieze and brackets; Patent "Levérn" Syphonic Closet, with glass-enamelled siphon cistern, brackets, and mahogany seat complete, etc.

Messrs. STEPHEN SMITH AND Co. (Bow) showed Hall's Coca Wine, a preparation made from the Bolivian coca plant.

Professor SNEDEKOR exhibited the Thermogen, a mode of generating heat by electricity for hospital purposes. The apparatus was shown in seven distinct forms. The thermogen is constructed to be used by the electrical current from the ordinary incandescent circuit of either 100 volts or 50 volts, and 2 ampères of current, or from an accumulator battery. In case of a connection to regular electric light line, a uniform heat may be had for any length of time. A battery will give the same service for twelve hours, when the battery must be recharged, but is very convenient for use when the regular current is not attainable. The Thermogen Operating Table was also shown, whereby the patient may be kept at any degree of desired temperature during an operation.

Messrs. G. AND J. STERN (London) showed their preparations. They called special attention to their Pepsalia, a digestible table salt, which is now produced in an improved way, the salt being white, odourless, and possessed of a high digestive power.

Messrs. STEARNS AND Co. (London and Detroit) exhibited their Wine of Cod Liver Oil, which contains 25 per cent. of pure cod liver oil. Each fluid ounce of this wine is said to contain 4 grains of peptonate of iron. They also showed a preparation called Panjecorine, constituting collectively the combined alkaloids and active principles of cod liver oil—morrhuine, aselline, butylamine, hexylamine, etc. The specimen of Panjecorine exhibited at Bristol weighed 70.4 grains. It represented about two thousand times its own weight of pure cod liver oil.

Mr. G. STANDERWICK (Croft) exhibited Cellular Clothing in Underwear, Tennis and Cycling Shirts made in various textures of silk, cotton, and wool.

Messrs. C. THOMAS AND Co. Bristol) showed a variety of soaps, including Fripp's Olive Oil Soap, Eucalyptus and Glycerine Soap, Carbolic Toilet Soap, and universal Carbolic Soap.

Messrs. VAN ABBOTT AND SONS (London) showed Diabetic Foods, Gluten Bread and Biscuits, Flour, Macaroni, Vermicelli, and Limona, also their new form of Soya Bread and Biscuits, and Carraway and Ginger Biscuits, which are very palatable foods for the diabetic. They also showed their Hypophosphate of Lime Biscuits for delicate children and adults suffering from nervous depression; and Imperial Granin, the American medicinal food for old and young.

The VIKING FOOD AND ESSENCE COMPANY (London) exhibited their specialities and delicacies for invalids, including Essences of Beef, Mutton, and Chicken and Turtle, which are claimed to consist of the juice of meat without the addition of water or any other substance. They also showed their Turtle Soup, Invalid Turtle Soup, Turtle Jelly, Pure Beef Tea (concentrated and in skins), Beef Tea Jelly, Karn, Savoury Meat Lozenges, Consolidated Soups, and other various preparations.

Messrs. HIRAM WALKER AND SONS (London, New York, and Chicago) showed their Canadian Club Whisky, which has already been reported on in the BRITISH MEDICAL JOURNAL.

Messrs. A. AND J. WARREN (Bristol) showed among other things Stoddart's Sea Salt, Methylated Liniments, Pure Olive Oil, Carbolic and Palm Oil, Coal Tar, and Eucalyptus.

Messrs. WARRICK BROTHERS (London) showed their Iron Jelloids—medicinal flexible capsules.

Messrs. JOHN WEISS AND SON (London) exhibited a collection of some of the latest and most improved surgical instruments.

Messrs. WILLOWS, FRANCIS, AND BUTLER, manufacturing chemists (London), showed New Animal Extracts and Preparations, including Thyroid Extract, a permanent glycerine preparation of the fresh thyroid glands of the sheep; Thyroidine, a powder containing the active principle of the thyroid glands; Thyroidine Tablets and Pills, each containing a minimum dose of thyroidine; Tincture (Suprarenal), a preparation made from the adrenals of the calf; Extract Corticis Cerebri, a carefully-prepared extract of the brain in the form of a powder. They also showed Oxy-Iodine Compounds: Liquor Calcis Iodinatæ, a new compound of lime and iodine, said to be a powerful antiseptic, deodorant, and parasiticide; Liquor Potassæ Iodinatæ; Bismuth Oxy-Iodide (Red and Yellow). The same firm showed Improved Pharmaceutical Liquors, such as Liquor Hypnoticus, Tinct. Cacti Grandiflori, Liquor Opii Sedativ., Liquor Secalis Ammon., Liq. Euonym et Pepsin, Liq. Hyoscyami, Liq. Pancreaticus, Liq. Pepsin Porci, Liq. Podophyllin, Liq. Podophyllin et Belladonna et Strychnina, Liq. Rosæ Conc., Liq. Santal Flav. Co., Liq. Sennæ Dulcis, Liq. Trinitrin. The same firm showed also Ext. Cascar. Sagradæ liq., Ext. Cinchonæ liq., Ext. Cocæ liq., Ext. Ergotæ liq., Ext. Kolæ liq., Ext. Malti. liq., Mist. Diarrhœa Aromat. Conc., Linctus Glycerini, Linctus Limonis. Linctus Tussi Rub., Spiritus Hamamelidis, a distilled extract of witch hazel. Concentrated Mixtures: Syr. Chloral Hydras, Syr. Codeiæ, Syr. Ferri Iodid., Syr. Ferri Phosph. Co., Syr. Hypophos. Co. Soluble Gelatine and Pearl-Coated Pills: Hypodermic Tablets, Syringes, and Appliances; Medicated Suppositories, Pessaries, and Bougies; Medicated Wines, Meat Extracts, etc.; Test Solutions and Appliances for Urine Testing; Microscopical Materials and Reagents for Bacteriological Research; Granular Effervescent Preparations; Capsules and Cachets for administering nauseous drugs; Powders for dispensing; Surgical Bandages and Antiseptic Dressings; Amyl Nitris in glass capsules for angina pectoris; Cod-liver Oil and Preparations; the Augean Fluid (registered), a coal-tar product; Augean Soap Sheets—thin sheets of medicated soap put in a small tin box; Sol. Picis Carbonis, makes a powerful antiseptic lotion for dressing; Thymol Cream with Corrosive Sublimate (1-1,000), in collapsible tubes, for obstetric use; Antiseptic Tablets of Corrosive Sublimate, for preparing solutions of definite st ength; Iodol, Europhen, Dermatol, and Ichthyol; Naphthol, Resorcinol, Methyl Violet, and other aniline derivatives, for local use; Medicated and Antiseptic Ointments, in collapsible tubes, for application to the rectum and urethra; Compressed Drugs and Tablets.

Messrs. WILSON AND SON, chemists (Harrogate) showed Urinary Test Papers, Albumen Test Papers, Indigo Carmine Test Papers, Peptone Bile Test Papers, Acidity Test Papers, Urinary Test Cases, Peptone Bile Test Solution, Apparatus for Testing Urine.

The WOODHALL SPA COMPANY (Lincoln) exhibited their Bromo-iodine Mineral Water; Mutterlange (for external use), prepared from the bromo-iodine water; and Granular Effervescing Salt. The bromo-iodine water is also aërated.

Messrs. WOOLLAMS AND Co. (London) exhibited specimens of their Wall Paper, free from arsenic, and specimens of handmade Paperhangings.

Messrs. JOHN WRIGHT AND Co., publishers, Bristol, ex-

hibited a series of Medical and Scientific Books of which they are the publishers.

Messrs. John Wyeth and Brother (Philadelphia, U.S.A., and London) showed Compressed Pills (or Powders), plain; Compressed Pills (or Powders), sugar coated; accurately compressed, and put up in parcels for prescription purposes. Soluble Compressed Hypodermic Discs; Compressed Ophthalmic Discs; their Beef Juice, Wine of Tar, Elixir Digestive Ferments, Dialysed Iron, Glycerole Chloride of Iron; Digestive Ferments—Pepsin, Pancreatin, Amylopsin, etc.

THE PLAGUE IN HONG KONG.

Clinical and Pathological Characters.

Dr. James Cantlie, formerly Surgeon to Charing Cross Hospital, now of Hong Kong, sends us the following interesting report:

The bubonic plague now present in South-East China and the island of Hong Kong is of the nature of the so-called Yunnan plague.

Definition.—An acute specific fever, of an intensely fatal character, accompanied by high temperature, cerebral congestion and delirium, and the formation of painful swellings of the lymphatic glands.

Incubation.—The period of incubation is from five to eight days; in short, a week is regarded as the date of development after exposure to disease. In the following case twelve days may be fairly claimed as the period of incubation. A Chinaman was condemned to a period of imprisonment and sent to gaol. At the end of twelve days he developed bubonic plague, and was removed from the gaol (where no previous case had occurred) to the epidemic hospital. This case is worthy of mention, as eight days is recorded as the maximum period of incubation hitherto.

The onset of the disease is sudden, and marked by a pronounced febrile disturbance. Headache, vertigo, rigor, aching in the limbs, vomiting, and general loss of energy hastily compel the victim to seek his bed. His face becomes flushed, the skin burning and dry, the hands and feet cold, and the thirst intense. Within two or three hours the patient becomes apparently semi-conscious, apathetic, and seemingly indifferent to his condition. Not infrequently he leaves his room for the verandah as if to throw himself over, or even leaves his house and may be found staggering along the street as if intoxicated, or lying in the gutter.

Signs and Symptoms.—On approaching a plague patient in the early stage, say four hours after seizure, as he lies in bed one is inclined to disbelieve the gravity of the affection. The face is placid, the wrinkles and lines being lessened by the muscular relaxation common of all other muscles of the body. The patient, as he hears one approach, or is spoken to, turns towards one with a dazed look, as if semi-conscious; in fact, he appears as if intoxicated by alcohol. His gaze rests on one for a moment, and then, either by feature, by voice, or by manual movements, it is brought home to one that his thoughts have wandered, and some shadowy creation of his grey matter has diverted his attention. He at times understands to protrude his tongue when spoken to sharply, but next moment he seems to disregard the request, and the effect of one's words seems to be to stimulate an outlying centre, or he either points with his finger partially extended in a hesitating manner, or turns his eyes and head upwards as if looking for something in the wall behind his bed. All movements are performed with a tremor, hesitancy, and purposelessness, which conveys the notion that either the centripetal or centrifugal cerebral message has miscarried. The patient lies for the most part on his back, but occasionally on either side, and usually with the legs drawn up. The position of the lower extremities is no doubt determined by the condition of the inguinal glands, their acute tenderness causing flexion of thighs to relieve tension of the fascia. The presence of pain, however, is not to be gathered from the facial expression, as his aspect is perfectly apathetic unless the gland is pressed upon, and the haggard aspect usually attendant on suffering is absent. The only other symptoms observable by inspection of the patient without disturbing the bed clothes are the flushed or yellow aspect and the red or yellow tinge of the conjunctivæ. The dull cornea surrounded by the yellow or red setting of the conjunctiva adds to the listless, apathetic, and seemingly intoxicated condition of the patient.

Frequently one finds the patient sitting up in bed with his hands clasped around the ankles looking calm and convalescent; and it is only in speaking to him that one finds he is but semi-conscious, and deeply affected by plague.

Following a clinical inspection course of description one finds: The tongue during the first twenty-four hours somewhat shrunken, coated by a lining of white [illegible] gingerly yellow in the middle of the dorsum, [illegible] at the edge, and the tip during protrusion co[illegible] point, and of a mottled appearance. A prevailing dryness of the tongue and buccal cavity attends the disease throughout. By the third day, or even earlier, the tongue has become drier, harder to the touch, and contracted in appearance. The dorsum is dry, hard, rough, fissured longitudinally, and of a mahogany or black colour. The "mahogany tongue" is a feature of the disease, and characteristic of the later stages. The lips are dry, sometimes cracked, and sordes line the teeth and gums. Thirst after the onset is not so constant a symptom as might be inferred from the appearance of the mouth. Vomiting is not uncommon in the early stage; usually it ushers in the disease. The vomit is either bilious in appearance or of a chocolate colour, but never of the nature of a black vomit. Constipation obtains during the disease, and this condition, when combined with the yellow conjunctivæ and generally bilious aspect, accounts for the free purging by calomel resorted to as a rule of practice.

The fæces are hard, dark yellow or brown in colour. When diarrhœa is met with, as it occasionally is at the end of the first week, the dejections are of a light mustard colour, and frequently involuntary. Loose motions are considered a very favourable sign.

The buboes consist of a swelling of the lymphatic glands accompanied by severe pain and exquisite tenderness to touch. The order of relative regional frequency is: (*a*) Vertical inguinal glands, (*b*) oblique inguinal glands, (*c*) axillary glands, and (*d*) cervical glands. Any and every gland may become affected, as at the bend of the elbow, the back of the popliteal space, and *post mortem* the iliac and lumbar, and, very exceptionally, the mesenteric glands are swollen.

Glandular swelling may accompany the initial stages of the disease: may appear during the first twenty-four hours: may delay development until the third day, or, in rapidly fatal cases, the patient may be carried off without any lymphatic manifestation whatever. The swelling when first recognised is almond-shaped in the inguinal region, but globular in other regions. Multiplicity of affected glands is always present, but, unless examined early, this fact is difficult of diagnosis owing to the rapid periglandular œdema, when one meets with a large sodden mass only. Amongst males the vertical inguinal (femoral) glands are most frequently affected; the axillary amongst females. The swelling rapidly increases in size, becoming softer, less definite in outline, and less tender, until by the end of five or six days it consists (say at the top of the thigh) of an elevated mass, doughy to the touch, almost circular, with a diameter of 6 inches. The skin over this large swelling is of a livid hue and dimpled here and there, according to the state of the underlying gland. The doughy feel gives place to a feeling of fluctuation, and it may be that purulent effusion has taken place. More often, however, this is not the case, fluctuation is deceptive as to the diagnosis of the presence of pus, as an incision into the mass is followed by an escape of sero-sanguineous fluid only.

An incision betrays the true nature of things, a local but widespread serous effusion infiltrates the periglandular tissue, or occasionally the hyperæmia has been so great that hæmorrhage has occurred. The tissues cut tough and leathery, and it takes some patience and a considerable depth of incision before the gland is exposed. The gland is easily recognisable by the thickened capsule, by the pulpy condition of the contents, and by the escape of dark ropy sanguineous fluid from the cut surfaces. The contents of the gland resemble splenic pulp which has perished owing to a hyperpyrexia. Occasionally pus is present or purulent spots clot the reddened surface of the cut gland. The incision affords relief to pain, and if for no other reason ought to be practised early. If suppuration is not present at the

time of operation it seldom ensues; what happens is that the serous fluid exudes, the œdema disappears, and the edges come together and heal in an extraordinarily rapid manner, considering the general condition of the patient.

At times cervical swellings, especially in rapidly fatal cases, assume an enormous size, bulging from between the jaw and the neck to a lump of many inches in diameter. The severity of the disease extends its virulence seemingly on one group of glands, it being usual to find one group of glands only conspicuously affected; but glands in other regions are also swollen and only want searching for.

The general symptoms are those of a highly febrile state. Temperature rises rapidly, in from two to three hours it may reach 105° or 106°. After thirty-six hours the temperature subsides, and even in rapidly fatal cases may not rise again. Frequently, however, without evident reason, the temperature, after a gradual fall for three or four days or longer, may

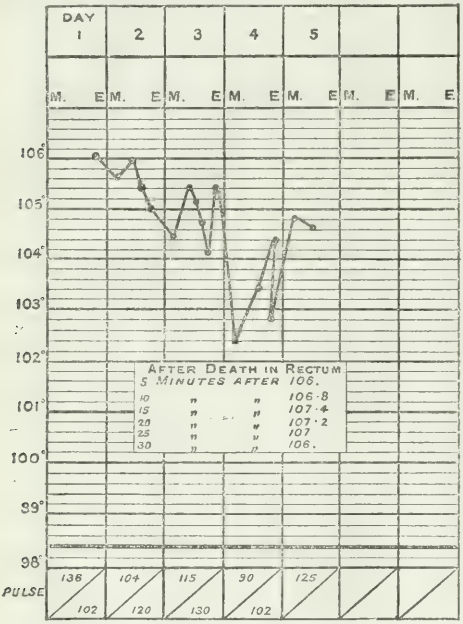


Fig. 1.—Temperature chart of an acute case, with temperature in rectum after death.

suddenly rise to 105° or 107° (in children), and that without fatal indication. In cases which do well the temperature gradually but irregularly falls, and becomes subnormal after fourteen days or so. Still again it may rise, and at the end of the fourth week even a recurrence of fever is not infrequently observed. No death from true hyperpyrexia can be said to have been noted, although high temperature is well-nigh constant during the first week of illness. The pulse varies in force, frequency, and character. It is accelerated considerably, indicating in the early stages 85 to 140 per minute in adults. Movement has no great effect upon the pulse frequency, nor is it markedly dicrotous. The force of the pulse varies more than any other condition, at times soft and compressible, or again hard and full, though but seldom incompressible. The condition evidently varies more with the amount of blood supplied to the arterioles than with the condition of the arterioles themselves. Even whilst the patient is dying in a comatose state the pulse may deceive one by its fulness and power. The heart sounds are not conspicuously altered, neither *bruits* nor *souffles* are met with, but irregularity in the cardiac impulse, and the intensity of sound is well-nigh constant. Hæmorrhages have occurred in no more than 2 per cent. of the cases up to the present (June 27th, 1894, eighth week of the epidemic). The most frequent hæmorrhage is from the nose, but some vomit blood, some cough blood, and some pass blood at stool. Subcutaneous hæmorrhage is rarely seen except in the immediate neigh-

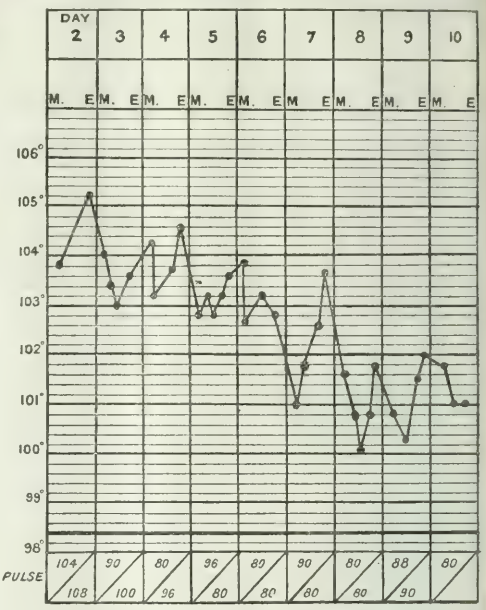


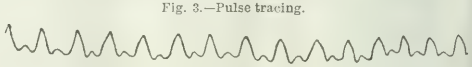
Fig. 2.—Temperature chart from a less rapid case.

bourhood of affected glands. The respiratory tract maintains a remarkable immunity; neither pneumonia nor pleural effusion being met with, as is the case in most febrile disturbances. A congestion of the lung caused by sagging is the only pathological change noted. Of the abdominal organs



CHAN KAN YUT, M. AGE 24. TEMP. 102·5 29 JUNE, 1894.

Fig. 3.—Pulse tracing.



HSÜ YING SHUN, M. AGE 28. TEMP 104. 29 JUNE, 1894.

Fig. 4.—Pulse tracing.

the spleen is almost invariably to be felt protruding beyond the left cartilages. Its edge feels hard and sharp, and the increase, although not hard, is, however, decided. The liver boundaries are definitely pronounced, indicating fulness but no great enlargement of area. The abdomen is not prominent, in fact, if there is any change worthy of record it is of the nature of a flattening, as if from empty intestines. The urine is unaltered in specific gravity, colour, quantity, or composition.

The prognosis of bubonic plague is bad in the extreme; neither age nor sex avail either as a prophylactic or a sup-

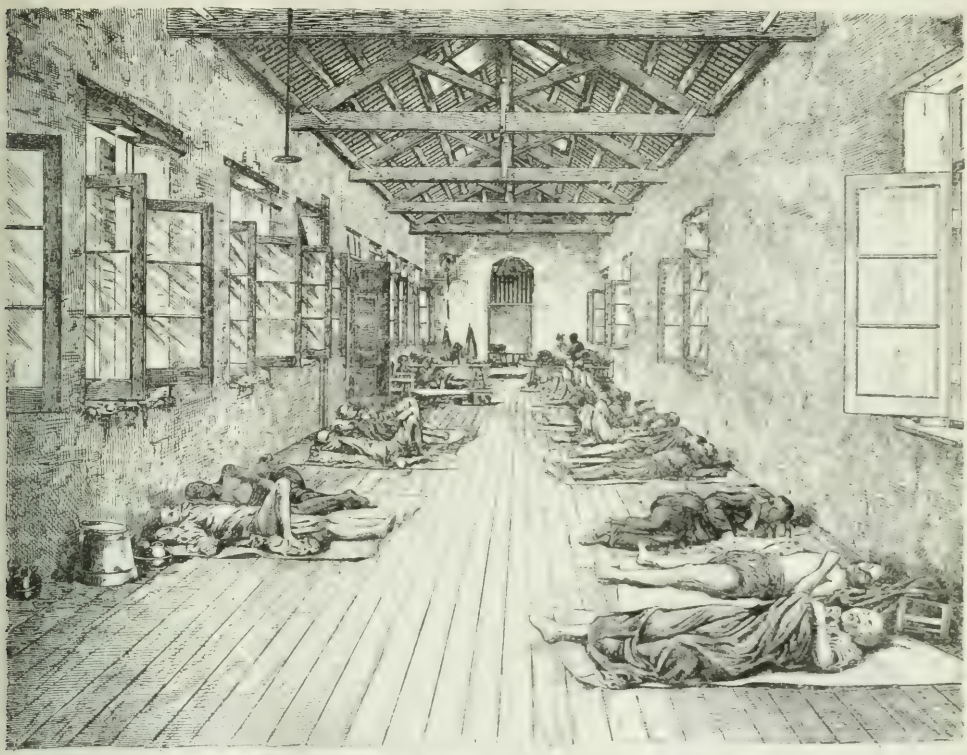


Fig. 5.—The glass works, Kennedy Town; view of the part used as the men's ward.

port when the disease has set in. The lower classes are more liable to be attacked than the better classes of natives, and the European enjoys almost an immunity. Of the various races in Hong Kong the following is the order of susceptibility—Chinese, Japanese, Hindus (from India), Malays, Jews, Parsees, and English. The Japanese are a small community in Hong Kong, but the proportion of those attacked is large. Of seven Japanese doctors engaged in scientific and clinical investigation, three were attacked; while of eleven English doctors more or less similarly exposed, none were seized. It is true two of the Japanese had *post-mortem* wounds, but they were seized by marked symptoms of plague; it may have been, in addition to ordinary blood poisoning, from the cadaver. The percentage of deaths of those attacked is perhaps the highest of any known disease; from 80 to 97 per cent. is variously given. The former is the approximate percentage of those under European treatment, the latter—97 per cent.—the number given as the result of Chinese treatment.

The virulence of the poison does not seem to lessen as the wave of disease passes on. Those seized after a period of two months suffer as fatally as those attacked during the first week. Of eight Englishmen attacked up to July 5th seven were soldiers engaged in cleansing houses where persons had died of plague. Two soldiers only died.

Contagion.—Direct contagion, that is body to body, as when a doctor or nurse handles a patient, does not appear to be the means of spread, at any rate to any marked extent. No nurse, male or female, concerned in attendance at the hospitals devoted to plague, contracted the disease. Infection seems to be indicated from the fact of the English soldiers concerned in cleansing the houses vacated owing to the disease being attacked. It is further possible that it was only those actively concerned in digging out the dirt and accumulated filth on mud floors, back yards, and the like that suffered. Of the large numbers of volunteer inspectors not one was attacked; nor were any other of the soldiers or others engaged simply in whitewashing or disinfecting seized. The miasm of infection seems to be soil produced, and to flourish in filth. This is in accordance with native (Chinese) belief. The poison emanates from the ground, according to the Chinese, and attacks animals in the following sequence—rats, poultry, goats, sheep, cows, and buffaloes. The height of the animal from the ground affects the order of the seizure of the particular group of animals, and man, being the tallest in point of distance of the head from the earth, is the last to be seized.

That this is not the case may be safely argued, but one fact about rats and rat infection must be considered. Where plague has been in China, whether Yunnan, Pakhoi, Canton, or Hong Kong, the mortality amongst rats is excessive. Dead rats are found plentifully; in an hotel in Hong Kong forty dead rats were found in one day. The rats seem to leave their haunts in sewers and drains, and, escaping by their holes, seek the houses. They seem careless of the presence of men, and run about in a dazed way with a

peculiar "spasm" of their hind legs. They are frequently found dead on the bedroom floor, but more often the foul odours from their dead bodies under the flooring is a proof of what is going on. This may be all ascribed to native popular belief, and even the statements of many Englishmen who have seen the circumstances above recorded may be slighted. But when it is known that in the blood and in the viscera of all the rats found dead during the plague, the bacteria of plague were present, the tale assumes a scientific interest. Not only so, but buboes are found likewise, and the peculiar gait of the animal ascribed to spasm is nothing more or less than the limping consequent upon a painful bubo. Further, the dazed appearance of the animal is exactly in harmony with the symptoms met with in man. Nor does the matter end here. Inoculation of healthy mice, rats, guinea-pigs, etc., with the blood from a gland affected by plague, or from a tube cultivation causes a fatal malady in the animal characterised by buboes in the groin and a wealth of bacilli in the blood and viscera. The rat infection therefore cannot be passed lightly by, but must enter seriously into the conditions affecting the spread of the disease. Even assuming that rats are affected, and we cannot doubt it, they may be merely affected in common with man, or they may be the actual carriers of the disease to human beings. A miasm, the toxic influence may still however be, and the nearest we can get to the means of spread and infection is that the disease is miasmatic contagious.

Post-mortem naked eye appearances afford but little information as to the nature of the disease. On opening the chest and abdomen the lungs are observed to recede abnormally in the chest, leaving the heart and pericardium peculiarly prominent.

The pleuræ and peritoneum are here and there occasionally ecchymosed. The lungs are pigmented; the sub-pleural region presents occasional ecchymosis; the engorgement of the lung with blood gives a dark reddish brown hue to the organ. On opening the bronchi the mucous membrane is pale for the most part, with here and there injected patches. The membrane conveys the impression of a submucous œdema; there is but little frothy mucous present in the tubes. The lung when cut into oozes dark non-aërated bloody fluid at every probe. It seems although the blood had sagged only, that the whole lung is so affected, and not the posterior part merely. No consolidation is to be found as a rule, nor is congestion of the most dependent part marked. The fluid in the pleural cavity is normal in quantity and appearance.

The Heart.—Occasionally a slight increase in the quantity of the pericardial fluid was noted. No sign of recent pericarditis has been observed. The substance of the heart was firm and the muscle of a healthy colour when viewed externally. The inner third, however, of the wall showed a definite pallor, a yellowish-white hue, as if from rapid granular change in the heart tissue, commencing from within. Two cases showed signs of very recent endocarditis, but as a rule the valves were healthy. The blood in the heart and large vessels was uniformly fluid except immediately around the mitral valves. No red staining of the endocardium was noted.

The tongue seemed swollen at the base, the glandular structures over the posterior third being large, bulgy, and œdematous. The laryngeal mucous membrane seemed pale, as if from submucous œdema, with here and there flecks of brightly-stained injection.

The stomach, empty as a rule, was streaked longitudinally by ridges with injected crests, the intervals being pale and the tissue rather firm. The ileum showed Peyer's patches distinctly in younger subjects, but, although the contents of the gut seem to cling unnaturally to the surface of the patches, there was no congestion or injection. The gut otherwise was normal.

The liver becomes prominent and firm, but actual increase in bulk is not so great that it could be of clinical value. The colour is paler than natural; the cut surfaces are of a whitish-pink tinge, as though blood had been expressed from the surface, and an œdematous condition of liver cells left the appearance which is best stated as that of cloudy swelling. The gall bladder is full in all and distended in a few cases. The bile is rather darker than usual.

The spleen is invariably firm, purplish in colour, and increased in bulk. The cut surfaces are firm, rather cakey, and presenting none of the appearances met with in death from high temperature.

The kidneys present the appearance met with in cloudy swelling, and perhaps that term conveys the best idea of their state.

The Lymphatic Glands.—Supposing the death to have occurred in a patient suffering from femoral bubo, it will be found in cutting down upon the gland that the surrounding tissues are full of serous fluid which infiltrates the peri-glandular area for 2 or 3 inches around. A large patch of sub-cutaneous hæmorrhage frequently extends outwards as far as the gluteal region. The gland when cut into shows a marked capsule, and a reddish, pulpy, splenic-looking tissue within. According to the stage of the disease is the gland uniformly red, mottled, or picked out with white or yellow points where suppuration is actively threatened. If the patient has died late in the disease pus may be met with as in other suppurating glands. Nor is one gland affected, a chain may be diseased leading up beyond Poupart's ligament to the iliac fossa, and far beyond, the diseased tract may be traced to the lumbar and retroperitoneal glands generally. Cervical glands, axillary glands, mediastinal, and even mesenteric glands may be affected. The enlargement of the latter is perhaps the most interesting, as without intestinal lesion these glands are affected in common with others, as proved by the presence of the bacillus in all.

Treatment.—From the first it was seen that the disease was not amenable to any known treatment. The symptoms reached a crisis so suddenly, the patient became mentally affected so early in the disease, death supervened so unexpectedly and with such terrible rapidity that but little time and opportunity was available to test any line of treatment. The Chinese treatment was, according to their own confession, unsatisfactory in the extreme. They believe that 97 per cent. of the Chinese attacked and treated by them died. This is interesting, as it shows that no specific, nor even alleviating, remedy is known amongst the natives in Yunnan, Pakhoi, or elsewhere where the disease is endemic. One Chinaman in Hong Kong prepared a powder and handed it me for trial; it contained fifty-three separate drugs, pearl powder being the chief ingredient. In the Government Civil Hospital and the Alice Memorial Hospital, where the medical staff are Europeans, many different methods of treatment were tried. The first drug administered was almost invariably calomel in gr. x doses, followed by a saline purge. This was indicated as the aspect so frequently wore a bilious hue, the conjunctiva a yellow tinge, and the tongue foul, as if covered by cotton wool, or of a mahogany or black colour. Further, constipation in the early stages of the disease was almost a constant symptom, and justified a purge. At *post-mortem* examination the practice was still further justified by the full gall bladder found. The maintenance of purgation was attempted in many cases as a means of carrying off the poison by the bowel. Sulphate of magnesia in 2 drachm doses, administered morning and evening, served to keep up a freely acting bowel. In the cases under my own care where this was tried the treatment was followed by a cleaner tongue, a less cloudy intellect, and a good appetite; but the drain may have been too great, as sudden death carried off most of them, although means were also taken to allay the deleterious effects of purgation.

The question of course arises, How is the poison, if at all, to be eliminated? How does Nature attempt to get rid of it? By the lungs? Not so: the lungs are practically never found affected *post mortem*, and in but a fraction of the cases did any lung symptoms call for treatment. Hæmoptysis one met with occasionally, but it was rather the overflow of a passively full lung than from any active cause. In the breath I could find no bacilli of plague. I caused a patient to breathe on a surface of glycerine, but found no bacilli after a patient search. If not by the lung, how then; by the skin? If so, no indications helped one to determine the fact, as practically there were no eruptions, no critical sweats; nor were bacilli found in scraping from the skin or in the sweat. By the kidney it is not likely the poison would find exit; nor moreover did any signs or symptoms point to the renal organs as being capable of such work. The urine was practically un-

changed. Urea was greatly in excess in all cases during the height of the fever, but the quantity of urine was somewhat reduced, nor could the bacterium be found. *Post mortem*, also, the kidney showed merely a cloudy swelling. By this elimination process of the excretory organs one is left with only the bowel, and seeing the others are at most only partially concerned, one seizes upon the bowel, if on any one of them, as a means of poison exodus. Using the intestine for scavenging purposes is still further justified in that the bacilli of plague are met with plentifully in the fæces.

All this proves that the intestine is a means of the poison finding exitus, and that the prevailing symptom—constipation—may be overcome with several advantages by continued gentle purgation. The further treatment was devoted to sustaining the patient by every means possible.

Curiously enough, patients throughout their attack, even when slightly delirious or semi-conscious, took their food readily. Brand's essence was the most palatable and easy of retention, but conjee-tea, beef-tea, chicken-tea, sago, etc., were taken with eagerness usually. At first vomiting interfered a little, but only for one day usually. During early convalescence solid food was relished, and without deleterious effect.

The drug largely administered at first was digitalis in frequent doses. This was indicated owing to the frequent fatal collapse which so often carried off one's patient. A man seemingly convalescent takes his food, refers to it with a cheerful smack of the lips, tumbles back, and dies in a few minutes; another, with no fever for days, and feeling his ordinary self, walks in the verandah and drops down dead. Heart failure without clinical or *post-mortem* signs, suggests at once digitalis as a means to combat the same. Gradually, however, and by bitter experience, it was seen that certainly digitalis did no good, and it was just possible that positive harm accrued from its persistent use. At any rate, it came about that digitalis was neglected. No doubt its slowness of action told against it.

Strophanthus met also with fair patronage but with no more satisfactory results.

Musk, an old-fashioned cardiac stimulant, I prescribed personally, but the trial was limited to a few cases, and I can only say that the slight benefits observed render the drug worth remembering in the physician's armamentarium. I gave 5 grains in pill every three hours. Towards the end of the plague epidemic most practitioners simply prescribed ℞ Ammoniæ carbonatis, gr. v; decoct. cinchona co. ℥j. every four hours. Digitalis and strophanthus were reserved for the period of the disease when the pulse flagged, but even then their use was fleeting, now given, now withheld, even from hour to hour. Our special cardiac drugs may be said to have dropped out of the routine of prescriptions as experience advanced. High temperature is a constant factor to be dealt with in the disease. The rise is sudden, and the chief accession is within the first twenty-four hours; 106° F. is a frequent register, and 105° the usual record of the first day of illness. If left to itself, even in fatal cases, it tends to fall, so that by the third day 103° is the usual temperature. In a few cases persistent high temperature obtains, and the third day generally ends the scene.

The usual chemical antipyretics are at a discount. Antipyrin occurs to one at once as ever present in the hands of practitioners in malarial districts, but a glance at the furry tongue and the known tendency to sudden death teaches caution in the use of a drug which, by its persistent use will upset the stomach, and even by its intermittent use acts on the heart in a manner which causes alarm to both patient and practitioner. Besides, when antipyrin was tried in plague patients and its effects watched carefully, the temperature was scarcely affected.

Phenacetin has been still more neglected as an antipyretic throughout the epidemic, and it seems to me justly so.

Quinine is useless in plague, and not only so but it is possibly deleterious. No one would think of administering quinine in either large or small doses with a mahogany colour dry tongue, with the patient in a semi-conscious state, and with the temperature over 105°. The only cases in which one is tempted to give quinine in plague is when the glands are but lightly if at all affected, and when a large spleen seems to point to a possible error in diagnosis, plague being mistaken for ordinary malaria. In such cases quinine does no good, and in the cases I have myself observed large doses neither affected the temperature, the size of the spleen, or the subsequent confirmatory signs of plague. A quinine and acid tonic in the convalescent stage is beneficial.

Alcohol is the stimulant which readily occurs to me as being indicated above all others. The limited number of Europeans affected rendered the knowledge to be gained by the administration of alcohol meagre in the extreme. The Chinese, Hindus, Japanese, and Malays object to alcohol at all times and especially in sickness. Even when no objection was raised by the native patients vomiting was readily induced by brandy or whisky, and the use of alcohol in the present epidemic cannot be said to have had a fair trial. This, however, is known, that patients who took alcohol freely stood a better chance of recovery than those who by prejudice refused it, or by physical constitution could not stand it. Many other drugs were administered: salol, perchloride of mercury, iodide of potassium, with various intentions and for various reasons. Nor was the local treatment of the bubo neglected.

Early incision, early excision of the gland, injection of the gland with various substances.—Of these gland injections a favourite one at the Alice Memorial Hospital was a solution of hydrargyri perchloridi with iodide of potassium. This seemed to do good, but in an indefinite way. The temperature fell, as a rule, immediately after, and the patient felt more comfortable. In all probability the pricking of the gland capsule with the hypodermic needle helped in a small way to relieve the gland tension, and thereby relieved pain. A drop or couple of drops of carbolic acid injected in the gland substance caused no marked effect for good or evil. These proceedings are not altogether unscientific, from what we know of the disease from Kitasato's bacteriological observations. The bacilli are mostly confined to the gland and its immediate neighbourhood: few, very few, are met with in the blood at any time, and a 1 per cent. solution of carbolic acid destroys the vitality of bacilli cultures in a very short space of time. These statements seem to justify the use of local treatment, be it incision, excision, or gland injection. None, however, can be said to have indicated any marked success in treatment.

Delirium is relieved by tepid sponging, ice bags to the head, and bromide of potassium was freely used. Of all drugs, hyoscine administered hypodermically (gr. $\frac{1}{100}$) is the best. Most grateful results followed its administration, and apparently with no deleterious effect. Paraldehyde and sulphonal gave no positive results. Chloral was shunned by all practitioners owing to the known cardiac tendency to sudden failure.

There is not much more to tell from the experience collated in the epidemic of plague. The old stock phrase, "to treat symptoms as they arise," but too surely indicates all modern medicine can do in this most terribly fatal malady.

CRIMINAL RESPONSIBILITY OF THE INSANE.

Speaking in the Psychological Section of the Annual Meeting at Bristol, Mr. Pitt-Lewis, Q.C., a very able barrister, made an interesting address, of which we were unable last week to give a report, but of which we are now able to furnish the following brief summary:

Mr. Pitt-Lewis said that *audi alteram partem* was a maxim which found favour with lawyers. The Congress having already heard the medical view of the question might be interested to know how some lawyers thought that an improvement in the law might be brought about. The subject was no light one, and some misapprehension existed with regard to it. In the first place, there never was a Macnaughten's case at all, in the sense that any binding decision had then taken place. Macnaughten having been acquitted, his case could not come finally before the House of Lords in any shape. A debate did, indeed, arise on the case after the acquittal, and the judges answered certain abstract questions as to the law, subsequently put to them by the House. Their answers, however, were neither of any authority, nor in any way final. The mention of finality suggested another serious misapprehension. Many people thought that the rule that a

man was responsible for his acts if he knew right from wrong had been invented by the judges in Macnaughten's case. This was not so. The rule itself was at least as old as the 14th century, probably older. English law was full of elastic expressions, which in different ages received interpretations varying with the knowledge and science of the day. A familiar instance of this was the rule that a man might employ "reasonable" restraint towards his wife. "Reasonable" was in mediæval times held to mean moderately beating her, or locking her up. But when Mr. Jackson endeavoured to place the same interpretation on the word a few years ago, and to lock up his wife, he discovered that what was reasonable "in the good old times" was not considered reasonable in the 19th century. In a similar way, the phrase "know right from wrong" varied in different ages. Hale said that a man, to be excused on the ground of not knowing right from wrong, must have no more intelligence than a child of 14. In Arnold's case, about 1760, Mr. Justice Tracy directed the jury that an accused could not be acquitted on the ground of insanity "unless he had no more understanding than a child, a wild animal, or a brute beast!" Soon after this, in consequence of the writings of Blackstone, and of George III's illness causing greater attention to be given to the subject of insanity, a great change took place in the interpretation of the word "know." Accordingly when, in 1800, Hadfield shot at the King, knowing perfectly well what he was doing, and in order to get hung, but while he was labouring under an insane delusion that he was compelled to do an act which would cause him to be put to death, he was acquitted. Macnaughten's case in 1843 marked the next great advance in the history of the law. In it the late Sir Alexander Cockburn's brilliant and astute defence caused the doctrine of what was then called "monomania" or "partial insanity" to be for the first time accepted by the law as a defence. Since that time English criminal law as to insanity had made no advance. What was now to be sought for was the recognition by the law of the fact that when a man was required to know 'right from wrong" a discriminating knowledge was spoken of, and not a mere bare and narrow knowledge. Moreover, it was also necessary that there should be a freedom of exercise of that judgment by the accused, for, in the words of a late Chief Justice (Lord Denman), "if some controlling disease was in truth the acting power within him which he could not resist, then he will not be responsible." This statement of English law practically brought it into harmony with other systems of jurisprudence. Reform must be sought by means of the Court for the Consideration of Crown Cases Reserved rather than by endeavouring to get an Act of Parliament (a hopeless task).

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XIII.—LANCHESTER.

In the quiet little village of Lanchester we found a compact union, having a small infirmary built apart, the whole standing in a pretty flower garden, in front of which was a pauper engaged in cutting the grass. In response to his query, "Will ye be inside?" we asked for the master, who at once introduced us to the nurse, and left us in her charge. The infirmary is planned for 49 beds, and the nurse, who is a midwife, is trained in general nursing.

Wards.

These are on the ground and first floors, the nurse's quarters being between; though they are of a pleasant aspect, with windows on each side, they are too small, and the ventilation is not effective, as we found on going into a male ward in which there was an offensive case, a poor man with paralysis of the sphincters. The bedsteads are spring, with hair mattresses, and the wards were supplied with armchairs and other comforts, such as dressing gowns and slippers, for the patients who have to leave their beds at night. Commodes are used at night, as the conveniences are downstairs on the intermediate landing. There are no wards for isolation; we saw in a male ward a man with syphilis, a most decidedly offensive case; and all the feeble-minded patients would be in the infirmary. The labour ward is on the first floor, and, if we remember rightly, has two beds, one of which is the labour bed.

Lady Guardian.

The nurse informed us that she felt much indebted to the lady guardian for the improvements that had been introduced into the infirmary; until the lady guardian was appointed there was no one on the board with whom she could talk over the feminine matters that appertained to her department.

Sanitary Arrangements.

Part of the drains were being taken up at the time of our visit, but they are not yet satisfactory. The system of closets is earth; they were certainly most unsavoury when we looked into them. This ought not to be, for the earth closet in the country must be more wholesome than the water where there is no main drainage system, and in a place like Lanchester, where the guardians have a large amount of ground under cultivation, the failure in the supply of earth must be from want of organisation. Hot and cold water are laid on to the infirmary on both floors; there are two bathrooms on each side but no slop sinks.

Patients.

The medical officer told us that the work in the infirmary was good; being at some distance from a general hospital all the poor came to the workhouse. We saw several patients in bed—a woman in advanced phthisis, a man with disease of the foot, another necrosis of the arm, recovering, and the usual sprinkling of infirm and old age patients. Nurse was very proud of her surgical patients, and she had good results with carbolic lotion and vaseline dressing; she told us that she was liberally supplied with all that was required for her work. Water pillows and mattresses, linen, mackintoshes for the beds: those that we looked at had an ample supply of bedding and were clean. All the wards are in telephonic communication with the nurse's room, but the hospital is not placed in communication with the master's quarters.

Pauper Help.

The services of the inmates are not made use of in the wards except to assist in the minor details of the work, and in the cleaning. The nurse is responsible for the actual service about the sick: but at night the wards are left to the paupers, who are charged to call the nurse at any time that her presence is needed; under these circumstances there are times when the nurse is more out of bed than in.

Diets.

The question of suitable food for the sick is one that requires attention. The diets as we saw them set forth on the cards were hardly such as some of those patients could eat, and if unsuitable food is sent to the wards it is double waste—waste of the food cooked, and waste because it takes the place of other nourishment that might help on the course of treatment. Perhaps the lady guardian may have time to study the food as supplied in the infirmary.

Recommendations.

This little country infirmary made a pleasing impression on us: the patients appeared happy and well cared for. Still, we would suggest that more accommodation for isolation should be provided; the offensive cases above referred to are a distinct evil in a ward, and if there is want of sufficient ventilation in the daytime when the nurse is about, what must it be at night when the paupers are left to their own devices? Also we suggest the employment of a night-nurse, who, besides her own especial work, would be available to relieve the day-nurse and herself be relieved by the day-nurse. The sanitary arrangements need attention, as it is nothing short of a disgrace that the necessary supply of earth for the closets, and the frequent change of the same, is not a matter of routine in the midst of the country.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, AUGUST 25th, 1894.

THE HOSPITALS OF THE STATE AND THE INSPECTORS OF THE POOR LAW BOARD.

In a timely article in the *Westminster Review*, Miss de Pledge, matron of a large metropolitan infirmary, reviews the present treatment and nursing of the sick poor in the metropolitan and some of the larger country workhouse infirmaries. It is delightful to find how wide is the interval which separates their present condition from that which obtained in 1865, when the inquests on Gibson in the Holborn Workhouse Infirmary first attracted the attention of Mr. Ernest Hart, when acting as the co-editor of a contemporary, and led him to plan and initiate the inquiry, in which he subsequently obtained the assistance of Dr. Anstie, Dr. Rogers, and Dr. Carr. Then followed the publication of his manifesto on the "Hospitals of the State;" the formation of the Metropolitan Workhouse Infirmaries Reform Association; the great meeting at St. James's Hall; the giant deputation which he introduced at the Poor Law Board, and of which he was spokesman, to Mr. Villiers, then President; and the unprecedented and rapid revolution of public opinion which destroyed the old and barbarous systems of treatment of the sick in the infirmaries, and culminated within eighteen months in the passing of Gathorne Hardy's Act, the creation of the Metropolitan Asylums system, and the erection throughout the metropolis of separate infirmary buildings, administered as, what they are now admitted to be, "hospitals of the State"—a phrase which has since then become stereotyped in our literature, and which represents what was then a new idea but has now become a commonplace. Then for the first time was accepted the principle of a common rate for London for sanitary purposes and for the sick.

Miss de Pledge points out with pride, and we read with a warm thrill of personal pleasure, the admirable conditions under which the great workhouse infirmaries of London are now administered—the kindness, the skill, and the success with which the sick poor within these great establishments are treated and nursed. No one will envy us the deep satisfaction with which we find it affirmed by a critical authority that that great humanitarian movement, due solely to medical effort, *quorum pars magna fui*, has remained a permanent benefaction to the thousands of the infirm, sick, and helpless poor. Not only are they no longer neglected and made to endure cruel and unnecessary sufferings, but they are, as Miss de Pledge points out, as tenderly nursed and as well cared for as in the great metropolitan hospitals, which are the pride and glory of our city. It is delightful to find that an impartial critic is able to give such an account of these establishments as to show that the work then founded remains a permanent good, and one which has grown and developed during the quarter of a century which has elapsed. It is now in most respects and in many places as well, in London as in some of the great provincial cities—Manchester, Birmingham, Cardiff, Liverpool, and Newcastle—and in other large workhouse infirmaries scattered over England and Wales, a model for other countries and for other cities. It now only remains to complete the work by raising the provincial workhouse infirmaries generally to the same level of decency and of humanity in the treatment of the sick poor.

It will no doubt have come as a painful surprise to many, as indeed it has been to ourselves, to learn, as has been shown by the result of our recent inspections, and from the reports which we have already published and those which we have yet to publish, that the "straw sack" is still in use in some of our country infirmaries: that the untrained matron of the workhouse is accepted as the head of the nursing department: that the "assistant nurse" is still to be found receiving her £12 per annum; that the night nurses, even the untrained pauper helps so-called, are few and far between; that the unpaid paupers who are called nurses, and who wash the patients, change poultices, administer medicines, drugs, and have charge of the stimulants for the sick, are plying their task in numberless instances in the wards of the workhouse infirmaries. How they fulfil them, and with what results, the tragedies at Newton Abbot and at the Oldham workhouses bear illustrative testimony. We have found that the mixing up of the infirm, helpless imbeciles, and sick is the prevailing custom in the majority of these infirmaries. We have had twenty-eight years of further Poor-law inspection; but these abuses still exist, and few days pass but that in one country newspaper or another news is given of a catastrophe that has resulted from the want of trained nurses or proper appliances. We propose to make an end of them, and ask public help for the purpose.

We should be sorry if, under the influence of anodyne reports of the great improvements which have been effected through the efforts of our Editor and his contemporaries in the metropolitan workhouse infirmaries and those of the great cities which we have named, the public should fold its hands and rest satisfied that all has been done that is required for the sick. The Local Government Board appears for a long series of years to have regarded these sad conditions and cruel neglects with silent complacency or gentle chidings at cases of scandal: it needs to be awakened from this supine satisfaction. What its inspectors have failed to stigmatise, and what the Board has been content not to know or not to alter, we are bringing weekly to public notice. At present, and hitherto, these strange and sad revelations, while happily awakening some local echoes and leading to partial improvements, are being received by the Board with silence, and by the public and the press, preoccupied with political anxieties, with a quietude which might be interpreted as indifference. The inspectors of the Local Government Board have apparently been occupied largely, so far

as they have been moved at all by the reports of our commissioners, in suggesting apologies or insinuating exaggeration. We are well assured, however, that there will be a rude and probably a swift awakening. The public conscience will not be satisfied with little hole-and-corner reforms and local reprimands. The reports which we are week by week giving of the country workhouse infirmaries bring to light in every one of those which we have had visited one or more of the abuses to which we have referred existing in full vitality.

Almost everything that was accomplished by Mr. Ernest Hart and his colleagues for the sick poor in the great cities remains to be done in the country, and we must work on knowing no pause until this result is attained. It is absolutely necessary, and we demand in the name of all that is dutiful and humane, that adequate standards be laid down for the construction, the administration, and the nursing of the sick poor under the charge of the State in provincial as in metropolitan workhouses. There must be an end of all this cruel, wicked story of the sick, the infirm, and the bedridden. We are formulating these standards tentatively by recommendations in each infirmary. It will be for the public to insist and the Poor-law Board to require that they are fulfilled.

We demand—and we feel sure that the public conscience will support the demand—that there shall be a standard for the number of trained nurses in workhouses in proportion to the number and the classification of the sick; that the necessary appliances, baths, closets, and dressing apparatus be provided according to a general scale; and that the provincial hospitals of the State be assimilated in standards of humanity and efficiency to those of the great cities. This is all the more necessary that, judging by their silence or their recalcitrancy, by their supineness or their obstruction, the legal and political gentlemen to whom, as "general inspectors," the supervision of the wards, the nursing establishment, the supply of hospital appliances, and the nature of the hospital administration has hitherto been officially left appear to be wholly unequal to the task and ill equipped for the responsibility—as, indeed, without reproach, they might be expected to be.

To the question which we have now often asked—who shall inspect the inspectors?—there has as yet been no reply. To this we must now add the further question—and take care that sooner or later a public answer shall come—Who shall appoint the inspectors, under what conditions, with what requirements, and by whose advice? It might be well, and it would be very agreeable to us as it would, we feel sure, be satisfactory to the public, and worthy of the Local Government Board, if it would now and at the present stage take this matter in hand on the basis of the information already furnished by the twelve reports which we have thus far published of the results of our inspection of as many workhouse infirmaries in the provinces, and with the aid of the further information contained in as many more reports which we have in hand, and of which we are ready at once to furnish to Mr. Shaw Lefevre the details. It seems to us surprising that this stereotyped machinery of influential deputations to the Local Government Board, and the public recital within the walls of its board room of the facts calling for inquiry and redress, should always be needed. It had to be gone through, with all the aid of public meetings and grand deputations, to bring about the reform of metropolitan workhouses. It cost our present Editor just eighteen months of hard work when such time could ill be spared. This was rewarded by the success of the effort, by much violent abuse, and speedy oblivion. We have just gone again through that ceremony, this time also with prompt and promising results in the case of the children of the State educated in barrack schools. Three months ago, when the subject of the Forest Gate School scandal was first brought before us and we began to deal energetically with this subject, the Local Government Board, with all its apparatus of clerks, secretaries, and inspectors, appeared perfectly contented with the then existing state of things. In more than one instance it has even refused to allow cottage homes to be established at the guardians' expense, and it was on the eve of approving considerable additions to the barrack schools. In reply to the questions which were put in the House of Commons at the instance of Mr. Ernest Hart, as Chairman of the Parliamentary Bills Committee and as Editor of this Journal, concerning the Forest Gate scandals, and the hardly less regrettable methods and results of the Local Government Board inquiry, the President of the Local Government Board—under the advice, no doubt, of his able permanent officers—gave answers indicative of nothing else than deprecation of any suggestion for the need of further inquiry, and treated the matter as a closed book. The advent to the Local Government Board of a great and influential deputation, and the printed memorandum previously placed in his hands and issued from this office descriptive of the basis of demand for a full and ample public inquiry, first awoke Mr. Shaw Lefevre to an active sense of the necessity of giving something more than smooth and illusive replies in the House of Commons; and so within three months of our first raising the question in an individual sense it was developed into an urgent and organised public demand which no administrator could disregard. To this Mr. Shaw Lefevre, with a quick and humane instinct, has given effectual satisfaction by the appointment of a Committee of able and independent persons wholly freed from official influences. For this act and for the complete and graceful manner in which it has been carried out, much thanks are due to him. We trust and we feel, indeed, no small confidence—that he will meet the demands which we are now putting forward as to the treatment of the sick poor in provincial infirmaries with the like concession. The Parliamentary recess is upon us, or it would certainly be obtained within a few weeks. Meantime Mr. Shaw Lefevre has time to set his house in order, and to agree with us—his friend and not his enemy—in the gate.

We hope that it may not be necessary again to besiege the doors of the Local Government Board at so short an interval with another deputation bound on a similar errand; but, however it may be necessary to proceed in order to obtain the public object which we have in view, we must not rest until a similar inquiry is set on foot for the sick as is now to be commenced for the children. In this labour we shall not pause, and we feel assured that the demand which we are making on behalf of the public and of the sick poor is so just and so urgent that it cannot be resisted, and its satisfaction ought not to be long postponed.

THE CHELSEA HOSPITAL FOR WOMEN.

It is not surprising that the unfortunate events which have recently taken place at this institution should have excited a good deal of comment in the public press, or that persons ignorant of hospital matters should rashly conclude that all hospitals, or at any rate all women's hospitals, are places unfit for the treatment of the sick, because at one such hospital some negligence is proved to have crept into the administration. Nor will it surprise anyone that there is one member of our profession—Mr. Berdoe—who makes himself the champion of this enlightened theory. A letter written by this gentleman to the *Daily Chronicle*, under date July 25th, has been forwarded to us, and is worth our readers' attention as showing the lengths to which prejudice—honest, we are willing to believe, in its origin—can carry a man who knows little of the matter he treats. In this precious production we are told that "hospitals for women are the happy hunting ground for the human vivisector," that "Sir Spencer Wells once claimed to have saved 500 lives at the cost of experiments on fourteen rabbits, but Mr. Lawson Tait has reduced the mortality, after the operation of ovariotomy, far below that of Sir S. Wells—to *nil* in fact without any vivisection at all;" and that "only a paper wall divides the laboratory of the vivisector from the hospital ward," a statement which Mr. Berdoe amusingly hopes will not be considered libellous. Let us assure Mr. Berdoe that there is no risk of this, seeing that the charge is perfectly unmeaning; but it does surprise us, that even the folks who talk about "human vivisection" should be foolish enough to refer to the history of ovariotomy. Who that is old enough to recollect that controversy does not remember how fiercely those who advocated and practised ovariotomy—then a very fatal operation even in the best hands—were denounced as "murderers," "belly rippers," and other choice terms, and that not by authorities of Mr. Berdoe's stamp, but by some of the leaders of the obstetric and surgical professions? Yet who can now deny that, in spite of disasters occurring in the practice of some ovariotomists, ovariotomy has been the means of saving life and suffering to an incalculable extent? So in regard to other novel operations "hysteropexy" let us say. Grant that a patient with displacement of the womb is not in any immediate danger of life. The same may be said of many cases of ovarian tumour. But if she is so disabled by her infirmity as to be willing to run some risk for its removal, the only questions in the matter are whether the operation gives a fair prospect of removing the infirmity, and whether it involves so much danger as to render it unjustifiable. Some approach to a judgment on the latter point may be made from the analogy of the many similar operations now practised in the peritoneal cavity. But the former point can only be settled by experience, and to decry such "experimental" operations—if you choose so to term them—as "human vivisection" is as absurd as it would have been a few years since to use similar abusive epithets about the operation for the radical cure of non-strangulated hernia. The latter operation is now practised very freely, and, we believe, with a very high percentage of permanent and really "radical" cures. And so it may be—we do not say that it will be—with hysteropexy and other uterine operations. Nothing that has been proved about the Chelsea Hospital has in any way decided this question. The staff and the Committee have, in the opinion of the Committee of Investigation, been negligent in performing such operations in an unhealthy condition of the building; but the charge which Mr. Berdoe assumes as proved against all hospitals has not even been made in this case; or, if Dr. Parkes's original words bore such a construction, the charge was at once withdrawn. And if Mr. Berdoe were fit to talk about surgical matters, he would know that advance in operative practice can only be made by trying new methods, and that such trials are not confined to hospitals for women, nor even to hospitals at all, but are the essential condition of surgical progress.

Other scribes, not much better informed than Mr. Berdoe, are, of course, busy with the matter. Thus a correspondent sends us a cutting from a Wolverhampton paper, in which the Chelsea report is used in order to strike at the local women's hospital there. But this, like the other attacks, assumes that operations said by the Committee to be unjustifiable, under the circumstances of the hospital at that time, are unjustifiable in themselves. Of exploratory incision into the peritoneal cavity—an operation practised in every hospital in the world, as far as we know—the Committee say, "Circumstances such as these, with a mortality of 44.4 per cent., render recourse to this method of diagnosis unjustifiable;" and this is used to discredit women's hospitals generally.

Another proposal advocated by a local Kensington paper is for a Government inquiry, and a periodical public inspection of all public hospitals. This would be, in our opinion, to give a very exaggerated importance to what, though a very regrettable, is also, we believe, a very exceptional occurrence. And the idea thrown out elsewhere, of having a coroner's inquest on every case of death after surgical operation is really ridiculous. Such inquests would be entirely superfluous in 99 cases out of every 100, and would, therefore, soon become a mere farce.

Dr. Septimus Gibbon, who has filled the office of medical officer of health to the Holborn District for thirty-nine years, has tendered his resignation, and asked to be granted a superannuation allowance in consideration of his long service. On the motion of Mr. J. Trenner the resignation was accepted, and the question of granting a superannuation allowance to Dr. Gibbon was referred to the Sanitary Committee for consideration and report.

A statue to Claude Bernard will be unveiled at Lyons on October 26th. The French Academy has appointed MM. J. Bertrand and Brunetière to represent it on the occasion. The Académie des Sciences will be represented by MM. Chauveau et Bouchard. As the first French Congress of Internal Medicine will be in session in Lyons at the time, it is expected that the ceremony will be exceptionally brilliant.

THE BUDA-PESTH CONGRESS.

The Tropical Section of the Eighth International Congress of Hygiene and Demography, to be held at Buda-Pesth next month, promises to be very successful. The President (Surgeon-Major Theodore Duka) has received a telegram from Hong Kong stating that Dr. Ayres, the principal medical officer to the Government, is sending a full report on the plague. Dr. Simpson (of Calcutta), in conjunction with M. Haffkine, has written an important paper on the

comma bacillus; and Miss Florence Nightingale, one of the honorary presidents of the Section, has promised to send a communication on "Village Sanitation in India." Papers will also be contributed by Sir Joseph Fayrer, Sir William Moore, Professor Henry Cayley (of Netley Hospital), Mr. Ernest Hart, Dr. Dhurandhur (of Baroda), Dr. Laveran (of Paris, Dr. Clemow (of St. Petersburg), and other distinguished authorities.

QUEEN'S COLLEGE, BELFAST.

The President has received information that the Government will grant the sum of £2,500 for the erection and equipment of a physiological and pathological laboratory. Plans are being prepared, and the buildings will be at once proceeded with. They will constitute a very important addition to the machinery of the medical school. About £8,000 is in hand for the erection of the Students' Union. The bazaar and fête held last May proved highly successful. The College is to be congratulated on the evidences of progress and enterprise which it is constantly showing.

FOSSIL MICROBES.

A recent communication to the Académie des Sciences, MM. Reynault and Bertrand stated that, in examining sections of coprolites of the Permian period, they noted the presence of a considerable quantity of microbes of different kinds—isolated rodlets and diplo-bacilli, strepto-bacilli, vibrios, and filaments. There were also mucedinea, with mycelium and detached spores. The Permian bacterium is said not to resemble any of the forms known to exist at present. MM. Renault and Bertrand throw out the suggestion that possibly these may be only one species of bacterium which is polymorphic.

THE CASE OF J. G. ROUND.

Dr. J. S. Scriven (St. Michael's Lodge, Abberley, Worcestershire) writes to us: "The case of J. G. Round, recently convicted of manslaughter of his faithless wife, is, I think, a matter for the consideration of the medical world, and especially of alienists. Briefly reviewed, the man was robbed of a wife to whom he was passionately attached by a wretch named Hampton. Round tries all he can to get the woman to return to him, and condones her conduct with Hampton, jun. She meets him, and not only once; then in a sudden fit of passion, or, as I think, of mental aberration, he stabs her. The judge rightly and wisely charged the jury, who brought in a verdict of manslaughter in lieu of murder, and the judge gave as light a sentence as the law would sanction, namely, twelve months' hard labour, the jury having recommended the prisoner to mercy. From a medical point of view there can be little doubt but that this poor cripple—a heart-broken man who had for months been brooding over his wrongs—had the brain centres more or less disturbed. His was no premeditated crime; he was with the woman and her paramour, in hopes of inducing her to return to him. He was described in evidence as a quiet, peaceable, hard-working man. There is the evidence of Mr. Jermyn, shoemaker, who employed Round as one of his workmen, that the conduct of the adulterer Hampton 'had driven him (Round) off his head.' Had the man been in a high position in life, and instead of being a poor crippled working man a handsome rich lady, and used poison day by day to get rid of a disliked husband, a hundred rich persons would have clamoured for pardon, on the ground of insanity. In this case the victim is poor and helpless, save for where medicine in its most noble aspect steps in, points to the irresponsibility of the man, and also will, on investigation, doubtless decide that twelve months' hard labour will complete what the previous strain has begun, namely, render the man an imbecile for life. I venture to think that if the Home Secretary were requested he would allow two or three members of the British Medical Association, skilled in lunacy, to examine the man, with a view of craving Her Majesty to grant him a full pardon. Justice has been done now let mercy have a voice.

ANARCHISTS, ANTIVACCINATORS, AND ANTI-PASTEURISTS.

Anarchists, antivaccinators, and anti-Pasteurists appear to be foregathering just now in a friendly and instructive fashion. The anarchists have been assembling at a friendly evening at the house of the President of the Antivivisection League in Paris, and a little outdoor gathering, including a quaint collection of "Anti's" generally, to protest against the British Institute of Preventive Medicine has had its little innings and is reported in all the papers. It is just as well that these wild people should have their silly say unanswered and without comment. But it is rather painfully comical to find a Minister and a man of Mr. G. W. Russell's culture writing to them to announce that he detests Pasteurism—and of course also Listerism. Why not add that he has a contempt for the equator and grave doubts about gravitation? It reads oddly at this moment when the whole world has been meeting to do honour at every quarter of the globe to its two greatest benefactors—Pasteur and Lister, and on the day after Lord Salisbury's eulogy *urbi et orbe* of the Listerian conquests as among the few great positive victories of modern science on which he could definitely congratulate mankind. But oddity is the badge of the anti-party who delight in posing as "against all science" and "agin all government," and appear to think that there is something progressive, emancipated, and metaphysical in this attitude. To be logical, Mr. Russell should add the inevitable converse of his proposition, and declare that he loves small-pox, is much attached to hydrophobia, and adores blood-poisoning and high hospital mortality. This would put him quite in sympathy with his friends, the orators in the cart to whom he addressed this interesting missive.

PREVENTION OF CRUELTY TO CHILDREN.

Few, probably, of the people who hear of the Society for the Prevention of Cruelty to Children, have any idea of the magnitude of its operations, or the importance of the work which it is doing: operations which extend over an area including 23,000,000 of the population, and serving 109,364 children during the last ten years. The tale is a miserable one—25,437 sufferers from actual violence, 62,887 from neglect and starvation, 12,663 little things exposed to suffering in the streets to draw forth the lazy and cruel charity of the casual giver, 4,460 girl victims of sensuality, 3,205 children improperly and hurtfully employed, as in travelling shows and circuses, and 712 cases where the interference of the Society came too late, and nothing was left for it but the punishment of the wrongdoers. One may judge of the helplessness of these little victims by the fact that nearly 90 per cent. of them were under 12 years of age: and one may estimate the reality of the cruelties inflicted on them by this, that notwithstanding the newness of the law and the unwillingness of certain magistrates to give effect to its provisions, 5,460 convictions were obtained out of 5,792 prosecutions. Many of these prosecutions of course involved more than one person, and if the penalties inflicted are to be taken as showing how convinced the magistrates and judges were of the truth of the cruelties brought to light by this Society no better justification for its existence could be found than in the fact that during ten years 6,973 parents and others have been convicted and that 1,108 years of imprisonment and £2,022 of fines have been distributed among them as punishment for their cruelties. It must not, however, be imagined that the Society exists for the punishment of crime. Its primary purpose is the prevention of cruelty; prosecution and punishment only follow where parents refuse to reform. At

first the prosecutions were numerous, but since the status of the Society has been better recognised and people have learned from its teaching that cruelty to children is a crime which will be punished a warning has generally been sufficient, the proportion of cases in which prosecution has been sufficient not being half as great now as it was at first. Some very interesting facts are brought out in the report of the Society regarding the cause of cruelty. It certainly has nothing to do with either largeness of family, lowness of wages, lack of education, or the character of the children themselves. Experience wholly disposes of these as causes of cruelty. There would seem to be a certain vice in some people's moral constitution, a vice which can only be expressed as lack of natural affection, and one which is by no means confined to the poor or uneducated. This shows the absolute necessity of such a Society. If cruelty to children were indeed the natural outcome of the poverty and wretchedness entailed upon many by our social system the matter would be one for political economists, and we should indeed despair; but if, like thieving and wife beating, it is a mere indulgence in criminal propensities—a crime punishable by law—then such a Society as this is necessary, to act as guardians to these suffering little ones, and to obtain for them the protection which the law offers, but, without such intermediary, fails to give. Working, as the members of our profession do, among every class, and seeing as they do the inner life of every section of society, it must, and we believe does, often happen that they become cognisant, or at least suspicious, of instances of cruelty to children entirely unsuspected by the outer world—cruelty which they would give anything to put a stop to, but in regard to which they, by themselves, feel helpless. Under these circumstances, it is well that they should bear in mind the existence of this Society. We do not suggest that they should use their professional position merely to spy out the land, but where they see abuses which they would stop if they could, then by the aid of this society they can.

THE SEMMELWEISS INTERNATIONAL MEMORIAL.

On September 2nd, prior to the session of the International Congress of Hygiene at Buda-Pesth, in the afternoon Professor Huppe, of Prague University, will deliver an oration on Semmelweiss at the Academy of Sciences, after which carriages in waiting will convey the guests to the site of the memorial, and Professor Kezmarszky, the Chairman of the Committee, will unveil the statue. Dr. Duka has been requested, in the absence of Sir Spencer Wells, to place a laurel wreath upon the statue, and to deliver an address in English.

SANITARY AUTHORITIES AND MEDICAL OFFICERS OF HEALTH.

The Ilkeston Town Council has, by a majority of 1 vote, elected a fresh medical officer of health in place of Dr. Carroll, who has held the post for a considerable number of years. As throwing some light on the motives by which local sanitary authorities are apt to be swayed in electing their officials, we quote the following from the speech of one of the councillors, who objected to Dr. Carroll being re-elected. Dr. Carroll, he said, was an enthusiastic sanitary reformer, and he read extracts from his annual report to show that the property owners of the town would be put to tremendous expense, and the ratepayers, too, if Dr. Carroll's recommendations were carried out. Such ideas were all very well for towns like Manchester or Liverpool, but the ratepayers of a small borough like Ilkeston could not afford to go in for these sanitary improvements, such as the provision of a "destructor" at a cost of £600, the more frequent emptying of ashpits free of charge, to put damp courses in all buildings, to have all existing yards asphalted, to abolish all tub closets for waste waterclosets, to abolish all the privy middens in the town, the erection of a public slaughterhouse, and the abolition of existing slaughterhouses, the appointment of a second nuisance inspector with practical knowledge of building so as to check jerry building, the improvement and enlargement of the sanatorium, and free admission thereto. If Dr. Carroll were re-elected he would feel it his duty to assist in carrying out all these improvements, and the ratepayers must pay the piper. All this sounds like highest praise, and seems reason enough for reappointing so energetic an officer; not so, however, at Ilkeston, the speaker seems to have known his audience, and to have spoken thus in all seriousness as implying blame, and his name appears in the list of the majority voting against the reappointment of Dr. Carroll. Things like these throw grave doubt on the utility of local self-government.

THE TREATMENT OF TETANUS BY ANTITOXINS.

It is well not to forget in the midst of the reports which are being published regarding the use of antitoxins in diphtheria that, as readers of our Epitome have had many opportunities of knowing, from the beginning of the investigations on the subject, the treatment of tetanus by this method has run *pari passu* with that of diphtheria. The object in both cases is to produce an immunity, possibly only of a temporary nature, but lasting sufficiently long to interfere with the fatal progress of the disease which has already been planted in the individual. In both it is of great importance that the injection of the remedy, in other words the production of the immunity, should be commenced as early as possible, before the patient has become charged with the toxic products of the disease. If, therefore, this form of treatment is to become of practical service, especially in the treatment of a comparatively rare disease like tetanus, it is essential that the antitoxins should be comparatively permanent, so that they can be kept at hand ready for an emergency; and it is satisfactory to find that this is the case in regard to the antitoxins against tetanus, derived from the serum of the horse. The material used is an antitetanic serum, prepared in the dry state and sent out in tubes each containing 4 to 5 grammes, which is a little more than the minimum dose considered curative in the case of a man. The substance is to be dissolved in distilled water, and injected subcutaneously. The dose must vary according to the gravity of the symptoms, and requires to be repeated in smaller quantity for several days. In regard to the cases hitherto reported, doubt has been expressed by some as to the severity of the attack, it being well recognised that the less acute forms of tetanus by no means partake of the gravity which attaches to those of more acute onset. These doubts are, however, in some cases ill-founded, and now that the material for the treatment can be stored and kept at hand we ought quickly to accumulate sufficient evidence to decide on its utility in surgical practice. We hope to publish in an early number an interesting case successfully treated by Dr. Herbert L. Evans, of Goring.

THE YORKSHIRE COLLEGE NEW BUILDINGS.

The primary object of the visit of the Duke and Duchess of York to Leeds on October 5th is, as is generally known, to open the new buildings that are being erected in connection with the Yorkshire College. Both the School of Medicine, near the Infirmary, and the College Hall and the Library, forming part of the College Road buildings, are now in an advanced stage, and there is every likelihood that both edifices will have reached completion when they are formally opened by their Royal Highnesses. There is still a good deal to be done internally at the new Medical School, but this is mostly detail work, and the large staff of workmen who are employed by the contractors will be able to accomplish much within the next two months. Special fittings, designed by the architect (Mr. W. H. Thorp) with the assistance of the professors of the various departments, are being put in throughout the building, and great care necessarily had to be exercised in their construction

and erection. The masons and plasterers have completed their labours; the joiners are now hard at work; the various appliances needed for the lavatories and other departments are being rapidly provided, and men are engaged in putting in the electric light. Sufficient progress has been made with the entrance hall to indicate that this hexagonal apartment, with its mosaic floor, its walls of faience, its arcaded sides, its windows filled in with cathedral glass, and its groined ceiling, will be one of the most effective features of the building. Externally the structure has a striking appearance, and forms a fitting adjunct to the General Infirmary, but the façade gives little idea of the vast extent of the various departments, covering three sides of a square. The Physiological Department has been finished for some time; in fact, classes have been held in it during the past session. This, however, is but a small proportion of the admirable accommodation that will be available for the medical students of the Yorkshire College after the visit of the Duke and Duchess of York. Little more remains to be done to complete the other section of the Yorkshire College extension—the College Hall and Library. This latest addition to the College buildings is worthy of the reputation of that eminent architect, Mr. Waterhouse, R.A. The graceful structure that is to form the central block has long been greatly admired by passers-by, and though it is yet too early to predict the verdict that will be pronounced upon the interior when it is thrown open to public inspection, it is quite safe to say that the interior will be found to be quite in keeping with the exterior. The noble entrance hall, the commodious library on the ground floor, and the examination hall on the first floor are practically complete, little is now needed but the finishing touches, which paint and varnish will soon supply.

CORONERS AND THE MEDICAL PROFESSION.

THE *Liverpool Medico-Chirurgical Journal* of July contained an article on "The Coroners' Acts of 1887 and 1892," by Mr. Frederick W. Lowndes, senior surgeon to the police force of the city, and it has just been reprinted in the form of a pamphlet. This is the concluding paragraph of the paper: "The coroner's functions are medical rather than legal—to ascertain the cause of death first, and next how it was caused. All inquiries into accidental deaths, deaths from suicide, deaths from injuries, come most appropriately within the province of a medical coroner, while it becomes a grave question whether he would not be able to reduce considerably the number of inquests resulting in verdicts of deaths from natural causes. In making these remarks I make no reflection upon our city coroner, Mr. T. E. Sampson, or his deputy, Mr. Gibson, whose courtesy and deference to medical practitioners are beyond all praise. I am simply arguing that the office of coroner is one which is fairly open to the medical profession, practically as well as legally. Any fit person may now be a candidate for any vacant office of coroner, or of deputy coroner. Meanwhile, I repeat that it is the duty of all medical practitioners to endeavour to work heartily and loyally with every coroner, whether he be a legal or a medical man."

DEATHS UNDER CHLOROFORM.

WE are indebted to Surgeon-Lieutenant-Colonel W. J. Fawcett for the following account of death under chloroform which occurred recently at the Woolwich Hospital. J. B., a private in the 8th Hussars was admitted to the Herbert Hospital, Woolwich, on July 17th, suffering from primary syphilis. He was a strong man, aged 20. On July 27th, circumcision being found necessary, it was decided to perform this operation. The usual precautions were taken, and the heart's action being normal, Duncan and Flockart's chloroform, specific gravity 1497, was administered on lint. Its effects were very rapid, anæsthesia being complete in about three minutes, and the operation was accordingly proceeded with. The pulse, strong at first, now became weaker, the respirations, however, continuing full and regular. Within two minutes the operation was completed, and the administration of chloroform discontinued. The usual dressings were being applied, when the pupil, before contracted, suddenly dilated to its full extent, the pulse stopped, and the respirations became slow, deep, and sighing for a few seconds, and then ceased altogether. Five drops of nitrite of amyl were at once administered by inhalation, the legs of the patient were elevated, his head depressed, his tongue drawn out, and artificial respiration commenced and continued for three-quarters of an hour. The faradic current was at once applied behind the sterno-mastoid, and over the heart; ether was injected hypodermically, and no effect having been produced by these measures, acupuncture of the heart was resorted to, but all without avail. The man was dead. The total amount of chloroform used was exactly 2 drachms. The *post-mortem* examination showed that all the organs were healthy, except the right side of the heart, which was dilated and full of black fluid blood. The verdict returned at the inquest was "Death from failure of the heart's action while under the influence of chloroform properly administered previous to a necessary operation."—We are indebted to Mr. W. H. Maidlow for the following report of a death under chloroform which occurred at St. Bartholomew's Hospital on August 3rd. W. B., aged 44, was admitted in a condition of chronic septic poisoning, with fœtid collections of pus in one leg. Three weeks previous to the date of death chloroform had been administered by the same anæsthetist, and well borne; nitrous oxide had also been given on four or five occasions. The examination of the heart during life showed nothing special beyond feebleness. On the last occasion the anæsthetic was taken well at first. After about four minutes some struggling took place, but the patient was too weak to struggle much. In the meantime the pulse became a good deal more rapid. Just as the patient was at the point of going under, about six minutes from the commencement of the administration, when a little more than two drachms had been given, the pupils suddenly dilated widely, and the pulse became almost immediately imperceptible at the wrist. The usual measures were at once adopted. Respiration gradually became slower, and ended in a few gasps, separated by long intervals. The face became pale at the outset, and remained so. A stethoscope was applied to the chest, shortly after the pulse had ceased, but not the faintest sound could be heard. Efforts at resuscitation were continued for fifteen or twenty minutes, but there was no response. The necropsy showed that the liver was very cirrhotic. The lungs were emphysematous and œdematous, the right being also entirely adherent to the chest wall. The heart was dilated and flabby, but its tissue was not friable. The right side was engorged with blood. Kidneys large and hard, with some cysts. There can be little doubt that the patient died of syncope.

APATHY NOT REPUGNANCE.

OUR attention having been directed to a letter in the *Echo* of May 9th last from Mr. Wm. Tebb, under the heading of "Vaccination in Australasia," we asked Dr. Anderson Stuart, the President of the Board of Health, and medical adviser to the Government of New South Wales, who was quoted in the letter, how far true were the inferences drawn by Mr. Tebb from the returns of vaccinations in the colony of New South Wales, and we have now been favoured by Dr. Stuart with his observations on the matter. The special points arising were that only one-tenth of the births in the colony are said to be accounted in the vaccination returns. This statement seems to be quite true. Secondly, the concealment of so-called "misadventures" is alleged on the part of the Government officials, such misadventures being stated by Mr. Tebb to be of frequent occurrence, so numerous, indeed, as to lead to an "ineradicable distrust of the practice" of vaccination in the colonies generally.

Speaking on behalf of his own colony, Dr. Stuart is quite at one with Mr. Tebb as to the absence of any account of the alleged injuries, and he emphatically states that he has knowledge to the effect that there is in the colony no repugnance to the matter of vaccination *per se*, but only apathy in the absence of the much dreaded small-pox. He says: "It has been proved, again and again, that the occurrence, or even only reputed occurrence, of a single case of variola within the boundaries of the colony, will create such desire on the part of the public for the protection which vaccination affords, that my department can hardly supply the sudden and continuous demand of medical practitioners for lymph." Such practical experience, repeated again and again, is worth a lot of theory as to the meaning of the poor vaccination returns as regards infantile vaccinations. The human nature in mankind is very generally distributed. We see the same thing in our own country whenever a small-pox prevalence brings to the minds of the unvaccinated, or only primarily vaccinated, the fact that they are not in a position to successfully repel infection should they be exposed to it. And so, whether it be in St. John's Wood, or Leicester, or Bradford, or half a hundred other places, it is always the same—the public stations are flooded with eager crowds of people anxious to secure for themselves or their offspring the needed prophylactic. Dr. Stuart says, moreover, that the recession of the danger "is followed by the usual apathy." This, too, in a district where small-pox is very greatly dreaded. But inaction equally with action may be criminal. In the case of vaccination it is certainly dangerous.

INVITING THE CHOLERA.

There are evidently many places in Hampshire ripe for a cholera epidemic if any case should happen to settle there, and if any case should happen to reach there it could hardly fail to spread. Thus in the Christchurch rural sanitary district we read that the unsatisfactory state of Pokesdown is alluded to in the report from this district, there being no system of draining or scavenging, so that often the house refuse accumulates in large quantities and for long periods in corners near the houses, generally at the very time of year when it may become most hurtful by undergoing rapid decomposition. The water supply in the more rural parts is derived from streams and shallow wells, exceedingly liable to contamination from the many leaky privy vaults, cesspools, etc., that exist. In the Christchurch urban sanitary district it is not surprising to read that in this district seven cases of typhoid were noted during the year. The whole question of water supply in the borough needs to be dealt with. It is principally derived from shallow, drystained, imperfectly protected, and badly-situated wells, in many instances in dangerous proximity to overflowing cesspools, etc., and sunk in a soil upon which sewage and other refuse is disposed of.

MECHANICAL TRAINING OF DENTAL STUDENTS.

It will be in the memory of our readers that from the establishment of the dental diploma a three years' training in mechanical dentistry has been required on the part of a dental student's curriculum, which may be taken, according to the English College of Surgeons, either in a dentists' or a dental hospital laboratory. The Edinburgh Dental Hospital, however, is the only one that has provided the necessary teaching in this subject up to the present time; in the other parts of the United Kingdom it must be obtained from a registered dentist. About eighteen months or two years since the Irish College of Surgeons abolished this part of the curriculum, and the dental examiners of that College resigned their positions as a protest against the course of action. The Council of the College refused to restore it, and consequently the British Dental Association and the various dental hospitals throughout the kingdom petitioned the General Medical Council to insist upon its restoration to the dental curriculum, and pointing out that if a College could abolish one part of the curriculum another College could abolish another, and that an examination in a subject was in no sense a substitute for teaching required in that subject by a curriculum. The General Medical Council very rightly insisted upon the necessary restoration, and the Irish College has reluctantly yielded the point. Dr. Jacob, in a letter to the *Freeman*, protests against the action of the General Medical Council, and endeavours to prove that it is more difficult in Ireland than in any other part of the kingdom to acquire this training. He also dwells on the expense incurred in getting such instruction, and from the tone of his letter seems to aim at creating yet another imaginary grievance for Ireland. For the successful practice of his profession it is necessary that a dental surgeon should receive instruction in mechanical dentistry, and three years is not too long a period for the attainment of the necessary skill. Until some other method of teaching is instituted that training must be got in private laboratories. It may be admitted that it might be better taught in public hospitals and schools, and no doubt the time is not far distant when this will be done, but it certainly will not reduce the cost of the curriculum. A student intending to practise dentistry can readily find out the cost of his training before commencing his education, and can then decide whether he can afford the expenditure, but to abolish so essential a part of the dentist's training on account of its expense would simply be disastrous.

THE ABOLITION OF QUARANTINE.

Sir F. S. Powell has done good service to sanitary progress in our country by his proposed amendment on the vote for the Privy Council Office for the current year. He moved in the House of Commons that the vote be reduced by the amount of £1,414, the sum allotted to the maintenance of the old quarantine laws, an anachronism to which we recently called attention, urging its abolition. In reply, he received from Sir J. Hibbert the assurance that the item would not again appear on the estimates, as the different departments of State were unanimous as to the desirability of the abolition of our quarantine laws. This is an important piece of news for sanitary authorities, since they will doubtless in future be called upon to do for yellow fever and plague that which they now have to do for cholera and for other infectious diseases.

TRANSFUSION OF BLOOD AND POSSIBLE CLAIMS FOR DAMAGES.

A case presenting some novel features of interest from a pathological as well as from a medico-legal point of view has recently been before the Civil Tribunal of the Seine. From the judgment delivered on May 29th, it appears that on July 4th, 1891, a gardener in the employment of a gentleman named Lefevre, underwent what the court called "the operation of transfusion of blood" for the benefit of his master, who was then seriously ill. Some time afterwards the gardener also fell ill, and on April 18th, 1893, he brought an action against his master, claiming 60,000 francs damages for the injury done to his health by the transfusion. The court commissioned MM. Langier, Delens, and Vibert to make a full medical investigation. The plaintiff died on October 28th, 1893, and the action was carried on by his widow. The experts reported that the man died of cancer of the stomach, rejecting as inadmissible the idea that such disease existed at the date of the transfusion, and affirming that the transfusion could not directly have given origin to the cancerous affection which had been the cause of death. They declined, however, to commit themselves to a decision as to whether the transfusion might not have had some influence on the development of the disease. The

action was dismissed with costs against the widow. Without the report of the experts before us it is impossible to offer any criticism upon it; and there can, we think, be no question as to the justice of the decision of the Court, as the man had freely offered himself as the donor of blood. We should be glad, however, to know the grounds on which MM. Langier, Delens, and Vibert based their positive pronouncement that the cancer was not present at the date of the transfusion. Cancer of the stomach is an insidious disease, which may not for a long time reveal itself by any definite symptoms. This point appears to us to be of considerable importance in view of the possible results in the recipient which might follow transfusion from a cancerous donor.

THE COMMITTEE ON BARRACK SCHOOLS.

WE understand that the new Committee of Inquiry into the Pauper Schools of London will be presided over by the Right Hon. A. J. Mundella, M.P., and will include also Sir John Gorst, Mr. Lyulph Stanley, Mrs. S. A. Barnett, Dr. Russell Reynolds, the President of the College of Physicians, and two others, one of them a working man. Dr. Bridges, whose co-operation was desired, was unable to act, as also was Mr. John Burns, whose name has been mentioned. Mr. Ernest Hart, the leading spokesman of the deputation, will be wintering in India, but will leave his statement in the hands of the Committee.

OUR PROVINCIAL WORKHOUSE INFIRMARY REPORTS.

IT is satisfactory to find that the observations of Dr. Young, the medical officer of Oldham Workhouse, are in accordance with those of the BRITISH MEDICAL JOURNAL. At a meeting of the board last week he said: "At present too many beds are allotted to one nurse throughout the infirmary, so that the patients cannot have the attention they require during the day, and at night one nurse is quite insufficient for the whole. Neither is there any provision for cases requiring extra nursing, or for the temporary illness or disablement of a nurse. The whole of the nursing at the workhouse is conducted on an entirely wrong principle. There is no responsible head, no means of maintaining discipline amongst the nurses, or of ascertaining whether their duties are properly discharged during the absence of the medical officer. A ward should never be left without a nurse in attendance. In order that the nursing of the sick may be placed on a sound footing, I would strongly recommend that there should not be fewer than three night nurses at the infirmary, and that no nurse should be engaged on constant night duty. The night nursing should be done by the probationers taking alternate duty every week." Mr. Horrobin moved that the whole question be relegated to the Investigation Committee.

THE SICK POOR IN PROVINCIAL WORKHOUSES: LANCHESTER.

OUR Commissioner's report of the conditions of the sick paupers in this village in the county of Durham is a pleasant picture of a bright infirmary in the midst of a flower garden, with sunshine and fresh air around; and we are pleased to read of a trained nurse who is in charge of the sick. This same nurse speaks of her indebtedness to the lady guardian, with whom it is evident she can talk freely about all those homely details of her work which she would hardly like to discuss with a member of the sterner sex nor do we think that he would understand them if she did. In many points this infirmary is abreast of the times. Our Commissioner makes mention of spring beds and hair mattresses, also of telephones from the wards to the nurse's room, and of other appliances for the treatment of the sick which are supplied to her with no niggard hand, and these may be taken as indications that the board realises its responsibilities. So much being done for the sick by day, we are sorry to read that there is no responsible officer in charge at night; and though the nurse is within easy call, still this does not take the place of the nurse at night, for it is at night time that the bedsore is formed, because the helpless and infirm are not properly cleansed, and it is at night that nourishment may be necessary when the failing strength is unable to last through the long hours until the morning: it seems a pity that the work is left incomplete. Our Commissioner also notes that there is no ward for isolation, necessitating the mixing of the offensive patients with the general cases, and this would be especially objectionable in the case of sick children, so we suggest that wards be provided for isolation, and with them bath rooms as required; that the sanitary arrangements be kept in an efficient state, for the Commissioner justly remarks that there is no excuse for the insanitary condition of an earth closet in the country. We point to these defects in no captious spirit, but in the hope that the liberal management that has done so much for the sick poor will see wherein the work is incomplete, and supply the remedy.

SMALL-POX IN DUBLIN.

THERE has been no substantial increase in the number of cases reported last week, and there is no further indication that the outbreak is likely to be serious. There have been half a dozen fresh cases and one death. The Lord Mayor and a deputation from the Town Council have waited on the boards of guardians for the purpose of consulting as to emergency. The dispensary committees have provided for a house-to-house inspection, with a view to the revaccination of all desiring it, and extra medical officers will be provided if necessary. All the centres at which vaccination or revaccination can be performed are daily crowded by women and children, in spite of the efforts of the antivaccinators, who have placarded the walls with red-letter warnings. The Corporation as the sanitary authority is prompt and energetic. All clothing of patients is at once burned, and their dwellings are thoroughly disinfected.

CHRONIC LEAD POISONING BY FUMES.

WE called attention recently[1] to a source of lead poisoning which did not seem to have received the attention which it deserved at the hands of sanitary authorities. The danger arose in connection with the melting down of old lead into bar lead or ingots. The operation is attended by the production of fumes which are not only evil-smelling but capable of producing lead poisoning in persons who come within the sphere of their influence. The operation is often carried on in sheds and other very unsuitable buildings, and the fumes liberated at a very low level. The fumes have been found on analysis to contain lead, zinc, manganese, and arsenic. We now learn that the Scottish Board of Supervision has scheduled the melting of lead in the manner described as a trade injurious to health. The consequence of this will be that the trade will in future only be permitted to be carried on after permission has been obtained in writing from the local authority. The duty, therefore, of preventing danger from this source will fall upon these authorities, since they now possess the power of refusing permission to carry on the trade except under conditions approved by them. Dr. James Gairdner, of Crieff, has, we learn, advised that the local authorities should require that all fumes should be carried into the "stalk," and that this should be of such a height as to clear every house within 500 yards.

[1] BRITISH MEDICAL JOURNAL, March 10th, 1894, p. 540.

PRESENTATION.—A handsome fourteen-day marble clock, chiming the hours and quarters, was presented to Dr. Slader of Gainsborough, on his marriage. It bears the following inscription: "Presented to Dr. Slader on his marriage by the members of the Gainsborough Working Men's Club and Institute, July 24th, 1894."

PRECAUTIONS AGAINST CHOLERA.

Information obtained within the last few days at the Local Government Board shows that the cholera survey of coast towns and district, and of inland places having, in some respects, an unsatisfactory record, has been in continuous operation ever since February, 1893, and is still going on with the result that, in many districts, much has been done to remove conditions which would assist in the spread of imported cholera. The present season is regarded with some anxiety. In the first place, cholera has shown a power of recrudescence, especially in Russia, Galicia, North East Germany and Belgium, which is not only greater than might have been anticipated in the third year of a European prevalence, but is actually in excess of that which obtained last year. This, to some extent, discounts anticipations based on the supposition that we were dealing with a waning epidemic. In the second place, it has to be remembered that the commencement of cholera last year in the towns on the Humber was obscured by the mildness of a large number of attacks, which were at first deemed to be diarrhœa only, but which gradually increased in severity until it was evident, after the disease had obtained a foothold, that true cholera was in question. This may well happen again.

In these circumstances the utmost vigilance is being maintained. Medical inspectors are ready at any moment to investigate suspicious cases in any part of the country; and in two or three instances cases not to be distinguished from true cholera have already been met with in this country during the last few weeks. The most rigid sanitary measures have been adopted in each case, and as yet, happily, there has been no extension. Even London has not been free from suspicious cases, and the death at Battersea on Thursday last is regarded as serious.

Within the offices of Whitehall daily record is kept of all suspicious attacks occurring in this country, and immediate notice is supplied to the Board's medical officer by the Registrar-General's office of any case of death, the certified return of which renders the attack in any way suspicious. Bacteriological investigation is made by Dr. Klein of all material available in such suspicious cases. Dr. Barry, one of the medical inspectors, has under his special charge the maintenance of records of the movement of cholera abroad. His room is filled with charts and maps in which, by means of flags of different colours, the movement of the disease at different dates is shown in the various provinces of the different European States. Some flags imply suspicion only. Marseilles has for some time past been under suspicion. Late last week it became known that a fatal attack had occurred at Bordeaux in a person who had come from Marseilles within the previous forty eight hours. In short, Marseilles is a place where true cholera must now be regarding as existing.

The maps and charts referred to show that up to the end of June the area of cholera prevalence in Europe was chiefly confined to European Russia and to districts of Austria-Hungary and of Germany immediately adjoining that country. In Russia some twenty-five Government districts, chiefly situate in the south-west of Russia and in Russian Poland, had been declared to be infected; in Austria-Hungary five districts situated in Eastern Galicia and in Bukovina, close to the Russian frontier, had been invaded, and in Germany cases of cholera had occurred at two or three places situate on the Vistula near to the frontier of Russian Poland.

There were, indeed, other cholera centres in France, Belgium, and Turkey in Europe declared during the first half of the year; in France, in the extreme north-west, in the departments of Morbihan and Finisterre: in Belgium in the provinces of Liége and of Limbourg, as well as isolated cases in other provinces: and in Turkey in Constantinople and the neighbouring districts.

Since June 30th a considerable extension of cholera has taken place in Russia, some fifteen more Government districts having become invaded, the majority of the newly-invaded districts being situate in the west and north-west of the empire. Apparently in connection with this western extension there was a marked and alarming increase in the number of cases reported from day to day as occurring at St. Petersburg, and at Cronstadt in July, an increase which has, fortunately, not been maintained.

In Austria-Hungary cholera has extended in Eastern Galicia along the river Zbrucz, which forms the boundary between Galacia and Russia, and to places situated on the Vistula in Northern Galicia.

In Germany cholera has invaded many towns and villages situate on the river Vistula from the point of its entry into Germany and to its mouth at Danzig. Isolated cases imported from St. Petersburg have also been reported from Berlin and Bremen.

In Belgium extension has taken place to several towns situate on the Meuse and Sambre, in the provinces of Liége and Limbourg.

In Holland cholera has appeared at Maastricht and other towns situate on the Meuse in the province of Limbourg, near to the Belgian frontier. Cholera has, during the last few days, been reported to have occurred at several towns in Noordholland and in Zuidholland, and may at any time become a serious outbreak.

As regards France, the information received is most meagre. Reports of the occurrence of "cholera nostras" and of "cholerine" have, indeed, been received as regards isolated cases in "Mort-devant Sassey" (Meuse), Mancel-sur-Seille (Meurthe-et-Moselle), Avignon (Vaucluse), Rueil (Seine-et-Oise), and in Paris. From Bordeaux, however, official information has been received of the occurrence of a case of Asiatic cholera which was stated to have been reported from Marseilles, although the presence of cholera in the last-named city has been denied.

In Sweden cases of cholera occurred in July at the quarantine station at Fejan amongst persons on board a ship from St. Petersburg.

In summarising the results of our inquiry, it may be stated that the arrangements very much resemble those of a sanitary intelligence department, with an emergency staff always ready for instant action; and, while the country is looked upon as better prepared to meet cases of imported cholera than it his ever been, yet the virulence of some of the recrudescences abroad causes more anxiety than had been anticipated earlier in the year, and it is also known within the Local Government Board Medical Department that there are sanitary districts in England which would run considerable risk if cholera happened to find its way into them. The next four weeks will probably be the time in which for England there will be the greatest risk.

SANITATION AFLOAT.

The question of sanitation afloat is an interesting and important one, especially perhaps at this moment, and it is somewhat extraordinary that so practical a nation as Great Britain should have allowed it to receive so little attention. While sanitary science has made such great progress on shore, the sailor has been practically neglected, until at the present moment his condition is fully a quarter of a century behind the times.

The Merchant Shipping Act, which became law in 1854, enacted that every seaman, if hammocks were used, should be allowed 54 cubic feet and 9 square feet of deck space, and if hammocks were not used the allowance should be increased to 72 cubic feet, and 12 feet of deck space.

The Amending Act of 1867 swept away the distinction between hammock and berth ships, and required for every seaman 72 cubic feet and 12 square feet of deckspace.

The same Act expressly states that every such space shall be "such as to make the space available for the proper accommodation of men who are to occupy it, shall be securely constructed, properly lighted and ventilated, properly protected from weather and sea, and, as far as practicable, properly shut off and protected from effluvium which may be caused by cargo or bilge water."

Obviously the whole value of this Act depended upon the character of its administration. This was placed in the hands of the Board of Trade, a body without medical advisers, and whose inspectors had no special sanitary training. Moreover, when their regulations under the Act were drawn up they were in many cases disputed by shipowners as impracticable and unnecessary, and being found to travel beyond the powers of the Act itself were not carried into effect.

Gradually, however, since 1872, port sanitary authorities have been created and powers, tentatively at first until experience showed their working, have been conferred upon them under the Public Health Acts, ships being classed as houses and dealt with in the same way.

Some of our more important ports are now equipped with a complete staff of medical officers and sanitary inspectors, hospitals, ambulances, and arrangements for disinfection. Under the stimulating influence of the fear of importation of cholera. Much has been done in the last two years, but to judge from the facts put forth by Dr. Collingridge, in a paper recently read by him before the Shipmasters' Society, much still remains to be done before even the British sailor can enjoy the same sanitary surroundings as the class on shore from which he is mainly drawn. A combination of port sanitary authorities on the lines of the conference held in the Guildhall in 1893, would doubtless have a great influence in bringing public and official opinion to bear on this important subject. In the first place the cubic space should be largely increased; 72 cubic feet is an absurdly small amount to allow an adult, more especially when forecastles are continuously occupied by sleeping men, which obviously prevents the thorough ventilation and cleansing of the space during the hours of daylight.

It is a very rare thing to find proper or indeed any accommodation for men to wash either themselves or their clothes. All this could be easily remedied, and at a very small outlay.

As a matter of fact some increased attention to decency and cleanliness on board ship would be of great advantage to shipowners. If men are well treated much more work is got out of them, and with considerably less trouble to the officers of the ship. Working men are being rapidly educated up to the sanitary standard of the times, and as a consequence will more and more avoid those callings where this standard is not reached. This is, no doubt, one of the reasons why the general tone of our merchant seaman is gradually and steadily falling, and his place being taken by foreigners. The remedy is, to a great extent, in our own hands. The failing of owners to supply the necessities for decency and cleanliness is, in the majority of cases, due only to carelessness or ignorance.

The management of ships devolves mainly upon men who have been brought up to the sea, and who, having been treated themselves in this way, see no reason for any improvement in the condition of those for whom they are responsible. Dr. Collingridge's paper to shipmasters has already reached many, to whom it has come as a revelation; but before long the question must engage the attention of Parliament, and legislation must deal with those who cannot be touched by reason. The changes needed are not revolutionary, and certainly not extravagant, and will readily obtain the support of educated and thoughtful men.

THE ASSOCIATION OF BRITISH POSTAL MEDICAL OFFICERS.

THE annual general meeting and conference of this Association was held in London on July 6th, under the presidency of Mr. FRANK CLIFFE.

The annual secretarial report, which was presented by Mr. R. Ritchie Giddings, the honorary general secretary, and adopted, indicated that the present position of the Association is eminently satisfactory. Its membership already consists of a large proportion of the postal medical officers of the United Kingdom. It further reviewed the origin of the Association and its special purpose, which is the bringing of a large number of professional men into touch.

A report was then presented by Dr. Henry FitzGibbon, honorary secretary to the Association in Ireland, which pointed out that the medical officers in all the important centres of his portion of the kingdom had now become members of the Association; whilst a statement by Dr. William Dougan, honorary secretary to the Association in Scotland, recorded that a similar condition of affairs existed there. The audited financial report showed that the Association's finances are quite satisfactory.

The code of rules of the Association came next under consideration, and was provisionally adopted and ordered to be printed and circulated to all members.

It was unanimously agreed that the whole of the previous executive should be requested to continue in office, and that Dr. T. Walton Browne should be elected to fill the vacancy on the committee, caused by the resignation of Mr. Wright. It was also agreed unanimously that Mr. John Watson, Manchester, should be constituted the Vice-President for the ensuing year.

The meeting subsequently devoted itself to the discussion of several technical departmental topics possessing a special interest to those present. The question of alcoholism amongst postal *employés* was considered, and a resolution was unanimously adopted avowing the determination of members to assist the Postmaster-General, so far as lies in their power, in his endeavour to eradicate it wherever it may be found to exist.

The recent suggestion that post-office buildings should be subject to the inspection of local sanitary authorities was also under discussion, and although the opinions of members were very strongly antagonistic to any such practice being legalised, it was deemed unnecessary at the present time that the Association should take any definite steps in the matter until it became apparent if there was any probability of these suggestions being acted upon.

In the evening the annual banquet was held in the Hôtel Métropole, the President occupying the chair.

SMALL-POX AND VACCINATION IN 1893.

IX.—BRISTOL.

WE are glad to see from the annual report of Dr. D. S. Davies, health officer of the city of Bristol, that he is engaged on a special account of the small-pox epidemic through which that city has so recently passed. While trusting to be favoured with a copy of that document when issued, we cannot refrain from reproducing an admirable table which is embodied in his annual report, and which gives at a glance the leading features of the 1893 prevalence as regards its relations with vaccination.

Table showing the Mortality of Small-pox in relation to Vaccination in 164 cases occurring in Bristol during 1893.

Degree of Vaccination.	Under 15 years of age.				Above 15 years of age.			
	Total Cases.	Recovered.	Died.	Deaths per cent.	Total Cases.	Recovered.	Died.	Deaths per cent.
Unvaccinated or doubtful ...	15	9*	6	40	11	7	5	45.4
1 vaccination mark	2	2	0	—	25	25	0	0
2 vaccination marks	5	5	0	—	33	29	4	12.1
3 vaccination marks	2	2	0	—	41	38	3	7.3
4 or more vaccination marks	3	3	0	—	27	26	1	3.7
	27	21	6	—	137	124	13	9.4

Recoveries 145. Deaths 19.

* One of these cases was unvaccinated on contracting small-pox, and was vaccinated on fifth day of infection, 9 days before rash, mild case, 40 papules in all. A second case was unvaccinated on contracting small-pox, vaccinated on fifth day of infection, 9 days before rash, mild case, 2 papules in all.

Revaccination.—Seven of the above, all over 15 years of age, were stated to have been revaccinated, but none recently; of these, one case was fatal; she stated she had been revaccinated 20 years before, but no marks of any kind could be discerned. Another case, revaccinated 38 years ago, was also severe, but recovered. The others were mild attacks.

The doubtful cases were 6, all over 15, of whom 4 died, and none of them had any discernible marks.

But little comment is needed at this stage. We may call attention to the fact that, in Bristol as throughout the country, primary vaccination in persons under 15 years of age gave absolute protection against fatal attack, whilst

no less than one-third of those unvaccinated children who were attacked died. And as to persons of older years, 45.4 per cent. of unvaccinated sufferers had to pay the penalty with their lives, their more fortunate fellow-sufferers only dying at the rate of (under) 6.4 per cent.; the relative incidences being 1 in 2.2 throughout life for those vaccinated in infancy, and 1 in 15.7 cases for the unvaccinated.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

Its Value as a Prophylactic.

Dr. H. Urquhart Walker, L.R.C.P. and S.Ed., late Medical Officer of Health, Worksop, writes: Since my notes on the above subject appeared in the British Medical Journal of August 18th, I have had letters and telegrams from all parts conclusively proving the interest that the profession take in matters which concern the welfare of their patients. I have been favoured with much that is interesting. Widest in its scope, and, therefore, of greatest general interest and importance, is the report of Dr. O. Katz as to the employment of Dr. Aronson's antitoxin against diphtheria in the Emperor and Empress Frederick's Children's Hospital under Professor Baginsky's superintendence. In the last three years 1891-1893, 1,081 cases of diphtheria have been treated in the hospital, of which 421, or 38.9 per cent., died, the mortality in the respective years being 32.5 per cent. in 1891, 35.4 per cent. in 1892, and 41.7 per cent. in 1893. From the commencement of this year up to March 14th, 86 cases have been treated, with 38 deaths, or a mortality of 41.8 per cent. On the latter date the antitoxin treatment was commenced and employed in 128 out of 151 cases admitted to the hospital, 23 cases not being subjected to it for various reasons. In the 128 cases so treated only 17 deaths occurred, the mortality thus falling from 41.7 to 13.2 per cent. In all his clinical observations Dr. Katz is able to say that on no occasion could any deleterious effect be ever attributed to the employment of the antitoxin solution. If renal inflammation did occur, it followed quite a normal course, no bad effect could be observed upon the rhythm or tone of the heart and pulse.

Now, I would suggest that the urine in all cases should be submitted to a careful analysis both before and after the use of antitoxin to determine whether the new specific effects the the kidneys, for in that case care would have to be exercised in the choice of cases. Last week I spoke shortly of the prophylactic properties of antitoxin. This week I am able to state that Dr. Katz inoculated 72 children exposed to the disease, and of these only 8 were attacked, and so slightly as to be free from any evil consequences. Surely, then, it is worth while pursuing this subject. Possibly I may be oversanguine, but the reported cases in this country alone, though few, I think demand the attention of the profession at large; and I am much mistaken if the result of continued research does not place antitoxin on the top rung of the ladder, a boon at once to the patient, the nurse, and last, but not least, the professional man in attendance on the case. Antitoxin, to be of service, I believe can be used at any stage of the disease, but to be of the greatest service should be used early. The reason I give for this is because in no case reported where this has been done has the diphtheria process extended to the larynx, and the complications and sequelæ have been of a normal character. The favourable course taken by the disease in the great majority of the cases, even as in reported case where there was little chance of recovery, must at once dissipate any scepticism as to the value of the treatment.

We have received the following report of cases of diphtheria successfully treated by the antitoxin method.

IV.—Thomas Eastes, M.D., F.R.C.S., Folkestone, writes: As the treatment of diphtheria by antitoxin is so successful it would seem wise to emphasise its simplicity, that all who have severe cases of this disease under their care may be induced to adopt it without loss of valuable time.

The fluid, Aronson's diphtheria antitoxin, may be obtained from Messrs. Zimmermann, Cross Lane, St. Mary-at-Hill, E.C. The syringe I have used is Debove's, supplied by Messrs. Ferris, of Bristol, a beautiful but complicated and expensive instrument. Any syringe will do that can be sterilised either by boiling or immersion for a few hours in a 5 per cent. solution of carbolic acid, but it is better if it will hold at least 5 c.c. (85 minims). The skin should be washed, and then cleansed with absolute alcohol where the injection is to be made. The dose should be 1 c.c. to produce immunity for any age over 3 years, half that for younger children. For cure during the first two or three days under 2 years, 2 to 3 c.c.; from 2 to 10 years, 5 c.c.; over 10 years, 10 c.c.; after the third day in a severe case twice as much. If worse symptoms should ensue after the injection the dose should be repeated in twelve hours. It seems doubtful whether any symptoms whatever are caused by the injection, and in cases of exceptional severity larger doses still should be used. Usually there will be distinctly less œdema and a fall in temperature in from twelve to twenty-four hours, and a most marked improvement in the general condition in forty-eight hours. The advantages of this treatment are many in addition to its efficacy. The injection once for all into the tissues of the back gives very little pain, and there is no more interference with the patient required at all—no more painting, spraying, or swabbing the throat, no tearing off false membrane—and consequently a most welcome diminution of suffering and distress. As the omission to make a bacteriological examination of the membrane in my first four cases was commented on at the Bristol meeting, the next three were all examined and confirmed as diphtheria by cultivation by a skilled bacteriologist, but the first four were all just as typical cases, and in fact more so than No. 5. Through the kindness of my medical brethren I have now treated seven cases, all with most satisfactory results, and the following table gives some of the particulars.

Cases of Diphtheria treated by Injections of Antitoxin.

Number.	Sex.	Age.	Date of Injection.	Dose.	Other Treatment used	Type of Case.	Result.	Bacteriology.
1	F	10½	3rd day	5 c.c.	Vigorous local and internal	Severe	Perfect and speedy recovery*	Not examined
2	F	20	23rd „	5 c.c.	Vigorous local and internal	Severe	Was already improving; complete recovery hastened	.. ..
3	M	5	5th „	5 c.c.	None after injection; acid citric. locally before	Average	Rapid recovery	.. ..
4	F	12	Early in 2nd day	5 c.c.	None	Average	Speedy recovery	.. ..
5	F	3	2nd day	5 c.c.	None	Average	Speedy recovery	Klebs-Loeffler bacillus.
6	F	3	2nd „	5 c.c.	None	Average	Speedy recovery	Klebs-Loeffler bacillus
7	F	6½	3rd „	5 c.c.	None	Severe	Nearly well on 3rd day; quite well on 6th	Klebs-Loeffler bacillus.

* *Vide* British Medical Journal, July 21st, 1894.

Since writing the above I have heard that the supply of antitoxin is failing for the present. It is to be hoped that efforts will be made to procure a constant and continuous supply as soon as possible.

ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

VISIT TO BATH.

One of the most agreeable of the excursions made by members attending the annual meeting at Bristol was to Bath, where most hospitable entertainment was offered by the Mayor and corporation, and by the resident members of the Association in Bath.

The visitors to the number of about 200 were received by the Mayor in the Octagon, which was tastefully decorated for the occasion, and were subsequently entertained at luncheon in the ball room. The Mayor proposed the toast of "The Visitors," which was acknowledged by Surgeon-General

Sir William Moore. The toast of "The Mayor and Corporation" was given by Dr. G. H. Broadbent of Manchester, and acknowledged by the Mayor, who also made a statement as to the benefits conferred upon the poor all over the country by the Royal Mineral Water Hospital. After luncheon a visit was paid to this hospital, and also to the baths, where all the details of the treatment followed were explained by Drs. Brabazon, Spender, Freeman, and others. The interesting features of the old Roman Bath were pointed out by Major Davis, who gave a brief historical sketch.

An agreeable afternoon was brought to a close by a reception in the Pump Room given by the members of the Association resident in Bath, which was largely attended. The excellent arrangements made by the Branch Secretary, Mr. W. H. Beaumont, were highly appreciated.

THE PORTLAND TOWN OUTBREAK OF SMALL-POX.

Valuable lessons as to the usefulness of vaccination and the cost of these disturbances to the trade, and the heavy financial losses incurred in dealing with an epidemic of small-pox, however swiftly and intelligently, may be learned from the recently issued report dealing with the outbreak at Portland Town. This outbreak was dealt with with intelligence and activity, and the medical officers had the advantage of being backed by a wealthy vestry, supported by enlightened public opinion. This place was, it seems, a nest of antivaccinators, and the whole district has had to suffer for the fanaticism of these pestilent idiots.

A report has been already presented to the Marylebone Vestry detailing the chief features of this remarkable outburst of small-pox. In that report the origin was referred to a case in Henry Street, which remained unisolated from July 2nd to the 5th, the nature of the disease not being known. When the case was recognised to be one of small-pox, and removal could not be enforced because of the serious condition of the patient and the opposition of the friends, all that could be done to isolate was done. Isolation of small-pox, difficult under any circumstances, is still more so in the case of a house with the accommodation the patient possessed. In a few days death ensued, and speedy burial and disinfection followed. Altogether for fifteen days, in the centre of the area afterwards affected, there was a focus of possible infection. Had the house been private the harm done would have been small: it happened, however, to be a shop doing a large trade in the immediate locality, and the result was that some of the customers were affected, and where this connection cannot be traced yet it is possible it still existed. Small-pox is liable to be carried by money, by goods, by personal contact with those nursing the sick, and in a variety of insidious ways not easy to follow or trace, but the localised character of the outbreak and the coincidence of seizure with the several dates during which the patient was suffering are factors in the judgment of origin.

Had the sanitary authority power to close places of business and to compensate for the loss of trade when such cases arise, such a power would have here been most useful. On the other hand, legislation to meet rare and exceptional cases is apt in practice to be applied too generally, and it would be difficult to draft a satisfactory scheme of compensation for loss of trade. The number of cases notified during the month were 141, of which 139 occurred between July 23rd and 31st. The age and sex of 139 of the cases were as follows:

	Males.	Females.	Total.
Under 1 year	1 ...	1 ...	2
1 to 5	5 ...	10 ...	15
5 to 15	15 ...	16 ...	31
15 to 25	22 ...	21 ...	43
25 to 45	17 ...	19 ...	36
45 to 65	6 ...	4 ...	10
65 and upwards	2 ...	0 ...	2
	68	71	139

Vaccination.—Accurate reports have, since the report already mentioned, been obtained as to the proportion vaccinated in 101 of the cases; of these 36 were unvaccinated, 21 of the 36 being under 7 years of age; the remainder were vaccinated in infancy, but in the majority of these cases the vaccination had been done more than fourteen years ago.

The ages of those that had been vaccinated in infancy may be classified as follows:

	Per cent. of the 101 Cases.
7-14 years of age	6.9
14-21 "	17.8
21 and above	39.6

There has been a marked difference in the severity of the disease in those that had been vaccinated in infancy and those that had not; the fatal cases do not not enter in this month's statistics, but it may be mentioned that up to the present date 10 deaths have occurred; of these 6 were unvaccinated and the remaining 4 had been vaccinated at least twenty years before the attack. The outbreak, therefore, so far as it goes, affords strong evidence of the temporary immunity conferred by vaccination. This, in the majority of cases, lasts at least seven years, in a few probably through life, and in nearly all it profoundly modifies an attack, making the disease much milder. Dogmatic assertions as to the exact time it lasts cannot be made, for one operator produces a single vesicle on the arm, another raises a crop of five. Both of these operations may be certified as vaccination, but the fivefold method is far more likely to confer immunity throughout the greater portion of the after-life of an individual than the single vesicle. To judge, therefore, how far the disease was modified by previous vaccination we require to know the number of vaccination scars on the arms of the patient. This information at the present I do not possess.

THE CIVIL RIGHTS DEFENCE COMMITTEE.

THE ANDERSON APPEAL FUND.

The following additional subscriptions have since the publication of the last list been received or promised:

	£	s.	d.		£	s.	d.
Professor McCall Anderson, Glasgow	1	1	0	Dr. Huggard, Davos Platz...	1	1	0
Mr. Andrews, Hammersmith	0	10	6	Mr. Jackson, Plymouth ...	0	10	6
Dr. Aveling, Upper Clapton	0	10	6	*Mr. Jeaffreson, Framlingham	0	10	6
Dr. Berry, Wigan	0	10	6	Mr. Jones, Aberdare ...	1	1	0
Dr. Boxell, Barbados ...	1	1	0	Dr. Lang, Bromley	0	10	6
Dr. Branch, St. Kitts ...	1	1	0	Dr. Little, Dublin	1	1	0
Dr. Caldwell, Shotts... ...	1	1	0	Mr. London, British Guiana	1	1	0
Mr. Cureton, Shrewsbury...	1	1	0	Mr. Palmer, Chelsea ...	0	5	0
Dr. Cheadle, London ...	1	1	0	Dr. J. K. Philips, Barbados	1	0	0
Mr. Fearnhead, Heywood	0	10	6	Mr. Ronaldson, Haddington	1	1	0
Mr. Farnell, Eastbourne ...	1	1	0	Dr. Semon, London (further subscription)	1	1	0
Dr. T. Law Gaskin, Barbados	1	0	0	*Dr. Shirlaw, Ferryhill ...	1	1	0
Dr. Handyside, H.M.S. *Blake*	1	0	0	Mr. Stear, Saffron Walden..	0	10	6
				Dr. Totthill, Blackheath ...	0	10	6
				Dr. Wade, Wells	1	1	0

* Omitted by clerical error in previous list.

The following errata from the published list require correction:—
Professor Barker, inserted as Professor Barner.
Dr. Sassoon, inserted as Dr. Sansom.

Cheques and post-office orders should be crossed and made payable to the Anderson Appeal Fund Account, and forwarded to the manager of the Chancery Lane Branch of the Union Bank, Chancery Lane, London, E.C.

Presentation.—Dr. and Mrs. Alfred E. Wilmot, of Barnham, Bucks, on the occasion of their silver wedding on August 17th, were presented with an illuminated address and a silver tea and coffee service by their friends and neighbours as a recognition of the esteem in which they are held.

Professor von Pettenkofer has resigned the Chair of Hygiene and the directorship of the Hygienic Institute in the University of Munich on account of his advanced age. He has been connected with the University as a teacher for forty-seven years. Professor von Pettenkofer is succeeded by Professor Hans Buchner, who has already won high distinction by his bacteriological researches.

International Obstetrical Congress.—The International Congress of Gynæcology and Obstetric Medicine will be held for the second time at Geneva, in September, 1896. The questions proposed for discussion are: 1. The treatment of eclampsia. 2. The surgical treatment of retroflexion and retroversion. 3. The relative frequency of the various forms of narrowing of the pelvis in different nations. 4. The best method of suturing the abdominal walls for the prevention of hernial protrusion. 5. The treatment of pelvic suppurations.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1894. ELECTION OF MEMBERS.

A meeting of the Council will be held on October 24th, 1894. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before such meeting—namely, October 3rd, 1894.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election. Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NORTH WALES BRANCH.

The 45th annual meeting of this Branch was held at Bangor on July 26th, 1894, John Roberts, M.D., J.P., Menai Bridge, the President, was not able to be present, so the President-elect, Dr. Eyton Lloyd, of Rhyl, was installed into office at the commencement of the meeting, which was very numerously attended.

New Members.—Messrs. William Thomas, M.R.C.S., L.R.C.P., Nevin, and Bedlington H. Morris, M.B., Denbigh, were elected members of the Association and Branch.

Report of Council.—The report of Council, which was read by the Honorary Secretary, referred to the meetings of the year, the success of the Branch both in the number of its members and the interest evinced in its affairs, the very satisfactory state of its finances, and contained many suggestions for the further development and consolidation of the Branch.

Places of Meeting in 1895.—It was unanimously resolved that the intermediate meeting should be held at Corwen, and the annual at Criccieth.

Election of Officers.—The following were elected office-bearers for the ensuing year:—*President-elect:* Dr. Hunter Hughes, of Pwllheli (Coroner for South Carnarvonshire). *Honorary Secretary:* Dr. Jones Morris. *Honorary Treasurer:* Dr. Samuel Griffith, J.P. *Members of the Branch Council:* Messrs. Roger Hughes, Bala, Jones, Corwen; Hugh Jones, M.B., Dolgelly; Charles Williams, Duffryn; H. J. Roberts, Penygroes, and S. W. Griffith, Pwllheli. *Representative on Council:* The Honorary Secretary was unanimously re-elected. *Representatives on Parliamentary Bills Committee:* The Honorary Secretary and Dr. Robert Jones, Claybury, Woodford Bridge, Essex, were elected.

Congratulation to Sir John Williams.—On the motion of Dr. Lloyd Williams, Llanberis, seconded by Dr. Arthur Prichard (Mayor of Conway), it was unanimously resolved to tender a hearty vote of congratulation to our distinguished countryman, Sir John Williams, Bart, M.D., on the honour that had been conferred upon him by Her Majesty.

Amendment of Medical Act.—This question was then discussed, and it was resolved:

That the District Council be recommended to collect facts as to illegal practice by unqualified persons and to elicit information from members of the Branch by means of circulars or otherwise as it may deem fit and report to the Parliamentary Bills Committee, through its Chairman, Mr. Ernest Hart.

Many instances of practice by unqualified persons of a most flagrant character were reported by members taking part in the discussion, and a hope was expressed that by thorough co-operation with the Parliamentary Bills Committee on the part of every Branch that such a mass of material information would be elicited as to strengthen the hands of the Committee to such an extent that when it approached Parliament with a view to amend the Medical Acts the case would be so irresistible that it could not be denied.

President's Address.—The President delivered his address, taking as his subject Isolation Hospitals. He gave an account of the difficulties experienced in establishing a hospital for infectious diseases in his district, the obstruction and legal technicalities that had to be overcome, the success it had attained, and the result on the public health. A hearty vote of thanks was accorded him.

Diet of Quarrymen.—Mr. Richard Williams, of Liverpool, read a paper on the Dietetics of Quarrymen, founded on the recent report of the Quarry Commission, in which he showed that there was a decided deterioration in the physical condition of the working population reported upon and which was due in a great measure to the want of milk and meat in their diet. An interesting discussion ensued, and it was unanimously resolved:

That the members of this Branch, recognising the facts brought out by the Commission on the Diet of Quarrymen, pledge themselves by every means in their power to disseminate among the people in their respective districts sound principles of dieting and hygiene generally.

In the course of the discussion it was pointed out that, although this Commission had taken cognisance of the physical condition of the people, no medical man was appointed upon it, although there are a number in the district who are not only experts in their profession, but perfectly conversant with the working of quarries and the intrinsic and extrinsic dangers of the *employées.*

Communications.—Hugh Jones, M.B., of Dolgelly, read notes of a case of Extrauterine Fœtation where it became a question whether operative interference should not be resorted to, and in which recovery took place after a long interval without.—Dr. Lloyd Roberts read a paper on Leucocythæmia occurring in a patient in the Denbigh Infirmary.—Dr. Elliott, of Chester, gave the history of a case of Anthrax in which the pustule was excised from the patient's wrist, with recovery. He showed microscopical sections of the structure in which the bacillus anthracis was easily recognised.—Mr. R. H. Mills Roberts, F.R.C.S.Edin., read notes and showed the specimen of Fractured Ribs in a patient over 74 years of age who died suddenly eight weeks after the accident. He also read notes of a case of Trephining for Depressed Fracture of the Skull, with perfect success.—Robert Parry, M.B., read notes of a case of Sarcoma of the Tibia. Exhibited the specimen with microscopic sections.—Mr. H. J. Roberts read notes of a case of Secondary Amputation of the Thigh owing to gangrene from plugging of the arteries, with recovery.

Dinner.—In the evening the members dined together, having as guests the Lord Bishop of Bangor, the Vicar of Bangor, and Dr. W. F. Wade.

QUEENSLAND BRANCH.

The first general meeting of the Queensland Branch, the inauguration of which was reported in the Journal, August 18th, p. 375, was held on June 14th, 1894, though the society had been in existence for nearly eighteen months under the name of the Queensland Medical Association.

Officers and Council.—The following are the names of the office-bearers for 1894:—*President:* Dr. W. F. Taylor. *Vice-President:* Dr. C. F. Marks. *Hon. Treasurer:* Dr. E. Sandford Jackson. *Council:* Drs. Lyons, Connolly, Comyn, and P. Bancroft. *Honorary Secretary:* Dr. A. B. Brockway.

New Members.—Drs. Sugden and Weekes were elected members of the Branch, and Drs. Lindsay and Phillips proposed for membership.

Communications.—Dr. Jackson exhibited cases.—Dr. T. Bancroft read a paper upon Some further Observations on the Physiological Action of Snake Venom, together with a reference to the Strychnine Cure of Snake Bite. A long discussion followed, in which all the members present joined.

The Dean of Manchester will preside at the Church Congress of the Church Sanitary Association, to be held at Exeter on October 8th.

SPECIAL CORRESPONDENCE.

PARIS.

The Hydrotherapeutical Congress.—The Congress of Dermatology and Syphilography.—The Slaughtering of Animals.—The Furtado-Heine Dispensary.—Statistics of Infant Mortality.—Typhoid Fever.—Typhus and its Propagation.—Army Dressing Pack.—Rabies.

THE Hydrotherapeutical Congress, recently held at Boulogne, has brought to light some new facts. M. Aigre stated that what is generally understood by "seaside" is a delusion and a snare. The influence of the sea air, good or bad, does not extend beyond five hundred yards from the sea shore, and this distance must be free from trees or buildings. Lymphatic children who were placed in Boulogne boarding houses in the town remained as unhealthy as when they arrived, but when afterwards housed on the sea-shore a marked improvement resulted. Persons subject to nephrotic and arthritic diathesis only suffered when they go to the shore. H. M. Houzel has gathered statistics showing that the female population in fishing villages was benefited by plying their trade of shrimping. Though they remain hours in the sea in all weathers and all seasons, they suffer less than other women during menstruation. M. Houzel's facts warrant him in concluding that sea bathing during menstruation facilitates the function, hastens the first appearance of the menses, retards the menopause; it also favours child bearing. Certain pathological conditions are to be classed as exceptions to this rule. The next congress will be held at Ostend between August 15th and September 7th, 1895.

At the French Congress of Dermatology and Syphilography recently held at Lyons, M. Augagneur asserted that hypodermic injections of mercurial salts in the treatment of syphilis are neither so efficacious nor so inoffensive as is generally supposed; subcutaneous treatment should be used only in exceptional cases. The mass of syphilitic patients only required mercurial pills; mercurial hypodermic injections might determine dangerous results of more or less importance. Stoukowenkow, of Kiew, maintained that hypodermic injections of soluble salts acted quickly without any risk of subsequent trouble. He had made 200,000 injections without any bad results. Dr. Jullien and Dr. Thibierge were in favour of hypodermic injection. Dr. Balzer considered that this treatment cannot always be adopted, but was of great value in hospital practice, and prudent antiseptic precautions rendered abscesses of exceptional occurrence.

At a recent meeting of the Academy of Medicine, Dr. Dieulafoy reported on Dr. Dembo's treatise—already fully discussed in the BRITISH MEDICAL JOURNAL—on the different methods of killing animals destined for food. M. Trashot, a competent authority, opposes the theories of Dr. Dembo, and states that stunning animals intended for slaughter is the most humane method. One blow is sufficient, and the operation is generally skilfully done. He also flatly denies that *post-mortem* hæmorrhage after stunning is incomplete. Farther, when necessary, hæmorrhage is rendered complete by artificial means, such as artificial respiration and pressing on the animal's belly.

During the ten years since the Furtado-Heine Dispensary was opened, 446,055 consultations have been given. More than a million prescriptions have been made up; 205,000 salt and sulphur baths have been given; 26,000 gymnastic consultations; 37,000 massage; 27,000 electrical; 27,000 applications have been made; 4,000 pieces of flannel and orthopædic apparatus have been given; and 183,000 meals have been given to sickly children—about an average of eighty meals a day.

M. Cadet de Gassecourt considers the causes of the terrible infant mortality which contributes to depopulate France might be determined if the statistics were more carefully and accurately drawn up; the age of the children is often not stated, nor the sex.

An epidemic of typhoid fever has broken out at Montlignon, a village on the borders of the Montmorency Forest. Eighty-one cases have occurred, resulting in four deaths. The milk supply is incriminated under the following circumstances: A child contracted typhoid fever last May, how it is not known, but its clothes were washed in a brook parallel with the principal street; this water is not used for drinking, but it appears that a milkman washed his cans in it. Thus it is believed typhoid fever has been spread at Montlignon. Another milkman, having sold out his stock, bought some from his neighbour for his personal use, and was afterwards attacked with typhoid fever.

Typhus at Amiens has not disappeared. A few days ago a fresh case occurred. A nurse who had tended typhus patients contracted the malady. A tramp who had passed the night in the Avenue du Maine night refuge has been sent to the Hotel Dieu Hospital to be treated for typhus. In the Sanitary Section of the Congress of the Association for the Promotion of Science, the question of the propagation of contagious illnesses was discussed, and Dr. Deschamps stated that he had undeniable proof that typhus was spread by the vagrants. He had also ascertained that typhus attacks more readily healthy people, and that it was more dangerous than in the weak or sickly. Dr. Deschamps has had peculiar facilities for carrying on his inquiry, in virtue of his post on the Sanitary Council. Dr. Dubref, in a paper on the same subject, confirmed Dr. Deschamps's statements.

A municipal decree enforces that every soldier and officer in war time shall carry about him the dressing packet as prescribed by the said decree. It measures 12 centimetres in length, 10½ in width; it contains a bundle of antiseptically prepared hemp enveloped in gauze, a gauze compress, and a linen bandage, all rendered antiseptic, a piece of impermeable material, and ten safety pins. These articles are placed in an impermeable bag, which is placed in a grey cotton bag with a ticket explaining how to open it.

According to a report of Dr. Dujardin-Beaumetz, read before the Sanitary Committee of the Seine Department, four deaths from rabies have occurred during 1893. In one of these cases the proprietor of the dog which inflicted the bite was proceeded against, and was fined £48.

A competition has been organised as to the best means of sterilising mineral waters. Those who wish to compete must send their credentials and particulars of their proposed method to the Seine Prefecture before September 15th.

SHEFFIELD.

Uncertified Births.—Health of Sheffield.

THE lax manner in which children when uncertified are buried has received exemplification recently at Sheffield. A man and his wife were prosecuted for neglecting their five children by the Society for the Prevention of Cruelty to Children, and it appeared that the baby had died, and been buried under peculiar circumstances. The child had been taken once to the Children's Hospital, and, on death ensuing, the substitute for the house surgeon, who had attended the child, gave a note saying that the child had suffered from bronchitis, but very properly said that a proper medical certificate could not be given. The child was buried without an inquest or inquiry into the facts. The registrar gave a certificate "Bronchitis—uncertified," and the coroner did not appear even to have been communicated with. It transpired that the baby had been left practically without food for several days, and that the mother had buried three children, and on one an inquest had been held. The mother was sentenced to a month's imprisonment, and the case against the man was withdrawn.

The report of the medical officer of health for the city of Sheffield has been issued for 1893. The marriage rate was 1 in 35, being lower than has pertained for many years, and which corresponded to greater distress in trade than had been known in Sheffield for many years. 2,238 infants under 1 year had died, and 3,348 under 5, out of a total of 7,419 of all ages. This appalling mortality amongst children was held to be largely preventable; exposure, deficient and unsuitable nourishment, and insanitary surroundings being reckoned among the causes. In 1893, 190 legitimate children died under 1 year to 1,000 births, while 252 illegitimate children succumbed to every 1,000 illegitimate births, or, in another form, 5 illegitimate children died proportionately to every 4 legitimate. Sheffield again occupies a conspicuous position amongst the larger towns for the

great number of uncertified deaths and the comparatively few inquests held. The uncertified deaths were 261, or 3·5, of the total, and there were 279 inquest cases, or 3·8 per cent. of the total deaths. The abatement of the smoke nuisance seems to have made some progress, judging from the following statement: "The average number of minutes of black smoke observed per hour as a result of 6,157 hours' observations was only 2·8, whereas the corresponding figures since 1885 have been: 1885, 10·0; 1886, 9·0; 1887, 9·7; 1888, 10·0; 1889, 11·0; 1890, 7·0; 1891, 6·3; 1892, 5·2; 1893, 2·8. Diarrhœa caused 660 deaths, against 377 in 1892. Small-pox continued to be prevalent in the first half of 1893, but gradually died out as the surrounding districts and towns became free from infection. Four out of the 102 cases for the year were fatal. Seventeen of the total showed no sign of vaccination; 79 were males and 23 females; 85 were over 15, and 17 under that age. Thirty-five of the 102 were males not having a fixed abode. One thousand eight hundred and twenty-six cases of scarlet fever were notified; this number exceeding that of 1892 and 1891, but in 1890 there were 2,202 cases notified. Eighty-nine deaths from enteric fever were reported.

CORRESPONDENCE.

CHELSEA HOSPITAL FOR WOMEN.

Sir,—I regret that owing to my having been from home I have been unable to comply with the suggestion conveyed in your leader of August 11th. Had I had the prescience of some of my former colleagues, doubtless I should have recognised that personal interests must sometimes be placed before the common good.

The letters which have already appeared show that others have not held my views—possibly antiquated in these days of keen competition—that conjoint work should be conjointly recorded. I have asked the board of management to favour me with a record of all the operations I have performed at the hospital since I joined it in 1891. When I receive this, which I trust to do in the course of a few days, I shall, with your kind permission, present a full abstract of my operative work at the hospital; not that for one year only, a year unusually fortunate for some of the staff, and equally unfortunate for others working under exceptional conditions. By so doing I trust the profession generally may fairly appreciate matters which at present are liable to be misunderstood.—Yours, truly,

Grosvenor Street, W., Aug. 18th. LEITH NAPIER.

Sir,—When the late staff of the Chelsea Hospital for Women placed their resignation in the hands of the Board of Management, they did so, as they felt it the most honourable course to pursue after the publication of a report in which the censure was grave, but was not apportioned to any particular member.

In seeking re-election as individual members, each understood that he would stand or fall on his own personal work at the hospital, and that if he were not included in the common blame, his position would be justified before the public and the profession by the fact of his re-election.

Dr. Dickinson's Cases.

Hospital No.	Initials.	Disease.	Treatment.	Result.
4,518	S. W.	Fever, pain, discharge. Endometritis	Curetting	Recovery
4,557	A. S.	Dysmenorrhœa	Metrotomy	,,
4,639	M. H.	,,	,,	,,
4,683	C. A.	Incontinence of fæces; complete ruptured perineum	Perineorrhaphy	,,
4,721	E. W.	Hæmorrhage and pain; fibroid polypi	Excision	,,
4,752	M. H.	Hæmorrhoids	Crushing	,,
4,7[illegible]	J. T.	Dysuria; urethral caruncle	Cauterisation	,,
4,7[illegible]	A. R.	Prolapse	Perineorrhaphy	,,
4,7[illegible]	H. W.	Fistula	Division	,,
4,8[illegible]	F. S.	Prolapse	Perineorrhaphy	,,
4,826	F. S.	Polypi of cervix (multiple)	Amputation of cervix	,,
4,877	M. H.	Dysuria; caruncle	Cauterisation	,,
4,918	E. P.	Cyst of vulva	Ablation	,,
4,928	B. B.	Hæmorrhage: polypus	Removal	,,
4,945	E. G.	Dyspareunia; angiomata	Removal	,,
5,054	E. H.	Incontinence; hypertrophic nymphæ	,,	,,
5,104	A. W.	Dysmenorrhœa, etc.	Curetting	,,
5,135	E. McK.	Recurrent mammary tumour	Excision	,,
5,161	,, K.	Abscess, ,,	Incision	,,
4,582	B. H.	Large sarcomatous tumour of ovary; tumour irremovable	Abdominal section	,,
4,782	E. S.	Ovarian cyst	Ovariotomy	,,
4,965	E. S.	Ovarian cyst	Ovariotomy	,,
4,892	C. P.	Ovarian cyst; difficult operation	—	Death
5,005	E. K.	Suppurating ovarian cyst with septicæmia; emergency operation in absence of senior	—	,,
4,857	M. B.	Hæmorrhage; enlarged uterus; dilatation; enucleation of multiple fibroid polypi	—	,,

As the Board of Management have failed to take this view of the question, and leave it open to inference that we were not re-elected owing to our work being involved in the report, we submit as a fact that the Committee of Inquiry did not include us in the censure of the report. We feel sure the Committee of Inquiry will not deny this, and we challenge the Board of Management to disprove it.

We append statistics of our operative work at the hospital during 1893.—We are, etc.,

August 22nd. VINCENT DICKINSON.
J. A. SHAW-MACKENZIE.

Dr. J. Shaw-Mackenzie's Cases.

Name.	Age.	Admitted.	Discharged.	Diagnosis.	Operation.	Result.	Remarks.
		1893	1893				
A. N.	39	Aug. 20.	Sept. 10.	Metrorrhagia	Curetting	Cured	No septic rise of temperature.
M. H.	33	Aug. 29.	Oct. 14.	Perimetritis	None	,,	
E. S.	29	Sept. 5.	Sept. 23.	Vulva sinus	Split	,,	No septic rise of temperature.
A. H.	34	Sept. 8.	Sept. 21.	Hæmorrhoids	Clamped and removed	,,	,, ,, ,,
M. W.	50	Sept. 8.	Sept. 23.	,,	,,	,,	,, ,, ,,
A. S.	29	Sept. 15.	Oct. 20.	Cervical stenosis	Dilatation, "Hegar's"	Cured of dysmenorrhœa	,, ,, ,,
C. J.	42	Sept. 28.	Oct. 21.	Fibroid of uterus	None	Same condition	A large fibroid.
A. G.	33	Sept. 30.	Oct. 17.	Intrauterine polypus	Removed by scissors	Cured	Operation performed for constant hæmorrhage producing profound anæmia. The polypus was about size of orange.
S. S.	29	Nov. 18.	Dec. 20.	Pelvic and inguinal pain due to either hernia of ovary or omental hernia	None	Relieved	

I had no beds. The above cases were under my care in 1893 in the absence of the In patient Physician.

J. A. SHAW-MACKENZIE,
Late Physician to Out-Patients } Chelsea Hospital for Women.
Late Pathologist also }

A PROVIDENT ASSOCIATION AND ITS MEDICAL OFFICERS.

Sir,—It seems to me that it would have been better if some communication had been made to me previously to the appearance in the British Medical Journal of July 21st (p. 146) of the annotation entitled "A Provident Association and Its Medical Officers." Perhaps some of my fellow members will agree with me that it is right that a journal which is the organ of the British Medical Association should not put in a moral pillory any member of the Association without giving him some opportunity of showing cause against judgment. In the case in point if this course had been adopted I might either have defended myself and the institution criticised or have joined you in an endeavour to correct any abuses that might be in existence. Surely my professional life of five-and-thirty years, known to you, should have convinced you that my inclination would be to the latter course.

My association with the Provident Association of Warehousemen, Travellers, and Clerks dates from a great many years ago, when the establishment of such an institution for ensuring satisfactory medical treatment to the comparatively poor was considered to be very desirable. The British Medical Journal was amongst the foremost advocates of these institutions, and I think it was conceded that the particular one mentioned was of the best. I never had reason to believe that its benefits were accorded to other than properly qualified recipients, namely, warehousemen, travellers, and clerks in receipt of modest wages. Certainly members "in splendid positions" never came under my notice, nor have I ever received from any of the medical staff—sixty-nine in number—a complaint of maladministration in this or any other matter. If such had been received by any officer of the institution it ought to have been communicated to me as senior consulting physician.

The addition of a homœopathic section of medical officers was made without my knowledge. It is only quite recently that I became aware of its existence. The names of candidates for positions on the general medical staff were forwarded to me by the secretary, and I endorsed these after I had ascertained that the applicants held reputable medical qualifications. The names of homœopathic practitioners were, of course, never submitted to me. Opinions may differ on the question whether the typography of the annual report makes it appear that there might be any sort of undesirable connection between the "medical officers" and the "homœopathic medical officers." I must confess that I glanced at the report too cursively, and I did not observe the dangerous juxtaposition noticed by your annotator, nor was it brought to my notice by any of my colleagues. I am as opposed as anyone can be to consultations with homœopaths, with whom we can have no community of thought and method.

Seeing that there exists, from your showing, what I consider to be errors of administration, I have forwarded my resignation of the office which I hold; but I sincerely hope that an institution which I believe to have done a good work for a deserving but struggling class will not be wrecked, but will be reorganised on a satisfactory basis.—I am, etc.,

A. Ernest Sansom, M.D., F.R.C.P.

Harley Street, W., Aug. 13th.

*** It is satisfactory to find that Dr. Sansom has thought it well, by his resignation, to express his disapproval of the proceedings of this Association to which we recently drew attention. While, however, we wish to assure Dr. Sansom that in mentioning his name, along with that of Sir W. B. Dalby, as consultant to the Association, we intended no slight or discourtesy to him. We would at the same time differ from him in regard to his strictures on the conduct of the Journal in the matter. We have no doubt that if we had privately drawn his attention to the matter he would have done as he has done, that is, resigned. But it is no part of our duty as medical journalists to put the world right by private correspondence. If the Journal is to do good in such matters, it must be by its public utterances, not by its private hints, and however disagreeable it may have been to Dr. Sansom to find that an Association which he joined from the best of motives years ago has drifted into ways of which he now cannot approve, and to find himself in consequence placed in what he calls a "moral pillory," we submit that by the course we have adopted more good is done, justice is better served, and other men are more effectually awakened to the harm they do by carelessly lending their names than would have been the case had we entered into previous communication with the individuals mentioned. It is their eminence which points the moral; leaders cannot be too careful as to the bodies with which they are drawn into public association.

HOSPITAL APPOINTMENTS.

Sir,—Under this heading, in the British Medical Journal of August 18th, is a letter signed by eight medical men, who were candidates on July 24th for the post of surgeon to the Surrey Dispensary, and who complain of the way in which they were treated by the committee on that occasion. Now, if these eight gentlemen had read Rule 22, they would have seen that, of the three surgeons to the dispensary, one must be a Fellow of the College on the staff of a London hospital, and the other two in general practice; and, if they had inquired, they would have found that these two posts were already filled, and that the vacancy was for a Fellow and hospital surgeon. One gentleman, who was a Fellow, did read the rule and make the inquiry, and he wrote to the secretary, asking him to withdraw his application, on the ground that, although a Fellow, he was not on the staff of any hospital. The advertisement, *per se*, I admit, would lead these eight gentlemen to suppose they were eligible, and perhaps it ought to have been so framed as to exclude them, but this was not done, for the reason, I believe, that if no hospital surgeon and Fellow should come forward the selecting committee might find a candidate who who would, after his election, obtain the required qualifications. Take my own case, for example: I was once a candidate for the post of physician to the dispensary, and although a B.A. and M.B. of London, not a M.R.C.P., and therefore not qualified in accordance with the rule; but the Committee elected me on the understanding that I would present myself before the next Censor's Board of the College of Physicians and obtain the necessary diploma. If there had been a candidate possessing that diploma he would have been elected and I should have been declared ineligible. It is quite true that Mr. Cheatle did not attend on July 24th, but his application was read by the Secretary and the Chairman received a most satisfactory reason and apology for his absence. Moreover, he was a candidate at the previous (quashed) election; was then interviewed and approved by the Committee, and received a large majority of their votes. Of course, if he had not then been seen by them and approved his absence on the 24th would have disqualified him.—I am, etc.,

D. Hooper, B.A., M.B., M.R.C.P.,

Trinity Square, S.E., Aug. 18th. Physician to the Surrey Dispensary.

THE CRIMINAL RESPONSIBILITY OF THE INSANE.

Sir,—The writer of the interesting leading article upon the above subject which appears in the *Times* of to-day (Saturday, August 4th) has fallen, I venture to suggest, into a very important though frequent mistake. He says that a person who commits an act punishable by the law is criminally responsible for it if he at the time when he did it "knew that he was acting contrary to the law." The writer, in other words, assumes that the knowledge of right and wrong, spoken of in the well-known test of responsibility, "knows right from wrong," is a knowledge of legal right and wrong and not a knowledge of moral right and wrong. Now, Sir, I venture to contend that the "right and wrong" referred to are moral and not legal right and wrong. Some of the corresponding expressions employed in the cases on the subject (see *Hansard*, vol. 67, pp. 30-1) are "capable of distinguishing good from evil," or "capable of knowing what is proper," or "capable of knowing what is wicked." Even on Bellingham's trial Chief Justice Sir James Mansfield, who has been severely censured for harshness towards the prisoner (see *Hansard*, *ubi sup.*) but has certainly never been accused of undue leniency towards him, told the jury that the prisoner must, to be guilty, have known his act to be a violation of "both the laws of God and Nature." On Macnaughten's

trial Chief Justice Tindal, who was aided by Mr. Justice Williams and Mr. Justice Coleridge, substituted for this phrase the expression "the laws of God and man." Neither can Chief Justice Tindal's expression be regarded as merely a casual remark, for on that very trial Sir William Follett, the then Solicitor-General, by whom the prosecution was conducted had quoted with approval a declaration made by Yorke—afterwards Lord Chancellor—on the trial of Lord Ferrers's case in 1760, in which the very expression occurs that to render an insane person responsible he must possess "a faculty to discern the difference between moral good and evil." Nay, more, it is abundantly clear from Hadfield's case (27 *Howe St. Tr.*, 1313) that the phrase "right and wrong" cannot possibly refer to legal right and wrong: for in 1800, Hadfield,[1] labouring under the singular delusion that it was necessary for him to suffer death for the salvation of mankind, and thinking that it was wicked to commit suicide, deliberately resolved to do an act for which the law would put him to death. In pursuance of this design he, in the year named, fired a horse pistol at George III in Drury Lane Theatre, because he well knew that this act was in law high treason, and as such punishable by death. Yet Hadfield was acquitted on the ground of insanity, and I am not aware that anyone—even Lord Brougham, who would avowedly have hung Macnaughten—has ever been bold enough to assert that the acquittal of Hadfield was a mistake.

It is true that, notwithstanding the decision in Hadfield's case, and the existence of the formidable array of authority quoted above, Lord Brougham did, in the debate which followed Macnaughten's case, say that he considered "right and wrong" to mean *legal* right and wrong. But Lord Brougham differed from all the other law Lords in his avowed opinion that Macnaughten ought to have been hung. Moreover, though the judges took some months to frame their answers to the questions subsequently put to them by the House of Lords, and though after Lord Brougham's plain expression of his opinion, they cannot have been ignorant or forgetful of the question which had been raised as to the meaning of "right and wrong," those answers certainly say nothing to countenance Lord Brougham's views as to the meaning of the phrase, while if they even do so by implication the writer of your leading article will no doubt point it out; as after careful study of the subject, anything which there may be to this effect has escaped my notice. Headnotes, indeed, are proverbially misleading, but that Macnaughten's case in 10 *Cl. and Finn*, p. 200, clearly suggests that a man is not criminally responsible for an act unless it is not only contrary to moral right, but "happens" to be also a violation of municipal law.

Macnaughten's case marked at the time a great advance in the law, because in it the then new doctrine called at that time "monomania," was first recognised, and it was admitted that "partial insanity" might free a man from criminal responsibility. But half a century has elapsed since that time without any further marked advance in the law, and whatever may have formerly been the case, medical men certainly do not stand alone in thinking that the time has now come for another marked step forward in our criminal law as to insanity. Emphatic declarations by such recent occupants of the Bench (who alas are now no longer with us in their vigour), as the late Lords Coleridge, Bramwell, and Blackburn are recorded to this effect, as are also those of that great jurist, the late Sir James Stephen, whilst of present occupants of the Bench such experienced criminal lawyers as Mr. Justice Hawkins and Mr. Justice Cave have expressed similar views. Regard for your space forbids my quoting the words of each of the eminent judges whose names have just been mentioned.

Similar considerations prevent my here discussing in detail the suggestions which I ventured to offer to the Psychological Section of the British Medical Association. These were to the effect, first, that medical men must look for reform in this branch of the law rather to the Court for Consideration of Crown Cases Reserved than to the Legislature, or even to the House of Lords: and next, that the best hope of the law being placed in a more satisfactory state than that in which it now is will be afforded by seeking not to obtain the entire abrogation of the rule, as to a knowledge of right and wrong, which is stated by the judges in their answer to MacNaughten's case, but rather by seeking to get a wider and more benign interpretation placed upon the word "know," and a meaning placed upon it which will impute to it what I conceive to be its full sense, namely, that of signifying a discriminating and appreciative knowledge. Such a construction of "know" would place the law of England in harmony with that of Scotland, by which I believe a person cannot be convicted unless he have "*libertas arbitrii*;" with the French Code, Article 64 of which in substance provides that a person is not criminally responsible for an Act done under the influence of an overpowering insanity; and with the law prevalent in several States of America, under which a man is not responsible for a crime which is the direct outcome of insanity. Indeed, some authority for this construction of "know" already exists in English law, since Lord Denman, in Oxford's case in 1840 (9 *C. and Pat.*, p. 525), certainly told the jury that the prisoner would not be guilty "if some controlling disease was in truth the acting power within him which he could not resist."

I cannot conclude this letter without saying that I am satisfied that Dr. Weatherly does not (as has been suggested) seek in any way to interfere with the institution of trial by jury. All that he desires (and in this I confess that I heartily share the wish with him) is that the direction that the law gives to the jury should be made somewhat more in accordance with our present knowledge of mental science than it now is, much more easily understood, and such as, while not embarrassingly vague or difficult to be understood, will give the jury more freedom of action than they possess under the formula which is at least capable of, and sometimes I fear receives, a harsh and narrow interpretation.—I am, etc.,

August 20th. G. Pitt-Lewis.

[1] See the late Sir James Stephen's *History of the Criminal Law*, vol. ii, p. 159.

CORRECTION OF DEATH-RATES FOR TRADES.

Sir,—Your leaderette of August 18th on the subject of the correctness of death-rates for occupations opens an interesting question: How far is it legitimate to push the correction of death-rates on account of conditions affecting the resident population? The writer of the annotation allows that it is advantageous to take into consideration the ages of the persons living in a district, but implies rather than says that a correction for trades would be an unfair one. Surely, however, it is desirable to know in regard to two such towns as, say, Manchester and Brighton what amount of the higher death-rate of the former is due to the circumstance that Manchester contains a large population engaged in the cotton industry, and that the well-to-do citizens to a large extent live outside the municipal boundaries, whereas Brighton contains practically no manufacturing population, but, on the other hand, a very large number of well-to-do persons living in large houses upon their own means.

A large industrial population generally means a large number of people with small incomes living in houses built more or less closely together. In the case of Manchester many of these persons are also engaged in a specially unhealthy trade. Is it not desirable to know what influence these conditions exert in producing the uncorrected death-rate of a town? Suppose, for instance, that the trade corrections for Manchester and Brighton gave a lower death-rate for the former, would it not indicate that sanitation of houses in Manchester was well in advance and that the attention of the authority should be next directed to the condition of the work and work places of the inhabitants? Were it possible, in fact, to "correct for every circumstance," while the corrected rates might exhibit a monotonous uniformity, the several factors used for their production would themselves serve to guide the health officer to the points most needing his attention. Any exact knowledge as to where he is weakest is surely an advantage.—I am, etc.,

Leeds, Aug. 20th. J. Spottiswoode Cameron.

MASSAGE, LEGITIMATE AND ILLEGITIMATE.

Sir,—With reference to the extensive correspondence which has of late been published in the British Medical Journal, I think it is but fair to those who are striving to place this method of treatment on a firm and legitimate basis,

that a distinct line of demarcation should be drawn between legitimate and illegitimate massage.

Massage, as an outsider reading these articles, is very likely to become prejudiced, and as a result the usefulness of this treatment is doubted, discarded, and in all probability condemned. By all means let such establishments as you describe as being all too common in London and elsewhere be rooted out, if necessary even by the intervention of the law; let massage be entrusted solely and entirely to medical men who have adopted it as a speciality; or if patients are treated by a masseuse or masseur, let them be so under the direct supervision of a medical man; never, under any conditions, let a female be treated by a masseur, nor a male by a masseuse, as the very idea of this is repulsive to all right thinking people, and can only be resorted to by those whose animal nature is developed at the expense of their moral character.

I have not the slightest doubt that if these few but most important points are attended to, massage will be recognised and welcomed by both the physician and surgeon, as one of the most powerful and effectual means at his disposal for dealing with numerous, otherwise, most intractable bodily conditions.—I am, etc.,

Edinburgh, Aug. 20th. ALEXR. J. KEILLER.

"DYSENTERY AND TROPICAL LIVER ABSCESS."

SIR,—In the BRITISH MEDICAL JOURNAL of June 23rd I notice a letter from Dr. Neil McLeod, in which he criticises the statements of Surgeon-Lieutenant Yates and Surgeon-Major Younge, of Mandalay, and contends "that all cases of liver abscess are associated with dysentery." In reply to this very sweeping assertion, I should like to put on record, if you will permit me, my own recent experience in the treatment of that disease.

During the past eighteen months, seven cases of hepatic abscess have come under my care, and in no single instance was there any history of dysentery, though the most careful and searching inquiry was made in each case. All were treated by incision and free drainage, with antiseptic precautions and dressings. Six of the patients were Europeans, and one a native Sepoy. In the result, two recovered and returned to duty; three died, and the other two, who were progressing favourably towards convalescence, I lost sight of, owing to a change of station. In all the fatal cases multiple abscesses were found. Careful examination of the gut, however, failed to show any signs of recent or remote dysentery.

In the two cases of complete recovery neither ever had a day's illness before in his life, nor had either of them the slightest idea of the gravity or severity of the disease from which he was suffering, having continued doing duty up to the very day of admission to hospital, yet the abscess, in the one case, contained 60 ounces, and in the other 25 ounces, of pus. Both made excellent recoveries, and were fit for duty again in a month or five weeks.

With regard to Dr. McLeod's statement "that in *post-mortem* examinations no mention is often made of the state of the gut." I would point out the very stringent regulation in the service, namely, "that the condition of all the organs and viscera, whether healthy or otherwise, is to be noted," and that this is especially carried out with regard to the intestinal tract, in India, is a fact well known to all army medical officers. A *post-mortem* report that contained no mention of the state of the intestines would probably be at once sent back from headquarters for an explanation. The importance of the careful examination of the intestine was impressed on the officers of the Department by the late Surgeon-General, Sir A. D. Home, V.C., K.C.B., who ordered "that in every case of *post-mortem* examination the presence or absence of ulceration or of entozoa was to be particularly noticed."

In conclusion, I may say that my own experience, extending over nine years in the tropics, has led me to believe that hepatic abscess is in no way necessarily associated with or the result of previous dysentery.—I am, etc.,

S. J. RENNIE.
Meerut, India, July 15th. Surgeon-Major, A.M.S.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ALABASTER v. HARNESS.

MR. JUSTICE HAWKINS has given judgment in the Queen's Bench Division in the action of Alabaster *v.* Harness. The plaintiffs are the proprietors of the *Electrical Review*, and the defendant, C. B. Harness, was the manager of the Medical Battery Company in Oxford Street. The plaintiffs were successful in an action brought against them by Dr. Tibbits for libel, but they were unable to recover their costs, and they now sued Harness, alleging that he was really maintaining the plaintiff in the action. His lordship, in giving his decision, said, after the judgment of Lord Chief Justice Coleridge in Bradlaugh *v.* Newdgate, he need not take very much time over the present matter. The counsel for Harness, Mr. Jelf, did not deny that the defendant did maintain Tibbits, but contended that the defendant believed he had a common interest. Whether that was so or not, his lordship had to determine the question, What was improper maintenance? The principle was laid down that it was maintenance of a party in a suit where the maintainer was not concerned. An exception was made in the case of aid giving out a charity to a poor man. It could not be suggested that this report of Harness was due to a neighbourly action or to a charitable impulse. The point simply was, Had he or did he believe he had a common interest with Tibbits in the matter at variance? No doubt the article complained of by Tibbits attacked Harness also, but the comments of Harness and his belts did not make such a common interest in the suit as to justify maintenance. In no proper sense could a libel on Harness be treated as the matter at variance. It might seem hard that a man could not maintain a man who, in defending his own character, almost necessarily to defend the character of the maintainer also. Did Harness reasonably believe in such a state of things as would have justified him in maintaining Dr. Tibbits? His lordship thought not. The verdict would be entered for the plaintiffs for the costs they claimed. Judgment was given accordingly.

WALSALL FRIENDLY SOCIETY AND THEIR DOCTOR.

IN the Queen's Bench Division, on August 10th, before Justices Mathew and Lawrance, the case of Everton and others *v.* Lynch came on for hearing on an appeal by the defendant against an order of Justice Wright restraining him from practising as a medical man within five miles of Walsall for a term of three years. Mr. Greene, Q.C., and Mr. David appeared for the appellants, and Mr. MacIntyre represented the respondents. It was stated that in 1890 Dr. Lynch entered into an agreement with the respondents, who were the trustees, to become the medical officer of the Walsall Medical Society. He continued in this capacity until May 6th last, when he resigned, and became the medical officer of another society. The respondents alleged that as a result many of the members of the Walsall Society had gone over to the rival organisation in order to follow Dr. Lynch, who, they claimed, was not entitled under the agreement to practise within five miles of Walsall for three years after the termination of his engagement. After hearing the argument, Justice Mathew said he was of opinion that the case was one for a jury. The injunction granted against Dr. Lynch would be dissolved, and the action would be expedited so as to be heard soon after the long vacation. Justice Lawrance concurred.

GENERAL DISTRIBUTION OF TESTIMONIALS.

WE have received an account of some proceedings in connection with the appointment of a medical officer to the Burnley Union Workhouse, and we much regret to find that a grave error appears to have been committed by one of the candidates for that office. The vacancy in question was advertised by the guardians, and candidates were thereby invited to send in applications, with not more than six testimonials. Nine gentlemen applied, but one of these sent in not only the six required, but a further one described by him as additional testimonials. Copies of all these were, by this same candidate, sent not only to the guardians (elected and *ex officio*), but to county J.P.s, and also to members of the Liberal Association executive, and further to other persons who had nothing whatever to do with the election, and who were in no way interested about it. The defence set up for this liberal distribution of testimonials was that the candidate in question had a perfect right to send them to any person he liked, and that he was the sole judge as to whom he might send them.

In our opinion testimonials, which are frequently required to enable candidates to obtain a vacant public appointment, should be sent only to those persons who have votes or power of appointment; any further distribution of them can be nothing less than an abuse, as they are not given for such a purpose, and such circulation appears to us to constitute a serious breach of professional etiquette, which, if commonly practised, would be regarded even by the public as nothing short of general advertising.

PROSECUTION OF QUACKS.

M.R.C.S.—We recommend our correspondent to send to the Clerk to the Society of Apothecaries, London, short particulars of two or three cases in which the quack in question has visited, dispensed, and sold medicines, and we have no doubt the Society will be willing to take the necessary proceedings if the evidence forthcoming is sufficient.

A SUPPLANTED PRACTITIONER.

A. is in attendance upon a patient for about a week, and, after his daily visit, is informed that B. has been called in and is just away, and is going to send some medicine, A. has been in the district about fourteen months, and has never met B. nor had anything to do with him. A. writes to B., and, although ample time has passed (two posts), B. has not replied. A. on leaving the house, of course, said he would not come back. And what should A.'s attitude toward B. be in future?

*** Assuming that the above statement fairly represents the facts of the case, the following is the rule by which B. should have been governed: "When a practitioner is called in to or consulted by a

patient who has recently been, or still may be, under the care of another for the same illness he should not on any account interfere in the case, except in an emergency—having provided for which, he should request a consultation with the gentleman in previous attendance and decline further direction of the case except in consultation with him. If, however, the latter refuse this or has relinquished the case, or if the patient insist on dispensing with his services and a communication to that effect be made to him, the practitioner last consulted will be justified in taking charge of the case, ere assuming which, however, he should satisfy himself that such intimation has been given by the patient or family."—*Code*, chap. ii, sect. 5, rule 9. In regard to the future attitude of A. towards B., our counsel would be influenced by the incident as to whether the latter resides within reasonable visiting distance of the former, for it would appear from A.'s "P.S." that he omitted, as a newcomer, to pay B. the customary visit of courtesy.

A DELICATE QUESTION.

H. B. writes: A. is in attendance on a case. During his temporary absence the patient is seized with a fit; the relatives send for A., and are advised by his dispenser to call someone else. They call in B., who at once goes to see the case, stipulating that he goes for A. Whilst seeing the patient A. arrives and sees the patient with B. Downstairs A. offers to pay B. his fee, which B. declines, stating as his reason for doing so that one medical man should always help another in an emergency, and certainly should not expect any recompense other than a courteous "thanks." A. is huffy at B.'s refusal, and remarks: "I shall never ask B. to see a case for me again" in the presence of the relatives. Was B. right in his refusal to take a fee from A., and was A.'s conduct quite courteous?

*** Well-intentioned as A.'s motive no doubt was in proffering a fee to B. for his willingly rendered attendance on the patient in question, he (A.) would appear to have unwittingly misinterpreted the true spirit of medical ethics, which inculcates mutual and reciprocal assistance in cases of emergency and otherwise; and although the rule appended ordinarily applies to cases like to that referred to, it should be noted that the wording thereof leaves it optional with the acting substitute to accept or decline a fee for attendance; the fee, in our opinion, should, in the case of a personal friend or mutual professional acquaintance, be firmly and courteously declined, as in the above instance:

"When a practitioner is called to an urgent case, either of sudden or other illness, accident, or injury, in a family usually attended by another, he should (unless his further attendance in consultation be desired), when the emergency is provided for, or on the arrival of the attendant in ordinary, resign the case to the latter, but he is entitled to charge the family for his services."—*Code*, chap. ii, sect. 5, rule 7.

HOUSE-SURGEONS AND CORONERS' FEES.

B.—Our correspondent, who is house-surgeon at a country hospital, is summoned by the local coroner to give evidence at an inquest on the body of a patient dying within the institution, and he inquires if he is entitled to a fee for so doing.

*** It is provided by the Coroners Act that where an inquest is held on the body of a person who has died in a public hospital, infirmary, or other medical institution, whether the same be supported by endowments or voluntary subscriptions, the medical officer whose duty it may have been to attend the deceased person as the medical officer of such institution shall not be entitled to the fee or remuneration for giving evidence at the inquest.

CONTRACTS NOT TO PRACTISE.

F.R.C.S.E.—A bond or contract can be given or entered into by an assistant not to practise in the neighbourhood when he becomes qualified. The question, however, arises in this case as to the consideration for such a contract or bond, the assistant being already in our correspondent's employ. The difficulty is not insuperable, but we would recommend that the contract or bond should be prepared by a solicitor.

Medicus.—A bond given by an assistant to a principal not to practise in the neighbourhood may debar the assistant from practising there at any future time. It depends on the terms of the bond. A radius of 10 miles from a country village is not, we think, an unusual restriction. Each case must be decided on its merits; the restraint must be partial and reasonable, and there must have been a good consideration for the promise.

The late Professor Michel Peter.—It is not often nowadays that the Paris Faculty of Medicine officially takes part in religious observances. It is therefore interesting to note that when a week or two ago a mass for the repose of the soul of the late Professor Peter was celebrated on the anniversary of his death, the Faculty of Medicine was present in great force. Conspicuous in the devout assemblage were Professor Brouardel, Dean of the Faculty, Professors Jaccoud, Dieulafoy, Guyon, and Cornil, and many other medical stars of the first magnitude.

NAVAL AND MILITARY MEDICAL SERVICES.

EXTENSION OF AGE CLAUSES.

The extension and fixing of new age clauses in the superior ranks of the Army Medical Staff are now so confidently predicted in many quarters that there can be little doubt such is contemplated. We have long foreseen, and, indeed, as our readers will remember, foretold, that some such scheme would probably be tried as a way out of the muddle into which the administrative ranks of the department had fallen. The extension of age retirement will for a time render the administration in the upper ranks easier, but cannot in the end permanently mend matters. Age retirement is, of course, a necessity in every branch of the public service; but the true solution of the difficulties of the medical as of other departments lies in promotion by selection, combined with limitation in the tenure of administrative appointments. A time as well as an age limitation is necessary in the interests of efficiency and fair play. This is the rule, and a very proper one, in the combatant commands and appointments, and must be applied to the medical men at the risk of swelling the half-pay and retired lists. Any change in the rules of retirement is sure to cause hardship, and even injustice to individuals: and a strong outcery and agitation will be the certain result, unless the authorities are prepared to deal equitably, and mayhap generously, with sufferers.

ARMY MEDICAL EXCHANGE STAFF.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A Surgeon-Captain, with probably two more years to remain home, wishes to exchange to India. Apply, with full particulars, to Surgeon-Captain, 7, Trafalgar Place, Stoke, Devonport.

THE NAVY.

The following appointments have been made at the Admiralty: Edward E. Mahon, C.B., Fleet-Surgeon, and Henry F. Izlewicz, Surgeon, to the Royal Marine Artillery, Eastney, August 20th; Richard A. Fitch, Surgeon, to the *Ramillies*, August 20th.

ARMY MEDICAL STAFF.

Surgeon-Colonel (local and temporary Surgeon-Major-General) Thomas Walsh, is promoted to be Surgeon-General, *vice* P. R. Smith, M.D., deceased, July 18th. Surgeon-Major-General Walsh's previous commissions are as follow: Assistant-Surgeon, May 25th, 1858; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1873; Brigade-Surgeon, July 16th, 1884; and Surgeon-Colonel, October 28th, 1889. He held the rank of Surgeon-Major-General as Principal Medical Officer at Madras from January 11th last. He served in the Jowaki Afreedee Expedition in 1877-78 (medal with clasp); in the Afghan war in 1879-80, where he was senior medical officer to the force under Brigadier-General Charles Gough during the advance on Cabul in December, 1879 (mentioned in despatches, medal with clasp); and in the Egyptian war of 1882 as Sanitary Officer 1st Division, being present in the engagement at Tel-el-Mahuta, at the action at Kassasin (September 9th), and at the battle of Tel-el-Kebir (medal with clasp, and Khedive's star).

Brigade-Surgeon-Lieutenant-Colonel W. D. Wilson, M.B., is promoted to be Surgeon-Colonel, *vice* T. Walsh, July 18th. Appointed Assistant-Surgeon October 1st, 1867, Surgeon-Colonel Wilson was made Surgeon March 1st, 1873; Surgeon-Major, October 1st, 1879; received the rank of Lieutenant-Colonel May 21st, 1884; and became Brigade-Surgeon-Lieutenant-Colonel, October 28th, 1889. He was in the Afghan war of 1878-80 (medal); and in the Soudan Expedition under service conditions in 1884 as Principal Medical Officer of the Infantry Brigade, being present in the engagements at El Teb and Temai (mentioned in despatches, promoted Surgeon-Major with relative rank of Lieutenant-Colonel with two clasps, and Khedive's Star).

Surgeon-Lieutenant-Colonel A. L. Brown is promoted to be Brigade-Surgeon-Lieutenant-Colonel *vice* W. D. Wilson, M.D., July 18th. Brigade-Surgeon-Lieutenant-Colonel Brown entered the service as Assistant-Surgeon March 31st, 1868; became Surgeon March 1st, 1873; Surgeon-Major March 31st, 1880; and Surgeon-Lieutenant-Colonel March 31st, 1888. He was engaged in the Ashanti war in 1873-74, and was present at the battle of Amoaful and advance on Coomassie (mentioned in despatches; medal and clasp); in the Kafir war in 1878, including the operations against the Kaikas; and in the Zulu war of 1879, including the engagements at Kambula and Ulundi (mentioned in despatches; medal with clasp); and in the Nile Expedition in 1884-85 (medal with clasp, and Khedive's star); and in the operations of the Soudan Frontier Field Force in 1885-86, including the engagement at Giniss.

Surgeon-Major R. C. W. Laffan is restored from the Seconded List to the establishment as Surgeon-Major, August 2nd.

Quartermaster and Honorary Captain James Thompson retires on retired pay August 22nd. He was appointed Lieutenant of Orderlies June 9th, 1877; Quartermaster Medical Staff July 1st, 1881; and Honorary Captain June 9th, 1887.

Surgeon-General Miah William Murphy died at Cork on August 17th, aged 80. He entered the service as Assistant Surgeon, July 22nd, 1842

became Surgeon, March 3rd, 1854; Surgeon-Major, July 22nd, 1862; Deputy Surgeon-General, March 9th, 1867; and Honorary Surgeon-General on retirement on half pay, September 1st, 1875. *Hart's Army List* informs us that he served with the 50th Regiment during the Burmese war of 1852-53, and was present at the taking of Prome. He was also present as staff-surgeon to the Bengal Division with Sir J. Cheape's force at Donabew, where he was wounded. For his services he received the medal with clasp for Pegu.

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT T. E. STUART, 1st Essex Volunteer Artillery (Eastern Division Royal Artillery), to be Surgeon-Lieutenant, August 22nd.

INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON-LIEUTENANT-COLONEL A. STEPHEN, M.B., Bengal Establishment, is promoted to be Surgeon-Colonel, May 19th. He was appointed Assistant-Surgeon September 30th, 1867, and became Brigade-Surgeon-Lieutenant-Colonel April 16th, 1892. He was engaged in the Abyssinian war in 1868 (medal). The tenure of his appointment in the administrative grade of the Bengal army will reckon from May 19th.

Surgeon-Lieutenant-Colonels F. C. NICHOLSON, M.B., and T. H. HENDLEY, C.I.E., Bengal Establishment, who were appointed Assistant-Surgeons October 1st, 1869, and Surgeon-Lieutenant-Colonels October 1st, 1889, are now promoted to be Brigade-Surgeon-Lieutenant-Colonels, the former from April 1st, the latter from April 2nd. Brigade-Surgeon-Lieutenant-Colonel Nicholson was with the Lushai expedition in 1871-72 (medal with clasp).

Surgeon-Lieutenant-Colonel S. M. SALAMAN, M.D., Bombay Establishment, is also promoted to be Brigade-Surgeon-Lieutenant-Colonel, May 7th. He entered the service October 1st, 1869, and became Surgeon-Lieutenant-Colonel October 1st, 1889.

Brigade-Surgeon-Lieutenant-Colonel R. T. WRIGHT, M.D., Bengal Establishment, has retired from the service from June 20th. He dated as Assistant-Surgeon from April 1st, 1868, and as Brigade-Surgeon-Lieutenant-Colonel from January 2nd, 1894. He served in the Afghan war in 1880, receiving the medal granted for that campaign.

Surgeon-Lieutenant-Colonel W. A. C. ROE, Bengal Establishment, officiating as Sanitary Commissioner of the Punjab, is confirmed in that appointment, from May 9th.

Surgeon-Lieutenant-Colonel C. LITTLE, Madras Establishment, Sanitary Commissioner, Inspector-General of Dispensaries, and Superintendent of Vaccination in the Hyderabad Assigned Districts, is appointed to officiate as Residency Surgeon at Hyderabad.

Surgeon-Lieutenant-Colonel E. FAWCETT, Madras Establishment, is promoted to be Brigade-Surgeon-Lieutenant-Colonel from April 4th. His commission as Assistant-Surgeon dates from October 1st, 1869; and that of Surgeon-Lieutenant-Colonel from October 1st, 1889. He served with the Burmese Expedition in 1886-87, was mentioned in despatches, and received the Frontier medal with clasp.

THE VOLUNTEERS.

SURGEON-LIEUTENANT A. F. CLAY, 1st Worcestershire and Warwickshire Artillery, has resigned his commission, which was dated April 12th, 1890.

Surgeon-Lieutenant F. E. PATON, M.B., 4th Volunteer Battalion the South Wales Borderers, has also resigned his commission, which dated from October 5th, 1887.

THE PRINCIPAL MEDICAL OFFICER IN INDIA.

THE extension in office of Surgeon-Major-General Bradshaw was understood when he first took up the appointment as Principal Medical Officer in India. Indeed, it was on the distinct understanding that he should hold the post for five years that the appointment was accepted by him. That the extension beyond the compulsory retirement age would be granted to Surgeon-Major-General Bradshaw has been long known in the department; its necessity or desirability, however, have been adversely criticised by medical officers.

THE A.M.S. AND I.M.S.

THE suggestion made by "Union" respecting an amalgamation of the Army Medical Staff with the Indian Medical Service has already been strongly advocated in an article which appeared in our Naval and Military Services columns on April 28th. This is the only scheme which can further the interests equally of both services, and serve as an antidote to the rivalry of either. We trust, therefore, it may be pressed on the attention of the India Office.

THE BIRR ESCAPADE.

SURGEON-LIEUTENANT-COLONEL (Retired) writes: The raid by militia subalterns on Surgeon-Major Fox's quarters at Birr would never have been made if that officer's rank had been regarded by them as real. Had the outrage been on an ordinary major the roysterers would have promptly been placed in arrest, and there would have been no difficulty in extracting a report from the Officer Commanding in Ireland on the subject. The *Army and Navy Gazette* does not comment on this gross breach of discipline.

*** We have noticed the discreet silence of our military contemporaries on this business; they are ashamed. But the matter will be kept in mind for future reference if necessary.

VOLUNTEER MEDICAL SERVICE.

BRIGADE-SURGEON-LIEUTENANT-COLONEL PETER GILES, Welsh Border Brigade V. I., sends us a scheme for the organisation of the Volunteer Medical Service, of which the following are the salient points. His desire is less to thrust his ideas to the front than to excite interest and raise discussion on the subject. His proposed organisation is: (*a*) Regimental; (*b*) Brigade; (*c*) District.

(*a*) Regimental medical officers to be efficient, should attend three annual trainings, and each year give a course of instruction to the regimental stretcher-bearers on the subjects shown in Army Form E 586. The proficiency examination should include stretcher drill, and ability to give the words of command to a section of stretcher bearers. At the annual inspection of volunteer regiments, a stretcher section should parade under the command of the medical officer, with an orderly and a regimental hospital sergeant—the latter to undergo special training in connection with stretcher and hospital duties. The sergeant and bearers should be examined by a board of medical officers, not under the rank of surgeon-captain, to be convened by the brigade-surgeon of the brigade. That the possession of the proficiency certificate should carry with it a proficiency grant of £1 a year. That a revised scale of equipment be placed under the senior medical officer of the regiment for instruction and hospital purposes. (Here follows a list.) That in camp the stretcher bearers should be under the senior medical officer, and relieved of fatigue and sentry duties.

(*b*) The brigade bearer company and the field hospital to consist of 8 medical officers, 4 staff non-commissioned officers, and 100 rank and file; these to be called the brigade medical staff in the field, to act as a bearer company, and administer a dieted field hospital. The present *personnel* is too limited, and cannot cover a brigade when moderately extended. Dieted hospitals have proved a great success in volunteer camps. Revised scale of equipment is much needed. The uniform should be the same as the Medical Staff and Medical Staff Corps with silver for gold.

(*c*) In each district a brigade-surgeon should be selected as senior medical officer with the rank of surgeon-colonel; he would visit and inspect camps in the district, and report to the principal medical officer of the district. When on duty, he should be paid at the rate of his relative rank with travelling expenses.

Finally, volunteer medical officers should have some share in honours; one honorary physician and one honorary surgeon, with three C.B.'s are suggested; such would immensely popularise the service.

The writer states he has especially avoided calling the force here sketched the Volunteer Medical Staff Corps, because he is of opinion that all stretcher bearers and bearer companies are better part and parcel of the combatant force.

THE SUPPRESSION OF SYPHILIS.

DR. DONALD F. DYMOTT M.B.Lond., writes from Madras as follows: The increased prevalence of contagious disease in the army, as revealed in the late discussion on the Estimates, suggests some thoughts on the eradication of syphilis. The widespread and lamentable effects of the disease on the community at large needs no demonstration in a medical journal; its far-reaching effects on the race are well known. There is no hesitation in enforcing the compulsory notification of such diseases as small-pox and rabies; and why should the State not interfere in the case of syphilis? There seems no reason to doubt syphilis could in time be completely eradicated, so far, at least, as the British Isles are concerned; and if the means necessary for its eradication can be shown to be practicable, then surely it is the duty of every member of the medical profession to urge on the authorities the great necessity which exists for taking steps to stamp out the disease. The following rough scheme towards this end may not be original, but is none the less worthy of consideration. 1. The eradication of syphilis within our shores. 2. The prevention of extension of any disease which may be imported. The first might be enforced by the compulsory notification of every case, under penalty; every person should be obliged to furnish a medical certificate of freedom or otherwise from the disease. Communication of the disease by either sex to be punishable by imprisonment for a term not exceeding five years. Free medical attendance at public hospitals to be provided, and treatment made compulsory. When a cure is effected notification to be made to the health officer of the district, and also to the magistrates.

The second object would be effected by the inspection of new arrivals, and punishment for concealment. Medical officers of troop and other ships to notify any case known to them.

The above scheme has the merit of bearing equally on both sexes, and cannot fairly be charged with either tending to increase immorality or offend religious feelings. At first a great deal of labour would be involved, but would be rapidly diminished: lady doctors could be employed to examine females. The difficulties to be overcome would be (*a*) ignorance on the part of those affected of the nature of the disease; (*b*) wilful concealment; (*c*) uncertainty of knowing when the power of communicating the disease is quite lost.

When the State interferes with individual freedom there is always more or less danger of bribery and blackmail; the subject is an ugly one, but must be considered.

*** As we cannot for a moment question our correspondent's sincerity and good faith, his drastic proposals fill us with amazement. Would he reflect on the fate of a Minister, or even of a private member, who should venture to introduce a Bill drawn on the lines he suggests? And even if his ideas could be translated into laws, could he imagine their practical application? At present when it is impossible to apply a limited Contagious Diseases Act to military camps and garrisons, fancy the enforcement of an unlimited one all over the country! We cannot imagine the application of Dr. Dymott's projected heroic legislation, even by an irresponsible despotism; the restraint on individual freedom and invasion of private life would overthrow any Government in the world. Syphilis is a great evil, and the subject is an ugly one, but its check through the restraint of public women is quite a different matter from the application of terrific compulsion to the entire community.

SUCCESSFUL VACCINATION.—Mr. W. W. Baxter, vaccinating officer of the 3rd and 4th districts of the Tendring Union, has received the Government award for vaccination.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

INTERMEDIATE EXAMINATION IN MEDICINE, Pass List.—*Entire Examination.*—First Division: A. R. J. Douglas, St. Bartholomew's Hospital; Mary Buchan Douie, London School of Medicine and Pharmaceutical Society; A. H. Evans, Westminster Hospital; E. J. Fox, Owens College; G. F. S. Genge, Westminster Hospital; F. C. B. Gittings, Middlesex Hospital; F. W. Goldie, Guy's Hospital; Urania Latham, London School of Medicine for Women; F. B. Thornton, St. Thomas's Hospital; W. B. L. Trotter, University College; W. C. Wood, St. Mary's Hospital. Second Division: Louisa Garrett Anderson, London School of Medicine for Women; W. B. Anderton, Owens College; S. H. Berry, Charing Cross Hospital; W. F. V Bonney, Middlesex Hospital; A. Burn, St. Mary's Hospital and Birkbeck Institute; M. Cameron, London Hospital; J. H. Churchill, St. Bartholomew's Hospital; C. C. Clarkson, University College; H. M. Cooper, St. George's Hospital; J. M. S. Coutts, University College; E. C. Davenport, London Hospital; A. W. Dickson, St. Bartholomew's Hospital; J. A. Dredge, St. Bartholomew's Hospital; A. Earnshaw, Guy's Hospital; G. R. Elwin, St. Mary's Hospital; F. A. Field, St. Bartholomew's Hospital; E. Fisk, Guy's Hospital; A. B. Fry, London Hospital; L. Gilbert, St. Thomas's Hospital; C. F. Gordon, St. Bartholomew's Hospital; W. J. Hardiug, St. Bartholomew's Hospital; S. Hunt, St. Bartholomew's Hospital; G. Hutchens, Liverpool Hospital; H. W. Jackson, University College; A. E. Jorman, Westminster Hospital; R. Kay, Guy's Hospital; Sarah Kaye, London School of Medicine for Women; H. Leader, Guy's Hospital; W. Liversidge, University College; A. A. Montague, St. Thomas's Hospital; J. T. Roberts, Guy's Hospital; T. O. Roe, University College; E. L. M. Rusby, King's College; J. M. Schaub, King's College; J. Shardlow, University College; E. I. Spriggs, Guy's Hospital; G. H. Warren, London Hospital; H. Weeks, St. Bartholomew's Hospital; S. Whicher, Guy's Hospital.

Excluding Physiology.—First Division: H. Mundy, St. Bartholomew's Hospital; C. Kundle, St. Mary's Hospital; J. P. Scatchard, St. Thomas's Hospital. Second Division: J. A. P. Barnes, St. Bartholomew's Hospital; H. N. Goode, St. Thomas's Hospital; F. R. Greenwood, Mason College; H. F. Maskell, St. Mary's Hospital; C. S. Read, University College; C. Riviere, St. Bartholomew's Hospital; S. F. Smith, St. Bartholomew's Hospital; H. Sugden, St. Mary's Hospital; L. K. Thomas, Queen's and Mason Colleges, Birmingham; W. Wrangham, St. Bartholomew's Hospital.

Physiology Only.—First Division: J. F. Bill, St. Bartholomew's Hospital; J. H. Murray, University College. Second Division: R. H. Ashwin, Guy's Hospital; J. N. Bahadurji, University College; F. W. Binckes, St. Thomas's Hospital; S. L. Box, St. Bartholomew's Hospital; P. W. Brigstocke, St. Bartholomew's Hospital; D. H. F. Cowin, St. Bartholomew's Hospital; Frances Ede, London School of Medicine for Women; E. G. L. Golfe, University College; J. T. Leon, B.Sc., St. Mary's Hospital; L. F. Marks, St. Bartholomew's Hospital; E. Pratt, St. Bartholomew's Hospital; J. W. F. Rait, University College; A. H. Spicer, Guy's Hospital: A. B. Tucker, St. Bartholomew's Hospital.

EXAMINATION FOR HONOURS.

Anatomy.—First Class: *C. Bolton, University College; †J. Beatty, Trinity College, Dublin; and ‡C. Roberts, Middlesex Hospital. Second Class: F. Riley, Westminster Hospital; and J. S. Koss, Owens College (equal); and G. K. Levick, Guy's Hospital. Third Class: J. G. Emanuel, B.Sc., Mason College; J. V. Hadley, Yorkshire College; and A. W. Sikes, B.Sc., St. Thomas's Hospital.

Physiology and Histology.—First Class: †V. C. Collins, Guy's Hospital; and ‡R. P. Williams, King's College (equal). Second Class: F. Riley, Westminster Hospital; and A. W. Sikes, St. Thomas's Hospital. Third Class: C. Bolton, University College.

Organic Chemistry.—First Class: *A. W. Sikes, St. Thomas's Hospital; and H. E. Wise, Middlesex Hospital. Third Class: T. J. Horder, B.Sc., St. Bartholomew's Hospital; and J. G. Emanuel, Mason College.

Materia Medica and Pharmaceutical Chemistry.—First Class: *R. P. Williams, King's College. Second Class: J. Howell, Guy's Hospital; E. M. Aubin, Middlesex Hospital; and C. Roberts, Middlesex Hospital. Third Class: A. Howell, St. Mary's Hospital and Birkbeck Institute; G. K. Levick, Guy's Hospital; and A. W. Sikes, St. Thomas's Hospital.

*Exhibition and Gold Medal.
† Gold Medal.
‡ Obtained the number of marks qualifying for a Gold Medal.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

THE following gentlemen passed the First Examination of the Board at the quarterly meeting of the Examiners in the subjects indicated under the Four Years Regulations:

Part I. *Chemistry and Chemical Physics.*—F. Adams, St. Thomas's Hospital; H. A. Ahrens, King's College, London; U. M. Asplen, Cambridge University and King's College, London; J. K. Bell, University College, Liverpool; J. Bennett, Owens College, Manchester; J. Birch, Owens College, Manchester; T. N. Blomfield, private study; A. E. Caddy, King's College, London; W. W. Claridge, Middlesex Hospital; P. D. Cogswell, St. Mary's Hospital; W. H. Davis, University College, London; F. C. Dudley, Westminster Hospital; O. R. Ennion, St. Mary's Hospital; A. Farrington, Cambridge University and St. Bartholomew's Hospital; W. H. Goodchild, St. Bartholomew's Hospital; R. W. Hill, Owens College, Manchester; W. H. Howard, Owens College, Manchester; A. H. Hughes, Clifton Laboratory, Bristol; O. S. Kellett, Cambridge University; G. H. Lucas, Middlesex Hospital; G. L. Meredith, London Hospital; A. F. Mortimer, St. Thomas's Hospital; E. A. Onyon, private study; J. L. Payne, Guy's Hospital; R. C. Smith, University College, Liverpool; P. B. Spurgin, St. Mary's Hospital; T. W. H. Stephens, University College, London; R. S. Thorpe, Owens College, Manchester and Guy's Hospital; A. H. Whittingham, Cambridge University and St. Mary's Hospital; P. G. Williams, St. Thomas's Hospital.

Part II. *Materia Medica and Pharmacy.*—G. H. Alcock, St. Thomas's Hospital; W. H. Allen, St. Bartholomew's Hospital; W. R. Battye, University College, Bristol; T. D. Bell, University College, London; A. P. Birch, Middlesex Hospital; J. Birch, Owens College, Manchester; J. J. Blagdon, St. Bartholomew's Hospital; T. N. Blomfield, Private Study; C. Bramwell, King's College, London; F. Brickwell, St. Bartholomew's Hospital; E. F. Burton, Queen's College, Birmingham; F. A. H. Clarke, St. Bartholomew's Hospital; W. H. Clough, Yorkshire College, Leeds; H. A. Colwell, St. Bartholomew's Hospital; E. R. M. C. K. Cousins, University College, London; T. W. Croft, Westminster Hospital; D. E. Curme, Cambridge University, and King's College, London; E. C. Davies, Guy's Hospital; H. Davis, St. Bartholomew's Hospital; W. H. Davis, University College, London; J. L. F. De Gannes, University College, London; W. S. Dibbs, Yorkshire College, Leeds; G. Downes, Carmichael College, Dublin; C. Dykes, University College, London; O. R. Ennison, St. Mary's Hospital; H. J. Farah, Sarian Protestant College, Beyrout; D. Fogarty, Carmichael College, Dublin; G. E. Gardiner, St. Bartholomew's Hospital; T. H. Gardner, King's College, London; C. B. Garman, London Hospital; E. R. Grazebrook, King's College, London; W. Green, Charing Cross Hospital; L. C. G. Haudson, Guy's Hospital; H. E. Hewitt, St. Thomas's Hospital; J. J. Ireland, University College, Liverpool; E. S. Jones, St. Bartholomew's Hospital; H. L. Lambert, St. Bartholomew's Hospital; N. Lavers, Guy's Hospital; F. H. Lawson, Middlesex Hospital; W. H. Lee, Firth College, Sheffield; G. W. Lewis, University College, London; E. Lloyd, St. Bartholomew's Hospital; G. H. Lucas, Middlesex Hospital; J. M. A. Manning, St. George's Hospital; A. R. Mansell, St. Bartholomew's Hospital; R. R. Matthews, St. Mary's Hospital; R. H. Milsom, St. Mary's Hospital; E. C. Moriand, St. Bartholomew's Hospital; W. E. Morgan, Charing Cross Hospital; E. A. Onyon, private study; W. H. Pearse, Middlesex Hospital; W. H. Peile, University College, London; E. C. Plummer, King's College, London; R. S. Ransome, St. Thomas's Hospital; G. Renshaw, Owens College, Manchester; J. W. Rollings, University College, London; R. P. Rowlands, Guy's Hospital; A. L. Ruge, Charing Cross Hospital; E. S. Shave, Middlesex Hospital; A. W. S. Sheldon, St. Bartholomew's Hospital; S. S. Simmons, University College, London; F. H. Sturdee, St. Thomas's Hospital; E. H. Sweet, St. Mary's Hospital; W. V. P. Teague, London Hospital; G. B. Thwaites, St. Thomas's Hospital; S. V. H. Underhill, St. George's Hospital; J. Viney, Middlesex Hospital; S. R. Walker, Westminster Hospital; G. S. Webb, St. Mary's Hospital; L. T. Wells, St. Mary's Hospital; P. S. White, Queen's College, Birmingham; L. Whitfield, Queen's College, Birmingham; W. W. Williams, University College, London; J. Winder, St. Mary's Hospital; W. E. A. Worley, St. Bartholomew's Hospital; J.C. Young, Queen's College, Birmingham.

Part III. *Elementary Anatomy and Physiology.*—E. G. Battiscombe, London Hospital; J. K. Belt, University College, Liverpool; S. C. S. Broughton, Queen's College, Birmingham; E. G. Bunbury, Cambridge University and University College, Bristol; J. Butterworth, Owens College, Manchester; B. F. Carlyle, St. Bartholomew's Hospital; A. M. Crosfield, University College, Liverpool; C. Dykes, University College, London; R. S. Elvins, Queen's College, Birmingham; J. Fisher, Queen's College, Birmingham; A. Holden, Owens College, Manchester; R. McKay, Middlesex Hospital; A. W. Naughtin, King's College, London; F. J. Nicholls, Cambridge University and Guy's Hospital; S. D. Oldham, Owens College, Manchester; S. B. Reid, Cambridge University; F. J. Russell, London Hospital; R. Sykes, Yorkshire College, Leeds; I. Taylor, Yorkshire College, Leeds; A. P. Watkins, University College; W. I. Weldon, St. George's Hospital; and J. A. Wolverson, Queen's College, Birmingham.

Passed in Elementary Physiology only: A. E. Gladstone, Cambridge University and St. Thomas's Hospital.

Passed in Elementary Anatomy only: E. A. Charlesworth, Middlesex Hospital; W. Marsden, Yorkshire College, Leeds; A. Price, University College, Liverpool; E. S. Shave, Middlesex Hospital; and W. N. Spencer, University College, Bristol.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, August, 1894. The following candidates passed in

Surgery.—G. Allcock, St. Thomas's Hospital; W. E. Bremner, King's College; P. M. Smith, St. Mary's Hospital; F. A. Storr, Leeds; A. H. Trevor, Guy's Hospital; S. S. Wallace, Guy's Hospital.

Medicine, Forensic Medicine, and Midwifery.—R. W. S. Christmas, Charing Cross Hospital; J. W. A. Cooper, King's College; J. Mace, Leeds; W. Manbergh, Manchester; R. Marshall, Manchester; T. E. Rice, King's College; P. M. Smith, St. Mary's Hospital; H. L. Thurnell, St. Thomas's Hospital.

Medicine and Forensic Medicine.—A. M. Thornett, Royal Free Hospital.

Medicine and Midwifery.—E. D. Macnamara, Westminster Hospital.

Forensic Medicine and Midwifery.—W. S. Routledge, University College.

Forensic Medicine.—F. E. A. Webb, St. Bartholomew's Hospital.

Midwifery.—R. G. Jones, London Hospital; R. Keatinge, London Hospital; G. Lowsley, St. Bartholomew's Hospital; F. C. Sutherland, St. Bartholomew's Hospital.

To Messrs. Allcock, Cooper, Mansergh, Marshall, Rice, Smith, Storr, Sutherland, Thurnell, and Webb, were granted the diploma of the Society.

At the recent examination for the prizes in Materia Medica and Phar-

maceutical Chemistry, the successful candidates were: H. J. Compton, Owens College, Manchester, gold medal; R. P. Williams, King's College, London, silver medal and book.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.

Mr. Hopwood and Vaccination.—Mr. Hopwood asked the Parliamentary Secretary to the Local Government Board whether he was aware that William Windridge, who died of small-pox in the City Hospital, Coventry, on June 22nd last, and was certified by the medical officer, Dr. Henton, to have died unvaccinated, was described by the doctor to be an antivaccinationist, who refused the protection afforded by vaccination, and died a martyr to his prejudices; whether the Department had since received a statement signed by the mother, widow, and brother of the deceased, that he had been vaccinated, and was an advocate of vaccination; and whether the Department would inquire into the matter with a view of preventing the above from appearing in the Registrar-General's statistics as an unvaccinated case.—Sir W. Foster replied that the statements in the first two paragraphs were substantially accurate. Inquiry had been made of Dr. Henton, and he stated that Windridge on more than one occasion stated to him that he did not think he had been vaccinated. He stated further, that he failed to discover the slightest mark or cicatrix or other evidence left by the operation. Windridge had not only refused to be vaccinated, but made statements to Dr. Henton with regard to vaccination, which satisfied him that he was opposed to it. Dr. Henton subsequently made inquiry, and could not obtain any satisfactory information as to his having been vaccinated. In face of these contradictory statements he could not say that if his hon. friend would obtain information for him as to the date and place of the vaccination, he would make the inquiry.

Medical Examination of Military Candidates.—Mr. Bartley asked the Secretary of State for War whether he would arrange that candidates for commissions in the Army might, if they wished, by paying a special fee to cover the cost, be officially examined as to their fitness before undergoing the competition. Mr. Woodall, in reply, said that a very full statement of the physical conditions required of candidates for the Army had been prepared, and might be obtained by candidates on application to the War Office. With that statement before him, any qualified surgeon would be able to inform candidates whether they were likely to pass the medical examination. It was therefore unnecessary, even if it were practicable, to authorise any official medical examination of candidates before the examination which followed successful competitions for commissions.

Chelsea Hospital for Women.—Mr. Stuart asked the Secretary of State for the Home Department whether his attention had been called to recent allegations respecting the conduct of the medical staff of the Chelsea Hospital for Women; whether it was the case that the whole staff resigned; whether, notwithstanding the report of a committee presided over by Lord Cadogan, all except two of the staff had been re-elected; and whether he had any power to order an inquiry into the whole proceedings; and, if not, would he consider such an inquiry.—Mr. G. Russell said: The Secretary of State has seen the allegations to which my hon. friend refers, and is fully alive to the gravity of them. I am bound, however, to tell my hon. friend that the Home Office have some private reason for believing that the allegations made in the newspapers are not correct. If my hon. friend will communicate with me privately, I will tell him what I know of the matter. In the meantime I have to announce that the Secretary of State has no power to order an inquiry, as suggested in the question.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

FACTS ABOUT VACCINATION.

We have had brought to our notice a correspondence which has passed recently in the columns of the *Bradford Observer* between Dr. R. G. Alexander and Mr. J. Walshaw for and against vaccination respectively. Dr. Alexander is anxious that the residents in Bradford should profit by the recent epidemic of small-pox there, and seek, so far as they still need it, the protection of primary vaccination or revaccination. Many points of interest have arisen, in the correspondence in which a Mr. Appleton has also joined. The Town Council have not long since tried to secure the better carrying out of the law of vaccination in the borough, and, indeed, took the law into their own hands in the last prevalence of small-pox. We would like to point out to those antivaccinators in Bradford who side with Mr. Walshaw's views that in the epidemic of 1893, the rate of mortality in the unvaccinated was more than five times that of the vaccinated, and that in the first fifteen years of life the latter class suffered no fatality, whilst over 27 per cent. of the unprotected sufferers died from small-pox; in other words, vaccination saved 14 children among vaccinated patients from death by a horrible disease, whilst its non-use led to the sacrifice of 35 infants and young people. Small-pox in relation to sanitation is once again brought forward; may we, therefore, draw attention to the latest instance of a large town invaded by small-pox for which data are available? Dr. Barry's data showed that in Sheffield small-pox had risen in its death-rate among people over childhood, the remarkable fall in its all-age mortality having been entirely due to an enormous decline in its mortality in children. This fall on the period 0-10 years is shown by no other disease in Sheffield.

So much for the theory of sanitation in relation to decline of small-pox. Or, if we like to look at the matter in a wider sense, we find the Registrar-General in his report for 1880 showing a fall in the small-pox mortality of 80 per cent. in children under 5 years of age, and only 6 per cent. as regards other diseases, the respective rates in persons aged 15 years and upwards being actually a rise of 161 in the case of small-pox, and a fall of 3 in other diseases. As showing the readiness of the anti-vaccinator to catch at straws, we find Dr. Alexander saying that he had failed to find record in his experience of the death of a person within fifteen years after primary vaccination efficiently performed. Mr. Walshaw is content to read the assertion as having reference to primary vaccination of whatever sort. But, unfortunately, there is vaccination and vaccination, and it is the sixpenny doctor with his one mark of poor quality and his sometime fraudulent obedience to the letter of the law that brings discredit on vaccination. We would it were possible with due regard to the dictates of humanity to place in a small-pox hospital in actual occupation three sets of, say, 100 men each—namely, the efficiently vaccinated and revaccinated, the typical one-mark class, and the totally unvaccinated. The experiment would, we do not doubt, settle the vaccination question much more quickly and forcibly than any amount of statistical matter or any number of Royal Commissions.

We venture to assert that it is not the antivaccinationist who is putting the law at defiance by the exposition of his views so much as the ease with which only too many ignorant people can be brought to listen to any story which will save them the trouble of compliance with the law, even though it cost them nothing to obey. The pity is that disobedience costs them nothing, or next door to it, either. The need for the enforcement of the law is not so much the measure of the resistance manifested towards it as the natural apathy of the classes which has to be overcome when any little trouble is entailed, such as having to nurse a baby with a sore arm. England suffers too much from unenforced laws, of which that relating to vaccination is a specimen. The law enacts so and so, but the people seem to break it with impunity in too many places. Our excellent system seems to be in danger of a complete breakdown while the Royal Commission are considering their report now so long overdue. What we want is a strict carrying out of the law in all parts of the kingdom, with penal clauses such as will demand compliance. If the State will not do this, well let us strike the law of compulsion off our Statute book. Small-pox is doubtless the best enforcer of the law. There is no such thing as an antivaccinator when this disease is next door. Antivaccinationism cannot stand the test of coming from that malady. When vaccination becomes a matter for the State appointed servant, and revaccination is also rendered compulsory, we shall see less of these unseemly rushes to the public vaccination station of antivaccinators and imperfectly protected so-called "vaccinated" persons in a time of small-pox prevalence. The recent epidemic in St. John's Wood has witnessed the vaccination or revaccination of over 1,500 persons. Will it for one moment be held that none of those were antivaccinators? No, antivaccination is tenable only in the absence of small-pox. Meanwhile the cry of the believer in vaccination (desirous of seeing his fellows secure the protection which he has himself obtained) goes up. How long, how long? Is England, so far the leader in matters sanitary, to be allowed to remain behind in a subject so vitally important as the stamping out of small-pox? Sanitary progress has failed to stamp out the malady; vaccination and revaccination do protect from death when performed in the best fashion. Why not go on with these prophylactics in the way best adapted to do the needed good? The medical profession, trusted with the cure of a thousand and one diseases, are not trusted, as regards small-pox, by a certain portion of the community when they would rather prevent than cure it. Why? Ah, there is the rub. Even when it does not pay, antivaccinationism is for the moment an easy method of leaving undone the paramount duty of every parent to protect his child from disease. The antivaccinator will tell the apathetic parent that he does so in refusing to have his child vaccinated. But false statements do not alter the unalterable.

VACCINATION BY A NURSE.

The Irish Local Government Board have just given their decision as a result of an inquiry held by their inspector in Derry Union. It appeared that a district nurse had been in the habit of vaccinating children, with the sanction of the medical officer, Dr. Morrison, who returned the cases as done by himself. The results were not all satisfactory, and, the matter having been reported, an inquiry was ordered. Dr. Morrison meanwhile resigned, stating at the same time that he had only continued a usage which he found in existence at the time of his appointment. The Board state their strong disapproval of the practice, and intimate that Dr. Morrison has properly resigned his position. The board of guardians and the committee have declared that the feeling of the people is that Dr. Morrison should be re-elected as he is very popular, but it is not known whether the Local Government Board will sanction this course.

ZYMOTIC MORTALITY IN LONDON.

The accompanying diagram shows the prevalence of the principal zymotic diseases in London during each week of the second quarter of the current year. The fluctuations of each disease during the period under review, and its fatal prevalence as compared with that recorded in the corresponding weeks of recent years, can thus be readily seen.

Small-Pox.—The deaths referred to small-pox, which had declined from 100 to 11 in the preceding four quarters, rose again to 37 during the three months under notice, the average number in the corresponding periods of the preceding ten years, 1884-93, being 90. Of these 37 deaths, 8 belonged to Poplar, 4 to St. Pancras, 3 to Bethnal Green, 3 to Mile End Old Town, and 2 each to Islington, Newington, and Camberwell sanitary areas. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had been 71, 82, and 56 at the end of the preceding three quarters, had risen again to 123 at the end of June last; 568 new cases were admitted during last quarter, against 377, 289, and 169 in the preceding three quarters.

Measles.—The fatal cases of measles, which had been 459, 446, and 788 in the preceding three quarters, further increased to 1,745 during the three months ending June last, and were almost double the corrected average number. Among the various sanitary areas of the metropolis

the highest proportional fatality of measles was recorded in Fulham, Limehouse, Mile End Old Town, Poplar, St. Saviour Southwark, St. George Southwark, St. Olave Southwark, Newington, Rotherhithe, and Battersea.

Scarlet Fever.—The deaths referred to this disease, which had been 467 and 276 in the preceding two quarters, were 286 during the three months under notice, and exceeded by 70 the corrected average number in the corresponding periods of the preceding ten years. Among the various sanitary areas this disease showed the highest proportional fatality in Marylebone, Hackney, Limehouse, Greenwich, Woolwich, and Plumstead. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 2,659, 2,873, and 2,070 at the end of the preceding three quarters, had further declined to 2,042 at the end of June. The number of cases admitted into these hospitals, which had been 4,308 and 2,800 in the preceding two quarters, rose again to 3,144 during the three months ending June last.

Diphtheria.—The fatal cases of diphtheria in London, which had been 1,089 and 728 in the preceding two quarters, further declined to 652 during the three months under notice, but were more than double the corrected average. Among the various sanitary areas, diphtheria caused the highest proportional fatality in Paddington, Fulham, Marylebone, Bethnal Green, St. George-in-the-East, St. George Southwark, Bermondsey, and Rotherhithe. The cases of diphtheria admitted into the Metropolitan Asylum Hospitals, which had been 1,841, 821, and 839 in the preceding three quarters, further rose to 947 last quarter, and 351 patients remained under treatment at the end of June last.

Whooping-cough.—The deaths referred to this disease, which had been 619, 588, and 932 in the preceding three quarters, declined to 608 last quarter, and were 231 below the corrected average number. The highest proportional fatality of whooping-cough was recorded in Strand, Holborn, Whitechapel, St. George-in-the-East, Mile End Old Town, and Camberwell sanitary areas.

Fever.—Under this heading are included deaths from typhus, enteric fever, and simple and ill-defined forms of fever. The deaths referred to these different forms of "fever," which had been 273 and 145 in the preceding two quarters, further declined to 131 during the three months under notice, and were slightly below the corrected average. Of these 131 deaths from "fever," 1 was certified as typhus, 124 as enteric fever, and 6 as simple and ill-defined fevers. There was no marked excess of "fever" mortality last quarter in any of the sanitary areas. The Metropolitan Asylums Hospitals contained 72 enteric fever patients at the end of June last, against 103 and 92 at the end of the preceding two quarters: the new cases admitted into these hospitals, which had been 230 and 168 in the preceding two quarters, further declined to 141 during the three months ending June last.

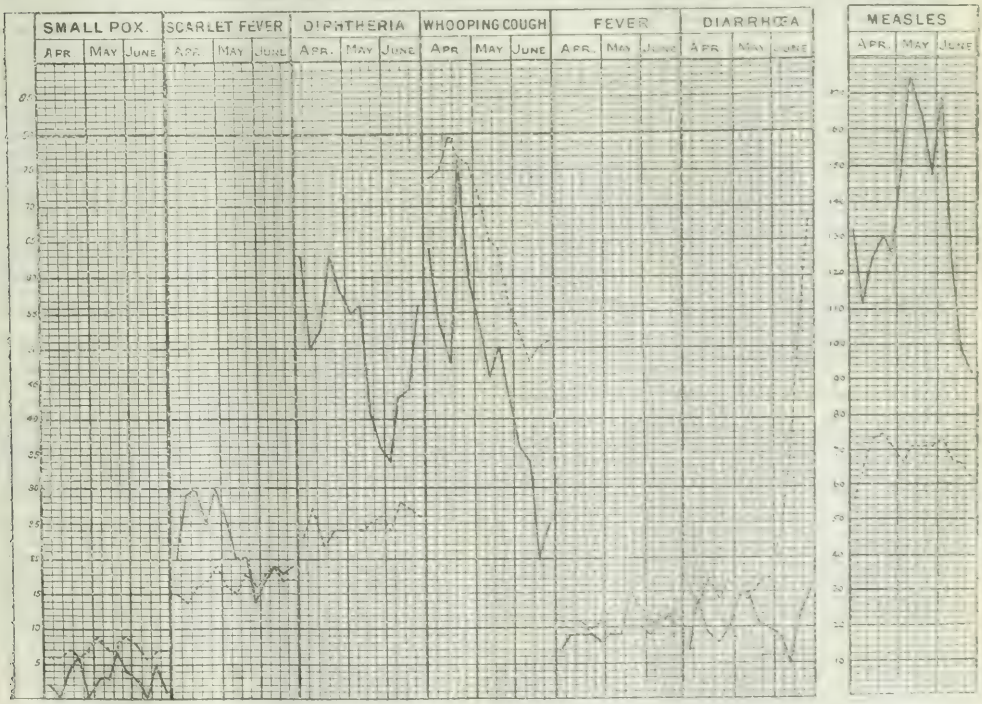
Diarrhœa.—The 140 fatal cases of diarrhœa registered in London during last quarter were considerably less than half the corrected average. The mortality from this disease showed no marked excess in any of the sanitary areas of the metropolis.

In conclusion, it may be stated that the 3,589 deaths referred to the principal zymotic diseases in London during the second quarter of the current year were 796, or nearly 13 per cent., above the corrected average number in the corresponding periods of the preceding ten years 1884-93. This excess was mainly due to the epidemic prevalence of measles and diphtheria. Among the various sanitary districts the lowest zymotic death-rates were recorded in St. George Hanover Square, Hampstead, Stoke Newington, St. Luke, London City, Lee, Woolwich, and Plumstead: the highest rates in Fulham, Bethnal Green, St. George-in-the-East, Limehouse, St. Saviour Southwark, St. George Southwark, St. Olave Southwark, and Bermondsey.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 8,508 births and 3,526 deaths were registered during the week ending Saturday, August 18th. The annual rate of mortality in these towns, which had increased from 13·9 to 17·6 per 1,000 in the preceding five weeks, was again 17·6 last week. The rates in the several towns ranged from 10·7 in Plymouth and 11·6 in Cardiff to 30·6 in Sunderland and 30·9 in Liverpool. In the thirty-two provincial towns the mean death-rate was 17·9 per 1,000, and was 0·8 above the rate recorded in London, which was 17·1 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3·6 per 1,000; in London the rate was equal to 3·2, while it averaged 3·9 per 1,000 in the thirty-two provincial towns, and was highest in

Deaths from Zymotic Diseases in London during the Second Quarter of 1894.



Note.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding week of the preceding ten years 1884-93.

Liverpool, Preston, and Sunderland. Measles caused a death-rate of 1.5 in Sunderland; whooping-cough of 1.6 in Swansea and in Huddersfield; "fever" of 1.0 in Liverpool and in Salford; and diarrhœa of 7.3 in Sunderland, 7.5 in Liverpool, 7.7 in Leicester, and 9.4 in Preston. The mortality from scarlet fever showed no marked excess in any of the large towns. The 70 deaths from diphtheria in the thirty-three towns included 57 in London and 2 in West Ham. Four fatal cases of small-pox were registered in London, and 1 in Plymouth, but not one in any other of the thirty-three large towns. There were 179 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, August 18th, against 207, 215, and 209 at the end of the preceding three weeks; 37 new cases were admitted during the week, against 152, 40, and 28 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,132, against 2,197, 2,221, and 2,193 at the end of the preceding three weeks; 69 new cases were admitted during the week, against 99 and 88 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, August 18th, 861 births and 415 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 16.3 and 15.6 per 1,000 in the preceding two weeks, further declined last week to 14.6, and was 3.6 per 1,000 below the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 8.6 in Perth to 17.4 in Dundee. The zymotic death-rate in these towns averaged 1.7 per 1,000, the highest rates being recorded in Glasgow, Dundee, and Greenock. The 185 deaths registered in Glasgow included 14 from diarrhœa, and 4 from diphtheria. A fatal case of small-pox was recorded in Greenock.

THE COST OF ISOLATION HOSPITALS.

H. J. H. M.—The report on Infectious Hospital Accommodation and Administration in England appeared in the BRITISH MEDICAL JOURNAL of January 28th, 1893; and in replying to a question as to the cost per bed of such a hospital, we stated in our issue of April 21st last that the cost of a hospital for twenty beds would probably be something over £200 per bed if of a really good class. We see no reason to modify this estimate.

DIPHTHERIA AND DRAINS.

THE medical officer of health of Islington, in his annual report for 1893 on the health and sanitary condition of the parish, deals in some detail with this subject. After remarking upon the steady growth of diphtheria in London in recent years, and its spread by personal contact, fomites, and infected milk, he observes that there are three great factors in the causation of the disease—school influences, defective sanitary fittings, and dairies. He then proceeds to discuss the possibility of contraction of diphtheria from sewer air admitted into houses through defective drains, and comments upon the never-ending recurrence in houses where cases of diphtheria have occurred of such defects as untrapped waste pipes to sinks, defective drains under the houses, and the like. Mr. Harris observes that persons will say "these facts prove nothing—a similar state of affairs has been found in houses in which you have had typhoid fever, scarlet fever, or whooping-cough;" "but," he adds, "I answer by saying that if, when the drainage has been put right, there have been no new cases of sickness in the houses although children lived in them who, by reason of their age were liable to be attacked, it is only reasonable to conclude that the defective drains were the most probable origin of the disease, especially when no other circumstance could explain it." Mr. Harris then alludes to the case of the Yerbury Road Board School, and states that he has "no hesitation in affirming now that the school drains had been the cause of the constantly recurring cases, because from the date of the completion of the work the disease ceased to recur, and the school, which had the worst health record in Islington, may now lay claim to the best."

MAGISTRATES AND THE ENFORCEMENT OF THE VACCINATION ACTS.

A GREAT deal is made of the difference of treatment of defaulters under the Vaccination Acts by magistrates, and much that is said is not without reason. The same is of course true of different boards of guardians in the matter of enforcement of those laws. We have seen therefore with the greater satisfaction the action taken in the case of a defaulter in the south-west of London which was before Mr. Denman last week, in which the defendant pleaded as excuse for the non-vaccination of his child that a Royal Commission was still sitting, and that there was no evidence as to the value of vaccination. In the face of a small-pox prevalence however, Mr. Denman would not allow such excuses to hold, and promptly made an order for the vaccination of the child within fourteen days. This order was the outcome of the discretionary power which the defendant told the magistrate was vested in him, and this practical answer to the plausible utterances of the parent in default is refreshing from the bench, and it is to be wished that many more of those having discretionary power would use it in the best interests of their fellows by insisting on the observance of the law which they have been appointed to administer.

THE SALARY OF WORKHOUSE MEDICAL OFFICERS.

WE note with great satisfaction that the Local Government Board appears disinclined to ratify the appointment of Dr. Herbert Collier as medical officer to the Yarmouth Workhouse at the salary proposed to be paid to him by the guardians, and we shall watch with interest the result of the correspondence now passing between the two boards on this subject. The salary now proposed appears to be considerably less than that which was awarded to the late medical officer, Dr. Smith, and we do not understand that there are any adequate grounds for it being reduced.

OBITUARY.

PROFESSOR ROLLET,

Lyons.

PROFESSOR ROLLET of Lyons, the well-known syphilographer, died suddenly on August 2nd, on the very day of the opening of the Congress of the French Society of Syphilography and Dermatology, at the meeting of which he was to have presided.

Joseph Pierre Martin Rollet was born 69 years ago at Lagnien, in the Ain Department. He studied medicine in Paris, where he obtained the coveted post of *interne des hôpitaux* in 1845. Whilst holding this appointment he served under Trousseau, Piorry, and Langier. Among his colleagues and fellow students were Broca, Gubler, Verneuil, and Follin. He took his degree in 1848, the subject of his thesis being Traumatic Hæmorrhage in the Interior of the Skull.

In 1854 Rollet was appointed Surgeon to the Antiquaille of Lyons, where he had charge of the clinic of venereal and skin diseases. Here he gathered the materials for his two great works, *Recherches Cliniques et Expérimentales sur la Syphilis, le Chancre Simple et la Blennorrhagie* (Paris, 1861 and 1869), and *Traité des Maladies Vénériennes* (Paris, 1865). In these works Rollet proved by an abundance of clinical and experimental facts the existence of "mixed" chancres and the contagiousness of secondary syphilitic lesions. In his demonstration of the latter point Rollet produced a mass of evidence from his observation of primary sores in the mouth and on the tonsils in glassworkers, which he had exceptional opportunities of studying. By this addition to our knowledge of syphilis Rollet was the means of bringing about a most important reform in the conditions of glass-blowing, which is now almost everywhere carried out by the use of compressed air instead of the human mouth. He was further instrumental in inducing the Jewish ritual authorities to abolish the digusting and dangerous practice of suction with the operator's mouth in circumcision. Rollet also made important observations in hereditary syphilis and the infection of nurses by sucklings, which led to the enactment of prophylactic measures, and placed the subject in its medico-legal aspects, which had previously often been misunderstood, in a truer light. Another service which Rollet rendered to scientific truth was his demonstration that the syphilitic poison could be transmitted by the blood, and hence that the disease could be conveyed by vaccination. This was vehemently opposed by Ricord, who accused Rollet of wishing to throw down the statue of Jenner. Rollet's views prevailed, however, and it was mainly owing to his teaching that the use of animal lymph has largely superseded arm to arm vaccination.

Rollet was no mere specialist. He was a powerful advocate of sanitary reform, and on the foundation of the Lyons Faculty of Medicine in 1877 he was appointed Professor of Hygiene. He was a member of the Académie de Médecine and a correspondent of the Institute of France. At different times he held the offices of President of the Lyons Medical Society, of the Council of Hygiene of the Rhône, etc. His funeral was attended by a large number of his professional colleagues, civil dignitaries, and local notabilities. Farewell orations were delivered at the graveside by Professors Ollier, Arloing, and Gayet, of Lyons, by Professor Hallopean, of Paris, and others.

Among the writings of Professor Rollet, in addition to his works already referred to, may be mentioned the following: *Etude sur le thumatisme blennorrhagique* (1858); *Etudes Cliniques sur le chancre produit de la contagion de la syphilis secondaire* (1859); *De la pluralité des maladies vénériennes* (1860); *Etudes sur la Transmission de la Syphilis entre nourrisons et nourrices* (1861); *Des Agents Contagieux des Maladies de la Peau* (1857); *Prophylaxie Internationale des Maladies Vénériennes* (1867); *La Maladie de Job* (1867); *La Blessure d'Alexandre le Grand* (1879); *Des applications du feu à l'hygiène dans les temps préhistorique* (1883); *Influence de la Filtration sur les eaux potables* (Geneva, 1883); *Hygiène Industrielle* (Lyons, 1888), etc.

Mr. HENRY WEEKES, F.R.C.S.Eng., who recently died at Barnstaple at an advanced age, had a more adventurous

career than is usually the lot of the medical practitioner. He was born at Barnstaple in 1814, being the younger son of an old Devonshire family. He studied medicine at University College, London, where he was contemporary with Viner Ellis—the author of the *Guide* so familiar to generations of dissectors—Erichsen, Morton, and others, who subsequently rose to fame. Afterwards he studied in Paris. In 1836 he passed the "College and Hall," and having a taste for travel he obtained an appointment as colonial surgeon to the New Zealand Company. After two years' residence at Taranaki, Mr. Weekes resigned his appointment, returned to England, and married. Being convinced, however, that New Zealand had a great future before it, he again emigrated and bought property near Auckland, including an island in the Manallan, which is still known as Weekes's Island. In 1848, on the announcement that gold had been found in California, Mr. Weekes betook himself thither. He settled at Los Angeles, where he soon had an extensive surgical practice. A large part of his work consisted in the treatment of arrow wounds inflicted on miners by hostile Indians. Mr. Weekes often had to make long journeys to patients, carrying a loaded revolver at full cock in his hand. After spending some five years in California, Mr. Weekes returned to New Zealand, where he practised his profession for ten years. During that time he held the appointment of senior surgeon to the Auckland militia, in which capacity he saw active service during the Maori war of 1863-65. He was also made a Justice of the Peace, and was an energetic member of the local bench during the remainder of his stay in New Zealand. In 1868 gold was found abundantly at Thames River, New Zealand, and a rush at once took place to that locality. Mr. Weekes followed the crowd, and was at once appointed Senior Surgeon to the Thames Hospital. In 1871 he returned to England, became a Fellow of the College of Surgeons, and settled in practice at Southampton. After a few years, for reasons of health, he removed to Melksham in Wiltshire, where he held the appointment of medical officer of health. The English winter was, however, too much for him, and two years later he settled at Barcelona in Spain, where he practised among the English colony. In 1889 he retired from professional work, and came back to his native place, Barnstaple, where he died, after a lingering illness, on July 20th, aged 79. Mr. Weekes was not only a skilful surgeon, but an accomplished musician and an excellent draughtsman. He was the author of *Sanitary Reports, New Zealand*, and of *A Catechism of Health*. He also contributed several articles to the medical journals, chiefly on subjects connected with climatology.

Dr. Herbert Goude, Resident Surgeon, Small-Pox Hospital, Highgate, who was recently found dead in his bed, was born in 1846, being the eldest son of Mr. J. F. Goude, a member of the medical profession. He was educated at the City of London School, and apprenticed to his father. He passed the Arts Examination, Society of Apothecaries, in 1865, and joined the Medical School of St. Bartholomew's Hospital; he became M.R.C.S. in 1870. He held the office of house-surgeon under Mr. Paget, then that of resident midwifery assistant; afterwards he became house-surgeon of the St. Mark's Hospital, City Road, and the Lock Hospital, Dean Street, Soho. He then travelled for five years and a-half over Europe, and on his return was appointed registrar of the Orthopædic Hospital, Oxford, and was appointed resident surgeon of the Small-Pox Hospital, Highgate, in 1880. Dr. Goude was a frequent contributor to our columns, and for a time a member of our editorial staff.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Juan Maria Rodriguez, Professor of Midwifery in the University of Mexico; Dr. O. Th. Sandahl, Professor of Pharmacology in the University of Stockholm; and Dr. Mazard, some time Professor of Clinical Medicine in the Medical School of Limoges.

It is announced that a laboratory for the manufacture of tuberculin, mallein, anthrax, vaccine, etc., will shortly be established in Rome in connection with the laboratories of Hygiene of the Ministry of the Interior.

MEDICAL NEWS.

Frenchwomen and the Medical Profession.—According to the *Progrès Médical*, the medical profession does not seem to have much attraction for Frenchwomen. Of 165 female students registered in the Paris Medical Faculty at the beginning of the present academic year, only 16 were French. On the other hand, of a total of 164 female students in the Faculty of Letters, 141 were French. There were 7 French female students in the Faculty of Science, and 3 in that of Law.

The Next International Medical Congress. — Dr. Idelson has suggested to the Committee charged with the arrangements for the next International Medical Congress, which is to be held at Moscow in 1896, the advisability of organising a group of "volunteer guides," consisting of young medical practitioners and students having a good knowledge of foreign languages, whose duty it should be to interpret for the foreign members, and generally look after the comfort of visitors.

American Jottings.—The Legislature of Louisiana has amended the Charter of all Colleges of Medicine and Pharmacy so as to permit them to admit women to degrees. Of the 18,910 students of medicine in the United States, 16,759 attend regular medical colleges, 1,410 homœopathic, and 741 "eclectic" and other aberrant schools of medicine. —The Memphis Board of Health has sent a communication to the Tennessee State Board of Health, calling for such action as will lead to legislation prohibiting the insurance of the lives of infants and children within the State, on the ground that the practice leads to criminal negligence of children, and is to that extent prejudicial to public health.

International Congress of Applied Chemistry.—The International Congress of Applied Chemistry took place at Brussels and Antwerp from August 4th to the 11th. More than 400 chemists, representing all civilised Governments and a large number of scientific societies throughout the world, took part in the proceedings. Important resolutions were passed as to the unification of methods of analysis and the prevention of adulteration of food. The Congress also adopted the French litre in preference to the German (Mohr's litre) as the standard for gauging purposes and for the graduation of chemical instruments. The Centigrade thermometer was adopted to the exclusion of those of Reaumur and Fahrenheit. It was decided that the next meeting of the Congress should be held in Paris in 1896.

The Sanitary Institute.—The arrangements have now been perfected for the 14th Congress and Exhibition of the Sanitary Institute, to be held in Liverpool near the end of next month. On Monday, September 24th, the Lord Mayor of Liverpool will receive members at the Town Hall. Afterwards there will be a public luncheon at the Adelphi Hotel, and at 3 P.M. the President (Sir F. S. Powell, M.P.) will deliver the inaugural address in the large theatre of University College; while in the evening the Lord Mayor will formally open the exhibition in the Volunteer Drill Hall, Upper Warwick Street. Next day there will be conferences in University College on a variety of subjects. In the conference on "Domestic Hygiene" the Lady Mayoress will preside, and the ladies will afterwards hold a reception. At night Dr. George Blundell Longstaff, of the London County Council, lectures at University College. On Wednesday, Section 1, "Sanitary Science and Preventive Medicine" meet under the presidency of Dr. Klein, in the College, and the discussion will be continued next day. The Lord Mayor gives a reception in the Walker Art Gallery on Wednesday evening, Section 2, "Engineering and Architecture," meets on Thursday, and the discussions will be continued on the following day; when also Section 3, "Chemistry, Meteorology, and Geology meet under the presidency of Dr. T. Stevenson, scientific analyst to the Home Office. The closing general meeting of the Congress takes place in the College on Friday evening, and later Sir James Crichton Browne, M.D., will address the working classes in the Picton Lecture Hall. The exhibition will remain open three weeks.

ULSTER MEDICAL SOCIETY: ANNUAL MEETING.—The annual meeting of the Ulster Medical Society was held on July 20th. The report of the council showed that the operations of the society had been well maintained throughout the year. Twenty new members had joined the society. New rooms (situated in a central part of the city) sufficiently large to accommodate the society, both for meetings and for reading rooms and library, have been secured and handsomely fitted up. The following gentlemen were elected office bearers for the ensuing year:—*President:* Brigade-Surgeon F. E. McFarland, A.M.D. *Vice-Presidents:* Dr. O'Malley and Professor Symington. *Council:* Dr. Lindsay, Dr. Calwell, Dr. McDonnell, Dr. Bingham, Dr. Dempsey, Dr. Ferguson. *Treasurer:* Dr. Kevin. *Pathological Secretaries:* Dr. Campbell and Dr. McQuitty. *Librarian:* Dr. Shaw. *Secretary:* Dr. McKisach.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN CITY HOSPITAL.—Resident Physician at the City (Infectious Diseases) Hospital. Salary, £50 per annum, with board and lodgings at the Hospital. Applications to W. Gordon, Town Clerk, Town House, Aberdeen, by August 27th.

ABERDEEN ROYAL INFIRMARY.—Ophthalmic Surgeon. Applications by August 31st.

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House-Surgeon. Salary, £100 per annum, with rooms and attendance. Applications and testimonials, endorsed "House-Surgeon," to H. Lawford Jones, Secretary, before August 31st.

BURGH OF LEITH.—Medical Officer of Health. Salary to commence at £350. Applications and testimonials to T. B. Laing, Town Clerk's Office, Leith, by September 1st.

CAMBRIDGE UNIVERSITY.—John Lucas Walker Studentship. Applications to Professor Roy, New Museums, Cambridge, by September 30th.

COUNTY ASYLUM, Prestwich, Manchester.—Pathologist. Salary, £200 per annum, with board, residence, and washing. Applications and testimonials to the Superintendent.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications and testimonials to the Secretary before August 29th.

DERBY BOROUGH ASYLUM.—Assistant Medical Officer. Salary, £100. Applications to Dr. Macphail, Rowditch, Derby.

DUNDALK UNION, Dromiskin Dispensary.—Medical Officer. Salary, £75 per annum, with £10 yearly as Medical Officer of Health, together with registration and vaccination fees. Applications accompanied by diplomas and copies of testimonials to Mr. P. Byrne, Honorary Secretary, Milltown Castle. Election on September 1st.

GENERAL HOSPITAL, Birmingham.—Assistant-Surgeon. Appointment for three years, with eligibility for re-election. Honorarium, £100 per annum. Applications to Howard J. Collins, House-Governor, by September 1st.

GENERAL HOSPITAL, Nottingham.—Senior Resident Medical Officer doubly qualified. Salary, £120 for the first year, with an addition of £10 a year up to £150, with board, residence, and washing. Applications to the Secretary by September 1st.

GRAVESEND HOSPITAL.—House-Surgeon. Doubly qualified and registered. Salary £80 per annum, with board and residence. Applications and testimonials to Frederick Mitchell, Honorary Secretary, by September 1st.

LAMBETH WORKHOUSE.—Assistant Medical Officer and Dispenser. Salary, £100 per annum, with board, apartments, and washing. Applications and testimonials to W. B. Wilmot, Clerk, Guardians' Board Room and Offices, Brook Street, Kennington Road, S.E., by August 28th.

MEMORIAL HOSPITAL, Jarrow-on-Tyne. — House-Surgeon, age not under 25, and to reside and board free in the hospital. To come under a three years' engagement at a progressive salary of £130, £150, and £170 respectively. Applications and testimonials to J. Campbell, Secretary, by September 4th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Assistant Physician. Must be Fellows or Members of the R.C.P.Lond., and graduates in medicine of a University recognised by the General Medical Council. Applications and testimonials to Charles H. Byers, Secretary, by September 3rd.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer, qualified. Salary, £30 per annum, with board, attendance, and washing; tenable for six months, with prospect of re-election as Senior. Salary, £50 per annum. Applications and testimonials to Major-General G. R. Roberts, Honorary Secretary, by August 31st.

NORTH WALES ASYLUM, Denbigh. Second Assistant Medical Officer. Salary £100 per annum, with board, washing, and apartments. Applications to W. Bark, Clerk to the Visitors, by September 12th.

NORTH DISPENSARY, Liverpool.—Head Surgeon. Salary, £200 per annum, with apartments, board, and attendance. Applications and testimonials to R. R. Greene, Secretary, Leith Offices, Moorfields, Liverpool, by August 27th.

PARISH OF LOCHGOILHEAD AND KELMORLCH.—Medical Officer to attend the poor of the parish. Salary, £60 per annum; in addition, £40 per annum (exclusive of practice) will be guaranteed by the residents. Applications to the Chairman of Parochial Board, Inverary, Douglas Pier, Lochgoil, by August 24th.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House-Surgeon. No salary, but board, residence and laundry found. Applications and testimonials to the Honorary Secretary, by September 17th.

ROYAL ORTHOPÆDIC HOSPITAL, 297, Oxford Street.—Resident House-Surgeon. Candidates must be M.R.C.S.Eng. and L.R.C.P., unmarried. Salary, £100 per annum, with residence and partial board. Applications and testimonials to the Secretary by August 28th.

RUBERY HILL ASYLUM, Bromsgrove, Worcestershire.—Clinical Assistant. Applications to the Medical Superintendent.

SHEFFIELD UNION.—Resident Assistant Medical Officer for the Workhouse at Fir Vale, Pitsmoor. Salary, £100 per annum, with apartments, rations, etc. Applications and testimonials before September 5th, to J. Spencer, Clerk to the Guardians.

ST. BARTHOLOMEW'S HOSPITAL.—Ophthalmic Surgeon, must be F.R.C.S.Eng. Applications and testimonials to W. Cross, Clerk, by September 10th.

ST. LUKE'S HOSPITAL, E.C.—Clinical Assistant, must be qualified. Appointment for six months, with board and residence. Applications to Percy De Bathe, M.A., Secretary.

ST. PETER'S HOSPITAL, Henrietta Street, Covent Garden, W.C.—House-Surgeon for six months. Salary at the rate of 50 guineas a year, with board, lodging, and washing, and an allowance for wine, etc. Applications and testimonials to Irwin H. Beattie, Secretary, before September 1st.

STOCKPORT UNION.—District Medical Officer and Public Vaccinator for the Cheadle (No. 3) District. Must be fully qualified in Medicine and Surgery. Salary, £40 per annum, with usual fees. Applications and testimonials endorsed "Medical Officer, etc., Cheadle District," before August 27th.

SOUTH DISPENSARY, Liverpool.—Head Surgeon. Salary, £200 per annum, with apartments, board, and attendance. Applications and testimonials to R. R. Greene, Secretary, Leith Offices, Moorfields, Liverpool, by August 27th.

SOUTH DISPENSARY, Liverpool.—Assistant Surgeon. Salary, £80 the first year, and £90 per annum afterwards, with apartments, board, and attendance. Applications and testimonials to R. R. Greene, Secretary, Leith Offices, Moorfields, Liverpool, by August 27th.

STAFFORDSHIRE COUNTY ASYLUM, Stafford.—Medical Officer to act as *Locum Tenens* for two or three months. Salary, 2 guineas per week, with board, etc. Applications to the Medical Superintendent.

MEDICAL APPOINTMENTS.

EARDLEY-WILMOT, C., M.D., appointed Senior Assistant Medical Officer to the Middlesex County Asylum, Tooting, *vice* F. H. Ward, resigned.

GRENFELL, H. O., M.R.C.S.E., L.R.C.P.L., appointed Admiralty Surgeon and Agent to Mothecombe, Kingston, and Challaboro; also Certifying Factory Surgeon for Modbury District.

LEWIS, C. E. M., M.B., C.B.Cantab., appointed House-Surgeon to the West Norfolk and Lynn Hospital, King's Lynn.

LESLIE, Richard W., M.D. M.Ch.R.U.I., appointed Medical Officer to the Campbell College, Belfast.

MAYNARD, John S., M.B., C.M.Edin., appointed House-Surgeon to the Brighton, Hove, and Preston College Hospital and Dispensary.

MOLYNEUX, J. P., M.R.C.S.Eng., L.R.C.P.Lond., appointed Police Surgeon for the Haydock, Golboroe, and Ashton-in-Makerfield District.

PHILLIPS, Percy C., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the East London Hospital for Children, Shadwell, *vice* E. E. Ware, M.D., resigned.

ROLLESTON, L. W., M.B., appointed Junior Assistant Medical Officer to the Middlesex County Asylum, Tooting, *vice* C. Eardley-Wilmot, promoted.

SHEPPARD, A. M., M.B., Ch.M.Syd., appointed House-Surgeon to the Central London Ophthalmic Hospital, Gray's Inn Road.

TIMS, H. W. Marett, M.B., M.Ch.Edin., appointed Demonstrator of Anatomy at the Westminster Hospital Medical School, *vice* P. de Santi, F.R.C.S.Eng., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

NEALE.—On August 15th, at 24, Hamilton Terrace, Milford Haven, the wife of Albert E. Neale, M.B., B.S., of a son.

MACLEOD.—On August 20th, at Tower Place, Shrewsbury, the wife of Harold H. B. MacLeod, M.R.C.S., of a son.

MARRIAGES.

ALLDEN—COX.—At Holy Trinity Church, Wimbledon, on the 22nd inst., by the Rev. C. P. Clarke, vicar, Sidney J. Allden, M.D., of Bridport, to Annie, eldest daughter of John Cox, Esq., of Wimbledon, formerly of Luccombe, Dorset.

HIGHET—HINSHELWOOD.—At East Grey Friars Church, Stirling, on the 16th inst., by the Rev. James P. Lang, assisted by the Rev. J. T. Graham, Robert Campbell Highet, M.B., C.M., second son of the late Campbell Highet, Ayr, to Jessie (Jetta), youngest daughter of the late John Hinshelwood, of Ibrox, Govan. At home, 16, Abercromby Place, Stirling, September 12th and 14th.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not later than Midday Post on Wednesday. Telegrams can be Received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal and not to his private house.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any Circumstances be Returned.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

F. B. H. asks for information of a home where massage can be used for a boy of fourteen.

Kennington asks whether the scar of an old strumous cervical abscess would alone suffice to disqualify a candidate from entering the Civil Service?

Obstinate Vomiting in Infancy.

Member B.M.A. would be glad for some suggestions in treatment of incessant vomiting in an infant since a fortnight old, now over 5 months; weighs 6 lbs., has gained no weight, nor lost any. Am using milk suppositories and external application of cod-liver oil; have tried several drugs.

Bismuth in Rhinorrhœa.

W. P., M.B., writes: In what class of cases of rhinorrhœa should bismuth be used as a snuff, from a pharmacological view, as a therapeutic?

*** If our correspondent understands by rhinorrhœa a watery discharge from the nose, a snuff containing bismuth might be useful in the earlier stages of acute coryza or in that form of chronic rhinitis accompanied by a watery discharge.

Urinary Pigments.

W. P., M.B., writes: Is it possible for a "very highly coloured urine" to get from nitric acid a discoloration (green) which can be produced from the colouring matter, and from Esbach Albuminometer a deposit 0.5, that it may be entirely due to the colouring matter, under the above conditions. I should like to know whether the preparations of sodium or potassium should be used?

*** The coloration referred to must be due to some abnormal pigment present. The writer does not say that the urine contained no bile pigments. If it did, the reaction might be due to biliverdin. Pure nitric acid was presumably used. The last question in respect to the preparation of sodium or potassium to be used is not clear.

ANSWERS.

R. M. should consult his ordinary medical attendant.

Rus.—In the opinion of trustworthy authorities the rates charged by the Independent Order of Foresters are inadequate to secure the assurance benefits offered; we cannot, therefore, recommend it.

E. W. B. would probably obtain the information he desires by applying to the St. John Ambulance Association, St. John's Gate, Clerkenwell, E.C.

Rus.—The authorities as to the existence of hospitals in early Greek and Roman times are too numerous to quote in a paragraph. We would refer our correspondent to Vol. III of the *Hospitals and Asylums of the World*, by Mr. H. C. Burdett, where the subject is fully gone into.

L.R.C.P.Lond. will find further information of the kind he requires in *Madeira and the Canary Islands*, by A. Samler Brown (Sampson Low, Marston, and Co., London. 2s. 6d.).

Junior Member will find particulars as to books recommended to candidates for the D.P.H.Cambridge in the last Educational Number of the British Medical Journal (September 2nd, 1893). The lists will probably be republished in the Educational Number to appear next week.

Pruritus Ani.

G. H. B. recommends zinci oxid. and cub. prep., equal quantities mixed and applied locally, or emol. keleet (Burroughs and Wellcome's) applied ditto

Local Anæsthetics.

Seloc.—Among local anæsthetics, those acting by numbing the skin, namely, chloride of methyl, chloride of ethyl, the ether spray (Richardson)—all possess drawbacks. Most are inadequate; others freeze and render the tissues difficult to manipulate. Cocaine and tropacocaine are undoubtedly the most efficient local analgesics. Tropacocaine, according to Dr. Chadbourne,[1] is the safer substance while equally efficacious, and is slightly antiseptic. It is used in a similar way to cocaine. That cocaine is dangerous in certain cases there is, unhappily, no doubt, nor can it be discerned in what instances untoward symptoms will arise. Among recent papers our correspondent may consult one by Dr. Krogius, Zur Frage von der Cocainanalgesie in the *Centralblatt fur Chir.*, No. 11, March, 1894. The method of incarceration vaunted by Dr. Leonard Cooning consists of fastening on Esmarch's cord on the exsanguineous limb and injecting a few drops of 1 per cent. solution immediately above the cord. Dr. Schleich has employed an "infiltration" method.[2] He has two "stock" solutions: one contains 1 grain of cocaine in 1,000 of water (A), and the other 2 grains of NaCl in 1,000 of water (B). Some of A is added to five times its bulk of B, and both should be rendered sterile. He first freezes the skin with ether spray, then introduces a hypodermic syringe parallel to the skin beneath the papillary layer, and slowly injects the solution so as to infiltrate the tissues layer by layer.

[1] British Medical Journal, August 24th, 1889.

[2] *Berliner klin. Woch.*, No. 24.

NOTES, LETTERS, Etc.

Shorthand.

Progress writes: In the British Medical Journal of July 28th I read as follows: "In order to promote the use of shorthand in medicine," etc. This reminds me of the recent Government examination at the Shepperton Road Board Schools (Day), London, N. Eighty-two boys were taught, and all were examined and passed, as certified by Her Majesty's Inspector. The system exclusively used is the Sloan-Duployan. It is not merely simple but very brief, and, above all, legible, and Messrs. P. Harford and F. Kinton have just been awarded diplomas for a speed of 200 and 180 words per minute respectively. As I, like many readers of your interesting paper, love to see progress made in this art, I ask you to insert this letter, especially as I failed to acquire the old style, but mastered the Sloan-Duployan with ease.

Medical Aid Associations.

The Medical Officer (Banbury Friendly Societies Medical Association), writes: I notice on page 378 of the British Medical Journal of August 4th some remarks about medical aid associations, and knowing the impartiality with which all professional matters are treated in your periodical, I have to request you to be good enough to accord me space in your next issue for a reply to the statements of the representative of the Oxford and District Branch, which were made at the recent meeting at Bristol.

First of all, this is the "Banbury Friendly Societies Medical Association" (as distinguished from medical aid societies). Secondly, your correspondent errs in stating that "high and low, rich and poor" are solicited to join. I would not hold office in any association where this occurred, and I point black deny your correspondent's insinuation as to "touting"—for his assertion means that if it means anything. Thirdly, the ex-Mayor of this town was, and is, a member, because he is an Oddfellow in benefit of his lodge (and it may perhaps be interesting to your correspondent to know that in various parts of England Oddfellows and Foresters who have risen in the world and are now very well to do, claim benefit at ordinary club rates from their club doctor in private practice). I can call to mind many such cases that came to my knowledge whilst acting as *locum tenens* some years ago. Fourthly, your correspondent is mistaken as to my pay, and he hopelessly flounders out of his depth when he asserts that the balance of profits goes into the pockets of the Association. A glance at the published and audited annual balance sheet would have prevented his making such a mistake.

Regarding being "sweated," I do not deny that the work is very hard, but it is certainly not harder than that of an "assistant" at a very much smaller and bare "living wage," and with the numerous superadded disagreeables which usually are the lot of the assistant. Again, the Irish College of Physicians and the English College of Surgeons have merely expressed an opinion about medical aid associations, but they have not forbidden their diplomates to hold such appointments as I do, for it such prohibition existed, every L.R.C.P.I. and M.R.C.S.Eng. would have to resign, thus leaving it open to the graduates of all the other licensing bodies in the kingdom to take our places. Perhaps, too, I may not be out of place to mention that not long since, when this Association was seeking an assistant medical officer, there were plenty of applications, including those from candidates holding the M.D. and F.R.C.S. Your correspondent my depend upon it that if I and all others holding similar appointments were to resign *en masse* to-morrow, our places would be filled up in a few hours' time. I frankly acknowledge that at the formation of these associations outsiders who had no claim for attendance at club rates were admitted, and both my committee and I myself are gradually weeding out these persons.

Lastly, the General Medical Council has twice declared the holding of these appointments is not infamous conduct, and they are very unlikely to stultify themselves by going back upon their twice expressed opinion. Would it not therefore be much better for your correspondent and the other members of the Oxford Branch (and for that matter all Branches) to frame a set of practical and workable rules and regulations which would meet the requirements of the profession on the one hand, and of friendly societies associations on the other, and submit these to the General Medical Council for their approval and sanction?

Personally, I believe that these institutions will never be done away with, for they are of great benefit to a very worthy, hard worked, honest and thrifty class of society. Unquestionably some abuses have crept into them, as in the out-patient departments of hospitals; and it seems

to me it would be far better to get rid of these abuses than keep on "fighting the air."

I do not know from what source your correspondent obtained his information, but from whatever source it came it is incorrect, and I may be allowed to suggest to him the advisability of obtaining more trustworthy information in future before making such wholly inaccurate statements before a public meeting.

THE TREATMENT OF ANTHRAX IN MAN.

DR. C. R. ILLINGWORTH (Forest Hill) writes: I request permission to state that my experiments with the poison of anthrax under the usual licence conclusively showed that the barbarous mode of treatment advocated by Dr. J. D. Mortimer in the BRITISH MEDICAL JOURNAL of August 11th is totally uncalled for. All that is required is the dressing of the affected part with a solution of the biniodide of mercury in iodide of potassium, and the same in all other poisoned wounds. Germs are the cause, and a germicide will, if properly prepared so as to prevent blood coagulation when applied, be quite sufficient to effect a cure. I have propounded this cardinal doctrine in the treatment of poisoned wounds for over seven years, and yet the vast majority of the profession refuse the plainest and most conclusive evidence of facts in physiology, pathology, and experiment, backed by seven years' experience of the method in extensive general practice. What is the consequence? In London alone three deaths from anthrax and glanders last year, and several more in the provinces.

"THE DIAGNOSIS OF TUBAL PREGNANCY BEFORE RUPTURE OF THE TUBE."

MR. JOHN W. TAYLOR (Birmingham) writes: If Mr. Tait will read my paper, which has already been published in the *Medical Press and Circular* for July 18th, he will, I think, find that I have fairly expressed as Mr. Tait's the very views which he enunciates afresh in the BRITISH MEDICAL JOURNAL of August 4th. The original paragraph runs as follows: "Mr. Lawson Tait has maintained, not so much that the diagnosis before rupture is impossible, but that as a matter of fact it never does take place except by the merest accident, since tubal pregnancy before rupture is absolutely without any symptoms leading to the examination of the patient." In his letter to-day Mr. Tait affirms that the diagnosis of tubal pregnancy before rupture of the tube "is not easy because the patients do not claim our attention," and that the surgeon "has no chance of making such a diagnosis, because he is called to cases of tubal pregnancy only after the onset of severe symptoms." It appears to me that the two statements are practically identical. But in my paper I point out that acute symptoms and internal hæmorrhage are not always dependent on rupture of the tube; that in many cases we get intraperitoneal hæmorrhage and acute symptoms owing to hæmorrhage from the abdominal ostium of the tube and without any rupture of the tube itself, and that intraperitoneal hæmatocele, with the formation of a definite tumour, is usually produced in this way—a fact which was independently observed both by myself and Dr. Cullingworth, but which until now has not been recognised. This explains why I agree with Mr. Tait in saying that the diagnosis of tubal pregnancy can very rarely be made before acute symptoms have set in. But it is a mistake, I believe, to suppose that acute symptoms must necessarily be due to rupture of the tube.

KISSING AS A SANITARY SIN.

OUR little dissertation on the circumstances and conditions which may make abstinence from the much-abused practice of kissing on the lips a sanitary duty has at least had the advantage of arousing public attention; for during the past fortnight we have received no fewer than 320 extracts, articles, and observations upon it from various newspapers. One of the most amusing, perhaps, is the comment of "Dagonet" in the *Referee*:

"I don't quite grasp a sanitary sin. I should have thought that nothing which was sanitary could be a sin, but that is the heading given to the extract in *Public Opinion*, when it jumped to my eyes last week.

* * *

The Sanitary Sin.

I met my modest Minnie by the windmill in the trees;
We walked among the lilies, those that neither toil nor spin.
But a demon danced between us, and he bawled above the breeze,
'You may love the little lady, her affections you may win,
But kissing is a Sanitary Sin.'

I married her one morning in the churchyard down the lane,
Far away from all the trouble and the turmoil and the din.
Ere the earth had made its journey round the orb of day again,
We'd a baby girl; but never did we kiss our little Min,
For kissing is a Sanitary Sin.

O, we love each other dearly; but our lips have never met.
Though her silver threads are coming, and my thatch is growing thin,
To the act of osculation we have not descended yet,
For we know, since fell diseases such a practice ushers in,
That kissing is a Sanitary Sin.

* * *

"And now a Russian doctor has startled the world with the statement that handshaking is also a highly dangerous practice. An up-to-date sanitary law will presently require that every individual should be isolated in the interests of his health. I think I will be isolated and see what it is like. My isolation would probably benefit the health of my household considerably more than it would benefit the health of DAGONET."

AMBULANCE INSTRUCTION NEEDED.

MRS. SHAW, of Prospect House, Southwood Terrace, Thanet, was suffering recently from a varicose vein in her right leg. This burst and produced hæmorrhage, the unfortunate lady bleeding to death before Dr. Fox reached the spot. Dr. Fox says if any person had had the presence of mind to place a finger firmly on the rupture the woman would have undoubtedly lived.

REWARDS FOR FECUNDITY.

THE Province of Quebec, in Canada, has a law according to which every father of a family who has twelve living children begotten in lawful wedlock can claim 100 acres of Government land. Up to the present 174,200 acres of rich agricultural land have been given away in bounties to 1,742 fathers of twelve or more children who have complied with the conditions of the Act. Not all of these proud fathers, however, are satisfied with the amount of the bounty, for instances of families of twenty or more children are not rare, and in these cases paterfamilias claims a proportionate amount of land should be given to him. He not unnaturally thinks his reward should be *pro re natâ*. One old gentleman (as we learn from the New York *Medical Record*), Mr. Paul Belanger, of River du Loup, wants 300 acres, basing his claim on the fact that he has thirty-six living children. Another claimant for an increased endowment is Mr. Theoret, of Ste. Genevieve. His wife, who is but 30 years of age, has presented him with seventeen children. She recently gave birth to triplets for the second time in five years, while the comparatively trifling episode of twins has already occurred three times. Mr. Theoret is said to cherish the hope of acquiring a large part of the province if his wife continues on her present promising career.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(**A**) Mr. H. E. Allen, London; Mrs. E. G. Anderson, M.D., London; Mr. A. Andrew, London; Mr. W. T. Atwood, Torquay; Mr. D. Arthur, London; A. A. F.; G. W. Ancrum, M.B., Gloucester. (**B**) Mr. W. W. Baxter, Manningtree; Mr. T. W. Blake, Bournemouth; Mr. G. H. Broadbent, Manchester; Mr. R. T. H. Bodilly, London; Dr. E. Blake, London; A. H. Barrett, M.B., Derby; C. B. Braithwaite, M.B., Keswick. (**C**) Mr. J. B. N. Cane, Letterkenny; Messrs. T. Christy and Co., London; Messrs. J. Cleave and Son, Creditor; Civil M.D.; Mr. J. S. Cameron, Ilkley; Mr. S. A. Clarke, Walthamstow; Mr. H. H. Crickitt Reading. (**D**) Messrs. Down Brothers, London; Mr. W. E. Darby, London; Mr. F. A. Davey, Royston; Darlington Town Councillor. (**E**) Dr. C. Eardley-Wilmot, London; H. L. Evans, M.B., Goring-on-Thames; Mr. J. Ewens, Bristol; Dr. T. Eastes, Folkestone; Mr. H. S. Elworthy, London; Dr. T. W. Eden, London. (**F**) Dr. W. H. Fenton, London; Dr. P. Fraser, Carnarvon; C. N. Fox, M.B., Ramsgate; Miss M. Forrest, Alnwick; Mr. J. M. Ferguson, Burnley; Mr. J. Feaver, London; F. B. H. (**G**) W. Gray, M.B., West Hartlepool; Mr. G. Griffin, Barmouth; Dr. H. R. Greene, Knaphill; H. G. Gardner, M.B., Cheltenham; Mr. H. O. Grenfell, Devonport; Mr. J. J. Gardner, London. (**H**) Mr. H. W. Haydon, Wadebridge; Dr. A. Hill, Birmingham; Mr. N. Heygate, Cosham; Health; Mr. A. W. Harrison, Croydon. (**I**) I.M.S.; Indignant; Ipse. (**J**) Justice. (**K**) Mr. A. J. Keiller, Edinburgh; Dr. F. W. Kidd, Dublin; Mr. C. A. Kelly, Norwich. (**L**) Dr. J. M. Lawrie, Weymouth; Mr. S. R. Lidiard, Falmouth; Mr. H. C. Linden, Basingstoke; L.R.C.P.; C. E. M. Lewis, M.B., King's Lynn; E. R. Lyth, M.B., London. (**M**) Messrs. R. and A. Main, London; Member B.M.A.; Medical Officer of the Edinburgh Friendly Societies' Medical Association; Dr. S. R. Macphail, Derby; Member; Memorabilia; Mr. J. P. Molyneux, Ashton-in-Makerfield; Mr. H. G. Monk, Scarborough; Mr. H. T. N. Merrick, London; Mr. J. S. Mackenzie, London; Mr. G. B. Masson, Ramsgate; Dr. L. J. Minter, Rotherham. (**N**) Nayl. (**O**) Mr. W. Oppenheim, London. (**P**) Mr. J. Pickles, Gainsborough; Mr. G. Pitt-Lewis, M.P., London; Progress; Mr. H. P. Pike, Gloucester; Mr. F. G. Parsons, Southsea; Dr. R. J. Purdon, Belfast. (**R**) Mr. A. W. M. Robson, Leeds; Mr. A. E. Russell, Falmouth; Dr. B. M. H. Rogers, Clifton; Mr. H. T. Rake, Salisbury; Rus. (**S**) Surgeon-Captain A.M.S.; Dr. G. E. Shuttleworth, Richmond; Senex; Mr. R. R. Sleman, London; Dr. F. F. Schacht, London; Mr. W. Scatchard, Faversham. (**T**) Mr. G. N. Thomas, Barnsley; Dr. W. Travers, London; T. M.; Dr. F. E. Townsend, Middlesbrough; J. Thyne, M.B., Edinburgh; Dr. H. W. M. Tims, London. (**U**) Unwilling Victim. (**W**) Mr. E. S. Weymouth, London; Mr. W. B. Winckworth, London; E. C. Willcox, M.B., Gosforth; Mr. M. A. Wardle, Bishop Auckland; Mr. H. B. Walker, Worksop; Mr. T. M. Watt, Hovingham; Dr. F. R. Walters, London; Dr. C. Wolston, Chislehurst; Dr. F. H. Worwick, Manchester. (**Y**) Mr. W. T Yates, Halstead; etc.

BOOKS, ETC., RECEIVED.

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THE MEDICAL CURRICULUM.

The medical calling is one of the noblest to which a man can give himself. His duty is to relieve suffering and to combat and prevent disease. When he succeeds, he enjoys one of the highest pleasures of which man is capable. To attain the highest kind of success in any walk in the medical profession a man must have a high ideal. He should be imbued with a love of humanity and a love of science, and should be indifferent to the worship of the god of the modern world—the golden calf. Very few members of the medical profession become rich through the exercise of their profession, and very many die in harness before attaining more than a modest competence, if so much. No man whose aim is to make a fortune should dream of entering the medical profession. Let him learn the grocery business or the drapery business; he will not only fail in medicine, but help to degrade it.

There is one fact which should be recognised by every young man who contemplates entering the medical profession, and by everyone who is called upon to advise as to the wisdom of such a step, and that is that the ranks of the profession are crowded, or, perhaps, it would be more correct to say overcrowded. Crowded not only in the United Kingdom, but also in most of the British Colonies, if not indeed in all. There was a time when openings in the Colonies were numerous, and the prospects of an energetic man were good. At the present day, however, the field has been very fully occupied, and in most of the larger Colonies there are medical schools attached to local universities, and a new generation of colonial-born and colonial-educated Doctors of Medicine is springing up.

The pinch of narrow resources comes when the young man has obtained his degrees or licences. There are the public medical services—the Naval Medical Service, the Army Medical Staff, the Colonial Medical Services, which offer honourable and useful careers to a few. There are resident house-surgeoncies and house-physicianships in provincial hospitals which afford invaluable experience and often the opportunity for a good start in life to fewer still; and in this direction it must be added that, owing to the way in which these appointments are made, the race is not always to the strong, for a candidate with local influence will often carry the day against one whose intrinsic merits are greater. For the average man with average luck some small reserve of capital, some assured source of income is almost a necessity if he is to have a fair chance of taking an honourable place in a profession which, perhaps more than any other, calls for sound physical and moral endowments.

The old apprenticeship system undoubtedly smoothed the way of the young practitioner. Not only did he early learn much as to the conditions of general family practice which was afterwards of the greatest use to him when he had to begin to undertake its responsibilities himself, but he had probably formed friendships and connections which helped him to tide over the period of waiting. Perhaps the new system of tuition with a general practitioner in the last year of the curriculum, designed to replace to some extent the old plan of apprenticeship at the earliest stage of the medical student's career, may do something to fill the gap. But, however this may be, the penniless young practitioner is at a sore disadvantage when he has first to attempt to earn his living by the practice of medicine, and this fact should be realised in all its significance by parents and guardians.

The mode of admission to the medical profession is governed by Acts of Parliament. The State, for the public good, has determined that it will recognise as duly qualified medical practitioners only those whose names appear upon the *Medical Register*. It has committed to the General Medical Council the duty of maintaining this *Register*, and the conditions upon which a person can be admitted to registration are determined by the Medical Acts, and by the regulations of the Medical Council framed under these Acts. The primary requirement is the possession of a medical degree from a university, or diplomas from certain medical corporations or colleges in the United Kingdom.[1] The degrees or diplomas must have been obtained after examination in medicine, surgery, and midwifery, and the recipient must be certified to be competent in these three subjects. All the English, Scottish, and Irish universities grant such degrees; the corporations which grant diplomas are In England (1) the Conjoint Examining Board of the Royal College of Physicians of London and the Royal College of Surgeons of England; (2) the Apothecaries Society of London; In Scotland, the Conjoint Examining Board of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow; In Ireland (1) the Conjoint Examining Board of the Royal College of Physicians and the Royal College of Surgeons in Ireland; and (2) the Conjoint Examining Board of the Royal College of Surgeons in Ireland and the Apothecaries' Hall in Ireland.

It is important that an intending student should at once make up his mind whether he intends to seek a degree from a university or licences from the corporations. At the commencement of his medical studies a student must enter his name in the *Medical Students' Register*, kept by the General Medical Council, and before this can be done he must pass a preliminary examination in the subjects of

[1] Colonial degrees are, in certain cases, registrable under special conditions.

general education. The General Medical Council accepts any one of a large number of examinations, as will be seen by the list on pages 462-3, and it permits the period of medical study to be passed at any one of a large number of medical colleges and schools. The regulations of the universities and medical corporations as to examination and place of education are in many instances more precise, and a student who fails to enter a university at the commencement of his career will find it difficult, if not impossible, subsequently to remedy this initial error should he at a later date become convinced of the value of a university degree. It was very generally the custom for medical students in London and Dublin not to seek a university degree, but to rest satisfied with the diplomas of the corporations. As correspondence published from time to time in these columns has proved abundantly, many, probably the large majority, of those who have followed this plan now recognise it to have been mistaken. The holder of a diploma tells us that he finds himself at some disadvantage before the public, as compared with the graduate. We would strongly advise all intending students to consider well whether it would not be in every way wiser for them to seek a university degree. The medical curriculum must now occupy five years at least, and some part of this period may without loss of time or increase of expense be spent as an undergraduate of an English or Irish university. The regulations of the universities have been specially adapted to meet the needs of students—the academic wind has been tempered to the medical lamb.

In Scotland the requirements of the universities have always been most favourable to medical students, and even in London the student who has once crossed the *pons asinorum* of the Matriculation will not find the subsequent examinations of the University of London to present any insuperable or unreasonable difficulties. The project for the reconstitution of this University has made considerable progress during the past year, but it is impossible to say how long it may be before the reconstitution can be carried into effect, and it would be imprudent for the student of to-day to count upon its being effected in time to influence his own prospects. It is desirable that the student coming to London, if he intends to seek a degree from the University of London, should pass the Matriculation Examination;[2] if he has not passed the Preliminary Scientific Examination[3] also, he must be prepared to devote the necessary time to attending classes on the subjects required for it before commencing those of the medical curriculum proper. A diligent student who attends conscientiously the classes of a medical school and the practice of the hospital to which it is attached will find no difficulty in passing the Professional Examinations of the University for the degree of M.B.

An alternative opportunity of obtaining a degree in Medicine is afforded by the University of Durham, and at some of the medical schools special arrangements are made to this end with a view to meeting its requirement in regard to a year's residence.[4]

Finally, an English student would do well to consider seriously whether it may not be possible for him to become a member of the University of Oxford or Cambridge. At both the arrangements and appliances for teaching Preliminary Sciences, as well as Anatomy and Physiology, are first rate, and it is possible to take the degree of M.D. of the University of Cambridge after five years of study.[5]

The main differences between the curricula required by universities and the medical corporations are in the earlier period of education, and affect the requirements as to Arts and the preliminary sciences (Chemistry, Physics, and Biology). The student who seeks only a diploma or licence to practise will still have to pass through a curriculum of five years' duration subsequent to passing a preliminary examination in Arts. In all the subjects of a medical education proper he will have to attend the same classes and hold the same appointments as the University undergraduate. We say again, therefore, that it will be well for him to consider very seriously, before proceeding to a medical school, whether it would not be well for him to seek a University degree.

The following pages contain a sketch of the requirements and recommendations of the General Medical Council, and an outline of the regulations of the universities and medical corporations. Particulars are given also of the advantages offered by the various medical schools and colleges in England, Scotland, and Ireland, and short articles are added on the terms of admission to the public medical services and the advantages offered by them. The conditions under which the Diploma in Public Health may be obtained are also sketched, and for convenience of reference abstracts of the regulations of the various corporations as to the Dental Curriculum, and Licences in Dental Surgery are appended.

The old custom was for medical students to enter at a medical school at the commencement of the Winter Session in October. Circumstances have now been so much altered that the majority of the schools recommend students entering for the whole curriculum to join at the beginning of the Summer Session in May.

THE COST OF A MEDICAL EDUCATION.

THE educational course demanded of the medical student of to-day is an affair not to be entered into without due deliberation. At the least it must last five years, and any slip, any failure to satisfy the examiners at any stage, any accidental disablement from ill-health at the time appointed for examinations, must inevitably lengthen it still further, adding to the period during which the student must be supported somehow, and rendering more remote the hoped-for goal—the qualification which shall make it possible to earn a living. It is no small matter to fix one's life beforehand for a certain five and a probable six years, and the import-

[2] The examination is held in January and June in London, and once, or in some cases twice a year, at numerous provincial centres: Aberystwith, Bangor, Birmingham,* Bristol,* Cardiff,* Edinburgh, Epsom,* Glasgow,† Leeds,* Liverpool, Manchester, Newcastle-on-Tyne,* Nottingham, Plymouth,* Portsmouth,† and Sheffield. (At the places marked thus * the Matriculation Examination is held in January and June, 1895; at those marked thus † in January only; at the others in June only.)

[3] This examination is held twice a year in London (January and July); it will also be held in July, 1895, at the following centres: Aberystwith, Bangor, Bristol, Cardiff, Epsom, Glasgow, Leeds, Liverpool, Manchester, Newcastle, Nottingham, and Sheffield.

[4] Special arangements exist at Guy's Hospital, but the student will probably find that his needs will be met at St. George's Hospital, Middlesex Hospital, or the Westminster Hospital, as well as at some other London hospitals, and at Mason College, Birmingham. The student is advised to enter the medical school selected at the beginning of the summer session (May).

[5] Arrangements to meet the requirements of Oxford and Cambridge students as to Practical Medicine, Surgery, and Midwifery exist at St. Bartholomew's, St. George's, Guy's, the London Hospital, the Middlesex Hospital, St. Mary's, St. Thomas's, and the Westminster Hospitals.

ance of the decision is in no way lightened by the knowledge that a medical education is peculiarly special, leads to little else but medicine, is of no service in obtaining entry into any other profession or even trade, and that, unless it can be carried through to the end, it is so much loss of time. If a medical education should turn out more expensive than had been anticipated and arranged for, and if from that or any cause it should have to be broken off, not only are the money and the time spent on it thrown away—absolutely wasted from a money-earning point of view—but the student finds himself, at an age which makes an entry into business difficult, stranded without employment or profession, and his little capital gone. It is, then, of the greatest moment that before embarking in the study of medicine an accurate estimate of its probable cost should be formed, otherwise the student runs the risk, of which every year sees sad examples, of dropping out of his course in mid-career, his youth wasted, his future spoilt.

There are certain expenses connected with the medical curriculum which can be calculated with considerable accuracy beforehand. The fees for examinations vary greatly among the different qualifying bodies, but they are all published, and can be estimated in advance; the same is the case with the fees for medical schools and hospital attendance, and by adding to these a fair estimate for books and materials, it is possible to form an accurate judgment as to the necessary expenses outside and beyond those of maintenance. It must always be remembered, however, that such an estimate is but a minimum; if examinations are not passed in due order and at proper times expenses increase, fees have to be paid over again, dissections to be done afresh, and often the help of a tutor obtained—a luxury to some, an unfortunate necessity to others, but in either case a great addition to expense.

To come to particulars. The fees for the various examinations will be found under the headings of the different qualifying bodies.

The cheapest qualifications are those given by the University of London and the Apothecaries' Society, namely, £15 15s. in each case; the dearest, that of the Conjoint Board of the Colleges of Physicians and Surgeons of England, is £35 15s., and as the last is the one aimed at by the mass of the English students, we will take it as representing the fees for examination.

The fees for lectures and hospital practice vary considerably, and will be found set forth in detail on page 486. Roughly, they vary between £157 10s. and £115 for the whole course; and regarding these again a little study of the tables given will enable one to discover with great exactitude the cost of the curriculum.

Then there are certain other expenses, the exact amount of which cannot be found from published tables, and which also vary at different schools—namely, subscriptions to library, cost of "parts" for dissection, of chemical, biological, and pathological apparatus and materials; of books, bones, etc.; and the subscription to cricket, football, or rowing clubs, which, although not in the estimate, may be practically obligatory. As regards all these points, when the school and the diploma are provisionally decided on, a little correspondence, asking for definite answers to definite questions, ought to enable any man to make an estimate within a few pounds of the sum required.

So far we have been dealing with things definite. The great question to which no precise answer can be given is as to the cost of maintenance. Here individual idiosyncrasy crops up, the previous training, the habits of the family, the standard of life acceptable not only to the student but to his friends, all become factors of the problem, and, in view of their extreme variations, it is clear that no exactitude in the answer is attainable. There is, in fact, no standard of comfort which can be set up as appropriate to the medical student, very little standard of dress, and absolutely none as regards amusements.

The range of possibilities in this matter becomes obvious enough when we consider, on the one hand, at what wages an artisan can live, and, on the other, how easily £5 a week slips through the fingers of one not inured to petty thrift and to the care of pence. It is here that the nicely brought up youth finds himself at a disadvantage with those who, from early habits, do not feel the hardship of surroundings which to him would be constant misery; for there is no denying that it is possible, to one accustomed to the style of life, to pass through the curriculum on an artisan's wages added to the necessary fees. To one not trained to such economy the attempt would be folly, but many a black-coated clerk lives on £70 to £80 a year, and certainly scores of curates do not receive more than £100 to £130, and it appears to us that this last may fairly give an idea of what a gentleman willing to live carefully can keep himself upon. Here again locality has much to do with expense of living. It may possibly be the case that lodgings in certain parts of Manchester, or Dublin, or Edinburgh do not cost much less, if any less, than they do in London, but from the smaller size of these towns a greater range is available within a moderate distance, a walk which in London would make no appreciable difference in surroundings bringing one into those more open regions where cheaper lodgings are most likely to be found.

We believe that within half an hour's walk of most of the London hospitals a single room can be obtained for from 8s. to 12s. a week, or a sitting room and bedroom from 10s. to 20s., and that partial board—meaning thereby breakfast with ham or eggs, and plain dinner or meat tea in the evening—for from 21s. to 30s. a week. All these charges will come to less per head, and will command very much better food for the money, if two or three students chum together in the same rooms. Unless one lives very near one's hospital the midday meal must be taken away from home, and, if it is to be a meat lunch, it soon runs away with money. Then there are washing, boot cleaning, and fires to be provided for; so that we may fairly estimate the total living expenses as amounting to from 31s. to 45s. a week—near the lower sum on the system of chumming, near, at any rate, 40s. living independently.

Attached to several of the hospitals there are residential colleges at which students can live very comfortably.

St. Bartholomew's, Guy's, King's College, St. Mary's, Middlesex, all receive resident students. In the immediate neighbourhood of University College, although not under the same governing body, is University Hall, and connected in the same way with the London School of Medicine for Women is a Residential Hall for students.

At Leeds there is Lyddon Hall, a Hall of Residence in connection with the Yorkshire College. The charge is at the

rate of £56 per annum for medical students, whose session lasts about thirty-eight weeks.

In Manchester there are two halls of residence in connection with Owens College, the expense at Hulme Hall for the academic year being £63 (exclusive of laundry), and at Dalton Hall £90. At Hulme Hall there are twenty-five scholarships of £25 per annum, tenable for three years, of which six or more are offered annually for public competition. Two of those offered for competition in October will be of the annual value of £50. As regards expense, these collegiate establishments do not seem to differ much from private lodgings. There are, however, certain definite advantages connected with them—at any rate, from the parent's point of view—which are worth bearing in mind. Some amount of supervision is exercised over the goings-out and comings-in; the warden also may be able to give a word in season, if he finds a student inclined towards loafing or dissipation; the sanitary arrangements are often better than in the average of London lodgings; where full board is given the temptation to skimp the diet for the sake of pocket money is removed; and one may, at least, have some confidence that a student at one of these colleges will not be allowed to drift into illness unnoticed and uncared for, as may easily happen in lodgings so long as the rent is paid. On the other hand, much depends upon the warden, and college housekeepers are no more immaculate than are landladies; a great deal also depends upon the "set" among whom one falls, if they are in the habit of constantly visiting each other's rooms it is far more difficult to find time for reading than it is in lodgings.

At Toynbee Hall there are admirable facilities for pleasant companionship and true collegiate life. The terms are extremely moderate. The total cost of board, lodging, washing, etc. (exclusive of midday meals) need not exceed 15s. a week. Each resident has a combined bed and sitting room furnished, and each house has a common room. It is, however, much more than a mere residence; there is a large library, and much educational and social work centres in the place. For those who are prepared to interest themselves in such matters, and can afford to give a certain amount of time to promote its great social and scientific work, Toynbee Hall affords an admirably appointed residence at a very moderate cost. It is specially suited for men who have come down from the universities to complete their education in London.

It is impossible to give an estimate for clothes; sartorial requirements vary with different people and different modes of bringing up; it should, however, be possible to keep within £20 a year if cash is paid.

For the London student, then, we can make a fair estimate of the cost of education. Taking one of the more expensive schools and living at 40s. a week on the one hand, and one of the less expensive with living at 30s. on the other, and adding in each case the Conjoint Examination fees and £20 a year for clothes, we find the total expense of the five years' curriculum in London as follows:

	£ s. d.	£ s. d.
Composition fee for school and hospital ...	157 10 0	115 0 0
Fees for instruction in vaccination and fevers...	4 4 0	4 4 0
Materials (biology and chemistry), and "parts"	6 6 0	5 5 0
Clubs	8 8 0	5 5 0
Instruments, about	10 10 0	10 10 0
Books, about	10 10 0	10 10 0
Diploma fees	36 15 0	36 15 0
Five years of forty weeks at 40s. and 30s. a week respectively	400 0 0	300 0 0
Five years' clothing at £20	100 0 0	100 0 0
Total	£734 3 0	£587 9 0

To this must be added provision for three vacations a year, with the necessary railway fares, or else proportionately increased charges for living. The only points in which this sum might be contracted are that in the fifth year it might be possible to act as assistant to a practitioner and so diminish the expense of living; but it must be remembered that in this fifth year a good deal of hospital attendance has to be put in, besides preparing for the final examination, and that it is out of the question to expect to be able, even in that year, to pay one's way, and we would say at once that the examinations are now so severe that any attempt to combine the work of student with that of assistant, in the early years, is merely to court failure.

In the provinces we believe that the curriculum can be gone through at a considerably cheaper rate. Not only are the hospital and school fees somewhat lower, but the expense of living is in many cases less. As the result of a considerable amount of correspondence on the subject, we are able to give the following details:

In Manchester it is thought that for living in ordinary lodgings the minimum expense would be £50 per annum.

Students in Liverpool can manage comfortably on £1 10s. a week, and a minimum of £1 per week may be stated.

From Leeds we are told that a student can obtain board and lodging for one guinea a week.

A correspondent at Bristol says that a student can live on from £70 to £90 a year.

In Newcastle there are plenty of lodgings close to the College and Infirmary, varying from 10s. to 20s. a week. A student's average expenses for living and rooms might fairly be put down at from £1 10s. to £3 a week. There are also cheap railway fares to outlying places.

In Edinburgh there is great variety both as to price and quality of lodgings. Students usually go into lodgings either by themselves or with a companion. The rent of a sitting-room and bedroom in a good and healthy locality varies from 12s. 6d. to 30s. or more per week, the cost of food may be anything from 7s. 6d. upwards, fairly good living would be 12s. 6d. to 15s. Good plain living may be had from 5 guineas a month upwards, but this may not include a private sitting-room. Residence with a medical practitioner, with some supervision of studies, 10 to 12 guineas a month.

There is nothing in the Scotch Universities akin to the social life of Oxford and Cambridge, but of late years Edinburgh has possessed in University Hall a completely equipped social residence for students, graduates, and others connected with the University. In the several buildings which together form this institution there is now accommodation for forty-five men. The rents vary from 7s. to 16s., and some few more luxurious rooms run up to 22s. 6d. per week. Board may come to about 12s. 6d.; last summer it averaged 11s. 9d. The place partakes of the character of a club so far as admission is concerned, applications being voted on by the residents; and, owing to the fact that some graduates are generally in residence, coaching can be arranged on moderate terms. Information as to lodgings

can be obtained at the Students' Representative Council Office, or at the Students' Union.

At Cork very fair lodgings for students can be had close to the College for 6s. a week, food costing about 10s. in addition. There is also an institution called Berkeley Hall, at which the rent of rooms is £1 2s. 6d. a month, and the cost of breakfast, dinner, and tea 11s. 1d. a week; but luncheon would be required as well, and some linen would have to be provided.

It would seem, then, that from what we have looked upon as the minimum expense of living in London, perhaps £20 per annum may be deducted, and £20 from the total minimum college fees, which means that the entire cost of entering the profession through a provincial school might not exceed £470. It is well, however, to call attention to the large proportion of this sum which goes for maintenance —an amount which, in the case of a student whose home is either in London or one of the school towns, would admit of considerable modification.

As regards the ordinary student living away from home, it may, we think, be taken broadly that all classes of expense tend to vary together, that cheaper rent often accompanies cheaper food, and even cheaper style of clothing, and that where the necessary expenses are least there also the social expenses into which men are drawn by custom are also kept at a lower level. This is no doubt partly due to the fact that richer men tend to flock to the more expensive schools, where it is difficult to prevent them from setting the fashion in many ways, and it may be said that in mere matters of fashion it is not necessary to conform to any, even general, standard. Nor can it be denied that in a large metropolitan school it is comparatively easy for a student to become lost in the crowd when he leaves the college gates and to live as he likes or as necessity may force him; but it must be at once insisted on that by such a mole-like existence, in which the student, however much he may sit with others in the class, hides himself from them in his private life, a youth loses a great part of those wider educational advantages which a more intimate association with his fellows ought to give.

An active companionable student life, full of intimacies, rivalries, and competitions, both in regard to work and play, not only brings out the best powers of a man's mind, but is a thing to look back upon with pleasure so long as life shall last. It is no small loss that a period so full of expansive possibilities should be turned into a time of penurious counting of petty cash, and we feel sure that it is better, as an educational proceeding, to send a youth whose means are small to a school so suited to his pocket that he can join in what is going on evenhanded with the rest than to place him where he will have to study economy and even parsimony at the expense of sociability. We doubt, for example, the educational advantage of trying to live at Oxford or Cambridge for less than £150 a year. What is gained in knowledge is lost in bitterness of spirit.

Nor must it be forgotten that the life of a medical student is a trying one, and that for the maintenance of health provision must be made for a considerable amount of outdoor exercise. Boating, cricket, tennis, football—things for which the solitary walk is no substitute—all mean clubs and subscriptions, and, although this is a side of student life which is often overdone, it is absolutely essential that some provision be made for it. Two years spent in laboratories and dissecting rooms form but a poor preliminary, from a health point of view, to the long study of disease which then has to be undertaken, in wards and out-patient rooms, mixing daily with the sick of every kind. The athletic side of education is really more necessary for the medical than for any other class of student.

To revert again to our main subject, the expense of a medical education may in a few cases be materially diminished by the various scholarships and prizes that are offered for competition. It must be remembered, however, that the race is to the swift, and that these prizes fall to none but the more brilliant students. To those, however, who possess the knack of winning these things the number of such possible additions to income attached to any school must have some influence in the choice of a place of study. Unfortunately, as regards average students, many fail to pass their examinations at the proper time, fail not only once but over and over again, thus lengthening their course and increasing its expense, besides having to pay extra fees for repeated examinations.

A little inquiry will show what a very large proportion of candidates at every examination get plucked, and how largely, therefore, the average expense of a medical education must exceed the estimated minimum. What this excess may be it is impossible to say, but however poor a method the present system may be of gauging the mental faculties, it is at any rate a fair test of one's power of passing examinations, and it is obvious that a youth who has found a difficulty in this respect while at school, and either from want of knowledge or disorderliness of mind has shied a time or two at his preliminary, will cost much more to educate than will one whose neat and trim intellect enables him to glide easily through the barriers set up by the examining bodies. This is a matter worth most serious consideration, for "cutting it too fine," calculating the cost on the basis of the published fees, and taking for granted that the examinations will be passed in due season is at the root of much bitter disappointment and many wasted careers.

The question of intellectual fitness should certainly be borne in mind not only in the choice of one's profession, but in the arrangement of one's studies. A sharp youth who shows promise of taking his examinations easily had better register as a medical student as early as he can, but it is otherwise with one of a duller type. The advantages of going through the course *pari passu* with the best men of his year, and the disadvantages of being thrown back among the laggards are so great, that we strongly advise the average student to go as far as he can before registering—that is, to pass in chemistry and physics, practical chemistry, and elementary biology, but especially in chemistry, before he becomes a medical student. When these are once done with the course is clear, and the chance of passing the examinations in their appointed seasons is much increased. The orderly passing of the appointed examinations as they become due is the key to economy in medical education.

At the London Hospital Dr. Hadley has been appointed Lecturer on Bacteriology, Mr. Chalmers Mitchell Lecturer on Biology, and Dr. Kennedy Will Lecturer on Mental Diseases.

REGULATIONS OF THE GENERAL MEDICAL COUNCIL:

IN REGARD TO THE REGISTRATION AND EDUCATION OF MEDICAL STUDENTS.

THE regulations of the General Medical Council as to registration, preliminary examination, and as to professional education must be followed by all medical students seeking to obtain degrees or licences to practise from the universities or medical corporations of the United Kingdom. The separate regulations of the universities and corporations are so drawn up as to meet the requirements of the General Medical Council.

PRELIMINARY EXAMINATIONS.

Every medical student must be registered by the General Medical Council at the commencement of his studentship. To obtain registration the student must pass a preliminary examination in general education, and must produce evidence that he has commenced medical study. The student must make application for registration on a special form to be had on application to the several qualifying bodies and medical schools.

The *Students' Register* is kept by the Branch Registrars, namely: in England, Mr. W. J. C. Miller, B.A., 299, Oxford Street, London, W.: in Scotland, Mr. James Robertson, 1, George Square, Edinburgh; in Dublin, Dr. R. L. Heard, 35, Dawson Street, Dublin.

The following is a list of examining bodies whose examinations in general education are recognised by the General Medical Council as qualifying for registration as a medical student:

I.—UNIVERSITIES IN THE UNITED KINGDOM.

University of Oxford:
(1) Junior Local Examinations; Certificate to include Latin and Mathematics, and also one of these optional subjects (Greek, French, German).
(2) Senior Local Examinations; Certificate to include Latin and Mathematics.
(3) Responsions.
(4) Moderations.
(5) Examination for a Degree in Arts.

University of Cambridge:
(6) Junior Local Examinations; Certificate to include Latin and Mathematics, and also one of these optional subjects (Greek, French, German).
(7) Senior Local Examinations; Certificate to include Latin and Mathematics.
(8) Higher Local Examinations.
(9) Previous Examination.
(10) Examinations for a Degree in Arts

University of Durham:
(11) Examination for Certificate of Proficiency.
(12) Examination for Students at the end of their first year.
(13) Examination for a Degree in Arts.

University of London:
(14) Matriculation Examination.
(15) Preliminary Scientific (M.B.) Examination.
(16) Examination for a Degree in Arts or Science.

Victoria University:
(17) Preliminary Examination; Latin to be one of the subjects.
(18) Entrance Examination in Arts, to include all the subjects required.

University of Edinburgh:
(19) Local Examination (Junior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects (Greek, French, German).
(20) Local Examinations (Senior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects (Greek, French, German).
(21) Preliminary Examination for Graduation in Science or Medicine and Surgery.
(22) Examination for a Degree in Arts.

University of Aberdeen:
(23) Local Examinations (Junior Certificate); Certificate to include all the subjects required.
(24) Local Examinations (Senior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects (Greek, French, German).
(25) Preliminary Examination for Graduation in Medicine and Surgery.
(26) Examination for a Degree in Arts.

University of Glasgow:
(27) Local Examinations (Junior Certificate); Certificate to include all the subjects required.
(28) Local Examinations (Senior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects (Greek, French, German).
(29) Preliminary Examination for Graduation in Medicine and Surgery.
(30) Examination for a Degree in Arts.

University of St. Andrews:
(31) Local Examinations (Senior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects (Greek, French, German).
(32) Local Examinations (Junior Certificate), to include all the subjects required.
(33) Preliminary Examination for graduation in Medicine and Surgery.
(34) Examination for a Degree in Arts.

University of Dublin:
(35) Public Entrance Examination.
(36) General Examination at end of Senior Freshman year.
(37) Examination for a Degree in Arts.

Royal University of Ireland:
(38) Matriculation Examination.

Oxford and Cambridge Schools' Examination Board:
(39) Certificate, to include the following subjects, an adequate knowledge of English Grammar and Orthography, as shown in the course of the Examination, to the satisfaction of the Examiners, being held as conforming to the requirements of the General Medical Council in regard to these subjects:
(*a*) Arithmetic, including Vulgar and Decimal Fractions;
(*b*) Algebra, including Simple Equations;
(*c*) Geometry, including the subjects of the first three books of Euclid;
(*d*) Latin, including Translation and Grammar;
(*e*) Also one of these optional subjects: Greek, or any Modern Language, or Logic.

II.—OTHER BODIES NAMED IN SCHEDULE (A) TO THE *Medical Act*.

[1] *Apothecaries' Society of London:*
(40) Examination in Arts.

[2] *Royal Colleges of Physicians and Surgeons of Edinburgh:*
(41) Preliminary (Combined) Examination in General Education.

[2] *Faculty of Physicians and Surgeons of Glasgow:*
(42) Preliminary Examination in General Education.

[1] *Royal Colleges of Physicians and Surgeons in Ireland:*
(43) Preliminary Examination; Certificate to include Mathematics.

III.—EXAMINING BODIES IN THE UNITED KINGDOM, NOT INCLUDED IN SCHEDULE A) TO THE *Medical Act*, 1858.

College of Preceptors:
(44) Examination for a First Class Certificate, or Second Class Certificate of First or Second Division, Algebra, Geometry, Latin, and either a Modern Language, or Greek, or Logic, having being taken.
(45) Preliminary Examination for Medical Students.

Intermediate Education Board of Ireland:
(46) Junior Grade Examination } Certificate in each case to include
(47) Middle Grade Examination } all the subjects required.
(48) Senior Grade Examination }

Educational Institute of Scotland:
(49) Preliminary Medical Examination.

Scotch Education Department:
(50) Leaving Certificates in each Grade and in Honours.

IV.—INDIAN, COLONIAL, AND FOREIGN UNIVERSITIES AND COLLEGES.

University of Calcutta:
(51) Entrance Examination.

University of Madras:
(52) First Examination in Arts.

University of Bombay:
(53) Entrance Examination.

Ceylon Medical College:
(54) Preliminary Examination (Primary Class).

University of McGill College, Montreal:
(55) Matriculation Examination.

University of Bishop's College, Montreal:
(56) Matriculation Examination.

University of Toronto:
(57) Matriculation Examination.

University of Trinity College, Toronto:
(58) Matriculation Examination.

University of Queen's College, Kingston:
(59) Matriculation Examination.

University of Victoria College, Upper Canada:
(60) Certificate of Full Matriculation in Arts; or Second Class Provincial Certificate from Education Department.

College of Physicians and Surgeons of Ontario:
(61) Preliminary Examination.

Western University of Ontario:
(62) Entrance Examination in Medicine.

University of Manitoba:
(63) Previous Examination.

University of Fredericton, New Brunswick:
(64) Matriculation Examination.

University of Mount Allison College, New Brunswick, Canada:
(65) Examination for a Degree in Arts.

University of King's College, Nova Scotia:
(66) Matriculation Examination.
(67) Responsions.

[1] "The Council has recommended that these Examinations be discontinued."

[2] These Examinations are conducted by the Educational Institute of Scotland (No. 49).

University of Halifax, Nova Scotia:
(68) Matriculation Examination.
Dalhousie University and College, Halifax, Nova Scotia:
(69) Matriculation and Sessional Examinations.
Provincial Medical Board of Nova Scotia:
(70) Matriculation Examination.
University of Melbourne:
(71) Matriculation Examination.
University of Sydney:
(72) Entrance Examination for Medical Students.
University of Adelaide:
(73) Senior Public Examination.
(74) Junior Public Examination.
University of Tasmania:
(75) Senior Public Examination.
University of the Cape of Good Hope:
(76) Matriculation Examination.
(77) Examination for a Degree in Arts.
University of Otago:
(78) Preliminary Examination.
University of New Zealand:
(79) Preliminary Medical Examination.
Christ's College, Canterbury, New Zealand:
(80) Voluntary Examinations; Certificate to include all subjects required.
Codrington College, Barbados:
(81) English Certificate for Students of two years' standing, and Latin Certificate or "Testamur."
Germany and other Continental Countries:
(82) Gymnasial Abiturienten-Examen, and other corresponding Entrance Examinations to the Universities.
Egyptian Government:
(83) Secondary Education Certificate, Arabic being accepted as a classic language in place of Latin.

"*" The list of Examinations at present received as fulfilling the conditions of the Council as regards preliminary education will be revised by the Education Committee shortly.

The examinations in Divisions I, II, III at present entitle to registration on production of satisfactory evidence that the applicant has passed them. The examinations in IV are accepted if the certificates contain evidence that the examination passed included all the subjects required by the General Medical Council. These are:

"*(a)* English Language, including Grammar and Composition.
"*(b)* Latin, including Grammar, Translation from specified authors, and Translation of easy passages not taken from such authors.
"*(c)* Mathematics, comprising *(α)* Arithmetic; *(b)* Algebra, as far as Simple Equations, inclusive; *(c)* Geometry, the subject matter of Euclid, Books I. II, and III, with easy deductions.
"*(d)* One of the following optional subjects:
(α) Greek, (β) French, (γ) German, (δ) Italian, (ε) any other Modern Language, (ζ) Logic."

In the case of natives of India, or other Oriental countries whose vernacular is other than English, an examination in a classical Oriental language may be accepted instead of an examination in Latin.

The Council will not in future accept any certificate of pass in Preliminary Examination in General Education, unless the whole of the subjects included in the Preliminary Examination required by the Council for Registration of Students of Medicine have been passed at the same time. A certificate of having passed a University Examination required for graduation in Arts, or a Senior or Higher Local University Examination, or a Senior Grade Examination of the Intermediate Education Board of Ireland, or the Leaving Certificate Examination (honours and higher grade) of the Scottish Education Department, wherein the specified subjects of General Education are included, may be recognised for the purpose of registration.

PROFESSIONAL EDUCATION.

A.—Requirements.

The period of professional study between the date of registration as a medical student and the date of the Final Examination for any diploma which entitles its holder to be registered under the Medical Acts as a qualified practitioner shall be a period of *bonâ-fide* study during not fewer than five years. The course of professional study and examinations must include the following subjects:

(i) Physics, including the Elementary Mechanics of Solids and Fluids, and the rudiments of Heat, Light, and Electricity. (ii) Chemistry, including the principles of the science, and the details which bear on the study of Medicine. (iii) Elementary Biology. (iv) Anatomy. (v) Physiology. (vi) Materia Medica and Pharmacy. (vii) Pathology. (viii) Therapeutics. (ix) Medicine, including Medical Anatomy and Clinical Medicine. (x) Surgery, including Surgical Anatomy and Clinical Surgery. (xi) Midwifery, including Diseases peculiar to Women and newborn Children. (xii) Theory and Practice of Vaccination. (xiii) Forensic Medicine. (xiv) Hygiene. (xv) Mental Disease.

The first four of the five years must be passed at a school or schools recognised by any of the licensing bodies (universities or medical corporations). The first year, however, may be passed at a university or teaching institution recognised by any of the licensing bodies, where the subjects of Physics, Chemistry, and Biology are taught. Further, graduates in arts or science of any university recognised by the General Medical Council, who have spent a year in the study of Physics, Chemistry, and Biology, and have passed an examination in these subjects for the degrees in question, are held to have completed the first of the five years of medical study.

B.—Recommendations.

The Council recommend that due time should be set aside for attendance at practical courses in which practical work is done by the student himself under the direction of a duly qualified teacher. It is also recommended that attendance on systematic courses should be concluded at the end of the fourth year of study, and that the fifth year should be devoted to clinical work in one or more recognised public hospitals or dispensaries, British or foreign, with the proviso that of this year six months may be passed as a pupil to a registered practitioner possessing such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities.

THE ENGLISH UNIVERSITIES.

UNIVERSITY OF OXFORD.

There are two degrees in Medicine (B.M. and D.M.), and two degrees in Surgery (B.Ch. and M.Ch.), which under the most favourable circumstances may be obtained in six or seven years from Matriculation.

B.A. Degree.

The Degree of B.M. and B.Ch are conferred only on candidates who have taken the B.A. degree, for which residence for twelve terms within the University is necessary; the Examinations, however, for the degrees in Arts and Medicine may be passed in any order, provided the subjoined regulations are complied with.

The degree of B.A. may be obtained in either of the following ways:

(a) By passing Responsions (or one of the Extra-University Examinations, which are held as exquivalent to it), Moderations, a Divinity Examination, or, in the event of a candidate objecting, an examination in some specified Greek book; and the Final Pass School in three subjects, two of which may be the same as the Preliminary Examination in Natural Science.

(b) By passing Responsions, an additional subject in Responsions, the Divinity Examination, and the Preliminary Examinations in the Natural Science School, and by passing the Final Honour Examination in Chemistry, Physics, Animal Morphology, Botany, or Physiology.

Responsions and the additional subject may be passed before a candidate is a member of the University;[1] Moderations can be passed in the fourth term; the Divinity Examination at any time after Responsions; the Final Pass School may be taken any time after Moderations; a Final Honour School may be taken at the end of the third or within the fourth Academical year, that is, twelve or sixteen terms respectively: the Preliminary Examinations of the Natural Science School may be taken as soon as Responsions have been passed.

Degrees in Medicine and Surgery.

Candidates for degrees in Medicine must take the degrees of B.M., B.Ch., to obtain which the following examinations must be passed:

Preliminary.—The preliminary examination of the Natural Science School must be passed. It is held in two parts, namely: (1) Mechanics and Physics and (2) Chemistry in November and June, (3) Animal Morphology and (4) Botany in December and March.

Professional.—There are two professional examinations, held twice a year at the end of Michaelmas and Trinity

[1] Membership is constituted by Matriculation, and by becoming a member of a College or Hall, or a non-collegiate student.

Terms. The subjects of the first B.M. examination are Organic Chemistry, Human Anatomy and Physiology, Materia Medica, and Pharmacy. This examination may be passed at any time after the preliminary. The second examination, held in June, may be taken at any time after the first, but usually two or three years elapse. It comprises the remaining subjects of the medical curriculum, namely, Medicine, Surgery, Midwifery, Pathology, Forensic Medicine, and Hygiene.

D.M. Degree.—An M.B. who has entered his thirty-ninth term is admitted D.M. on presentation of a dissertation approved by the appointed professors and examiners.[2]

M.Ch. Degree.—An examination for this degree is held in June. The candidate must be in his twenty-seventh term.

Fees.—University: B.A., £16 or £17. B.M. and B.Ch., £14. D.M., £25. M.Ch., £17. Also an annual fee to the University of £2 for the first four years, reduced to £1 when the B.A. is taken.—College: Fees (varying in amount) on taking degrees and for first four years of membership. Tuition fees, £21 to £30. The cost of living for the four University terms cannot be stated at less than £120.

Scholarships, etc.—The several colleges grant scholarships of £80 a year tenable for four years in Natural Science, Chemistry, Physics, and Biology, and also exhibitions. Particulars can be obtained on application to the College tutors. A Radcliffe Travelling Fellowship of £200 a year, tenable for three years, is open annually to those who have taken certain position in university examinations, and who have taken the degree of B.M.

Teaching.

Courses of lectures and demonstrations on Elementary Mechanics and Physics, on Inorganic Chemistry, on Animal Morphology, and on Botany are given at convenient periods, and are open to members of the University intending to proceed to a medical degree.

First M.B.—The instruction in Human Anatomy is by lectures and demonstrations; the dissecting room is open daily, and dissection may be continued during the vacation. The course of instruction in Physiology consists of a course of lectures extending over six terms, a course of practical instruction in Histology during two terms, and a course of Elementary Physiological Chemistry, with practical laboratory work during two terms. Special facilities are afforded to advanced students. Instruction in Organic Chemistry is also given in the Chemistry Department.

Second M.B.—Lectures on Materia Medica and practical instruction in Pharmacology are given during the summer term, and clinical lectures and tutorial instruction and demonstrations in Physical Diagnosis and Regional Anatomy are given in each term at the Radcliffe Infirmary.

UNIVERSITY OF CAMBRIDGE.

Bachelor of Medicine (M.B.) and Bachelor of Surgery (B.C.).

A student proceeding to this degree must (1) reside in the University during the required portion of each of nine terms, (2) pass (or obtain exemption from) the Previous Examination, (3) pursue medical study for five years.

There are three examinations for the degree of Bachelor of Medicine. They are partly in writing, partly oral, and partly practical. The examinations take place twice in the year, in the Michaelmas and Easter terms.

The First Examination is divided into two parts: 1. Chemistry and other branches of Physics; 2. Elementary Biology. These two parts may be taken together or separately. Before admission to this examination the candidate must have passed (or obtained exemption from) the Previous Examination. He must also produce certificates of diligent attendance on a course of lectures in Chemistry, and on practical instruction in Chemical Manipulations.

The Second Examination is divided into two parts, which may be taken together or separately: 1. Human Anatomy and Physiology; 2. Pharmaceutical Chemistry. Before admission to this examination the student must have passed both parts of the First Examination, must have attended hospital practice, and have practised dissection, during six months, and must produce certificates of diligent attendance on a course of lectures on each of the following subjects: 1. Human Anatomy; 2. Physiology.

The Third Examination is divided into two parts, called the First part and the Second part respectively. Before presenting himself for either part, the student must have passed both parts of the Second Examination. The first part includes Principles and Practice of Surgery and Midwifery and Diseases peculiar to Women. The second part includes Pathology, Principles and Practice of Physic, Elements of Hygiene, Medical Jurisprudence, and Mental Diseases. The student, before admission to the First part, must produce certificates of attendance on one course of lectures in each of the following subjects: Pathology, Principles and Practice of Surgery, Midwifery; he must have attended a course of Practical Surgery and and acted as dresser or house-surgeon at a recognised hospital for six months; must have attended twenty cases of Midwifery; and must have obtained a certificate of proficiency in vaccination from an authorised vaccinator appointed by the Local Government Board. Before admission to the Second part, he must produce evidence that he has completed the course of medical study and certificates of diligent attendance on one course of lectures in each of the following subjects: Principles and Practice of Physic, Physiological Actions and Therapeutic Uses of Remedies, and Medical Jurisprudence: he must also have attended the Medical and Surgical Practice of a recognised hospital (with clinical lectures), including certain special hospitals and asylums, during three years at least; must have been Clinical Clerk at a recognised hospital for six months at least, or have, subsequently to the completion of his attendance on Hospital Practice, attended to Practical Medicine or Surgery with special charge of patients in a hospital, dispensary, or parochial union, under superintendence of a qualified practitioner, unless the student himself be duly qualified. All candidates must also produce certificates of attendance during three months on (1) practical instruction in Pharmacy and Dispensing, (2) clinical instruction in Fevers at a general or special hospital.

Act.—After these examinations have been passed, an Act must be kept in the schools in the following manner. The Regius Professor of Physic assigns a day and hour for keeping the Act, of which public notice has to be given eight days before. The candidate reads a thesis, composed by himself, on some subject approved by the Professor; the Professor brings forward arguments or objections for the candidate to answer, and examines him orally, as well on questions connected with his thesis as on other subjects connected with medicine of a more general nature. As the Third Examination for the degree of M.B. includes operative and clinical surgery, the degree of Bachelor of Surgery is conferred upon candidates who pass the Final Examination for M.B. without further examination and without the Act.

Doctor of Medicine (M.D.).

This degree may be taken by an M.B. of three years' standing, or by an M.A. of four years' standing, who has been engaged in medical study for five years. In the latter case certificates of attendance on lectures and hospital practice as for the M.B. must be produced, and the examinations for the M.B. must be passed. In either case the candidate keeps an Act by reading a thesis, upon which he is examined, and writes a short extempore essay upon one of four topics (at his choice) relating severally to Physiology, Pathology, Medicine, or State Medicine.

Master in Surgery (M.C.).

This degree is granted to a candidate who has completed all that is required for the degree of B.C. at least two years previously; the candidate is examined in Pathology, Surgery, Surgical Anatomy, and Surgical Operations; the examination is both written and practical.

Dates, Fees, etc.

The dates of examinations are announced early in the Michaelmas and Lent Term. Each candidate pays £2 2s. to the Registrary of the University on giving notice of his intention to offer himself for either part of the First, Second, or

[2] The regulations for Graduates who took the degree of B.M. previous to 1886 differ slightly

Third Examination for M.B. He pays £3 3s. before that for M.C. Schedules defining the range of subjects in the First M.B. Examination, and of the Pharmacy and Pharmaceutical Chemistry in the Second Examination, also schedules for the necessary certificates, and a list of the schools of medicine and hospitals recognised by the University, may be obtained on application to the Registrary of the University, The Registry, Cambridge.

UNIVERSITY OF LONDON.

Degree of M.B.

Every candidate for a medical degree is required to take the degree of M.B. To obtain this degree four examinations must be passed:

Matriculation, held twice a year in January and June. This examination consists of the following subjects; (1) Latin, (*a*) translation of selected authors, (*b*) unseen translation, (*c*) translation of English into Latin, (*d*) Latin grammar; (2) one of the following languages: Greek, French, German, Sanscrit, Arabic; translation and grammar; (3) English Grammar, History (to the end of the 17th century), and Geography; (4) Mathematics, including Arithmetic, Algebra to Quadratic Equations, Geometry, including the subjects of the first four books of Euclid; (5) Mechanics (a general acquaintance with the apparatus by which the elementary principles of Physics can be illustrated and applied must be shown); (6) one of the following branches of science: (*a*) Chemistry, (*b*) Heat and Light, (*c*) Magnetism and Electricity, (*d*) Botany. The full text of the regulations, with schedules in each subject, can be obtained on application addressed to the Registrar of the University of London, Burlington Gardens, London, W. The candidate must be 16 years of age.

Preliminary Scientific (M.B.) Examination.—This examination is held for Pass and Honours in July, and for Pass only in January. It consists of two parts (*a*) Chemistry and Physics, (*b*) General Biology. The examinations are conducted by written papers, *viva voce*, and by practical tests. The two sections may be taken together or separately, and the candidate who passes in one section only, though presenting himself in both, will be credited with the one in which he is successful. Honours may be taken in (*a*) Inorganic Chemistry, (*b*) Experimental Physics, (*c*) Botany, (*d*) Zoology. Particulars as to the conditions of competition for honours and schedules of the subjects, both in the Pass and Honours examination, may be obtained on application to the Registrar, as above.

Intermediate Examination in Medicine.—This examination is held for Pass and Honours in July, and for Pass only in January. The candidate must have completed his nineteenth year, and must, subsequently to having passed the Preliminary Scientific Examination, have been a student in a recognised medical school for at least two years, have dissected for two sessions, have attended courses of Practical Chemistry and Practical Pharmacy, and have attended lectures in a recognised medical school. The subjects of the examination are: Anatomy, Physiology and Histology, Organic Chemistry, Materia Medica, and Pharmaceutical Chemistry. The examination is conducted by written papers, *viva voce*, and by practical examination. The examination in Physiology and Histology may be postponed by candidates who do not sit for honours. Honours may be taken in any one of the subjects of the examination under conditions stated in the *Calendar*, an extract from which containing these particulars, as well as schedules of the subjects, can be obtained from the Registrar.

M.B. Examination.—This examination is held for Pass and Honours in October, and for Pass only in May. The candidate must have passed the Intermediate Examination twenty-one months earlier, must have attended lectures and hospital practice in a recognised medical school for two years, one of which must be subsequent to the Intermediate Examination, must have conducted at least twenty labours, and have acquired proficiency in vaccination. The period between the passing of the Preliminary Scientific and the M.B. Examination must be at least four years. The examination, which is conducted by written papers, *viva voce*, and by practical examination, comprises the following subjects: Pathology, Therapeutics, Hygiene, Surgery, Medicine, Obstetric Medicine, and Forensic Medicine. The candidate must pass in all the subjects, Honours may be taken in Medicine, Obstetric Medicine, or Forensic Medicine.

Degrees in Surgery.

Bachelor of Surgery (B.S.).—This degree is granted to Bachelors of Medicine after an examination held annually in December. The candidate must have attended a course of operative surgery. The examination comprises Surgical Anatomy and Surgery, and the candidate is examined by written papers and clinically, and is required to operate on the dead body. Candidates who pass this examination may be examined in Honours.

Master in Surgery (M.S.).—This degree is granted, after examination, to Bachelors of Surgery of at least two years' standing.

Degree of M.D.

Doctor of Medicine.—The degree of Doctor of Medicine is granted to Bachelors of Medicine of at least two years' standing. The examination comprises Mental Physiology and Medicine, and is conducted by written papers, clinical examination, and *viva voce*. A candidate who presents a thesis approved by the examiners is excused the written examination.

Doctor of Medicine in State Medicine.—This degree is granted to Bachelors of Medicine after examination on producing evidence of having been engaged in the study of State Medicine for at least two years. The examination is the same as for the ordinary M.D., with the exception that State Medicine takes the place of Medicine.

Fees and Scholarships.

The fees are as follows: Matriculation, £2; for the other examinations, in each case, £5. A rejected candidate, on again presenting himself, pays half the fee.

Exhibitions or Scholarships are granted to the first six candidates in the Matriculation Examination, and to the first candidates in honours at all the other examinations.

The Sherbrooke Prize.—This prize, founded by the late Lord Sherbrooke, will in future be awarded triennially for the best essay embodying original research in some branch of natural science. It is open to graduates of not more than five years' standing. The first award will be made in 1895 for an essay in any department of the science of Public Health.

VICTORIA UNIVERSITY.

Colleges.—The Colleges of the Victoria University are Owens College, Manchester: University College, Liverpool; and the Yorkshire College, Leeds.

Entrance.—All candidates for Medical and Surgical degrees must obtain the degree of M.B. in this University. The first step is to pass the Entrance Examination in Arts, or some other examination recognised by the University. The candidate for the Entrance Examination in Arts, who must present a certificate from his last instructor to the effect that he is a proper person to be admitted to the examination, is examined in: (1) Latin; (2) Elementary Mathematics; (3) Elementary Mechanics; (4) English Language, including Grammar and Composition. (5) *One* of the following: i. Greek; ii, French; iii, German; iv. Italian; v. Spanish. Candidates may, by special permission of the Board of Studies, substitute any other modern language for either of the subjects named under (5). Candidates who propose to present themselves in Italian or Spanish, or in a modern language not included in the list, must give notice to the Registrar on or before March 31st in the year in question.

Matriculation.—Before matriculating, which consists in signing the University Register, candidates must produce proof that they are registered students of a College of the University, or of a medical school recognised by it.

Degrees of Bachelor of Medicine and of Surgery (M.B., B.Ch.).

Curriculum and Residence.—Five years must be spent in study at a recognised medical school subsequent to registration as a medical student; of these five years, two must be passed in a college of the University, and one of these two years must be subsequent to passing the first M.B. Examination.

First M.B. Examination.—Candidates must have attended during at least one year courses of lectures and laboratory work in each of the subjects of the examination—namely: Part I. (*a*) Physics: (*b*) Chemistry). Part II. Physiology (Animal and Vegetable Morphology, Physiology, and Laboratory work). The two parts may be taken together or separately.

Second M.B. Examination.—Candidates must have attended winter courses in Anatomy and Physiology, and a summer course in Materia Medica and Pharmacy, must have dissected for two winter sessions and one summer, and must have had practical instruction in Physiology and in Materia Medica and Pharmacy. The subjects of the examination are: (1) Anatomy; (2) Physiology; (3) Materia Medica and Pharmacy: (3) may be passed separately.

Final M.B. Examination.—Candidates must produce certificates of having attended, in a recognised medical school, courses of instruction in all the subjects of the examination, which are:—Part I.: (*a*) Pharmacology and Therapeutics, (*b*) General Pathology and Morbid Anatomy, (*c*) Forensic Medicine and Toxicology and Hygiene. Part II.: (*d*) Obstetrics and Diseases of Women. (*e*) Surgery, (*f*) Medicine (including Mental Diseases and Diseases of Children). The two parts may be taken separately, and any one of the subjects of Part I. may be deferred and taken with Part II.

DEGREE OF DOCTOR OF MEDICINE (M.D.).

A candidate must have obtained the degree of M.B. at least one year previously. He must present a printed dissertation, and may be examined on any subject connected therewith.

DEGREE OF MASTER OF SURGERY (CH.M.).

A candidate must have obtained the degree of M.B. at least one year previously, must have been engaged in the study of Practical Surgery in the interval, and have held a surgical appointment for not less than six months in a hospital or other public institution. He must also produce certificates of having attended special courses in Operative Surgery, Surgical Pathology, and Ophthalmology.

FEES AND DATES OF EXAMINATION.

Entrance examination, £2; re-examination after failure, £1. First, Second, and Third M.B. Examinations, each, £5; re-examination after rejection, £2. M.D., £10. Ch.M., £5 on examination, and £5 on the conferring of the degree.

The entrance examination in Arts is held in June and September. The First M.B. Examination is held in June (Part I.) and July (Part II.), and also in September. The Second and Final M.B. Examinations are held in March and July, and that for the Ch.M. in July.

UNIVERSITY OF DURHAM.

The University of Durham grants six degrees in the medical faculty—M.B., M.D., B.S., M.S., B.Hy., D.Hy. The degrees of M.D., B.S., and M.S. are granted only to graduates M.B. of the University. The degrees B.Hy. and D.Hy. are granted under certain conditions to registered medical practitioners (see page 495). The University also grants Licences in Medicine and Surgery, the Licence in Sanitary Science, and the Diploma in Public Health. It is hardly necessary to say that every student intending to attend the University of Durham College of Medicine (Newcastle-on-Tyne) would do well to pass the necessary examination in general knowledge, and qualify himself to obtain the degrees of the University.

DEGREE OF BACHELOR IN MEDICINE (M.B.).

Preliminary Examination in Arts.—A candidate must (*a*) pass the Preliminary Examination in Arts for the degrees in Medicine of the University of Durham, or (*b*) be a graduate in Arts of the University of Durham, Oxford, Cambridge, London, Dublin, Queen's University (Ireland), Edinburgh, Glasgow, St. Andrews, Aberdeen, Calcutta, Madras, Bombay, McGill (Montreal), Queen's College (Kingston), the Victoria, or the Royal University of Ireland, or (*c*) must have passed the Preliminary or Extra-professional Examination for graduation in the University of Cambridge, London, Edinburgh, Glasgow, St. Andrews, Aberdeen, Queen's (Ireland), the Victoria, or Royal (Ireland), or (*d*) have passed the Preliminary Examination in Arts which, until 1881, qualified for the F.R.C.S.Eng. Particulars as to the Preliminary Examination of the University of Durham (*a*) can be obtained from Mr. A. Beanlands, the University, Durham, to whom the fee (£1) is payable.[1]

[2] In addition to the Certificate of Registration, the candidate must produce a certificate of having passed the Preliminary Examination in Arts for the Degrees in Medicine of the University of Durham, unless he shall have, previously to passing the Final Professional Examination, graduated in Arts at one of the following Universities: Oxford, Cambridge, Durham, London, Victoria (Manchester), Edinburgh, Aberdeen, Glasgow, St. Andrews, Dublin, Queen's University, Royal (Ireland), Calcutta, Madras, Bombay, McGill College (Montreal), Sydney, and Melbourne. This examination is held twice yearly, in March and September, at the same time as the Registration Examination. The next examination will be commenced on September 25th, 1894.

Curriculum.—The curriculum extends over five years, of which one at least must be spent in attendance at the University of Durham College of Medicine, Newcastle-on-Tyne, and in the clinical practice of the Royal Infirmary there. Students are recommended to carry out the curriculum on some such plan as the following:—

First Winter: Anatomy, Dissections, Chemistry, Physics. First Summer: Practical Chemistry, Practical Physics, Practical Physiology, Elementary Biology, Dissections.

Second Winter: Anatomy, Physiology, Dissections. Second Summer: Practical Physiology, Practical Pharmacy, Materia Medica, Therapeutics and Pharmacology, Dissections.

Third Winter: Medicine, Surgery, Hospital Practice, with Clinical Lectures, Midwifery and Diseases of Women and Children, Practical Midwifery. Third Summer: Pathology, Practical Pathology, Medical Jurisprudence, Hospital Practice, with Clinical Lectures.

Fourth Winter: Medicine, Surgery, Regional Anatomy, Public Health, Hospital Practice, with Clinical Lectures. Fourth Summer: Mental Diseases, Operative Surgery, Hospital Practice, with Clinical Lectures.

Fifth Winter: Infectious Diseases and Clinical Lectures. Fifth Summer: Clinical Lectures.

Professional Examinations.—There are four professional examinations conducted in writing practically and *viva voce*, each held twice a year (April and September). *First Examination:* Elementary Anatomy and Biology, Chemistry, Physics. *Second Examination:* Anatomy, Physiology, Materia Medica, Therapeutics, and Pharmacology. *Third Examination:* Medicine, Surgery, Pathology, Medical Jurisprudence, Public Health, Practical Pharmacy. *Final Examination:* Clinical Medicine and Surgery, Midwifery, and Diseases of Women and Children. The *Calendar* of the University of Durham College of Medicine, Newcastle-on-Tyne, contains synopses of the subjects of the examinations and examination papers. Applications for further information should be addressed to Henry Fox, R.N., at the College. A candidate who has passed the First Examination of the Conjoint Board in England of the Royal College of Physicians of London and the Royal College of Surgeons of England, will be exempt from the First Examination of the University of Durham except in the subjects of Chemistry and Physics.[3] Candidates who hold a qualification from a recognised licensing board in the United Kingdom at the date of entry for the First Examination for the Degrees in Medicine are in every case required to pass in Chemistry with Chemical Physics; and are also required to pass in Botany with Medical Botany, if they have not previously passed in that subject at one or other of their examinations for qualification; but they are exempt from examination in Elementary Anatomy and Phy-

[1] Candidates from Indian Universities must have passed a Matriculation Examination at one of the Indian Universities, and will have to reside for one academic year at the University of Durham College of Medicine, at Newcastle-upon-Tyne, before presenting themselves for the M.B. Degree Examination, in accordance with the regulation on page 56 of the *Calendar*. If the Matriculation Examination at the Indian University did not embrace Latin, and Persian, or Sanskrit, then it will be necessary for the candidate, in addition, to produce evidence that he has passed in Latin and one of these subjects, or in Greek, within twelve months of his presenting himself for the Examination for the Degree in Medicine.

[2] This regulation applies to all students who shall have been registered by the General Medical Council after October 1st, 1895.

[3] A candidate who has passed the First and Second Examinations of the University will be exempt from the First and Second Examinations of the Conjoint Board in England, and will be entitled to present himself for the Final Examination of the Board on the completion of the necessary curriculum.

siology.[1] Candidates who have completed part of their curriculum elsewhere may pass their First and Second Examinations *previously* to entering at Newcastle-upon-Tyne.

Degree of Doctor of Medicine (M.D.).

A candidate for this degree must have been engaged in practice for at least two years subsequent to obtaining the degree of M.B. in the University of Durham. The candidate is required to write an essay based on original research or observation, and is subjected to examination on the topic of his essay. For particulars as to the degree of M.D. for medical practitioners of fifteen years' standing, without curriculum, see page 495.

Degrees in Surgery.

Bachelor of Surgery.—A candidate must have passed the examination for the degree of M.B.(Dunelm), and have attended courses of lectures on Operative Surgery and on Regional Anatomy. He is required to perform operations on the dead body, and to show practical acquaintance with the use of surgical instruments and appliances.

Master in Surgery.—A candidate must have obtained the degree of B.S.(Dunelm) at least two years previously, and have been engaged in practice for that period. The subjects of the examination are: Surgery (Pathology, Anatomy, and Operations and Clinical).

Licenses in Medicine (L.M.) and Surgery (L.S.)

Particulars as to the conditions under which these licences may be obtained will be found in the College *Calendar* above cited. Intending students are strongly recommended to proceed to degrees in the University, and not to seek the licences.

Degrees in Hygiene (B.Hy., D.Hy.).

For the regulations as to these degrees, see page 495.

Fees.

Preliminary Arts Examination for Degrees, £1. First, Second, and Third Professional Examinations (M.B.), each £5. Final (M.B.), £10. Examination for the degrees of M.D., B.S., and M.S., each £5. In addition to the University of Durham for each degree, £6. For the Licences in Medicine and Surgery, each £3.

THE ENGLISH COLLEGES.

The Medical Corporations in England are the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Society of Apothecaries of London. The two Royal Colleges now co-operate to hold a series of examinations, on passing which the candidate receives the diploma of Licentiate of the Royal College of Physicians (L.R.C.P.), and Member of the Royal College of Surgeons (M.R.C.S.). The Society of Apothecaries grants its diploma separately.

CONJOINT EXAMINING BOARD IN ENGLAND.

A candidate who desires to obtain the licence of the Royal College of Physicians of London and the diploma of Member of the Royal College of Surgeons of England is required to pass four professional examinations, and to produce evidence of having passed through a stated course of instruction at a recognised medical school. The candidate must pass an examination in Preliminary Education before entering the medical school (see page 462), and must register as a medical student within fifteen days of entering such school. Except in the case of Chemistry and Physics, Practical Chemistry, Practical Pharmacy, and Elementary Biology, professional studies commenced before registration will not be recognised.

First Professional Examination.

The examination consists of four parts: (1) Chemistry and Physics, (2) Practical Pharmacy, (3) Elementary Biology, (4) Elementary Anatomy.

[1] All candidates for the First Examination for the Degrees in Medicine, whether exempt from a portion of it or not, are required to pay the full fee—£5.

A candidate may take this examination in four parts at different times, or he may present himself for the whole at one time. A candidate will be admitted to examination in Chemistry and Physics, and Practical Chemistry and Elementary Biology before registration as a medical student by the General Medical Council, *and he may take Practical Pharmacy as part of the Third Examination*; but he will not be admitted to the examination on Elementary Anatomy earlier than the end of his first winter session, or than the completion of his first six months' attendance at a recognised medical school during the ordinary session, that is, exclusive of the months of April, August and September.

A candidate is required to produce evidence of having received instruction in each of the above-mentioned subjects. A candidate referred in any part or parts will not be admitted to re-examination for three months. If referred in Chemistry, Biology, or Anatomy he must produce evidence of further instruction. A candidate who produces evidence of having passed an examination for a degree in Medicine on any of the subjects of this examination at a university in the United Kingdom, India, or a British colony will be exempt from examination on the subjects in which he has passed.

Second Professional Examination.

The subjects of this examination are Anatomy and Physiology, and both must be passed at the same time. A candidate must have passed the First Examination at least six months earlier, and have attended during two winter sessions and one summer session at a recognised medical school lectures on Anatomy, Physiology, and a course of Practical Physiology and Histology, and have dissected for twelve months during the ordinary sessions. If rejected a candidate, before being admitted to re-examination, must continue his studies for not less than three months.

Third Professional Examination.

This examination consists of three parts: Part I, Medicine, Pathology, Pharmacology, Therapeutics, Forensic Medicine, and Public Health; Part II, Surgery; Part III.[1] Midwifery and Gynæcology. The examination may be passed at one time or in each part separately. Evidence of attendance at courses of instruction in the subjects of the three parts must be produced, and also of attendance on twenty labours. The candidate must have passed the Second Examination two years previously, and have been registered as a medical student for at least four years. A rejected candidate must produce evidence of further instruction during three months.

Final Professional Examination.

The subjects of this examination are Clinical Medicine and Clinical Surgery, which must be passed at the same time. The Third Examination must have been passed one year previously, and the candidate must have been registered as a medical student for five years. A rejected candidate must produce evidence of three months' further hospital practice.

All applications with reference to the examinations for the Licence of the Royal College of Physicians of London and to the Diploma of Member of the Royal College of Surgeons of England, should be addressed to the Secretary, Examination Hall, Victoria Embankment, London, W.C. (telegraphic address, "Conjoint," London), from whom also synopses of some of the subjects can be obtained.

Regulations for Colonial, Indian, or Foreign Candidates, and University Candidates.

A person holding a Colonial, Indian, or foreign qualification is admissible to the Second, Third, and Final Examinations without any interval. Members of an English, Scotch, or Irish University are under certain conditions eligible for admission for the Third and Final Examination, without any intervals between them, two years after passing at his University the subjects included in the First and Second Examination of the Board.

A Doctor or Bachelor of Medicine or Surgery of an Indian or Colonial University recognised for the purpose, who shall have passed at his university in the subjects of the First and Second Examination will be eligible for admission to

[1] May be deferred to Final Examination.

Third and Final Examinations two years after passing in the said subjects.

Fees, Dates, etc.

First Examination, £10 10s. Re-examination, Part I, £3 3s., Parts II, III, IV, each £2 2s. *Second Examination*. £10 10s. Re-examination. £6 6s. *Third Examination*, £10 10s. Re-examination. Part I. Medicine, £3 3s.; Pharmacology, £1 1s.; Practical Pharmacy, £2 2s. Part II, £3 3s. Part III, £3 3s. *Final Examination*, £5 5s. Re-examination, £5 5s. Clinical Medicine only, £2 12s. 6d.; Clinical Surgery only, £2 12s. 6d.; Midwifery and Gynæcology, £3 3s. Members of an English, Scottish, or Irish University: For each examination, £5 5s.; for the diplomas, £26 5s.

The examinations are held in January, April, July, and October. A book of questions set at the several examinations is published annually, and can be obtained from Messrs. Taylor and Francis, Red Lion Court, Fleet Street, London, E.C.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Licentiates.—Candidates are now subject to the regulations of the Conjoint Examining Board in England.

Members.—The Membership of the College is granted after examination to persons above the age of 25 years who do not engage in trade, do not dispense medicine, and do not practise in partnership.

Medical graduates of a recognised university are admitted to a pass examination, but others must have passed the examinations required for the licence of the College. The examination, which is held in January, April, July, and October, is partly written and partly oral. It is directed to Medicine, and is conducted by the President and Censors. Candidates under 40, unless they have obtained a degree in Arts in a British University, are examined in Latin, and either Greek, French, or German. Candidates over 40 are not so examined, and the Examination in Medicine may in their case be modified under conditions to be ascertained by application to the Registrar. The fee for the Membership is £31 10s., but if the candidate is a Licentiate the fee is £15 15s. In either case £6 6s. is paid before examination.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Membership.—The candidates are now subject to the regulations of the Conjoint Board.

Fellowship.—The Fellowship of the College of Surgeons is granted after examination to persons at least 25 years of age, who have been engaged in professional studies for six years. There are two examinations—the first in Anatomy and Physiology, which may be passed after the third winter session; the second, chiefly directed to Surgery, which may be passed after six years of professional study. A graduate in Arts of a recognised university may pass the examination after five years of professional study. The Second Examination may be passed before attaining the age of 25, but the diploma is not granted until that age is reached.

Fees.—At First Examination: Members, £5 5s.; non-Members, £10 10s.: £5 5s. returned if rejected. At Second Examination: Member, £10 10s.; if not a Member, £21. In latter case £10 10s. is returned in case of rejection. Further information can be obtained on application to the Secretary of the Royal College of Surgeons, Lincoln's Inn Fields, London, W.C.

SOCIETY OF APOTHECARIES OF LONDON.

The Society holds a special preliminary examination in Arts,[1] but other examinations in Arts recognised by the General Medical Council are accepted. The subjects of the Society's examinations, which are held in the first weeks of March, June, September, and December, are English, Latin, Mathematics, Elementary Mechanics, and one of the following subjects at the option of the candidate—Greek, French, German, Italian, Logic, Botany, Elementary Chemistry. In accordance with the regulations of the General Medical Council, in the case of candidates who have passed one or more subjects previous to January, 1892, the subjects may be passed at one or more examinations, and no subject passed before any recognised examining body need be taken up again for the purpose of registration. Candidates who have passed nothing before January, 1892, must take all subjects at one examination. Medical study before registration as a medical student does not count in the curriculum, with the exception of Chemistry. Materia Medica, Pharmacy, and Dispensing. A form of notice accompanying the regulations has to be filled up by the candidate, and sent with the fee (£1 1s.) fourteen days before the examination. Those who desire can present themselves for examination in special subjects. The fee for each special subject is £1 1s. A pass list is published and sent to every candidate. The regulations as to the curriculum are framed in accordance with the directions of the General Medical Council, and the student who was not registered until on or after January, 1892, is required to spend five years after the date of registration as a medical student. There are three professional examinations. (The Examiners in Surgery are nominated by the General Medical Council.)

Primary Examination.—This examination consists of two parts: Part I.—Elementary Biology, Chemistry, the Principles of the Science which bear on the study of Medicine; Chemical Physics, including the Elementary Mechanics of Solids and Fluids; Heat, Light, and Electricity; Practical Chemistry, Materia Medica, Pharmacy and Prescriptions. A synopsis indicating the range of the subjects may be obtained on application. The examination may be passed any time after registration as a medical student. Evidence of instruction which may have been received prior to registration must be produced. Part II.—Anatomy and Physiology and Histology. The candidate must have completed twelve months' Practical Anatomy. A candidate rejected in one or more subjects is not re-examined in the subjects in which he passed. The examination is held in January, April, July, and October.

Intermediate Examination.—This examination consists of two parts: Part I, Surgery and Surgical Pathology and Anatomy; Part II, (A) Medicine, Therapeutics and Pharmacology, Pathology; (B) Forensic Medicine, Hygiene, Vaccination, and Mental Disease. Candidates passing in either of the sections, A or B, will not be re-examined therein. The candidate must have been a medical student at a recognised school for not less than three winter and two summer sessions, and must have been registered for forty-five months. This examination is held monthly.

Final Examination.—This examination consists of three parts: Part I, Practical Surgery and Surgical Anatomy; Part II, Clinical Medicine and Medical Anatomy; Part III, Midwifery, Gynæcology, and Diseases of Newborn Children. This examination, which is held monthly, cannot be passed before the end of the fifth year.

Fees.—The fee for each examination is £5 5s., total for the licence, £15 15s.: Re-examination—Primary, for each Part, £1 1s.; Intermediate, for each Part, £3 3s.; Final, for each Part, £3 3s.

Further information, with particulars as to the course of study, curriculum (both of the four years and five years' curriculum respectively), and of the certificate required, can be obtained from the Secretary to the Court of Examiners, Apothecaries' Hall, E.C.

The licence is a registrable diploma in Medicine, Surgery, and Midwifery, and qualifies the holder to compete for medical appointments in the Army, Navy, and Indian Services, also for Poor-law, Civil, and Colonial appointments.

[1] The General Medical Council has recommended that this examination should be discontinued, but the Society has not adopted the recommendation.

At the Yorkshire College arrangements have been made for a summer course in Practical Bacteriology and for a systematic course for the D.P.H. Dr. Trevelyan has become Professor of Pathology and Mr. H. Littlewood Demonstrator of Surgical Pathology.

At St. George's Hospital Dr. Dickinson, who has been appointed Consulting Physician and Baillie Lecturer in Physic, is succeeded as Physician by Dr. Isambard Owen, and to the vacancy thus created Dr. Lee Dickinson has been appointed as Assistant Physician. Mr. J. Addyman Gardner has been appointed Lecturer on Chemistry, and Mr. Jaffrey Demonstrator of Anatomy. Dr. Remfry has been appointed Assistant Obstetric Physician.

THE SCOTTISH UNIVERSITIES.

It will be convenient to give the regulations for Edinburgh more in detail, and then briefly indicate points of difference as regards the other three Universities.

UNIVERSITY OF EDINBURGH.

The new regulations apply to all who begin their studies after October 1st, 1892.

Four degrees in Medicine and Surgery exist—namely, Bachelor of Medicine, Bachelor of Surgery, Doctor of Medicine, and Master of Surgery. The degree of M.B. is not conferred separately from Ch.B., and *vice versâ*; but M.D. and Ch.M. are separable.

Preliminary Examination.

This must be passed before beginning medical study; the subjects are: (1) English, including Grammar (analysis, parsing, derivation, and correction of sentences), Composition, Literature (general knowledge of life and works of the greater writers, and a more special knowledge of the works of two or three),[1] Geography (general knowledge of the world, and special of the British Empire), History[2]; (2) Latin, Translation, and Parsing, Prose Composition, Grammar, and Sentences; (3) Elementary Mathematics, Arithmetic, Algebra, and Geometry, Euclid, Books i. ii, and iii (or their equivalents with easy deductions); (4) Greek or French or German—Translation and Parsing, Sentences and Grammar.

Excellence in one or more subjects will in some measure compensate for deficiency in others. The examination is conducted by a Joint Board of the four Universities, and will be held from September 29th to October 3rd, 1894, and from March 30th to April 3rd, 1895, and these dates apply to all the Scottish universities. The standard of examination corresponds pretty nearly to the leaving certificate of the Scotch Education Department, or the lower certificate of the Oxford and Cambridge Schools. The whole examination must be passed at one time, save in the case of those who had already passed part under the old regulations. The examinations of a large number of bodies are taken as equivalents of the Preliminary; these will be found on page 581 of the University Calendar (Regulations of the Joint Board of Examiners). The fee is 10s. 6d. each time, and is payable to T. Gilbert, the University Clerk, ten days before the examination.[3]

(*Note.*—It is particularly important that the candidate should observe that: (1) The entire examination must be passed at one and the same time. (2) The examinations in Latin, Greek, French, and German will be wholly on "unseen" passages, no special authors having been prescribed by the Joint Board.)

Registration.

The student must register within fifteen days after the commencement of medical study. There is no fee. Forms and information may be had from Mr. James Robertson, 1, George Square, Edinburgh, or at the office of the Faculty of Medicine.

Professional Education.

The course extends over five years. During the first four the student must attend Elementary Botany, Elementary Zoology, Physics, Practical Chemistry, Practical Physiology, Practical Pathology, and Medical Jurisprudence and Public Health during courses of not less than 2½ months each; Practical Anatomy during two courses of not less than 5 months each; Chemistry, Anatomy, Physiology, Pathology, Surgery, Materia Medica and Therapeutics, Medicine, and Midwifery, and the Diseases of Women and Infants, during courses of not less than 5 months each. During the fifth, or final year, he must be engaged in clinical study for at least 9 months, and must attend a 9 months' course in Clinical Medicine and in Clinical Surgery. In all, before graduation he must have attended, for at least three years, a hospital which accommodates not fewer than 80 patients, and possesses a distinct staff of physicians and surgeons, and he must have acted as clerk in the medical and dresser in the surgical wards of such a hospital, or the practice of a dispensary, or of a physician or surgeon. He must have had approved opportunities of studying at a hospital *Post-mortem* Examinations, Fevers, Diseases of Children, and Ophthalmology. He must have attended a course of 25 meetings on Practical Pharmacy, a course on Mental Diseases, been properly instructed in Vaccination by a certified public vaccinator, have attended 12 cases of labour, or had 3 months' attendance at a lying-in hospital, and have personally conducted 6 cases. Certificates for these various courses must attest regular attendance and due performance of the work of the class. The fees vary from 1 to 4 guineas for each class, and the total minimum cost in class, examination, and other fees for M.B. and Ch.B. may be set down as £150. Two of the five years' course must be taken in the University of Edinburgh. For students beginning their course in winter there may be given the following minimum curriculum for the degrees of M.B. and Ch.B., with suggested order of study and examination:

First Winter Session: Chemistry, including Practical Chemistry, Physics,[4] or Elementary Zoology. Anatomy (Lectures), Examination in Chemistry, including Practical Chemistry, and either Physics or Elementary Zoology. First Summer Session: Elementary Zoology or Physics.[4] Elementary Botany. Examination in Elementary Botany and Elementary Zoology or Physics.

Second Winter Session: Practical Anatomy, Physiology, Surgery. Second Summer Session: Practical Physiology, Practical Materia Medica, Clinical Surgery (with Dressership), Hospital.

Third Winter Session: Materia Medica, Practical Anatomy, Clinical Surgery (with Dressership), Hospital, Examination in Anatomy, Physiology, and Materia Medica and Therapeutics (the last may be postponed to the end of the following summer). T[illegible]

Pathology, Medical Jurisprudence and P[illegible]

Hospital, Examination in Materia Medi[illegible] viously taken).

Fourth Winter Session: Pathology, Medicine, Midwifery and Diseases of Women and Children, Clinical Med[illegible] Hospital. Examination in Pathology, and Medical Jurisprudence and Public Health (the latter may be postponed to the end of the following summer). Fourth Summer Session: Examination in Medical Jurisprudence and Public Health, if not previously taken.

Fourth Summer and Fifth Winter Session: Cli[illegible]ine, Clinical Surgery, Mental Diseases, Ophth[illegible]inations, Fevers, Diseases of Children, [illegible]spensary, etc., Midwifery, Casebook and Practice, Vaccination, Hospital.

Fifth Summer Session: Examination in Surgery and Clinical Surgery, Medicine and Clinical Medicine, and Midwifery.

Professional Examinations.

These are four in number, and the first three may be taken in sections as indicated above.

First.—Botany, Zoology, Physics, Chemistry, taken any time after the full specified course in these subjects.

Second.—Anatomy, Physiology, Materia Medica, and Therapeutics, at the end of the third winter.

Third.—Pathology, Medical Jurisprudence, and Public Health, at the end of the fourth winter.

Final.—Surgery, Clinical Surgery, Medicine, Clinical Medicine, and Midwifery, at the completion of the fifth year.

Failure in one subject does not involve failure in the other subjects of that division. Candidates must be 21 years of age before admission to the degrees of M.B. and Ch.B.

Examination Fees for M.B. and Ch.B.

[illegible]

	£	s.	d.
Preliminary	[illegible]		
First Professional	[illegible]		
Any two Subjects of Ditto...	[illegible]		
Second Professional	[illegible]		
Anatomy and Physiology ...	[illegible]		
Materia Medica, etc.:	[illegible]		
Third Professional	[illegible]		
Final	[illegible]		

Degree of M.D.

The candidate must be M.B. and Ch.B. of Edinburgh must have been engaged for one year in the medical wards of

[illegible]

[1] For next October these specially cited are Shakespeare's *Merchant of Venice*, and Scott's *Kenilworth*. For April, 1895, Shakespeare's *Julius Cæsar*, and Scott's *Fortunes of Nigel*.

[2] For October, 1894, the outlines of the history of both England and Scotland from the accession of James VI to the Union of the kingdoms: and for April, 1895, from the Union of the kingdoms to the Reform Bill of '32.

[3] A student whose native language is not English may substitute his own language for either French or German, and may substitute any other classical language for Latin or Greek.

[4] Three months' course.

a hospital, or at scientific work in a recognised research laboratory, or in the military or naval medical services, or for at least two years in general practice, and must be 24 years of age. He must write a thesis on a subject not exclusively surgical, and he will be examined in Medicine, and in some of its special departments. The fee is £10 10s., and the stamp duty £10.

DEGREE OF CH.M.

The candidate must be M.B. and Ch.B. of Edinburgh, have worked one year in the surgical wards of a hospital, or been engaged in scientific work, or in the military and naval medical services, or for at least two years in practice not confined to medicine. He must be 24, must submit a thesis on a subject not exclusively medical, will be examined on Surgical Anatomy, Operations on the Dead Body, Clinical Surgery, and some of its special departments. The fee is £10 10s.

For further details the student is referred to the *University Calendar* (published by Mr. Thin, South Bridge, Edinburgh, price 3s., post free 3s. 6d.), or the medical *Programme*, price 2d., also published by Mr. Thin, or to the Dean of the Faculty of Medicine, University of Edinburgh.

UNIVERSITY OF GLASGOW.

The new regulations came into force on January 1st, 1892. They are essentially the same as those given above for Edinburgh.

PRELIMINARY EXAMINATION.

The dates of the next two Examinations are the same as those given under Edinburgh. Fee, 10s. 6d. each time. Names to be given in and fee paid by September 13th, 1894, and March 11th, 1895, to the Assistant Clerk, Matriculation Office. The extent of the examination will be found under Edinburgh.

REGISTRATION.

Printed form of application may be had from the Assistant-Clerk at the Matriculation Office, and this must be transmitted to Mr. James Robertson, Scottish Branch Registrar, 1, George Square, Edinburgh.

PROFESSIONAL EDUCATION.

The same minimum cost is about £126, and the course is the same as at Edinburgh.

FEES, ETC.

The total examination fees for M.B., Ch.B. are the same as for Edinburgh, but are differently distributed. The fee for the First and Second is £6 6s., and for the Third and Fourth £5 5s. each. In the event of a candidate being rejected in any of these he may be admitted once to re-examination without payment of further fee, but for a second and for each subsequent re-examination a fee of £2 2s. is charged.

For further details the student is referred to the *Glasgow University Calendar* for 1894-95, published by James Maclehose and Sons, 61, St. Vincent Street, Glasgow, price 3s., post free 3s. 6d. (see also p. 483).

Queen Margaret College, which provides a course of instruction for women, has now been affiliated with the University. For course of study, etc., see p. 483.

UNIVERSITY OF ABERDEEN.

The new regulations came into force at the beginning of the winter session of 1892-93. They are essentially the same as for Edinburgh.

PRELIMINARY EXAMINATION.

The next preliminary Examinations will be held on precisely the same dates as are given under Edinburgh, and the subjects are the same. Names must be intimated and the fee paid ten days previous.

PROFESSIONAL EDUCATION.

The University Court has ordained that the candidate before admission to his Final Examination must produce certificates to the effect that he has acted for a period equal to a winter session both as a Clinical Clerk and Surgical Dresser, that he has attended not fewer than twenty-five necropsies, and taken part in some; that he has attended for at least three months a fever hospital of at least forty patients, and has had a three months' course on Disease in Children, and the same in Ophthalmology. The total minimum cost for M.B. and Ch. B. is about £115.

The fees for Professional Examinations are: Preliminary, 10s. 6d.; First, Second, and Third, £5 5s. each; Final, £7 7s. The fees for second and subsequent examination have apparently not yet been adjusted.

Further information will be given by the Secretary of the Medical Faculty, or will be got in the *University Calendar* for 1894-95, published by A. King and Co., Aberdeen; price 2s. 6d. or post free, 2s. 11d.

UNIVERSITY OF ST. ANDREWS.

The new regulations, in so far as they are applicable to the University of St. Andrews, have not yet received the approval of Her Majesty in Council, and are consequently subject to alterations in detail. They are expected to come into force on October 1st, 1894.

PRELIMINARY EXAMINATION.

Although the new regulations are not yet in force, students now beginning their medical studies are recommended to take the examination under these regulations, as given above under Edinburgh, instead of that prescribed by the old regulations, and in any case the whole examination must be taken at once. The dates and subjects of examination are the same as those given for Edinburgh. Applications for an Examination Schedule must be made to the Secretary of the University, and that must be filled up and returned, along with the fee of 10s. 6d., to the Dean by September 24th, and for Spring, 1895, by March 25th, 1895.

REGISTRATION.

Forms may be had from the Dean, or from the Branch Registrar for Scotland, named under Edinburgh.

This registration in the books of the General Medical Council is not to be confounded with Matriculation or other registration in the books of the University.

PROFESSIONAL EDUCATION.

This extends over five years from the date of registration. Two of the five years of medical study must be spent in the University of St. Andrews, the remaining three years may be spent in any University of the United Kingdom, or in any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such medical schools or under such teachers as may be recognised for the purpose by the University Court. The total minimum cost will depend on the fees of the various schools where parts of the course have been taken. The University of St. Andrews has not in itself a completely equipped medical school, but by being in 1890 affiliated to University College, Dundee, its scope and possibilities were greatly enlarged. Unfortunately the validity of the affiliation agreement is being brought under review in the law courts, and the growth and consolidation of the school are thus, temporarily at least, interfered with. As the Principal of Dundee College says in his report of July 31st last, "the distrust of our status and qualifying powers induced by the regrettable attempt to repudiate a contract deliberately entered into has operated very prejudicially on the numbers of the students."

PROFESSIONAL EXAMINATIONS.

When the new regulations come into vogue these will be the same as in the University of Edinburgh. It is not now necessary to refer to the scheme under the old regulations.

EXAMINATION FEES.

For M.B. and Ch.B. the total fee will be 22 guineas, but the proportion for each examination has yet to be determined by the University Court.

DEGREES OF M.D. AND CH.M.

The regulations and fees for these will be found under Edinburgh.

Further information will be given by the Dean of the

Faculty of Medicine, or will be found in the *University Calendar* for 1894-95, published by William Blackwood and Sons, 45, George Street, Edinburgh, price 2s. 6d., or post free 2s. 11d.

THE SCOTTISH COLLEGES.

The three medical corporate Colleges in Scotland—the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons in Glasgow—now co-operate to hold a series of examinations, after passing which the student is presented with the diplomas of all three Colleges. Each College grants its single qualification only to persons who already possess another and opposite qualification (see below).

CONJOINT EXAMINATION.

A candidate who passes this series of examinations is granted the diploma of each of the co-operating bodies, and is entitled to register the three diplomas under the Medical Acts, and to write after his name—L.R.C.P.Edin., L.R.C.S. Edin., and L.F.P.S.Glasg.—qualifications which are recognised by the army, navy, and other public services.

Preliminary Examination.

The Educational Institute of Scotland conducts special preliminary examinations in Edinburgh and Glasgow for the the Colleges. Full particulars may be obtained from Thomas Morrison, LL.D., Free Church Training College, Glasgow, Secretary to the Examining Board of the Institute; or to Alex. Mackay, LL.D., 10A, South Saint Andrew Street, Edinburgh, Treasurer of the Institute. Certain other preliminary examinations, of which a list may be obtained on application, are also accepted. The entire examination must be passed at one period.

Professional Curriculum.

The course of study after registration as a medical student must occupy not less than forty-five months, which period shall include not less than four winter sessions' attendance.[1] Professional studies commenced before registration will not be recognised, except in the case of Physics, Elementary Biology, Chemistry, Practical Chemistry, and Practical Pharmacy: but graduates in arts or science of any recognised University, who have spend a year in the study of Physics, Elementary Biology, and Chemistry, and have passed examinations in these subjects for their degrees, are held to have completed the first year of medical study. The fifth year must be devoted to practical clinical work, and six months of this year may be spent as a pupil of a registered practitioner.

The following order of study is recommended as conforming generally to the sequence of examinations, but is not imperative:

First Summer: Physics, Elementary Biology. First Winter: Chemistry, Practical Chemistry, Junior Anatomy, Dissections. Second Summer: Histology, Dissections. Second Winter: Anatomy, Dissections, Physiology. Third Summer: Pathology, Materia Medica. Third Winter: Dissections, Surgery, Hospital Practice, with Clinical Surgery. Fourth Summer: Midwifery and Gynæcology, Medical Jurisprudence and Hygiene, Hospital Practice, with Clinical Surgery. Fourth Winter: Medicine, Hospital Practice, with Clinical Medicine. Fifth Summer: Clinical Medicine, Insanity, Practical Midwifery, Eye Diseases. Fifth Winter: Hospital Practice, Dispensary, Fevers, Vaccination.

Students are also recommended to study in the fifth year the following subjects: Operative Surgery, Diseases of Children, Ear and Throat, Skin.

Professional Examinations.

During the five years of the professional curriculum the student has to pass four examinations. Each examination is held six times in each year, four times in Edinburgh, and twice at Glasgow, and a candidate may present himself at either place. He may pass two or more examinations at the same time. The pass mark in each subject shall be 50 per cent. A candidate who obtains 60 per cent. in any subject will be exempted from re-examination in that subject, although he may fail to obtain a pass in the other subjects of examination; and on re-examination he shall be required to obtain 60 per cent. of the conjoined marks in the remaining subjects. Schedules showing the course of study followed must be submitted before the examinations to one or other of the Inspectors of Certificates: in Edinburgh, Mr. James Robertson, Solicitor, 1, George Square; in Glasgow, Mr. Alexander Duncan, B.A., Faculty Hall, 242, St. Vincent Street, to whom all inquiries as to professional examinations should be addressed.

[1] This regulation does not apply to students who commenced medical study before January 1st, 1892.

Table showing the Fees for the Conjoint Examinations in Scotland.

The Figures signify Pounds Sterling.

	Whole Examination.	Re-entry for all Sessions.	Re-entry in one or two Sessions.	Entry for one Session.	Re-entry for one Session.
Preliminary	1	1	—	—	—
Professional, First ...	5	3	2½	2½	2
,, Second ...	5	3	2	—	—
,, Third ...	5	3	2	1	
,, Final ...	15	5	—	6	2

First Examination.—This examination may be passed at any time after registration as a medical student, by any candidate who has attended the obligatory courses. The examination consists of three parts: (1) Physics, (2) Chemistry, (3) Elementary Biology, and each division may be taken separately.

Second Examination.—This examination may be passed at any time after the end of the second year by a student who has attended courses of Anatomy, Physiology, and Dissections for six months each. The subjects of the examination are (1) Elementary Anatomy, and (2) Physiology including Histology. A candidate may pass in one subject while failing in the other.

Third Examination.—The student must have attended Practical Anatomy for twelve months and a course of Pathology and of Materia Medica before presenting himself for this examination, the subjects of which are (1) Advanced Anatomy, (2) Pathology, (3) Materia Medica and Pharmacy. It may be taken in three divisions, or at one time, at any time after the end of the third year.

Final Examination.—The student must be 21, may not pass this examination till the end of the fifth year. The subjects are (1) Medicine, including Therapeutics, Medical Anatomy, and Clinical Medicine: (2) Surgery, including Surgical Anatomy, Clinical Surgery, and Diseases and Injuries of the Eye; (3) Midwifery and Diseases of Women and of Newborn Children; (4) Medical Jurisprudence and Hygiene. Candidates may also be examined on Diseases of Children, Diseases of the Ear and Throat, Insanity, Vaccination, etc. The examination may be taken in divisions or all at once.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

Licence.—The Licence is only granted as a separate qualification (in Medicine) to persons (of either sex) who already possess a recognised British, Irish, Colonial, or Indian qualification in Surgery. A candidate, who must not have been rejected within three months by any Licensing Board, is subjected to written and oral examination in Medicine, Materia Medica, Midwifery, and Medical Jurisprudence. The fee for the examination is £15 15s.: it is held on the first Wednesday and succeeding days of each month except September and October. A special examination can be obtained on showing cause, and paying £5 5s. extra. Eight days' notice must be given by all candidates to the Secretary of the College, from whom further particulars can be obtained.

Membership.—The candidate, who must be a Licentiate of a College of Physicians, or graduate of a British or Irish University, and 24 years of age, is examined in (1) Medicine and Therapeutics, and in (2) one of the following subjects chosen by him: (*a*) One or more departments of Medicine specially professed; (*b*) Psychological Medicine; (*c*) General Pathology and Morbid Anatomy; (*d*) Medical Jurisprudence; (*e*) Public Health; (*f*) Midwifery; (*g*) Diseases of Women.

Further particulars as to other formalities can be obtained from the Secretary. A candidate 40 years of age and ten years in practice may be excused any part of or all the examination by the Council. The fee paid by a Licentiate of the College is £21 if licensed prior to August 1st, 1876, if subsequently, £15 15s. Fee for others, £31 10s. The examination is held quarterly (October, January, April, and July), and application must be made a month previous to the date of examination.

Fellow.—A Member, aged 25, and of at least one year's standing, may be elected a Fellow; he pays £56 10s. (including stamp duty). Women are not yet admitted to the Membership or Fellowship.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

Licence.—The Licence is only granted as a separate qualification (in Surgery) to persons (of either sex) who already possess a recognised British, Irish, Colonial, or Indian qualification in Medicine. A candidate, who must not have been rejected by any other Licensing Board in Surgery within three months, is examined on one day by written papers, and on a subsequent day orally, on specimens in the wards of a surgical hospital, and may be required to operate on the dead body. The fee is £15 15s. of which £10 10s. will be returned to unsuccessful candidates, and is payable to Mr. James Robertson, Clerk to the College, 1, George Square, Edinburgh, from whom further particulars may be obtained, and to whom eight days' notice must be given. A special examination can be obtained on showing cause. The fee is £20, of which £10 will be returned to candidates remitted on examination.

Fellowship.—A candidate must have the diploma of the Royal College of Surgeons of Edinburgh, England, or Ireland, or of the Faculty of Physicians and Surgeons in Glasgow, or the surgical degrees of the Universities of Great Britain and Ireland, must be 25 years of age, and must have been engaged in practice for two subsequent years at least. Candidates who are Licentiates of the Edinburgh Colleges are examined in Surgery, including Clinical and Operative Surgery, and one optional subject: other candidates are examined also in Surgical Anatomy, and in other subjects not adequately included in the examination passed elsewhere. The optional subjects embrace: (*a*) Surgery in any one of its Ophthalmic, Aural, Cerebro-Spinal, Laryngeal, Dental, Abdominal, Orthopædic, Venereal, or Genito-Urinary branches; (*b*) Advanced Anatomy; (*c*) Advanced Physiology; (*d*) Surgical Pathology and Morbid Anatomy; (*e*) Midwifery: (*f*) Gynæcology; (*g*) Medical Jurisprudence; (*h*) Hygiene. The examinations are written, oral, and practical. Three weeks' notice must be given to Mr. James Robertson as above, from whom full particulars as to certificates required (among others two from Fellows of the College, of whom one must reside in Edinburgh) may be obtained. The fee is £30 for those who hold the diploma of Licentiate of the College, and £45 to others (no stamp duty is payable on the diploma). Registered practitioners, aged not less than 40, and who have been in practice for not less than ten years, and who have highly distinguished themselves by original investigations, may under special circumstances be elected without examination. Women are not admitted to the Fellowship.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

Licence.—The Licence is only granted as a separate qualification to candidates who already possess a recognised British, Irish, Colonial, or Indian qualification in Medicine. Candidates are examined in Surgery. The fee is £15 15s. The examination is held quarterly. Further particulars can be obtained on application to Mr. Alexander Duncan, B.A., 242, St. Vincent Street, Glasgow.

Fellowship.—Every candidate must be qualified for two years, and aged 24; he may pass one or two examinations. If he elects to take two examinations he is examined in Anatomy and Physiology at the first, and in Pathology and Surgery or Medicine at the second. If he elects to take one examination he is examined in Medicine or Surgery and an optional subject. The optional or alternative subjects are: (1) Human Anatomy, (2) Comparative Anatomy, (3) Physiology, (4) Pathology, (5) Midwifery and Diseases of Women, (6) Medical Jurisprudence, (7) Ophthalmic Surgery, (8) Aural Surgery, (9) State Medicine, (10) Psychological Medicine. Three examinations are held annually (April, July, October). Fourteen days' notice must be given. The fee to a non-licentiate is £25 unless he desires to qualify to hold office, when it is £50; to a Licentiate, £20 and £40 respectively.

Four Fellows may be elected in each year "in virtue of distinction," and without examination. They must be 40 years of age, and 10 years qualified.

THE IRISH UNIVERSITIES.

UNIVERSITY OF DUBLIN.

THE University of Dublin grants two degrees in Medicine (M.B. and M.D.), two in Surgery (B.Ch. and M.Ch.), and two in Midwifery (B.A.O. and M.A.O.). A candidate for any one of these degrees must be a graduate in Arts, and have passed the Previous Medical Examination.

The following schools, in addition to the School of Physic, are recognised by the Board of Trinity College—the Schools of the Royal College of Surgeons in Ireland, the School of the Catholic University.

PREVIOUS MEDICAL EXAMINATION.

This examination is divided into three parts—(1) Physics and Chemistry, (2) Botany and Zoology, (3) Anatomy, Practical Histology and Physiology. The three parts may be taken together or passed at separate examinations. The examinations are held in November, January, May, and twice in June.

DEGREES IN MEDICINE (M.B. AND M.D.).

Degree of M.B.—The course for the degree of M.B., extends over five years, and the student must attend three courses of nine months' duration at Sir Patrick Dun's or other metropolitan hospital recognised by the Board of Trinity College. One year in a recognised London or Edinburgh hospital or two years in a recognised county infirmary or colonial hospital may be counted as equivalent to one year in a recognised metropolitan hospital. A candidate for the degree is required to pass an examination in the following subjects: Medicine, Therapeutics, Pathology, Physiological Anatomy, Medical Jurisprudence, and Hygiene and Mental Disease. The examination is held in November, January, and June.

Degree of M.D.—The candidate must have taken, or have been qualified to take, the degree of M.B. three years previously, and must read a thesis or undergo an examination before the Regius Professor of Physic.

DEGREES IN SURGERY.

Degree of B.Ch.—The candidate must, in addition to the course for the degree of M.B., take courses of Surgery, Operative Surgery, Dissections, and Ophthalmic Surgery. The examination is directed to Surgery, Surgical Pathology and Anatomy, and Ophthalmic Surgery.

Degree of M.Ch.—The candidate must be a B.Ch. of not less than three years' standing, and have been engaged in practice for two years. Graduates of ten years' standing may be given a special examination.

DEGREES IN OBSTETRIC SCIENCE.

Degree of B.A.O. — The candidate must attend special courses in Midwifery and Practical Midwifery, and is required to pass an examination in Practical Midwifery, Gynæcology, and Obstetrical Anatomy.

Degree of M.A.O.—The candidate must have passed the M.B. and B.Ch. examinations. The examination is specially directed to Obstetrics and Practical Gynæcology.

UNIVERSITY DIPLOMAS.

The University grants diplomas in Medicine, in Surgery, and in Obstetric Medicine. A candidate must have completed two years in Arts and five years in medical studies.

Diploma in Medicine. The medical course and examination are the same as for the degree of M.B., except that attendance is not required on lectures on Botany and

Zoology, and that the candidate is not examined in these subjects.[1]

Diplomas in Surgery and in Obstetric Science.—The examination and courses necessary for these diplomas are the same as for the degrees of B.Ch. and B.A.O. respectively.

Fees.

Matriculation, 5s.: M.B., for the examination, £5, for the degree, £11; M.D., £13; B.Ch., for the examination £5, for the degree, £5; M.Ch., £11; B.A.O., £1; M.A.O., £5; diploma in Medicine, for the examination, £5, for the diploma, £5; diploma in Surgery, for the examination, £5, for the diploma, £5; for the diploma in Obstetrics, £1.

A schedule containing recommendations respecting the five years' medical curriculum can be obtained on application to the Registrar of the School of Physic in the University of Dublin.

ROYAL UNIVERSITY OF IRELAND.

The University grants two Degrees in Medicine, M.B. and M.D.; two in Surgery, B.Ch. and M.Ch.; and two in Obstetrics, B.A.O. and M.A.O. The course of five years for these degrees is reckoned from the completion of one academical year from the date of matriculation. Graduates in Arts or Science who have spent a year in the study of Physics, Chemistry, and Biology, and passed an examination in those subjects, are held to have completed the first of the five years.

Medical Curriculum.

The order in which the subjects of the medical curriculum are required to be studied is minutely stated in the *Calendar:* the general character of the curriculum is sufficiently indicated by the examinations held at the termination of each year.

Matriculation and First University Examination.

Candidates for any degree must pass the Matriculation Examination and First University Examination.

Matriculation.—This examination is held for pass and honours in June, and for pass only in September. Notice of intention to compete must be sent with the fee to the Secretaries, Royal University of Ireland, Dublin, on a printed form, not later than May 15th or August 15th respectively. The examination consists of the following parts:—I. Latin; II. any one of the following languages: Greek, French German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic; III. English Language; IV. Elementary Mathematics; V. Natural Philosophy. A schedule of the subjects is contained in the *University Calendar.*[2]

First University Examination.—A candidate who has passed the Matriculation Examination in the autumn of one year may be admitted to the First University Examination in the summer of the next year, otherwise an academical year must elapse. The subjects are:—I. Latin; II. any one of the following languages: Greek, French, German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic; III. English Language, and Literature; IV. Mathematics; V. Natural Philosophy. Schedules are published in the *Calendar.*[2]

Degrees in Medicine, Surgery, and Obstetrics.

A candidate must pass four examinations subsequently to the First University Examination.

First Examination in Medicine.—Candidates must have matriculated two years previously and must have completed the first year of the medical curriculum. The subjects are Natural Philosophy, Systematic Chemistry, Botany, and Zoology. Schedules are contained in the *Calendar.* The examination is written, oral, and practical.

Second Examination in Medicine.—Candidates must have passed the First Examination one year previously, and are examined in Anatomy, Physiology, and Practical Chemistry. Schedules will be found in the *Calendar.*

Third Examination in Medicine.—Candidates must have passed the Second Examination one year previously. They are examined in Anatomy, Physiology, Materia Medica, Pharmacology, and Therapeutics, and clinically in Physical Diagnosis.

Examination for the Degrees of M.B., B.Ch., B.A.O.—Candidates must have passed the Third Examination. The examination consists of three parts—(*a*) Medicine, theoretical and clinical, including Therapeutics, Mental Diseases, Medical Jurisprudence, Sanitary Science, and Medical Pathology. (*b*) Surgery, theoretical, clinical, and operative, including the use of instruments and appliances; Surgical Anatomy, Ophthalmology and Otology, Surgical Pathology. (*c*) Midwifery and Diseases of Women and Children. All candidates must enter for and go through the entire examination, but a candidate may be adjudged to have passed in any of the foregoing parts in which he satisfies the examiners. Successful candidates receive the triple degree.

Honours.—There are special examinations for honours held in connection with each of the last four examinations.

M.D. Degree.

A candidate must have obtained the degrees of M.B., B.Ch., B.A.O. at least three years previously and must have spent at least two of these in practice. The candidate is examined in writing and orally in Medicine and Pathology and at the bedside.

M.Ch. Degree.

The candidate must have obtained the degrees of M.B., B.Ch., B.A.O. at least three years previously, two of which must have been spent in practice. The candidate is examined in Surgery, including Ophthalmology and Otology, at the bedside, and is required to write detailed reports on cases.

M.A.O. Degree.

The candidate must have obtained the degree of M.B., B.Ch., B.A.O. at least three years previously, have been engaged in practice for two years, have had personal charge of at least twenty cases of labour, and have attended clinical Gynæcology for three months. The candidate is examined in writing, orally and clinically, in Midwifery, Diseases of Women and Children, and Pathology.

Exhibitions and Scholarships.

Two first class and two second class exhibitions are given after each of the four examinations in Medicine. They are of the value at the first of £20 and £10, at the second of £25 and £15; at the third of £30 and £20; and at the degree examination of £40 and £25 respectively. A travelling medical scholarship, value £100 is awarded in October, after a special examination, to a candidate who has passed the Medical Degrees Examination in that year or the preceding year. Two Dr. Henry Hutchinson Stewart Medical Scholarships are awarded annually, the one of the value of £10, tenable for three years, in the subjects of the Second Examination in Medicine; the other of the annual value of £30, tenable for three years, for Proficiency in the Knowledge of Mental Diseases. One Medical Studentship tenable for two consecutive years of the annual value of £200.

Fees.

Matriculation, £1; First University Examination, £1; First, Second, and Third Examinations in Medicine, for each £1. The Examination for Degrees, £2; for admission to the Degrees £10; for the Degrees of M.D., M.Ch., M.A.O., each, £5.

Post-Graduate Classes and Lectures, Charing Cross Hospital.—Three courses of Clinical Lectures and Practical Demonstrations arranged for the convenience of practitioners are given at Charing Cross Hospital annually. Each course consists of ten meetings during ten weeks, and the fee for each course is £1 1s. The first of the two winter courses will commence on October 11th and will be conducted by Drs. Green, Bruce, Willcocks, Murray, Mott, Routh, Arkle, and Messrs. Bloxam, Boyd, and Waterhouse. Full particulars can be obtained on application to the Honorary Secretary of the course, Dr. Willcocks.

[1] A Diplomate in Medicine, on completing his course in Arts and proceeding to the degree of B.A., may become a Bachelor in Medicine by attending the lectures on Botany and Zoology, passing the Previous Medical Examination in those subjects, and paying the degree fees.

[2] Dublin: Alex. Thom and Co. London: Longmans, Green, and Co. Extracts can be obtained on application to the Secretary of the University.

THE IRISH COLLEGES.

CONJOINT EXAMINING BOARD OF THE ROYAL COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

The diplomas of these two bodies are now granted upon conditions and after examinations settled between the Colleges.

Preliminary Examination.—Examinations in general education, which fulfil the requirements of the General Medical Council, are accepted by the Colleges (see pages 462-3). The Preliminary Examination of the College is held twice a year, in March and September, and seven clear days' notice must be given to Mr. Greenwood Pim, Secretary of the Committee of Management, Royal College of Physicians, 6, Kildare Street, Dublin.[1]

Professional Examinations.

There are four Professional Examinations:

The *First Professional Examination* may be passed not earlier than the end of the first winter session. It consists of four Parts: I, Chemistry and Physics; II, Practical Pharmacy; III, Biology; IV, Anatomy (Bones and Joints). The four Parts may be taken together or separately.

The *Second Professional Examination* may be passed not sooner than the end of the second winter session. It consists of four Parts: I, Anatomy; II, Histology; III, Physiology; IV, Materia Medica; the last named subject may be postponed at the option of the candidate, and if he fail in any one of the other three subjects, he may, at the discretion of the examiners, receive credit for the subjects in which he obtains passing marks.

The *Third Professional Examination* may be passed not sooner than the end of the fifth winter session. It consists of five Parts: I, Medicine; II, Surgery; III, Pathology; IV, Therapeutics; V, Public Health and Forensic Medicine. A candidate must present himself in the first instance in I, II, and III at least, but if he pass at either I or II he will obtain credit therefor.

The *Final Professional Examination* may be passed not sooner than the end of the fifth year of medical study. A candidate may present himself in all the subjects at one time, or in one or more in the following groups: (*a*) Medicine, including Mental Diseases, Medical Anatomy, and Clinical Medicine; (*b*) Surgery, including Ophthalmic and Aural Surgery, Clinical Surgery, Operations, and Surgical Anatomy; (*c*) Midwifery, including Diseases of Women and Newborn Children, and the Theory and Practice of Vaccination.

Curriculum.

The curriculum as above stated extends over five years, and its general arrangement can be gathered from the subjects of the examination, which are arranged to test the student's progress. Full details may be obtained on application to the Secretary as above.

Fees.

Preliminary Examination, £2 2s., except in the case of matriculated pupils of the Royal College of Surgeons, who pay £1 1s.; re-examination, £1 1s. First Professional Examination, £15 15s.; Second, £10 10s.; Third, £9 9s.; Final, £6 6s.; Re-examination Fee, £3 3s.

CONJOINT EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS OF IRELAND AND THE APOTHECARIES' HALL OF IRELAND.

The conjoint diploma is granted to candidates who pass through a prescribed curriculum and pass a series of examinations conducted by the two bodies jointly. The candidate is required to pass a Preliminary Examination and four Professional Examinations. The subjects of the Preliminary Examination are those prescribed by the General Medical Council. All examinations in general education recognised by the General Medical Council (see pages 462-3) are accepted

[1] Any candidate who has been rejected at the examination for the Licence in Medicine loses this privilege, and shall be required to pay the full fee of £3 3s. for the Licence in Midwifery.

Sessional Medical Examinations.

First Year.—The subjects of the examination are Physics, Chemistry, Anatomy (Osteology and Elementary Biology, as defined by syllabus), and Pharmacy.

Second Year.—The subjects of examination are Anatomy, Physiology, Histology, and Materia Medica. The last subject may be deferred until the third year.

Third Year.—The subjects of the examination are Pathology, Therapeutics, Forensic Medicine, and Public Health. The candidate is also examined in Practical Dissection.

Fourth Year.—The candidate must produce evidence of having attended, subsequently to the Third Professional Examination, a medico chirurgical hospital, lectures on Midwifery, Midwifery Practice, Operative Surgery, and of having studied fevers in fever wards.

Fifth Year.—The candidate is examined in Medicine, Surgery, and Therapeutics, Midwifery and Diseases of Women. The examination is conducted by written papers, by a clinical examination (including Ophthalmic and Aural Surgery). The candidate's skill is tested by being required to perform operations, and showing the knowledge of surgical instruments and appliances. A candidate is not admitted to the Final Examination until the end of the fifth year of medical study. Candidates who fail in examination are referred for three months.

Curriculum.

These examinations are arranged so as to test the candidate's progress during a stated curriculum, the general scope of which is indicated by the subjects of the various examinations. A pamphlet containing full particulars of these and on other points can be obtained on application to the Registrars of the College of Surgeons or of the Apothecaries' Hall.

Fees.

The total fees for the Diplomas of L.R.C.S.I. and L.A.H. will in future be £26 5s.; that is, £5 5s. for each of the First Three Examinations, and £10 10s. for the Final. The fee for re-examination is £3 3s.

Candidates who at an examination fail in one or more subjects but pass in others are re-examined only in those subjects in which they fail. Candidates who have passed one or more examinations of another licensing body but have failed to pass subsequent examinations can, as a rule, obtain credit from this Conjoint Board for such examinations as they may have passed.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

This College continues to issue its Licence in Medicine and the Licence in Midwifery to registered medical practitioners whose names appear on the *Medical Register* of the United Kingdom.

Licence in Medicine.—The subjects of examination are: Practice of Medicine, Clinical Medicine, Pathology, Medical Jurisprudence, Midwifery, Hygiene, and Therapeutics. A candidate of five years' standing is exempt from examination by printed questions.

Licence in Midwifery.—The candidate must produce certificates of having attended a course of lectures on Midwifery, and of having attended Practical Midwifery and Diseases of Women, for six months, at a lying-in hospital or maternity recognised by the College; or, where such hospital attendance cannot have been obtained during any period of the candidate's course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner holding a public medical appointment, the certificate in either case to state that no fewer than twenty labour cases have been actually attended. A registered medical practitioner of five years' standing is exempted from the examination by printed questions.

Fees.—Fee for the Licence to practise Medicine, £15 15s., except in the case of Graduates in Arts and Medicine of any University in the United Kingdom, when the fee shall be £5 5s. only. Fee for examination for the Licences in Medicine and Midwifery, if obtained within the interval of a month, £16 16s.—to be lodged in one sum.[1] Fee for special examination for the Licence to practise Medicine, £21. Fee

[1] Any candidate who has been rejected at the examination for the Licence in Medicine loses this privilege, and shall be required to pay the full fee of £3 3s. for the Licence in Midwifery.

for examination for the Licence to practise Midwifery, £3 3s. Fee for special examination for the Licence to practise Midwifery, £5 5s. The admission fee, less the sum paid to the examiners, will be returned to rejected candidates. The examinations for these licences are held in the week following the first Friday in February, May, and November. Notice must be given, and the schedule transmitted at least four days before the first Friday in each of the above months to the Registrar of the Royal College of Physicians of Ireland, Kildare Street, Dublin, from whom further information can be obtained. A special examination can be obtained under certain conditions which can be ascertained on application to the Registrar.

Membership.—A candidate for the Membership of the College must be 25 years of age and a Licentiate of the College of three years' standing, or if a graduate of arts of a university in the United Kingdom, a Licentiate of one year's standing, or, if a practitioner of seven years' standing, then he is admitted to the Membership after one year. He must not be engaged in trade, dispense medicine, or practise in partnership. He must also have held during at least six months the office of resident physician or resident medical pupil, or of having acted during the same period as medical clinical clerk in a recognised hospital, or of having been in medical charge for at least twelve months of a public institution for the treatment of the sick. Every candidate must pass an examination in: 1. Principles of Medicine, including Pathology, Morbid Anatomy, and Medical Chemistry; 2. Practice of Medicine, including Principles of Public Health; 3. Clinical Medicine. The fee for the examination is £21 (to graduates in Arts 15 guineas), which must be lodged in the Royal Bank, Dublin, before the applications and certificates are sent in. The examinations are held in January, April, July, and October.[2]

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Fellowship.

The Fellowship of the Royal College of Surgeons in Ireland is granted after examination to graduates or Licentiates in Surgery of a university or college recognised by the College, who are required to bring evidence that they studied in a medical school, for not less than six years, three of which must have been spent in a recognised medical school in Great Britain. The other three may be spent in any foreign school of repute.

Examination.—The examination differs according to the standing of the candidate. *Grade 1.*—Licentiates or Graduates in Surgery of less than ten years' standing. Two examinations must be passed. Primary: Anatomy, Physiology, Histology (laboratory), Dissections. Final: Surgery, Clinical Surgery, Operative Surgery, Surgical Pathology. *Grade 2.*—Licentiates or Graduates in Surgery. One examination must be passed in Surgery, Clinical Surgery, Operative Surgery, and Morbid Anatomy.

Dates.—The examinations are held in February, May, and November. Special examinations may be granted, for which an extra fee of ten guineas is charged.

Fees.—Grade 1: For Licentiates of the College—for Primary Examination, £15 15s.; for Final Examination, £10 10s. For Licentiates in Surgery of other licensing bodies—for Primary Examination, £26 5s.; for Final Examination, £15 15s. *Grade 2:* Licentiates of the College, 25 guineas; Licentiates in Surgery of other licensing bodies, 40 guineas. In either case £10 10s. is retained by the College in case of rejection, and is not allowed in the fees of re-examination.

Further information can be obtained from the Registrar at the College.

APOTHECARIES' HALL OF IRELAND.

Licence.—The Apothecaries' Hall of Ireland does not now grant its licence except in conjunction with the Royal College of Surgeons in Ireland (see p. 474), or to qualified practitioners, whose names appeared on the *Medical Register*, who wish to add this to other qualifications. Doctors of Medicine, Licentiates of a College of Physicians, and Licentiates of a College of Surgeons, who have also a Certificate in Practical Pharmacy, may obtain the Licence of the Hall by undergoing examination—the first two in Pharmacy, the latter in Medicine and Pharmacy. The fee is £10 10s.

Certificate of Assistant.—The Hall grants a certificate of Assistant after examination to persons not less than 16 years of age who have spent two years at Practical Pharmacy under the superintendence of a duly registered Apothecary or Pharmaceutical Chemist. The examination, which is held monthly (except in August), embraces the subjects of Pharmacy, practical and theoretical, Materia Medica, the *British Pharmacopœia*, and the correct translation and compounding of Medical Prescriptions. Fee for examination and registration, £1 7s.

Further information can be obtained from Mr. R. Montgomery, M.R.C.S., Secretary.

[2] The admission fee, less the sum paid to the examiners, will be returned to the rejected candidates.

NOTES ON MEDICAL SCHOOLS AND COLLEGES.

LONDON.

The special attention of all students intending to enter at a medical school in London should be directed to the fact that the degrees of Doctor and Bachelor of Medicine are conferred by Universities only. The holders of diplomas from Corporations (the Colleges of Physicians and Surgeons, or the Apothecaries' Hall) have no legal right to use the title of "Doctor." Those students who desire the degree of Doctor, and intend to obtain their medical education in London, are warned that they should matriculate at the University of London before entering a medical school. Failure to understand this point is a common source of delay, disappointment, and avoidable expense. Further remarks on this subject will be found in the article on the Medical Curriculum printed on page 457.

Particulars are given below of the twelve medical schools in London which provide for the full curriculum. The schools are connected in each case with a large general hospital, where clinical instruction is given in Medicine and Surgery, and within which students can obtain the necessary appointments as medical clinical clerks and surgical dressers. All the schools have arrangements under which the student is enabled to attend the requisite number of cases of midwifery.

The arrangements at the various schools are everywhere the same in principle, and are in conformity with the requirements of the General Medical Council and the qualifying bodies. The laboratories for chemistry, physiology and histology, and pathology, have at most of the schools been greatly improved during recent years, and the facilities for instruction at the smaller, as well as at the larger, schools are now in most respects very complete, and are yearly extended and improved.

St. Bartholomew's Hospital Medical School.

The Hospital contains 750 beds.

Appointments.—Clinical Clerks to the Physicians and to the Physician-Accoucheur, and Dressers to the Surgeons and in the Casualty Department are chosen from the most diligent students. Clerks and Dressers are also selected to attend in the out-patient rooms, in the special departments (Ophthalmic, Orthopædic, Gynæcological, Laryngological, Aural, Dermatological, and Electrical), and in the *post-mortem* room. Eight House-Physicians and ten House-Surgeons (who must be qualified to practise), and a Senior and a Junior Assistant Chloroformist, are appointed annually. A Resident Midwifery Assistant and an Ophthalmic House-Surgeon are appointed every six months. Each of these officers receives a salary of £25 a year, except the Senior Assistant Chloroformist, who receives £50. All, except the eight Junior House-Physicians and House-Surgeons, are provided with rooms. An Extern Midwifery Assistant is appointed every three months at a salary of £50, and two Assistant Electricians are appointed every six months.

There is a residential college within the precincts of the Hospital.

A recreation ground has recently been purchased for the use of members of the Students' Amalgamated Clubs.

A special class is held for students preparing for the Preliminary Scientific Examination.

Entrance Scholarships.—Two senior open Scholarships in Science, value of each £75, tenable for one year, to be competed for at the end of September; candidates must be under 25 years of age. The subjects are Physics and Chemistry for one, Physiology and Biology for the other. Two Junior open Scholarships, value £150 and £50, will be competed for at the same time in the subjects of the London University Preliminary Scientific Examination. Candidates must be under 21 years of age. The successful candidates must enter at St. Bartholomew's Hospital in the October succeeding the examination. Jeaffreson Exhibition: £20; examination at the end of September; subjects: Latin, Mathematics, and any one of the following languages—Greek, French, German. Candidates for the open Scholarships and the Jeaffreson Exhibition must not have entered to the hospital practice of any metropolitan medical school. The Treasurer's Research Studentship in Pathology, of the value of £100 a year, is given by election to the most promising of the recently qualified men. The Research Student must engage in original work in the Hospital laboratories.

Communications regarding the Hospital and Medical College must be addressed to Dr. T. W. Shore, Warden of the College, St. Bartholomew's Hospital.

Charing Cross Hospital Medical School.

The Hospital contains 180 beds. Students are also admitted to the practice of the Royal Westminster Ophthalmic Hospital, which contains 30 beds.

Appointments.—Clinical Clerks and Dressers, Clinical Ward Clerks, Surgical Ward Clerks, and Pathological Assistants are appointed for three months. Assistant Demonstratorships of Anatomy and Physiology are also open to the students. Two House-Physicians, two House-Surgeons and a resident Obstetric Officer are appointed by competitive examination for six months. They are entitled to rooms and commons in the hospital. A Medical and a Surgical Registrar, each with a salary of £40 a year, are appointed for twelve months. An Electrical Assistant is appointed every six months, and receives an honorarium of £12 12s. at the end of his term of office.

Entrance Scholarships.—Two Entrance Scholarships, of the value of 120 guineas and 60 guineas respectively, are awarded annually at the commencement of each winter session, after a competitive examination in the following groups of subjects: 1. English, including Language, History, and Geography; 2. Latin and Greek; 3. French and German; 4. Mathematics, including Arithmetic, Algebra, and Geometry; and Mechanics, including Statics and Dynamics; 5. Chemistry (Inorganic) and Physics, including Acoustics, Heat, and Electricity; and 6. Animal and Vegetable Biology. The value attached to each group of subjects is 1,000 marks. Candidates must be under 25 years of age on the first day of the examination. No candidate may offer himself for examination in more than three of the above groups of subjects the selection of the groups being left entirely to the candidate. Intending candidates must give notice before September 15th. The Examination will commence at the School on Monday, September 17th. The successful candidates must enter forthwith for their complete medical education at the Hospital. A Scholarship of the value of 60 guineas is open to students from the University of Oxford who have passed the First M.B. Examination, and to students of the University of Cambridge who have passed the Second M.B. Examination, and who have not entered at any London Medical School. Subjects: Anatomy and Physiology, including Histology. The examination for this Scholarship, which will be largely practical, will be held on September 17th and 18th. Notice to compete must be sent in on or before Saturday, September 15th. The successful candidate will be required to complete his curriculum at Charing Cross Hospital.

Further information may be had of the Dean, Mr. Stanley Boyd.

St. George's Hospital Medical School.

The Hospital contains 351 beds, of which 205 are devoted to Surgical, and 146 to Medical cases.

Appointments.—Four House-Physicians and four House-Surgeons are appointed quarterly from among the perpetual pupils; they hold office for six months in each capacity in succession, and reside and board in the hospital free of expense. An Obstetric Assistant is appointed annually; he must be a legally qualified practitioner. He resides and boards in the hospital, and receives a yearly salary of £100. A Curator of the Pathological Museum and a Medical and a Surgical Registrar are appointed annually from among the senior pupils, each with a salary of £50; and an Assistant Curator with a salary of £30. A Senior Anæsthetist is appointed annually, with a salary of £50 a year; and a Junior Anæsthetist with a salary of £25. As the result of a competitive examination held every three months, those students who desire to proceed to the offices of House-Physician and House-Surgeon are appointed in turn as assistants for three months in each special department and in the general out-patient department. Two Demonstrators of Anatomy and a Demonstrator of Physiology are appointed annually, each with a salary of £50. Each pupil of the Hospital must act as Clinical Clerk and Dresser before a certificate of attendance on hospital practice can be signed.

Entrance Scholarships.—The following Entrance Scholarships are offered for competition: 1. A Scholarship, value £145, for the sons of medical men who have entered the school during the current year.[1] 2. Two Scholarships, each of £50, open to all students commencing their studies. The subjects for these three Scholarships will be Latin, French, or German, and Elementary Physics and Mathematics, and the examination will be held in October. The examination for all these Scholarships will be on October 3rd and 4th. 3. Two Scholarships, value £85, for students who have entered during the current year, and have been signed up for or passed the Oxford First M.B. or the Cambridge Second M.B. Subjects: Anatomy and Physiology. The examination for these Scholarships will be on October 5th.

Further information may be obtained from the Dean of the School; from any of the Lecturers; or from Mr. F. J. Marshall, the Resident Medical Officer at the Hospital.

Guy's Hospital Medical School.

The Hospital contains 695 beds, of which 500 are in constant occupation. Detached wards, containing 40 patients, are set apart for the purpose of instruction in clinical medicine.

Appointments.—All appointments are given according to the respective merits of the candidates, and without extra payment. There are appointed annually House-Physicians, House-Surgeons, Assistant House-Physicians, Assistant House-Surgeons, Surgeons' Dressers, and Medical Clinical Clerks, Dressers in the Eye Wards, Dressers in the Throat Department, Clinical Assistants, Assistant-Physicians' Clerks, Assistant-Surgeons' Dressers, Dressers in the Surgery, Obstetric Ward Clerks, Surgical Clinical Clerks, Assistant-Surgeons' Clerks, for three months: Obstetric Residents, *Post-mortem* Clerks, Dental Surgeon's Dressers, Aural Surgeon's Dressers, Obstetric Out-Patient Clerks, Extern Obstetric Attendants, Clerks in the Electrical Department, also Clerks to the Anæsthetists. A special honorary certificate is given to every gentleman who has diligently performed the duties of not less than three of the various offices.

Entrance Scholarships.—Four open Scholarships, two in Arts and two in Science, will be offered for competition in September, 1894. Entrance Scholarships in Arts: 1. A Scholarship of £100, open to candidates under 20 years of age. 2. A Scholarship of £50 open to candidates under 25 years of age. Subjects: English Language, including Grammar and Composition. Latin; Greek; including Grammar, translation from specified authors, translation of easy passages not taken from such authors, and translation from English into Latin or Greek. In Latin and Greek the passages for translation

[1] Subjects, Latin, French, or German. Passages from authors usually read in schools with prose composition and grammatical questions. Mathematics; Euclid, Books i to vi; Algebra, including generative equations; Arithmetic. The examination in Elementary Physics will include Mechanics, Hydrostatics, Light, Heat, and Electricity.

will be taken from the set books required for the previous July Examination for Matriculation at the University of London, or the September Examinations of the Society of Apothecaries, and of the College of Preceptors. French: German: Including Grammar, translation into English, and translation from English into French or German. Arithmetic and Algebra: As far as simple equations inclusive. Geometry: Including the subject matter of Euclid, Books I. II, and III, with easy deductions. Candidates may choose between Greek, French, and German, but will not be allowed marks in more than one of these subjects. Entrance Scholarships in Science.—1. A Scholarship of £150, open to candidates under 25 years of age. 2 A Scholarship of £60, open to candidates under 25 years of age. Subjects: Inorganic Chemistry, General Biology (Zoology, Botany), Experimental Physics, including General Properties of Solid, Liquid, and Gaseous Bodies, Acoustics, Heat, Magnetism, Electricity, and Optics. There will be a practical examination in Chemistry, in addition to the paper. Specimens will be given with the papers in Botany and Zoology. The successful candidate will be required to enter at the Hospital, as a Perpetual Student, in the October immediately succeeding the Examination. Names of intending candidates should be forwarded on or before September 10th, to the Dean, Guy's Hospital, London, S.E., and candidates for the Scholarships in Arts must then specify the set subjects in Latin and Greek in which they propose to present themselves for examination.

A Residential College within the precincts of the Hospital accommodates about sixty students.

Further information may be obtained on application to the Dean of the Medical School.

King's College Medical Faculty.

The Hospital contains 220 beds in daily use.

Appointments.— Resident Medical Officers, Clerks, and Dressers are chosen from matriculated students, and the former have rooms and commons free. Two Sambrooke Registrarships, of the annual value of £50 each, tenable for two years, open to matriculated students who have filled any of the higher appointments of the Hospital.

Entrance Scholarships.—Two Warneford Scholarships, for the encouragement of previous education,[1] each £25 per annum, for three years; one Additional Scholarship of £25 per annum for two years will be given in October, and one Warneford Scholarship of £25 per annum for two years for third year resident matriculated students, at the close of the winter session. Two Sambrooke Exhibitions, one £60 and one £40 open to all matriculated students at the commencement of their course of study; subjects of examination, Mathematics, Elementary Physics, Inorganic Chemistry, Botany, and Biology. Rabbeth Scholarship, value £20, in July, for best evidence of early scientific training. Two Science exhibitions, given annually, in October, by the Clothworkers' Company, one of £30 per annum and one of £20 per annum, each tenable for two years, for proficiency in any four of the following subjects: Mathematics, Mechanics, Physics, Chemistry, Botany, Geology, Mineralogy and Zoology, will be open to all candidates who are under the age of 19. Rooms are provided within the College for a limited number of matriculated students under the supervision of the Censor. The cost of the academical year varies from £50 to £60 for rent of rooms and dinner. The Dean of the Medical Department, Professor Curnow, attends daily (Saturdays excepted), at King's College, from 11.30 A.M. to 1 P.M., for the purpose of seeing students and their friends. Any letter addressed to the Dean during the vacation will receive early attention.

[1] The examination will be in the following subjects:—1. Divinity, *Old Testament*, Numbers and Deuteronomy; *New Testament*, the Gospel according to St. Luke; the *Church Catechism*. Books recommended: Barry's *Notes on the Catechism*, or Maclear's *Class Book of the Catechism of the Church of England*. 2. English, Shakespeare, *As you Like It*. 3. History, the History of England, from 1558 to 1603; Textbook, Bright's *History of England*. 4. Latin, Sallust, *Catuline*. 5. Greek, Xenophon, *Hellenics*, Book III. 6. French, *Michelet de la Revolution* (Madame Michelet's abridged edition). 7. German, Heine's *Harzreise* (Clarendon Press). 8. Mathematics, Arithmetic, Algebra, as far as and including Quadratic Equations, together with Proportion and Arithmetical and Geometrical Progression; Euclid, Books I—IV, or the subjects thereof.

London Hospital Medical School.

The Hospital is the largest general hospital in the kingdom; it contains 786 beds.

Appointments.—Five House-Physicians, five House-Surgeons, and a Resident Accoucheur are appointed every six months; two Assistant Anæsthetists, two Receiving-room Officers, and a Senior Dresser to Out-patients every three months. Clinical Clerks, Surgical Dressers, and Clinical Obstetric Clerks are appointed every three months. Every student must act as a Clinical Clerk for three months in the medical out patient department, after passing the first College of Surgeons examination. Maternity pupils reside in the hospital every week. Each student must attend at least twenty cases of Midwifery; those who have attended one hundred are entitled to a special certificate. Dressers reside and board in the hospital every week. Every student must act as a dresser in the Surgical out-patient department for at least six months after the end of the first winter session. Three Clinical Assistants are appointed every three months for the Medical out-patients, and are eligible for re-election. Each receives a salary at the rate of £80 per annum. Unpaid Clinical Assistants are appointed in the Ophthalmic department. A Medical Registrar and a Surgical Registrar are appointed annually; each receives £100. An Instructor in Anæsthetics is appointed annually, and receives £50. Every student must act as a *Post-mortem* Clerk for three months. A Dental Assistant, Prosectors of Anatomy, and Dressers in the Ophthalmic and Aural departments, are also appointed. The holders of resident appointments are provided with rooms and board.

Entrance Scholarships.—Six Entrance Scholarships, value £120, £60, £60, £45, £30, and £20; examination at the end of September. This September will be offered for the first time the Price Entrance Scholarships:—1 and 2. Value £120 and £60. The interest upon the sum of £5 000 bequeathed to the London Hospital Medical College, free of legacy duty, by the late Dr. H. E. Price, formerly a student of the London Hospital with additions granted by the College Board. 1. Value £120. Science: In the subjects appointed by the University of London as the subjects of the Preliminary Scientific Examination. Examiners: The Lecturers on Biology, Chemistry, and Physics. Conditions: Successful candidates must forthwith become Perpetual Students of the College, if not already entered. 2. Value £60. In Human Anatomy and Physiology, and Histology. Examiners: The Lecturers on Anatomy and Physiology. Conditions: Candidates must be students of the University of Oxford who have passed the First M.B. Examination, or students of the University of Cambridge who have passed the Second M.B. Examination. Successful candidates must forthwith become either Perpetual Students or University Students of the Hospital and College, if not already entered. The Epsom College Scholarship, open to students of Epsom College, represents a free medical education at the London Hospital. Nineteen other Scholarships and Prizes will be offered during the ensuing session.

Information may be obtained from the Warden, Mr. Munro Scott, at the College.

St. Mary's Hospital Medical School.

The Hospital contains 281 beds; the number will shortly be raised to 381.

Appointments.—Three House-Physicians and three House-Surgeons are appointed for six months each, and two Obstetric Officers for six months each; all live free of expense in the Hospital. All students must act as Clinical Clerks and Dressers for eight months after passing the Primary Examinations, and after having acted as Dressers two months in the Casualty Department. Demonstrators of Anatomy are appointed annually at salaries of £70; two Assistant Demonstrators and two Prosectors with an honorarium of £5 each; a Demonstrator of Physiology at a salary of £100, and two or three Assistant Demonstrators, who receive an honorarium of £5; a Demonstrator of Chemistry and Physics at a salary of £75, and an Assistant Demonstrator, who receives an honorarium of £5; a Demonstrator of Biology at a salary of £30; and an Assistant Demonstrator, who receives £5; and two Demonstrators of Pathology, to assist the lecturers, who receive an honorarium of £5 each.

Entrance Scholarships.—One Scholarship in Natural Science,

value £105, and three of the value of £52 10s. each; subjects, Inorganic Chemistry, Experimental Physics, and Elementary Biology. There will be a practical examination in each subject. The examination takes place at the end of September. The candidates must not have completed a winter session of study at a medical school in London. The successful candidates must enter as perpetual pupils of the Hospital, and pursue the full course of study there. A scholarship of £130 for students of Epsom College, who are sons of medical men. Two scholarships, each of £52 10s., open to students from a University, who have not entered at any London medical school: subjects, Physiology and Histology, and either Anatomy or Chemistry at the option of the competitor.

Special Classes are held for the Preliminary Scientific, Intermediate M.B., and Final M.B. Examinations of the University of London, and for the Examinations for the Fellowship of the Royal College of Surgeons.

Students may reside in the College, 33 and 35, Westbourne Terrace, under the supervision of the Warden, Mr. E. Roughton. Terms, inclusive of all school fees, and including the assistance of the demonstrators on three evenings in the week, can be obtained on application to the Warden.

Further information may be obtained from the School Secretary Mr. Frederic H. Madden, or from the Dean of the School, Mr. George P. Field.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.

The Hospital contains 320 beds.

Appointments, etc.—Eighteen Resident Appointments are open annually to competition among pupils of the Hospital. The officers reside and board in the Residential College free of expense. There are two Casualty Medical and two Casualty Surgical Officers appointed annually. Six House-Surgeons are appointed every year at intervals of two months, after examination; they must have a legal qualification. Six House-Physicians are also appointed annually at similar intervals; they must have a legal qualification, or hold a Broderip Scholarship. An Obstetric House-Physician (qualified to practise) is appointed every six months. Each of the above-mentioned resident officers pays (except the Casualty officers who receive a salary) £10 10s. on appointment. Non-Resident Physicians' Assistants are appointed in the out-patient department. Clinical Clerks and Dressers are appointed for six months. An Obstetric Physicians' Clerk is appointed. In the out-patient department the appointments are: Dresser to the Assistant Surgeon and to the Dental Surgeon, Clerk to the Assistant Physician, Dresser to the Ophthalmic Surgeon, Clerk in the Department for Diseases of the Skin, Clerk in the Department for Diseases of Women, and Dresser to the Throat and Ear Department. There are also Extern Midwifery Clerks, and *Post-mortem* Clerks. The appointments are so arranged that every student may during his course take both a clerkship and a dressership. Each student must be an out-patient clerk or an out-patient dresser before being eligible to an in-patient clerkship or dressership. No student can be appointed to any office until he has passed the second examination of the Examining Board in England, or its equivalent. Clinical Assistants are appointed in the Ophthalmic, Skin, and Throat and Ear Departments.

Entrance Scholarships.—Two Entrance Scholarships, value £55 and £40, tenable for two years,[1] are open to all gentlemen commencing their medical studies at the Hospital in October, 1894. The successful candidates must become general pupils of the school. Examination on September 27th and following days. Candidates must send in their names to the Dean, stating the three subjects they select, on or before September 20th.

Universities Scholarship.—An annual Entrance Scholarship of the value of £30 a year, tenable for two years, is open to students of the University of Cambridge who have passed the Second M.B. Examination, and to students of the University of Oxford who have passed the First M.B. Examination. Subjects: Anatomy and Physiology, including Histology. The examination takes place in October.

The Freer Lucas Scholarship is annually awarded on the nomination of the Head Master to a pupil of the Royal Medical College, Epsom, who has passed the Preliminary Scientific M.B. Examination.

Information may be obtained from Dr. Coupland, the Dean; from Dr. Pasteur, Secretary of the School; from any of the Lecturers; or from the Resident Medical Officer at the Hospital.

The Residential College is situated in Cleveland Street, W., and has its frontage in the Hospital garden; it accommodates about 30 students. The Warden is the Rev. W. G. Deighton, M.A., Chaplain of the Hospital.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.

The Hospital contains 572 beds.

Appointments.—A Resident Assistant Physician and a Resident Assistant Surgeon, at a salary of £100 per annum each, with board, are appointed, and may hold office for a term not exceeding three years. Two Resident and two Non-Resident House-Physicians, and four Resident House-Surgeons, two Assistant House-Surgeons, a Senior and Junior Obstetric House-Physician, are selected from gentlemen who have obtained their professional diplomas, every three months. Two Ophthalmic House-Surgeons, chosen from qualified students, are appointed for six months, the senior receiving a salary at the rate of £50 per annum, and the junior being provided with commons. The Resident House-Physicians, the Resident House-Surgeons, the Senior Obstetric House-Physician, and the Dresser on Accident Duty are provided with rooms and commons. Clinical Clerks and Dressers are selected each year to the number of at least one hundred for in-patients, and eighty to one hundred for out-patients. Clinical Assistants in the departments for Diseases of the Throat, Skin and Ear are appointed every three months. Obstetric Clerks are from time to time appointed; also Assistants in the Physiological Laboratory, Prosectors, and Assistants to the Lecturer on Materia Medica, to Teachers of Practical Surgery, and to Demonstrators of Morbid Anatomy. All students have the opportunity of being engaged in the performance of the practical duties in connection with the Medical, Surgical, and Special departments of the Hospital. Two Hospital Registrars are appointed at an annual salary of £100, and an Obstetric Tutor and Registrar at a salary of £50 per annum.

In one of the new wings, opened on June 9th, 1894, by H.R.H. the Duke of Connaught, K.G., President of the Hospital, is a large Laboratory for the class in Pathological Histology. A Dissecting Room for the class in Elementary Biology and a private Laboratory are provided, as well as a large Class Room for the various Tutorial Classes, and special accommodation for the class in Operative Surgery. The East Wing contains a Dining Room (51 feet by 39 feet), and a Smoking and Reading Room (51 feet by 29 feet) for the use of members of the Students' Club.

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[1] The following are the subjects for examination:—(1) Latin: The examination will consist of passages for translation into English; short passages for translation from English into Latin, and questions in grammar. September, 1894: Sallust, *Catoline*. September, 1895, *Cæsar*, Gallic war, Book vii.—(2) Greek: The examination will consist of easy passages for translation into English, and questions in grammar September, 1894, Xenophon, *Hellenica*, Book III. September, 1895, Xenophon, *Hellenica*, Book IV. The books selected are those set for the Matriculation examination of the University of London held in the preceding June.—(3) French or German: The examination will consist of passages (authors not set) for translation into English, short passages for translation from English into French or German, and questions in grammar.—(4) Mathematics: comprising Arithmetic, Algebra up to and including Quadratic Equations; and Euclid, Books I., II., III.—(5) Mechanics and Experimental Physics: comprising the composition and resolution of Statical Forces. Simple Machines, the ratio of the Power to the Weight in each. Centre of Gravity. General Laws of Motion. Law of the Motion of Falling Bodies. Pressure of Liquids and Gases, Specific Gravity, and the subjects included in the Schedule of Experimental Physics for the Preliminary Scientific (M.B.) Examination of the University of London. (6) Chemistry: the range of subjects is comprised in the course prescribed by the University of London for the Preliminary Scientific (M.B.) Examination under the head of "Chemistry." The fundamental principles of the Science aptly illustrated will claim more attention than a detailed account of the manufacture of the Salts of the Metals.—(7) Botany: the use of recognised Botanical Terms. Vegetable Morphology. The outlines of Vegetable Physiology. The Features and Life-history of the various classes of the Cryptogamia. The Classification of the principal British Natural Orders. Demonstration of the characters of recent Specimens, and the recognition of Vegetable Tissues and Organs in prepared Microscopical Slides.—(8 Zoology: the Schedule will be that of the Preliminary Scientific Examination of the University of London.—Candidates will be required to examine Microscopic and other Specimens.—Candidates will be examined in any three, and not more, of the above subjects which they may select.

Entrance Scholarships.—Two Open Scholarships in Natural Science value £150 and £60, are open to students not exceeding 24 years of age who have passed a preliminary examination in Arts; subjects: Physics, Chemistry, and either Physiology, Botany, or Zoology; examinations in September. Notice must be given not later than September 17th. Successful candidates must become students of the Hospital. One of the value of £50 is open to students who have completed their examinations in Anatomy, Physiology, and Materia Medica and Pharmacy for a medical degree in any of the Universities of the United Kingdom, and have not entered as students in any London medical school.

Preliminary Scientific Instruction.—Classes in the subjects required for the Preliminary Scientific Examination are held from October to July, and for the Intermediate M.B. Examinations from January to July.

Further information may be obtained from Mr. G. Rendle, the Secretary to the Medical School, at the Hospital.

University College: Medical Faculty.

The Hospital contains 207 beds available for clinical instruction and study.

Appointments.—Eight House-Physicians, six House Surgeons, twelve Obstetric Assistants, Out-Patients', Physicians' and Surgeons' Assistants, Clinical Clerks, Surgeons' Dressers, and Ophthalmic Surgeons' Assistants, are selected annually from among the students without extra fee. The House-Physicians, the House-Surgeons, and four Obstetric Assistants reside in the Hospital, paying for their board.

Entrance Scholarships.—Three Entrance Exhibitions, one of the value of 131 guineas, and two of the value of 55 guineas, to gentlemen who are about to commence their first winter's attendance. Subjects: Chemistry, Physics, and Biology. The examination will take place on September 25th and 26th. Notice of intention to compete must be given on or before September 22nd.

Other exhibitions and prizes of the annual value of about £500 are given in the Faculty of Medicine.

Information respecting the College may be obtained from the Dean, Professor Victor Horsley; the Vice-Dean, Professor A. E. Barker; the Sub-Dean, Professor Thane; or the Secretary, Mr. J. M. Horsburgh.

Westminster Hospital Medical School.

The Hospital contains upwards of 200 beds.

Appointments.—A Curator of the Museum and a Pathologist are appointed annually, each with a salary of £50; and a Medical and a Surgical Registrar, each with a salary of £40. Two House-Physicians, two House-Surgeons, and a Resident Obstetric Assistant are appointed for six months, after examination, and are provided with rooms and commons. Senior Dressers are appointed to attend to the surgery patients, under the supervision of the House Surgeons, and the dresser of the day is provided with commons at the Hospital table. Clinical Assistants to the Assistant-Physicians and Assistant-Surgeons, and to the officers in charge of special departments, are appointed from among qualified students. Every student must perform the duties of Out-patient Dresser for four months; and afterwards hold the office of In-patient Dresser for four months, of Out-patient Clinical Clerk for four months, and of In-patient Clinical Clerk for four months. Two Pathological Clerks are appointed every four months to assist in the *Post mortem* Room. No student is eligible as In-patient Dresser or Clinical Clerk until he has passed the Second Examination of the Conjoint Board, or an equivalent examination. Clerks and Dressers in the Special Departments of Hospital Practice are periodically appointed. So far as vacancies permit students of other hospitals are admitted to In-patients' Dresserships or Clerkships on payment of a fee of £7 7s.

Entrance Scholarships.—An examination for three Entrance Scholarships, value respectively £60, £40 and £20 will be competed for on September 28th and 29th, 1894. The third is offered for competition to intending students of dentistry. The subjects of examination are: Latin (same subjects as those of the Matriculation Examination of the University of London of the same year), Greek, French or German, Mathematics, and Experimental Physics and Chemistry. A week's notice must be given to the Dean. An examination for a Natural Science Scholarship (Inorganic Chemistry, Physics, and General Biology), value £60, will be held on April 26th and 27th, 1895. On the same date will be held an examination for a Scholarship (Chemistry, Inorganic and Organic, and Physics), value £40. A senior scholarship in Anatomy and Physiology are offered for competition to members of the University of Oxford or Cambridge. There is a Free Presentation open to pupils of Epsom School, and a Scholarship open to dental students. Preliminary Scientific (M.B.) Examination: Special classes in Chemistry, Physics, and Biology; fee, £12 12s. to those becoming general students. Intermediate M.B. and First F.R.C.S.: Special classes in Anatomy and Physiology, including Advanced Practical Histology and Embryology. Diploma in Public Health: The course of Laboratory instruction in Chemistry, Physics, and Bacteriology; fee, £12 12s. General Bacteriology: A separate course in General Bacteriology; fee, £5 5s. Any of the above classes are open to other than students of the School on terms to be learned on application to the Dean, from whom further information can be obtained.

London School of Medicine for Women.

Clinical Instruction is given at the Royal Free Hospital, which contains 160 beds.

Entrance Scholarships.—An Entrance Scholarship, value £30, is offered for competition at the end of September in each year. Candidates must have passed a Preliminary Examination in Arts, and the successful candidate must enter on a full course of medical study at the school. The Stuart Mill Scholarship, value £30 a year for four years, is offered to ladies willing to practise in India under the Dufferin Fund. A Medical Scholarship, value £100 a year for three years, for girls under 19, residing within the metropolitan area (St. Dunstan Trustees). The John Byron Bursary, value £20 a year for four years, is offered to ladies requiring assistance for the prosecution of their medical studies; the next award will probably be in 1896. The Fanny Butler Scholarship, value £20 a year for four years, for ladies guaranteeing to practise Medicine under the Church of England Zenana Missionary Society. Two Mackay prizes of £20 each are awarded to the two students taking the highest place in the class examinations of the first two years. Three Evans prizes of £3 3s. each are given in the Midwifery class, and a Woods prize of £5 5s. for the Operative Midwifery class. The Society for the Promotion of Christian Knowledge offers valuable scholarships on certain conditions. The Zenana Medical Mission Society assist ladies who wish to go to India as missionaries.

Cooke's Medical School, London.

The School is prepared to admit to its supplementary work all who may wish to join, but it desires to receive, in regard to its curriculum work, earnest workers only, and not more than half a dozen in the course of the year. These curriculum students are instructed according to the "Dissection Guides," and are supplied with the necessary material for dissecting the human body two or three times over. Corresponding advantages are offered in regard to Physiology. The Syllabus of the experimental work in Physiology will be forwarded on application.

The Bland Sutton Presentation, named after Mr. Bland Sutton, F.R.C.S., Surgeon to the Middlesex Hospital (a former pupil of the School), is intended to meet the case of specially able and deserving men of limited means. It confers the privilege of free education during the two first years of medical studies. Particulars forwarded on application.

By decision of the various Examining Bodies, gentlemen rejected at their Anatomical and Physiological Examinations (Second Conjoint, etc.) can get "signed up" from this school for the three or six months' supplementary work they are now required to put in before re-examination. The School is also recognised for the special dissections for the Fellowship of the Royal College of Surgeons.

The instruction is given on the dissected and undissected body, with normal and pathological specimens, microscopical preparations, chemical, physiological, and surgical apparatus,

splints, etc. The operations of Surgery are performed on the dead body. The school possesses a collection of physiological and chemical apparatus, and gentlemen preparing for the higher examinations receive special instruction in the more difficult subjects, and have the advantage of personal use of the physiological apparatus.

PROVINCES.

The medical schools in England, outside London, which give instruction in the full medical curriculum are those of the Universities of Oxford, Cambridge, and Durham (University of Durham College of Medicine, Newcastle-on-Tyne); the three Colleges of the Victoria University (Owens College, Manchester; University College, Liverpool; and the Yorkshire College, Leeds); Mason College, Birmingham (Queen's Faculty of Medicine); University College, Bristol; and Firth College, Sheffield (School of Medicine).

The opportunities for obtaining a good knowledge of the Preliminary Sciences, and of Anatomy and Physiology at the Universities of Cambridge and Oxford are unsurpassed; the staff of teachers is distinguished, and the laboratories are most completely appointed. Instruction in Clinical Medicine, Surgery, and Midwifery is given by the University Lecturers, and by the visiting staffs of the Radcliffe Infirmary at Oxford and of Addenbrooke's Hospital, Cambridge; but it is the rule for Oxford and Cambridge men, after spending three years at the University and passing the necessary examinations, to proceed for the remaining two years to London or some other large town where the opportunities for gaining clinical experience are greater. At many of the London schools special arrangements—as to which full particulars can be obtained on application to the respective Deans—are in existence to meet the case of students from the Universities joining under these circumstances. At some of the schools they are placed on the same footing in regard to obtaining the appointments of House-Physician and House-Surgeon as students who have attended the hospital throughout. As the circumstances of the various schools are liable to vary from time to time, special inquiries should be made on this point, which after-experience will show to be of great importance.

The arrangements and appliances for laboratory and other practical instruction at Owens College, Manchester, at University College, Liverpool, and at Bristol are most complete, having been in each case recently enlarged and improved. At the Yorkshire College, Leeds, new buildings have just been completed, and will be opened by the Duke and Duchess of York on October 5th, and the first session in the new buildings will commence on October 8th. At Birmingham the medical school is now a Faculty of the Mason College, and is provided with all the most modern facilities for instruction in science, while the great hospitals afford equally excellent opportunities for clinical work. Reference may also be made here to the new Medical School of the University College of South Wales and Monmouthshire at Cardiff: new buildings were opened by Sir Richard Quain last February, and the school now gives instruction in all the subjects of the medical curriculum belonging to the first three years.

Mason College, Birmingham (Queen's Faculty of Medicine).

Clinical instruction is given in the General and Queen's Hospitals, which have a joint total of 400 beds.

Appointments.—General Hospital: Two Resident Medical Officers, salary £70 a year; a degree in Medicine is necessary. One Resident Surgical Officer, salary £130 a year. Four Assistant House-Surgeons, office tenable for six months, without salary; a Surgical qualification is necessary. Two Medical Assistants, unqualified, tenable for six months, without salary. One Resident Assistant at the Jaffray Hospital, unqualified, tenable for three months. *Queen's Hospital:* Two House-Physicians, tenable for twelve months, at a salary of £50; a Medical qualification is necessary. Two House-Surgeons, tenable for twelve months, at a salary of £50; a Surgical qualification is necessary. One Obstetric and Ophthalmic House-Surgeon, tenable for six months; candidates must have a qualification; salary £10, with board and lodgings, etc. One Resident dresser, unqualified, tenable for three months.

Entrance Scholarships.—Queen's Scholarship, 30 guineas: Sands Cox, restricted to sons of medical men, 30 guineas: Sydenham Scholarships, one or more annually, restricted to orphan sons of medical men, elected by the Council, 30 guineas.

Further particulars may be obtained by application to Professor Windle, Dean of the Medical Faculty, at the College.

University College, Bristol: Faculty of Medicine.

Clinical instruction is given at the Royal Infirmary and General Hospital. The Royal Infirmary contains 264 beds, a large Library and Museum. The General Hospital contains 200 beds, a Library and Museum.

Appointments—Royal Infirmary: House-Physician, House-Surgeon, and Junior Resident Medical Officer; Clinical Clerks and Dressers, also Ophthalmic, Obstetric, and Pathological Clerks are appointed. The Dressers reside in the Infirmary in weekly rotation. *General Hospital:* House-Surgeon, Assistant House-Surgeon, and Physicians' Assistant; Clinical Clerks, Dressers, Pathological Clerks, and Obstetric Ophthalmic, and Pathological Clerks are appointed. The Dressers reside in the Hospital in rotation free of expense.

Entrance Scholarships — Royal Infirmary: Two Entrance Scholarships (in subjects of general education), value £36 15s. and £10 10s. *General Hospital:* Lady Haberfield Entrance Scholarship, value, the interest of £1,000, at the beginning of the winter session, after examination in subjects of general education. Second Entrance Scholarship, value £20. Clarke Surgical Scholarship, for third year students, £15 annually.

Full information can be obtained on application to the Dean of the Medical Faculty, Dr. Arthur B. Prowse, University College, Bristol.

Leeds School of Medicine: Medical Department of Yorkshire College.

Clinical Instruction, etc.—The General Infirmary has 443 beds. The West Riding Lunatic Asylum at Wakefield is open for the study of Mental Diseases. Students can also attend the practice of the Leeds Public Dispensary, the Fever Hospital, and the Hospital for Women and Children.

Appointments.—House-Physicians, House Surgeons, Physicians' Clerks, Surgeons' Dressers, Ophthalmic and Aural Surgeons' Dressers, Gynæcological Ward Clerks, Assistant-Physicians' Clerks, Assistant-Surgeons' Dressers, Dressers in the Casualty Room, and *Post-mortem* Room Clerks, are appointed during the year. The house-physicians and house-surgeons hold office for twelve months; the physicians' clerks and surgeons' dressers for six months; the others for three months. The house-physicians and house-surgeons must have at least one legal qualification. Appointments are also open to students at the Leeds Public Dispensary, at the Hospital for Women, and at the West Riding Lunatic Asylum.

University College, Liverpool: Medical Faculty.

Appointments.—Royal Infirmary: Three House Physicians, three House-Surgeons, and one External House-Surgeon to the Thornton Wards are appointed for six months, after (if there be more applicants than vacancies) competitive examination. Candidates must have a legal qualification. Three Clinical Clerks for each Physician, three or more Dressers for each Surgeon, and two Clerks to the Thornton Wards for Diseases of Women are appointed for three months in October, January, and May. *Post-mortem* Clerks are appointed for

six weeks. All students must perform this duty before the schedule for the final examination is signed.

Entrance Scholarships.—Holt Tutorial Scholarships: two are awarded annually by the Medical Faculty, each of the value of £100 for one year. Roger Lyon Jones Scholarships (each £21 for two years): one is offered annually as an entrance scholarship to students proceeding to the Victoria M.B. degree; the other is competed for by second year's students in Anatomy, Physiology, Chemistry, and Materia Medica.

Communications should be addressed to the Dean, Professor Gotch, F.R.S., University College, Liverpool.

Owens College, Manchester: Medical Department.

The Royal Infirmary contains 300 beds. Associated with it are the Monsall Fever Hospital (306 beds), and the Convalescent Hospital (136 beds), and the Royal Lunatic Asylum at Cheadle, which accommodates 260 patients.

Appointments.—The following appointments are made: A Surgical Registrar, at £100 per annum; a Pathological Registrar, at £100 per annum; a Medical Registrar, at £50 per annum; two Assistant Medical Officers, each at £80 per annum; an Anæsthetist, at £50 per annum; an Assistant Anæsthetist, at £50 per annum. Resident Medical Officer, two years, £150 per annum; ditto, at Cheadle, one year, £150 per annum; ditto, at Monsall, one year, £250 per annum; Resident Surgical Officer, one year, £150 per annum; four House-Surgeons and two House-Physicians, a Resident Assistant at Monsall (salary £100 per annum); and one at Cheadle, each for six months. The House-Physicians, House-Surgeons, and the Resident Assistant at Monsall must possess a qualification which can be registered. Four or more Clinical Clerks are attached to each Physician or Assistant-Physician, and four or more Dressers to each Surgeon and Assistant-Surgeon. Additional Clinical Clerks are appointed to assist in the departments for the Diseases of the Ear and Throat, and to assist the Surgical Registrar.

Entrance Scholarships.—Two Dauntesey Medical Scholarships, value £50, tenable for one year. Candidates must not have attended lectures in a medical school. Subjects of Examination: Zoology, Botany, and Chemistry. The successful candidates must enter for the full course of medical studies at the College. A Gilchrist Scholarship of £50 per annum, tenable for three years in the College, awarded biennially, upon the results of the June Preliminary Examination of the Victoria University; also one, annually, upon the results of the June Preliminary Examination of the Victoria University. Grammar School Scholarship, value £18, tenable for three years, open to scholars of the Manchester Grammar School between the ages of 16 and 21. A subject for an English Essay will be set each year. The successful candidate must enter to one of the departments of Owens College.

Prospectuses may be obtained from the Registrar, Mr. H. W. Holder, M.A.

Firth College, Sheffield: School of Medicine.

The General Infirmary contains 200 beds, including two ophthalmic wards. The Public Hospital and Dispensary contains 105 beds. Students are also admitted to the practice of the Jessop Hospital for Diseases of Women, to the Borough Fever Hospitals, and South Yorkshire Asylum. An Entrance Scholarship of the value of £110 will be awarded at the commencement of the session to the best candidate, if of sufficient merit, in Latin, Mathematics, Elementary Physics, Inorganic Chemistry, French. The Examination will be held at Firth College on September 26th and 27th; applications to be sent to the Secretary of the Medical School not later than September 19th. Certificates and Book Prizes awarded annually. Prizes in Clinical Medicine and Surgery, £10 10s., are awarded by the Clinical Committee. Simon Prize of £10 is presented by Dr. Hunter, Consulting Surgeon to the Public Hospital.

University of Durham College of Medicine, Newcastle-on-Tyne.

The Royal Infirmary contains 280 beds.

Appointments.—Assistant Demonstrators of Anatomy, Prosectors for the Lecturer on Anatomy, Assistant Physiologists, Pathological Assistants, Assistants to the Dental Surgeon, and Assistants in the Eye Department are elected annually. The Assistant Demonstrators of Anatomy receive £5 each; the others are unpaid. Four times in the year Clinical Clerks and Dressers are appointed for three months.

Scholarships.—A University of Durham Scholarship, value £100, for proficiency in Arts, open annually at beginning of winter session to intending students, and to those who have attended only one winter and one summer session. The Dickinson Memorial Scholarship, interest of £400, with a gold medal, for Medicine, Surgery, Midwifery, and Pathology; open to perpetual students who have passed the primary examination of a licensing body. The Tulloch Scholarship, interest of £400 annually, for Anatomy, Physiology, and Chemistry. The Charlton Memorial Scholarship, interest of £700 annually, open to full students entered for the class of Medicine, at end of winter session. The Gibb Scholarship, interest of £500 annually, for Pathology, at end of summer session. The Goyder Memorial Scholarship, proceeds of £325; subjects: Clinical Medicine and Clinical Surgery. Luke Armstrong Memorial Scholarship, proceeds of £680. The Scholarship is open to all the candidates for the Degree of Bachelor of Medicine, and will be awarded to the candidate who obtains highest marks in the Honours Division in the Final Examinations in June and December in each year. The Stephen Scott Scholarship, interest of £1,000 annually, to promote the study of Hernia and allied subjects. The Heath Scholarship. The late George Y. Heath, M.D., M.B., D.C.L., F.R.C.S., President of the University of Durham College of Medicine, has bequeathed the sum of £4,000 to found a scholarship in Surgery, the interest to be awarded every second year.

University College of South Wales and Monmouthshire, Cardiff.

This College has for some years prepared students for their Preliminary Scientific Examination (M.B.), and these students have continued their studies in London and elsewhere. By the foundation of two new Chairs of Anatomy and Physiology, and also of a Lectureship in Materia Medica and Pharmacy, students are able to prepare for the Intermediate M.B. of London, and spend three out of their five years of medical study in Cardiff, proceeding subsequently to a London hospital for the remaining two years. A student preparing for a Conjoint College Surgical and Medical Diploma, or that of the Society of Apothecaries, may spend his first two years in Cardiff. Believing that many students—more especially in Wales and Monmouthshire—will avail themselves of the opportunity of study near home, the Council has sanctioned the construction at considerable cost of new laboratories and lecture rooms for the teaching of Anatomy, Physiology, and Materia Medica and Pharmacy, which are now complete and furnished with the newest and best appliances for teaching and research. By an arrangement with the managing committee of the Glamorganshire and Monmouthshire Infirmary, students have the privilege of attending a large and well-ordered hospital situated within a few minutes' walk of the College.

Students preparing for the Preliminary Scientific and Intermediate Examination in Medicine of the University of London may compound for their classes by paying a composition fee of £57 10s. Students who are preparing for the examinations of the Conjoint Board or of the Society of Apothecaries, London, may compound for their classes by paying a composition fee of £47 10s. In all cases the composition fees may be paid in instalments. The composition fees include hospital attendance. The teaching staff is as follows:

Physics.—Professor: J. Viriamu Jones, M.A.Oxon., B.Sc.Lond., F.R.S. Fellow of University College, London. Assistant Professor: A. L. Selby, M.A., Fellow of Merton College, Oxford. Demonstrator and Assistant Lecturer: W. S. Hensley, B.A., Christ's College, Cambridge.

Chemistry.—Professor: C. M. Thompson, M.A., Trinity College, Cambridge, D.Sc.Lond., F.C.S. Assistant Lecturer: E. P. Perman, D.Sc.Lond.

Biology.—Professor: W. N. Parker, Ph.D.Freiburg, F.Z.S.

Botany.—Lecturer: A. H. Trow, B.Sc.

Anatomy.—Professor: Alfred W. Hughes, M.B., F.R.C.S.Eng.&Edin.

Physiology.—Professor: John Berry Haycraft, M.D., D.Sc., F.R.S.E.

Materia Medica.—D. R. Paterson, M.D., M.R.C.P.

Registrar.—Ivor James.

The Glamorganshire and Monmouthshire Infirmary will

have its accommodation raised within the next few months to 200 beds. Attached to the hospital is a large out-patient department, and special departments for the eye, ear, and throat.

Students preparing for the Medical Degrees of a Scottish University may also spend three out of their five years of medical study at the College.

SCOTLAND.

UNIVERSITY OF ABERDEEN.

Special opportunities for practical instruction are afforded in the chemical, anatomical, physiological, pathological, and hygienic laboratories; and anatomical, pathological, botanical, materia medica, forensic medicine, midwifery, natural history, and surgical museums throughout the day, under the direction of the professors. Practical instruction is given also in the toxicological, pharmaceutical, botanical, and zoological laboratories and in the surgical museum and laboratory. Courses of practical instruction are given in summer in Medical Jurisprudence and Hygiene; in Diseases of Children, at the Sick Children's Hospital; in Fevers, at the Fever Hospital: in Insanity, at the Royal Asylum; in Diseases of the Ear and Larynx, at the Dispensary; in Diseases of the Eye, at the Infirmary and Eye Institution; in Diseases of the Skin, at the Royal Infirmary and Sick Children's Hospital. The General Dispensary and the Lying-in, Vaccine, and Eye Institutions, and the Sick Children's Hospital are open daily. Practical Pharmacy, Operative Surgery, Practical Medical Jurisprudence, and Hygiene, fee to each class, £3 3s. except Anatomical Demonstrations, Practical Natural History, Practical Midwifery, and Gynæcology, each £2 2s.; Practical Ophthalmology, Insanity, Public Health, Diseases of the Ear and Larynx, Diseases of the Skin, and Dental Surgery, each £1 1s.; Matriculation Fee, both sessions, £1; summer session alone, 10s.; Royal Infirmary: Perpetual fee, £6; or first year, £3 10s.; second year, £3. Clinical Medicine and Clinical Surgery, each £3 3s. The winter session begins on October 10th. Bursaries, scholarships, and fellowships, to the number of forty-six, and of the annual value of £1,018, may be held by students of medicine in this University. They range from £8 to £100 per annum, and are tenable in most cases for two years.

EDINBURGH UNIVERSITY.

Practical Instruction.—The following means are afforded for practical instruction: Royal Botanic Garden, Herbarium, and Museum; Zoological Laboratory and Museum of Science and Art: Physical Laboratory: Chemical Laboratories; Dissecting Rooms, Bone Room, and Anatomical Museum; Physiological Laboratory; Medical Jurisprudence Laboratory; Materia Medica Museum and Laboratory; *Post-mortem* Department of Royal Infirmary, and University Pathological and Bacteriological Laboratory; Royal Infirmary of 735 beds; Royal Hospital for Sick Children, with some 70 beds; Maternity Hospital; City Fever Hospital; Mental Diseases at Royal Morningside Asylum; Tutorial Classes of Practice of Physic, of Clinical Medicine, and Clinical Surgery.

Fees.—The Sessional Fee for Zoology, Botany (Garden Fee, 5s.), Chemistry, Anatomy Lectures, Physiology, Pathology, Materia Medica, Medical Jurisprudence, Surgery, Medicine, Clinical Surgery (Winter), Clinical Medicine (Winter), is £4 4s. each. Second Course, £3 3s. Third free. A perpetual ticket taken at the beginning of the first year is £6 6s. Physics, Practical Chemistry, Practical Physiology, Practical Pathology, Clinical Surgery (Summer), Clinical Medicine (Summer), Practical Anatomy (Winter), Operative Surgery, Insanity, Obstetric Operations, Diseases of the Eye, and Comparative Embryology are £3 3s. Practical Botany (besides charge of 10s. for Laboratory expenses), Practical Zoology (besides charge of 10s. for Laboratory expenses), Practical Anatomy (Summer), Anthropology, Anatomy Demonstrations, £2 2s. Diseases of Children, and Vaccination, £1 1s. Matriculation Fee, £1 for each year, or 10s. for a Summer Session. Library open from 10 to 4; Saturdays, 10 to 1.

FELLOWSHIPS, SCHOLARSHIPS, BURSARIES, AND PRIZES OPEN FOR SESSION 1894-95.

I. *Fellowships.*—Syme Surgical Fellowship of annual value of £105 17s. 6d., tenable for two years, open to M.B.'s and C.M.'s of not more than three years' standing, for the best thesis on a surgical subject at the graduation of August, 1895. Leckie-Mactier Fellowship of annual value of £70, tenable for three years, open to M.B.'s of not more than three years' standing, for best reports and commentaries on Medical, Surgical, and Gynæcological cases in the University Wards, and Examinations in Medicine, Surgery, Midwifery, Medical Jurisprudence, and Public Health. Next appointment may be November, 1895.

II. *Lectureship.*—The Swiney Lectureship on Geology, of the annual value of £144, tenable for five years, open to M.D.'s.

III. *Travelling Fund.*—The William Dickson Travelling Fund of about £100 per annum, to aid in travel, study, and research. Open to Graduates of not more than three years' standing. It may be divided.

IV. *Scholarships.*—(1) Ettles Scholarship in Medicine of the annual value of about £25, awarded to the most distinguished M.B. and C.M. of his year. (2) Sibbald Medical Scholarship of the annual value of £40, tenable for three years, open to students of medicine who have attended Edinburgh University for not less than one Winter and one Summer Session, and for not more than one Winter and two Summer Sessions. The examination is in Chemistry, Botany, Zoology, and Physics. (3) Thomson Scholarship, of the annual value of £40, tenable for four years, open to matriculated students beginning their first winter. The examination is in Botany, Zoology, and Elementary Mechanics. Names to be given to Traquair, Dickson, and Maclaren, W.S., 11, Hill Street, Edinburgh. Preference to those of the name Thomson or Traquair, or natives of Dumfries or Edinburgh. (4 and 5) Vans Dunlop Scholarships, one after examination in Zoology, Geology, and Botany, value £100, tenable for three years. Examination similar to Second B.Sc., open to all students from second to sixth year inclusive. Names to be given in before March 15th, 1895. One at the end of the third winter to those who shall obtain the highest marks in Anatomy, Physiology, Materia Medica, and Pathology; tenable for three years. (6) Murchison Memorial Scholarship, annual proceeds of £1,000, awarded in alternate years in London and Edinburgh for proficiency in clinical medicine. Registered medical students of not less than four, or more than six, years' standing. (7) Buchanan Scholarship, £40 10s. for one year, awarded to the M.B. who has shown highest proficiency in Midwifery and Gynæcology. (8) James Scott Scholarship, £45, awarded annually at the graduation ceremonial for proficiency in Midwifery. (9 and 10) Hope Prize Scholarships, two of the value of about £30, awarded annually for proficiency in Chemistry.

V. *Bursaries.*—(1 and 2) Sibbald Bursaries; two bursaries of £30 each, tenable for three years, for distinction in preliminary examination. Apply to MacKenzie, Innes, and Logan, W.S., 23, Queen street, Edinburgh, before September 15th. (3 and 4) Mackie Bursaries; two of £30 each, tenable for two years by those requiring pecuniary assistance. Apply to Dean, before October 1st, 1894. (5 to 8) Grierson Bursaries; four of £20 each, tenable for 3 years to candidates from parishes of Crawford and Leadhills. Distinction in Preliminary, tenable for one year only by non-preferential candidates. Names before September 21st. (9 and 10) Thomson Bursaries; two of £25 each, tenable for four years. Subjects of Preliminary. One awarded in spring and one in autumn. Names of Thomson and Traquair, or natives of Dumfries or Edinburgh, have the preference. Preferential candidates apply to Traquair, Dickson, and Maclaren, 11, Hill Street, before September 22nd and March 21st. (11 and 12) Mackenzie Bursaries; two of £21 5s. each, tenable for one year, awarded for distinction in Practical Anatomy. (13 and 14) John Aitken Carlyle Bursaries; two of £28, tenable for one year, one for proficiency in Anatomy and Chemistry and one in Anatomy and Physiology. (15 to 19) Heriot Bursaries; five of £30, tenable for four years, open to students matriculating for first time. Apply to Treasurer, 20, York Place, after August 10th. (20 to 23) Crichton Bursaries; four bursaries of £50 each, tenable for four years. Subjects and dates to be announced later. (24) Renton Bursary of £19 19s. 6d., tenable for one year. Candidates must be between 16 and 21 years of age, and be studying Physics or Chemistry.

VI. *Prizes.*—In addition to Gold Medals given on Graduation to Doctors of Medicine, whose theses are deemed worthy of that honour, some sixteen prizes, varying in amount from £8 16s. 2d. to £100, are open to M.B.'s at the close of their course.

EDINBURGH ROYAL INFIRMARY.

Fees.—Six months, £4 4s.; one year, £6 6s.; perpetual, £12 in one sum, or separate payments £12 12s.

Six resident physicians and five surgeons are appointed every six months; they live in the house free of charge, save laundry. They must be registered. Many non-resident clinical clerks are also appointed for six months. The physicians and surgeons appoint their own clerks and dressers, and assistants in the Pathological Department are appointed by the pathologists. Instruction is given in all the special departments.

SCHOOL OF MEDICINE, EDINBURGH.

The School of Medicine of Edinburgh claims antiquity; it dates from 1505. The teaching is similar to that of the Scottish Universities, and the students receive similar certificates at the close of each session. The courses on the special subjects not included in the curriculum of the Examining Boards are also conducted by teachers specially qualified in each branch, and have for the last quarter of a century formed a special feature of the School.

This School of Medicine is composed of lecturers licensed by the Royal Colleges of Physicians and Surgeons, and who are also recognised by the University through their *licentia docendi*, though, for the sake of convenience, lecturing in several buildings near at hand to the Royal Infirmary. The lecturers form one body, are all subject to the same rules and regulations, and enjoy the same privileges. The different buildings at present utilised for the purpose of lecturing are the following: 1. Surgeons' Hall, Nicolson Street; 2. Minto House, Chambers Street; 3. Nicolson Square; 4. Marshall Street; 5. Park Place, and several other places.

The present number of lecturers is 61, of whom 48 deliver qualifying courses of instruction of the same duration and scope as those given in the University, while a large number of lecturers conduct non-qualifying courses on special subjects applicable to medical science, but which are not included in the ordinary curriculum.

In accordance with the statutes of the University of Edinburgh, three out of the five years of medical study required for graduation may be taken at this School; but the regulations require that the fee of any class shall be the same as for the corresponding class in the University.

The whole education for graduation at the University of London may be taken here.

Fees for the first course, £3 5s.; for a second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh, the perpetual fee is £2 4s.; Practical Anatomy (six months' course), £3 3s.; Demonstrations, £2 2s.; Perpetual, £4 4s.; Practical Anatomy, with Demonstrations, £4 4s.; Practical Chemistry, £3 3s.; Analytical Chemistry, £2 a month, £5 for three months; Biology and Physics, £3 3s. each; Practical Materia Medica and Pharmacy, Practical Physiology, and Practical Pathology, each £3 3s.; Otology, Eye, Dermatology, Children, Topical Diseases, each £2 2s.; Vaccination, £1 1s. For summer courses of Clinical Surgery and Clinical Medicine, each £2 4s.; Practical Anatomy, with Demonstrations, Medical Diagnosis, and Insanity, £2 2s. each; Operative Surgery, £3 3s.

The appointment of Resident Physician to the Wards in the Royal Infirmary under the care of the ordinary physicians is open only to those members of their Clinical class who have "clerked" in their wards for at least six months. Six appointments are made during the year, for a period of six months each. Six Resident Surgeons are similarly appointed.

The Secretary is Dr. Stevenson Macadam, Surgeons' Hall, Edinburgh. Full particulars in the *Edinburgh Medical School Calendar*.

Edinburgh School of Medicine for Women.

No student is admitted under the age of 18, and a form of application must be got from the Secretary, filled up and returned at least a month before the beginning of each session. No one can be admitted to the classes until a favourable answer has been given. Students must conform to directions given by the Dean (Dr. Sophia Jex-Blake) from time to time; must take the advice of the Dean respecting her curriculum, both as to order of study and as to repetition of any class; cannot proceed to any professional examination without the sanction of the Dean, who will, when necessary, make arrangements for special probationary examinations, for which a small fee will be charged; must satisfy the Dean that lodgings selected by themselves are of a desirable character in all respects.

A full curriculum of instruction in all subjects is provided. Anatomy and Practical Anatomy, Chemistry and Practical Chemistry, Clinical Medicine and Surgery are given every year, and the other courses, as a rule, in biennial rotation. For Winter 1894-5 the courses will be: *Anatomy, Practical Anatomy, Chemistry*, Histology, Practice of Surgery, Physics, Biology, Clinical Medicine and Surgery, and Hospital. [Those in italics are for junior students.] For Summer 1895, *Practical Pharmacy, Practical Chemistry*, Mental Diseases (optional), Midwifery, Forensic Medicine, Physics, Biology, and Hospital.

Cost.—The whole amount of a student's fee may be set down at about £150. This includes £26 5s., as examination fees for the "triple qualification." The cost of books, instruments, etc., will vary from £10 to £30, or more.

Scholarships.—There are some scholarships open to students—(1) an Entrance Scholarship of £20, given by the Executive Committee to those who need such assistance; (2) the Cropper Scholarship of £50 may be offered for competition in 1894 or 1895; (3) the Arthur Scholarship, which confers free education for three years; (4) the Dufferin Scholarship of £100, open to women who intend to practise in India; (5) certain missionary societies frequently give help in bearing the cost of education.

While the curriculum of this school is specially adapted to the requirements of the Scottish Conjoint Board, the classes also qualify for some of the other Examining Boards that are open to women—namely, the University of London, the Royal University of Ireland, the Conjoint Irish Colleges of Physicians and Surgeons, and the Society of Apothecaries of London.

Miss Black will be glad to assist students to find suitable lodgings or board. The latter can be obtained at about £1 per week, or more, according to requirements. Arrangements will be made to supply a substantial midday meal at the school during the session for those who cannot conveniently go home. The charge is £3 for a winter session, and £1 10s. for a summer. Further particulars from Miss Black, or in the *Edinburgh Medical School Calendar*, published by E. and S. Livingstone, 15, Teviot Place, Edinburgh. Price 2s.; post free, 2s. 3d.

Medical College for Women, Edinburgh.

Precisely the same facilities for medical study as are given to male students in the School of Medicine, Edinburgh. Arrangements, fees, and regulations are similar. All the teachers are qualified lecturers of the school, and their courses admit to the qualifying bodies for women. The classes are open to all ladies, whether taking a full medical curriculum or not. No matriculation fee is charged. The school is a large and vigorous one. Prospectus and all information from Miss D. M. Scott, 30, Chambers Street; and details of the classes are given in the *Edinburgh Medical School Calendar*, named above.

University of Glasgow.

The whole course of study presented by the University of Glasgow (*q.v.*) can be passed in the Medical School of the University.

For practical work there are available the Physical, Chemical (winter course, £10 10s.; summer, £5 5s.), Physiological, Zoological, and Botanical Laboratories; and the Botanic Gardens.

Partial Study Elsewhere.—Only two of the five years need be spent at the University, the remaining three may be spent in such universities or schools, or under such teachers, as are recognised by the University Court.

Bursaries, etc.—Ten Bursaries and Prizes in Medicine are open to competition during Session 1894-95, the aggregate value of which is £193.

Hospitals.—The University is in the immediate neighbourhood of the Western Infirmary, with 400 beds, and near to the Lunatic Asylum, and Special Hospitals for Diseases of the Eyes, Skin, etc.

Fees.—The class fees are, as a rule, £3 3s., excepting Practical Anatomy and Anatomical Lectures (in summer), Operative Surgery, Embryology, and Diseases of Women, which are £2 2s. A Perpetual Hospital Ticket costs £21, payable £10 10s. in the first year, and the same the second, and this includes clinical instruction. The fee for the degree of M.D. is 10 guineas (exclusive of stamp duty, £10); for Ch.M., 10 guineas. The total class and hospital fees for the five years' course amount to about £97 13s., to which add the annual matriculation fee (£1 1s.) and the fees for M.B., Ch.B. (£23 2s.) making a total of £126.

The Women's Department of the University (Queen Margaret College).—The course of study, degrees, regulations, fees, etc., are the same as for men, but women students have their own buildings, with Reading and Writing Rooms, Drawing Room, Library, etc., and are taught in classes apart from male students, but have all the rights and privileges of university students. Their clinical studies are taken in the Royal Infirmary, where wards (110 beds) are reserved for their exclusive use, and in its Dispensaries.

Scholarships and Bursaries at Queen Margaret College.—A scholarship of £25 for three years will be open to competition by first year students at the First Professional Examination in October, 1895. The Mackintosh Mental Science Bursary of £30 is open to medical students who have attended the Insanity Lectures. The University Commissioners have prepared a Draft Ordinance proposing to make regulations for the admission of women to certain Bursaries, Scholarships, and Fellowships.

Class and Examination Fees.—The class and hospital fees, for the subjects enjoined by Ordinance as constituting a five years' course of study and clinical work, amount to about

£97 13s. To this there has to be added £5 5s. for matriculation fees, £23 2s. for examination fees, and £5 1s. for registration as a practitioner.

Board for Students.—A House of Residence for women students, Queen Margaret Hall, situated near the College, will be opened in October, 1894. For information regarding terms, etc., apply to Mrs. Riddoch, Honorary Secretary, 2, Lawrence Place, Dowanhill, Glasgow.

For further information, male students may apply to W. Innes Addison, Matriculation Office, Glasgow University; women students to Miss Galloway, Queen Margaret College, Glasgow, W.: or the *Queen Margaret College Calendar*, published by James Maclehose and Sons, 61, St. Vincent Street, Glasgow, price 1s., post free 1s. 2d.; and to the *Prospectus* for session 1894-95 by the same publishers.

St. Mungo's College, Glasgow.

The class rooms and laboratories are within the grounds of the Glasgow Royal Infirmary, the wards of which are available for the students. The Winter Session opens on October 21st. Courses are given during the winter on Physics, Zoology, Embryology, Chemistry, Anatomy, Osteology, Surgery, Medicine, Materia Medica, Physiology, Histology, Pathology, Ophthalmology, Gynæcology, Diseases of Throat and Nose, Public Health Laboratory, and Dispensary; and during the summer in Botany, Surgery, Children, Anatomy, Medical Chemistry, Osteology, Practical Pathology, Hygiene, Practical Physiology, Clinical Medicine, Medical Jurisprudence, Dermatology, Otology, Bacteriology, Psychological Medicine, and Dispensary.

Sessional Fees.—First year, £15 15s.; second year, £15 15s.; third year, £10 10s.; fourth year (and perpetual), £5 5s. Total cost of qualifying course including Corporation Licence about £100.

Class Fees.—£2 2s. for each class, except Anatomy, £4 4s.; Pathology, £3 3s.; Otology, Throat and Nose, and Dermatology, £1 1s.

Hospital Fees.—First year, £10 10s.; second year (and perpetual), £10 10s.

Full information from the Dean of the Faculty of Medicine, Professor Clark.

Glasgow: Anderson's College Medical School.

Lectures are delivered on all the subjects of the five years' curriculum. Hospital Practice and Clinical Lectures in Royal or Western Infirmary: Pathology in Royal or Western Infirmary; Vaccination and Dispensary Practice in Royal or Western Infirmary Dispensary. The above lectures qualify for all the Licensing Boards in the United Kingdom. They are recognised by the Universities of Glasgow, Edinburgh, etc., under certain conditions which are set forth in the *Calendar*.

Fees for each course of lectures (Anatomy and Chemistry excepted), first session, £2 2s; second session, £1 1s.; afterwards free. Anatomy Class Fees: Winter, first session (including Practical Anatomy), £4 4s.; second session (including Practical Anatomy), £4 4s.; third session, £2 2s.; Practical Anatomy alone, £2 2s. To those who have attended the necessary courses of Practical Anatomy the fee will be £1 1s. Chemistry Class Fees: First Course, £2 2s.; second ditto, £2 2s. Students who have attended classes at other schools will be admitted to such classes as they may have attended elsewhere at the reduced fees. Matriculation fee, 10s.

The new buildings are situated in Dumbarton Road, immediately to the west of the entrance to the Western Infirmary, within two minutes' walk of that institution and four minutes' walk of the University.

A *Calendar* containing full particulars of the school may be obtained from Professor A. M. Buchanan, M.A., M.D., the Secretary, Anderson's College Medical School, Dumbarton Road, Partick, Glasgow.

The session opens on October 23rd, 1894.

University College, Dundee.

Students proceeding to the degrees of St. Andrews or any other Scottish University, the University of London, the Royal University of Ireland, and the licences of the Royal Colleges, can now complete the first two years of the curriculum by attendance on the classes of this department, which along with the practice of the Dundee Royal Infirmary are open to women.

The following order of study is suggested:—

First Winter.—Chemistry, Zoology, Anatomy, and Physics.[1] *First Summer*—Botany, Physics,[1] Zoology (if not taken in winter), Anatomy (optional). *Second Winter.*—Anatomy, Physiology, Surgery, Hospital. *Second Summer.*—Practical Physiology, Practical Pharmacy, Practical Anatomy, Hospital.

Royal Infirmary.—The Infirmary contains 250 beds, including a special ward for children. In addition there were during last year 5,023 out-patients, and 6,623 patients seen at their own homes. Appointments: Two qualified resident medical assistants are appointed annually. Clinical clerks and dressers are attached to the physicians and surgeons, and students are appointed as assistants in the *post-mortem* room. There is in connection with the hospital course a class of Minor Surgery and Bandaging conducted by the assistant surgeon, and a class of Practical Pharmacy and Materia Medica held at the dispensary.

Royal Asylum.—Clinical instruction is given at the Royal Asylum. Appointments: one qualified resident assistant and one resident clinical clerk.

IRELAND.

Students desirous of prosecuting their medical studies in Ireland may attend the School of Physic in the University of Dublin: the Schools of Surgery of the Royal College of Surgeons of Ireland (including the Carmichael and Ledwich Schools), the Catholic University School of Medicine, Dublin; or the Schools of Medicine of the Queen's Colleges in Belfast, Cork, or Galway. The student will be guided in his arrangements for clinical instruction by the advice of the teachers of the School which he may select to attend.

Dublin.

School of Physic in Ireland.

This school is formed by an amalgamation of the medical schools of Trinity College and of the King and Queen's College of Physicians; the King's Professors of Institutes of Medicine, Practice of Medicine, Materia Medica, and Midwifery, being appointed by the latter. (See also Table on p. 486.)

Clinical instruction is given by the staff of Sir Patrick Dun's Hospital. The following Hospitals are also recognised by the Board of Trinity College: Adelaide Hospital, City of Dublin Hospital, Dr. Steevens's Hospital, House of Industry Hospitals, Jervis Street Infirmary, Mater Misericordiæ Hospital, Mercer's Hospital, Meath Hospital, the National Eye and Ear Infirmary, St. Mark's Ophthalmic Hospital, St. Vincent's Hospital.

Catholic University Medical School.

Prospectuses and further information about this school, which provides complete courses of lectures as required by the examining bodies, may be obtained from the Registrar of the School, Cecilia Street, Dublin, who has written a very useful *Guide for Medical Students*. (See also p. 486).

Schools of Surgery; including the Carmichael and Ledwich Schools; Royal College of Surgeons in Ireland.

There is a laboratory for the study of Practical Physiology. The dissecting rooms open from October 1st. The dissections are under the direction of the Professors of Anatomy, assisted by several Demonstrators. There are complete arrangements for the whole course of lectures required by the examining bodies.

Belfast.

Queen's College.

Clinical instruction is given at the Belfast Royal Hospital, The Ulster Hospital for Diseases of Women and Children, the Belfast Lying-in Hospital, the Belfast Ophthalmic Hos-

[1] Attendance during the winter session in the Ordinary Course of Physics for the Arts Degree will exempt from attendance in the summer session.

pital, the Ulster Eye, Ear, and Throat Hospital, the Belfast District Lunatic Asylum, and the Belfast Hospital for Sick Children are open to students.

Cork.

Queen's College.

Clinical instruction is given at the North and South Infirmaries (each 100 beds). Students can also attend the Mercy Hospital (60 beds), the Cork Union Hospital, the County and City of Cork Lying-in Hospital, the Maternity, the Hospital for Diseases of Women and Children, the Fever Hospital, the Ophthalmic and Aural Hospital, and the Eglinton Lunatic Asylum. The session at Queen's College extends from October to April inclusive (thirty weeks), but the hospitals are open to students in May, June, and July also.

Galway.

Queen's College.

Clinical instruction is given at the Galway County Infirmary and the Galway Town Hospital.

Prizes.—Attached are eight scholarships of the value of £25 each; four exhibitions of the value of £12 each; two exhibitions of the value of £16 each; and sessional prizes in each of the subjects of the curriculum are awarded annually. All scholarships and exhibitions of the second, third, and fourth years may be competed for by students who have attained the requisite standing in any medical school recognised by the College Council, and have passed the Matriculation Examination in the College, or in the Royal University of Ireland.

Clinical Hospitals.

Sir Patrick Dun's Hospital.

Appointments.—A House-Surgeon is appointed annually, and four Resident Pupils half-yearly.

Richmond, Whitworth, and Hardwicke Hospitals.

These hospitals contain 312 beds: 110 for surgical cases, 82 for medical cases, and 120 for fever and other epidemic diseases.

The Richmond Lunatic Asylum, containing over 1,200 patients, adjoins these hospitals, affording facility for the study of mental disease.

Appointments.—A Resident Surgeon and a Resident Physician are appointed every year, receive a salary, and hold office for one year. Five Residential Clinical Clerks are appointed each half year, and provided with furnished apartments, fuel, etc. These appointments are open not only to advanced students, but also to those who are qualified in Medicine and Surgery. The dressers are selected from among the best qualified of the pupils, without the payment of any additional fee.

Further information can be obtained from the Honorary Secretary, Dr. G. P. L. Nugent, 19, Lower Fitzwilliam Street; or the Hon. Treasurer, Dr. Thomson, 54, Stephen's Green, E.

Adelaide Medical and Surgical Hospitals.

The hospitals contain 140 beds. A Resident Surgeon is appointed yearly, and three resident pupils are selected half-yearly.

Further particulars may be obtained from Mr. F. T. Heuston, or any of the members of the medical staff.

City of Dublin Hospital.

Appointments.—Clinical Assistants to the Physicians and Dressers to the Surgeons are appointed from the most deserving of the class, and certificates awarded for the faithful performance of their duties. Medical and Surgical Resident Pupils are appointed, and Special Certificates awarded if merited. A House-Surgeon is appointed annually.

For further particulars, apply to Mr. Arthur Benson, F.R.C.S., 42, Fitzwilliam Square, or at the hospital.

Jervis Street Hospital, Dublin.

The hospital was founded in 1718 and was rebuilt in 1886.

Appointments.—Resident Pupils, Clinical Clerks, and Dressers are appointed every six months, without additional fee, and are awarded special certificates if their duties have been satisfactorily performed. Four interns are appointed each half year, and are provided with apartments, etc., free of expense. *Fees:* Winter session, £8 8s.; summer, £5 5s.; winter and summer, £5 5s.

The hospital prospectus and any further information can be obtained from Dr. J. B. Coleman, 15, Westland Road.

Mater Misericordiæ Hospital.

This hospital, the largest in Dublin, at present contains over 311 beds. Fifty beds are specially reserved for the reception of patients suffering from fever and other contagious diseases. Connected with the hospital are extensive Dispensaries, which afford valuable opportunities for the study of general Medical and Surgical Diseases, Accidents, etc.

Appointments.—A House-Physician and Four House-Surgeons will be appointed annually. They will hold office for one year. Eight Resident Pupils will be elected to hold office for six months from the most attentive of the class.

A prospectus containing in detail the arrangements for clinical instruction, prizes, etc., may be obtained from the Secretary of the Medical Board, Arthur Chance, F.R.C.S., etc., 90, Merrion Square, W., Dublin.

Dr. Steevens's Hospital.

The hospital contains 200 beds. The facilities for obtaining practical acquaintance with the treatment of injuries from accidents and other emergencies are usually great in this institution, owing to its position, and there are always in the wards instructive cases of acute and chronic disease. The various forms of syphilis can be studied in the ward set apart for this disease, and there is also a separate Fever House.

A fee of ten guineas is charged for each term of three months' residence. This fee includes that for Hospital Practice, and must be paid in advance. Resident pupils not requiring certificates in Hospital Practice are admitted at reduced rates.

There is accommodation for two Medical and Six Surgical Resident Pupils, who are provided with separate furnished rooms, with coals and gas, also a common comfortable sitting-room for meals, which latter can be obtained at a reasonable rate.

Further particulars may be obtained from the Honorary Secretary, Dr. R. A. Hayes, 82, Merrion Square South, Dublin.

St. Vincent's Hospital.

This hospital contains 160 beds, and has attached to it a dispensary and three special dispensaries. The whole practice of the hospital is available for clinical instruction, which is carried on during the session in a systematic manner. Systematic courses are delivered on Medicine and Surgery. *Post-mortem* examinations are made in the pathological theatre, and frequent opportunities are given for the examination of morbid specimens. There is a museum in connection with this department. Instruction is also given daily in the dispensaries.

The hospital is in proximity to the principal colleges and medical schools. Its certificates are recognised by all the universities and licensing bodies in the United Kingdom. Two Resident Medical Officers and sixteen Resident Pupils are appointed annually from amongst the most deserving members of the class. The fees for clinical attendance are the same as at the other Dublin hospitals.

Arrangements have been made with the Fever Hospital, Cork Street, and with other hospitals, for providing senior students with clinical instruction in infective fevers, as required by the licensing bodies, without extra charge.

Further particulars can be obtained on application to the Honorary Secretary, Mr. Tobin, 59, St. Stephen's Green, Dublin.

Rotunda Hospital.

Master—Dr. W. J. Smyly.

This institution consists of two distinct hospitals, namely, the Lying-in Hospital, into which 1,200 labour cases are, on an average, admitted annually, and the Auxiliary Hospital, set apart for the reception and treatment of patients suffering from the various forms of uterine and ovarian disease;

TABLE OF FEES FOR HOSPITAL ATTENDANCE AND LECTURES—IN ENGLAND AND IRELAND.

	ST. BARTHOLOMEW'S.	CHARING CROSS.	ST. GEORGE'S.	GUY'S.	KING'S COLLEGE.	LONDON.	ST. MARY'S.
Composition Fee for all Systematic Lectures and Hospital Practice required by Examining Boards, with certain minor exceptions in some instances	£157 10s.; or 1st year, £42; 2nd year, £42; 3rd year, £42; 4th year, £42	£115 10s. in one payment, or £127 1s. in five instalments, namely: 1st win., £31 13s.; 1st sum., £23 2s.; 2nd win., £23 2s.; 2nd sum., £23 2s.; 3rd win., £23 2s.	£145 9s.; or, by four instalments, £150	£150; or 1st win. and 1st sum. each, £75 10s.; or 1st and 2nd year each, 50 gs.; 3rd year, 30 gs.; 4th year, 20 gs.	£135; or two years £70 each year; or three years, £48 each year; or four years, £37 each year	130 guineas by three instalments, or 120 guineas in one payment	£130; or 1st year, £40; 2nd year, £40; 3rd year, £30; 4th year, £25.
University students who have finished Anatomical and Physiological studies	£34, or £35 1s. in three instalments	Proportionate reduction	£55	£80, or instalments of £52 10s. and £31 10s.	—	£63	£26 5s. a year.
Fee to qualified practitioners for Hospital Practice and Clinical Lectures	£15 15s.	£10 10s.; six months, £7 7s.; three months, £5 5s.	—	Three months, £7 7s.; six months, £10 10s.; unlimited, £15 15s.	£10 10s. for one year; £5 5s. for any less period	—	Perpetual, £15 15s.

	MIDDLESEX.	ST. THOMAS'S.	UNIVERSITY COLLEGE.	WESTMINSTER.	LONDON SCHOOL OF MEDICINE FOR WOMEN.	MASON COLLEGE, BIRMINGHAM.	BRISTOL MEDICAL SCHOOL.
Composition Fees for all Systematic Lectures and Hospital Practice required by Examining Boards, with certain minor exceptions in some instances	£126; 1st win., £63; 2nd win., £42; 3rd win., £31 10s.	£150; or on entr., £85; 2nd year, £73 10s.; or, 1st year, £75; 2nd year, £50; 3rd year, £32 10s.; or, 1st year, £65; 2nd year, £50; 3rd year, £30; 4th year, £12 10s.	£136 10s.; or 1st year, £63; 2nd year, £52 10s.; 3rd year, £26 5s.	£115; or 1st win., £60; 2nd win., £60; or six payments of £27 and £17 alternately	£125; or 1st year, £40; 2nd year, £40; 3rd year, £30; 4th year, £25	£105, or two instalments of £52 10s.	£94 10s.; or for lectures, two instalments, £76 15s. and £26 5s.; and perpetual hospital, £36 15s.
University students who have finished Anatomical and Physiological studies	£73 10s., or instalments of £42 and £36 15s.	£80, or two instalments of £52 10s. and £31 10s.	—	£64, or two instalments of £34	—	—	—
Fee to qualified practitioners for Hospital Practice and Clinical Lectures	Ordinary class fees if certificates are required, if not £2 2s. for three months.	Perpetual, £15 15s.	Special arrangements may be made.	£12 12s.	—	—	—

	YORKSHIRE COLLEGE, LEEDS.	UNIVERS. COLL., LIVERPOOL.	OWENS COLL., MANCHESTER.	UNIVERSITY OF DURHAM COLL. OF MED.	SCHOOL OF PHYSIC, UNIVERSITY OF DUBLIN.	CATHOLIC UNIVERSITY SCHOOL OF MEDICINE.	SCHOOLS OF SURGERY, R.C.S.I.
Composition Fees for all Systematic Lectures and Hospital Practice required by Examining Boards, with certain minor exceptions in some instances	£115 10s., or two instalments of £59 16s.	£114 2s., or two instalments of £91 and £23 2s., or Comp. for Vict. M.B. Ch.B. three instalments. £24 15s., £51, and £51	£112, or two instalments of £57	£99 15s., or by two instalments of £61 19s. and £49 7s.; or by three of £39 17s., £42, and £27 6s.	£122 6s. 6d., or including degree fees, £150 18s.	R.U.I. course, total cost, including degree fees, £167 3s.; Conjoint course, R.C.P. and S.I., total cost, £169 1s.	Conjoint course, R.C.P. and S.I. Lectures and Hospital Practice, £121 5s.; total cost, including licence fees, £161 5s.; R.C.S.I. and A.H., £105 10s., and £131 15s. respectively.
University students who have finished Anatomical and Physiological studies	£87 4s., or two instalments of £31 13s.	—	—	—	—	—	—

about 500 patients are received into this hospital during each year.

There is also in connection with the hospital a large extern maternity (1,838 patients were in the past year attended at their own homes), and a Dispensary for Diseases Peculiar to Women, which is open daily.

Pupils are admitted to the practice of all these departments. Clinical Instruction in Midwifery and the Diseases of Women is given daily, and lectures are delivered regularly during the session on these subjects. Pupils can enter at any time.

The diploma from this hospital is granted to pupils on their passing an examination before the Master and Assistants after a period of six months' attendance on the practice of the hospital.

Accommodation is provided for a limited number of intern pupils.

Fees.—Intern pupils: six months, £21; three months, £12 12s.; two months, £9 9s.; one month, £6 6s.; extern pupils; six months, £10 10s.; three months, £6 6s.

A NEW operating theatre is in course of construction at St. Bartholomew's Hospital.

AT St. Thomas's Hospital Dr. Sharkey has been appointed Joint Lecturer on Medicine; Dr. Mackenzie, Lecturer on Pharmacology and Therapeutics; and Dr. Sherrington, F.R.S., on Practical Physiology. Dr. Turney has become Assistant Physician, and has been placed in charge of the Electrical Department. Mr. Robinson has become Assistant Surgeon and Demonstrator of Anatomy.

CLINICAL HOSPITALS.[1]

Opportunities for clinical instruction and study are afforded by many hospitals which are not directly connected with any medical school, and the student will often find it to his advantage to resort to them, especially in the fifth year of the curriculum, as they offer great facilities for practical clinical experience. The following pages contain brief particulars as to the most important of these.

A student may obtain clinical instruction at certain hospitals in London, and at some of them, both general and special, he can hold appointments.

General Hospitals: London.

Great Northern Central Hospital.—The practice of the hospital is open to practitioners and senior students. Clinical students are appointed in the Wards and Out-patient Department. Further information can be obtained on application to the Honorary Secretary of the Medical Committee.

London Temperance Hospital.—The hospital contains 110 beds. The medical and surgical practice is open to students and practitioners. Special departments for Ophthalmology and Gynæcology. Classes arranged during the winter and summer sessions for students preparing for the Final Examinations at the Colleges and Universities. Appointments (vacancies for which are advertised in the medical journals), Registrar and Pathologist, Resident Medical Officer and Assistant Resident Medical Officer. For particulars as to hospital practice and classes apply at the hospital to Dr. W. J. Collins.

Seamen's Hospital Society, Greenwich.—The hospital contains 235 beds, and the branch hospital 18 beds. Opportunities are afforded to students and others who may be desirous of studying Practical Surgery and Diseases incidental to Tropical Climates before entering the services or going abroad.

West London Hospital. Hammersmith Road, W.—The present building contains 101 beds, but arrangements have been made for the erection of a new wing, which will contain another 60 beds. The practice of the hospital is open to practitioners, and to senior students; clinical assistants are appointed to the wards, and instruction is given in the out-patient department. Courses of Post-Graduate Lectures are given by the staff, on Wednesdays, at intervals, particulars of which are advertised in the medical journals. Further information can be obtained on application to the Honorary Secretary of the medical staff, Mr. L. A. Bidwell, at the hospital.

Children's Hospitals: London.

Hospital for Sick Children, Great Ormond Street.—There are 127 beds in the hospital at Great Ormond Street, and 52 at Highgate. The physicians and surgeons of the hospital give Clinical Instruction in the wards during the winter session, and out-patients are seen every morning at 9 o'clock. The fees are 3 guineas for three months. Six clerkships and six dresserships, tenable for three months, are open to students of the hospital; particulars can be obtained on application to the Secretary.

East London Hospital for Children, Shadwell.—The hospital contains 102 cots, one-third being devoted to infants. The hospital practice is open to students and practitioners. Clinical Demonstrations being given by the Visiting Staff. Out-patient Clinical Clerks are appointed, for which application should be made to the Assistant Physicians or Assistant Surgeons. Two House Surgeons and two House Physicians (holding office for six months) are appointed annually.

North-Eastern Hospital for Children, Hackney Road, N.E.—The hospital contains 57 beds. The practice of the hospital is open free to students, both male and female. Patients in 1893: In-patients 694 (183 under 2 years of age); Out-patients, 16,405 new cases, 55,538 attendances. Particulars of facilities for attending Medical and Surgical practice can be obtained on application to the Secretary.

[1] Additions or corrections intended for future editions should be forwarded to the Editor not later than the end of July in each year.

Lying-in Hospitals and Hospitals for Women.

Queen Charlotte's Lying-in Hospital and Midwifery Training School.—This hospital receives over 1,000 patients annually, besides having a large out-patient department. Medical pupils are received at all times of the year. Pupils have unusual opportunities of seeing Obstetric complications and Operative Midwifery, on account of the very large number of primiparous cases—upwards of three-fourths of the total admissions. Clinical Instruction is given on the more important cases that present themselves. Certificates of attendance at this hospital are recognised by all Universities, Colleges, and Licensing Bodies. Pupil Midwives and Monthly Nurses are received and specially trained. *Fees.*—Medical Pupils, £5 5s. for two weeks, and £6 16s. 6d. for four weeks, exclusive of board and lodging; Pupil Midwives, £26 5s. for three months; Pupil Nurses, £15 15s. for twelve weeks and £11 0s. 6d. for eight weeks, inclusive of board and lodging. For further particulars, application should be made to the Secretary, at the hospital.

Hospital for Women, Soho Square.—There is an organised School of Gynæcology open to qualified medical men, and students after their fourth year. A limited number of Clinical Assistants to the Physicians and Surgeons in the In-patient and Out-patient Departments are appointed every three months. A course of lectures on the Anatomy and Physiology of the Female Pelvic Organs is given during each quarter. Clinical lectures are given throughout the winter and summer sessions. Prizes are given annually after examination, open to past and present Clinical Assistants. *Fee* for the three months' course, £8 8s. Further information can be obtained by letter, addressed to the Dean at the hospital.

Ophthalmic Hospitals: London.

Royal London Ophthalmic Hospital, Moorfields.—There are 100 beds for in-patients, and a large out-patient department. Operations are performed daily, from 10 A.M. until 1 P.M. Gentlemen are admitted to the Practice, and to Lectures and Demonstrations. *Fees* for six months, £3 3s.; perpetual, £5 5s. A perpetual ticket admits to Lectures and Demonstrations free. Students of the hospital are eligible for the office of House-Surgeon, and may be appointed Clinical Assistants for twelve months, Junior Assistants for six months.

Royal Westminster Ophthalmic Hospital (King William Street, West Strand).—The hospital contains 30 beds, and an out-patient department. The practice is open to practitioners and students from 1 to 4 P.M. daily. Special instruction is given in the Diagnosis, Pathology, and Treatment of Eye Affections, including the Operations on the Eye, the Treatment of Errors of Refraction, and the Use of the Ophthalmoscope. *Fees:* Six months, £3 3s.; perpetual, £5 5s. For particulars, apply to Mr. Adams Frost, 17, Queen Anne Street, W.

Fever and Small-pox Hospitals of the Metropolitan Asylums Board.

Students are admitted to study at the Fever Hospitals and the Small-Pox Hospital Ships of the Metropolitan Asylums Board after they have completed the third year of medical education, provided they have held the offices of clinical clerk and dresser. The minimum duration of the course of study at the hospitals is two months, and at the small-pox ships not less than two weeks, nor more than four. At the fever hospitals the student must attend two days a week: at the small-pox ships he resides, paying 12s. a week for board and lodging. He must abide by the rules laid down as to disinfection; and, in the case of the ships, show that he is sufficiently protected against small-pox by vaccination or otherwise. A certificate signed by the medical superintendent of the hospital at which attendance is made is granted to students who complete satisfactorily the courses of study. Qualified medical men are admitted under similar terms and conditions.

Fees.—Fever hospitals, two months, £3 3s., and £1 1s. for every additional month; small-pox ships, two weeks, £2 2s., and £1 1s. for the remaining period.

Other Special Hospitals: London.

Bethlem Royal Hospital.—Two resident clinical assistants

are appointed twice a year for six months from recently qualified medical students. A limited number of students who have completed the third year of study can attend the hospital practice for three months on application. Students of Guy's Hospital and St. Thomas's Hospital during the summer can attend special afternoon instruction. Qualified medical men are allowed to attend for three months on payment of a fee. Post-graduate courses are given from time to time.

Hospital for Consumption and Diseases of the Chest, Brompton.—There are 321 beds in the two buildings constituting the hospital, and a special throat department. Pupils are admitted to the in-patient and out-patient practice of the hospital. *Fee:* One month, £1 1s.; six months, £5 5s.; perpetual, £10 10s. Pupils of the hospital are admitted at half price to the London Post-Graduate Course Lectures. Certificates of attendance on the Medical Practice of this hospital are recognised by the University of London, the Apothecaries Society, and the Army and Navy and Indian Boards.

City of London Hopital for Diseases of the Chest, Victoria Park.—There are 164 beds. The practice of the hospital, both as regards in- and out-patients, is open to students and medical practitioners. Certificates of attendance in the medical practice of this hospital are recognised by the London University and London medical examining boards. Information as to medical instruction can be obtained on application to the Secretary of the Clinical Subcommittee at the hospital.

Central London Throat and Ear Hospital (Gray's Inn Road).—The hospital contains accommodation for seventeen in-patients, and has an extensive out-patient department, which is open to all medical practitioners and students for the purpose of Clinical Demonstration and Instruction. Fee for three months' attendance £3 3s.; for six months, £5 5s.

St. Peter's Hospital for Stone and Urinary Diseases (Henrietta Street, Covent Garden).—Qualified medical men and students are admitted free to the practice of this hospital, which contains 24 beds, and has a large out-patient attendance (32 278 for 1893). New cases, 4,928. Operations are performed and consultations are held on Wednesdays and Fridays at 2. Clinical lectures and demonstrations are given regularly by members of the staff.

Royal Ear Hospital (Frith Street, Soho Square, W.).—The clinic of the hospital is open to medical practitioners and advanced students by previous arrangement with the Secretary.

LIVERPOOL.

Royal Southern Hospital: Clinical School.—The hospital is situated within convenient distance of the School of Medicine, and contains 200 beds. There is a children's ward, and beds are appropriated to the diseases of women. Clinical teaching is given in the hospital, and arrangements have been made to render it both thorough and systematic. The members of the staff visit the wards daily, and clinical lectures are given each week. Tutorial classes are also held each day, at which the junior students are instructed in the methods of diagnosis, and the seniors are prepared for their final examinations. The pathological department has a good laboratory attached, in which the students receive practical instruction. *Appointments:* In addition to the usual clinical and *post-mortem* clerkships, the resident post of Ambulance Officer is awarded every three months to the student whom the Board may consider most suited to hold it. *Fees:* Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. *Terms:* (Exclusive of fees for Hospital Practice), £15 15s. per quarter. The practice of the hospital is recognised by all examining bodies. Further particulars may be obtained from the Dean, Mr. Robert Jones, 11, Nelson Street, Liverpool.

Northern Hospital.—The hospital contains 160 beds. There is a special ward for the treatment of children. Clinical lectures are delivered by the physicians and surgeons during the summer and winter sessions. Clinical clerkships and dresserships are open to all students without additional fee. *Fees:* Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. Students can enter to the medical or surgical practice separately on payment of half the above fees. Practical Pharmacy, three months' fee, £2 2s.

Eye and Ear Infirmary, Myrtle Street.—The infirmary contains 46 beds. Evening courses of lectures on Refraction and Medical Ophthalmoscopy and Diseases of the Ear are delivered at this infirmary during the winter months by the honorary medical staff. Students of medicine of University College, Liverpool, have free access to the practice of the infirmary. Out-patient dresserships may be obtained on application to the Secretary of the Medical Board. The infirmary is recognised by the Conjoint Board as a teaching institution.

Liverpool Infirmary for Children.—The infirmary contains 88 beds, and has a large out-patient department. In-patients (1893), 1,276; new out-patients, 14 212; out-patient attendances, 50,138. The practice of the hospital is free to students, and clinical instruction is given by the Medical Staff. For further particulars apply to the Secretary of the Medical Board.

MANCHESTER.

General Hospital for Sick Children, Pendlebury.—The hospital at Pendlebury contains 140 beds, including 28 for fever. The medical staff see out-patients daily at the Dispensary, Gartside Street, at 9 A.M., and visit the hospital at 10 A.M. The practice of the hospital and dispensary is free to students accompanying the medical staff.

Royal Eye Hospital.—The hospital contains 100 beds. The medical staff attend daily from 9.30 to 12. Clinical instruction is given to students.

St. Mary's Hospital for Diseases of Women and Children.—Fifty beds, including six for the reception of lying-in cases, especially those attended with difficulty or danger. In the out-patient department students are taught the various methods of examination and diagnosis, and the use of gynæcological apparatus; while, in the wards, they have an opportunity of becoming familiar with the diagnosis and treatment of graver cases, and of witnessing more important gynæcological operations. The large number of maternity cases attended annually (3,000) in connection with this hospital affords ample opportunity to students for receiving instruction in practical midwifery. Every student, on registering himself as a midwifery pupil, is supplied with a card, on which must be filled in the particulars of every labour at which he is present, each entry being attested by the initials of the medical officer or certified midwife in charge of the case. The hospital possesses a library, presented by the late Dr. Radford, consisting of nearly 5,000 volumes, chiefly on subjects connected with obstetrics and gynæcology. There is also a museum, containing a large number of pathological specimens, and a valuable collection of deformed pelves, casts, obstetric instruments, and anatomical models. The gynæcological practice of the hospital is free to third and fourth years' students. The fee for the midwifery practice, which includes attendance upon twenty cases of labour, as required by the examining bodies is £2 2s. Application must be made to the House-Surgeon at the hospital.

NEWCASTLE-ON-TYNE.

Hospital for Sick Children.—There are 60 beds in the hospital, which the honorary staff visit every day. There is a large out-patient department. The practice of the hospital is open free to all students or qualified practitioners.

SHEFFIELD.

Jessop Hospital for Diseases of Women.—The number of beds is 45; in the Diseases of Women Department 36, and in the Maternity Department 9. Students can attend the practice of the hospital, and be supplied with cases of midwifery. (See also p. 481).

BRADFORD.

Infirmary and Dispensary.—The hospital contains 210 beds. Non-resident pupils are received, and have every opportunity of acquiring a practical knowledge of their profession under the superintendence of the House Surgeon. One year's attendance is recognised by the Examining Boards. *Fees:* Perpetual, £10 10s.

BATH.

Royal United Hospital. 120 beds. The hospital is recognised by the Royal Colleges of Physicians, Surgeons, etc., and

licensed for dissections. It contains a library and an excellent museum, in which are a large number of interesting specimens, both in Pathology and Comparative Anatomy. Fees for attendance: twelve months, £10 10s.; six months, £5 5s. (temporary pupils can also, by permission of the honorary staff, attended the practice of the hospital by the payment of £1 1s. for each month). Instruction in Practical Pharmacy for three months, £3 3s. For further particulars apply to the Registrar.

Brighton.

Sussex County Hospital.—The hospital contains 187 beds, with separate wards for children and for cases requiring isolation; and the Out-patient Department is attended by 700 to 800 patients weekly. It is recognised by the College of Surgeons and by the Conjoint Board as a hospital where part of a medical course may be spent. Out-pupils are admitted to the clinical teaching and the classes at a fee of £21 for two years. The Ormerod Exhibition, of the average value of £30, is awarded annually, after examination, to the best student of those leaving to pursue their studies at a medical school. Further information may be obtained from the House-Surgeon.

Derby.

Derbyshire Royal Infirmary.—The infirmary is about being rebuilt, and will provide for 200 beds. The accommodation now provided is for 104 beds. Pupils are admitted to the practice of the infirmary at £5 5s. a year. This fee will probably be increased shortly.

Exeter.

Devon and Exeter Hospital.—The hospital contains 214 beds, including a special Children's Ward. There are a good Library, Museum, Dissecting, and *Post-mortem* Rooms. Attendance on the practice at this hospital qualifies for all the Examining Boards. Two Resident Pupils are received. Arrangements may be made by which students can attend Midwifery. For further particulars as to fees, etc., apply to the House-Surgeon.

West of England Eye Infirmary.—The infirmary contains 50 beds. Arrangements can be made for students of the Exeter Hospital to attend the practice of the Eye Infirmary.

Devonport.

Royal Albert Hospital.—The hospital contains 218 beds. The pupils of the medical staff are allowed to attend the hospital practice and to learn pharmacy on the payment of £2 2s. to the dispenser.

Glasgow.

Royal Hospital for Sick Children.—This hospital, containing 77 beds for the non-infectious diseases of children, is open for clinical instruction, as is the dispensary, or out-patient department. Students, by paying the fee of £1 1s. are entitled to the practice of the hospital and dispensary for twelve months from the term of entry, which may be at the beginning of February, May, or November. Further particulars may be had by applying to the Resident Medical Officer, 45, Scott Street, Garnethill.

Glasgow Western Infirmary.—This hospital adjoins the University of Glasgow. Number of beds 400. The Clinical Courses are given by the Physicians and Surgeons, each of whom conducts a separate class, and students may attend whichever they select at the beginning of the session. Special instruction is given to junior students by tutors or assistants, and clinical clerks and dressers are selected from the members of the class. Special wards are set apart for Diseases of Women and for Diseases of the Skin. In the Out-Patients' Department there are special *cliniques* for Diseases of Women and for Diseases of the Throat, Ear, and Teeth. All the courses of clinical instruction are recognised by the University of Glasgow and the other Boards in the kingdom. Nine resident assistants are appointed annually without fee from those who have completed their course. *Fees.*—For the hospital practice, including the various courses of clinical instruction in Medicine and Surgery, £21 in one payment, or in two equal instalments for the first and second years; for six months, £7 7s.; and for three months, £4 4s.

Glasgow Eye Infirmary (Berkeley Street Infirmary and Dispensary: Charlotte Street Dispensary only).—New buildings opened June, 1894. 1. Gentlemen may attend as students on payment to the Treasurer of the following fees: for six months' attendance, £1 1s.; for twelve months' attendance, £2 2s. Further information may be obtained from the Secretary, Mr. W. G. Black, 88, West Regent Street, Glasgow.

Gloucester.

The General Infirmary and the Gloucestershire Eye Institution.—The hospital contains 156 beds. Resident and non-resident pupils are admitted by the General Committee on the recommendation of a member of the Medical Board. Each pupil pays in advance £10 for the first half-year, and £5 for every subsequent quarter, or portion of a quarter, of a year. Each resident pupil has board and lodging in the house, for which he pays in advance 26 guineas for the first half-year, and 13 guineas for every subsequent quarter, or portion of a quarter, of a year. Each pupil pays in advance to the House-Surgeon a fee of £5 5s. for instruction, and a further fee of £3 3s. for every subsequent year or portion of a year. One year passed at this hospital, after passing a preliminary examination, is recognised by the Royal College of Surgeons.

Canterbury.

Kent and Canterbury Hospital.—The hospital contains 106 beds. Over 700 in-patients and 1,200 out-patients attend every year. Lectures are delivered weekly to the students of St. Augustine's Missionary College on Practical Medicine by Dr. Gogarty, and on Surgery by Mr. T. W. Reid.

Lincoln.

County Hospital.—The hospital contains 119 beds and 8 isolation beds. The House-Surgeon is allowed to take two pupils, on terms arranged by the Weekly Board, himself, and the pupils. A fee of not less than £10 10s. is paid by every pupil to the hospital. The House-Surgeon is responsible for the conduct of his pupils. The pupils remain in the hospital only when occupied in performing or observing the actual work of the hospital.

Norwich.

Norfolk and Norwich Hospital.—The hospital contains 220 beds. Fees: £10 10s. for six months, £15 15s. for twelve months' Medical and Surgical Practice. Pupils, resident and non-resident, are admitted.

Northampton.

General Infirmary.—There are 160 beds and a large out-patient department. Out-pupils are received, and have every opportunity of acquiring a practical knowledge of their profession. Instruction is also given by the House-Surgeon in Anatomy, Materia Medica, and Pharmacy. Non-resident pupils are taken at a fee of £10 10s. Arrangements for board and residence, etc., can be made.

Nottingham.

General Hospital.—The hospital contains 165 beds. The Honorary Staff introduce pupils to witness the practice of the hospital on payment of £10 10s. annually in advance. The pupils receive instruction from the Resident Medical Officers.

Portsmouth.

Royal Portsmouth Hospital.—133 beds. One year's attendance recognised by the examining boards. For particulars as to fees apply to the House-Surgeon.

Southampton.

Royal South Hants Infirmary.—The out-patient department contains an eye department, fitted with modern instruments, lamps, lenses, etc.; also an electrical department, containing a new set of modern batteries. The hospital contains 120 beds.

Staffordshire.

Staffordshire General Infirmary.—There are 120 beds. The pupils of medical practitioners resident in the county of

Stafford are allowed to witness the Medical and Surgical Practice of the infirmary, and to be present at operations. The pupils of the officers of the institution are admitted to these privileges gratuitously, those of other practitioners on the payment of £10 10s. with each pupil. The assistants of a medical practitioner, having gone through a complete curriculum, are admitted on the annual payment of £5 5s.

North Staffordshire Infirmary and Eye Hospital.—The infirmary has accommodation for 222 patients, including children's wards, eye department, and special ovarian wards. The attendance of pupils at this infirmary is recognised by all the Examining Boards. Particulars as to fees, etc., may be obtained from the Secretary, Mr. R. Hordley, Hartshill, Stoke-on-Trent.

SWANSEA.

Swansea Hospital.—The House-Surgeon is permitted to take two articled pupils, whom he binds himself to transfer to his successors in the event of his leaving the hospital during the term of their apprenticeship. The premium or fee on the introduction of pupils is such a sum as the Committee may consider reasonable. It is apportioned between the House-Surgeon and the institution, as the Committee for the time being may determine. The hospital contains 130 beds.

WINCHESTER.

Royal Hants County Asylum.—The hospital contains 108 beds. Apprentices are received by the Committee on payment of £100 per annum, and are bound to the House-Surgeon for five years. During the first two years they are chiefly employed in dispensing; afterwards they may witness the practice, and attend clinical lectures and operations and *post-mortem* examinations. The Physicians and Surgeons are allowed to introduce a certain number of pupils; the House-Surgeon may also receive a pupil on payment of £100 per annum. Pupils of qualified medical practitioners not belonging to the staff of the hospital may, with the consent of the Committee, become out-pupils, and see the practice of the hospital, under the direction of the House-Surgeon, on the payment of £10 10s. for one year, of £21 for unlimited attendance. Out-pupils are permitted daily (Sundays excepted) to read in the Library on payment of £1 1s.

WOLVERHAMPTON.

Wolverhampton and Staffordshire General Hospital.—The hospital contains 230 beds, and is a preparatory School of Medicine and Surgery. The pupils see the whole of the practice of the physicians and surgeons, and are trained in clinical work by the medical and surgical staff. Attendance at this hospital is recognised by all the Examining Boards. *Fees:* Six months, £6 6s.; twelve months, £12 12s.; perpetual, £21.

INSTITUTIONS FROM WHICH CERTIFICATES ARE ACCEPTED BY THE CONJOINT BOARD IN ENGLAND.

I. Hospitals recognised for a part of the required attendance on Medical and Surgical Practice, for Medical Clinical Clerkship, and for Surgical Dressership, namely:

IN ENGLAND AND WALES.

Bath.—Royal United Hospital.
Bedford.—General Infirmary.
Bradford.—Infirmary.
Brighton.—Sussex County Hospital.
Canterbury.—Kent and Canterbury Hospital.
Cardiff.—Glamorganshire and Monmouthshire Infirmary.
Derby.—Derbyshire General Hospital.
Exeter.—Devon and Exeter Hospital.
Gloucester.—General Infirmary.
Hartshill.—North Staffordshire Infirmary.
Hull.—Royal Infirmary.
Leicester.—Infirmary.
Liverpool.—Northern Hospital.
Norwich.—Norfolk and Norwich Hospital.
Northampton.—General Infirmary.
Nottingham.—General Hospital.
Oxford.—Radcliffe Infirmary.
Plymouth.—South Devon and East Cornwall Hospital.
Portsmouth.—Royal Hospital.
Reading.—Berkshire Royal Hospital.
Salisbury.—General Infirmary.
Shrewsbury.—Salop Infirmary.
Southampton.—Eye and Ear Hospital.
Stafford.—Staffordshire General Infirmary.
Winchester.—Hampshire County Hospital.
Wolverhampton.—Wolverhampton and Staffordshire General Hospital.
Worcester.—Infirmary.

IN TASMANIA.

Hobart Town.—The General Hospital.
Launceston.—The General Hospital.

II. Institutions recognised for Instruction in Chemistry, including Chemical Physics, Practical Chemistry, and Elementary Biology.

Aberystwith.—University College of Wales.
Bradford.—The Grammar School.
Bristol.—University College; Merchant Venturers' School.
Cheltenham.—Public School of Science and Technical School, Clarence Street.
Chester.—School of Science and Art, Grosvenor Museum.
Clifton, Bristol.—The Clifton Laboratory (without Biology).
Epsom.—The College.
Hull.—Royal Institution (without Biology).
London.—Royal College of Science.
" The Pharmaceutical Society (without Biology).
" City of London School (without Biology).
Newcastle-upon-Tyne.—The Durham College of Science.
Reading.—University Extension College.
Swansea.—Technical College (without Biology).

III. Recognised Lunatic Asylums.

Banstead.—London County Asylum.
Birmingham.—Borough Asylum.
Cane Hill.—Lunatic Asylum.
Claybury.—Lunatic Asylum.
Colney Hatch.—Lunatic Asylum.
Hanwell.—Lunatic Asylum.
Rainhill.—Lancashire County Asylum.
Wakefield.—West Riding Asylum.

IV. Recognised Fever Hospitals.

London.—Metropolitan Fever Hospitals.
Liverpool.—Corporation Fever Hospitals.
Birmingham.—Corporation of the City of Birmingham Fever Hospital.

V. Laboratories recognised for instruction in Public Health for the Diploma in Public Health.

London.—St. Bartholomew's, London, University College, King's College, Charing Cross, St. George's, College of State Medicine.
Birmingham.—Mason College.
Bristol.—Medical School.
Liverpool.—School of Science and Technology.

MEDICAL EDUCATION OF WOMEN.

THE QUALIFICATION OF FEMALE PHYSICIANS.

THE medical education of women is now so far organised in England that there is very little to say about it. It is almost as easy at this moment for a woman to get a complete medical education in England, Scotland, or Ireland as it is for a man. The course of education is precisely the same, and its cost is practically the same in both cases. Men and women pass the same examinations and obtain the same qualifying diplomas, though at present there are still a few of the examining bodies which admit men only. There is no examining body which admits women only. The diplomas of the Universities of London and of Ireland, of the Colleges of Physicians and Surgeons of Edinburgh and Glasgow, and of Ireland, and the Licence of the Apothecaries' Hall, London, are all open to women. The examinations are prepared for in medical schools, some of which are for women only, and some for men and women together. The schools for women only are in London, Edinburgh, and Glasgow. The mixed schools are three in Ireland and one at Newcastle-upon-Tyne. The curriculum is the same in the mixed and separate schools.

About fifty medical women are practising in London, and they are gradually winning public confidence. Several important medical charities are worked entirely by women. The New Hospital for Women in London contains 42 beds. No effort has been spared in trying to make it a model of all that a hospital should be in construction and in administration. The patients contribute each a small sum towards the expenses of maintenance; the aggregate sum thus raised in 1893 amounted to £1,129. The number of new out-patients is restricted to 30 a day. The beds are always full, and there are usually from 25 to 40 patients waiting their turn for admission. During 1893 there were 34 operations: for radical

cure of hernia (5), nephrectomy (1), extrauterine gestation (2), ovarian tumour (9), pyosalpinx (3), removal of the appendages (2), oöphorectomy (10), and all the 34 cases recovered; but the operations for pelvic abscess (4 with 2 deaths), and for hysterectomy (abdominal 5 with 2 deaths, vaginal 4 with 2 deaths), were less successful. There were also 105 minor operations, including in this term many amputations of the breast, with no mortality.

In maternity work women have been equally successful. Miss McCall, at the Clapham Maternity, has had under her own care, or that of her assistants or pupils, about 3,500 cases, with a total maternal mortality of 5. Of these deaths, 4 occurred in the out-patient department of the maternity (1 from double pneumonia existing before labour set in, 1 from sepsis, 1 from erysipelas contracted from a fellow lodger, 1 from pulmonary embolism). The remaining death (after craniotomy) occurred in the hospital, and is the only one that has taken place, with a total of about 900 patients, during the five years the hospital has been established.

There are also in London three female oculists. The ophthalmic department of the New Hospital was attended in 1893 by 311 patients; ten operations, which included cataract extraction, iridectomy, enucleation, and tenotomy, were performed, with uniformly good results.

In private practice there are signs that women will show themselves as ready to accept responsibility as the best men are. As an instance of this, the following case may be given. A lady practising at Dundee in Scotland, without any hospital appointment, and not long after she had taken the licence of the Scotch Colleges, met in 1893 with a case of abdominal tumour, which she diagnosed as calculous pyonephrosis. She opened the abscess, let out three pints of pus, and removed thirty calculi from the pelvis of the kidney and the upper end of the ureter. The patient recovered and is still well.

In India excellent work has been done by medical women at the Cama Hospital, Bombay. Eleven women, holding a British qualification, are working as doctors under the Dufferin Fund, and about 30 in connection with the various missionary societies. Valuable as their work is, experience shows that to remain for eleven months out of the year hard at work in an Indian town is a very severe trial to the health of most English women. It is work which cannot, as a rule, be continued for many years, and which ought not to be undertaken rashly, nor for inadequate remuneration. It may indeed be doubted if for any very long time, or on any large scale, the need of India for medical women can be met by sending out English women. India is a poor country, and to pay a sufficient number of English women what they have a right to expect if they go there, would be a heavy burden. Possibly the final solution of the problem will be found in educating native ladies to work as doctors in the various Indian communities. Well trained medical women are able to get on very well in England, and fresh opportunities are opening up to them every year. There is no necessity for them to go to India in order to make a living, and if they are needed there, they have a right to expect to be well treated, financially and socially. Women undertake the study of medicine for the same reasons that men do. They wish to maintain themselves, and they are willing to work hard in order to fit themselves for their responsibilities and to gain a good position in their profession. They aim at making themselves as trustworthy as the best men, and they expect to receive the same remuneration. It is no part of their programme to lower fees or to do work for nothing which ought to be paid for, whether in England or India.

Degrees, Diplomas, and Schools.

The qualifying bodies in the United Kingdom which admit women as candidates for their degrees as diplomas are as follows: The University of London, the University of Glasgow, the University of St. Andrews, and the Royal University of Ireland, the Society of Apothecaries, London, and the Conjoint Board of the Royal College of Physicians and Surgeons in Ireland. Women candidates for qualification are subject to the regulations of the General Medical Council as to education and examination in precisely the same manner as men.

Women medical students can obtain a complete medical education by becoming students of the London School of Medicine for Women, the Edinburgh School of Medicine for Women, the Medical College for Women, Edinburgh; Queen Margaret College, Glasgow, and the Schools of Surgery of the Royal College of Surgeons in Ireland. The three first-named schools receive women only. In the Schools of Surgery of the Royal College of Surgeons in Ireland special rooms are set apart for lady students.

For the University of Glasgow a complete medical education is given at Queen Margaret College, which has been transferred or affiliated to that University. The University of St. Andrews does not as yet give a complete medical course, but women are admitted to the classes of Botany, Zoology, Physics, Chemistry, and Physiology; and the Lecturers of the Edinburgh School of Medicine are held *ex officio* to give qualifying courses in their various subjects for the degrees of M.B., C.M. of that University.

Women candidates for the medical degrees of the University of St. Andrews can take their Preliminary Examination in Medicine at the London School of Medicine for Women. The first examination will begin on September 29th. The subjects are those required by the General Medical Council for registration as a medical student, and include Latin, English, Greek or German, or French and Mathematics.

The classes available for women, University College, Dundee, are stated at page 484. The rest of the course must be taken elsewhere, it may be in Edinburgh, Glasgow, or London. If in Edinburgh it will necessarily be at one or other of the two schools alluded to at p. 483, and the course, examinations, fees, etc., of the second of these are those of the Conjoint Board given at page 471. The course at Queen Margaret College, Glasgow, is noted at page 483.

Some further particulars as to the London School of Medicine for Women will be found on page 479, but intending students should write to the Secretary of the School, Miss Heaton, 30, Handel Street, Brunswick Square, London, W.C. The prospectus of this School contains an article of advice to students which will be found very useful. A further note on the Edinburgh School of Medicine for Women will be found on page 483. Candidates may obtain a prospectus on application to the Secretary, Miss Black, School of Medicine, Surgeon Square, Edinburgh, who will also forward a pamphlet containing full particulars on medical facilities offered to women in the United Kingdom, published by the National Association for Promoting the Medical Education of Women (post free six stamps.)

Before entering upon the career of a medical student a woman should consider well whether she is in a position to meet the serious calls which the career will make upon pocket and health. She must be prepared to spend at least five full years at a medical school (after passing a preliminary examination in Arts), and must remember that during this period she will find her time fully occupied, and should not attempt—in fact, if she does her duty, should have no time—to earn a penny. Further, the work, which is severe and prolonged, and of necessity sometimes performed under somewhat unhealthy conditions, makes a serious call upon a constitution not naturally robust. A very serious percentage of male medical students break down in health.

At St. Bartholomew's Hospital Dr. Calvert has been appointed Demonstrator of Materia Medica; Dr. F. W. Andrewes, Assistant Demonstrator of Practical Medicine; Dr. Bowman, Assistant Demonstrator of Physiology; Mr. J. Berry and Mr. H. J. Waring, Demonstrators of Operative Surgery; and Mr. Morland, Assistant Demonstrator of Biology.

The Supply of Intoxicants to Paupers.—As we recently presaged, when commenting on a resolution passed by the Liskeard guardians to make district medical officers pay out of their own pocket for all alcoholic beverages ordered for their pauper patients, the Local Government Board has declined to accede to this improper proposal. In a communication to the guardians the Board states that, in its opinion, wines, spirits, and beer recommended by a medical officer must be regarded in the same way as meat or other articles of food; and that the Board was unable to assent to the medical officer being required to provide, at his own cost, the alcoholic liquors which he considered necessary.

POST-GRADUATE STUDY.

LONDON.

POST-GRADUATE study has of late years become a much more recognised institution than it used to be in former times. At every hospital it has always been common enough to see the middle-aged practitioner revisiting the scenes of his youthful studies; but this was a matter of pleasure, a visit paid for the sake of renewing old acquaintances, and seeing how "the old place" looked, and had no relation at all to the post-graduate study of modern times. That men after obtaining their diplomas, and even after obtaining considerable success in life, should flock again to the schools and take up the study of their profession as a serious business is a comparatively new phenomenon, due partly to modern facilities for travel, partly to the rapid advances which are being made in the science of medicine. The love of knowledge is insatiable, and notwithstanding the flood of lectures, papers, and clinical reports poured out upon the world by the enterprise of medical journalism, nay, possibly in consequence of the taste thereby encouraged, the number of those who wish not only to read but see, and who, for all that they are qualified, wish for the nonce again to become students, is constantly increasing.

Army or navy men between one appointment and another, ship surgeons ashore, young men who after being educated in the provinces wish to have a few months' study in the metropolis, medical officers of health studying bacteriology, men who have sold their practices and wish to polish up a little before entering on fresh fields of work, and a constant stream of Americans and Colonials on the search for what is new, drift in a steadily increasing crowd towards London, where special arrangements are now made by many of the hospitals to cater for their wants.

First among the various arrangements for this purpose we should mention the London Post-Graduate Course, which, under the management of its secretary, Dr. Fletcher Little, has become a permanent institution. Three full courses are given every year, besides short ones on public health during the vacations. The courses for the ensuing session are to be given by members of the staffs of the following hospitals: The Hospital for Consumption and Diseases of the Chest, Brompton; the Hospital for Sick Children, Great Ormond Street, Bloomsbury; the National Hospital for the Paralysed and the Epileptic (Albany Memorial), Queen Square, Bloomsbury; the Royal London Ophthalmic Hospital, Moorfields; Bethlem Royal Hospital for Lunatics, the London Throat Hospital, Great Portland Street; and at the Bacteriological Department, King's College. A course of clinical lectures on Medicine and Surgery will also be given at the Central London Sick Asylum, Cleveland Street, W., by various teachers not necessarily connected with London hospitals. The fees are £1 1s. and £2 2s. according to the number of lectures in the course, and practitioners can enter for one or more courses as they may please. Any further information can be obtained from and fees paid to the Secretary, Dr. Fletcher Little, 32, Harley Street, Cavendish Square, W.

The clinical demonstrations given by Mr. Hutchinson, on Tuesday afternoons, at his museum close to Portland Road Station (Metropolitan Railway), are of great interest and well worth attending by the post-graduate student. There is no fee. Certain of the school hospitals have also arranged special post-graduate courses independently. At Charing Cross, for example, a special series of clinical lectures and practical demonstrations, exclusively arranged for the convenience of practitioners and post-graduate students, are given by members of the staff throughout the year. The lectures for the year are arranged in three courses, each consisting of ten meetings, and lasting ten weeks, two being held during the winter, and one during the summer. The class meets on each Thursday afternoon, at 4 P.M. The fee at present charged for each course of ten lectures is £1 1s. Practitioners wishing to attend can receive any further information as to the dates and subjects by communicating with the Honorary Secretary, Dr. Willcocks, at the hospital.

Children, eyes, throat, chest, skin, bladder, rectum, consumption, cancer—all have their special hospitals, at most of which courses of lectures are delivered, the dates being advertised from time to time; and, so far as occasional visits go, these, like all the hospitals in London, are practically open to the profession, but for regular attendance a fee is required. (For list of special hospitals open for purposes of study see page 489 *et seq.*) Some of these special hospitals contain cases of great interest, and a short course of study at them may be of considerable utility to a post-graduate student, the cases in their wards showing the refinements of special treatment and diagnosis, and their large out-patient departments giving a good general survey of the routine treatment of the more common ailments.

For those who wish not merely to "drop in" at a hospital, but to take up a careful study of any special subject, a certain number of appointments are available as clinical clerks or assistants. No doubt these posts are mostly filled by senior students or newly-qualified men, but as the special hospitals are not connected with schools, there is nothing to prevent senior men taking them up. The field is very large, and the opportunity for gaining technical knowledge is great, as the work is done in conjunction with, and under the eye of, a member of the staff. At the children's hospitals, both at Great Ormond Street and at Shadwell, appointments of this kind can be obtained.

The large school hospitals are freely open to any practitioner with a card in his pocket, but it must be confessed that it is not at them that the occasional visitor will get most benefit or receive most attention. The reason is obvious; the staff is thoroughly employed in teaching; and, although a stranger is always courteously received by the professor, no visitor can help feeling himself an intruder when he perceives that every attention paid to him is so much taken from the class. The operating theatres, however, and the clinical lectures and consultations held in the theatres are freely open. Most of the large hospitals, however, make full provision for short time students, and a stranger wishing to spend a whole session in London might do far worse than attach himself to one of the large hospitals, entering as a student and paying the fee, which is not a large one, and thus gaining the right to the full practice of the hospital, including all the special departments, which at the larger schools are very well done. A man so entering ceases to be a stranger; he becomes one of the regular students of the place, and, if he be a man of conversation and sociability, gets a better view of the *vie intime* of the student world than he does by wandering from hospital to hospital. There is no doubt about the immensity of the field for study in London, or that the growing demand for post-graduate instruction is quickly opening the gates. Happy those who can enter and taste again the student life.

SCOTLAND.

At Edinburgh there are permanent post-graduate courses running for most of the year, among which may be noted:

1. Demonstrations on the Anatomy and Pathology of the Brain and Spinal Cord, by Dr. Alexander Bruce.
2. Demonstrations on Dermatology, by Dr. W. Allan Jamieson, assisted by Dr. Norman Walker.
3. Consumption and Diseases of the Chest, by Dr. R. W. Philip.
4. Ophthalmology, in the Royal Infirmary, by several of the ophthalmic surgeons.
5. Diseases of the Ear, Nose, and Throat, and Laryngology, at the Royal Infirmary, by Dr. P. McBride, assisted by Dr. R. Mackenzie Johnston.
6. Diseases of Children, by Dr. John Thomson, at the Children's Hospital and New Town Dispensary, and also by other physicians elsewhere from time to time.
7. Disease of the Tropics and Climatology, by Dr. R. W. Felkin.
8. Medical Electricity, including Electro-Physics, Diagnosis, and Therapeutics, by Dr. Dawson Turner.
9. Laryngology and Medical Ophthalmology, and the Uses of Electricity in Medical Treatment and Diagnosis, by Dr. John Wyllie.

The fees vary from £1 1s. to £3 3s., and the courses are of various lengths. Full particulars are advertised some time in advance, and inquiries may be addressed to the lecturers named.

DEGREES FOR PRACTITIONERS.

Since it was formerly the almost universal custom for medical students educated in London not to seek a University degree, and as that custom still prevails to a considerable extent, a very large proportion of medical men in actual practice in England possess diplomas to practice, but not degrees in Medicine. The want of a degree and of the title of "doctor" is often a subject of regret in after-life, and certain universities have issued special regulations under which the degree of M.D. is granted to practitioners of a certain standing under special conditions. The regulations of these Universities are stated briefly in the following paragraphs. The University of Brussels also grants the degree of M.D. to practitioners after examination, without restrictions as to residence or curriculum; but this degree is not registrable on the *Medical Register* if obtained subsequently to June, 1887.

University of London.

Registered medical practitioners of not less than three years' standing, and not less than 25 years of age, who shall pass, or have already passed, the Matriculation and Preliminary Scientific Examinations, may proceed to the Intermediate and M.B. Examinations without the intervals prescribed by the Regulations, on producing certificates that they have gone through the required course of training at any time previously (see p. 465).

University of Durham.

The degree of M.D. is granted by the University of Durham to registered practitioners of not less than fifteen years' standing, who have been qualified and in practice for that period, upon the following conditions without residence: The candidate must be 40 years of age, and must produce a certificate of moral character from three registered medical practitioners. If he have not passed previously to the professional examination in virtue of which his name was placed on the *Register* an examination in Arts, he is examined in classics and mathematics; if otherwise, he is required to translate into English passages from Cæsar, *De Bello Gallico* (first three books), Virgil, *Æneid* (first three books), or Celsus (first three books); he is afforded an opportunity to show proficiency in Moral Philosophy, Greek, or some modern language, but no extra marks are awarded for these subjects.

Professional Examination.—The candidate must pass an examination in the following subjects: i. Principles and Practice of Medicine, including Psychological Medicine, Hygiene, and Therapeutics; ii. Principles and Practice of Surgery; iii. Midwifery and Diseases Peculiar to Women and Children; iv. Pathology, Medical and Surgical; v. Anatomy, Medical and Surgical; vi. Medical Jurisprudence and Toxicology. The examination is conducted by means of printed papers, clinically, in the Royal Infirmary, Newcastle, and *viva voce*. The classical portion of the examination may be taken separately from the professional, on payment of a portion (£10 10s.) of the full fee.

Foreign and Colonial Practitioners.—Natives of India or the British Colonies are placed on the same footing as natives of Great Britain. Natives of India may produce evidence from an Indian university that they have passed within one year an examination in Latin, and in Greek, Persian, or Sanskrit.

Fees.—The inclusive fee is fifty guineas; if a candidate fail to pass twenty guineas are retained, but if he present himself again forty guineas only are required.

Dates, etc.—The examinations are held twice a year at the end of April and of September. Notice, accompanied by the fee and certificates, must be sent to Frederick Page, M.A., M.D., Registrar of the University of Durham College of Medicine, Newcastle-on-Tyne, at least twenty-eight days before the commencement of the examination.

University of St. Andrews.

The degree of M.D. may be conferred on any registered medical practitioner above the age of 40, of approved professional position and experience, and who shall pass a satisfactory examination in (1) Materia Medica and General Therapeutics, (2) Medical Jurisprudence, (3) Practice of Medicine and Pathology, (4) Surgery, (5) Midwifery and Diseases of Women and Children. Certificate of age, and certificates from three medical men of acknowledged reputation as to the professional position and experience of the candidate, must be sent in.

Fees.—The fee is 50 guineas, inclusive of stamp duty, and a Registration Fee of £1. Only 10 such degrees are conferred in any one year.

University of Brussels.

British practitioners of medicine holding medical and surgical qualifications are, in common with legally qualified practitioners in other countries, admissible without further curriculum to the examinations for the degree of M.D. of the University of Brussels.

Examination.—The examination is divided into three parts. The "First Doctorate" includes Medicine, Pathology (with microscopical examination), Therapeutics, Mental Diseases, and Diseases of Women and Children. The "Second Doctorate" comprises Surgery, Ophthalmology, Midwifery, Hygiene, and Medical Jurisprudence. The "Third Doctorate" consists of clinical examination in Medicine and Surgery, examination in Midwifery with the mannequin, Operative Surgery (amputation, ligature of arteries in the dead subject), and Regional Anatomy with Dissections. Special importance is attached to practical knowledge. The examination is conducted in French through an official interpreter, but most of the examiners, it is stated, speak English fluently. The examination is *viva voce*, but a written examination may be obtained on paying a special fee of £1 for each part.

Dates.—The examinations take place on the first Tuesday in November, December, February, May, and June. It is desirable that the candidate should arrive in Brussels on the previous Saturday before 2 P.M. at latest. The whole examination (First, Second, and Third Doctorates) may be got through in about a week.

Fees.—Candidates are required to leave their diplomas with the Registrar of the University prior to the examination. The fees are—for inscription of name, £8 12s.; for examination, £13; for legalisation of diploma, 8s.; total, £22. If a candidate fail in the first part of the examination the fees for the second and third are returned to him; if in the second, the fees for the third. A rejected candidate may present himself again in three months on paying one half of the examination fees.

Further particulars may be obtained from Dr. Major Greenwood, Hon. Sec. Brussels Medical Graduates' Association, 243, Hackney Road, London, N.E. An article containing a full description of everything concerning the degree was published in the British Medical Journal on September 15th, 1888.

N.B.—This degree, if obtained subsequent to June, 1887, is not registrable.

PUBLIC HEALTH OR STATE MEDICINE.

A medical officer of health of any county or county district, or of any metropolitan district, or the deputy of any such officer, must be legally qualified for the practice of Medicine, Surgery, and Midwifery, and also either be registered in the *Medical Register* as the holder of a diploma in Sanitary Science, Public Health, or State Medicine under Section 21 of the Medical Act, 1886, or have been, during three consecutive years preceding the year 1892, a medical officer of a district or combination of districts in London or elsewhere with a population, according to the last published census, of not less than 20,000, or have, before the passing of the Local Government Act, 1888, been for not less than three years a medical officer or inspector of the Local Government Board.

Certain regulations for candidates for diplomas in Public Health have been laid down by the General Medical Council,

and are binding on any candidate who may have been registered or become entitled to be registered as a medical practitioner after January 1st, 1890. These regulations are designed to ensure "the possession of a distinctly high proficiency, scientific and practical, in all the branches of study which concern the Public Health." The Executive Committee of the General Medical Council has power in special cases to admit exceptions to the rules. The regulations are as follows: "(*b*) A period of not less than twelve months shall elapse between the attainment of a first registrable qualification in Medicine, Surgery, and Midwifery and the examination for a diploma in Sanitary Science, Public Health, or State Medicine. (*c*) Every candidate shall have produced evidence of having attended, after obtaining a registrable qualification, during a period of six months practical instruction in a laboratory approved of by the body granting the qualification. (*d*) Every candidate shall have produced evidence that, during a period of six months after obtaining a registrable qualification, he either has practically studied the duties of outdoor sanitary work under the medical officer of health of a county or large urban district, or else has himself held appointment as medical officer of health under conditions not requiring the possession of a special sanitary diploma. (*e*) The examination shall be conducted by examiners specially qualified, and shall comprise laboratory work as well as written and oral examination." Further regulations have been laid down, and are binding on any candidate who may have been registered after January 1st, 1894, and require such candidate to produce evidence (1) of having after obtaining a registrable qualification attended during a period of six months practical instruction in a laboratory approved by the bodies granting the qualification, including the pathology of those diseases of animals that are transmissible to man: (2) of having before or after obtaining a registrable qualification attended the clinical practice of a hospital for infectious diseases approved by the several licensing bodies recognised under the Medical Acts. The rules (1) (2) do not apply to medical practitioners registered or entitled to be registered on or before January 1st, 1894.

The rules (*b*) (*c*) (*d*) as to study do not apply to "(1) Medical practitioners registered, or entitled to be registered, on or before January 1st, 1890; (2) registered medical practitioners who have for a period of three years held the position of medical officer of health to any county, or to any urban district of more than 20,000 inhabitants, or to any entire rural sanitary district."

The examinations for diplomas in Public Health, granted by the various Universities and Medical Corporations, and the courses of study required are adapted to meet the regulations of the General Medical Council, and, as a rule, to fulfil the recommendations issued by that body from time to time. It will be unnecessary to recapitulate in every case details of this nature.

Books.

Inquiries are often made with regard to the most suitable books to be read by practitioners preparing for examinations in Public Health. The following list issued until recently by the University of Cambridge will be found useful. It is not, of course, intended that candidates should read all, or even the majority, of these works, but it will not be difficult to make a selection. The books marked (*) may be used for reference.

Parkes's *Manual of Practical Hygiene* (Churchill); Wynter Blyth's *Manual of Public Health* (Macmillan); Grimshaw and others, *Manual of Public Health for Ireland* (Fannin, Dublin; and Longmans; Cameron's *Manual of Hygiene* (Hodges, Foster, and Co., Dublin; and Baillière, Tindall, and Cox); Seaton's *Handbook on Vaccination* (Macmillan); McVail's *Vaccination Vindicated* (Cassell); *Reports of the Royal Commission on Vaccination; *Army Medical Reports, *Reports on Hygiene* (Eyre and Spottiswoode); *Reports to Privy Council and Local Government Board by their Medical Officer (Eyre and Spottiswoode); Simon's works Churchill).

On Chemistry: General Principles.—Watt's *Manual of Chemistry* (Churchill); Bloxam's *Chemistry* (Churchill); Roscoe's *Lessons in Elementary Chemistry* (Macmillan); *Miller's *Chemistry* (Longman's); *Thorpe's *Dictionary of Applied Chemistry* (Longmans).

Analysis.—Sutton's *Systematic Handbook of Volumetric Analysis* (Churchill); Frankland's *Water Analysis for Sanitary Purposes* (Van Voorst); Wanklyn and Chapman's *Water Analysis* (Trübner); Hartley's *Air and its Relations to Life* (Longmans); Wanklyn's *Air Analysis* (Trübner); C. Fox, *Sanitary Examination of Water, Air, and Food* (Churchill); Wynter Blyth's *Foods, Composition, and Analysis* (Griffin).

Physics.—Everett's *Textbook of Physics* (Blackie); Ganot's *Physics* (Longmans); Deschanel's *Physics* (Blackie); *Daniell's *Textbook of the Principles of Physics* (Macmillan).

Microscopy.—Macdonald's *Guide to Microscopical Examination of Drinking Water* (Churchill); Davis's *Practical Microscopy* (Allen); *Cornil and Babes's *Les Bactéries* (Alcan); Crookshank's *Manual of Bacteriology* (Lewis); Klein's *Micro-organisms and Disease* (Macmillan); Flugge's *Micro-organisms* (New Sydenham Society).

Sanitary Engineering, Water Supply, Sewage, etc.—Eassie's *Sanitary Arrangements for Dwellings* (Smith, Elder, and Co.); Gaxton's *Healthy Dwellings* (Clarendon Press); Corfield's *Dwelling Houses: their Sanitary Construction and Arrangements* (Lewis); *Bailey-Denton, *Sanitary Engineering* (Spon); *Latham's *Sanitary Engineering* (Spon); *Bayles's *House Drainage and Water Service* (Williams, New York); Tomlinson's *Warming and Ventilation* (Lockwood); Corfield's *Treatment and Utilisation of Sewage*, 3rd edition, 1887, by Corfield and L. Parkes (Macmillan); *Report of Committee appointed by President of Local Government Board on Modes of Treating Town Sewage (Eyre and Spottiswoode); *Reports of Royal Commission on Pollution of Rivers, especially the Sixth on Doncaster Water Supply (Eyre and Spottiswoode); *Reports (two) of Royal Commission on Metropolitan Sewage Discharge; *Report from Select Committee on Public Health Act (1875) Amendment Bill, with the Evidence (Eyre and Spottiswoode); *R. Angus Smith's *Air and Rain* (Longmans).

On the Laws of the Realm and by-laws relating to Public Health.—For England, Public Health Act, 1875, and the Acts of Parliament relating to the various subject-matters within the domain of Hygiene passed since that date: Housing of the Working Classes Act, 1890; Vaccination Acts. For the Metropolis, or for Scotland, or for Ireland: Laws dealing with the same subject-matters as the above, and having application to the particular part of the United Kingdom; Model By-laws of the Local Government Board (Eyre and Spottiswoode), or the same annotated (Knight); Adulteration of Food and Drugs Act.

Statistics.—New-holme's *Vital Statistics* (Sonnenschein); Lewis's *Digest of the English Census* (Stanford); *The articles on "Statistics" in the *Cyclopædia of Anatomy and Physiology* (Longmans); *Papers by Mr. Noel Humphreys in the *Journal of the Statistical Society*; *Dr. Farr's *Vital Statistics* (Stanford); *Dr. Farr's letters to the Registrar-General in the early Reports of the Registrar-General; *Reports of the Registrar-General (Eyre and Spottiswoode); *Deaths in England, Average Annual Proportion of Deaths, etc., 1861-70, Parliamentary Paper C. 874, Session 1873 (Eyre and Spottiswoode).

Construction of Hospitals.—Miss Nightingale's *Notes on Hospitals* (Longmans); Galton *On the Construction of Hospitals* (Macmillan); Burdett, *Cottage Hospitals* (Churchill); *Hospital Construction and Organisation*—Johns Hopkins Essays (W. Wood and Co.); *Mouat and Snell's *Hospital Construction and Management* (Churchill); *"L'Etude et les Progrès de l'Hygiène en France," article "Hopitaux et Hospices" (Masson); *Dr. Tourne's *Report on Infectious Hospitals*—Local Government Board (Eyre and Spottiswoode); *the Chaumont, article "Hospitals" in the *Encyclopædia Britannica*, ninth edition.

The books recommended in the regulations for the Diploma in Public Health and the degree of B.Hy. in the University of Durham are:

Professor A. Wynter Blyth, *Manual of Public Health*: Dr. Louis C. Parkes, *Hygiene and Public Health*: Dr. George Wilson, *Handbook of Hygiene*.

Bacteriology.—Dr. G. Sims Woodhead, *Bacteria and their Products*.

Sanitary Chemistry and Physics.—Dr. C. B. Fox, *Sanitary Examination of Water, Air, and Food*: Professor Wanklyn, *Analysis of Food and Water*; Mr. Noel Hartley, *Air, Water, and Disinfectants*.

Professor Corfield, *Dwelling Houses*: Professor Walley, *Meat Inspection*: Aitken's *Practice of Physic*—Medical Geography.

Law.—Knight and Co.'s *Public Health Acts* (latest edition); Infectious Diseases Prevention Act, 1890; Housing of the Working Classes Act, 1890; Public Health Acts (Amendment) Act, 1890; Knight's *Model By-laws*.

University of Cambridge.

A diploma in Public Health is granted by the University, and any person whose name is on the *Medical Register* may apply to be examined, provided that he can show that he has complied with the regulations laid down by the General Medical Council (*see* Regulations (*b*), (*c*), (*d*), (1), (2) (*see* preceding column). (These regulations do not apply to candidates registered or entitled to be registered on or before January 1st, 1890.)

The examination, which is usually held twice a year, on the first Tuesday in April and October respectively and three or four following days, is divided into two parts, both of which are partly oral and practical, and partly in writing. One day at least will be devoted to practical laboratory work and one day to oral and practical examination in and reporting on subjects connected with outdoor sanitary work. They may both be passed together. A fee of £5 5s. must be paid before admission to either part.

PART I comprises Physics and Chemistry: the principles of Chemistry and methods of analysis, with especial reference to analyses of air, water, and food; applications of the microscope, including the investigation of micro-organisms; the laws of health, and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water supply, drainage, construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general; meteorology in relation to health; sources of water supply; statistical methods in their application to public health.

Part II comprises laws and statutes relating to public health; origin, propagation, pathology, and prevention of epidemic and infectious diseases, including those diseases of animals that are transmissible to man; effects of overcrowding, vitiated air, impure water, and bad or insufficient food; unhealthy occupations and the diseases to which they give rise; water supply and drainage in reference to health; nuisances injurious to health; distribution of diseases within the United Kingdom, and effects of soil, season, and climate.[1] A list of Colleges and Schools of Medicine at which the courses of laboratory instruction have, for the purposes of this examination, been already approved by the syndicate, can be obtained on application. The foregoing schedule is not to be understood as limiting the scope of the examination, which will include every branch of sanitary science. No candidate will be approved by the examiners who does not show a high proficiency in all the branches of study, scientific and practical, which concern the public health.

Applications for further information should be addressed to Dr. Anningson, Walt ham-sal, Cambridge, who will also supply particulars as to the course of instruction provided in the University.

Application for admission to the examination must be made to J. W. Clark, M.A., Registrary, University Registry, Cambridge, not later than March 13th or September 18th, and must be accompanied by the proper fee and certificates. A candidate who has not been on the *Medical Register* for three years must show that he is in his 24th year at least when he presents himself for Part I, and at least 24 years old when he presents himself for Part II.

University of Oxford.

A Diploma in Public Health is granted after an examination which will be held for the first time in Michaelmas term, 1895. The examination will be conducted in two divisions: (1) First Division: The application of Chemistry and Physics to General Hygiene. (2) Second Division: (*a*) General Pathology, with special relation to Infectious Diseases; (*b*) Laws relating to Public Health; (*c*) Sanitary Engineering; (*d*) Vital Statistics. It will be permissible to take the two divisions at the same or at different examinations. Candidates must comply with the regulations of the General Medical Council (see p. 494). The First Division may be passed at any time after registration, provided that the candidate has spent six months studying in a public health laboratory approved by the Board of the Faculty of Medicine.

University of London.

The University does not grant a Diploma in Public Health, but Sanitary Science is made a branch of the M.D. Examination, which is only open to persons holding the degree of M.B.Lond. Candidates must in addition have complied with the regulations laid down by the General Medical Council (See Regulations (*b*), (*c*), (*d*), page 494).

Victoria University.

A Diploma in Sanitary Science is granted after an examination, which begins on the third Monday in July in each year. The candidate must fulfil the requirements laid down by the General Medical Council (see Regulations *(b)*, *(c)*, *(d)*, page 494). The examination is divided into two parts; the subjects in each part, and their scope, as defined in the regulations of the University, so nearly coincide with those of the University of Cambridge that it is unnecessary to reproduce them. Special mention is, however, made of the use of meteorological instruments, of the diseases of animals in relation to the health of man, and of "Sanitary Reporting," every candidate being expected to visit and report upon the sanitary condition of some actual locality assigned to him by the examiners.

Each part of the examination occupies two days, and the fee for each part is £4 4s. Application for admission to the examination must be made to the Registrar of the University, Owens College, Manchester, not later than July 1st, and the fee must be paid on or before July 5th.

[1] The examination papers set at former examinations can be obtained at the Cambridge University Press Warehouse, Ave Maria Lane, London, price 1s. each set, or by post 1s. 1d.

Conjoint Board in England.

The diploma in Public Health of the Royal College of Physicians of London and the Royal College of Surgeons of England is granted to persons whose names are on the *Medical Register*, subject, so far as concerns those who have registered after January 1st, 1890 to the conditions laid down by the General Medical Council in Regulations *(b)*, *(c)*, and *(d)*. The examination is held in two parts, and Part I may be passed before fulfilling *(d)*. The subjects of the two parts of the examination are as follows:

Part I.—1. Physics, in their application to Health, with reference to—(*a*) Warming and Ventilation; (*b*) Water Supply, Sewerage, and Drainage; (*c*) Sanitary Construction. 2. Meteorology in relation to Health. 3. Chemistry with special reference to Food, Air, Soil, and Water. 4. Microscopical Examinations as applied to Air, Food, and Water. 5. Geology and Soil in their relation to Drainage and Water Supply.

Part II.—1. The origin, development, and prevention of Disease with reference to: (*a*) Special Pathology of Epidemic and Endemic Diseases, including the Natural History of the Specific Organisms of Diseases; (*b*) Influence of Climate, Season, and Soil; (*c*) Effects of Unwholesome Air, Water, and Diet; (*d*) Diseases of Animals in relation to the Health of Man; (*e*) Influence of Occupation and Lodgment; (*f*) Isolation, Quarantine, Disinfection, Vaccination. 2. Sanitary Work and Administration with reference to: (*a*) Health requirements of Houses, Villages, and Towns; (*b*) the Sanitary Regulations of Households, Establishments, and Occupations, including the Construction and Arrangement of Hospitals; (*c*) the Prevention and Control of Epidemic and Endemic Diseases. 3. Statistics in Relation to Health. 4. Statutes, Orders, and By-laws relating to Public Health. 5. Duties of Sanitary Authorities and their Officers. (The candidates may be required to visit and report on some premises selected by the examiners.)

The obligatory course of Laboratory Instruction must include the following subjects:

I. Physics. Gases: examination of their physical properties; their weight and bulk under varying alterations of pressure and temperature, and the movements thereby set up: diffusion, with especial reference to warming and ventilation. Anemometers, and their use. Liquids; their physical properties, their pressure, and flow through tubes and conduits; their action on gases. Meteorological instruments, their construction and use. Barometers, thermometers, hygrometers, rain gauges. II. Chemistry. The analysis of water for drinking purposes, including the qualitative and quantitative estimation of total solids (lime, magnesia, chlorides, sulphates, nitrates and nitrites, ammonia and lead), and loss on ignition of solids; determinations of hardness, of organic impurities, and of acidity and alkalinity. Chemical methods of treating sewage. The examination of air for the detection of polluting gases. Simple methods of endiometry. Estimation of the quantity of carbon dioxide in air. III Microscopy. The recognition of the constituents of food, such as starches and muscular fibre. The recognition of the chief fibres of clothing, such as wool, cotton, and silk. The recognition of constituents of ordinary dust and deposits from water. IV. Bacteriology, including the cultivation and recognition of micro organisms. V. Parasites and other organisms infesting foods, stuffs, or the human body.

The two parts may be passed separately or at the same time. The fee for each is £5 5s., and must be paid three days before the examination commences. Fourteen days' notice must be given to the Secretary at the Examination Hall, Victoria Embankment, from whom further particulars and the dates of the examinations (which are held in the months of January and July) may be obtained.

University of Durham.

The University grants a Diploma in Public Health (D.P.H.) and the degrees of Bachelor in Hygiene (B.Hy.) and Doctor in Hygiene (D.Hy.).

Diploma in Public Health.—The candidate must be a registered medical practitioner, not under 22 years of age, and must have passed his first registrable qualifying examination at least twelve months. He must fulfil the conditions laid down by the General Medical Council (see page 494, (*c*) (*d*), and exemptions (1) (2) in the next paragraph on the same page). The six months' practical laboratory course must consist of three months' practical instruction in a Chemical Laboratory and three months in a Bacteriological Laboratory (not concurrent). The examination comprises Sanitary Chemistry, Physics, Sanitary Legislation, Vital Statistics, Meteorology and the distribution of disease over the globe and in different districts of the United Kingdom, Sanitary Medicine, Practical

Hygiene, Bacteriology. The candidate is required also (i) to pass an examination on cases at the Newcastle City Hospital for Infectious Diseases, (ii) to report upon the condition of some actual locality, (iii) to analyse liquids and gases and specimens of food, (iv) to describe the construction and use of meteorological instruments (v) to show a practical acquaintance with the methods of bacteriological examination The fee is 10 guineas. The examination is held in April and September, and fourteen days' notice must be given to the Registrar of the University of Durham College of Medicine, Newcastle, from whom a full syllabus can be obtained. Candidates registered or entitled to be registered before January 1st, 1890 are required to pass the same examination.

Bachelor of Hygiene.—The regulations are in general similar to those for the D.P.H., but the candidate is required to have spent a winter and a summer session at Newcastle in following a prescribed course of lectures and practical work, and he must be a graduate in medicine of a recognised university. The subjects of examination are classified under the same headings as for the D.P.H., except that Bacteriology is replaced by Comparative Pathology, and that the subject of Nosology is added. The practical part of the examination includes all the subjects of the practical part of the D.P.H., with in addition (*a*) to draw up outlines for annual or other reports of a Medical Officer of Health, (*b*) to examine with the microscope submitted specimens, (*c*) to describe submitted specimens of diseased organs and tissues, and (*d*) the candidate is examined on Hygienic Apparatus and sanitary appliances, as well as on meteorological instruments. The fee is 10 guineas.

Doctor of Hygiene.—This degree is only granted to Bachelors in Hygiene of the University who have been engaged for two years subsequently to taking that degree as Medical Officers of Health.

University of Aberdeen.

The University grants a diploma in Public Health. Candidates for the diploma must have graduated in Medicine in the University, or in a University in the United Kingdom, one year before they receive the diploma; and they must produce evidence of (1) having complied with the regulations of the General Medical Council (see p. 494); (2) of having attended a fever hospital, containing not fewer than fifty beds, for six months; (3) if not a graduate in Medicine of Aberdeen University, of having attended a course in the University in one or more of the subjects embraced in the examination for the diploma The examination consists of two Parts; Part I (*a*) Physics, Engineering, and Meteorology; (*b*) Chemistry, Microscopy, and Bacteriology. Part II (*a*) General Hygiene; (*b*) Sanitary Law and Vital Statistics. The examination (which is written and oral) is held in March and July, and notice must be given to the Secretary of the Medical Faculty two weeks before. A detailed synopsis can be obtained from the Dean of the Medical Faculty. The fee, which must be paid at the time of giving notice, is £5 5s. The fee for re-examination, £1 1s.

University of Edinburgh.

This University confers two degrees in science in the department of Public Health, namely, Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.).

Bachelor of Science.—Two examinations must be passed, and the candidate must produce evidence of having complied with the regulations of the General Medical Council (see p. 494), and have taken a degree in Medicine in the University of Edinburgh or in a university recognised by it. The subjects of the First Examination are: (1) Laboratory work, practical, written, and oral; (2) Elements of Experimental Physics; (3) Geology, written and oral. The Second Examination cannot be taken sooner than six months after the First. The candidate must have attended a course of lectures (fifty at least) in the University of Edinburgh, or in a university recognised by the Court. The subjects of the Second Examination are: (1) Medicine in its application to Public Health: Sanitation; (2) Sanitary Law; (3) Vital Statistics; (4) Medicine in its bearings on Public Health; and the examinations in these subjects are taken at one time; (5) Mensuration and Drawing. (A detailed syllabus is given in the *Calendar*.) The examinations are held in March and July. The fee for each examination is £3 3s. Further particulars may be obtained on application to the Convener of the Science Degree Committee, at the office of the Faculty of Medicine, University New Buildings, where the schedules for examinations are issued and the certificates of candidates examined.

Doctor of Science.—Bachelors of Science in the Department of Public Health may, after the lapse of five years, proceed to the degree of Doctor in the same Department, on presenting a Thesis on some subject in the Department of Public Health, and are required to pass an examination in Public Health, and in such of its special departments as may from time to time be determined. Every such Thesis must be certified by the candidate to have been composed by himself, and must be approved by the examiners. The Thesis must be lodged with the Convener of the Science Degrees Committee on or before April 30th, in the year in which the candidate proposes to graduate. The fee is £10 10s.

University of Glasgow.

The diploma in Public Health may be obtained by any Bachelor of Medicine of the University on his passing the required examination twelve months at least after he has taken the degree of M.B. Every candidate for a diploma in Public Health shall produce certificates giving sufficient evidence: (1) that after obtaining the degree of M.B. he has undergone the practical laboratory training required by the General Medical Council (see page 494); (2) that he has for six months practically studied the duties of outdoor sanitary work under the medical officer of health of a county or large urban district.

The examination is written, practical, and oral. The subjects of examination are as follows: (*a*) Physics, Meteorology, and Climatology; (*b*) Chemistry and Biology; (*c*) General Hygiene; (*d*) Sanitary Law and Vital Statistics. The fee for the examination is five guineas. A course of instruction is provided by the University, the fee for which is ten guineas.

The Conjoint Board in Scotland.

The Royal Colleges of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow will grant a conjoint diploma in Public Health, after examination by a Board on which these bodies are represented. Candidates qualified before 1890 will be admitted without evidence of special instruction (though even in their case such instruction is strongly recommended). Registered medical practitioners who have for a period of three years held the position of medical officer of health to any county or urban district of more than 20,000 inhabitants, or any entire rural sanitary district are also exempt from courses of special instruction. Other candidates must produce evidence of attendance (subsequent to obtaining first a registrable qualification) for six months in a Public Health Laboratory, and for six months under a Medical Officer of Health of a county or large urban district. There are two examinations, and candidates may present themselves for both of them at one period, or for either examination separately. The First Examination embraces the following subjects in their relation to Public Health: Chemistry, Laboratory Work, Physics, and Meteorology. The Second Examination includes Epidemiology, Endemiology Vital Statistics, Practical Sanitation, and Sanitary Law. The various subjects of both examinations are detached and limited by synopses given. The laboratory work embraces not only Chemical Analyses, but also Microscopical Examination, Bacteriology, Parasites, etc. At the Second Examination each candidate is required to submit a report on the sanitary condition of premises to which he may be sent for the purpose, and is examined on the Acts of Parliament included under "Sanitary Law." The fee is ten guineas, or five guineas in respect of each examination; and candidates referred are readmitted on the fee of three guineas in respect of each examination. The examination is held in Edinburgh or in Glasgow, there being two periods of examination yearly. Application for examination in Edinburgh to be sent to Mr. James Robertson, 1, George Square, Edinburgh; and in Glasgow to Mr. Alexander Duncan, 242, St. Vincent Street, Glasgow, not later than one week before the examination day.

University of Dublin.

The diploma in State Medicine is conferred after examination upon M.D.'s or graduates in Medicine and Surgery of Dublin, Oxford, or Cambridge. The name of the candidate must have been on the *Medical Register* at least twelve months before the examination, and, subsequent to registration, the candidate must have completed six months' practical instruction in a laboratory approved by the University, and have studied practical outdoor sanitary work for six months, under an approved officer of health. [This condition does not apply to candidates registered or entitled to be registered on or before January 1st, 1890.] The examination is held in December, and candidates are required to send in their names at least a week before the first day of the examination to the Registrar of the School of Physic, from whom a full syllabus of the examination can be obtained. The subjects of examination are: State Medicine and Hygiene (paper); Chemistry (paper and laboratory); Physics and Meteorology (oral); Engineering (paper); Morbid Anatomy (oral); Vital Statistics (paper); Medical Jurisprudence (oral); Law (paper).

Further particulars can be obtained on application to the Registrar of the School of Physic, Dublin.

Royal University of Ireland.

The University grants a diploma in Sanitary Science, but only to graduates in Medicine of the University. The fee is £2. Further particulars will be found in the *Calendar*.

Conjoint Examining Board in Ireland of the Royal College of Physicians and the Royal College of Surgeons.

A diploma in State Medicine is granted by these two Colleges after an examination conducted by them jointly. Candidates are required to comply with the regulations of the General Medical Council (see page 494). The regulations as to study do not apply to practitioners registered or entitled to be registered on or before January 1st, 1890. The examination comprises the following subjects: State Medicine and Hygiene, Chemistry, Meteorology and Climatology, Engineering, Morbid Anatomy, Vital Statistics, Medical Jurisprudence, Law. The candidates will be examined orally in the Law of Evidence, and practically in the reading of Plans, Sections, and Scales, as well as in Analytical Chemistry, with special reference to Air, Water, and Food, including the use of the Microscope. They will also be required to read meteorological instruments, and to explain their construction; and they may be called upon to make a practical Sanitary Report.

The candidate must return his name to the Secretary of the Committee of Management under the Conjoint Scheme, Royal College of Physicians, 6, Kildare Street, Dublin, three weeks before the examination, and lodge with him a testimonial of character from a Fellow of either of the Colleges, or of the Royal Colleges of Physicians or Surgeons of London or Edinburgh.

The fee for the examination is ten guineas; for re-examination £5 5s; the examinations begin on the Tuesday following the first Friday of the months of February, May, and November. The examination lasts three days.

A Special Examination for the diploma can be obtained on payment of £5 5s., in addition to the ordinary fees mentioned above, and on giving notice at least one fortnight before the date of the proposed examination.

Schedules of the subjects can be obtained from the Secretary.

Instruction and Laboratory Classes.

Courses of lectures and laboratory instruction to suit the requirements of candidates for diplomas in Public Health have been organised at the following schools, and could probably be arranged for at other schools and colleges.

London.

St. Bartholomew's Hospital.—Inclusive fee, 20 guineas.
Charing Cross Hospital.—Inclusive fee, 20 guineas.
St. George's Hospital.—Inclusive fee, 20 guineas; for candidates registered before January 1st, 1890, 12 guineas.
Guy's Hospital.—Inclusive fee for six months' course of Laboratory Instruction and Lectures, 20 guineas.
King's College.
London Hospital.—Inclusive fee, 20 guineas; three months' course, 12 guineas.
St. Mary's Hospital.—Six months' course, inclusive fee, 12 guineas.
St. Thomas's Hospital.—Inclusive fee, 20 guineas; short course, 6 guineas.
University College.
College of State Medicine.

Provincial.

Cambridge University.
Mason College, Birmingham.
University College, Liverpool.
Yorkshire College, Leeds.
University of Durham College of Medicine.
University College, Bristol.

Ireland.

School of Physic, Dublin.
The Catholic University School of Medicine.
Royal College of Surgeons, schools of Surgery, Dublin.

PSYCHOLOGICAL MEDICINE.

The facilities for the study of mental diseases are now vastly increased, and in addition to the regular lectures given in the different medical schools, post-graduate lectures are also given at the Bethlem Royal Hospital in connection with the London Post-Graduate Course, of which Dr. Fletcher Little 32, Harley Street, W., is the Hon. Sec. The London County Council is proposing to throw open their large asylums, and contemplate applying to the Conjoint Medical Boards for the recognition of all of them as teaching hospitals. Dr. Savage, at Guy's, and Dr. Rayner, at St. Thomas's, have special classes, with clinical instruction, at Bethlem Royal Hospital; Professor E. W. White lectures at King's College, and gives clinical instruction at the City of London Asylum, near Dartford; Dr. Hack Tuke is the Lecturer at Charing Cross; Dr. Claye Shaw at St. Bartholomew's; Dr. Mickle at Middlesex; Sir James Crichton-Browne at St. Mary's; Dr. C. Mercier at Westminster.

In the provinces, also, each medical school has a Lecturer on Psychological Medicine, who gives clinical instruction in a neighbouring asylum; and in Scotland and Ireland similar arrangements exist.

The Royal University in Ireland grants a diploma for proficiency in the treatment of mental diseases under the following conditions:—

The diploma is conferred only on Graduates in Medicine of the University.

Candidates must give notice, in writing, to the Secretaries of their intention to present themselves, and must pay the prescribed fee of £2 at least one month previous to the examination.

Candidates who satisfy the examiners will be required to pay a further fee of £3 before the diploma is conferred.

The subjects for this examination are those prescribed for the Hutchinson Stewart Scholarship for proficiency in the treatment of Mental Diseases.

The Medico-Psychological Association of Great Britain and Ireland also grant a Certificate in Psychological Medicine after a course of training, according to the rules of the Association, to candidates registered under the Medical Act. The examinations are held in London, Scotland, and Ireland twice a year. The fee for the examination is £3 3s. Full particulars may be obtained from the General Secretary, Dr. Fletcher Beach, 64, Welbeck Street, W. The Medico-Psychological Association further gives a Bronze Medal and £10 10s. to Asylum Assistant Medical Officers for the best dissertation on any clinical or pathological subject relating to insanity, and also the Gaskell Prize, value £30.

OPENING OF THE MEDICAL SCHOOLS.

The arrangements for the opening of the Winter Session of the Medical Schools and Colleges in the United Kingdom, so far as they are at present complete, are as follows:—

Metropolitan.

Charing Cross Hospital Medical School.—Monday, October 1st, *Conversazione* and Distribution of Prizes at 8 p.m.

Guy's Hospital Medical School.—Monday, October 1st. Mr. Durham will preside at the House Dinner of the Students' Club at 6 p.m. In the evening the first meeting of the Physical Society for the session will be held under the presidency of Dr. Wilks, when Mr. Lockhart Stephens will read a paper on "Medical Education in its Relation to General Practice."

King's College, London, Medical Faculty.—Monday, October 1st, Old Students' Dinner at Limmer's Hotel, Professor Watson Cheyne in the Chair.

LONDON HOSPITAL MEDICAL SCHOOL—Monday, October 1st. Old Students' Dinner in the College Library at 7 p.m. Mr. Jonathan Hutchinson, F.R.S., in the Chair.

LONDON SCHOOL OF MEDICINE FOR WOMEN—Monday, October 1st. Introductory Address by Miss Maida Sturge, M.B. (Lon.), Resident Medical Officer, South Tottenham Fever Hospital.

MIDDLESEX HOSPITAL MEDICAL SCHOOL—Monday, October 1st. Introductory Address by Dr. R. Boxall at 3 p.m., followed by Annual Distribution of Prizes. Old Students' Dinner, Holborn Restaurant, 7 p.m.

ST. BARTHOLOMEW'S HOSPITAL MEDICAL SCHOOL—Monday, October 1st, Old Students' Dinner in the Great Hall of the hospital.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL—Monday, October 1st, Introductory Address by Dr Isambard Owen at 4 p.m.

ST. MARY'S HOSPITAL MEDICAL SCHOOL—Monday, October 1st. Introductory Address by Dr. Scanes Spicer at 4 p.m. Annual Dinner of Past and Present Students at the Café Royal, Dr. G. Danford Thomas in the Chair.

ST. THOMAS'S HOSPITAL MEDICAL COLLEGE—Monday, October 1st. The Prizes will be distributed in the Governor's Hall at 4 P.M. by the Rev. W. W. Merry, Rector of Lincoln College, and Public Orator in the University of Oxford, who will also deliver an address.

WESTMINSTER HOSPITAL MEDICAL SCHOOL—Monday, October 1st. Introductory Address by Mr. G. Hartridge, F.R.C.S., at 4 P.M.

UNIVERSITY COLLEGE, MEDICAL FACULTY—Monday, October 1st. Introductory Address by Professor H. R. Spencer, M.D. Announcement of Prizes. Report by the Dean, Professor Victor Horsley, F.R.S.

PROVINCIAL.

BIRMINGHAM, MASON COLLEGE—Monday, October 1st. A public meeting under the presidency of Mr. Oliver Pemberton, F.R.C.S., Bailiff of the College, will be held in the College, when Professor Macneill Dixon, D.Litt., will give an inaugural address.

BRISTOL UNIVERSITY COLLEGE—Wednesday, October 3rd. Inaugural Address by the Rev. Canon Ainger, Master of the Temple.

LEEDS YORKSHIRE COLLEGE—Friday, October 5th. The new buildings of the Medical Department will be opened by the Duke and Duchess of York. The classes will commence on Monday, October 8th. The Prizes and Certificates for the past year will be distributed on Friday, October 19th, by the Right Hon. A. W. Ward, Vice-Chancellor of the Victoria University and Principal of Owens College.

LIVERPOOL UNIVERSITY COLLEGE—Wednesday, October 3rd. On Saturday, October 13th, the Earl of Derby will preside over a meeting, at which Professor Michael Foster will deliver an address.

MANCHESTER, OWENS COLLEGE—Monday, October 1st. The new Medical School Extension buildings will be opened early in November by the Duke of Devonshire.

NEWCASTLE, THE UNIVERSITY OF DURHAM COLLEGE OF MEDICINE—Tuesday, October 2nd. The Scholarships and Prizes will be distributed by the Earl of Durham.

SHEFFIELD SCHOOL OF MEDICINE—Monday, October 1st. Introductory Address by Dr. Martin, Lecturer on Midwifery.

WALES.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE, CARDIFF—Monday, October 8th. On Wednesday, October 10th, Introductory Address at 8 P.M. by Professor C. E. Vaughan, Professor of English Language and Literature.

SCOTLAND.

UNIVERSITY OF EDINBURGH—The medical classes open on Tuesday, October 9th; the Anatomy Rooms and Laboratory Courses on October 1st.

THE EDINBURGH SCHOOL OF MEDICINE—The session commences on Tuesday, October 9th. The Practical Anatomy Rooms and Chemical Laboratories will be opened on October 1st.

THE MEDICAL COLLEGE FOR WOMEN, EDINBURGH—Monday, October 1st.

EDINBURGH SCHOOL OF MEDICINE FOR WOMEN.—Monday, October 1st.

THE UNIVERSITY OF ABERDEEN—Tuesday, October 16th.

THE UNIVERSITY OF GLASGOW—Monday, October 22nd. Opening Address by one of the Professors.

ST. MUNGO'S COLLEGE, GLASGOW—Wednesday, October 17th. Introductory Address by Professor T. R. Marshall, D.Sc., F.R.S.E.

ANDERSON'S COLLEGE MEDICAL SCHOOL, GLASGOW—Tuesday, October 23rd.

THE UNIVERSITY OF ST. ANDREWS.—Tuesday, October 16th.

IRELAND.

TRINITY COLLEGE, DUBLIN—The Dissecting Room will be opened on October 1st; the Lectures will begin on November 1st.

CATHOLIC UNIVERSITY MEDICAL SCHOOL, DUBLIN—Dissecting Room open October 1st; Lectures November 2nd.

SCHOOLS OF SURGERY OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.—Dissecting Room open October 1st; Lectures November 1st.

QUEEN'S COLLEGE, CORK—Tuesday, October 16th.

PATIENTS FOR PASTEUR.—Three children living at Hyde were on August 21st bitten by a black and tan terrier suffering from rabies. The patients were despatched to Paris for treatment by M. Pasteur. A youth named Nathan Percival, of Salford, who was bitten on August 18th by a dog suffering from rabies, has also been sent to M. Pasteur.

LEPROSY IN RUSSIA.—The Society for the Repression of Leprosy, founded last year on the initiative of Professor Petersen of St. Petersburg, has already collected a sum of 41,000 roubles, and the Czar has granted a site for a leper-house in the St. Petersburg Government. It is expected that a hospital with provisional accommodation for twenty-five patients will be ready in the autumn.

THE PUBLIC SERVICES.

THE NAVAL AND MILITARY MEDICAL SERVICES.

THE Medical Services of the Royal Navy, of the Army Medical Staff, and of India offer careers which possess certain advantages, but are not without some drawbacks. The pay offered to the young surgeon on joining is fair, if not liberal, and it ought to be possible for him, with care, to live upon it. On the other hand, the prizes of the services are few, and a man without private means may in middle life find himself in somewhat straitened circumstances if he has incurred the responsibility of maintaining and educating a family.

The prospects of officers entering the Indian Medical Service are not now what they were a generation, or even a decade, ago. A variety of circumstances have combined to bring about this unfavourable result, the chief among which may be mentioned the fall in the value of the rupee, which has not only much diminished in this country an income derived from India, but has also seriously hampered the financial resources of the Government of India. The fall in the value of the Indian currency also much affects the Medical Staff, of whom a large number are constantly employed in that country. Representations have been made by the Parliamentary Bills Committee of the British Medical Association to the India Office, and the proposals made are now under the consideration of the Government of India. Medical officers will have the benefit of the recent regulation issued by the Government of India, which has undertaken, in view of the great depreciation in the value of the rupee, to make special allowance to officers whose pay does not amount to £1,000 a year, with regard to so much of that pay as they may wish to transmit to this country. This concession will be a great boon. The Indian Medical Service is a great and honourable service; it affords to earnest men almost unlimited opportunities of clinical work. It places within the reach of the more fortunate administrative posts of much importance and some dignity, and it has a splendid record of past service to the State, and to our Indian fellow subjects.

The Army Medical Department has long laboured under grievances with regard to military rank and titles which sometimes appear to civilians to be mainly of a sentimental character, but which those who have served, or who are serving, know to be very real and substantial. These grievances have been ameliorated by the recent concession of the progressive compound titles of Surgeon-Lieutenant, Surgeon-Captain, Surgeon-Major, Surgeon Lieutenant-Colonel, Surgeon-Colonel, and Surgeon-Major-General. It is possible, we hope we may say probable, that the Army Medical Staff will eventually be converted into a Royal Corps. The reply received from the Secretary of State for War showed that, for the present at least, the authorities are indisposed to listen to representations on various points made last year to the Secretary of State by Mr. Ernest Hart on behalf of a deputation of the Parliamentary Bills Committee of the British Medical Association.

The Medical Service of the Royal Navy we mention last, though the Royal Navy is the senior service, because at the present time the position of the department is on the whole satisfactory to medical officers belonging to it. And no man who feels he has a vocation for the Navy need be deterred from entering its medical department by the fear of meeting with ungenerous or harsh treatment at the hands of the authorities.

All candidates for these services must submit to an examination by a medical board into their physical fitness before being admitted to the entrance examinations. Special attention is given to the candidate's power of vision. A moderate degree of myopia is not considered a disqualification, provided

it does not necessitate the use of glasses during operations, and that no organic disease of the eyes exists.[1]

As the prospects of a medical officer of one of these services attaining to the highest administrative grades depends on a large extent upon the regulations with regard to compulsory retirement at the age of 55, if below a certain grade at that age, there is a distinct advantage in entering the service at as early an age as possible.

ARMY MEDICAL STAFF.

A candidate for a commission in the Army Medical Staff must be over 21 and not over 28 years of age at the date of the commencement of the competitive examination. He must be of unmixed European birth, and must be registered under the Medical Act.[2] He must produce a certificate of moral character, and a certificate to the effect that he is of steady habits, and likely to prove creditable to the department. Before admission to the examination his physical fitness must be determined by the Board of Medical Officers. These and some additional facts of minor importance must be embodied in a "declaration" upon a special form, which may be obtained on application to the Director-General of the Army Medical Department, War Office, London, S.W., who will also forward a memorandum on conditions of admission, pay, etc.

A competitive entrance examination is held twice a year, generally in February and August. Announcement of the date and of the number of vacancies is made by advertisement in the medical and some other papers.

Entrance Examination.

The examination consists of two parts:

I. *Compulsory*, the subjects of which are (*a*) Anatomy and Physiology, (*b*) Surgery, (*c*) Medicine, including Therapeutics and the Diseases of Women and Children, (*d*) Chemistry and Pharmacy, and the Practical Knowledge of Drugs; 1,000 marks are given for each division (*a*, *b*, *c*, *d*). The examination in medicine and surgery is in part practical, and includes operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. The examination in chemistry is limited to the elements of the science, and to its application to medicine, pharmacy, and practical hygiene.

II. *Voluntary*.—A candidate may be examined in the following voluntary subjects: (*a*) French and German (150 marks each), (*b*) Natural Sciences (300 marks). Competitors are urged to qualify in French and German, as a knowledge of modern languages is considered of much importance. The Natural Sciences include Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany with special reference to Materia Medica. A number less than one-third of the marks obtainable will not be allowed to count. An entrance fee of £1 is payable, and no candidate is allowed to compete on more than two occasions.

Successful candidates are arranged in order of merit, and are required to proceed to the Army Medical School at Netley as Surgeons on Probation; they receive an allowance of 8s. a day.

Final Examination.

Surgeons on probation at Netley attend courses in: 1. Hygiene; 2. Clinical and Military Medicine; 3 Clinical and Military Surgery; 4. Pathology of Diseases and Injuries incident to Military Service. At the conclusion of the Netley course a further examination in the subjects there taught is held, for which marks are awarded, and the final position of the candidate is determined by the number of the marks obtained at the Entrance and Final Examinations. On leaving Netley the Surgeon on Probation receives a commission of Surgeon-Lieutenant, the pay of which rank is £200 a year. The next grade is Surgeon-Captain, and after five years' service the pay is £250 a year. A Surgeon-Captain may be promoted to the rank of Surgeon-Major after twelve years' full pay service; to qualify himself for this promotion he must at any time after his seventh year of service pass a special examination in Surgery, Medicine, Hygiene, the Duties of Medical Officers, Hospital Organisation, Military Law, and the Administration of the Medical Staff Corps.

Retired Pay.—All officers under the rank of Surgeon-Colonel must retire at the age of 55; above this rank at the age of 60. An officer of ten years' service on full pay may be permitted to retire on a gratuity of £1,250; after fifteen years' service, £1,800; after eighteen years' service, £2,500.

INDIAN MEDICAL SERVICE.

All natural born subjects of Her Majesty between 21 and 28 years of age may be candidates; the conditions are otherwise the same as for the Army Medical Staff (see above), but there is an additional voluntary subject, Hindustani, for which 150 marks are allowed.[1]

The final order of merit is determined, as in the case of the Army Medical Staff, by the combined results of the Preliminary and of the Final Examinations, and, so far as the requirements of the Service will permit, candidates will have the choice of Presidency in India, according to their position in that list. The examinations are held, as a rule, twice a year, in February and August.

Free passage to India is provided. The rate of pay, until arrival in India, is 10s. a day. The minimum rate of pay in India is stated to be Rs. 317.8 a month. After seventeen years' service for pension the rate of retired pension is £292 a year; after twenty, £365; after twenty five, £500; after thirty years, £700. Further particulars as to rates of pay, promotion, pensions, and half-pay will be found in Military Department Form 124, which can be obtained on application to the Under-Secretary of State, India Office, London, S.W.

It should be stated that much dissatisfaction is expressed as to the mode in which certain of the provisions as to pay and allowances is interpreted by the authorities. The Parliamentary Bills Committee of the British Medical Association is at present in communication with the India Office with a view of obtaining some remedy of the grievances alleged.

MEDICAL DEPARTMENT OF THE ROYAL NAVY.

The regulations for admission to examination for the Medical Department of the Royal Navy are generally the same as in the case of the Army Medical Staff (see above). The candidate must be between 21 and 28 years of age. The entrance examination consists of two parts: in Part I. *Compulsory*, the subjects are the same and the number of marks allowed for each the same as in the Army Medical Staff. Part II. *Voluntary*, consists of two divisions: (*a*) French and German (150 marks each). A knowledge of modern languages being considered of great importance, all candidates are urged to qualify in them. (*b*) Natural Sciences (Biology, Physics, and Physical Geography). Candidates will be examined in all, or any, of these sciences. Candidates who qualify in the compulsory subjects will be allowed to count marks in those of the three sciences only in which they obtain one third of the maximum marks for each.

Biology.—The examination in biology will include the general principles of the science; structure and life-histories of the chief animal and vegetable parasites; bacteria and their relation to disease; distinctive characters of the important groups of animals, with a special knowledge of the vertebrata; the elements of embryology; the general morphology and physiology of flowering plants; diagnosis of the chief British natural orders; medicinal plants.

Physics.—The examination in physics will be limited to the general principles of mechanics, acoustics, optics, heat, magnetism and electricity, such as: the properties of solids, liquids, and gases; conservation of energy, specific gravity, propagation and reflection of sound and light, temperature, specific and latent heat, thermometers, conduction of heat.

[1] Further particulars as to the standard of eyesight will be found in the pamphlet by Sir J. Favrer, M.D., K.C.S.I., entitled, *Regulations as to Defects of Vision*, etc., published by Messrs. J. and A. Churchill, 11, New Burlington Street, London, W. Price 2s.

[2] He must have a diploma in Medicine and in Surgery, but the diploma of the Society of Apothecaries of London, obtained under the conditions of the Medical Act of 1858, is accepted as a double qualification. A candidate is required to produce also the following certificates: (1) Of having discharged the duties of a medical clinical clerk during six months and of a surgical dresser during another period of six months, of which, in each case, not less than three months must have been spent in the wards of a hospital. (2) Of having attended a course of instruction during not less than three months at an ophthalmic hospital, or the Ophthalmic Department of a general hospital, which course shall include instruction in the errors of refraction.

[1] Candidates presenting themselves for examination in Hindustani are recommended to study some recognised textbook, such as the annotated edition of the *Tauhat-un-Nasuk*, which is the text used by candidates for the Indian Civil service.

properties of mirrors and lenses, chromatic dispersion of light, chief forms of batteries, faradaic, galvanic and frictional electricity, general properties of magnets.

Physical Geography.—The examination in physical geography will be limited to general principles, such as the relation of the earth to the rest of the solar system, movements of the earth, nature of the earth's crust and the chief kinds of rocks, general configuration of land and water, mountain ranges, plains, lakes, rivers, islands, glaciers and icebergs, the ocean currents, tides, the earth's atmosphere, winds and storms, dew, clouds, rain, climate, general distribution and nature of volcanoes, earthquakes, general distribution of animal and vegetable life.

The order of merit is determined by the total number of marks obtained in the compulsory and voluntary parts.

Successful candidates, immediately after passing the examination, will receive commissions as Surgeons in the Royal Navy, and will undergo a course of practical instruction in Naval Hygiene, etc., at Haslar Hospital.

The rate of pay of Surgeon is on entry, £209 17s. 6d. a year; after four years' full pay service, £264 7s. 6d. a year; after eight years' full pay service, £282 17s. 6d. A Surgeon at the expiration of twelve years' service may, on the recommendation of the Director General, be promoted to the rank of Staff-Surgeon, if he has passed the required examination at any time after completion of eight years' service. The pay on promotion is £383 5s.; after four years' full pay service in the rank, £438.

Retirement.—The age for compulsory retirement is 55, except in the case of Inspectors-General and Deputy-Inspectors-General, who retire at 60. Voluntary retirement and withdrawal is allowed as follows:—

(*a*) Every officer will have the option, subject to the approval of the Lords of the Admiralty, of retiring after 20 years' full-pay service on the scale of retired pay, or with a gratuity on the scale provided if not eligible for retired pay. (*b*) At the expiration of 8, 12, or 16 years' full-pay service, every officer will be permitted, subject to their Lordships' approval, to withdraw from the Naval Service, receiving a gratuity on the scale laid down.

Rank.	Gratuities.	Daily.	Yearly.
	£ s. d.	£ s. d.	£ s. d.
Surgeon and Staff-Surgeon:			
After 8 years' full-pay service	1,000 0 0	—	—
,, 12 ,, ,,	1,500 0 0	—	—
,, 16 ,, ,,	2,250 0 0	—	—
Fleet-Surgeon:			
After 20 years' service (including proportion of half-pay time)	—	*1 0 0	365 0 0
After 24 years' service (including proportion of half-pay time)	—	*1 2 6	410 12 6
After 27 years' service (including proportion of half-pay time)	—	*1 5 0	456 5 0
After 30 years' service (including proportion of half-pay time)	—	*1 10 0	547 10 0
Deputy-Inspector-General ...	—	1 15 0	638 15 0
Inspector-General	—	2 0 0	730 0 0

* To obtain this rate an officer must hold the commission of Fleet-Surgeon.

† Or on compulsory retirement at the age of 55.

A memorandum containing the regulations as to the examinations, and as to rates of pay and retirement and conditions of service and promotion, can be obtained on application to the Director-General, Medical Department, Admiralty, Northumberland Avenue, London, W.C.

PRISON MEDICAL SERVICE.

The prison department consists of two branches—the convict service and the local prison service. In the case of the smaller prisons the medical officer is usually a local practitioner, but in the case of the larger prisons the medical officers are appointed by the Convict Prison Board or the Prison Commission, and form practically a special service. The Chairman of both Boards is Sir E. Du Cane, K.C.B., and application for employment may be made to him on a special form which, we understand, can be obtained from his private secretary, Mr. C. S. Joseph, Prison Department, Home Office, London, S.W.

The number of vacancies is not large, and the prospects of promotion bad. This is due in part to the fact that the rate of pay of the higher appointments depends upon the number of prisoners in the particular prison, and that the total number of prisoners in the country is decreasing.[1]

The following was the staff in 1892:

Convict Service.—Seven assistant surgeons at £250, rising by quinquennial increments of £25 to £300; seven medical officers, at incomes ranging from £300 to £550.

Local Prison Service.—Seven assistant surgeons, at £250, rising by quinquennial increments of £25 to £300. Six medical officers at £250. Four medical officers at £320 rising after five years to £350. Four medical officers at £400, rising by quinquennial increments of £50 to £500.

COLONIAL MEDICAL SERVICES.

There are a certain number of appointments in the Medical Services of the following Colonies, which are from time to time filled up by the Colonial Office: British Guiana, Jamaica, Trinidad, Windward Islands, Leeward Islands, British Honduras; Fiji; Sierra Leona, Gambia, Gold Coast, Lagos; Ceylon, Straits Settlements, Hong Kong; Cyprus, Gibraltar, St. Helena, and the Falkland Islands.

All applicants for medical employment in the Colonies must be between the ages of 23 and 30, and must be doubly qualified; preference will be given to those who have held hospital appointments as house-physicians and house-surgeons; certificates of moral character and of sobriety will be required, and every officer before being appointed will be medically examined by one of the consulting physicians of the Colonial Office.[2]

Applications for medical employment in the tropical Colonies from persons in the United Kingdom must be addressed to the Private Secretary, Colonial Office, Downing Street, S.W., during the month of April in each year. Out of the total number so applying a list of candidates will be made who will be eligible to fill any vacancies which may occur during the year, but no promise whatever is held out that candidates will eventually receive an appointment.

It is not possible to forecast either the number or the nature of the vacancies which will arise in the course of any given year. The number during the last six years has varied from eight to eighteen, the average being between thirteen and fourteen a year. The list of candidates applying in April usually comprises sixty names. In Ceylon and Jamaica vacancies are almost always filled locally by the appointment of qualified native candidates.

It is for the West Indies and the West African Colonies that medical officers are chiefly required. The majority of the West Indian appointments involve medical charge of a district, including, as a rule, the care of a hospital, poor-house, asylum, or other institution, and free attendance on the aged and children. In West Africa the medical officers are also required to take charge of any hospital, public dispensary, lunatic asylum, or other Government institution at their respective stations, to supervise the sanitation of the district, to perform vaccination, and to give gratuitous attendance to all Government officials, and, in most cases, to the families of such officials also.

The rates of pay vary in the different colonies and depend to some extent upon whether private practice is permitted. In British Guiana the pay starts at £300 a year with quarters, is £500 to an officer in charge of a district, and rises to £900. In Trinidad the salary is £250 with quarters on appointment, £400 for a district appointment, with a quinquennial increment of £50. In the Leeward Islands the salary in most cases is £250, in the Windward it varies from £200 to £400. In the Gold Coast the assistant colonial surgeons are paid £350 a year, rising by triennial increments of £25 to £400. In Lagos the commencing salary is £250, rising by triennial increments of £25 to £300 a year. Full details upon these and other points are contained in a memorandum[3]

[1] Intending applicants would do well to consult a memorandum prepared for the use of the Parliamentary Bills Committee of the British Medical Association, and published in the British Medical Journal on April 23rd, 1892.

[2] Dr. C. Gage Brown, 88, Sloane Street, London, S.W.; Sir D. S. Maclagan, 28, Heriot Row, Edinburgh, and Dr. Hawtrey Benson, 57, Fitzwilliam Square, Dublin.

[3] Miscellaneous, No. 90, printed for the use of the Colonial Office.

which will, we understand, be forwarded by the Private Secretary, Colonial Office, London, S.W.

Passage money on first appointment and leave of absence on half pay (in case of sickness or after six years' service, if the medical officer has given satisfaction in the discharge of his duties) are granted to medical officers under the colonial regulations; and those serving in West Africa are allowed six months' leave with full pay and free passages home and out again after every twelve or fifteen months of continuous residential service. With regard to pension, medical officers are usually on the same footing as other Government servants, but in cases where private practice is allowed the rule is that they are not entitled to pension except in West Africa.

BRITISH PRACTITIONERS ABROAD.

Foreign practitioners can practise medicine in Great Britain without restriction, but unless registered cannot recover their fees by legal process nor give medical evidence in courts of law, nor hold public medical offices. Under the Medical Act of 1886 the General Medical Council may recognise equivalent qualifications granted in countries which treat this country with reciprocity; after certain formalities such qualifications would be registrable. At present, however, no foreign countries have arranged to treat this country with reciprocity, and as a rule British practitioners are required in European countries to pass an examination of more or less severity. The following list contains particulars as to the regulations of the British Colonies as well as of foreign countries:

BRITISH COLONIES AND DEPENDENCIES.

AUSTRALASIA.

Australia.—The applicant must be registered by the Medical Board of the colony in which he proposes to practise. He may be required to prove the genuineness and authenticity of his diplomas.

New Zealand.—Certain legal formalities must be gone through, but there is no examination.

Tasmania.—A diploma must be verified by the Medical Examining Board.

DOMINION OF CANADA.

Except in British Columbia and Ontario it is necessary only to register British diplomas, but evidence of authenticity and genuineness may be required. For this registration a fee is charged, and in some cases there is also an annual tax. In British Columbia the Medical Council of the colony holds an examination, and there is a fee of 100 dollars; in Ontario an examination is held by the College of Physicians and Surgeons of Toronto.

SOUTH AFRICA.

There is a Colonial Medical Council both in the Cape of Good Hope and Natal. British diplomas are registrable after inspection and verification.

WEST INDIES.

British qualifications are everywhere recognised. In some instances they must be registered, for which a small fee is charged.

EUROPE.

Austria.—It is necessary to pass the State examination, or obtain a University Degree in Medicine, and to become an Austrian subject. Exemptions may be granted under very special circumstances.

Belgium.—Upon the advice of a jury which has a right to grant the diploma of Doctor, the Government can give permission to practise medicine to a foreign subject who possesses a diploma in Medicine, Surgery, and Midwifery.

Denmark.—Foreigners are required to pass the State examination.

France.—Under the new law a degree of M.D. obtained by examination before a French faculty will be indispensable. (See page 504.)

Holland.—Foreigners are required to pass the State examination.

Germany.—Any person may practise medicine, but if he has not passed the State examination he does so at his own peril, and is liable to fine and imprisonment if convicted of a mistake.

Greece.—A State examination must be passed, but graduates of foreign schools may take their examination in French or English.

Italy.—A foreigner must (*a*) obtain an authorisation (*abilitazione*) from one of the Royal Universities of Italy; or (*b*) if he desire to practise only among foreigners he is at liberty to do so.

Monaco.—See British Medical Journal, July 21st, 1894, p. 165.

Portugal.—The State examination must be passed.

Roumania.—A State examination must be passed (*viva voce*).

Russia.—The State examination must be passed; but if the applicant possess the degree of M.D. from a university of high repute, the Minister of Education may give an authorisation after requiring the candidate to compose and defend a dissertation.

Norway.—The State examination must be passed.

Spain.—The State examination must be passed, but exemptions are sometimes granted on application through the British Ambassador.

Sweden.—The State examination must be passed.

Switzerland.—A qualified English practitioner desiring to practise in Switzerland even if he desire to practise only among his own countrymen, is required to pass an examination at a university in that country. The examination may be passed at Basle, Zurich, or Berne in German, and at Geneva or Lausanne in French. The applicant is advised to obtain from one of his teachers in this country an introduction to a professor at the university at which he proposes to pass the examination. His proper course would be to call upon the Rector of the university. We are informed that every information would be afforded, and that no difficulties are placed in the way of candidates. At the University of Zurich, the three examinations which it is necessary to pass are held as a rule at the following periods of the year:—*First Examination:* End of January, and mid-September; *Second Examination:* end of January and mid-September; *Third Examination:* beginning of January, end of May, and beginning of October. At Basle the next examinations are in October. At Geneva the examinations are held in the third week of October, and in the second week of July, at the opening and conclusion respectively of the winter and summer session.

Turkey.—An examination must be passed (fee, £1 10s.) at Constantinople.

NORTH AMERICA.

United States.—The law varies in the different States and Territories:

A. No regulations or inoperative.

Connecticut	Kansas	Ohio
District of Columbia	Maine	Rhode Island
Indian Territory:	Massachusetts	Utah
Creek Nation		

B. Diploma to be registered with State or county officials.

Arizona	Idaho	Nebraska
Arkansas	Indiana	Nevada
Delaware	Michigan	Wyoming
Georgia		

C. Diploma to be endorsed by a college "in good standing," or by the State Medical Society, or by the State or Territorial Board of Examiners; or by the State Board of Health.

*California	Louisiana	Pennsylvania
*Colorado	Maryland	*South Dakota
*Illinois	*Missouri	*Tennessee
*Indian Territory:	*Montana	*Texas
Choctaw Nation	New Hampshire	Vermont
Iowa	*New Mexico	*West Virginia
Kentucky	*Oregon	Wisconsin

* Signifies that the applicant may be submitted to examination by the State or District Board of Medical Examiners.

D. Candidate is examined by State, Territorial, County, or District Board of Medical Examiners, or Board of Censors.

Alabama	Mississippi	North Dakota
Florida	New Jersey	South Carolina
Indian Territory:	New York	Virginia
Cherokee Nation	North Carolina	Washington
Minnesota		

Mexico.—No special requirements.

SOUTH AMERICA.

Argentine Republic.—The applicant's diplomas must be [illegible] by the Argentine Consul in this country (fee £1 4s.) This should be done before leaving this country. On arriving at Buenos Ayres the endorsement of the Argentine Consul in this country must be verified by the Argentine Foreign Office. Three examinations must be passed in the University of Buenos Ayres or Cordova. First [illegible] tions, Physiology, Pathology, Ophthalmology, and Gynæcology. Second Examination: Clinical and Operative Surgery, Histology, Materia Medica, and Mental Diseases. Third Exam[illegible] Midwifery, and Toxicology. The fee for examination is 300 dollars, half of which is retained in case of rejection. The examinations can be passed consecutively at a few short intervals or separately; a rejected candidate is not readmitted to examination until after the lapse of six months. The examination is conducted *viva voce* in Spanish. Temporary authorisations to practise for six months may be obtained from the governor of a province, and the applicant may utilise this time to improve his knowledge of Spanish. The regulations for graduates of Spanish Universities are less onerous.

Brazil.—A State examination must be passed which is conducted in Portuguese or French.

Chili.—The regulations resemble those in the Argentine Republic: examination by the University of Santiago.

Peru.—An examination must be passed before the University of Lima. It is conducted in Spanish.

Uruguay.—The conditions are similar to those in the Argentine Republic: examination by the University of Monte Video.

Indian Medical Service.—The following is the list of the candidates for Her Majesty's Indian Medical Service who were successful at the competitive examination held at the Examination Hall, Victoria Embankment, on August 10th and following days. Thirty candidates competed for fourteen appointments. Twenty-four were reported qualified: 1, C. T. Milne, 2,727; 2, F. H. Watling, 2,574; 3, A. F. Stevens, 2,500; 4, A. Gwyther, 2,446; 5, W. Carr, 2,382; 6, J. D. McMillan, 2,307; 7, C. H. Bensley, 2,283; 8, A. E. J. Ward, 2,237; 9, S. Evans, 2,235; 10, J. H. McDonald, 2,206; 11, E. J. Morgan, 2,187; 12, F. Wall, 2,021; 13, C. M. Mathew, 2,018; 14, J. A. Hamilton, 2,000.

Army Medical Staff.—List of successful candidates for commissions in the Medical Staff of Her Majesty's Army at the recent examination in London: 1, H. A. H. Howell, 2,445; 2, D. Lawson, 2,270; 3, W. S. Harrison, 2,260; 4, E. B. Steel, 2,178; 5, S. J. C. P. Perry, 2,168; 6, H. E. Haddon, 2,088; 7, C. W. Profeit, 2,075; 8, J. H. Whitehead, 2,013; 9, N. P. Tomlinson, 1,999; 10, F. Kiddle, 1,986; 11, J. A. Murison, 1,978; 12, A. F. Heaton, 1,940.

DENTAL SURGERY.

REGULATIONS OF THE GENERAL MEDICAL COUNCIL.

CANDIDATES for a diploma in Dental Surgery are required to produce certificates of having been engaged during four years in professional studies and of having received three years' instruction in Mechanical Dentistry from a registered practitioner. One year's *bonâ-fide* apprenticeship with a registered dental practitioner, after being registered as a dental student, may be counted as one of the four years of professional study. The three years of instruction in Mechanical Dentistry, or any part of them, may be taken by the dental student, either before or after his registration as a student; but no year of such mechanical instruction shall be counted as one of the four years of professional study unless taken after registration.

A *Register of Dental Students* is kept by the Registrar of the General Medical Council, 299, Oxford Street, London.

Preliminary Education.—Dental students are subject to the same regulations as regards preliminary education as medical students. (This does not apply to dental students who were apprenticed or had commenced attendance upon professional lectures before July 22nd, 1878.)

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LICENCE IN DENTAL SURGERY.

The candidate must fulfil the conditions of the regulations of the General Medical Council in regard to registration, and must pass through the following curriculum:

(1) Instruction in Chemistry and Materia Medica, which may be attended before registration. (2) Attendance at a recognised medical school on (*a*) Anatomy (one winter session) and Dissections (twelve months), (*b*) Physiology (six months), and Practical Physiology (three months); (*c*) Medicine (six months), Surgery (six months), and Clinical Surgery (two winter sessions). (3) Attendance at a recognised school for two courses of lectures upon each of the following subjects: Dental Anatomy and Physiology (Human and Comparative), Dental Surgery, Dental Mechanics, and one course of lectures on Metallurgy, by Lecturers recognised by this College. Students are required to attend examinations which are held in the several classes, and to spend not less than three years in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a competent practitioner or under the direction of the Superintendent of the Mechanical Department of a recognised Dental Hospital where arrangements for teaching are satisfactory to the Board of Examiners. In the cases of qualified surgeons evidence of a period of not less than two instead of three years of such instruction will be sufficient. This instruction may be taken prior to the date of registration as a dental student. Candidates must also produce evidence of having attended at a recognised dental hospital, or in the dental department of a recognised general hospital, the practice of Dental Surgery during the period of two years, and of having attained the age of 21 years.

Examination.—The examination, which is held in May and November, comprises the following three parts:—

Written.—General Anatomy and Physiology, General Pathology and Surgery, Dental Anatomy and Physiology, and Dental Pathology and Surgery.

Practical.—(*a*) On the treatment of Dental Caries, and may be required to prepare and fill cavities with gold or plastic filling or material, or to do any other operation in Dental Surgery (candidates must provide their own instruments). (*b*) On the mechanical and surgical treatment of the various irregularities of children's teeth. (*c*) On Mechanical Dentistry.

Oral.—The several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, etc.

Special Exemptions.—Candidates who have passed the Second Examination of the Examining Board in England, or who shall produce evidence of having passed the examination in Anatomy and Physiology required for the Licence in Surgery of the Royal College of Surgeons of Edinburgh, the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, or an examination in Anatomy and Physiology required for a degree in Medicine or Surgery at a University in the United Kingdom, will be exempt from re-examination in those subjects. Candidates who are Members of the College, or who have passed the Examination in Surgery of the Examining Board in England, or who shall produce evidence of having passed the Examination in Surgery for the Licence in Surgery of the Royal College of Surgeons of Edinburgh, the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, or an Examination in Surgery for a Degree in Medicine or Surgery at a University in the United Kingdom, will be exempt from re-examination in General Surgery and Pathology.

Fee.—The fee for the Diploma is £10 10s. over and above stamp duty. Further particulars may be obtained on application to the Secretary, Examination Hall, Victoria Embankment, London, W.C.

THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

LICENCE IN DENTAL SURGERY.

The candidate must fulfil the conditions of the regulations of the General Medical Council (see above): and the regulations as to curriculum are generally the same as those of the Royal College of Surgeons of England.

Examinations.—First: Anatomy, Chemistry, and Physiology (lectures on these subjects must have been attended). *Second:* Surgery, Medicine, Therapeutics, and the special subjects of Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics.

Special Exemptions.—Candidates who have passed the first and second examinations for the triple qualification under the old Regulations will be exempt from the first dental examination, and will have the advantage of being admissible either to the final dental examination or to the final examination for the triple qualification, or to both. But the first dental examination will not be held as equivalent to the first and second triple examinations, and will admit to the final dental examination only. Candidates who are Licentiates of this College, or who may be registered medical practitioners, will require to produce certificates of attendance on the special subjects only, and will be examined in these only for the Dental diploma. And candidates who shall produce satisfactory evidence of having passed in any of the subjects of the first dental examination before any Dental or Surgical Licensing Board recognised by the Royal College of Surgeons of Edinburgh, will be exempt from examination in such subject or subjects; but no examination will be recognised as giving exemption unless it is coextensive in its scope with the examination of this College, and is the only or final examination on the subject or subjects required by the Board at which it was passed.

Fees.—The fee for the diploma is £10 10s.

A copy of regulations, giving a list of preliminary examinations recognised for this, as well as of the subjects of the professional examinations, may be obtained from Mr. James Robertson, Clerk to the Royal College of Surgeons, at George Square, Edinburgh.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

The regulations as to certificates, curriculum, number of examinations, fees, and examinations are in effect similar to those of the Royal College of Surgeons of Edinburgh. There is special provision for candidates who intend to qualify both under the Medical and the Dentists' Act, and there is an examination in Practical Dentistry conducted in a dental hospital.

THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

LICENCE IN DENTISTRY.

Candidates are required to pass three examinations:—

I.—PRELIMINARY EXAMINATION.

All examinations in general education recognised by the General Medical Council (see p. 462) are accepted, but a preliminary Examination is held conjointly by the Royal Colleges of Physicians and Surgeons in Ireland on the third Wednesday in March and September. A syllabus can be obtained on application to the Registrar.

II.—PRIMARY DENTAL EXAMINATION.

A candidate is required to produce evidence that subsequently to registration as a dental or medical student by the General Medical Council he has attended at a recognised medical school winter courses (1) on Practical Anatomy, (2) two courses of Demonstrations and Dissections; (3) on Theoretical Chemistry; and (4) on Physiology, also summer or winter courses on (5) Practical Chemistry and (6) Practical Histology, and has attended a medico-chirurgical hospital for two sessions of nine months each. Candidates educated in England or Scotland are admitted on production of certificates necessary for the Final Primary and Final Examina-

tions in their own countries. The subjects for examination are (1) Physics, (2) Chemistry, including Metallurgy, (3) Anatomy, (4) Physiology and Histology, (5) Surgery. A syllabus can be obtained on application to the Registrar. The examination is held on the second Monday in February, May, and November. It lasts three days, and is partly written, partly oral, and partly practical.

III.—Final Examination.

Candidates must have passed the Primary Dental Examination of the College, or the Third Professional Examination under the Conjoint Board with the Royal College of Physicians or the Apothecaries' Hall in Ireland, or an equivalent examination recognised by the College. Candidates are required to produce certificates of having attended (1) recognised courses of Lectures on Dental Surgery and Pathology (two courses), Dental Mechanics (two courses), Dental Anatomy and Physiology (one course); (2) for two years the practice of a recognised Dental Hospital or Dental Department of a General Hospital; (3) of having been engaged in acquiring a knowledge of Dentistry for at least forty-five months (four Academic years) subsequent to registration; (4) of having been engaged during a period of not less than three years in acquiring practical familiarity with the details of Mechanical Dentistry, under the instruction of a registered dentist. Candidates holding a Diploma in Surgery are admitted to this examination on producing certificates of having attended (1) one course of lectures on Dental Surgery and Pathology; (2) one course of lectures on Dental Mechanics; (3) for one year on the practice of a Dental Hospital, or the Dental Department of a General Hospital recognised by the College where such attendance has been subsequent to the date of diploma; (4) of having been engaged for not less than two years in acquiring practical familiarity with Mechanical Dentistry under a registered dentist. The subjects for examination are: (1) Dental Surgery, theoretical (including Dental Pathology), clinical, and operative; (2) Dental Mechanics, theoretical, clinical, and practical (including the metallurgy of the workshop); (3) Dental Anatomy and Physiology. The examination is held on the Thursdays immediately following the Primary Dental Examination. It lasts three days, and is partly written and partly oral.

Examination for the Licence sine curriculo.—The Council have power to admit to examination *sine curriculo* candidates whose names are on the *Dental Register* upon special conditions which can be learnt on application to the Registrar.

Fees.

Primary Dental Examination. £10 10s., re-examination, £5 5s. *Final Dental Examination.*—Candidates holding L.R.C.S.I., or students who have passed the Primary Dental or Third Professional Examination of the College, £10 10s.; Re-examination £5 5s. All other candidates, £26 5s.; re-examination, £10 10s.

Special Examinations.—The Council has power on special cause shown to grant a special or supplemental examination to a candidate, who must pay £5 5s. in addition to the ordinary fees for the examinations.

The licence is only granted to candidates over the age of 21 years, of good moral character, and who will sign a declaration undertaking not to attract business by advertising or by any other practice considered by the College to be unbecoming.

Certificates of attendances at courses of lectures must be furnished on the schedule to be obtained on application to the Registrar of the Royal College of Surgeons in Ireland, Dublin.

DENTAL SCHOOLS AND MEDICAL SCHOOLS HAVING SPECIAL DENTAL DEPARTMENTS.

Dental Hospital of London and London School of Dental Surgery, London.

Students can attend lectures in the special subjects of the dental curriculum and practical work and dental hospital practice.

Appointments.—There are eight house-surgeons, and these appointments may be held by students as soon as they are qualified. Twelve senior dressers for extraction under anæsthetics, and eighteen junior dressers for ordinary extractions, are appointed every month.

Fee for two years' hospital practice required by the curriculum, including lecturer, £50 in one payment, or £52 10s. in two yearly instalments. The *Calendar*, containing further particulars, may be obtained on application to the Dean, at the hospital, Leicester Square, London, W.C.

National Dental Hospital and College, London.

Students can attend lectures in the special subjects and dental hospital work required by the colleges.

Exhibition.—An entrance exhibition of the value of £15 is awarded at the commencement of each summer and winter session after an examination in Elementary Physics (Statics, Dynamics, and Electricity), Physiology (Functions of Respiration, Circulation, and Digestion), Osteology (Bones of the Head), Chemistry, and Dental Mechanics (Theoretical and Practical).

The usual medals and certificates are open for competition in the Class Examinations.

Appointments.—Dresserships in the extraction room are held for two months by twelve senior and twelve junior students of the hospital.

Fees.—Total fees for the special lectures and hospital practice required, £31 10s. Information respecting the hospital practice and the college may be obtained from the Dean, who attends at the hospital, Great Portland Street, on Tuesday mornings.

Each student on entering the school passes through a preliminary course under the care of a demonstrator, and all the members of the staff take part in chair-side teaching. Tutorial classes are held to prepare for the Final Examinations.

Guy's Hospital Dental School, London.

The buildings for the purposes of the dental school have recently been enlarged, and the arrangements for teaching perfected, so that students can now obtain a complete curriculum.

Appointments.—The following appointments are allotted to dental students: Three dental house-surgeoncies: two assistant dental house-surgeoncies: six demonstratorships in the conservation room: two curatorships of the laboratory; dresserships in the extraction rooms; dresserships in the conservation room; an assistant demonstrator in dental microscopy.

Fees.—The fee for the two years' hospital practice, required by the Royal College of Surgeons for the L.D.S., including lectures, is £50. Dental students are also required to receive two years' instruction in a general hospital, the fee for which in Guy's Hospital Medical School is £60, with a reduction of 12 guineas in the case of those students who have obtained recognised certificates of instruction in Chemistry, Practical Chemistry, and Materia Medica. No arrangements are made for short periods of instruction, or special courses of lectures. Further particulars, with prospectus, may be obtained from the Dean, at Guy's Hospital.

Mason College, Birmingham.

The teaching of Dentistry is undertaken by the Mason College, acting in association with the Birmingham Dental Hospital and the Birmingham Clinical Board, so that students may fully qualify themselves for the dental diploma of the Royal Colleges. The new college buildings contain a special dental museum and a dental laboratory. The Dental Hospital is situated near the College.

Entrance Scholarship.—A scholarship of £15 is open to competition by students entering in October.

Fees.—Hospital, Dental, Composition, £12 12s.; Non-composition, £14 14s.; General Surgical Hospital, two winters, £10 10s. A Composition Fee of £42, payable in one sum—or in two sums—namely, £21 at the beginning of the first year, and £21 at the beginning of the second year of studentship—admits to the full curriculum required for the Dental Diploma. Students wishing to take the diplomas of M.R.C.S. and L.R.C.P. in addition to a dental qualification pay a Composition Fee of £73 10s., payable in two annual instalments of £31 10s. and one of £10 10s.

OWENS COLLEGE, MANCHESTER.

Arrangements have been made for dental students to attend the hospital practice at the Manchester Royal Infirmary and the practice at the Victoria Dental Hospital. Lectures on the special subjects will be given in the College.

Fees.—For course of Metallurgy, £3 3s.; other lectures, one course, £3 3s.; two courses, £4 4s.. Dental practice for two years at the Manchester Royal Infirmary, £10 10s.: at the Victoria Dental Hospital at Manchester, £12 12s., paid in advance, or £8 8s. for the first year, and £5 5s. for the second year.

Further particulars can be obtained from the Dean of the Dental School, Victoria Dental Hospital, Manchester.

UNIVERSITY COLLEGE, LIVERPOOL.

There is a school of Dental Surgery in connection with the medical faculty. The curriculum includes Lectures and Demonstrations on all the subjects required for the Licences in Dental Surgery of the Royal Colleges of Surgeons of London, Edinburgh, and Dublin, and of the Faculty of Physicians and Surgeons of Glasgow.

Practical instruction in Dentistry is given at the Dental Hospital in Mount Pleasant.

Fees.—A payment of £50 on entrance, or in two equal instalments (one-half on entrance and the remainder within twelve months), entitles the student to attendance on all lectures and demonstrations (medical and special) required for the Dental Licence of the College of Surgeons. The fee for two winters' surgical practice is £10 10s., and for two years' dental hospital practice £12 12s. The total expenditure for the whole curriculum is £73 2s.

Further information can be obtained from Professor Gotch, F.R.S.

THE INCORPORATED EDINBURGH DENTAL HOSPITAL AND SCHOOL.

The following lectures are given in the School: Dental Anatomy and Physiology (winter); Dental Surgery and Pathology (summer); Mechanical Dentistry; Practical Demonstrations; Dental Materia Medica: Dental Metallurgy; Gold Filling; Dental Histology.

Fees.—The fee to Hospital Practice, including one course of Demonstrations in Gold-filling, is £15 15s.: one course of Dental Anatomy, Dental Surgery, and Mechanical Dentistry, £9 15s.

Further information can be obtained from the Dean at the School, 31, Chambers Street, Edinburgh.

GLASGOW ROYAL INFIRMARY DENTAL DEPARTMENT.

The following course in the curriculum can be taken at St. Mungo's College: Anatomy, six months; Practical Anatomy, nine months; Physiology, six months; Chemistry, six months; Practical Chemistry, with Metallurgy, three months; Surgery, six months; Medicine, six months; Materia Medica, three months: Clinical Surgery, six months; Dental Surgery, six months; and attendance for two years on the Dental Department of the hospital. The attendance on the dental clinic is free to students of the hospital; to dental students, one year, £5 5s.; perpetual, £10 10s. Lectures on Dental Surgery, £2 2s.

GLASGOW: ANDERSON'S COLLEGE MEDICAL SCHOOL.

Dental Curriculum.—Students studying with a view to the Dental Diploma can obtain instruction in the following subjects: Anatomy, Chemistry, Physiology, Surgery, Practice of Medicine, and Materia Medica. The special Dental Courses may be obtained at the Dental School.

DEVON AND EXETER DENTAL HOSPITAL.

Attendance at the practice of this hospital is recognised by the Royal College of Surgeons of England as qualifying for its Dental diploma. Pupils of any member of the staff, or other recognised practitioner (being a Life or Annual Governor), are permitted to attend the practice of the hospital, subject to the approval of the Medical Subcommittee, on payment of £5 5s. annually to the funds of the institution. The honorary secretary is Mr. Henry Yeo.

MEDICAL PRACTICE IN FRANCE.[1]

By the new law regulating the practice of medicine in France, which came into force on November 30th, 1892, the inferior grade of *Officier de Santé*—that side door which foreigners used to find so convenient—was abolished, and the possession of a French degree of Doctor of Medicine was made imperative on everyone wishing to practise the healing art in France. The first clause of the new law is explicit on this point. It runs as follows:

ART. 1.—Nul[2] ne peut exercer la médecine en France s'il n'est muni d'un diplôme de docteur en médecine, délivré par le gouvernement français à la suite d'examens subis devant un établissement d'enseignement supérieur médical de l'Etat (Facultés, écoles de plein exercice et écoles préparatoires réorganisées conformément au règlements rendus après avis du Conseil Supérieur de l'Instruction Publique.)

ART. 1.—No one can practise medicine in France unless he possesses a diploma of Doctor of Medicine conferred by the French Government after examinations undergone before a State Institution of superior medical education (Faculties, schools of full curriculum; and preparatory schools reorganised in conformity with the regulations passed on the advice of the Superior Council of Public Instruction.)

The "Faculties" referred to in the clause just quoted are seven in number, namely, Paris, Montpellier, Nancy, Bordeaux, Lyons, Lille, Toulouse. Before any one of these Faculties all the examinations for the degree of Doctor of Medicine can be passed. The Schools of Full Curriculum are three in number, namely, Marseilles, Nantes, and Algiers; in any one of these the full curriculum of professional study can be gone through, and the first two of the five final examinations required for the degree can be passed; the remaining three must in all cases be passed before a Faculty to which also the thesis must be presented. The Preparatory Schools are fourteen in number, namely, Amiens, Angers, Arras, Besançon, Caen, Clermont, Dijon, Grenoble, Limoges, Poitiers, Reims, Rennes, Rouen, Tours. Of these, four—Caen, Reims, Rennes, and Besançon—are classed as "reorganised," that is to say, the first two examinations may be passed in them; this right is not possessed by the others, and the students entered at these must pass all their examinations before a Faculty. In addition to the schools above enumerated, there is a "Free Faculty of Medicine" at Lille.

Before commencing his medical studies, every candidate for the degree of Doctor must have obtained a diploma of Bachelor in the subjects of secondary classical education (letters and philosophy), and a certificate of proficiency in physics, chemistry, and natural science. The official curriculum of professional study extends over a period of four years, the first three of which may be passed in a Faculty or in one of the recognised schools above enumerated. The last year must be taken in a Faculty or "full curriculum" school. Sixteen "inscriptions" or periodical registrations must be taken at intervals during the four years, and certain test examinations have to be passed at the end of each year before the student is allowed to enter on the next year of study.

The examinations for the Degree of Doctor of Medicine are five in number, the subjects being distributed as follows:

First Examination.—Anatomy, excluding topographical anatomy; dissection. *Second Examination:* Histology, physiology, including biological physics and biological chemistry. *Third Examination:* This is divided into two parts as follows:—First Part—Operative surgery and topographical anatomy, external pathology, midwifery. Second Part—General pathology; parasites animal and vegetable; microbes. Internal pathology; practical test in morbid anatomy. *Fourth Examination.* Therapeutics; hygiene, forensic medicine; materia medica; pharmacology with the applications of the physical and natural sciences. *Fifth Examination:* This also is divided into two parts. First Part—

[1] The decree of August 18th, 1792, which suppressed all congregations and communities, lay and religious, also suppressed the eighteen faculties of medicine, together with the colleges of surgery at that time existing in France. The law of 14 frimaire, year III, replaced these by the "Schools of Health," established in Paris, Montpellier, and Strasbourg. Up to the year XI the practice of medicine was entirely free; but this state of things soon became intolerable, and on 19 ventôse, year XI, a law was passed creating two orders of medical practitioners—Doctors of Medicine and *Officiers de Santé*. A reform of the law of the year XI has frequently been under consideration, but the scheme was always wrecked on the stormy sea of French politics till two years ago, when, after prolonged travail, the French Legislature was delivered of a new law, which was promulgated in the *Journal Officiel* of December 1st, 1892.

[2] The word *Nul* being masculine was made the subject of a proposed amendment in the French Chamber. It was explained on behalf of the Government, however, that there was no intention of making any change in the present state of the law, in which there is nothing to prevent women from obtaining the degree of Doctor of Medicine. This assurance was accepted as satisfactory.

Clinical surgery, clinical midwifery. Second Part—Clinical medicine. Lastly, an original thesis on a subject selected by the candidate himself must be presented and approved. A certain number of copies of this thesis must be printed at the candidate's expense.

The total cost of the degree, including "inscriptions," examination fees, and thesis, is fixed by two decrees, dated February 14th, 1894, at 1,605 francs (about £64).

The application of the new law to foreign practitioners of medicine is clearly set forth in the following clause:

ART. 5.—Les médecins, les chirurgiens dentistes et les sages-femmes diplômés à l'étranger, quelle que soit leur nationalité, ne pourront exercer leur profession en France qu'à la condition d'y avoir obtenu le diplôme de docteur en médecine, de dentiste, ou de sage-femme, et en se conformant aux dispositions prévues par les articles précédents.

Des dispenses de scolarité et d'examens pourront être accordées par le ministre, conformément à un règlement délibéré en Conseil Supérieur de l'Instruction Publique. En aucun cas, les dispenses accordées pour l'obtention du doctorat ne pourront porter sur plus de trois épreuves.

ART. 5.—Medical men, surgeon dentists, and midwives possessing foreign qualifications, whatever be their nationality, can practise their profession in France only on condition that they have obtained the diploma of doctor of medicine, dentist, or midwife in that country, and that they conform to the regulations indicated in the preceding clauses.

Exemptions from portions of the curriculum and examinations may be granted by the minister in accordance with a decision arrived at after consideration by the Superior Council of Instruction. In no case shall the exemptions granted for the obtaining of the doctor's degree extend to more than three of such examinations.

Foreign practitioners, therefore, while under the necessity of getting the degree of Doctor of Medicine by examination before a French Faculty, may obtain partial, or even complete, exemption from the "inscriptions" required from French students, and partial exemption from the final examinations. These exemptions are granted by the Minister of Public Instruction on the advice of the Faculty before which the candidate proposes to present himself for examination, and of the Consultative Committee of Public Education. It will be observed that nothing is said in the clauses quoted as to the production of certificates of professional study or of proficiency in subjects of preliminary education; it is to be presumed that these points, together with the nature and value of the medical qualifications possessed by the foreign practitioners, will be taken into account in deciding how far exemption from further study and examination is granted. In every case the full fees required from ordinary students must be paid.

The conditions on which foreign students can obtain the degree of Doctor of Medicine in France are set forth in the following clause:

ART. 7.—Les étudiants étrangers qui postulent, soit le diplôme de docteur en médecine visé à l'article premier de la présente loi, soit le diplôme de chirurgien-dentiste visé à l'article 2, et les élèves de nationalité étrangère qui postulent le diplôme de sage-femme de 1re ou de 2e classe visé à l'article 3, sont soumis aux mêmes règles de scolarité et d'examens que les étudiants français.

Toutefois il pourra leur être accordé, en vue de l'inscription dans les Facultés et Ecoles de médecine, soit l'équivalence des diplômes ou certificats obtenus par eux à l'étranger, soit la dispense des grades français requis pour cette inscription, ainsi que des dispenses partielles de scolarité correspondant à la durée des études faites par eux à l'étranger.

ART. 7.—The foreign students who are candidates for either the degree of Doctor of Medicine indicated in Clause 1 of the present law or of the diploma of surgeon dentist indicated in Article 2, and the pupils of foreign nationality who are candidates for the diploma of midwife of the first or second class indicated in Article 3, are subject to the same regulations as to study and of examinations as French students.

Nevertheless, there may be granted to them, in view of their inscription in the faculties and schools of medicine, either the equivalence of the diplomas or certificates obtained by them abroad or exemption from the French degrees required for such inscription, as well as partial exemptions from the curriculum corresponding to the duration of the studies made by them abroad.

The clause provides[3] that foreign students who do not possess the Bachelor's degrees and certificates of preliminary study required of French students for admission to the Faculties and schools of France may not only have such examinations as they have passed in their own countries accepted as equivalent by the competent French authorities, but may even have the necessity for the production of any such certificates altogether dispensed with by the Minister of Public Instruction. In addition to this, foreign students may obtain exemption from part of the curriculum of professional study corresponding to the period of study they may have gone through in their own country. There is no exemption, however, in respect of fees.

To sum up, the foreign medical man who wishes to practise his profession in France must obtain the degree of Doctor of Medicine by passing certain examinations at Paris, Montpellier, Nancy, Bordeaux, Lyons, Lille, or Toulouse. For this purpose he must submit his qualifications, and whatever other degrees or certificates he may possess, to the Minister of Public Instruction, with a statement of the Faculty before which he intends to present himself. He will then be informed what examinations he will be exempted from; the remainder, which in the most favourable case must include tolerably searching tests in practical surgery, midwifery, and medicine, he must pass in due course. The examinations are conducted in the French language. Fees to the amount of about £64 must be paid.

The same regulations apply *mutatis mutandis* to dentists.

[3] In the interpretation here given of this clause and the others quoted we have the authority of M. A. Lechopié and Dr. Floquet (*La Nouvelle Législation Médicale*, Paris, 1894, pp. 34 and 98). This work contains the text of the new law, with a full commentary on its several clauses and a discussion of the legal points arising from them. It is introduced by a preface from the pen of Professor Cornil, a member of the French Senate, who took the principal part in carrying the new law through the French Legislature.

SALARIES OF THE INDIAN MEDICAL SERVICE.

WE quote the following authoritative statement from the regulations issued by the India Office in October, 1893:

"The monthly salaries of officers holding the principal administrative appointments and substantive military charges of the Indian Medical Service receive at present the following consolidated salaries: Surgeon-Major-General, Bengal, Rs.2,700; Madras, Rs.2,500; Bombay, Rs.2,500; Surgeon-Colonel from Rs.2,250 to Rs.1,800; Brigade-Surgeon-Lieutenant-Colonel or Surgeon-Lieutenant-Colonel, of twenty years' service and upwards, in substantive charge of a Native regiment, Rs.1,000, with Rs. 90 horse allowance in cavalry regiments; Surgeon-Major, under twenty years' service in substantive charge of a Native regiment, Rs.800, with Rs.90 horse allowance in cavalry regiments; Surgeon-Captain, above five years' full-pay service in substantive charge of a Native regiment, Rs.600, with Rs.60 horse allowance in cavalry regiments; Surgeon-Captain or Surgeon-Lieutenant, under five years' full-pay service in substantive charge of a Native regiment, Rs.450, with Rs.60 horse allowance in cavalry regiments. The salaries of other substantive medical appointments in the civil and military departments are consolidated, and vary from Rs.1,800 to Rs.400 per mensem. Qualified officers of the medical service are also eligible for appointments to the assay department. The salaries of these appointments are from Rs.600 to Rs.2,250 per mensem. Officers are required to perform two years' regimental duty in India before they can be considered eligible for civil employment."

WHEN the extensions of the University buildings at Aberdeen are complete, probable in about two years' time, the Mitchell Hall, so called after the generous donor, will be set apart for a Students' Union.

GLASGOW possesses as yet no residential college, and there is little prospect of any, for men at least, in the near future. The need of a residential college for women, however, has been very prominently before the minds of the authorities of Queen Margaret College (for women). Though that college has now become the women's department of the University, the need has not become any the less, but rather the more, and a scheme is at present on foot for the establishment of a residential college for women in connection with Queen Margaret College. The success of the scheme is already almost assured. The male students of the University have the privileges of the Students' Union, connected with which is the Union Building, situated within the University grounds, and erected through the generosity of an old *alumnus* of Glasgow University. Recently the building has been considerably added to, and funds have been obtained for its endowment. There is a large hall for students' meetings, meetings of societies, and so on, while also the accommodation and equipment are fully adequate for all the purposes of a students' non-residential club.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, SEPTEMBER 1st, 1894.

THE BARRACK SCHOOLS INQUIRY.

V.—Boarding Out.

The Committee of Inquiry which Mr. Shaw Lefevre is now appointing will be of value not so much in getting material by which to compare rival theories on pauper education, as for the collection of the ample experience already accumulated by individual efforts, charitable agencies, and official action. One system which must be most carefully and impartially considered is that which is know as "boarding out." For this system its advocates claim exceptional advantages. They argue that as the family is the natural environment of the child, to take a State child and put it into a family is to supply its every need in a way most conducive to its health, growth, and happiness, and most in accordance with the laws of Nature. Certainly the plan has the advantage of simplicity. On an orphan child becoming dependent on the rates, suitable foster parents are asked to adopt it, and a small weekly payment from the rates is regularly paid. A local committee is invited to exercise control over its education, treatment, clothing, and the general matters that affect its health; and the Local Government Board supervises the whole, using as its inspector a lady. Miss Mason's duty is to visit not only the children in their foster parents' homes, but the school teachers and the Committee, and, if need be, the doctor and sanitary authorities. "According to my experience," she reports to the Local Government Board, "boarding out is, if well carried out, the best of systems; and, if badly, the worst."

Boarding out, like many other good things, originated among the poor. It was a system that had its source in right feeling rather than in hard thinking. In the year 1828 three Protestant working men of Dublin on returning from a friend's funeral met together to consult on how best they could provide for his orphan children. A penny-a-week subscription was set on foot, to which they were the first contributors; and with this humble sum of 3d. they commenced operations, little thinking how largely their example would be followed, and that their kindly effort to find a home for their comrade's offspring would ultimately result in a complicated system of Government inspection and Imperial administration. From this effort sprang the Protestant Orphan Society, which has now as many as thirty-four branches, and lays claim to having educated and started in life no fewer than 2,781 boys and girls. As the system was begun in Ireland, it is not surprising to hear that it was adopted by the Irish, 105 out of 163 of whose unions have adopted boarding out as a method of upbringing their juvenile paupers, a quarter of whom are thus dealt with; with what result it is not easy to determine, as the Local Government Board, in issuing a boarding-out order for Ireland, forebore to encourage voluntary committees, thus depriving the system of one of its most valuable adjuncts—namely, the care, the supervision, and the affectionate interest of ladies and gentlemen resident in the neighbourhood. Such visitors, as has been proved by experience in the localities where they have been formed into committees, not only look after the children while they are dependent on their foster parents, but take a kindly interest in them in after-life, and are able to produce facts which bear witness to the success or failure of the system.

In a conference summoned by the Reformatory and Refuge Union in Dublin, a good deal of contradictory evidence was given on the success of boarding out in Ireland, due, doubtless, to the varied experience of the speakers, for this system, the inherent value of which is its close relation of individuals to individuals, can, unless the individuals be suitably selected and carefully supervised, become a means of legalising baby-farming and concealing private cruelties and immoralities.

In Scotland boarding out is carried out far more extensively than either in England or Ireland. The Scotch divide their State-supported children into "orphans," "deserted," and "separated," the latter being "the offspring of either paupers in the poorhouse or of persons maintaining themselves outside, whose consent to their children being thus disposed of is required by law." The "separated" children, however, do not form a large proportion of the whole number boarded out—about 11 per cent. That the Scotch show their usual caution in so dealing with children of such parents no one will dispute after reading the following "remarks" made in the Report of the Barony parish authorities, on the parentage of the children which they voluntarily support out of the rates. The remarks are not selected as referring to specially bad parents, but taken at random as the book opened: "'W. K., aged 12; S. K., aged 10; J. K., aged 5; father has been convicted of theft, and mother a brothel keeper.' 'M. W., aged 13; C. W., aged 8; A. W., aged 6; mother dead, father and mother committed to prison for cruelty.' 'M. D., aged 5; mother a prostitute, four illegitimate children.'" To take children from such homes, even though it may cost shillings to the ratepayer to-day, will save him pounds but a few years later in prison dues and casual-ward rates.

The success of the scheme in Scotland is almost proverbial, but as it has not been submitted to the test of such rigorous inspection as that given by Miss Mason, it is not possible to compare it with boarding out as carried on in England. Indeed, those advocates who would claim for it freedom from all evils usually connected with the pauper class would do well to study some of the visitors' reports, and query not the system itself, but the standard adopted which allows the children to be housed under such a roof, as the report of the visitors made to the Barony parish guardians states that of Mrs. McEachran to be, "the thatch of her house is rapidly acquiring all the properties of good manure, and, like a sponge, retains all the moisture that comes

near it." Another, "Miss M'Niven's house," in which four children, aged 15, 5, 12, and 6 were boarded, is reported to "have every evidence of being damp, and although they had got a new floor put in, there was nothing done for removing the damp so far as we could learn. Two of the little ones had colds. Cod-liver oil and flannels were needed for this house." As these visitors should know, if they were at all competent for their work, "cod-liver oil and flannels" are but inadequate weapons with which to fight the crop of evils, both hygienic and economic, that are bred in a damp house. It can hardly also be considered satisfactory, as the visitors report, that one boy, aged 12, "absents himself every day from morning till night, and although we inquired where he got his dinner we could not discover, and so had to conclude that he provided these kind of things for himself. This boy seems to be able to paddle his own canoe." Of the parentage of this little boy we learn bad things, for in the language of the report the "mother is of cruel and careless habits; starved the children; father dead."

To eradicate tendencies such as are here evidently inherited requires not, we venture to think, that the boy should be removed from a close court in Glasgow, and placed among the breezes of the island of Islay, but that he should be put under careful supervision and such discipline as would tend towards the control of vagrant and idle habits, which are evidently more potent in his life than the physical demands for food. That this report was written by a man it does not require the signature to assure us. A woman inspector would have taken the boys' side into consideration, and discussed the position with more thoroughness and sympathy.

Economic *doctrinaires* will be prepared to denounce the Scotch method of removing children from their parents as likely to encourage carelessness, desertion, and vice, but it is stated that the system has not so resulted. Mr. George Greig, an authority on boarding out, and an inspector to the city parish of Edinburgh, writes on this point, with the intent to prove that the removal of the children from vicious parents tends to their reform: "I have returned children to sober mothers and clean comfortable homes." That the hope of regaining the care of their children can be used as an elevating influence on their parents is in itself an economic gain—but in cases where the children are not reclaimed by their relations, the State is often relieved of them. If once the bonds of affection exist between the children and their foster parents, the elders give far more than they demand of the Board. In times of sickness, through long periods of slackness, during terms of misfortune, when, had the child been brought up in the barrack school, he could have had no other refuge but the workhouse, the foster parent's home becomes, as it has been for the years of his childhood, his home. Thus the rates are saved, and the gain to the community of examples of friendship, fidelity, and good feeling is one of still greater importance. "It is a rare thing for either a boy or girl"—when brought up as boarders-out—"to become chargeable to the parish in after-life, which is not the case as to children brought up in the hospital in town," that is, in a barrack school. These words came from a Scotch report on boarding-out, and can be further borne out by statistics. Mr. Loch's able paper, read before the British Association at Oxford the other day, showed that pauperism is decreasing all over the kingdom. The Scotch claim that this is specially true of Scotland, and the advocates of boarding out assert that the fact is largely due to the extent that their system is adopted. Anyhow the fact remains that in Scotland the percentage of population to pauperism was 2.4, while in England and Wales on the same calculation and on the same date it was 3.1.

The Local Government Board has ordered an inquiry into certain charges against the late master of Poplar Workhouse, pending which consent is refused to the granting of a pension of £130 per annum awarded by the local board of guardians.

We understand that Mr. Henry Power, who has been Ophthalmic Surgeon to St. Bartholomew's Hospital for twenty-five years, and Lecturer of Ophthalmic Surgery, will shortly retire from these offices.

A number of leading residents of Tokio and Yokohama are preparing to give a congratulatory dinner to Professors Kitasato and Aoyama upon their return from Hong Kong. The local physicians are preparing a reception in their honour.

It is with great regret that we record the death in Trinidad, from fever, on August 24th, of Dr. Beavan Rake, who for many years occupied the post of superintendent of the Government Leper Asylum in that colony. Dr. Rake, who had given much attention to the study of leprosy, was a member of the Special Commission appointed to inquire into the prevalence of the disease in India.

At Newquay the water supply to the lower levels of the town is now reported as being adequate. Phillack Local Board, says the Plymouth *Western News*, appears to be still oblivious of the fact that one of the prime necessities of life is an adequate supply of pure water. The medical officer has reported that one of its public wells is worse contaminated than ever, and still the recommendation of the Local Government Board to the Local Board to call in an engineer is not attended to.

The names of the following gentlemen are mentioned in connection with the medical membership of the new Local Government Board for Scotland:—Sir James Russell, Lord Provost of Edinburgh; Dr. Russell, the chief medical officer for Glasgow; Dr. Campbell Munro, of the Renfrewshire County Council: Dr. John C. McVail, of the Dumbartonshire County Council; and Dr. M'Lintock, of the Lanarkshire County Council.

GIFT OF A CONVALESCENT HOME FOR CHILDREN.

We are informed that a munificent donation has been made by Mr. Yarrow, the well-known torpedo boat builder, of a sum which will amount to at least £120,000 for the erection of a convalescent children's hospital at Broadstairs. This institution, which is being quietly erected by Mr. Yarrow, will, if his wish be respected, not even, we believe, bear his name. The plans for it are being furnished and the details superintended, also as a labour of love, by Mr. Barrow Emanuel, the architect of the City of London School on the Embankment.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

The trustees of the late Mr. Richard Berridge have, with the consent of the Attorney-General, now handed over to the Institute the residue of the legacy, amounting to over £20,000, for the purpose of building and endowing a laboratory for the chemical and bacteriological examination of water supply and the investigation of processes of sewage purification. The permanent laboratory is now in course of erection on the site secured by the Institute at Chelsea, but pending its completion a temporary laboratory has been

fitted up in order that the work may be at once proceeded with. Mr. Joseph Lunt, B.Sc., F.C.S., formerly assistant to Sir Henry Roscoe, has been appointed by the Institute to carry on this work under the Director's supervision. The Institute is now prepared to undertake the bacteriological and chemical examination of any samples of water which may be submitted. In addition to this the Institute is also prepared to undertake the bacteriological or pathological diagnosis of any pathological material. The demand for this kind of work has greatly increased, so much so, that although Dr. Ruffer will still retain charge of this department, a specially trained bacteriologist has been appointed to work under his direction. Particulars may be obtained by writing to the Director at the temporary offices, 101, Great Russell Street, London, W.C.

THE SICK POOR IN PROVINCIAL WORKHOUSES: LISKEARD.

AT Liskeard there is not even a cottage hospital, so that the sick poor who are not sent to a distance for treatment, or nursed in their own homes, must all come to the workhouse infirmary. Nothing, however, approaching hospital treatment awaits them there. The building is old and totally unsuited, according to the report of our Commissioner, for the treatment of the sick. It may, perhaps, be urged that it is hardly fair to judge of the normal condition of the place from the appearance it presented when undergoing a thorough cleaning. Yet the haphazard nature of the treatment of the sick in our remoter workhouse infirmaries can hardly be better exemplified than by the fact that whitewashers and cleaners carry on their operations in the room where a patient lies, the dust of years being swept down from an unceiled roof on to the quilts of beds where other patients, well enough to be up, are yet to sleep that night. We get another glimpse into a common difficulty arising from the use of pauper help, in the matron's complaint of the lack of able-bodied people in the house. It might be considered rather a subject of rejoicing, but, since their absence reduces the staff of assistants of all sorts to the imbeciles, the matron's position becomes intelligible. There is a trained nurse, but the infirmary being licensed for fifty-four patients, it is obvious that she must relegate a great part of what are properly her duties to the inefficient pauper helps. The report shows numberless instances of a curious ignorance of, or indifference to, many modern arrangements for the comfort of the sick or the efficiency of their attendants. The labour bed, for example, is a four-poster, and it is placed against the wall; the screens are so cumbersome that they are rarely used; there is no hot water, except what is heated in and baled out from a copper; in the nursery, a large bare room, which was formerly divided into two by a partition, the half which is paved with stone is chosen for use. Will any say that these are small matters? Each taken alone might perhaps be unimportant, but we contend that, taken together, they show an utter absence of that organisation and skill which should go to the management of any place devoted to the care of half a hundred sick people.

UNIVERSITY HALL, EDINBURGH.

THERE is nothing in the Scotch Universities akin to the social life of the English Universities, and of late years a feeling has grown that this blot should be removed in such way as was possible. It is due to the praiseworthy energy of Professor Patrick Geddes, of Dundee University College, that Edinburgh now possesses, in what has been named University Hall, a completely equipped social residence for students, graduates, and others connected with the University. Although the movement is only seven years old, there is now accommodation for forty-five men. Several buildings, all within short distances of the University, have been exploited to this end. Each house includes a common sitting-room, common dining-room, private studies, bedrooms, and combined bedrooms and studies. The rents vary from 7s. 6d. to 16s., and some few more luxurious rooms run up to 22s. 6d. per week. The charges for coal and gas are met out of the common fund. Arrangements have been made for the introduction of electric light; this will be an accomplished fact in October next, when the city supply is turned on. There is a consulting committee to act along with Professor Geddes in managing the external affairs. The internal arrangement is a scheme of self-government through a committee of the residents elected monthly. There is a house treasurer, who is the intermediary between the men and the housekeeper. All complaints are made to this house treasurer, and not to the servants personally. The arrangements for meals are these: Breakfast, 7.45 to 10; luncheon, 12 to 2.30; afternoon tea, 4.15; dinner, 6.30; and supper from 9 onwards. The board last summer cost about 11s. 9d. per week. Beer is supplied at the modest charge of one penny per glass. Rather more than three-fourths of the men living in the various houses last summer were medical students or graduates. For it is one of the important features of University Hall that several distinguished graduates of medicine live in the place and do their utmost to help, encourage, and stimulate their juniors. Further, some of these gentlemen are prepared for moderate fees to undertake the supervision and coaching of the younger men. Admission to University Hall is by no means lax. Applicants must produce two references from present or past residents. These applications are considered in order, laid before a house meeting and voted on. Similarly by a majority of votes a man may be turned out of the house for ethical reasons. Thus parents may look upon University Hall as a most desirable residence for their sons. In all disputed points Professor Geddes is the referee, but he is most anxious to avoid interfering with the working of the establishment. There is a most excellent rent treasurer in the person of Dr. Riccardo Stephens, who will give any information desired. At homes, private theatricals, and other entertainments are held from time to time.

THE ALLEGED "NEW ELEMENT."

WHATEVER may be the ultimate verdict of chemists, whether it be that a new element or new form of nitrogen has been discovered in the atmosphere, or whether the verdict may be, as we fear, that a sad blunder has been committed, the method of announcement was most unhappy. On Monday, August 13th, at half-past ten o'clock, the Chemical Section of the British Association met in Oxford ostensibly for the purpose of hearing and discussing ten papers, the titles of which had been announced in the Journal issued at eight o'clock the same morning. The business of the section having been in that manner provided for, the Chemical Section soon betook itself to the consideration of a matter which was not in the official programme, and which turned out to be the announcement of "the great discovery of a new element or new gas alleged to exist in considerable proportion in the atmosphere." One of the consequences of this extraordinary proceeding was that there was no adequate discussion in the Chemical Section, and that a manifestly exaggerated importance was at once assigned to the preliminary announcement, and that to a certain extent the public has been misled. The experimental results appear to be as follows. Lord Rayleigh, who had been making a series of very careful specific gravity determinations, had noticed that the specific gravity of the nitrogen of the atmosphere is very slightly higher than the specific gravity of nitrogen obtained from other sources. Lord Rayleigh thereupon conjectured that the reason of the difference was that atmospheric nitrogen contained minute

quantities of some gas heavier than nitrogen. Working on this hypothesis, he proceeded to oxidise the nitrogen by the well-known method of passing electric sparks through a mixture of that gas with oxygen, and obtained a small quantity of residual gas the density of which was greater than nitrogen. The proportion of this residue seems to have been very small—apparently only 2 or 3 parts in 1,000 volumes of air. Next Professor Ramsay passes air over heated metallic magnesium, which causes absorption of both oxygen and nitrogen, and a residue of about 1 per cent. is left behind. This residual gas is found to be rather less than one and a-half times as heavy as nitrogen. On the strength of these experiments, supplemented by a very problematical spectroscopic observation, the conclusion is jumped at that the atmosphere contains about 1 per cent. of either a new element, or else that there is that amount of condensed nitrogen in the atmosphere. Official management having burked discussion in the Section, criticism makes itself heard through the public press. Professor Dewar has published two letters on the subject. In the second of these letters the following passage occurs: "The inference is that the new substance is being manufactured by the respective experimenters, and not separated, as they imagine, from the ordinary air." Another chemist, Professor Wanklyn, points out that everything hitherto observed may be accounted for without assuming either the existence of a new element or even a new compound, and that the presence of nitrous oxide, which is extremely probable, explains everything. A mixture of nitrogen and nitrous oxide is very inert, and to operators in a hurry would be likely to appear more inert even than nitrogen itself.

A NEW DANGER.

Hamlet rudely reminds Ophelia that while God has given ladies one face they insist of making themselves another. He says he has heard of their paintings, but he makes no allusion to their teeth, and we are willing to believe that Ophelia's were the gift of Nature. Had she lived in the present day the chances are that they would have been the handiwork of the dentist, and Hamlet might possibly have learnt the fact to his cost. A young lady of New Jersey was recently kissed by her lover with such Swinburnian fervour that the gold filling fell out of one of her teeth. The ungallant swain seems to have been unwilling to pay for the necessary repairs. The result is that the engagement has been broken off, and Chloe is suing Strephon for the value of her damaged tooth. This case adds a fresh terror to love making in these days of breach of promise and of our particular *protégé*, the *bacillus basii*, and it opens up a rich vein of legal questions of a novel kind. If Angelina's maiden blushes come off on Edwin's cheek, is the latter liable for the cost of their reproduction? If a deviated septum which has (to use the words of Theophile Gautier) altered the intention of the fair one's nose to be Greek has been rectified by surgical art, is the enamoured wooer liable for the amount of the fee if the structure gives way under the ardour of his embrace? Truly if this be the law the man whose fancy lightly turns to thoughts of love might, as Touchstone says, "If he were of a fearful heart, stagger in this attempt." At any rate, before sporting with Amaryllis in the shade it would be well for the lover to make sure that one of her eyes is not made of glass, and before playing with the tangles of Neæra's hair it would be prudent for him to satisfy himself that it is not detachable.

THE WORKHOUSE INFIRMARY NURSING ASSOCIATION.

The Bedford Guardians, and even the Local Government Board Inspector present at a recent meeting, having apparently misunderstood the function of the Workhouse Infirmary Nursing Association, the officials of the latter have addressed a letter to the Bedford newspapers, setting forth the objects of their work, and the methods by which they are accomplished. They especially wish to make it clear that in retaining their control over the nurses after they have accepted service with the guardians, their aim is by no means to interfere in any way between them and their employers, but to insure that nurses trained and sent out by them shall not throw up their engagements on first contact with workhouse life. The nurses' training is of necessity obtained either at a completely equipped hospital or at one of the better kind of workhouse infirmaries. But the Association which pays for this training is essentially a missionary body, and although many of the best infirmaries retain their connection with it, its best work is done in supplying trained nurses to places where the surroundings are by no means pleasant or helpful, where workhouse influence is still rampant, and where good nursing can be done only with considerable difficulty. Under these circumstances, the tendency of a nurse trained amid surroundings so much more encouraging is at the first rebuff to throw up the task in despair, and it has in many cases been only by aid of the fact that the nurse is tied to the Association that she has been kept to her post, and that the back of the difficulty has been broken. There are many pleasanter paths open to a well-trained nurse than struggling with the dead incubus of Poor-law officialism: and but for the influence of the Workhouse Nursing Association, the tendency of self-interest would be to restrict the choice of the guardians to the residuum of the profession. Until we can arrive at a much stricter definition of the term "a trained nurse" than obtains at present, guardians will find it much safer to call in the aid of an Association which will both train and supervise its nurses than to trust to what will turn up in answer to an advertisement.

ANTIVACCINATION FALSEHOODS.

We have received a circular letter of invitation, which is being widely distributed, to a demonstration to be held "under the auspices of the London Society for the Abolition of Compulsory Vaccination," at Mile End, on September 4th. The following data are given as regards Leicester in respect of the small-pox outbreak of 1892-93:

	Per Million Living.
The death rate from small-pox of the *re*vaccinated was ...	270
" " " vaccinated ...	159
" " " *non*-vaccinated ...	109 only.

These data are absolutely and scandalously false and misleading. There were no deaths in the period stated among "*re*vaccinated" persons. We fail to see, therefore, how there can be alleged a death-rate at all, much less 270 deaths per million in "*re*vaccinated" individuals. The deaths among the "*non*-vaccinated" to give the above rate have here been taken *on the whole population over 10 years of age*, and those on the "vaccinated" on the *population under 10 years of age*. The results are perfectly absurd, and once more wilfully misleading. In regard to the further fabricated falsehoods as to Leicester, as a matter of fact the death-rates per million of the three classes, on the total estimated population of Leicester in 1893, were as follows:

*Re*vaccinated	0.0 per million.
Vaccinated	5·4 " "
Non-vaccinated	102.7 " "

The circular goes on to show that the infantile death-rate in Mile End in 1893 was below that of London as a whole. What has that to do with the matter at issue? What of Portland Town, Lisson Grove, and Mr. Wynter Blyth's demonstrations of the need and value of vaccination?

QUESTIONABLE WATER SUPPLY.

At the monthly meeting of the Paignton Local Board, Dr. Vickers concluded his report for the month with the following remarks upon the water supply: "Several inspections

have been made, and I would strongly advise the board, now that there is a probability of the large reservoir being proceeded with, to carry the town water supply to Preston. The inhabitants depend chiefly upon a supply the source of which is questionable."

THE REPORT OF THE OPIUM COMMISSION.

We understand that the report of the Opium Commission will not be ready for publication before Christmas. We are informed that the gist of the report, which will be unanimous, will not be found to differ greatly, either in weight of evidence or in the character of the conclusions (which are in favour of the frequent usefulness, general harmlessness, and rarity of mischief from the use of opium in India) from our own recently republished reports on the use of opium in India, collected from the replies of 120 leading Indian doctors and magistrates, to a detailed schedule of questions issued by Mr. Ernest Hart. As the cost of preparation of our report was about £40, and that of the Commission at least £40,000, our method of proceeding by schedules of detailed questions, to be answered deliberately and in writing, has at least had the advantage of economy, and if adopted as a preliminary measure by the Government would probably have prevented the issue of this costly roving Commission. It has the further recommendations of compactness and promptitude, for the whole business of preparing the schedules (under the most varied and best advice), receiving and analysing the answers, and publishing them, was carried through in three months. They occupy only about 100 pages and are issued at an infinitesimal price. Nevertheless, they will be found to contain the pith of the matter and the required data, and we are glad to find them accepted in quarters previously the most moved by prejudice and one-sided statements, as "conclusive against any State interference with the present growth and use of opium in India." Not only would such interference be highly dangerous and threatening in its political and social results, but any substitutes such as alcohol, ganja, or haschish would be productive of incalculably evil results without any corresponding benefits. The "opium question" may in fact now, we are glad to find, be considered dead—killed by the clear light of independent and ubiquitous inquiry from skilled and disinterested witnesses.

THE BARRACK SCHOOL COMMISSION.

We are informed that the reference by the President of the Local Government Board to the Committee on Metropolitan Poor-law Schools will be in the following terms: "To inquire into the existing systems for the maintenance and education of children under the charge of managers of district schools and boards of guardians in the metropolis, and to advise as to any changes that may be desirable."

THE ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD, 1892-93.[1]

[First Notice.]

The annual report of the Medical Department of the Local Government Board is always to sanitarians a volume to be hailed with satisfaction, and that for the year 1892-93 is certainly no exception to the rule. Rather it is a record with which few of its predecessors can vie. The contents are very varied, and are all of them interesting to the sanitary world. The internal changes of the department were not a few, and in addition the medical staff was enlarged to the extent of four temporary inspectors, by reason of the possible advent of cholera.

[1] London: Eyre and Spottiswoode; Edinburgh and Glasgow: Menzies and Co.; Dublin: Hodges, Figgis and Co. Price, 9s. 7d.

Vaccination.

Dr. Thorne Thorne has to record a still growing disregard for the vaccination laws, the percentage of default having risen in unbroken sequence in the provinces from 4.3 in 1881 to 10.9 in 1890; and almost unbrokenly in London from 5.7 to 13.9. In each instance the default is more than once greater than that of ten years ago. That the protracted sittings of the Vaccination Commission have had much to do with this deplorable state of things few can doubt.

Local Inquiries.

These were of exceptional interest in 1892, having embraced the waterborne typhoid outbreaks at Rotherham and King's Lynn, the typhus outbreak at Wigan, and the inquiry called for by complaint of the Staffordshire County Council as to inefficient sanitary administration in the Brownhills urban district. Other local conferences and inspections as well as conferences at Whitehall were numerous. A return showing quarter by quarter the notified cases of infectious disease in 81 towns, and the registered deaths from the diseases, is this year included, forming an entirely new feature. We are glad to see this return, and hope that ere long it will grow to be a complete summary for the whole country, under universal compulsory notification.

Cholera in Europe.

A very exhaustive report by Dr. Barry is incorporated in the appendix, together with a large number of helpful maps, and will serve as an official record of the origin and progress of the Western diffusion of cholera in 1892. Especially valuable are the notes and tables dealing with the disease as it affected our own country, and the portion treating of cholera in Germany. In this connection the Hamburg-Altona outbreak is well worth study as an instance of waterborne cholera attacking only the town population who drank of unfiltered river water. Dr. Thorne's summary of the report merits attention, since he has brought the more elaborate history as told by Dr. Barry within the compass of half a dozen pages. We may here state that Professor R. Koch's paper on Water Filtration and Cholera finds place, in a translated form, in the appendix to the report, and since it deals at some length with the Hamburg-Altona outbreak of 1892, the paper is of considerable value.

English Cholera Administration and Quarantine Proposals.

The activity of the Medical Department is well illustrated by Dr. Thorne's graphic account of the doings in the matter of cholera survey of port and other districts during the summer of 1892. The mere list of sanitary districts visited is a long one, and the points taken up on the visits paid are both numerous and important in relation to the prevention of cholera. If there be yet any sanitary authorities who have a desire to see the old order of things as to quarantine once more in force in our country, it is to be hoped that their attention will be given to what Dr. Thorne has to say on the subject. He very trenchantly places before his readers the reasons which have led, and still lead, England to rely on her sanitary defences in preference to attempting to enforce a system of quarantine. The utter hopelessness of trying to formulate a system which should not at its very outset call for exemptions is well shown. And the weighty words which Sir John Simon uttered on the same subject thirty years ago are reproduced with great effect, especially as they are as true to-day as when they were penned. The advances made towards an international law as to the treatment of cholera-infected shipping are touched upon, and no one is more qualified to speak on the matter than Dr. Thorne himself, seeing it was he who attended the Paris sittings in 1892, and again this year.

Mr. Walter Freshney, of the firm of Messrs. Freshney Brothers, Chemists, Grimsby, died on August 23rd through accidental poisoning. It appears he was about to dilute some ether with water for the purpose of taking a draught, and picked up an ammonia bottle in mistake, an errand boy having put the bottle in the wrong place. The result was that after swallowing a dose he was taken seriously ill, and died.

THE "BRITISH MEDICAL JOURNAL" REPORTS ON THE INFIRMARIES OF PROVINCIAL WORKHOUSES.

In the House of Commons on Thursday, August 23rd, Mr. A. C. Morton asked the President of the Local Government Board what were the requirements of the Board for the appointment of inspectors of the Local Government Board; what were the technical qualifications required; whether their duties included reporting on the nursing of sick poor in infirmaries, and the management of the hospital wards; how far they could be considered responsible for not having reported on the condition of things officially admitted to have existed at Oldham, Bath, and other provincial workhouse infirmaries, which were now known to be wholly unprovided with trained nurses for the attendance on the sick and aged people at night; and whether he was cognisant of the reports on this subject on twelve provincial workhouses and infirmaries in the British Medical Journal, all of them described in detail as disclosing cruel and shocking defects in the treatment of the sick poor.

Mr. Shaw Lefevre, in reply, said that no rules had been laid down as to the qualifications for the office of general inspector of the Local Government Board. During the last twenty years the officers appointed had, almost without exception, held office as assistant inspectors, and had thus obtained experience in the inspection of workhouses and other duties which devolve on an inspector. There were also two medical inspectors, one of whom acts in the provinces, and was associated with the inspector of the district in special inspection where the advice and assistance of a medical man was deemed desirable. It was the duty of the inspectors when they visited the sick wards of a workhouse to inquire as to their arrangements, ascertain from the inmates whether they had any complaints, and report to the Board the result of the inspection, and especially any matters which they considered required a communication to the guardians from the Board. They themselves dealt with many matters by direct communication with the guardians. He had read with great regret the reports which appeared in the British Medical Journal, and they were receiving his very careful attention. He had instructed an inspector to deal with them in connection with his visits to the workhouse, and when it appeared to be required a joint visit would be made by a medical inspector. He was aware that there were many unions in which the guardians still relied to a much greater extent than was desirable on the assistance given to nurses by pauper wardsmen and wardswomen, and the subject was one that was constantly being brought under the attention of boards of guardians. In several of the cases mentioned the nursing arrangements had been the subject of communications either by the board or their inspectors. Although much remained to be done, he was very glad to be able to state that there had been of late years a considerable increase in the number of nurses, and this to a large extent had been secured by the influence of the board and their inspectors. The importance of the questions affecting the care and comfort of the sick was fully realised by him, and he would give the whole subject his very careful consideration during the recess.

Mr. A. C. Morton asked how long it took the inspectors to discover the cruelties practised at the Brentwood Schools.

Mr. Shaw Lefevre said it was very difficult indeed to discover cases of that kind unless complaint was made to them, and very often the children were so terrorised that they were afraid to make a complaint.

Mr. A. C. Morton inquired whether the inspectors took any opportunity of seeing the children themselves.

Mr. Shaw Lefevre replied in the affirmative.

Mr. H. Hoare asked whether the inspectors ever saw the children after they left the schools.

Mr. Shaw Lefevre was understood to say that that had been done in some cases, but even then it was not always possible to ascertain the facts.

THE "BRITISH MEDICAL JOURNAL" REPORTS ON PAUPER BARRACK SCHOOLS.

Appointment of a Commission of Inquiry.

In the House of Commons on Friday, August 24th, Sir Charles Dilke asked whether the list purporting to contain the names of the Committee appointed by the Local Government Board to inquire into the management of pauper schools published that morning was correct.

Mr. Shaw Lefevre said the list published in the papers of that day was correct so far as it went, but it was not complete. It would, therefore, be convenient if he stated all the names of the Committee. They were: Mr. Mundella (Chairman), Sir John Gorst, Mr. Lyulph Stanley, Mrs. Barnett, Rev. Brooke Lambert, Dr. Russell Reynolds (President of the Royal College of Physicians), and Mr. W. Vallance (Clerk of the Whitechapel Board of Guardians.

The list referred to was published in the British Medical Journal and copied by the daily press, and was avowedly incomplete, requiring the addition of two further names. The two names in question are those of Mr. Brooke Lambert and Mr. Vallance. We may now say that the Committee is, in our opinion, admirably constituted. It is one the selection of which does great credit to the Local Government Board, and of which the composition will insure a thorough, active, and judicial investigation of the important questions at issue. We may, however, be permitted to express our deep satisfaction that this valuable result has been so quickly obtained as to arrive at this practical stage within three months of the time at which we first began to bring the matter definitely and continuously under public notice. Nor ought we to omit to express our thanks to the principal organs of the public press, and especially to the editors of the *Daily Chronicle*, the *Star*, the *Echo*, the *Westminster Gazette*, and the *Sun* for the active and invaluable aid which they afforded us reporting in more or less detail, and ably commenting on the facts which we brought to light, and the principles which we urged.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XIV.—LISKEARD.

The workhouse which serves this little Cornish borough and its district stands close to the station, presenting a modest front to the high road. Provided with an introduction from Dr. Nettle, the medical officer, we asked for the master, from whom we received every attention.

The Infirmary,

which stands behind the main building, is very old. It is licensed to accommodate fifty-four patients. It was obvious at the first glance that it was idle to expect anything like the modern system of hospital nursing in the total absence of the necessary appliances. Our visit was timed at a somewhat unfortunate moment, for the whitewashers were in possession of the wards, and everything was upset. The matron was in despair, for there were at the time but few able-bodied inmates in the house, and most of these were imbeciles; indeed, the method, or rather the absence of method, in the cleaning operations was an index to the capacity of the staff of assistants on whom she had to rely.

The Wards

were being colour-washed, but the rough surface of the walls must prove a sure receptacle for dust and dirt, and the cleanliness will be short lived. In one ward on the first floor we found the boards and ladders of the cleaners at one end, then a tangle of beds, and at the other end a solitary old woman, who had recovered from a fractured thigh, but was kept to

her bed. The stairs from the ward below came up into the middle of this room, dividing it into two halves. It was somewhat startling, to those acquainted with the modern doctrines of germs and with hospital theories of antiseptic treatment, to see the dust of years swept off from the beams of an unceiled roof on the beds below, where it lay in lumps, together with a litter of old brooms and the oddments which are turned out during a house cleaning. One incident was characteristic. As we entered the ward the pauper attendant was attending to the wants of the old patient, and had just helped her out of bed. On seeing us she turned and fled down the stairs, regardless of her patient or of the matron's call to her. It was finally the latter who assisted the helpless old woman back to bed. All the other female patients were up except one who was suffering from severe fits; she was lying in another ward in a padded bed. The matron told us that she had tumour on the brain. On the male side there was a patient in a separate ward with a bad leg: it was stated that he was kept apart because of bad conduct and language. Under his bed was an unemptied vessel containing fæces and urine. In the adjoining ward was a man recovering from pneumonia, a patient with an abscess in the groin, a man crippled with chronic rheumatism, old age, and paralysis, in all six men in bed. In the ward above, holding seven beds, all the patients were in the day room.

In a separate ward some children were isolated on account of ringworm, and in another there was a bad case of syphilis. The ward in which this poor woman was lying was dreary in the extreme; the walls were whitewashed, it had a small fireplace and a small window, and the door opened out immediately on to the yard. Among the infirm patients there was an unusually large number of imbeciles, both male and female.

The Lying-in Ward

is on the ground floor; it is a mean, dark room, holding 3 beds. The labour bed is a cumbersome four poster, placed against the wall. There is a small fireplace, no separate offices, no hot water supply; the ventilation must be difficult, as the windows are overshadowed by projecting parts of the building.

The Feeble-minded and the Imbeciles

are ward attendants, as they seem to be the only available form of able-bodied service: they act under the direction of the one nurse who is in charge of the infirmary. This officer is a trained nurse and midwife. The paupers make the beds and wash the patients, but the nurse attends to the backs and dresses the wounds. There is no night nurse or other attendance beyond that of the imbeciles above mentioned, who are, however, in bed themselves at night. There are bells from the wards to the nurse's room, but no communication between the nurse's quarters and those of the master. The doctor, who lives about half a mile off, is summoned at night by a messenger. We were pleased to see separate towels hanging over the bed each of patient, and there was an ample supply of mackintoshes for the use of the nurse. We saw very few armchairs in the wards, but perhaps they were away being cleaned. The only screens were heavy canvas screens, practically useless.

The Dinner was being Served

at the time of our visit, it consisted of meat and potatoes. The plates containing the food were piled one above the other, and were thus carried to the wards by a paralytic wardsman. We wondered which suffered most, the food or the quilt on which the greasy bottom of the plate would rest. The food was nicely cooked, and we were informed that extra milk was issued for those patients who required nourishment during the night.

The Nursery

is a large wilderness of a room, having a fireplace at each end, half the floor is stone and half is boarded. With a strange want of the sense of fitness, the stone floor end was chosen for use, and neither mat nor rug was provided for the infants to crawl upon. There were five infants in cradles, in charge of a pauper inmate; one of these looked very sickly; the matron said that its food disagreed with it. The long tube feeding bottles were in use in the nursery, and the two taken in connection, the faulty feeding bottle and the pauper attendant, were probably the cause of the disagreement of the food. The cradles were fitted with a straw pad, and over this was a mackintosh sheet. It must be difficult, if not impossible, to keep this room warm enough in winter.

The Infectious Hospital

stands at some little distance behind the infirmary. It is a self-contained building, but the only baths available are long baths, which have to be filled and emptied by hand labour. The hospital was empty at the time of our visit. The matron stated that when small-pox was isolated there, the guardians were unable to procure a trained nurse, and the patients were placed under the charge of an inmate. We wonder how those in authority could have acquiesced in such an arrangement, or how any master could have accepted such a responsibility.

The Sanitary Appliances

are, as one might expect, quite insufficient. There was a bath room on the male side, but no hot water supply. There is no bath room on the female side. In the house there is one bath for the tramps and the regular inmates; there is no hot water supply. Cold water is laid on to the infirmary, the taps discharging over troughs on each floor: but all hot water must be heated in, and baled out of, a copper. On the first floor there are modern waterclosets, with good flush; but on the ground floor the patients have to use the closets in the yards.

Recommendations.

It seems hardly possible to amend satisfactorily the present building, and we are convinced that the most economical plan consistent with efficiency would be to build a new infirmary. As the guardians are responsible for the nursing of the sick poor over a wide district where there is no general hospital, it is of paramount necessity that the workhouse infirmary should be well appointed. As no nurse is competent to attend on 54 patients, be responsible for the lying-in room, and supervise an infectious hospital by day and night, it is obvious that the present nursing staff is wholly insufficient, for the feeble-minded pauper attendants cannot be ranked as nurses.

THE UNITED KINGDOM POLICE SURGEONS' ASSOCIATION.

The first general meeting of this Association was held at University College, Bristol, during the annual meeting of the British Medical Association. A statement as to the formation of the society and its objects was made by Mr. Nelson Hardy. The following officers were elected: Mr. Thomas Bond (London), President; Mr. T. Holmes (London), and Dr. Littlejohn (Edinburgh), Vice-Presidents; Mr. Nelson Hardy (London), Treasurer; Mr. F. W. Lowndes (Liverpool), and Mr. H. Culliford Hopkins (Bath), Joint-Secretaries. The rules submitted to the meeting were adopted. It was resolved to ask the Home Secretary to receive a small deputation to bring under his notice the following points:

1. The desirability of appointing police surgeons in those counties, cities, and towns which do not now possess any, and that they be officially recognised as part of the police force, as such officials might be of great assistance to the police, magistrates, and coroners.

2. The importance of providing the chief police officials and police surgeons throughout England and Wales with copies of instructions issued to the metropolitan police with regard to the medical examination of prisoners charged with offences under the Criminal Law Amendment Act, 1885, in order to make the mode of procedure in these cases more uniform.

3. The necessity of raising the present scale of remuneration for medical witnesses attending trials at assizes and sessions held in distant towns and cities, which particularly affect police surgeons, who, so far from being fairly remunerated, are put to expense.

4. To ask that, in the event of medical certifiers being appointed as recommended by the Select Committee of the House of Commons on Death Certification, the interest of police surgeons may be safeguarded.

The Secretaries announce that as the third point is one which affects most police surgeons, as well as many other medical men, they will be glad to receive any information bearing on it, so as to strengthen the case which they hope to be able to lay before the Home Secretary in October.

The bone-setter in England is generally a heaven-sent, or at least an hereditary, healer, but in St. Louis, U.S.A., there is, we read, a "school of osteopathy" established by a bone-setter.

CORRESPONDENCE.

ANTITOXIN TREATMENT OF DIPHTHERIA.

Sir,—The antitoxin treatment of diphtheria seems as though it would reduce to a minimum the mortality of a disease which in its virulent forms has hitherto practically resisted all plans of treatment. In looking over the cases recorded in recent numbers of the British Medical Journal it will be seen that there is a great discrepancy in the doses employed; in four cases the dose varied from 8 to 15 minims, whereas Dr. Eastes, in his seven cases, has injected 5 c.c. (that'is, 85 minims). As the supply of antitoxin is nearly exhausted, and as I was informed by Mr. Zimmerman to-day that he will not be able to obtain more until the end of September, it is desirable that the fluid should be used as economically as possible; it would be well, therefore, if an authoritative opinion could be given as to the smallest dose which can be injected with the hope of a successful result.—I am, etc.,

Wimpole Street, August 24th. F. de Havilland Hall.

CHELSEA HOSPITAL FOR WOMEN.

Sir,—I would ask your kind permission to say a few words concerning my position on the late staff of this hospital.

My request to the Board for an explanation of its action has been postponed over two meetings, and I have no doubt the Board has considerable difficulty in finding any plausible excuse for sacrificing some of my late colleagues and myself. Any attempt to lay bare the inner workings of this remarkable body would trespass too much on your space, and must be deferred for some other occasion. I now wish simply to state the following facts:

At no time during my seven years of office had I anything to do with the management of the hospital.

In conjunction with some of my late colleagues I have repeatedly made suggestions which would have entirely covered the recommendations of the Committee of Inquiry had they been adopted. Complaints, very distinct and emphatic, have been made in writing as well as verbally. I have a letter before me offering "information" in proof of my statements. That "information" has never been asked for from that day to this. The letter is dated October 15th, 1893, and addressed to the Chairman of the House Committee, who is also Vice-Chairman of the Board of Management. I find after stating my complaint, I said "this is the fourth time within the last few months that certain steps, closely affecting the medical staff, have been taken without a single one of them being consulted. These points may appear small in themselves, but I venture to consider them of extreme importance with regard to the discipline and management of the hospital, and would therefore, I am sure, not meet with the approval of any single member of the House Committee were he fully cognisant of them."

These assertions have never been contradicted. On one occasion recently the Chairman of this Committee made the remark that I "was rather fond of making complaints." No one regretted more than I did the faulty management that made such complaints necessary. The management alone had the means of knowing what was taking place in the hospital as a whole, and persistently refused to recognise the staff as a committee responsible for medical matters.

My own cases gave no sort of indication that "septic influences were prevalent." I maintain, therefore, that by not re-electing me the Board has allowed—and still continues to allow—public censure to fall on me on account of a condition of things over which I had absolutely no control, for which the Board itself was solely to blame, and which I did my utmost to remedy.

I will leave it to others to duly comment on such a course of action. It is one for which I must confess my own limited vocabulary contains no suitable expression which would be at once accurate and polite.—I am, etc.,

Curzon Street, W., Aug. 25th. F. F. Schacht, M.D.Cantab.

Sir,—Following in the wake of several of my late colleagues, I, too, venture to ask for some space in your columns. To economise room I would say that I re-echo Dr. Fenton's letter of August 18th up to where he starts upon his own defence, but no further. I demur against the accuracy of the quotation from Sir John Williams—it was not said as referring to the "cases" generally, but was a reply to an after-question from Dr. Fenton as to "high temperature in successful cases"—and I would here note that the number of admissions under Dr. Fenton's care in 1893 were 94, as compared with my 157 cases. I, however, in no way allow that my wards were overcrowded.

My facts are as follows: 157 cases were admitted under my care in 1893. These comprised 63 non-operative cases, with no deaths; 10 digital examinations of the bladder, with no deaths; and 84 operative cases, with 6 deaths. The last group includes 24 abdominal sections, with 5 deaths.

I enclose, recorded as briefly as possible, a summary of these fatal cases for your perusal: I fear I can have no hope of your finding room for their publication. I would merely say that three of these deaths occurred from shock in forty-two, fifty-four, and seventy hours respectively—a result which the history of the cases immediately before operation led one at any rate to fear. A fourth died from ileus, proved at *post-mortem*, and suspected before death. In the fifth case I believe death must have resulted from septicæmia, although I am still puzzled to account for it; but this was the only death I had which could, by the most liberal interpretation, be called "death from sepsis." I did two "exploratory operations" in the year (I had done one only in the previous six years); both were in my opinion, and in that of my colleagues, who saw these cases in consultation, absolutely justifiable. The one did well without a rise in temperature; the second died on the fifteenth day (January 9th, 1894); the circumstances of this latter case call for full comment, and will, I trust, be published shortly *in extenso*. Two of my successful abdominal sections were in cases of extrauterine gestation.

With regard to cases of "high temperatures" otherwise successful, on again looking carefully over the notes of my 157 cases, I cannot see that at any time there was anything to call for special comment on my part.

I am now disposed to think that perhaps the smaller wards (with three beds in each) would have been better if they had only contained two; but as my beds were always overflowing (and cases were waiting constantly for admittance), it would have been difficult, without more clearly defined reasons, to have reduced their number. The view of the Commission that "temporary high temperatures" and "sepsis" are merely convertible terms presents much matter for academic discussion.

I finally beg most decidedly to differ from Dr. Fenton's last paragraph of praise for the Board. This difference may probably be due to the fact that he was never on the Board of Management, and that his membership of the House Committee dated only from the spring of last year, since which, I must allow, his attentions have been most assiduous, but not always for the benefit of his colleagues. I should be glad to express my views on the subject of the hospital management, but must defer this to another occasion.—I am, etc.,

William Travers, M.D., F.R.C.S.Eng.

Phillimore Gardens, W., Aug. 28th.

UNIVERSITY HALL, EDINBURGH.

Sir,—If in your Students' Number you can find space for a letter from an old resident of University Hall, Edinburgh, I think that some of the men entering Edinburgh University this year may benefit thereby.

Until of late years the stranger matriculating here had no choice but to live in lodgings. To these he went, and in these he stayed, changing only from one to another place as fancy or the vagaries of his landladies dictated, and the social intercourse of many, and their opportunities for developing social qualities, were limited practically to their discussion of the weekly bill with their landlady or flirtation with their landlady's daughter.

It has been argued that in this way self-reliance was fostered, and, truly, that there was no great temptation to shirk one's classes and reading; that a man's books became his companions and his friends, and that studious habits were encouraged. This may be, but your older readers will

/that the medical man must know men as well as books, or his book learning may never be applied, and that to know men one must mix with them: also that eternal association with men of one's own line of study, and with no others, the eternal presence of "shop," is wearying and antagonistic to true education.

This was the opinion of an Edinburgh teacher, Professor Patrick Geddes, expressed in the organisation of University Hall, a residence for students and others connected with the University. Seven years ago this started with seven rooms and four residents. It prospered until all the seven flats of the building were used. It spread to other houses under the same rules and with the same object; and its latest extension, formally opened by Professor Blackie last April, is now one of the most conspicuous features of the old town as seen from Princes Street.

Each house is self-governed through a committee consisting of a rent treasurer acting for Professor Geddes, and a house treasurer and secretary, with assistants, elected by the residents, holding office for a month, eligible for re-election, liable in their official capacity to criticism from any resident at the fortnightly house meetings. The names of intending residents, with their two references, are submitted to and voted upon by the residents, who have also the power of expelling any unruly member.

The rents of single rooms (with the use of common rooms) vary from 7s. 6d. to 16s. a week. The board bill in one house through last summer session averaged 11s. 9d., being merely the weekly bills equally divided among the residents.

University Hall is open to students and graduates of all Faculties, and in this way we believe that our interests are usefully widened, our experience increased, and that the younger students profit by the experience (always at their service) of their seniors, whether students or graduates.

The secretaries of any one of the houses of University Hall will, I know, be ready to answer any question put by those wishing further information.—I am, etc.,

August 14th. M.B.Edin.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

The following appointments have been made at the Admiralty: John Grant, M.B., Surgeon, to the *Adventure*, August 22nd; Richard L. Price, M.B., Surgeon to the *Herald*, August 22nd; James P. Willis, M.B., Surgeon, to the *Repulse*, August 22nd; Lawrence Bidwell, Surgeon, to the *St. Vincent*, August 22nd; John Jenkins, Surgeon, to the Royal Marines, Plymouth, August 28th; John D. Hughes, Surgeon, to the *Vivid*, August 28th; Joseph R. McDonnell, Surgeon, to the *Barrosa*, August 29th; Edgar R. Dimsey, Surgeon, to the *Bellona*, August 29th; John D. Menzies, Surgeon, to the *Sharpshooter*, September 15th; Henry W. Finlayson, M.B., Surgeon to the *Lizard*, August 25th; John E. Coad, M.B., Surgeon to the *Royal Sovereign*, August 25th; Henry E. Tomlinson, Surgeon, to the *Cambridge*, August 25th; William M. Craig, M.B., Staff-Surgeon, to the *Rapid*, August 28th; Christopher L. W. Bunton, Surgeon, to the *Impregnable*, September 1st.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel W. F. Burnett is granted the temporary rank of Surgeon-Colonel while officiating on the Administrative Medical Staff of the Madras Army, dated July 31st.

Surgeon-Lieutenant-Colonel T. R. Corgan, having resigned his appointment of the charge of Troops and Station Hospital at Ipswich, will be succeeded in that position by Deputy-Surgeon-General Gardiner.

Brigade-Surgeon-Lieutenant-Colonel Gustavus Rochfort Rae died at Waterville, co. Kerry, Ireland, on August 22nd, aged 48 years. Appointed Assistant Surgeon October 1st, 1867, he became Surgeon March 1st, 1873, Surgeon-Major October 1st, 1879, attained the rank of Lieutenant-Colonel October 1st, 1887, and was made Brigade-Surgeon Lieutenant-Colonel December 23rd, 1893. He served in the Boer War in 1881.

INDIAN MEDICAL SERVICE.

Surgeon-Lieutenant-Colonel A. S. Reid, M.B., Bengal Establishment, Medical Officer 2nd Battalion 4th Goorkha Regiment, is appointed to officiate as Agency Surgeon in Bhangelcund, and Tutor to the Maharajah of Rewah.

Brigade-Surgeon-Lieutenant-Colonel G. McB. Davis, Bengal Establishment, Medical Officer, 4th Sikh Infantry, is appointed Principal Medical Officer Peshawur District, *vice* Brigade-Surgeon-Lieutenant-Colonel C. F. Churchill, Army Medical Staff, who has proceeded to England.

The Queen has approved of the following admissions to Her Majesty's Indian Medical Service:—*Bengal*: G. Ramsay, D. W. Sutherland, W. Selby, T. A. Granger, H. J. K. Bamfield, J. W. Grant, A. H. Moorhead, W. D. Hayward, A. W. F. Russell, W. E. Scott-Moncrieff; *Madras*: C. R. Pearce; *Bombay*: V. B. Bennett, H. M. Moore, D. C. Johnston.

Surgeon-Major William Coleridge Kiernander, late of the 16th Bombay Infantry, died at Brighton on August 27th, at the age of 53. He served at Suakin during the Soudan Expedition in 1885. He entered the service April 1st, 1867, and retired from it December 15th, 1888.

UNIVERSITIES AND COLLEGES.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following gentlemen having passed the necessary examinations and having conformed to the by-laws and regulations, have been admitted Members of the College and received their Diplomas, namely:

Adams, E. G., L.R.C.P.Lond.
Andrews, H. R., L.R.C.P.Lond.
Archer, S. A., L.R.C.P.Lond.
Bailey, F. W., L.R.C.P.Lond.
Beach, H. W., L.R.C.P.Lond.
Borchcrds, W. M., L.R.C.P.Lond.
Briggs, R. W., L.R.C.P.Lond.
Brown, J. N., L.R.C.P.Lond.
Burgess, T. W. W., L.R.C.P.Lond.
Byers, H. S., L.R.C.P.Lond.
Campbell, J. H., L.R.C.P.Lond.
Carpmael, C. E., L.R.C.P.Lond.
Chavasse, H. S., L.R.C.P.Lond.
Clendinnen, W. McE., L.R.C.P.Lond.
Clendining, F. T. D., L.R.C.P.Lond.
Cock, E. J. E., L.R.C.P.Lond.
Coldicott, W. R., L.R.C.P.Lond.
Collins, J. B., L.R.C.P.Lond.
Copeman, A. H. L.R.C.P.Lond.
Cornish, S., L.R.C.P.Lond.
Cosens, F. R. S., L.R.C.P.Lond.
Cotton, H. P., L.R.C.P.Lond.
Couzens, A. E., L.R.C.P.Lond.
Cowes, A., L.R.C.P.Lond.
Creak, A. B., L.R.C.P.Lond.
Crookshank, T. G., L.R.C.P.Lond.
Davis, A. E., L.R.C.P.Lond.
De Castro, G., L.R.C.P.Lond.
Dobell, C. B., L.R.C.P.Lond.
Drake, W., L.R.C.P.Lond.
Ducat, A. D., L.R.C.P.Lond.
Dukes, E. S., L.R.C.P.Lond.
Emery, W. D. E., L.R.C.P.Lond.
Evers, C. H., L.S.A.Lond.
Evans, D. E., L.R.C.P.Lond.
Evans, R., L.R.C.P.Lond.
Evans, R. D., L.R.C.P.Lond.
Faber, J. G., L.R.C.P.Lond.
Fooks, E. V. R., L.R.C.P.Lond.
Freeland, A. R. S., L.R.C.P.Lond.
Gibbs, F. R., L.R.C.P.Lond.
Goodman, H. C., L.R.C.P.Lond.
Haines, J. W., L.R.C.P.Lond.
Hammond, E. A., L.R.C.P.Lond.
Harcourt, G. R., L.R.C.P.Lond.
Harding, C. H., L.R.C.P.Lond.
Hargreaves, W. H., L.R.C.P.Lond.
Hartford, W., L.K.Q.C.P.Irel.
Hatherell, R. R., L.S.A.Lond.
Haward, H. H., L.R.C.P.Lond.
Hepworth, J., L.R.C.P.Lond.
Hewer, C. M., L.R.C.P.Lond.
Hibbert, J. C., L.R.C.P.Lond.
Hills, W. C. D., L.R.C.P.Lond.
Horton, T., L.R.C.P.Lond.
Hosford, A. H., L.R.C.P.Lond.
Howes, G. S. O., L.R.C.P.Lond.
Howse, C. B., L.R.C.P.Lond.
Hughes, H. S., L.R.C.P.Lond.
Hunnard, A., L.R.C.P.Lond.
Hunt, G. B., L.R.C.P.Lond.
Jeménez, G., L.R.C.P.Lond.
Kinnersly, G. E., L.R.C.P.Lond.
Lang, A. J., L.R.C.P.Lond.
Laver, J. W., L.R.C.P.Lond.
Law, J., L.R.C.P.Lond.
Lockyer, C. H. J., L.R.C.P.Lond.
Longinotto, M. J., L.R.C.P.Lond.
Lucas, C. R., L.R.C.P.Lond.
McCullough, H. A., L.R.C.P.Lond.
Melland, C. H., L.R.C.P.Lond.
Middlemist, R. C., L.R.C.P.Lond.
Moreton, F., L.R.C.P.Lond.
Munro, H. A., L.R.C.P.Lond.
Nattle, W. R., L.R.C.P.Lond.
Norman, R. H., L.R.C.P.Lond.
O'Flanagan, M. J., B.Sc.Lond., L.R.C.P.Lond.
Oliver, L. W., L.R.C.P.Lond.
Orella, F. R., L.R.C.P.Lond.
Panting, C. H., L.R.C.P.Lond.
Pawlett, E. L., L.R.C.P.Lond.
Petley, J. T., L.R.C.P.Lond.
Phillips, L. C. P., L.R.C.P.Lond.
Pomeroy, W., L.R.C.P.Lond.
Poynder, F. C., L.R.C.P.Lond.
Pring, H. R., L.R.C.P.Lond.
Propert, W. A., L.R.C.P.Lond.
Raper, M. H., L.R.C.P.Lond.
Ray, J. H., L.R.C.P.Lond.
Revell, H. S., L.R.C.P.Lond.
Roscoe, H., L.R.C.P.Lond.
Scharlieb, H. J., L.R.C.P.Lond.
Seccombe, P. J. A., L.R.C.P.Lond
Shepard, R. H., L.R.C.P.Lond.
Shields, O., L.R.C.P.Lond.
Skipworth, J. G., L.R.C.P.Lond.
Stableford, F. B. G., L.R.C.P.Lond.
Stainsby, J. A., L.R.C.P.Lond.
Steinhaeuser, —, L.R.C.P.Lond.
Stephenson, W. A., L.R.C.P.Lond.
Stevens, R. C. J., L.R.C.P.Lond.
Stewart, J. P., L.R.C.P.Lond.
Sturges-Jones, W. E., L.R.C.P.Lond.
Swinhoe, A. C., L.R.C.P.Lond.
Thorpe, A., L.R.C.P.Lond.
Tilsley, J., L.R.C.P.Lond.
Tippett, S. G., L.R.C.P.Lond.
Trethewy, A., L.R.C.P.Lond.
Vinter, C. H. S., L.R.C.P.Lond.
Wales, H. L., L.R.C.P.Lond.
Wallis, E. E., L.R.C.P.Lond.
Way, G. H. C., L.R.C.P.Lond.
Webb, F. E. A., L.R.C.P.Lond.
Westrop, J. P., L.R.C.P.Lond.
Wilson, W., L.R.C.P.Lond.
Withers, P., L.R.C.P.Lond.
Wright, C. H., L.R.C.P.Lond.
Wright, W. S., L.R.C.P.Lond.

MEDICAL NEWS.

The opening of the Clarence Ward of the Alexandra Hospital, Woodhall Spa, by the High Sheriff of Lincolnshire, took place on August 23rd, before a distinguished gathering. The addition to the institution has cost £600.

Mr. Passmore Edwards, on Saturday, August 25th, laid the foundation stone of a new cottage hospital at Wood Green, the cost of which, estimated at £2,000, he has undertaken to defray.

Bath Baths.—At a meeting of the Bath Baths Committee, held at the Guildhall, Bath, on August 24th, it was decided to take steps to issue to all practising medical men in the United Kingdom a description of the baths, with plans and illustrations.

International Congress of Hygiene and Demography, Buda-Pesth.—At the special request of the Executive Committee of this Congress, Professor Corfield, Honorary President of the Tenth Section, will propose a resolution to be voted on at a general meeting of the Congress on "The Question of Promoting and Enforcing the Asepsis of Towns and Dwellings with regard to Public Cleanliness."

MEDICAL VACANCIES.

The following vacancies are announced:

BETHLEM HOSPITAL.—Two Resident Clinical Assistants. Apartments, rations, and attendance provided. Applications, endorsed "Clinical Assistantship," to the Treasurer by October 1st.

BURGH OF LEITH.—Medical Officer of Health. Salary to commence at £350. Applications and testimonials to T. B. Laing, Town Clerk's Office, Leith, by September 1st.

CAMBRIDGE UNIVERSITY.—John Lucas Walker Studentship. Applications to Professor Roy, New Museums, Cambridge, by September 30th.

CITY ASYLUM, Birmingham.—Resident Clinical Assistant for three or six months, without salary. Applications to the Medical Superintendent.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board, residence, and allowance for washing provided. Appointment for six months. Applications to the Secretary at the office, 24, Finsbury Circus, E.C., by September 13th.

CLAPHAM GENERAL AND PROVIDENT DISPENSARY.—Vacancy in the staff of Medical Officers. Applications to the Honorary Secretary, 42, Manor Street, Clapham, S.W., by September 5th.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer; unmarried. Salary to commence at £100 per annum, increasing annually to £120 per annum, with board, lodging, washing, and attendance. Applications to the Medical Superintendent by September 15th.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's Buildings, Holborn.—Honorary Physician; must be F. or M.R.C.P.Lond. Applications to W. R. Taunton, Honorary Secretary, by September 7th.

GENERAL HOSPITAL, Nottingham.—Senior Resident Medical Officer; doubly qualified. Salary, £120 for the first year, with an addition of £10 a year up to £150, with board, residence, and washing. Applications to the Secretary by September 1st.

GENERAL HOSPITAL, Birmingham.—Assistant-Surgeon. Appointment for three years, with eligibility for re-election. Honorarium, £100 per annum. Applications to Howard J. Collins, House-Governor, by September 1st.

GENERAL INFIRMARY, Gloucester, and the Gloucestershire Eye Institution.—Assistant House-Surgeon; doubly qualified. Board, residence, and washing provided, but no salary. Applications to the Secretary by September 5th.

GRAVESEND HOSPITAL.—House-Surgeon. Doubly qualified and registered. Salary £80 per annum, with board and residence. Applications and testimonials to Frederick Mitchell, Honorary Secretary, by September 1st.

MEMORIAL HOSPITAL, Jarrow-on-Tyne.—House-Surgeon, age not under 25, and to reside and board free in the hospital. To come under a three years' engagement at a progressive salary of £130, £150, and £170 respectively. Applications and testimonials to J. Campbell, Secretary, by September 4th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Assistant Physician. Must be Fellows or Members of the K.C.P.Lond., and graduates in medicine of a University recognised by the General Medical Council. Applications and testimonials to Charles H. Byers, Secretary, by September 3rd.

NORTH WALES ASYLUM, Denbigh. Second Assistant Medical Officer. Salary £100 per annum, with board, washing, and apartments. Applications to W. Bark, Clerk to the Visitors, by September 12th.

PLYMOUTH PUBLIC DISPENSARY.—Physician's Assistant; doubly qualified. Salary, £60 per annum. Appointment for one year, but eligible for re-election. Applications to the Honorary Secretary before September 18th.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Brighton.—House-Surgeon; doubly qualified. Salary, £50 per annum, with board, lodging, and washing, but no stimulants. Applications to the Chairman of the Medical Committee by September 8th.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House-Surgeon. No salary, but board, residence and laundry found. Applications and testimonials to the Honorary Secretary, by September 17th.

SHEFFIELD UNION.—Two Medical Officers for two newly-formed medical districts, the Grimesthorpe District and the Neepsend District. Salary for the former, £50 per annum, and for the latter £40 per annum. Candidates appointed will be required to live in the respective districts. Applications to Joseph Spencer, Clerk to the Guardians, Union Offices, Sheffield, by September 5th.

SHEFFIELD UNION.—Resident Assistant Medical Officer for the Workhouse at Fir Vale, Pitsmoor. Salary, £100 per annum, with apartments, rations, etc. Applications and testimonials before September 5th, to J. Spencer, Clerk to the Guardians.

ST. BARTHOLOMEW'S HOSPITAL.—Ophthalmic Surgeon, must be F.R.C.S.Eng. Applications and testimonials to W. Cross, Clerk, by September 10th.

ST. PETER'S HOSPITAL, Henrietta Street, Covent Garden, W.C.—House-Surgeon for six months. Salary at the rate of 50 guineas a year, with board, lodging and washing, and an allowance for wine, etc. Applications and testimonials to Irwin H. Beattie, Secretary, before September 1st.

VICTORIA HOSPITAL, Burnley.—Resident Medical Officer. Salary for the first year, £80; second year, £90; third year, £100. Applications to the Honorary Secretary.

VICTORIA INFIRMARY OF GLASGOW.—Superintendent and Resident Medical Officer; must devote his whole time to the Infirmary. Applications to Francis Bisset, Secretary, 22, Carlton Place, Glasgow, by September 5th.

WALSINGHAM UNION.—Medical Officer for the Raynham District. Salary, £38 per annum, exclusive of extra medical and vaccination fees. Applications to William M. Rumbelow, Clerk, Bridge Street, Fakenham, by September 3rd.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Appointments for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary Superintendent, by September 19th.

MEDICAL APPOINTMENTS.

ABRAHAM, Phineas S., M.D.Dub., B.Sc.Lond., F.R.C.S.I., appointed Dermatologist to the West London Hospital.

ALLARD, Joseph H., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer of Health to the Tewkesbury Urban Sanitary District. *vice* Mr. W. Allard, deceased.

ANDERSON, William M., M.B., appointed Medical Officer of the Infirmary of the Parish of Chelsea, *vice* J. A. Ward, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

APPLEYARD, F. E., B.A.Cantab., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital (extension).

ARKLE, George M., L.S.A.Lond., appointed Medical Officer for the Walton Workhouse of the West Derby Union.

ARNOLD, G. J., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

ARNOLD, E. G. E., L.R.C.P., M.R.C.S., appointed Junior Obstetric House-Physician to St. Thomas's Hospital.

ASHTON, H., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Fourth District of the Oldham Union.

BROOK, Sydney W., M.B., B.Ch.Vict., appointed House-Surgeon to the Manchester Royal Infirmary.

CATTLEY, Robert, M.B.Durh., D.P.H.Camb., appointed Medical Officer of Health to the York City Council.

CLEMESHA, W. W., M.B., B.Ch.Vict., appointed House-Surgeon to the Manchester Royal Infirmary.

COLLCUTT, A. M., B.A., M.A., B.C.Cantab., L.R.C.P., M.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital (extension).

COULSON, Mr. James E., appointed Second Assistant Medical Officer to the Workhouse and Infirmary of the St. George's Union, *vice* Mr. R. B. Williams.

CUFF, A. W., B.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

DICKSON, H. A., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

FENWICK, P. C., L.R.C.P., M.R.C.S., appointed Senior Obstetric House-Physician to St. Thomas's Hospital.

GRIFFITHS, G. Batho, L.R.C.P.Lond., M.R.C.S.Eng., appointed Resident Medical Officer to the Eastern Dispensary, Bath, *vice* O. A. G. Collins, M.R.C.S., L.R.C.P., resigned.

GRENHAM, A. S. F., B.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed Non-resident House-Physician to St. Thomas's Hospital.

HUGHES, Hugh Owen, L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Abergele District of the St. Asaph Union.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

CATHCART.—On August 23rd, at 8, Randolph Crescent, Edinburgh, the wife of Charles W. Cathcart, M.B., F.R.C.S.Eng. & Edin., of a son.

KERR.—On August 21st, at 36, Oak Lane, Bradford, the wife of James Kerr, M.A., M.D., D.P.H.Cantab., of a son.

MARRIAGES.

FOSTER—DAVIES.—On August 15th, at the Parish Church, Machynlleth, by the Rev. John Williams, Rector of Penegoes, William James Foster, F.R.C.S.Eng., L.R.C.P.Lond., only son of the late H. J. Foster, Esq., of Penn, Bucks, to Dorothea Gwenfron, youngest daughter of E. Davies, Esq., J.P., of Dolcaradog, Machynlleth.

MURRAY—MACQUIBBAN.—On August 30th, at 248, Union Street, Aberdeen, by the Rev. G. Webster Thomson, B.A., John Murray, Advocate, Aberdeen, to Williamina Edward (Minnie), youngest daughter of Surgeon-Lieutenant-Colonel Charles Mitchell Macquibban, M.D., 3rd Gordon Highlanders. No cards. At home after October 1st.

WINTER—COPELAND.—On August 22nd, at Littlemore Parish Church, by the father of the bride and the Rev. Vernon T. Green, M.A., Vicar, and the Rev. C. A. Comfort, M.A., Laurence A. Winter, M.R.C.S., L.R.C.P., of Chartham, Canterbury, Kent., elder son of the late L. Winter, Esq., of Clements, Snaresbrook, and Mrs. Winter, of the Manor House, Crendon, Thame, to Bessie Copeland, fourth daughter of the Rev. Hayman Cummings, Chaplain, Oxford County Asylum.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MIDWIFERY FORCEPS.

OPSIMATHES writes that he finds it difficult to make ordinary midwifery forceps "lock." It is said that Zeigler's and Assalini's are easy to apply. Can anyone testify to the efficiency of either of these for ordinary purposes?

*** Neither Assalini's nor Zeigler's forceps are so easy to apply, or so efficient, as the ordinary English forceps.

OIL STOVES.

G. W. A. wishes to know what is the best oil stove for heating a waiting room or hall 12ft. by 8ft.

*** This is a question interesting to many, and we shall be glad to receive personal experience upon it. We may note, however, that the smell so often complained of as arising from oil stoves is generally due to want of care in cleaning the lamp or trimming the wick.

TREATMENT OF THREADWORMS.

M.D. writes: I have a boy, aged 9, who for the last three years has suffered constantly from threadworms, associated with involuntary passage of feces. All the usual remedies have been tried by the mouth and injections by the rectum. Would any of your numerous readers recommend any efficacious treatment, also any more recent authority on the subject than the late Dr. Cobbold's work?

DENTISTS AND MEDICAL PRACTITIONERS.

A MEMBER asks if there is anything against medical etiquette in giving gas or chloroform for a dentist who is not an L.D.S.? If so, on what grounds should one refuse to do so?

*** If the dentist is registered there can be no objection to the course indicated. If he is unregistered, and gives himself out as a dentist, he is liable to proceedings, and it is probable that the practitioner associated with him would be deemed guilty of "covering."

TREATMENT OF DYSMENORRHŒA.

A MEMBER asks for suggestions for the treatment of a case of dysmenorrhœa dating from the first occurrence of the menses in a spare single woman aged 28. The pain comes on two or three days before the flow, and there is ovarian tenderness. There is a definite history of sudden cessation of the menses two years ago after exposure to cold, followed by symptoms indicating a broad ligament hæmatoma, which suppurated and discharged *per vaginam*. He inquires whether marriage is contra-indicated.

ANSWERS.

W. P., M.B.—No; probably due to gleet.

G. D. M.—This is a pure question of ordinary law; the documents should be placed before a solicitor.

INDIGNANT should communicate the facts of his case to the President of the General Medical Council, 299, Oxford Street, W.

HERNIA IN PREGNANCY.

W. P., M.B., writes, in answer to "Galen" (BRITISH MEDICAL JOURNAL, August 18th), to suggest that his patient should wear her ordinary truss till the first stage of labour, then she should be kept in the horizontal position.

PUPILAGE.

E. R. L.—Pupilage with a general practitioner preliminary to entrance on medical study has become so rare of late years that it would be difficult to state an average premium for the same. When this practice was common, a very usual custom was for the pupil to pay £100 per annum, and to give his principal the advantages of his services, receiving in return board and lodging and instruction in the ordinary routine of medical practice.

TERMS OF PARTNERSHIP.

W. A.—When one medical practitioner enters into a partnership with another, a deed of partnership, usually drawn up by a solicitor, strictly defines their business relations with one another. The premium paid by the incoming partner usually varies from one to two years' value of the annual income he expects to derive from the share of the practice he purchases.

NOTES, LETTERS, Etc.

A WARNING.

DR. ARTHUR T. LONGHURST writes from 4, Eaton Square, S.W., to warn medical practitioners against a respectable-looking man, aged about 25 or 30, of fair complexion, dressed in a tweed suit, who called at Dr. Longhurst's house on August 23rd, and asked him to call on a lady in Drayton Gardens. The man gave his name as Fowle, and said that the lady's regular attendant, Dr. Ryan, of Gower Street, was out of town. The message turned out to be a hoax.

THE OPIUM REPORT OF THE "BRITISH MEDICAL JOURNAL."

THE ignorant and mischievous propaganda of the anti-opiumists will, says the *Newcastle Chronicle*, scarcely survive the report on the subject which has just been issued by Mr. Ernest Hart, on behalf of no less weighty and impartial a body than the Parliamentary Committee of the British Medical Association. Mr. Hart merely edits the hundred reports which he has received from experienced and competent medical men and civilians in India. These reports are overwhelmingly against the anti-opiumists on every count in their harrowing indictment. The use of opium is proved to be general all over India, and where the soil is most malarious there are the greatest number of opium eaters; and it is only where the land is high, dry, and bracing that the people do not use opium at all, simply because they do not feel the want of it. Mr. Hart's correspondents have no doubt that in malarious districts the use of the drug is absolutely beneficial; they are unanimous in believing that the prohibition of its sale would lead to the introduction of far more deleterious drugs, and finally, Mr. Hart says, "One may open the documents wherever one pleases, and one finds the most emphatic denials of the allegation that the people of India have fallen a prey to the excessive use of opium. In all parts of India, the use of opium, though widespread, is almost always very moderate." If only we could say the same about alcohol.

LETTERS, COMMUNICATIONS, Etc., have been received from:
(**A**) Dr. W. L. Andriezen, Wakefield; Mr. H. Alston, Trinidad; Mr. M. A. Adams, Maidstone; A. T.; Dr. A. Anderson, Mirfield; Messrs. Arthur and Co., London; Mr. R. Adams, Bodmin. (**B**) Mr. R. Bevan, Lydd; Mr. J. M. Bentley, Aberdeen; Mr. D. A. Berrell, Edinburgh; Miss B. Bentley, Leicester; Dr. A. G. Barrs, Leeds; Mr. R. P. Brown, Newquay. (**C**) Mr. E. G. Clarke, Walton; Dr. D. J. Caddie, Carricore; Professor Corfield, London; Mr. J. Couldrey, Scunthorpe; Mr. T. S. Cogan, Ipswich; Mr. L. Chaffers, Manchester; Mr. J. Crisp, Market Harborough; Mr. H. Cumming, Oxford; Mr. A. B. Carlton, Dublin; C. W. Cathcart, M.B., Edinburgh. (**D**) Dr. V. Dickinson, London; Mr. W. Dalton, Blackpool. (**E**) Mr. G. A. Elliot, Kingsbridge. (**F**) Mr. C. Franks, Rugby; Dr. T. F. Fernandez, Ross; Mr. T. Fowler, Epping; Frame Food Company, London. (**G**) G. W. A.; L. D. Gamble, M.B., Abergavenny; Dr. R. N. Goodman, Kingston-on-Thames; D. M. Greig, M.B., Dundee; Mr. C. G. Grant, London. (**H**) Mr. C. J. W. Hall, Warrington; H. P.; Health; Heretic; W. Hardman, M.B., Blackpool; Mr. J. Hutchinson, London; Mr. A. Hope, London; Dr. A. Hill, Birmingham; Mr. H. N. Hardy, London; Mr. C. Holtom, Shirehampton; Mr. G. Hayes, London; Mr. G. L. Hill, Dursley; Mr. E. C. Hendley, Aldeburgh; Mr. W. H. Heygate, Cosham; H. F.; Mr. T. C. Hutchinson, London. (**I**) Dr. C. R. Illingworth, London. (**J**) Mr. H. L. Jones, Bristol; J. A. F.; Mr. A. M. Jessop, Redhill; J. P.; Junior Member; Jaundice. (**K**) Mr. C. H. Kerbey, Charmouth; Mr. B. C. Kendall, Penally; Mr. P. Q. Karkeek, Torquay. (**L**) Mr. J. N. Langley, Cambridge; Lieutenant-Colonel Army Medical Corps; Mr. C. D. Lucas, London; Dr. A. Longhurst, London; Mr. T. Leeds, London; Mr. L. Lewis, London; Messrs. T. H. Lloyd and Co., Leicester; Sir Joseph Lister, Bart., London. (**M**) Dr. A. Macfadyen, London; Medicus; Mr. G. D. Mackintosh, St. Anne's-on-Sea; Dr. N. Macleod, Aberdeen; Dr. J. Mackenzie, Burnley; J. D. E. Mortimer, M.B., Horley; M.D.; Mr. W. C. M'Donnell, London; Mr. A. C. Morton, North Walsham; A. E. Mahood, M.B., Birmingham; Member; Mr. E. P. Meadows, London. (**N**) Dr. A. D. L. Napier, London. (**O**) Mr. J. O'Connor, Dublin; Dr. P. O'Connor, Cork; Opsimathes; Mr. R. Odell, Hertford. (**P**) Parent. (**Q**) Queren. (**R**) Dr. A. Rankin, Glasgow; Dr. H. Renny, Sunderland; Mr. A. Reene, London; Dr. M. Ramsay, Bournemouth; Mr. W. Randall, Bridgend; Mr. H. Rainbird, Saxilby. (**S**) R. H. Shaw, M.B., Gt. Yarmouth; Dr. H. Skelton, Downend; Dr. F. F. Schacht, London; Dr. A. Sheen, Cardiff; J. O. Symes, M.B., London; Dr. W. Sloan, Dalry; Dr. Schofield, London; Mr. F. Sorel, London; Struggling Practitioner; Mr. R. H. Shaw, Stockport. (**T**) Mr. W. Tatham, Ilkeston; Mr. S. J. Thomson, Chartham; Mr. P. Tytler, Manchester; Traveller; Dr. W. Travers, London; Alderman B. H. W. Tree, Hastings. (**U**) Ubique. (**V**) Mr. C. C. Vincent, Haverhill. (**W**) Mr. J. Westaway, London; Mr. C. J. Whitcombe, Halifax; Dr. J. Wood, Liversedge; Mr. G. H. Whitaker, Bolton-le-Moors; Mr. J. Williams, Fontsvilla; Witness; W. P., M.B.; Mr. J. A. H. White, Durham; Dr. F. J. Waldo, London; C. H. Walker, M.B., Clifton. (**Y**) Mr. J. Yates, Birmingham; etc.

BOOKS, Etc., RECEIVED.

A Textbook on Diseases of the Eye. By Dr. H. D. Noyes. 2nd Edition London: H. K. Lewis. 1894.

International Clinics. Edited by Dr. J. Daland, Dr. J. M. Bruce, and Dr. D. W. Finlay. Vol. ii. 4th Series. Philadelphia: J. B. Lippincott Co. 1894.

Jahresbericht über die Leistungen und Fortschritte in der gesammten Medicin. Unter mitwirkung zahlreicher gelehrten herausgegeben, von Rudolph Virchow; unter special-redaction, von E. Gurh and C. Posner. xxviii Jahrgang. Berlin: August Hirschwald. 1894.

Lehrbuch der speciellen pathologischen Anatomie. Von Dr. J. Orth Berlin: August Hirschwald. 1894,

The Johns Hopkins Hospitals Reports. Vol. iv. Nos. 4 5. Report in Neurology II. Baltimore: Johns Hopkins Press. 1894.

*** In forwarding books the publishers are requested to state the selling prices.

SIXTY-SECOND ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION,

Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF DERMATOLOGY.

A. J. Harrison, M.B., President.

A DISCUSSION ON LUPUS.

Its Etiology, Pathology, and Relations to Other Forms of Tegumentary Tuberculosis.

I.—By Professor H. Leloir, M.D.,

Lille.

The idea of a definite cutaneous affection was first attached to the term "lupus" by two English dermatologists, Willan and Bateman. Up to the year 1887 there was no true definition of lupus. At this time I propose to define lupus as a slightly virulent form of tegumentary tuberculosis whose elementary lesion is a tubercle, reddish-brown in colour, of soft consistence, evolving slowly, destroying tissues either by interstitial absorption or by ulceration or by sclerosis. Lupus may invade all regions of the skin and adjacent mucous membrane. It begins generally in infancy, and may produce partial or general infection of the system.

The *lupoma* or elementary lesion may take the form of a nodule or of diffuse infiltration, *lupus nodulaire* and *lupus en nappe*. *Lupus en nappe* is formed by the confluence of tubercle nodules and diffuse infiltration. Unfortunately there still exists considerable disagreement in the opinions of dermatologists as to the exact nature of lupus. According to some, lupus is a cutaneous form of scrofula. Others admit a scrofulous lupus and a syphilitic lupus, while the Austrian school maintain that lupus constitutes a special affection absolutely distinct from scrofula and syphilis. This opinion is maintained by Virchow, Baumgarten, and Klebs. The French school have firmly maintained the scrofulo-tuberculous nature of lupus, a view which is now steadily gaining favour with the English, German, and Austrian dermatologists, and is supported by a vast amount of clinical, pathological, and experimental evidence.

It has been known since the time of Villemin that tuberculosis is experimentally inoculable. If lupus, therefore, is a form of tuberculosis, it ought to be possible to transfer it to animals. Owing to faulty methods of experimentation the early experiments in this direction ended in failure. In 1881 I carried out a series of experiments entirely modifying my *technique* of 1878 and 1879.[1] Under the improved conditions failure was rare, and I was able to arrive at the conclusion that lupus was a slightly virulent form of tegumentary tuberculosis.[2] In August, 1884, I showed that it was possible to produce a local or general tuberculosis in animals by inoculating them with the products of lupus. These observations have been confirmed by many observers. In 1888 I proved in the same experimental way that the atypical varieties of lupus were slightly virulent forms of tuberculosis. In 1889 I proved in a memoir presented to the Academy of Sciences that many glandular affections associated with lupus are not simple inflammatory adenopathies, as maintained by Hebra, Kaposi, and others, but were due to the invasion of the gland by the tuberculous virus conveyed by the lymphatics from the seat of lupus. The discovery by Koch in 1883 of the tubercle bacillus in lupus afforded bacteriological support to my opinion regarding the tuberculous nature of lupus. In 1889, 1890, and 1891 I demonstrated, contrary to the opinion of Baumgarten, that the suppuration which occurs in the lupus patch is not an essential characteristic of the lupoma properly speaking, but is due to the combined action of the agents of suppuration with the bacillus of Koch.

Of all forms of cutaneous tuberculosis lupus is the most frequent. We may inquire now the manner in which a patient becomes infected with lupus, or with the other form of tegumentary tuberculosis. The starting point of these diseases is the entrance into the skin or mucous membrane of the tubercle bacillus. We have no exact information regarding the manner of entrance; it probably takes place in one of the following ways:

1. Direct inoculation from without.
2. Indirect inoculation by continuity from deep tuberculous foci.
3. Inoculation by way of the lymphatics or the veins passing through a tuberculous focus more or less remote.
4. Infection of hæmatic origin.
5. Infection by inheritance.

Methods 1 and 2 are probably the most frequent ways of infection. In my treatise on scrofulo-tuberculosis I have entered at some length into the details of etiology, and will not trespass further on your patience by dilating further on this subject.

While lupus vulgaris represents the type of tegumentary tuberculosis, there are other varieties, including the scrofulo-tuberculous gumma,[3] which demand our attention.

Among these other forms are the ulcers which occur in phthisical patients, papillomata, such as the anatomical wart, and probably the disease which I described in 1884 under the name "suppurative and conglomerative perifolliculitis in patches." According to some authors, among whom are Besnier, the ulcer of phthisical patients is secondary to general tuberculous infection, while lupus and the anatomical wart are the results of external inoculation, forming the primitive tuberculosis of Brocq. I do not think this method of classifying the tegumentary tuberculoses according as they are derived primarily from external inoculations, or accidentally from internal general infection permissible. Both are examples of localised tuberculosis occurring, in the one class of cases, in subjects not yet infected generally, and in the other, in which the system is already general, infected with the organism. The diversity in the phenomena in the several varieties may be accounted for by the mode and seat of inoculations (inoculation from within outwards or from without inwards), the deposit of the virus in regions more or less vascular, the greater or less virulence of the virus inoculated, and the different degrees of reaction of the tissues.

Further, even in the case of phthisical patients it is not always proved that "true tuberculosis" of the integument is the result of general infection by the localisation by metastasis of the tubercle virus in the *locus minoris resistentiæ*. It is quite probable, as has been shown by recent researches, that the tubercle virus may be derived from the saliva or fæcal matter of the patient himself, and thus pass by direct inoculation into the skin and mucous membrane, giving rise to a new tuberculous centre presenting the characters of true tuberculosis, and the ulcer of phthisical patients.

The beautiful experiments of Charrin (since confirmed by Cornil, Babes, and myself) have shown that the tuberculisation of an individual does not confer immunity on him, and that in the case of animals rendered tuberculous by a first inoculation, it is possible to provoke a fresh local tuberculosis presenting the same course and lesions as the first. Finally, it has been shown by several authors, among whom are Lehmann, Hanot, and Lefèvre, that tuberculous ulceration, the ulcer of phthisical patients, may be consecutive to external inoculation.

What I have just said of "true tuberculosis" is equally applicable to scrofulo-tuberculous gummata, which many observers are inclined to range with the secondary tuberculoses. I have seen some remarkable examples of scrofulo-tuberculous gummata arising from external inoculation. But, on the other hand, it is certain that, in a great many cases, they may arise from internal infection, just as lupus vulgaris itself may, although some authors consider this to be always of external origin. That lupus may arise from internal inoculation is shown by the fact that it may occur around the mouth of a fistula leading to a deep tuberculous centre, and by the way in which secondary lupus nodules appear around a pri-

[1] Leloir, Recherches sur l'Inoculation de Lupus, *Comptes Rendus de la Soc. de Biol.*, 1882.

[2] *Comptes Rendus de la Soc. de Biol.*, 1883.

[3] Scrofulo-tuberculous gummata, whose tuberculous nature was suspected by Bazin, have been studied by Vidal, Besnier, Brissaud and Josias, Lannelongue, Volkmann, and Friedländer.

mary patch. But the clinical, anatomical, and pathological evidence goes to prove that lupus is most frequently the result of external inoculation.

To sum up, all forms of tegumentary tuberculosis are the result of inoculation of the integument with the tubercle virus. This inoculation is most frequently direct and of external origin, especially in the case of lupus and its atypical varieties. In some exceptional cases it is of internal origin, and in some way metastatic.

The clinical aspects of tegumentary tuberculosis varies immensely according to the mode of infection, the anatomical and regional seat of the inoculation, the quantitative, and perhaps also the qualitative, nature of the virus, the combination of this virus with other pathogenic microbes, the degree of receptivity of the skin for the tubercle virus, and the general and local reaction of the individual inoculated, etc. But these clinical forms, so polymorphous in their aspect, have essentially the same nature, and the careful observer will often be able to detect transition forms, proving their identity of origin.

The different varieties of tegumentary tuberculosis may at present be classified as follows:

A. True lupus, non-exedous and exedous.
B. Atypical varieties of lupus: 1. Lupus vulgaris colloide. 2. Lupus vulgaris myxomatosus. 3. Lupus vulgaris sclerosis and demi-sclerosis. 4. Lupus vulgaris erythematoïd.
C. Scrofulo-tuberculous gummata, dermic and hypodermic.
D. Ulcerative tuberculosis: 1. Secondary ulceration (type Vulpian, Coyne, Jahrisch, Vidal). 2. Primary ulceration (type Schmann, Hanot, Lefevre).
E. Mixed tegumentary tuberculosis resulting from a combination of two or more of these varieties.

From a prognostic and pathogenic point of view the tegumentary tuberculoses may be divided into primary and secondary, according as they constitute the first tuberculous centre in the patient, or are secondary to other tuberculous manifestations. The term lupus may be preserved, just as we retain the word scrofulo-tuberculosis, because in its classical example it presents special characters which distinguish it from other varieties of tegumentary tuberculosis. These special characteristics are sufficient to constitute a special group of the cutaneous tuberculoses.

From a clinical point of view lupus is distinguished by the particular aspect of its lesions (lupomata), by its chronicity, extensive course, its appearance generally in childhood, its excessive rarity in certain territories frequently invaded by "true tuberculosis," for example, the tongue, vulva, anus, the mucous membranes of the external genital organs of man, etc. Lupus is further remarkable for the concurrence of good health which the patients enjoy, the difficulty with which it produces general infection, as is shown by the fact that vast areas of the skin may be infected with lupus for years without the disease producing general inoculation.

Histologically, lupus is remarkable for the number of giant cells by a less rapid caseification, by a more abundant vascularisation than "true tuberculosis."

Bacteriologically, lupus is distinguished by the small number of tubercle bacilli which it contains. Finally it is distinguished experimentally by the very special technical conditions under which its products are transferable from one animal to another. These variations need not surprise us, if we bear in mind the paucity of bacilli present in lupus, the poorness of the skin as a soil for tubercle, the temperature of the skin below the optimum temperature of the tubercle bacilli, and possibly the continual movements of the skin; the condition of unrest being, as Koch has shown, highly unfavourable for the development of the microphytes.

We may thus conclude that the special characters of lupus depend on the microphyte and on the soil which maintains it. This fact enables us to comprehend more clearly two clinical phenomena well worthy of our notice. When a deep tuberculous focus travels to the cutaneous integument, its manifestation in this external position takes the form of lupus vulgaris, as was shown by Neisser, Schuller, Volkmann. On the other hand, it is almost impossible, as Michelson has pointed out, to trace accurately the limits which separate lupus of the mucosa from tuberculosis of the mucosa, because it is only in the cicatrices that we find the characteristic lupus nodule when this disease attacks the mucous membranes.

Although the classical type of lupus has special characters of its own, it is impossible to deny the close relationship which exists between its atypical form and the other varieties of tegumentary tuberculosis. Thus tuberculous gummatous lupus passes insensibly into scrofulo-tuberculous gummata. Lupus papillomatosus and lupus sclerosis in certain of their varieties cannot be distinguished from certain tuberculoses of external origin, for example, anatomical tubercle (tuberculosis verrucosa cutis). Certain exceptional forms of ulcerative lupus rich in bacilli present close analogies with the so-called true ulcerative tuberculosis of the integument. On the other hand, we sometimes see true tuberculosis of the skin and mucosa which closely resembles lupus. We not infrequently meet with the several varieties of tegumentary tuberculosis in the same subject, sometimes occurring simultaneously (which is rare), but generally successively, lupus vulgaris of the ordinary type being followed by the sclerosed or papillomatous variety, by scrofulo-tuberculous gummata, with their complications, lymphangitis, tuberculous adenopathies, or even by true tuberculosis of the integument.

Lupus may be derived from other forms of tuberculosis, such as glandular tuberculosis and tuberculosis of the joints and bones. It may be derived even from visceral tuberculosis, either of the patient himself or some other patient. Conversely, lupus may terminate in visceral and general infection of the subject. Histologically the lupoma cannot be distinguished from the tuberculoma, notwithstanding the researches of Baumgarten and Grancher. The pathogenic processes are merely more rapid and more pronounced in tuberculosis than in lupus. The specific element—namely, the bacillus—is present in both, though less abundant usually in the lupoma.

Since 1882 I have proved beyond all doubt the inoculability of lupus. The failure of the experiments of some authors depends upon faulty methods. Arloing's distinction (1888) between the products of scrofula and those of true tuberculous (namely, that the former were virulent only to the guinea-pig, while the latter were virulent to both the guinea-pig and the rabbit) breaks down as regards lupus, which can be transferred to both these animals. My opinion has subsequently been confirmed by White, de Renzi, Nocard, and even by Arloing himself.

II.—NORMAN WALKER, M.D.,

Assistant Physician in Dermatology, Edinburgh Royal Infirmary.

DR. NORMAN WALKER said there were two definite ways in which tubercle bacillus might show its action. In one class of cases it showed its presence by the formation of a very large number of tuberculous foci of a cellular nature, in other cases by the comparative scantiness of tuberculous foci, and in the production of a large amount of fibrous tissue. The difficulty was to draw a line and to say, Here lupus ends, here tuberculosis begins. That difficulty was so great, that it would be best cleared away by cutting the Gordian knot, and describing all cases as varieties of the same condition, for that the same cause was at the bottom of all few will be found to deny, while there were many varieties of lupus, ranging from lupus vulgaris to lupus psoriasis. Tuberculosis of the skin, as it is at present described, was a rare disease. Dr. Crocker, quoting Professor Chiari, of Prague, said that it only occurred 5 times in 3,000 cases of tubercle. The other forms, tuberculosis verrucosa cutis, etc., were also rare affections. In his opinion the differences were not so great as to warrant the assertion that some were tuberculosis of the skin and others lupus. Those who relied entirely on ocular observation were apt to be mislead by processes which, while inexplicable to the naked eye, were readily cleared up by the microscope. Were the lung, for instance, open to inspection during life, minor differences would no doubt be found in the cases now classed as tuberculosis. An eighteenth-century physician, relying only on the naked-eye appearances, described no fewer than twenty different kinds of phthisis. No doubt some of those belonged to the pneumokomoses, but the majority must have been forms of tuberculosis. The true tuberculosis of the skin, as described by Chiari and others, was situated near some mucous surface, and there was constant repeated infection with tubercle. Deposited on the surface of the skin, it led first to the destruction of the surface—the condition, tuberculous ulcer produces—while

it was evident a direct infection in lupus could often be traced; the primary lesion must be of an exceedingly insignificant nature, for the earliest lesion of lupus was always in the skin. Thus it would appear that there were some, though far from adequate, grounds for drawing a distinction between the conditions. The different appearances were due to secondary changes, and not to any subtle difference in the tuberculous process. There were two very definite ways in which the tubercle bacillus might show its action, in one by the presence of a very large number of small tuberculous foci of a cellular nature, and in the other by the comparative scarceness of the tuberculous follicle, and the production of a large amount of fibrous tissue. The many varieties and subvarieties nearly all owed their existence to some secondary change or infection. Blocking of the lymphatics, pyogenic infection, and repeated mechanical irritation produced in cases apparently simple the most diverse varieties. The ordinary form of "ulcerative" lupus was distinctly produced by coccal contamination, and was as a rule a very markedly catarrhal process, and not so marked an ulceration as was supposed. With regard to the treatment of anatomical wart, he found it very far from encouraging.

III.—Henry Waldo, M.D.,
Physician, and Physician in Charge of Skin Department, Bristol Royal Infirmary.

Dr. Waldo said that a feeble circulation and cold extremities rendered subjects susceptible. If the tuberculous origin of lupus were not accepted, no other could be suggested. Kaposi and others who objected suggested no other. A phthisical family history was very common, especially in erythematous lupus. The same structures were present in miliary tubercle, in scrofulous lymph glands, and in lupus, as well as the giant cells of Schüppel, also the bacillus of Koch. But lupus did not appear to be hereditary, nor did it affect the general health. It very rarely occurred in scrofulous or phthisical patients, and it only rarely caused inflammation of adjoining lymphatic glands.

IV.—Dr. Unna,
Hamburg.

Dr. Unna objected to the use of the term "true tuberculosis." Lupus was the true tuberculosis, and formed 95 per cent. of all forms of tegumentary tuberculosis. He could not agree with Dr. Norman Walker as to the treatment of anatomical wart. He cured it rapidly by surgical means.

V.—H. Radcliffe Crocker, M.D., F.R.C.P.,
Physician, Skin Department, University College Hospital.

Dr. Crocker only wished to touch upon two points: First, that while no doubt lupus, lupus verrucosus, and acute tuberculous ulcer, etc., might be comprehended under the term tuberculosis of the skin, yet it was still necessary to use other terms indicating which form of tuberculosis of the skin was under consideration, and it would be better to use the old terms than to invent new ones. With regard to *post-mortem* warts, he agreed with Dr. Unna, that they were quite curable, and that without excision Unna's strong salicylic acid persistently applied would remove slight cases, but more severe cases required a subsequent stronger application to the papillæ, denuded of their horny covering.

The compulsory notification of infectious diseases has been put in force in Lyons.

Cremation in Bavaria.—By a Ministerial decision recently given in reply to a petition addressed to the Bavarian Government by the Cremation Society of Munich, cremation has been declared illegal in the present state of the law of that country.

An Uncommon Source of Lead Poisoning. A series of cases of lead poisoning in a family have been traced by Dr. H. Strauss, of Giessen, to the material used in stopping the millstones in which the flour for the bread of the household was ground. The stopping contained a very large quantity of sugar of lead. Dr. Strauss states that a more extensive epidemic of lead poisoning at Chartres about thirty years ago was also traced to the use of a stopping for millstones which contained a large quantity of lead.

SECTION OF PSYCHOLOGY.

G. F. Blandford, M.D., President.

Wednesday, August 1st.

DISCUSSION ON THE PREVENTION OF INSANITY.

[After the delivery of the Presidential address by Dr. G. Fielding Blandford (published in the British Medical Journal of August 4th, p. 256), the following discussion took place on the topic with which it dealt.]

I.—W. Lloyd Andriezen, M.D.Lond.,
West Riding Asylum.

There are the following important points which require further discussion: (1) The increase of neuroses. This is borne out by the Registrar-General's return for the years 1845-90, both for England and for Ireland. This latter was shown by Dr. Drapes in his paper at Dublin (On the Alleged Increase of Insanity in Ireland, June, 1894), and as I have also shown in my paper on Insanity and Race Decay, from the English returns, read at the meeting of the Medico-Psychological Society at Dublin, 1894. (2) The curves plotted from these returns are exactly parallel to those of the returns of cases of insanity for the same period. This parallelism cannot be explained by the statement that more cases of insanity are coming under cognisance. Allowing for that and similar factors, there is on the whole a slight and steady increase of both insanity and its twin sister, the whole group of the neuroses. The latter is shown not only by the curves for England and Ireland for 1845-90, but according to the returns from American and German writers, and the great French teachings of Charcot and his pupils. (3) *Per contra*, contrast the curves of zymotic and infectious diseases for the same time. These curves show a gradual diminution—a point also emphasised by Haycraft in his lectures on Darwinism and Race Progress (1894). These curves are the reverse of those for the neuroses and insanity. Why? With the growth and development of hygienic and preventive (including antiseptic principles) medicine of the last forty years, these zymotic and infectious diseases are getting less; we are slowly preventing them. But there is no such thing as regards insanity; we have never had as yet any system of preventive medicine in any respect comparable to the other. The mortality from major surgical operations has fallen from 16 and 17 per cent. in the fifties, to 1 to 2 per cent. in the eighties and nineties. —(Lister's and his followers' results.) (4) The increase of insanities and neuroses is owing to the increase of their factors. These factors are two, as classified by Mercier, viz., Heredity and Stress. Illustration of Stress: This is exemplified by the case of cretinism. People settle in the cretin-producing valleys, and from the influence of the environment their children in the second and third generations get goitre, and in the 4th and 5th become cretins—sterile idiots who cannot propagate. Yet the race is not stamped out. Fresh people come and settle in these localities, and thus keep up the race of cretins. (5) With the growth in the complexity and severity of the stresses of social and civilised life, the greater are the failures which fall short in the race. The conditions of progress throughout the whole of organised life are inevitably associated with the failure of a large number to fully realise or attain high development—shown by Darwin and all other workers since. With increase of stress, therefore—which is a fact—there is an increase of its results, that is, some types of insanity. (6) The study of the poorest and lowest class—those labouring under the worst conditions of life and progress—(the class where *la misere* reigns supreme) shows that this class is increasing. I have observed this in my own investigation amongst the people, and the ground has been admirably cleared by Professor Huxley, who has written ably on the same subject. (See on this point Huxley's *Social Disease and Worse Remedies*, and in Kidd's *Social Evolution*, 1894.) I have fully gone into this subject in my discussion on insanity and race decay at Dublin, to be shortly published in the British Medical Journal. (7) There is increase of hereditary

intensification in some of the neuroses and insanities, for many of these subjects breed and intermarry, thus intensifying their morbid tendencies. This I have fully shown elsewhere in reference to the study and conclusions to be drawn from the great Juke's family of America (for example, in my Dublin paper). Thus the lower group of the neuroses leads to the more virulent classes of the paranoias, of general paralyses, and the more chronic class of the degenerative psychoses. Independent observation and the writings of Maudsley, Bastian, Strahan, and others of our own workers lead to similar conclusions. (8) Why are some of our general paralyses increasing in virulence of type? and why are our paranoias increasing, or at any rate that both these are appearing earlier in the race? This falls in with the hereditary sublaws of anticipation in heredity. We shall give pathological evidence in support of this in a future publication. (9) It is no good appealing to the neurotics themselves; they cannot perceive, and their selfishness of brain prevents them from acting up to it—they cannot perceive that by marrying they are propagating a vice which is potent for the evil of their progeny. In fact, they tend to congregate one with another and to intermarry, thus intensifying their morbid tendencies in their children. (10) Overforcing of children by modern education. This does ill in two ways: *(a)* some break down early directly from the stress; *(b)* others get to such a pitch of exhaustion that their future reproductive (mental) powers decay, and thus many a student who has done well and worthily in his examinations soon ends there. He takes up his profession, but does no further work in it; his originality and powers of research are already exhausted, like the sterile fig tree he exists and goes on, but all his productive power is lost; he can henceforth in his profession be only a hewer of wood or drawer of water, not able to produce anything to contribute to the advance of medical or other science: he has already become sterile. Let us look round our own profession to find hundreds of such cases. Are we becoming like the fig tree? Lastly, seeing that both factors of stress and heredity are not decreasing, what can we do for pointing out a way for the diminution of the insanities? I agree with our President, and have already expressed my views on this subject at Dublin—that is, we can work on two lines: *(a)* by our public utterances and publications gradually influencing public opinion; *(b)* by gradually spreading our ideas amongst friends and others in our own circle, to cause knowledge concerning the cause of the evil of insanities to spread, and thereby *(c)* prepare slowly the way for legislation in the future—legislation which must come when we have sufficiently prepared public opinion first for its pathway. We look forward by so doing to prepare the way when the twentieth century (now not far off) will see legislation brought forward for the prevention of the insanities. Nature herself stamps out the insanities herself; they end in sterile idiocy. But before such a consummation can be reached, a vast and intermediate progeny have to be gone through, exhibiting all the intermediate phases of the insanities and the criminalities. Our work has to do not only with the insane, but the criminal (epileptic, alcoholic, paranoiac, etc.) classes; in all these respects our work lies in preparing the way for preventive or restrictive legislation. *for we do not cure the insanities*; for as Thurnam, Tuke and Bucknill, and Pliny Earle have shown—and it is still true—"out of eleven cases of people who get insane, nine ultimately die insane, and, of the remaining two, but one entirely recovers." As regards vices (masturbation and other excesses), including alcoholic excesses, we have slowly to teach and influence public opinion too; but the subject is getting too vast, and I must now conclude.

II.—HENRY BLAKE, M.B.,

Honorary Medical Officer Great Yarmouth Hospital.

DR. BLAKE said: With regard to management of children with neurotic inheritance: 1st. Their neurotic parents are incapable of guiding them wisely; on the contrary they exaggerate the children's morbid characteristics in education, in short, manufacture lunatics. 2ndly. In the education of such cases special attention should be paid to the inculcation of simple religious principles, of good conduct, and as little as possible to complicated questions of dogma.

III.—G. E. SHUTTLEWORTH, M.D.,

Late Medical Superintendent Royal Albert Asylum for Idiots.

DR. SHUTTLEWORTH laid stress on the importance of separating as much as possible children with neurotic inheritance from their neurotic parents during the educational period. Such parents were often the worst possible guardians for their children; they acted and reacted injuriously on each other. The importance of this course is illustrated in the improvement frequently seen when feebleminded children are sent to institutions merely for improved surroundings and discipline, apart from training; and a case was instanced of a "highly-strung" boy who, with the best educational arrangements, did not improve while at home; he improved *more* when sent under care of a governess to live at a farmhouse; but was improving *most* when placed with the same governess in an educational establishment under medical supervision, where there were other pupils with whom he could be trained. As to cousin marriages, Dr. Shuttleworth agreed with the President that with a common neurotic inheritance they were most hazardous; though the statistics of institutions for idiots did not show such a preponderance of the offspring of consanguineous marriages as might have been expected. There were, however, numerous sad instances of several defective children in one family, the offspring of neurotic cousins.

IV.—REES PHILIPPS, M.D.,

Medical Superintendent, Holloway Sanatorium, St. Ann's Heath.

DR. REES PHILIPPS took exception to one recommendation made in the very able and interesting address to which he had listened with such pleasure, namely, that children should be cautioned against contracting the habit of self-abuse. He thought that any reference to such a thing should be avoided as likely to suggest evil. For himself he would say that he was educated at a great public school, where he identified himself actively with athletics, and that until he became a medical student he had never heard of such a thing as self-abuse. He thought that if athletics were carefully cultivated self-abuse in public schoolboys would be very little heard of.

V.—EDWIN GOODALL, M.D.,

Medical Superintendent West Riding Asylum.

DR. GOODALL hoped the practical address of the President would have full publicity. Heredity and alcoholism were the two main factors they had to contend against. He would put under control alcoholics wherever possible. The factor of alcoholism would be in part dealt with in treating that of heredity. It was necessary in these questions that medicine should point out the remedy and law should apply it. As regards the after-treatment of those who had been in asylums, he looked forward to the time when, in the case of married people, a heavy tax (or some strong deterrent measure) would be levied upon children borne after discharge, and in the case of single people it would be made penal to marry; further, that a heavy tax would be raised upon illegitimate children as far as possible. He feared that, in a free country like England, it was futile to look for legislation in this matter. He expected that the first movement would take take place in a State-governed country like Germany, where it was possible for the advanced minority to legislate for the uneducated masses.

VI.—CONOLLY NORMAN, F.R.C.P.I.,

Resident Medical Superintendent, Richmond District Lunatic Asylum, Dublin.

DR. CONOLLY NORMAN looked more hopefully to the future than the President. He thought that we were apt to be overanxious and to overlook the operation of two factors—one which had been so well elucidated by Morel and his followers, namely, the tendency of insanity and the higher neuroses to limit themselves by producing infertility; another, the enormous strength of the tendency to reversion to the healthy type. If a man had an insane father he might have had thousands, perhaps millions, of sane ancestors. The speaker doubted whether the knowledge now possessed was at all sufficient to entitle us to assume a position so invidious and perhaps dangerous as that of directors of the public con-

science. If we assume such a position our descendants might have small reasons to be obliged to us for having framed laws on very insufficient knowledge. The medical profession must not assume the absolute powers which belonged at one time to another calling. Comte had said that medicine erred from the true truth when it dissociated itself from the Church, and that it would never attain its due power till it was again bound up with the Church, and thereby acquired the power to enforce sanitary laws as religious enactments were of old. Were we to assume the attitude of Comte? There was little use in endeavouring to ask even sane and intelligent persons to look from the immediate satisfaction of the sexual functions, which appeared to them to be the immediate incentive of their actions, onwards to what was known—speaking from the racial point of view—to be the real end of the sexual act. The fact that Nature seemed to work for remote ends by immediate motives ought to be a hint to us in dealing with all men and women. But in dealing with the neurotic and the half crazy it would be generally found perfectly vain to appeal to higher and remoter motives. The speaker was too radical to care at all for State-governed countries or their methods. Whatever crimes liberty was responsible for, he thought liberty was safest for the race in the end. He quite disowned any intention to appeal to Providence or to Nature, since, as far as he understood either word, nothing could happen in the world against the will of Providence or contrary to Nature. Some small comfort might be derived, perhaps, from the consideration of the fact that the recorded increase of the neuroses largely meant our modern knowledge and recognition of neurotic diseases. It was difficult to dogmatise from individual cases on such subjects as race decay. Reference was made by Dr. Andriezen to the twelve Cæsars, who were, no doubt, all crazy, but they were not late Roman Emperors, but early ones, and during the following centuries, when, according to theory, the degeneracy of the Roman race was much more advanced, the imperial chair was dignified by the genius of Justinian, Julian, Marcus Aurelius, and Diocletian. Even degeneracy was not an absolute inclined plane. With regard to masturbation, the speaker agreed with Dr. Philipps as against the President. The worst cases of masturbation he had ever seen were in persons who had been warned against it by too anxious parents.

VII.—Sir Frederic Bateman, M.D., F.R.C.P., LL.D.,
Senior Physician Norfolk and Norwich Hospital.

Sir F. Bateman agreed entirely with the remarks of the President as to the desirability of parents cautioning their children against the vice of self-abuse. He considered this simply as a question to be decided by experience. As a consulting physician of considerably more than a quarter of a century, he had often been consulted by persons who had been addicted to self-abuse in their school days, and he was forced to the conclusion that the vice was very frequent, and, moreover, that many boys were totally ignorant of the nature of the sexual function. He thought the same ignorance existed in girls, who, brought up in a perfectly pure atmosphere, frequently reached the age of puberty without the smallest knowledge of the physiology of the sexual system.

VIII.—Arthur Finegan, L.R.C.P. and S.I.,
Resident Medical Superintendent, District Lunatic Asylum, Mullingar.

Many of the speakers, in referring to the cause of masturbation, dwelt on the mental cause of the practice. It is my opinion that many cases can be traced to a physical cause—for example, tight prepuce. The Jews are singularly free from this vice, and it is believed they as a race are comparatively exempt from other neuroses. I have been consulted by parents whose children suffered from the practice of masturbation at a very early age; but in each case I found the cause to be the result of a contracted and elongated prepuce. On dilating this all symptoms of the disease disappeared.

IX.—Bonville Fox, M.A., M.D.,
Physician, Brislington House Asylum, Bristol.

I do not believe that any large number of boys can grow to manhood without some of them discovering that they are sexual animals. The reproductive organs must develop as any other. If a boy is allowed to grow up in ignorance of the dangers and temptations inseparable from the development of sexual instincts and activities, how can he be expected to curb and check those instincts? The knowledge must come in course of Nature, let not the wisdom linger to tell him how those activities are to be controlled. I do not believe that physiological knowledge can ever be a source of mischief if properly conveyed, or that a father who warns his son against the dangers and temptations which the development of his organism must sooner or later bring to him, does anything but his clearest duty, or that silence and absence of warning can be anything but the clearest betrayal of a parent's trusts and responsibilities.

X.—J. Wiglesworth, M.D.,
Medical Superintendent County Asylum, Rainhill.

I am glad that the President did not advocate State interference in the matter of the regulation of marriages, for Parliament is a most unfit agent to deal with the question. We must look entirely to the development of a healthy public opinion, the social sanction being quite strong enough to effect any amount of change, if properly directed. But have we sufficient knowledge at present to speak with sufficient authority? Where one or both parents are, or have been, actually insane, the case is comparatively simple, but we must all have seen cases in which the parents have been sane, but the children, or some of them, insane or idiotic. Then, again, there is the well-known connection between certain forms of genius and insanity. Would not the world be poorer if some persons with a strong tendency to insanity had not lived? And is it desirable that we should all be brought down to a dead level of sane mediocrity? What we want is a far more minute knowledge of the laws of heredity than we at present possess. The mere accumulation of observations, thought it may be the only course of investigation open to us, may perhaps help to give us the requisite information: and the interrogation of Nature by experiment, though it would no doubt be fruitful in results, is for the most part inadmissible here. But until we do get such increased knowledge our *dicta* must remain empirical and unsatisfactory.

XI.—Hack Tuke, M.D., F.R.C.P., LL.D.,
Late President Medico-Psychological Association.

Dr. Hack Tuke fully agreed with Dr. Wiglesworth that we are still so ignorant of the laws of heredity that it is very difficult to decide in special cases on the degree in which certain persons should be advised not to marry. It is admitted that only a minority of the children of insane parents became insane. Again, in the case of the deaf and dumb, he might mention the instance of the superintendent of a deaf and dumb asylum who fell in love with a lady student. Of course every one protested against their marriage, and said there would be deaf and dumb children: they married and had children. The children were perfectly healthy, a son becoming the able successor of his father as the superintendent of the same institution. He believed the children in the third generation were free from deaf-dumbness. Take a reverse instance. The parents were quite healthy, yet out of eight children five were deaf and dumb. All this does not militate against the doctrine of insane inheritance, but does show the extreme difficulty of giving advice to persons contemplating marriage in whose family there is insanity. There is besides always the chance—and more than a chance—that in inducing parties to give up a contemplated marriage they subsequently marry quite as unwisely, or even more so. In other cases our veto has been followed by disastrous results to the persons themselves, and in a still larger proportion of cases the physician's advice is not taken, sometimes with and sometimes without evil consequences.

XII.—C. Mercier, M.B.,
Lecturer on Neurology and Insanity, Westminster Hospital.

Dr. Mercier merely desired, as a former member of a private school and of one of our large public schools, to corroborate every word Dr. Rees Philipps had said.

XIII.—J. Batty Tuke, M.D., F.R.S.E., F.R.C.P.E.,
Morrisonian Lecturer on Insanity, Royal College of Physicians, Edinburgh; Member of General Medical Council.

Dr. Tuke asked why should we restrict marriage in relation to insanity only? Do not phthisis and other diseases affect the public as much? Insanity has been spoken of as a disease. It is not so. It is a mere generic term, applicable to various morbid conditions. Are we prepared to advise the State to prevent marriage of the subjects of all of these conditions? Do we know enough to warrant dogmatism? Is our system of treatment all it should be? No, we ought to exercise great humility in speaking on the whole subject.

XIV.—J. S. Bolton, M.D.

Dr. Bolton drew attention to the effects of quack literature upon the subject of masturbation as tending to unhinge the minds of young men more even than the vice to which they were addicted.

XV.—T. Outterson Wood, M.D.,
Formerly Lecturer on Mental Diseases University of Durham.

With regard to the question of masturbation raised by Dr. Rees Philipps and others, Dr. Wood desired to say that if these gentlemen could see, as he was in the habit of doing, the disastrous results of masturbation as observed in the outpatient department of a public hospital, they would considerably modify their views with respect to parents warning their children against the habit—a step he strongly approved of.

XVI.—Seymour Tuke, M.A., M.B.

Dr. Seymour Tuke thanked the President for his excellent and instructive address. The most we can expect in our time is the lessening of insanity; the question of prevention is enormous, and we should be proud of ourselves if in the present generation we can, by more knowledge of the subject, and more still by our influence as psychologists on public opinion, point to even a reduction. I hail with pleasure the decision of the great examining bodies, to add psychology to their subjects, and hope much from the extension of knowledge of the subject among medical men generally in the future.

XVII.—Fletcher Beach, M.D., F.R.C.P.,
Late Medical Superintendent Darenth Asylum.

Dr. Beach said though at the present time we may not be able to enforce on the public the opinions we hold, and prevent marriage between neurotic persons, yet there is a hope that in the twentieth century, when according to Lord Salisbury and Mr. Gladstone biology will hold a sway over the people, they will then pay more attention to what we say, and our suggestions will be considered as orders. With regard to consanguinity, he held the opinion that it does not play an important part in the production of imbecility. From an inquiry into the subject he found that it did not account for more than 2 per cent., and in those cases other causes were present which were sufficient of themselves to produce imbecility.

DISCUSSION ON NEURASTHENIA AND ITS TREATMENT.

I.—George H. Savage, M.D., F.R.C.P.,
Late Senior Physician and Superintendent Bethlem Royal Hospital.

What is Neurasthenia?

There was once a professor who being asked what he knew upon a certain subject, replied, "Nothing; I have not even lectured on it." This is rather how I feel in relationship to the subject on which I am to open a discussion. We have a disorder whose very name is not without difficulty, for the classical scholar only recognises it as neurasthēnia, while we medical men are content to call it neurasthēnia. Is it a new disease? As we advance from the known in medicine, the definite, we must stretch forward into new and undefined territories, and there we shall, amid much that is confusing, slowly find other groupings of symptoms, which for convenience we may treat as if they were definite. The elements of old have been divided and defined, and even now we see signs of the further extension of their division, what was thought to be elemental being found to be divisible.

We have passed into a more definite state of knowledge in regard to hysteria and hypochondriasis, and now we find among the nervous residuum groups of symptoms which may fairly be studied together. The term neurasthenia or nervous weakness I accept, but I cannot say that I accept "nerve or brain fatigue" as an equivalent; but I shall have to refer to this again later. Neurasthenia is looked upon as a nervous disorder in which there is both weakness and irritability of the nervous system, and two groups have been formed, namely, the one in which there is more weakness and the one in which there is more irritability. It has been shown to be common as a kind of connecting link between health and insanity; but one of the most interesting points to me is that, just as with hysteria and with hypochondriasis, so with neurasthenia, the greater number of patients remain neurasthenic and do not become insane. A doubt some develop "*folie de doute*," and others become melancholic and suicidal, but for all that very many remain for years with no further evidence of mental loss.

Etiology and Pathology.

I feel that I cannot fairly approach the treatment without at least saying a few words in relationship to the etiology and the pathology of the disorder. First, I would desire to express my opinion that it is more a disorder of function than a disease of tissue. I shall have many who will say they fail to understand the distinction, but I am free to confess that I still believe in disorder of the functions, more particularly of the higher functions, without there being any very evident signs of tissue change. There are such things as derangements. One's watch does not keep correct time, not that it is degenerating, but that it is not in the established order, and it is not necessary to find a special pathology for the state. Our higher parts may readily fall into changed relations, and yet they may be individually healthy.

I believe there is a neurasthenia of diseased tissue, and there is a neurasthenia of disordered function, and that this latter may depend on some disorder either of the central or the peripheral nervous elements. Further, I believe this derangement may be acute and temporary, or it may be chronic and hardly curable. I do not believe this state is very common as a result of overwork. I constantly hear of the causes of breakdown, and I find so many causes given that I remain in doubt as to their causative power. That the persons who break down are often of the anxious-minded type I admit; but the evidence of overwork is not convincing to me. I cannot admit that the toxin theory of the causation appeals to me in a convincing way either. The result of over-muscular work has been shown to be associated with the production of acids in the tissues, and it has been shown, though not in so conclusive a way, that with action of nervous tissues there is a tendency to the production of acid also; many and most refined experiments have been performed to show that with exercise certain changes take place, and with any further extension of such exercise there is further chemical change, but I do not believe the overwork is provable, and I do not think we are justified in attributing the neurasthenia to chemical changes alone. If I had to give theories as to the causation, I might try to fit the causation in the scheme of Hughlings Jackson, and suppose that there was the removal of the very highest function of the developed cortical area, that the disease of the nineteenth century is, in fact, the disorder of the most developed—evolved—central nervous area, and that the result is some loss of the higher power and the negative symptoms produced by the action of the uncontrolled parts. This may be true, but I am inclined to think that we may go further, and consider that neurasthenia is a disorder of the sensory rather than of the motor side, and though it may appear to be rather a fanciful comparison, yet I cannot help comparing the two disorders of advancing civilisation, general paralysis and neurasthenia; and I shall presently place before you some of the points of contact of these two morbid conditions. My suggestion is that whereas general paralysis is the result of degeneration of the central nervous system, neurasthenia is the result of disorder of the peripheral nervous system;

that in fact just as we get the individual falling out of relationship with the outer world through decay of the central nervous system, so we may have very similar symptoms resulting from change in the peripheral impressions which are conveyed to the centre.

It has been shown that the nervous system is the means of notifying to the individual the state of his surroundings, and by appropriate mechanism enabling him to accommodate himself to the varying surroundings. It is known that this to be done healthily should be done unconsciously, that in fact we develop from the conscious into the unconscious reflex. Again, we have to recognise that every vital act is followed by repair; in fact, every stimulus has a double action—it causes the natural reaction, but it also acts as a stimulant to fresh nutrition. Every stimulation of nervous tissue should be followed not only by the appropriate reaction but automatically the tissue should adjust itself for the receipt of fresh impressions. I believe in neurasthenia as a rule the defect is in this power of repair; the nervous stimulus is conducted, not normally, but with undue consciousness, and the power of repair is defective from one cause or another. This defective power of repair may be initial as a result of the habit of the tissue due to some defective heredity, or it may be due to shock or commotion in the nervous system itself, or it may result from the condition of the blood as in uric acidæmia, and consequently will have to be met in different ways in different cases. I believe a very great deal of our success will depend on our recognising that the cause of neurasthenia may be outside of us, and that it is not necessarily the result of brain disease, that is, of local brain tissue change. In this, as in so many other cases, there is no fixed dividing line between the normal and the morbid, and I am inclined to think that if I gave, in brief only, the many symptoms which are attributed to neurasthenia that there are very few of my audience who would not be inclined to believe that they have got it themselves. Everyone from time to time suffers from lack of energy without definite cause, from restlessness with defective attention and general *malaise*: such symptoms may arise, and very commonly do, from purely extraneous causes, and I do not think it at all helpful for us to search only in the centres for what may be due to the periphery. In one man a thunderstorm impending causes many of the symptoms of neurasthenia; the east wind to one may act as the air of a hot valley to another; one man finds certain places "relaxing," while another does not, and are we to say that this personal peculiarity is due to toxins and not to external influences? Our explanations depend on the advance of science, and nowadays we have to call in chemistry and physiological chemistry to support or replace the bacteriology of the last few years, and as we go further we shall have to look for explanation of vital acts in the forces which are most nearly allied to vital force. I believe we shall find the electrical conditions are nearer than chemical ones, and that the electrical laws will more nearly resemble the vital ones, and we must expect to find help from study of the laws of electrical function. I believe it will be a good thing when our Section studies electricity more, not necessarily as a therapeutic agent, but as a guide to observation.

My own feeling, then, is that in uncomplicated neurasthenia we have conditions which depend to some extent at least in inability to repair after action, and that this depends to a great extent either on the peripheral nerves and their roots or on the sensory side of the nervous system. Wilks long ago pointed out that we did not sufficiently study the changes in sensibility in various nervous disorders.

Before passing on I will refer to some of the similarities existing between general paralysis and neurasthenia.

Agreement.—Irritability and tendency to emotional display; weakness of will and lack of power of attention; rarity of hallucinations of the senses; tendency to exaggerations and feeling of self-sufficiency; similar hypochondriacal ideas; most common in middle-aged men; only indirect heredity; in both tendency to irregular action of heart and respiration; in both sleepy tendency.

Contrast.—Chiefly the one is progressive and fatal, the other not; the one often syphilitic, the other not.

Treatment.

There are no two cases of neurasthenia exactly alike, therefore I have to give very general directions for their treatment. I would begin by saying, whether the patient is suffering from overwork or not, I believe that he must have rest. But rest is purely relative. What is rest to one man is not rest to another. I find that in many cases in the earlier stages rest in bed for a time is very useful. Thus a young active-minded officer who was always on the worry about doing his duty was sent travelling about by various doctors, being told not to give way, but to struggle against his feeling of langour. With a will he set to drive away the demon of weakness, with the result that after all the spurring the nervous system finally gave out, and I then saw him, and sent him to bed with the best results. I believe very strongly in bed in a very large number of the cases. In some simply lying in bed is enough, while in others massage is of the utmost service. I have recently seen two clergymen of the highly nervous, conscientious type, but who neither had too much work, yet they broke down, and bid fair to become melancholic. One managed to gain 1 stone in one week and 4 stone in 6 weeks under the bed and massage treatment, and with proper care, the corner having been reached, a straight road may be followed leading to health and work. I do believe in rest, but I do not believe in the ordinary prescription of travelling; in many cases a yachting cruise in summer seas is of the utmost value if the patient have a suitable companion, but there is some danger in sending these cases away for long voyages without special attendants, for neurasthenia may be the passing cloud which overcasts the mental well-being, or it may be the signal of coming disaster. Neurasthenia may herald general paralysis, or may be the early stage of some form of recognised insanity.

Under this head of treatment I think I should say that I believe in Weir-Mitchell treatment very strongly, when the patient is still on the border lands; I do not think that he will do much, if any, good if he have developed distinct delusions. Next I do not think much of the modified Weir-Mitchell treatment, which is so often forced upon one. It is all very well for the friends to say they can carry out the treatment just as well at home as in a home; they cannot; and you do not give the patient the same absolute rest from peripheral irritants as you do in a home. It is not true in fact that these patients after a day or two worry about the past and the future, they accept the fact that they are to be left alone: I would so far modify the treatment that I would not necessarily overfeed to the same extent that one does in anorexia nervosa.

I have no experience of the added electrical treatment, but I can believe that it will be of service. The next practical point is as to how much you are to argue with the patient. My belief is that you will do no good by arguing, and that assertion is better than reason in these cases, you lay down the regulations and decline to discuss them; I point out as a rule that there are two ways of attaining the end, and by the way I do believe in dogmatically asserting the prospect of cure and also the explaining that it is not brain disease which is causing the trouble.

I explain that the methods are either to isolate, so as to give rest while the nervous system is being built up by suitable food and the conditions which tend to repair sleep are being encouraged: or else the patient may be placed under firm but skilled companionship, and set to work out his own cure through muscular work and the like. Patients want to be set to do definite work, to learn a language or to study a new science; but such attempts as a rule fail, there is defect of power of attention, and with it there is defect of memory, and the same worrying feeling of failure; I have had some good results from the following a mechanical training, such as carpentering; and golf in my hands has been of great service if taken with a suitable and even tempered companion.

I do not believe in the endeavours to draw out the patient's higher faculties by will alone, and I do not think that home is a suitable place for treatment. In some cases one has to follow not the ideal best, but the practical best, and this often means trying to make bricks without straw. I have been able to steer a few cases through while they were still following their work. This is almost impossible unless the work is of a definite kind, and confined to a few hours a day. In such cases I think sending them away for the end of the week to some quiet seaside place, where golf can be got and where an interesting but non-exciting life can be followed, will end in cure in some cases.

I believe that in cases where time is of great importance the best chance lies in complete isolation and Weir-Mitchell treatment. Every form of bath has been suggested, and hydropathic institutions have a constant flow of such patients through them. I cannot say I have seen much good result except in the early and very slight cases, which would have got well anywhere. I make use of the Turkish bath in some cases, but as a rule the only cases which benefit are those in whom there is at least ground for thinking that uric acid plays a part in the production of the symptoms. In these cases a Turkish bath twice a week will often lead to improvement. In any case one has to impress the fact that the cure will not be sudden or even rapid. Travelling, as I have already said, I look upon, as a rule, is contraindicated. I see a considerable number of persons who are made worse by the regular tour through Switzerland, and I see Americans who, having "done" Europe for cure, are so much the worse for the process. I have seen a good deal of good results from sea voyages in persons who were good sailors, but I have seen harm and great nervous exhaustion follow voyages in persons who were liable to sea-sickness.

Perhaps this is the place in which I ought to refer to the use of hypnotism and suggestion in the cure of neurasthenia, but I can only repeat what I have heard, for my own experience has been obtained at second hand. I have known several cases with extreme weakness and with all the neurasthenic symptoms in a very exaggerated form in whom hypnotism has been tried, first, as a rest producer, and, secondly, as a mode of changing the tone of thought and feeling; but I cannot personally recall a case in which I have seen any good follow. There seems, however, to be evidence enough collected to show that in some cases good results follow. I had one young patient who was for months under the treatment by Weterstrand, of Stockholm; and, though his bodily health improved, his mental tone and his inability to work persisted. His was one of the cases in which, with very little apparently wrong, the brilliant nervous apparatus was unable to fulfil its part. His letters are very characteristic of the type of cases. In his case everything was tried, from indulgence to firmness. I went so far as to say to his father he had better allow him a living wage, and tell him he must shift for himself. I fear the result in any way will be an useless self-conscious weakness which will last his life.

The only novelty I purpose introducing to your notice today is one about which Dr. Ralph Browne has recently written. He has taken the physiological and clinical work of Dr. Cheron as his basis, and he has shown what the effect of the subcutaneous effusion of artificial serum is, and from the physiological effects he has turned this to practical uses.

Under the head of treatment everyone places rest first, and after that come diet and other conditions. I do think the diet is of great importance, but I have failed to find any one stock diet which will be of service to all cases. I believe in some cases the patients must be treated as if they were gouty, and the meat diet reduced. On the other hand, I have found most excellent results follow full diet and generous use of heavier wines. I have met with several marked cases of neurasthenia among teetotalers, and I have seen cases also in vegetarians, or in those who were practically all but vegetarian. I have given with advantage coca wine to some patients, more especially to those who were sleeping badly I find that a wineglassful of this wine with a biscuit given before going to sleep is often able to produce a good night's rest. I believe in many cases frequent light feeding is essential, and night feeding often gives relief to the morning depression. It most cases it is well that a cup of milk, with or without a tablespoonful of brandy, should be taken on awakening in the early morning. This often gives rest or even sleep. In the same way in other cases a few grains of chloral at this time may be of service, or a small dose of sal volatile or, what is less pleasant, paraldehyde. A hot bath in some cases leads to sleep if taken shortly before the usual hour for going to sleep.

One must not forget that of neurasthenics are made morphine takers and those who take to hypnotics of various kinds. In all cases it is well to avoid the use of morphine, that is, at least, the use of the drug by the patient himself. These patients readily pass into hypochondriasis, therefore need to be judiciously neglected. They differ from the hypochondriac in that they believe in their doctors.

To sum up, I think, Dr. Cowles, of Massachusetts, U.S.A., has given in brief the best sketch of what we should aim at:

Each case must be a separate study. The objective and the subjective symptoms must be treated. We must aim at elimination of waste products through bowels, kidneys, and skin; through the *bowels* rather by diet than by purges, hot water, mineral waters, hot water enemata, abdominal massage, and regular habit. Fruit of some kinds is useful; I believe the sweeter fruits are best. Digestive pills may be used. *Kidney* action should be promoted by free flushing; I like abundance of skimmed milk. As some cases depend on uric acid, this should be got rid of; salicylate of soda is often useful. *Skin* action best promoted by exercise in moderation, gymnastics not very good, but fencing may in moderation be used. Hot bathing at night, occasional Turkish baths; sea bathing needs care, for one sees exhaustion follow in a good many cases. In women menstrual irregularity is often present, and I prefer the permanganate of potash. In some cases extract of ergot is good; iron often disagrees. I am trying at present permanganate of potash in other cases than those of women.

Diet.—The aim is to be solid food first, through the use of fluids; this is better started with only full milk diet, to which is added fish, then meats; plain food is most essential. Cream, malt, and prepared foods, but not much essence of meat and the like. I have given "Koumiss" in some cases with benefit, and the extract of meat with port wine. Sal volatile may occasionally be useful after a meal. I think food should be given at regular intervals not exceeding four hours. On waking early some fluid food may be taken. I have given grapes in the early morning with advantage. Write out a dietary. *Rest* must be arranged to suit the individual. Exercise must be short of fatigue, and should be with companionship; sea voyage, golf.

Sleeplessness.—Avoid hypnotics as much as possible; use food, stimulants, coca wine, hot baths, small doses of chloral or paraldehyde. Sulphonal is probably the least harmful drug.

As to electricity and the subcutaneous injection of serum and hypnotism, I must rather refer you to the experience of others.

My introduction is, as I know, only too defective and weak, but I am like many others groping for an end amidst the darkness of ignorance. Light, I trust, may be evolved by the discussion which may follow.

II.—W. JULIUS MICKLE, M.D.,

Medical Superintendent, Grove Hall Asylum, Bow.

I WOULD emphasise the important relations of neurasthenia with insanity, and the fact that neurasthenia is a fertile field for the operation of existing factors of mental disease. Overwork is a frequent factor in the production of neurasthenia, but it is necessary to fix attention strongly on the point that this overwork is a relative term only; that which may be, and often is, overwork to the neurastheniac is really what would be beneficial activity to the healthy. Cases of general paralysis sometimes begin with neurasthenic symptoms; and yet the relations clinically of neurasthenia are much more with melancholia than with general paralysis.

III.—RALPH BROWNE, M.D., M.R.C.S., L.R.C.P.,

Physician, Chelsea, Brompton, and Belgrave Dispensary.

I AGREE with Dr. Savage that overwork or overstrain are the most frequent cause of neurasthenia. Overwork is a relative term. If overwork or overstrain be the cause, then rest would seem to be the rational treatment. But rest is also a relative term; and the best treatment is that which gives the form of rest required in each particular case. Neurasthenics are prone to fall into all kinds of bad habits, and to persist in them; for instance, going to bed at unusual hours in order to rest. This naturally interferes with their ability of getting to sleep at night, and hence they suffer from sleeplessness. In other cases they will eat voraciously for a time, until digestion becomes impossible, and they are then obliged to refrain from food altogether for a period. These habits as they occur in any particular case must be counteracted by rational means. With reference to the particular treatment mentioned by Dr. Savage—that of Dr. Cheron, of Paris, by hypodermic injections—I saw some excellent results by this treatment in the hands of Dr. Cheron, and have since had good results in my own practice. I regard the action of the injection to be that of a peripheral stimulant, which produces a tonic state of the system for the time being, and during this condition the functions of assimilation and nutrition are better performed.

IV.—WILBERFORCE SMITH, M.D.

THE tendency of modern medicine to change Latin for Greek terminology has had the unfortunate result that in changing

the old expression "nervous debility" for "neurasthenia," we imagined we had arrived at something specific. A state of debility accompanied by neuroses required differentiating as truly as formerly did "dropsy" when it was regarded as a distinct disease. In regard to seeking exact methods for indicating varieties of debility, I would only refer to one, namely, examination of the abdomen, partly in order to arrive at an estimation of the amount of nutritive storage. The diet required by an individual could be to a large extent arrived at by such a method.

V.—Norman Kerr, M.D.

I would suggest the alternative American title of "nervetire," a term the meaning of which was at once recognised by all American physicians and by the public. He commended Dr. Savage's original and suggestive paper, which is well calculated to arouse a desire for thorough investigation of various special forms of neurasthenia. The need for a special investigation of each case, as considered apart from all other cases, was evidenced in a case which he had, where a patient had been treated for years for hepatic derangement alone, which had really been the result of incipient brain disorder.

VI.—W. Lloyd Andriezen, M.D.,
West Riding Asylum.

There is no functional disease of any system or of any organism which has not its corresponding structural or nutritional change. Throughout the whole of living Nature functional differentiation goes side by side with structural, from the lowest metazoa up to man. And changes which we have hitherto for want of knowledge called functional, are now, with more refined methods of investigation, coming to be recognised as nutritional. With functional activity muscle tissue gets acid in its chemical character changes; the gland cells (as shown by Heidenhain, Langley, and others) show also changes, namely, diminution of intracellular granules, shrinkage of cell protoplasm, shrinkage and crenation of the nucleus, difference of coloration of the cells with stains, etc. In nerve ending in muscle it has been shown by Külme, Golgi, and others, that functional activities are accompanied by definite and distinctly recognisable structural change. What of the nerve cell and its process—the whole neurosis? Recent work on this subject tends to show that we are beginning more and more to recognise that normal functional activities are accompanied by structural and recognisable changes. This has been shown by studies on the brains of bees, sparrows, etc., by Hodge (1890-93), including his further studies on the spinal ganglia of the frog, etc. These include shrinkage of the whole cell body and protoplasm, and loss of intracellular granules (including Nissl's rods), diminution of the size of the nucleus, shrinkage and crenation of nucleus, and difference of staining reaction (colour intensity) of the cell. I will not go fully into this, only pointing out that in the human brain cell similar facts are now beginning to be recognised. These consist in (*a*) swelling and softenings of the most delicate and peripheral protoplasmic processes and collaterals; (*b*) loss of the fine granulations of these processes (both of which I shall show in specimens prepared by Golgi's method); (*c*) changes in the terminals of nerve fibres within the cortex; (*d*) changes of colour reaction or granulation within cell protoplasm and nuclei (chromophilus or chromophobic types, etc.). Finally, insomnia produces nutritional changes, for with it there is want of recuperation and rebuilding of cell protoplasm. All this I shall fully show later, remarking here that the time is coming when the so-called vague and functional diseases will each and all come to find their accompanying and characteristic structural and nutritional changes.

VII.—R. H. Cole, M.B.

The close alliance in the symptoms between neurasthenia and incipient general paralysis is especially important from a prognostic view. With regard to the term "functional" as applied to this and other diseases, we, the younger workers in medicine, are beginning to find that the more we understand morbid processes the more we need an explanation of them, and that the word "functional" seems to have a limited sphere.

VIII.—G. F. Blandford, M.D.,
President of the Section.

The President remarked that neurasthenia was a name applied to many different cases, and each must be judged by itself. There was the typical case which formerly was called hysteria, which benefits by the Weir-Mitchell treatment, by rest in bed, feeding, and massage, being mostly cases ill-nourished and emaciated. But there are other cases—cases of commencement of insanity, general paralysis, or melancholia; these do not benefit by being kept in bed, but often this Weir-Mitchell treatment has a most disastrous effect.

Reply by Dr. Savage.

In some cases I would say any work is overwork, but I do not admit overwork as a frequent cause of neurasthenia. Neurasthenia resembles melancholia in symptoms, but is more allied to general paralysis as to causal conditions. I do not think "brain fag" is a good term as equivalent to neurasthenia. In reply to Dr. Andriezen, I may say that I do not expect every action or function to be represented by morbid tissue change. We have not reached the basis of consciousness nor of life, and so I decline to eliminate the word functional. I think there is such a thing as self-satisfied science; I profess dissatisfied science.

DISCUSSION ON THE STATUS OF ASSISTANT MEDICAL OFFICERS IN LUNATIC ASYLUMS.

I.—Charles A. Mercier, M.B.,
Lecturer on Neurology and Insanity, Westminster Hospital.

In introducing a discussion on this subject, Dr. Mercier said: I propose to set forth the alleged grievances of the assistant medical officers in asylums, to show how far they are dependent on the system and how far they are personal, and to suggest such remedies as seem available. 1. A grievance often alleged is that assistants are chosen for other than professional qualifications—for their musical attainments, their skill at cricket or lawn tennis, etc. It is obvious that this is a grievance of candidates, not of medical officers, and does not fall within the scope of this discussion. 2. It is alleged that the pay, emoluments, and accommodation of assistant medical officers are deficient. It is obvious that the initial emoluments are sufficient, or candidates would not come forward for the posts. There is no lack of candidates, however, and therefore the emoluments offered are sufficient to induce men to enter the service. There is, however, no regular and sufficient increase of emolument with length of service, and the pay of assistant medical officers of seven, ten, and fifteen years' service compares very unfavourably with that of medical officers in other public services. It is said that the duty of committees to ratepayers will not allow of larger emoluments being given than are found sufficient to attract to and keep in the service efficient officers; but the question arises whether the men who are content to remain in the service for many years at a salary of £200 a year are as efficient as would be attracted and retained by a superior rate of pay. I think they are not. The [illegible] between the position of a medical superintendent with [illegible] or £1,200 a year and a house and other advantages and that of an assistant with £200 and a couple of rooms is far too great, and leads to many evils. There should be in large asylums an intermediate grade of officers—deputy superintendents—with salaries of £400 to £500 and a house and permission to marry. Under the present system the sudden elevation of an assistant to a superintendency involves such an immense difference of fortune that it is enough to turn a man's head. In any case additional accommodation should be provided for assistants, especially in asylums in which there is only one, so that he can frequently have a friend to stay with him, and so mitigate the intolerable loneliness and isolation of his position. 3. A serious drawback to the position of assistants is the stagnation of promotion, together with the rapidity with which the life they lead unfits them for other forms of medical practice, and the large element of chance and luck that enters into their promotion. To meet this drawback I would propose that all assistants should be appointed on probation for one year or perhaps two, and that those appointments only should be confirmed in which the assistant

shows definite promise of becoming a capable and efficient superintendent. Further I would propose a definite age limit to the service of superintendents, and would compulsorily retire all superintendents at the age of 55. 4. The next grievance of assistant medical officers is that they are in a position of excessive subordination and serfdom. It is alleged by some assistants, and I am quite satisfied that in some cases these allegations are true, that their superintendents treat them with tyranny, regard them with jealousy, and exhibit in dealing with them a total disregard of professional ethics. It is a common thing in some asylums for the superintendent to alter and to reverse the medical treatment ordered by the assistant without consultation and without even the courtesy of a notice. In some asylums the leave of absence of the assistant is reduced to a point that is not consistent with his health or his mental well-being, and he is perpetually subjected to snubs of one kind and another. It is obvious that these grievances do not depend to a great extent upon the system, but are personal matters due largely to the relative strength of character of the two individuals concerned. The only way in which they can be met is not by an alteration of the system, but by making the guilty superintendents amenable to the force of a healthy public opinion. But this is the very difficulty. Superintendents of this class do not attend the meetings of this or of any other learned society. They are such very great men in their own little world, and such very little men outside of it, that there is no inducement for them to come here. Of those superintendents whom it is my privilege to meet at the meetings of this Association, and of the sister Association that met here yesterday there is not one who is capable of these practices. One other suggestion I may make which I think would be a valuable safeguard. An assistant medical officer who is dismissed from his post should have the right of an appeal to the Commissioners in Lunacy or to the Local Government Board. I know of cases in which an officer has been dismissed and has been refused an inquiry, in spite of demands again and again repeated. There have been cases, also, in which the assistant has been made a scapegoat, and has been sacrificed for the fault of his superintendent. If an appeal could be made before a dismissal should take effect, such abominations would become impossible. Lastly, assistants complain of a want of recognition of their work, and of actual discouragement of research which they have to suffer. I have often heard the idleness and laziness of assistants reprobated, and I am afraid that in many cases the accusation is just; but how is a man to maintain habits of industry when there is not one human being in the world who knows or cares whether he does his work or whether he does not? "I may work like a slave," said an assistant, "or I may sit in my easy chair and smoke all day, and do nothing. It is just the same. Nobody knows and nobody cares." To such men I would say: "Be of good cheer. Do not relax your efforts. Good work always tells, and always must tell. Your superintendent may frown upon your efforts and your Committee may be indifferent to them. But the work that you do appeals not to them, but to the whole civilised world, which will give you attention and will applaud your efforts if your work is but thorough and honest." I am glad to see that it is becoming the practice for the Commissioners in Lunacy to notice in their report the way in which the casebooks and even the *post-mortem* books of asylums are kept; and if they knew that the words of encouragement they give are often the only recognition that the assistant receives for many hours of laborious work, they would no doubt pay even more attention to this point. Let me say, in conclusion, that although the grievances of assistant medical officers are in some cases acute, there is no reason to believe that they are widespread. The appeal that I issued, now some months ago, to them to communicate with me with a view to putting their suggestions before this meeting, has met with scarcely any response; and when I look round this room I notice that assistant medical officers are conspicuous by their absence.

II.—Conolly Norman, F.R.C.P.I.,
Resident Medical Superintendent, Richmond District Lunatic Asylum, Dublin.

Dr. Conolly Norman thought that in the strained and trying condition of asylum life personal difficulties were always liable to arise, and it was impossible to hope that all asylum medical officers, superintendents, and assistants would always be high-minded and generous gentlemen; willing to give and take—full of kindliness and tact. Much had been said that was regrettable on the side of assistants—at least, of those assistants who wrote anonymously to the papers—but there was another side of the question, and he hoped no superintendents, no matter what their own experience had been, would imitate the writers in question. Now, putting aside personality once for all, let them consider whether there was anything that could be done to alleviate the real great hardship of assistants—the block in promotion. In speaking of the general condition of asylum work at the meeting of another society in Dublin, Dr. Norman had advocated, not only examination for candidates for the post of assistant medical officer, but also examinations before all further promotions. He thought that, indirectly, this would tend to improve things. The present system, under which a man might remain on as an assistant for an indefinite time—twenty years, perhaps—was entirely bad. He was sure it was bad for the institution; and he would here say—speaking generally and of course acknowledging some brilliant exceptions to the rule—that the best superintendents were not men who had been assistants for a great number of years. For the assistants themselves prolonged service under the unhealthy conditions of asylum life, and in a position of subordination very wearing to a man who was getting on in years, was most injurious. The feelings of the superintendent ought, perhaps, only so far to be consulted as they coincided with the interests of the asylum, but the speaker was quite satisfied that it was better for the superintendent to have young men about him, men fresh from hospital work and full of go and enthusiasm, especially if he himself was getting old. The narrowing tendency of prolonged life in an asylum could not be denied. If they were not to become fogies they must have men around them who were young. A body of young and ardent assistants under a superintendent not himself too old could undoubtedly best serve the insane. All their proposals for improving the condition of assistants were unfortunately rather unpractical, for they all involved the expenditure of money which was not in their hands; but the scheme that commended itself to the speaker—and it was, perhaps, as feasible as any other—was the compulsory retirement (of course on pension) of superintendents at a fixed age, say 60, and the employment of assistants on a short-service system such as was for a time adopted in one of the services a few years ago. Instead of increasing the pay of assistants, and encouraging them to stick miserably on where they had no hope of promotion, committees would possibly be satisfied to give these gentlemen, when they retired at the end of the period for which they were engaged, a bonus which might be regarded as deferred pay, and would enable the man who had not succeeded in obtaining a superintendency to start in life in less disadvantageous circumstances than he was now generally compelled to endure.

III.—E. Goodall, M.D.,
West Riding Asylum, Wakefield.

Dr. E. Goodall was of opinion that those competing for asylum posts should present a certificate of proficiency in mental diseases; also that they should be appointed on probation; also that no man should be appointed a senior who had not given proof of genuine interest in his work, and was not more than a mere routinist and disciplinarian. If he had afforded such proof he was worthy of proper treatment, and this, in the speaker's opinion, lay in providing a separate house, a sufficient salary, with freedom to marry; more administrative responsibility. A difficulty lay in the way of retirement of superintendents, as suggested, since the likelihood of their being awarded pensions was growing less.

IV.—W. Lloyd Andriezen, M.D.Lond.,
West Riding Asylum, Wakefield.

Dr. Lloyd Andriezen said the points raised appealed on the one hand to the selfish and personal instincts of medical officers, and to those of superintendents on the other: and therefore he said—and he said it advisedly—the time would be

far distant indeed when they would be settled on any other basis. Perhaps some medical officers were too idealistic in their aims and conceptions, but that the present state of the service was far from being such as would correspond with an ideal medical service would be admitted by both parties. On the one hand there were medical officers who, after they have tasted the sweets—or sweats—of asylum life, found, after a period of five, six, or seven years, that there was no worthy inducement to remain, because the prizes were too few and small on the one hand, and the position was one of subordinacy with all its accompanying evils and none of its compensating advantages. These have been ably brought before you by previous speakers, and he endorsed what they had stated. The asylum medical officer had no chance, and and under the present *régime* would never have the chance for the development of those instincts which belonged to the citizen of every state, and the head and breadwinner of every family—he could not, in 99 cases out of 100, marry. Was it to be wondered at then that men, after they had tasted thus far of asylum life, left it at a time when their skill and services were such as could be but little dispensed with by the service, to make way for raw recruits, who in turn followed the same exodus of circulation, while but one or two of the less enterprising or able remained behind? That this should be not only a common but a general occurrence was in itself sufficient to show that the foundations of the *régime* under which it occurred must be essentially wrong and unsound. As long as this state of affairs was perpetuated, the asylum service would only continue to draw only students and men who would be content to remain for the first half-a-dozen years or so, and then shake the dust off their feet, and breathe the air of freedom, which, for the asylum medical officer, were objects unattainable within the four walls of the modern asylum. There were other evils, and there were two or three roots from which these evils sprang. There was first the fact that the senior medical officer, the one who has charge of the whole institution with the responsibilities, medical and legal, appertaining thereto, when the superintendent was away, was inadequately remunerated. He had a couple of rooms and about £200 a year, the income of many a city clerk, and a labour and responsibility meanwhile totally out of proportion. He could not help being struck by the fact that so little had been hitherto done to remedy this state of affairs. It speaks little for the *esprit de corps* of the medical officers, or much for the state of fear which some of them certainly seemed to labour under, for, they said, "a movement or a procedure of that sort on our part would offend our masters, the superintendents." If that represents the truth in some cases, thank God there are superintendents like their present President of the Medico-Psychological Association, and others here—leaders in our speciality like Drs. Tuke, Conolly Norman, Savage, Mercier, and others too numerous to mention, who did not adopt that humiliating and degrading sentiment. There was another root to the evil—he spoke of the system not of persons. As at present constituted, the position of assistant medical officer placed the latter on a platform of subordinacy which was too low, and which might be and was in cases very demoralising leading to a sycophantic spirit *et id genus omne*, of which the psychology and history have yet to be written. In looking abroad on the naval or military medical services, or in the constitutions of their general hospitals and infirmaries, no parallel could be found. Some superintendents, the older ones, might have forgotten the bread they might once have had to eat, but others knew that this was a grievance which was all too true. He did not say that there should be no subordinacy. He did not propose any such absurdity, but he did sincerely state that, coupled with their position as subordinates, they had but little or nothing to safeguard their position and interests, and no board to appeal to if they were endangered or vitiated; for the alien camps, and those who were powerful within them, lived out of the range of critical shot. He thought the time was coming when the medical officers throughout the kingdom would have to combine and bond together into a union which would be competent to safeguard and watch their interests. He hoped that such a union would be realised and would bear fruit in the immediate future. Referring to the economic and the medical aspects of the case, Dr. Andriezen said that when this question was brought before the Medico-Psychological Association some few years ago, the medical officers were snubbed and overwhelmed; now they could speak more freely and with less fear. When the question of salary and emoluments of the deputy-superintendent was raised, there was then an outcry against its alleged absurdity. Now experienced officers and superintendents were beginning to acknowledge that there was some justice in the position they took. They knew the demoralising effects of sweating systems and allied forms of economic forces, and the objection once urged by certain superintendents to the raising of the post of deputy-superintendency to a worthy and sufficiently paid level, namely, that committees would not like to pay more than a minimum wage if they could get any man to do their work for such minimums. Such an objection was worthless on the face of it, not only owing to its intrinsic selfishness—for the same could be applied to superintendents and their wages and emoluments—but owing to the fact that it was born of a dangerous and demoralising economy which refused to recognise that the labours and responsibilities of deputy-superintendents were well worthy of a higher salary and status. Had they not dispensary doctors who would give advice plus medicine for 4d. per case; and is that the ideal, the worthy and noble one, which should be held up as applicable in principle to our asylum service? God forbid! It would be to the eternal disgrace of any physician—whether officer or superintendent—to uphold or proclaim such a doctrine. Finally, as regards the scientific aspect of the case in relation to the present and immediate future of insanity, he asked why was their specialty known in the general medical profession, not for what little it did, but for what greater part it left undone. Take the 140 public asylums in the United Kingdom, and taking their total of superintendents and medical officers at 500 men, alleged specialists and workers in psychiatric medicine, could they say that one-tenth—nay, one-twentieth—of these contributed anything to the growth and increase of the knowledge of the etiology, the pathology, the therapeutics, the sociology, or the psychology of psychiatric medicine? It might be that the work was depressing, and therefore did not attract, it might be that the environment was unfavourable and chilled the younger and more enthusiastic, or it might further be that there was no incentive to work owing to the insecurity of the asylum service, and for other causes within, which have made us lag behind the great army of advancing medical science. At the last annual meeting of the Medico-Psychological Congress, when members from France, Belgium, Germany, Austria, and America were present in addition to those of the United Kingdom, the following words were uttered in the Presidential Address by Dr. Conolly Norman: "No branches of medicine, anatomy, and physiology attract more attention or better workers at present than those dealing with the nervous system, and although we await for the fullest development of our specialty, the further progress of normal and pathological anatomy and physiology, sciences in strict logical order subordinate to ours, yet we can even now claim to follow one of the most scientific branches of medicine. As students and workers in this branch our best interests are identical with the interests of our patients and of the public, and are also the common interests of science. Our success depends upon two things: first, the disinterestedness of our motives, and, next, our title to be considered active workers." Could it be said that such a claim was justified? He was loth to disagree with Dr. Conolly Norman, but in this respect at least he must humbly differ from him by saying that their speciality neither attracted, nor will it under the prevailing spirit continue to attract, those capable or willing to show devotion to work and scientific investigation of the insanities, for the environment was unfavourable, and living in the asylum atmosphere under conditions of life so strikingly and faithfully pourtrayed by Drs. Mercier, Philipps, and Goodall, the vast majority of asylum medical officers and superintendents become like the fig tree cursed by Christ, and bear no fruit. They contributed next to nothing to the progress of knowledge in psychiatry, neglecting and leaving undone the things which make their profession worthy of honour or admiration at the hands of our medical or scientific brethren.

A DISCUSSION ON POINTS CONNECTED WITH THE EDUCATION OF FEEBLE-MINDED CHILDREN.

I.—G. E. Shuttleworth, B.A., M.D., etc.,
Late Medical Superintendent, Royal Albert Asylum, Lancaster.

The Numbers to be dealt with.

This paper is intended to be in the nature of a supplement to the report presented by Dr. Francis Warner on the mental and physical condition of school children. From this it will be seen that of 50,000 children (26,287 boys and 23,713 girls) seen in schools from 1892 to 1894, 101 (50 boys and 51 girls) were classified as "feebly-gifted mentally," but of course there were others falling under the head of "exceptional pupils," including children maimed and paralysed, epileptic, mentally exceptional, and a few (5 in all) classified as idiots and imbeciles, making an aggregate of 16 per 1,000 who seem to require special training. In addition there is a large group of cases reported by the teachers as mentally dull; and although this group may be considered beyond the scope of a committee investigating the subject from the physical side, yet cognisance must be taken of them in connection with any scheme of special educational care for those disqualified by physical or mental incapacity from following the ordinary school curriculum.

Indications for Training.

To quote from the interim report of our Committee, "the same scientific principles as enabled the numbers of such cases to be ascertained may be used to indicate their special requirements in training." On these lines a few of the leading groups will be considered, and the indications for their educational care studied.

Defects in Development.

Whilst children with a defect in development form the largest class of cases noticed in every group of schools, it has been observed that "under conditions of less favourable training the proportion with nerve signs and the proportion who are dull rises. It seems, then, that efficient training and education does much good in preventing evils from arising in such cases." Let us now consider some of the indications to be met to render educational care appropriate to these exceptional children.

Inherited Defects.

Logically, indeed, the educational care requires to have been carried back for some generations to avoid defects in development which are no doubt largely inherited, and so to say accumulated, by injudicious teaching; and the omission of all instruction in physiology and hygiene from the educational systems of the past has much to answer for in this respect. But we have, of course, only to deal with the present, and to do what we can to prevent such evils as have now been ascertained from being perpetuated. At the same time, we endeavour to qualify the unfortunate defectives, as far as may be, for the practical duties of life.

Craniectomy or Sensorial Training.

Starting with defects of development, we inquire what can be done by educational means to counteract such defects. As regards cranial abnormality, I am tempted, in passing, to refer to the surgical procedures which have of late years been practised with the view of allowing room for expansion of the brain by cutting strips of bone from the skull (craniectomy). My own opinion is that as a rule the skull is moulded to the brain, not the brain to the skull, and that in the instances in which mental improvement has been recorded, the credit is really due to the educational effect of the special attention and nursing after the operation, rather than to the operation itself. I would rather point out as a physiological antidote to cranial deficiency the doctrine of Séguin, that the volume of the brain, and consequently the skull, is influenced by judicious sensorial training of the child, a remarkable instance having been recorded by him, in which an observed increase of cranial measurements followed "instruction imparted simply through the medium of the senses and the muscles, as in training the eye and hand."

Bean Bags and Music.

Passing now to children with "abnormal nerve signs," or, in other words, presenting evidences of "nerves out of order," we must consider these a little in detail to gather indications for their appropriate educational care. Dr. Warner describes three principal types, the first indicating an over-mobile nervous system, the second characterised by repetitive uniform movements, the third associated with an insufficiency of activity in the nerve centres. It is obvious that different modes must be adopted in dealing with each of these types. Taking the last first, I may refer to the extreme case of the impassive idiot whose educational training starts with a bombardment of bean bags. Such a child is so inert as not at first to put up its hands to protect its face from the bean bag thrown at it by the teacher; gradually, however, the instinct of self-protection asserts itself so far as to ward off the missile. The second step, to catch the bag, and the third, to throw it back to the teacher, mark successive stages of improving mental activity, and from these progress is made in the direction of simple drill, aided by music. With the class of defectives found in ordinary schools bean-bag exercises may be unnecessary—though they would be found serviceable in promoting alertness of the eye and hand—but there is no doubt that musical drill exerts a most beneficial influence, and I am glad to find the superintendent of special instruction under the London School Board (Mrs. Burgwin) making a point in her report of pianos being supplied as necessary aids for this purpose. Children of the second type—those with the so-called athetotic or choreic movements—are also benefited by specially-adapted physical exercises, for purposeless automatic movements subside as the child's attention is engaged in carrying out, at the word of command, the regular movements of drill. Manual training, too, beginning with simple but attractive Kindergarten exercises and advancing even to the intricacies of macramé work, is of much utility with this class. Then, with the over-active children—those with "twitches," whether of the hand or forehead—much good is done by judicious training of the muscles. I do not mean of a consciously repressive character, but with the object of directing superabundant nerve energy into appropriate action, controlled by the will. For this there is nothing better than the manual occupations, "Sloyd" work, etc., which have at length been recognised as an integral part of our educational system; and in country schools I would strongly advocate the provision of out-door work. A school garden would be a most useful adjunct in the training of exceptional children.

Over-Pressure and Under-Feeding.

"Low nutrition," in the sense in which it is used in the report, does not necessarily imply deficiency of food. It has been said that with elementary school children "over-pressure" often means "under-feeding," and it has been urged that "free meals" are in many cases an essential preliminary to "free education." Whilst far from denying the educational value of good feeding (and no doubt the Scotch diet of oatmeal porridge helps to evolve superior brain power as compared with the English stewed tea and scraps), our inquiry has shown that the pale, thin, and delicate children at school are so, for the most part, because they are defective in make. Even in Poor-law schools, where presumably the diet is physiologically sufficient, it was found that no less than 3.3 per cent. of the children seen suffered from low nutrition, the explanation being that these children were "of lower general constitutional power, and tended to an ill-nourished condition under the stress of life."

Defective Vision and Hearing.

Time forbids the discussion of the special care necessary for the education of children suffering from defective vision and hearing, but it is satisfactory to note that the Legislature has lately provided for the blind and deaf, whilst the Education Department has been roused to the necessity of taking some account of minor degrees of these sensorial defects, the need for the early recognition of which forms an additional argument in favour of the appointment of medical inspectors of schools.

Fits.

A few words may not be out of place with regard to the children with history of fits during school life. Though the number noted in our report is comparatively small (boys, 20; girls, 35; total, 55) there is good reason to believe that the number of children suffering from epilepsy is by no means insignificant, and that the majority are kept at home uneducated. We have the high authority of the late Sir Andrew Clark to the effect that the doctrine formerly held that epileptics should be allowed to lie fallow, and should not learn lessons, is "a fearful mistake." Let us therefore inquire under what conditions their education can best be carried on. It seems to me that ordinary school life is inappropriate, for the mental condition of epileptics varies so much that they could not be expected to keep pace with the ordinary curriculum, and if not specially guarded they would be liable to serious bodily accidents. Even in special classes, such as those now established in London, they would be unwelcome pupils, as their fits would disturb discipline and inspire terror in the minds of nervous and weakly children. I am of opinion, therefore, that such children would be better educated in special boarding schools in the country, where regular routine, judicious diet, and a happy combination of school instruction, outdoor work, and systematic recreation would co-operate in the amelioration both of the bodily and mental condition.

Mischievous Children.

There is a small class tabulated in our report, designated in a special sense as "mentally exceptional," not so much mentally deficient as utterly wanting in moral sense, and subject to strange impulses to mischief. These form a very trying class, and perhaps test the tact of the teacher to a greater extent than any other. Mrs. Burgwin reports with reference to the London classes for special instruction, that "many of the scholars are untruthful, in fact seem utterly devoid of conscience, and a great deal of time is spent in inculcating the virtue of truth and honesty in word and deed." There is no doubt that most of these poor children suffer from the "damnosa hereditas" of nervous instability, and their extraordinary impulses are in many instances akin to the explosions of epilepsy. It is hardly necessary to point out that great care is called for in their association with other children at school.

The Feebly-Gifted.

In conclusion, a few general considerations may be useful in connection with practical methods of dealing with the mentally feeble (in which term I include the "feebly-gifted," the *schwach-befähigte* of the Germans). It will be conceded that special modes of education adapted to special defects are called for in the case of exceptional children. It will be further admitted that recognition and study of the individual defects are necessary for the success of the special teacher: in other words, teachers grounded in the general principles of education should have special training for this special work. The training of the Kindergarten is no doubt a step in the right direction, but Froebel's system presumes too much upon the spontaneous activity of child life to be altogether applicable to the more inert classes of the mentally feeble. Useful hints may, no doubt, be derived from the system which experience has shown so serviceable in the ameliorative training of idiots and imbeciles, the fundamental note of which, struck by Séguin fifty years ago, is that the education of the senses must precede the education of the mind. Nerve signs, that is, signs of abnormal nerve action, must be noticed, special incapacities investigated and counteracted, and undue strain guarded against. In cases where the nervous system is overmobile this precaution is specially necessary, for if the teacher unwittingly pushes instruction beyond that which is prudent mental breakdown results. Hence the necessity of teachers being taught to recognise the physical signs of nervous over-action and to adopt precautions before the stage of St. Vitus's dance, or chorea, supervenes. Dr. Octavius Sturges has recorded 9 cases of school-bred chorea, in 5 of which the children had been kept at school in spite of morbid restlessness, the significance of which had not been understood until St. Vitus's dance incapacitated them for school work. A painful example this of "evil wrought by want of thought," and failure, through ignorance, to act on the maxim *Obsta principiis*. Special training for the children, based on physiological principles, and special training, including such principles, for the teachers may, therefore, in a few words, summarise the practical suggestions of this paper.

II.—Fletcher Beach, M.B., F.R.C.P.Lond.,
Physician to the West End Hospital for Nervous Diseases; formerly Medical Superintendent Darenth Asylum for Imbecile Children.

DEFECTS AND DISEASES OF SCHOOL CHILDREN.

Of the 50,000 children seen by Dr. Warner in various schools during the years 1892 to 1894 8,941 were noted, of whom 5,112 were boys and 3,829 girls. During the examination of these 8,941 children 1,03 abnormal points or signs were observed. These were afterwards classified under

1. Defects of development
2. Abnormal nerve signs
3. Low nutrition
4. Mental dulness
5. Defects of eyes
6. Cases of rickets
7. Exceptional children

Defects of Development.

Altogether 3,926 cases of defects of development were observed, 2,308 of these being boys and 1,618 girls. On analysing further the defects of development, we find them divided into (1) cranial defects, (2) ear defects, (3) eyelids with epicanthis, (4) defects of palate, (5) nasal bones wide, sunken, and indented, and (6) other defects of development less frequently observed. This list accounts for 42 defects. I do not propose to take them all *seriatim*, but to make remarks on some of them.

Defective Crania.

Taking first defective crania, we find that 1,328 children, or 15 per cent., presented this deviation from the normal condition. Nine forms of this defect were noticed, of which the most important are the large, the small, the asymmetrical, the dolicocephalic, and the hydrocephalic; 120 children presented large heads, and 665 small heads; in 29 the heads were asymmetrical, in 28 dolicocephalic, and in 3 hydrocephalic. The large heads are important, as in some cases they are due to rickets, in others to hypertrophy of the substance of the brain. In 8 cases, whose ages were respectively 5, 8, 10 (2 cases), 11 (2 cases), 14, and 15, which were under my care, the brains weighed 49½, 53 (2 cases), 55, 49 (2 cases), 52, and 62 ounces respectively. All these brains were much above the normal weight for the corresponding age, varying from 5 or 10 to 15 ounces, while in the boy aged 15, whose brain weighed 62 ounces, the average weight for that age was exceeded by 18 ounces. Although the children who presented these abnormal brains were imbeciles, yet the pathological appearances found, if present to a much less degree, would be sufficient to produce an abnormal child. No fewer than 665 children, or half the number who presented defective crania, had small heads. A head was considered small if the circumference was less than 19 inches at the age of 8 years, or 19½ inches in older children. From what we know of microcephaly, in which the brains are much reduced in weight, there seems good reason to suppose that the brains of some of these children were below the normal size. The smallest brain I have ever seen weighed only 7 ounces. This was observed in a microcephalic girl, aged 11 years, who could neither stand, walk, nor speak. Those of us who have seen much of idiocy are inclined, from our observation, to class any head between 17 or 18 inches as a microcephalic one. It was formerly held by Virchow that the microcephalic skull was produced by premature synostosis of the bones of the cranium, but I have recently been informed that he has abandoned that position. Voigt many years ago wrote a book to show that persons with very diminutive heads possessed brains in the stage of the Simian ancestors of man, but carefuly inquiry has proved this thesis to be incorrect, for all the typical fissures and convolutions of man are present.

Asymmetrical heads, the next on the list, are often produced in this country by unilateral suckling, but there are various tribes who artificially deform the head in order, as Topinard says, "to conform to accustomed usage, or to submit to certain rites." The dolicocephalic head which was found in 28 cases is of interest from the fact that it is also found in negroes, the Esquimaux, the Hottentots, and bushmen. The hydrocephalic head, present in 3 cases, is also

worthy of notice, since the presence of fluid in the skull, acting slowly but surely on the substance of the brain, is likely to cause a certain amount of dulness in the child.

Defective Ears.

Passing now to the defective ear, which was present in 474 cases, we find that it was defective in its parts, size, and form. It was sometimes found without, or with only a defective, lobule, as in some cases of Mongolian idiocy, or was too square above and closely attached to the skin behind. Occasionally it was too large and implanted far back, as in cases of low type congenital idiocy. Deformity of the ear is one of the signs of the physical stigmata of degeneration, which includes, in addition, smallness or malformation of the cranium, facial asymmetry, prognathism, deformities of the extremities, club feet, supplementary fingers, and other conditions.

Defective Palates.

The defective palate is very important, and was noticed in 820 cases, or 0.92 per cent. It was either narrow, V-shaped, arched or vaulted, or cleft. An arched or vaulted palate is frequently found in cases of idiocy and imbecility, and when present is usually considered to be a sign that the condition is congenital in origin. Many years ago Dr. Langdon Down inquired into the subject, and, on examining 200 idiots, he found that excessive arching of the palate occurred in 58 per cent. Within the last two or three years the subject has again been inquired into by Dr. Clouston, and the results are given in his *Neuroses of Development*, a book brimful of facts bearing on the causation and defects of the degenerate class of the population. He divides palates into the typical, the neurotic, and the deformed, including under the latter term the vaulted or arched type. On examining 169 idiots and imbeciles he found the typical palate present in 11 per cent., the neurotic in 28 per cent., and the deformed in 61 per cent., thus agreeing, as far as the last form is concerned, with the results obtained by Dr. Langdon Down. The neurotic palate, according to Dr. Clouston, is one midway between the typical and deformed, and was so called because it was very frequently found in persons of a nervous temperament, who were liable to hysteria, neuralgia, and migraine. It has a more Gothic arch than the typical palate, and the alveoli run parallel for a greater distance than in the latter form: it has also a much higher and narrower dome. About two years and a-half ago I made an examination of the palates of 700 idiots and imbeciles, and my conclusions were rather different from those of Dr. Clouston. I have not the figures by me at present, but the result was that the number of typical palates was about the same as those of Dr. Clouston, whereas the neurotic palates were far in excess of those of the deformed type. Perhaps the reason for this may be that among those I examined many were not congenital cases, and the imbeciles exceeded the idiots in number. Although many sane persons have vaulted palates, yet, as far as my experience goes, they are of a neurotic temperament, and liable to beget nervous, highly strung descendants. There is no doubt that a vaulted palate, when combined with changes in the cranium and expression of the face, is a sign that a person to whom it belongs, and his family, are liable to developmental neurotic diseases such as idiocy, imbecility, epilepsy, and weakness of mind. "It is," as Clouston says, "one of the marks of a family that is tending towards mental death and extinction." From this point of view the fact that no fewer than 820 cases with defective palates were observed, some of whom, no doubt, had deformities of the cranium, is of grave importance, and calls not only for special educational, but for preventive, measures.

Asymmetry.

In 610 cases "other defects of development less frequently observed" were noticed. The most important of these were the asymmetrical face, coarse, heavy, flat features, thick lips, defective palpebral fissures, hairy forehead, and prognathous, heavy, underhung jaw. These are all signs of stigmata of degeneration, and are seen in persons with bad neurotic heredity. People of this kind are unable to make their way in life, and, sinking in the social scale, at last find their way into the workhouse. Here, if the officials understand their duty, they can be protected and well cared for. Unhappily, the girls, as they approach maturity, often go out and return as the mothers of illegitimate children, who are mentally exceptional, feeble minded, or even idiots and imbeciles; for these homes are required, and special teaching and training is wanted for the children. Another defect remaining to be noticed is obliquity of the orbits. This is often found in idiots of the Mongolian type, who, in addition to this abnormality, have broad features, a flattened bridge of the nose, rounded pinnæ to the ears, hypertrophied papillæ of the tongue, rough skin, and short and broad hands and feet.

Abnormal Nerve Signs.

Abnormal nerve signs were noticed in 4,868 cases, 2,853 being boys and 2,015 girls; they are useful as showing the nervous state of children at the time they are examined. Thus, in one school to which I went with Dr. Warner, a considerable number of girls belonging to Ex. VII Standard showed the condition described by him as the "nervous hand." If the arms are extended forwards with the palms of the hands directed downwards, the wrists will sometimes be found to droop, while owing to a contraction of the muscles of the palms of the hands the thumbs and fingers seem to press upwards from the knuckles. This is the position of the hand to which he gives the above name. It was discovered after examination of the school that the scholars had undergone a Government examination a day or two previously, and their nervous systems were still in an abnormal state. The same scholars were examined by Dr. Warner some time afterwards, and then only seven or eight presented this condition. These abnormal nerve signs are also useful when taken in conjunction with states of the body deviating from the normal, but cannot of themselves be relied upon exclusively as showing that the possessors of them require special education.

Low Nutrition.

Low nutrition was observed in 1,537 cases. The children were thin, pale, and presented signs of delicacy. Apparently this condition was due in many cases to physical defect or to low constitutional power, and not so much to starvation or insufficient food as is generally supposed. This was fully proved by Dr. Warner when examining the first 50,000 children between 1888 and 1891. Taken in conjunction with other abnormal conditions of the body, the state of nutrition is a useful guide, and should always be examined into and allowed for in forming an opinion of the mental power of the child.

"Mental Dulness."

Altogether 3,774 children were mentally dull, or were so reported by their teachers; of these, 2,077 were boys and 1,697 girls. Mental dulness, combined with defects of development, abnormal nerve signs, and bad nutrition, was noted in 159 cases. The largest number presenting this combination were observed in the infants' school and in Standard I, there being 49 in the former and 67 in the latter class; it is an interesting fact that the greatest number of children noted were also in these classes. Examining again the children with the above defects according to age, we find that the largest number observed were between the ages of 9 and 10, and next to these during the ages of 7 and 8. The results are different from those in which the children were arranged according to standards in school, and show that the combination of the four defects is chiefly noticed between the ages of 6 and 12.

Defects of Eyes.

Defects of eyes were observed in 1,489 cases, some of them being congenital in origin, while others, such as squint, which was noticed in 815 children, may have been congenital or due to convulsions in early life. Myopia was noted in only 23 cases, but 92 were found wearing concave glasses, so that the defect had partly been provided for. This is an interesting point, in view of the fact that this defect has been said to be due to improper position of the body and faulty arrangement of the light while children are in school.

Rickets.

In 49 children rickets was observed; it is well known this disease is due to a disorder of nutrition, consisting in an in-

creased growth of the epiphyses, or ends of bones, accompanied with delayed, imperfect, and irregular nutrition. So far the combination of rickets with other correlative defects in the second 50,000 children has not yet been worked out, but in the first 50,000 it was combined with nerve signs in 69 cases, with low nutrition in 45 cases, with mental dulness in 74 cases, and with cranial abnormalities in 169 cases.

"Exceptional Children."

Lastly, we come to a very important group of cases, namely, exceptional children, 305 of whom were noticed, of whom 157 were boys and 148 girls. This class includes imbeciles, children feebly gifted mentally, children mentally exceptional, epileptics, and dumb children. The imbeciles were five in number and should not have been sent to a Board school, but to the Darenth Asylum for Imbecile Children, where they would have been specially educated and trained; 101 children were feebly gifted mentally; the defects from which they suffered have not yet been worked out, but in the first 50,000 examined, 234 were found to be feeble minded, and of these, 67 suffered from defects of development, and nearly three-fourths from abnormal nerve signs. Ten were epileptic; 8 crippled or paralysed; 36 were "eye" cases; and 5 had cold, blue hands, a sign of bad circulation. From this we see that feebleness of mind involves the presence of other concomitant diseases. Seven were mentally exceptional, that is to say they were children who, with fair intelligence, were of feeble or low moral character. Such are the truants, the excitable children, those of "irregular mental conformation," who, if not specially trained, later in life commit some offence and are afterwards numbered among the criminal population. No fewer than 55 children, 20 boys and 35 girls, were epileptic, or had a history of fits during school life. In the first 50,000 children, who were seen from 1889 and 1891, 54 were epileptic or had a history of fits, so that the number of these cases in 100,000 children amounts to 109. Other defects were combined with epilepsy: in the first 50,000 children, 35 had also abnormal nerve signs, 35 were dull, 11 suffered from low nutrition, and 28 from defects of development. Only 4 dumb boys were noticed. This seems to show that the Act for providing education for the deaf and dumb is well observed, and probably these four children will be sent to the special schools established for them as sufficient accommodation can be provided.

Summary.

Summarising the results, we find that defects of development were most frequently noticed, and of these defects of the cranium and of the palate are the most important. Cranial defects were more commonly met with in boys than girls; but while more boys had large heads than girls, the latter exceeded the former in the possession of small heads. As far as the defective palate was concerned, this was again found to be more frequently seen in boys than girls, and of the various forms the narrow and the V-shaped palate were most often noted. Mental dulness was more frequently observed in boys than girls, but the sexes were nearly equal in number among the exceptional children. It is for the last two classes, the mentally dull and the mentally exceptional, that special education is required, and it is encouraging to know that this can be obtained in London, Leicester, Birmingham, and other cities. If it should be found that the epileptic children upset the others in the special classes which have been formed, place can no doubt be found for them either in Lady Meath's "Home of Comfort," or in the colony which is now being opened by the National Society for the Employment of Epileptics.

III.—J. Wiglesworth, M.D.,
Medical Superintendent County Asylum, Rainhill.

Craniectomy.

Dr. Wiglesworth quite agreed with Dr. Shuttleworth that the operation of craniectomy was useless in the case of microcephalic idiots. The operation was based on an erroneous pathology, the sutures not being prematurely synostosed in microcephaly, not, at any rate, in the great majority of cases. The results obtained in practice had not been satisfactory.

IV.—W. J. Mickle, M.D.,
Medical Superintendent Grove Hall Asylum, Bow.

Classification.

Dr. Mickle referred to the necessity for a complete and sweeping reclassification of the various forms of congenital—or early-appearing—mental defects; the present classification was eminently unsatisfactory, confusing and jumbling together cases which ought to be kept distinctly separate. Dr. Mickle proposed to adopt a pathological and anatomical classification, dividing the cases into two great groups. First, those in which the mental defect was based upon the results of gross organic intrauterine processes of disease affecting brain and nervous system. Secondly, those in which the fundamental condition was a general developmental nervous failure or defect. These groups would require subsequent subdivision and description.

V.—Dr. Shuttleworth's Reply.

In reply, Dr. Shuttleworth said that he was interested to find that Dr. Wiglesworth bore out his own experience as to the general inefficacy of craniectomy in producing mental improvement, and stated, with reference to the brains of microcephalic idiots, that though in some cases the arrangement of convolutions closely resemble those of the chimpanzee, this was not an invariable rule, the characteristic human arrangement being traceable in many, though on a miniature scale.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

CHLOROFORM DURING SLEEP.

The following case is of interest, as bearing on the question whether a sleeping person can be chloroformed without awaking. I was asked to take two teeth out for a girl, aged 7, and as she is very timid and excitable, to give her chloroform. On going to her home, I found her lying on her back, in bed, sound asleep. Having poured about 2 drachms, probably more, of chloroform on a folded towel, I gradually brought it to about 2 or 3 inches from her mouth, and held it there. She went on breathing quite quietly, and neither coughing nor making any unwonted movement. In a very short time she was so well under its influence that her hand fell plump down when raised, and the conjunctiva was insensible to touch. I then lifted her out of bed, carried her into another room, and laid her on a sofa without her giving any sign of consciousness. On my opening her mouth, however, she put up her hands and turned her head on the pillow. More chloroform was given, and almost immediately she was in a state of complete anæsthesia, and the teeth were extracted. She was easily roused, but almost momentarily again fell asleep, and slept for two hours. When she awoke she was much astonished to find that her teeth were out.

Hawick. James Brydon, M.D.

APPENDICULAR ABSCESS BURST INTO ABDOMINAL CAVITY DURING EXAMINATION; OPERATION; RECOVERY.

M. W., aged 27, first came under my care about ten months ago. She complained of a severe pain in the right iliac region, accompanied with vomiting, constipation, and fever. It had commenced about three days previous and was gradually getting worse. Purgatives instead of relieving had rather increased the pain.

On examination there was a distinct circumscribed swelling, very painful, but no distinct centre of softening that would lead me to suspect suppuration, and she had had no rigors. I therefore suggested the application of six leeches and hot fomentations, and gave her a saline mixture with large doses of belladonna internally, and a $\frac{1}{4}$-gr. of morphine hypodermically. The next morning she was much better, the bowels had acted copiously, and in three or four days she appeared quite well again.

Two months after she had a similar attack, the same treatment was adopted, and she appeared to get quite well again. Since then she has had several other attacks, coming on after intervals of three or four weeks. After the fourth attack I suggested operation, which she declined, and consulted another practitioner. The last attack had commenced whilst she was away at Blackpool, and had lasted for three weeks without any material improvement. Her doctor told her she had better get home, as he had done all he could do, and that it might require an operation.

On April 7th, the day after her return from Blackpool, I was called in to see her; she was then suffering severe pain in the right iliac region, constipation, rigors, hectic, and great emaciation. The swelling which I first saw had considerably increased in size, and was distinctly fluctuating; and, whilst examining it, to be sure of my diagnosis, I felt it suddenly give way under my fingers; the patient felt it also, and fainted. After coming round, she said she felt relieved. I explained to her friends the nature of the case, and they sanctioned my operating. On opening the abdomen the pus welled up through the incision as I made it. The whole of the intestine was soaked in pus. I washed out the abdomen freely, first with warm water, and then with a saline solution, sponged out the abscess cavity, and dusted well with iodoform. The cæcum and colon were matted together, and the appendix could not be found. I made a counter-opening over the abscess, and put in a drainage tube, and dressed antiseptically. The same evening she expressed herself as feeling very comfortable; there had been no vomiting; temperature 102°, pulse 108. Next morning I removed the dressing from over the drainage tube, and soaked out of the tube about two teaspoonfuls of fluid with pus. On the second day there was scarcely any fluid in the tube, and the patient was still feeling better; temperature 100°, pulse 96. On the third day there was no fluid in tube, which felt firmly fixed on account of the cavity contracting, so I removed it, and dressed antiseptically. The wound continued to discharge for three or four days, and eventually healed up. The abdominal incision never gave any trouble. The woman is now wearing a belt, and is gaining flesh rapidly.

I think this case illustrates another instance of the dangers of delay, and, had it not been for my prompt action, the case might have turned out much more seriously.

Cheadle. JAMES DANIEL, M.D.Brux.

CASE OF PRIMARY SARCOMA OF LUNG IN BOY, AGED 11.

C. G., aged 11, a delicate-looking lad, was brought to me on July 8th, with the following history and symptoms. Previously to May last, when a schoolfellow emptied a bucket of water over him, he had enjoyed good health. He wore his wet clothes all afternoon, and in the evening complained of pain in the chest and headache. For the next week he suffered from dyspnœa, stabbing pain in the right chest, and cough. These gradually passed off, and in ten days he seemed himself again. In June he began to lose flesh, and became very weak and short of breath. I saw him on July 8th. There was then considerable bulging of the right chest, especially in its upper half, complete dulness, and absence of air entry; tenderness on pressure; slight cough; sputum occasionally blood-stained; heart's apex beat displaced to the left mid-axillary line, sixth interspace; body and limbs emaciated; temperature in evening, 99°.

The case was thought to be one of pleural effusion, and on July 10th 3 pints of slightly blood-stained serum were drawn off by an aspirator, affording great relief to the dyspnœa, and allowing the heart to resume a more natural position. Very slight return of air entry noticed over upper half of the right chest.

On July 15th, the dyspnœa being again urgent, the pleura was again aspirated, and 3½ pints drawn off, the fluid this time containing considerable blood and some clots. Little relief was experienced, the dyspnœa continuing, with much aching pain under the right scapula. Some ease was obtained by daily ¼-grain injections of morphine.

From this point he went steadily downhill. The bulging of the upper half of the right chest wall increased markedly, the subcutaneous tissue over the swelling becoming infiltrated with effused blood from dilated and ruptured blood vessels. Œdema, at first of the right side of the face and right leg, and subsequently of both sides, became considerable. The superficial abdominal veins became much dilated. A hard painful mass could be felt occupying the site over the head of the pancreas. The heart's apex beat could be felt at a point half an inch posterior to the left mid-axillary line. The dyspnœa became so urgent that for the last fortnight of his illness the boy was unable to lie down at all, but spent all his time sitting on the edge of his bed, propped up by pillows. There was no rise of temperature. In the beginning of August the right supraclavicular glands became enlarged and indurated, and both eyes protruded considerably. Death occurred suddenly on August 11th, apparently from interference with the heart's action due to the great displacement. Unfortunately, a *post-mortem* examination was not allowed.

The case is of interest as having presented the history, and at first the appearance of simple pleural effusion. Subsequently the very localised chest deformity, intrapleural hæmorrhage, the rapidity with which the fluid reaccumulated, absence of temperature, and the secondary glandular implication, pointed to the more fatal disease. From the patient's age the case was in all probability one of sarcoma rather than carcinoma.

Ealing. R. MILBOURNE WEST, M.R.C.S.

REPORTS OF SOCIETIES.

BRITISH GYNÆCOLOGICAL SOCIETY.

HEYWOOD SMITH, M.D., Vice-President, in the Chair.

Thursday, July 12th, 1894.

SPECIMENS.

DR. GODSON showed a Uterus removed by vaginal hysterectomy for malignant disease, from a patient aged 57, who had had six children. She made a good recovery.—MR. BOWREMAN JESSETT showed two specimens of Uteri removed by vaginal hysterectomy for malignant disease. He also showed a new Broad Ligament Forceps to secure the broad ligaments in cases of vaginal hysterectomy.—DR. BANTOCK showed two large soft Fibroids of the Uterus, removed by abdominal hysterectomy.—DR. HEYWOOD SMITH showed: (1) Double Hydrosalpinx, removed from a patient, aged 50; (2) Double Pyosalpinx and Tubo-Ovarian Abscess; (3) Double Hæmatosalpinx and Papilloma of the Broad Ligament. The important question in the last case was whether the disease was malignant. All three patients made a good recovery.

LYMPHANGIECTASIS OF THE OMENTUM TREATED BY ABDOMINAL SECTION.

The SECRETARY read a paper on this subject for Professor KRANTZ. The patient was a girl, aged 15, who in the beginning of 1893 observed a tumour, the size of a small orange, in the lower part of her abdomen. It was then freely movable. She had no pain except some cardialgia. She had menstruated, the first time, in October, 1892, scantily and painlessly; the second, and last time, in February, 1893, abundantly and with pain. When seen, in March, 1893, the tumour extended from the pelvis to a distance of two inches above the umbilicus; it occupied the middle of the abdomen, and a little to the left side. No contractions in the cyst; no fœtal or placental *souffle*. Liver and right kidney normal. Left kidney and spleen not palpable. On making an internal examination, as the external hand was pressed down behind the symphysis pubis the tumour was pushed higher up, and was easily moved up and down, less from side to side, and always causing pain in the cardia when moved to the right side. The uterus was of virginal shape, size, and consistency; tubes normal, and both ovaries somewhat enlarged. There was no connection between the uterus or its appendages and the tumour. In diagnosis, pregnancy was excluded by the condition of the uterus; and a phantom tumour by the absence of hysterical symptoms and by the uniform fluctuation. It was obviously not a genital tumour. There were no symptoms to indicate that it was a renal or hepatic tumour (echinococci do not exist at all in Norway); a pancreatic cyst would not be movable. There remained only two possibilities—an omental or a mesenteric cyst. The former was thought the more probable because of the pain in the cardia when the tumour was moved to the right. Laparotomy was performed, and the diagnosis was confirmed. The cyst was hanging in the omentum majus. It could not be shelled out, and the omentum had to be ligatured and cut off. As both ovaries were cystic, they, with the tubes, were removed. The patient made an uninterrupted recovery. On examination the cyst was found to be the size of a child's head, unilocular, with a wall from 0.5 to 1.00 mm. thick. The contents were a clear, thin, dark fluid. Microscopical examination showed that the cyst wall consisted of a more or less cellular fibrillary connective tissue; on the inner surface was a single layer of endothelial cells. It seemed evident, therefore, that the case was one of lymphangiectasis of the omentum majus. The special interest of the case was that these cysts are extremely rare, and that the diagnosis was made before operation. The paper concluded with a reference to the literature of the subject.

Dr. BANTOCK said he had reported three cases; one was a hydatid; of the other two, one (recorded in the *Obstetrical Transactions*) was unilocular, the other was multilocular.

REVIEWS.

Methods of Practical Hygiene. By Professor K. B. Lehmann, Würzburg. Translated by William Crookes, F.R.S. In two volumes. London: Kegan Paul, Trench, Trübner, and Co. 1893. (Vol. I, demy 8vo, pp. 457; vol. II, demy 8vo, pp. 490. 31s. 6d.)

For many reasons this work deserves to be studied by English hygienists; not always for guidance, although there is much to be learned from it, and especially in the region of laboratory research; but rather for the sake of appreciating the differences between our own standpoint and that of Continental countries in regard to the science of sanitation. If, as a great teacher of medicine said, there is nothing like dogma for the student, it would perhaps be well to defer the study of Professor Lehmann's pages until faith in our insular views has become consolidated by practical knowledge of the facts upon which they are based. In the sections devoted to the processes carried on in the laboratory, including chemical and bacteriological investigation, and physical measurements, much valuable information will be found, and in some respects it will be evident that German research has been more thorough and scientific than our own.

Even in the laboratory, however, the present manual is not on the whole adapted for routine use, however valuable as a work of reference. English processes of water analysis, to take one conspicuous example, are referred to only incidentally, and a much clearer conception of the necessary methods and the interpretation of them can be gained from our ordinary textbooks than from the work before us. This remark applies not only to the debatable ground of determination of organic matter, but also to minor details, such as the estimation of chlorine and lead in solution. As regards the former, no warning is given of the need for dilution if the proportion of chlorides be excessive. Similarly as regards food questions, other than those turning upon analysis, Professor Lehmann's views are not likely to find acceptance in the points wherein they differ from English teaching and experience. It is scarcely sufficient to dismiss the suggestion of the bovine origin of some scarlet fever epidemics with the statement that "a so-called epidemic of scarlet fever in cows was found to be cow-pox," nor is justice done in other respects to the mass of evidence which has placed beyond doubt the reality of milk epidemics and water epidemics. Not that the author fails to mention the occurrence of such epidemics; but, while speaking of them as possible, he conveys the impression that in Germany, at all events, they are not very familiar.

But the widest divergence is reached when we come to questions of house drainage, arrangements which are anathema in British sanitary practice being awarded something more than toleration in Germany. Thus, "the overflow pipes of cisterns should not open into the soil pipe of a w.c. without the intervention of a siphon:" and "there are no hygienic objections, though prejudices often prevail," against flushing closets direct from the main! What will English cremationists think of Professor Lehmann's dictum that in case of burial "the corpses certainly pollute the soil, but if the ground water does not occasionally rise into the graves it remains pure and of a good taste, as is proved by numerous analyses."

The translator has done his work well, and makes it clear by footnotes as well as in the preface that he does not share all the author's opinions or accept responsibility for them. It would have been better to substitute "enteric" or "typhoid" for "typhus" when the former is referred to instead of retaining the ambiguity of the original. It might mislead some readers to be told of epidemics of typhus alleged to be due to milk.

The Health Officer's Pocket-Book: A Guide to Sanitary Practice and Law. By Edward F. Willoughby, M.D.Lond. London: Crosby, Lockwood and Son. 1893. (Foolscap 8vo, pp. 390. 7s. 6d.)

Dr. Willoughby's handy little book is neatly and conveniently got up, well arranged, fairly well indexed, and crammed with information useful to medical officers of health. Its value would have been increased had more care been spent upon revision. Thus, on page 50, the "probable duration of life" is said to be equivalent to the "expectation of life at birth," whereas the author doubtless meant to affirm the identity of the latter with the "mean duration of life," which is mentioned a little earlier. Another obscure passage occurs on page 143, in reference to samples under the Sale of Food and Drugs Act: "Milk may be taken in the street, but not at the railway, there being no vendor present, unless a recent decision be confirmed." Nor is it quite clear what is to be understood by the statement (page 155) that "ashes are as good a deodorant as earth, while quite inert"; or (page 122) that in typhus "eruption follows an invasion of one day." It must not be supposed that these instances of hasty proof-reading are cited as samples of the work generally, which, on the contrary, is written clearly and tersely. In some respects Dr. Willoughby enunciates without warning views which are different from those currently held by medical officers of health, on the authority of the older textbooks. The incubation period of scarlet fever and diphtheria is put down as usually two days, and rarely if ever exceeding four days. The classification of causes of death suggested on page 83 has doubtless some advantages from a scientific point of view, but is open to the formidable objection that it is not comparable with other methods in general use in this country, and particularly with the classification required by the Local Government Board. A high standard of air space is advocated—higher in some respects than can usually be secured; for example, 3,000 to 4,000 cubic feet per patient in fever hospitals, and 1,500 cubic feet per cow in cowsheds. We are not quite sure to what Dr. Willoughby refers when he states (page 131) that model by-laws with regard to dairies and cowsheds have been drafted by the Local Government Board. Nearly a third of the book is devoted to sanitary law. The Factory and Workshop Act of 1891 seems to have been overlooked, but otherwise this section appears to be very complete. In spite of some minor defects the work is likely to prove very useful. It contains many valuable hints and formulæ not found in other handbooks addressed to the same class of readers.

The Sanitary Inspector's Handbook. By Albert Taylor, Chief Sanitary Inspector to the Vestry of St. George Hanover Square, London. With illustrations. London: H. K. Lewis. 1893. (Crown 8vo, pp. 243. 5s.)

Sanitary inspectors are called upon to know a little of everything, and Mr. Taylor's book will help them to that knowledge in many respects, although it is curiously unequal in detail. The author has evidently a liking for law, and enters fully into a number of judicial decisions with reference to the seizure of unsound food and the procedure under the Sale of Food and Drugs Act; but interesting and important as these points are, they are scarcely such as the inspector needs for guidance in his daily work, as he would, of course, have to rely upon the opinion of the professional officers as to legal as well as medical technicalities. For non-legal readers the elaborate reference to "53 and 54 Vict., c. 35, s. 31" is liable to be regarded as pedantic, and is certainly less intelligible than the use of the popular name of the Act would be. One consequence of this degree of detail is that other matters of more direct significance have been unduly compressed. The information given as to dairies and cowsheds is so scanty as to be practically useless, and no reference is made to the taking of milk samples at the place of delivery. Practical hints in this direction would be more to the point than legal niceties and the *ipsissima verba* of decisions in the higher Courts. On the other hand, many of the sections, and indeed most of them, are instructive and practical. It would have been well to warn the reader that the incubation periods, and even the symptoms of infectious diseases, stated on page 129 are not to be regarded as invariable, and to qualify somewhat the comprehensive direction that the inspector on visiting a house in which infectious disease is reported should always set about persuading the friends to have the patient removed. These are questions involving medical knowledge and judgment.

We have noticed scarcely any errors of commission, in the

sense of misstatement of fact, but the misuse of inverted commas which disfigures several of the paragraphs perhaps comes under this heading.

Teratologia: Quarterly Contributions to Antenatal Pathology, with Reviews of the Current Literature of the Subject. By J. W. Ballantyne, M.D., F.R.C.P.E., F.R.S.E. No. 1, April, 1894. London and Edinburgh: Williams and Norgate. (8vo, pp. 60. 2s. 6d.)

Not many years since we expressed a hope that teratology might be encouraged as a study by collegiate authorities and by learned societies. Without pecuniary assistance from some fund at the disposal of an association or university, or at least without the means of gratuitous publication which a society can afford, it is useless to expect much teratological work to be done in the United Kingdom. Of all sciences there is none which can so little be turned to personal profit. Yet teratology is important in relation to embryology.

Taking the above considerations into account, Dr. Ballantyne deserves high praise for his new enterprise. He has started *Teratologia* on his own account, and deserves both aid and success; we trust and believe that he will gain both.

The first number includes reviews and abstracts of works and papers on monsters, and a section devoted to an original article by the author on Fœtus Amorphus. Here we find comments on the difficult classification of the monsters generally grouped together as Acardiacs. He describes specially Amorphus Anideus, and the doubtful section Amorphus Mylacephalus.

We must suspend our judgment until Dr. Ballantyne has published his opinion on the remaining groups of acardiac monsters, but we feel sure that so accurate an observer will give excellent reasons for his theories on the classification of these malformed twin fœtuses. We also hope that his work may ultimately be published in a collected form, as no British atlas of teratology is in existence.

Pathologisch-anatomische Diagnostik neest Anleitung zür Ausfuehring von Obductionen sowie von pathologisch-histologischen Untersuchungen. [Pathologico-Anatomical Diagnosis, including a Guide to the Carrying out of *Post-mortem* Examinations, as well as Morbid Histological Investigation.] Von Johannes Orth. Fünfte bearbeitete Auflage. Mit 410 Abbildungen. Berlin: A. Hirschwald. 1894. (Imp. 8vo, pp. 722. M.14.)

This well-known book, now considerably enlarged in its fifth edition, differs in arrangement from most of those in general use. The morbid anatomy of each part is described in the order in which it should be examined in conducting a necropsy. For the sake of completeness some investigations which are more likely to be made clinically than after death, are also included, such as the examination of the sputum, gastric contents, morbid growths, etc.

In an introductory chapter the instruments, etc., used in making a *post-mortem* examination are briefly described: a sketch is given also of general microscope *technique*, and is amplified considerably in succeeding chapters as occasion demands. The author next gives a chapter to the description of external appearances, and the rest of the book is taken up with the examination in order of the vertebral and cranial cavities including the special senses, the thorax and abdomen, and the extremities. To illustrate the method pursued here the kidneys may be taken as an example. A short section is given to the changes in the capsule, then one to the external examination of the renal parenchyma, including (*a*) the general relations, size, weight, etc.: and (*b*) the special changes seen on the surface of the organ; and, lastly, one to the internal examination of the parenchyma, the general relation of parts and the special diseases being here described. The special diseases are arranged under: (*a*) malformations; (*b*) circulatory disturbances—anæmia, hyperæmia, hæmorrhages; (*c*) inflammation; (*d*) infective granulomata; (*e*) progressive nutritional changes, including hypertrophy and neoplasms; (*f*) regressive nutritional changes, such as the arterio-sclerotic kidney and hydronephrotic atrophy; and (*g*) foreign bodies and parasites, including calcareous and uric acid deposits. Finally, a section is given to the diseases of the renal pelvis and calyces and the ureter.

The chapter on diseases of the cardiac valves and myocardium seems to be especially good, and is profusely illustrated. As many as four different kinds of pneumonia are described according to the resulting products, namely, (1) fibrinous, (2) catarrhal, (3) purulent—of which that due to a foreign body is the best example—and (4) caseous. Under the last named, three varieties are mentioned, two of which appear to be tuberculous. The account of the morbid anatomy of the bile passages and the pancreas includes all the recently acquired knowledge on these subjects. Under typhlitis the author appears to attach more importance than usual to displacements of the appendix in producing appendicitis. These displacements, as well as changes in the mesentery, may, according to him, cause a kinking of the tube with consequent retention of secretion and appendicitis. Under the heading of extremities the morbid anatomy of lymphatic glands, blood vessels, nerves, muscles, tendons, joints and bone is discussed. The space given to nerves is small; one or two microscopical illustrations might have been given here with advantage.

The information contained in Professor Orth's book is wonderfully complete, and is obviously given by a master hand. The arrangement lends additional interest to it. The illustrations are copious and useful. Those interested in morbid anatomy, both naked eye and microscopical, will read and refer to this book with pleasure.

La Médication par l'Exercise. By M. le Dr. Fernand Lagrange. Paris: Félix Alcan. 1894. (Roy. 8vo, pp. 596. Fr. 12.)

Lagrange is the author of a number of treatises upon "Exercise." He has produced three systematic works: *La Physiologie des Exercises du Corps*, *L'Exercise chez les Enfants et les Jeunes Gens*, and *L'Exercise chez les Adultes*. The first of these is well known to English readers. All are written with authority, and are the work of an enthusiastic student, and one who has had unusual facilities, for the author has three times been employed by the French Ministry of Public Instruction to investigate and report upon the condition of gymnastics in the educational systems of other countries.

The author prefers the word "exercise" to "gymnastics," for the reason that the latter has not everywhere the same meaning. Exercise is defined as "the general name of every kind of systematically regulated movement of the body." Therapeutic exercise falls easily within such a definition. Even free movements such as those involved in games and sports are not excluded, for these, when adopted for therapeutic purposes, must be regulated by the principle of dosage not less than exercises of a systematic kind.

The first part of the book before us sets forth the various resources for treating disease by means of active and passive movements, and massage. Next are considered the good and ill effects of fatigue, training, and what is termed the education of organs; and there are, finally, two chapters of a thoroughly practical nature on the indications and contra-indications of exercise as a therapeutic agent.

The second part furnishes an exhaustive account of the various methods of cure by means of exercise. A very full and detailed description of the Swedish gymnastic system is given, with a detailed description of the Central Institute at Stockholm. The author takes occasion to regret that in this case more of the work is not done in the open air, but he dwells with satisfaction on the compensatory influence of the admirable winter sports in vogue in Sweden. Dr. Lagrange does not lay enough stress upon the importance of the "resistive" movements, the distinguishing feature of King's system. German and French gymnastics are considered, and the author pronounces them too violent for medical purposes. There is an admirable chapter on the system of dosed exercise known as the "Oertel cure" or *cure de terrains*. The description is accompanied by a chart of the neighbourhood of Reichenhall, in Bavaria.

English opinion will dissent from Dr. Lagrange's views on gynæcological gymnastics and the Thure-Brandt system. The method consists of (1) ordinary massage with the additional

—and objectionable—feature of manipulating the vagina and rectum with the finger; (2) the active and passive movements adopted in abdominal gymnastics, with certain fantastic complications of "concentric" and "eccentric" movement for which we can find no physiological basis; (3) "uterus lifting," a *manœuvre à deux* which is effected as follows: One operator introduces his finger into the vagina to secure the due degree of elevation of the uterus, while another standing in front of the patient, with left knee on the couch and right foot on the floor, "seizes the fundus of the uterus through the abdominal parietes with both hands so as to raise it high enough." A procedure at once so indelicate and irrational hardly calls for comment.

On the subject of fencing, Dr. Lagrange proposes to obviate the tendency to resulting deformities by substituting for the classical and scoliotic postures others which it seems are not less vigorous and effective. His views on orthopædic fencing will be read with interest.

The third part deals with the application of exercise in treatment. The more important chapters are those on deformities, nervous affections, affections of the respiratory tract, and heart disease. The book is complete, exhaustive, and uniformly well written. It deserves to be, and assuredly will become, the leading authority on the subject of exercise and gymnastics as applied to medicine.

Untersuchungen über den feineren Bau des centralen und peripherischen Nervensystems. [Investigations into the Minute Anatomy of the Central and Peripheral Nervous Systems.] Von Camillo Golgi. Jena: Gustav Fisher. 1894. (Demy folio; text of 280 pages, atlas of 30 plates; 2 vols. 25s.)

The present magnificent work in two folio volumes is a worthy monument embodying the epoch-making work of Professor Golgi, of Pavia, on the central and peripheral nervous systems. The text contains 14 articles, and covers an extensive ground, beginning with the earliest contributions of Golgi, "On the Minute Anatomy of the Central Nervous System" (1871), and concluding with his most recent researches on certain cranial nerves and on the diffuse nervous network or plexus pervading the central nervous organs in the brain and spinal cord (1893). It covers, therefore, a period of the author's work, ranging nearly over a quarter of a century, and alike, from beginning to end, the work is of remarkable excellence. To say so is but faint praise, for the various contributions are themselves really small monographs, the whole constituting a work which must be indispensable to every student and investigator of the brain and nervous system.

The first memoir treats of the cerebral cortex, the cerebellum, and the spinal cord, each subdivision having prefixed to it a historical account of the growth of knowledge up to the date of the author's work. The results here are mainly obtained by the older histological methods; yet, so far as they go, they are of singular precision and clearness. There is a specially good account of the so-called "Deiter's cells," and their relations to nervous and vascular structure in the brain and cord, and the accompanying plates in the atlas are sufficient, clear, and to the point.

The second paper deals further with the grey substance of the cerebrum, and this is followed by one on the anatomy of the human cerebellum. The application of the special Golgi's sublimate method is first utilised in his study of the olfactory bulb—the fourth memoir, with an exquisite lithographic plate, in which the olfactory nerve endings in the glomeruli, the relation of these to cell elements there, and the axis cylinder branches of the latter, are well shown. The glomeruli are looked upon as "fields of association" where the peripheral ends and the cerebral (central) begins. The olfactory bulb cortex shows a three-laminated structure, comparable, therefore, to a primitive cortex.

The sixth memoir and the seventh deal with medullated nerves and their structure (both central and peripheral), with minute studies on the striæ of Lautermann, and of Golgi's "spiral fibres," "funnels," etc., the silver method being employed. This is the conjoint work of Golgi and his pupil Rezzonico.

The greatest monograph is that which follows, namely, the seventh, a distinctly epoch-making work—100 folio pages with 24 plates. Throughout there is evidence not only of vast, extensive, and critical work, but an acute philosophical insight, which find expression in the discussions on the structure and meaning of nerve cells, the nature of their processes, their inter-relations to one another, and the actual structure of the pathways of nerve currents in the centres. The distinction between protoplasmic and axis cylinder processes is shown, and a classification of nerve cells proposed, based mainly on the extent and terminations of the axis cylinder process. The division is into those with (*a*) short and immediately-branching axis cylinder processes and (*b*) long axis cylinders which branch and end at a distance. It is unfortunate that these two cell types, instead of receiving purely anatomical names, should have been designated by Golgi "sensory" and "motor" cells respectively, an implication of function which later researches have failed to bear out.

The enormous extent and complexity in the protoplasmic branchings is well shown, and admirable illustration given of the two anatomical cell types. Following this is a study of the organisation of these cell elements into layers (cortical lamination) and cell groups, and here Golgi naturally propounds his own subdivision of the cortical layers. These are three in number, namely: (1) The deep or polymorphic layer (Meynert's claustral formation); (2) the pyramidal layer (large and medium-sized cells), which gradually verges into (3) the small pyramidal cell layer (pyramidal and ovoid cells). There is no real distinction, however, between these last two layers. According to the shape of the cell body, the author recognises three main cell types: (1) pyramidal; (2) fusiform; (3) polygonal-spheroidal. These are well shown in the two plates illustrating the structure of the ascending frontal and the occipital cortex.

The cerebellar cortex is next minutely described. There are three layers: (1) Superficial (molecular layer) with small fusiform cells, and in its deepest part Purkinje's cells. Neuroglia cells are also present in this layer (Plates 9 and 12). The various connections of Purkinje's cells are well shown (Plates 10 and 11). These plates alone realise the wonderful possibilities which Golgi's methods have opened out. The whole scheme of the structure of the cerebellar cortex is thus revealed, the different kinds of cells being differently tinted for the sake of clearness (Plates 12, 13, and 15). Plate 15 is a marvel of artistic skill. The neuroglia cells are shown to fall into four morphological subtypes. This work on the cerebellum alone ought to confer immortality on the author.

Elaborate investigations follow on the hippocampal region, the main cell types being illustrated in Plates 17 and 18. The structure of the cell layers here and their homologies are next discussed (with Plates 20, 21, 22); the cortex of the fascia dentata (with ovoid bicornate cells) seems to be a separate layer, the discussion of whose significance opens out various morphological problems. The neuroglia constituents are also described with moderate fulness. The nerves of Lancisi, which form the supra-callosal edge of the pallium, are next studied, and the presence of nerve cells is then established. The whole discussion concludes with an excellent account of the methods of *technique*.

Memoir 9 deals with the doctrine of cortical localisation, and is an attempt to correlate facts of structure with the view of circumscribed "centres," due regard being given to the views of Hitzig, Munk, and Ferrier. The peripheral nerves are next studied, and the various sensory endings in skin, tendon, muscle, and other tissues fully described; especial attention is paid to the anatomical evidence of the nerves of muscular sense (Plates 29 and 30). The significance of these in regard to the "sense of movement" is discussed, the views of no important school being overlooked.

In memoirs 11 and 12 the cell groupings in the spinal cord and their relation to nerve endings (intra-spinal) shown; here the author replies also to recent criticisms of Cajal and others, and the discussion is fully brought up to date.

The concluding memoirs deal with the central origin of certain spinal and cranial nerves, the oculo-motor and sixth nerve nuclei being made the subject of a special study, and certain new results are given concerning the connection of the sixth with adjacent nuclei. (Drawings are given showing

the kinds of cells present.) The remaining paper is partly controversial; it replies to recent criticism concerning the network or fretwork which, according to Golgi, pervades the entire nervous system. A new method—development of the sublimate staining, with intensification to allow of the finest structures being rendered visible—is given, and new results. These results, however, go far to confirm the author's previous conclusions, namely, that the ultimate branchings of the protoplasmic processes and collaterals are of such exquisite fineness and subtlety that the demonstration of actual anastomosis is practically certain—at any rate, that the ultimate nervous pathways are so fine and so close that probably there are many anatomical connections of the most delicate nature between cell and cell (*contra* Cajal and others).

But enough has been said about the work and its conclusions. It must be indispensable for every worker, and whatever other author be read or studied, Golgi must be read.

THE COMMON FORMS OF DYSPEPSIA IN WOMEN. By ROBERT SAUNDBY, M.D., F.R.C.P. Birmingham: Cornish Brothers. 1894. (Demy 8vo, pp. 388. 2s.)

DR. SAUNDBY is to be congratulated both on the subject which he selected for the Ingleby Lectures, and the manner in which he treated it. It will be remembered that he did the profession considerable service in bringing out a short time ago an excellent translation of Professor Ewald's *Verdauungskrankheiten*. The general character of the lectures will have been gathered from the reports published in the BRITISH MEDICAL JOURNAL at the time of their delivery. Everyone is familiar with the class of case described by the author in his first lecture, and yet the treatment of it is most haphazard. One thing very properly emphasised in the lectures is the importance of the examination of the vomit and gastric contents, a clinical investigation which, strangely, meets with little sympathy in this country. The second lecture is taken up with treatment considered under its various aspects—rest, massage, isolation, climate, diet, exercise, electricity, washing-out the stomach, and drugs. Dr. Saundby does not share the very generally accepted views in respect to tea drinking, and especially if the tea is made with milk. These lectures are very practical, and will be read with much interest.

LA PARALYSIE GÉNÉRALE. Par V. MAGNAN et P. SERIEUX. Paris: G. Masson. 1894. (Cr. 8vo, p. 194. Fr. 2.50.)

THE recognition of general paralysis begins with Boyle (1822) and Calmeil (1826). In the present volume the author distinguishes (*a*) its primary and fundamental manifestations from (*b*) the secondary or accessory ones. The progressive loss of memory and mind enfeeblement and the parallel loss of physical co-ordination belong to the first category. Delusions, maniacal excitement, melancholic phases belong to the second; so do epileptiform and apoplectiform attacks. In case of remission the fundamental lesions (weakness of memory, hesitancy of speech, loss of the highest motor activities) are ever present, though the accessory ones (*troubles délirants*) may be in abeyance more or less.

The early mental changes are correlated by the author with pathological brain changes, and the pathogenesis of altered personality and its emotional accompaniments ably explained after Griesinger's psychopathology. Pupillary phenomena are accessory. Pyrexias with seizures are shown to be high in relation not to the amount of muscular agitation, but the central (cortical) disintegration which is going on. The special types (tabetic, pseudo-tabetic, spastic) and the presence of optic neuritis show the profound trophic changes throughout the whole nervous system in this disease.

Pathological states in the brain, etc., are inadequately treated. Etiology gives the age curves culminating between 30 and 40 in both sexes. With Fournier, the author thinks syphilis a predominant cause. The rarity of the disease among Quakers and other primitive folk and its increase with the growth of social stress in civilisation is clearly shown. The manual is of use to the general student.

DES LÉSIONS DE L'ENDOCARDE CHEZ LES TUBERCULEUX. [Endocardial Lesions in the Tuberculous.] Par Dr. PIERRE TEISSIER. Paris: Baillière et Fils. 1894. (Roy. 8vo, pp. 328. Fr. 7.)

ONLY a few years ago the idea of lesions of the endocardium being in any way connected with tubercle was hardly entertained; indeed, certain valvular lesions, such as mitral stenosis and phthisis were looked upon as mutually exclusive. In the study of the subject which this volume contains, the lesions themselves are considered under (*a*) specific endocarditis, (*b*) sclerosis of the endocardium, (*c*) valvular defects, and (*d*) secondary endocarditis.

Under specific endocarditis true tuberculosis of the endocardium is discussed, as well as a caseating and nodular form of the disease. The cases belonging to this group are few. In sclerosis of the endocardium, which may be either general or local, the base of the valves is chiefly affected. The author has never seen a strictly specific lesion in many such cases examined, nor has he found the tubercle bacillus present. The sclerosis is looked upon as due to a slow tuberculous intoxication, and analogies are instituted between this and the scleroses produced by other intoxications.

Among lesions of the cardiac orifices two classes of cases are distinguished: (1) those which are merely coincident and (2) those which by their evolution may be assumed to have a direct relation to the tuberculous disease. In the former the tuberculosis is really secondary, and there may be a rheumatic history. In the latter only lesions having a gradual onset—namely the stenoses—are included. Secondary endocarditis is mostly, if not entirely, due to secondary infections. The possible sources of such secondary infection by the streptococcus, staphylococcus, etc., are numerous—as, for example, intestinal and pulmonary lesions.

As to acute toxic endocarditis of tuberculous origin, the author says that its existence has not as yet been proved. The case recently reported by Londe and Petit[1] does not appear to him to offer such proof, and it is here classed, perhaps more correctly under tuberculosis of the endocardium. Yet Londe and Petit were of opinion that some of the fresh vegetations were formed under the influence of the toxins. None of the characteristic structure of tubercle was present, but a few tubercle bacilli were found at the base of one vegetation, and the inoculation of another vegetation into a guinea-pig produced generalised tuberculosis.

The chapter on the pathogeny of these diseases, supported as it is by experimental work, is one of considerable interest. The subject is discussed under: (1) Tuberculosis as an infective process; (2) tuberculous intoxication, including an experimental study of tuberculin; and (3) the bacterial associations occurring in tuberculosis. In the clinical study the question of specific endocarditis and the endocarditis due to secondary infections must of course take a subordinate place, for the first named is extremely rare, and the latter only occurs in advanced tuberculosis. Sclerosis of the endocardium is also of little clinical significance. The symptoms of these lesions are but slightly marked. The presence of chronic lesions of the cardiac orifices is quite a different matter, and especially that of mitral stenosis. In the out-patient room the occurrence of phthisis, combined with a valvular lesion, is not such a very rare event. In regard to prognosis, the author's opinion is that the presence of mitral stenosis retards the development of the tuberculous lesions. In respect to pulmonary stenosis where the ischæmia predisposes to the tuberculous disease, the phthisis appears to develop slowly. In an appendix details are given of over 90 cases of these various lesions, many of which have been observed by the author himself. A summary is also given of the experimental work, and a useful bibliography follows.

The author may be congratulated on having produced a book of very considerable interest, and well worthy of being carefully read. The amount of patient work and inquiry upon which it is based is obvious. It not only includes valuable information upon the subject immediately under consideration, but it also deals with questions of much wider interest in the large field of tuberculosis.

[1] EPITOME, February 3rd, 1894, par. 83.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE "ANTIDIPHTHERITE."

This apparatus, which has been patented (Stenning's Patent), is designed as a safeguard for persons brought into intimate relations with diphtheria and other forms of infection; but it is thought that it will also be of use to workpeople engaged in chemical works, cement mills, and places where metallic particles are liable to be suspended in the air. The apparatus consists of a mouthpiece, to which is attached a clamp for compressing the nose; air enters the mouthpiece through a double tube, which falls backward on the shoulders. At the outer end of the tubes, which are made of indiarubber, is a small indiarubber receptacle for a sponge, which may be soaked in a disinfecting fluid. For this purpose Sanitas is recommended, and the apparatus can be obtained from the Sanitas Company, Three Colt Lane, Bethnal Green, E., price one guinea.

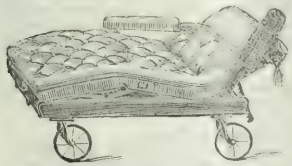
A SIMPLE INHALER.

An inhaler designed by Mr. F. W. Ingram, and patented by Messrs. J. C. Ingram and Son, Hackney Wick, which presents certain advantages, has been brought to our notice by Dr. J. Francis Taylor, of Leyton. Its construction is simple. The inhaler is practically a tin mug with a tightly-fitting perforated lid, which contains a short cylindrical aperture. Through the aperture an india-rubber tube, provided with a vulcanite mouthpiece, and guarded by a flange at the bottom, is passed. To the bottom of the mug is fixed a perforated cylinder large enough to hold an ordinary wide-mouth stoppered bottle of the capacity of about one ounce. The drug to be inhaled is placed in this bottle, and hot water is poured into the mug until it reaches to about the neck of the bottle. The lid is then adjusted, and the inhaler is ready for use. When the inhalation has been continued for the required time, the stopper is replaced in the bottle, and the water is poured out of the mug. When required again, all that is necessary is to pour in more warm water, and remove the stopper from the bottle.

We find that the inhaler works well, and the claim of the patentee appears to be well grounded that it is an efficient apparatus, and at the same time prevents waste of the drug, while saving no little trouble of measurement, cleansing, etc. The inhaler has been given the rather incomprehensible name of "The Respiroregenerator."

THE "FARRINGDON" COUCH.

This couch has several improvements on the models in vogue. The top frame is Austrian-spring edged-stuffed, the stuffing being made with the best steel springs and white horsehair, and covered in silk tapestry. It is provided with three movements, so as to adapt itself to any position most comfortable to a patient. The arms are adjustable. The lower frame has a powerful mechanical movement fitted with levers, which are silently and easily adjusted, so that the cushioned top is brought alongside a bed, and a patient quickly and easily transferred to it, and lowered to the height of an ordinary couch. The alteration both in the top and lower frames are made by one crank handle. The movements are noiseless, and can be performed without exertion by any female attendant. The mechanism is simple. The wheels are swivelled and fitted with india-rubber tyres. It is manufactured by Alfred Carter, Limited, 47, Holborn Viaduct, and was exhibited at Bristol.



THE CATLEY ABBEY MINERAL WATER.

The analysis of this water by Professor Attfield is as follows:

	Grains per Gallon.
Chl. potassium	0.680
Chl. sodium	133.851
Nit. sodium	0.299
Sulph. sodium...	0.361
Bicarb. sodium	52.131
Carb. calcium	3.525
Carb. magnesium	3.700
Iron oxide and alumina	0.090
Silica	0.041
Saline ammonia	0.109

As its composition would indicate, it is recommended as an alkaline water, likely to be serviceable in cases of biliousness and kidney disorders, and for relieving gout and rheumatism, and as such is put forward as a rival for the German Selters water, to which class it belongs.

ARTIFICIAL NAIL CURETTE.

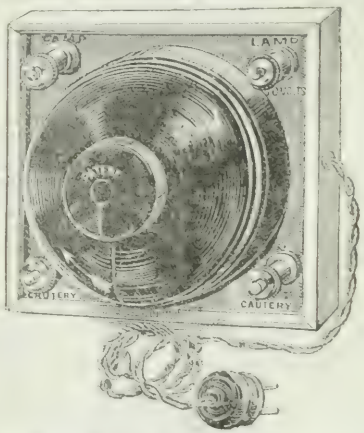
Dr. W. D. Haslam of Bournemouth sends us a description of an artificial nail curette; the chief advantage which he claims for this instrument is that it leaves the most sensitive part of the finger uncovered, free to examine the growths to be scraped away, whilst the scraping edge assumes a naturally



convenient position for effectual work. It is important to ensure an accurate fit, then the instrument will not slip backwards when the finger is flexed or come off. Its chief use is for the removal of post-nasal adenoids, and also for some uterine operations.

TRANSFORMER FOR MEDICAL CAUTERIES.

This is an apparatus for use on the electric lighting mains to take the place of a battery for heating the galvano-cautery.



It can either be fixed to the wall or placed upon the table and connected to the mains by a flexible wire from a wall plug or

lamp socket. It is safe, portable, strongly made, and admits of exact regulation to suit cauteries of different kinds. A small lamp (ten volts) can also be lighted from it simultaneously with the cautery. It can only be used upon the mains of an alternate current supply. The instrument is made by Messrs. Miller and Woods, 2, Gray's Inn Road, Holborn, E.C., and the price is £4 4s.

AN AXIS TRACTOR.

DR. LE PAGE (Manchester) writes: With reference to Mr. W. H. Goodenough's letter published in the BRITISH MEDICAL JOURNAL of July 7th, in which he stated that a similar "obstetric hook" had been used by him with decided advantage for the last fourteen years, and that it was made by Messrs. Young, cutlers, Edinburgh, I wish to point out that my axis tractor is in no sense whatever an "obstetric hook," and further that I am unable to obtain any information from Messrs. Young respecting the "hook" which Mr. Goodenough says was made by them.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

SPECIAL COMMISSION OF THE "BRITISH MEDICAL JOURNAL."

XV.
PLYMOUTH.

THE Plymouth Workhouse has to do with over 600 inmates, and of these 184 are infirmary beds. The infirmary is under the same management as the workhouse, but it is in distinct buildings. This house is much to be commended for the arrangements that are made for the care of the imbeciles and the feeble minded; they are lodged in a separate building of modern construction, with skilled attendants as responsible officers, and are well provided with amusements and suitable occupations: would that the same could be said of the sick department!

THE WARDS

are located in a building immediately behind the house, so close that the air and light space is not adequate to the needs of the sick: like many other infirmaries in this county, it is quite behind the age, and as we walked round it we questioned whether its stubborn walls could be adapted to the present day. The plan of the infirmary is a middle block with the male and female wards on each side, on ground, first, and second floors, with annexes at right angles to the ground and first floors. There are about 80 beds on each side, in wards of varying capacity, the smallest holding 6 beds, and the largest 12. Besides these wards there is a small detached ward on the female side and a corresponding ward on the male side, each holding 10 beds; these are light, pleasant wards, and are made warm by the erection of a small porch to the entrance. It seemed to us that these wards were well adapted for the isolation of the lock patients, whom we found mixed up with the general patients. The appearance of the wards was cheerful; the windows are large, there are pictures and plants as decoration, armchairs and matting giving an air of comfort. There are no day rooms for the infirm; all the patients must eat, sleep, and on the male side smoke, in the one room, unless they can come down to the airing courts for a change of scene.

THE PATIENTS

are not classified, except that we found that the more convalescent cases were in the large wards at the top of the building, from which they had a fine view over the Sound; still among the convalescents we saw a man suffering with acute rheumatism; in deference to his feelings the Tobin ventilator, which was near to his bed, was rendered useless by a book being placed over its aperture. The wards were nearly full, and we were struck by the large number of acute cases among them; quite half of the patients were in bed. We saw a pneumonia chart, on which the height of the temperature recorded, and the steady descent, indicated that the man had been very ill. There was a man quite crippled with rheumatic arthritis, another with cancer, a sloughing sore in the groin the result of hernia, an ununited fracture of the thigh, phthisis, disease of the hip-joint, gastritis, several patients with bad legs—these we noted with a hasty glance at the bed cards, and the medical officer afterwards confirmed our opinion as to the large number that were under treatment. Add to these hospital cases the usual infirmary patient, the helpless, paralytic, and incontinent cases, and we can have a fair idea of the amount of nursing required of the two (!) nurses who are responsible for the sick in Plymouth Infirmary.

THE NURSES

are distributed on the male and female sides of the buildings; the nurse on the female side is not trained, though she has had long experience in the work; she has charge of the children's ward. The nurse on the male side, who had only just been appointed, was trained, though from our impression, gathered as we went round, she had not been accustomed to nursing under the Poor-law administration. They were supplemented by the wardsman and woman, taken from among the paupers, one of whom was detailed for duty in each ward; one wardsman was well over 60 years of age, and, on consideration, we see the selection of these inmates must be restricted to old men and women who have been inmates for some time, as the younger men, unless in exceptional cases, could not be trusted to attend on the sick and infirm. There is no trained night nurse; the inmates are responsible at night, and the matron informed us that if a patient required feeding or watching during the night, that "watchers" were sent from the house to sit up at night. There are no bells or means of communication from any of the wards, nor is there telephonic communication with the doctor, who lives at some little distance from the workhouse.

THE UNSUITABILITY

of the structure was very evident as we went round; the staircases are steep, and the passages narrow; in the top-floor wards the lavatories are down five steep steps, and then there is a long passage to be traversed before the closet is reached; this arrangement is healthy, but it must be trying to the old people to crawl up and down those stairs, and it necessitates the use of the commode for the infirm during the day. Then there are no places for the clothing. In one ward we saw the man's clothing on the ground; the matron said that he required his trousers for leaving the ward, and that they were as often as not found thrown down on the floor. There are no lockers for the patients, and very few cupboards. We inquired for a bath, and were shown a little room off a landing, and a large reservoir covered by a heavy wooden cover, and on this piles of plates, jugs, etc., so that we felt that that bath was not in daily use. No hot water is laid on: there is no slop sink, so that the heart of the nurses must sink at the impossible task of doing their work in a business-like way under such circumstances. The wards being divided and scattered on so many floors makes the work harder, and supervision almost impossible. The small size of some of the wards, having no cross ventilation, makes it a most difficult problem to keep them sweet. The ward in which the cases of syphilis were located was not at all wholesome, nor was it quite apart from the other patients. There was a want of neatness about the wards. It seems hardly decent that the vessels and urine bottles should be left casually under the beds or by the side of the patients; but these will be until the system of nursing is organised more on the lines of a hospital. The bedsteads are of all widths, and the bedding is either straw or mill puff, and a water mattress where needed.

THE CHILDREN'S WARD

has twenty-four cots in it; it forms part of the infirmary building. There was a pauper nurse in the ward, who works under the female nurse. There were very few patients in the ward when we visited. There was a child with hare-lip waiting to enter the South Devon Hospital for operation, a case of diarrhœa, and a little babe not ailing much. We were sorry to see that the tube feeding bottle was in use, and taking that and the pauper attendant into consideration we were not surprised that the babe had diarrhœa. These tender little ones need more care than they can receive from a nurse

overwhelmed with the charge of adult patients, her duties being delegated to an inmate.

The Sunk Hot-water Tank

in the court from which the hot water for the infirmary is obtained appeared to us a very dangerous and unsatisfactory contrivance; this circular tank is nearly flush with the ground; it has a trap-door lid, which was open as we passed by, a railing two-sides of a square, high enough to allow of a small or careless person falling on to the tank and of a child tumbling in, is the only protection; the women draw the water by dipping a bucket in, and they cannot be trusted to close it each time.

The Lying-in Ward

is in the main part of the house; it is on the first floor, and holds 4 beds. In the ward beneath is the room in which the pregnant women sleep until they have reached the period of labour; then they are transferred to the labour ward above. This ward is so small that privacy for the parturient woman is practically out of the question, and the women awaiting their trial must be painfully aware of all that is taking place; this ward also is destitute of comforts; we saw a poor woman who had had a severe time—indeed, her face told the tale—seated on an upright hard settle, eating some unappetising gruel. In a hospital that woman would have had a couch or resting chair to save her strength. We could not ascertain that there was any means of bringing these poor women up the stairs other than on their feet when their time had come. The "nurse" is not trained, but she has been at the work some time; her room is on the same landing as the lying-in ward, facing it. Could not this room be taken into the labour department, and the nurse be quartered elsewhere? There are separate offices for this ward.

For the Infectious Cases

there is a small isolation building in the grounds; this is for temporary use only, as the patient, when the complaint is declared, is removed to the infectious hospital belonging to the town.

Recommendations.

As we pass from one to another of these country infirmaries we are obliged to reiterate the same recommendation: Build a new infirmary; make it into a separate department, and use the old building for something else. And yet one shrinks from suggesting a course that must fall heavily on the ratepayers; but these buildings were erected at a time when the needs of the sick were not so well understood, and they cannot be adapted without an unnecessary expenditure of service and labour, which makes the working extravagant. When the new building is erected, then the staff of nurses and the methods of working will group themselves in order. But until this is done an increase in the existing staff would make a great improvement in the sick nursing. We would suggest two trained nurses on the male and the same number on the female side, and one nurse on the male and one on the female side at night. We must also point out that an ample supply of hot and cold water for the infirmary, with two bathrooms on each side, is most essential; add to this the separation of the lock patients in isolation wards, and all has been done that is possible with the existing buildings. If the lying-in ward could be transferred to the hospital department and be worked by one of the female nurses holding a midwife's certificate, it would be a great improvement; but we could see no place available; a new ward would have to be built.

European Ophthalmology in Persia.—Dr. Galezowski, the well-known ophthalmologist of Paris, who went to Persia not long ago on the invitation of the Shah to see His Majesty's eldest son, Prince Massoud Mirza Zill, Governor-General of the Province of Ispahan, has been so successful in his treatment that the Shah has asked him to organise an ophthalmological clinic in Persia, to be under the direction of a pupil of the French surgeon. The principal details of the scheme have already been settled by Dr. Galezowski and the Persian Minister to France, General Nazar Aga. The salary of the director is to be 20 000 francs (£800) a year, and certain privileges are to be attached to the post.

THE PLAGUE IN HONG KONG.

[From our Special Correspondent.]

Concealment of the Earliest Cases by the Chinese.—Evidence that the Disease existed in Hong Kong as early as April.—The Disappearance of the Epidemic in Hong Kong and Canton.—Estimate of the Number of Deaths.—The Steps taken by the Sanitary Board in Hong Kong.—Temporary Bamboo Hospitals.—The General Hospital Arrangements.—The Services of Dr. J. A. Lowson, Surgeon Herbert Penny, R.N., and Surgeon-Major James.—The House-to-House Visitations.—The Chinese Women and the "Foreign Devils."—Burial Difficulties.—The Japanese Bacteriologists.—The Reopening of the Port of Hong Kong.

It is now, July 31st, twelve weeks since bubonic plague was discovered in Hong Kong. I use the word discovered advisedly, for it is now well known plague existed for several weeks before it was known to Europeans in Hong Kong. Moreover, the Chinese, knowing that it was a disease *per se*, and aware that the knowledge of its presence in the island would cause the authorities to take decided steps, hid the fact of plague being amongst them. In no more conclusive way can this be proven than by the announcement of the fact that to none of the hospitals for Chinese under a European staff were any cases of plague sent. That the Chinese diagnosed the disease from the first is certain; that its presence was carefully hid from Europeans is equally so, and that it was present in the month of April I know, from personal inquiry, to be true.

These statements require proof, as for some reason unknown the Colonial Government are anxious that this fact should not be talked of. There are many proofs which are conclusive, but the most positive is that when first discovered plague was rife, widespread, scores were affected, and the fatality enormous. That is not the history of any epidemic; it begins with small beginnings, and multiplies, it may be rapidly, but in the case of plague its rapidity of spread is relatively slow compared with many other well-known epidemic diseases. Many statements of residents in the affected districts are also quite definite enough to be accepted as proof, if such is required, that in April, 1884, Hong Kong was rapidly developing plague. Therefore it may be accepted as conclusive that it is sixteen weeks since the disease first reached Hong Kong. Now it is practically over, July 31st, 1894. This is important to know, as it shows how long any town or village may suffer from the epidemic. A wave of cholera lasts weeks or months according to the size of the town; in a town of 20,000 inhabitants it will last three weeks, almost to the day. In a town of 50,000 inhabitants it will hold its course for a period between four and five weeks. In a town of 100,000, six weeks sees its finish. This is well nigh scientifically accurate, as the history of the epidemic in 1883 in Egypt bears testimony. Even in Cairo, with its enormous population, six to eight weeks saw the beginning and end of the cholera attack. That the disease runs its course in spite of medicinal treatment, in spite of disinfectants, and the spasmodic effects of chaotic sanitation, we all know; still we strive and struggle and make rules and have by-laws, and believe when the epidemic is over that much good has been done thereby, and we have stamped it out as it is called. It is a consolation so to think, and a belief one hesitates to shake. Here in Hong Kong we spent thousands of dollars upon disinfectants. Jeyes' fluid was in great demand, chloride of lime was at a premium, and carbolic acid and camphor found many patrons. All to good effect, no doubt. We shut up houses, we walled-up a whole district, we condemned this and destroyed that, we burnt furniture, we whitewashed everywhere and everything, we scraped out houses, opened up drains; still the plague lasted four months, and—and what? In the neighbouring city of Canton the disease waned and disappeared at the same time as in Hong Kong. The course was run in Canton, and the disease disappeared. In Hong Hong, likewise, all we can say is, the epidemic disappeared. It does not seem that, by all our efforts, the disease ended one day sooner than if left to itself; it is very disappointing to our notions of civilisation, and shakes the creed of that phrase which is dear to all those who

deal with epidemics, "the stamping out of the disease." In Canton with a population of 1,000,000 – the figures are a mere myth—180,000 people during the last six months are stated by the Chinese to have died. One thousand per month is the usual death-rate, so deducting 6,000 for the total of deaths recorded we have the number of deaths ascribed to plague.

In Hong Kong, with a population of 200,000, the registered deaths from plague have been a little over 2 000. We know the latter returns to be incorrect, as every Chinese man and woman when seized ran away to the mainland if he or she possibly could, so that the total number of deaths we shall never know—10,000 would be well within the mark. Again, curiously enough, we know the number of deaths in Canton but not the population. We talk of a million, it may be any number between half a million and two millions, but they have a very simple method of ascertaining the number of people who have died of plague. The Viceroy merely calls upon the coffin-makers for true returns of the number of coffins supplied. It is simple, as most Chinese methods are, and although not conclusive, still it is fairly accurate. But the population is not known, at any rate to Europeans; so that neither Hong Kong nor Canton can enlighten us as to the number of people seized or dead in proportion to the population. These meagre sources of information lead to the conclusion that about 1 person in every 6 was seized and died in Canton; and 1 person in 16 was seized and died in Hong Kong. The recoveries amongst the Chinese are too infinitesimal to alter the figures to any marked extent. Twenty-five in a thousand attacked recovering, does not affect the gross estimate of a rough statement of the totals one way or the other.

The management of the plague arrangements has been entrusted in Hong Kong to a permanent committee of the sanitary board; ample powers were granted and the epidemic has been rigorously dealt with. At the extreme west of the city of Victoria, and close to the seashore, a few unoccupied commodious buildings, standing quite by themselves, were occupied as hospitals, and that most excellent of all forms of epidemic hospital, bamboo mat sheds, were added. Hither plague patients were conveyed by road or launch and submitted to European or Chinese treatment, as they preferred, one of the three hospitals being solely under the charge of Chinese native practitioners. The hospitals in the city were closed to plague patients; half of them were closed altogether, and the others were retained as forwarding stations for plague cases.

Doctors were advertised for, and a payment of 350 dollars a month (about £35 a month) guaranteed. Very soon a plentiful supply of medical officers, largely from the navy, were at work, and the management of the hospitals and the sick transport was well in hand. The brunt of the medical work fell upon two or three men, and very ably did they perform their duties. Dr. J. A. Lowson, Acting Superintendent of the Government Civil Hospital, has earned a lasting name for his fearless devotion and untiring exertions during the whole period. Upon him fell the work of organising and maintaining the sanitation of the hospitals, and very earnestly and well were his duties performed. Scarcely less distinction has been attained by Surgeon Herbert Penny, R.N., and by Surgeon-Major James, M.S. The latter officer, Surgeon-Major James, has performed most laborious sanitary duties. He was elected a member of the sanitary board, a member of the permanent committee, and inspecting medical officer for the board during the long trying period whilst the epidemic held the city in its clutches. A colony of limited means, with its exchequer bled to the last dollar to cope with the enormous losses incurred by the plague epidemic, cannot award nor even pay these officers anything extra for their unsavoury work. It is hard to stand by and see unrequited labour of the high character these medical men have performed without being able to move a finger whereby to obtain some recognition of their services. Surely some channel will be opened whereby true merit and devotion to work in this most trying time may be acknowledged and stamped with a people's approval.

House-to-house visitation was performed by police, by soldiers, and by a few civilian volunteers. The privacies of a Chinese house were besieged upon the least tittle of excuse, and frequently without either notice or sufficient evidence. To the inhabitant of Western Europe the intrusion of the soldier during the time of an epidemic might not seem a harsh step; but in oriental climes the inner recesses of the house are held to be sacred, are devoted to family life only; they shade and hide the young wife or budding maiden, and thus protect her from harm and the gaze of pitiless man. When this abode is forcibly besieged, when the intruder is an alien European and a soldier, the climax of all that can shock the mind of Chinese women is reached. The native soldier in China is regarded without honour or respect, and his acts are held to be always undertaken with a mean and sordid intent. Add to this the fact that the Chinese woman in question may have never seen a European before, or if seen, it has been the occasion of her running to the house or her neighbours for protection until the foreign devil passed. The title "foreign devil" is no empty name to the ignorant China woman; it means all it expresses, and conjures up in her mind all possible "devilries" of a variety more intricate and demoniacal than any a British witch ever dreamt of. The consequence of these intrusions has been that the respectable women have left the colony, and spread the news of British brutality and barbarism throughout South China. To them we have satisfactorily demonstrated what civilisation ought not to be.

Another trouble was burying bodies in lime. This offended Chinese notions, and caused many remonstrances. A newspaper war was raised also concerning the establishment of a hospital on Chinese territory to receive Hong Kong patients. This gave to the would-be European rioters much offence. The graveyard attached was also a subject of discussion as to its salubrity, and a pretty little squabble was continued until the common sense of public feeling gained the ascendency, and the whole thing was seen to be a fizzle.

We were much grieved when our hard-working Japanese medical *confrères* caught the disease. Besides Professors Kitasato and Aoyama four assistants came to Hong Kong from Japan to work at the bacteriology and the clinical and pathological phases of the plague. All went well until about three weeks after their arrival, when a Japanese doctor in practice in Hong Kong caught the disease, and next day Professor Aoyoma and one of his assistants were seized. Aoyama had several *post-mortem* wounds, and he had to run the gauntlet of septicæmia from a *post-mortem* wound, whilst the plague bacillus, as proved by microscopic examination, flourished in his blood and tissue. The first mentioned Japanese died, but the others recovered. Aoyama's case was a triumph of medical skill and good nursing. Drs. Lowson and Molyneux stayed by him in turns night and day, and by great care and praiseworthy efforts they saved a valuable life. In what esteem the Japanese Government held his name may be gathered from the fact that the Emperor himself telegraphed daily during the crisis of his illness as to his condition. A very valuable life has been spared to Japanese science.

Now there is nothing left to be done but to open the port and give clean bills of health to the ships leaving. This, however, seems to be delayed beyond even the requirements of the most stringent needs.

Rabies in France.—In consequence of numerous protests on the part of the public, the Paris Prefect of Police and the prefects of departments are to be instructed to insist on the rigorous enforcement of the ordinances relating to stray dogs, the number of which has of late greatly increased. Several members of the Consultative Committee of Hygiene have from personal observation satisfied themselves that the police allow ownerless dogs without muzzles to wander about at their own sweet will; so strict, indeed, is their regard for the liberty of the canine subject that they decline to interfere even when their attention is called to suspicious-looking curs by anxious passers-by. In some parts of the country there are numbers of starving dogs at large which are only too glad to have the opportunity of lunching off the casual wayfarer.

School Boards and Vaccination.—A recent decision of the Supreme Court of the State of Pennsylvania has confirmed a decree of the lower court to the effect that a school board has a right to exclude from the public schools children who have not been vaccinated.

SANITARY ASSOCIATION OF SCOTLAND.

Congress in Glasgow.

The twentieth annual Congress of the Sanitary Association of Scotland was opened on August 22nd, in the Corporation Galleries. The proceedings were entirely devoted to the business of the Association. Dr. Ebenezer Duncan, the President, occupied the chair, and there was a large attendance.

The Secretary submitted his report, which referred to the business of the Council during the year. It proposed the following gentlemen as office-bearers: *Honorary President:* Ex-Bailie Crawford, Glasgow. *President:* Professor Mathew Hay, Aberdeen. *Vice-Presidents:* Dr. J. B. Russell, Glasgow, and Mr. Gilbert Thomson, M.A., C.E., Glasgow. *Secretary:* Mr. D. M. Alexander, Glasgow. *Treasurer:* Mr. J. C. Stobo, Rutherglen.

Mr. Stobo, the Treasurer, submitted his annual report, which stated that the total income was £215 15s. 9d., and the expenditure £208 4s. 7d., leaving a balance in hand of £7 11s. 2d. Mr. Stobo, as Secretary of the Board of Examiners, stated that 118 persons now held the certificate of the Association.

The Association, said the Chairman, had stirred up the Government to take an interest in the local government in Scotland. They had for several years been discussing that question, and they had put their views in various forms before the Government, not only by memorial this year, but by deputation to Parliament, and he had not the smallest hesitation in saying that these last ten years of agitation, in which the Association had taken a very prominent part, had had a great deal to do with the revision which had been effected in the Board of Supervision during the last session of Parliament. He must say that he was somewhat disappointed with the result of the Local Government Bill. He had hoped that they would have a Health Board for Scotland. They were still in the position of having a Board which dealt both with Poor-law and public-health matters, and in which they had not carried out the thorough reform which they had advocated in their Association. They were not only desirous of having a separate health board for Scotland, but of having on that board a number of skilled men who might be able to advise the local authorities in regard to such matters as were constantly coming before them. They had, however, an instalment of their reforms granted to them. They had one skilled man put upon the Board, and they had had a large number of persons removed who took no interest in public health matters at all, and who did not attend their meetings. They had still a number of reforms which must be effected before they could consider the Board which had been granted by Parliament at all an ideal or a thoroughly efficient board. In the first place they ought to have on the Board experts in order to strengthen it, and in order to make it a board of health respected by the local authorities, because when a local authority had a difficult question of sanitation to face, it naturally looked to the central body to direct its action intelligently, and therefore he thought their suggestion that there should be gentlemen connected with sanitation on that Board should be carried out at some future time. Thus they were strongly of opinion that the powers of the central board should be greatly enlarged. They found in looking into the Public Health Act that the central authority had really had no power of compulsion over burghs, particularly those over 10,000 of population. They had simply the power of suggesting reforms. With regard to the examinations, he thought that department had been carried out with signal success during the past year. They were the only body in Scotland who were at present engaged in doing work of that kind, and they were quite ready to increase the stringency of the examinations, particularly with regard to education pure and simple. So long as the great English bodies did not advance in that direction more heartily than they were doing at the present time, of course they could not go any further than they had done. The report was adopted

On August 23rd the subject of Uninhabitable Houses was introduced by Dr. J. B. Russell, who described the method of dealing with them in Glasgow under Clause 32 of the Glasgow Police (Amendment) Act, 1890, which gives powers to the local authority, as advised by their officials. As a result of the discussion, the Congress decided to call upon the Secretary for Scotland to insert in the new Public Health Act a provision giving similar powers to all local authorities. Mr. R. R. Tatlock, analyst for Glasgow, discussed the causes of the pollution of the Clyde; and the medical officer of Lanarkshire, Dr. McLintock, handled the same theme of the pollution of rivers, and the Congress adopted a resolution that the Rivers Pollution Prevention Act of 1876 should be amended by the Government, in terms of the Act, recently passed by the Joint Boards of West Riding and Aire Valley, so as to enable burgh and county sanitary authorities adequately to purify rivers and streams within their jurisdiction.

Dr. A. K. Chalmers, Dr. J. B. Russell's colleague, opened the proceedings of the second day with a paper on Sanitary Control of Infectious Diseases. A discussion on Building Regulations for cities and counties led to the adoption of a resolution that more powers should be given local authorities to regulate the erection of new buildings, and the Congress remitted it to the Council to draft a Bill on the subject. School hygiene was also brought under the review of the Council by a paper by Dr. Glaister, of Glasgow.

The business of the Congress was pleasantly varied by visits to places presenting features of sanitary interest, including the new Glasgow Sewage Disposal Works.

THE ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD, 1892-93.[1]

[Second Notice.]

The portion of this report devoted to auxiliary scientific investigations is principally occupied by the record of researches undertaken by Dr. Klein, on the Etiology of Typhoid Fever, on the Antagonism of Microbes, and on the Etiology of Vaccinia and Variola. The rest of the space is given to Dr. Cautley on Micro-organisms found in the Small Intestines of Man, Dr. F. W. Andrewes on Blood Infection, and Dr. Sidney Martin on the Chemical Pathology of Diphtheria in Relation to the Symptoms of the Disease.

All these essays are interesting, but it must be confessed that to one untrained in official ways they have a smack of antiquity. From the taxpayers' point of view it is doubtless a satisfaction, tempered by the costliness of the illustrations, to know that public servants are doing good public work, and as a proof of industry the bulky volume before us serves a good purpose. It must be noted, however, that, although published in the latter half of 1894, it deals only with matters occurring up to March, 1893, and thus, as a contribution to current scientific knowledge, is, to say the least of it, somewhat out of date.

The Typhoid Bacillus.

The first matter reported upon by Dr. Klein is as to the relationship of Eberth's bacillus with enteric fever. The fact of its almost constant presence in the mesenteric glands and spleen of persons dead from enteric fever is universally recognised, but there are certain difficulties in the way of accepting it as the *vera causa* of typhoid fever—it is not found in the blood, as are the microbes of malarial and relapsing fever; it is now generally admitted that it does not form spores, as it should do, to accord with the clinical history of prolonged vitality in the infection of typhoid fever; and then there is the doubt arising from the difficulty of identification and the confusion between it and the bacillus coli. After much careful investigation on the latter point, Dr. Klein believes that the two bacilli are distinct and separate species. From examination of the blood of living patients suffering from typhoid fever, Dr. Klein confirms the observations of Gaffky and others as to its freedom from all forms of bacteria. In the mesenteric glands and spleen, however, of patients dead of the disease during the second and third week of its progress, the typhoid bacillus was constantly present, often in the form of pure culture, and it is to be noted that this was the case so early as the second week, before any considerable disorganisation of Peyer's patches had taken place and given rise to possibility of immigration.

[1] London: Eyre and Spottiswoode; Edinburgh and Glasgow: Menzies and Co.; Dublin: Hodges, Figgis, and Co. Price, 9s. 7d.

The Bacillus Coli in Typhoid Fever.

It is a curious thing, however, in regard to the great similarity between the typhoid bacillus and the bacillus coli that Rodet and Roux should have found the latter almost in pure culture in the intestinal contents in cases of typhoid fever, while Klein in the same disease finds the former in the glands and spleen, and it is clear that when Dr. Klein says, "There is then the strongest presumption, short of actual proof, that this particular organism called the typhoid bacillus, which differs essentially from the bacillus coli, stands in an intimate relation to the disease enteric fever," the strength of the presumption hinges on the proof of the distinction between the two bacilli.

The Antagonism of Microbes.

The second investigation reported on by Dr. Klein is a continuation of his experiments as to the antagonism between different pathogenic microbes. He has found reason for believing that in regard to the influence exercised on each other's life processes by different pathogenic micro-organisms a distinction must be drawn between the influence due to the actual chemical constituents of the body of a given microbe and that referable to the chemical products produced by it in the pabulum in which it flourishes. The bodies of certain microbes, their actual protoplasm, inoculated into rodents, produce a certain physiological effect, whereas the culture media in which they have been grown and from which they have themselves been completely removed have under like conditions other and different physiological effects.

Both are due to poisons produced by the animal, but the poisons are different; one being the "intracellular" poison, bound up within the body of the bacterium, the other that manufactured in the culture medium by the particular microbe, its own "metabolic" poison. Upon this basis of differentiation of a microbe from its products, Dr. Klein went on to inquire whether the insusceptibility conferred by protective inoculation was due to the "intracellular" or to the "metabolic" poisons produced by the microbic growth.

His results are certainly surprising, tending to show that while, as is well recognised, each microbe brews its own "metabolic" poison, which has a specific inhibitory effect on the growth of similar micro-organisms, the intracellular poison is not specific, but in regard to all the species experimented on is of the same nature.

Guinea-pigs made ill by inoculation with the intracellular poison of one of his microbes were fully protected against further successful inoculation with the intracellular poison of any of his other microbes, even when used in greater amount and greater potency.

Inoculation against Cholera.

The importance of this in respect to cholera inoculation is obvious. This procedure consists in essence of the introduction into the body to be protected of the cholera vibrio itself, not of the chemical products resulting from its life-processes; now although inoculation with the intracellular poison of the cholera vibrio does indeed protect against further reaction to the same test, the same protection can be obtained by inoculation of the intracellular substance of a great variety of microbes, and the disease produced by the one or the other cannot be looked on as in any sense specific, or as a substitute for a definite attack of cholera. In Dr. Klein's view, therefore, anti-cholera inoculation, as now practised, cannot be expected to have protective value.

Variola and Vaccinia.

In regard to vaccinia, Dr. Klein has succeeded in inoculating lymph from early vesicles of confluent small-pox into calves. But even at the fourth remove, vaccinating calf from calf, there was no trace of vesiculation; nothing but a linear crust, with swelling of the skin in its neighbourhood and distinct areolar redness.

At the stage of "fourth remove" it was considered by Drs. Klein and Cory that the semi-fluid material which could be squeezed out might with safety be transferred to the human subject, and the result was the production of unmistakable vaccinia. The scab from one of the vesicles so produced was used for retrovaccination on another calf, and then there appeared on this calf the characteristic umbilicated vesicles of vaccinia. Clearly all that tends to prove the variolous origin of vaccinia tends to make more comprehensible its protective powers, showing that the protection is of a specific nature.

Dr. Klein's further bacterioscopic examination of calf-vaccine, and variolous lymphs do not appear very conclusive, but he found in them all an apparently similar bacillus, a bacillus which contains certain bodies comparable with spores, but which cannot at present be cultivated in artificial nutritive media, and so cannot at present be further studied.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

V.—Dr. J. J. Henton White, L.R.C.P. (Durham), sends us the following notes of a case of diphtheria treated by antitoxin, for permission to publish which he is indebted to Dr. Renton, of Chester-le-Street:

B., a girl, aged 3 years, was first seen on the evening of August 12th. She was then feverish (temperature 99.5° F.), had a harsh, croupy cough, and a sore throat. On examining the latter by candle light no membrane could be seen. During the night the cough became worse, and stridor set in with ordinary respiration. On August 13th there was distinct membrane over both fauces and pharynx. Stridor was distinct but respiration was not much hurried. On August 14th a piece of membrane had disappeared from the pharynx and left tonsil, leaving a raw, red, swollen surface beneath. On August 15th the child was worse; respiration was hurried and the stridor very marked; membrane was again present over the fauces and pharynx; anæmia and emaciation were setting in, and the patient was distinctly weaker; there was a haze of albumen in the urine.

The treatment up to this date had consisted in frequent insufflations of equal parts of boric acid and iodoform and of a mixture of perchloride of iron. Calomel gr. ij was administered on this day. On August 16th the patient was still weaker and more anæmic, and on this day for the first time refused nourishment; the stridor, croupy cough, and membrane continued as on August 15th. At 11 A.M. antitoxin ℥vj was injected into the muscles of the back with antiseptic precautions. At 6.45 P.M. great improvement, both in general and local conditions, had taken place; the pulse had fallen from 130 at 11 A.M. to 100, she was taking food eagerly, and had slept well since the injection; the membrane had almost gone from the pharynx, but there was still some on the fauces; there was no stridor. Antitoxin ℥v was given as before. She slept nearly all night, and on August 17th no membrane was to be seen; knee-jerks, tested for the first time, were found to be present. On August 18th she was still improving; the fauces and pharynx were almost normal in appearance.

This case seems of interest, not only because it shows the therapeutic value of antitoxin locally, but also on account of the rapid relief of the general toxic symptoms. It will be interesting to see if cases thus treated develop any paralytic symptoms after apparent recovery, and, if so, to try the effect of a renewal of the injections on their appearance.

VI.—Dr. Trevor Fowler, D.P.H.Camb., M.O.H. Epping, etc., sends us the following notes on two cases of diphtheria treated by antitoxin:

R. R., a female, aged 11 years, was admitted into Epping Infectious Hospital on August 18th. The illness was stated to have been of three days' duration. On admission, the whole of the soft palate was swollen and covered with membrane protruding into the mouth. There was inability to shut the mouth, with saliva constantly dribbling from the lips. There was great swelling of the left tonsil and surrounding structures. On the left side the neck was swollen and brawny externally from above the angle of the jaw to the sternum; deglutition was difficult, and the breath very offensive; pulse 110, temperature 99°. There was no cerebral disturbance. On August 19th the local conditions were unaltered, except that there was well-marked diffused cellulitis extending over the left side of the neck and halfway down the sternum. The pulse was unaltered, the temperature 99°. On August 20th the cellulitis was apparently subsiding. A large piece of membrane had been coughed up. The temperature 99°6 in the morning, 99° in the evening. On Au-

gust 21st the condition was unaltered, except that the temperature was 100° in the morning and 99.2° in the evening. On August 22nd severe epistaxis had occurred, followed by great prostration and general lividity of the surface. The temperature was 99.4° in the morning and 100° at 4 P.M., when antitoxin (♏xj) was injected into the arm with antiseptic precautions. At 8 P.M. the temperature was 102°; at 12 P.M. 101.2°; 4 A.M. (August 23rd) 99.8°; at 8 A.M. normal; at 10 A.M. 98.6°; at 2 P.M. 100°. The patient was apparently dying. Ether (♏xv) was injected into the arm. Death occurred at 5.15 P.M.

N. R., aged 9 years, brother of the first patient, was admitted into hospital on August 22nd with diphtherial membrane developing upon both tonsils. The breath was offensive, the temperature 101.8°. On August 23rd, at 4 P.M., both tonsils were covered with membrane, with a good deal of glandular swelling externally. The temperature was 102.8°, the pulse 120. Antitoxin (♏x) was injected subcutaneously. At 6 P.M. the temperature was still 102.8°; at 10 P.M. the temperature was 102°. At 2 A.M. (August 24th), 101°; at 6 A.M., 98.6°; at 10 A.M., 98°; at 4 P.M. the temperature was 100°, the pulse 122, the respirations 18, the membrane was separating from the tonsils, and the patient's general state was improved. At 10 P.M. the temperature was 99.8°, the pulse 112, respirations 20. On August 25th, at 4 A.M., the temperature was 98.8°, the pulse 114, the respirations 18; at 10 A.M. the temperature was normal; at 4 P.M., 99.8°, pulse 112. The membrane had been thrown off both tonsils, and the cervical swelling was gone. From this time the patient made steady and rapid progress. All that now remains to be seen in the throat is some abnormal redness over the tonsils and uvula.

Remarks.—Owing to delay in obtaining the antitoxin, it was evident that general toxæmia had occurred in the first case before the remedy was tried. The patient was, in fact, *in extremis* at the time, but it was thought well to give her what chance there might be. In the second case, in which the remedy was employed earlier, the result was well marked, and entirely satisfactory. It is desirable, however, that the dose to be given should be more definitely stated, as well as the need or otherwise for repeated doses. I should add, in each of my cases a chlorine mixture was given, and the throats were constantly sprayed with the same, a treatment from which I have hitherto had the most satisfactory results.

VII.—Dr. Henry W. King, Physician to the Chester General Infirmary, sends us the following notes of an unsuccessful case:

A young woman aged 22, a dressmaker, anæmic-looking, but not otherwise delicate, was admitted into the Chester Fever Hospital on August 16th suffering from diphtheria. She had been taken ill on the morning of August 13th, and had been seen by my friend, Dr. Mann, on the evening of the 15th. Perchloride of mercury, 1 in 500, had been used to swab out the throat and pharynx as throroughly as possible, but it was found that the membranous patches were on the pharynx rather than on the tonsils, and extended low down. Upon admission the tonsils and uvula were acutely inflamed and much swollen. Upon pushing the uvula aside a leathery patch could be seen, extending backwards from the side of the left tonsil. There was some thin sanious discharge from both nostrils. Temperature, 100.6°; pulse, 112; respirations 22. The urine contained a small amount of albumen. After consultation it was decided to adopt the suggestion of Dr. Mann, and use antitoxin, and to omit other treatment than a chlorate of potash gargle and ice; ♏vij of Schering's antitoxin was therefore injected at 11 A.M. on August 17th. Evening, patient said she felt rather more comfortable; local symptoms as before. August 18th. Patient had a fairly comfortable night, and the discharge from the nose appeared less. The temperature had varied between 100° and 102.6°, highest and lowest towards midnight and midday respectively. August 19th. Patient had a bad night, and the temperature, instead of having fallen after 6 A.M., as on the previous two days, had risen to 102° at 10 A.M. It was therefore decided to give a larger injection; ♏xv were therefore injected at 11.55 A.M. and at 3 o'clock the temperature had fallen one degree. At 6 o'clock it had risen to 103°, and had continued to rise in zigzags through the night to 104° at 11.30 A.M. on August 20th, when patient died. The breathing was somewhat difficult nearly all along, and though worse during the last eighteen hours, was not such as to require tracheotomy. This case seemed a suitable one for giving the antitoxin treatment a fair trial, as it was not one of more than ordinary severity, and the acute throat symptoms forbade any but the mildest local treatment.

The sad termination of the case may have been due to the smallness of the dose used relative to the age of the patient. I see that all the cases so far mentioned have been children. In Dr. Goodhart's case of a child, aged 3, the dose used was ♏xj on the day of invasion, and ♏viij next day; this was practically all the treatment used. Dr. Walker of Worksop publishes the case of a girl, aged 8, in which ♏xj was used towards the end of the first week of illness, when the temperature fell nearly 4 degrees, and remained normal until complete recovery. Dr. Waglen of Devizes publishes the case of a boy of 5 years, who was injected with 4½ c.c. (7½♏) towards the end of the first week, two days after tracheotomy had been found necessary. Temperature, pulse, and respiration rate fell in a few hours, and recovery was initiated by the rapid separation of the false membrane. No other treatment, either general or local, appears to have been used in this case. Dr. Caudwell, of Harleston, used ♏xv of antitoxin in the case of a boy, aged 9 years, which was followed by a complete recovery. In this case, however, the throat did not immediately answer to the remedy, as the membrane did not separate until thirty-six hours after. A vigorous local treatment, including sulphur insufflation, had failed to benefit this case. In the British Medical Journal of August 25th, Dr. Eastes, of Folkestone, quotes seven cases, the ages between 3 and 20 years, where each received the same dose, and all recovered. He gives, I know not on what grounds, the dose of 2 to 3 c.c. under 1 year, 5 c.c. from 2 to 10 years, over 10 years 10 c.c., and in a very severe case after third day 20 c.c., or 300♏. It will be seen, however, from his table, that although two children, aged 3, were of average severity, and were seen on the second day, they received the same dose as a girl of 10 years of severe type, seen on the third day.

Again, compare Dr. Walker's patient, aged 8, in whom ♏xj injected produced a fall of nearly 4 degrees, with Dr. Waglen's patient, aged 5, in whom 7½ ♏ injected produced a less marked fall of temperature, pulse, etc.

I feel that we have much yet to learn about the dose necessary for each case, and I think that all those who have treated cases of diphtheria with antitoxin should publish their cases.

I ought to add that my patient died through failure of the heart, and this in spite of the subcutaneous injection of strychnine and digitalin.

VIII.—Mr. George Morgan (Brighton) has favoured us with the following brief note on a case of diphtheria treated by antitoxin:

R. P., a chubby little girl aged 2½ years, was admitted to the Children's Hospital, Brighton, on August 17th with all the symptoms of laryngeal obstruction. Membrane was present in both tonsils and uvula. She had been ill ten days, and had been treated with salicylate of soda and a carbolic throat spray. The other children were suffering from diphtheria, and the eldest sister had died of the same disease after tracheotomy four months ago. Tracheotomy was at once performed, and a half an hour after ♏vj of antitoxin was injected by Dr. Lewis, the house-surgeon. The next day (August 18th) ♏viij were injected, and, at Dr. Chaffey's suggestion (who kindly watched the case), on August 20th and 21st ♏iv were injected. The abbreviated history is as follows: The temperature came down (from 102° to 103°), and did not rise again above 100°. The membrane, which was very free, was expectorated. Two or three times daily the nurse in attendance removed pieces of membrane from the inner tube, mixed with free discharge of mucous, and this continued for the first five days after the operation. The tracheotomy wound remained throughout typically healthy. The tube was left out on the twelfth day. Three times during the first five days the pulse became slow and irregular, and this condition was treated with stimulants and strychnine.

INSPECTION AND INSPECTORS.

THE annual meeting of the Western Branch of the Sanitary Institute was held recently at Barnstaple. A paper was read by Mr. W. Penhale on the inspection of dairies and cowsheds, which gave rise to an interesting discussion.

Mr. Moss Flower said the inspection of dairies and cowsheds was a very vexatious question, and sanitary inspectors had a great difficulty in performing their duties in regard to it. It was, of course, a vital question, and he gave a concrete case in which the washing of dairy utensils with impure water had led to an outbreak of disease in his own district. He held that 600 cubic feet was sufficient air space for cowsheds.

Mr. Pleass (Honiton) thought that 800 feet was not too much. He lived in a very much smaller borough, but they could not enforce a regulation making it compulsory to have such an air space, because of private interest. They might go to a man and say, "Your cowsheds are overcrowded," and the reply might be, "I am a Mayor," or "An ex-Mayor," or a "Member of the Town Council; you must not poke your nose into my affairs." It was a strong thing to say, but it had been said to him two or three times. He suggested that veterinary surgeons should be appointed to assist the sanitary inspector in such matters as the inspection of dairies and cowsheds.

Mr. Price asked why cows so often preferred dirty water from a stagnant pool to clean spring water.

Mr. Penhale thought, first, because it was warmer, and, secondly, because it was alkalised. There was no data to prove that dirty water was injurious to animals, but common sense should tell them that clean water was best.

Mr. S. Segar (honorary secretary) said that often inspectors had not the time to inspect dairies and cowsheds, their duties were so heavy. He represented fifty-seven parishes, and although he knew the Act was in force, he was unable to visit one dairy. Ultimately the Board granted him an assistant, and he was set to make an inspection, with the result that many certificates had been suspended, many refused, and in some cases the sale of milk had been prevented. Sanitary authorities were, in his opinion, practically useless, unless it were not a matter of £ s. d.

Mr. Penhale briefly replied.

Dr. Mark Jackson, Medical Officer of Health for the Barnstaple Urban District, read an interesting paper entitled Some Diseases which are Caused by Sewer Gas and other Emanations from Organic Refuse of all kinds. Dr. Jackson said although the subject he had taken for his paper seemed primarily of importance to medical men, yet he believed it would be found not to be without interest to the members of such an association as that. Their daily vocation brought them into intimate connection with such sanitary defects as allowed of the emanations and escape into their houses of the poisons with which the paper dealt, and he had no doubt that all of them could, from personal experience, substantiate some of the facts to which he hoped to refer. It was no new story of diseases caused by sewer gas, and other emanations from organic refuse of all kinds. It was many years ago since Sir John Simon asserted that "thousands of deaths annually resulted which were in the most absolute sense preventable," diseases which either would not arise or would not spread in communities who followed certain well-known sanitary laws. There were diseases of which it was hardly a metaphor to say that they consisted in the extension of putrefractive process from matters outside the body to matters inside the body; diseases of which the very essence was filth diseases, which had no local habitation except where putrifiable air or putrifiable water furnished means for their rise or propagation, diseases against which there might be a complete security in the cultivation of private and public cleanliness. To diseases entirely preventable and to the preventable proportion of other diseases was referred at least a quarter of the mortality of England. It was more particularly with such cases as might be due to putrifiable air, that he wished to restrict himself, remembering that he claimed for it only one of many causes as the origin of diseases in certain conditions. Dr. Parkes stated that the air in the house drains was often, in fact, more impure than that of the main sewers. But sewers, drains, cesspools, and other accumulations of organic refuse gave off not only gases, but fœtid organic matters, which probably were of a more serious character, though they were but little understood. Dr. Angus Smith found that a given quantity of the air of a house into which sewer air had penetrated destroyed more than twenty times as much potassium permanganate as the same quantity of pure air. In addition to the above, it was probable also that the air of sewers, drains, etc., contained those small minute organisms capable of causing disease when introduced into the human system, under favourable conditions. Instances were given of persons dying from diseases attributed to bad smells, arising from defective drains, and Dr. Jackson then proceeded to refer to the group of cases affecting the internal organs, such as the lungs, kidneys, and possibly the brain, and after quoting a number of authorities, he concluded by saying if he was right that the evidence for the deleterious effects of sewer poisons in physical health was true, and based on accurate observation and logical deduction, what practical issues suggested themselves, seeing that, according to Section 23 of the Public Health Act, the local sanitary authority had power to enforce the effectual drainage of every house within its jurisdiction. He thought, at any rate, it might go just one step further, and enact that at any rate no new house shall be occupied until good evidence has been given that it is in a condition fit for "human habitation," and can be occupied without detriment to the health and life of its occupants. Mr. Ernest Hart long ago suggested that no new house should be allowed to be inhabited until passed and certified by a surveyor: That plumbers should be examined and licensed: That plumbing and drainage of all buildings should be executed in accordance with plans and specifications previously approved in writing by the local authority, drainage work not to be concealed until approved; the peppermint or other test to be applied: That these precautions were not in these days even unnecessary, he thought few would deny, and was rendered the more urgent when they remembered that of every 100 houses inspected by the Edinburgh Sanitary Association, 90 per cent. had their drains in direct communication with the interior, 80 per cent. had faulty water storage arrangements, and 15 per cent. had the main cisterns in direct connection with cesspools.

Messrs. Parker, Moss Flower, and Knowles warmly eulogised the paper, and Dr. Jackson, in reply, admitted that he had purposely steered clear of the difficult question of sewer ventilation. If only the conditions were even, it would not be such a difficult problem. But the rate of flow, external and internal temperature, barometric pressure, etc., were not constant, while the wind affected ventilation wonderfully.

The readers of papers were thanked by resolution.

Mr. W. J. Ridd, demonstrator and science teacher at the Barnstaple Schools of Science, Art, and Technology, gave an illustrated address on Analysis of Water.

A VACCINE STATION IN TUNIS.—A vaccine station was recently established in Tunis in connection with the lately-founded Bacteriological Institute. The initiative in the matter was taken by Dr. Loir, the director of the institute, and M. Ducloux, of the veterinary department of the French army. The work was inaugurated by the inoculation of a calf by M. Ducloux. Hitherto Tunis has been dependent on other places for its supply of vaccine lymph. The military force of occupation procured it from Philippeville, the French medical practitioners as well as the Tunisian municipalities got it from Paris and Montpellier, and the Italian doctors obtained their supply from Tours. As the death-rate from small-pox is 492 per 100 000 inhabitants, it was time that a vaccine station should be established.

PROFESSOR NICOLADONI has succeeded Gussenbauer as Director of the Surgical Clinic at Prague.

THE "Naturforscher-Versammlung," held this year at Vienna, will be formally opened on September 24th by Professor Leyden. The arrangements for the serious part of the meeting appear to be in a somewhat backward state, as many of the subjects of discussion are not yet announced. The "Festkalender" is more complete, and among many other festivities mention may be made of a reception given by the City of Vienna and a Congress banquet.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, SEPTEMBER 8TH, 1894.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

A certain degree of immunity to diphtheria, lasting for a comparatively short time, can be conferred on animals by inoculating them with attenuated cultures of the specific bacillus, or by injecting a suitable quantity of the serum of an animal who has suffered from the disease in some form which has conferred on it immunity. Since it is probable that the cessation of the pathological process of an acute specific disease—that is to say, recovery—is due to the production of a condition strictly analogous to, or rather, identical with, acquired immunity, the suggestion was made that the acquisition of this desired immunity during the existence of the disease might be hastened by the introduction into the organism of a quantity of the serum of an immune animal. This principle has now been applied in the treatment of two diseases—tetanus and diphtheria. Some striking results have been reported in tetanus, but the question of the value of the method in this disease is not yet settled. The claims made on behalf of the treatment of tetanus by antitoxin have been much criticised in an adverse sense. These criticisms have been founded in great part on the small number of cases which have as yet been treated, since in a disease which is not invariably fatal only a long series of cases can eliminate the source of fallacy which would be found in a run of mild cases. In the case of diphtheria this source of fallacy is being rapidly eliminated. Our own columns have contained recently a series of interesting examples of the action of the serum, contributed by Drs. Still, Thomas Eastes, H. N. Walker, G. S. A. Waylen, and E. Caudwell, and we hope shortly to publish others. The number of cases now on record by German observers is very considerable. The results on the whole have been remarkably encouraging, and apart from statistics the marked improvement noted in many cases within a few hours after the administration of the first or second dose has carried conviction to the minds of those who have had the opportunity of observing the cases.

The earliest published cases of diphtheria treated by this method were a series of 30 reported by Behring and Kossel in April, 1893.[1] Of these, 24, or 80 per cent, recovered. For various reasons, among others the difficulty of obtaining the serum, it was some time before the example of the discoverer was followed by other physicians, but in April, 1894, Ehrlich, Kossel, and Wassermann,[2] reported the results in 220 unselected cases of diphtheria treated by the hypodermic injection of the serum of goats rendered immune by giving them increasing doses of dead diphtheria cultures. Among the 153 cases which it was not necessary to submit to tracheotomy, the mortality was only 23.6 per cent. In 6 treated on the first day there was no death, and in 66 treated on the second day there were recoveries amounting to 97 per cent.. whereas in 23 treated on the fourth day the percentage of recoveries fell to 56.5 per cent. In half the fatal cases the disease was so far advanced as to make recovery almost hopeless when the treatment was commenced, and in some other instances the stock of serum ran out. It is important to add that in a few instances the great improvement noticed in the first two days was not maintained, and the patients died in ten days or a fortnight of nephritis or cardiac failure. Nevertheless Ehrlich and his co-workers believed that they had reason to hope that the serum treatment would eventually diminish the number of cases in which nephritis and paralysis occur as complications. The results in the cases submitted to tracheotomy were not so favourable, the mortality being 44.9 per cent. The results of the treatment reported by Weibgen, from Hahn's clinic in Berlin,[3] are not very conclusive. The number of cases was 65. Of the patients submitted to tracheotomy 44 per cent. recovered, of the others 72 per cent. The epidemic, however, was of a mild type, and by other methods of treatment the rate of recovery had been so much improved that in 1893 it had reached 63 per cent. among the cases not submitted to tracheotomy, and 40 per cent. among those who did undergo the operation. The results in the Emperor and Empress Frederick's Children's Hospital are the most striking, the mortality, which had been over 41 per cent. for fourteen months previous to the adoption of the serum treatment, falling, according to Katz's report, suddenly to 13.2 per cent., the number of cases being 128. Weilgers saw his mortality fall from 53 per cent. to 28 per cent., the number of cases treated with the serum being 63.

There is some evidence that a person may be rendered immune to the infection of diphtheria by preventive inoculations. Klemensiewicz and Escherich[4] have found that guinea-pigs can be rendered immune to diphtheria by inoculation with the blood serum of patients just recovered from the disease. Wernicke[5] succeeded in producing a certain degree of immunity in dogs by feeding them on the flesh of sheep which had been rendered refractory to diphtheria. The immunity in either case was of short duration, but Wernicke's observation that the immunising principle is present in the tissues and can be absorbed from the intestinal canal is of great interest, and appears to open up a new method of administering the remedy comparable to the thyroid feeding in myxœdema which has now so generally replaced the injections of thyroid extract at first employed. Wernicke succeeded in rendering his dogs more immune by inoculating them with increasing doses of the virus contained in old cultivations of the diphtheria bacillus, and he found that the serum of these dogs had so high a protective power that it rendered guinea-pigs immune to

[1] *Deut. med. Woch.*, April 27th, and Epitome, May 27th, 1893.

[2] *Deut. med. Woch.*, April 19th, and Epitome, May 5th, 1894.

[3] *Deut. med. Woch.*, July 19th, and Epitome, August 18th, 1894.

[4] *Cent. f. Bakt.*, xiii, 5 and 6; and Epitome, March 25th, 1893.

[5] *Arch. f. Hyg.*, xviii.

infection by a dose ten to fifteen times as large as was necessary to kill an unprotected animal. He found also that injections of the serum of these immunised dogs could bring about the recovery of guinea-pigs inoculated twenty-four hours previously with a fatal dose of the diphtheria bacillus. Katz, as Dr. H. N. Walker stated in our columns recently, inoculated 72 children exposed to the disease; only 8 contracted it, and all of these recovered after a mild attack.

In the current number (September 3rd) of the *Berliner klinische Wochenschrift* Behring publishes a paper, in which, among other points, he deals with the question of dose. He states that the serum prepared and tested under his own supervision and that of Ehrlich is now issued in two forms—No. I and No. II; No. II in two and a half times stronger than No. I. No. I is sufficient for the treatment of a case of diphtheria in a child under 10 years of age, if it be seen on the second or third day. In cases of longer standing, in those of a very severe type in young children, and in adults a repetition of the injection will be necessary. No. II serum acts more surely and rapidly in these cases, but, owing to the difficulty of rendering the animals sufficiently immune to provide a serum endowed with immunising powers so strong, a constant supply cannot be ensured.[6]

The estimation of the exact strength of the serum is a difficult matter, and it must be recognised that the strength is liable to vary with the commercial source from which it is obtained. Behring and Ehrlich have devised a method of expressing the strength in figures. Their No. I (quality and quantity) contains 10 c.c., which is equal to 600 antitoxin normals, and is sufficient for one case with the limitations already mentioned. No. II contains 11.5 c.c. of a strong serum, and is equivalent to about 1,500 antitoxin normals. Behring now estimates that the death-rate of cases treated within forty-eight hours of the onset of the disease with No. I ought not to exceed 5 per cent.

The dose to be injected as a prophylactic in persons liable to be exposed to diphtheria is set down by Behring at 60 antitoxin normals, or one-tenth of No. I. After infection, that is during the incubation stage, he believes that 150 antitoxin normals ought to avert the development of the disease.

[6] The telegraphic address of the manufactory from which this serum can be obtained is "Farbwerke, Hoechst, Main," Germany. No. 1, price 5 mks.; No. II, price 15 mks. We understand that the serum will, before long, be obtainable from the British Institute of Preventive Medicine.

AUTUMN HOLIDAYS IN ENGLAND.

I.

At this time of the year the mind of the hard-worked professional man naturally turns to thoughts of rest and relaxation. To many of our colleagues in busy general practice the period they are enabled to devote to an autumn holiday is, we fear, often much too brief and inadequate to their needs. At the same time we like to think that there are few indeed who are unable to snatch a week or two's leisure, and so escape from the continuous strain of their arduous daily tasks. It is frequently a question of no small importance where this brief annual holiday can most profitably be spent so as to afford the greatest amount of healthful relaxation to mind and body.

To the keen sportsman—and many of our country brethren may no doubt be numbered amongst this class—we have little advice to offer, because, as a rule, they do not desire any. They have made up their minds long ago; there is no holiday for them without sport, and they know as well or better than we do where that sport is to be found. Nor do we propose to refer on this occasion to the attractions of foreign travel. We are far from wishing to underrate them, but our object now is to indicate briefly the manner in which an autumn holiday may be advantageously spent within our own shores.

It has often been remarked how little Englishmen know of the beauties of their own country. We possess a coast line of unrivalled extent and variety provided with resorts where all the attractions of a seaside life can be enjoyed in perfection. We have forest and woodland scenery such as few other countries can boast of; and if we do not possess the lofty mountain ranges of Switzerland nor the vast inland lakes of America, there is no lack of hills and mountains of moderate elevations quite high enough to afford plenty of climbing exercise, and bold enough to give imposing grandeur to the surrounding scenery; while the Lake District in England and in Ireland and the lochs of Scotland have a beauty of their own such as cannot be found in those immense sheets of water of the American Continent. In a comparatively small insular country like Great Britain, the climatic conditions are necessarily more uniform than in the different and widely-separated regions of a vast continent; but, notwithstanding a certain unavoidable general uniformity of climate, there exist wide differences in different parts of our country which are capable of exercising a very appreciable influence over the health of visitors. One of the main objects of change for those whose professional work confines them to city life is the possibility of passing much of the time they are able to be absent from their homes in the open air. That is the grand desideratum—a life in the open air—and to the greater number it is to be desired that that air should be as bracing as possible.

And, first, let us glance at some of the many seaside resorts which are readily available from all parts of England. Such resorts commend themselves especially to families where there are children. The life on the sands of the seashore is a paradise to young children, and a most healthgiving one. The air blown across the sea is rich in ozone and in blood-restoring properties, and its restorative power in the case of delicate children is remarkable. Sea bathing, properly practised, is also a valuable tonic. Some caution, however, should be exercised in allowing children, and even adults, to remain a long time in the sea; the object of sea bathing, it should be remembered, is the bracing shock of immersion—the quick plunge and the subsequent reaction, which should be immediate and well marked. No good, and occasionally much harm, may arise from a prolonged stay in the sea, which off our own coasts is often of considerably lower temperature than the air in summer, and none but the most vigorous organisations can stand such a prolonged withdrawal of heat from the body as a long immersion in the sea would involve. An active and powerful swimmer can, of course, maintain the body heat by muscular exercise, but pottering about in the sea, as delicate girls are occasionally encouraged to do, is injurious, and is often followed by a sense of fatigue and langour fo the rest of the day.

The resorts on our south coast are those best adapted to sea bathing, especially for children, but on the east and west coasts there are also many places which are justly popular for this purpose. The sands of Westgate, Broadstairs, Margate, Ramsgate, are of immense value to the hosts of children who crowd out of London to these popular shores, so readily accessible from the metropolis both by boat and rail. Then come Deal, Dover, Folkestone, Sandgate (not forgetting the quiet little St. Margaret's Bay, between Deal and Dover); all these resorts, while they get an abundance of sunshine, are somewhat more bracing than those further west, and those in the Isle of Thanet especially so, as the air blows in upon them from a vast surface of sea, stretching away in an uninterrupted expanse to the Arctic Ocean and the North Pole.

Hastings and St. Leonard's, deserted by its more fashionable winter guests, in summer and autumn are crowded with a poorer class who find good and cheap accommodation there at this season. Eastbourne, so beautifully laid out and well built, with its fine bold headland—Beachy Head—and its extensive downs stretching away inland nearly to Lewes; its public gardens, its golf links, its cricket ground and tennis courts, its fine sea front; and its dry bracing climate is widely and justly popular.

Seaford, Brighton, Worthing, Littlehampton, Bognor, Southsea, bring us to the Isle of Wight, a most attractive resort, presenting most charming coast and inland scenery; a great variety of interesting excursions by land and water and some of the best sands for bathing in England, notably at Sea View and Sandown. Although some of the resorts in the Island may not be so bracing as those we have already referred to, a climb on to the elevated ground behind most of them often reaching an altitude of 800 feet above the sea, brings the visitor into a fine invigorating atmosphere and a most commanding position for beautiful sea and land views. Further west, on the Dorset, Devon, and Cornish coasts, there are many beautiful resorts, somewhat moist and relaxing however in comparison with those to the east; Southbourne, Bournemouth, Seaton, Sidmouth, Budleigh Salterton, Exmouth, Dawlish, Teignmouth, Torquay, Dartmouth Fowey, Falmouth, and others.

It is definitively settled that the Dufferin Victoria Hospital, Calcutta, shall be sold, and that a new hospital shall be built in a more convenient position. Both Her Majesty the Queen and Lady Dufferin have been consulted in the matter, and have agreed to the proposals of the Bengal Branch. The Dufferin Fund Association makes, it is understood, a handsome profit by the sale of the building.

The Committee appointed last year by the Home Secretary to inquire into the mode of identification of habitual criminals having reported favourably on the Bertillon system, the Commissioners of Prisons have decided to adopt the anthropometrical system of measurement of criminals. The system will be worked in conjunction with the present system of identification. Officers from various prisons have already been ordered to attend at Her Majesty's prison, Pentonville, to receive instruction from Dr. Garson.

THE INSPECTION OF WORKHOUSE INFIRMARIES.

The Rev. W. H. Thornton, in a letter defending the horrors of the Newton Abbot Workhouse Infirmary, lays stress on the fact that the inspectors of the Poor Law Board "refrained from finding fault," and is not a little scandalised at the extremely severe censure which the Poor Law Board now, under the influence of public opinion, unsparingly inflicts. The fact, however, while emphasising what we have already had to say about the inspectors' "inability to see," only adds another item to the claim which we have made for a public inquiry into the whole system. Mr. Shaw Lefevre admitted in the House of Commons, to the question of Mr. Morton as to the course which he proposes to take in reference to the undisputed reports of the British Medical Journal on the cruel shortcomings of a large proportion of the infirmaries, that there is no technical standard of knowledge on the part of the inspectors, and that the recent appointments are based on the claims of previous services; but already we see signs that our work is not in vain.

THE USE AND ABUSE OF "GEYSERS."

Attention has been drawn afresh to the dangers attending the misuse of "geysers" by an inquest on a servant who was found dead in a bath-room. The water used in the bath-room was heated by a geyser, but the gas had been turned off and the plug removed in the bath, which was empty. The geyser had no ventilating tube. The jury in returning a verdict of death from misadventure, called attention to the importance of having the geyser itself, as well as the room, properly ventilated. The amount of gas required for heating a bath is so large that it may be questioned whether any reasonable amount of window ventilation is sufficient to remove the products of combustion; and it must be remembered that whatever printed direction may be supplied, someone or other is sure sooner or later to close the window, and then the inevitable catastrophe happens. All such appliances should certainly be supplied with an independent chimney for removing the products of combustion, which are very deadly, probably often containing carbonic oxide as well as carbonic acid.

WORKHOUSE NURSING: A NIGHTMARE.

We hear from Bradford of another shocking example of the results which inevitably occur from the abominable system of placing imbeciles in positions of authority over their fellows. It appears that an imbecile named Patrick Scanlan is in custody there on the charge of kicking to death another inmate of the imbecile ward named James Cooper. Scanlan, although classed as a "dangerous" imbecile, had, it is alleged, been placed in charge of the other inmates: and Cooper having aroused his anger by interfering to protect a deaf and dumb mute whom Scanlan was belabouring, the prisoner kicked him so violently, according to the testimony of the other inmates of the ward, that he expired. Scanlan was remanded by the magistrates. The authorities are in somewhat of a difficulty, as no one observed the assault on Cooper except the imbeciles. It is hard to conceive a more horrible pandemonium than an imbecile ward, full of feeble-witted folk, with all the vices and want of self-control which feeble wit involves, ruled over by another imbecile just separated from his fellows by the dangerous violence of his passions. The poor victim in this case would seem to have had some sense of justice left, and for interfering to protect a deaf and dumb mute from the tyranny of the dangerous half-wit whom the guardians had placed over him him he met his fate. And yet we suppose that guardians sleep o' nights, and do not dream. But to us, and we hope to many thousands of ratepayers, the whole system seems a nightmare.

DRUNK OR DYING?

This is practically the question discussed under the unconscionably long title of "Differential Diagnosis of Alcoholic Coma from Other Forms of Coma, with Especial Reference to the Case of Persons found by the Police on the Streets in a Comatose or Semi-comatose Condition," by Dr. Lewis

Mason, of New York. With regard to differential diagnosis, we do not get very much beyond the statement of Dr. Hughlings Jackson, which Dr. Mason quoted from Reynolds's *System of Medicine*, that we may have a history of a mode of onset which will exclude the diagnosis of drunkenness; "but to make a diagnosis from the condition of the patient only is quite a different thing. We can only make a diagnosis by exclusion, and the most important thing is to exclude injury to the head." A large portion of Dr. Mason's paper is taken up with a description of the methods employed by the English, French, German, and American police authorities in dealing with doubtful cases; and here the information furnished to the author by his London correspondent seems to be hardly up to date. All police recruits in the metropolitan district are now regularly instructed in first aid to the injured by means of ambulance lectures. For every police station in London and the suburbs there is an ambulance available for the conveyance of sufferers to the nearest hospital, and the inspectors or sergeants in charge of each station have positive instructions that in all cases in which persons come into the hands of the police, whether as prisoners or otherwise, and there is any appearance of their being ill or suffering from injury, or it is known or believed that they have hurt themselves by falling down while drunk or otherwise, the divisional police surgeon is to be at once sent for to see them, even though they make no complaint. It is hard to see what more could possibly be done by the police authorities, and it is satisfactory to note that since this enlightened policy has been adopted at Scotland Yard cases under the above heading have almost disappeared from the London daily papers.

A NEW LIGHT ON THE "NEW WOMAN."

The "New Woman" is chiefly remarkable for the unerring perversity of instinct with which she selects the less admirable features of the male sex for imitation. She is as puzzling to the philosopher as she is startling to ordinary mortals. Among the various theories of the phenomenon that have been propounded we do not remember to have seen it suggested that she is simply a man in disguise. At the first blush (if we may speak of blushes in connection with the "New Woman") one feels tempted to doubt this. Yet, if the interesting story recently told in the *Progrès Médical* concerning a certain "Mlle. Laure Bertrand" be true, the theory would appear to have some foundation of fact. The young lady in question is said to have amassed a little "nest egg" of some £1,600 by the treatment of stammering. With this sum in her pocket she proceeded to Grenoble and entered as a student of medicine. There was nothing in her appearance to raise any suspicion as to her sex, and she would doubtless in due time have added her twig to the academic laurels won by women had not Cupid betrayed her secret. Mlle. Laure, who had always shown a marked preference for the society of her own supposed sex, and in difference, if not aversion, for that of the brutal tyrant man, suddenly fell in love and married—a woman. This modern Achilles, with his distaff, has now had the register of his birth corrected, and the State has further marked its recognition of his privileges as a member of the male sex by entering his name on the roll of conscription for military service.

THE TEETH OF WORKHOUSE CHILDREN.

The boards of guardians throughout the country are gradually realising the importance of a suggestion which we have repeatedly put forward that the teeth bear to the general well-being of the children who come under their control. We have frequently called attention to reports supplied by dentists at the request of the bodies having the management of district schools, and in most cases the result has been that a dentist has been appointed to the school. This is as it should be, and no school or orphanage should be considered to be duly equipped unless somebody is appointed to periodically examine the dental organs of the inmates. We notice with pleasure that a dentist has recently examined the mouths of the children in Woodbridge Workhouse School at Nacton, and that he has been asked to "pay another visit" in three months' time. It is to be hoped that very shortly the boards of guardians throughout the country will follow the example set by the small workhouse at Nacton. That the course here advocated is the right one is evident when it is remembered that the teeth not only give rise to actual toothache, culminating in alveolar abscess, but may cause various forms of stomatitis (notably the ulcerative one), ulcerations of tongue and cheek, and trismus; and even should so serious a trouble as lockjaw not supervene, the due and proper nourishment of the child is interfered with, as it is quite impossible for mastication to be performed when either the teeth or mouth is sore; and, unless food be well triturated, it cannot be assimilated.

NURSING IN PROVINCIAL HOSPITALS: WAKEFIELD.

We see from a paragraph in a local paper that the Wakefield Board of Guardians is agitated by a report made on the union infirmary by our Commissioner. The criticism seems to be chiefly directed against the number of beds quoted, the figures given in the report being an exaggeration. In explanation, we may say that the number of beds quoted in our reports is that for which an infirmary is licensed, taken from the published returns. In the summer it is the usual experience of workhouse officials that the full number of beds is not occupied, and the class of disease is non-acute; but in estimating the relative proportion of the nursing staff to the beds, the staff necessary must be calculated on the licensed number. Our Commissioner was so evidently convinced that the utmost was done for the sick with the existing staff that any adverse criticism would have for its object the strengthening of the guardians' hands when they appeal to the ratepayers for more skilled help in nursing the sick. A board that has done its work so creditably in the past need fear no open and just criticism of its work, and what has been done may be taken as an earnest of what will be accomplished with an increase of means.

THE SICK POOR IN PROVINCIAL WORKHOUSES: PLYMOUTH.

As we turn from one to another of the reports from the provinces furnished by our Commissioner, we are struck by the sameness of the tale told, the old building erected at the time when the sick were in a part of the house, or when the requirements of the Gathorne Hardy Act laid on the guardians the responsibility of placing them apart, but did not concern itself to particularise the treatment of the sick, and Plymouth is no exception to the rule. In the workhouse infirmary we are told of patients, who are to all intents and purposes hospital cases, left to the chance care of pauper "watchers" during the night, and taking their share of the responsible day nurse, whose duties include the supervision of 87 beds scattered about in wards up and downstairs, her assistants being paupers, themselves either convalescent patients or inmates selected from the house. Their fitness for the work must depend upon their kindly nature, for the opportunities of petty persecution and of active unkindness which are placed in their hands are innumerable, but kindness cannot make up for ignorance. To think of a man with an ununited fracture being turned in the night by the kindly pauper, or the patient with the sloughing groin asking help at the hands of the watcher, or the man with gastritis being fed by a kind but ignorant wardsman, makes one shudder; it is not nursing. Then picture the unbusiness like aspect of the wards, the rooms in which these men and women live, eat, and sleep, ornamented with unsightly though useful vessels in all directions,

emptied or unemptied, according to the activity and efficiency of the ward helpers; the clothing lying on the floor, because the man must be clothed if he has to go down the long passage to the lavatory, and there is no one to put it away, nor place wherein to put it. Then we read of the hot water being baled out of a sunk tank in the court, into which an unwary foot might slip if the trap was left open by an irresponsible pauper—a dangerous and an ancient method of supplying hot water for the 87 or more patients; and of a bath protected by a heavy wooden cover, used as a pantry; is it acting the part of a captious critic to say the best remedy is to build? The Plymouth Infirmary might be made into a hospital under its trained head, with its staff of nurses and probationers. With the teaching material in its wards it would form a valuable adjunct to its near neighbour, the South Devon and East Cornwall Hospital.

DEATHS UNDER CHLOROFORM.

Dr. Wynn Westcott held an inquiry respecting the death of Alfred George Simpson, aged 17, a confectioner, late of Evelyn Street, Hoxton. Simpson was always very delicate, and frequently swooned at home, and latterly had been suffering from ingrowing of the nail of the big toe. On Saturday, August 18th, he went to the Metropolitan Hospital for the purpose of having his toe operated upon. He was put under chloroform, which he took for about ten minutes. After the operation had commenced, he suddenly stopped breathing. Immediate steps were taken to restore respiration, and after a few minutes the patient made voluntary efforts at respiration. He breathed five or six times, and then, with one "catchy" breath, stopped breathing again. Despite exertions which were continued for an hour and a-half, the surgeons failed to restore animation. Death was due to asphyxia from respiratory paralysis during chloroform narcosis. The young man's father complained that chloroform had been administered without the consent of the parents, but the coroner said that he considered a boy of that age could judge for himself. The surgeons, before administering the anæsthetic, sounded the deceased and found nothing wrong with his heart and lungs. The coroner remarked that deaths under chloroform were about 1 in 5,000 cases. The risk, therefore, was so small, that almost everyone would have it rather than suffer the agony without it. A verdict of death from misadventure was returned.—Dr. E. M. Grace, coroner for the Lower Division of Gloucestershire, and a jury, of whom Mr. E. Gregory was foreman, held an inquest at the Berkeley Hospital on Saturday, August 18th, as to the death of George Alway, aged 50, labourer, of Alveston, who expired at the hospital on August 18th, during the administration of chloroform. The verdict was "Death by misadventure during the administration of chloroform, which was properly administered." The jury gave their fees to the hospital.

SOME IMMEDIATE RESULTS OF THE BRITISH MEDICAL JOURNAL'S REPORTS ON NURSING IN WORKHOUSE INFIRMARIES.

We are glad to notice that the Chester Board of Guardians has agreed that a second night nurse is absolutely necessary for the well-being of the house all round, and that the clerk was instructed to summon two candidates for the post to appear before the board at its next meeting. From Hatfield we hear that plans for the new women's block in the infirmary have been under the consideration of the board, and these plans are to be submitted to the Local Government Board for approval, when we trust that no time will be lost in putting the building in hand. A correspondent at Haverfordwest informs us that the adverse report on that infirmary made by our Commissioner has caused much comment in the locality, and as one immediate result spring mattresses have been ordered to supersede the plank beds and chaff sacks used by the sick people. From an advertisement in the *Manchester Courier* we see that the Stockport Board of Guardians is increasing the nursing staff of the infirmary—two female nurses are required for the hospital, and one female nurse for the imbecile wards. We welcome any sign of improvement in the care of the sick in the workhouse infirmaries of which this increase in the Stockport nursing staff gives evidence; but we should have felt more satisfied that a fitting selection would be made if we had not read that the guardians were in search of women "who must have had previous experience in nursing." The overwhelming number of women who think that they have had "previous experience in nursing" is appalling, and includes the widow who, at the suggestion of a sympathetic neighbour, turns her hand to monthly work; or the charwoman who thinks she "would like a little change," or the cook who once was in service in a hospital; there are too many of these to be found in our country workhouse infirmaries. We trust that the board will insist upon having trained nurses, who are prepared with certificates or other proofs of systematic hospital training. Doubtless on this point they will have the advantage of the advice of their medical officer.

A SINGULAR APOPLECTIC SEIZURE.

We adopt this title for the following case from the *Sheffield Daily Telegraph*. It is a very appropriate one. Coroners have before now been known to "make remarks," but it is not often that a legal luminary has given such a detailed pathological study as in this instance. The inquest was held on the body of a boy, who, after hiding in a closet, slipped when he came out, and fell over a beam in the roof. There he hung for five minutes, and when he was got down "he looked white and ill, and complained of feeling sick." The coroner remarked "that it was a singular incident, but he was satisfied that the lad had broken a small blood vessel on the brain. The heart would pump the blood through the fracture, the lad would turn sick, go insensible, and then die. That of course was nothing else than apoplexy." The jury, in accordance with this oracular utterance returned a verdict that the deceased died suddenly, probably from an accidentally ruptured blood vessel on the brain. A medical man is mentioned as having been sent for to see the boy, who, however, had died before his arrival. Of course, medical testimony at the inquest was unnecessary with a coroner so satisfied as to the way the death had been brought about.

PATHOLOGY OF INSANITY.

The result of the investigations of a small committee of the London County Council into the pathological treatment of insanity is given in the annual report of the Asylums Committee. Dr. W. J. Collins was chairman of the committee, which we learn from *London* was first appointed in 1892 "to consider whether pathologists should be appointed at each asylum, or whether one or more pathologists should be appointed, and their services be rendered to all the asylums; and also the precise nature of the duties to be performed by these officers." The committee inquired into the necessity for experiment in this direction in connection with our asylums, and obtained the opinions of medical offices. Through the courtesy of Lord Rosebery, then Foreign Minister, a report was obtained giving the results of experiments abroad. There is no doubt of the value of investigation into the pathological psychological anatomy of the brain, and of the necessity for establishing a pathological laboratory in connection with lunatic asylums. As a rule, *post-mortem* examinations are made on all patients who die in the institutions, but without an experienced pathologist the value of each examination cannot be great. There is not by any means a consensus of opinion among the medical profession as to the improved methods of treatment which may result directly from pathological investigations, but there is a general opinion that pathological examinations should be made. Dr. Clay Shawe, the medical superintendent

of Banstead Asylum, says: "Probably the association of physiological investigation with the pathological might lead to results in time, and more especially if the paths of normal brain action were brought into direct relation with diseased processes; but this requires the special knowledge of a physiologist as well as a pathologist. The diseased and broken-down brains of those who die in asylums give little scope for any original work beyond what has been already done. I cannot point," he continues, "to any distinct system of cure from what we know of the pathology of insanity, except I refer to the slight improvement in some of my published operations to relieve brain pressure, and to some cases of surgical interference, melancholia, published in Germany. Until we have a better knowledge of physiological brain action I expect little from pathology." Dr. Shaw is hopeful that the council, with the opportunity of experiment at its disposal, will develop a pathologist of its own. Dr. Alexander, of Hanwell Asylum, says; "I admit it is probable that a long time would elapse before pathological research would lead to improvements in the cure and prevention of insanity, but one cannot help believing that, in the long run, such research would tell in the right direction." Dr. Alexander seems to express the general view of the managers of asylums abroad who have answered the council's questions. A report from Heidelberg says that "there is no doubt as to greater scientific research being necessary to secure the better treatment and prevention of mental diseases." From Berlin comes the report that "there is much need for microscopical research, especially respecting the nervous system." A report from Heppenheim says that "it speaks for itself that further research into the pathology of insanity would aid in the treatment and prevention of the insane." A report from Holland says, "Great improvements in the prevention rather than in the cure of insanity will, it is anticipated, result from regarding the anatomy and physiology of the nervous system as the solid and single basis of the pathology of insanity." Generally speaking, the result of all the investigation is to show that the pathology of insanity is in an experimental stage, and there is much scope for investigation, and a strong probability that better or preventive treatment will result. This is the conclusion at which the subcommittee has arrived, and a pathological laboratory is now being built at Claybury Asylum. The subcommittee feels that the information received enables them to report that in their opinion there is room for more thorough pathological research in connection with the county asylums, and that research may lead to information likely to be valuable in the treatment and prevention of insanity. The committee will offer a salary of £700 to a pathologist. Dr. Collins deserves much credit for the time and attention he has bestowed on the subject.

EPIDEMIC SKIN DISEASE IN EAST LONDON INFIRMARIES.

Several workhouse infirmaries in the East of London have been affected during the last few months by an epidemic skin disease similar to and probably identical with that which occurred in the Paddington and Marylebone Infirmaries in 1891, as described by Dr. Savill in the British Medical Journal, 1891, ii, 1197. The disease so far as it affects the skin is an epidemic dermatitis, with redness and thickening and considerable exfoliation. In the "moist" type, according to Dr. Savill, there is a certain amount of exudation, causing it to bear some resemblance to eczema, but attended with much more thickening of the dermis. The course is irregular, lasting from 6 to 10 weeks, and the fatality is considerable, 12.8 per cent., according to Dr. Savill. The present epidemic reached the separate infirmary of St. George-in-the-East about the middle of July, since which date it has shown itself in its typical form in about fifty cases, but besides these an almost equal number of patients have been affected in a manner similar to that in which the other cases begun, although without rash. Among old people so affected some have died without the appearance of the characteristic rash. These prodromal symptoms have been headache, some pyrexia, back-ache, and general soreness, absolute anorexia, furred tongue, and often vomiting. The sequence of the symptoms has been very variable, and the violence of the general disturbance has borne but little relation to the intensity of the rash. In fact, in some of the cases in which exfoliation was free its occurrence seemed to give relief. The disease has been attended with great depression, the fatal cases being characterised by dry tongue, cardiac failure, and congestion of the lungs. The similarity to influenza of those cases in which no rash appeared is obvious. Most of the deaths, but not all, have occurred among old people, and, without putting all the mortality down to this disease, it is to be noted that the death-rate of the infirmary has lately been about double what is usual in the corresponding months. Besides St. George-in-the-East, Shoreditch, Bethnal Green, and we believe the City of London Infirmaries have also been affected. In view of the possibility of its connection with diet, Dr. Dowlan, the medical superintendent of the St. George's Infirmary, has thought well to stop the use of ordinary milk and since August 13th has substituted condensed milk, and, according to a report in the Local Government journal, there has already been a change for the better. The Shoreditch guardians have also stopped the use of ordinary milk.

DISINFECTION.

It probably seldom strikes the housemaid or mistress that ordinary daily cleansing is in itself a disinfecting operation. The shaking of carpets, the beating of mats, the sweeping of rooms, the polishing of furniture, and above all the scrubbing of floors with an alkaline soap, are all operations tending to destroy myriads of pathogenic germs should they be present; if we add to this floods of light from the direct rays of the sun, few infections will resist such combined attacks. When we come to disinfection by chemical agencies, such disinfection ought to be thorough and to be supplemented by the cleansing and aëration as above enumerated. Disinfection is becoming more and more of a craft; it is not a business that should be meddled with either by the general medical practitioner or the householder, but relegated to sanitary officials acting under the directions of the medical officer of health. Disinfection, varying in detail, but identical in principle, as carried out by the various metropolitan sanitary authorities, appears to be efficient. Many of the authorities possess the most modern appliances; as, for example, St. Pancras and St. George's Hanover Square, in both of which districts infected articles can be submitted to steam under pressure. The disinfecting operations used by Mr. Wynter Blyth in the recent outbreak of small-pox were as follows: Directly the ambulance left with the patient, the room was sealed up, and one or more tins of liquid sulphur dioxide opened, and the fumes allowed to act for many hours; this operation concluded, all articles that could be removed were taken away, and put into a hot-air apparatus, and kept there for four hours at a temperature above the heat of boiling water. Mr. Wynter Blyth is urging the local authority to purchase a steam apparatus, so as to be able to work quicker; so long a time as four hours would be quite unnecessary with a more efficient apparatus. Lastly, the room is cleansed. During the outbreak only a few articles were destroyed by fire. Several parishes still use chlorine gas, which properly evolved is without doubt efficient, but is destructive to fabrics, to pictures, and to steel and brass articles. The evolution of sulphur dioxide from sulphur itself, or from the burning of a carbon disulphide lamp, is not to be commended, for the simple reason that the supply of the gas is limited by the amount of air gaining access to the flame. The feeble manner of performing this fumigation in the past may be gathered from the fact that cats accidentally shut up

in a room have frequently survived—a very practical proof that the atmosphere could not have been replaced or saturated with the gas.

MORPHINOMANIA IN THE MEDICAL PROFESSION.

Dr. Jules Rochard, in the *Union Médicale*, draws a gloomy picture of the increase of the morphine habit in France and elsewhere. The habit, he finds, becomes incurable at the end of six months of indulgence. The fair sex and the doctors are, in his opinion, the most deeply addicted to morphine. He draws an unpleasant comparison between the behaviour of each kind of delinquent. Women, he says, delight in declaring how they indulge in this vice, and show ornamental hypodermic syringes to their friends. Dr. Notet states that a lady having broken the needle of her syringe in a remote country village, wounded her skin with scissors and thrust the stump of the needle into the wound, injecting herself in this manner till a new syringe arrived from Paris. Men, Dr. Rochard declares, and especially medical men, the bulk of male morphine injectors, take the greatest pains to hide their vice. Hence the precise number cannot be estimated. He believes, however, that doctors and persons associated with them form nearly half the total of men addicted to morphine.

THE NOTIFICATION OF DIARRHŒA.

During the past few weeks the parishes of St. George Hanover Square and St. Giles have added diarrhœa to the list of diseases regarding which they receive notification. In the week ending August 25th, out of 26 notifications in St. George's parish 21 were of diarrhœa, and in St. Giles's, out of 19 notifications, 18 were from the same cause. In view of the premonition of choleraic tendencies so often given by a rise in the prevalence of diarrhœa, it is desirable that, at any rate for the present, other vestries should adopt the same course. Grimsby also has added diarrhœa to the notifiable diseases, the experience of last year having shown the importance of the warning given by the rise in the diarrhœa-rate. In this case, however, it is provided that no notification be sent in in the case of children under 1 year of age, or of infantile diarrhœa where the child is teething. Some of the councillors protested against the expenditure as a mere waste of money, and did not see why the Corporation should have to pay half-a-crown merely because someone happened to have a little diarrhœa. In fact, they appeared to look upon it as quite a proper and salutary thing; but in the end the proposal was carried by a large majority.

CREMATION.

A crematorium is about to be erected in Priory Road, near Anfield Cemetery, Liverpool. The buildings, to comprise chapel, ante-chamber, and cremating chamber, are to be about the same size as the establishment at Woking. The chapel is to be 41 feet by 24 feet, and in the ante-chamber will be a small platform or gallery for the use of friends who desire to follow the remains to the last. Usually, it is expected, ashes will be buried in the ground surrounding the chapel, but it is intended to provide a columbarium in a well-lighted crypt under the chapel, where between 1,000 and 2,000 cinerary urns may be permanently deposited, being built into the walls, with a commemorating bronze or marble slab in front of each niche. The foundation was laid by the Lord Mayor of Liverpool, and Mr. Alfred Holt, as chairman of the Liverpool Crematorium Company (Limited), spoke at some length on behalf of cremation, and said that the experiment would be tried in Liverpool under better conditions than elsewhere in this country. The Lord Mayor believed that by cremation human remains would be disposed of reverently, carefully, and promptly, and he thanked the company for establishing in their midst that system of disposing of the dead, believing that it would be of the greatest advantage to crowded communities.

LUNACY IN LONDON.

The annual report of the Asylums Committee of the London County Council gives some interesting details. In the department of lunacy, the London County Council now spends over £400,000 per annum. The total number of lunatics dealt with is 11,668. The vast majority of these are in the asylums controlled by the Council; but a few hundreds of them are accommodated elsewhere. The increase of the total, in four years, has been over 15 per cent.; or, from a total of 10,104 in 1890 to a total of 11,668 in 1894; which is the same as an average increase of the total by nearly 400 lunatics a year. There are a number of reasons for this rapid increase in the total lunacy under care both in London and elsewhere, but there is not space, nor is this the occasion, to deal with that subject. The percentage of recoveries annually of the total number during the year, under care and treatment, has been as follows: In 1889, 8·72 per cent.; in 1890, 11·31 per cent.; in 1891, 12·28 per cent.: in 1892, 11·34 per cent.; and in 1893, 11·93 per cent It is stated that the patients "have long since been reconciled to the teetotal *régime*, and the medical superintendents, without exception, highly approve of it. The Lunacy Commissioners, however, still obstinately maintain a hostile attitude," thinking that "the withdrawal from the temperate of their past life's beverage irritates them, whereas every effort should be made to alleviate the morbid discontent of the sober patients, in proportion to whom the drunkards are few."

SANITARY INSPECTION OF FACTORIES.

Her Majesty's Inspectors report that local sanitary authorities, under the powers conferred on them by the Act of 1891, have in the majority of cases done little or nothing, the local authorities being averse to add to local taxation by the appointment of a sufficient number of sanitary inspectors. In several important towns, however, action has been taken. In Manchester four inspectors (two men and two women) have been appointed under the Factory and Workshop and Shop Hour Acts, 1,014 shops, 225 workshops, and 353 bakehouses being registered. In Leeds 602 visits were made by the sanitary inspector of workshops, 132 occupiers being noticed for dirty premises. In Hull, in six months, 369 places had been visited; 174 were found out of order, of which 90 had been put in order. In Sheffield 896 visits have been paid to workshops. Other large towns mentioned as taking special action are Portsmouth, Southampton, Northampton, Bradford, Liverpool, Birkenhead, Bristol, Nottingham, Birmingham, Aston, Leicester, Huddersfield, Halifax, Swansea, Cardiff, Burnley, Blackburn, Bolton, Wigan, Walsall, West Bromwich, Smethwick, Hanley, Stockport, and Edinburgh.

ALCOHOL AND THE HEALTH OF THE ARMY IN INDIA.

The highest officers in our army in India continue to bear unmistakable testimony to the marked influence for good which the work of the Army Temperance Association has had upon the health and conduct of our soldiers. General Sir H. Collett has stated that in an army of abstainers there would be one-hundredth part of the present crime, and one-tenth part of the present sickness. General Sir G. S. White has said that if he wanted men on whom he could depend, who would most readily turn out in an emergency, and who could be entrusted to perform any duty, he would go straight to the rooms of the Army Temperance Association. The admissions into army hospitals in India last year were, of total abstainers, 5 per cent.; and of non-abstainers, 10·4 per cent. Minor offences were only 1.5 per cent. among the abstainers, against 6·7 per cent. among the non-abstainers. There was but one courtmartial on 1 out of every 1,224 water drinkers, while there was 1 out of every 19 of the others. Mental and bodily health both benefit by abstinence.

THE EIGHTH INTERNATIONAL CONGRESS OF HYGIENE & DEMOGRAPHY

Held in BUDA-PESTH, September, 1894.

[FROM OUR SPECIAL CORRESPONDENTS.]

The Congress was formally opened in Buda-Pesth by the Archduke Charles Louis in the name of the Emperor on September 2nd. The Archduke was accompanied by Dr. Wekerle, the Hungarian Premier, and other members of the Ministry, and by the burgomaster of Buda-Pesth.

The Minister of the Interior, M. Hieronymi, in an opening address, sketched briefly the progress which had been made in Hungary in assuring the welfare of the people.

The Archduke, in formally declaring the Congress open, said that such great international assemblages were a proof of the importance attached at the present day to hygienic questions. He concluded by welcoming the foreign delegates.

The welcome was acknowledged by representatives of the various nationalities present, Professor Corfield speaking in the name of Great Britain.

The Congress settled down to practical work on Monday, September 3rd, when all the nineteen sections assembled.

Subsequently an exhibition was opened at the Royal Joseph Polytechnicum, and in the evening a Court reception was held in the Royal Palace.

On the afternoon of the same day a special meeting was held in the State Hall of the Royal Academy of Science, when an oration in memory of Ignatz Semmelweis was delivered by Professor Hueppe of Prague. Subsequently, the memorial to Semmelweis, erected by international subscription, was unveiled by Professor Kezmarsky, and Dr. Duka, of London, delivered an address and placed an international wreath on the memorial.

The number of members present on the first day of the Congress was estimated at 2,000, and the business was conducted in nineteen sections as well as at general meetings.

The Care of the Sick and the Hygiene of the Home.

One of the earliest papers read was that prepared by the Princess Christian, as President of the Royal Association of British Nurses, on the progress made in the care of the sick, and the extension of sanitary and hygienic knowledge in Great Britain. The Princess recapitulated the work of the Royal British Nurses' Association, mentioning that the nursing register now bore upon the roll the names of 2 000 trained nurses, nearly all who had undergone three years' probation. She described the curriculum, and expressed the hope that the time was not far distant when the State would see the importance of recognising a definite diploma of nursing, and giving an official sanction to the maintenance of the register.

Backward and Exceptional Children.

The report from the British Committee appointed by the Congress of 1891 to investigate the physical and mental condition of children in schools was then read. In the absence of Sir Douglas Galton, the Chairman of the Committee, the report was read by Dr. Francis Warner, who stated that the inquiry had been proceeding since 1888, when the British Medical Association appointed a committee of investigation. Between the years 1888 and 1891, 50 000 children were examined. The individual results had been reported to the Congress of 1891, and had since been published *in extenso* by the American Government. In the meantime the British Royal Commission had reported that feeble-minded children were to be found in elementary schools, and needed to be specially cared for. This work had since been undertaken by the London School Board. Since 1892 a second lot of 50,000 children had been examined, and it was now possible to report on any group of children or group of schools as to their mental and physical condition, and compare the results with an established average. Groups of children arranged according to their physical conditions had been traced through the educational standards, and it had been found that those of defective bodily and brain condition remained mostly in the lower standards, and were frequently over aged for those standards. The ages at which children presented certain brain irregularities could be traced, and a basis was thus afforded for the determination of the age at which defective conditions were most prevalent. The report mentioned the fact that more boys than girls were ill developed, but that ill-developed girls tended more to be delicate and mentally dumb. This suggested, then, that while average girls might work and play hard with advantage, there was a certain number who needed special care. Children crippled, maimed, deformed, paralysed, mentally deficient, epileptic, or otherwise ill developed formed 16 per 1,000 of the total number under review. This condition of things might be ameliorated by special care. Another important result stated by the Committee was that of tracing children with defects through certain groups of schools. They were found to be more numerous in Poor-law schools and certified industrial schools than in day schools, and though they became fatter in resident schools, they presented more brain disorders and mental dulness. The Committee recommended that a method of observation and reporting having been settled in the United Kingdom, the Governments of other countries should be invited to co-operate for the purpose of further investigation.

Small-Pox Precautions in London.

In the Second Section of the Congress, which was specially concerned with the question of epidemics, Mr. W. M. Acworth, of the Metropolitan Asylums Board, London, read a paper on The Methods Adopted in London for Dealing with Small-pox Outbreaks. He described the Thames hospital ships, and stated that the system had proved eminently beneficial. Marked objections, however, were the practical impossibility of completely disinfecting the ship, the danger of collision and fire, and the possibility of the suicide of patients while delirious. To meet these drawbacks a movement was now on foot for supplementing the system by means of pavilion hospitals ashore. It was proposed to acquire 150 acres on the banks of the Thames, and to build on this ground accommodation for 1,000 patients, so as to be ready for emergency.

Diphtheria.

On Tuesday, September 4th, the Sections of Bacteriology, Epidemiology, and Pediatrics met together, under the presidency of M. Hieronymi, Minister of the Interior, to receive reports on diphtheria, drawn up in accordance with a resolution of the last Congress upon the Prevention and Treatment of Diphtheria. Professor Löffler, of the Griefswald Hygienic Institute, presented the German report. His rising was very warmly applauded. He said that the specificity of the diphtheria bacillus and its value as a means of diagnosis in doubtful cases was now generally recognised: and he advocated strongly the appointment of bacteriologists in every district, to whom should be committed the duty of making the necessary examinations. After commenting on the fact that the bacillus might be met with in the upper air passages of persons apparently healthy, he observed that, as a rule, the bacillus ceased to be discoverable shortly after the subsidence of the local symptoms, though it might persist in a virulent state for weeks and months. In organic matter, not exposed to light, the bacillus could survive for many months. It was, therefore, liable to persist in dark, damp, and dirty dwellings. The first hygienic measure, therefore, was attention to the cleanliness and dryness of houses, and the thorough admission of light and air. The German Committee also insisted upon the value of routine cleansing of the mouth and nose with a weak solution of common salt or carbonate of soda. Cleanliness of the teeth, the extraction of bad teeth, and the removal of enlarged tonsils were

also advised. The Committee also advised compulsory notification, and in addition to isolation and thorough disinfection, the enforcement of the provision that isolation should not cease until the disappearance of the bacillus had been ascertained by bacteriological examination.

The report from the American Committee was presented by Dr. J. S. Billings, and was illustrated by a series of maps. He stated that in 1880 of every thousand deaths from known causes 78 were due to diphtheria, whereas in 1890 only 49 per 1,000 were ascribable to the disease. In 1880, in the rural districts of America, the proportion of deaths from diphtheria was 83 per 1,000, and in the cities 57 per 1,000, but in 1890 the proportion had fallen to 50 for the towns and 49 for the country. He considered that the chief cause of the diminished mortality was the recognition of the fact that the disease was spread by contagion, and was to be checked by isolation and disinfection. A system of bacteriological examination was already enforced in certain cities in the United States. The results show that 80 per cent. of the cases of croup were true diphtheria.

The report of the British Committee was submitted by Dr. Edward Seaton, M.O.H. for the County of Surrey. He dealt first of all with the increase of diphtheria in the United Kingdom during the twelve years ending 1892. The increased prevalence of the disease in London and the south-eastern counties of England, and its lighter incidents in North Wales and other country districts suggested that the spread of diphtheria was mainly governed by the habits of populations. The great change to be noted in these habits was the influx of the country population into town, and the collection of children in schools. He considered that the education of the public to understand the necessity for the systematic encouragement of scientific observations and research in matters connected with public health was the most urgent need of the day.

The report of the French Committee dealt especially with the importance of the early recognition of the disease, which could only be attained by the systematic examination of the throats of children. M. Roux, of the Pasteur Institute, spoke strongly in favour of the antitoxin treatment, and stated that by the use of Behring's serum the mortality in one of the Paris hospitals had been reduced from 40 per cent. to 25 per cent. He advocated also the use of prophylactic inoculations. Mr. Mathew A. Adams, of Maidstone, contributed a paper on the Relations between the Occurrence of Diphtheria and the Movement of the Subsoil Water. He brought forward statistics for nine years in support of the view that the prevalence of diphtheria was closely connected with dampness of the soil.

After further discussion the reports from the various countries were referred to a special committee to consider and report before the conclusion of the Congress.

Cholera and Water Supplies.

The same three sections also discussed the subject of cholera, under the presidency of Dr. Koranyi. Professor Gruber, of Vienna, dealt at length with the bacteriological diagnosis of the disease, and concluded that at present it was not of much practical value. Dr. Metschnikoff, of the Pasteur Institute, also dealt with bacteriological questions, pointing out that many points yet remained obscure. He dwelt at length on the important part which the presence in the human intestine of other bacteria had in determining an attack of cholera. Dr. Kuborn, of Liége, presented a report on the recent epidemic in Belgium. The infection had been imported from France, and in many instances the cases had occurred in the same locality, and the same houses as had been affected in previous epidemics. The improvement in the sanitary condition had contributed greatly to rendering it possible to limit the spread of disease, but the most important factor was the substitution of a proper water supply for the old system of wells and cisterns. Cholera had not attacked any of the districts which had been provided with a good water supply. It was mainly to this cause that should be attributed the fact that the epidemic of 1892 had caused less than 1 500 deaths, while those of 1849, 1853, 1854, and 1866, had carried off over 86 000 victims. A paper was contributed by Dr. Clemow, on the Dissemination of Cholera by Water, founded upon observations made in Russia. He described at length an outbreak on board a British ship, traced to the use of water taken from the Gulf opposite the harbour of Cronstadt. A long and animated discussion took place, and great regret was expressed at the absence of Dr. Brouardel, of Paris, and Mr. Ernest Hart, who had promised to contribute important papers.

Sanitation in India.

A paper by Miss Florence Nightingale was read in the Tropical Section, over which Dr. Theodore Duka, of London, presided, and, after considerable discussion, the following resolution was adopted, on the motion of Dr. G. V. Poore:

> The Tropical Section of the Congress, having had under consideration a paper by Miss Florence Nightingale, on Village Sanitation in India, are of opinion that the subject is a very important one, affecting as it does the health and prosperity of so many millions of industrious, law-abiding people. They appreciate the efforts that have been made in different provinces by the Government of India to promote this work, and, looking to the special conditions of village communities in India, they think the best results will be obtained through the co-operation of the people themselves, if they are instructed in the primary rules of health. The most pressing needs appear to be a wholesome water supply and the removal of refuse and other insanitary matter from the neighbourhood of dwelling houses.

The Sections did not sit on Thursday, the day being entirely devoted to excursions to various places of interest.

THE INDIAN MEDICAL CONGRESS.

When the idea of organising a general Medical Congress in Calcutta for all India was first brought under our notice, we were inclined to doubt its successful realisation on the grounds of the difficulty of official medical men obtaining leave of absence in adequate numbers, and a further doubt whether non-official medical men practising in India would overcome the difficulties involved, and would unite with sufficient public spirit and capacity of organisation to complete the enterprise. The result is, we are delighted to find, completely set at rest all those doubts, and is likely triumphantly to prove the public spirit and the ability of the non-official practitioners, and already forecasts considerable success. The Congress will be largely attended by official members of the medical services, and also by the members of the various official classes, including those who have attained by merit a high position and well-deserved success in their calling. Our earlier remarks are, we observe, resented by an important organ of native medical and non-official practitioners, a class which we rejoice to find rapidly growing in bulk, importance, and reputation, and one which is, we trust, destined to assume a still higher and weightier position in India. At any rate it has, and will continue to have, our warmest sympathies.

The combined ardour and energy of officials and non-officials has already overcome preliminary difficulties, and the scheme of assembling a Medical Congress at Calcutta in December next bids fair to be a brilliant success. Educational and social developments exhibit in India such startling rapidity of growth that judgments concerning them require frequent revision, and we rejoice that a revision and recall of our first judgment in the case of the Indian Medical Congress has become necessary. Our sympathies are entirely with medical men who are honourably and successfully practising their calling in Indian cities and communities.

We earnestly hope that this Congress will prove a new departure in the history of the medical profession in India, by stimulating its members of every sort and grade to active and sustained co-operation in advancing medical science and improving medical art.

Surgeon-Lieutenant Colonel E. Lawrie, of Hyderabad, has been appointed President of the Surgery and Eye Section of the Indian Medical Congress. Among many important subjects which come under this section are the chloroform question and the organisation of first aid on the battle field in relation to the modern system of concentrating troops and the character of their armaments. Surgeon-Lieutenant-Colonel A. Crombie, of Calcutta, will preside over the Medicine and Pathology Section, and Surgeon-Major W. G. King, Madras, over that of Public Health. The subjects coming under the

last head include even a paper on appropriate shoes and headgear for India, and it is in this section that the general public will naturally take most interest. Several sections, such as those devoted to obstetrics and diseases of women and children, medico-legal, medicine, and indigenous drugs, have up to the present been unallotted. A native practitioner will, doubtless, preside over the last-named section.

THE ARGUMENTS OF ANTIVACCINATORS.

ON Tuesday last a meeting was held at the Assembly Hall, Mile End, to denounce vaccination. The proceedings seem to have been marked by the misrepresentation of facts and concealment of important considerations which are usual at such meetings. According to the report in the *Morning Leader*—which is the fullest we have seen—it would appear that Mr. Hopwood said that "they had official record that out of 53,000 cases treated for small-pox, 41,000 were vaccinated." The area or period to which those figures apply, however, do not appear, and nothing seems to have been said as to the age distribution of the cases, or the efficiency of the vaccination, or the relative severity or fatality of the attacks in the unvaccinated as compared with the vaccinated. Then, again, "the Local Government Board reported that in two years and a quarter, from 1870 to 1873, when 90 per cent. of the population were vaccinated, the deaths were 44,433, yet they were told that vaccination was mitigating the disease." The speaker, however, did not state how many of these deaths occurred amongst unvaccinated and how many amongst the vaccinated portion of the community, or explain that at that time there was no justification for considering that 90 per cent. of the whole population were vaccinated, although it might be said of the infantile population. These distinctions would materially modify the aspects of the argument. Moreover, the question of mitigation of the disease must be judged not so much by the actual number of deaths during an epidemic period as by the rate per million of the population, which increases from year to year. Thus, while the death-rates per million of the population in 1838 and three following years were 1,064, 589, 661, and 400 respectively, the rate gradually declined, with slight fluctuations, until the epidemic of 1871-72, when it rose to 1,015 per million, but then again fell to 824, 101, 91, 40, 103, 178, 79, 25, 29, 124, 54, 39, 87, 107, 13, 21 in the succeeding years. Again, the speaker remarked that "in the last ten years, according to the Registrar-General, 500 children had died of vaccination. And they knew in addition that there were constantly reports of inquests at which some doctor, with cant and humbug and nonsense, induced a pudding-headed jury of fathers, who ought to know better, to say that vaccination had nothing whatever to do with it." Apart from the questionable taste of these remarks, it needs to be pointed out that the deaths referred to were from "cow-pox and other effects of vaccination," and principally related to erysipelas following improper treatment of the children during the few days the vaccination was maturing, and that during the same ten years some 7,500,000 children underwent vaccination. So that even if it be assumed that all the deaths so grouped were really due, directly or indirectly, to vaccination, which is open to doubt, they only represent one victim out of every 15,000 children vaccinated. On this question Sir George Buchanan in his report to the Local Government Board in 1884 remarked that "I find from the last published annual report of the Registrar-General that 974 children under 1 year old were suffocated in a twelvemonth by bedclothes: the fact gives a reason for care in the use of bedclothes, but gives no reason for going without them. So 55 deaths (51 being of infants under 1) were recorded in that report as from vaccination and the results of vaccination."

Mr. Milnes said that in the returns of the Registrar-General since 1881 there have been shown 177 deaths of vaccinated children under 10 years of age, and 1,999 in which no statement as to vaccination was forthcoming; but he is silent as to the deaths in unvaccinated children. Now, as a matter of fact, in the decade 1881-90 there were 168 deaths in vaccinated children under 10 years of age, and as many as 1,711 in unvaccinated children of like ages. Accepting, for the moment, the ratio of 90 per cent. of the children thus dying as vaccinated—a supposition far from the truth, and in favour of the antivaccinator—we see that thus 23 per cent. of the deaths were on only 10 per cent. of the children. And with regard to the small-pox of 1870-73, in this country, whilst it is impossible to give any detailed data as to the proportion of mortality among one and another portion of the community in relation to vaccination as a whole, still it is possible to give figures for over 10,403 cases in which Dr. Gayton kept accurate record, these being nearly all belonging to that epidemic period, and being hospital records which we issued in 1885.

At Ages.	Not Vaccinated.	Vaccination.		
		Good.	Imperfect.	Nominal.*
0—5	56.5	0.0	11.5	39.8
5—10	35.2	0.9	5.0	29.3
10—15	23.3	1.1	3.4	19.6
15—20	42.1	1.9	6.3	19.0
20—30	49.8	3.9	13.1	32.1
30—40	40.7	9.5	14.8	35.7
40+	43.0	12.5	19.1	33.5

* Nominal =[said to have been vaccinated, but no marks visible.

We need not comment on this table for its lessons are self-evident. Vaccination, even imperfectly informed, is seen to be a great protection against fatal attack by small-pox, whilst in its best form it is seen to be all but absolutely protective against fatal attack in the first fifteen years of life.

NOTES UPON RUSSIAN MILITARY MEDICAL ORGANISATION.

PEACE.

IN the Russian army during peace there is no medical corps existing as a separate unit. Every fighting unit has a small medical *personnel* of its own, with a regimental hospital of sixteen beds.

Regimental Establishment.—In a regiment of infantry consisting of 4 battalions, there are 1 senior and 4 junior surgeons (*vrachi*), 1 senior and 12 junior dressers (*feldsheri*) 1 apothecary dresser (*abtechnie feldsher*), 14 dresser pupils, 1 hospital sergeant (*nadziratel bolnikh*), and 3 hospital orderlies. All these are classed as non-combatants. The average strength of an infantry battalion is about 1,000 of all ranks. The companies in a four-battalion regiment would be numbered from 1 to 16; the whole of the non-combatant officials in a regiment are grouped into what is called a non-combatant company; this has no number. The medical *personnel* allotted to other fighting units is in proportion to strength, as based upon the requirements of an ordinary infantry regiment. A cavalry regiment has usually a strength of from 770 to 1,100 men, according as to whether it is a four or six-squadron regiment. The artillery is organised into brigades of 6 batteries each, the average strength being 1,100 of all ranks in each brigade.

Garrison Hospitals.—Besides the regimental hospitals and medical *personnel*, there are in certain large towns, garrison hospitals of from 200 to 1,000 beds, and to these are attached from 5 to 20 medical officers with the necessary subordinates.

Rank.—All the various army officials, that is, all persons not actually fighting men or so-called combatants in the Russian army, are considered as civilians, and, in common with all other Government officials, have rank according to their standing in the *chin*. The Russian army officials are known technically as *voyennii klassnii chinovniki*, and belong to one or other of the following classes or groups:

1. *Svyashchenniki* or chaplains.
2. *Intendantski chinovniki* or intendance officers.
3. *Vrachi* or surgeons.
4. *Veterinarnie vrachi* or veterinary surgeons.
5. *Artilleriiskie chinovniki* or artillery officials.
6. *Inzhenernie chinovniki* or engineer officials.
7. *Farmatsenti* or apothecaries.
8. *Voyenno-uchebnie chinovniki* or officials of the various military educational establishments.

In these various groups there are no special names for grades, which are practically only denoted by the particular class rank in the *chin* which the individual official has. The *chin* is really an official or Court scale of rank. Thus, in the Medical Department, although the members have no other titles than that of *vrachi* or surgeons, still they have rank from the III to the IX Class in the *chin*. The surgeon-general of the army has III Class rank, while a senior surgeon has VIII Class rank, and a junior surgeon IX Class rank.[4] The highest officials among the apothecaries have only V Class rank.

Uniform.—All surgeons wear the same uniform, namely, dark green tunics and trousers, with cuffs and collars of the same colour, with scarlet piping. The forage cap is dark green, with a dark green band and scarlet piping. The shoulder straps are narrower than those of combatant officers, and ornamented with silver lace. The subordinate *personnel* of the medical department wear the same uniform as that of the regiment to which their hospital belongs.

WAR.

In time of war the various medical units required on mobilisation are made up from the regimental peace establishments, supplemented by men from the reserve, and by drivers supplied from the cavalry reserves. For war purposes, the various medical units mobilised are as follows:

1. *Regimental Hospitals.*—Each fighting unit has in the field the same medical *personnel* as in peace time, except that in place of 12 junior dressers and 14 dresser pupils there are 20 junior dressers and no dresser pupils. The hospital is equipped for 16 beds, while each dresser carries a knapsack for first aid, and 32 stretchers are provided. The transport consists of 4 one-horsed carts for stores and tents, 1 two-horsed waggon with stretchers, etc., and 4 four-horsed ambulance waggons. Each company furnishes 6 men trained as stretcher bearers; that is, for a four-battalion regiment of 4,000 men, 96 bearers are supplied from the ranks. When employed with stretchers these men wear the Red Cross badge on the left arm, but otherwise take their place in the ranks. During an action the regimental medical *personnel* form dressing stations to which the regimental wounded are brought in: the regimental hospital is not organised or actually pitched until the troops are halted.

2. *Sanitary Divisions.*—To each infantry division in the field s at tached what is called a "sanitary division," and this forms a part of the divisional supply and transport column. The sanitary division consists of one "divisional hospital," or, as we should call it, a bearer company; and two "mobile hospitals," or, as we should say, field hospitals. In the case of sanitary divisions attached to active, as distinguished from reserve, infantry divisions, two extra mobile or field hospitals, are included, making four in all for that division. The *divisional hospital* or bearer company is intended for the establishment of a main dressing station, and otherwise collect and despatch the wounded from the fighting line to the field hospitals. Its strength is 1 combatant officer (who commands), 5 surgeons, 1 official, 29 non-combatant medical subordinates, a bearer company of 217 non-commissioned officers and men, with 39 transport non-commissioned officers and men, or 285 non-commissioned officers and men in all, with 78 horses and 27 carriages. The equipment consists of 50 stretchers, 2,000 bandages made up into 10 packages, 50 lanterns, 50 first-aid knapsacks, 4 dressing tents, 2 operating tables, medical stores, food, etc. The transport consists of 8 four-horsed ambulances, 3 one-horse medical store carts, 15 two-horsed store waggons, and 1 four-horsed store waggon for the heavier parts of the tents. The uniform worn by the men of this bearer company is the same as that worn by the remainder of the divisional supply and transport column, which again is always the same as that of the first regiment of that division. The particular number of the division to which the company belongs is shown on the men's shoulder-straps. Except the drivers all wear the *brassade*, while all are unarmed except the drivers, who are provided with hatchets. The mobile or field hospitals constitute the third line of medical assistance, and each affords accommodation for 10 officers and 200 men. Their *rôle*, location, and movements are the same as in our own army. The *personnel* of these hospitals consists of 5 surgeons, 4 other officials, 107 non-commissioned officers and men (including 28 for transport duties), 4 sisters of mercy, 57 horses, and 25 waggons. The equipment includes bedding and clothing for 10 officers and 200 men, 210 bedsteads, 105 tables, 40 stretchers, 3 large tents, each to hold 20 men, and the necessary medical stores, food, etc. The transport comprises 19 two-horsed store waggons, 1 four-horsed waggon for heavy parts of tents, 4 one horsed store carts, and 1 four-horsed carriage for the sisters. The uniform of the *personnel* of these hospitals is the same as that of the fourth regiment of the division, with the number of the hospital on the shoulder-strap. The arms and use of the *brassade* is the same as described for the divisional hospital or bearer company.

3. *Reserve Field Hospitals.*—240 of these are maintained, and in war are established at points on the lines of communication. They have no transport, their *personnel* and stores being forwarded by rail or on requisitioned carriage. Each has 5 surgeons, 4 officials, 80 non-commissioned officers and men, with 4 sisters of mercy. Their composition is practically the same as that of a mobile or ordinary field hospital, less, of course, the transport *personnel*.

4. *Military Sanitary Convoys.*—Twenty of these are mobilised in time of war for the transport of the wounded and sick from the front to the rear. The strength of each is 1 combatant officer in command, 2 surgeons, 98 non-commissioned officers and men (including 71 for transport work), 2 sisters of mercy, 137 horses and 36 carriages, including 27 four-horsed ambulances, 1 four-horsed kitchen waggon, 7 two-horsed store waggons, and a one-horsed medical store cart.

5. *Field Dispensaries.*—These are intended to supply the divisional and field hospitals with all the medical and surgical stores they require. In time of war, 7 of these dispensaries are mobilised. Each is provided with a supply equal to the requirements of four months, and has a *personnel* of 3 officials and 21 non-commissioned officers and men. Transport is provided only when required.

THE PUBLIC HEALTH OF LONDON.

THE Annual Report of the Medical Officer of Health of the Administrative County of London for 1892,[1] which has been ordered by the London County Council to be printed, is a valuable and important document. Mr. Shirley Murphy has adopted two broad main divisions of subject matter, the first part of the report dealing with statistics, and the second with questions of administration and legislation. The statistical portion of the report is admirably and copiously illustrated with eleven charts and twelve diagrams, and embodies the result of what must have been a large amount of thought and labour. Mr. Shirley Murphy deals first with the census figures, discusses the falling off in the increase per cent. of population in the last as compared with previous decades, and notes the fact that immigration into London has been greatly diminished in the decade 1881-90. He then deals in some detail with density of population and overcrowding in the 41 sanitary districts into which London is divided, and the graphic representations given in the charts are here particularly effective and useful.

Marriages, births, and deaths next come under discussion, and in connection with the last named the corrected death-rates for London sanitary districts are given; the method employed by the Registrar-General, in his calculations relating to the thirty-three large towns of England and Wales, having been applied for the purpose of correcting for differences of age and sex distribution the death-rates of the forty-one London districts. The "factors for correction" obtained deviate most widely from the standard in the case of Greenwich (factor 1.02791) and St. Martin in the Fields (factor 1.21665), and the peculiar constitution of these populations is commented upon.

A table showing the relation between mortality and overcrowding is then given; infant mortality is discussed; and Mr. Shirley Murphy then proceeds to consider the behaviour of the several forms of zymotic disease during the year under review. Allusion is made under the several heads to the account given of outbreaks of zymotic disease in the annual reports of the medical officers of health of London sanitary

[1] E. Stanford: Cockspur Street, Charing Cross. Price, 2s. 3d.

districts, and in particular instances to certain special investigations instituted on behalf of the London County Council. Small-pox and vaccination are discussed in some detail, and under this heading the statement is made that "during the year 1892 there was a marked falling off in the number of infants vaccinated, and in some districts the number 'unaccounted for, including vaccinations postponed,' attained large proportions. In Hackney, Limehouse, and Poplar, this number is more than 20 per cent. of the births; in Hackney more than 40 per cent. Among those districts having from 15 to 20 per cent. are St. Pancras, St. Giles, St. Martin-in-the-Fields, Strand, St. Luke, St. Olave, and Battersea; and from 10 to 15 per cent. Chelsea, Islington, Shoreditch, St. George-in-the-East, St. Saviour Southwark, St. George-the-Martyr, and Wandsworth."

A complete history of the typhus cases of the year is given; cholera precautions are discussed, and the action taken by the various authorities with a view to dealing with a possible outbreak of cholera, so far as it can be gathered from the annual reports of the medical officers of health, is set out in detail.

The well-executed diagrams and charts and the carefully compiled tables give a special value to this portion of the report, which should prove of the greatest interest and service to all interested in London statistics.

In the Section which deals with administration and legislation a summary is given of the work done during the year in connection with the Housing of the Working Classes Act, noxious trades, dairies, cowsheds, and milkshops, and slaughterhouses, and *apropos* of the last named, the results of an inquiry as to the average number of animals killed per week during summer and winter in slaughterhouses licensed by the Council, are given. Certain other topics alluded to in the annual reports of medical officers of health of London sanitary districts are dealt with, and among these may be noted the summary given of work done in connection with workshops throughout London during the year. The portions of the report in which bakehouses, London water supply, and the London building law are discussed, are also of particular interest, and some tables are given showing the relation between width of streets, height of buildings, and the extent of the admission of solar rays, in streets variously placed in respect to the meridian. The report closes with an account of the principal amendments of the public health law in London introduced by the passing of the Public Health London Act, 1891.

This first annual summary of the Council's work in connection with public health, combined as it is with an important statistical record, is a new departure which will meet with a general welcome. There is much in the report that he who runs may read, much too that will bear careful study and will prove of lasting value; the document will therefore not only appeal to a large circle of readers interested in the sanitary work of the London County Council, but will also meet with the hearty approval of a body of workers who will be minded not only to read but to mark, learn, and inwardly digest the well-ordered array of carefully-considered statements and results which Mr. Shirley Murphy has compiled.

THE LOCAL GOVERNMENT BOARD FOR IRELAND.

THE twenty-second annual Report has now been issued. The average daily number of persons in the workhouses during the year 1893-94 was 40,961, of those maintained in public institutions and the district school at Trim 1,152, and of those on outdoor relief 57 979, making a total of 100,092, which represents 2.17 per cent. of the estimated population of the country, and is less than the total average daily number in the year 1892-93 by 627. There was a decrease of 551 in the number admitted to workhouses in sickness, and an increase of 8,928 in the number admitted who were not sick, thus showing a net increase of 8,377 in the total number admitted during the year as compared with the number in the previous year. There was an increase of 210 in the number suffering from fever or other infectious disease, and the total number of persons relieved in workhouses was greater than in the previous year by 8,570. The total number of deaths in the workhouses during the year ending March 3rd, 1894, was 9,776, which was an increase of 195. Deaths by fever numbered 296 as against 30; by lung disease 1,876, as against 1,707; by consumption 1,125, as against 1,139; by heart disease, 678, as against 565; and by cancer 255, as against 231. The number of cases of vaccination during the year in dispensary districts was 90,370, or an increase of 4,170, while the number in workhouses was 897. During the past year small-pox has on several occasions been introduced into Ireland from places in the United Kingdom, but on every occasion the disease was arrested. The number of cases of small-pox treated by dispensary medical officers was 34; all recovered. The fever cases under treatment show an increase of 213, and scarlatina of 306. During the year ended September last, medical relief was afforded by 410,292 dispensary tickets, and 167,113 visiting tickets, making a total of 577,405. As compared with the previous year, there was an increase in the number of cases treated at dispensaries amounting to 9,434, and a decrease in the number of those attended at their own homes numbering 20,387, making a net decrease of 10 953 in the total number of cases in which medical relief was afforded by the medical officers of dispensary districts.

THE CHOLERA.

IT is officially stated that a case of Asiatic cholera has occurred at Stettin.

The official weekly cholera bulletin issued on August 29th by the Imperial Board of Health at Berlin shows that in the week ended at noon on August 27th there were 32 deaths and 78 cases in the German Empire, as against 23 and 32 respectively in the preceding week.

According to official returns 240 cases of cholera and 107 deaths occurred in Galicia on August 30th.

In the Bukovina 15 cases and 12 deaths were reported.

A severe outbreak of cholera has occurred in the village of Tilleur in the province of Liege. Between Wednesday night, August 29th, and the morning of August 30th there were 25 cases, of which all but 1 proved fatal.

Twelve fresh cases of cholera were reported at Seraing on August 31st.

A case of cholera is reported from Ostend, and some consternation is felt in consequence. The victim was a sailor belonging to one of the fishing boats in that port.

Several fresh cases occur daily in the different provinces and towns of Holland.

An outbreak of cholera is reported to have taken place in Upper Hesse, in the neighbourhood of Margburg. Twelve cases and 3 deaths have occurred at Bürgeln, and the German military authorities have ordered the immediate withdrawal of the troops who are manœuvring in that district. A later telegram states that 4 Uhlans stationed at Bürgeln have fallen ill with cholera and the section of the regiment quartered there has had to go into quarantine.

A telegram has been despatched from the Medical Department of the Local Government Board to the Irish Local Government Board and to the Fowey Port Sanitary Authority, informing them that the schooner *Volunteer*, of Fowey, from Antwerp to Belfast, had landed a cholera patient at Rammekens, off Flushing.

The official cholera report issued at Vienna on Tuesday evening, September 4th, states that in the last twenty-four hours there had been 151 new cases and 111 deaths in Galicia, and 12 new cases and 9 deaths in Bukowina.

The silence observed by the authorities of Marseilles as to the sanitary state of Marseilles causes much anxiety in the South of France. The presence of cholera asserted by the Consular reports, is denied by the municipality who, however, have suspended the publication of the statistics as to the number of deaths and their causes usually issued. There was undoubtedly cholera in Marseilles a month ago, and the reticence of the authorities encourages the belief that matters have not improved, and that the disease is really Asiatic cholera.

LITERARY NOTES.

ONE of the most interesting features of the excursion to Tintern Abbey at the annual meeting of the British Medical Association at Bristol was the reading by Dr. Yeats of a letter from Thomas Carlyle, which he said had never before been published. It was addressed to the author of a book entitled *The Healing Art the Right Hand of the Church*, by "Therapeutes" (Sutherland and Knox, Edinburgh, 1859). The following is the text of the letter:—

Chelsea, February 25th, 1859.

Dear Sir,—I have received your book which you were kind enough to send me, and I beg to return you thanks for the same. It is a book (unlike many that come to me here) of a serious nature, the fruit of long study, meditation, inquiry, and evidently of perfect conviction on your part.

I believe, and have long believed, the essential idea it sets forth to be not only true, but of the very highest importance to mankind, namely, that the Physician must first of all be a Priest (that is to say, a man of pious nobleness, devoted to the service of the Highest, and prepared to endure and endeavour for that same, taking no counsel of flesh and blood, as the theory of Priests is)—first of all, a real Priest, and then that

the whole world should take supreme counsel of him, as it does of its real or imaginary priests or pontiffs this long while back, and follow said counsel as the actual will of God, which it would be were the physician what I say.

It is curious to remark that *Heilig* in our old Teutonic speech is both holy and also healthy; that the words holy and healthy, as our antique fathers understood them, are one and the same. A thousand times has that etymology risen sorrowfully upon me in looking at the present distracted position of affairs, which is horrible to think of, if we look earnestly into it, and which cannot well be spoken of at all. We, sure enough, have completely contrived to divorce holiness (as we call it) from health, and have been reaping the fruits very plentifully during these fifteen hundred years.

The notion of bringing our present distracted anomaly of a Physician into union with our ditto ditto of a Priest, and making them identical is, of course, extremely chimerical; nor can one easily say what ought to be the first step towards bringing each of them back from his anomalous, imaginary condition, and nearer to veracity and the possibility of coalescing. But I am very glad to see the idea started, in any form, under any vesture, and heartily wish you success in bringing it home to men's minds.—I remain, yours truly, T. CARLYLE.

To Therapeutes, Messrs. Sutherland and Knox,
Booksellers, Edinburgh.

The letter is interesting from more than one point of view—not least, perhaps, as exhibiting Carlyle's characteristic incapacity for, or indifference to, *constructive* criticism. He was (though no man would have more resented being told so by a candid friend) the typical *idéologue* so despised of Napoleon: he was always telling us that whatever is is wrong, but had no word of practical guidance that could help us to set it right. Dr. Yeats stated that "Therapeutes" is still living.

It is announced that a collection of "Doctors' Stories," from the pen of Mrs. J. K. Spender, will shortly be published through the National Press Agency. Mrs. Spender is the wife of Dr. J. Kent Spender, of Bath.

The *Revue Internationale de Bibliographie*, conducted by Professor Jules Rouvier, of Beyrouth, will henceforth appear in Paris under the title of *Revue Internationale de Médecine et de Chirurgie Pratiques*.

A Spanish translation of Dr. Gowers's *Diseases of the Nervous System*, by Drs. L. Gongora and J. Gongora, is in course of publication.

Dr. Oliver Wendell Holmes celebrated his 85th birthday on August 29th. He is in fairly good health, walks a mile every morning, and drives ten miles or more every afternoon. He gives the following account of himself:

The burden of years sits lightly upon me, as compared with the weight it seems to many less advanced in age than myself. But after threescore years and twenty, the encroachments of time make themselves felt with rapidly increasing progress. When one can no longer hear the lark, when one can no longer recognise faces one passes in the street, when one has to watch one's steps, when it becomes more and more difficult to recall names, one is reminded by every movement that one must spare oneself, or Nature will not spare one—penalties she exacts for overtaxing one's declining powers. The twelfth septennial period always seemed to me as one of the natural boundaries of life. One who has lived a complete 85th year has had his full share—even on an old man's allowance. Whatever is granted after that is prodigal indulgence on the part of Nature. I am often asked whether I am writing my autobiography. I am in the habit of dictating many of my recollections and some of my thoughts and opinions to my secretary, who has in this way accumulated a considerable mass of notes. Many of these will be interesting to my family and intimates—some of them, perhaps, to a wider public, if I should see fit to make use of them, or leave them to be made use of by others.

The *Monist* for July gives a portrait of the late Professor Romanes, reduced from the large picture which was added in 1892 to the National Portrait Gallery. It also contains some lines from a memorial poem addressed by Professor Romanes to Charles Darwin, and embodied in a volume printed for private circulation among his friends. They are entitled: "The Immortality That Is Now." We give the concluding lines:

The web of things on every side,
Is joined by lines we may not see;
And, great or narrow, small or wide,
What has been governs what shall be.
No change in childhood's early day,
No storm that raged, no thought that ran,
But leaves a track upon the day
Which slowly hardens into man;
And so amid the race of men,
No change is lost, seen or unseen;
And of the earth no denizen
Shall be as though he had not been.

At the quarterly General Court of the Middlesex Hospital on August 30th, it was announced that the building of a convalescent home for the hospital at Clacton-on-Sea had been commenced, and an expenditure of £18,475 for the purposes of the building was authorised.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1894. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 24th, 1894. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before such meeting—namely, October 3rd, 1894.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election. FRANCIS FOWKE, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting will be held at the Schoolroom, Lympne, near Hythe, on Thursday, September 13th, at 3 P.M., R. H. Clarke, M.B., in the chair. Agenda:—Professor Victor Horsley, F.R.S., will give an account of his excavations at the Ancient Roman Castle of Stuttfall (illustrated by the Limelight). A visit will be paid to the site of Stuttfall Castle. Mr. Hicks will contribute a paper on the Landing Place of Cæsar. All members of the South-Eastern Branch are entitled to attend these meetings and to introduce professional friends. Westenhanger Station (S.E.R.) is the nearest to Lympne.—THOS. F. RAVEN, Honorary District Secretary, Barfield House, Broadstairs.

SPECIAL CORRESPONDENCE.

PARIS.

Propagation of Typhus.—Dr. Lucas Championnière on Bicycling.—Food for the Tropics.—The Lyons Hospitals and Private Initiative.—Examinations and Brain Trouble.—Disinfecting for Tetanus.—A Public-spirited Municipal Councillor.—Deaths from Dysentery.—General News.

DR. DROINEAU declared at the Congress of the Association Française, recently held at Caen, that unfortunately typhus shows a tendency to become endemic in France. There are in certain parts of Brittany foci of this malady, and it is to be feared that in the Somme department another typhus centre is forming. Dr. Droineau urges, in order to arrest the course of this malady, that night refuges be abolished. There are 370 in the Somme department, which are hotbeds of infection. Dr. Dubief and Dr. Deschamps maintained that the germ of typhus must preserve its vitality for a considerable time and communicate the disease during the incubation period before any visible symptoms are manifested. Contagion is more intense before the eruption than afterwards. Typhus is equally contagious during its evolution. A vagrant is a source of danger to the community fifteen days before his attack of typhus, as manifest likewise when apparently cured.

Dr. Lucas Championnière is an enthusiastic "velocipedist." At the Congress of the Association Française he gave an address on the subject from the hygienic and physiological standpoint, and asserted that by gradually increasing the speed an extraordinary quick rate can be reached without inconvenience. Delicate, even anæmic, women properly trained to cycling arrive at the same results without increasing their neurotic symptoms.

Dr. Legrand, in his book entitled *L'Hygiène des Troupes Européennes aux Colonies et dans les Expeditions Coloniales*,

states that fresh meat is a necessary article of diet in tropical countries, also that preserved meat or other provisions ought not to be sent out. The investigations of Rattray and Jousset prove that they are dangerous, as is also the use of *eau de vie;* the daily ration is suppressed in all the French colonies except in that of St. Pierre-Miquelon.

According to the *Debats*, the Lyons hospitals are in possession of a capital of 100 000,000 francs (£4,000,000), resulting entirely from donations and legacies; the income from this property amounts to 3,400 000 francs (£136 000). A considerable portion of this income is derived from house property. The administration of this property, also of the hospitals, are services rendered gratuitously, always excepting the *honoraire* of the hospital *personnel* and the office clerks. A council of 25 members assume the whole responsibility of this vast organisation. Formerly the administrators, called *recteurs*, were obliged to deposit a considerable sum of money; at the present time this custom does not exist, but small expenses are defrayed by the administrators such as those incurred by the inspection of hospital *fêtes* given every year in each hospital; by this arrangement every centime of the hospital property is devoted to the poor. These services given gratuitously are onerous and fatiguing, involving considerable responsibility. The administrators are morally responsible for any deficit that may occur in the accounts. At 7 A.M. they are at work, remain all the morning attending to their multifarious duties, and frequently return in the afternoon. During epidemics they organise among themselves a constant service. What is remarkable is that crowds of the Lyonnaise are candidates to perform these duties. The post of hospital administrator is the laurel of an honourable career; the *Journal des Connaissances Medicales* sighs over the contrast between the Lyons hospital administration and that of the Paris public assistance, faulty and costly. What a lesson from the provinces for that honourable if not honoured body!

Recent events have shown that the dangerous habit of overworking collegians and students does not result from the scholastic programme adopted; the principal cause is the preparation for examinations. This year one of the candidates at the competitive examination (*concours*) at the faculty of letters for geography and history for *agreges*, was obliged to take to his bed after the first day's examination, exhausted by the prolonged overwork the examination demanded. This very student was considered certain to succeed. Another was seized with vertigo, and was obliged to give up. The official report states that all the candidates looked worn out.

M. le Roy des Barres considers that in the interest of public health all localities, dwellings, clothes, etc., contaminated by contact with men or animals attacked by tetanus should be disinfected. This malady should be put on the list of veterinary affection exacting disinfection.

A municipal councillor in the Seine and Oise Department has shown the good example of consulting the interest of public health rather than his own. He had let some ground to a tenant, who established on it a depôt of unsavoury material. Complaints were numerous, and came equally from distant communes. At a meeting of the Municipal Council he asked that the nuisance should be abolished, thus acting against his tenant's and his own interests, but in favour of public health.

Two deaths from dysentery have occurred at Mont Jout during July; twenty-two were attacked, but recovered; fifteen are still being treated. The infection was imported by a soldier coming from the colonies.

There are 165 female medical students in the Paris Medical Faculty.

In the accounts drawn up by the War Administration the hospital material is estimated at 58 millions of francs (£2,300,000).

Of the 417 patients treated at the Institut Pasteur during the month of April, May, and June, 54 had been bitten by animals experimentally proved to have been rabid, 210 by animals recognised by a veterinary surgeon to be rabid, 153 by animals supposed to be rabid.

Dr. Orloff Damidoff, of St. Petersburg, offers a prize of £1.000 to whoever finds a remedy for bovine pest. The competition is open to all nations. The essays are to be sent in before January 1st, 1899.

Fifteen persons have been poisoned by eating potatoes boiled in a copper saucepan which had been mended with old sardine boxes and others used for preserved provisions. Energetic remedies were administered, and all recovered after suffering severely.

The medical papers congratulate the French Minister of Finance on giving a *bureau de tabac* to a widow of a medical man who fell a victim to his professional duties during the Havre cholera epidemic. The congratulations are well merited; the instance is a rare one. Well bestowed recompenses to scientific medical men or their families are neither general nor generous on the part of the French Government. Intrigue generally presides, and the French scientists in this respect are purists.

The recent discussion at the Academy of Medicine on the subject of the best means of disinfecting walls, etc., of rooms has drawn from Dr. Dujardin-Beaumetz a decided opinion, based on a lengthened study of the question, that the most practical and satisfactory method is in general the use of the Geneste-Herscher sprayer. Of the alternative processes, washing is inapplicable in the majority of cases, and the use of sulphurous acid, even admitting its sometimes questioned efficiency, is usually impracticable through the difficulty of keeping the rooms air-tight during the operation, and objectionable through entailing the disuse of the room for one or even two days. The Geneste-Herscher process, on the other hand, can be used to apply just so much disinfectant solution as may be required, and the force of projection as well as the quantity thrown on any given surface can be indefinitely varied according to the nature of the surface to be treated. A man can easily learn in a very short time to apply a thorough and rapid disinfection without injury to the surface. The results so obtained in Paris are in his opinion most astonishing. The occurrence of house epidemics has practically ceased through the prompt and rigid use of this method, and epidemics are got under and arrested in a considerably shorter period than has previously been possible.

CORRESPONDENCE.

HOSPITAL APPOINTMENTS.

Sir,—It is with regret that I find that the late election of Surgeon to the Surrey Dispensary should be defended by Dr. Hooper in the face of the strong protest of over eight of his professional brethren. But as his letter contains many inaccuracies, I presume he is ignorant of the true facts of the case. If they had been as he describes, no offence could have been given to any of the candidates. By the advertisement we were led to believe that we were eligible to the post, and at considerable trouble and expense to ourselves we attended the meeting and were detained over two hours, when Dr. Ince was deputed by the committee (so he informed us) to tell us that Mr. Cheatle, who had not put in an appearance, had been elected, we not being eligible. He admitted emphatically that a mistake had been made in issuing the advertisement, and begged to convey to us the regret of the committee for their error. It is useless therefore for Dr. Hooper to say for one moment we ought to have known how matters stood. Again, as our testimonials were sent in beforehand, there was no occasion for the committee to have detained us so long when the election was to be a mere farce. Those who made inquiries beforehand were not told that it was necessary for them to hold the F.R.C.S., and to a few the secretary simply forwarded at the last moment a copy of the rules without comment.

If Dr. Cheatle's apology for his absence was so satisfactory, why was his name called three or four times during the interview with candidates, and why after all present had passed before the chairman was he again loudly summoned? This was followed by a long interval of suspense, when Dr. Ince appeared on the scene to endeavour to correct matters.

The quashed election referred to by Dr. Hooper should have taught the committee a better lesson than to allow a subsequent election to need comment. I, on behalf and by the request of the candidates, forwarded you the original letter, as

the election was conducted according to Dr. Ince under a mistake.—I am, etc.,

Loughborough, S.E., Aug. 29th. W. Steele.

Sir,—Dr. Hooper's letter fails to meet our case. Can there be any doubt that the advertisement should have been otherwise framed? Admitting that we all made a mistake in attending at the dispensary, it would have been a simple matter for the Secretary to inform us that we were ineligible. Instead of that, the Committee wasted time in interviewing each of the candidates present. There were at least two medical men on the Committee. Why did they not protest? I have seen a good deal of committee work, but I have never been present at such a farce. Obviously, when convenient, the Committee of the Surrey Dispensary ignores its own rules.—I am, etc.,

Lewis Lewis, M.D., L.R.C.P., M.R.C.S.

Brixton Road, S.W., Aug. 28th.

Sir,—I am glad to see attention again called to the abuse which committees too often make of their responsibilities. How often are applications asked for posts which, though vacant, are not to be decided on the merits of the candidates. Applications are asked for the post of senior house-surgeon when the committee know perfectly well that they will almost certainly appoint the junior man. If they require to advertise the vacancy, why not say that the junior man will get the preference? Why ask a number of selected candidates to attend when a local man is certain to get the post? Such conduct on the part of committees is, to put it mildly, unfair. I shall give two examples which appear to me to require explanation.

Huddersfield Infirmary advertises for a senior and a junior house-surgeon. Four selected candidates attend. As no binding conditions are mentioned in the advertisement, one candidate writes about a fortnight before the election asking if any such conditions exist. No answer is received. He is a selected candidate, and is called to see the committee. The chairman produces his note, and asks if he will bind himself to stay a year. No apology is made for not answering the note, although a postcard might have saved the candidate all the trouble of appearing. This is the only question asked a candidate who has held better hospital appointments previously, and has excellent testimonials. I understand the appointment was given to a local man. Glasgow Maternity is another case. Notices are sent to Edinburgh asking young graduates to apply for two vacancies each quarter. Although an M.D.Edin. (Honours), who has held important resident hospital appointments, and has had good experience in midwifery, having frequently used forceps and attended various complications, applies, Glasgow men get the posts. I understand that for the past two or three years Glasgow men have always got the posts. One can have no objection to the committee reserving the appointments for Glasgow men, only let it be known that the posts are reserved. These committees may be able to justify themselves, but to do so it is not sufficient to say that they chose the best man; they must prove it. It is a great shame that young graduates should be put to the expense of getting testimonials printed (which cost £2 4s.) and sometimes asked to attend as selected candidates when they have really no chance of the appointment.—I am, etc.,

August 27th. M.D.

DYSENTERY AND TROPICAL LIVER ABSCESS.

Sir,—In the British Medical Journal of August 25th Surgeon-Major Rennie, of Meerut, states that a nine years' experience of the above subject in the tropics leads him "to believe that hepatic abscess is in no way necessarily associated with or the result of previous dysentery." In support of this view are quoted seven cases of these abscesses he has lately dealt with, and "in no single instance was there any history of dysentery, though the most careful and searching inquiry was made in each case"—a result so far in accord with my own observation. It has been repeatedly pointed out, however, that cases with such negative history are frequently found on *post-mortem* examination to have ulceration of the large gut, a test that could not be applied to four of these cases, since two made a good recovery and two were progressing favourably when they were lost sight of owing to a change of station. He adds: "In all the (three) fatal cases multiple abscesses were found. Careful examination of the gut, however, failed to show any signs of recent or remote dysentery." From the whole tone of the communication it is implied that *post-mortem* examination was made, though there is no explicit statement to that effect. Does Dr. Rennie believe that multiple "hepatic abscess is in no way necessarily associated with or the result of previous dysentery?" If these three cases of multiple abscess were not secondary to some other condition than ulceration of the large gut, they must have been examples of primary multiple liver abscess—a somewhat rare form of liver disease, to say the least of it.—I am, etc.,

Murtle, Aberdeenshire, Aug. 27th. Neil Macleod, M.D.

INFANT MORTALITY IN FRANCE.

Sir,—In the fifth paragraph of your Paris correspondence, page 442, is a reference to the above subject. I mention the following circumstance as a possible cause because it came under my own notice, not that I suppose, if at all general, it could have escaped attention by French medical men.

On March 1st, 1852, at midnight, I attended a Frenchwoman, aged 31, in her sixth confinement, when she was delivered of a healthy female child. I do not recollect how long after the confinement, but within a month, I was called to see the baby, as it was ill. The mother was then sitting up, and the child lying in her lap trussed up like an Egyptian mummy. Its lips were blue; it seemed suffering from asphyxia. As the child was being undressed I was surprised to find how tightly it was bound up in all its garments. The mother was much distressed at her baby's illness, and said she had lost five about the same age before she came to England. She further informed me that her baby was dressed in the way usual amongst Frenchwomen. I explained through her nurse that the baby's sickness was produced by tight bandaging, and recommended her for the future to dress her child more loosely, as English people did. The child recovered.—I am, etc.,

Charles Moore Jessop,

Redhill, Aug. 25th. Deputy-Surgeon-General.

INFANTILE VACCINATION.

Sir,—In an editorial on Inefficient Results of Infantile Vaccination published in the British Medical Journal of August 18th, you have dealt with a subject of great interest to general practitioners, and I should be glad to learn whether the opinion therein expressed is that of the majority of medical men. The case is one of vaccination, where only one of four punctures has given any result, and your opinion is that "the legal requirements of the case have been satisfied."

Now in the absence of direct rules, I believe the certificate requires that the vaccination should have been successful in the opinion of the medical man signing it, and it is owing to variations in individual opinions that we find parents saying that "Dr. A. only vaccinates in one place," or "Dr. B. says two are quite sufficient," and so on.

Many, however, of whom I am one, believe that the evidence is in favour of the greater protective power of vaccination, which results in three or more scars, and it is a matter of common knowledge that inoculation of lymph on the eighth day will usually result in the formation of new vesicles; we insist, therefore, that this should have been tried and failed before a certificate of successful vaccination is given for one vesicle. It is true that at present we are unable to produce analogies from other bacteriological work which suggest a greater protection from the inoculation of greater numbers of bacteria, though it may be that the influence of vaccination is due to a toxin formed by the growth of micro-organisms at the seat of inoculation, and not, as is often inferred, in the general circulation, but with the theory we are not so directly concerned as with the facts.

The opinion expressed in this article will, if correct, put us legally in the wrong in insisting on further vaccination, and also, I believe, justify parents in refusing to allow vaccination in more than one place. If I am wrong in my views and

deductions, I shall be glad if you or your correspondents will correct them.—I am, etc.,

Kingston-on-Thames, Aug. 27th. ROGER N. GOODMAN.

DIPHTHERIA AT THE ROYAL NAVAL SCHOOL, ELTHAM.

SIR,—My attention has been drawn to the letter of the Headmaster of the Royal Naval School in the BRITISH MEDICAL JOURNAL of August 11th, giving particulars of the outbreak there.

Since the beginning of the year till the boys dispersed in July scarlatina, chicken-pox, and diphtheria, with the death of one boy from the last-named disease, have, at intervals, broken out in the school. As the sanitary condition of any public institution must be of great importance, I trust that in the interests of the parents, relations, or guardians of the boys it will not be long before your columns are furnished with the report that Dr. Louis Parkes has, after investigation on July 31st and August 1st, duly submitted.

The public mind will be much relieved in the knowledge that any sanitary recommendations (if considered necessary) made by so eminent an authority have been thoroughly carried out before the reassembling of the school.—I am, etc.,

August 25th. A PARENT.

THE PLAGUE AT HONG KONG.

SIR,—I have read with much interest Dr. J. Cantlie's account of the bubonic plague now present in China, and from his description of the symptoms I believe the disease to be identical with one occasionally seen in the Himalayan hill tracts of India, where it is known as "maha-mari." It fell to my lot as sanitary officer in the N.W. Provinces of India to investigate and report upon outbreaks in 1886 and again in 1888. The report on the last outbreak appeared in the Annual Report of the Sanitary Commissioner with the Government of India. My experience corresponded with that of Dr. Cantlie as regards treatment, but I was inclined to regard the extension of the disease to contagion as well as infection. This is certainly the view taken by the inhabitants of these hills, as it was very difficult to persuade people to handle or bury the bodies of the victims. However, in an epidemic it is practically often impossible to positively ascertain as to how far contagion, or infection, or both, have operated in extending disease. There is no doubt that it is essentially a filth disease, and overcrowding, as far as my experience went, was a factor of great importance.

A fact mentioned by Dr. Cantlie is the great mortality among rats during the epidemic. This is also most marked in the case of outbreaks of "maha-mari," or hill plague, but I should add that it is generally observed before the appearance of the disease among human beings. So well is this recognised by the people, that they will sometimes vacate their villages for fear of an outbreak of "maha-mari," when once this rat mortality has become distinctly noticeable. Moreover, when rats are thus dying, snakes also are said to be found dead about the site in unusual numbers. The discovery of the existence of the same bacillus in these rats and human victims in China is one of great interest, and what I have long suspected would be found to be the case.

While thus able to confirm Dr. Cantlie's observations as regards the mortality among rats, it is not within my experience that poultry, cattle, goats, etc., suffered from this disease. In these hill tracts the huts are usually double storeyed, the upper one being occupied by human beings, and the lower by cattle, goats, etc. It is the custom of the villagers to often store the grain in pits under the floors of these huts, and the soil is frequently very foul from the excrement of animals, etc. The theory among the people is that the rats eat this grain (which is often musty), and the snakes eat the rats. It would be a point of great interest to examine these deposits of grain during an epidemic of "maha-mari." Most of these hill people are very poor, and would consume such grain (which is their principal food), even when musty and clearly affected with fungoid disease.

As regards the action taken to arrest the disease on the occasions referred to, the matter was much simplified by the inhabitants of the infected localities voluntarily deserting their villages (all fortunately small and isolated), and living for awhile in temporary huts some distance away. During their absence the site was, as far as possible, cleaned up, and thatch and other cheap and inflammable materials were burnt. Fortunately neither epidemic ever attained alarming proportions.—I am, etc., SAMUEL J. THOMSON,

Deputy Sanitary Commissioner, North-West Provinces, India.

Perry Chartham, near Canterbury, Aug. 27th.

THE PRACTICE OF QUACKS: PROPOSED COLLECTIVE INVESTIGATION.

SIR,—With reference to your scheme for accumulating facts and evidence about quackery, I think that if you would invite medical men to send you papers, irrespective of the Branches, you would be doing well. A man may come across advertisements, etc., and may feel indignant at the time that such things should be allowed, but he would hardly take the trouble to bring the questions before a meeting of the Branch. I have, as you are probable aware, taken some interest in this question, and therefore do not speak without knowledge.

At the same I would suggest that a certain part of the BRITISH MEDICAL JOURNAL should be entirely devoted to the exposure of the advertising quacks.—I am, etc.,

Cardiff, Aug. 22nd. T. GARRETT HORDER.

*** We shall be very glad to receive communications direct, if that course is found to be more convenient.

PSEUDO-CONSULTANTS.

SIR,—In view of the attitude assumed by many so-called consultants, who not only see cases without any consultation with the usual medical attendant, but who are also in the habit of attending cases like an ordinary general practitioner, I propose that a society of consultants be formed, the members of which shall pledge themselves amongst other things:

1. Never to see a case except in consultation with the ordinary medical attendant.

2. To have no interest, direct or indirect, in any nursing home or private hospital.

I am persuaded that if consultants in a body were to adhere to these simple rules, we should have very much less friction than there is now between the general practitioner and the so-called consultants. Moreover, their observance must tend to enhance the dignity and welfare of the profession. I personally should be very glad to belong to and to subscribe to such a society, but it would be a useless society unless backed up by the majority of consultants.—I am, etc.,

August 13th. F.R.C.S.

"AMERICAN AND PARISIAN MASSAGE COMPANY."

SIR,—Concerning my connection with the above company, you would greatly oblige by inserting the following in your valuable paper at your earliest convenience:

1. My name was placed on the list of directors entirely without my sanction.

2. All advertising, etc., has been done entirely by the promoter and on his sole initiative.

3. I wrote more than three weeks ago requesting the immediate removal of my name from the list of directors.

4. I am in London with the object of seeing the last statement carried into effect, and take this opportunity of disclaiming any further connection with the affair.—I am, etc.,

London, Sept. 3rd. D. A. BIRRELL, L.R.C.P. and S., Ed.

OSTEOCLASIS.

SIR,—In the BRITISH MEDICAL JOURNAL for August 25th, Dr. Murray has given an account of osteoclasis. Without going deeply into the subject, I shall mention a method of osteoclasis which I have practised, as opportunity offered, during the last three or four years.

In many cases I have found it impossible to fracture the bone in children, even under 3 or 4 years, at the first attempt. But I have found that if one can put sufficient strain on the bone so as to nearly straighten it, this produces some molecular change in the bone tissue at the point of greatest strain, that in a week or two afterwards, bone which resisted the utmost force snapped readily with much less force. Probably the strain induces some form of atrophy or osteoporosis which favours fracture.—I am, etc.,

PETER TYTLER, M.D., C.M.Aberd.,

Honorary Surgeon, Aucoats Hospital, Manchester

THE CHELSEA HOSPITAL FOR WOMEN.

Sir,—It is with surprise and regret that I see a paragraph in the lay papers of this morning announcing my appointment as Senior Physician to the Chelsea Hospital for Women. I wish to state that it appears entirely without my knowledge or consent. Obviously all or none of the appointments should have been inserted.

By finding space for this disclaimer in this week's British Medical Journal you will greatly oblige.—I am, etc.,

Harley Street, Sept. 4th. William Duncan.

THE DENTAL SCHOOL AT BRISTOL.

Sir,—Will you kindly insert this letter to supply an omission in your Educational Number of last week? Dental students can enter for the full curriculum at Bristol. The lectures are provided at the medical school in connection with our University. Practical instruction is given at the Royal Infirmary by me, and at the General Hospital by Mr. Genge, both institutions being recognised by the Dental Board of the Royal College of Surgeons. Full information may be obtained of the Dean of the Medical Faculty, Dr. A. B. Prowse, University College, Bristol. Thanking you in anticipation for your courtesy,—I am, etc.,

W. R. Ackland,

September 4th. Dental Surgeon, Royal Infirmary, Bristol.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

The undermentioned Surgeons, having completed twelve years' full pay service, have been promoted to be Staff-Surgeons, August 25th: William H. Norman, James McC. Martin, John L. Bagnall-Oakley, Francis Woore, William M. Craig, M.B., Henry S. Jackson.

The following appointments have been made at the Admiralty: William G. K. Barnes, M.D., Staff-Surgeon, to the *Edinburgh*, August 29th; Alfred H. Miller, Staff Surgeon, to the *Orlando*, additional, August 29th; Francis Woore, Staff-Surgeon, to the *Canada*, August 28th.

ARMY MEDICAL RESERVE.

Surgeon-Lieutenant G. R. J. Fletcher, 22nd Middlesex Volunteer Rifle Corps, to be Surgeon-Lieutenant, August 29th.

INDIAN MEDICAL SERVICE.

Surgeon-Lieutenant-Colonel H. Johnstone, M.D., Bengal Establishment, is promoted to be Brigade-Surgeon-Lieutenant-Colonel from May 19th. He was appointed Assistant-Surgeon, September 30th, 1867, and became Surgeon-Lieutenant-Colonel, September 30th, 1887.

THE VOLUNTEERS.

The undermentioned officers of the 1st Lincolnshire Artillery (Western Division Royal Artillery) have resigned their commissions: Surgeon-Lieutenant-Colonel T. Newby, M.B. (with permission to retain his rank and uniform), and Surgeon-Lieutenants E. Sharpley and G. S. Stephenson, M.B.

Surgeon-Lieutenants W. H. Miller, M.D., and J. H. A. Laing, M.B., The Queen's Rifle Volunteer Brigade, the Royal Scots (Lothian Regiment), are promoted to be Surgeon-Captains, August 29th.

Mr. Thomas James Selby, M.B., is appointed Surgeon-Lieutenant to the 2nd (Earl of Chester's) Volunteer Battalion, the Cheshire Regiment, July 25th.

Surgeon-Lieutenant L. P. J. Finegan, 2nd (South) Middlesex, has resigned his commission.

Surgeon-Major P. A. Young, M.D., 1st Midlothian Artillery, is promoted to be Surgeon-Lieutenant-Colonel, September 5th.

Mr. William Arthur Payne, M.B., is appointed Surgeon-Lieutenant to the 1st Devonshire Artillery (Western Division Royal Artillery), September 5th.

Surgeon-Lieutenant G. H. Hopkins, 1st Glamorganshire Artillery, is appointed Captain in the same corps, September 5th.

Surgeon-Lieutenant J. Griffiths, M.D., 4th (Cambridge University) Volunteer Battalion the Suffolk Regiment, is promoted to be Surgeon-Captain, September 5th.

Surgeon-Captain W. Hammond, 2nd Volunteer Battalion the Duke of Cornwall's Light Infantry, is promoted to be Surgeon-Major, September 5th.

VOLUNTEER MEDICAL STAFF CORPS.

Surgeon-Lieutenant I. J. E. Renshaw, of the London Companies, is promoted to be Surgeon-Captain, August 29th.

ARMY MEDICAL STAFF.

Surgeon-Major H. J. McLaughlin, M.B., is placed on temporary half pay on account of ill-health, September 2nd. He was appointed Surgeon, February 3rd, 1878, and Surgeon-Major twelve years thereafter. He was in the Boer war in 1881, when he took part in the defence of Standerton, and with the Nile Expedition in 1885, for which he has the medal with clasp and the Khedive's bronze star.

Sergeant-Major Timothy Francis Brake, of the Medical Staff Corps, is appointed Quartermaster with the honorary rank of Lieutenant, *vice* Honorary Captain J. Thomson, retired, September 5th.

Brigade-Surgeon Hamilton Mitchell died on the 26th ult. after a short illness at his residence, Lanowlee, Derry. Brigade-Surgeon Mitchell entered the service as Assistant-Surgeon, July 21st, 1854, and retired with the honorary rank of Brigade-Surgeon, March 8th, 1880. He served in the Crimea from November 8th, 1854 till February 15th, 1855, and received the medal with clasp for Sebastopol and the Turkish medal.

AMBULANCE ORGANISATION.

We are indebted to Brigade-Surgeon-Lieutenant-Colonel Evatt, Medical Staff, Netley, for the following notes, which cannot fail to be of interest, specially to Volunteer Medical Officers:

Mobilised Bearer Companies.—Photographs of Surgeon-Major Risk's complete mobilised bearer company can be had of Mr. Leach, photographer, Princes Terrace, North Town, Aldershot, price 2s. each.

Models.—I have lately been using models in demonstration of bearer company work, namely, toy railway carriages, ambulance and equipment waggons, with coloured pawns or counters representing *personnel*; thus:

M. S. C., privates	Blue
,, corporals	White
,, sergeants	Green
Officers	Yellow

These, with turned wooden models of bell tents, 1½ inch high, enable a camp to be laid out to scale in the field. The above also applies to model field hospitals. For stationary and base hospitals similar models may be displayed on a table covered with green baize, with the roadways marked in brown braid, with blue braid for the seashore and a model hospital ship. The whole appeals to the eye, and fixes itself in the memory. For army corps medical organisation the following can be supplied by Captain Sharp, 42, Willow Road, Hampstead, N.W.: interchangeable war game map (£1 1s.); two boxes of model troops blue (10s. 6d. each); red blocks for medical units; with these it is possible to arrange an army corps on the map complete as in the field. Such maps and models are in constant use for purposes of instruction in Continental armies.

Army Corps Diagrams, showing the latest organisation of an army corps and its medical units, can be obtained of Mr. Lead, printer, silver street, Leicester, at 1s. the dozen diagrams.

The German Sanitäts Detachment can now be purchased in children's toy shops; we want the same for our organisation, which could be easily constructed and cheaply made. A series of photographs is also wanted, showing ambulance drill in every stage of work.

EXTENSION OF AGE FOR ARMY MEDICAL ADMINISTRATIVE OFFICERS.

The remarks that we have from time to time made on the proposal to extend the age retirement of administrative officers receives, judging from correspondence before us, the sanction of a large body of medical officers, and we cannot for a moment believe that the proposal will be carried out without certain restrictive and conditional clauses which will ensure the extension being granted only to those officers who, on the grounds of merit and physical fitness, are most qualified for it. We have repeatedly in these columns adverted to the physical deterioration which results from the prolonged and disproportionate foreign service that has been imposed on the medical department. It is, therefore, quite conceivable that the higher ranks of the medical staff should contain men who cannot possibly be pronounced thoroughly fit for the responsible and active duties which war and foreign service necessarily entail. These remarks are justifiable when we state that, on the outbreak of the Egyptian war of 1882, the then Director-General of the Medical Department found considerable difficulty in selecting an administrative officer who fulfilled all the requirements of a principal medical officer for an army corps, and before a fit officer could be found the Director-General was compelled, instead of selecting one of general's rank, to seek amongst the deputy-surgeon-generals with colonel's rank, one of whom—certainly not the senior—was ultimately chosen, on whom it became necessary to confer the local rank of surgeon-general while principal medical officer of the force.

There can be little doubt that had strict selection, enforced by regulation and bearing the impress of the recommendations made by Sidney Herbert's and Lord Camperdown's Commissions, been adhered to, the block in the upper ranks would scarcely now have been witnessed. Putting, however, for the moment aside the serious effects that have arisen from neglect of selection by merit for promotion in the higher grades, and also the restrictions to voluntary retirement, etc., we think it our duty to propose certain terms on which the age extension, if it is inevitable, (but we do not, *en passant*, acknowledge that it is so) would promote the efficiency of the medical staff, and lighten the sense of hardship and injustice done to a large body of officers who must suffer if extension in age be unconditional.

Bearing, then, in view our remarks on physical fitness, which should be a *sine qua non*, we would propose a very careful, impartial, and close medical examination by a board (of which the Director-General himself should be President) of every administrative officer to whom it is intended to grant an extension, and if the candidate be pronounced unfit let him be permitted to retire forthwith, and if in surgeon-colonel's grade the step of promotion and pension might be given. It has been suggested that a personal certificate of good health and physical fitness should be furnished by each administrative officer; but this, we apprehend, would scarcely be necessary if only medical examining boards perform their duties thoroughly and impartially, with a full knowledge of the previous medical history of each candidate as officially recorded and as obtainable from the candidate himself.

Then it should be ruled that a surgeon-colonel be debarred who cannot with two added years put in altogether three years in the rank. With the foregoing suggestions it would be well to take into consideration the abolition of three years' service in a rank before pension can be claimed, and the optional retirement at 60 years of age with full pension. We have not thought it necessary to enlarge on the limitation in the tenure of administrative appointments, because if the terms we set forth are

carried out the flow of promotion will proceed apace, and give life to a department crushed by an unerring seniority promotion, and bars to voluntary retirement on promotion to the three highest grades in the Army Medical Service. The expansion of the non-effective list is a trifle placed beside the importance to the service of having an efficient as well as a contented body of army surgeons.

THE CASE OF SURGEON-MAJOR H. G. GARDNER.

A SUGGESTION is now made for the cancelment of this officer's resignation in 1890, which appears to offer an easy solution of the difficulty. Mr. Campbell-Bannerman informed Mr. Strachey, M.P. for Yeovil, in August, 1893, that Mr. Stanhope's consent would be necessary, and, if obtained, the cancelment could be accomplished, whereupon Mr. Stanhope wrote on August 24th, 1893, that no consent by him was necessary, and practically his assent has been given to the cancelment of Surgeon-Major Gardner's resignation. Mr. Campbell-Bannerman has repeatedly expressed his regret at being unable to do anything, but the interest of nearly fifty members of Parliament has been invoked, and all these gentlemen support the views that injustice has been done. Consequently the act of the War Secretary, if contemplated, is as easy as the stroke of his pen. Sir Redvers Bulwer and Sir Evelyn Wood have had the case under their notice, and have commented on the strong claims this officer has to be reinstated; in fact, Sir Redvers Bulwer, writing on April 28th, 1894, pointedly states that at the time (1890) the circumstances of this officer's case had weight if the circumstances had been properly urged.

THE INDIAN APOTHECARIES.

NOYL writes: Your correspondent, "The Last Straw," begrudges the honorary rank of Surgeon-Lieutenant and Surgeon-Captain, recently conferred on Senior Assistant Surgeons of the Indian establishment, and says: "however estimable, these gentlemen are absolutely devoid of any medical qualification or licence to practise." He thus casts a great slur on those hard worked servants of the State, but speaks in complete ignorance of the professional status of these Assistant-Surgeons, which are practically those of a House-Surgeon of a military station and civil hospital. I herewith enclose a copy of the curriculum of studies (Grant Medical College, Bombay) of an Assistant-Surgeon before he could be qualified for the Warrant Medical Service in India.

*** We would never endorse comments disparaging the functions and position of the subordinate medical service in India, least of all its meritorious seniors. In our mind it constitutes one of the most useful and indispensable of the Indian establishments. Nor can we desire to underestimate the efficiency of the medical training afforded by the Indian colleges. We hardly think these were the questions involved in our previous correspondent's remarks; it was, by what legal right can the Indian Government confer by Warrant the civil title of Surgeon on those who do not hold the diploma of members of a corporation empowered to grant such a distinction?

CORRECTIONS.

SURGEON-CAPTAIN SLEMAN, A.M.R., writes: For Volunteer Medical Staff on p. 390 of the BRITISH MEDICAL JOURNAL of August 4th add "Corps." All Volunteer surgeons are Volunteer Medical Staff; only a few belong to the special corps. On p. 391, on transport for medical staff, it is not a new thing for the medical department to get its transport from civilians; the plan worked well in the divisional camp at Woodbury last year, when all the transport for the bearer companies of the South Wales V.I. Brigade was obtained from the farmers in the district. In case of invasion the Volunteers would have to rely solely upon this service.

PAY OF SURGEON-CAPTAINS IN INDIA.

THE complaint of "An Unwilling Victim" is of old standing, and has been well ventilated in the professional and military press for some time past. We fear that under existing financial conditions there is no remedy. Was our correspondent not aware, before he entered the service, that surgeon-captains served in India under serious disadvantages of pay; if so, did he not subscribe to the conditions by becoming a candidate for the Army Medical Staff?

USE OF TITLES.

PALMAM QUI MERUIT FERAT asks: Can a retired Brigade-Surgeon of the Bengal Civil Medical Service, who retired on December 8th, 1884, assume, without due authority, the title of Brigade-Surgeon-Lieutenant-Colonel? The latter grade and title did not exist before 1891. What is the value of the new rank if it can be assumed in an unauthorised way?

*** The assumption of the new titles by officers who retired before they came into use is a matter of taste, but of course it is not one of right. We cannot see the harm; the old Brigade-Surgeons certainly possessed the rank of Lieutenant-Colonel, and why should it not be expressed? It is not a complete change like that between Deputy Surgeon-General and Surgeon-Colonel. We have always advocated the optional use of the new titles by old retired officers.

EXTENSION OF AGE CLAUSES.

SENEX wants to know the authority on which we based our recent remarks on the age clauses. The retention of Surgeon-Major-Generals until 62 will be disastrous enough, but if no Brigade-Surgeon-Lieutenant-Colonel is to be promoted after 52 years of age, it means ruin to the hopes of almost every officer in that grade. There will be no promotion to the rank of Surgeon-Major-General now before November 1896, nor any vacancy at all in the administrative grades before July, 1895; when the latter vacancy occurs, only twenty-three Brigade-Surgeon-Lieutenant-Colonels out of the whole fifty will be within the prescribed age limit; and when the two vacancies in 1896 are filled, only eight of those officers will be eligible. It is impossible to conceive that such wholesale supersession is intended, and I am therefore sceptical concerning the proposed changes. The extension of service to 57 years of age would be an insult, as none of these officers would consent to serve five years longer in the executive grade, merely to be superseded by their more fortunate brethren who had not reached the fatal limit. There is a flaw somewhere in this precious scheme.

*** Our authority is common report. If our correspondent's data be correct, there is more than a flaw in the scheme; it would be utterly unjust and wholly unworkable. The discussion on this matter will, we trust, cause the authorities to pause, before they commit themselves to ridiculous blundering as a way out of temporary administrative embarrassments. Our contemporary, the *Pioneer of India*, characterises the scheme as mooted "the greatest of all the many blunders in the administration of the unfortunate Army Medical Department." Good men will be driven from the service, and those whom it is the interest of the State to keep will swell the non-effective list.

Another correspondent remarks the scheme is "a fatally injurious step to the Army Medical Staff; every effort should be made to avert it."

GALLANTRY AT HONG KONG.

MEMORABILIA asks, referring to the discussion in the House of Commons on the admirable conduct of the military in assisting to deal with the plague, whether there are no army and naval medical officers at that station who also have taken part in combating the pestilence. He has never seen them mentioned.

*** Our civil and service brethren at Hong Kong have doubtless had their share in dealing with the scourge, but these functions may therefore be looked upon as merely ordinary and professional. The universal praise of the gallantry and devotion displayed by the military is indeed an indirect and reflected homage to our profession. It is an admission that medical men are constantly called upon to brave risks which it were heroism in others to face.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL CERTIFICATES FOR SCHOOL CHILDREN.

WE have received copies of a correspondence between a medical practitioner and the clerk of a school board, in regard to certificates of inability to attend school on account of illness. The school board took exception to a certificate because "no ground was stated for inability to attend school," the words "as she is suffering from....." being crossed out and no name of disease inserted.

In a further letter the clerk writes that it is the board's "duty to form an opinion for themselves, and they look to the medical gentlemen to assist them in this matter by intelligent (*sic !*) certificates. Two questions are raised by this correspondence; first, as to the right of the school board to compel parents to produce medical certificates every time their children are absent from school; next as to the necessity of inserting the name of the disease in such certificates.

As to the first, clearly the board has no right to demand a medical certificate even from the parent, and has no relation with the doctor at all. A child may be detained from school on account of illness even when no medical advice is sought, and if illness incapacitating it from attending can be proved, that is a perfectly good defence against any action of the board's officers. Undoubtedly the proof of illness is much more easily made if a doctor has attended, but the certificate is not evidence, and if the case goes into court the doctor must go there also. The demand for a medical certificate is a mere matter of black mail on the part of the board, enforced by the threat of prosecution, solely for the sake of saving their officers the trouble of inquiring the reason for the child's absence. It is an attempt to make medical men the unpaid servants of the board, and certainly should be resisted.

As for the second point, it is clearly unnecessary to insert the name of the disease, and it is also undesirable as confusing the issue. What the doctor certifies is that the child is for medical reasons unfit for school, and he should never give such a certificate, unless he feels sure of the fact; but to fill up the various blank spaces in any form of certificate the board may chose to issue is to make himself the servant of the board, to do the work of their officers, and to enter into particulars which in no way tend to elucidate the medical question "Is the child fit for school?" To take an example, evidence that a child was unfit for school would be accepted by any court, even though the cause might only be dyspepsia. The name of the disease, however, would be no guide to the school board officials in estimating the gravity of the illness; for if the mere fact of having dyspepsia were accepted as an excuse, half the children in London might stay away from school. The name of the disease is of no importance, the fact to which the doctor certifies is that the child is "unfit;" on that he stakes his credit, and to add the disease only tends to confuse the board, and can in no way help them "to judge, of the *bona fides* of the excuses for non-attendance." We would point out, however, that the form enclosed, which runs as follows, "I certify that, ——— is unable to attend school. So-and-so, physician and surgeon," the signature and everything except the date and the patient's name being printed, is not only not evidence, but is not even a certificate.

ILLEGAL CERTIFICATE OF DEATH.

AT Clerkenwell, John Manley, of Skinner Street, Clerkenwell, was summoned by Arthur William Hill, Superintendent Registrar of the Holborn District, for that he, "on or about the 4th of August, knowing a certificate of the death of Jane Peters under and for the purposes of the Registration of Births and Deaths Act, 1874, to be false, did unlawfully and wilfully use and give the same as true." From the statement of a solicitor who appeared for the prosecution, it appeared that the defendant was an unqualified assistant of a medical man, who, on going for his holiday and expecting the death of a certain child, left with the defendant a signed blank certificate of death. In the meantime the defendant attended a woman—Jane Peters—in an illness of which she suddenly died. He then called in his principal *locum tenens*, who would not, however, certify the death, he not having attended the case. The defendant then filled in and adapted the blank certificate left with him by his employer. The *locum tenens* felt it incumbent upon him to report the matter to the coroner, when an inquest was held, leading to the present proceedings. A solicitor for the defence pleaded that the defendant had been guilty of an act of stupidity. The *locum tenens* stated that Manley had done all that was right in his treatment of the woman. Mr. Bros said he could not accept the plea of carelessness, and commented upon the seriousness of the offence. He imposed a fine of £10 with 2s. cost of of the summons.

SCARBOROUGH FRIENDLY SOCIETIES AND THEIR MEDICAL OFFICER.

MR. JUSTICE ROMER, sitting as the vacation judge in London on August 22nd, heard an application by Mr. Martin, Q.C., on behalf of the General Committee of the Scarborough Friendly Societies Medical Association, to restrain Mr. George Barkley, a surgeon, from practising within that borough contrary to an agreement he had entered into with the Association to devote the whole of his time to the members of the Association, and not to undertake private practice in the borough for two years under a penalty of £200. For this he was to receive £200 a year for the first year, and £220 for the second year, with specified fees for midwifery, vaccination, etc., and house rent free, the agreement being determinable by three months' notice. Such notice had been given by the Association, but defendant, it was alleged, carried on a private practice, and had a brass plate on the door. Defendant, who appeared in person, asserted that he had done no more than he was entitled to do. His lordship, after a patient hearing of the facts, at first said he must grant the injunction as asked for, but eventually adjourned the case for a week, and said if defendant could not in the meantime agree with his opponents, the injunction would probably go.

THE "CHILD'S BLESSING."

AT Shoreditch Tabernacle on August 29th Dr. Wynn Westcott, coroner, held an inquest respecting the death of Agnes James, aged 1 year and 8 months, the daughter of a postman. The mother deposed that the deceased had diarrhœa, and witness sent a girl, 6 years old, to "Dr." Williams's shop for a 1½d. teething powder. The powder was given to the baby, and in about two hours the child was seized with a fit. The witness ran with the child to a doctor, who tried to bring the child round and prescribed for her, but death ensued on the following morning. A juror informed the coroner that "Dr." Williams had been dead some years. Minnie Maud Mary Hardy, the wife of a herbalist, of 91, Hoxton street, who supplied the powder, was informed by the coroner that as there was a possibility of an criminal charge being preferred against her, it was her duty to caution her as to the effect of any statement she might make. As the witness hesitated about giving evidence, the evidence of Dr. R. A. Irvine, Hoxton, was taken first. He deposed that he had made a *post-mortem* examination, and was of opinion that death was due to convulsions produced by the calomel contained in the powder. The coroner then asked Mrs. Hardy if she would make a statement, and the lady replied that she had very little to say, and felt in a very awkward position. The coroner replied that it was a very awkward position to sell powders and a death to follow. The witness then stated that a child asked for a "three ha'penny powder," and the witness gave her one similar to that produced labelled "Dr. Williams's Child's Blessing." There were full instructions on the packets, and the powders were made according to a prescription of the witness's father now dead.

The Coroner: What was his name?

The Witness: Morgan Edward Williams. The witness added that her father was a chemist.

The coroner then showed the witness a paper which bore the name, "Dr. Williams, M.D., formerly Army Surgeon, Chemist, etc." The witness said that her father had a diploma of some sort, but thought the coroner was asking questions not bearing on the case. The coroner replied that she could not help that, and had run the risk of being sent for trial. She was selling powders which were supposed to be made by a gentleman who called himself a doctor. If he was not one, then the witness was certainly running a great risk.

Eventually the following verdict was returned: "That deceased died from convulsions following diarrhœa, which was brought on, after a previous attack of diarrhœa had passed off, by the administration of a powder named 'Dr. Williams's Child's Blessing,' which contained calomel." The jury added that the mother gave the whole powder instead of half, and recommended that such powders should not be sold to young children, and that death was due to accidental causes.

"NO *POST MORTEM*."

OUR attention has been drawn to the published account of a recent inquest held in a small town in Cornwall at which the jury returned the following verdict: "That Samuel George, a schoolboy, aged 12 years, died from compression of the brain, but that there was not sufficient evidence to show how it was produced." It was alleged by the friends of the deceased that two days before his illness commenced he had been struck on the side of the head by his master and "sent spinning." That he first complained of headache, got worse, that symptoms of compression of the brain with paralysis followed, and that ultimately he died, having been attended for several days by two medical men. At the inquest the medical witness stated there was no external mark of injury and that in the absence of a *post-mortem* examination he could not say whether the compression of the brain arose from injury or from some other cause. The master of the school gave evidence, and stated that he did hit the boy on the head with his hand, but that it was only a light blow.

To say the least, the verdict is most unsatisfactory, as the real issue of the inquiry is left in doubt, and the important question as to whether the blow on the head was the primary cause of the death is still unsettled. In a case of this kind the fullest investigation should take place, and the *post-mortem* examination of the body was of first importance, and would have probably revealed the condition which led to the fatal issue. Had a *post-mortem* examination shown in this case that some lesion following injury had occurred it would not have been the first case of death arising from a so-called "smack in the head" or "boxing of the ears" in children predisposed to cerebral disorder. Such inquests, terminating in such verdicts as the one above alluded to, are certainly incomplete, most unsatisfactory, and prejudicial to the safety and interests of the community.

CLUB TARIFFS.

MEDICUS writes: *Re* club fees, in the BRITISH MEDICAL JOURNAL of August 18th, p. 389, perhaps it would be interesting for you to know that in Ireland, as far as I can make out, the Free Gardeners and Rechabites only pay their medical attendant 3s. per annum, and no examination fees, and 2s. 6d. per annum and 1s. for passing them.

"*.*" The present very inadequate scale of remuneration made by the majority of sick clubs to their doctor was, we believe, originally accepted by the latter in consequence of such societies having been regarded as charitable institutions (specially established for unskilled working men and their families), the members of which appealed to the philanthropy of the profession for services to which the pay bore no relation to the value of their skill, time, and labour. The present enlarged means of the members of sick clubs generally (among whom are not only skilled artisans, whose earnings are now greater than in former years, but tradesmen and others whose position in life render them able to pay the customary medical fees, and whose self-respect should induce them to bear in mind the rule of "live and let live") should, therefore, not merely as a matter of justice, but of policy, incite them to remunerate their medical officers on a scale more proportional to the value of their services than the existing one, and one better calculated to promote the mutual confidence and respect which should subsist between members and their doctors; for although inadequate payment affords no justification for the omission of duty on the part of the latter, still the probability, nay, the moral certainty, cannot be ignored that a fair and liberal remuneration would, by insuring increased medical attention, tend (humanly speaking) to shorten the duration of disease, and thus, to no inconsiderable extent, lessen the demand upon the several club funds for "sick pay." Moreover, it is of importance, as affecting the financial position of clubs, that every member should on admission be in sound health, and free from any hereditary or marked tendency to disease. This can only be ascertained by a careful medical examination—a work of time and skill; and it is but reasonable that a moderate fee should be paid for the trouble and responsibility incurred.

TERMINATION OF CONTRACT WITH CLUB MEDICAL OFFICER.

R. H. writes: I was elected surgeon to a Foresters Club in the year 1877 at a salary of 2s. 6d. a head per annum. No contract was signed, and no condition made as to notice to be given on either side. In the minutes there is simply recorded the fact that I was elected under Rule .... No number of the rules was put in the minutes. In May of this year I asked for an advance from 2s. 6d. to 3s. 6d. on the ground that (1) 2s. 6d. was too little, as the members were generally advanced in years, and very frequently required attention; (2) the other clubs in the town were paying more. I was refused the advance but offered the post at the old rate of 2s. 6d. This I declined to accept, but did not resign the post. In July there was a meeting of the members. My name was proposed and seconded at a salary of 3s. 6d. per member. The chairman refused to put it to the meeting as he said I had resigned. Two other medical men were then proposed, one of whom was declared elected. My supporters left the room after the chairman had refused to put my name to the meeting. Only about one-quarter of the members voted in the so-called election. I informed the secretary that as I was paid twice a year I was willing that my letter in May should be taken as a resignation, and I would continue until November to act as surgeon, as I considered that six months' notice should be given by either side. In reply I got the letter and extract from their rules, which I enclose.

EXTRACT FROM RULES.

"Medical officer.—24 (Section 1). A qualified medical practitioner who is duly registered under the Medical Act shall be appointed, and remain in office during the pleasure of the Court, and such medical practitioner shall be either a benefit or honorary member of the Court. The payment of the medical officer's salary shall be made half-yearly out of the management fund into which the contributions of the members for medical aid shall be paid."

The medical man elected (whose father, by the way, holds another club at 3s. 6d. per member) assured me on August 4th, when I called upon him, that he would not take up the duties of surgeon until my

dispute with the club was settled. On August 6th, however, he called upon me, and informed me that he had taken up the duties, and intended to act as surgeon. I very courteously told him that in my opinion he was making a mistake.

*** This is a matter of some importance as affecting the interests of the profession, and we should advise our correspondent to place his case in the hands of a solicitor, who will probably advise him to sue the "Court" for at least a quarter's salary in lieu of notice. It is, indeed, most unjust that a medical man should be turned away without any notice whatever, and, although it does not always follow that the law will insist on a notice corresponding with the periods of the payment of salary, it is a distinct axiom of the law that a "reasonable" notice must be given, and, under the circumstances detailed by our correspondent, this would probably be not less than three months. The rule quoted by the secretary "that the medical officer was to remain in office during the pleasure of the 'Court'" merely signifies the general conditions of the appointment, and could never be interpreted as implying that the medical officer might be dismissed without any notice beyond the appointment of another surgeon; and we are of opinion that this "Court" would be strongly of the latter view if their surgeon had abruptly terminated his contract with them without any notice. Every servant naturally only holds his office during the "pleasure" of his employer, in the absence of specific agreement as to its term, but we have yet to learn that the latter could dismiss the former at his pleasure without due notice. We also regret to hear that the surgeon elected in our correspondent's place did not adhere to his original intention "of not taking up his duties as surgeon till this dispute was settled."

HONORARY OFFICERS OF COTTAGE HOSPITALS AND CORONER'S FEES.

We are asked by H. J. H. to advise on the point whether a coroner can refuse fees for *post-mortem* examinations and giving evidence at inquests to an honorary medical officer of a cottage hospital. Hitherto, our correspondent observes, the coroner in his district has paid such fees, but now declines to do so, and quotes the Coroners Act (1887), which, he states, certainly appears to justify his (the coroner's) refusal. It seems very hard, our correspondent goes on to say, that a private medical practitioner who voluntarily gives up a great deal of his time to honorary attendance on cases of accident in a cottage hospital should be deprived of any little remuneration of the kind in question.

*** We certainly concur in the views of our correspondent on this point; but no distinction is apparently made in the Coroners Act between an honorary and a paid officer. It is not, however, absolutely clear that such places as cottage hospitals are included in the exception mentioned in the Act; and it might be desirable to test the question by an action in the County Court. We find that a County Court judge has held that sick wards of workhouses are within the enactment, but doubts are expressed as to whether (*inter alia*) almshouses, asylums for the aged, dispensaries, cottage hospitals, and nurses' homes are also within the Act.

LUNACY CERTIFICATES.

Member British Medical Association asks: 1. Is an epileptic a lunatic? Can he be certified as such? 2. When a person is desponding and suicidal, should this be notified? What are the responsibilities on the medical attendant?

*** 1. An epileptic is also a lunatic only if, and when, he has also the symptoms of lunacy. 2. If a pauper the fact should be made known to the relieving officer. If a non-pauper the friends should be fully informed as to the facts of the case and the dangers attending it; and they should be urged to take the proper measures to secure the patient from suicide. According to circumstances these may or may not include the placing of him under care and control under the Lunacy Act, whether in an asylum or under single care.

SENIOR STUDENTS AND UNQUALIFIED PRACTICE.

A. writes as follows: A. is the son of B., a duly qualified man with a large practice. A. has passed all the examinations with the exception of the final. Is he in the same position as an unqualified assistant if he helps his father? Would his father be liable to prosecution for employing his son? Or can the son attend on his father's patients during the father's absence from home, so long as he does not append his signature to certificates and does not undertake the responsibility of serious cases?

*** We think A. would be in the same position as an unqualified assistant and he should therefore only act under the immediate supervision and direction of his father. He should certainly not take charge of his father's practice during his absence from home, as a qualified *locum tenens* could do.

LOCUM TENENS AND CORONERS' FEES.

R.—1. A. employs B. as *locum tenens* at a given fee per week. In A.'s time B. does some *post-mortem* examinations, and gives evidence before coroners. Whose are the fees?

2. B. is stopping socially with A. prior to the *locum tenency* beginning. A. gets an urgent message and asks B. to go for him as A. is engaged for an operation, and is on the point of leaving home for that purpose. B. is also going socially to a house close to the residence of the patient who has sent, and A. has given directions for him to be driven there in his carriage, so that the visit takes him about a quarter of a mile out of his way. The case turns out to be suspicious death. A. goes with B. next morning, sees the body, writes to the coroner, and makes all arrangements, and B. agrees to do the *post-mortem* examination and give evidence on the morrow, the same day that B. took on duty as A.'s *locum tenens*. Whose is this fee?

*** 1. Inasmuch as a *locum tenens*, or, in other words, temporary assistant, is, as a rule, engaged on the same conditions as is an ordinary permanent one, and that, for a specified remuneration, he is to devote his whole time to the legitimate requirements of the principal, we entertain no doubt that, in the absence of any specific arrangement to the contrary, all fees received in such capacity belong to the principal for the time being.

2. Although the necropsy was not made, nor the medical evidence given by the *locum tenens* until the day that he *de facto* entered on his professional duties (in contradistinction to his antecedent social relations) with A., and, therefore, that the latter consequently would, strictly speaking, be entitled to the fees, we are of opinion, in view of the preceding attendant circumstances, that a division of the fees would be a more equitable and judicious arrangement.

THE TITLE OF "DR."

Inquirer.—Our correspondent inquires if a M.B..C.M. is entitled to put "Dr." before his name on his brass plate, and inquires if not what means should be taken to prevent the using of the word "Dr.," as is done in a case to which he refers.

G. G. asks a similar question with regard to the diploma of M.R.C.S.

*** We believe it not to be an infrequent occurrence for a medical practitioner, although not entitled to the degree M.D., to prefix the title of "Dr." to his name on door-plate or card. Strictly speaking, however, in the light of not remote decisions, it may possibly be that legal proceedings would lie against such practitioner under Section 42 of the Medical Act, for so doing; but we doubt very much if on such ground alone they would be successful; and we should certainly not recommend proceedings being taken. The question is a vexed one, and has been much discussed in our columns.

CORONERS' INQUESTS.

Justice.—A coroner is not bound to hold an inquest if he is satisfied as to the nature of the case, and it is possible that the coroner, in the case to which our attention is drawn, acted without any desire to shield the chemist, though the probabilities may seem to be the other way. Such conduct as you hint at might come within a measurable distance of being dubbed "unprofessional," and if the facts are quite clear and well attested they might be laid before the bodies from whom the gentleman in question obtained his diplomas. For many reasons it is undesirable that a medical man taking the office of coroner should continue in the active practice of his profession.

Z.—Ere we can offer any comment on the case submitted relative to the alleged conduct of Y. *re* Mr. B.'s child it is essential that Z. should authenticate it by his name, and also transmit a copy of Y.'s (if any) response to his (Z.'s) undated communicatory note thereon. It is desirable, moreover, that a transcript of the two medico-ethical queries transmitted for our opinion should be forwarded to Y. lest he should dissent therefrom as ill defining the true points for consideration.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 5,996 births and 3,369 deaths were registered during the week ending Saturday, August 25th. The annual rate of mortality in these towns, which had been 17.6 per 1,000 in each of the preceding two weeks, declined to 16.8 last week. The rates in the several towns ranged from 10.7 in Plymouth and 12.2 in Hudderfield to 26.1 in Sunderland, 27.2 in Liverpool, and 27.6 in Preston. In the thirty-two provincial towns the mean death-rate was 17.8 per 1,000, and exceeded by 2.4 the rate recorded in London, which was 15.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3.2 per 1,000; in London the rate was equal to 2.8, while it averaged 3.5 per 1,000 in the thirty-two provincial towns, and was highest in Liverpool, Preston, and Sunderland. Measles caused a death-rate of 1.0 in Salford; whooping-cough of 1.3 in Salford and 1.5 in Oldham; "fever" of 1.2 in Wolverhampton; and diarrhœa of 4.4 in Leicester, 4.6 in Burnley, 5.2 in Liverpool, 7.0 in Preston, and 8.8 in Sunderland. The mortality from scarlet fever showed no marked excess in any of the large towns. The 58 deaths from diphtheria in the thirty-three towns included 43 in London, and 2 each in Brighton, Portsmouth, Liverpool, and Manchester. Two fatal cases of small-pox were registered in London, 1 in Plymouth, and 1 in Birmingham, but not one in any other of the thirty-three large towns. There were 158 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, August 25th, against 215, 209, and 179 at the end of the preceding three weeks; 34 new cases were admitted during the week, against 40, 28, and 37

in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,221, 2,193, and 2,133 at the end of the preceding three weeks, was 2,117 on Saturday last; 208 new cases were admitted during the week, against 208 and 182 in the preceding two weeks.

In thirty-three of the largest English towns, including London, 6,354 births and 3,051 deaths were registered during the week ending Saturday, September 1st. The annual rate of mortality in these towns, which had decreased from 17.6 to 16.8 in the preceding three weeks, further declined to 15.2 last week. The rates in the several towns ranged from 9.0 in Derby, 10.6 in Bristol and 10.7 in Croydon to 21.8 in Sunderland and 22.5 in Preston. In the thirty-two provincial towns the mean death-rate was 15.8 per 1,000, and was 1.4 above the rate recorded in London, which was 14.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.5 per 1,000; in London the rate was equal to 2.1, while it averaged 2.9 per 1,000 in the thirty-two provincial towns, and was highest in Leicester, Gateshead, Sunderland, and Preston. measles caused a death-rate of 1.4 in Croydon and in Preston; whooping-cough of 1.0 in Norwich, and 1.1 in Cardiff, Swansea, Burnley, Sunderland, and Gateshead; "fever" of 1.9 in Sunderland; and diarrhœa of 2.6 in Sheffield, 2.8 in Gateshead, 3.1 in Brighton, 3.9 in Leicester, and 6.1 in Preston. The mortality from scarlet fever showed no marked excess in any of the large towns. The deaths from diphtheria in the thirty-three towns included 33 in London, 3 in West Ham, and 3 in Sheffield. Seven fatal cases of small-pox were registered in London, 4 in Birmingham, 1 in Wolverhampton, and 1 in Leeds. There were 163 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, September 1st, against 209, 179, and 156 at the end of the preceding three weeks; 40 new cases were admitted during the week, against 26, 37, and 34 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,112, against 2,193, 2,133, and 2,117 at the end of the preceding three weeks; 232 cases were admitted during the week, against 182 and 208 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, August 25th, 823 births and 425 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 16.3 to 14.6 per 1,000 in the preceding three weeks, rose again last week to 14.9, but was 1.9 per 1,000 below the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 9.9 in Perth to 16.3 in Glasgow. The zymotic death-rate in these towns averaged 1.3 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 215 deaths registered in Glasgow included 18 from diarrhœa, 5 from diphtheria, and 4 from scarlet fever. Four fatal cases of diphtheria were recorded in Edinburgh, and 3 in Aberdeen.

During the week ending Saturday last, September 1st 850 births and 445 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 14.6 and 14.9 per 1,000 in the preceding two weeks, further rose to 15.6 during the week under notice, and was 0.4 per 1,000 above the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 10.0 in Greenock to 20.7 in Perth. The zymotic death-rate in these towns averaged 1.8 per 1,000, the highest rates being recorded in Glasgow, Dundee, and Perth. The 218 deaths registered in Glasgow included 8 from diarrhœa, 6 from whooping-cough, 5 from diphtheria, and 5 from "fever." Four deaths from diphtheria were registered in Edinburgh.

ALLEGED CALF VACCINE POISONING IN CANADA.

ENGLAND would seem not to be the only country in which allegations are made of injury and death arising by reason of vaccination. We have just got to hand some Canadian papers in which much has been made of a few cases of supposed blood poisoning by the use of calf vaccine supplied from the Vaccine Farm of the Montreal Health Department. The allegation was concerning the deaths of two children in one family, and so important did the matter appear to the city authorities that an inquiry was instituted into the death of one of the children, the body being exhumed, and every effort made to show cause for the pyæmia which was the certified fatal illness. That fatal pyæmia which had been made out to be the direct consequence of vaccination. As to the first case, no evidence is forthcoming; but, as to the second, it appears that after a necropsy and much medical evidence, a special jury of none but medical men have been unable to state what was the actual cause of the blood poisoning, which might have arisen at the point of insertion of the lymph, or from a throat ailment. At any rate, the child was treated for scarlet fever until symptoms of pyæmia came on which were not due to vaccination. As a result of minute inquiries, it transpired that the jury were entirely satisfied as to the purity of the calf vaccine, and, whilst acquitting all concerned of any blame, went on to warn parents to be most careful of children while undergoing vaccination, recording their opinion that parents should always be furnished with instructions for the proper treatment of a child's arm.

We most entirely agree with this recommendation. If only people could be induced to pay proper attention to their children during the weeks that follow on vaccination, we should hear even less than we now do of untoward results following the operation; but whilst parents permit the wearing of dyed dresses and dirty vaccination shields—or any shields for the matter of that—on the vaccinated arm, and so long as applications, of a sort to irritate the wound, are resorted to without advice, so long will we of necessity continue to hear of erysipelas and the like attributed to vaccination. People cry out a great deal nowadays as to the purity of the vaccine employed; it would be much more to the point if they would pay a little more regard to the child's surroundings, and to the treatment of its arm, leaving the other matter to medical judgment. It will be a good thing for vaccinated children when they are taken to none but public vaccinators, and when parents act on the advice conveyed to them, in addition to coming to the vaccinator at any subsequent stage of the vaccination where abnormal conditions manifest themselves. It is seldom that it is the lymph that is at fault, but rather the home life and nursing treatment of the child whilst it has on its arm a wound which is as likely as the prick of a pin, or any other flesh wound, to lend itself to the development of erysipelatous symptoms. We note from one of the Canadian papers to hand—the *Montreal Daily Star*—that the feeling of the city, as the result of past unhappy experience, is such that even had it been shown that the particular fatality had been the direct result of vaccinia, the cause of vaccination in the city would not have suffered. England still requires the bitter experience which would eliminate the influence of its chief promoters of antivaccination, whose vested interests would thus be at stake.

WATER SUPPLY IN THE EVESHAM UNION.

ON the 2nd inst. an inquiry was held by an inspector of the Local Government Board with respect to the objections of two villages in the Evesham Union to be included in the apportionment of a preliminary loan for boring purposes, in connection with the water supply scheme of the rural sanitary authority. In the case of one of the villages, Aldington, it was contended that equally good water could be obtained at less cost from the Evesham corporation. In the case of the other village, Cleeve Prior, an attempt was made to defend the existing supplies. The medical officer of health, however, stated that the large majority of wells in Cleeve were polluted with organic matter, and were utterly unfit for use. On the other hand, it was contended that water condemned by the analyst had been drunk for many years with impunity by certain persons, and in particular by one individual, the health, strength, and beauty of whose children were appealed to as a test of the quality of the water they had consumed. Evidence such as this is not likely to have much weight in the face of the condemnation of the well waters by the analyst and medical officer of health, and it may be anticipated that the objection of Cleeve Prior to inclusion in the scheme will be overruled.

SANITATION IN CORNWALL.

WE have before us the very useful report of the sanitary committee of the Cornwall County Council on the sanitary defects existing in the several sanitary districts—or perhaps we should say the several insanitary districts—in the county at the close of 1893. Seeing that the long list has been compiled from the statements of the officers of the separate areas, it constitutes a strong indictment against the authorities of the county, the stronger on this account. The committee have resolved that a letter be written to the several district authorities, calling the attention of each to the reported sanitary defects particular to its own area, and asking for observations. It will strengthen the hands of the County Council wonderfully in those cases where inaction is still maintained to have in their possession a yearly summary of a like nature with which to confront refractory bodies, who will not care to have thrust at them the accumulating evidence of their recalcitrancy. Where disease occurs by reason of such persistent default, the responsibility will be all the greater for the attempt of the County Council to right matters. We have not seen the summary, on the ground of terseness, surpassed.

THE FOLLY OF DELAY.

DR. VACHER, in his report on the County of Chester for 1893, refers to the cases of Runcorn urban and rural districts as typical of the consequences of not being prepared to meet an emergency in the matter of hospital accommodation. The first had an insufficient amount, and the second had no beds at all when small-pox appeared in the midst of the areas. The beds at the disposal of the urban authority were soon all utilised, and the erection of wooden structures became necessary. Added to this there was some prejudice against the institution at first, so that the disease, which appeared in December, was not got under control until June. In the rural area matters were worse in the entire absence of any provision in the nature of a hospital, and the disease had a run of about two months before any hospital was ready for the cases, and then only by the kindness of the Manchester ship canal authorities. In the two districts some 200 cases occurred, with 22 deaths—two-thirds of the small-pox mortality of the entire county. Dr. Vacher expresses his opinion that with hospitals ready in requisite amount the epidemic would have been cut short.

INVITATIONS TO THE CHOLERA.

1. DR. LAKE, at a recent meeting of the Guildford Rural Sanitary Authority, said he was keeping a look-out for anything like cholera in the district, but he did not think it necessary this year to take special steps in regard to diarrhœa. At the same meeting, the Inspector of Nuisances reported in respect of the water supply of a cottage at Mayes Green, Ripley, that Mr. Byron Noel said it had yet to be proved that the water from the pond was not fit for human consumption. It had been used for a generation without any bad results. The said *prima facie* good water was bad for drinking purposes. He had analysed the water in question, and found it was unfit for human consumption. It was crowded with bacteria. A copy of the analysis was directed to be sent to Mr. Noel.

2. At an inquest held at Appledore on the body of James Henry Richards, aged 3 months, it was stated in the evidence that the drinking water of Irsha Court, Appledore, was from a well into which all kinds of things were thrown, and that there was no doubt that the well was the curse of Appledore, and the cause of one-half of the disease occurring there.

3. In the report of the Subcommittee of the General Purposes Committee as to the reports of the medical officer of health for 1893, presented at a recent meeting of the Isle of Wight County Council, it was stated that the subcommittee deeply regret to call attention to the following paragraph in the report of the medical officer of health for the rural sanitary authority: "The Rivers Pollution Act has been almost wholly inoperative in your district, and probably this amendment will be equally so, but it affects you, for one of your sewers has its outfall in a stream. Some of the Isle of Wight streams furnish a considerable population, including many in the rural sanitary district, with their drinking water. Crude sewage mixes with the water which is supplied,

after filtration, to Lake and Gatten. Crude sewage passes into the eastern Yar, from which a number of people living on its banks drink; and into both branches of the Calbourne, from which several cottages are supplied, and from which some of the inhabitants of Calbourne, many of those of Newbridge, and nearly all the population of Shalfleet drink. Human excrement passes also into the Shorwell and Brighstone stream, which supply a large number of persons with water for drinking. This is a matter which deeply concerns you, and although you have never taken legal action with a view to prevent the pollution of streams, you have continued to make effort, and you have need to do so, to safeguard the public health against the dangers associated with drinking impure water, more especially by providing independent supplies." The subcommittee think it is impossible to express too strong an opinion on the state of affairs disclosed by the paragraph, because not only are the rural sanitary authority charged with neglecting to put in force the provisions of the Rivers Pollution Acts, and that in most flagrant cases, but with actually themselves polluting a stream by running one of their own sewers into it. We trust that the rural sanitary authority will not only cease to be law-breakers, but will with the means at their command enforce the law, so that the inhabitants of the several places mentioned by the medical officer may be enabled to enjoy the greatest of all blessings, a pure and plentiful supply of water. If some steps are not immediately taken in this matter it will be the duty of the County Council to exercise the large powers vested in them.

NEGLECT TO NOTIFY A CASE OF SMALL-POX.

ON August 17th, at the Birmingham Police-court, a case under the Infectious Diseases Notification Act was heard in which the defendant was charged with having failed to give notice to the authorities that his wife on August 3rd was suffering from small-pox. The patient, it appears, was taken ill on July 27th, and on August 3rd an irregular practitioner was called in, who pronounced the disease to be small-pox. The defendant, though aware he ought to notify the case, failed to do so; on August 7th, however, at the instance of the sanitary inspector, a medical man was asked to see the patient, and the case was forthwith notified. The defendant was fined twenty shillings and costs, or one month's imprisonment. The case is an important one; it will serve to give prominence to the obligations imposed by statute with respect to the notification of infectious disease. The duty of notifying is imposed not only upon the medical practitioner attending upon or called in to visit the patient, but also upon "the head of the family, and, in his default, the nearest relatives of the patient present in the house, or being in attendance on the patient; and, in default of such relatives, every person in charge of or in attendance on the patient, and, in default of any such person, the master of the house." The defendant in the Birmingham case suffered by reason of his folly and negligence in more respects than one, as the sequel to the hearing of the summons proved to be that the defendant himself was found to have contracted the disease and removed to hospital.

THE COST OF SMALL-POX EPIDEMICS.

AT a meeting of the Whittington local board, held in the early part of last week, it transpired that the small-pox epidemic at the place in the first months of this year cost the board no less than £373, of which amount £145 was on account of relief given to pauper cases. A bill for the latter having been presented to the Chesterfield guardians, that body have refused to pay it, this decision being arrived at by a majority of one vote. Some hard things have been said by the Poor-law Board as to the inactivity of the Whittington authority in the face of the epidemic, and the latter sanitary board have resented the stigma under which they have been made to rest. It seems, however, that arrangements were made with the Chesterfield Hospital to take in all cases of the disease on a rate of 25s. per week each, and the complaint is that all the pauper cases should be paid for by the Poor-law body. We think so too, since the sanitary authority in isolating or arranging for the isolation of the pauper patients were doing all that could be expected of them without saddling them with the expenses incident to the cases. *Primâ facie* the circumstances are against the ruling of the guardians. At all events, it seems a great pity that so much money should have had to be spent on a preventible disease, for the stamping out of which the State has provided a cheap and effectual remedy, both primary and revaccination being within the reach of all for the seeking at the nearest public station.

At the last monthly meeting of the Whittington Local Board, the Clerk (Mr. Twelves) went into the total cost of the small-pox epidemic, and found that the board had actually paid £327 14s. 8d.

INFECTIOUS DISEASES NOTIFICATION ACT AT LEITH.

AT the monthly meeting of the Leith local authority, held on August 13th, Provost Keith presiding, Mr. Duncan (convener of the Public Health Committee) moved that the Infectious Diseases Notification Act of 1889 should be adopted in the burgh, to come into force on October 1st next. He remarked that no special circumstances had hitherto occurred since the passing of the Act to cause them to adopt it, but recently things had assumed a different aspect in the burgh and in the neighbouring parishes. Although the adoption of the Act might entail certain expense, the committee felt that it would be far more than compensated for by the good that would be done to the general health. The committee hoped that the public generally and the officials would give careful attention to the carrying out of the Act. Mr. Melvin seconded the motion, which was carried unanimously.

INEFFICIENT RESULTS OF INFANTILE VACCINATION.

DR. SCATCHARD, of Faversham, and Dr. Watt, of Hovingham, have written to us in reference to what is stated in the BRITISH MEDICAL JOURNAL of August 18th on the above subject. The particular point at issue is the remark that to subject a child to revaccination within a week or two after primary vaccination successful in one place would be useless. Our correspondents state that in their experience this revaccination at the end of the first week after the primary operation, even from the one resulting pock of the individual child, has always resulted in the successful maturation of the new pocks. But can our correspondents, or any of our readers, tell us what is the condition of these new scars at the end of, say, two years, or even less? Our point is that the scars thus newly acquired will, if the preceding pock has been of any avail, maturate very quickly and as quickly fade away. Nothing in the way of added protection for the infant has been gained.

VACCINATION IN IRELAND.

DURING the June quarter there were 31,371 persons successfully vaccinated; in 2,900 cases the operation was postponed, and 51 children were reported as insusceptible of vaccination. The deaths of 1,541 unvaccinated children under 3 months old were registered during the quarter, making a total of 35,953 children with regard to whom particulars as to vaccination were ascertained.

VACCINATION DURING SMALL-POX EPIDEMICS.

AT the fortnightly meeting of the Marylebone Board of Guardians, on August 27th, Mr. J. Hunt, the chairman, presiding the question of the outbreak of small-pox in the parish was considered. The chairman stated that since the last board meeting he had received an urgent letter from Mr. Wynter Blyth, medical officer of health, advising the appointment of a temporary vaccination officer. Dr. Greenwood deemed it very important that this officer should make a house-to-house visitation, and get the people who resided in the huge blocks of model dwellings, such as Portman Buildings, vaccinated or revaccinated. Dr. Greenwood, the public vaccinator, said that the small-pox epidemic in Portland Town was now virtually over. There was only one case on Friday, August 24th, and that was a case that ought not to have occurred. Three visits were made to the house, but the patient evaded them, and was found, when taken with small-pox, not to have been vaccinated. He considered it highly necessary that the temporary vaccination officer should be kept on at his work of house-to-house visitation so as to get the whole of the parish vaccinated or revaccinated. In Lisson Grove the epidemic seemed, with the exception of a few isolated cases, to be confined to the small area of Nightingale Street, and it was hoped that by the end of the week they would have seen the end of it. It was agreed to continue the services of the temporary vaccination officer.

PENNY WISE WATER COMPANIES.

MOST people are agreed as to the insufficiency of the two-gallon flush for waterclosets allowed by the water companies. That it is but poor economy so to restrict the supply, that the cistern has to be emptied two or three times over to do what one good flush would have effected is obvious.

In a little book by A. J. Wallis-Tayler, recently published, the aim of which is to instruct householders in the use of the various sanitary appliances which form so large a part of the fittings of a modern house, we find it recommended that "waterclosets should be flushed before and after use." This means that each use of the closet will require four gallons of water, just twice what the companies intend. Now it is clear enough that this double flushing would be quite unnecessary if waste preventers of a sufficient capacity to clear the pan were allowed, say three gallons. The fact is the dirty pans left by the two gallon cistern are developing in the people a habit of using flush after flush which is wasteful in the extreme, and the attempt on the part of the companies to check this by requiring slowly filling cisterns, either produces foul closets and all the evil consequences or, in better regulated households, gives rise to the common instruction given to housemaids to pull the plug every time they pass, in the vain hope of keeping things decent. All this would be avoided by allowing an efficient flush.

THE DEATH-RATE IN ITALY.

OFFICIAL statistics recently published show that between 1887 and 1892 there was a steady decrease in the death-rate. Whilst in the former year the total number of deaths was 828,992, in the latter it was 802,714, the population meanwhile having grown from 29,592,146 to 30,355,848. These figures give a death-rate of 26.6 per mille in 1892, as against 28.5 per mille in 1887. During the period in question there was a considerable diminution in the number of deaths from typhoid fever and diphtheria, and those from puerperal fever showed a decrease of about 50 per cent. The number of deaths from pulmonary tuberculosis remained stationary, while those from malignant tumours showed an increase. Deaths from suicide were also more numerous.

PERSONAL ATTENDANCE AND NOTIFICATION.

HEALTH.—Section 2 (b) of the Infectious Disease (Notification) Act, 1889, says: "Every medical practitioner attending on, on called in to visit, a patient," etc., showing that personal attendance was in contemplation. Notification of a case known of by hearsay, and after recovery, would not, in our opinion, constitute a claim for payment for the certificate. Since the term "medical practitioner" is held to mean a person registered under the Medical Act of 1886, we cannot think that visit by an unqualified assistant would fall within the subsection above referred to.

FEES FOR NOTIFICATION.

HEALTH asks whether a practitioner can notify and claim a fee (1) on mere hearsay, without seeing the patient; and (2) when the case has been seen by his unqualified assistant only.

*** The Act requires the medical practitioner attending on or called in to visit the patient "to certify the nature of the infectious disease" from which, "in the opinion of such medical practitioner, the patient is suffering." Such an opinion can obviously only be formed after examination of the patient.

NOTIFICATION OF RELAPSE OF SCARLET FEVER.

H. T. writes: D. K. was notified as having scarlet fever, and sent into hospital on July 25th. On August 13th I was called to the house again, and found that she had been sent home on August 7th apparently well. On examination I found that she had a temperature, swelled glands, and was desquamating freely on the hands. Was I right in notifying the case again?

*** True relapses of scarlet fever are not very rare, and occur most commonly about the end of the fourth week. Presumably the present case was of this kind, although, in the absence of any note as to the date of onset, the dates of admission and discharge suggest the possibility of premature dismissal from hospital. But however that may be, the propriety of notifying afresh seems to be beyond question.

EXTRA FEE FOR FRACTURED LEG.

County Member, who is a district surgeon, writes to ask if he would be right in claiming the usual extra fee of £3 for the following case: He was called to attend a man with fractured thigh on an overseer's order; he put the limb up in splints, and superintended the removal of the patient to a cottage hospital four miles off, as there was no suitable accommodation in the man's own cottage.

*** We consider our correspondent may fairly put in a claim for the fee, though we think it may be disallowed, as he gave so little attendance on the case.

NOTIFICATION FEES.

J. A. F.—The expression "public body or institution" in Section 4 (2) of the Infectious Disease (Notification) Act, 1889, has been held to include a public hospital or infirmary, the fee of one shilling for each notification being therefore all that need be paid to officers thereof; but the expression does not seem to include a private hospital or a provident dispensary.

THE DUTIES AND OBLIGATIONS OF A MEDICAL OFFICER OF HEALTH UNDER THE NOTIFICATION ACT.

A Correspondent asks for an opinion as to the following point of etiquette. A has a case of supposed scarlet fever under observation, and of course not reported to the medical officer of health. B. who is medical officer of health for the district, and in practice as well, has been informed by a School Board officer of a supposed case of scarlet fever where A. is attending. B., without A.'s knowledge, visits the case, examines, and diagnoses the same not to be scarlet fever. A. wishes to know if B. was justified as medical officer of health in visiting this case, and offering an opinion as he did.

*** Assuming A.'s statement to represent the whole of the facts of the case, the action of B. certainly appears to have been ill-advised. In any case (even if there was ground for suspecting the existence of an unnotified case of the disease, and reason for ascertaining whether such case was related to known cases of scarlet fever, and learning whether the circumstances called for action, with a view to preventing spread of the malady), B. would have done well to have examined the suspected case in consultation with the medical man in attendance. It is of course possible, however, that B. was not aware of the fact that the patient was under A.'s care.

INSTRUCTIONS TO MEDICAL OFFICERS BY COMMITTEE OF GUARDIANS.

H. R., a district medical officer, writes to say he attended a motherless child on a parish order, and gave the father a certificate to take to the relieving officer, in which he recommended the removal of the patient to the workhouse. The district committee of the guardians objected to this recommendation, and passed a resolution that the clerk should write to forbid any such recommendation being given in future, which, however, the clerk did not do. He asks what he is to do, as this is not the first time the committee have ordered him not to give advice of such character.

*** It appears to us that our correspondent can, if he thinks proper, ignore any instructions he may receive from a committee. It is the board only which has power to issue orders to him, and these ought always to be forwarded in writing by the clerk.

PLURAL APPOINTMENTS UNDER LOCAL GOVERNMENT BOARD.

F. W. G. writes: In a town with 7,000 inhabitants there are three medical men; one is medical officer of health, another is parochial medical officer and public vaccinator. The medical officer of health dies, and though his successor hoped to secure his appointment, he is opposed by the other who already holds the two appointments named. He asks will the Local Government Board sanction this, or should someone call their attention to it, and adds, "for really with other things it seems to be iniquitous."

*** If the election by the guardians of the medical officer of health was strictly in accordance with the regulations of the Local Government Board, which appears highly probable, there is no reason to suppose that this Board will offer any objection to the appointment. We ourselves are unable to see that the term "iniquitous" is appropriately used in reference to this case.

ADULTERATION OF WINE.

The French Chamber of Deputies has recently passed a measure extending all the penalties to which adulterators are liable to vendors convicted of selling to the public wine to which they have added water or alcohol, even in cases where the fraud is known to the buyer or to the consumer.

OBITUARY.

BEAVEN NEAVE RAKE, M.D.Lond., L.R.C.P., M.R.C.S.

Scientific medicine has sustained a very severe loss in the death of Dr. Beaven Neave Rake, Government medical officer and director of the Leper Hospital at Trinidad, which was briefly recorded in the British Medical Journal of September 1st.

The news came by telegram from the governor of the colony to the Colonial Office, and the only particulars given were that it occurred from "fever" on August 24th. When the report got abroad early last week Dr. Rake's friends thought and hoped that there was possibly some mistake, and that the death of his father, Thomas Beaven Rake, of Fordingbridge, Hants, which took place about a fortnight previously, had given rise to the rumour; but inquiry at the Colonial Office soon removed all doubt.

Beaven Rake's record has been a brilliant one, both as a student and since his qualification in medicine. Entering at Guy's Hospital in 1874 he soon made his mark at that school, and gained the goodwill and respect alike of all his fellow students and teachers. He was looked upon as one of the best men of his year, and took several prizes, one at the Physical Society for his essay on the Localisation of the Functions of the Brain, as well as the Joseph Horace Prize (1877), and the Gurney Horace Prize (1879). He early matriculated at the University of London, and passed the Preliminary Scientific in the first division and with honours in 1876. In the following year he passed the First M.B., also with honours, and subsequently took the M.B. degree with first class honours in medicine and honours in obstetric and forensic medicine. In 1882 he became M.D.Lond., with marks qualifying for the gold medal. He took the M.R.C.S. in 1879, and L.R.C.P. in 1880. He held several appointments at Guy's—house-surgeon in 1882, house-physician in 1883, and also for some time the post of resident obstetrical assistant.

After leaving the hospital he spent a considerable time abroad studying the special departments in Vienna, Berlin, and Paris. On his return to London he was appointed medical and surgical registrar at the Victoria Hospital for Children, and in 1887 accepted a nomination for a colonial surgeoncy in Trinidad. He was at once placed in charge of the Leper Hospital at Cocorite, and entered upon his duties and on the scientific study of the subject of leprosy with that industry, energy, and ability which had characterised all his previous work. His first communication on the subject was to the Pathological Society of London in 1885 on Tuberculous Leprosy of the Tongue and Larynx. During the following year he made seven communications to that Society, and since then many instructive specimens and valuable observations on the bacilli, inoculation experiments, etc., have been recorded by him in the Pathological *Transactions*.

It would take up too much space here to enumerate all the papers which he contributed to the various congresses, societies, and journals in this and other countries. Suffice it to say that in every one of them there is something original and thoughtful, and, like his able *Annual Reports of the Leper Hospital*, they are all full of careful work. We may say that several of his most important communications were presented at the annual meetings of the British Medical Association, and have been published in the British Medical Journal.

When, in 1890, the Committee of the National Leprosy Fund determined to send three commissioners to investigate the question of leprosy in India, the Royal College of Physicians was requested to nominate one of the Commissioners. At the suggestion of the writer of this article the late Sir Andrew Clark offered by telegram the post to Beaven Rake, who, with the permission of the Colonial authorities, promptly accepted the position. It is not too much to say that Dr. Rake was the strongest and most experienced member of that Commission, and that his name has added much to the weight and value of its report.

Dr. Beaven Rake's views on leprosy may be described as "moderate." He appreciated how much we still have to learn concerning the disease, and was not inclined to say "*Ex uno disce omnes*," and rush after theories which on in-

vestigation cannot be proved. He was certainly not a violen "contagionist," and, on the other hand, he felt himself con strained, from his own observations, to give up the "fish theory," and to attach but little importance to heredity in the spread of the disease.

It is an open secret that he was about to receive well merited promotion, and that one of the most important medical posts in the Colonial Service was shortly to be placed at his disposal. This would have given very general satisfaction, for, quite apart from his professional and scientific attainments, by his gentle unassuming bearing, his kindly disposition, and his high character, he had made sincere friends of most people with whom he had come in contact.

In the midst of his arduous official and professional duties he found time to pursue his favourite studies in natural history, and was the moving spirit of the local society in Trinidad. He was for some time the Honorary Secretary, and was lately elected the President. He was President of the Trinidad Branch of the British Medical Association, and we published recently his presidential address.

Beaven Rake was born on April 28th, 1858, and consequently has been cut off in the 37th year of his age. He married in 1884, and leaves a widow and three sons to deplore his loss. It is to be hoped that steps will be taken to collect and publish his scattered works in a memorial volume.

THOMAS ODELL, M.R.C.S.Eng., L.S.A.

Mr. Thomas Odell, M.R.C.S.Eng., L.S.A., who recently died at Hertford, was born at Newport Pagnell in 1816. After receiving a preliminary education at Mr. Burn's Academy he was articled to his cousin, the late Dr. Goodwin of that town. He then entered as a student of St. Bartholomew's Hospital, and, after having qualified, was for a time assistant to the late Dr. J. Neill. On the death of Mr. Shillitoe, of Hertford, Mr. Odell purchased his practice, and soon became widely known and appreciated for his kindness and attention to his patients, and was highly esteemed by the poor of the districts of which he was Poor-law medical officer. For twenty-four years he held the appointment of honorary medical officer to the Hertford Infirmary, and, upon his retirement, received a handsome testimonial from the governors in appreciation of his valuable services. He was elected one of the consulting officers to the institution. For the last few years he suffered from paralysis agitans, and on this account was obliged to retire from active practice, but he retained his interest in all the concerns of his profession to the last. Becoming gradually weaker he passed away peacefully on the morning of August 23rd.

We regret to announce the death of Dr. Léon Warnots, Professor of Operative Surgery in the University of Brussels. The cause of death was septicæmia following a dissection wound. Dr. Warnots, who was only 38 years of age, has already won for himself a great reputation, and was very popular among his professional brethren in Belgium.

It is with deep regret that we have to announce the death of Dr. C. Brainsford, who expired at his residence at High Street, Haverhill, on August 13th. He was born at Painswick, Gloucester, in the year 1805. He took his degree at St. Andrews University, L.S.A., 1828, and M.D., 1862. For some years the deceased gentleman was a missionary in Jamaica, and for some time editor of the *Medical Times*. According to the express wish contained in his will, his body was cremated at Woking, and the ashes interred in the Haverhill cemetery.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Wilhelm Parow, a well-known hydrotherapist and orthopædist of Weimar, aged 77; Dr. Joaquin Maldonado, Dean of the Medical Faculty of Bogotá, and Professor of Gynæcology for forty years in that University, and one of the leading practitioners of that speciality in South America; and Dr. Khomiakow, Professor of Therapeutics in the University of Kasan.

MEDICAL NEWS.

The winter session at University College, Dundee, will open on October 9th.

We are informed that Dr. Robert Barnes has resigned the post of Consulting Physician, and Sir Spencer Wells and Mr. Jonathan Hutchinson that of Consulting Surgeon to the Chelsea Hospital for Women.

Successful Vaccination.—Mr. W. H. Kerbey, M.R.C.S., Public Vaccinator of the Charmouth District of the Axminster Union, has again received the Government award for official vaccination.

The Local Government Board have fixed September 20th as the date on which the official inquiry into the irregularities connected with the administration of the Poplar Workhouse shall be held.

Professor von Helmholtz celebrated his 73rd birthday on August 31st. It is satisfactory to learn that he has now almost recovered from the paralytic stroke which disabled him some weeks ago.

The Medical Faculty of Lyons.—The number of theses for the degree of doctor of medicine presented to the Medical Faculty of Lyons during the academic year 1893-94 was 124. This represents the largest number of degrees conferred in any one year since the creation of the Faculty in 1877.

Charing Cross Hospital Medical School.—A *conversazione* will be given at this school on October 1st, when Professor Alexander Macalister, F.R.S., will distribute the prizes. Short descriptions, illustrated by lantern slides, will be given subsequently by Dr. Abercrombie of a tour in Greece, and by Mr. Victor Corbould of a tour in Brittany.

Italian Obstetrical and Gynæcological Society.—The first annual congress of the Italian Obstetrical and Gynæcological Society will be held in Rome in the second half of October next. The following subjects are proposed for discussion:—(1) The Results, immediate and remote, of Vaginal Hysterectomy for Cancer (to be introduced by Professor Mangiagalli); (2) Castration for Osteomalacia (to be introduced by Professor Truzzi).

The new ambulance steamer of the Metropolitan Asylums Board, *The Geneva Cross*, has begun to run on the Thames, and is now conveying small-pox patients to and from the hospital ships at Long Reach. Provision is made for carrying fifty patients in a recumbent position. *The Geneva Cross* is considered to be the best type of ambulance steamer yet built. The Board has three other ambulance steamers. Last year they ran altogether over 10,000 miles, and carried 1,400 patients and attendants.

MEDICAL VACANCIES.

The following vacancies are announced:

BETHLEM HOSPITAL.—Two Resident Clinical Assistants. Apartments, rations, and attendance provided. Applications, endorsed "Clinical Assistantship," to the Treasurer by October 1st.

CAMBRIDGE UNIVERSITY.—John Lucas Walker Studentship. Applications to Professor Roy, New Museums, Cambridge, by September 30th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board, residence, and allowance for washing provided. Appointment for six months. Applications to the Secretary at the office, 24, Finsbury Circus, E.C., by September 13th.

COVENTRY PROVIDENT DISPENSARY.—Surgeon; must be fully qualified medical practitioners. Applications and testimonials to W. Sleath, Honorary Secretary, by September 17th.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer; unmarried. Salary to commence at £100 per annum, increasing annually to £120 per annum, with board, lodging, washing, and attendance. Applications to the Medical Superintendent by September 15th.

DENTAL HOSPITAL OF LONDON, Leicester Square.—Assistant Dental Surgeon. Must be Licentiate of Dental Surgery of one of the licensing bodies recognised by the General Medical Council. Applications and testimonials to J. Francis Pink, Secretary, by October 8th.

THE GENERAL INFIRMARY AT GLOUCESTER AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Surgeon; must be F.R.C.S. or M.R.C.S.Eng., or F.R.C.S. or L.R.C.S. of Ireland or Edinburgh, or graduate of University recognised by the General Medical Council. Applications and testimonials to Henry T. Pike, Secretary, by October 10th.

GREAT YARMOUTH HOSPITAL.—House-Surgeon; must be doubly qualified. Salary, £30 per annum, with board and lodging. Applications and testimonials to Richard F. Ferrier, Honorary Secretary, by September 22nd.

NEW HOSPITAL FOR WOMEN, 144 Euston Road, N.W.—Female Assistant-Physician; appointment for two years. Also two Clinical Assistants for Out-patient Department; appointment for one year. Applications and testimonials to Margaret M. Bagster, Secretary, by September 26th.

NORTH WALES ASYLUM, Denbigh. Second Assistant Medical Officer. Salary £100 per annum, with board, washing, and apartments. Applications to W. Bark, Clerk to the Visitors, by September 12th.

PLYMOUTH PUBLIC DISPENSARY.—Physician's Assistant; doubly qualified. Salary, £60 per annum. Appointment for one year, but eligible for re-election. Applications to the Honorary Secretary before September 18th.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Brighton.—House-Surgeon; doubly qualified. Salary, £30 per annum, with board, lodging, and washing, but no stimulants. Applications to the Chairman of the Medical Committee by September 8th.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House-Surgeon. No salary, but board, residence and laundry found. Applications and testimonials to the Honorary secretary, by September 17th

ROYAL UNITED HOSPITAL, Bath.—House-Surgeon. Candidates must be M.R.C.S. Eng. and registered. Salary, £60 per annum, with board, lodging, and washing. Appointment for one year. Applications and testimonials to W. Stockwell, Secretary-Superintendent, by September 18th.

ST. BARTHOLOMEW'S HOSPITAL.—Ophthalmic Surgeon, must be F.R.C.S. Eng. Applications and testimonials to W. Cross, Clerk, by September 10th.

USSEX COUNTY HOSPITAL, Brighton.—House-Physician; unmarried and under 30 years of age. Salary, £60 per annum, with board, residence, and washing, rising to £80. Applications and testimonials to Lieutenant-General E. F. Bourchier, Secretary, by September 19th.

E COPPICE, Nottingham.—Assistant Medical Officer for private patients. Candidates must be duly qualified, registered, and unmarried. Age not to exceed 28. Salary £120 per annum, with apartments, board, attendance, and washing. Applications and testimonials to Dr. Tate at the Asylum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Appointments for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary Superintendent, by September 19th.

MEDICAL APPOINTMENTS.

BARCLAY, J., M.B., C.M.Edin., appointed Medical Officer for the Wetheral District of the Carlisle Union.

BUCK, Arthur H., M.R.C.S.Eng., L.R.C.P.Lond., appointed Senior House Surgeon to Sussex County Hospital, Brighton.

CHILCOTT, Arthur E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Superintendent of the Infirmary of the Parish of St. Pancras.

COWAN, Mr. J. J. appointed Medical Officer for the Leigh District of the Martley Union.

CRAWFORD, Mr. A., appointed Assistant Medical Officer of the Infirmary of the Parish of St. George's-in-the-East.

COLLUM, Archie Tillver, M.B.Lond., F.R.C.S.Eng., appointed Assistant-Surgeon to Charing Cross Hospital, *vice* Benjamin Wainewright, M.B., C.M.Edin., F.R.C.S.Eng., resigned.

DAVIES, Arthur T., M.D.Cantab., F.R.C.P.Lond., appointed Physician to the Metropolitan Hospital, *vice* Dr. Drysdale, resigned.

DUNCAN, William, M.D., M.R.C.P., F.R.C.S., appointed Physician to In-Patients at the Chelsea Hospital for Women.

FULLER, Mr. L., appointed Medical Officer of the Workhouse of the Bedminster Union.

GARMAN, E. C., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Fourth District of the Hailsham Union.

HOLTOM, Charles, M.R.C.S., appointed Surgeon to the Avonmouth Branch of the St. John Ambulance Association, *vice* Dr. Duncan, resigned.

JOSEPH, Jas. John, L.R.C.P., L.R.C.S.I., appointed Medical Officer for the No. 2 Battersea District of the Wandsworth and Clapham Union.

KENWOOD, Henry R., M.B.Edin., D.P.H., appointed Medical Officer of Health to the Stoke Newington Sanitary District.

KING, A. F. W., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the out-Special Department for Diseases of the Throat at St. Thomas's Hospital (extension).

LAVER, J. W., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

LONG, Frank T., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the Colton District of the Ulverston Union, *vice* F. C. MacNulty, M.D.Dub., resigned.

MARSH, J. H., M.R.C.S., L.R.C.P.Lond., appointed Senior House-Surgeon to the Macclesfield General Infirmary.

MELLAND, C. H., M.R.C.S., L.R.C.P., appointed Clinical Assistant at the Barnes Convalescent Home at Cheadle of the Manchester Royal Infirmary.

MERRY, W. J. C., M.B., B.Ch.Oxon., appointed House-Surgeon to St. Thomas's Hospital.

MISKIN, L. J., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

NICHOLSON, T. G., B.Sc.Lond., L.R.C.P., M.R.C.S., appointed Non-resident House-Physician to St. Thomas's Hospital.

NIX, R. E., B.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital (extension).

PLATT, John E., F.R.C.S.Eng., B.S., M.D.Lond., appointed Resident Surgical Officer to the Manchester Royal Infirmary.

PLUMMER, Selby W., M.D.Durh., appointed Medical Officer to the Durham Union Workhouse, *vice* Henry Smith, M.B.Durh., resigned.

POLLOCK, E. S., M.B.Dub., appointed Medical Officer for the Cheriton Fitzpaine B. District of the Crediton Union.

POWELL, Leslie, M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Cheriton Fitzpaine A. District of the Crediton Union.

RADCLIFFE, Frank, M.B., B.Ch.Vict., appointed House-Physician to the Manchester Royal Infirmary.

RAY, J. H., M.B., B.Ch.Vict., appointed House-Surgeon to the Manchester Royal Infirmary.

RICHARDSON, S. W. F., B.Sc.Lond., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

RUSSELL, A. E., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

RUSSELL, William, M.B., C.M.Aberd., appointed Resident Medical Officer Netherfield Road Fever Hospital, Liverpool.

SANDFORD, G. C., M.B., C.M.Edin., appointed Assistant Medical Officer to the City Hospital, Birmingham.

SAYRE, Alex. W. F., Medical [illegible] appointed Medical Officer for the Wilmington District of the Wetherby Union.

STEVENSON, Mr. J., appointed Assistant Medical Officer at the Infirmary of the Parish of St. Leonard, Shoreditch.

SYMONS, R. Fox, L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

THOMSON, Daniel G. P., M.B.Edin., appointed Medical Officer for the Edmont Bridge District of the West Ward Union.

THOMSON, Peter, M.B., B.Ch.Vict., appointed House-Physician to the Manchester Royal Infirmary.

TOMKYS, Mr. L. M., appointed Medical Officer for the St. Chad District of the Lichfield Union.

TURNER, Mr. E. O., appointed Medical Officer for the Sixth District of the Wycombe Union.

WARRY, John K., M.S.Lond., appointed Medical Officer of Health to the Hackney Sanitary District, *vice* John W. Tripe, M.D., deceased.

WEBB, Frederic J., M.B., B.Ch.Vict., appointed Medical Officer and Public Vaccinator for the Gorton (Sixth) District of the Chorlton Union, Manchester.

WITHERS, Percy, M.R.C.S., L.R.C.P., appointed House-Surgeon to the Manchester Royal Infirmary.

WOODHOUSE, Mr. Walter M., appointed Junior Assistant Medical Officer of the Infirmary of the Parish of Kensington, *vice* A. Rudd, M.R.C.S., resigned.

YOUNG, R., M.D.Durh., M.R.C.S.Eng., appointed Medical Officer of the Workhouse and Schools of the Oldham Union.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

EVANS.—On August 30th, the Castle Hill House, Shaftesbury, the wife of C. S. Evans, M.B., of a daughter.

MARTIN.—On September 2nd, at Arnheim, Blackburn, the wife of John M. H. Martin, J.P., M.D.Vict., F.R.C.S.Eng., of a daughter.

SQUARE.—On August 26th, at 22, Portland Square, Plymouth, the wife of J. Elliot Square, F.R.C.S., of a son.

MARRIAGES.

HARVEY—POWER.—On September 1st, at the Parish Church of St. Martin-in-the-Fields, by the Rev. T. K. Abbott, B.A., Frederick George Harvey, of 4, Cavendish Place, W., to Molly Power, of Mythe Cottage, Atherstone.

KENNEDY—SCOTT.—On August 30th, in the Parish Church of Lavenham, Suffolk, by the Ven. Melville H. Scott, Archdeacon of Stafford, assisted by the Rev. Cyril Egerton Hubbard, Angus Endicott Kennedy, M.R.C.S., L.R.C.P., L.S.A., eldest son of Dr. Alfred E. Kennedy, of Chesterton House, Braistow, to Margaret, youngest daughter of the Rev. Canon Scott, Rector of Lavenham.

WOAKES—ALLINGHAM.—On September 1st, at the Parish Church, Marylebone, by the Rev. W. E. Cotes, M.A., Vicar of St. John the Baptist, Great Marlborough Street, Claud Edward, youngest son of Dr. Woakes, of Harley Street, W., to Ethel Maud (Dodie), younger daughter of William Allingham, F.R.C.S., of Grosvenor Street, W.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A MEMBER would be glad to hear of the best kind of respirator to be worn by dry cement workers.

MR. JAMES COULDREY, M.R.C.S.Edg., etc. (Scunthorpe, *vid* Doncaster), writes: In the case of an accident requiring amputation at the hip joint in a country district, what would be the best method to adopt? A country surgeon is handicapped on account of want of skilled assistance—a most important element under the old system of amputation. Ought he to adopt the new method, a prior transfixion with a large pin under the artery, and an elastic band fastened figure-of-eight fashion round it and the front of the thigh. Would not this procedure endanger the flap's vitality afterwards? This method is described and pictured in the *Annual of the Universal Sciences for 1893* (Segaux), Vol. iii. H. 2. In the same publication, at the same page, it is stated that encircling the limb with an elastic tourniquet has been successfully used, the elastic band being kept up by two inelastic suspenders, one in front, the other behind, fastened over the opposite thigh. I suppose this was used to prevent the band slipping over the stump when the head of the bone was disarticulated. Have we any experience of this method in England? I should suggest that the suspenders be fastened round the opposite hip, somewhat like a spica bandage, and that the arteries in the anterior flap be secured at once before making the disarticulation and posterior flap.

A bloodless method by which this major operation could be performed would be a great boon to country surgeons, and might save a few lives. The ease with which Messrs. Arnold's "Reliance" tourniquet could be used would make them valuable in these cases, especially if the tubing were made as strong, but a little thinner, for using in the pin operation.

SATURATED SOLUTION OF PICRIC ACID.

P. O'C. asks what is the strength of what is called a "saturated solution of picric acid."

*** A saturated solution of picric acid contains rather less than 5½ grains in the fluid ounce. Therefore, if the acid is dissolved in boiling water in the proportion of 6 grains to the ounce, some crystals are precipitated on cooling, and a saturated solution is ensured.

THE STUDY OF BACTERIOLOGY.

A MEMBER asks to be recommended a good textbook on bacteriology. He asks also where he could procure a complete set of slides showing the different micro-organisms at present recognised, also the best and cheapest microscope for this branch of study.

*** Sternberg's *Manual of Bacteriology* will probably best meet our correspondent's needs. Slides can be obtained from Professor Kral, Prague, Bohemia. Leitz microscope, with pantachromatic oil immersion lens, with Abbe's condenser, etc., will answer the purpose, and would cost about £18.

THE TITLE OF PHYSICIAN.

A CORRESPONDENT asks: Would it be considered unprofessional, incorrect, or peculiar, for a Member of a College of Physicians, not an M.D. and not practising as a general practitioner, to put on his doorplate "J. So-and-So, Physician," if he wishes it to be understood that he does not practise as a surgeon?

*** It would be very unusual for a Member of the Royal College of Physicians of London to put "Physician" on his doorplate, but there would be nothing unprofessional or incorrect about it. Owing to the fact that many Licentiates put the words "Physician and Surgeon" on their doorplates, we doubt whether our correspondent's suggested plan would have the result he desires.

THE GENERAL MEDICAL COUNCIL AND IMMORALITY.

M.A. writes: Would it be considered infamous conduct in a professional respect by the General Medical Council if a married medical man was convicted in a court of law of rendering a young girl pregnant whilst she was in his surgery waiting for medicine for her father?

*** If the person in question is convicted in a competent court, the General Medical Council could at once take action under Section XXIX of the Medical Act (1858). Not having power to administer oaths, the Council would not be in a position to try the primary charge.

REMOVAL OF SUPERFLUOUS HAIRS.

A. T. writes: I have a patient afflicted with growth of hair on face and chin. Is there any hospital or establishment in London that I could recommend her to go to? Beyond suffering from neuralgia, there is no other ailment she suffers from. Or is there any special line of treatment you could advise?

*** The best remedy is electrolysis, which is, however, not suitable for all cases, and is necessarily tedious and expensive. We are not aware of any establishment in London where such patients are received. Probably the best advice which could be given is to shave.

MILK, CREAM, BUTTER, AND TYPHOID INFECTION.

K. writes: I am now fighting with another typhoid epidemic which I have traced to the milk supplied from one particular farm. The farmer has been prohibited from sending milk into the town. He now converts his milk into butter and sends it to market, which is visited by our retailers. Thus, although he sends no milk into the town, still we may be consumers of his butter. Cream, from which butter is made, is caused to rise by heat in the West of England. The boiling point of milk is much lower than that of water, 180° to 190° I think. Would the heat necessary to make cream be sufficient to destroy typhoid germ? In other words would the boiling point of milk destroy typhoid germ?

*** A temperature of 140° F. continued for ten minutes destroys typhoid bacilli. Probably a single minute at 180° F. will have the same effect, but a longer exposure will render the process safer. Not a single drop of the milk should remain unheated, as one drop might reinoculate a whole batch. But heating the milk will not do in this case, as water used for washing utensils, etc., is probably the real source of infection.

THE DETERMINATION OF CAUSE OF DEATH.

A MEMBER B.M.A. writes: A child is found by its mother dead when she wakens in the morning. She goes for the police; the sergeant of police returns with the woman to her house, and is satisfied the child is dead, although, according to the woman's statement, the child was still warm. The woman, thinking this notification sufficient, does not call in her usual medical attendant. The police send for a medical man thirty-six hours afterward to hold a *post-mortem* examination. Was the sergeant of police qualified legally to be satisfied that on his visit the child was dead, without immediately calling to his aisistance a medical man? A coroner's inquest has been held, with the verdict of "overlaid accidentally," without the facts, as stated above, appearing in the evidence.

*** It is eminently desirable, but we believe not compulsory, that under the circumstances mentioned a medical man should be promptly called in.

LIVERPOOL VICTORIA FRIENDLY LEGAL SOCIETY.

DR. H. W. HAYDON (Wodebridge, Cornwall), writes: Many of the medical men in this neighbourhood act as medical officers to the Liverpool Victoria Legal Friendly Society. I should be glad to know if I am justified in accepting such an appointment in this town. I should also like to know whether the prohibition of the Royal College of Surgeons, England, would apply to this Society. I may say that I held the appointment for a short time, and resigned it because the other medical man residing in this town objected to the Society's agent canvassing indiscriminately for patients.

*** We believe this to be an insurance company which allows the insured on paying a slightly increased premium the advantage of medical attendance during sickness. What we have said, therefore, respecting the London and Manchester Assurance Company in recent numbers of the BRITISH MEDICAL JOURNAL would apply to the Liverpool Victoria Friendly Legal Society, and we entirely approve of our correspondent's conduct in declining to countenance any system of "touting" for patients by the agents of the Society.

We were not aware that the Royal College of Surgeons of England had expressed disapproval of any of these societies, but we believe the Royal College of Surgeons of Ireland has prohibited its licentiates from having any connection with medical aid societies, that is, with joint stock societies formed with no other object than to furnish the public with cheap medical attendance, and in which the principle of insurance is entirely absent.

They are, in fact, nothing more than speculations on the part of a section of the public by which dividends are procured for the shareholders by means of the degradation of necessitous members of the profession; the result is wholesale injury to the profession generally brought about by the unfair competition of such societies with individual practitioners in various parts of the country.

ANSWERS.

A COUNTRY PRACTITIONER.—The address of the Medical Defence Union is 20, King William Street, Strand, London, W.C.

D. C.—The volume from which the quotations our correspondent refers to are made is *A Code of Medical Ethics*, by Jukes de Styrap, M.K.Q.C.P. London: H. K. Lewis. Third Edition. 1890. Price 3s.

D.P.H. would probably find the information he requires in *Hospitals and Asylums of the World*. By H. C. Burdett. London: J. and A. Churchill. Vol. 1-4. £8 8s.

L.K.H.—If the person who issued the advertisement is known it would be well to communicate the facts to the bodies from which he holds his qualifications.

Obstinate Vomiting in Infancy.

G. H. K. writes: I would suggest abstinence from drugs, and the use of Benger's Food, which I believe saved the life of my own infant when suffering from this affection.

The Association of British Postal Medical Officers.

The name of the President of this Association—Mr. Iliffe, of Derby—was incorrectly given in our report of the annual meeting of the Association in the British Medical Journal, August 25th, p. 428.

Dysmenorrhœa.

W. P., M.B., writes: In answer to "A Member" (p. 516), I consider there is no objection to marriage, but if after six months she is not pregnant and still suffers from dysmenorrhœa, dilatation of the cervix uteri by Hegar's or laminaria should be tried.

Hammer-Toe.

Lieutenant Colonel, Army Medical Corps.—The causation and treatment of hammer-toe has been discussed frequently within the last few years, and we refer our correspondent to Mr. W. Anderson's paper, read before the Clinical Society[1]; to the correspondence which ensued in our columns; to papers read by Mr. William Adams before the Medical Society of London[2]; and to a paper by Mr. Swan, read before the Section of Surgery of the Royal Academy of Medicine.[3]

Shorthand for Medical Men.

Junior Member would do well to learn Pitman's system (phonography), which is now used by 95 per cent. of the shorthand writers in the kingdom, and has a considerable literature. The first number of a *Phonographic Record of Clinical Teaching* has been recently issued, containing "Glossitis," by Sir William Jenner, and also "The Treatment of Infantile Paralysis" and "The Ophthalmoscope in General Practice," by Dr. Gowers. For further information, "Junior Member" should apply to Dr. Neil, Warneford Asylum, Oxford, who is acting as secretary to an effort that is being made to unite medical phonographers with a view to further publications, and to the promotion of the use of shorthand in the profession.

Club Fees.

L. K.—The medical fees paid by club members to their medical officers vary in different parts of the country, but as a rule they are very inadequate. Generally speaking they seldom fall below 4s. per annum per member, especially in the metropolis, and such members are usually examined by the medical officer and certified by him to be in sound health before admission to the club, so that in reality he is only supposed to take absolutely healthy members at this rate. This amount does not include wives and children, who are not usually accepted as members of clubs, though of late years institutions have grown up which accept with the members the wives and children up to specified ages at inclusive rates, varying from 8s. per annum upwards. It is obvious that in this latter case the fees paid are still more inadequate than in the former. In all these appointments the medical officer usually is expected to supply the necessary medicines.

NOTES, LETTERS, Etc.

The *Wakefield Echo* publishes in full our report on the nursing and administration of the Wakefield Union Workhouse and our summary and comments thereon, which we trust will have beneficial influence.

A Consulting-Room Thief.

Dr. G. Washington Isaac (Gower Street) writes: The consulting room (hat is abroad; one visited my house on Monday last and took a valuable carriage clock from my chimneypiece. The plan of procedure was the usual one of asking to write a letter and seizing the opportunity.

The British Medical Journal Reports on Provincial Workhouses.

The Wakefield Infirmary was, writes the *Yorkshire Daily Post*, visited by a special commissioner of the British Medical Journal, who makes it the subject of a discriminating article in the current number of that publication. The writer's criticisms, in so far as they are unfavourable, serve to confirm the guardians in their purpose to erect a new building. When they do so they should, it is pointed out, at least double the present nursing staff, and admit a number of probationers in order that paupers may be employed for the ward service only. Until a few years ago there were about two nurses for about 180 patients; one other has since been added for night duty. The isolation block in which offensive cases are bedded has, the commissioner avers, "a look of neglect in all its appointments," its beds are unsuitable, and its atmosphere in the mornings is described as very foul. The other wards and much of the internal economy are praised, and it would seem that, considering the nursing resources, the institution is on the whole well managed. The children's ward is singled out for special commendation. With reference to the arrangement of the new building, the commissioner makes a valuable suggestion to the effect that the hospital for acute cases should be made a separate department under a trained matron.

Nursing in Workhouse Infirmaries.

In the issue of the British Medical Journal for August 18th, Dr. Rhodes, of Bidsbury, has, says the *Stockport Advertiser*, something to say about nursing and nurses in our various workhouses. Dr. Rhodes is chairman of the Northern Workhouse Nursing Association, and is thus able to speak with authority on all matters connected with that particular profession. He points out too often that Tom Hood's line with regard to the workhouse inmate, "He's only a pauper whom nobody owns," is justified even in modern times. He pleads eloquently for the necessity of providing the best and scientific nursing procurable for the sick paupers. The Northern Workhouse Association is doing its best to provide for this requirement, and we hope that some of the instances of carelessness mentioned in Dr. Rhodes's letter will become impossible as the years pass by.

Dr. Luys Again.

Dalziel's Telegraph Agency has sent out the following paragraph to the papers, and, strange to say, it appears in a good many of the leading journals:

"A series of very wonderful experiments which have just been concluded by Dr. Luys, of Paris, whose observations and discoveries in connection with magnetism and electricity in relation to hypnotism made a profound impression upon the scientific world some time ago, has led to a remarkable result. The latest discovery establishes the fact that cerebral activity can be transferred to a crown of magnetised iron in which the activity can be retained and subsequently passed on to a second person. Incredible as this may seem, Dr. Luys has proved its possibility by the experiments just referred to. He placed the crown, which in reality is only a circular band of magnetised iron, on the head of a female patient suffering from melancholia, with a mania for self-destruction, and with such success was the experiment attended that within a fortnight the patient could be allowed to go free without danger, the crown having absorbed all her marked tendencies. About two weeks afterwards he put the same crown, which meanwhile had been carefully kept free from contact with anything else, on the head of a male patient suffering from hysteria, complicated by frequent recurrent periods of lethargy. The patient was then hypnotised, and immediately comported himself after the manner of the woman who had previously worn the crown. Indeed, he practically assumed her personality, and uttered exactly the same complaints as she had done. Similar phenomena have, it is reported, been observed in the case of every patient experimented upon. Another experiment showed that the crown retained the impression acquired until it was made red hot."

We thought this imposture was scotched by the exposures which have been made of it. It is sad to see the papers which one may expect to be reasonably well informed on such subjects giving currency to these absurdities.

The Bites of Gadflies.

Dr. A. W. Hall (Warrington) writes: In reference to Surgeon-General Bidie's remarks in the British Medical Journal of August 18th, I can quite corroborate all he says on this subject as in July I was in the Highlands, and one warm, close, damp day, while on an excursion up a deep glen after specimens of royal fern, received most unpleasant attentions from these flies. The bites swelled considerably and caused intense irritation. I got most relief by pricking the centre of the swelling and squeezing out drops of serum and then applying liq. plumbi subac., pretty strong. This relieves the pain. It was over a week before the effects wore off.

Tannic Acid in Nasal Polypi.

Dr. Edward Rice (Oxford) writes: I have been much interested in the letter *re* the treatment of nasal polypi by Dr. Godfrey. In March, 1892, I was consulted by Miss A. W., aged 13, on account of deafness. Acting on the advice of her teachers she had been to see a medical man, who diagnosed adenoid growths in the naso-pharynx, and advised immediate operation. Her parents, hesitating to consent to this course, brought her to me as their usual attendant, and asked if I could suggest an alternative plan. It struck me as possible that an astringent application might be of service, and I proposed giving it a trial, explaining that it was only an experiment, as I was not aware it had been suggested before. The patient was a strong, healthy looking girl, but wearing the characteristic expression of nasal obstruction, and speaking with the peculiar twang. She was extremely deaf; indeed, she could only faintly hear the ticking of a watch on actual contact with either ear. On passing the finger behind the soft palate, the whole of the naso-pharynx was found to be choked with velvety polypoid masses. The treatment adopted was to pass a throat brush charged with glycerine of tannic acid, and carefully brush over the whole of the naso-pharynx two or three times a week, and twice daily to use a nasal douche of a solution of the same in gradually increasing strength, as the patient could tolerate it, until it was used diluted only with an equal part of water. Tolerance was soon established, though there was some distress at first, and by the end of June—that is, in four months, she was able to hear a watch clearly at 3 feet distance, her voice and aspect had completely changed, and she appeared quite well. The douche was continued at increasing intervals until the end of August, when all treatment was discontinued, and she now—July, 1894—remains quite well, and free from any trace of the growths. In March of this year her younger sister came to me suffering from precisely the same condition of things, and similar treatment was adopted and is still being carried out, with the result that so far she can now hear a watch at 2 feet instead of only on contact. Of course I know that the record of these two cases is not sufficient to establish the value of the treatment: but I throw out the suggestion as worthy of a trial, especially as the operation of clearing the naso-pharynx, besides being an unpleasant one for both patient and operator, is very far from being free from risk, and I venture to hope that others will be induced to try it, and give the profession generally the benefit of their experience through the medium of your valuable columns.

Dr. Charles Graham Grant (Albert Square, Commercial Road, E.) writes: Following up a hint from a correspondent in the British Medical Journal of July 7th, I injected tannic acid and water into the nasal polyp of one of my patients. I had removed with the snare

[1] British Medical Journal, June 4th, 1887, p. 1215.
[2] 3 Irish Medical Journal, March 24th, 1888, p. 645; and December 13th, 1890, p. 1386.
[3] British Medical Journal, March 26th, 1892, p. 661.

a previous crop, and he was rather glad to hear of a painless process. In three days the polypus immediately acted on had become gangrenous and my patient's right cheek and eyelids were enormously swollen with erysipelas, which took some days to reduce. Somewhat discouraged, my patient declined further injection, and said "he preferred a snare to a delusion."

THE OPIUM REPORT OF THE BRITISH MEDICAL JOURNAL.

A REPORT has, says the *Dundee Courier*, been issued by Mr. Ernest Hart on behalf of the Parliamentary Committee of the British Medical Association, and the anti-opiumists have their statements challenged at every point. Not only medical men, but civilians, contribute the 100 reports which Mr. Hart has edited, and their united voice is that opium is simply a necessity in all parts of India where the soil is malarious. As in the case of the drink traffic at home, these men fear that the prohibition of the sale of opium would only lead to the use of more harmful drugs; and they are emphatic in their belief that opium is used only in moderation, although they admit that the practice is widespread. Where doctors differ at home, it is unsafe for the uninitiated to hazard any opinion, and differences of climate and temperament render the Indian problem still more thorny. Opium is largely used by the inhabitants of the fen districts of England, and this fact goes far to prove the statement of Indian experts regarding the real need felt by the marsh-dwellers for some drug to counteract the disposition to malarial fever. The result of the inquiries of the Opium Commissioners will be of great interest to others than those concerned with missionary enterprise, but it is questionable, in view of the large revenue the Indian Exchequer has from the opium trade, whether the result will not be much like that of the Labour Commission, simply *Vox et præterea nihil*.

IT was justly supposed by the Editor of the BRITISH MEDICAL JOURNAL (says the *Daily Chronicle*) that a special value would attach to the evidence of men of trained observation and scientific habit of mind who passed a large part of their active life in constant association and intercourse with the natives of India. Accordingly a scheme of queries covering the whole ground was drawn up and despatched, and upwards of 100 reports were returned. The information contained in the reports was carefully summarised in a popular form by Mr. Ernest Hart, and published in the BRITISH MEDICAL JOURNAL, from which it is now reprinted in a handy pamphlet, *On the Use of Opium in India*, issued by Messrs. Smith, Elder, and Co. Mr. Hart does not argue either for or against the use of opium; he simply sets forth the facts as reported by his correspondents. The substantial results, however, are decidedly in favour of opium. We do not propose to enter argument at present, but merely to abstract the main points of fact and the general conclusions as set forth by Mr. Hart. In any case these form a most valuable contribution to the discussion of the question, and must be frankly reckoned with.....We commend this summary of results of a most useful investigation to the most serious consideration of all who take interest in this important question.

THE BRITISH MEDICAL JOURNAL has, says *To-day*, been at the trouble of collecting medical and judicial opinion upon the opium question. The evidence is above suspicion; it is the evidence of the only people capable of forming an opinion and it is practically unanimous. "The overwhelming majority," writes the BRITISH MEDICAL JOURNAL, "are decidedly in favour of opium, and they almost unanimously testify that it is a highly beneficial and useful stimulant." In damp and swampy districts its use guards against malaria and ague, and in times of famine it is the only thing that keeps the poverty-stricken Hindu alive. The ignorant and harmful fanatic never has brain enough to learn anything, or he would cease his silly crusade. Stimulants, among which tea and coffee take an important place, are among the greatest gifts of life Creator, and man has been taught by instinct to discover and use them. They are as necessary to life as beef and bread, and foolish faddists would deprive mankind of their inestimable benefits because a few weak people abuse the gift. We might as well cut out everybody's tongue because a large number of folks talk nonsense.

THE LEICESTER LESSON.

THE "lessons to be learnt from an epidemic of small-pox in an unvaccinated community" are, says the *Coventry Standard*—referring to Dr. Priestley's paper with this title published in the BRITISH MEDICAL JOURNAL of August 18th—"best learnt second-hand, and after Leicester has been good enough to furnish the illustration other towns will only have themselves to thank if, neglecting to profit by her experience, they are punished by having, some fine day, to learn those lessons for themselves. The facts are short, sharp, and conclusive, and will be found summarised in another column. They point their own moral—the importance of vaccination and notification, coupled with a prompt 'live' policy on the part of the local sanitary authority. From the figures given at the meeting of the board of guardians it will be seen that the number of vaccinated in Coventry is slowly creeping up."

GRATITUDE TO JENNER.

THE outbreak of small-pox in the metropolis, says the *Sun*, will cause hundreds to be revaccinated, but now many will give a thought to Dr. Edward Jenner, who, nearly a hundred years ago, discovered vaccination, and thus saved thousands from the ravages of one of the most loathsome diseases which has ever attacked mankind. It is of special interest in view of this scourge to visit a unique and valuable collection, now being exhibited, in the shape of relics, personal and literary, of the grand old man, which have been treasured and got together by Mr. Frederick Möckler, of Wotton-under-Edge. This is interesting, coming from the *Sun* newspaper, which has often seemed to be on the fence and disposed to back the lunatic antivaccinators.

A PROTEST FROM ROMNEY MARSH.

DR. RICHARD BEVAN (Lydd) writes: In Dr. Dickinson's address at the Bristol meeting, On the Diseases of Children, he expresses himself to this effect: "I have been told in that district notorious for ague—Romney Marsh—that there," etc. Now without being, or intending in any way to be offensive, I should like to ask: When, and by whom, he was told that Romney Marsh was notorious for ague? It is a prevalent idea among outsiders I know, for it is not long ago that I was asked to send to Guy's a patient suffering from this disease, in order to have the blood bacteriologically examined; but upon what foundation I am at a loss to imagine. I am certain that I have not seen a case of ague for ten years. I have been Medical Officer of Health for a large portion of Romney Marsh since 1881, and I do not remember to have recorded a single death from this disease among children or adults for the whole of period, from that date to now.

I know, Sir, that by repute we are classed among the Campagna at Rome and the fens of Lincolnshire, but I should like to tell all those whom it may concern that Romney Marsh at the present moment is one of the best drained, best cultivated, and most salubrious portions of Kent, or even of England. So much has the subsoil water been lowered within the last thirty years, by deepening the ditches, dykes, sewers, and widening the outfalls, that owners of land are actually complaining of the loss of pasturage, and consequent decrease in the value of land, due to this self-same lowering of the water level. That the three districts for which I am Medical Officer of Health are not unhealthy, may be understood when I say that the death-rates were 6.4, 8.9, and 14.4 per 1,000 last year.

It is only by the circulation and publicity of uncontradicted statements such as that made by Dr. Dickinson, that the stigma of unhealthiness still sticks to the district and neighbourhood, and it is with the object of averting this, and its damaging effects, that I wish to give expression to my most vigorous protest.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(**A**) Mr. W. R. Ackland, Clifton. (**B**) Mr. C. H. Byers, London; Dr. H. W. Bing, Chester; Mr. H. Beaumont, Wakefield; Mr. H. T. Butlin, London; Mr. A. H. Buck, Plymouth; Dr. R. S. Batterbury, Berkhamsted. (**C**) Professor E. Crookshank, London; Professor R. Carmody, London; Country Practitioner. (**D**) Dr. N. Dalton, London; Mr. A. De Terrant, London; Dr. H. Davis, Callington; Mr. L. F. Dods, London; Mr. J. H. Drysdale, London; Mr. W. Duncan, London. (**E**) Mr. Elgar, Ashford; *Electrical Review*, the Editor of, London; Mr. E. H. Ellison, London; Mr. J. Ewens, Bristol; Mr. T. Elworthy, Hastings. (**F**) Dr. E. L. Fox, Plymouth; Messrs. G. Fottrell and Sons, Dublin. (**G**) J. C. M. Given, M.B., Liverpool; Dr. E. Gibbon, South Shields; Dr. W. R. Gowers, London; Mr. F. Griffith, London; P. R. Griffiths, M.B., Cardiff. (**H**) Mr. W. H. Halfrey, London; Mr. E. J. Hawes, Liverpool; Dr. J. F. Haines, London; Dr. H. Head, London; Mr. C. T. W. Hirsch, Fiji; Mr. R. Hartley, Thirsk; W. H. Hewlett, M.B., Wivenhoe. (**I**) In Corpore Sano; Indignant; Dr. C. R. Illingworth, London. (**J**) Mr. J. Jack, Glasgow. (**K**) Dr. G. H. Kenyon, Doncaster; Mr. A. E. Kennedy, Plaistow. (**L**) Locum. (**M**) Dr. W. Murrell, London; Dr. G. H. Mackenzie, Edinburgh; Member; Mr. G. Morgan, Brighton; Dr. W. F. Menzies, Rainhill; Dr. J. M. H. Martin, Blackburn; Mr. G. E. Marshall, Hertford; Mr. G. H. Makins, London; Medical Officer. (**N**) Mr. I. Newton, Tonbridge. (**P**) Mr. G. C. Peachey, Wantage; Provincial M.R.C.P.Lond.; Practitioner; Mr. H. P. Pike, Gloucester; Dr. C. E. Pursley, Birmingham. (**Q**) Q. (**R**) Dr. J. Reynolds, London; Mr. J. Rogerson, London; Mr. F. L. Rochin, London; Dr. B. Rogers, Clifton; Mr. H. Ramsford, London; Dr. A. Ruffer, London; Dr. A. Rosenau, Bad Kissingen; Dr. J. M. Rhodes, Didsbury; R. J.; Mr. V. Roch, Dublin. (**S**) Mr. F. W. Short, London; Sussex County Hospital, the Secretary of, Brighton; R. R. Sutter, M.B., London; Mr. J. Sanger, London; Dr. W. Steele, London; E. A. Shaw, M.B., Yokohama; Sir William Stokes, Dublin; R. H. Shaw, M.B., Great Yarmouth; Mr. W. T. Smith, London; Messrs. Street Brothers, London; Mr. H. E. Staddon, Ipswich; G. C. Sandford, M.B., Birmingham; R. H. Shaw, M.B., New Mills. (**T**) Mr. J. G. Turner, London. (**U**) Up to Date. (**W**) Dr. R. T. Williamson, Manchester; Mr. W. J. Welch, London; F. J. Webb, M.B., Manchester; W. P., M.B. (**Y**) Mr. G. T. Yates, Halstead. (**Z**) Zeta; etc.

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A REPORT ON THE PRESENT STATE OF KNOWLEDGE RESPECTING THE ETIOLOGY AND PREVENTION OF DIPHTHERIA.

Presented on behalf of the English Committee to the Eighth International Congress of Hygiene and Demography at Buda-Pesth.

By EDWARD SEATON, M.D., F.R.C.P.,
Medical Officer of Health to the Surrey County Council.

Introduction.

The following report is as far as possible based on lines suggested by the Hungarian Committee on Diphtheria, and communicated to the Presenter by a letter from the Secretary-General dated February 15th, 1894. It has been practically impossible to present it in the form of a committee report for the reason that, apart from the Medical Department of the Local Government Board (whose provisional conclusions are here restated), those who are authorities on this important subject in Great Britain are for the most part working at a distance from each other, and under conditions which do not admit of or provide for committee research and report. The Presenter has been in personal or written communication with those whose names are mentioned in the report, and whose labours have done much to elucidate the difficult subject of the etiology and possible prevention of diphtheria. Although solely responsible for its mode of presentation, he may claim for the report that it represents views that are generally accepted in Great Britain.

Attention is recalled to the statistical facts, from the English Registrar-General's reports, brought forward by the Presenter at the seventh Congress in London in 1891. They were those exhibited in tabular form by Dr. Thorne Thorne, C.B., F.R.S., medical officer of the Local Government Board, in the Milroy Lectures before the Royal College of Physicians in 1891 (since published in a separate volume by Macmillan and Co., London). These facts show that in England and Wales the death-rate in the two last decennia, 1871-80, and from 1881 up to 1889, has steadily declined from 22.6 to 17.8 per 1,000 persons living; that the death-rate from zymotic diseases during the same period had decreased from 5.4 to 2.4; that from enteric fever from 0.37 to 0.17. The decline in the death-rates had been contemporaneous with extensive public and private sanitary works for improved water supply, drainage, and sewage-disposal works. The death-rate from diphtheria, on the contrary, did not appear to be subject to the same law, there having been an actual rise in the death-rate from this disease synchronously with the fall in the general and zymotic death-rate. The prevalence of influenza of late years has interfered with the steady progressive decline in the death-rate from all causes and from zymotics generally; at the same time the increase in the diphtheria death-rate has become more marked. Taking the twelve years 1881-92, the Registrar-General's figures for all England yield the following returns of mean annual death-rates:

Diphtheria Deaths per Million Persons Living.

	1881-3.	1884-6.	1887-9.	1890-2.
England and Wales	144	166	173	192
London	213	227	315	377

The above figures are from a table specially prepared by Mr. A. C. Waters, of the Registrar-General's Department, at the suggestion of the Presenter, mainly for the purpose of showing changes of incidence in the disease as distributed throughout England and Wales. These tables are given in complete form below.

The question of the relation of diphtheria to "sanitary conditions" has of late been very much the subject of discussion in England. The republication by Sir William Jenner of his belief that the disease is in the main independent of sanitary conditions or hygienic circumstances, together with Dr. Wilks's judicially expressed opinions to the same effect, have caused many who were disposed to class diphtheria with enteric fever as a filth or sewage disease to revise their experiences. Sir George Johnson's emphatically expressed opinion (which is opposed to those of Sir William Jenner and Dr. Wilks) carries the weight which naturally attaches to the view of an eminent and experienced practising physician. Dr. Thorne Thorne, Dr. George Turner, and other authorities write and speak cautiously on the subject, probably wishing not to discourage the idea that insanitary conditions may in some way help the development or spread of diphtheria, although their *modus operandi* cannot easily be explained. Included among such conditions are those which Mr. Adams, of Maidstone, has described, and which relate to the conditions of the soil in respect of movements of subsoil water and its impregnation with animal or vegetable organic matters. Mr. Adams will give the result of three years' additional observations since the publication of his important observations "on the relationship between the occurrence of diphtheria and the movement of the subsoil water" at the seventh International Congress of Hygiene and Demography, 1891. It is greatly to be desired that research work of the kind which Mr. Adams has with so much ability and perseverance inaugurated should be continued and carried out on a large scale.

The low tide in summer is always attended by a decrease in diphtheria either in its volume or violence—that is, quantity or quality, whereas the interposal of a higher tide during the hot season is always attended on or followed by an increase of diphtheria. In sum total that the germ of diphtheria appears to reside and multiply in the subsoil, and that its dispersal into the air follows meteorological events.

The main facts connected with the prevalence of diphtheria in England and Wales, already established at the time of the last Congress, were these:

1. That diphtheria, formerly a disease of the country, was becoming more a disease of towns.

2. That apart from the varying character of the populations in respect of their being "chiefly urban" or "chiefly rural," the mortality of the disease was shown to be much heavier in some parts of England and Wales than in others. (Dr. Longstaff's Map, 1855-80, referred to at the seventh International Congress.)

3. That there is an influence which is now referred to as "school influence," and which, so far as our knowledge extends at present, must be regarded as a potent agency in the spread and even the development of diphtheria.

Clearly from the point of view of the international investigation of this disease, it is essential to ascertain if possible the sources or reasons of the uneven or unequal distribution of the disease in different countries.

It is important to note that since the publication of Dr. Longstaff's map, there have been variations in the distribution of the disease in England and Wales. This will be shown by statistics relating to the twelve years 1881-92, which have been arranged in four equal periods, and which are illustrated by tables, maps, and charts.

The incidence of the disease has become relatively much heavier in London and the South-Eastern counties, and, on the other hand, much lighter in North Wales and parts of England previously noted for high comparative mortality from the disease. It must, of course, be borne in mind that Dr. Longstaff's map bears reference to a period of twenty-six years, and that the statistics which are now presented relate only to four periods of three years each. The basis of observation is comparatively small in the latter periods. They are chiefly important as tending to show varying degrees in the incidence of diphtheria as between counties or groups of counties, just as there has been observed varying incidences as between rural and urban districts. The chief significance of this "varying" quality in the observed local incidence of the disease is that it would appear to favour the view that diphtheria is mainly dependent on the habits of the population which are liable to change rather than upon conditions which are described as "telluric." (These telluric conditions change in towns where drainage operations have dried the soil, and where in consequence, as Buchanan and Bowditch first showed, phthisis mortality has been markedly reduced. There is nothing, however, in the changed incidence of diphtheria to suggest analogy in this respect with phthisis. But this part of the subject urgently needs further and systematic inquiry.)

The habits of the population have undergone very great changes in England during the periods 1860-1894. The most important of these have been the tendency of the "general population" to aggregate in towns, and for the "child popu-

TABLE A.

Mean Annual Death-rates per Million Living from Diphtheria in England and Wales, and in each Registration County in four Periods of Three Years each.

	1881-3	1884-6	1887-9	1890-2
England and Wales	141	166	173	192
London	213	227	315	377
Surrey	193	310	196	247
Kent	225	276	211	189
Sussex	162	238	229	311
Hampshire	310	251	187	164
Berkshire	193	182	199	180
Middlesex	235	253	289	235
Hertfordshire	185	346	157	209
Buckinghamshire	108	186	191	176
Oxfordshire	86	72	91	166
Northamptonshire	112	128	125	91
Huntingdonshire	195	211	156	153
Bedfordshire	300	239	139	186
Cambridgeshire	208	300	278	120
Essex	282	289	263	361
Suffolk	109	170	131	255
Norfolk	162	241	144	176
Wiltshire	86	139	139	155
Dorsetshire	84	228	163	116
Devonshire	107	119	136	128
Cornwall	153	208	139	110
Somersetshire	151	182	127	101
Gloucestershire	61	117	81	167
Herefordshire	196	69	104	126
Shropshire	232	145	147	166
Staffordshire	78	98	69	83
Worcestershire	99	101	113	145
Warwickshire	129	121	129	123
Leicestershire	63	113	123	95
Rutlandshire	58	103	15	121
Lincolnshire...	139	261	104	103
Nottinghamshire	223	210	94	89
Derbyshire	90	77	102	163
Cheshire	111	125	111	138
Lancashire	100	127	203	188
West Riding	98	111	107	122
East Riding	101	70	86	107
North Riding	85	87	128	99
Durham	63	78	107	135
Northumberland	84	109	129	173
Cumberland...	67	89	95	117
Westmoreland	62	97	122	146
Monmouthshire	134	120	274	236
South Wales...	119	103	97	125
North Wales...	202	209	112	122

TABLE B.

Proportional Death-rates from Diphtheria in each Registration County in four periods of three years, the rate in England and Wales being taken as 100. (Rates which exceed the Standard are in Roman: rates which are below the Standard are in Italic.)

	1881-3	1884-6	1887-9.	1890-2
England and Wales	100	100	100	100
London	148	137	182	197
Surrey	134	186	113	129
Kent	156	166	122	99
Sussex	113	143	132	162
Hampshire	216	151	108	86
Berkshire	134	109	115	94
Middlesex	163	212	167	123
Hertfordshire	129	208	91	109
Buckinghamshire	75	112	110	92
Oxfordshire	60	43	53	87
Northamptonshire ...	78	77	72	47
Huntingdonshire	136	127	90	80
Bedfordshire	209	126	80	97
Cambridgeshire	145	180	161	63
Essex	196	162	152	188
Suffolk	76	102	76	133
Norfolk	113	145	83	92
Wiltshire	60	84	80	81
Dorsetshire	58	137	94	61
Devonshire	74	72	79	67
Cornwall	106	125	80	57
Somersetshire	105	109	73	53
Gloucestershire	42	70	47	87
Herefordshire	136	42	60	66
Shropshire	161	87	85	87
Staffordshire	54	59	40	43
Worcestershire	69	61	65	76
Warwickshire	90	73	75	64
Leicestershire	44	68	71	50
Rutlandshire	40	62	9	63
Lincolnshire...	97	157	60	54
Nottinghamshire	155	126	54	46
Derbyshire	63	46	59	85
Cheshire	77	75	64	73
Lancashire	70	76	117	98
West Riding	68	67	62	64
East Riding	70	42	50	56
North Riding	59	52	74	53
Durham	44	47	62	70
Northumberland	58	66	75	90
Cumberland...	47	54	55	61
Westmoreland	43	58	70	76
Monmouthshire	93	72	158	123
South Wales...	83	62	56	65
North Wales	140	126	65	64

lation" to be aggregated in schools. There have been other powerful influences at work. There has been the institution of medical officers of health, appointed, however, under such widely different conditions that it may be fairly said that whereas in some districts admirable medical preventive work has been, and is being, carried on with excellent results, in others the value of such work is not yet understood or appreciated. Then there has been the introduction of the Notification Infectious Diseases Act, and in some large populous centres an attempt to control the spread of diphtheria by hospital isolation.

These changes, and the way in which they appear to have operated, will now be described.

The first of these changes, namely, the appointment of medical officers of health, is of fundamental importance. It is not easy to give an idea of the great variety and the apparently different intentions of these appointments in a short statement. It will, however, be understood that there is a vast difference between the appointment of officers under conditions which make preventive medical work possible as a livelihood, and those, on the other hand, which make it practically impossible. Apart from the intentions of the office, which for various reasons differ according to the kind of local governing body, there is the complicating circumstance of "the differing size of local government areas and populations," the variations of which are most striking—variations, for example, from populations of 500 to those of over 500,000, from areas of a few acres to many square miles.

The Presenter of this report has described, in an address delivered at the request of the British Medical Association in 1891 on Public Medicine, the effect of these varied conditions of local government in respect of preventive medical work. Nowhere is that effect more apparent than in the case of diphtheria, the prevention of which is to be looked for by the direct agency of what is essentially medical preventive work.

The prime importance of this consideration is further evident by observation of the working of the Notification Infectious Diseases Act. This is an Act to render compulsory the notification of epidemic diseases which may be adopted by any sanitary authority in England. It is in force in London and all the large towns, and it is now becoming very generally adopted in small towns and in country districts. Throughout England it may be said to be already very generally in operation. But although "in operation" its efficaciousness differs widely according to the character of the appointments of the medical officers of health. This point (which may be shown to be of great importance with reference especially to diphtheria) has been made the subject of special study by the Presenter, whose observations have been the subject of several official reports to the Surrey County Council during 1891-3.

TABLE C.

The Registration Counties of England and Wales, arranged in the order of their Diphtheria Death-rates, in each of four triennial periods. (The figure preceding each county is the mean annual rate per million, and the figure following each county is the percentage which that rate bears to the rate for England and Wales in the same period.

1881-83.				1884-86.				1887-89.				1890-92.			
No.	Rate.	—	Per-centage.	No.	Rate.	—	Per-centage.	No.	Rate.	—	Per-centage.	No.	Rate.	—	Per-centage.
1	58	Rutlandshire	40	1	69	Herefordshire ...	42	1	15	Rutlandshire	[illegible]	1	[illegible]	Staffordshire ...	[illegible]
2	61	Gloucestershire ...	42	2	70	East Riding of York.	42	2	69	Staffordshire ...	[illegible]	2	[illegible]	Nottinghamshire	[illegible]
3	62	Westmoreland ...	43	3	72	Oxfordshire ...	43	3	84	Gloucestershire ...	[illegible]	3	[illegible]	Northamptonshire ...	[illegible]
4	63	Leicestershire ...	44	4	77	Derbyshire ...	46	4	86	East Riding of Yorkshire	[illegible]	4	[illegible]	Leicestershire ...	[illegible]
5		Durham ...		5	78	Durham ...	47	5	94	Oxfordshire ...	[illegible]	5	[illegible]	Nth. Riding of Yorkshire	[illegible]
6	67	Cumberland	47	6	87	Nth. Riding of Yorkshire	52	6	94	Nottinghamshire ...	[illegible]	6	[illegible]	Somersetshire ...	[illegible]
7	78	Staffordshire	54	7	89	Cumberland ...	54	7	95	Cumberland	[illegible]	7	[illegible]	Lincolnshire ...	[illegible]
8	84	Dorsetshire ...	58	8	97	Westmoreland ...	58	8	97	South Wales	[illegible]	8	[illegible]	East Riding of Yorkshire	[illegible]
9	84	Northumberland ...	58	9	98	Staffordshire ...	59	9	102	Derbyshire	[illegible]	9	[illegible]	Cornwall ...	[illegible]
10	85	North Riding of Yorkshire	59	10	101	Worcestershire ...	61	10	[illegible]	Herefordshire	[illegible]	10	[illegible]	Dorsetshire ...	[illegible]
11	86	Oxfordshire ...	60	11	103	Rutlandshire ...	62	11	[illegible]	Lincolnshire	[illegible]	11	[illegible]	Cumberland ...	[illegible]
12		Wiltshire		12		South Wales ...		12	107	West Riding of Yorkshire		12	[illegible]	Cambridgeshire ...	[illegible]
13	90	Derbyshire	63	13	109	Northumberland ...	65	13	127	Somersetshire ...	[illegible]	13	[illegible]	Rutlandshire ...	[illegible]
14	98	West Riding of Yorkshire	68	14	111	West Riding of Yorkshire	67	14	111	Cheshire	[illegible]	14	[illegible]	West Riding of Yorkshire	[illegible]
15	99	Worcestershire ...	69	15	113	Leicestershire ...	68	15	112	North Wales ...	[illegible]	15	[illegible]	North Wales ...	[illegible]
16	100	Lancashire	70	16	117	Gloucestershire ...	70	16	113	Worcestershire ...	[illegible]	16	[illegible]	Warwickshire ...	[illegible]
17	101	East Riding of Yorkshire ...	70	17	119	Devonshire ...	72	17	122	Westmoreland ...	[illegible]	17	[illegible]	South Wales ...	[illegible]
18	107	Devonshire ...	74	18	120	Monmouthshire ...	73	18	123	Leicestershire ...	[illegible]	18	[illegible]	Herefordshire ...	[illegible]
19	108	Buckinghamshire ...	75	19	121	Warwickshire ...	73	19	125	Northamptonshire ...	[illegible]	19	[illegible]	Devonshire ...	[illegible]
20	109	Suffolk	76	20	125	Cheshire ...	76	20	127	Somersetshire ...	[illegible]	20	[illegible]	Durham ...	[illegible]
21	111	Cheshire	77	21	127	Lancashire ...	76	21	128	Nth. Riding of Yorkshire	[illegible]	21	[illegible]	Cheshire ...	[illegible]
22	112	Northamptonshire ...	78	22	128	Northamptonshire ...	77	22	[illegible]	Warwickshire ...	[illegible]	22	[illegible]	Worcestershire ...	[illegible]
23	119	South Wales	83	23	139	Wiltshire ...	84	23	[illegible]	Northumberland ...	[illegible]	23	[illegible]	Westmoreland ...	[illegible]
24	129	Warwickshire	90	24	145	Shropshire ...	87	24	[illegible]	Suffolk	[illegible]	24	153	Huntingdonshire ...	[illegible]
25	134	Monmouthshire ...	93					25	[illegible]	Devonshire	[illegible]	25	155	Wiltshire	[illegible]
26	139	Lincolnshire	97		166	England and Wales ...	100	26		Bedfordshire ...		26	162	Derbyshire	[illegible]
	144	England and Wales ...	100	25	170	Suffolk ...	102	27	139	Wiltshire	[illegible]	27	166	Hampshire	[illegible]
				26		Berkshire ...		28		Cornwall	[illegible]			Oxfordshire	[illegible]
27	151	Somersetshire	105	27	182	Somersetshire ...	109	29	144	Norfolk	[illegible]			Shropshire	[illegible]
28	153	Cornwall	106	28	186	Buckinghamshire ...	112	30	147	Shropshire	[illegible]			Gloucestershire ...	[illegible]
29	162	Sussex	113	29	208	Cornwall ...	125	31	156	Huntingdonshire ...	[illegible]			Northumberland ...	[illegible]
30		Norfolk		30	209	Bedfordshire ...	126	32	157	Hertfordshire	[illegible]			Buckinghamshire ...	[illegible]
31	185	Hertfordshire	129	31		North Wales ...		33	163	Dorsetshire	[illegible]			Norfolk	[illegible]
32	193	Surrey	134	32	210	Nottinghamshire ...	127					34	180	Berkshire	[illegible]
33		Berkshire		33	211	Huntingdonshire ...			173	England and Wales ...	100	35	186	Bedfordshire	[illegible]
34	195	Huntingdonshire ...		34	227	London ...		34	187	Hampshire	108	36	188	Lancashire	[illegible]
35	196	Herefordshire	136	35	228	Dorsetshire	132	35	191	Buckinghamshire ...	110			Kent	[illegible]
36	202	North Wales	140	36	238	Sussex	143	36	196	Surrey	113	192		England and Wales ...	100
37	208	Cambridgeshire	145	37	241	Norfolk	145	37	199	Berkshire	115				
38	213	London	148	38	253	Hampshire	151	38	203	Lancashire	117	209		Hertfordshire	[illegible]
39	223	Nottinghamshire ...	155	39	281	Lincolnshire	167	39	211	Kent	[illegible]			Middlesex	[illegible]
40	225	Kent	156	40	269	Essex	162	40	229	Sussex	[illegible]			Monmouthshire ...	[illegible]
41	232	Shropshire	161	41	276	Kent	166	41	283	Essex	[illegible]				
42	235	Middlesex	163	42	300	Cambridgeshire ...	180	42	274	Monmouthshire ...	[illegible]				
43	282	Essex	196	43	310	Surrey	185	43	278	Cambridgeshire ...	[illegible]				
44	300	Bedfordshire	209	44	346	Hertfordshire	208	44	289	Middlesex	[illegible]				
45	340	Hampshire	236	45	353	Middlesex	212	45	315	London	[illegible]				

The attempt to control the spread of diphtheria by hospital isolation should also be considered in this connection. The results as yet have not been encouraging. The proposal to admit diphtheria cases to isolation hospitals in London was moved by the Presenter at the Metropolitan Asylums Board in 1887. He referred at that time to the action of the New York Board of Health in this direction as experimental. Hitherto, as Dr. Sykes, in his able and interesting report presented recently to the Vestry of St. Pancras has shown, the results in London have not apparently been favourable; and Dr. Sweeting, of the Local Government Board, has given certain reasons (in an important contribution to the *Proceedings* of the Epidemiological Society) which partially account for this.

From observations in the country there is good reason for assigning want of success similar to that in London to conditions which spring from the differing nature in the medical officers' appointments already referred to. A report recently made by the Medical Officer of Health to the Guildford Rural Sanitary Authority (Mr. W. W. Lake) tends to show that medical inspection of school children is absolutely needful for diphtheria prevention, the means of proper hospital isolation being a further valuable and even necessary aid to its prevention.

The significance of the change which has come through the operation of the Elementary Education Act will be gathered from the provisional conclusions thus stated by Dr. Thorne Thorne in the book already referred to, which embodies the researches of Mr. W. H. Power and the medical department of the Local Government Board generally:

"That age has an important influence on the incidence of diphtheria, the greatest number of cases actually and relatively both fatal and non-fatal, occurring at the ages 3 years to 12 years.

"That prevalences of recognised diphtheria are commonly associated in their beginning, during their continuance, and after their apparent cessation, with a large amount of ill-defined throat illness, and that fatal attacks of diphtheria in many localities get registered as croup, laryngitis, etc.

"That there is reason to believe that attacks of so-called sore throat exhibit under certain favouring conditions a progressive development of the property of infectiousness culminating in a definite specific type which is indistinguishable from true diphtheria.

"That, apart from susceptibility, 'school influence' so-called tends to foster, diffuse, and enhance the potency of diphtheria, and this, in part at least, by the aggregation of children suffering from that 'sore throat' which commonly is prevalent, antecedent to, and concurrently with definite diphtheria."

A very important memorandum by Mr. Shirley Murphy, Medical Officer of Health for the Administrative County of London, and President of the Epidemiological Society, has quite recently been published. He arrives at the following conclusions:

TABLE D.

Table showing the Numerical Order in which the Registration Counties of England and Wales stand when arranged in the Order of their Diphtheria Death-rates in each of Four Triennial Periods, the County with Lowest Rate in each Period being indicated by 1, and with the Highest by 45. (Counties whose Rates were Below the General English Rate in any Period are Numbered in Italics in the Corresponding Column.) When Two or more Counties have Equal Rates, the Numbers under which they are Bracketted are shown.

	1881-3.	1884-6.	1887-9.	1890-2.
London	38	34	45	45
Surrey	32, 33	43	36	41
Kent	40	41	39	37
Sussex	29, 30	36	40	43
Hampshire	45	38	34	27
Berkshire	32, 33	26, 27	37	34
Middlesex	42	45	44	39
Hertfordshire	31	44	32	38
Buckinghamshire	19	28	35	32, 33
Oxfordshire	11, 12	8	5	28, 29
Northamptonshire	22	22	19	3
Huntingdonshire	34	33	31	24
Bedfordshire	44	30, 31	26, 27, 28	35
Cambridgeshire	37	42	43	13
Essex	43	40	41	11
Suffolk	20	25	24	42
Norfolk	29, 30	37	29	31, 33
Wiltshire	11, 12	23	26, 27, 28	25
Dorsetshire	8, 9	35	33	10, 11
Devonshire	18	17	25	19
Cornwall	28	29	26, 27, 28	9
Somersetshire	27	26, 27	20	6
Gloucestershire	1	16	3	30
Herefordshire	35	1	10, 11	18
Shropshire	41	24	30	28, 29
Staffordshire	5	9	2	4
Worcestershire	15	10	16	15
Warwickshire	21	31	22, 23	16
Leicestershire	4, 5	15	18	7
Rutlandshire	1	11, 12	1	1
Lincolnshire	26	39	10, 11	1
Nottinghamshire	39	32	14	2
Derbyshire	13	4	9	26
Cheshire	21	20	14	21
Lancashire	16	21	38	36
West Riding	14	7	12, 13	14, 15
East Riding	17	3	4	8
North Riding	10	6	21	5
Durham	4, 5	5	12, 13	20
Northumberland	8, 9	13	23	31
Cumberland	6	7	7	10, 11
Westmoreland	3	8	17	22
Monmouthshire	25	28	42	40
South Wales	23	11, 12	8	17
North Wales	36	30, 31	15	14, 15

"That there has been throughout England and Wales relating to the diphtheria mortality at all ages a considerably augmented incidence of the disease upon the population aged above 3 and under 10 years in the decennium 1871-80, compared with that in the decennium immediately preceding. And in the case of England and Wales as a whole that increase has been maintained throughout the succeeding decennium 1881-90.

"That when croup and diphtheria are taken together it is found that in both the periods 1871-80 and 1881-90 there was a relative increase of the disease at school ages (3 to 10) as compared with 1861-70.

"That relatively this rise in the death-rate at school ages has been most marked in London, where the influence of school attendance might be expected to be most felt. The Education Act came into operation in 1870, and from that time children have been aggregated in an increasing degree year after year in schools under conditions in which opportunity for the communication of infectious disease from one to another necessarily occurs."

The basis of the difficulty in the working of the Notification Act so far as diphtheria prevention is concerned has been referred to. It is well that attention should be chiefly concentrated on that. It is, however, necessary to speak also of the difficulties connected with the early and accurate diagnosis of cases of diphtheria. Those difficulties, so far as they relate to the examination of school children, have been overcome by medical officers appointed under fairly favourable conditions. The way in which the examination may be carried out systematically has been described by the Medical Officer of Health for the Guildford Rural Sanitary Authority in the report referred to. The further and more difficult question of bacteriological examinations in certain doubtful cases may at this point be discussed by the light of Dr. Sidney Martin's most valuable report, here introduced.[1]

"It was shown by the researches of Roux and Yersin that the bacillus diphtheriæ (Loeffler) produced in veal peptone bouillon, a chemical poison (presumably of a ferment nature), which, when injected in small doses into rabbits, produced paralysis, and sometimes wasting and diarrhœa. These results were in great part confirmed by Brieger and Fraenkel. This poison was sensitive to heat and to light, and could only with difficulty be preserved in an active state.

"My own observations were directed to the nature and action of the chemical bodies which were:

"1. Found in the tissues, blood, spleen, kidneys, of patients who died of diphtheria.

"2. Found in the diphtheritic membrane.

"3. Produced by the bacillus diphtheriæ when this was grown in a suitable medium, not in a peptone bouillon but in a liquid medium containing albuminous bodies like those existing in the serum.

"The methods used are fully described in the papers referred to. A chemical investigation of the tissues of patients dead of diphtheria showed the presence of two classes of poisons, namely, albumoses and an organic acid. Both these classes of bodies are specific, since when injected intravenously into rabbits they produce a characteristic and widespread degeneration of the nerves, motor, sensory, and sympathetic (visceral). But they differ in certain particulars; whereas the albumoses in multiple doses (that is, two or three successive doses intravenously) always produce fever and a progressive paralysis with a widespread nerve degeneration, and in large doses, wasting and diarrhœa; the organic acid does not produce fever, wasting or diarrhœa, but only a moderate degree of nerve degeneration.

"The nerve degeneration is evident in from 7 to 10 days after the injection of the poisons.

"The activity of these bodies is much less than that of the 'ferment' separated from cultures of the bacillus diphtheriæ by Roux and Yersin; but similar bodies to those found in the tissues of patients dead of diphtheria are obtained from cultures of the bacillus in a solution of alkali albumen made from serum. The albumoses and organic acid obtained from the cultures have the same physiological action as those obtained from the tissues of diphtheritic patients; the albumoses produce the same paralysis and the same kind of nerve degeneration. These facts therefore constitute a direct proof that the bacillus diphtheriæ is the cause of diphtheria.

"The albumoses are products of digested proteids, and are absent from normal tissues; their presence shows that a process of digestion of the proteids of the body has been going on during the course of the disease.

"The digesting agent or ferment is not the bacillus itself directly, since this does not invade the tissues of the body, nor are the albumoses directly absorbed from the diphtheritic membrane in the throat and larynx, since the amount found in the body bears no proportion to the amount of membrane present during life (see papers quoted for details). Chemically the diphtheritic membrane consists of fibrin, which is undergoing digestion into albumoses and the organic acid described, but it also contains a chemical poison which in infinitesimal doses and in a single dose produces paralysis in rabbits with the characteristic nerve degeneration. The albumoses produce the same effect only in multiple doses. The chemical poison found in the diphtheritic membrane acts

[1] *On the Mode of Action of the Bacillus Diphtheriæ.* By Sidney Martin, M.D. Published in the Goulstonian Lectures delivered before the Royal College of Physicians of London in 1892, and in the Report of the Medical Officer of the Local Government Board. (1891-92.)

like that described by Roux and Yersin, that is, like a ferment. It is suggested that the pathological process in diphtheria is as follows:—The bacillus diphtheriæ produces a false membrane of fibrin in the surface of the mucous membrane, and exudes a poison which is a proteolytic ferment. This ferment is absorbed and by digesting the proteids of the body, chiefly those of the spleen, forms albumoses and an organic acid which are the specific agents producing the characteristic symptoms of the disease. Finally, it may be said that the albumoses present in the spleen of diphtheritic patients are characteristic of the disease; by their special action a diagnosis is possible between cases of non-diphtheritic (?) croup, septic infection through the pharynx, with formation of false membrane on the one hand and cases of true diphtheria on the other."

Dr. Martin would add to the last paragraph that the diagnosis of early cases will, he feels sure, rest in the future on the cultivation of the "bacillus diphtheriæ," and that this can be done with facility as soon as our backward country finds the means.

Dr. Donkin, who has for many years studied the subject of the specificity of diphtheria and croup, says in his work on the medical diseases of children:—

"There may be some hope that the microscopical detection, by staining methods, of the Klebs-Loeffler bacillus, corroborated by culture observations, may come into general clinical use, and thus afford some means of accurately distinguishing between diphtheritic and non-diphtheritic membranous deposit. Baginsky has reported cases where by this means he differentiated two classes of membranous deposits, the one, marked by the presence of the bacillus diphtheriæ, with a mortality of 50 per cent., the other, marked by streptococci and other organisms, being always of favourable event. The time is, however, probably far distant when the non-discovery of the presumably specific bacillus may be regarded as a satisfactory negative test of diphtheria, or justify us in disregarding other possible indications of this disease."

It is plain that the early and accurate diagnosis of the disease is all-important as a measure of prevention. At the present time it is to be feared that it is necessarily uncertain, and in some cases it depends to some extent on the significance attached to the notification of cases in official quarters. In this connection the Presenter would refer to a valuable official summary of our knowledge as to diphtheria prevention which appeared in the *Times* of October 30th, 1893, and to his critical observations thereon which appeared on November 1st in the same journal. Special reference has been made to the comparative fatality or severity in London and some districts as compared with others. On this point the Presenter made the following observations:

"This (that is, the comparative severity of the disease) is judged of by the proportion that 'diphtheria deaths' bear to 'diphtheria notifications' during a given period. Without disputing the main conclusion arrived at as regards the serious increase in the total mortality (shown by the death returns of the last five years), I may observe that there is a fallacy involved in the mode of estimating the severity of the disease."

Now that the Notification Act has been some time in operation in London, and has become very generally adopted in the country, as well as in those large towns which had not before 1889 already established the principle of notification by local Acts of Parliament, it might be supposed that we possess a reliable means of estimating the case mortality (that is, the proportion of attacks to deaths) in each of the twelve diseases to which the term infectious is made to apply by Section 6 of the Act. I am afraid it is not so, at any rate in the one notifiable disease now under discussion, namely, diphtheria.

Comparison of the death returns with the notification returns of the various sanitary districts of London or any large county in England is calculated to be both instructive and useful. Permit me to quote from a report which was issued under the direction of the Surrey County Council in May, 1893, and which relates to the reports and returns for the year 1892 of the several medical officers of health attached to the twenty-five sanitary districts in which the Notification Act is in force within the administrative county. In the section of the report relating to diphtheria there occurs the following passage:

"For example, taking the K—— rural district, which is closely connected with that of C——, it is presumable that the diseases known as diphtheria and membranous croup (prevailing as they did in 1892 in villages and places lying close together, but in areas of different sanitary jurisdiction) were practically of the same character or type. It might be expected that the proportion of cases notified to deaths registered would naturally be about the same, and yet in the one district there were 102 cases to 11+2 deaths (11 diphtheria and 2 of membranous croup), and in the other 29 cases to 12 deaths.

"There can, I think, be little doubt as to the reason of these striking differences in the working of the Notification Act. They are due partly to the extremely varying conditions of local government, and partly to the general want of appreciation by local authorities of the value of medical preventive work."

The full meaning of these last observations will be gathered from what has previously been said in this report about the widely different kinds of appointments of medical officers of health.

It remains now to briefly summarise the commonly observed methods or channels by which the contagium is conveyed. Dr. Donkin, in the work already referred to, says: "My own experience strongly corroborates the teaching that by far the most frequent mode of infection is through the actual invasion of the mucous membrane by the exudative material from a diphtheritic throat, and, in my own hospital, where for many years diphtheria was admitted into the general wards, I have scarcely ever had reason to suspect its spread in any other way."

The Presenter of the report has had large opportunities of gathering the opinions of medical officers at the Asylums Board hospitals and elsewhere. He would describe the mode of infection as being "mouth to mouth," which is essentially the idea conveyed in the above-quoted words. The contagium, as Sir William Jenner emphatically declares, is hardly ever conveyed by third persons (non-infected) in clothing, although rags and pocket linings must obviously, under certain circumstances, be liable to become vehicles of the "mouth-to-mouth" infection.

Dr. Donkin adds: "Of the etiological conditions and vitality of the contagium outside the body we know but little for certain, in spite of much research and more speculation. It is said, with the support of much evidence, to remain long potentially active in clothes, bedding, soil, and elsewhere, and therefore to be possibly communicable by persons themselves uninfected. Cold and damp, I believe, both from authority and experience, to be certainly favourable to its energy, and there is valuable evidence to show that milk supply from cows probably suffering from the disease in some form, and contact with animals, especially cats and fowls, infected by human or other diphtheritic matter are more or less frequent sources of infection."

The very important researches of Mr. W. H. Power, Dr. George Turner, and Dr. Klein, F.R.S., into the nature of the diseases of the cow and the cat, which are without doubt related to diphtheria in the human being, have never been followed up by the Government of our country as they should have been. This indifference to the public health, where research work is in question, is one of the most discouraging signs of the times in England.

Finally, it must be said that progress in medical preventive work generally (which must obviously include experimental research work) is retarded in a considerable degree by the popular or general conception of the scope of "hygiene." This in England has come to have far too narrow a signification. The term hygiene is almost always used to apply to structural works (for example, water supply and drainage), materials, etc. which, however important, they may be as necessary for the prevention of some (so-called) preventable diseases, are apparently useless for the prevention of others, which are also entitled to be called preventable. It will be impossible to combat diphtheria, influenza and other diseases which can only be properly termed preventable, when the public and Governments understand the necessity for the systematic encouragement of scientific observation and research bearing on the public health, and the furtherance of medical preventive work generally.

REPORT ON THE ETIOLOGY AND PREVENTION OF DIPHTHERIA.

Presented on behalf of the German Committee to the Eighth International Congress of Hygiene and Demography, at Buda-Pesth,

BY F. LOEFFLER, M.D.,
Professor of Hygiene in the University of Greifswald.

[THE following is the summary of the conclusions of this important report, to which we made reference in our report of the proceedings of the Congress last week:]

1. The productive agent of diphtheria is the diphtheria bacillus. Dispute as to the etiological definition of this bacillus exists no longer. We can, therefore, henceforth indicate as diphtheria such forms of disease as are infested with the bacillus.

2. Not infrequently cases appear in the early stages to the clinical observer as true diphtheria, which, however, are caused by other organisms, as streptococci, staphylococci, pneumococci, and in light or graver form may be mistaken for diphtheria. But the differential diagnosis can be effected through bacteriological research. Statistical compilations on the epidemic spread of diphtheria, as well as on the character of diphtheritic epidemics, cannot represent an exact definition so long as the bacteriological investigation of cases suspected of diphtheria fails to mark a division between true diphtheria bacillus and cases merely resembling diphtheria.

3. Diphtheria epidemics show a various character, as do many other epidemics of infectious disease. The course of the epidemics is often very light, but also much more severe, indicated by the high figure of the death-rate, the rapid infection of the larynx and the nose, and by severe heart and kidney affections, and consecutive paralyses. But also in the same epidemic instances of severe and light forms of disease frequently alternate irregularly.

4. The variation, of course, will be determined by several factors: (*a*) By differences in the number and the virulence of the diphtheria bacilli: the causes of the latter are not yet absolutely known. (*b*) By concomitant bacteria, and, indeed, as much by pathogenic as saprophytic; the processes of infection with regard to the diseased mucous membranes in the passages and in the nose appear to influence the course of the disease unfavourably, in part by increasing the virulence of the bacilli, in part by weakening the body through absorption of decomposition products. (*c*) By individual tendencies not yet thoroughly recognised.

5. The diphtheria bacillus can appear in the passages, especially of the nose, of separate individuals without causing indications of sickness, which it first induces when it has actually established itself. Lesions of the mucous membranes, small eruptions, catarrhal changes, are favourable to its residence. In brief, meteorological conditions, giving admission by the first approach to catarrh, especially cold, damp weather, appear to favour the sickening from this cause. But this influence has to be more closely observed.

6. Diphtheria is most rapidly communicated by direct contact between sick and well through spitting, coughing, sneezing, kissing, and grasping of the hands, whereby the hands come into contact with fresh secretion, but also freely through utensils which the sufferer has fouled, with his excretions, by beverages, food, eating and drinking vessels, cast off washing clothes and other articles, as pocket-handkerchiefs, playthings, even long after their actual infection.

7. The sick is infectious so long as he has bacilli upon the mucous membranes. The bacilli usually disappear with or soon after the disappearance of the local signs, but they may be detected still lively and virulent in the passages or nose for weeks and even months.

8. In organic matters condensed and excluded from light the bacilli can maintain themselves for a period of months outside the body; accumulations of dirt, dark and close dwellings favour thus the preservation of bacilli and the extension of disease.

9. As a specially noticeable vehicle for the extension of disease is to be noted the crowding together of susceptible individuals, especially in families of many children. But other gatherings of people, apart from children, where separate persons do not come into such proximity as the members of a family, may offer facility for the extension of infection, as schools, barracks, and the like.

10. The diphtheria bacillus is so far not identified with certainty as the cause or inducer of other diseases similar to diphtheria or of other spontaneous disease of lower animals. The possibility of the conveyance of true diphtheria from sick animals to human beings is thus outside our present knowledge. It is desirable that the Governmental investigating committees should combine with research regarding diphtheria coming under their notice the similar diseases of animals, and also the communication from animals to human beings of diseases resembling diphtheria.

11. As prophylactic means are to be considered: (*a*) Care for cleansing, keeping dry, sufficient ventilation, and lighting of the dwelling; (*b*) careful cleansing of the mouth and nose, gargling with weak solutions of common salt and carbonate of soda, thorough brushing of the teeth, extraction of bad teeth, attention to the deeper cavities of the tonsils, and removal of hypertrophied tonsils; (*c*) cold douching of the throat in times of diphtheria prevalence.

12. Every case suspected as diphtheria must, when possible, be bacteriologically investigated. The physicians must have easy access to the required materials for carrying on the culture, for example, in the chemists' shops. The investigation has to be carried on by specialists, as in the case or cases of suspected cholera.

13. All cases proved bacteriologically to be true diphtheria, as well as all cases suspected as diphtheria which have not been bacteriologically investigated, must be dealt with as under police regulations.

14. Every diphtheria case must be isolated either in a separate room of the dwelling or in an isolation ward. In order to restrict as much as possible the spread of the bacilli by the sick, a local antibacillar treatment must be employed with a view to prophylaxis against the early stages of the disease.

15. One of the most effective means against the spread of diphtheria to be cared for is the protective inoculation of susceptible individuals in the neighbourhood of the patient, especially of children. In proportion as the innocuousness of Behring's serum cure through preventive injection is established for curing or prophylaxis, it appears worth while to develop further as far as possible the art of inoculating it in families and in school classes in which diphtheria cases have occurred.

16. In every case of diphtheria disinfection is imperative. This is needed for all utensils for the sick, as well as for the sick themselves and the sick room.

17. Convalescents from diphtheria must not mix freely with others (or children go to school) till bacteriological investigation has proved the removal of the bacilli, and the sick after a warm bath with soap have been thoroughly cleansed and have put on clean clothing.

18. On the outbreak of diphtherial epidemics notification should be given in the public press.

A REPORT ON THE ETIOLOGY AND VITAL STATISTICS OF DIPHTHERIA AND CROUP.

Presented on behalf of the American Committee to the Eighth International Congress of Hygiene and Demography at Buda-Pesth.

BY J. S. BILLINGS, M.D.,
Deputy-Surgeon-General U. S. Army.

DR. BILLINGS began by stating that, owing to the want of uniformity in registration of deaths throughout the States, it was impossible to give death-rates from diphtheria for the greater part of the country. Some idea, however, could be obtained as to the relative prevalence of this disease in the different States during the year preceding the date of the decennial census, and the ratio of the deaths from diphtheria to deaths from all known causes could be computed for each State for that year. A comparison of these ratios indicates those regions where the disease has been most prevalent. [Illustrated by maps.]

For the census year ending May 31st, 1880, the total number of deaths reported as due to diphtheria was 38,143, or 52·32 per 1,000 of all deaths from known causes. For the census year ending May 31st, 1890, the total number of deaths reported as due to diphtheria was 27,815, or 33.06 per 1,000 of all deaths from known causes.

Ratio of deaths from diphtheria and croup together per 1,000 of all deaths from known causes:

In 1880 (Total, 56,109), namely, 77.96 per 1,000,
In 1890 (Total, 41,677), namely, 49.54 per 1,000,

showing a decided decrease in the latter year.

Table showing proportion of deaths from diphtheria and croup per 1,000 total deaths in cities of 35,000 population and upwards, and in rural districts:

Area.	Rate per 1,000 Deaths. 1880.	1890.
United States (Total)... ...	77.96	49.54
Cities	57.73	50.10
Rural	83.80	49.18

Tables were also presented, from which the following facts were shown:

Death-rates from diphtheria and croup per 100,000 of the population in the "registration States" (that is, those States in which a fairly accurate registration was obtained), for the year ending May 31st, 1890=95.4, namely;

Whites	96.03
Coloured	70.19

The larger death-rate among the whites was attributed to the far larger proportion amongst them of individuals under 15 years of age. In Columbia, where there was a large proportion of coloured children, the death-rates from these causes were:

Whites	67.88
Coloured	114.93

There have been great variations in the death-rates in individual years. In some of the cities they have increased; in others they have decreased. There is no general correspondence between the States and the individual cities in this respect.

Death-rate from diphtheria and croup taken together per 100,000 for year ending May 31st, 1890:

(1) In 28 Cities of the United States (of 100,000 and upwards	116.55
(2) In 28 largest German Cities	92.0
(3) In 28 largest English Cities	24.9

Analysis of the death-rates (from diphtheria and croup) in the 28 "registration cities" showed that the death-rate (1) among children under 5 years of age was much greater than in any other age group; (2) was much greater among the whites (119.76) than among the coloured (58.18); greater among those whites whose mothers were born in the United States (166.72) than among those whose mothers were born in Germany (117.05), or those whose mothers were born in Ireland (89.24). It was also shown that the death-rate from diphtheria and croup was more than twice as great in the cities (121.95) as in the rural districts (54·94). A considerable part of the differences shown in this table was attributed to the differences in the age distribution of the different classes of the population.

The bacteriological aspects of the question were presented in a report drawn up by Dr. Welch and others on behalf of the American Committee.

Between 6,000 and 7,000 cases of suspected or confirmed diphtheria had been examined bacteriologically up to May 1894.

For the bacteriological test sterilised swabs of absorbent cotton wool are used; the cultures are made in Loeffler's blood serum, the results being controlled by inoculation if there is any doubt.

According to the rule of the Health Department, "No person who has suffered from diphtheria shall be considered free from contagion until it has been shown by bacterial examination, made after the disappearance of the membrane from the throat secretions, no longer contain the diphtheria bacilli, and that until such examinations have shown such absence, all cases in boarding-houses, hotels, and tenement houses must remain isolated and undergo observation. Cultures are also made from the throats of the apparently healthy in infected houses. In a series of 6,158 cases 58 per per cent. were proved bacteriologically to be true diphtheria.

Membranous Croup.—Of 286 cases in which the membrane was confined to the larynx or bronchi 80 per cent. proved to be true diphtheria, only 14 per cent. being undoubtedly not diphtheria. The diphtheria bacillus has been found in many cases where there are no symptoms of diphtheria, in cases where there is no other symptom than that of simple catarrh, and in various forms of tonsillitis or pharyngitis. Various bacteria are found associated with the diphtheria bacillus, the most common being the streptococcus pyogenes. The bacillus has been found in the throat after complete disappearance of the membrane for periods varying from three days up to five weeks.

In a series of 48 examinations of children in houses where there was diphtheria, the bacilli were found in 50 per cent. of the children where there was no isolation, less than 10 per cent. where the isolation was good. They have also been found in membrane-free sputa of the patient, on the person and clothing of the attendants, and on the various objects surrounding the patient.

A CASE OF RECOVERY FROM TETANUS IN WHICH ANTITOXIN WAS INJECTED.

By HENRY PERCY DEAN, M.B., M.S., B.Sc.(Lond.), F.R.C.S.,

Assistant Surgeon and Teacher of Operative Surgery to the London Hospital; Surgeon to North-Eastern Hospital for Children.

The patient, A. H., aged 16 years, a butcher by trade, was admitted into the London Hospital, under my care, on Tuesday, July 24th, complaining of stiffness in the muscles of the face and jaws.

History of the Injury.—On June 28th the patient's middle finger of the right hand was crushed between the cogwheels of a chaff-cutting machine. He came to the out-patient department on the following day, and his finger was soaked for half an hour in solution of perchloride of mercury (1 in 2 000), and then dressed with the double cyanide gauze and wool. He attended the out-patient department twice a week, and the same treatment was continued. For a week or ten days previous to his admission to the hospital he dug potatoes on several occasions, and took no precautions to keep the dressing intact. On Sunday, July 22nd, he found that he could not open his mouth properly, that he had pains in the back, and felt sleepy. On Tuesday, July 24th, he came to the hospital, and was admitted as an in-patient.

Condition on Admission.—One was at once struck with the expression on the patient's face. The rigidity of the facial muscles caused a retraction of the angles of the mouth, and produced a characteristic "risus sardonicus." The masseteric and temporal muscles were markedly rigid, so that the mouth could only be opened for about a third of an inch, and mastication was impossible. The tongue could be protruded, but the patient complained of some difficulty in swallowing. The muscles at the back of the neck were rigid, producing slight retraction of the head. The pectoral and abdominal muscles were only slightly rigid. There were no spasms or twitchings of any of the muscles. No other affection of the nervous or muscular systems could be discovered. The wound of the finger had healed excepting at one small spot, where a drop of pus could be wiped away from a superficial granulation. There was a troublesome cough, but no expectoration. Temperature, 100° F. Urine high coloured, specific gravity 1030: no albumen or sugar, abundance of urates.

Progress of the Disease.—July 25th. Patient sweating freely. "Risus sardonicus" still more marked, and occasional painful twitchings of the facial muscles. Increased difficulty in opening the mouth, and greater rigidity of the muscles generally. Temperature, 100° F.

July 26th. A rapid increase in the symptoms since yesterday. Expression of the face very much altered by the rigidity of the facial muscles. The teeth are clenched, and the mouth cannot be opened to the slightest extent; the masseteric and temporal muscles being quite hard. The muscles at the back of the neck and trunk are rigid, causing marked extension of the body. The pectoral and abdominal muscles are quite hard. Both legs are usually quite rigid in the extended position, the right more so than the left.

CHART No. 1.—*An hourly record of the temperature during and for four days after the administration of the antitoxin.*

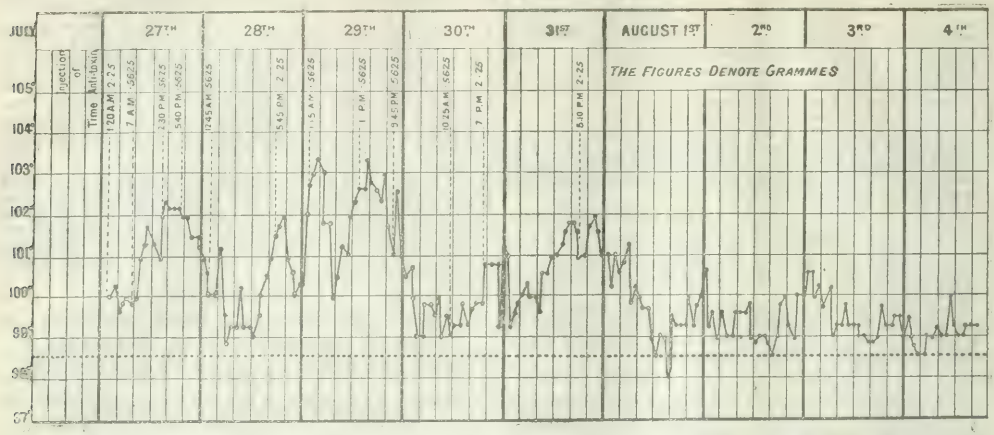
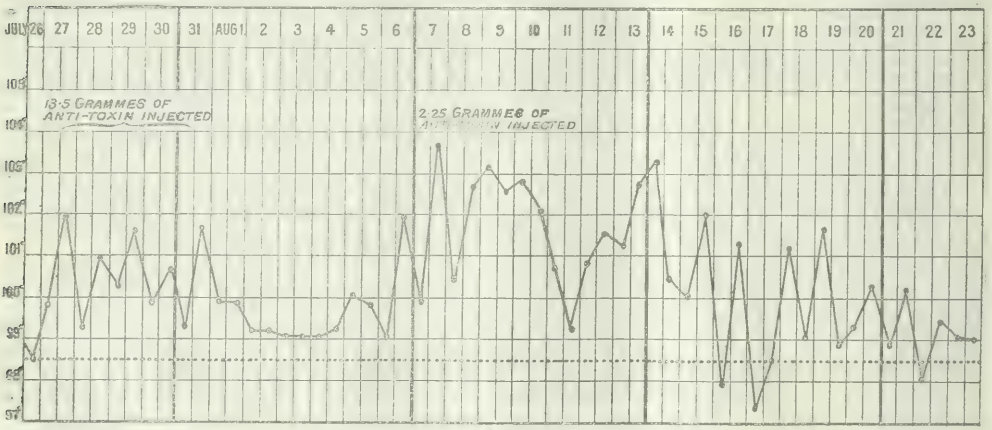


CHART No. 2.—*The morning and evening record of the temperature during the whole course of the disease*



Occasionally the rigidity of the muscles of the leg relaxes, and the patient can then flex the knees with difficulty. At frequent intervals the muscles of the face, trunk, and legs pass into a condition of spasm with twitchings, and the patient cries out with pain. The spasm of the back muscles produces a well-marked opisthotonos. Examination of the patient will generally start a painful spasm. He complained of difficulty in swallowing, but could suck milk and beef-tea through an india-rubber tube. The urine could not be passed, and had to be withdrawn by catheter. It was decided to try the effect of tetanus antitoxin, and steps were taken to obtain the drug.

July 27th. At 1.20 a.m. the temperature was 100° F., and as the patient's condition was decidedly worse, 2.25 grammes of antitoxin, dissolved in sterilised water so as to make a 10 per cent. solution, were then injected into the subcutaneous tissue of the abdominal wall and thighs. Every six hours afterwards, a quarter of this amount, namely, 0.5625 gramme, was injected. For some hours after the first injection, painful spasms were frequent, and the temperature rose to 102° F.; pulse 144; respiration 32. After about nine hours the condition of the patient began to improve, and at 2 P.M. he was much better. The mouth could be opened at least half an inch; the marked extension of the trunk had subsided, and the left leg could be moved about. The pectoral and abdominal muscles, together with those of the right leg, were still very rigid. The bowels were opened after an enema, and the urine was passed voluntarily. Painful spasms less frequent and less marked.

July 28th. Patient's condition not so good as yesterday at 2 P.M. Spasm and pain more marked and mouth not opened so well. At 4 P.M. another half-bottle of antitoxin, that is, 2 25 grammes, was injected, and the remaining half bottle was divided into four parts and injected every six hours as before.

July 29th. Patient has had considerable pain since yesterday, and during the night a hypodermic injection of morphine (gr. ¼) was given. Doses of chloral hydrate and bromide of potassium (gr. 10 of each) were given occasionally to relieve the pain, but they did not seem to have any effect. Since yesterday patient has been sweating profusely, and his temperature has kept about 103° F. The cough is very troublesome, the expectoration being ejected with great difficulty, and causing the patient considerable pain.

July 30th. Condition about the same. At 7 P.M. 2.25 grammes of antitoxin were injected, but were not followed by the small doses.

July 31st. Patient's condition decidedly better. Spasms and pain confined chiefly to the right leg. Cough is still very troublesome, owing to the difficulty in ejecting the mucus. Although the injured finger was quite healed, it was considered safer to amputate it. Patient was anæsthetised with chloroform, and had to be placed very deeply under its influence before the rigidity of the muscles began to disappear. In the trunk and abdomen the rigidity never completely disappeared. While under the anæsthetic, another dose of antitoxin (2.25 grammes) was injected.

August 1st. Patient had a much better night, and the temperature began to fall rapidly. From 10.30 A.M. to 9.30 P.M. he had no painful spasms; cough still very troublesome.

August 2nd. Improvement continued until 2 P.M. but then he became very restless; more muscular rigidity and an increase in the painful spasms; considerable headache.

August 3rd. Patient's condition slightly worse; had a very bad night, chiefly owing to the troublesome cough; very few spasms. No antitoxin was given as the stock was exhausted, and no more could be obtained until August 7th.

August 4th to 6th. Patient much better; cough less troublesome; no spasms; sleeping well. Temperature between 99° and 100°.

August 7th. Patient in about the same condition excepting that occasionally there were a few spasms. Between 11 A.M. and 3 P.M. there were several painful spasms, and at 7 P.M. 2.25 grammes of antitoxin were injected. Between 8 P.M. and 10 P.M. there were severe spasms.

August 8th. Good sleep obtained; had two spasms at 6 A.M.; perspiring freely; patient complains of throat feeling sore and swollen; muscles of legs and trunk still rigid; mouth can be opened about 1 inch.

August 9th to August 16th. The tetanic symptoms gradually improved; the temperature varied between 99° and 103°, and soreness of throat still felt. So far as examination of the throat was possible, nothing abnormal could be seen.

August 17th to August 24th. Patient's general condition good; temperature still high occasionally (102° F.).

August 25th to September 4th. Steady improvement maintained; all signs of tetanus have disappeared. Patient rapidly gaining strength and taking food well.

Remarks.—1. As regards the diagnosis, there is not the slightest ground for doubting that the patient was suffering from tetanus. On July 27th—that is, on the fifth day after the onset of the disease, when the antitoxin was first administered, the symptoms were of considerable severity, and were rapidly becoming worse.

2. As regards the severity of the case, there is considerable difficulty in the present instance in determining its degree. In cases of tetanus generally it is very difficult, in the early period of the disease, to say whether the case is likely to end fatally or not; and in trying the effect of any new remedy it is most important to determine, if possible, the degree of severity of the case. Some look upon the length of the incubation period as forming a very good guide. The shorter the period of incubation the more severe the symptoms are likely to be. In the present case the duration of the incubation period is by no means certain. It is quite possible that the bacillus gained entrance into the tissues, not at the time of the first injury, but subsequently while the patient was working, digging potatoes, etc. The rapidity with which the symptoms develop after their first appearance and their intensity seem to be fairly safe guides. My colleague, Mr. Jeremiah McCarthy, however, in his article in *Heath's Dictionary of Surgery*, states that "no correct inference can be formed from the apparent mildness of the symptoms. The writer had under his charge three cases of tetanus in the year 1884, which all ended fatally, although the symptoms in each case were not severe." In the present case the rapidity with which the symptoms developed was not great, three or four days elapsing between the onset and the presence of well-marked opisthotonos. On the fifth day, however, the symptoms were decidedly severe. The inability to open the jaw was complete, and the painful spasms affected nearly the whole body. Before the commencement of the treatment by antitoxin the temperature remained about 100° F., and such a moderate degree of fever is said to indicate a favourable prognosis. After the fifth day the temperature began to rise, but was never more than 103.2° F. From these considerations it will be evident that no accurate or even approximate prognosis concerning the termination of the case could have been made before the fifth day—that is, before the antitoxin was administered. Looking at the statistics of the termination of cases of tetanus, we find that the chances are greatly against recovery. Thus, Gowers states that "in traumatic tetanus the mortality is nearly 90 per cent., and seems to be rather greater in women than in men." Taking the cases admitted into the London Hospital during the last sixteen years, I find that the mortality is almost exactly 80 per cent.

3. Whether the administration of the antitoxin had any share in the favourable termination it is impossible to say. The objection that is usually brought forward when recovery of a disease during the administration of a new remedy takes place—namely, that the patient would have got well without the remedy—applies with considerable force in this case. The value of any remedy cannot, so far as I can see, be determined by a single successful case, or even by two or three successful cases. Considering the overwhelming evidence in favour of the value of antitoxin in the treatment of tetanus induced experimentally in lower animals, it is only right to give such a remedy a fair trial in the case of man, and my chief reason for publishing this single instance is to give additional support to the view that the remedy is, to say the least, a perfectly harmless one. The maximum dose recommended by Professor Tizzoni is 4.5 grammes, but as my patient was only 16 years old, and as the symptoms were not of alarming intensity, I started with half this quantity, that is, 2.25 grammes, and repeated a quarter of this amount, that is, 0.5625 gramme every six hours. Altogether the patient was given 15.75 grammes of the antitoxin. So far as I could ascertain the drug had no effect, either immediately or for some hours afterwards, on the pulse, respiration, or consciousness; in other words, the drug seemed to have no "physiological action." Whether the drug had any influence upon the disease I am, as I have said before, unable to say. It is true that there was a marked improvement in the symptoms about eight hours after the first dose, and that this improvement did not continue. I could trace no definite relationship between the administration of the subsequent doses and amelioration in the symptoms. Although more than two dozen injections were given, there were no signs of inflammatory reaction in the region of the punctures. I may add that with the exception of one small hypodermic injection of morphine and occasional doses (gr. 10) of chloral hydrate and pot. bromide, no drug, other than the antitoxin, was administered. The drug is an expensive one, costing £1 per gramme; it is prepared according to the directions of Professor Tizzoni, of Bologna, and is imported into this country by Messrs. Allen and Hanburys. I desire to express my thanks to the members of the House Committee of the London Hospital for the promptness with which they consented to the administration of so expensive a remedy.

A CASE OF TRAUMATIC TETANUS WHICH RECOVERED UNDER ANTITOXIN INJECTIONS.

By HERBERT L. EVANS, M.B., C.M.Edin.,
Goring-on-Thames, near Reading.

The following brief notes may be interesting to your readers.

W. S. (a boy, aged 13 years and 11 months) of this village fell on Friday, June 8th, cutting his right knee on the road, and leaving some of the road dust embedded in the wound. He was away from home at the time but returned to his father on June 26th.

On July 16th he began to experience "stiffness in the back and pain between the shoulders." On the following day the pains were worse, and there was some difficulty in mastication.

On July 22nd the pains were worse and more frequent; the "head was quite drawn back." He cried loudly during the

spasms, and was obliged to kneel so as to rest his head against some object.

When seen on July 23rd he complained of pain between the shoulders, which had not been relieved by rubbing; he had a difficulty in sitting up and turning to the light; he felt sick but had not been so; he could not open the teeth one inch, and the jaws closed on attempting to protrude the tongue; the bowels were opened by calomel, the abdomen thereafter being far less tense. The same evening the patient was put under chloroform, and the supposed focus of infection scraped and kept under a compress of solution of perchloride of mercury. The wound was freely excised, a light wet dressing being put on; chloral and bromides were given. Slight improvement seemed to have taken place by next day, but on July 25th his condition was worse. Plugs of cotton wool were placed in the ears, as sounds caused spasms. Opisthotonos was well marked.

During July 26th spasms occurred about every quarter of an hour. Chloroform was given and twelve ♏xx injections of Tizzoni's tetanus antitoxin were introduced under the skin of the abdomen and inside of the thighs with antiseptic precautions. The injections were made soon after 7 P.M., the temperature being then 99.8°; by 9 P.M. it had fallen to 98.4°. He was ordered nepenthe ♏vij, acid. hydrobrom. dil. ♏x, every four hours if in pain.

On July 27th the temperature was 98°. He had had three spasms, but less severe: he could open his mouth better and the head was less drawn back.

Up till July 30th the spasms since the injection had caused little trouble. He seemed bright and hopeful. Towards midday slight spasms, "little niggling pains," were said to occur every five minutes, but he had not been kept sufficiently quiet.

Three injections of a fresh solution were made under cocaine in each arm, the temperature apparently falling to 96.6°. From this time he had no return of the spasms, and general improvement took place. His appetite was enormous. The tongue was protruded with greater ease; the tendons at the back of the knee were less tense; the head could be slightly raised from the pillow. He asked to be allowed to get up and walk.

The improvement continued, but with a view to hastening the cure two more injections of a strong solution were given on August 9th. On August 11th the patient got up and walked downstairs, and on August 12th he was taken out in a Bath chair.

The mouth could be opened, apparently to its full extent, on August 15th; voice and mastication were normal; the knee-jerk was now normal; a few days after the first injection this was found to be absent.

The injection used was Tizzoni's tetanus antitoxin, supplied with great promptness by Messrs. Allen and Hanburys. A hypodermic syringe by Arnold of a very simple type was employed. The dried serum proved very difficult to dissolve in cold distilled water, and the solution was far weaker than that advised. In all, not more than half the total quantity supplied—4½ grammes—was used.

The chief subjects for discussion at the French Medical Congress to be opened at Lyons on October 25th will be the Etiology of Diabetes, the Clinical Value of the Chemical Examination of the Gastric Contents, and Aphasia. The President of the Congress will be M. Gailleton, Professor in the Medical Faculty of Lyons and Mayor of the city.

A movement is on foot at Chesterfield for the establishment of a medical hospital for the town and neighbourhood. The present institution is devoted to surgical cases. The idea appears to be to have a separate hospital—perhaps as a cottage hospital—but the advantages of consolidating rather than multiplying such charities, especially in a small town or district, are very great. At the least, a separate institution would mean additional expense in management.

The next meeting of the International Congress of Hydrobalneotherapy will be held at Ostend in 1895. The questions proposed for discussion are (1) the Treatment of Pulmonary Phthisis at the Seaside; (2) the *Technique* of Marine Therapeutics.

SIXTY-SECOND ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF OPHTHALMOLOGY.

F. R. Cross, M.B., President.

A DISCUSSION ON THE RELATION OF SOME OCCUPATIONS TO EYESIGHT.

I.—Simeon Snell, F.R.C.S.Ed.,

Ophthalmic Surgeon to the Sheffield General Infirmary.

Mr. Snell observed that the subject of occupations as they bore upon eyesight was a most interesting and important one, but was far too wide for complete treatment in a single paper. He could only refer to some of the occupations into which he had made investigations.

Toxic Amblyopias.

Bisulphide of carbon was used in rubber works as a penetrating solvent in the process called curing or vulcanising. From his recent investigations it appeared that the bisulphide was less employed now than formerly, and less likely to be used in the future, the sulphur being now mixed with the rubber and the vulcanising effected by heat. Dinitro-benzol as used in making explosives was a subject he had only recently treated exhaustively in an article in the British Medical Journal. Tobacco was hardly to be considered as belonging to the occupation group of disorders, because, though such a frequent cause of optic nerve failure, there was no evidence of the workers at tobacco works being injured by the powder; rather, on the other hand, there was evidence to the effect that these *employés* did not suffer injuriously. Iodoform, recently recognised as occasioning optic nerve failure, did not, as far as was known, affect the workers at the factories where it was made. Lead in the many occupations in which it was used in different forms was mentioned as a cause of optic neuritis, either direct or secondary to brain or kidney disease. Allusion was made to the Sheffield file cutters as sufferers from lead poisoning and eye troubles.

Effect of Intense Light and Heat.

The various occupations in which men were exposed to intense light and excessive heat received attention. The alleged frequency of cataract among glass blowers was mentioned, and it was stated that if, as was supposed, the withdrawal of moisture by the sweating and the heat to which the men were exposed were the causes, then the metal workers to be referred to later on should also be specially liable to lens lesions, which, however, did not appear to be the case. The brightness of the surface worked upon was mentioned, and the employment of "burnishing" of silver or electro goods as pursued in Sheffield trades was given as a frequent cause of retinal hyperæsthesia in the females who generally were employed at this work. The exposure to heat and intense light was seen chiefly in the large works in which iron was made and converted into steel. The men exposed to these heats sweated a great deal, and consequently often wore little clothing above the waists. The temperatures to be mentioned could be best grasped by recollecting that the temperature of an ordinary well-lighted fire in a grate was about 500° F. Up to a temperature of about 2,000° F. a man could look at the furnace with comparative ease, but before it got to 3,000° F. he could only do so with using coloured spectacles. The different processes seen in some of the large armour-plate works were described. With cast iron the heat would be about 1,800° to 2,000° F., and molten steel 2,700° to 2,800° F., and the gases in the furnace would make this about 200° or 300° higher; the heat of the Bessemer process was 3,000° to 3,200°, but only one man was required to watch this

process, which, moreover, was a short one; whereas in the Siemens, which lasted ten hours in heating the steel, many men were engaged observing and their work was constant. They protected their eyes with coloured glasses. Some men were unable to continue exposed to these heats and intense lights, but others continued working with them without injury year after year, and the author thought that with protection they could do so without injury. His experience did not allow him to state that these men were subject to any deep or superficial lesion which could be associated with the condition under which their labour was performed.

The intensity of the light from some of the processes of the electric light was mentioned. The effect upon the eye was often injurious and was becoming recognised. Electric welding was a process that would be employed still more in the future. The ease with which, under the electrical influence, metal ran like solder was almost incredible if not witnessed. There appeared to be no photometric observations as to this light, but an estimate had been given the author showing that it was about 8,000 candles, and the heat was 3,000 C. (7,000 F. about). Exposure to this light, however briefly, brought on the most excruciating eyepain, with great swelling and lachrymation. It was felt immediately, but more violently some hours afterwards. Moreover, any part of the skin left bare was burnt or blistered. The men were therefore careful to cover their face, neck, and arms. The man using it also had his head covered with a helmet with a glass door in front, with six layers of glass alternately blue and red. Those assisting or looking on had screens with four thicknesses of the same glass. The author had watched the process on two occasions with these screens, and knew how well they answered. Proof was given that the injury was done by the chemical rays and not by the heat rays, and it was thought that ruby glass gave a better protection than the combination mentioned. It was quite clear that with due care the serious mischief caused to the eyes was preventable.

Injuries.

The subject of eye accidents received attention. Mention was made of the fact that in many of the Sheffield trades, foreign bodies were apt to get embedded in the cornea, and that men were recognised among their fellow workmen for their skill in removing these particles. They effected it with a pin, blunt lance or penknife. It was not an uncommon sight in the streets to see a man undergoing this operation. Grinders were named as very liable to get these "motes" in the cornea, especially the "dry grinders." The fan which was required for the grinders was recognised as a means for drawing away these particles from the eyes, and prevention by using spectacles was referred to. A grinder's cornea was often, when carefully examined, found studded over with small scars. "Ivory cutters" were also exposed to these splinters. Colliers also received eye injuries, chiefly abrasions of the cornea, from pieces of coal or from the pick or wedge. They appeared to have a greater tendency than other abrasions to pass into hypopyon ulcers. Out of a total of 34,995 non-fatal accidents to colliers, 1,778 were eye injuries. The worst injuries were met with in the large works—iron and steel. The men engaged in chipping, punching, chiselling, rivetting, and fitting, besides other work in these large works, were very prone to serious injury. A splinter from the metal struck, or the tool used would stick in the outer part of the eye or pass through the cornea or sclerotic, and lodge in the interior of the globe. As bearing upon the relation of these accidents to occupation, the author mentioned that of the 150 or more fragments of steel or iron that he had removed from the eye with the electro-magnet, not one had been in a female. Molten metal or hot cinders was referred to as causing very destructive injuries. Many of these accidents were held to be preventable, if the men used proper protection. But the destruction of sight was on the whole so great that the author said he would be glad to see accident insurance largely extended among these men.

Pasteurism at Marseilles.—Between December 10th, 1893, and July 31st, 1894, the number of persons treated at the Antirabic Institute of Marseilles was 167. Of these only 2 died. The director of the institute is Dr. Livon.

II.—George Lindsay Johnson, M.D., F.R.C.S.,
Ophthalmic Surgeon, Western General Dispensary.

THE EFFECT OF PROLONGED EXCESSIVE LIGHT ON VISION.

Some time ago Dr. Salviati, the director of the well-known Venetian Glass Works, told me that those of his workmen who were employed in the furnace room invariably lost more or less of their sight after some years had elapsed, and he asked me whether I thought something could be done to prevent this. Accordingly I undertook an examination of the workmen's sight and of the conditions under which they worked.

I found that the workmen spent their time in a large vaulted room imperfectly lighted, in the centre of which was a large circular furnace. In the wall of the furnace were four large apertures about 3 feet 6 inches broad by 3 feet high, and narrowing down to half the width on the inside. These apertures could be completely closed by vertical sliding doors, but as the workmen had to withdraw and insert continually pieces of half-melted glass, the apertures were only closed when they were not in use. Thus, during most of the time that the workmen were busy they stood looking at the melted or glowing glass and at the floor of the furnace, which was glaring with white heat and surrounded by intensely bright and vivid flames. I found that all the men thus employed had defective vision. The more so the longer they had been engaged. Their optic nerves gradually became atrophied and their visual fields contracted.

The ophthalmoscope revealed a pale disc, retinal vessels of diminished size, and in some cases a disturbed condition of the pigment. In no case, even in those who had worked as long as forty years at the furnaces, did I find complete atrophy, but in the worst case the vision had sunk to Sn ⅀. The following are a few examples:—

Initials.	Age.	Years at Work at the Furnaces.	Vision when Examined.
V. Z.	[illegible]	[illegible]	[illegible]
G.	[illegible]	[illegible]	[illegible]
G. B.	[illegible]	[illegible]	[illegible]
Y.	52	40	[illegible]
G. G.	48	36	[illegible]

I was informed that all these men had perfect vision when they first began work at the furnaces. The last mentioned case had only occasionally worked at the furnaces, being mostly employed elsewhere. I found that in no case did workmen who were exposed to the glare of the furnace for more than one year escape without the permanent loss of some of their vision, whilst others who were exposed to the heat only had no impairment of sight. This would point distinctly to the glare and not to the extreme heat as the cause of the injury. But whether it is the intensity of the light or the peculiar nature of the light given out by the furnace I am not able to determine, as I had no opportunity of examining the light spectroscopically. I regret that I was unable to do so, because we know by the ingenious experiments of Dr. Widmark[1] that the ultra-violet rays possess the power of producing marked pathological changes, and I have found that the red and ultra-red rays have also a marked effect.

Widmark found that the violet and ultra-violet rays produced on the skin and conjunctiva effects resembling an ordinary erythema followed by desquamation. Direct sunlight, the reflection from snow, and the arc light are therefore found to produce similar effects. I have bred rabbits under spectrum red glass and have made microscopic sections of their eyes. Other work has prevented me from carrying out my experiments in this direction to the extent I would have desired; but from the facts before me I have every reason to believe that the red and ultra-red rays tend to exhaust the retina. The sections of the eyes of rabbits

[1] *Nord. Med. Ark.*, 1889, vol. xxi, 1.

bred under the above conditions show a marked diminution of retinal and choroidal pigment as compared with the eyes of rabbits bred in the open air. It is well known that photographers and photographic plate makers have suffered severely from the effects of red light, in consequence of which a canary-yellow or orange medium is used by them wherever practicable.

The prolonged excessive action of either end of the spectrum seems equally pernicious, though acting in a different and possibly opposite manner; but the action of either does not seem to produce any permanent effect except by long and continued exposure. Nature seems to struggle in order to eliminate the irritation and succeeds in maintaining the tissues in health for a considerable time, but ultimately the nerve cells lose their activity and power of resistance, and they become more or less replaced by connective tissue. In this respect we may compare the action of prolonged excessive light to the prolonged over-indulgence in alcohol.

We must clearly distinguish between the effects of direct sunlight on the retina and that of the furnace glare. The former injury, as Deutschmann[2] has clearly shown, is produced by the rays of the sun being directly focussed on to the macula, and causing an actual cauterisation of the retinal elements, a coagulation of the albumen, and a fusing of the retinal layers into a structureless mass. In the case of the furnace glare there is no immediate structural change in the retina, the process being in every case a chronic one.

I regret to say that I was unable to carry out my observations at Salviati's glass works as thoroughly as I would have desired on account of the extreme superstition and prejudices of the Venetian workmen, who seemed to have a much greater dread of the influence of the evil eye than of the danger of losing his own.

III.—W. M. BEAUMONT, M.R.C.S.,
Surgeon to the Bath Eye Infirmary.

THE SOLDIER'S RED COAT AS A CAUSE OF RETINAL HYPERÆSTHESIA.

MR. BEAUMONT related the history, extending over more than thirty years, of a patient in whom there was a remarkable retinal intolerance to red-coloured objects—a condition which the author calls erythrophobia. The subject was an officer of the army, and highly neurotic. The dazzling produced by the scarlet uniforms on his eyes, especially when the sun was shining brightly, seriously interfered with the performance of his duties. When he retired into private life other red objects, such as parasols, shawls, etc., had the same effect. Often when walking in the street he would be overcome by giddiness, sometimes almost before he realised that he was looking at a red object. There was a history of a sunstroke in India, and he was a great smoker. The field of vision was contracted for white and extremely so for red and green. The erythrophobia was more marked in the right eye than in the left, and it appeared that some light might be thrown on the etiology by a comparison of the fields, for in the right whilst the red field was larger than in the left, yet the green field was smaller. For treatment green spectacles were tried, and answered well as long as they were worn, but when removed the red "after-image" produced the same annoying effect that a real image would. It was pointed out that the condition was in nowise connected with that known as erythropsia, in which red is seen where none exists.

DR. G. T. STEVENS (New York) would only add a single suggestion to the valuable and extensive collection of facts presented by Mr. Snell. He referred to the injuries to the eyes suffered by stonecutters. According to his own experience, this was a most important class among those who received injuries as the result of their peculiar occupation. He believed that a very large proportion of these workmen received such injuries.

DR. LANDOLT (Paris) said that from a glass factory in the Department of Aisne a large number of patients came to his clinic for extraction of cataract. There was no doubt that the work in the glass factories tended to develop this affection. Mr. Snell was certainly right in stating that very frequently the scars on the cornea were produced by the attempts at removal of foreign bodies rather than by the foreign bodies themselves. Before using a steel instrument, Dr. Landolt therefore always attempted to remove the foreign bodies lying in the superficial layers of the cornea with a small camel-hair brush dipped in an antiseptic solution. The hairs glided under the foreign body, and very frequently removed it without pain to the patient or injury to the eye.

DR. G. M. GOULD (Philadelphia) agreed that the injury from attempts of workmen to remove foreign bodies often caused more injury than the foreign body itself. He wished to suggest a method of removal of the particles that he had found very useful, namely, by a wisp of absorbent cotton rolled and turned upon itself. With this roll of fibrous material the foreign body could often be removed by a quick brushing motion which caught the foreign body entangled in the fibres of the cotton. In this way workmen and oculists also might frequently remove a body in the superficial layer of the cornea or conjunctiva, without the use of cocaine or any instruments whatever.

DR. DE SCHWEINITZ (Philadelphia) agreed with Mr. Snell that workers in tobacco, themselves non-users, generally escaped toxic amblyopia; but that they were not immune entirely was illustrated by the case of a young girl, free from disease and bad habits, who developed a perimacular scotoma while employed in a tobacco factory, her bared arms being immersed for many hours a day in a strong solution of tobacco. Recovery occurred after leaving the factory. Dr. de Schweinitz could not agree with Mr. Snell that great heat was incapable of causing changes in the choroid, changes which in their turn were probably responsible for the development of cataract.

DR. S. D. RISLEY (Philadelphia) said that he had been greatly interested and instructed by Mr. Snell's valuable paper; but his experience differed in respect to the deleterious influence of heat on the eyes of workmen. He had long observed in the eyes of puddlers and stokers certain choroidal changes characterised by pigment increase, and granular change along the vessels and borders of the nerves, accompanied by asthenopia and more or less dread of light. He believed, however, that the injury was caused by the heat and not the light, since these changes were observed in the eyes of cooks as well as stokers, etc. He believed that too much stress had been laid upon the work in the schools in causing myopia. He had himself shown that the increased percentage of myopia occurred among those who entered upon their school work with congenital defects of form in the eyeballs; while it had been shown by all observers in the schools that the approximately emmetropic eyes remained in the same percentage through all the classes, from the lowest to the highest. It was not, therefore, fair to hold the schools solely responsible for the production of the myopic eye.

MR. ERNEST CLARKE (London) observed that in a manufacturing country like Great Britain Mr. Snell's paper was most important, and especially at the present time, when the subject of employers' liability was before the public. Sir James Paget had pointed out some years ago that every workman disabled was so much loss to the country. It was not enough simply to provide workmen with protective means; it was absolutely necessary that the employers should see that these means were used, and this should be done not only for the workmen's sake, but also for their own protection from liability.

MR. TATHAM THOMPSON (Cardiff) mentioned a case in which, about a year after undergoing operation for cataract, the patient subjected the eye momentarily to the direct rays of sunlight with the strong cataract glasses on. The result was immediate almost complete loss of vision, with extreme pain and photophobia lasting forty-eight hours. There was permanent diminution of vision from $\frac{2}{3}$ to $\frac{2}{9}$. Whilst agreeing in the main that it was a mistake not to allow cases of incipient cataract full use of their eyes, Mr. Tatham Thompson thought there was a class of cases in which it was most necessary to enjoin rest. He referred to cases occurring mostly at about the age of 50 to 55, in which there was vacuolation of the lens rather than true opacity, and the patients

[2] *Graefe's A. f. O.*, xxviii, 3, p. 241, *et seq.*

were in the habit of using their eyes for fine work or reading late at night.

Mr. S. Johnson Taylor (Norwich) had seen years back at least two cases of permanent central limited choroido-retinitis induced in men working all night by the naked Brush electric light. In cases of cataract occurring in young or middle-aged persons with irritable and asthenopic symptoms, who used their eyes excessively, as in fine needle-work or embroidery, he would advise great limitation in the use of their eyes, but in the same affection occurring in elderly persons he considered it inadvisable to prescribe rest. Young persons without structural disease, coming with dark glasses, generally received the same advice as the late Dr. Matthews Duncan was in the habit of giving to ladies going to him wearing pessaries—namely, that they should be thrown over the garden wall.

Mr. Wray (Croydon) thought that it might be desirable to place a printed notice in schools with regard to eyesight and occupation. In one column might appear those unsuitable for hypermetropes, in the other those unsuitable for short-sighted persons or those with slight amblyopia in one eye or both. As an illustration of the necessity for this, he mentioned one fact that the School Board for London disqualified teachers who could not see with glasses. For removing foreign bodies from the cornea he preferred a cone of wool, and used an instrument aid only when necessary. In the latter event a very sharp-pointed instrument was less likely to bruise and lacerate the corneal tissue than a spud or blunt instrument.

Dr. McGillivray (Dundee) thought that peripheral lenticular opacities in old people, unless progressive and unless the vision were subnormal, should not be diagnosed as cataract, and that the patient need not be informed of this abnormality. Still the oculist must protect himself against the diagnosis of others, seeing that some surgeons had no hesitation in informing such a patient that he was suffering from incipient cataract. These peripheral opacities were often simply senile changes and non progressive

In reply, Mr. Lindsay Johnson said that he could not agree with those managers who supplied their men with red glasses to cut off the blue rays, because he had never been able to collect the slightest evidence that the blue rays ever did injury; in fact he could only get evidence of the ends of the spectrum proving injurious, that is violet and ultra-violet on the one hand, and the red and ultra-red on the other.

A FEW RULES FACILITATING THE DIAGNOSIS OF PARALYSIS OF THE OCULAR MUSCLES.

By E. Landolt, M.D.,
Paris.

The diagnosis of paralysis of the ocular muscles is at times somewhat difficult, especially when it is necessary to decide quickly. It is for this reason that I wish to present certain laws and rules which I have found useful in such cases.

I always base my diagnosis upon the most characteristic symptom, that is to say upon the diplopia, and not upon the appearance of the eyes, which is often very deceptive. We have only to consider the discrepancy which can exist between the line of sight and the axis of the pupil; and especially the difference in level of the eyes, which is met with frequently, and may attain a very marked degree.

As soon as I suspect a muscular paralysis, I begin by placing the patient, with the head erect, in front of a lighted candle placed at a distance. I cover one eye—the better, if there is a difference in the acuteness of vision—with a red glass, and I decide the nature of the diplopia.

Now the first of my rules is as follows: *The affected eye is that in the direction of the image of which the diplopia increases.*

This rule, which at first sight seems somewhat complicated, is in reality very simple. Let us take, for example, the most elementary case, that of homonymous diplopia. The image of the left eye is to the left, that of the right eye is to the right. If the diplopia increases in looking to the left, it is the left eye which is the seat of paralysis, and inversely.

In case of a crossed diplopia, the image of the left eye is at the right, and that of the right eye is at the left. If, then, the two images separate towards the left, it is the right which is affected, because its image is to the left.

The affected eye thus found, I apply the second law, which is: *The paralysed muscle is the one which would have given to the eye the position and the direction of the false image.* In the first of the two examples—homonymous diplopia, left eye affected—it is the external rectus which is paralysed, because it is this muscle which would have directed the left eye to the place of the false image—that is, to the left. In the second example—crossed diplopia due to muscular paralysis of the right eye—it is the internal rectus which is paralysed, because it is this muscle which should have turned the eye towards its image to the left.

The two cases are, however, so easy to recognise that there is no need of new rules for diagnosis. In fact, I have chosen them in order to make these laws better understood, but the value of the laws becomes more evident when it is a question of vertical diplopia. Let us suppose, for example, that we have placed the red glass before the left eye, and that the patient says the red flame is below, the yellow above. This phenomenon could be due to paralysis of the superior oblique or the inferior rectus of the left eye, or to paralysis of the inferior oblique or the superior rectus of the right eye. Our laws will guide us surely in our deduction.

Thus, first, if the vertical diplopia increases in looking upward it is the right eye that is affected, because it is its image which is higher. If it diminishes in this case the right eye is not involved and the suspicion is directed to the other eye. Let us suppose that the difference in height of the two images increases in looking downward. Now, since it is the left eye whose image is lower, it is this eye which is the seat of paralysis.

The second law tells us, farther, that it is one of the depressors of the eye, which is paralysed, because it is they that direct the eye toward the image, that is downward.

If the patient indicates that the red flame is toward the left (homonymous diplopia) and that its superior extremity leans toward the right, this same law will permit us at once to recognise a paralysis of the superior oblique, because this muscle not only draws the eye downward, but directs it also outward and turns it around its antero-posterior axis in such a way that the upper extremity of its vertical meridian inclines toward the nose. The inverse situation and direction of the image, that is to say the image of the left eye to the right (crossed diplopia) and inclined toward the temple, would have revealed paralysis of the inferior rectus.

If, as often happens, the indications of the patient are uncertain regarding the lateral separation, and especially the inclination of the superposed images, then we resort to another stratagem to make the differential diagnosis between paralysis of the oblique and recti muscles. It is the well-known method of von Graefe and Mauthner, that is, we decide in which direction the difference in height increases—if toward the temple it is the rectus; if toward the nose it is the oblique.

Allow me to still add a few practical remarks concerning this subject. First, do not displace the object of fixation in order to obtain a change in the direction of the gaze, but accomplish this by turning the head of the patient. I am in the habit of turning it with one hand to the left to direct the eyes to the right, to hold it backward to lower the gaze, and *vice versâ*. In this manner the walking and reaching with the candle are avoided, and the patient's eyes can be directed at will while standing at his side.

A further very puzzling phenomenon is avoided. It is due to the fact that when the fixation object has sufficiently approached one of the side walls, or the floor of the room, the patient ceases to project the two images on the same plane, and supposes one of them to be situated on the plane which is nearer to him. In leaving the object in place in the middle of the wall the plane of projection does not change.

Everyone knows that a paralysis of the motor muscles of the eye gives an especial position to the head, but this valuable symptom is not sufficiently utilised. Nothing is easier, however. It is necessary only to take into consideration that if the patient turns his head in a peculiar way, it is to prevent the diplopia due to the lack of one agent in the coördination of the muscles of the eyes. One of his muscles being out of use, he replaces its action by the rotation of his head. In-

capable of directing his eye to the left, for instance, he turns his head to the left, and so forth. From this results a third law: *The direction of the patient's head corresponds in every way to the physiological action of the paralysed muscle.* A face turned to the left is characteristic of paralysis of the left external rectus, or of the right internus, and inversely. A face directed upward is pathognomonic of paralysis of an elevator, while that of a depressor directs the face downwards.

A head inclined towards the left shoulder indicates paralysis of a muscle that turns the eye around its antero-posterior axis; in giving to its vertical meridian this same inclination, the superior rectus or oblique of the right eye, the inferior rectus or oblique of the left eye. Conversely paralysis of the superior rectus and oblique muscle of the left eye, as well as that of the inferior rectus and oblique of the right eye, tend to incline the head towards the right shoulder.

I have drawn up these rules, with the symptoms of muscular paralysis in synopsis, and published them, with directions as to their use, in a synoptic table, which Messrs. Curry and Paxton have taken great care in producing.

THE IMPORTANCE OF MAINTAINING EQUAL ROTATIONS OF THE EYES AFTER OPERATIONS OF THE OCULAR MUSCLES.

By GEORGE T. STEVENS, M.D.,
New York.

A MOST unfortunate path to error in that field of ophthalmology which deals with the correlative positions of the two eyes lies in the misleading expression "the squinting eye." In all the literature of strabismus in textbooks, from the time of Strohmeyer and Diffenbach until now, attention has been especially directed to the "squinting eye" and the treatment which must be directed to it.

As a rule in concomitant strabismus, a rule with few exceptions (not considering the cases which are strictly of a pathological character), there is no squinting eye; if by that expression a deviation confined either wholly or largely to one eye is intended. Strabismus concomitans is a mutual relation between the eyes, and if there is an actual deviation of one eye inward or outward, that deviation is almost universally shared by the other eye. If an ordinary case of such strabismus is examined with care, several conspicuous facts must be brought to our attention.

1. The familiar "secondary" squint when the habitually deviating eye is forced to fix the object. While it is true that a secondary squint occurs with paralysis of a single muscle of one eye, this secondary squint differs materially from that of comcomitant squint.

2. The much less familiar fact that if each eye is caused to rotate to its extreme ability toward the nasal or toward the temporal side, the rotations are in many cases strictly equal, and in cases where slightly unequal rotation is found, it is not usually on account of the comparative tensions of the lateral recti, but from causes to which reference will be made as we proceed.

Suppose the examination to be an ordinary case of converging strabismus. If we cause the patient to roll first each eye as far toward the nose as it is possible, we can observe that in the case of each eye the rotation is excessive, and that the excess in one case equals that in the other; then, if the eyes are alternately directed as far as possible to the temporal side, there is usually little difference, and the restriction, if one exist, may be not in the rotation of the squinting eye, but of the eye habitually fixed. If then there occurs a secondary squint when the usually deviating eye is covered equal to the primary deviation, and if the rotations are in case of each eye excessive, and equal in the direction of the deviation, the question naturally arises why should one eye habitually remain as the eye of fixation while the other habitually deviates?

Let us suppose a perfectly uncomplicated case of converging strabismus, one in which the nasal rotations are each excessive and equal, and in which the tensions of the vertically acting muscles are equal; in such a case either alternating strabismus will occur, or, if one eye is selected for habitual fixation, it will be that which is more advantageously constituted for accommodation at the point of fixation. In certain cases in which one eye is emmetropic or nearly so while the other is moderately myopic, it is well-known that the fixing eye for distance is the emmetropic one, while that for near points is the myopic eye. Usually the reason for habitual fixation of one eye is found in the fact that the patient selects the eye which is best suited to clear vision. If there is a difference in the refractive states, the eye most nearly approaching emmetropia is selected as the fixation eye. The fact of such a selection does not indicate a better or a different state of muscular tensions on the part of the selected eye. Nor is the eye which is not selected for fixation more a squinting eye than the one usually used for fixation.

Lateral strabismus, as I have at various times indicated, is not infrequently the result of a difference in the tensions of the vertically-acting muscles; and, examining the philosophy of lateral strabismus from this standpoint, light will be thrown on some of the peculiarities of the lateral rotations. This difference in the relative tension vertically is a most annoying and perplexing one to the patient. One of the strongest of the muscular instincts is to see vertical objects vertical and horizontal objects horizontal. When the power to see objects thus is absent or its attainment very difficult, the power of maintaining the equilibrium of the individual is compromised. One may see double in the horizontal direction with relative comfort compared with the confusion from diplopia in the vertical or oblique direction. In a tendency toward vertical dipoplia one of two means will be attempted for relief. The person subject to the defect will, perhaps, acquire the faculty of mental suppression of one image; unless the deviation in this vertical direction is considerable this is difficult to accomplish. If this effort fails the patient may, by placing much stress upon the vertically-acting muscles, bring the images to a level; at the same time, by virtue of the adducting action of these muscles, he may force a deviation inward. This inward deviation may in many cases be encouraged by the fact that in conjunction with the unequal vertical tension there is also a moderate excess of tension of the interni over the externi. When the habit of such a lateral deviation has become once established, the force directed to bringing the images to the horizontal plane may be in some measure relaxed, for with a squint inwards or outwards the urgency for maintaining horizontal images is modified. When the images are far removed from each other by such a squint the ability to suppress one of them increases.

To this class, in which converging squint results largely from the efforts of the patient to free himself from the annoyance of vertical or oblique diplopia, belong those cases in which convex glasses afford temporary relief. In such cases, if the tensions of the counteracting rectus superior and rectus inferior of one eye should be materially greater than that of the other, it is easy to see that the lateral rotation of that eye might be somewhat restricted outwardly or increased nasalwards, and thus lead to the supposition that the external rectus is less, or the internal rectus more, potent than the corresponding muscle of the other eye.

In this unequal vertical tension also is found an explanation of some marked exceptions to the rule to which I have already referred, namely, that the eye most nearly emmetropic is usually the fixing eye. In some cases of decided hypertropia—deviation of one visual line above the other—the upward turning eye is the best eye; yet, on account of the difficulty of holding this eye in the proper line for fixation, the astigmatic or otherwise ametropic eye will sometimes be selected as the most advantageous eye for fixation, and the well-constructed eye will squint.

It was not the original design of this paper to discuss the causes of strabismus; but I have ventured upon this introduction somewhat at length in order to base the considerations of treatment not upon apparent and superficial facts, but upon the fundamental principles with which we have to deal.

However important may be the removal of the deformity of strabismus from the cosmetic point of view, the supreme motive for strabismus corrections should be the establishing of binocular vision. If one believes that the ordinary perfunctory division of an internal rectus of the squinting eye

in converging strabismus often establishes such vision, he will be undeceived if he make many careful examinations in cases which have been subjected to such surgical treatment. Continuous binocular vision can only exist where there is approximate equality of tension of corresponding muscles of the two eyes, and easy binocular vision is only possible when the nervous impulse for the direction of one eye is exactly similar to that for the other. Corresponding action of two interni cannot be maintained, and in some cases cannot be even temporarily induced in a case in which the rotating power of one internus has been reduced, while the other remains intact and excessive.

Here lies the secret of von Graefe's cases of "antipathy to single vision," cases which are infinitely more common than is generally supposed, and cases which, according to my own observations, occur only after operations. When one internus has been cut and another retains its excessive tension, and especially when the image of one eye lies normally in a higher plane than the other, there can be no permanent union of images. Few cases operated by the usual methods have any practical binocular vision. By careful attention, not to the gross and most conspicuous phenomena of strabismus, the lateral deviation, but to the essential and important relations of the tensions in vertical as well as horizontal direction, the failure to obtain practical binocular vision, which is the extremely common result of strabismus operations, may be practically eliminated. An operation properly performed on a superior rectus will often completely relieve a moderate converging or diverging strabismus by removing the necessity for the squint.

Some years ago I expressed my conviction that the condition of antipathy to single vision, as described by von Graefe, and by subsequent authors, depends not upon lesions of the brain, or upon faulty projection of the images from the retinæ, but upon unequal tensions of corresponding muscles under the influence of corresponding nerve impulses directed to them. Abundant experience and research in this field has since then fully confirmed this view. It has also led me to see that even in cases in which extremely moderate modifications of the tension of a single lateral rectus has been made with the view of relieving conditions of heterophoria, that is, of conditions of less grade than strabismus, a tension of one muscle unequal to that of the corresponding muscles, results after the first relief from the primary defect, in much perplexity of vision and often in much nervous distress.

If these principles are conceded, we should abandon the idea of correcting any lateral squint by an operation on a single muscle. Even if the rotation is to be affected only to the extent of a few degrees, the equilibrium should be maintained. But if the correction of slight strabismus, or even of esophoria, or of exophoria by relaxation of a single muscle is to be avoided, how much more must we reject the idea of doing a tenotomy on an internal rectus and an advancement of the external rectus of the same eye, while the so-called but miscalled non-squinting eye remains with its original tensions.

The precept which I would earnestly impress is one which I have already on former occasions urged, namely, that "every modification of a lateral muscle by relaxation or by shortening which can in any degree affect the rotation of one eye should in every instance be accompanied by an exactly equivalent modification of the corresponding muscle of the other eye."[1]

Dr. G. C. Savage (Nashville, Tenn.) said with reference to the etiology of internal squint that he believed that Donders was not wholly wrong when he taught that hypermetropia was the cause of squint. Acting alone it could not cause squint, and it was not one of the causative factors in most cases, but the impulse that came to the ciliary muscles of hypermetropics was always attended by a corresponding impulse to the internal recti, developing "pseudo-esophoria." The chief causative factor in internal squint was intrinsic esophoria. Neither of these conditions existing alone might be able to develop a squint, but the one grafted on to the other might do so, hence an indication for treatment. The three great factors entering into the causation of internal squint were pseudo esophoria (caused by hypermetropia), intrinsic esophoria and hyperphoria, and that the greatest was intrinsic esophoria. In the treatment of internal squint the first indication was to correct the hypermetropia, and thus remove the pseudo-esophoric factor. If the patient were young this alone would often result in a correction of the squint, although the intrinsic esophoria remained. Likewise an operation for the cure of the hyperphoric condition would relieve the squint though the intrinsic esophoria had not been altered. In older cases the interni must be operated on, and in some cases the externi as well. The operative effect should be divided between the corresponding muscles. A very simple procedure to determine which one of the recti muscles was paralysed was that if a lighted candle held in the median plane were seen as one, but when moved to the patient's right diplopia resulted, the affected muscle was on the same side of the eye to which it belonged, as was the doubled candle. It therefore must be either the internal rectus of the left or external rectus of the right eye. The affected eye saw the candle farthest removed. Exclusion of one or the other eye quickly settled the question. If the superior or inferior rectus were affected, and moving the candle up from the horizontal plane developed diplopia, it was a superior rectus that was diseased, and it belonged to the eye that saw the higher candle.

Mr. C. Wray said that his first step was to find out the squinting eye by asking the patient to shut the eye he habitually closed to prevent himself seeing double. If diplopia existed in the upper field the upper and more distant image was the one seen by the misdirected eye, and all that remained was to find out whether the diplopia was homonymous or crossed, as paralysis of an oblique muscle gave rise to homonymous of a superior or inferior rectus to crossed diplopia. This could be confirmed by the direction of the false image.

Dr. J. L. Thompson (Indianapolis) observed that the causes of strabismus were numerous. That hypermetropia was a frequent cause he was confident, and had proved it in several instances. Several times he had met with children in the same family, all of whom had strabismus. An operation had been done on one member in whom amblyopia had been found at the 10th or 12th year of age. Other members of the family had been brought to him who, by the ophthalmoscope, had been found to be hyperopic. Positive glasses had been given them at the age of 18 months. These children, examined several years subsequently, had manifested no symptoms of deviation, and they had possessed binocular vision. Others (infants) had been benefited by instillation of atropine on every fourth day for some months. Older persons, with high degrees of convergence, in whom binocular vision cannot be brought about, all that could be done was to help them cosmetically, and even so perfect results were rarely got. He was careful not to do much at one operation, but insisted on seeing the patient again and operating further if necessary.

Dr. Landolt (Paris) thought that too much stress could not be laid upon the fact that homonymous strabismus was a binocular affection. He was so much convinced of this that, at the International Medical Congress in Washington, he had logically called strabotomy a binocular operation. He asked for some further explanation of the phenomenon called by von Graefe aversion to binocular vision, which Dr. Stevens explained by a lack of equilibrium of the ocular muscles.

Dr. Stevens thought that Dr. Landolt's remarks respecting the importance of the position of the head in the diagnosis of paralysis of eye muscles were of much value, and fully concurred with him in the statement that the direction of the head corresponded to the character of the affection. In a paper published in the *Ophthalmic Record*, Dr. Stevens added, he had arranged the signs from diplopia in a scheme which attempted to place the whole subject in the simplest possible manner.

General Scheme of Diplopia in Paralysis of the Ocular Muscles.

Diplopia caused by lateral rotation in the median plane: images homonymous, paralysis of the externus of the eye toward which the rotations cause the greatest separation of the images; images crossed, paralysis of the internus of the eye towards which the rotations cause the least separation. Diplopia induced by vertical rotations above the median plane: The highest image belongs to the affected eye; images homonymous, paralysis of the interior oblique of that eye; images crossed, paralysis of the superior rectus of that eye. Diplopia induced

[1] Stevens, *Archives of Ophthalmology*, 1889, p. 407.

by vertical rotations below the median plane: The lowest image belongs to the affected eye; images homonymous, paralysis of the superior oblique; images crossed, paralysis of the inferior rectus. Coexisting exophoria of sufficient degree may cause the images in paralysis of the obliques to become crossed, and esophoria in like manner may cause the images in paralysis of the superior and inferior recti to become homonymous. In such case diagnosis may be aided by the tilting of the images. If the tilting of the upper end of one image inwards increases with the rotation above or below the median plane, paralysis of the rectus muscle is suggested. If the tilting of the upper end outwards increases with the rotation above or below the median plane, paralysis of one of the obliques is suggested.

To the question, What is the approximate percentage of cases operated for uncomplicated strabismus in which stereoscopic vision may be expected? the reply must be indirect. Strabismus operations were commonly regarded as easy; but the proper treatment of strabismus demanded the highest skill. If the surgeon and the patient were willing to give the time and trouble requisite, 90 per cent. should get such vision.

AN EXPERIMENTAL INVESTIGATION OF EYE MOVEMENTS.[1]

By J. S. RISIEN RUSSELL, M.D., M.R.C.P.,
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(From the Pathological Laboratory of University College, London.)

DR. RUSSELL'S paper dealt with the influence of the cerebrum and cerebellum on ocular movements. The first question considered was the cortical representation of eye movements, and after alluding to Dr. Hughlings Jackson's surmise as to why none but the lateral movements of the eyes to the opposite side had been obtained by previous observers on excitation of the cerebral hemispheres it was shown that the results obtained in the present investigation amply confirmed Dr. Jackson's view. For, after excluding the possibility of the movements of the globes to the opposite side taking place, by dividing the recti muscles concerned in bringing about this movement, it was shown that excitation of the same area of the cortex which was previously found only to result in this lateral movement evoked the following movements of the eyes:

1. A direct downward movement of both eyes.
2. A similar upward movement of both eyes.
3. A movement of both globes downward and to the opposite side from the hemisphere stimulated.
4. A similar movement upward and to the opposite side from that stimulated.
5. A movement of convergence, both globes turning inwards towards the middle line. (External rectus of opposite eye alone divided.)
6. A direct lateral movement towards the side of the hemisphere stimulated.
7. A movement upwards and to the same side.

Each movement was, of course, obtained from a different focus within the area of representation of conjugate turning of both eyes to the opposite side. The four first noted were obtained with great constancy, but convergence was less constantly obtained, and the movements of the eyes to the side of the hemisphere stimulated were so inconstant that little stress was laid on the fact that they were sometimes obtained.

The next point to which attention was directed was that when part of the eye area of one cerebral hemisphere was excised both eyes at first turned towards the side of the lesion, but recovered their normal positions after a variable time, depending on the severity of the cerebral lesion. The possible ways in which compensation might be effected were discussed, and arguments for and against the various hypotheses advanced. If the animal were placed under the anæsthetic influence of ether or chloroform after the globes had recovered their normal positions, they once more assumed the abnormal position of turning to the side of the cerebral lesion. The probable explanation of this was that suggested by Dr. Hughlings Jackson, who supposed that after destruction of part of the cortical representation for eye movements certain nervous arrangements for some ocular movements were lost for ever. On this hypothesis it was easy to see why the hemisphere containing the fewer nervous arrangements for ocular movements should give out first under the influence of an anæsthetic.

Control experiments on normal dogs showed that when they were placed under the influence of ether or chloroform the eyes turned to one or other side as the stage of surgical anæsthesia was approached. While pointing to an inequality in the representation of ocular movements in the two hemispheres, this fact did not detract from the former observation in which the eyes always turned to the side of the lesion, regardless of the direction in which they turned, during narcosis, before the operation.

The ocular deviations which resulted from ablation of different parts of the cerebellum were detailed, together with the direction of the nystagmus in the different lesions; and it was further shown that after they had been recovered from, both the abnormal position of the globes and the nystagmus could be reproduced by placing the animal under the influence of ether or chloroform. Arguments were adduced in favour of looking on ocular deviations consequent on ablation of parts of the cerebellum as paralytic, rather than irritation phenomena, as had been previously supposed; and that the cerebellar influence was one exerted directly on the ocular muscles through lower centres, and not indirectly through the agency of the cerebral hemispheres. Two forms of nystagmus were recognised in this connection, one spontaneous and due to the taking off of an influence which normally inhibited or controlled, and the other evoked only on movement of the eyes, and evidently due to weakness of the ocular muscles. Control experiments on the labyrinth and auditory nerve proved that the ocular phenomena met with in experimental lesions of the cerebellum did not result from interference with these structures, so widely different were those resulting from ablation of one lateral lobe of the cerebellum from those which resulted from extirpation of the labyrinth or section of the auditory nerve.

The effects of ablation of one lateral lobe of the cerebellum and part of the eye area of one cerebral hemisphere were considered in various combinations, namely, as to whether both were injured on the same side or on different sides, as to whether in either case the lesions were produced at the same time, or the one some time before the other, and if the latter whether the cerebral preceded the cerebellar, or *vice versâ*. The facts which appeared to be best established by this last series of experiments were, that the influence exerted on the muscles of the opposite eye by one lateral lobe of the cerebellum and the cortical cells of the eye area of the cerebral hemisphere on the same side as the lateral lobe of the cerebellum, antagonised each other, and that one lateral lobe of the cerebellum and the cortical cells of the opposite cerebral hemisphere acted in concert in moving the eye in one direction, while the other lateral lobe of the cerebellum and the other cerebral hemisphere were responsible for movement of the eye in exactly the opposite direction.

[1] Part of the expenses of this investigation have been defrayed by a grant from the Scientific Grants Committee of the British Medical Association.

ON THE GOOD EFFECTS OF DRESSING ONE EYE ONLY AFTER CATARACT EXTRACTIONS.

By JULIAN J. CHISOLM, M.D., LL.D.,
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IN my earlier life I was taught that for the first ten days after operation the eyes could not be kept too quiet, and that even the suggestion of movements in them should be avoided. This is the belief of most eye surgeons to-day, and their practice is moulded upon it. Both eyes they think must be kept closed for at least one week, and then slowly admitted to the full light of day. In bed is considered the best place for such blindfolded patients, for when on their backs and in the dark they are supposed to be out of danger. Most surgeons accept the so-called fact that the movements of the eyeball will interfere with the healing of the corneal wound. That if the eye be permitted to move the wound can not be kept from gaping, and therefore proper union cannot take place. As we know that the movements of one eye must affect the other, they think that both must be bandaged and kept quiet. Now my experience during the past six years, in at least 600 cataract extractions, has shown me that

the theory, however universally accepted, is not followed by the results stated. The movements of the eyeball do not disturb in any way the rapid healing of the corneal wound, and therefore do not tend to iritic protrusions after simple cataract extractions. Once this fact is established, and in my experience it is absolutely so, I can allow patients the inestimable comfort of having the eye not operated upon left open during the whole treatment. This decided departure from the usually adopted method robs the cataract operation of all its terrors, because it is the blindfolding for ten days in darkness that is most alarming to the majority of old people. I can now say with confidence to my patients that under cocaine drops the operation is free from pain; that with sterilised instruments there is but little danger of destructive inflammation, and that with one eye opened they can safely continue to enjoy all the sight that they are accustomed to be guided by. I need not draw a picture of what all this means.

For twenty-five years the present method of closing both eyes in a dark room was also my method in at least 1,000 extractions. I vied with the most careful how this passive condition of my patient could be best ensured.

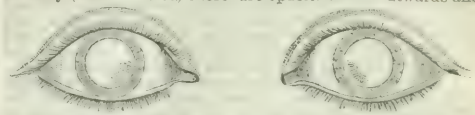
Using every precaution, with asepsis, whether the extraction be made with or without iridectomy, I now close the eye operated upon only, and with a bandage that makes no pressure. I believe that the tonic contraction of the palpebral muscle, with its contiguous curved splint of tarsal cartilage, is all that the corneal wound needs for perfect adaptation and support. To keep this eye closed in this natural condition is all that should be wished for. This I do by covering it with a bit of thin muslin, wetted, and therefore made more pliant, by a sublimate solution. This, in turn, is covered by a thin layer of elastic cotton wool, kept in place by a light bandage, a piece of cloth 4 inches by 3 inches, to the four corners of which tapes, to go round the head, are attached. Formerly I secured the closed lids by a single strip of isinglass plaster. For the past three years I have discarded this good dressing because I now desire to inspect the eye daily, and find the removal and the reapplication of the sticking plaster troublesome. As a rule I liberate the eye operated upon on the completion of the fifth day. From my hospital wards I only shut out sunlight. If the patient has still useful vision in the eye not operated upon he is allowed to move about in the bright twilight of the room, to dress himself, and to feed himself; and therefore he escapes the many discomforts of confinement sometimes so marked in old patients. This course of practice with me is no longer an experiment. In the beginning I treated a number of cases with both eyes closed in bed, and also a similar number with one eye opened for comparison. As I found no difference in the final results of treatment, but the comfort of patients enormously increased by the mitigation of restraint, I made bold to adopt the open treatment as my daily practice. Now I never close the eye not operated upon and seldom put my patients to bed, leaving them to sit up in the ward if they prefer it.

Regardless of preconceived theories, these are the facts which my six years' experience has brought forth. I offer them to you as I know them, suggesting for your patients' comfort a trial. My practice has not suffered by the abandonment of a method of treatment, however classic, ancient, or generally adopted. My experience has taught me that the tying up of both eyes after cataract extractions, and keeping patients in bed and in the dark is useless, needless, and annoying, because they will do quite as well without any of this restraint.

OBSERVATIONS ON SOME PHASES OF OPACITY AND LUXATION OF THE CRYSTALLINE LENS.

By L. L. Thompson, M.D.,
Indianapolis, U.S.A.

Dr. Thompson read a paper with this title, in the course of which he pointed out that (1) segmental opacities of the lower, inner portions of the lens (as seen in the annexed sketch) usually remain stationary for many years; rarely do they cause blindness. One case was quoted in which the opacity remained unaltered for twenty-two years and until the death of the patient. The youngest patient in whom the condition was observed was aged 40, the oldest 87. Occasionally (about 1 in 50) there are opacities also outwards and



downwards. When this occurs, the prognosis is less favourable. (2) Annular opacity, or arcus senilis lentis, is often met with in persons under 30 years of age. Women seem to be more subject to it than men; it rarely passes beyond the periphery until after middle life, when it sometimes extends in the form of a minute speckled opacity of the whole anterior surface of the lens, again becomes stationary, and seldom causes blindness. (3) Cataract is occasionally cured spontaneously by degenerative changes within the capsule. (4) Congenital ectopia lentis is by no means a harmless anomaly. Its subjects are usually highly myopic, and have greatly reduced acuity of vision. It may cause loss of sight by glaucoma, or by luxation of the lens downward destroy the eye by uveal inflammation. (5) The spontaneous cure of cataract in elderly persons by luxation downward is also very undesirable; it gives temporary sight and joy to the patient, but usually ends in suffering and incurable blindness. (6) Second sight is also a danger signal; it is not always caused by an increase in the conjugate axis of the lens incident to incipient cataract. It is frequently present long before the faintest sign or symptom of cataract has appeared. It is often brought about by long-continued congestion of the fundus (as seen by numerous minute floating particles in the vitreous humour) by a relaxed suspensory ligament, and by luxation of the lens forward.

Dr. H. Knapp (New York) thought that Dr. Chisolm's plan of leaving one eye open was a good one. For years he had left one eye substantially open, that is, had covered it only with a patch of lint hanging over it, in nervous or timid people. Dr. Chisolm's present plan of dressing was more comfortable than the stiff occlusion with isinglass plaster. In the summer Dr. Knapp had used the first-mentioned dressing for many years, and during the last five or six years, as a rule, all the year round. It was not a novelty in Europe. The form of crescent-shaped opacities, especially of the lower portion of the posterior capsule, as well as their stationary character and their complication with opacities in the vitreous, was probably familiar to all ophthalmic surgeons. It had long been known, and had been described by earlier writers under the name of hyaloid cataract.

A DISCUSSION ON THE DIAGNOSIS OF THE THREE CHIEF FORMS OF OPHTHALMIA—THE PURULENT, THE CATARRHAL, AND THE GRANULAR.

Introduced by Henry Juler, F.R.C.S.,
Surgeon to the Royal Westminster Ophthalmic, the St. Mary's, and the London Lock Hospitals.

In using the term diagnosis I wish to imply the chief points in the distinction or recognition of these three forms of ophthalmia, so that we may be able to say with better judgment than heretofore what is the nature of the complaint with which we are about to deal.

So far as the cause of these serious affections is concerned we are unfortunately still very much at sea, and until a definite origin can be assigned to each I fear it will ever be difficult to arrive at a definite diagnosis. Nevertheless, from the clinical features of these three affections we can in many instances differentiate them.

In order to facilitate discussion, and as far as possible to abbreviate what I have to say, I will discuss these cases under two distinct heads—namely, acute and chronic ophthalmia. First, then, let us take the acute forms of these three affections—namely, purulent, catarrhal, and granular ophthalmia. In each of these we may find profuse purulent discharge

combined with inflammatory infiltration of the eyelids, chemosis of the ocular conjunctiva, and pronounced infiltration of the *culs-de-sac* and palpebral conjunctiva. How can we recognise in the early stage one from the other? The mere occurrence of pus in the ocular discharges is evidently not enough to distinguish the purulent from the other acute forms. To make my meaning as clear as possible I will enumerate the leading features of these three affections, and then point out what I consider the diagnostic signs of each.

A. *Purulent Conjunctivitis* is an acute suppurative inflammation of the conjunctiva. It may occur at any time of life, but is chiefly found amongst the newly born and young adults. Inflammation commences from one to four days after inoculation. During the first few days, the period of infiltration, there is great pain; the discharge is chiefly composed of serum mixed with tears, sometimes it is a little blood-stained. The eyelids are very much swollen so as to become smooth and shiny, losing their horizontal wrinkles: in some cases they become of brawny hardness, so that the patient is unable to open his eyes, and the doctor can only do so by means of retractors. About the fourth day the period of suppuration sets in, the discharge becomes intensely purulent, the lids become less swollen, the pain diminishes, the conjunctival swelling is less marked; the acute symptoms usually subside in fourteen to twenty-eight days.

B. *Acute Catarrhal Conjunctivitis* is an acute muco-purulent inflammation of the conjunctiva. It usually attacks children but may occur at any age. Its onset is sudden, and usually several members of a household are attacked at once. There is acute congestion and swelling of the ocular and palpebral conjunctiva. The former is often occupied by patches of ecchymosis. There is increased secretion of tears and copious muco-purulent discharge; the lymph or pus appears in large or small flakes floating in the lower *cul-de-sac*; the greater the amount of the discharge the more purulent its character. The lids may be much swollen but, as a rule, they do not lose their wrinkles; they become firmly adherent during sleep owing to desiccation of the discharge. There is copious lachrymation, photophobia, pricking and burning sensations in the eyes. As a rule, the pain is not severe. The acute symptoms yield quickly and readily to treatment, and the case is usually practically cured in the course of two weeks.

C. *Acute Granular Ophthalmia* is characterised by muco-purulent or purulent discharge, photophobia, gritty feeling as of sand in the eyes, and lachrymation. The conjunctivæ of the eyelids, fornices, and even of the globe are congested and thickened by infiltration, the upper and lower fornices as well as the tarsal portions of the palpebral conjunctivæ may be studded with transparent granules, having the appearance of boiled sago grains, but these are frequently masked by infiltration during the acute stage. The eyelids may be much swollen, but as a rule they are less so than in the two preceeding forms. The acute symptoms may subside but the case then assumes a persistent chronic form which is very difficult to cure.

In order to facilitate the proper estimation and classification of these cases, I would first call attention to the nature of the discharge. This as we have seen is always purulent or muco-purulent, and should be examined microscopically. The examination should be made at once, whilst the discharge is active and copious. The first search should be for the Neisser gonococcus. The presence of this organisation is easily demonstrated by staining with methylene blue, and using a $\frac{1}{12}$-in. oil immersion lens.

The examination is made as follows: Place a drop of the discharge upon a cover glass, place a second cover glass over this and press the two gently together so as to form a thin layer of pus on each; then slide them apart and dry gently over a gas flame. Place a drop of 2 per cent. alcoholic solution of methylene blue upon the cover glass and leave it for thirty seconds; now wash away with care the excess of the stain, dry as before and mount in Canada balsam.

These small bodies occur mostly in pairs, and are somewhat kidney shaped; they are found in the epithelial cells, in the pus cells, and in the fluid containg these. They are exactly similar to the organisms found in the urethral discharge of gonorrhœa.

The discovery of this gonococcus by Neisser has materially assisted us, and I believe it possible to find this organism in all cases of gonorrhœal origin.

Out of 25 cases I have examined for this gonococcus, I have found it in 24. Only 7 of the cases were taken from adults, the remainder were taken from cases of ophthalmia neonatorum. The absence of the gonococcus is, to my mind, sufficient to exclude gonorrhœal ophthalmia; and I am further convinced that with absence of the organism there is also absence of danger of those complications which we all know so well in connection with purulent ophthalmia. With regard to the discharge in acute catarrhal cases, Weeks and Kartulis have separately described an organism which they consider to be diagnostic of this affection. It differs from the gonococcus in not occurring in pairs and in being a bacillus with a slight central constriction. With the help of Mr. John Griffith, I have made repeated examinations of these discharges, and have found an organism similar to theirs in many but not in all cases. Further researches will be necessary before we can be positive as to the micro-organism which undoubtedly is associated with this disease.

Of the "trachoma coccus" I have so far had no experience, although I am convinced that the day is not far distant when its discovery will be established.

The intensity of the pain attending the onset of these cases is of some importance. In purulent ophthalmia, especially in adults, the pain is generally severe, whilst in the catarrhal and purulent forms it is much less so. The amount of swelling of the lids is as a rule much greater in the purulent than in the other forms. The appearance of the conjunctiva is of some help in diagnosis; this, as we have seen, is greatly congested and thickened with infiltration in all cases. The thickening is most pronounced in the purulent and granular forms. When sago grains appear on the tarsal surfaces of the palpebral conjunctiva, the diagnosis of acute granular ophthalmia is made clear, but as a rule in acute cases these bodies are so marked by infiltration that it is next to impossible to make a correct distinction. The only way of clearing up the difficulty is by waiting until the discharge has ceased and the mucous membrane has become less infiltrated. The prognosis in either form of acute ophthalmia should always be carefully guarded.

Chronic Ophthalmia is a long-standing conjunctivitis attended with persistent muco purulent discharge, gumminess of the eyelids in the morning, constant running of tears, a gritty sensation and heavy feeling of the eyelids at night. This may be due to chronic catarrhal or to chronic granular ophthalmia. How can we distinguish between them? This is a vexed question which will possibly never be absolutely settled until the "trachoma coccus" has been definitely described. Much of the confusion arises out of the variable number of follicles which are found to exist in the conjunctiva at the time of the examination. Dr. Sydney Stephenson has recently told us that he has found follicles existing in the lower *culs-de-sac* of hundreds of children whose eyes were supposed to be quite healthy. To my mind, the follicles act as sentinels to give warning of the approach of any poisonous substance in the palpebral sac; that they become irritated, inflamed, and even increased in number by certain specific poisons, and that the poison most powerful in this respect is that of granular ophthalmia. I have here some photo-micrographs of sections of the conjunctiva in a series of cases occurring in my hospital practice, which have been taken for me by Mr. John Griffith. These photographs show many points of interest but I exhibit them to-day to prove how much more the follicles are increased in size and in number in granular ophthalmia than in any other form. One specimen indeed shows a trachoma follicle existing in the substantia propria of the cornea—a position in which follicles certainly do not exist in health. I would say, therefore, that excessive formation of granulations in the *culs-de-sac* point to trachoma, but their actual presence on the palpebral portions of the conjunctival membrane is proof positive of that affection. On the other hand, the absence of follicles does not exclude the case from being one of trachoma, for in those of old standing it is usual to find a diffuse vascularised lymphoid tissue without any circumscribed lymphatic nodules, even if distinct granulations are present.

The presence of cicatrices in the palpebral conjunctiva is strongly suggestive of granular disease, so much so that by excluding traumatism and pemphigus conjunctivæ we are able to say, more or less emphatically, that such are cases of old or subsiding trachoma.

So-called follicular conjunctivitis is never followed by cicatricial contraction, and, though somewhat tardy in its pro-

gress, tends to subside without any visible organic change in the membrane. Clinically, therefore, there is not much difficulty in distinguishing this complaint from its malignant ally.

Chronic simple conjunctivitis, with extensive infiltration of the *cul-de-sac*, as well as the palpebral conjunctiva, is unattended as a rule with much change in the follicles—certainly no exaggeration of them. It usually starts in middle life, and can in many instances be associated with atonic dyspepsia. The gums are usually inflamed, and their teeth decayed, covered with tartar, and improperly attended to, this being the usual source of their gastric derangement; sometimes, however, it is alcohol. In such cases there is a tendency to eversion of the lower eyelid; whereas in trachoma we generally find entropion of the upper lid. It is a most troublesome affection and almost as difficult to treat as granular ophthalmia. It is generally symmetrical, as it is due to constitutional disorder, but it has not been proved to be contagious.

In conclusion, I wish to call attention to the fact that it is impossible in some of these chronic cases to give a diagnosis at their first visit, that is to say, whether it is one of trachoma or not. By removing all sources of local irritation, by attending to the constitutional state of the individual and his hygienic surroundings, the inflammation may subside far more rapidly than expected and leave a fairly healthy membrane without any cicatricial change.

THE TREATMENT OF TRACHOMA OR GRANULAR CONJUNCTIVITIS.

By Kenneth Scott, M.B., C.M., F.R.C.S.Edin.,
Cairo, Egypt.

In the year 1891 I had the honour of presenting a few remarks on the treatment of this disease before the Ophthalmological Society of the United Kingdom. Since then I have seen reason to change and somewhat modify the treatment there described.

The following facts are entirely derived from my hospital experience of the treatment of patients, where the course can, as a rule, be uninterruptedly followed from its commencement to its close. In private practice I have had exactly similar results, but owing to patients omitting a few days' attendance, etc., I have thought it advisable not to include them in the statistics on which the following statements are based.

The cases admitted to hospital were in no way specially selected, as owing to the continually crowded condition of the eye wards (male, 36 beds; female, 22 beds), it is only those cases considered as aggravated which can be treated as in-patients; all other cases are treated in the out-patient department, where of course it is equally difficult, as in private practice, to obtain perfectly accurate statistics of the result of treatment. I have only omitted those cases which from various causes, or at their own request, had to be discharged before cure had been effected.

In my paper laid before the Ophthalmological Society I strongly advocated the use of perchloride of mercury in solution. In no way do I depart from my opinion which I there stated, but owing to various reasons—the discomfort and pain accompanying its application, a certain instability of the salt when in solution and its difficult solubility—I thought it advisable to try and find another equally efficient but less annoying remedy. I therefore tried several other medicaments; amongst these, pyoktanin was found to be absolutely useless. For some time previously I had been using cyanide of mercury in solution with great success, both in the treatment of acute purulent conjunctivitis and in acute and chronic catarrhal conjunctivitis. I accordingly tried it as an application in the treatment of trachoma, and at first in the same strengths in which I used the perchloride of mercury. In comparison I found the application was in no way detrimental to the cornea, even though ulceration coexisted there; there was not nearly as much painful irritation produced as by the perchloride, and the result was equally satisfactory. In 26 cases, for the sake of comparison, I employed the perchloride of mercury application to one eye, and the cyanide of mercury in corresponding strength of solution to the other eye, and found scarcely any difference in regard to the rapidity of cure, but if anything the cyanide was quicker in effecting cure than the perchloride; also, a tolerance of the former application was much more quickly established than was the case with the perchloride. Since then I have invariably employed the cyanide of mercury. Varying strengths of solution have been tried, but none give such good and rapid results as the daily thorough application with a brush to the everted eyelids of an aqueous solution of the cyanide of mercury, 4 per cent strength, and the instillation two or three times daily of a ¼ per cent. solution of the same salt. Whatever the condition of the cornea may be it need never be considered in regard to the application of these cyanide solutions, as I have never seen any caustic or permanent irritative effects produced by it. The perchloride of mercury solution, however, must always be employed with care in this respect.

A similar result, as regards ultimate cure, may be obtained by the application, with a brush of a 1 per cent. solution of the cyanide of mercury, and the instillation of a solution of 1 in 1,000; but though the eventual effect is as good, the process of cure is much more slow, extending over two or three months, instead of, as with the stronger solutions, being a question of weeks and sometimes only of days.

I have found that the season has some bearing on the rapidity of cure. The statistics from which I have deduced the foregoing facts have been divided into those cases treated during the months, extending from May to October inclusive, which is our warm season in Egypt, when the average temperature (according to the records of the last twenty years) is 29° C. (84.2° F.); and into the season extending from November to April, when the average temperature is 12° C. (53.6° F.).

Both applications, namely, the perchloride and the cyanide of mercury, show a similar result; the cure is much more rapidly effected in the warm season than in the cool one. There is no very great variation in the average degree of humidity, so I think it may be left out of account.

I have found no distinction at all in the rapidity of cure in comparing the poor with the well to-do classes.

I do not think that my patients are placed in any unusually favourable hygienic circumstances in hospital, as they nearly all live an almost entirely outdoor life. The advantages they gain by coming into hospital are absolute cleanliness, and good, wholesome, and regular feeding. A tonic in some form is always administered, usually in the form of one of the preparations of iron, with the addition during the cool season of cod-liver oil.

I have tried the operative procedures which are often advocated, such as squeezing, etc., in conjunction with both the perchloride and the cyanide of mercury forms of treatment; and have compared it, when performed in one eye, with the simple treatment followed in the other eyes, but have never found any increased benefit accruing which would induce me to adopt it invariably.

May—October.

Average Temperature, C. 29°, F. 84.2°.

	Total.	Sex.	No.	Age in Years. Average.	Age in Years. Minimum.	Age in Years. Maximum.	Stay in Hospital in Days. Average.	Stay in Hospital in Days. Minimum.	Stay in Hospital in Days. Maximum.
Perchloride of Mercury in Solution 4 per cent.	29	Female	10	29	13	70	18.4	9	38
		Male	19	33.4	7	50	22.2	5	78
Cyanide of Mercury in Solution 4 per cent.	18	Female	10	19	4	50	25.1	5	78
		Male	8	28	5	45	20.9	9	41
Perchloride of Mercury in one Eye / Cyanide of Mercury in the other Eye	15	Female	7	31	6	61	31	9	46
		Male	8	16.3	11	28	33.8	5	68
Total	62								

NOVEMBER—APRIL.
Average Temperature, C. 12°, F. 53.6°.

	Total.	Sex.	No.	Age in Years. Average.	Age in Years. Minimum.	Age in Years. Maximum.	Stay in Hospital in Days. Average.	Stay in Hospital in Days. Minimum.	Stay in Hospital in Days. Maximum.
Perchloride of Mercury in Solution 4 per cent.	41	Female...	15	15.2	5	30	31		10.68
		Male ...	26	20.3	4	78	36.5		12.77
Cyanide of Mercury in Solution 4 per cent.	35	Female..	13	17.9	10	32	31		9.61
		Male ...	22	22.3	6	50	34.2		8.77
Perchloride of Mercury in one Eye Cyanide of Mercury in the other Eye	11	Female...	7	13.8	4	29	35.5		13.65
		Male ...	4	30.7	11	42	31.5	27	39
Total ...	87								

Total of Cases, 179.

That form of granular conjunctivitis which is seen in long continued or neglected chronic catarrhal or purulent conjunctivitis, but which is quite distinct from proper granular conjunctivitis or trachoma, yields readily to the above described application of cyanide of mercury.

In conclusion I should like to state that all applications of copper or silver salts, which I have tried in the cure of this disease, have proved either useless or positively harmful.

Mr. SYDNEY STEPHENSON had succeeded in finding the Neisser coccus in all his cases of purulent ophthalmia. He was of opinion, therefore, that the existence of that contagious malady should not be admitted unless that micro-organism could be found. As to the vexed question of distinguishing between follicular conjunctivitis and trachoma, Mr. Stephenson thought that the adenoid tissue and follicle present normally in the conjunctiva acted as a sort of sentinel tissue, reacting to various irritants. The simple irritants might be chemical as solutions of atropine or eserine, or of a more general character, as impure air or defective sanitary surroundings. In such circumstances the follicles become enlarged, the conjunctiva red and discharging, and the clinical picture of follicular conjunctivitis was produced. On the other hand if the irritation were specific, that is, due to an organism the specific disease, trachoma, came about. The diagnosis between follicular conjunctivitis and trachoma, although it might be difficult from a pathological standpoint, could be made clinically in 95 per cent of the cases at least. It was, from a practical point of view, of the greatest importance. He had tried a 4 per cent. solution of perchloride of mercury in trachoma, but he had never witnessed cure in four to eight weeks, the period named by Mr. Scott in his communication to the Ophthalmological Society in 1891. Mr. Stephenson's trials had extended over nine months, but complete cure had not resulted in a single one of the sixty eyes experimented on, although the condition of the conjunctiva had improved in almost all. He had noted sloughs of the conjunctiva and corneal infiltration after the use of the agent, which ought to be washed off the membrane. On the whole, Mr. Stephenson was of opinion that the 4 per cent. solution had few advantages over the 1 per cent sublimate, which he had employed and recommended since 1887. Mr. Stephenson had used for the last twelve months cyanide of mercury in strengths varying from 4 per cent. to 12 per cent. in watery solution applied daily to the exposed conjunctiva. The reaction following the cyanide was much less than that after perchloride, and the cases did as well under one as under the other remedy. But with all medicaments applications spread over many months were necessary to attain a complete, a satisfactory, and a lasting cure. Removal of the morbid material by the operation of "expression" he regarded as a useful accessory measure, aiding powerfully the daily application of blue stone, the oldest but the best remedy available.

Dr. H. KNAPP (New York) said that in practice two fundamentally different forms of trachoma were met with. In both the characteristic spawn-like granule was present. In the one, which he would call non-inflammatory (or, hypothetically, non-specific—that is, not of bacterial origin and not contagious), the deposition of these granules was the only abnormality. Both lids of one or of both eyes might be densely studded with granules, and there was no irritation. Not infrequently one eye was affected in the highest degree, and the other completely free. The granular infiltration in this form was, he thought, produced by a non-infective irritant—for instance, sulphate of atrophine, etc. The second form was inflammatory and contagious. The granular infiltration was produced by some infective micro-organism, be it a bacillus or a diplococcus, according to their catarrhal or purulent nature of the complicating conjunctivitis. The first form was successfully treated by expression; in the other expression must be followed by the sulphate of copper crystal, nitrate of silver, and the like. In every case in which the hyaline substance of trachoma was deposited in the conjunctiva, be it as granules or diffusely (coalescent granules), expression was very useful, though not the only means to produce a cure; its usefulness depended on its thoroughness. He had never seen it followed by more than transient and harmless reaction.

Mrs. CHARLOTTE ELLABY, M.D., said that her experience during four years' practice in Bombay in the treatment of trachoma led her fully to agree with Mr. Stephenson's remarks as to the efficacy of the application of the solid sulphate of copper. It was her practice, however, to apply it not every day, but, in the severer cases, every second day at first, and later twice a week, employing in the interval, once or twice daily, sulphate of copper in solution (4 grains to the ounce). The average time of cure in 90 per cent. was from two to three months. As regards purulent ophthalmia, the cure of which was so complicated in Eastern countries by the habits of the people and the bad hygienic conditions in which they lived, the constant use of peroxide of hydrogen for cleansing and disinfecting purposes was very efficacious. In conjunction with this a solution of nitrate of silver, not stronger than 4 grains to the ounce, was applied twice daily to begin with, later once daily.

Dr. J. J. CHISOLM (Baltimore) said that in connection with the sterilising of an inflamed conjunctiva he could report a case of interest of recent occurrence. The patient had a cataract and chronic purulent conjunctival inflammation of one year's duration. The patient was old, and coming from a long distance could not return for future operation. Peroxide of hydrogen solution was poured into the conjunctival sac until all escape of gas ceased. The following day the extraction of the opaque lens was made, although the conjunctiva was still highly injected. No infection of the corneal wound occurred, notwithstanding the ugly complications, and good sight was regained as in uncomplicated cases.

Brigade-Surgeon-Lieutenant-Colonel DRAKE BROCKMAN said that during a long residence in the East Indies in charge of the Government Ophthalmic Hospital in Madras he had ample opportunities of seeing the various forms of conjunctival affections—the catarrhal, the purulent, the granular, and the trachomatous forms. The catarrhal form showed itself in epidemics at the changes of the season, upon the setting in of the north-east and south-west monsoons. In such cases the disease could be arrested by the observance of rigid cleanliness and the use of silver nitrate solutions. At this time those who had been sufferers from granular ophthalmia in a dormant state suffered from profuse suppuration. The same treatment more rigidly employed served best. As regards the true trachoma such cases were very rarely seen in the early forms and stages: they came under treatment after they had been the subject of native treatment, with considerable damage to the conjunctiva, with changes in the tarsal cartilages and corneal tissues. Nothing, or next to nothing, could be done in these cases. In the chronic form of granular ophthalmia, with papillomatous granulations, the sulphate of copper in the solid form was the most useful application with perfect cleanliness. These cases required a long period of treatment, and taxed the patience alike of practitioner and patient. In the purulent form of the disease the application of a strong solution of silver nitrate of 15 grains, 20 grains, and 30 grains to the ounce was more effectual than the application of the weaker solutions, which were useless if not mischievous.

The old treatment, inculcated many years ago regarding the use of silver nitrate and copper sulphate, was the best if used carefully and with not too great severity.

Surgeon-Captain G. H. Fink said that in the North-Western Provinces and Oudh in India eye diseases of all characters were exceedingly prevalent, particularly various forms of conjunctivitis and its sequelæ, together with cataract. There he had had as many as 20 to 30 cases of purulent conjunctivitis to treat daily, and he had found no remedy so powerful and useful as nitrate of silver (gr. x to gr. xv to ℥j), used once or twice most thoroughly and efficiently, as Brigade-Surgeon-Lieutenant-Colonel Drake-Brockman had stated. As the disease went on to recovery, the strength of the solution of this nitrate of silver might be reduced gradually, or even used in the intervals of the application of the stronger applications; but these were frequently quite unnecessary if the strong solution (gr. x to xv) were properly applied once and for all. With regard to trachoma, his experience had been less; but he did not believe that the old remedy, solid sulphate of copper in crystal, could be surpassed if applied with a delicate touch to the trachomatous surface. In milder cases the lapis divinus was useful; but in all cases where strong solutions were used, they ought to be reduced in strength as the case gradually tended to recovery, lest cicatrices should result.

Dr. J. L. Thompson (Indianapolis, U.S.A.) said that there were a very great number of trachomatous cases in the United States resulting from the war. Indeed, it was no unusual thing to meet with patients who had quite recently contracted the disease from their parents or others who first had trachoma while in the army. If patients could only be seen a few days after the disease had been contracted, and if they could be induced to avoid all irritant applications and simply use a solution of boric acid (4 per cent.), cleanliness and a mild unguent to the edges of the lids, a majority would recover in three months; but when the disease became chronic it could never be known when the end would be reached. Some cases hung on, better and worse, in spite of irritant applications, roller forceps, stiff brushes, and all remedies which had heretofore been used. In the purulent ophthalmia of infants, nitrate of silver should be used once a day to the thoroughly everted lids by the medical man himself, in the proportion of gr. xx or xxx to the ounce of water, with a hair pencil washed off afterwards. In addition to this, thorough cleanliness should be practised many times a day, and a mild ointment applied to the edges of the lids. If this treatment were thoroughly carried out, nearly every patient might be cured in from two to seven weeks, if no ulceration of the cornea existed before the treatment was commenced.

Mr. Doyne (Oxford) considered that the difficulty of dealing with trachoma lay in the fact that it could not be known that it had to be dealt with until the late clinical symptoms had set in. In the Oxford district practically it did not occur. Among 12,000 eye cases only 21 cases of trachoma occurred, and 9 of these were distinctly imported. Further, of these 21 cases one-third were limited to one eye, the other being quite healthy. This would seem to point to the suggestion that trachoma was not as contagious as was generally supposed, but might be produced in the same way as tuberculous troubles arose.

Dr. McGillivray (Dundee) had seen a number of cases of trachoma in Dundee. They had been found exclusively among the Irish and Jewish sections of the city. The treatment adopted was free expression with Knapp's roller forceps under chloroform, and the application of corrosive sublimate lotion (1 in 1,000) rubbed firmly into the expressed parts. For several months this was followed up three times a-day with a weak sublimate solution (1 in 5,000). This method of treatment had given satisfactory results.

Mr. Juler, in reply, said that he was glad to hear that Mr. Stephenson's experience was that gonococci were very commonly present in all his cases of purulent ophthalmia. He agreed with several speakers as to the value of nitrate of silver in rather strong solutions in stopping purulent discharges. With regard to treatment he was not surprised to find that Mr. Kenneth Scott had not found much benefit from the use of pyoktanin. He agreed with Mr. Stephenson that a 1 per cent. solution of perchloride of mercury was more safe—that is, not attended with sloughing, etc.—than a 4 per cent. solution. He preferred, however, to scarify the lids and to brush into the subconjunctival tissue a $\frac{1}{15}$th solution of that salt. It was satisfactory to hear so many observers testifying to the value of the milder remedies, as blue stone and weak nitrate of silver. In his own practice there was great difficulty in keeping up prolonged treatment of this nature. He preferred the perchloride, with or without operative help.

THE ASSOCIATION OF BLEPHARITIS AND AMETROPIA.

By Ernest Clarke, M.D., B.S., F.R.C.S.

Mr. Ernest Clarke said that blepharitis was essentially a disease of youth, and when found in older patients it had existed since youth. It was an expression of asthenopia, the result of ametropia, which was invariably present. Just as asthenopia showed itself as headache or ocular pain in those whose nervous system was so constituted, so in others, especially strumous patients and those who exhibited a tendency to eczema, asthenopia showed its presence by blepharitis. One hundred patients suffering from blepharitis were examined and every one found to be ametropic; whereas Mr. Work Dodd had found that in healthy people 20 per cent. were emmetropic.

LOW DEGREES OF EYE STRAIN A SOURCE OF SYSTEMIC DISTURBANCES.

By Geo. M. Gould, A.M., M.D.,

Philadelphia, Pa., U.S.A.

According to an adage, as true as it is ancient, happiness is made up of little things, though not itself by any means a little thing. It appears to me that, *mutatis mutandis*, the same rule applies to disease. In its beginnings at least, disease consists of the slightest, almost inappreciable, departures from the normal. It is the million-fold repetition of slight abnormalisms, the continuousness of slight irritations, that finally break down the health-loving, disease-resisting power of life. As the continued dropping of limpid water finally wears away the hardest stone, as the daily, infinitely repeated naggings and worryings of tiny cares finally destroy moral resistance, so morbid tissue changes ultimately result from slight, repetitive, or continual malfunction. First come those tissue changes that are detectable only microscopically, but finally these become macroscopic, and generally death ensues. Pathology, like human history, has no beginning, but loses itself in the mysteries of an uniathomable past. Much or all of what is termed pathology is but the shore-strewn wreckage of past disease. The weakening of bolts and rivets, the widening of seams, the leakages, the giving way little by little of part after part, these are like the unrecorded beginnings of disease. It is the true function of pathology to deduce from a study of her specimens lessons to prevent pathology, lessons that shall stop such specimens from again coming into existence, lessons that shall inhibit morbid function from becoming morbid tissue change. Pathology is failed therapeutics, and the genuine pathologist must ever delight to sacrifice himself to the therapeutist.

To the eye especially, and I believe more than to any other part of the organism, these truths apply with remarkable pertinence and power. The reason for this peculiar application appears to lie in the novel and tremendous change of function and burden of labour thrown upon the visual mechanism by civilisation. The evolution philosophy teaches us that organic structures are the outcome of functions throughout an almost infinite past. Prior to the widespread use of printing and sewing, of urban, commercial, and indoor life, the work of the visual mechanic was to create an organ that should give the sharpest distant vision. Except exceptionally, danger or duty did not lie within a distance of 14 inches. Hence the hyperopic eye of animals, of primitive man, and, in a Darwinian sense, of the representative of these, the child of civilisation. But now, within a moment, an evolutionary moment, be it understood, comes civilisation, and utterly reversing the million-yeared development,

demands continuous application at near range of the organ created for long range purposes. The Müller ring fibres of the hyperopic eye is the answer of the ocular mechanician to the demand. But the demand is too sudden and too violent, and it is the belief of many oculists that apart from myopia and other organic sequelæ, there are in our modern society millions of examples of profound reflex systemic disturbances due to irritative malfunction and overfunction of the eye, unfitted for the work to which it is put by civilisation.

Another reason why this struggle and irritation is so frequently reflected to the brain and other parts of the system, instead of as usual back to the organ (in this case, the eye) whence it started, lies in the fact that, of all organs, the eye is by all odds the most valuable and necessary, and hence inflammations (the normal consequence of such normal reflexes) would be enormously dangerous to this precious organ, and thus also harmful to the welfare of the general organism. Whatever else suffers, vision must be saved. Not unworthy of mention, and of especial significance to Darwinians, is the possible influence of sexual selection. Even by those not Darwinianly inclined it will hardly be denied that sexual beauty plays a tremendous *rôle* in the drama of physiology as well as in the drama of life, and that ocular health and beauty is a very chief element of the whole. Whatever else is spoiled the eye must be saved.

A year or two ago a prominent English ophthalmic surgeon published an analysis of 10,000 cases of ocular disease which he had seen in private practice. Of this large number of patients, I note first that almost one half were males and only a little over one half were females. It is a result of my experience, as also of that of a number of *confrères* who pay particular attention to slight errors of refraction accurately diagnosticated and corrected, that our female patients very largely outnumber the males. With us the habit of accurately correcting these slight errors of refraction has spread abroad in the community a knowledge, gained by bitter personal experience on the part of patients, that the correction of these slight errors does give relief of manifold, profound, and long-endured suffering. Now if the philosophy of reflex ocular neuroses which I have briefly hinted be at all true, it follows that women with their greater sensitiveness and indoor life of sewing, reading, etc., must feel the sad results of eye strain far more poignantly and far more frequently than men, who have sturdier nervous organisations and more out-of-door occupations.

I note, secondly, that of the 10 000 cases only a little more than one-fifth are classed as hyperopic, including hyperopic astigmatism, while almost one-third are classed as myopic. This also is very different from the statistical showings of my case records, which give a very much larger number relatively of hyperopes. This, once more, seems easily explainable by the fact that eye strain is found to be with us so largely the consequence of hyperopia and hyperopic astigmatism, and the correction of these kinds of refractive errors has proved to the community that suffering is thereby relieved. Hence the general knowledge that headaches, hysteria, anæmia, functional digestive troubles, and other nervous disorders are relieved by the correction of anisometropia, hyperopia, and hyperopic astigmatism, brings more hyperopes to our offices, and makes our statistics differ so profoundly from those in question.

But it is in relation to emmetropia that my case records differ most from those of the article mentioned. In 10,000 cases the author from whom I quoted found 4,441 emmetropes, or almost 50 per cent. I have not had the rich clinical experience of the distinguished surgeon, but my experience extends at least to 3,000 or 4 000 cases, and I doubt if I have ever seen a patient both of whose eyes were emmetropic. This astonishing difference of results in diagnosis seems to be explainable only on the supposition either of a difference most profound as to the definition of the word emmetropia, or of a diagnostic confounding of ametropia and emmetropia.

From a certain point of view, we may look upon ophthalmologists as divisible into two classes; and for purposes of nomenclature we might speak of the older ophthalmology as almost exclusively occupied with operative surgery and inflammatory diseases of the eye, whilst the new ophthalmology is largely, preponderatingly, occupied with conditions arising from ametropia and imbalance of the extrinsic muscles of the eye. The new ophthalmology can only explain the finding of 50 per cent. of cases as emmetropic, as due to an indifference to low degrees of refractive anomaly, to a failure to make the diagnosis with the aid of a mydriatic, and hence a general classification of low degrees of ametropia as emmetropia.

It is the contention of the new ophthalmology that these low degrees of ametropia, these slight anisometropias, and exophorias, instead of being indifferent and ignoble matters beneath the dignity of the oculist, are transcendently important, demanding the closest scrutiny, the most skilled attention, and the most accurate diagnosis. Of course it would be contended by no sane person that every case of ametropia should be corrected. People without symptoms of disease do not in the first place come to the physician. There seems little danger of glazing the entire human race in the interests of pseudo-science. But this at best would be a harmless amusement, whilst even one instance of neglect in diagnosis is a very serious matter. These little defects, we think, sometimes cause profound systemic disturbances, and their correction often brings happiness instead of suffering, enjoyment in place of the most abject misery.

This suggestion seems reasonable from the following, a few of many reasons that might be urged:

1. Large defects, either of anisometropia, heterophoria, or ametropia, soon throw one eye out of function, or throw the owner of the eyes out of his function of continuous near work. Perfect vision, especially perfect binocular vision, is renounced, or the avocation that demands much near range visual labour is renounced. On the other hand, when there are slight and commonly-ignored errors, the mind imperiously demands the conquering of the difficulty, and never ceases to struggle for perfect binocular image formation. Hence it seems clear that the severest eye strain must result from the low defects which can be overcome, but overcome only with great difficulty and with ceaseless effort. Whatever muscle be continuously and strainfully contracted, then infallibly follows pain. The hand can hold the lightest weight, the arm can hold itself horizontal only for a few brief minutes; and yet the ciliary muscle of the hyperopic eye, or the interni of exophoric eyes of a clerk or of a seamstress are held in continuous contraction for hours, and with little interruption for a whole day, and every day. If, as generally happens, astigmatism is added to the foregoing, there is demanded a two-sided or unequal contraction of this delicate sphincter muscle, that is, a function *per se* unphysiological and morbid. What but harmful reflexes can result from such irritation and morbid functions?

2. In no sense organ except the eye, in no other tissue of the body, is there to the millionth of a degree the necessity of physiological reaction to so slight a stimulus kinetically, and the departures from normality are therefore more certain to occur than in other organs. Moreover, in other organs, as the ear, those of touch and of temperature, etc., the limits in which physiological function are confined, are broad, and so far as the organism is concerned, without significance. The highest or the lowest notes are not painful to the ear, and only a few very exceptionally loud sounds are injurious to it. Discords of the most outrageous kinds are mentally not physically painful. And so with all the senses. But in the eye a malformed image excites a world of effort and struggle, ceaseless and often agonising, to overcome or to circumvent. Pain somewhere and sometime must and does follow from such effort and struggle.

3. In no other structure of the body is there demanded a change of function analogous to that demanded of the eye by civilisation. The phlebitic disorders consequent upon the human upright position and valvelessness of the veins, is the only analogy that occurs to me, and that is a poor and insignificant one. Civilisation has come with a suddenness and, if one may say so, a malignity of demand upon the ocular mechanism that permits of no natural and certain adaptation of the eye—a fact conclusively proved by the tremendous prevalence of ocular disorders and reflex neuroses, and the progressive ravages of the disease, myopia, in the most civilised societies. Morbidity and suffering result from the unphysiological use of an organ, or from its use suddenly

different from that for which it was created and had served in its whole past history.

4. The function of accommodation is a precise and definite function, it exists for a specific purpose and for that only. It is to give emmetropic eyes the power of temporarily distinct vision of objects lying between infinity and, say twelve inches. Every degree of ametropia, however slight, and of whatever nature, every imbalance of the external ocular muscles throws upon the organs of accommodation a vicarious work, distinctly outside their proper function, introducing at once an unphysiological action, that is the element of morbidity. It therefore appears plain that in patients with ametropic defect and exhibiting symptoms of possible reflexes, we must by means of lenses create an artificial emmetropia in order not to thrust upon the ciliary muscle and crystalline lens a disease-producing function. I would again emphasise the fact that it is the low degrees of such defects that often give the greatest irritation to the general nervous system.

And by low defects I mean (*a*) any astigmatism whatever, one-fourth or one-eighth of a dioptre, that can be proved to exist by means of complete mydriasis; (*b*) any anisometropia, however slight, elicited by the mydriatic; and (*c*) any exophoria or hyperphoria of one or more degrees.

It is my conviction that the diagnosis of errors of refraction in patients under 45 or 50 years of age is utterly unscientific, wholly untrustworthy, and worse than useless without thorough mydriasis. All the machines and ingenious methods that have been devised, however valuable as aids, and however great the skill and experience of the surgeon, cannot, when the mental condition of the patient permits, take the place of patient, careful, interested, time-consuming, accuracy-giving work with the test lenses, and the twenty-foot test types.

I am well aware of the scorn, secret or confessed, which would contemptuously dismiss the foregoing suggestions as the exaggeration of a hobby rider, and see in them only a tendency to a sorry reduction of the ophthalmic surgeon to the level of the optician; but it strikes me that the proper question is not as to the dignity of the worker but as to the value of the work; it is as to the truth of the contention and the usefulness of this method of therapeutics. Does suffering sometimes, nay, often, come from these causes, and is it relieved by the means indicated?

There exists a body of evidence of most respectable origins and proportions going to show that slight degrees of uncorrected ametropia, anisometropia, and heterophoria do produce headache, sick headache, anæmia, hysteria, chorea, denutrition, and disorders of digestion, and that thousands, nay, millions of lives in the civilised world are shortened, invalided, or made utterly miserable from this unsuspected cause. It would seem that we should weigh this evidence, and without haste or prejudice consider if we have not here a diagnostic truth and a therapeutic method of inestimable value to humanity.

CRITICISM OF RECENT VIEWS AS TO THE SECRETORY FUNCTION OF THE CILIARY BODY.

By John Griffith, F.R.C.S.,
Pathologist to the Royal Westminster Ophthalmic Hospital.

Mr. John Griffith read a paper with this title. He commenced with a reference to the anatomy of the ciliary body. The apparent complex nature of the ciliary processes he attributed to the deceptive appearance given by the microscope, owing to their convoluted character, for they were usually seen and represented as a group of foliaceous papillæ, quite a wrong impression. He did not agree altogether with the histology of the pigmentary epithelial layer in this region laid down by Treacher Collins, for he was of opinion that with the eye at rest it was a natural condition to have only a single row of pigmented columnar cells in the pars nonplicata of the ciliary body, and that, owing to the act of accommodation, this cellular membrane was thrown into folds analogous to the convoluted arrangement of the cells on the posterior surface of the iris. He thought that Mr. Collins had taken these reduplications for glands. Mr. Griffith was quite in accordance with Mr. Collins as to the existence of tubular and pyriform glands, which were found chiefly at the junction of the plicated with the non-plicated portion, though he considered that their number and size had been somewhat overestimated. His examination had been made on eyes bleached by an easier method than that adopted by Mr. Collins. This method he advocated in the histological preparation of melanotic tissues.

Mr. Griffith next raised the question of the existence of false glands, pointing out certain anatomical peculiarities which were very prone to give rise to a misconception.

With regard to the vascular arrangement of this part, he disagreed with Nicati's description of the chorio-capillaries extending forwards and lying subjacent to the ciliary epithelium of the processes, on the ground that injected specimens of the eye of an albino rabbit showed an abrupt cessation of this fenestrated membrane at the ora serrata. Such a close network of capillaries did not exist in the eye except in the choroid. The capillary plexus of this region was to be seen in the processes, the pars nonplicata being but scantily supplied with blood vessels. He therefore came to the conclusion that the ciliary vascular plexus supplied the intraocular fluid rather than the chorio-capillaries.

Mr. Griffith could not associate the ciliary glands described by Mr. Collins with the secretion of the aqueous humour for several reasons. First, their size and number were inadequate as compared with the magnificent ciliary processes. Secondly, the intraocular fluid in the eyes of albino rabbits could not be accounted for in that way, as it was impossible to demonstrate any such glandular structures in them. The existence of the ciliary processes, too, could not be explained if they were not there to carry out this function. He considered them well adapted for such a purpose. Mr. Griffith found it difficult to accept the pathological evidence brought forward on behalf of the theory, as he believed it to be, in part, based on unsound principles. Greef's experiments were referred to, and shown to be of value in upholding the doctrine of Leber that the ciliary processes constituted the main fountain-head of this secretion.

In conclusion, Mr. Griffith suggested that the function of regeneration of the ocular pigment might be aptly attributed to the activity of these glands of Collins, for he pointed out that they existed in greatest number in dark brown eyes, whereas they were scanty in blue eyes, and in the eyes of albino rabbits were wholly absent.

REMARKS ON THE PATHOLOGY OF DESCEMETITIS.

By Herman Snellen, M.D.,
Utrecht.

Dr. Herman Snellen remarked that descemetitis or serous iritis was a well-known disease of the eye, but that opinions differed as to its nature. Early observers believed it to be a disease *sui generis*, and applied to it the terms aquo-capsulitis, keratitis punctata, or descemetitis. Later writers looked upon it as a symptom of disease of the deeper parts of the eye, and as the iris was as a rule more or less inflamed, applied the term iritis serosa. Treacher Collins regarded the disease as primarily a catarrhal inflammation of the glands of the ciliary body, and Priestley Smith had in consequence suggested the term serous cyclitis in place of serous iritis. Recently, in the case of a lady, aged 28, in whom it was found necessary to perform sclerotomy, one of the dots came away with the aqueous humour, and was found on microscopical examination to consist of a conglomeration of microbes. These microbes were cultivated; they grew slowly. When stained with carbol-fuchsin and examined closely, they were seen to be very short bacilli. In a second case a dot was obtained, and found to consist of cells with the same microbe between them. In this case the dot was probably older, the cells had been attracted and the microbes were dying off. Under the internal administration of salicylate of sodium, the eye became quiet. Dr. Snellen concluded that descemetitis was really a disease *sui generis*, and should be known by that name, and not as serous iritis or cyclitis. Further, he held that it was due to microbes growing in the anterior chamber, which, by the toxins they produced, caused irritation of the

uveal tract. The dots, which were situated at first on the cornea, might form subsequently on the iris, lens, and ciliary body. They consisted of microbes at first, with which leucocytes became intermixed subsequently. Whether some cases depended on deposit after inflammation of the deep parts remained to be proved.

Dr. H. Knapp observed that the result of Dr. Snellen's examination of some of the deposits in descemetitis was exceedingly surprising. As the normal secretions of the body had never been found to contain micro-organisms, it was necessary to suppose that the bacilli in Dr. Snellen's cases must have been either introduced from without, or derived from some constitutional microbic disease, such as syphilis and the like.

A CASE OF PROBABLE DISEASE OF THE LENTICULAR GANGLION.

By S. Johnson Taylor, M.B., C.M.Edin.,
Norwich.

Mr. S. Johnson Taylor (Norwich) related a case which presented certain interesting nervous phenomena best accounted for, in his opinion, by supposing a suspension of the functions of the lenticular ganglion on one side. The patient, a married woman, aged 49, who was liable to hysterical attacks, and had had a paralytic affection of the right arm, probably due to peripheral neuritis, was, about August, 1892, seized with pain in the left eye accompanied by proptosis, increased tension, and misty vision. When seen by Mr. Johnson Taylor in September, 1892, tension was normal, the proptosis had ceased, and vision had improved; there was a high degree of myopia which interfered with the examination of accommodation. The left pupil was larger than the right, immobile to light and convergence. There was no distinct history of syphilis, but the patient was ordered perchloride of mercury and iodide of potassium. The left pupil settled down to a fixed state, and was large and inactive to light and accommodation. Cocaine and homatropine increased the dilatation, as did also the application of the faradic current to the neck. She suffered from neuralgic pain in the eye and the left side of the nose, but there was no loss of sensation. In February, 1893, slight contraction on accommodation was noticed, but was not observed again until June, 1894. Mr. Johnson Taylor thought that the history pointed to an attack of orbital cellulitis, and that the ophthalmoplegia would be explained best on the view that the lenticular ganglion was involved in this inflammation. If this ganglion was placed *hors de combat*, the circular fibres of the iris would be paralysed and the accommodation lost, whilst the dilating fibres which received innervation from other sympathetic sources would be partially paralysed only. Faradisation of the skin of the neck would still produce increased dilatation. These symptoms were all present in the case recorded. The evidence of some return of accommodation pointed to some commencing recovery of function in the lenticular ganglion.

REMARKS ON MIXED ASTIGMATISM

By C. Wray, F.R.C.S.,
Croydon.

In a paper on this subject, Mr. Wray said that mixed astigmatism was much less frequent than was supposed, a very large percentage of the cases being really cases of simple hypermetropic astigmatism. He did not think complete cycloplegia necessary in working out the cases, and pointed out that in the artificial eye the glass that exactly neutralised the shadow was an exact measure of the refractive condition of that meridian, but added that he was not able to obtain the same accuracy when dealing with the human eye. His method of examination was to retinoscopise the hypermetropic meridian, and place the cylinder that corrected it in the trial frame, and diagnose mixed astigmatism and order glasses for its correction only, when a minus cylinder held at right angles to the plus cylinder improved the reading power of the patient at 20 feet.

Several cases were reported in which the retinoscopic examination indicated over -1.5 D in the myopic meridian, and $+2$ D in the hypermetropic, but examination on the distant type showed no improvement of vision beyond what was obtained by correcting the hypermetropic meridian.

Attention was called to the fact that the patient saw better with the minus element corrected, precisely as a low hypermetrope saw better when looking through a low concave lens, that is, the characters appeared darker, but he was unable to read more.

When esophoria was present, together with symptoms such as usually arise from this condition, Mr. Wray considered it in the highest degree important not to give a concavo-convex lens except under the clearest indications that it was called for.

THE THERAPEUTIC VALUE OF ICE IN OPHTHALMIC SURGERY.

By Angus McGillivray, C.M., M.B.Aberd.,
Surgeon to the Dundee Eye Institution; Ophthalmic Surgeon to the Dundee Royal Infirmary, and to the Dundee Institution for the Blind.

Considering the comparative want of attention given to cold as a therapeutic agent in modern ophthalmic textbooks, one may infer that its beneficial effect in ocular wounds and injuries is not sufficiently recognised. Some surgeons employ ice during the first stages of inflammation only; others do not employ it at all, probably on account of a prejudice which may be dated back to their student days, or on account of some injurious effect having followed its use which they may have seen or heard of. Cold, if wrongly applied to any injured part, may produce disastrous results just in the same way as drugs classified as poisons may if taken in overdose cause death; so cold, being a powerful remedy, requires careful and judicious application. To obtain the best results from cold in ocular injuries a knowledge of the pathology of inflammation and of the pharmacology of the remedial agent employed should guide us. Cold when applied to a part contracts the small arteries, and consequently diminishes its blood supply. In the early stages of inflammation the blood vessels become dilated. The attenuation of the vessel wall affords greater facilities for diapedesis and for the escape of the liquid part of the blood. To prevent or hinder dilatation cold must be applied as soon after the injury as possible and also continuously. By limiting the inflammatory exudation and the increased blood supply pain is avoided, or if pain be experienced it can be alleviated through the paralysing action of cold on the terminal branches of the cutaneous nerves.

The beneficial effect of cold does not cease after the early stages of inflammation have been reached. It can be continued with great advantage all through the process, for it plays an important part in the prevention of suppuration. Suppuration is brought about by the peptonising action of pathogenic micro-organisms on the inflammatory products. These micro-organisms grow best at body temperature. But when placed in a medium whose temperature is even a few degrees below that of the body, their functional activity becomes impaired although their vitality remains unaffected. If the temperature of an injured part be reduced in such a way as not to destroy the vitality of the injured tissues but to impair the function of the invading germs, we allow the injured tissues time to recover sufficient strength to ward off or destroy the invading host. When cold is applied continuously in the form of iced compresses the temperature of the part can be reduced to a degree at which the growth of bacteria is retarded without injuring the tissues. It may, therefore, be justly called an antiseptic.

The objections put forward by the opponents of cold have no foundation clinically. The healing process goes on uninterruptedly. Absorption of the inflammatory products is not interfered with, the pain accompanying the inflammation is either prevented or alleviated, and if properly and judiciously applied no injurious effect can follow. Further, Professor Michel's experiments by means of the thermo-electric couple as to the temperature topography of the eye show that by applying an icebag over the closed lids the temperature of the anterior chamber can be reduced by 27° F. Dr. Silex repeated the same experiments recently, and his results generally corroborate those of Professor Michel. His experi-

ments, however, with reference to the application of cold require confirmation and are therefore not conclusive.

The treatment of ocular wounds by means of the continuous application of iced compresses has given me the utmost satisfaction. Even if I have failed to explain its remedial action on the lines of rational therapeutics, I can confidently, from clinical experience recommend it is a most valuable adjunct in the treatment of ocular injuries.

KERATO-MALACIA IN ACUTE INFANTILE JAUNDICE.

By J. Tatham Thompson, M.B.

The following case, which came under my notice last July, seems to be of interest, because, so far as I am aware, the connection between gangrene of the cornea and acute jaundice has not hitherto been demonstrated.

The patient, a boy aged 2 months, was sent to me by Dr. Albert Jones, of Crickhowell. The child had been quite healthy until three weeks before, when it showed signs of fretfulness and illness, which turned out to be an attack of jaundice. On July 6th the child was taken to some outdoor *fête*, and two days later became markedly jaundiced. The conjunctivæ showed discoloration, and there was what the mother described as "yellow water running from the eyes," but the child opened them freely on that and the following day. Dr. Jones saw the child on July 10th, when the cornea was quite clear. There was no photophobia, but a considerable flow of bile-stained tears. On the evening of July 11th the cornea presented a slight filmy appearance, but no ulceration. On the next day the child had marked photophobia, slight œdema of the lids, a great deal of yellow watery exudation, and both cornea were opaque over the whole extent.

When I examined the child on July 13th there was slight swelling of the lids, from between which a stream of greenish-yellow, but clear, fluid was continually draining. The conjunctivæ were markedly jaundiced, both cornea absolutely opaque, of a greenish-brown colour, and apparently on the point of sloughing. The central portion of each cornea, of the extent equal to two-thirds of the entire cornea, was of a paler colour, and separated from the peripheral portion by a wavy sunken line of demarcation. I ordered instillations of weak eserine and warm boracic acid solution for cleansing purposes. I did not see the child again, but Dr. Jones informed me that both cornea sloughed within forty-eight hours, and the child died on July 31st. The child was well cared for, and was apparently well nourished and flourishing up to the time of the attack.

Amongst the causes of kerato-malacia as generally accepted we find infantile diarrhœa, measles, whooping-cough, encephalitis, starvation, or ill-advised feeding of infants, and abroad the result of fasting in the nursing mother. In this case the mother was perfectly healthy, and there was no suspicion of measles, etc.

CELLULITIS FOLLOWING MULES'S OPERATION.

By Sydney Stephenson, F.R.C.S.

Mr. Stephenson related the case of a boy, aged 10, who received an injury to his left eye which subsequently remained subject to periodical attacks of redness and pain. Six years afterwards it was found advisable to eviscerate the eyeball, and a small glass sphere was introduced. Extreme chemosis occurred, and a week after the operation the stitches were found to have given way, and the glass sphere was removed. The chemosis at first underwent some trifling diminution, but then became stationary, a small button of granulation tissue sprouted from the operation wound, and a nodule occupied the orbit. After ninety-three days the orbital stump was excised. Two years after the evisceration the conjunctiva remained a good deal thickened, and a glass eye could not be worn. Mr. Stephenson attributed this unfortunate result, which in his experience was most unusual to septic infection.

ON THE USE OF CERTAIN DRUGS OF RECENT INTRODUCTION IN OPHTHALMOLOGY.

SCOPOLAMINE, TROPACOCAINE, AND HYOSCINE HYDROBROMATE.

By T. J. Bokenham, M.R.C.S., L.R.C.P.,
Research Scholar to the British Medical Association.

During the past year or more I have made it my business to test the therapeutic value of three drugs, among others, the use of which is but little known. I regard two of these as being of great value, especially in the treatment of the eye, and take this opportunity of bringing my results prominently to the notice of others, in order that their greater opportunities of observation may either strengthen or oppose my own convictions. Without further prelude I will now pass to the actual consideration of my subject.

Scopolamine.

Some time during 1889 a rhizome appeared in the market, imported from Germany, where it was reported as growing wild. It was introduced as a new and cheap source of atropine, and its juice had certainly mydriatic properties. It was identified as the rhizome of scopolia carniolica, and its chemistry was investigated carefully by Dunstan and Chaston, for the Pharmaceutical Society. It was considered by these observers to contain hyoscyamine in an almost pure state, with a mere trace of hyoscine, atropine being absent. As however the chemistry of the Solanaceæ is a matter of considerable difficulty, one alkaloid being extremely liable to become converted into another in process of extraction, the chief point of interest attaching to the subject is the fact that from the rhizome of scopolia carniolica—or, as it has been more recently named, s. atropoides—a mydriatic alkaloid can be obtained, which is practically indistinguishable by chemical means from pure hyoscyamine.[1]

My attention was first drawn to this new drug towards the end of 1890 by Messrs. Burroughs and Wellcome, and I then performed a number of physiological experiments with it in Dr. Lauder Brunton's laboratory at St. Bartholomew's Hospital. I shall content myself with giving here an epitome of my results. Its general action was not thoroughly tested, as rodents are not satisfactory animals on which to test this action of the atropoid alkaloids. Upon myself a dose of $\frac{1}{60}$ grain had practically no effect, certainly causing no dryness of the throat or excitement. Tested on the rabbit and cat, under anæsthesia, tracings of the carotid pressure showed but little difference either as to rapidity of heart beat or arterial tension, until very large doses had been reached as compared with the doses of atropine. The pulse was slightly slowed by a dose of scopolamine hydrochlorate, which in the case of atropine would be sufficient to produce almost complete abolition of the inhibitory power of the vagus. Doses considerably larger produced a slight acceleration, but the vagus inhibitory effect still persisted after what would have been an overwhelming dose of atropine. The respiration was not distinctly affected. On the eye the drug acted as a powerful mydriatic, both in animals and in my own case. I used a solution of the strength 1 in 1,000: two or three drops were instilled into one eye twice at intervals of half an hour. After an hour and a-half the pupil was widely dilated and accommodation completely paralysed; the paralysis of accommodation persisted for about a day and a-half, and in three days the pupil had returned to its natural size. The result, save for the loss of accommodation, was in no way unpleasant.

Seeing that scopolamine had recently attracted the attention of other ophthalmologists, notably of Raehlmann,[2] who reported most favourably on its action as a paralysant of accommodation, I asked Messrs. Burroughs and Wellcome to obtain a further supply, and I have since employed it in a fairly large number of cases, in which I should have formerly given belladonna, as an aid to the estimation of refractive errors. The solution used had a strength of 1 in 250, and three instillations at intervals of half an hour have in nearly every case been sufficient to paralyse accommodation com-

[1] *Pharm. Jour.*, December 14th, 1889, and Schmidt, *Pharm. Zeitung.*, September 25th, 1889; Siebert, *Arch. der Pharmacie*, February 20th, 1890.
[2] *Klin. Monats. fur Augenheilk.*, Feb., 1893.

pletely. In not a single instance have I had any untoward effects. There has been no lightheadedness, although in five instances the patients were quite young children, and none of them have complained of throat dryness. Perhaps the amount used was too small, and the length of time too short to expect the production of erythema, even if atropine had been used, but I have come across nothing of the sort. In order to shorten the duration of the mydriasis after I have estimated the refraction, I have several times introduced a "Wyeth" disc of eserine, acting on a hint from Dr. Casey A. Wood, but I am not sure that this has accelerated matters materially. Patients have been able to use their eyes for near work after an interval of at longest three days, even without the use of the eserine.

I have little experience of scopolamine save as an agent in dealing with refractive errors. Raehlmann speaks highly of a solution of the hydrochloride or hydrobromate in the treatment of corneal ulcers, phlyctenular keratitis, and iritis,[3] finding that in the latter condition it was well tolerated when atropine was badly borne, and could be given day after day without any ill consequences. An important fact, which I am able to corroborate, is that a solution of one-fourth or one-fifth of 1 per cent. has quite as complete an action as a 1 per cent. solution of atropine, and seems to be free from the objection that it may produce a rise of tension in the eye.

Another recent paper on scopolamine is by Pooley, of the New York Polyclinic.[4] This observer, from a much larger experience than my own, has, I am pleased to say, arrived at very similar conclusions. He regards it as better than homatropine in the determination of refractive errors, because its cycloplegic action is more thorough; as superior to atropine because the effects are of shorter duration. He thinks, also, that it is of great value in cases of short attacks of inflammation of the cornea, especially in those of a suppurative type. He has come across three cases in which toxic symptoms were produced, but in each of these the drug was bought and instilled by the patient himself, but all of these are open to the suspicion that either the drug was wrong or that an excessive quantity was employed. My own experience certainly leads me to have no fear of such results.

TROPACOCAINE.

This drug was first brought under the notice of the Association, at the annual meeting two years ago, by Dr. Chadbourne, of Boston, America, who was kind enough to give me a fair supply for examination. I have already brought some of my observations on tropacocaine before the Ophthalmological Society, and, for clinical use, Messrs. Burroughs and Wellcome were good enough to make me some ophthalmic tabloids, each containing one-thirtieth of a grain. These I have found perfectly satisfactory for the removal of foreign bodies and to deaden the pain caused by the removal of misdirected eyelashes and the application of caustics to the lids. The smarting caused by these discs when first introduced is not greater than that caused by cocaine similarly applied, the anæsthesia is quite satisfactory, and the action of the drug is superior to that of cocaine in that it produces no paralysis either of the iris or of accommodation. The anæsthesia is of shorter duration than that produced by cocaine. In a few cases of irritable conjunctiva I have also prescribed a solution of tropacocaine (1 per cent.) with great advantage.

HYOSCINE HYDROBROMATE.

Of this drug I have had but a limited and recent experience. I have used a solution (1 grain to the ounce) to dilate the pupil in cases in which I have had reason to fear atropine on account of the risk of increasing intraocular tension. Its action is rapid and complete, so that one is enabled with its aid to examine easily the condition of the peripheral portions of the lens. I have found that the mydriasis following a single instillation of a solution of this strength is not of inconveniently long duration, but still it is longer than that produced by homatropine, and I do not think it possesses any advantages over the latter. I must say in its favour that I have observed no evil consequences in any of the dozen or more cases in which I have had occasion to use it. I have therefore no hesitation in saying that where atropine is undesirable, and where a more prolonged mydriatic effect is desired than that afforded by homatropine, hyoscine is a drug which may be employed with advantage.

[3] *Loc. cit.* and *Wien. med. Woch.*, No. 20, 1894.
[4] *Therapeutic Gazette*, March, 1894.

REPORTS ON THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

SPECIAL COMMISSION OF THE "BRITISH MEDICAL JOURNAL."

XVI.

FESTINIOG, NORTH WALES.

WE visited this house one afternoon on our way through North Wales by the little narrow-gauge railway. The house stands close to Minffordd, on the Festiniog line, but at some distance from the quarries, which supply the trade of the place, and the bulk of its inmates are drawn from the agricultural population, the number of parishes in the union being comparatively small.

BUILDING AND ACCOMMODATION.

The house, which is a small one and very old, appeared to us quite inadequate for the work which it has to do. The only officers are the master and matron, and as the house is licensed for over a hundred inmates, the work, with the best intentions, cannot be well done. They were most courteous when we asked permission to see the inmates, and afforded us every information.

The sick are lodged in the main building, on the ground and first floors, the dormitories for the able-bodied being on the upper floors. The rooms are not ceiled, and the noise of trampling must cause much disturbance to the sick when the occupants of the dormitories are rising and going to bed. There are twenty-six beds for the sick, exclusive of the small isolation wards on the male and female sides.

WARDS AND OFFICES.

The female ward on the first floor is a small, low-pitched, dark room, less, at a rough estimate, than 16 feet square, with a cupboard projecting into it; it had two small windows on the same side and a fireplace; it contained seven beds. The bedsteads are of a proper width; they have cocoa-nut matting over the laths, and the beds are filled with long straw and looked clean and comfortable. The bedsteads stood so closely together that there was hardly room to pass between. Several utensils were standing about, but there were no commodes or other provisions for the night.

This ward had no offices attached to it; the watercloset was outside; there was no bathroom and no water supply. This applies also to the lying-in ward, which opened out of a passage close to the master's and matron's quarters, all water, etc., having to be carried up or down. This ward held two beds, was small and inconvenient, and the labour bed was small and stood low.

On the male side the wards were not so crowded; the ward for the infirm is on the ground floor, and contained five beds: all the patients were sitting up. The ward on the next floor held nine beds, and in it there were no patients in bed. There are no bathrooms, sinks, or slop-closets, and the watercloset is outside. There are no day rooms for either the male or female side. There is no means of ventilation except by the windows, and these were closed at the time of our visit, early in the afternoon.

PATIENTS.

Three women were in bed in the crowded female ward; one with a fractured femur was in a bed in the recess between the projecting cupboard and the wall: she was lying on the straw bed, and had no support for the clothes. One of the other patients was paralysed, and the other suffered from senile debility. An imbecile was sitting by the fire, an old woman with an enlarged neck; a harmless lunatic danced up to the master and professed her great friendship for him; she

had been sitting on the edge of the bed of the patient with the fractured thigh bone.

There were no serious cases among the men; all were infirm and two were imbeciles, but they were all sitting up; they smoke, eat, and sleep in the wards.

System of Nursing.

It can hardly be said that there is any system of nursing: the master and matron undertake the care of the sick among their other duties. In answer to an inquiry as to what help the poor woman with the fractured femur received in the night, the matron informed us that she was rung up at night when necessary, that is, if more help was required than the inmates could render to each other. There is no midwife in the infirmary. The doctor now lives close to the infirmary, and the matron or an inmate remains with the patient until he comes.

When the isolation wards are used, and to the best of our recollection we were told that cases of small-pox had been nursed in them, an inmate is placed in sole charge.

There is no provision for the care of the insane; when an inmate needs watching he or she is put into a small ward, if such be vacant, and two of the inmates are told off to watch until the insane person can be removed.

There are bells of communication between the sick wards and the master's rooms, and also from the tramps' ward, though we doubt if the latter would be available in an emergency, as it is placed high in the wall, and is without a pull.

Diets.

All extras are ordered by the doctor. Tea was being served at the time of our visit, tea and bread and butter. There seemed to be every wish on the part of the master and matron to do their utmost for the sick; but as they had no assistant officers they had no time to cook extras, or in other ways do what was necessary for them. We did not see any bed cards in the infirmary.

We left the infirmary feeling quite grieved that anyone should be set so impossible a task: these two people have to govern the house, nurse the sick, overlook the able bodied, care for the children, admit the tramps, etc.

Recommendations.

After going round the house it appeared to us that the first thing to do was to appoint more officers: a trained nurse who should be a midwife, a porter, responsible attendants for the infants and the children. Next to build wards for the sick, where they would not be disturbed by the able bodied; to provide bath-rooms, slop sinks, and waterclosets in connection with the sick wards receiving and isolation wards; and day rooms for the infirm. There should be a paid attendant for the night, and an improved lying-in ward.

GENERAL HOSPITAL, BIRMINGHAM.

Laying the Foundation Stone by the Duke of York.

On September 8th the Birmingham General Hospital, which during the past 114 years has treated no fewer than 1,679,148 patients, was visited by T.R.H. the Duke and Duchess of York, for the purpose of laying the foundation stone of the new building, which is estimated to cost £200 000. The new building, from the plans of Mr. William Henman, will contain 342 beds.

Their Royal Highnesses—who had arrived at Castle Bromwich on September 7th, on a visit to Lord and Lady Newport (whose silver wedding was being celebrated)—drove in to Birmingham, accompanied by Lord and Lady Newport, Lord and Lady Dartmouth, and attended by Sir Francis de Winton (Comptroller), Sir Charles Cust (Equerry), and Lady Eva Greville. The procession was headed by the Chief Constable, and the escort provided by the 17th Lancers.

At the Town Hall their Royal Highnessess were met by the Mayor and Mayoress, and the Town Clerk read an address of welcome, to which the Duke replied. The Royal party then drove to the Council House, where, in addition to the Volunteer guard of honour, a special guard of eighty veterans of the Crimea and Indian Mutiny, was mounted, headed by Sergeant Parkinson (one of the "Six Hundred.")

Luncheon was given in the banqueting hall, and shortly after 3.30 the procession was reformed, and the Royal party proceeded to the site of the new hospital, where a pavilion 300 ft. long and 85 ft. wide had been erected by the contractors (Messrs. Barnsley and Sons) from designs by the architect (Mr. Wm. Henman), the canvas and decorations being supplied by Messrs. Piggott Brothers. In the centre was a main corridor, and flanked on either side by tiers of seats. In low galleries near the entrance were seated boys and girls from the Blue Coat School in their quaint dresses, and representatives of the police, fire brigade, post office, and others, and a good number of children from the deaf and dumb asylum. In the first block on either side were two rows of nurses in the indoor uniform of the General Hospital, and colour was given by the ladies' costumes and the gowns and hoods of the medical and legal professions, and by the uniform of the military. There was also a West African (Prince Ademuyiwa of Jebu Remo) in all the glory of his native costume.

The Honorary Secretary (Mr. W. N. Fisher) read an address, to which the Duke made reply. A glass cylinder was placed by the Duke in a hollow in the brick foundation, which contained an account of the day's arrangements, an official programme, copies of the *Daily Post*, and *Gazette*, and a series of coins of this year, together with a copy of the last published report of the General Hospital.

A trowel was presented by the architect, a mallet by the contractors, and a level by the chairman—the latter being cast in bronze and being of a very beautiful design; a model reproduction of the main central pier of the principal entrance of the administration building, having three figures: the Science of Medicine on one side, the Art of Surgery on the other, with hands clasped together to hold the silver thread of life, supported by "Philanthropy," from which depends an egg (the emblem of life), forming the plumb bob. Under the feet of the figures is the serpent of death endeavouring to seize upon the egg; on the pedestal are the heraldic arms of the city with panels of the Rose of York and May blossom on either side. All were designed by the architect, and the level was cast in bronze by the *cire perdue* process, giving a true rendering of the work of the sculptor (Mr. J. W. Rollins).

After a prayer, offered by the Bishop of Worcester, the stone was laid in the usual manner. Mr. Holder (the Chairman) then asked that a ward might be named the Princess May Ward as a memento of the occasion, which was graciously granted.

Thus ended a most brilliant ceremony, and it is earnestly hoped that an edifice so auspiciously inaugurated may be completed without delay, and may rival the old building in the splendid record of the past 114 years.

"WATERBORNE" AND BREAD-NURTURED TYPHOID INFECTION.

Surgeon-Major S. J. Rennie, A.M.S., of Meerut, India, sends us the following short account of bread acting as a means of transport of the virus of enteric fever:—

An instance having occurred in this station in which it has been almost undoubtedly proved that bread, especially in the form of half-baked, doughy "plum cakes," was the means by which the enteric virus was spread, I venture to put the circumstance on record, in the hope that it may lead to further observation and inquiry into the subject. In April and May of this year, enteric fever was very prevalent here, until, towards the end of the latter month, it assumed almost an epidemic form. From inquiries I was led to make, I found that the majority of those attacked were temperance men, and belonged to the Army Temperance Association. In this country the ordinary bread ration is issued by the Commissariat Department; every care is taken in its preparation, and the bread itself is usually excellent. The Army Temperance rooms and regimental institutions, however, procure their supplies of cakes, etc., from dealers in the native bazaar, who manufacture the articles in their own houses, often taking the water used in the process from very questionable sources. In the case in point, an inspection of the premises of the native baker who

supplied the temperance rooms was made, by Brigade-Surgeon-Lieutenant-Colonel Boileau, Surgeon-Captain Tate, and myself, and as a result of what we then discovered, arrangements were at once made for a supply of cakes and other luxuries of a like nature prepared under European supervision. This was in the end of May, during which month there had been no fewer than seventeen admissions to hospital for enteric fever. The effect was marked and immediate, for the disease at once declined. There were only three more admissions in the beginning of June, and not another single case during the whole of the remainder of June and July. These results, I think, speak for themselves, and I hasten to lay them before medical officers serving in stations where this terrible scourge of the young British soldier in India may be prevalent, with the suggestion as to the advisability of inquiring into the sanitary condition of the sources of the bread, etc., supplied to the regimental institutions of the troops under their charge, in cases where there is no obvious cause for the spread of the disease discoverable. I may add that a precisely similar state of things was found to exist at Cherat, where I was stationed last year, and where enteric prevailed in an epidemic form. I then also noticed that the majority of those attacked were temperance men, and an inspection of the bazaar bread shops revealed such a state of things that the vendors were brought before the civil authorities and severely punished. It was, however, too late in the season for any marked results to be observed, as the troops returned to the plains the following week; but I felt quite convinced at the time that we had hit off the true cause of the spread of the disease, and my conviction has been abundantly verified in the present instance.

The source of the infection I believe to have been the impure water of the wells, which are usually situated within the house itself, or in the small enclosed courtyard common to almost all native residencies. On the margin of these wells, with true Oriental disregard of even the first principles of sanitation, all the personal ablutions, clothes washing, and general "cleaning up" of the whole family is performed. This is the water that is then drawn and used in the preparation of cakes by the native bakers. These cakes are placed in the oven, and exposed merely to a low heat, which may possibly kill the bacilli, but is quite insufficient to do for the spores, the result being a mass of that indigestible "stodge" which delights the hearts of both "Tommy Atkins" and the British schoolboy. The softer—more underbaked—and doughy it is the more it is appreciated, a fact well known to the mild Hindu "roti-wallan."

Whilst writing on this subject I may mention what I consider to be another very important and potent factor in the spread of disease in India—namely, the filthy habit of the native washermen of washing clothes in any little stagnant waterhole they may come across; these holes so used are often on the outskirts of a village, and are simply common cesspools. Infusions of the linen washed in these places yield bacilli by the score. In the hot weather, when the clothes are thoroughly dried, they may be rendered more or less innocuous; but far different is it in the rains, when the things are, almost invariably, brought back in a damp or semidamp condition, and this, be it remarked, is the season when cholera is usually most prevalent. Much has been done in some stations to ensure a supply of clean running water for this purpose, but I firmly believe that all danger from this source will not be removed until every station in the country has its properly constructed "dhobies"—washing troughs—with a free inlet for the fresh, and a free outlet for the soiled, water.

Dr. Klein, to whom we have submitted the above statement, favours us with a note to the effect that "The typhoid bacillus does not form spores, but if, as above stated, the materials are 'exposed merely to a low heat' it is quite possible that some of the bacilli in the centre of the cakes remain shielded from the heat; experiment shows that a temperature of at least 65° C. acting for some time is required to kill the bacillus."

Dr. J. Arnallt Jones, of Aberavon, has, on the nomination of the Lord-Lieutenant (Lord Windsor), been appointed a Justice of the Peace for the County of Glamorgan.

NURSING OF THE SICK POOR IN THE PROVINCIAL WORKHOUSES.

Some Further Effects of the British Medical Journal Reports.

The Bedford Board of Guardians is advertising for a "trained nurse to take charge of all the women in the workhouse." This reads strangely: are all the women sick or about to be? or does it mean that the nurse is to be shared between the wards and the other parts of the house? If the latter, then this only spells failure, for in our experience we have never found that sickness respects times or seasons, and if the nurse is in attendance on a critical case in the wards when the hour has come, say, for bathing the able-bodied women or seeing to their clothing she cannot be in two places at once; then comes the inevitable friction between the matron and the nurse; the former is accustomed to a fixed hour for every duty; the latter, to give the first attention to her sick nursing, leaving other duties to come in when they can.

We see that Abingdon Union is advertising for an "assistant nurse." The increase in the nursing staff is a move in the right direction. Abingdon has forty-nine beds, and we believe—though we are not quite sure on this point—that the nurse they have is not trained, though she has had much experience in sick nursing; but we are sorry to see that the Board is seeking for that hybrid creature the "assistant nurse," a woman who has had no hospital training, and who may in the future pose as a "nurse" in virtue of her work in the sick wards of Abingdon Union; an attendant in the wards she may be, but not a nurse.

At Christchurch Union the Board has applied to the Workhouse Infirmary Nursing Association for a third nurse, who has just been sent to the union, making in all a staff of three trained nurses. This is most creditable in a small union, as we believe that the number of beds is under fifty.

The Reading Board, which has recently erected a new infirmary, has added a fifth nurse to the staff, and lately the Chairman of the Board wrote for two temporary nurses to be sent from the Workhouse Infirmary Nursing Association, as there were so many helpless patients in the wards. The head nurse is to be congratulated at seeing the results of her persistent labours in the old wards of the workhouse. The sick department is now carried on in a perfect little hospital, and the original trained nurse now finds herself the head of her four assistants, working in harmony with a sympathetic board of guardians.

It is with satisfaction that we note that the Newton Abbot Board is setting seriously to work to prepare proper accommodation for the sick inmates; at its last meeting the proposal to erect a separate hospital was carried, and we are also glad to see that the Board was giving consideration to the great waste of food under the present system of rations. The question of the food in the workhouses, quality, methods of cooking, distribution, and economising requires investigation: and we feel convinced that an appreciable saving might be effected, if the existing method was remodelled.

St. Austell Union has had one trained nurse for several years, and we are glad to hear that the Board has recently appointed a second trained nurse for the night. This union, in the pretty little Cornish town, has fifty beds for the sick poor.

Post-Graduate Vacation Courses.—The Committee of the London Post-Graduate Course have arranged for two vacation courses to be given at the end of this month, one on bacteriology by Professor Crookshank and Dr. Hewlett, the other on pathology by Dr. Galloway, commencing September 24th and ending October 5th. For those who can only arrange for a short stay in London these vacation courses offer certain definite advantages in that the classes meet day after day, and thus a much larger portion of the subjects can be gone through in a limited time than where the lectures are given at longer intervals. An additional attraction to many will, no doubt, be that the opening of the medical session occurs at the same time, thus giving old London students an opportunity of revisiting their schools at a time when "introductories," annual dinners, and other reunions commonly take place.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, SEPTEMBER 15th, 1894.

THE BATH WORKHOUSE INFIRMARY:

The "British Medical Journal" Report Confirmed by the Local Government Board.

The report of the Local Government Board regarding the Workhouse Infirmary at Bath has been received by the guardians, and however unsatisfactory it may be to the public to be assured, on official authority, of the existence of such a state of affairs as is therein described, this lesson, at any rate, will be taught by it, namely, that the reports of our Commission on the Nursing and Administration of Provincial Workhouses and Infirmaries are absolutely reliable.

As it was at Newton Abbot, so it is at Bath; an official inspection, made with the eyes of the world upon it, is constrained to admit the truth of the charges we have brought forward. We said that there was "no nurse at all, either certificated or not at night; for we entirely decline to descend to the Bath level and accept as 'nursing' the attention of pauper wardswomen." The report says: "There are no night nurses." We said: "To speak accurately, there is no system of nursing;" drawing attention to the inadequate number of the nurses, to the fact that only one of them was certificated, and that pauper help was largely used. We also said there was "no guarantee that the extras ordered were given in the night, nor could there be any systematic feeding."

The report says: "The day nursing staff is sufficient. The nurses delegate too many duties connected with the care of the sick to the ward assistants, who are incapable of understanding even the common rudiments of sick nursing. As a natural sequence at night, poulticing where required, care and cleanliness of the helpless and bedridden, and the administration of food and medicine to acute cases in stated quantities at stated times, are entirely neglected. Bedridden cases were not sufficiently well cared for, and where beds were wet and dirty the draw sheets were not changed sufficiently often."

We urged that the nursing and other appliances were on a "meagre scale," and drew special attention to the poorness of the beds and the lack of towels, combs, brushes, etc. The report says: "The macintoshes are of poor quality, and not waterproof. There is not a sufficiency of movable washing basins, towels, brushes, and combs in any of the wards. There are no movable baths for the use of the bedridden cases: there should be one on each floor (male and female sides) where there are bedridden cases." "In my opinion spring mattress bedsteads should be universally adopted in the sick wards. There is not a sufficiency of cupboards, especially on the female side, in which to keep crockery ware, which at present is frequently kept on the stairs or in other unsuitable places. There are no cupboards in which the patients' medicines, lotions, etc., could be kept under lock and key, and only administered under the direct supervision of a trained nurse."

All that we said about the necessity for and the absence of hot water is entirely confirmed. "There is no hot water laid on to any of the bathrooms in the sick ward; it has all to be carried from the 'copper' house on the ground floor. In my opinion, the guardians will be well advised if they at once lay on a hot water supply to all the wards."

We said: "The wards on the ground floor are dark and squalid in appearance." The report says: "The wards, generally speaking, were ill kept and dirty, particularly on the male side. Most of the sick wards are wanting in that bright and cheery appearance which adds so much to the comfort and convalescence of the sick..... In nearly all the wards the windows are too high from the floor and too small. Most of the wards require cleaning and repainting."

We complained that there was no labour ward and that when, as lately happened, several women were in labour at the same time, some were confined in the general ward. The report says: "The midwifery ward is most unsatisfactory in all respects. There is no labour ward. There should be a labour ward and a lying-in ward entirely separate, neither of which should be used for any ordinary sick cases. The nurse in charge of these wards should not by any chance have charge of or attend upon any surgical, infectious, or contagious disease."

The interest now centres in the action of the Bath guardians, who have appointed a committee to consider the matter. The chairman is reported to have said that the report "covered a good deal of ground, but it only consisted of recommendations at present;" but surely the guardians must see that it also lays bare an untold amount of human suffering for which they are directly responsible. It has been owing to their action that the sick have been left at night to the care of pauper helps, the nursing of acute cases being handed over to attendants only a few degrees removed in helplessness from the patients so recklessly placed under their care, that the nursing appliances have been defective, that even the means of securing ordinary cleanliness have been insufficient, that the wards were "ill-kept and dirty," that the bath rooms were without hot water, and that there was no labour ward, women having at times to be confined in the general wards, and that even in the daytime the nursing staff was not nearly large enough for the work they had to do. But the ratepayers of Bath must not forget that it is owing to their own action that such guardians have been elected and kept in office. On them lies the ultimate responsibility. Every day that the wards are without an efficient and sufficient staff of nurses, every day that patients with pneumonia, dropsy, heart disease, bronchitis, etc., are ministered to by ancient paupers, every night that the helpless are uncared for, the wet cases unchanged, the children untended; the sin lies at the door of the rate-

payers. Let them once understand their responsibility and we believe they will refuse any longer to be party to, or even to tolerate such cruelty in their midst.

In the official letter accompanying the report, the Local Government Board said: "The conclusion at which Dr. Fuller arrived is that the nursing staff at the workhouse should consist of a superintendent nurse and a minimum number of eight nurses, one of whom should be fully certified in midwifery, two of the nurses acting as night nurses. The Board fully concur in the view that the nursing staff should be increased as Dr. Fuller suggests."

This is just what we ask for. If once there is a superintendent nurse, responsible not to the master but to the guardians, with a proper staff of nurses under her, the rest will follow.

THE BARRACK SCHOOLS COMMISSION.

VI.—Final Hints for their Consideration. Boarding out in England and Wales.

Something like 50 per cent. of the 400,000 paupers in England and Wales are under 16 years of age. We owe it to the Commission which the British Medical Journal has been so largely instrumental in bringing into being to complete the suggestion which we have to offer. In all these matters medical men have a voice, and, as we have always maintained, should have a larger voice; but it is useless to express an opinion without knowledge, and on these matters it is important that the knowledge should not only be gained by local or personal experience, but should include the understanding of what is done elsewhere and under other conditions.

In a previous article we have already dealt, if albeit cursorily, with boarding out as practised in Ireland and Scotland. This week's page will be devoted to boarding out in England and Wales.

At the present time there are three classes of children eligible for boarding out: (1) Orphans, (2) deserted children, (3) foundlings. But there is yet a fourth class, which both philanthropists and far sighted economic thinkers agree should be added to those fit to be boarded out, and that is the children of the vicious or dissolute chronic pauper parents. Those eligible for boarding out are, under the boarding-out order of 1889, placed in the care of a local committee, which the same order decides, "shall consist of three or more persons approved by the Local Government Board;" and it is the duty of this local committee to find suitable homes and to place the children entrusted to them under the care of respectable foster parents. The order lays down sundry other rules concerning the distance of the homes chosen from good schools and the residences of its committee members, and the whole matter is then left to the local committees, the Local Government Board annually sending its lady inspector, Miss Mason, to visit and report on each child, its home, and the relation of the committee to its adopted charges.

Theorists contend that there are not enough homes in which the children can be suitably established, but on this point we have the opinion of Miss Brodie Hall, the Honorary Secretary of the Association for the Promotion of Boarding-out, who stated, in giving evidence before the House of Lords Committee on Poor Law, that there were then no fewer than 260 vacancies for children known to the small number of boarding-out committees, and that, in her opinion, a further inquiry would reveal many more. The Rev. Mr. Horsley gave similar evidence. "We have," he said, "a plethora of foster parents all carefully selected and well recommended." Whether inquiry would produce enough homes is, we venture to think, a little doubtful, for the numbers to be dealt with are very large. In England and Wales there are something like 270,000 children under the Poor Law. Of that number, between 50,000 and 60,000 are indoors. Of these 24,583 are in workhouse or district schools, 7,069 are in metropolitan schools, 380 on the ship *Exmouth*, 3,277 are boarded out. "Of these 3,277"—we quote here from a paper read by Dr. Rhodes at the Poor Law Conference held at Malvern—"2,105 are boarded out under the regulations which govern boarding out within the union, and 1,172 are boarded out under the rules which control the boarding out without the union, the whole 3,277 children belonging to 184 unions, proving that less than one third of the boards of guardians are making use of this system."

In Scotland, as we showed in a recent article, a large proportion of the pauper children are boarded out; but in England and Wales, though there are at least five times as many pauper children as they have in Scotland, there are more than a thousand less boarded out, or, in other words, only 6 per cent. are placed in homes where, in Lord Cranbrook's words, "you have created for the unwanted child a new centre of love and morality and of hope."

That this system should be so little used in England is all the more curious because the testimony as to it's success is not only almost universal, but is no recent revelation. As early as 1867 Miss Boucherett wrote in the *Englishwoman's Review*: "This is the most delightful and least costly mode of doing good." The late lamented Miss Preusser, of Windermere, wrote yearly reports on behalf of her committee, which she started in 1870—reports which are too long to quote, but which form a complete history of boarding out, its trials, failures, efforts, expectations, and the perusal of which leave the reader with the impression that the system, when carefully worked, needs little to be desired. The health and physique of the children improve, their education is given under conditions which enable them to make friends among their own class; their affections are developed, and their manners cultivated, and when the time comes for them to earn their living, they are "floated" into the larger world by the aid of their foster parents, who in the great majority of cases preserve for them the tenderest affection, and are ready to bid them count the parent's household as their home should slackness, sickness, or the misfortunes which occur to most human beings cause the foster child to need a roof, a friend, or a harbour of refuge. How love can be given to some of the pauper waifs is a source of wonder to the onlookers, but love is plentiful in simple mother breasts. It is the King's Norton Committee which tells of a foster parent, a widow, who came to curious cross purposes with the doctor who, while attending her boarded-out child for some lung disease, questioned her about the patient's antecedents. "It never occurred to me," he said, "that anyone but the child's own mother could have shown such devotion," for the poor

woman nursed the "workhouse brat" to the injury of her own health. "You cannot love that boy, don't take him," urged one practical husband, on seeing a sore-eyed, rickety, and sickly little fellow who had been sent to his wife by the board to be adopted. "Oh, let him stay, Dick; I'll make him better," was the woman's answer. We are told that the "very care, anxiety, and self-sacrifice that the little thing's condition entailed roused their deepest affection," and that they were repaid by his becoming a fairly strong and healthy child. Similar instances could be multiplied almost *ad infinitum*, but they are not needed. To simple natures maternal feeling is natural; and as Miss F. Davenport Hill points out, when writing on this subject, "among uncultured women it is a sentiment which they do not stifle or analyse, but on which they act."

If then the homes are ready, experience has proved that boarding out is, so far as it has gone, successful in dealing with the pauper material; the question why it is not more generally adopted still remains to be answered. There are many motives, but chief among them is ignorance. We are not wishful to stigmatise persons who in some cases are both enlightened and philanthropic, but taking them as a class we are reluctantly compelled to agree with the critic who said that "ignorance in guardians is as usual as ophthalmia in barrack-bred children." It is amazing that the ratepayers should be willing to elect as their representatives for important duties such as the care of the poor, the preservation of the sick, the education of the children, and the spending of the rates, men who can point to no qualifications for the post or special aptitude for the business to be done.

In the coming November the elections for guardians are to take place on a new and more democratic basis, and it would be as well then that the men and women standing should be questioned not only as to their opinions but also as to their knowledge on Poor-law matters. Hitherto the ratepayers have shown neither intelligence nor interest in these matters; but recent scandals and horrors will not have been in vain if they have caused an awakening which will result in the popular demand for candidates who will both know and care for Poor-law reform or have sufficient education to enable them to bring trained minds to the consideration of these complicated questions, with their vast and important national interests. But it is not only ignorance which prevents boards of guardians from adopting boarding out. The pleasure of seeing the palatial schools, the well-drilled children—the uniformed hundreds; the privilege of giving patronage to this tradesman whose tender has gone up, or of "speaking for" that friend's daughter who wants a berth—are all and each important factors in the minds of uncultured, of well-meaning men, whose ignorance of other systems of education allows them to remain in happy content with whatever system happens to be vogue in their union. A third reason is self-interest. Guardians "like to get a girl cheap from the workhouse as a drudge" being given by a Devonshire board when appealed to to adopt a more enlightened method of education for their children. But it is not only ignoble reasons which prevent the spread of the system. There are many among those who both know and care who do not favour boarding out. They argue that should the system spread so as to embrace anything like the number of children now dependent on the State, it would create a class in itself which would be injurious to village life, and which by its numbers would nullify the good influence hoped for. What is possible, desirable, and reasonable to expect in the case of a few children, they contend, is neither possible, desirable, nor reasonably to be expected when the children to be so dealt with are to be counted by the hundreds.

In the second place, they argue that children brought up in simple village homes are not provided with anything like technical education, and that inasmuch as people become paupers quite as often from want of skill as from want of character, it is important to provide them with opportunities of learning a skilled trade and receiving manual teaching.

Others urge that, excepting in isolated cases, the boarding-out system cannot provide for the children influential friends who would help them to make a good start in life, and these contending that a rich and patronising friend is of more real help to a working boy or girl than a poor one who is his equal.

Again it is argued that a system that depends so entirely on voluntary agencies for the selection of the homes, and on the personal character and individual health of the persons selected for its success, can hardly be considered as based on a foundation broad and strong enough to allow it to be adopted as a national solution of the difficulties that beset pauper education.

To this the supporters of boarding out reply by asserting that a proper standard can be maintained by the aid of educated and efficient supervision—a supervision they assert which shall include the children as well as the homes—the committees as well as the schools attended. This is a vexed point. Committees fall out of working order, circumstances of foster parents change, characters of children develop, sometimes causing them to be unmanageable by parents who had previously had perfect control. Who then is to move the child? investigate the changed circumstances of the foster parents? reconstitute the committee? Who then is to maintain the standard which all experienced persons agree is apt to get lowered unless the educated and efficient supervision is kept up?

It will be for the committee of inquiry recently appointed by Mr. Shaw Lefevre to think out a reply to these questions, to suggest amendments in the existing law, and to indicate methods by which the public eye can be made to do the public service of supervision. It may be found that there are means of tacking on boarding-out committees to the village councils—a plan which has already been suggested by Mrs. S. A. Barnett in an article in last month's *Contemporary*—or it may be found that more inspectors and a different mode of inspection is necessary. It is because there are so many and such vexed questions to be replied to on this subject that we are anxious to direct the minds of our readers to the matter, for whatever abuses go on behind the high walls of the barrack schools or the secluded precincts of the workhouse wing, there should be none that can go undetected in the village homes if half the cultivated people whose lives are passed in the country took even a common human interest in the boarded-out pauper child.

The report of the Indian Hemp Drugs Commission although signed, is, it is stated, at present mainly a bundle

of proofs from the press, and nothing can be done with it until properly printed and delivered, especially as two members have yet to draw up and send in a dissent on certain points.

THE WEATHER AND THE PUBLIC HEALTH.

SINCE the burst of sultry weather that occurred at the end of June and during the first few days of July the summer of 1894 has been cool and rain has fallen on most days. As is usual in urban populations under such circumstances, the death-rate in London has been low. During the four weeks ending on Saturday last the Metropolitan death-rate averaged only 15.3 per 1,000, being 2.9 per 1,000 below the mean rate in the corresponding periods of the ten years 1884-93. The amount of sickness, too, requiring medical attendance has in many districts of London and elsewhere been since July much below the average. A cool summer is unfavourable to the decay and putrescence of vegetable and animal foods, and notoriously lessens diarrhœa, which, especially with young children, is the fatal malady of summer, especially when hot. Moreover, in well-drained cities such as London a wet season at any time of the year is ordinarily a healthy season. The rain washes the air, cleanses the pavements and roadways, flushes drains and sewers, and carries away impurities of most kinds, lessening generally the pollution of air, water, and food. Thus a cool summer, especially if it be also a wet one, is in most cities beneficial to the public health. The number of micro-organisms in the atmosphere has a tendency to follow the temperature, for Dr. Percy Frankland's experiments at South Kensington showed "that it is during the hottest months of the year, July and August, that the largest number of micro-organisms is present in the air." The same observer found also that when rain had fallen, and the ground and its surroundings were thoroughly wet, the number of aërial micro-organisms was greatly lessened. It is probable that the healthiness of a cool wet season, such as the present, is in part the result of a lessened number of micro-organisms in the air.

THE INFECTIOUSNESS OF CONSUMPTION.

THE public recognition and the official teaching of the infectiousness of consumption spreads through northern towns, the sanitary authorities of several of which now gratuitously disinfect rooms inhabited by consumptives. We have lately received a copy of a circular issued from the Health Office, at Blackburn, giving good common sense directions for preventing the spread of consumption, which if once assimilated by the multitude are likely to be of great service. There is one direction, however, by no means peculiar to this circular, which we think deserves a little further consideration before it is stereotyped in men's minds, namely, the statement that consumptives should "spit into the fire." Now if there were a fire on purpose this would be incontrovertible; unfortunately in the dwellings of the poor the fire is for half its time in use for cooking purposes, and there are few things more disgusting than to see the sick man by the hearth leaning forward over a regiment of loaves or cakes, "set to rise," to spit into the fire, or to watch him shifting the cooking pans upon the fire so as to be able to take a straggling aim through their midst. More good will be done by insisting on the spitting cup than by advising as an alternative "spitting into the fire."

HIGH TEMPERATURES.

IT is a well-recognised fact that some of the earlier experiments upon the highest temperatures consistent with life in animals were to some extent vitiated by several factors, including deficient ventilation. The clinical evidence is, in this respect, really of paramount importance. It cannot be denied that there are some trustworthy examples on record of very high temperatures which, according to both experimental research and previous clinical observation, should have prove fatal, and yet recovery has followed. Professor C. Richet has recently collected evidence to show that, contrary to the general belief, the body temperature in man may rise above 110° F. without causing death. Very high temperatures in nervous or so-called hysterical fever are more easily understood than those occurring in the infective diseases. In the former there is in all probability merely a derangement of the cortical thermotaxic centres regulating the production and loss of heat, whereas in the infective processes the bacterial poisons themselves are more damaging to important and vital tissues than the actual heat. The temperature is then the index and not the cause of the evil. Even here a derangement of the thermotaxic centres in the cortex may very possibly supervene, giving rise to unwonted rises of temperature, as in some forms of meningitis. Professor Caparelli has lately reported a temperature of 115° F. in a woman with malaria, which was followed by recovery. An American physician has recorded a temperature of 115° F. in scarlet fever, with recovery; Corrie's case, where 118.4° F. was registered, died. It is impossible to suppose that these extraordinary temperatures could last any length of time without a fatal issue. Presumably in the malarial case it was short lived. Thus the actual figures are hardly as important as they might at first appear to be. Whatever views are held, this much is certain, that vigorous hydrotherapeutic measures must be at once adopted in such cases.

INDECENT QUACK ADVERTISEMENTS.

WE notice with satisfaction a paragraph in the police reports for August 24th, stating that Ernest Forsey and Henry James were convicted before Sir John Bridge of exposing and delivering certain medical pamphlets contrary to the Medical Advertisement Act of 1889. As the men had been in custody a week they were fined 40s., or in default were condemned to one day's imprisonment. Later in the day a "Dr. Hamilton" was charged with causing the distribution of these pamphlets. Sir John Bridge held that they came within the Act, and imposed a penalty of 40s. The defendant stated "that he had the greatest possible respect for Sir John Bridge's judgment, and would at once cease any further advertisement of like character." Now, the Act on which this conviction was based is exceedingly simple in its provisions, and is intended to prevent the public distribution or exposure in any way of quack pamphlets or notices dealing with "syphilis, gonorrhœa, nervous exhaustion, or other diseases due to sexual intercourse." This Act came into force on January 1st, 1890, and at first produced a welcome diminution in the number of touts who paraded the streets presenting prurient pamphlets to men only. Lately, however, immunity from prosecution has made them bold, and two or three were always to be found in Oxford Street or the Tottenham Court Road. The tract most commonly presented was entitled "A Treatise on Nervous Exhaustion and Loss of Vital Energy; their Causes, Symptoms, and Consequences, with Cases Cured by John Hamilton, M.D." The address of the "Medical Hall" at which this so-called doctor practises is given at the foot of the page. The pamphlet is exceedingly cleverly worded. For after detailing the symptoms of what is vulgarly called "nervous debility and loss of vital power," the eye catches the following sentence: "The causes whereby these terrible symptoms are produced *are various and, often under our control, are produced by our own folly*"—the italics are on the top of page 6. This is immediately followed by: "As one example I would instance delirium tremens." The pernicious little book continues in this strain, leading the miserable youth into whose hands it falls clearly to one conclusion whilst carefully avoiding a clear statement of the writer's meaning. A few weeks ago one of the distributors of these pamphlets was

given into custody by a medical man, but the police sergeant refused to take the charge. The matter was then, at our suggestion, carried to the authorities at Scotland Yard, but nothing was gained beyond expressions of sympathy and an acknowledgment of the prevalence of the evil. The matter was, however, then referred to the Chief Commissioner, and now Sir John Bridge has decided that this same pamphlet comes under the Act. Thus it now becomes the duty of every man, and especially of every medical man, to clear the streets of these pests. The Act can be purchased of Messrs. Eyre and Spottiswoode for 6d. On receiving any pamphlet which comes within the category defined by the Act as indecent advertisements, the distributor can be at once given in charge of the nearest policeman. If this is done sufficiently often the pernicious activity of "Dr." Hamilton and his like can be lessened, and much misery prevented.

THE PARIS EXHIBITION OF 1900.

In the programme of the Universal Exhibition to be held in Paris in 1900, medicine and hygiene occupy a fairly prominent position. The Section of Hygiene is subdivided into nine classes as follows: Science of Hygiene; Personal Hygiene and Hygiene of the Dwelling; Hygiene of Public Buildings and Places of Public Resort; Sanitation of Towns; Defence of Frontiers against Pestilential Diseases; Food and Drink; Mineral Waters and Sanatoria: Sanitary Statistics and Legislation. Military and Naval Hygiene have a section to themselves. The Section of Medicine and Surgery includes instruments and apparatus of every kind, specimens of normal and morbid anatomy, and microscopic and bacteriological preparations. There is also a Section of "Public Assistance" subdivided into classes, such as the care of infants, of lunatics, of the blind, of deaf-mutes, the training of nurses, etc.

OVERCROWDING OF PILGRIM SHIPS.

Two cases were recently tried by the Chief Presidency Magistrate of Bombay in which convictions were obtained and substantial fines imposed on the captains of steamers for carrying passengers (pilgrims returning from Jeddah) in excess of the numbers permitted by law and regulation. In one instance the excess amounted to 281 persons and in the other to 54. Charges were also laid in one of the cases of having no duly-qualified medical man on board and not providing proper cooking and latrine arrangements. Pleas of nonjurisdiction and miscount were rejected. The fine in one case amounted to Rs.1,405, and in the other to Rs.290. The overcrowding in both cases was scandalous and it is satisfactory to find that foreign vessels manned by foreign subjects are not permitted to evade the rules laid down by British law and authority for the protection of the lives and proper attention to the health and comfort of British subjects proceeding on pilgrimage to Mecca.

THE UNNECESSARY DANGERS OF FOOTBALL.

The commencement of the football season draws attention afresh to the danger of the game as at present played and to the desirability of introducing some such modification of its rules as shall lessen the very serious list of casualities which each season brings forth. In America the violence of the game appears to be, if anything, even greater than with us and has drawn forth serious remonstrances from various college authorities. A report issued by the Military Academy at West Point gives the number of casualties and their proportion to the number of men engaged in the different forms of exercise—football, riding, and the gymnasium. The results are strikingly against football. Among the 34 men playing football there were 54 accidents involving a loss of 277 days; among the 184 men in the riding school there were 17 accidents, involving a loss of 57 days; and among the 106 in the gymnasium there were only 9 accidents, causing a loss of 11 days. Not only then were the football accidents vastly out of proportion in number but they were much more serious in nature, the loss of days per accident being in football, 5.01; in riding, 3.04; and in the gymnasium, 1.02. The best means of comparison, however, is to take the total number of days' incapacity per man in consequence of accident; and here we have a very startling result, especially as we are assured that the riding at West Point is by no means a trot round, but is of a most "dare devil" character. These are the numbers of days lost per man engaged: Football, 8.01; riding, 0.31; gymnasium, 0.15. The gravity of these figures, as showing the extremely dangerous nature of the game of football as played at present, cannot be ignored. The chances of a man meeting with an accident are 18 times greater if he plays football than if he rides, and 20 times greater than if he goes in for gymnastics; and the number of days he is likely to be incapacitated is 26 times as great in football as compared with riding, and over 50 times as great as from gymnastics. It is for football men themselves to remove this opprobium by framing rules which shall limit the violence which causes most of this danger. If football leaders will do this and umpires will unflinchingly enforce such regulations a good game will be saved, greatly to the advantage of all lovers of athletics: if not, then respectable people who now draw the line at prize fighting must include football also.

TEA FROM CHINA.

We have been asked to express an opinion as to the risk involved in using teas coming from districts suffering from epidemics of a dangerous nature, and this particularly in connection with the epidemic of plague lately raging, but now happily subsided, in Hong Kong and Canton. Briefly, our answer is that there is no risk whatever. So far as the experience of the past and the experiments of Kitasato may be taken as a guide, unless under specially arranged conditions—which are certainly not supplied by a tea chest—the plague germ does not long survive removal from the body of man or animal. It requires a moist medium for its cultivation, and is soon killed by exposure to light and air. Besides this, the coolie suffering from plague is far too ill to engage in the picking, firing, and packing of tea. Any anxiety on this score should be removed by the reflection that plague was epidemic in South and West China for years before it appeared in Hong Kong and Canton, and that notwithstanding active commercial relations. Most probably plague cannot be introduced except by a human being or animal actually suffering from the disease; accordingly, as the limit of incubation is probably not more than eight days, a very mild form of medical inspection and isolation suffices to insure the immunity of this country from the scourge. No one hesitates to drink a cup of Indian tea because of the endemic presence of cholera in India: and no one need hesitate over his cup of China tea—which, by the way, is mostly of Foochow or Hankow growth, districts many hundreds of miles from Canton and Hong Kong, because plague is present in one small district of the huge Chinese Empire.

DEATH FROM HYDROPHOBIA IN DUBLIN.

An inquest was held at the Meath Hospital on September 5th on the body of a boy named Patrick M'Carthy, aged 10 years, who died in that institution on September 3rd from the effects of a bite of a dog on June 27th. Dr. Fottrell, the deputy coroner, said the circumstances were somewhat peculiar. The deceased lad was bitten as far back as June 27th, and at the time, and indeed up to a few days ago when brought to the hospital, the bite did not appear to be serious. Dr. Taylor, resident surgeon of the hospital, stated that the boy was first brought to the hospital on June 30th. He was then treated for the bite of a dog, which was of a trivial

character, and he was not then detained. On September 1st he was again brought to the hospital by his father to be admitted. At that time he was suffering from hydrophobia, the symptoms being pains in the head, pain in the back, and high temperature. There was only a very slight mark of the bite on the hand. He died on September 3rd, and subsequently witness made a *post-mortem* examination, which verified his opinion that the deceased died from hydrophobia. After hearing other evidence the jury returned a verdict "that the deceased died from hydrophobia caused by his having been bitten by a dog on June 27th."

DEATHS UNDER CHLOROFORM.

Dr. A. W. Sheen, Senior House-Surgeon to the Cardiff Infirmary, has favoured us with the following case of death under chloroform which occurred in that institution: N. R., female, aged 28, married, no children, admitted July 25th, 1894, with gastric ulcer. Certain symptoms rendered it desirable that a vaginal examination should be made under an anæsthetic, and on August 24th chloroform was administered on a single thickness of lint from a drop-bottle. Not half a drachm had been given, when the patient, who had passed through a short struggling, became pallid, respirations took placed by short gushes, and the pupils became dilated, although but a second before the patient had been snoring. The administration was immediately discontinued, the head lowered, the foot of the bed raised, and the tongue drawn forward. The heart was at once listened to, and its sounds could not be heard. Natural breathing ceasing, artificial respiration was commenced. Brandy and ether were injected under the skin, and an enema of brandy given. Flannels wrung out of very hot water were applied over the heart. Hot bottles were applied to the extremities. The patient was inverted. The interrupted current was used with both poles over the heart, and also with one pole over the diaphragm and the other over the phrenic nerve. Two aneurysm pins were fixed to the battery terminals and passed into the heart itself through the chest wall. Artificial respiration was kept up for an hour and a quarter. All efforts to restore animation failed. No steps had been taken to commence the examination of the patient, who had not been disturbed in bed. The heart had been several times examined previously, and no abnormality, functional or organic, detected. A limited *post-mortem* examination was made. The heart cavities were found empty, and the walls somewhat thin and flabby, but the muscle was of a good colour, and there was no excess of fat. An inquest was held on August 25th, and the verdict was that death resulted from failure of the heart's action under chloroform.—Mr. R. R. Sutter, M.B., House-Surgeon to the West London Hospital, has favoured us with the following case of death under chloroform, which occurred at that institution: George Wright, a labourer, aged 29, was admitted to the West London Hospital on August 15th, 1894, with a serpiginous ulcer on the right cornea, complicated by iritis and hypopyon. Patient was perfectly sound, but seemed abnormally fat for a man of his age. The ulcer increased, and sloughing of the cornea became imminent. Paracentesis of the anterior chamber was advised, and with this object in view chloroform was administered on August 17th. Patient had ʒ iij of mist. alba over night, and had nothing to eat for five hours before operation. He was very nervous as he came into the theatre, but soon became reassured. Macfarlan and Co.'s pure chloroform was administered on lint. Patient breathed quietly at first, but as the stage of excitement came on he struggled violently. This stage passed off more quickly than usual, the pupils became nicely contracted, and the corneal reflex disappeared. Barely ʒ iij of chloroform had been used. Suddenly the pupils dilated widely, the face became pallid, the respiration shallow and gasping, and before anything could be done all signs of life had disappeared. The administration had occupied about six minutes. The usual procedures were adopted for about half an hour, but without avail. Necropsy: Subcutaneous fat on abdominal wall about 2 inches deep. Heart weighed ʒ 13½, and had a slight coating of fat in diastole, and was flabby, lying flat when placed on the table. Left ventricle somewhat dilated, no hypertrophy of walls. A little dark fluid blood in both ventricles. All valves healthy and competent. Aorta normal. Lungs normal. The cause of death was undoubtedly syncope due to the action of chloroform on a weak and flabby heart in an alcoholic subject.—Mr. P. Langdon Down, House-Surgeon to the London Hospital, has favoured us with the following report of a case of death under chloroform. R.G., a girl, aged 17, was admitted to the London Hospital on Friday, August 31st, at noon, having been sent up by a general practitioner for operation. She was suffering from noma vulvæ. One labium was swollen, black, and gangrenous, the other was swollen, tense, and red; there was some general œdema of the legs and abdominal wall, and an incision was found on the dorsum of each foot, apparently made to relieve the œdema. The patient was somewhat cyanosed and the pulse weak. She was said to have been in bed a year with heart disease. At 3.30 P.M. she was seen by the surgeon, when the other labium had commenced to turn black. Leave to operate was obtained from the friends, but only on condition that an anæsthetic was administered. The question of whether she would stand it was discussed, and it was thought that in spite of her weak state an anæsthetic should be given at 5.5 P.M. The gangrene had spread considerably and between 3.30 P.M. and then the extension was most marked. The A.C.E. mixture was administered in the usual way on a sponge in a perforated leather cone. The patient took the anæsthetic quietly and without struggling, and as soon as she was under, that is, in about seven minutes from the commencement, the administration was discontinued; both labia were then excised, and the operation was almost complete when the respirations began to get shallow and weak and the pulse to fail, and the patient became more cyanosed. A hypodermic injection of brandy (ʒ ij) was given, and artificial respiration commenced at once; the injection of brandy was repeated; the patient continued to breathe by gasps for two or three minutes, and the pulse was still perceptible. Then both stopped. The pupil during this time gradually dilated. The artificial respiration was continued for some time, but without effect. The quantity of A.C.E. used was about 4½ to 5 drachms. *Post mortem* eighteen hours after death. About a pint of fluid was found in each pleural cavity, some excess of fluid in the pericardium, and about two quarts in the peritoneum. There were evidence of old pericarditis. The right side of the heart and the left auricle were distended with soft black clot, the left ventricle was contracted. The mitral and tricuspid valves were much thickened and puckered. The lungs were congested and very tough (heart lung). Liver nutmeg and fatty. Spleen small and hard. Kidneys congested. Brain healthy. Commencing inflammation in cellular tissue round the bladder spreading from the gangrene. An inquest was held on Monday, September 3rd. Verdict: "Death by Misadventure."—An elderly man named Thomason, of Habberley, died on September 8th at the Kidderminster Infirmary while under the influence of chloroform. We shall hope to publish a full report of the case in a subsequent issue.

A HOSPITAL FOR CONSUMPTIVES IN SCOTLAND.

Last week Sir William Arrol laid the memorial stone of a large hospital for consumptives, which is being erected in connection with the well known orphan homes of Scotland, organised by Mr. Quarrier. It is proposed to erect eight or ten blocks, as funds may permit, consisting of pavilions for patients, a doctor's house, a separate hospital, a washhouse, laundry, store, and rooms for servants. The pavilion now being built is intended to accommodate from 35 to 50 patients, according to the proportion of children to adults.

they will be distributed among a considerable number of small wards, 10 of which are for single patients only. Every effort has been made in planning the building to minimise as far as possible the opportunities for the lodgment of dust; hard smooth plaster, rounded corners, and wax floors being provided. Professor Gairdner, in the course of a short address, said the questions which were raised by the inauguration of this building had greatly exercised the medical profession. The doctrine that consumption was curable was no new one. The difficulty was to secure the conditions under which a cure could be accomplished. The conditions of work and the necessity of working were often such that doctors found their efforts entirely unsatisfactory. Their advice could not be carried out while a living had to be earned. Of late years, moreover, a new element had been imported into the case by the knowledge that in a certain sense consumption was an infectious disease. They had been a little hard to convince upon that subject because they saw the terrible consequences that might come out of it—the possibility even of it being taken as a reason for neglect and cruelty and leaving the consumptive on one side to die. But science was science, and they must accept what was ultimately established, and he would not like any one to go away under the impression that he did not believe that it was established. It was perfectly certain in one sense or another that consumption was an infectious disease. As to what was to be done one of the things was the starting of a number of consumptive hospitals; but there were things even more important, namely, the purifying of the homes and the keeping of their inhabitants free from injurious influences. Mr. Quarrier afterwards said that in regard to the management of the cases he had tied himself to a medical council and would be guided by it entirely.

SCHOOL COLONIES IN FRANCE.

The Paris Municipal Council recently voted a grant of 151,585 francs for the school colonies this year, besides 10,000 francs for the organisation of excursions for pupils in French communal schools. On the Continent the plan of sending weakly school children of large towns into the country during the holidays took its origin in Switzerland some eleven years ago, the initiator of the movement having been Pastor Bion, of Zurich. This example was soon followed by the large cities of Germany—Hamburg, Frankfort, Stuttgart, Dresden, Berlin, Leipzig, and Cologne. In France a first attempt in the same direction was made in 1883, and so marked was the improvement in the appearance and physical condition of the children sent to the country, that the movement quickly spread. It was noticed, however, that these rapid excursions, though benefiting the children physically, were somewhat apt to cause mental fatigue from the multitude of new impressions crowded into a few days. This led to the establishment of "school colonies," the children being boarded out in peasant's cottages, and living the ordinary country life. This system was first tried in 1887, when three colonies of children were sent to Compiègne, Gerardmer, and Berck-sur-Mer; the little ones came back in rude health, and it was found that they had increased both in size and in weight to a degree far beyond the normal. The experiment has been so successful, that grants in aid are now made to the various *arrondissements* proportional to their financial resources and to their school population. The grant, which has increased from year to year, amounted in 1894 to the sum already mentioned, the total expenditure being 236,459 francs 10 centimes, and the number of little colonists being 3,500. The average expense for each child is 67 francs 56 centimes for a stay in the country of twenty days, being at the rate of 3 francs 22 centimes (about 2s. 8d.) a day per head. Some notion of the degree to which these colonies influence the growth may be gathered from a report recently published by Professor P. Raymond. Comparing the results of a series of years, he finds that during the three weeks of their stay in the country the children gained as much as 2 kilos (4 pounds) in weight. Girls "put on flesh" more than boys, an increase of 3 kilos being not infrequent in them. The girls also grow more than the boys in height. Chest girth increased from 620 to 655 millimetres and from 655 to 675. According to M. Raymond, however, the principal improvement is in the general health. Nor must the growth in mental stature be forgotten. Opportunity is taken to make the fields, farmyards, and factories the sources of object lessons which bring the children face to face with Nature, and, above all, teach them that heaven is reflected from the surface of a running brook, or the shining sea more clearly than from the gutters of Paris.

HAFFKINE'S PREVENTIVE INOCULATIONS AGAINST CHOLERA.

Surgeon-Major MacRae has sent us an extremely interesting report on the result of preventive inoculations for cholera made in the Gaya Gaol in India by M. Haffkine. Cholera broke out in the gaol on July 9th and M. Haffkine arrived at Gaya on July 18th, and on that and the following day inoculated 215 persons, who voluntarily submitted themselves to the operation, out of a total of 433 in the gaol. Both classes of prisoners, inoculated and non-inoculated, were equally exposed to infection. The cases which occurred between the first inoculation and the second inoculations (July 24th) are considered separately, inasmuch as such immunity as may be conferred by the further inoculations does not immediately become effective after the first. Among an average number of 32.5 fully inoculated persons in gaol, one case occurred which did not prove fatal; among the non-inoculated, which averaged 48.55, 7 cases occurred, with 3 deaths. The percentage of attacks, therefore, was 3.07 among the inoculated, and 14.42 among the uninoculated. A large number of the prisoners were removed into camp on July 25th. This gives a daily average of 171.42 persons with 2 cases and 1 death, an average number of inoculated prisoners of 146.5 with 6 cases and 2 deaths. The gradually decreasing incidents of attacks and mortality among inoculated prisoners seemed to justify the hopes of the efficacy of the preventive inoculations. On the other hand, however, we find a telegram to the *Times* from Calcutta, under the date of September 11th, stating that during the recent cholera epidemic at Lucknow, several men of the East Lancashire Regiment who had undergone inoculation, were attacked. The proportion of fatal cases among them is said to be about the same as among the non-inoculated patients. The telegram adds that the facts are not yet sufficiently known to justify the formation of an opinion unfavourable to Haffkine's method. The results obtained in Calcutta and at Gaya are very favourable to the method, but the whole question of results is *sub judice*, and it would be premature to express an opinion on the existing data.

THE SICK POOR IN PROVINCIAL WORKHOUSES: FESTINIOG.

At this little Welsh town our Commissioner found a small crowded workhouse, licensed for a hundred inmates, with twenty-six beds for the sick, who are lodged under the same roof as the able bodied. This is perhaps as well, since the master and matron are the only officials in charge, and the difficulties of their position would not be lessened if the sick were properly isolated. The report, which may be read in another column, speaks of crowded rooms, of the want of classification, of the lack of suitable offices, of the necessity of carrying all water by hand to the wards. All these defects are now familiar to us, as report after report brings the same story: and we hope in time to see them remedied as the old buildings are one by one condemned and rebuilt.

But surely the Festiniog paupers need not wait until that perhaps distant date for some improvement in their condition. How is any nursing of the sick possible until more officers are appointed? A woman with a fractured thigh-bone had only such attendance as the matron or some kind-hearted fellow inmate could bestow upon her. But she would probably have willingly dispensed with the attentions of the imbecile who was sitting on her bed when our Commissioner entered the ward with the matron. The well-worn plea of economy can hardly be made to justify the placing of nearly a hundred people, sick and well, young and old, under the charge of only two officials, whose good will and ability we do not doubt, but who must in the nature of things be wholly insufficient to their task. A nurse should be appointed, who should also be a midwife; also a porter, and responsible attendants for the infants and the children. When the State takes charge of the sick and the children a bare shelter is surely very false economy. If the sick are cured and the children trained, the expense is lightened in the long run. We recommend these considerations to the Festiniog ratepayers.

THE EPIDEMIC OF SKIN DISEASE IN THE EAST LONDON WORKHOUSE.

The epidemic of exfoliative dermatitis, if we may apply that name to what appears to be a much more general disease, which has lately been prevalent in the workhouse infirmaries of St. George-in-the-East, Shoreditch, and the City of London, appears to be subsiding. Suspicion fell upon the milk, some of which has been analysed by the public analyst, and some submitted to bacteriological examination by Professor Crookshank. Excepting, however, the discovery of certain putrefactive organisms by Professor Crookshank, no further light seems to have been thereby thrown upon the matter. We understand that at the St. George-in-the-East Infirmary there have been no fresh cases during the week displaying the rash, only about 35 of such cases remaining under treatment, against 50 a week ago. The same, however, cannot be said of the cases without the rash, cases in which the same obscure febrile condition, with prostration, vomiting, and furred tongue, occurs without showing any of the rash which has drawn attention so markedly to the disease. These cases still continue to arise, although not in such numbers as before. The rapid recession of the outbreak, following so quickly upon Dr. Bowlan's withdrawal of the ordinary milk and substitution of condensed milk, which we reported last week, is strongly suggestive of the milk having had some influence in the production of the particular manifestation of the disease which has given it the provisional name of epidemic exfoliating dermatitis, but that it is not the sole etiological factor seems very clear, as also that the dermatitis is not the sole or even the main pathological condition. We understand, however, that the medical officers of the Local Government Board are preparing a report on the subject, which may throw some further light upon it; in the meantime, the use of the ordinary milk has been stopped in the workhouse as well as the infirmary.

THE INTERNATIONAL CONGRESS OF HYGIENE AT BUDA-PESTH.

The eighth International Congress of Hygiene and Demography was closed formally on September 9th, but the work of the Sections had come to an end on the previous day. A general meeting was held for the consideration of resolutions adopted by the Sections. This seems to have been the only part of the proceedings of the Congress which was not entirely successful. A long series of resolutions, dealing with matters in some cases highly technical, in others involving questions of international importance, were submitted orally in various languages to an assembly of less than fifty persons. This frequent but futile procedure drew forth some vigorous protests from Dr. Billings, Dr. Loew of Vienna, and Professor Corfield, and it is to be expected that such influence and authority as the resolutions may have will be derived solely from their adoption by the Sections. At the final meeting, over which the Hungarian Minister of the Interior presided, a letter was read from the Prince of Wales, President of the seventh Congress in London, expressing his great interest in the matters with which the Congress was concerned. The official delegates of the various nationalities returned thanks for the hospitality extended by the city of Buda-Pesth, and it was resolved that the next Congress should be held in Madrid. In many respects the Buda-Pesth Congress has been a distinct success; it was attended by some 2,500 members, among whom were included many names of the highest eminence. Of the vast number of discussions which have taken place, two stand out as of conspicuous interest: those on cholera and on diphtheria. That on cholera was felt to be of international importance. The epidemiological side was treated by Professor Gruber, of Vienna, and Mr. Ernest Hart; while Dr. Metchnikoff dealt with the bacteriological and pathological questions involved. The discussion on diphtheria was introduced by reports from national committees, appointed at the Congress of 1891. Of these we reproduce in full or in abstract the three most important, namely, those from the English, German, and American Committees. The discussion of the treatment of diphtheria by antitoxin was, however, the most striking of all to the public mind, since it presented for the first time to an international audience the splendid results which have already been obtained by this latest outcome of the new science of bacteriology. The statistics which M. Roux was able to bring forward from the experience of the Paris hospitals are reproduced in another page. They are most striking and, remembering that this method of treatment is yet in its infancy, most encouraging.

A CLINICAL RESEARCH ASSOCIATION.

A Clinical Research Association has been formed with the object of assisting medical practitioners in the investigation and treatment of disease by furnishing trustworthy reports upon excretions, tumours, and other morbid products. A laboratory has been fitted up, and will be under the direction of Dr. J. Galloway, Mr. J. H. Targett, M.S., and Mr. F. G. Hopkins, B.Sc. The scale of charges submitted to us is remarkably low, ranging from half-a-crown for the quantitative estimation of sugar, albumen, uric acid, urea, the examination of a urinary deposit, or of sputum for tubercle bacilli, to seven and sixpence for the bacteriological examination of supposed diphtherial membrane, and a report by telegram. The scheme of the Association has the support and patronage of many distinguished physicians and surgeons, among others Sir James Paget, Dr. Wilks, Mr. Jonathan Hutchinson, Sir W. H. Broadbent, Sir George Humphry, and Dr. Clifford Allbutt. The progress of medical and surgical knowledge has already made it desirable for the conscientious practitioner to make chemical and microscopical examinations, especially for the purpose of diagnosis, in a considerable proportion of cases. These examinations make considerable inroads upon the too limited leisure of the general practitioner, and demand in some instances a special manipulative skill which he may not have had the opportunity of acquiring. Matters are not likely to be simplified in the future, and from another point of view it is a truism to say that future advances in diagnosis and treatment must be accomplished through increased accuracy and completeness of observation of individual cases. From every point of view, therefore, this new venture, founded not for individual profit but in the interests of clinical medicine, deserves wide support. The Association will furnish to subscribers of 5s. a box containing bottles

in special post cases, and instructions for the preservation of specimens. Further particulars can be obtained from the Secretary of the Association, Mr. C. H. Wells, Clinical Research Laboratory, 5, Denman Street, London, S.E.

FACTORIES AND WORKSHOPS.

The Parliamentary Committee's report presented on the opening day of the Trades Union Congress on September 3rd, in referring to the question of factories and workshops, said that two departmental committees were appointed by the Home Office to inquire into the conditions under which labour is performed by men and women in certain dangerous trades. These investigations proved most conclusively the statements which have been made in this congress from time to time, namely, that the workers in these trades are subject to the most fearful diseases, such as lead poisoning, paralysis of the hands, ulcerated sores known as chrome holes, potters' rot, etc., while large numbers of them are also afflicted with bronchitis, consumption, asthma, and pneumonia. In order to remedy these evils as far as it is possible to do so by legislation, the Home Secretary proposes to amend the Factory and Workshops Act, so as to give power to the Secretary of State to prohibit, where necessary, the employment of women and children, and to limit the hours of labour of all who are employed in unhealthy and dangerous occupations. It was also proposed to include laundries, docks, wharves, quays, and warehouses and premises on which machinery is temporarily used in the construction of a building within the operation of the Factory and Workshops Act. Such questions as overtime, overcrowding, and safety, the particulars clause, and outworkers list were all dealt with in this Bill, which has been sacrificed in the opinion of the committee by the wilful and unjustifiable waste of public time.

CHELSEA HOSPITAL FOR WOMEN.

Last week we announced briefly the resignation of the consulting medical staff of the Chelsea Hospital for Women. Efforts have since been made to induce these gentlemen to withdraw their resignations. We have been informed, however, that Dr. Barnes and Sir Spencer Wells adhere to their determination to retire, while Mr. Hutchinson has consented to withdraw his resignation conditionally on the nominations to the medical staff lately made being not confirmed at a special general meeting, and an influential committee of medical men being appointed, with a free hand to nominate a new staff.

THE COTTAGE SYSTEM.

A proposal now engaging the attention of the St. Olave's guardians, if practicable, is highly to be commended. The married couples' quarters at the workhouse are overcrowded, and the guardians are considering whether four cottages in an adjoining street should be rented to provide the additional accommodation necessary. Life to the aged couples would certainly be smoother and sweeter in such small cottages than in gigantic workhouse buildings. The opinion has been strongly expressed by Mr. Walter Besant that the deserving aged of the workhouses should be kept on the almshouse system at no greater cost to the ratepayers than that of the present comfortless system of barracks and officialdom.

THE FORECASTING OF DISEASE.

On the occasion of the eighty-fourth general meeting of the Medical Society of Queensland, Dr. Hardie, in his Presidential address, gave a careful summary of the principal points to be considered in forecasting disease. It was desirable and even necessary not only to treat disease but to keep a watch upon its approach. For this purpose it was essential that we should make ourselves acquainted with the natural history of the germs or outside influences which at various times cause the more especial prevalence of one malady or another. In this regard it was necessary always to bear in mind their seasonal variations, and also to inquire into the causes for their being more common one year than another. The various factors he grouped as having to do with age, season, atmospheric conditions, and prevalence of other diseases, drawing special attention to the influence of rainfall in causing greater or less prevalence of typhoid fever. His experience was that, while every year there was a tendency to increase of typhoid during the summer months, the variation in its amount from year to year was connected with the amount of rain which fell in the earlier seasons, and that the longer the period of dry weather continued previous to spring and summer the earlier did the disease appear and the more intense did the epidemic become.

THE BATH GUARDIANS AND THEIR MEDICAL OFFICER.

Dr. Craddock in his controversy with the guardians may be congratulated on having secured his ground. The report of the inspector of the Local Government Board fully bears out the letters which he had addressed to the board of guardians as to the total inadequacy of the appointments of the Bath Workhouse Infirmary. In regard to that portion of the report in which the inspector complains of the medical officer not giving more time to his duties in the infirmary, and not keeping the entries in the medical relief book in the same terms as the diagnoses on the bed cards, it is to be observed that the medical relief book sets forth the nature of the ailment when the patient first presents himself, whereas the bed card sets forth the result of the more complete examination of the patient, and it must occasionally happen that the fuller investigation throws fresh light upon the case. As to the amount of time which he spends in the infirmary, it is stated that one hour and a quarter a day is not sufficient for a visit in an infirmary containing 230 beds. That is an example of the art of putting it, the result being doubtless arrived at by totalling Dr. Craddock's attendances during the week, and dividing the sum by six. Now, if a medical officer is not judge of which patients must be seen daily, and which can be placed on routine treatment, then he is not fit for his post. If the guardians have on record that the doctor is sent for, and being within reach does not come, then it is quite time to complain. What has to be borne in mind in regard to this matter is that the amount of nursing required is no criterion as to the amount of medical attendance necessary. Of the cases in the infirmary possibly 96 are incurable, bedridden, dirty, aged, and infirm, all of whom, while requiring the most careful nursing, only seldom demand active medical treatment. The sufficiency of Dr. Craddock's attendance should be estimated on the basis of the few acute cases, not on that of the crowd of those who chiefly require nursing.

ALCOHOL AND CLIMATE.

A report on the use of alcohol in France has just been issued by the Ministry of Finance. Among other interesting facts, it is stated that Paris, which has a greater population than any other French town, is eighteenth on the list, the average consumption of liquor being 1½ gallon per head. While Lyons drinks less, Marseilles drinks more. Cherbourg appears to be the most addicted to drink, the average consumption being 4 gallons, Rouen and Havre not being far behind. The returns seem to point to climate and occupation exerting a substantial influence on the amount of intoxicants consumed.

THE EIGHTH INTERNATIONAL CONGRESS OF HYGIENE & DEMOGRAPHY

Held in BUDA-PESTH, September, 1894.

[FROM OUR SPECIAL CORRESPONDENTS.]

WORK IN THE SECTIONS.

Some conception may be formed of the immense mass of material with which the Congress had to deal when it is stated that the department of Hygiene was divided into 19, that of Demography into 7 Sections; the total number of communications—many of them very lengthy and of great importance—amounted to 826.

Pre-eminent amongst these with regard to interest and practical value are the papers on Immunity and its causative factors, Serum therapeusis, etc., but, above all, the reports from the national Committees on Diphtheria, its etiology, prophylaxis, and treatment, and similar communications with regard to Cholera.

The Etiology and Prophylaxis of Diphtheria.

The vigorous and general interest taken in diphtheria was manifested by the densely-packed gathering, by the rapt attention with which all the discussions in the Section were followed, and by the enthusiastic applause with which the various speakers were greeted.

Professor Chyzer, who presided over the Section, resigned the chair to M. Carl Hieronymi, Minister of the Interior, who throughout showed the keenest interest in and appreciation of the papers which were presented. Professor Loeffler, renowned as the discoverer of the diphtheria bacillus, opened the discussion. Speaking with great earnestness and decision, he described the results obtained and conclusions formed by the Committee representing the German Empire. A summary of these conclusions is published at page 578.

The address of Professor Loeffler, frequently applauded and listened to with close attention by the crowded audience, was followed by the report from the United States, presented by Dr. J. S. Billings, a summary of which is published on p. 578.

Dr. Billings was followed by Dr. Edward Seaton, who presented a very valuable report "On the Present State of Knowledge in England respecting Diphtheria," etc. (see p. 573).

The reports of the National Committees being so numerous, it was decided to accept them as read and proceed with the other papers of the Section.

The Antitoxin Treatment of Diphtheria.

M. Roux, to whose communication with regard to the treatment of diphtheria by antitoxin we referred briefly last week, communicated the following statistics with regard to the trial of the remedy at the Hôpital des Enfants Malades in Paris. Between February 1st and July 24th 448 children were admitted into the diphtheria pavilion. Of this number 109 died; a mortality of 24.33 per cent. This was to be contrasted with the mortality in the four previous years, when 3,971 cases were admitted, and 51.71 per cent. died. The improvement in the death-rate attributable to the treatment was therefore 27.38 per cent. If compared with the mortality among the cases of diphtheria admitted during the same period into the Hôpital Trousseau the results appeared still more satisfactory; of 500 children admitted into that hospital 316 died; a mortality of 63.20 per cent. A critical examination of the statistics for this year involved the drawing of a distinction between cases of true and false diphtheria. Of the 448 children admitted into the diphtheria pavilion, bacteriological examination showed that 128 were not infected with true diphtheria; further, 20 of the cases were already moribund when admitted. There remained, therefore, 300 cases which afforded a fair test of the efficacy of the treatment; they yielded 78 deaths, a mortality of 26 per cent., which was to be contrasted with an earlier series of cases subject to the same eliminations but treated by other methods, which gave a mortality of 50 per cent. The rule had been to give an injection of the serum, which was obtained from the horse, immediately after the admission of the child. The injection was not repeated if bacteriological examination showed that the case was not one of true diphtheria. In none of these cases was the injection followed by any unfavourable symptoms; it was not painful, and if made with aseptic precautions was not followed by any local disturbance. In cases of true diphtheria a second injection was given twenty-four hours after the first, and as a rule this was sufficient. If the temperature remained elevated a third injection was given. As a rule a child received an amount of serum equivalent to one-thousandth of its weight, but in a few cases the quantity reached one-hundredth of the child's body weight. Under the antitoxin treatment complications were observed in only a few cases, but in some paralysis supervened. Occasionally during convalescence an urticarial eruption was observed, apparently due to the injections. The treatment appeared to diminish the liability to albuminuria. M. Roux made a further classification of the cases of diphtheria, taking first the cases in which the larynx was not involved. He said that in 120 of these the diphtheria bacillus was present alone; of these 9 died—a mortality of 7.5 per cent. But of these 9 children 7 only survived their admission into hospital for twenty-four hours or less. Eliminating these, the mortality was only 1.66 per cent. He stated, further, that of the two remaining children who died one was suffering from tuberculous peritonitis, the other from severe measles; so that it appeared that all cases of pure diphtherial angina ought to recover if treated in time. The false membrane ceased to develop twenty-four hours after the first injection, and became detached in all but 7 cases before the end of the third day. The temperature fell rapidly in many cases after the first injection, in severe cases only after the second or third injection, and then more slowly. In cases of diphtherial angina, complicated by the presence of other microbes, the results were equally good, except in those cases in which streptococci were present: the number of these cases was 35, of whom 12 died—a mortality of 34.28 per cent.; this was to be compared with a mortality of 87 per cent. in cases treated by other methods. With regard to cases in which the larynx was involved, M. Roux distinguished two classes; (1) cases in which tracheotomy was not performed; there were 10 such cases with 1 death; a case in which the diphtheria bacillus was associated with streptococci; (2) cases in which tracheotomy was performed; these numbered 121, with 56 deaths—a mortality of 46.28 per cent. Among these there were 49 cases of pure diphtheria, with 15 deaths—a mortality of 30.61 per cent.; but 4 of the patients died less than twenty-four hours after admission, and after deducting these the mortality was 22.44 per cent. Taking all the cases in which tracheotomy was performed, and eliminating 14, which died within twenty-four hours after admission, there remained 107 cases, with 42 deaths—a mortality of 39.25 per cent. Good as these results were, M. Roux thought that they might be still further improved by more perfect isolation of the patients, since many of the deaths after tracheotomy were due to broncho-pneumonia, and it was noticed that a series of such cases might follow the admission of a child suffering from diphtheria of the larynx associated with the presence of streptococci.

Professor O. Heubner (Berlin) made a communication, founded upon his experience of the use of Behring's serum in the Children's Department of the Charité Hospital in Berlin. He insisted upon the importance of early treatment, and pointed out that as the serum had no toxic effects, it might properly be employed in cases which were only suspected to be diphtheria. He thought it undesirable to use massage of the part into which the injection was made; its use was liable to be followed by some pain, and it was quite unnecessary, as the serum was very rapidly absorbed without it. The points to which attention should be directed in considering the necessity for repeated injections were the effect

upon the false membrane and the swelling of the glands, the behaviour of the temperature, the condition of the urine, and the character of the pulse.

Dr. Aronson (Berlin) said that he employed serum of the immunised horse which was three times stronger than that of Professor Behring. In the five months ending with July he had treated with his serum 192 patients suffering from diphtheria, as ascertained by bacteriological examination. The mortality was 14 per cent. In 23 cases the children were moribund when admitted; eliminating these there remained 169 cases with 19 deaths—a mortality of 11·2 per cent. This contrasted with a mortality in the same hospital varying in the three years before the adoption of the antitoxin treatment from 32.5 per cent. to 41.7 per cent. Eighty-two cases had been treated by the serum in other hospitals in Berlin, and the general mortality of the whole series of 274 cases was 15.3 per cent. He had also employed the antitoxin serum with the object of producing immunity in the children belonging to families in which 1 case of diphtheria had occurred. Among the 130 children thus inoculated 2 only contracted diphtheria, and that of a very mild type.

Immunity in Infectious Diseases.

A discussion on this subject was introduced by Dr. Elias Metchnikoff. His address was devoted chiefly to a criticism of objections which had been advanced to the general applicability of the theory of phagocytes. He pointed out that Professor Buchner now held that the bactericidal power of the blood was due to soluble substances capable of destroying microbes, alexins, which were given off by the leucocytes, and that in inflamed tissues the leucocytes acted not only by englobing the bacteria, but also by secreting alexins fatal to them. This theory was not purely humoral, but an attempt to combine the humoral with the phagocytic theory. Hankin, Kanthack, and Hardy also had attempted to combine the two theories by the hypothesis that the eosinophile granules set free from the eosinophile leucocytes killed the bacteria which were then taken up by the non-eosinophile leucocytes, and dissolved. This theory was negatived by some yet unpublished observations made in Dr. Metchnikoff's laboratory in the Pasteur Institute in Paris, by M. Mesnil, who found that in the perch and certain other fishes which possessed no eosinophile corpuscles microbes were as completely destroyed by the phagocytes as in animals which possessed eosinophile bodies in abundance. Behring now recognised two forms or degrees of immunity—the one acquired immunity (the active immunity of Erhlich) due to the cells, the other temporary immunity (the passive immunity of Ehrlich), due to the fluids of the body. Dr. Metchnikoff claimed, therefore, that the defenders of the humoral doctrines were approaching more and more nearly to the cellular doctrine of immunity. This theory was every day attaining a wider application. It was found to be applicable to the microbe of bubonic plague, which, as M. Roux had shown, was in mild cases found in large numbers within the phagocytes. It applied, too, to the bacillus of influenza discovered by Pfeiffer; at the beginning of the disease the greater number of the microbes were free, but as convalescence proceeded they were taken up in ever increasing numbers by the phagocytes. Dr. Metchnikoff then discussed some recent observations of Professor Pfeiffer on the bactericidal action of the peritoneal fluid of guinea-pigs "hyper-vaccinated" against cholera. In these animals peritoneal fluid withdrawn from ten to twenty minutes after injection of cultivations of the living cholera vibrio contained very few leucocytes, and a large number of vibrios, which were immobile and had been transformed into small spherical bodies. Professor Pfeiffer concluded that the vibrios were killed by a fluid secreted by endothelial cells, and that phagocytosis played only a secondary part. Dr. Metchnikoff had repeated these experiments, and had found that while it was true that the vibrios were altered in appearance as described by Professor Pfeiffer, they were not killed; on the contrary, they would grow in a hanging drop of the peritoneal fluid, and that fluid gave copious cultivations of the vibrio. The peritoneal fluid in these hyper-vaccinated animals therefore was incapable of killing the cholera vibrio. Further, he found that if the peritoneal fluid was withdrawn five minutes after the injection of the virulent cultures of the vibrio, leucocytes were seen enveloped in a layer of vibrios, of which most had assumed the globular form. The lymphocytes and red blood corpuscles were not thus surrounded—a fact which proved that the leucocytes exerted a chemiotactic power on the cholera vibrio. Further, it could be shown that the vibrio taken up into a phagocyte was not immediately killed; in the suspended drop the leucocytes died, the vibrios grew, and distended and finally ruptured the dead leucocyte. In conclusion, Dr. Metchnikoff said that he held it as now proved that immunity was due to the activity of living cells, and that the chief part was played by the phagocytes.

Professor Buchner (Munich) insisted on the importance of making an absolute distinction between natural and artificial immunity. The former was due to alexins the latter to antitoxins. Alexins were unstable but possessed a bactericidal power, the antitoxins were stable, had no bactericidal power, but had a specific action. Alexins were products of the animal organism, the antitoxins of specific bacteria. He thought it would be desirable to limit the term "immunity" to the artificial form, and to apply the term "natural resistance" to the natural forms of immunity. Natural resistance was due to the bactericidal properties of the soluble alexins and could not, as a rule, be transmitted by the blood to other individuals. The share of the leucocytes in producing this natural resistance was to secrete soluble substances having bactericidal powers. Phagocytosis was a secondary phenomenon. Artificial immunity was due to the presence in the blood and tissues of non-toxic specific substances derived from the bacteria. Antitoxins could be transmitted from one individual to another by the blood or milk. The condition of artificial immunity thus transmitted was due not to destruction of toxins but to a diminution of the receptivity of the animal tissues.

Professor Fodor (Buda-Pesth) related a series of experiments which had led him to form the theory that the organism resisted certain infections (anthrax, cholera, typhoid fever, tuberculosis) by an increase in the alkalinity of the blood. Such an increase rendered its microbicidal power greater. It was found that this immediate increase in alkalinity was followed by a diminution which was in relation with the ultimate fate of the animal. When death ensued the diminution was great and progressive. When recovery took place the diminution was less, and was soon replaced by an increase.

Professor Denys (Louvain) described the results of certain experiments made on rabbits with the attenuated staphylococcus pyogenes. He found that the fluid effused after inoculation possessed a bactericidal power which went on increasing from hour to hour. This power was not derived from the blood, and must be due to substances excreted by the leucocytes. The power was lost when the fluid was heated at temperatures between 50° and 60°, but might be in part restored to it by adding leucocytes and examining the fluid again after removal of the leucocytes two or three hours later.

Dr. Aronson (Berlin) thought that the cells had an important share in the production of antitoxins. The antitoxins acted chiefly on the cells, though it could not be denied that they exercised some action also on the toxins. If a mixture of diphtheria antitoxin and of the diphtheria bacillus were injected together no local reaction took place and the animal survived. If the antitoxin and the bacillus were injected separately at different points five times as much antitoxin was required to preserve the animal's life.

Dr. Nuttall stated that in the course of some experiments made in Professor Flügge's laboratory he had found that the aqueous humour of animals refractory to anthrax killed the bacillus anthracis.

Dr. Metchnikoff said that anthrax spores could survive and grow in the aqueous humour, even though it possessed bactericidal powers. It was a mistake to study these questions outside the living organism itself. If in animals refractory to a disease, whose blood serum therefore possessed strong, bactericidal powers, the specific microbe were injected it would be found that at the end of a minute all the microbes would have been taken up by the cells. The serum, therefore, had no time to exercise its bactericidal powers.

Professor Buchner did not accept this conclusion. The bactericidal action of the serum might be exerted instantane-

ously. The question of phagocytosis could not be settled by the microscope, but only by experiment.

General Meetings.

After the address by Professor Gruber, noticed in the British Medical Journal of September 8th, came the address of Dr. Metchnikoff (Paris), which was the event of the day, listened to by a packed audience, and greeted by the frequent outbursts of enthusiastic applause. Dr. Metchnikoff said that since Koch published his results and his conclusions that Asiatic cholera was produced by the "comma bacillus," numerous questions and complicating observations had been brought forward, which had thrown doubt upon those conclusions. Experiments on animals and on men showed that the bacillus of Koch was accompanied by remarkable developments. To the simple diarrhœa other special symptoms were added, as was shown by Pettenkofer. In the Pasteur Institute it was only necessary to administer this vibrio to produce cholera. On the other hand there were examples of local and specific immunity, the causes of which had to be traced out. The drinking water at Versailles, for instance, abounded in bacilli, and had been shown to contain cholera vibrio during epidemic prevalence in the neighbourhood, and yet Versailles had remained exceptionally immune. This immunity, this mysterious resistance, had yet to be explained. It had been proved that the cholera bacillus could multiply in water, persist for many months after the cessation of the epidemic, and maintain in this medium its power of giving cholera. On the other hand, it was shown that the presence of this microbe in the water did not of necessity involve the appearance of cholera. In all cases it must be admitted as certain that the bacillus of cholera could multiply in the water of localities constantly or temporarily immune from this malady; and that consequently the local immunity could not be explained by the impossibility for the specific microbe living in these localities. There were, undoubtedly, conditions which induced susceptibility or insusceptibility: these remained to be investigated. Experiments indicated that the immunity of animals was due to the action of the digestive organs. The cholera bacillus might exist for some time in their intestines in great numbers without migrating to other parts or causing cholera. The immunity of animals was due in large measure to the preventive influence of the "intestinal flora" on the cholera bacilli. The cholera bacilli were highly susceptible to the influence of other micro-organisms in their immediate neighbourhood, their growth and external form being much modified by these neighbours. Of these micro-organisms, some retarded and some promoted the growth of the cholera bacilli. For instance, old bacilli in gelatine media which had ceased to multiply might be revivified by contact with certain microbes. Undoubtedly the "microbic flora" of the digestive tract played an important part in producing immunity or susceptibility with regard to cholera in men as well as in animals. Relying on this fact it was easy to reconcile the fundamental truth that the bacillus of Koch is the specific agent of cholera with the teachings of epidemiology, especially with the influence of place and time in the progress of cholera epidemics.

An address on the Etiology of Cholera, with special reference to its prevalence in India and its distribution by pilgrims, had been prepared by request by Mr. Ernest Hart, who was, however, detained by indisposition in London, and the address was read by Mr. Guest at a special plenary meeting of the Congress, over which Professor Koranyi (Buda-Pesth) presided. The paper began by observing that it was a great gain to have arrived at the conclusion that cholera was not a strange, mystical influence spread by atmospheric miasm, pandemic waves, or blue mists—whatever those things might be—but was merely a filth disease carried by dirty people to dirty places. Further, it had been shown that cholera was caused by the drinking of water contaminated with choleraic discharges. Quoting the classical example of the Broad Street pump, the fouled water of which, in the epidemic of 1853-54, had brought death to 22 out of every 1,000 persons living in the parish of St. James Westminster, then referring to other instances where the like contamination and the like consequence had occurred, and touching finally on the outbreak in Hamburg in 1892, when nearly 18,000 cases and some 8,000 deaths resulted from the drinking of the polluted Elbe water, Mr. Ernest Hart declared that the doctrine of waterborne cholera had obtained conclusive evidence in its favour. But the establishment of this fact would not prevent further outbreaks, and it became therefore necessary that, without waiting for a sanitary millennium of cleanliness, the nations of Europe should attack India and the routes of India from which the disease was spread. The Sanitary Conventions of Vienna, Dresden, and Paris had been the result. After enumerating the important decisions of those conferences, Mr. Ernest Hart proceeded to show how cholera gradually spread from the lower valley of the Ganges, which was its very home, to every part of the world. India was not to be judged by its towns. The real India was a congeries of hundreds of thousands of villages, whose inhabitants, in entire disregard of all sanitary care, drank from the pond in which they bathed, in which their cattle wallowed, and which was surrounded by the refuse of their daily lives. This habit of drinking foul water accounted for the constant presence of cholera in India. Nothing seemed more certain than that people could touch and even rub cholera patients without catching the disease, so long as they took the precaution not to swallow the bacillus. This was the key to the position, the horrid truth, the dirty fact that the bacillus lived two lives—one in the human body, causing the disease, multiplying within the patient, and poured forth by him in abundance; the other, outside the body, waiting on damp ground, on soiled linen, in dirty water—waiting to be swallowed by someone else, and to start again on its destructive course. It was thus as clear as noon how and why the cholera passed from the Ganges Valley to other parts of the world. When cholera once broke its local bounds, it followed the lines of human traffic and communication, because man was the porter by whom it was carried from place to place. From the great fairs and religious festivals of India cholera was spread in all directions by the pilgrims to the shrine at Mecca. Nowadays it no longer sneaked round by easy stages through Russia and the Caucasus. Travelling by steamboat and railway it was at one bound at Jeddah; Mecca became a centre of infection, and the Red Sea ports distributed the disease to Egypt and the South of Europe. The Mecca route was thus the point with which the nations needed to concern themselves. While the Indian Government must watch its fairs and festivals, Europe, by international arrangement, must guard the pilgrim track by making provision for the capture and isolation of early cases. Even in countries where cholera was a common occurrence, it could be kept at bay by strict sanitary surveillance, by searching out cases of suspicious illness, by isolation of the sick, and by providing unpolluted drinking water. But Mecca itself required to be cleansed. While the well at Zemzem, where the pilgrims drank, remained in its present filthy state, the place remained liable to become a nursery of cholera. The sanitary reorganisation of Mecca was the task of the Sultan of Turkey.

Subsequently, at a general meeting held under the presidency of Professor Fódór, of Buda-Pesth, to receive and consider various resolutions adopted by the sections, a resolution was submitted was one by Dr. Kuborn, of Liége, delegate of the Belgian Government, embodying the chief recommendations of the British, German, Belgian, and Dutch Committees. These resolutions, after expressing full approval of the Dresden Convention, entered into the details of internal administration, to which Dr. Martin, one of the French delegates, objected as likely to raise unnecessary complications in the future. Finally, a resolution was adopted urging the various Governments to take measures to give effect to the recommendations of the Dresden Sanitary Congress.

Urban Typhoid Fever and Water Supply.

In the Second Section Dr. Anton Drasche (Vienna) discussed the spread of typhoid in large towns in recent years. It was very largely traceable to the nature of the water supply. He dwelt on the importance of pure water, but said that cases occurred for which the water was not responsible. Defective house construction was to blame in inferior buildings. Observations of 40,000 sick showed that 36 per cent. of the cases could not be traced to drinking water. Steps were being taken in Vienna for its better filtration and supply. Comparison with English statistics was not favourable to Austria.

Dr. S. C. Bambus (Athens) described last year's typhoid fever epidemic in that city, with notes as to its fluctuations. It was most severe during August and September. From November 24th to December 24th there were 325 cases. At the same time there were 585 in schools and poorhouses.

Visit to the Voluntary Salvage Society.

Nearly 100 members visited the depôt of this Society under the guidance of Dr. Géza Krisz, who minutely explained the extensive apparatus, and the system of work. A staff of 36 workers is kept within call, and when on duty they wear a simple but recognisable uniform. A quadruple telephonic installation communicates with all the hospitals, the police, and with every house occupied by a director or worker on duty. Each message is duplicated to prevent uncertainty and loss of time. Cases stocked with all appliances, including aseptic bandages for wounds, and splints, are kept ready for instant use. An apparatus for saturating bandages aroused much interest. Next was shown the heating apparatus for the house of 33 rooms, so economical that the whole work for a year cost only 300 florins. The register of all sick cases in the hospitals is here made up four times daily, in addition to that of the institution's first-aid work, so that the numbers of vacant beds and other necessary facts are always at hand. A special feature is the apparatus by which the operator disinfects himself before touching any wound. A carriage was shown which had transported 15 000 cases. Many of these, adapted for various exigencies, including infectious and lunatic cases, were examined with interest. Some appear when closed to be simple private carriages, but are really so constructed that either the whole side or the whole back can be folded away to admit the bed with the patient at full length. While these were being shown a call arrived, and in less than one minute an omnibus with three workers was on its way, cleared by the ringing of a bell of peculiar tone. Our conductor informed us that 30 calls could receive full attention in five minutes. A field apparatus for cooking 1,600 meals at once was shown in detail. More than 42,000 casualties, including suicidal attempts of various kinds, have been treated in the seven years during which the Society has worked here (2,753 day and 1,914 night calls were made in 1893); of these, over 23 900 were notified by the public, 3,300 by the authorities, 8,300 by the police. It is noted that the largest number of cases occurs in hot weather, partly, no doubt, on account of outdoor occupations being then more numerous. A daughter institution on the same lines has been established at Klausenburg, in Transylvania.

Disease and Water Supply.

Dr. J. Polak (Warsaw) exhibited two tables showing the progress there of sanitary work, with especial regard to improved water supply, beginning from 1886. From 1877 to 1886 the mortality from typhoid fever was 60·105 in 100,000, for the period 1887 to 1893 only 18·30. The second table showed the progressive decline of phthisis and bronchitis in the latter period from 430 to 275. The tables classified the diseases with great completeness.

Small-pox in London.

Mr. M. W. Acworth (London) described the methods adopted in London for dealing with small-pox, dating their inception from 1870; before that date practically no separate treatment of infectious disease was organised. In 1871 a ship was moored in the Thames as a hospital, twenty miles down the river, a special steamboat service being used for communication. Most cases, however, were still sent to the hospitals nearest to their homes. It was found, in regard to small-pox, that a complete land service must be kept in readiness for emergency which might at any time arise, and isolation wards provided for suspected cases awaiting development or discharge. If found to be small-pox the case was sent on by the next steamer. It had accommodation for 52 patients, the fore part being reserved for isolated persons, the staff, and visitors. The run down the river occupied an hour and a quarter, and appeared to be in no way injurious to the patients. To this ship, the *Atlas*, was added the *Endymion*, another old man of war, for the administration; with rooms for the staff, and separate accommodation for 50 females and 40 males; the *Atlas* was now arranged in three sections, with 50, 60, and 40 beds. A piece of land was secured near the mooring place, on which were erected huts for 200, and other buildings, sufficient together for the reception of 800; 12 pavilions had been built, and 8 more were contemplated, so that it was hoped that next year there would be room for 1,000. To these constructions was largely due the practical immunity of London from heavy visitations of small-pox; their cost might be fairly regarded as an insurance premium. The average mortality has been enormously reduced. The total deaths in 1893 were 28; a previous period of five years having shown 3,200.

Rates of Mortality in Artisans' Block Dwellings.

In this note, presented to the Congress at the request of Herr Körösi, Dr. A. Newsholme brought up to date and modified certain statistics given in a paper read before the Royal Statistical Society of London in 1891. The necessary corrections for age distribution and for deaths in outlying institutions were given, and it was then shown that for the four years 1886-89 the general death-rate of the Peabody Buildings was 18·8, as compared with 19·6 for London, 25·6 for its central, and 26·9 for its eastern districts. The infantile mortality for 1893 was 126 per 1,000 births in Peabody Buildings, 164 in London, 185 in the central districts, and 175 in the eastern districts of London. As regards infectious diseases, enteric fever was only about half as prevalent as in the above districts of London; the mortality from diarrhœa was also lower; that from diphtheria was slightly higher; while scarlet fever and, still more, measles and whooping-cough were more fatal in Peabody Buildings than in the above-named districts. There was no excess of tuberculous diseases in Peabody Buildings. Comparing Peabody Buildings with Battersea tuberculous diseases taken together were more fatal in the latter; while infantile mortality, enteric fever, and diarrhœa were also lower in the Peabody Buildings than in Battersea. In addition to the above general results, the preceding facts showed that increased aggregation of population in a given area did not necessarily involve an increased death-rate.

TYPHOID FEVER AND CREAM COMPOUNDS.

Mr. Hankin, bacteriologist to the North-Western Provinces and Oudh and the Central Provinces, relates in the *Indian Medical Gazette* the steps by which he traced with great probability two outbreaks of typhoid fever among officers of the East Surrey Regiment to the use of *dahi*. This preparation is a kind of curdled milk made by Indian confectioners. It is made as follows: milk is thoroughly boiled in an iron vessel, then allowed to cool and poured into large shallow vessels; to each of these vessels a small quantity of the *dahi* of the previous day is added, and the milk put away under cover in a cool place if the weather is hot, or a warm place if the weather is cold. The next morning the whole of the milk is found to be coagulated—that is to say, changed into *dahi* ready for sale. Mr. Hankin shows good reason for believing that the coagulation is due to a special bacillus which grows slowly on agar-agar, and to which he proposes to apply the name *bacillus dahi*. In the particular specimen of *dahi* suspected of being the cause of the cases of typhoid fever Mr. Hankin found the typhoid bacillus. He ascertained by experiment that at temperatures between 95° and 104° F. the *bacillus dahii* did not interfere with the growth of the typhoid bacillus, whereas at temperatures between 85° and 90° the growth of the typhoid bacillus was checked. It was remembered that both outbreaks in the East Surrey mess had begun at precisely the same season of the year—namely, at the beginning of the warm season. Experiment had shown the probability that if the vessel in which the *dahi* was being made were contaminated with a trace of typhoid bacilli during the cold weather no very serious consequences would be very likely to ensue, as the growth of the typhoid bacillus would be kept under by that of the *bacillus dahii*, whereas the contrary would happen during the hot season.

Mr. Hankin traced the *dahi* found in the mess to a confectioner's shop in the bazaar. Near it was a particularly foul well, liable to contamination by human dejecta. The

probability is that the *dahi* became contaminated with the typhoid bacillus through the use of the water of this well for rinsing the vessels. The dose of typhoid bacilli introduced into the *dahi* in this way would be small, but during the hot weather rapid growth would take place, so that the *dahi* delivered for use would swarm with the typhoid bacillus. Mr. Hankin's discovery of the typhoid bacillus in the *dahi* is an interesting example of the services which bacteriology may render to administrative officers. The cause of the outbreaks in the East Surrey mess appeared very obscure; the greatest care was taken with regard both to the milk supply, water supply, and the manufacture of soda water. No milk, cream, or other milk product, other than that furnished by the regimental dairy was supposed to be used in the mess, yet in this particular case *dahi* was captured while being smuggled into the officers' mess. For what purpose precisely the cook used it was not absolutely proved, but there was very good reason indeed to suspect that it was, by certain manipulations, transformed into a compound which passed for cream, which was served to eat with stewed fruit. It is suggested that the motive of the cook in substituting this imitation for the real cream furnished by the regimental cows is that the cream can be sold for four times the cost of the *dahi*. It is the fact that both the outbreaks affected especially the officers; in 1893 three officers were taken ill within four days of one another, and two died. In 1894 four officers and one soldier employed in the mess developed the disease within a week, and three deaths occurred. There was thus a special incidence of the disease on persons using the officers' mess—a fact which alone would point to the suggestion that the source of the typhoid fever was to be found in some condition special to that mess, and not in such conditions as the water supply or the regimental dairy, which were common to officers and men. The imitation cream, made of *dahi*, sugar, and almond essence, fits into this theory, which appears to be clinched by the discovery of the typhoid bacillus in the *dahi* smuggled into the mess from a confectioner who made it in vessels "cleaned" in the water from a foul well in the native quarter. *Dahi* is used as the basis for certain kinds of Indian sweatmeats, and the few scattered cases among the men may have been due to the consumption of these sweatmeats, in which some of them indulged freely. As Mr. Hankin says, the outbreaks were involved in so much mystery before bacteriology was employed to give a clue that the lovers of mystery might have been excused for reverting to the old fashioned, grotesque, but labour-saving idea that typhoid may be produced by fatigue and exposure without any help on the part of microbes.

Writing to Mr. Ernest Hart with reference to these observations, Mr. Hankin points out the importance of this in reference to Mr. Hart's previously-published reports of seventy-four epidemics of disease, affecting 5,044 persons, caused in this country by the pollution of milk. The details were reported by him to the International Medical Congress in London in 1881. It is of the greatest value to India that a bacteriologist of the skill and experience of Mr. Hankin has been attached to the Agra laboratory.

VACCINATION STATISTICS.

THE *Star* newspaper, which has constituted itself a champion of the antivaccinators, does us the honour to take notice of our short note of September 1st headed "Antivaccination Falsehoods," the falsehoods in question being the statistics given on a circular of the London Society for the Abolition of Compulsory Vaccination, issued in preparation for a meeting at Mile End on September 4th, at which Mr. Hopwood, Q.C., M.P., presided, and on which circular the names of a great number of other members of Parliament were mentioned as having been invited. With the exception of this honourable gentleman none of the others whose names were thus used, with or without their authority, seem to have put in an appearance. On that circular the following statistics were given as regards Leicester, and in respect of the small-pox and vaccination there in 1892-93:

	Per million living.
The death-rate from small-pox of the revaccinated was	270
" " vaccinated	159
" nonvaccinated	109 only.

To that we replied that these figures were false and misleading. As a matter of fact we stated, and we now restate, the death-rates of Leicester during the small-pox epidemic referred to were:

	Per million.
Revaccinated	0.0
Vaccinated	5.4
Nonvaccinated	102.7

To make these figures more precise we will add that the Medical Officer of Health for Leicester gives the following figures of that epidemic:

Under 10 years of age.

Vaccinated cases, 2; deaths, 0 = 0.0.
Unvaccinated cases, 105; deaths, 15 = 14.3.

Over 10 years of age.

Vaccinated cases, 176; deaths, 1 = 0.57.
Unvaccinated cases, 48; deaths, 4 = 8.3

In regard to the total small-pox mortality without regard to age, and including as vaccinated all those who have been so vaccinated in infancy but not since, and were thus very imperfectly protected from small-pox, the figures are as follows:

Total number of cases, 347; deaths, 21; per case mortality, 6.05 per cent.
Vaccinated cases, 178; deaths, 1; per case mortality, 0.56 per cent.
Revaccinated cases, 14; deaths, 0; per case mortality, 0.00 per cent.
Doubtful cases, 2; deaths, 1. per case mortality, 50.00 per cent.
Unvaccinated cases, 153; deaths, 19; per case mortality, 12.40 per cent.

From the above it is shown that there was not one death in the whole population of Leicester amongst the vaccinated children under 10 years of age, and only 2 cases; that on the other hand there were 15 deaths among the unvaccinated children and 105 cases. Nor was there one death among the revaccinated. Of persons at all ages unvaccinated, there were 153 cases of small-pox and 19 deaths. Of persons vaccinated in infancy, but over 10 years of age, and therefore imperfectly protected, there were 178 cases but only 1 death. Thus had the unvaccinated patients of all ages died only at the rate of those vaccinated, there would not have been the actual 19 deaths but less than 1 death. And had the vaccinated cases died at the rate of the unvaccinated cases, there would not have been the actual solitary death, but as many as 22 deaths. Moreover on the Leicester figures, 1892-93, had all the children been vaccinated and the adult cases revaccinated no death would have resulted, We hope we have given the answer which the *Star* desired, and as it has challenged our reply we have no doubt it will reproduce it.

The *Star* mentions that one person is alleged to have died of small-pox who is entered as unvaccinated. There were no vaccination scars on the arm, but the man's vaccination is assumed, and the *de visu* evidence of his medical attendants is disputed, because the man is stated to have been in earlier life in the Marines. This tale told from the Marines may be left to rest upon its merits as stated; our contemporary wisely does not attach importance to it. As a bit of statistical evidence it is characteristic enough of those who rely upon it to prove, in face of the overwhelming figures which we have given, and which ought, we think, to prove to every reasonable being that vaccination for the infant and revaccination for the adult are true and trustworthy protectives against death from small-pox. In championing the opposite allegations of the antivaccinators the *Star* puts upon itself a very heavy responsibility, of which we ask it to weigh the serious consequences. It is a journal much read by the working classes, among whom it has considerable influence, and whose interests it has often most usefully championed. We have had great pleasure in responding to its request in this instance to deal with the above figures, and we shall be glad at any time to furnish the like assistance in respect to any similar set of figures. Our desire is only to be helpful to the truth.

"THE SUICIDE EPIDEMIC."

THIS is now a common heading, and one which is of most frequent occurrence, and we meet also repeated disquisitions on the causes of these assumed epidemics. It reminds us of the question alleged to have been put to the early philosophers at the Royal Society, why a gold fish might be put into a perfectly full bowl of water without causing it to overflow. Before discussing the causes of the alleged epidemic

it is as well to ascertain whether it exists. We find on inquiry the following are the figures which afford the information concerned:

Year.	Deaths by suicide.	Rates per 1,000,000 Persons Living.
1881	1,965 ...	... 75
1882	1,995 ...	... 75
1883	1,902 ...	... 71
1884	2,013 ...	... 76
1885	2,007 ...	... 74
1886	2,254 ...	... 82
1887	2,254 ...	... 80
1888	2,208 ...	... 82
1889	2,170 ...	... 78
1890	2,205 ...	... 77
1891	2,483 ...	... 85
1892	2,[illegible] ...	... [illegible]

There appears to have been a gradual increase in the death-rate from suicide for the past thirty years or more, but the rates for single years of course show marked fluctuations. The rates for 1891 and 1892 were 85 and 88 per 1,000,000 living respectively, and were distinctly the highest recorded since 1858,[1] the nearest rate to these being 82 both in 1886 and 1888. The average mortality from suicide from

1871—76	was	66	per 1,000,000
1876—80	,,	74	,,
1881—85	,,	75	,,
1886—90	,,	79	,,

The figures point to a good deal of fluctuation from year to year in the number of suicides in England and to their tendency to increase, but they can hardly be held to justify the assumption that there exists either a suicidal mania or an epidemic of suicides. The fluctuations in the proportion of suicides will be found to bear a pretty close relation to the culmination or decline of periods of commercial prosperity or distress. The causes of suicides are largely very prosaic, those from poverty or inability to meet financial obligations constituting the largest part of them, the next largest division being from unhappiness in love affairs, and next comes the varieties of insanity and delusion. These reports, which to the reporter are a means of breadwinning, explain a good deal of the special activity and prominence of publication of inquests on suicides. There are many more reports of suicides when Parliament is not sitting as they are apt to attract much more attention in the dull season. It must not, however, be inferred that they are more frequent.

THE PLAGUE IN THE EAST.

Spread of the Epidemic from Yunnan through Pakhoi to Canton.—The Recent Outbreak Preceded by Drought.—Epizootic Disease.—Influence of Age, Sex, and Social Conditions.—Estimate of Mortality in Canton.—Escape of the European Colony.

We are indebted to Dr. Alex. Rennie, of Canton, for the following notes on the plague in Southern China:—

Excluding the theory that under certain fostering conditions the virus has originated *de novo*, the question naturally arises how did the disease reach the seaboard of China. To Pakhoi, where the disease has been endemic for several years, it doubtless found its way from Yunnan along one of the trade routes. The great highway of commerce between that province and the coast is the West River, on which are one or two *entrepôts* of trade, through which opium and other products of Yunnan find their way to Southern Kwang-tung.[2]

We find on inquiry, however, that no outbreak has hitherto been known in the large cities situated on the West River, so that more probably the disease has followed the land route along the southern border of Kwang-se. In Lung-chow and one or two places of that province in communication with Yunnan the disease is known to prevail. The disease first manifested itself in a town to the westward of Pakhoi, and the Chinese, rightly or wrongly, hold that it found its way thither from the borders of Tonquin.

Suspecting that the disease ex tended to Canton overland from Pakhoi, I made inquiries on the subject, and found that in 1891 a severe outbreak occurred in Kao-chao, the prefecture to the north of Lienchow in which Pakhoi is situated. In the spring of this year it prevailed in other towns to the south of Canton lying in the line of march northwards. Briefly, therefore, we may infer that the disease reached Yunnan from northern India or some point to the westward, possibly through Thibet, and that it found its way along the southern border of Kwang-se to Pakhoi, from whence it travelled northwards through the Kwang-tung province to Canton. From the latter city it was readily conveyed to Hong Kong by persons removing while actually suffering from the disease or during the period of incubation. The steamer journey between the two places occupies only about eight hours, and yet during the height of the epidemic it was quite a daily event for a few deaths to occur *en route*.

In considering the causation of the disease, account must be taken of the prevalence of insanitary conditions in Chinese towns. A prolonged period of drought preceded the outbreak. The rainfall in South China during the winter is small, but during the month preceding the outbreak of plague was exceptionally so. Thus:—

1893.	November ...	0.00 inch
	December ...	0.01 ,,
	January ...	0.31 ,,
	February ...	1.78 ,,

The Chinese readily ascribe the outbreak of plague to the absence of rain causing an impure water supply and a more than usually insanitary condition of houses and drains. The heavy rains that fell in May and June tended in nowise to lessen the prevalence of the disease when it was fully established. This may be partly explained by the fact that for the season of the year the temperature was abnormally low, whereas a high temperature seems antagonistic to the pestilence. Again, during wet weather Chinese are confined to their houses, and so more within the area of contagion.

In Yunnan, according to Mr. Rocher, pigs, goats, rats, and other animals die in great numbers before man is affected. In Canton rats were the only animals observed to suffer; an exceptional mortality was observed amongst them two or three weeks before cases of plague were noted, and this sequence of events persisted throughout the epidemic. A high mortality amongst rats in a district of the city quite free from sickness was most surely followed by an outbreak of plague, so much so that people came to regard these rodents as heralds of the coming evil, and when possible hastened removal to safer quarters. They would come out of their holes in broad daylight, run and tumble about in the streets in an aimless and dazed manner, and die. Certain officials took steps to have these dead animals collected, and from the quarter near the south gate over 22,000 dead rats were said to have been removed and buried in pits outside the walls. The *post-mortem* appearances were briefly enlargement and congestion of the liver, which was usually infested with parasites (encysted tapeworm and ova of distoma); spleen enlarged; patches of inflammatory action in the stomach and intestines; glandular enlargement present in some.

Although, as concerns man, all classes suffered from the plague, certain conditions of life seemed to confer immunity: First, the greater number of those attacked were women and children, especially female children, that is, those living most indoors: secondly, those living upstairs escaped the disease much more readily than those living on the ground floor: thirdly, the boating population, consisting of about 250,000 people, who live and sleep on the water, enjoyed almost complete immunity, so much so that many well-to-do people observing this circumstance made a temporary home on the river.

As no registration of deaths is in force in China, it is impossible to obtain a correct estimate of the mortality. The comparison of figures obtained from various sources leads to the belief that, up to the date of writing (June 15th), the mortality from plague may be set down as about 40,000, the maximum death-rate having occurred during the month of May. The number certainly appears large, but, in a city with a population of close on two million inhabitants, is small as compared with the ravages of the disease in Europe in former centuries.

In striking contrast stands out the health of the foreign community in Canton, who passed through the epidemic

[1] This is the earliest year with which comparison can be made; the statement does not imply that higher rates prevailed prior to 1858.

[2] *Across Chryse* (Colquhoun) and I. M. Customs *Reports*.

unscathed. This immunity they owe in large measure to the excellent sanitary arrangements that prevail. The total number of foreigners—Europeans and Americans—resident at Canton is about 300, the majority of whom reside on the island of Shamien, which is bounded on one side by the river and separated on the other side from the Chinese city by a creek some 50 feet wide. With the exception of about an equal number of servants, no Chinese are allowed to reside on the island. The drainage system is effective; the houses are two-storeyed, well-built, and ventilated, while the occupants may be said to be all comfortably situated. In spite of the fact that many deaths occurred on the other side of the creek, not more than a stone's-throw from the foreign houses on Shamien, not a single foreigner or servant on the island contracted the plague, and no mortality was noted amongst rats or other animals.

THE CHOLERA.

The official weekly cholera bulletin issued at Berlin on September 5th by the Imperial Board of Health shows that between August 27th and September 3rd, there were 53 cases and 21 deaths in the German Empire, as against 78 and 32 respectively in the preceding week.

Six fresh cases have been reported from Upper Silesia, and 1 from Porgan on the Elbe.

Ten fresh cases were reported on September 10th from Kattowitz in Silesia, and in consequence of the spread of the disease a request is said to have been addressed to the German Government to give orders for the complete closing of the frontier.

A telegram from Vienna dated September 6th, states that the organ of the Central Sanitary Council gives in its last number a survey of the progress of the epidemic in that country up to the present time. Including the cases in districts in which the disease has now ceased, the total number which have occurred in Galicia amount to 5,367, and those in the Bukowina to 591. In the former province the deaths were in round numbers 2,700 as against 330 in the Bukowina. On September 6th, there were 168 fresh cases in Galicia and 90 deaths, and on September 7th there were reported 98 deaths from cholera in Galicia and the Bukowina.

It is now officially stated that cholera has made its appearance in Lemberg, the capital of Galicia, and 8 cases and 4 deaths were recorded on September 7th.

Cholera is still raging in many parts of Russia. According to the latest official bulletins 146 cases and 101 deaths occurred in Moscow from September 1st to September 7th. From August 26th to September 1st there were 807 cases and 359 deaths in the Government of Petrikow, 289 cases and 114 deaths in the Government of St. Petersburg, and 229 cases and 109 deaths in the Government of Novgorod, and 1,126 cases and 527 deaths in other parts of the country. In the period between August 19th and September 1st 1,383 cases and 640 deaths occurred in the Government of Warsaw, and from August 19th to August 25th 1,017 cases and 571 deaths in the Government of Kielce, and 718 cases with 360 deaths in the Government of Radom.

A Reuter's telegram from St. Petersburg, dated September 6th, states that the epidemic in Russian Poland has assumed alarming proportions, the weekly number of fresh cases averaging 5,000, of which 2,500 prove fatal. A few cases continue to occur in various parts of Holland.

The Local Government Board issued the following notice on September 6th: "The Local Government Board have informed the Port Medical Officer of Health of Cardiff that the master of the steamship *Glanystwith* died on board at Antwerp on September 1st, and that the vessel sailed today (September 6th) for Cardiff. This is the third intimation of cholera in connection with the port of Antwerp."

The Local Government Board reported on September 10th that Great Britain has been completely free from cholera for the previous fourteen days.

The cholera at Lucknow has been terribly severe, all the regiments there contributing to the death roll. Up to August 13th, in the East Lancashire Regiment, there have been 132 cases and 82 deaths. The regiment has left Lucknow, and the disease is subsiding.

Our Berlin correspondent writes: The news that a case of cholera has occurred in Charlottenburg, a suburb of Berlin, causes no sort of panic or excessive anxiety in the town. There were isolated cases enough two years ago, at the time of the Hamburg outbreak, but thanks to the precautions immediately enforced they did not spread. The Berlin population has confidence that in this case, too, all that is necessary for disinfection will have been done. The case was a canal boatman as usual. He had come up from the neighbourhood of Magdeburg apparently in good health. His supper one evening consisted of 4 lbs. of raw pears, washed down by large quantities of beer. He died next morning. Such isolated cases are reported from all parts of Germany, chiefly from East Prussia and Silesia. In a little place near Marburg-Bürgeln there has been an epidemic outbreak—12 cases and 3 deaths in one week. Professor Carl Fraenkel, of Marburg, was on the spot, but he did not succeed in tracing the cause of the outbreak.

Medical Education for Women in Russia.—The scheme for the establishment of a medical school for women in St. Petersburg is now under the consideration of the Russian Government. It is proposed to admit as students women between 18 and 35 years of age. The course of study will extend over four years, and will be supplemented by two years' practical work in hospitals. On the completion of their studies a special diploma will be conferred on them.

MEDICAL EDUCATION IN THE FAR EAST.

The Chinese Imperial Medical College.

At the present time, when the war between China and Japan has drawn special attention to any arrangements which may exist for dealing with the sick and wounded in war, the following notes on measures now in force for introducing Western medical science into the Celestial Empire will be read with interest.

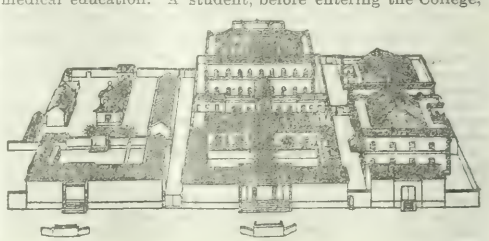
Among the many evidences which the great Viceroy Li Hung Chang has given of the possession of an enlightened and liberal spirit not the least interesting has been the establishment by him of an Imperial Medical College at Tientsin. The Viceroy himself is the President of the College, and the Vice-Presidents are Sheng Taotai, Lin Taotai, Loh Feng Luh Taotai, and Mr. A. Irwin, F.R.C.S.I. The two last named gentlemen are also directors of the College, and Dr. Lin Leun Fai assistant director.



Lecture Hall and Students' Quarters.

The College is designed to spread in the Chinese Empire a knowledge of Western medicine and surgery in the only way in which, as we are assured by those best competent to speak, that is possible; that is to say, by the education in Western methods of young Chinese. To this end Surgeon-Captain F. S. Heuston, F.R.C.S.I., of the Medical Staff of the British Army, was this year appointed Professor, and he has under his direction a staff of three Chinese instructors, Dr. Kin, Dr. Chow, and Mr. Li.

The College has, we are informed, made very satisfactory progress since its establishment last year, and from the curriculum for 1894, which is now before us, through the courtesy of Dr. Francis Heuston, of Dublin, it is evident that the directors are aiming at giving a sound elementary medical education. A student, before entering the College,



Bird's-eye View.

is required to pass a preliminary examination in general education. He is subsequently required to pass four annual professional examinations at the end of each year of study. A year of study comprises two sessions—spring and autumn—and the professional examinations are held at the close of the autumn session. Students are required to attend at least two-thirds of all lectures delivered. Quarterly examinations are held by the College, but the annual pass examinations are conducted by a board of examiners specially appointed for the purpose. These examinations are directed to the subjects of the year's instruction. The first year is given to Practical Anatomy, Theoretical Chemistry, Physiology, and Botany. In his second year the student is required to attend at a hospital, and take notes of cases, and in the College to

attend to anatomy, physiology and histology, materia medica, practical chemistry, and surgery. In the third year the attendance at hospital is continued, as is also that on lectures on anatomy, physiology, and surgery, the subject of medicine being added in this year, during which he is required also to receive practical instruction in the compounding of prescriptions. In the fourth year the attendance in hospital must include daily observation of patients suffering from infectious fevers, and also special instruction in the treatment of diseases of the eye and ear. The student is required to attend systematic lectures on the two last-named subjects, as well as on midwifery and diseases of women and children, and on hygiene, and also a further course of lectures on medicine and surgery.

The buildings devoted to the purposes of the College are capacious, as will be evident from the two accompanying illustrations—the one a bird's-eye view by a Chinese artist; the other a reproduction of a photograph. The College already has twenty students, selected from young men in Shanghai, who have been studying English there for some years.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 24th day of October next, at 2 o'clock in the afternoon.

September, 1894. Francis Fowke, *General Secretary.*

NOTICE OF QUARTERLY MEETING FOR 1894. ELECTION OF MEMBERS.

A meeting of the Council will be held on October 24th, 1894. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before such meeting—namely, October 3rd, 1894.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election. Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

North of England and Border Counties Branches.—It has been decided to hold a conjoint meeting of the above Branches at Gilsland on Thursday, October 30th, 1894. The meeting will commence at 3 P.M., and will be followed by a dinner. Members desirous of reading papers are requested to communicate with either of the Honorary Secretaries: G. E. Williamson, F.R.C.S., 8, Eldon Square, Newcastle-on-Tyne. North of England Branch; J. Altham, M.B., Penrith, Border Counties Branch.

East Anglian Branch.—The autumnal meeting of this Branch will be held at the Great Eastern Hotel, Harwich, on Tuesday, September 20th, at 2.30 P.M., A. C. Mayo, M.R.C.S., President, in the chair. Luncheon will be provided at 1 P.M. Members intending to be present are requested to send word to Dr. Thomas Carr, Braintree, by Monday, September 17th. —E. G. Barnes, Eye; M. Beverley, Norwich; Thomas Carr, Braintree, Honorary Secretaries.

South Midland Branch.—The autumnal meeting of this Branch will be held at Peterborough on Thursday, October 4th, 1894. Gentlemen wishing to bring forward communications at the meeting will oblige by intimating their intention to the undersigned with as little delay as possible.—Chas. J. Evans, Northampton, Honorary Secretary.

South Wales and Monmouthshire Branch.—The autumn meeting will be held at Pontypool on Thursday, October 18th. Members desirous of reading papers, etc., are requested to send titles to one of us not later than October 10th.—A. Sheen, M.D., Cardiff; D. Arthur Davies, M.B., Swansea.

South-Eastern Branch: East Sussex District.—The next meeting of the above will be held at the Station Hotel, Hayward's Heath, on Thursday, September 27th, at 3.30 P.M. Dr. Malcolm Smith, of Hurstpierpoint, will preside. A discussion on the Wants of the General Practitioner and how best to obtain them, will be opened by Dr. Withers Moore, who will treat of such topics as the following: 1. Limitation of Time during which Prescriptions should be Re-dispensed without re-dating. 2. Poor-law Retiring Pensions should be fixed by Poor-law Board. 3. Settlement of Differences between Members by the President of the Branch. 4. Cases of "Irregular Practice"—how to deal with them. 5. The Question of Dispensaries—Provident *v.* General—Wage Limit, etc. Dinner will follow the meeting at 5.30 P.M., charge 6s., exclusive of wine.—J. W. Batterham, Hon. District Secretary, Bank House, St. Leonards-on-Sea.

SPECIAL CORRESPONDENCE.

PARIS.

Wealthy Provincial Hospitals.—Certification of Lunacy.—Caserio's Body.—Anthrax and the Disinfection of Hides.—Tariff for the Disinfection of Houses. Hydrophobia and Stray Dogs. —Poisoning by Crayfish and by Mushrooms.—General News.

A medical man has written anonymously to a daily paper an interesting letter concerning the financial condition of certain provincial hospitals. Curiously enough there are some hospitals so rich that they do not know what to do with their funds. The *Journal de Médecine de Paris* calls attention to the fact that provincial hospitals do not spend their income. Every year there is a good sum invested. The *Journal de Médecine* condemns this administration, and claims that the hospital revenue be spent for the benefit and relief of needy sufferers. At the Villepauvre Hospital two beds are endowed by a donation, accompanied by a clause that they are for the benefit of the poor of Villepauvre. When not occupied by a patient of this community they are empty, and needy sufferers are turned away from the hospital. Yet it is nowhere stated that none but Villepauvre patients are to occupy the beds.

The *Journal de Médecine* calls attention to a curious law case decided in a French law court (Eighth Chambre Correctionnelle). An insane person was placed in a *maison de santé* without having been seen by the doctor, who gave a certificate at the request of a person who was not related to the patient. Whilst the patient was shut up in the *maison de santé* Nadaud, a photographer and business man, who had her placed there, got her fortune into his possession. He is imprisoned for theft, and Dr. Fabret, who received the patient in his *maison de santé*, is to appear before the Eighth Chambre Correctionnelle.

Professor Lacassagne applied to have Caserio's body in order to make a *post-mortem* examination. Menacing letters, it appears, were sent to the medical faculty, and the body has been buried. Thus probably interesting pathological and physiological data have been lost.

M. Lancereaux has recently read a paper before the Conseil d'Hygiène on three cases of malignant pustule resulting from the manipulation of skins imported from abroad. M. Lancereaux urges that skins should be disinfected before they are prepared. All substances hitherto used for this purpose spoil the skins. M. Schutzenberger recommends formol.

At one of the last meetings of the Paris Municipal Council a tariff was fixed for disinfecting houses, clothes, furniture, etc. Rents below £32 a-year do not pay a tax. In the province gratis disinfection has ceased for some time.

M. Alexandre, in his report sent in to the Public Health Council, states that in 1892 109 cases of bites from animals inflicted on human beings in the Seine Department were notified to the Seine police prefecture. Twenty were from dogs ascertained by veterinary surgeons during life to be mad; 147 from animals which were demonstrated by veterinary surgeons to be mad after *post-mortem* examination; 693 cases of hydrophobia were notified occurring among animals some of which had inflicted bites, others not; 874 animals were killed after being bitten or having been in

contact with rabid dogs; 26,502 stray dogs were taken to the *fourrière;* 23,204 were killed; 4 people died from rabies. In 1890 there were 201 cases of hydrophobia; in 1891, 400; in 1892, 693. Of the 693 cases, 186 belonged to the suburban communes. Among the 26,502 stray dogs taken to the *fourrière,* only 306 came from the environs of Paris, a very small proportion of the vagabond dogs straying about in the 76 communes of the Seine department. In 1892, 130,716 dogs paid the municipal tax; 20,000 avoided it. In the Seine department there are, therefore, 150,716 dogs. The prefects will receive instructions to enforce the law as to stray dogs.

Forty people have been poisoned at Epinal and seven at Verdun by eating crayfish. At St. Jean-de-Luz forty guests who ate crayfish at a marriage feast were seized with violent colic and vomiting; by prompt and skilful medical treatment they were saved, but in other localities a number of people have died from eating crayfish. It appears they are procured from Cologne, the central depôt of crayfish found in European waters. Seven people have been poisoned by eating mushrooms. They were Bohemians, and arrived at Maze to give a theatrical representation. The cook and two others went in search of mushrooms, whilst the other set up the portable theatre. All the mushrooms were eaten for supper. The next morning six men and three women were seized with convulsions. They were removed to the hospital, but succumbed. There remain now but two of this little band of wandering actors, and they are dangerously ill.

Seven medical men have been elected Presidents of *Conseils Généraux*—Dr. Carrère, Dr. Roussel, M. Bichat, Dr. Turgis, Dr. Guillaume, Professor Cornil, and Dr. Turigny.

The General Councillors of Marseilles, the Prefect, and the Mayor in his own name and that of the entire town, protest against the quarantine inflicted by Spain and Portugal on the produce exported from Marseilles. The matter is to be brought before the Ministers. The sanitary condition of Marseilles is said to be excellent and the cholera epidemic imaginary.

The Prefect of the Seine is negotiating with the Minister of Public Works in order to buy three houses for the purpose of enlarging the Hôpital Cochin.

Two Bulgarian ladies are inscribed at the Medical Faculty of Nancy. There are twenty-five male Bulgarian students at the Nancy University.

CORRESPONDENCE.

PROFESSOR CROOKSHANK'S EVIDENCE BEFORE THE ROYAL VACCINATION COMMISSION.

SIR,—You have been good enough to say that you will be glad if I will refer to any points in which the article which appeared in the BRITISH MEDICAL JOURNAL, upon my evidence before the Royal Vaccination Commission, is misleading. I will indicate and deal with each point as briefly as possible.

First.—The writer of the article in question states that I hold that vaccination with cow-pox is no protection against small-pox. In my evidence I have stated that the different stocks of vaccine lymph produce, if any, a very transient effect. I beg to refer you to my answer to Q. 11,852: "There is a good deal of evidence which would lead one to believe, having a perfectly open and impartial mind on the subject, that there may be a transient antagonism. That is the view I take myself."

Secondly.—The writer credits me with recommending a system of prevention of which no details are given, but which apparently consists of measures of notification and isolation very like those at present in operation, combined with a certain amount of variolous inoculation.

As a matter of fact, I recommend in answer to Lord Herschell (p. 123):

1. That there should be an international board of health.
2. That the system of notification and isolation should be an international one.
3. That our consuls should be required to give immediate information as to the existence of small-pox in other countries.
4. That there should be a central health office, presided over by a minister of health to collect information as to the existence of small-pox, cholera, etc., and to carry out measures of sanitary police.
5. That regulations should be constantly in force to prevent the importation of rags from places infected with small-pox, similar to those enforced in time of cholera epidemics.
6. That notification and isolation should be carried out uniformly all over the country, and any isolated case immediately dealt with.[1]
7. That medical men and householders should be liable to a penalty of £50 for failing to notify immediately any case of small-pox, or any case that may reasonably be supposed to be small-pox.
8. That the State should protect the people from small-pox by a stamping-out system, and by the encouragement of sanitary reforms, and *not by any system of protective inoculation.*

These recommendations will be found on p. 123, and the evidence upon which these conclusions are based will be found in the preceding pages.

Thirdly.—The writer speaks of the fate that befel the assertion that small-pox inoculation had prevailed in Wales from time immemorial. This expression was perfectly accurate. Small-pox inoculation in Wales was "a very antient and frequent practice among the common people."[2] Lord Herschell simply remarked that it was a little strange if it had been practised so long in Wales that it should only have got to the knowledge of the people in England from the experience of Lady Mary Montague in Constantinople. I replied that Lady Mary introduced it to the profession in London. I may add that Dr. James Moore, writing in 1815, made a very similar remark: "It is certainly singular that all these methods of communicating the small pox should have been in use in so many countries (he instances the 'old Highland women') yet have remained unknown in the medical profession."[3] The writer's inference in the article in the BRITISH MEDICAL JOURNAL that my statements are unreliable is absolutely unjustifiable.

Fourthly.—The writer makes capital out of my being obliged to confess that we have no proof that cow-pox is not derived from small-pox. The writer does not quote all that I said in relation to this question: "We cannot prove a negative and we cannot prove the origin of a disease any more than we can prove the origin of species" (A. 12,371). It is a question of evidence, and I maintain that the evidence is in favour of the belief that natural cow-pox is a distinct disease from human small-pox.

Fifthly.—The writer says: "The Commission no doubt expected some information on the bacteriological side of the question, instead of which he gives much vague history and unproven hypothesis." I gave the results of my researches upon the bacteria in vaccine lymph. These researches extended over three years, and were represented by more than 2,000 cultivations. I pointed out that the results confirmed and extended Pfeiffer's researches, and I handed in a sheet of coloured drawings of all the micro-organisms I had isolated from different stocks of vaccine lymph. My conclusion was that the nature of the contagion was unknown. These researches have been quite independently confirmed by Dr. Copeman, and have been quoted by him. If this was not bacteriological information what was it?

Sixthly.—The writer credits me with condemning nurses to inoculation with all its risks and with the certainty of disseminating small-pox among others. This is not at all what I recommend, or have ever recommended. In the first place, had I the charge of a small-pox hospital I should prefer that nurses and attendants should be recruited from those who had had small-pox before in the hospital or elsewhere. Failing this, I have stated clearly my views in my *History and Pathology of Vaccination,* p. 466: "I cannot see any scientific reason why nurses and other attendants upon cases of small-pox should not be protected by inoculation with attenuated small-pox within the walls of a small-pox hospital, and with due precaution to prevent the spread of infection." That is the sense in which I stated to the Commission that I should "use variola after Colin's experience" in Paris.

[1] Under this heading powers should be given to deal with tramps suffering from small-pox.

[2] *Phil. Trans.,* 1722.

[3] *History of the Small-Pox.*

Seventhly.—The writer states that I actually gave figures to show that revaccinated nurses suffer more in proportion than those who had not that protection. I did nothing of the kind. I gave Colin's experience of even revaccinated nurses contracting small-pox in Paris, in direct answer to Mr. Hutchinson's Q. 12,390: "Can you give the Commission any facts of cases in which that (namely, the practice of vaccinating nurses) has failed to protect." I was asked a straightforward question, and I gave a straightforward answer.

Eighthly.—Following a reference to variola vaccine, and in answer to Mr. Hutchinson's Q. 12,414, "You would admit that vaccination as generally practised does protect many," the writer of the article quctes my answer, "Yes, for a time," and absolutely ignores the footnote to that answer, which I will reproduce in full:

Footnote.—To prevent any erroneous interpretation of this reply, I wrote before the next sitting pointing out to his Lordship and the Commissioners that I understood Mr. Hutchinson, following up Q. 12,413, to be referring to variola vaccine. Woodville's experiments proved that variola vaccine was a protective, but I insist upon it that Ceely's test experiments (see Appendix 1, p. 412) showed conclusively that variola vaccine, when no longer capable of producing small-pox, could not be depended upon to afford protection for even five months. And as for cow-pox lymph, horse-pox lymph, cattle-plague lymph, or any other kind of vaccine lymph, I have repeatedly pointed out to the Commissioners that any effect upon small-pox, if such exist at all, is a very transient antagonism, and not a specific protection. Dr. W. Budd has expressed a similar belief with reference to sheep-pox: "There is indeed evidence to render it probable that for 'some weeks' after vaccination sheep are somewhat less prone to take *clavelée*—sheep-pox—in the natural way, but there is clearly nothing specific in the protecting influence. Louis has remarked that typhoid fever hardly ever occurs in persons who may at the same time be the subjects of any other morbid influence."

Lastly.—All my historical evidence, the result of an enormous amount of patient research in the British Museum and in other libraries at home and abroad, the writer dismisses as "uncriticised" and composed of "much copied statements," and infers that it is no doubt unreliable. I purposely gave *verbatim* extracts and the fullest references, and that evidence is absolutely unanswerable.

In conclusion, will you allow me to add that, although I am not versed in what I believe is regarded as "journalistic urgency," I venture to say that it is damaging in the highest degree to the best interests of the profession that such an article should have been published in the British Medical Journal without bearing the signature of the writer? Such an article could not possibly meet with the approval of a single right-minded member of the British Medical Association or of the medical profession who has cared to take the trouble to read my evidence or to study the vaccination question in all its bearings.—I am, etc.,

Edgar M. Crookshank, M.B., J.P.,
Professor of Comparative Pathology and Bacteriology,
East Grinstead, Aug. 1st. King's College, London.

*** A short comment on the above letter seems desirable, and we will follow the headings into which Professor Crookshank has divided it.

First, as regards our statement that he holds that "vaccination with cow-pox is no protection against small-pox." In Answer 11,864 he says: "I look upon it in this way, that cow-pox does not exercise any specific protective power. There is nothing analogous in vaccination to one attack of small-pox."

Again, in answer to Sir James Paget (11,564): "Do you admit that vaccinia protects from small-pox?" He says, "No; that is a point I want to deal with more fully later on." It must be remembered that he draws a sharp distinction between a specific protection and what he terms a "temporary antagonism," and after that he has no right to object to our statement on the ground that he has admitted that there may be a transient antagonism. More especially has he no right to raise this objection to our statement of his case seeing that only a little further on, in stating his position more fully, we mention the very point on which he relies to show the misleading nature of our article. We say: "He maintains that while inoculation with variola is protective, inoculation with cow-pox is absolutely inoperative, except so far as regards the production of a transient antagonism, such as might be produced even by cattle plague." On this question of there being a transient antagonism but no specific protection, and the complication introduced thereby, we would draw attention to the remarks of the Chairman (11,857): "I am bound to say that you have published two very big volumes, which I have gone through, and they did not give me a ray of light upon that point;" and to the curious example of arguing in a circle shown by the following: "11874. I want to know what your definition of specific is?—The protection is not specific when there is a tolerance produced by a disease specifically distinct. 11,875. That is all you mean?—Yes, that is all I mean;" which is interesting in view of his insistence on the specific difference between small-pox and cow-pox. The assertion that cow-pox "exercises no specific protective power" would appear, then, merely to mean that the two diseases are "specifically distinct," a matter about which the world is wonderfully indifferent, and is not to be taken as expressing any opinion as to whether a protection of any sort is given, which is really the point we want an assurance upon.

Secondly.—Professor Crookshank here quotes details of his system of prevention, but it will be observed that the great mass of his recommendations have to do with international precautions, surely a counsel of perfection to a widely trading nation like England—to wait for or trust to international notification—would be mere childishness. When, however, we come to the precautions to be taken at home, we find, as we said, measures of notification and isolation very like those at present in operation. Certainly he recommends a penalty of £50 on medical men and householders, but, as regards his so-called system of "stamping out," we fail to find any details concerning internal administration differing in essence from those at present in operation. In fact, he says: "I venture to think that the present system of notification and isolation, if uniformly carried out, is perfectly efficacious in stamping out small pox." So that we entirely decline to admit that in this point either our article was "misleading."

Thirdly.—The fate that befel the assertion that small-pox inoculation had prevailed in Wales from time immemorial can be read in Question and Answer 10,337. "Q. What do you mean by 'time immemorial?' In Wales, if I remember rightly, in a paper published in the *Philosophical Transactions*, where the doctor refers to inoculation in Wales, he refers to an old woman or an old man who remembered that her or his father or mother was inoculated; it does not go further back than that I think, and, if so, that is not quite 'time immemorial,' is it?—A. I have used the expression which I find used in the paper by Dr. Williams. Mr. Wright, the surgeon, of Haverfordwest, says, writing in 1722: 'I received yours the 9th instant, and in answer to it will readily give you all the satisfaction I can in relation to a very ancient custom in this country, commonly called buying the small-pox, which upon a strict inquiry since I had your letter I find to be a common practice and of very long standing, being assured by persons of unquestionable veracity and of advanced age that they have had the small-pox communicated to themselves in this way when about 16 or 17 years of age.'" In other words, "time immemorial" equals one generation back from 1722.

Fourthly.—Professor Crookshank says "it is a question of evidence." Possibly, if we have enough of it. Here is the evidence which led to our remarks: 12,366. "Now you have no proof, have you, that cow-pox is not derived from small-pox; you have stated that it is a disease *sui generis* belonging to cattle, but you can give no proof that it is?—We have no proof." Professor Crookshank says that we cannot prove a negative, but this is not a question altogether of a negative but of his assertion that cow-pox is a disease *sui generis* belonging to cattle.

Fifthly.—We never stated that Professor Crookshank did not give the result of his researches, nor did we say a word in derogation of the extent or laboriousness of these researches. As to "information" on the point at issue, we would refer our readers to the questions on which the Commission were asked to report and then ask whether they received much "information" regarding them "on the bacteriological side of the question."

Sixthly.—We quoted what Professor Crookshank said, and the explanation he now offers is not his evidence. In regard to our remarks on this matter, we would draw attention to Answer 12,290, in which he says, "I am quite sure that one attack of natural small-pox protects against future attacks, and that small-pox inoculation protects against future

attacks; but when small-pox is so far attenuated that it no longer produces specific variola, the results are not satisfactory I am bound to say." We would also draw attention to the evidence which he gave regarding the lesser efficacy of the milder inoculation by the "Suttonian" method, all of which makes it clear that to obtain protection for his nurses by "vaccination" with variola he would have to produce specific variola, as we said, "inoculation with all its risks." As to attenuation, the drift of much of his evidence is to show that a great deal of the vaccine now in use is actually attenuated small-pox.

Seventhly.—Let us give his actual words: "Out of 200 attendants, nearly all were revaccinated under his eyes, and 15 of them were attacked with small-pox with 1 death." Was the operation performed immediately before? It must have been shortly before. On the other hand, it is very curious—he remarks upon it himself—that among 40 doctors and chemists and 40 nuns, nearly all of whom refused to be revaccinated, "there was not a single case of small-pox." If these doctors and nuns had nothing to do with small-pox, there was no excuse for their introduction here; they evidently were introduced as a contrast or foil to the 200 revaccinated attendants with 15 attacks; otherwise the evidence is without meaning.

Eighthly.—This long footnote really does very little more than we did to explain Professor Crookshank's position. In the previous sentence we had shown that he looked on vaccination as being often merely another word for variola vaccination, and in the sentence following we say "how long is another question." The points raised in the footnote were then in no way ignored. It should be added that the footnote was not part of the evidence. The article was a fair comment on a public matter, and was submitted to a high authority on the subject before it was published.

CHELSEA HOSPITAL FOR WOMEN.

SIR,—I have now been officially furnished with an excerpt from the operation books giving an account of all the operation cases entered under my care at the Chelsea Hospital for Women since I joined the staff in February, 1891. The list is, I fear, too long to reproduce *in extenso* in your columns, comprising, as it does, 101 entries.

The object of my present communication is to place before you the actual results of these operations with reference to the mortality. My total mortality after operations of all kinds was 9 out of 101 cases, equal to 8·9.

Comparing the three years 1891, 1892, and 1893, we have the following:

In 1891 15 cases, including 4 abdominal sections, 0 deaths, 0 per cent.
In 1892 34 cases, including 13 abdominal sections, 3 deaths, 8·5 per cent.
In 1893 44 cases, including 15 abdominal sections, 6 deaths, 13·7 per cent. All the 6 deaths occurred between June and November.
In 1894 (May to July) 8 cases, including 1 abdominal section, 0 deaths, 0 per cent.
In all 101 cases, including 33 abdominal sections, 9 deaths, 8·9 per cent.

My ovariotomies numbered 9 cases, with 1 death; hysterectomy and myomectomy, 3 cases, 2 deaths. The results of my ventrofixation cases were marred by one exceptionally difficult case, recorded in the BRITISH MEDICAL JOURNAL, October 14th, 1893. I have only done this operation in 5 cases in all, and in none of these had any less serious procedure proved useful. I had 2 operations for extrauterine gestation, 1 advanced case,[1] both recovered. In operations for pelvic peritonitis (including pelvic abscess and suppurative peritonitis), of 5 cases, 2 died. Of the other 9 operations, comprising evacuation of adherent broad ligament cyst (1), ventral herniotomy (2), exploration for tubo-ovarian disease (1), and for malignant pelvic disease (1), removal of diseased uterine appendages (3), and suprapubic cystotomy (1), 3 died.

Of the total number of abdominal sections (33), 9 died; 3 of these died in 1892, the 6 others in June, July, August, September, and November of 1893. I had no deaths after any other operations. In the Classes 6, 7, 8, 10, and 11 of the report, which include removal of submucous fibroids *per vaginam*, removal of uterine polypi, amputations of the cervix for cancer and hypertrophy, perineorrhaphy, colporrhaphy, curetting for endometritis, and incomplete abortion, none became aseptic, and all recovered.

[1] *Brit. Gynæc. Journ.*, Part 27, November, 1891.

NOTES ON THE FATAL CASES.

Case 11 was admitted suffering from suppurative peritonitis; she was almost moribund; operation was only agreed to as a possible means of averting death. (September, 1892.)

Case 12 was the subject of pelvic abscess and a suppurating dermoid. She was operated on the same day as Case 11, and contrary to my instructions was placed in the same ward. She died of septic peritonitis. (September, 1892.)

Case 17 died from shock after a very severe operation. There were no signs of sepsis or peritonitis. (December, 1892.)

The sanitary conditions of the hospital had nothing to do with these deaths.

Case 23 was the subject of a very difficult operation; the abdomen had to be reopened in consequence of hæmorrhage. At the *post mortem* evidence of commencing peritonitis was found.

Case 24.—This patient, 60 years of age, had retroperitoneal hæmorrhage. The abdomen was reopened. At the *post-mortem* no lesions were found accounting for the hæmorrhage; the large vessels were atheromatous.

Case 25 had a quiet pulse and temperature till the sixth day, the former being from 76 to 92; the latter did not reach 101° till the seventh day, when she suddenly died.

Case 26 had increased temperature from the second day, but the pulse remained uniformly below 100°, ranging from 70° to 90° until the sixth day.

The abdominal wound healed by first intention, and remained healthy throughout. There was never abdominal distension or vomiting; micturition was natural; no pain; nothing but weakness complained of; took nourishment until an hour before her death. At the *post-mortem*, which was limited to the abdomen, nothing was found to account for her death. No peritonitic or septic sign was seen.

Case 28 had total suppression of urine. No peritonitis and no injury to bladder or ureters. Died from shock in thirty hours.

Case 32 had intestinal paresis; never had action of the bowels localised peritonitis; temperature only once 102° till immediately before death.

I was not on either of the controlling committees so I am unable to determine how much the condition of the hospital had to do with certain of these deaths. This, however, I must state that as far back as June, 1893, I expressed my opinion that the condition of the hospital and the arrangement for nursing operation cases required investigation.

With the exception of Cases 26 and 28, all the deaths in 1893 occurred in the same ward; this ward contained nine beds; I understand three of these have been discontinued. Four other of my abdominal operations treated in this ward during the same period did well, a fact which made me think that the after-care of the individual patients had more to do with the results than some of the other factors of success involved.

On comparing the results of my more recent hospital work with those I have obtained elsewhere during the same time, I find my hospital work has been much less successful. From 1891 to date, in over 70 gynæcological operations similar to those undertaken at hospital, including 13 abdominal sections and a complete vaginal hysterectomy, I have lost only 1 patient, a mortality equal to 1·3 per cent. An epitome of the abdominal sections gives 2 ovariotomies, 4 hysterectomies, 1 section for intrapelvic abscess, 1 for adherent broad ligament cyst, 1 for removal of malignant growth, 1 Cæsarean section, 1 oöphorectomy for fibromyoma uteri; 2 explorations, 1 for malignant ovarian and pelvic disease, 1 for the separation of pelvic adhesions, and a case of vaginal hysterectomy for cancer.

As to a secondary point inquired into by the Committee of Inquiry—namely, Did septicæmia occur in cases which eventually recovered? I shall again deal only with my own work. In the evidence given before the Committee it is stated: "Dr. Parkes has not attributed to any of your cases septic mischief" (Q. 916). I mentioned that all my fatal cases had been examined *post mortem*. The only cases which recovered, and regarding which I was asked to give evidence on this point, were 22, 27, and 29 (Q. 937, 959, and 1,005).

In 27, an ovariotomy with extremely firm and numerous adhesions, during the whole of the first week the temperature was practically normal. During the whole convalescence it never exceeded 100·5°.

No. 22 was a case of salpingo-oöphorectomy, a small cystic ovary and purulent salpingitis. The disease was believed to be due to specific causes. There were no signs of peritonitis and the patient made a good recovery and was up and well in twenty-eight days.

No 29 was a case of myomectomy; intraperitoneal treatment; the highest temperature during the first week was 100·6°; it was uniformly below 100° thereafter up to the thirtieth day after the operation; she went home strong and well.

Finally, I had three deaths assigned to me which were not operated upon.

One, the subject of an ovarian tumour, died from endocarditis and hemiplegia.

The second was a prematurely-born infant, which I believe I once saw in the ward, but which was never in any sense my patient.

The third has been erroneously entered as a post-operation death in the hospital book. In my evidence (Q 917) I stated there was no operation. I understand that the Committee, nevertheless, counted it as one of the septic deaths after operation, possibly thinking I had operated on the patient before her admission. I hold a letter from Mr. Parker, of Lillie Road, with whom I saw the case in consultation, disproving this.

So much material had to be dealt with that I am not surprised that some mistakes occurred.—I am, etc.,

Grosvenor Street, W., September 12th. LEITH NAPIER.

HOSPITAL APPOINTMENTS.

SIR,—Allow me to say, in reply to Drs. Steele and Lewis, that my object in writing was not to "defend," but to explain, the action of the committee. The vacancy undoubtedly was for a F.R.C.S. on the staff of a London hospital, and if I had framed the advertisement I should certainly have made this clear, but those who did frame it thought that if this was done, and Mr. Cheatle should not again apply for the post, we might possibly be without a candidate and without a surgeon, whereas, by inviting Members of the College, we might, in the absence of Mr. Cheatle or any other Fellow, select a Member who would afterwards qualify. At our large hospitals there are always several young Members preparing for the Fellowship, and waiting for a registrarship or demonstratorship, and these would certainly have been considered eligible candidates in the absence of anyone in actual possession of those high qualifications. The Committee of Management can suspend a rule *pro re nâta*, and accept an unqualified candidate who undertakes to qualify after his appointment, and they actually did so in the case of myself and that of a colleague. It is true that the candidates were kept waiting for a long time at the dispensary, but quite untrue that it was all the time well known they were ineligible, and that Mr. Cheatle would be elected.

Until 5 P.M. on July 24th the committee had not seen either the candidates or their testimonials, and until they had seen them they could not possibly know what their present and prospective qualifications might be; they took their names alphabetically, and called each candidate up separately and questioned him. If the first was not a Fellow, the second, or third, or last might be, and they did not know, until they had examined them all, that Mr. Cheatle was the only one qualified in accordance with the rule. If Mr. Cheatle had not sent in a second application, or had withdrawn it at the last moment, or had died, the committee would have selected one of the other candidates on his undertaking to qualify for the post. As to Mr. Cheatle's absence on the 24th, he was on that day summoned to a case in Oxfordshire, and he expected to return in time for the committee meeting, but the train was delayed and he could not attend. His name was called out several times, but he did not answer. At last, when the committee could wait no longer, they proceeded to elect, and for some time the question of Mr. Cheatle's eligibility was discussed. It was finally decided that, as he had sent in a second application for the post, and as he had been interviewed at the former (quashed) election and selected as the best candidate, he was eligible now. The end of it all was that Mr. Cheatle was elected unanimously. As to Dr. Ince, I deny most positively that the committee deputed him to tell the unsuccessful candidates that, through a mistake or an error (which they regretted) in the advertisement, they were all ineligible. Dr. Ince was simply told he might go down and inform the candidates that Mr. Cheatle was elected. The committee admit no error or mistake in the advertisement; they framed it as they did, deliberately and intentionally, in order to bring them a number of good candidates to select from, on the assumed possibility of no Fellow turning up.

Lastly, let me express my surprise that so well known a surgeon as Mr. Cheatle, assistant and aural surgeon to King's, surgeon to the West London Hospital, should be referred to by the eight complainants as "a certain Mr. Cheatle." It was not a Mr. Cheatle, but the Mr. Cheatle, who was a candidate, and we are now, all of us, proud to claim him as a member of the surgical staff of the Surrey Dispensary.—I am, etc.,

D. HOOPER, B.A. and M.B. (Lond.),
Physician to the Surrey Dispensary, etc.

Trinity Square, S.E., Sept. 9th

DYSENTERY AND "TROPICAL" LIVER ABSCESS.

SIR,—In a letter which appeared in the BRITISH MEDICAL JOURNAL of June 23rd, 1894, Dr. Neil Macleod restates his belief that tropical abscesses of the liver are invariably associated with dysentery, and suggests that in the cases I refer to the presence of dysenteric ulceration may have been overlooked. Such an oversight, however, could not occur under the present medical regulations, which have now been in force for many years, as these direct that in every fatal case amongst European soldiers in India a casualty report on Army Form A 21, giving a full description of the morbid changes found in each organ on *post-mortem* examination, shall be submitted to the Principal Medical Officer of the Presidency in which the death occurred.

As the etiology of liver abscesses is a matter of considerable practical importance, I hope I may be allowed space to state very briefly a few of the principal points which appear to me to prove that dysentery cannot be the cause of genuine tropical abscesses of the liver. I use the term "genuine tropical abscesses" to indicate those large single abscesses which form a considerable majority of the cases seen in India.

If we accept the opinion that dysentery is the invariable cause of liver abscesses, we must also admit that the bacillus of dysentery is a pathogenic (pyogenic?) organism, and, further, that this organism, if capable of exciting suppuration at all, must equally be capable of exciting it at every point where it may lodge. Looked at in this light, it is almost a physical impossibility that pathogenic (pyogenic?) organisms, which are absorbed from the rectum or colon, can lodge in such a way as to excite a single large abscess in the liver. By the time they reached the liver the bacilli would be so intimately mixed with the blood current that they must be more or less equally distributed throughout the organ.

If, therefore, they are capable of exciting morbid changes at all every point at which they lodge must become a centre of suppuration. This is exactly what we see when the liver becomes infected through the large intestine either during attacks of dysentery or after injuries to or operations on the rectum. Here we find the liver studded with minute abscesses similar in appearance and distribution to those which are seen when the organ becomes affected during the course of general pyæmia. In such cases, I believe however, that the infection of the liver is due, not to the bacillus of dysentery but to the accidental presence of streptococci in the large intestine. In other words the disease is a local pyæmia accidentally developed during the progress of the original affection.

Under proper treatment a large proportion (placed by one writer as high as 68.4 per cent.) of tropical liver abscesses end in recovery, a termination which could not be looked for were they due to infection from the intestine.

The entire absence of septic lesions in the hæmorrhoidal or portal veins in cases of single abscesses of the liver is also a strong argument against their infective origin. If space permitted others equally strong might be advanced. Indeed, were dysentery a frequent cause of suppuration in the liver it would be impossible to account for the fact that the dysentery of temperate climates does not show any tendency to infect the liver. This was especially noticeable during the Crimean war, where for two winters dysentery prevailed extensively amongst the British troops whilst only a single case of abscess of the liver occurred amongst them.

It would seem then that we must look beyond dysentery for the true cause of tropical abscesses of the liver, and the writer's observations (*Indian Medical Gazette*, 1887 and 1893), which are borne out by the experiments of Professor Alexander Dochemann, appear to show that this cause is to be found in hepatic exhaustion brought about by prolonged exposure to great atmospheric heat.—I am, etc.,

G. HARRISON YOUNGE, F.R.C.S.I.
Mandalay, Burmah, July 26th. Surgeon-Major A.M.S.

SIR,—At the recent International Medical Congress in Rome, Professor Carmona y Valle, of Mexico City, assured me that in his experience liver abscess was a common disease, and was not associated with dysentery. In proof of this, he said he had often seen it in people who had come from parts of the country in which dysentery and malarial

affections are unknown. I expressed my surprise at this information, but I do not doubt Professor Carmona's testimony, and I should be glad if he could be induced to publish his evidence, which would go far to settle this controversy.—I am, etc.,

Birmingham, Sept. 9th. ROBERT SAUNDBY.

BACTERIOLOGICAL EXAMINATION OF WATER SUPPLIES.

SIR,—In the BRITISH MEDICAL JOURNAL of June 9th you recommend that the water supply of Port of Spain, Trinidad, should be examined bacteriologically in addition to the usual chemical examination, and that the former mode of examination should not be confined to "a mere enumeration of the organisms present," but should extend to the number of the species, to whether they are water organisms merely, or whether they are rapidly liquefying organisms or those met with in sewage or in surface drainage, and whether they resemble pathogenic organisms or not.

I shall be greatly obliged if you will be kind enough to inform me, either through the JOURNAL or otherwise, of the names of the towns in the United Kingdom in which the chemical analysis is supplemented by a regular bacteriological examination of the kind you recommend and those in which the examination is confined to an enumeration of the organisms only.—I am, etc.,

London, Aug. 30th. P. CARMODY.

*** As far as we are aware, there is no town, excepting London, in the United Kingdom in which any regular bacteriological examination of the water supply is made, and none at all in which the quantitative estimate of the microbes present is supplemented by a quantitative inquiry. The monthly bacteriological examination of the London water supply was commenced by Professor Percy Frankland in 1885, and was carried on by him over a period of three years for the Local Government Board. During this period a number of the different species in the water were described by Professor Frankland in a paper published in the *Zeitschrift für Hygiene*, 1889. The great value attaching to the bacteriological examination of a water supply like that of London depends, in our opinion, upon its controlling the efficiency of the purification (subsidence and sand filtration) to which the water is subjected. For this purpose the numerical examination is of the greatest importance, as it can be readily and frequently employed, and, if properly carried out, gives the most conclusive results. The proper determination of the various species of bacteria in a single sample of water may occupy weeks, or even months; it can therefore only be applied on special occasions, although the tests for typhoid and cholera bacilli may be made with comparative facility. Professor Carmody will find full information on these points and on the results obtained, with water supplies of different places, is given in Professor Percy Frankland's recent work, *Micro-organisms in Water*, published by Messrs. Longmans.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL EXCHANGE STAFF.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A SURGEON-LIEUTENANT-COLONEL under orders for India in November or December wishes to effect an exchange with an officer having from two to three years more to serve at home. Address Medical Officer, the Barracks, Athlone.

ERRATUM.—In the list of candidates successful at the recent examination for admission to the Army Medical Staff the name of Mr. H. E. Staddon was incorrectly printed as "Haddon."

MILITIA MEDICAL STAFF CORPS.

THE officers of this corps are the regular Army Medical Staff. Medical officers have not been appointed to Militia regiments for a number of years. "M.A." can become a surgeon-lieutenant of volunteers, and afterwards, as such, be transferred to the medical reserve of officers.

THE NAVY.

STAFF-SURGEON ROBERT BENTHAM is promoted to be Fleet-Surgeon, August 26th. He was appointed Surgeon March 31st, 1874, and Staff-Surgeon twelve years thereafter.

The following appointments have been made at the Admiralty: JOSEPH CROWLEY, Staff-Surgeon, to the *Achilles*, undated; CHARLES W. BUCHANAN-HAMILTON, Staff Surgeon, to the *Australia*, September 6th; MICHAEL J. RONAN, Staff-Surgeon, to the *Achilles* and *Nile*, September 25th; EDWARD J. BIDEN, Staff-Surgeon, to the *Scout*, September 25th; EDWARD H. WILLIAMS, Staff-Surgeon, to the *Mersey*, September 25th; HENRY W. G. GREEN, Surgeon, to the *Achilles*, undated; HENRY B. HALL, Surgeon, to the *Nile*, September 25th; GEORGE A. WATERS, Surgeon, to the *Caledonia*, September 25th; LEONARD H. KELLETT, Staff-Surgeon, to the *Hawke*, September 1st.

ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL A. A. MACROBIN, M.B., is promoted to be Brigade-Surgeon-Lieutenant-Colonel, *vice* G. R. Rae, F.R.C.S.I., deceased, August 23rd. Brigade-Surgeon-Lieutenant-Colonel Macrobin entered the service as Assistant-Surgeon March 31st, 1868, became Surgeon March 1st, 1873, Surgeon-Major March 31st, 1880 and Surgeon-Lieutenant-Colonel March 31st, 1888. He served with the British Ambulance in the Franco German war from the time of its arrival in France in October, 1870, until its return to England in March, 1871, after the conclusion of peace, and has received the German War Steel Medal; and with the 2nd Battalion Rifle Brigade in the second phase of the Ashanti war in 1874, being present at the battles of Amoaful and Ordahsu, and at the capture of Coomassie (medal with clasp).

Quartermaster EDWARD ENRIGHT is placed on retired pay, September 12th. He was appointed Lieutenant of Orderlies, March 7th, 1877, and Quartermaster, Medical Staff, July 1st, 1881, being granted the honorary rank of Captain, May 21st, 1884. He was in the Ashanti war in 1874 (medal); in the Egyptian war in 1882 (medal with clasp and Khedive's star); and with the Soudan expedition in 1884, when he was present in the engagements at El Teb and Temai, was mentioned in despatches, promoted Honorary Captain, and granted two further clasps to his Egyptian medal.

Sergeant-Major JOHN BARTHOLOMEW SHORT, Medical Staff Corps, is appointed Quartermaster, with the honorary rank of Lieutenant, *vice* Honorary Captain E. Enright, September 12th.

The undermentioned officers, now serving in the Bombay Command, and whose tour of foreign service will expire during the trooping season of 1894-95, will proceed to England in Her Majesty's troopships, doing duty with the troops on the voyage: Surgeon-Lieutenant-Colonel H. F. W. BARROW; Surgeon-Major D. J. BOURKE; Surgeon-Major J. W. H. FLANAGAN; Surgeon-Major C. A. WEBB, in exchange with Surgeon-Major T. E. Noding, Bengal; Surgeon-Major R. W. BARNES; Surgeon-Major A. PETERKIN, M.B.; Surgeon-Major J. SEMPLE; Surgeon-Captain C. R. BARTLETT, in exchange with Surgeon-Captain R. W. Nicholson; Surgeon-Captain R. C. THACKER; Surgeon-Captain S. F. CLARK, M.B.

THE MILITIA.

SURGEON J. CREAGH, 9th Battalion the King's Royal Rifle Corps (North Cork Militia), is promoted to be Surgeon-Captain, September 12th.

CADET BATTALION.

MR. EDWARD PROUDLOVE, M.B., is appointed Acting Surgeon to the 1st Cadet Battalion the Manchester Regiment, September 12th.

VOLUNTEER MEDICAL STAFF CORPS.

SURGEON-LIEUTENANT J. J. K. FAIRCLOUGH, M.D., The Manchester Companies, is promoted to be surgeon-Captain, September 12th.

ERRATUM.—In last week's issue of the BRITISH MEDICAL JOURNAL, Surgeon-Lieutenant Renshaw should have been described as of the Manchester Companies, and not of the London Companies.

MEDICAL CHANGES IN INDIA.

THE proposals now under consideration in India are:—

1. That the Government of India should take over the closest departmental administration of the Indian Medical service in the Madras and Bombay presidencies.
2. The present Indian Surgeon-Major-General with the Governments of Madras and Bombay retain the titles and pay under existing rules.
3. The posts of secretaries to each be abolished.
4. That the Indian surgeon-major general cease to exercise any control over reducing Indian Medical service employed in the army or retiring of 25 per cent., administration of which would in future be directly under the orders of the Government of India.
5. All unemployed officers, or whatever rank or presidency, not filling sanctioned appointments in civil or military departments, while so unemployed, be at the disposal of the Government of India for duty in any part of India or dependencies.
6. That ultimately there be a complete unification of Indian Medical Service in all three presidencies, with the right of the Government of India to employ in any presidency.
7. Brigade Surgeons of three presidencies to be eligible for best posts in any presidency or province.
8. That promotion to Surgeon-General with the Government of India, and Surgeon-Major-Generals Madras and Bombay, be open to all Surgeon-Colonels of the three lists, to be selected according to seniority coupled with ability and merit; but they must complete five years' full pay service in these positions, including eight months' furlough, before becoming eligible for the extra pension of £350 a year. All Surgeon-Major-Generals to be also eligible for the office of Surgeon-General with the Government of India.
9. All existing orders and regulations as to pay, etc., rights and privileges, not incompatible with the foregoing to remain in force as hitherto.

AGE RETIREMENT.

WITNESS offers the following retrospect in reference to rumoured changes in the age retirement clauses:

1. In 1867 there was much discontent in the Medical Staff, owing to tardiness of promotion to the senior ranks.

2. As a prospective remedy, all admissions to the department were for a time stopped, between October, 1868, and April, 1871.

3. This it was considered would benefit those who entered after the latter date, by enabling them to reach the senior ranks with two years and a-half less service, as they would come on for promotion immediately after the men of 1868.

4. The men of 1871 are now very near promotion at the top of the list of surgeon-lieutenant-colonels, and the effect of the above remedy would probably be felt next year.

5. But if the age clause is extended two years it will completely rob them of the intended benefit after twenty years of waiting. If this is not playing pitch-and-toss with the interests of the officers concerned I do not know what is!

*** Complications thicken the more the proposed age extension for retirement is looked into. As we have before remarked, we sincerely trust the Secretary of State for War will not act in any such extension without full deliberation and calculation, as well on the effect generally on departmental efficiency, as on the legitimate prospects of the officers concerned.

THE military correspondent of *The Pioneer* expresses the following views on the age extension in the Medical Staff: "The suicidal policy of extending the age to 62 because it is the easiest to think of is likely to be carried out. If the most careful selection is not strictly exercised this will be the greatest blunder that has ever been made, and will also be the greatest and worst blow the department has ever received. Even with the most stringent selection this policy will be most disheartening to the A.M.S., and will force men to retire whom it is desirable to induce to serve on, while it will keep in the service those that can best be spared: indeed, it is desirable to encourage them to go."

VOLUNTEER MEDICAL SERVICE.

UBIQUE writes: "I have read the remarks of Surgeon-Lieutenant-Colonel Giles with interest, and would modify his scheme thus:

1. Every Volunteer regiment should have as part of its establishment, and independent of other members, a complete section of fifteen bearers, four stretchers, a hospital sergeant with distinct uniform, and under the command of his existing M.O.'s. They should parade at all battalion drills, and their efficiency should be made up of twelve ambulance drills, lectures, etc., and the remainder made up of drills in connection with the arm of the service they belong, to make them efficient as Volunteers. I find men grumble that after attending a full ambulance course they are compelled to take out the regulation number of drills to make themselves efficient, which I do not think is necessary.

2. These sections should go to form bearer companies, and be made up from regiments going to form Volunteer Brigades in the various districts, and should be under the command of the Brigade-Surgeon. The brigade should furnish the hospital tent, waggon, and field companion. Attention should be called to regiments having headquarters adjacent to get their men together as easily as possible. These sections should meet once a quarter as a bearer company. They would thus have an opportunity of carrying out the duties of bearers to collecting stations. Field and base hospitals and M.O.'s attached would be able to take command, and move small or large bodies with the same ease as a company combatant officer, which with many at the present is an utter impossibility.

3. Brigade bearer companies in a district should be under the command of the P.M.O. of the district, and should be annually inspected by him.

These few suggestions could be carried out without going to any expense or changing existing regulations, and I am sure C.O.'s and adjutants of Volunteer corps would give their M.O.'s all assistance if they took the trouble to look after the men. I cannot see what Volunteer medical officers want with honours such as your correspondent suggests, for to my mind they do very little, except as "ornaments," (save the mark!) to deserve them.

HOSPITAL ASSISTANTS.

THE title of "hospital assistant" distinguishes in India a large and useful class of native medical subordinates, who in native regiments occupy a somewhat analogous position, and perform similar duties to the class of assistant surgeons (formerly apothecaries) in European regiments. Hospital assistants are also employed in charge of gaols, dispensaries, subdivisions, etc., in the civil department, and are often entrusted with independent medical charges of importance. They receive a good practical medical education and training. In Bengal they are called "vernacular licentiates." This official designation by which they have hitherto been known was felt to be hardly descriptive of the status which they occupy and the duties which they perform. It is now proposed to bestow on them the title of "subassistant surgeon." They are a most useful and meritorious class of men, and deserve encouragement.

LEAVE FOR STUDY.

THE *Times of India*, in a recent issue, comments strongly on the casual manner in which the important subject of leave for revision of professional studies in the Army Medical Staff is treated by the authorities, and proceeds to remark that "it is in the highest degree invidious and inconsequent to allow combatant officers who want to improve themselves in some special branch of their profession leave for that purpose, while denying it to medical officers. Staff corps officers who happen to be at home on leave are at liberty to take up several courses of instruction, and draw allowances for doing so. This emphasises the hardship inflicted on military surgeons who get neither leave nor pay, nor countenance for improving their professional knowledge."

Lord Camperdown's Committee, in 1888, was not forgetful of this matter, and its recommendations to the Secretary of State for War were expressed in the following terms: "We suggest that greater inducements should be held out to medical officers to improve themselves in the knowledge of their profession, and to keep themselves in touch with the constantly recurring developments of medical science. We propose that once in every seven years a medical officer should be granted at least three months' leave in addition to, and independent of, his ordinary leave, on the distinct understanding that such period be spent in attending a properly approved course of lectures, or in attendance on a large civil hospital."

Six years have passed since this report of Lord Camperdown's Committee, and we are not able to quote a single instance of such leave for study having been granted to any departmental officer. Surely the head of the department should make it his duty to stir in the matter.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE TREATMENT OF LUNATICS.

THE coroner recently held an inquest in the case of the death of a female lunatic, an inmate of the Middlesex County Lunatic Asylum at Wandsworth Common. The patient, aged 69 years, had accidentally slipped down and broken her leg, but it was not until four hours afterwards that she complained of pain, and that the attention of a medical officer was called to the case. One of the jurors had the suggestion to offer that an independent *post-mortem* examination should be made: and there was some discussion about the immense cost this would entail if adopted in all cases; and also about the subject of slippery floors. In the end, a verdict of accidental death was returned with a rider as to the sending promptly for a medical officer whenever an accident occurs.

PAYMENT OF *LOCUM TENENS*.

LOCUM writes: A. acted as *locum tenens* for B. B. was unable to pay A. in full, but promised to do so as soon as possible. B. died shortly after and his widow took out administration and sold B.'s practice. When A. applied to B.'s widow shortly after administration was taken out for what was due to him, B.'s widow said all B.'s assets had been used up in paying rent and other debts, and that there was no money left by which she (B.'s widow) could pay A. How can A. find out if B.'s assets were really spent in paying his debts.

*** The case is a hard one. It is extremely unlikely that there should not be sufficient assets out of the sale of the practice to pay a *locum tenens* for services rendered to the late principal.

A. can of course sue B.'s widow, as administratrix, for his debt in the same way as another debtor might, and perhaps this would be the best procedure to adopt, for the defendant will have to prove in court how the assets have been expended.

MEDICAL CERTIFICATES FOR SCHOOL CHILDREN.

X. writes: In the BRITISH MEDICAL JOURNAL of September 8th you make some very pertinent remarks on school boards and medical certificates. I have been in practice for twenty-eight years in a Midland town in which there was a school board, and always refused to give certificates of unfitness to attend school unless the school board would pay for them, which, it is needless to say, they would not do, and I never knew of any prosecution being the result of my refusal. Whenever I considered it necessary I told the parents not to send the children to school, and in the event of their being prosecuted I would attend and give evidence which would result in the school board having to pay the costs. The attendance officer called on me many times endeavouring to induce me to alter my decision, without effect; and I could counsel every medical man to adopt a similar course. The giving of these certificates is for the public benefit, and should be paid for out of the public money. We surely are called upon to do quite enough work without payment, and should resist any further burden which is not legally imposed upon us, especially as it can be done without loss or injury, unless, perhaps, in the case of a man who holds public appointments, which I am thankful to be able to say I never did, and even in this case one ought not to give up one's independence.

*** It must be remembered that under the Notification of Diseases Act infectious diseases are already reported, and that by the refusal to give school certificates advised by "X." no injury would be done to the public. The public, as represented by Parliament, has found it desirable to obtain certain certificates from medical men, and to pay for what it requires. If the public as represented by a school board also requires certificates, why should it not also pay?

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,824 births and 3,060 deaths were registered during the week ending Saturday, September 8th. The annual rate of mortality in these towns, which had declined in the preceding three weeks from 17.6 to 15.2 per 1,000, rose again to 15.3 last week. The rates in the several towns ranged

from 10.1 in Huddersfield and 10.5 in West Ham to 22.1 in Wolverhampton, 23.4 in Bolton, and 24.0 in Liverpool. In the thirty-two provincial towns the mean death-rate was 16.1 per 1,000, and exceeded by 2.0 the rate recorded in London, which was 14.1 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.4 per 1,000; in London the rate was equal to 2.1, while it averaged 2.6 per 1,000 in the thirty-two provincial towns, and was highest in Portsmouth, Preston, and Wolverhampton. Measles caused a death-rate of 1.0 in Newcastle; scarlet fever of 1.8 in Wolverhampton; whooping-cough of 1.1 in Huddersfield and 1.8 in Plymouth; "fever" of 1.1 in Halifax and in Sunderland and 1.5 in Birkenhead; and diarrhœa of 2.7 in Portsmouth, 3.4 in Gateshead, 3.7 in Preston, and 5.5 in Wolverhampton. The 65 deaths from diphtheria in the thirty-three towns included 39 in London, 4 in West Ham, and 3 each in Portsmouth, Liverpool, Oldham, and Sheffield. Six fatal cases of small-pox were registered in London, but not one in any other of the thirty-three towns. There were 129 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, September 8th, against 179, 158, and 163 at the end of the preceding three weeks. 13 new cases were admitted during the week, against 37, 34, and 40 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,026, against 2,133, 2,117, and 2,112 at the end of the preceding three weeks; 212 new cases were admitted during the week, against 208 and 232 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, September 8th 838 births and 445 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 14.6 to 15.6 per 1,000 in the preceding three weeks, was again 15.6 during the week under notice, and was 0.3 per 1,000 above the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 8.7 in Leith to 25.0 in Greenock. The zymotic death-rate in these towns averaged 2.2 per 1,000, the highest rates being recorded in Greenock and Paisley. The 198 deaths registered in Glasgow included 9 from diarrhœa, 7 from scarlet fever, 5 from "fever," 5 from whooping-cough, and 4 from diphtheria. Three fatal cases of diphtheria and 6 of diarrhœa were registered in Edinburgh.

INVITING THE CHOLERA.—IV.

At a recent meeting of the Alvaston and Boulton Local Board, Dr. Maclean Wilson, one of the inspectors of the Local Government Board, attended and laid before the Board certain precautionary measures, which it was essential should be adopted by the authority in view of a probable outbreak of cholera or any other malignant and infectious disease. A subcommittee, consisting of Mr. W. Robotham and Dr. Ashby, was then appointed to consider the matter, and prepare answers to the suggestions of Dr. Wilson, to be submitted to the consideration of the Local Board for confirmation, and afterwards forwarded to the proper quarter. A report of the subcommittee presented at the meeting of the board on August 24th, states that in the first place it was held to be requisite that the district should possess an adequate supply of water derived from a source free from all liability to contamination. To this the Committee had to inform the local board that "the authority have for some time past seriously considered the water supply, and have approached the borough of Derby, whose water supply comes within 200 yards of the district, with a view of obtaining water from them. At the present moment this is rendered impracticable on account of the expense, but it is believed will shortly be overcome by this district being incorporated in the borough. Meanwhile the authority are doing everything in their power to prevent the existing water supply being contaminated." This answer failed to meet with the approval of the Board, and the chairman said he considered they possessed as good water at Alvaston as they could wish for. The other suggestions of the Local Government Board the subcommittee had answered, dealing with the disposal of sewage and the fouling of water courses, and these were accepted by the Board. On the motion of the chairman, seconded by Mr. Greatorex, the further consideration of the report of the subcommittee was adjourned to the next meeting of the Board.

SMALL-POX: COST OF AN EPIDEMIC.

At a conference which took place on August 28th at the Manor House, Shipley, between the members of the Shipley Local Board and Dr. Maclean Wilson, one of the medical inspectors for the Local Government Board, the Clerk informed the inspector that he did not know of any place that had done more, especially for the prevention and spread of small-pox, than Shipley had done. The authorities had not only burned all the infected bedding and clothing and provided new materials, but had also paid the wages of members of the families who were temporarily placed in quarantine owing to an outbreak of the disease. They had also disinfected the houses to the fullest extent. With regard to lead poisoning, Mr. Rhodes said that the Board had adopted means for preventing the water acting upon lead. Upon the recommendation of Dr. Whitelegge, the county medical officer, the Board were putting sufficient soda into the water as it entered the reservoirs as to prevent the deleterious action upon lead.

TRAMPS AS VEHICLES OF INFECTION.

THE frequency with which outbreaks of small-pox in healthy communities have been traced, says the *Devon and Exeter Daily Gazette*, to tramps led to the recent conference of sanitary authorities in London. It is to be hoped that some practical reforms will result from the exchange of opinion. It is manifest that if our sanitary officers are fortified with no other idea than that of a more stringent enforcement of vaccination, they will not have advanced the solution of the problem very far. As to the efficiency of tramps as vehicles of infection there can be no two opinions. It is pointed out by the BRITISH MEDICAL JOURNAL that during recent small-pox epidemics the disease was carried into Warrington 13 times, into Salford 17 times, into Keighley 15 times, into Blackburn 18 times, and into Nottingham as many as 25 times. It is estimated that of the cases in which the disease breaks out in a district previously free from it fully one half are due to tramps. This is a case in which prevention, though better, is much more difficult than cure; indeed, it is hardly too much to say that the public is well nigh helpless in the matter. The prevalence of disease among the tramps class points to the need for more efficient sanitary supervision over common lodging houses. A daily medical examination of the inmates of casual wards and lodging houses is suggested by the medical journal already quoted, and it also urges the necessity of more frequent vaccination of the vagrants. Tramps are not a class given to conscientious scruples on the subject of vaccination, and it would be interesting to know how many small-pox patients of this type have been vaccinated even once in their lifetime.

VACCINATION AT NOTTINGHAM.

THE Local Government Board communication was read again at the Nottingham Board of Guardians: "Local Government Board, Whitehall, S.W., August 27th, 1894. Sir,—I am directed by the Local Government Board to advert to your letter, from which it appears that the guardians of the Nottingham Union have passed a resolution to the effect that in all future cases of parents failing to comply with the Vaccination Acts, the defaulters will be called before the guardians, who, 'acting in accordance with the discretionary powers conferred on them under Section 29,' and if a reasonable excuse or explanation is given shall decide that criminal proceedings be not taken. The Board direct me to point out that the guardians are not empowered under the Vaccination Acts to exercise a discretion whether or not they will take proceedings against persons in default. The Board's order of October 31st, 1874, is obligatory on the guardians, and Section 16 of that Order requires that the guardians 'shall in all cases in which the provisions of the Vaccination Acts for enforcing vaccination have been neglected, cause proceedings to be taken against persons in default, and for this purpose shall give directions authorising the vaccination officer to institute and conduct such proceedings.' When, however, an order has been made by the justices under section 31 of the Vaccination Act, 1867, and summary proceedings have been taken for disobedience to it, and the parent still continues in default, it then becomes the duty of the vaccination officer to bring the case before the guardians with the view of receiving their direction before further proceedings are instituted in the same case. I am told that in the case of Regina *v.* the Guardians of the Keighley Union, and also in the recent case of Regina *v.* the Guardians of Mile End Old Town, the High Court clearly laid down that it was the duty of the board of guardians to enforce the compulsory provisions of the Vaccination Act, and that in the case of neglect on their part they would be held responsible.—I am, etc., A. D. ADRIAN, Assistant Secretary.—The Clerk to the Nottingham Guardians."

It was resolved to refer the communication to the Vaccination Committee.

THE COST OF COMPULSORY NOTIFICATION.

M.O.H. YORKSHIRE.—There would appear to be no means by which the sum total spent on compulsory notification in the country as a whole can be ascertained. The collated returns of local health officers would enable a rough estimate to be formed, and so too would the county reports where health officers have been appointed. But we would refer to the report by Mr. Ernest Hart on Compulsory Notification in England and Wales in 1892, printed and published by the British Medical Association, in which it is estimated, from returns comprising 86 per cent. of the population under the system, that in that year the sum spent in this country on notification certificates was £24,718 15s. If the whole population had been under the system, only another £5,000 would have been expended, namely, £29,851 11s.

OBITUARY.

PROFESSOR VON HELMHOLTZ.

OUR Berlin correspondent writes: The death of Herman Ludwig Ferdinand von Helmholtz, which took place on September 8th, has thrown Germany into mourning for one of her greatest sons. Two months ago, at the beginning of July, Helmholtz, who was then close upon 73 years old, had a stroke, which left him partially lame. His consciousness, however, returned, after having been clouded for about ten days, and his ultimate recovery was not considered hopeless. On August 31st—his birthday—his children and grandchildren assembled round him, and he was quite bright and cheerful, listening with evident pleasure to the prattle of the little ones. On September 5th, he had a second stroke, and never recovered consciousness.

The life of Helmholtz, though spent mainly in academic office, was not without a certain diversity. He was a son of a Potsdam schoolmaster and his English wife. He was born in Potsdam on August 31st, 1821, and after receiving his preliminary education there he became a medical student, and finally took his medical degree at the University of Berlin. After occupying a post at the Charité Hospital, he served for a time as a military surgeon. He next became an assistant in the Anatomical Museum at Berlin. In 1848 he was ap-

pointed Professor of Anatomy in the Academy of Fine Arts, but his first university chair was that of Physiology in the University of Königsberg, a position to which he was appointed in his 28th year. Before this, and while still discharging the routine duties of a junior military surgeon, he had written and published a remarkable essay on the Conservation of Energy, which, though anticipated in time to some extent by the work of Mayer and of Joule, must be regarded as having been an important factor in determining the trend of modern scientific thought.

As a physiologist Helmholtz early turned his attention to physiological optics, and published a work bearing that title. At an early stage of his investigation he presented surgery and medicine with the ophthalmoscope, an invention which was made public by him in 1851. This instrument has been one of the most powerful agencies in bringing about the immense advance which has taken place in ophthalmology, and has rendered hardly less service in the study of diseases of the nervous system. In 1856 he was called to Bonn as professor of physiology, and in 1859 accepted the chair in the same subject in the University of Heidelberg. While incumbent of the last-named post he accomplished most of the work which has rendered his name famous as a physiologist. He continued his researches into physiological optics, made numerous contributions to the physiology of the organ of hearing, and passed by a natural transition to a study of acoustics and the physiology of voice production. In each one of these complicated departments of physiology he accomplished work of the first order, not only in the way of observation and experiment, but through the lucidity of thought and the wide knowledge, not only of physiology, but also of physics, which he brought to bear upon every subject which came under his notice. Indeed, as time went on Helmholtz became more and more devoted to physics and mathematics, and finally in 1871 accepted the chair of Physics in the University of Berlin. It was, in the peculiar circumstances of the time, an extraordinary evidence of the intellectual supremacy which Helmholtz had acquired that in this same year he was elected a Corresponding Member of the French Academy of Science (Physical Section). In 1873 the Copley medal of the Royal Society was conferred upon him; and ten years later the German Emperor recognised his national eminence by conferring upon him the nobiliary prefix.

Helmholtz remained connected with the University of Berlin to the end of his life, and no great university function was complete without his presence, but he never took any active part in the public life of Germany, remaining to the last a typical example of a man who devotes the highest intellectual gifts to the furtherance of scientific research.

His funeral took place on September 12th at Charlottenburg, and was attended by representatives of many universities and scientific societies, and by Dr. Lucanus on behalf of the Emperor, and by Major-General von Pfuhlstein on behalf of the Empress Frederick.

We greatly regret to have to record the death of Dr. Thomas Duncan, which took place at his residence at Richmond on Sunday, August 26th. The deceased gentleman took the degree of M.D.Aberd. in 1854, and in the same year qualified as M.R.C.S.Eng. He went to Richmond some forty years ago. In the course of time he succeeded in building up a large practice. Among his patients he numbered the late Duchess of Cambridge, the Duke and Duchess of Teck, and the Comte and Comtesse de Paris. He took little part in public affairs, preferring to devote himself to the work of his profession. He was for some time an honorary consulting surgeon at the Richmond Hospital, a post which he resigned a few years ago. Dr. Duncan, who was in his 63rd year, leaves a widow, three sons, and two daughters. The funeral took place at Petersham churchyard on August 31st.

We regret to announce the death of Professor Friedrich Heinrich Bidder, one of the most distinguished teachers of the University of Dorpat in its pre-Jurjev days, which took place on August 27th at the age of 83. Born at Landohn in Courland in 1810, he entered the University of Dorpat as a student of medicine in 1828, and graduated Doctor of Medicine in 1834 with a thesis De Graviditatis vi Medicatrice. After studying at Berlin under Johannes Müller, Ehrenberg, and Henle, he was appointed Extraordinary Professor of Anatomy at Dorpat in 1836. In 1842 he became Ordinary Professor, and in 1843 he exchanged the chair of Anatomy for that of Physiology and Pathology. From 1857 to 1864 he filled the post of Rector of the University of Dorpat. In 1869 he resigned his professorship. His scientific work, which was of a very high order, was chiefly in the domain of microscopical anatomy and physiology, especially of the nervous system. Professor Bidder leaves two sons, both of whom have achieved high distinction in different provinces of medical science. One, Ernest Friedrich, is Professor of Obstetrics and Gynæcology in the University of St. Petersburg, the other, Alfred, is a well-known surgeon in Berlin.

By the death of Mr. George Wilson, M.R.C.S., for twenty years Medical Officer of Health to the Clutton Sanitary Authority, Bristol and the district has, says the *Bristol Mercury*, lost one of those far-seeing sanitarians who have been in advance of their time. We have already noticed the prominent part he took in the deplorable outbreak which led to the *Bristol Mercury* articles on "Sanitation in Somerset." But as long ago as 1878 Mr. Wilson was contributing to the columns of the *Mercury* a series of thoughtful and most valuable articles on sanitation and labourers' dwellings in Somerset, arising out of some lamentable discovery of the housing of a labourer and his family at Nempnett. Mr. Wilson in that series of articles not only spoke with the startling boldness so characteristic of him, but treated his subject in the most comprehensive manner, and foreshadowed legislation for which men of light and leading have since struggled, and not without encouraging signs of ultimate success. Like his father, the late Colonel P. P. Wilson (Bombay), who was shot down in battle, Mr. Wilson was one of the bravest of men, and in his younger days, when called upon by the Board of Health, he, without a moment's hesitation, went to take charge of a village in Essex which was ravaged by cholera. He was an ardent student from his early youth, and in the course of his studies had won three gold medals and numerous high-class prizes.

The death is announced of Dr. Henri Cottubier, of Vienna. He was from youth an intimate friend of Diday, of Lyons, by whom he was encouraged to devote himself to medicine rather than to the law, which would have been more in accord with his father's wishes. He was possessed of independent means, and devoted the greater part of his life to the forwarding of plans for the amelioration of the lot of the working classes. Fifty years ago, when such schemes were novelties, he urged the erection of a convalescent hospital for patients discharged from the hospitals of Lyons after suffering from acute diseases. Later he established and maintained a children's "colony" in Algeria. He was an ardent believer in co-operation, and established co-operative societies for the industrial classes. He was at one time a member of the Chamber of Deputies, and at the time of his death was a Senator.

MEDICAL NEWS.

The total sum now received on behalf of the Hospital Saturday Fund for the present year from all sources reaches nearly £13,000.

The customary annual smoking concert will be given this year by the medical staff of the Brompton Hospital for Consumption on Tuesday evening, October 2nd.

Dr. Keible recommends, in the *New York Medical Journal*, the selection of the house mouse as a test animal for inoculation in cases of suspected rabies. The inoculation may be made by injection into the subcutaneous tissue at the root of the tail. The symptoms are stated to be very marked and unmistakeable.

At a recent meeting of the Académie de Medécine Dr. Petit related three cases of sudden death in velocipedists suffering from heart disease. In one case the victim, a man

aged 60, had not yet succeeded in learning the art of riding a bicycle, and died suddenly during a lesson. Another case was that of a physician who had recently suffered from typhoid fever.

MEDICAL VACANCIES.

The following vacancies are announced:

BETHLEM HOSPITAL.—Two Resident Clinical Assistants. Apartments, rations, and attendance provided. Applications, endorsed "Clinical Assistantship," to the Treasurer by October 1st.

BRIDGWATER INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board and residence. Applications to Mr. John Coombs, Honorary Secretary, Bridgwater Infirmary, Bridgwater, by September 27th.

CAMBRIDGE UNIVERSITY.—John Lucas Walker Studentship. Applications to Professor Roy, New Museums, Cambridge, by September 30th.

CANCER HOSPITAL (FREE), Brompton, S.W.—Two House-Surgeons. Salary at the rate of £60 and £50 per annum respectively, with board and residence. Applications to the Secretary by October 5th.

CARLISLE DISPENSARY.—House-Surgeon. Salary, £130 per annum, with apartments. Applications to the Honorary Secretary, Mr. G. A. Lightfoot, 14, Bank Street, Carlisle, by September 21st.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer; unmarried. Salary to commence at £100 per annum, increasing annually to £120 per annum, with board, lodging, washing, and attendance. Applications to the Medical Superintendent by September 15th.

COVENTRY PROVIDENT DISPENSARY.—Surgeon; must be fully qualified medical practitioners. Applications and testimonials to W. Sleath, Honorary Secretary, by September 17th.

DENTAL HOSPITAL OF LONDON, Leicester Square.—Assistant Dental Surgeon. Must be Licentiate of Dental Surgery of one of the licensing bodies recognised by the General Medical Council. Applications and testimonials to J. Francis Pink, Secretary, by October 8th.

GENERAL INFIRMARY, Birmingham.—Resident Surgical Officer and House-Physician. Salary, £130 and £70 per annum respectively, with residence, board, and washing. Appointments for one year, but candidates will be eligible for re-election for two subsequent years. Also two Assistant House-Surgeons, appointment for six months, but eligible for re-election for another six months. No salary. Residence, board, and washing provided. Applications to Howard J. Collins, House Governor, by October 6th.

GREAT YARMOUTH HOSPITAL.—House-Surgeon; must be doubly qualified. Salary, £90 per annum, with board and lodging. Applications and testimonials to Richard F. Ferrier, Honorary Secretary, by September 22nd.

LEITH HOSPITAL.—House-Physician, House-Surgeon, and Surgeon for the Outdoor Department. Appointments for six months. Salaries at the rate of £50 a year each, with board in the hospital. Applications to the Secretary, Mr. George V. Mann, 33, Bernard Street, Leith, by October 1st.

NEW HOSPITAL FOR WOMEN, 144, Euston Road, N.W.—Female Assistant-Physician: appointment for two years. Also two Clinical Assistants for Out-patient Department; appointment for one year. Applications and testimonials to Margaret M. Bagster, Secretary, by September 26th.

PLYMOUTH PUBLIC DISPENSARY.—Physician's Assistant; doubly qualified. Salary, £60 per annum. Appointment for one year, but eligible for re-election. Applications to the Honorary Secretary before September 18th.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House-Surgeon. No salary, but board, residence and laundry found. Applications and testimonials to the Honorary Secretary, by September 17th.

ROYAL UNITED HOSPITAL, Bath.—House-Surgeon. Candidates must be M.R.C.S.Eng. and registered. Salary, £60 per annum, with board, lodging, and washing. Appointment for one year. Applications and testimonials to W. Stockwell, Secretary-Superintendent, by September 18th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, Cavendish Square, W.—Resident Medical Officer, doubly qualified. Salary, 100 guineas per annum, with an annual increase of 10 guineas to a maximum of 120 guineas, with furnished apartments, attendance, coal, and gas. Applications to the Secretary by October 1st.

SUSSEX COUNTY HOSPITAL, Brighton.—House-Physician; unmarried and under 30 years of age. Salary, £60 per annum, with board, residence, and washing, rising to £80. Applications and testimonials to Lieutenant-General E. F. Bourchier, Secretary, by September 19th.

SWANSEA GENERAL AND EYE HOSPITAL.—Clinical Assistant. Appointment for six months. Remuneration, board, lodging, and washing. Applications to the Honorary Secretary of the Medical Staff by September 20th.

THE GENERAL INFIRMARY AT GLOUCESTER AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Surgeon; must be F.R.C.S. or M.R.C.S.Eng., or F.R.C.S. or L.R.C.S. of Ireland or Edinburgh, or graduate of University recognised by the General Medical Council. Applications and testimonials to Henry T. Pike, Secretary, by October 10th.

WALSINGHAM UNION.—Medical Officer for the Raynham District. Salary, £38 per annum, exclusive of extra medical and vaccination fees. Applications to W. M. Rumbelow, Clerk, Bridge Street, Fakenham, by September 18th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Appointments for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary Superintendent, by September 19th.

WOLVERHAMPTON UNION.—Medical Officer for the Workhouse. Salary (including all fees for surgical midwifery and all other extra cases) will commence at £175, rising £5 every year to £200 per annum. Must reside within one mile of the workhouse. Applications to Edward Pritchard, Clerk to the Guardians, Clerk Office, St. Peter's Close, Wolverhampton, by September 18th.

VICTORIA HOSPITAL, Burnley.—Resident Medical Officer. Salary, first year, £80; second year, £90; third year, £100. Applications to Joshua Rawlinson, Honorary Secretary, by September 17th.

MEDICAL APPOINTMENTS.

BENSON, H. Thos., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the Market Deeping District of Bourne Union, *vice* W. B. Deacon, resigned.

BOYD, J. Wood. M.B., C.M.Glasg., appointed Assistant Surgeon to the Liverpool Dispensaries.

COLCLOUGH, W. Frank, B.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P., appointed Medical Officer to the British Hospital, Oporto, Portugal.

CHRISTIE, W. Ledingham, M.D., F.R.C.S., appointed House-Surgeon to the Bristol Hospital for Sick Children and Women, *vice* Dr. Alexander Jamison, resigned.

CURWEN, Eliot, M.A., M.B., B.C.Cantab., appointed to the London Mission Hospital, Peking, North China, *vice* E. T. Pritchard, M.B., C.M.

ELLIOTT, T., M.D., L.R.C.S.I., appointed Medical Officer for the Frant District of the Ticehurst Union, *vice* R. F. Dennis, L.R.C.P., L.R.C.S. Eng., resigned.

EVANS, Chas. Walter, M.D.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health for the Bakewell Urban Sanitary District.

FUSSELL, E. F., M.B.Aberd., M.R.C.P.Lond., reappointed Medical Officer of Health to the Seaford Local Board.

GAMGEE, Leonard Parker, F.R.C.S.Eng., L.R.C.P., appointed Assistant Surgeon to the General Hospital, Birmingham.

GREENWOOD, Arthur, L.R.C.P., M.R.C.S.Eng., appointed Medical Officer for the Haggerston District of the Shoreditch Union.

HASLAM, Mr. W. A., appointed Assistant Medical Officer of the Infirmary of the West Derby Union.

HODSON, Frederic, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Hornsea Local Board.

JOSEPH, James J., L.R.C.S.I., L.K.Q.C.P.I., appointed Medical Officer and Public Vaccinator to No. 2 District St. Mary's Parish Battersea of the Wandsworth and Clapham Union.

JONES, T. H., M.B., C.M.Edin., appointed Assistant House-Surgeon to the Infirmary for Children, Liverpool.

LYLE, H. Willoughby, M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to St. Peter's Hospital, Henrietta Street, Covent Garden.

MOLYNEUX, Harold Joseph, L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer for the Billinge District of the Wigan Union.

SHAW, J. Hepworth, M.B., Ch. B. Vict., M.R.C.S.Eng., L.R.C.P.Lond., appointed Head Surgeon to the Liverpool South Dispensary, *vice* Dr. E. P. Manby, resigned.

SKIPWORTH, Herbert, L.R.C.P.I., M.R.C.S.Eng., reappointed Medical Officer of Health to the Quorn Local Board.

STEWART, J. S., L.R.C.P., L.R.C.S.I., appointed Medical Officer of Health to the Kinson Urban Sanitary District, *vice* H. L. Harrison, M.B. Camb., M.R.C.S.Eng., resigned.

VINCENT, Hy. Bird, M.R.C.S.Eng., L.S.A., appointed Medical Officer of Health to the Cromer Urban Sanitary District, *vice* S. T. Taylor, M.B., resigned.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

AIRD.—On September 6th, at Thorn Bank, Wallington, Surrey, the wife of T. Wilson Aird, L.R.C.P.Lond., M.R.C.S.Eng., of a son, stillborn.

DAVEY.—On September 6th, at 167, Bedford Street South, Liverpool, the wife of W. H. Carthew Davey, M.R.C.S., L.R.C.P.Lond., of a son.

OXLEY.—On September 4th, at the Ferns, Buckhurst Hill, the wife of Fredk. J. Oxley, M.R.C.S., L.R.C.P., of a son.

UMNEY.—On September 7th, at Heatherbell, Crystal Palace Park Road, Sydenham, the wife of William F. Umney, M.D.Lond., M.R.C.S.,Eng., of a daughter.

WEAVER.—September 5th, at Southport, the wife of John J. Weaver, M.R.C.S., L.S.A., of a daughter.

DEATH.

LYM.—On July 7th, at Overton Villa, Granville, N.S.W., late of Manor House, Houghton-le-Spring, Walter Lym, M.A., M.D., of acute pneumonia, aged 49.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not Later than Midday Post on Wednesday. Telegrams can be Received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal and not to his private house.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

Treatment of Obstinate Constipation.

Medicus asks for a suggestion in the treatment (drug or otherwise) of a case of chronic constipation with dryness of fæces, which are generally of a light colour. The patient, whose appetite is good, is too light in weight. Several of the usual remedies have been tried without materially affecting the case. There is also at times considerable and distressing, almost disabling, flatulence.

Liability for Midwifery Fees.

Member asks for an opinion on the following point: A lady calls and makes an engagement for attendance at confinement—fee proposed by medical man, £3 3s., to which patient agreed. After a fortnight she writes: "Your fee being too high, I have engaged another medical man." Is she still liable to pay?

*** The legal remedy against the patient would be by action for breach of contract, when our correspondent might recover the amount of the fee as damages. We do not, however, advise this, as it is not customary under such circumstances for a medical man to sue his patient, but from a legal point of view it is never permissible for one party to a contract to put an end to it without the consent of the other.

Works on Infectious Disease.

A correspondent asks what is the most trustworthy, up to date, handy volume on the infectious diseases, their etiology, pathology, and bacteriology.

*** He cannot do better than consult *Hygiene and Public Health*, by Dr. Whitelegge (Cassell and Co.), 7s. 6d.; or if he wishes for more detailed treatment of the subject in question, the second volume of the *Treatise on Hygiene and Public Health*, edited by Stevenson and Murphy (S. and A. Churchill, London), 32s.

ANSWERS.

Zeta.—Such a claim under the circumstances is not valid. It might be allowed as a matter of kindness and consideration, but there is no legal claim to it.

Gohanniensis should consult a physician of experience in his neighbourhood. We cannot recommend individual practitioners.

Dr. W. A. Buchan (Plymouth).—Mr. Ernest Hart's letters on "A Winter Trip to the Fortunate Islands," have been republished in pamphlet form by Messrs. Smith, Elder, and Co.

Vaccination Statistics.

H. P.—Dr. A. R. Wallace's attack on vaccination will be found very completely refuted in Dr. J. C. McVail's admirable book *Vaccination Vindicated*, which was published in 1887 by Messrs. Cassell and Co., London. *Vaccination and Small-pox*, by Dr. E. J. Edwardes (Messrs. J. and A. Churchill), is also a very useful little treatise.

Treatment of Thread Worm.

M.R.C.S. writes, in answer to "M.D." (p. 516): I have found the following prescription very successful where the usual remedies have failed: R Acid. sulph. aromat. mxij; magnes. sulph. gr.v; tr. capsici mij; inf. rosæ acid. ad ʒj. I would call his attention to the article by Mr. Bland Sutton in the recent edition of Quain's *Dictionary*.

NOTES, LETTERS, Etc.

The Boarding-Out of Pauper Children.

Dr. Jno. Wilson Rhodes (Didsbury), writes: As an old advocate of the boarding-out system under proper supervision, I quite agree with your leader on the question, but there is another question I want answering, namely, What is the result upon the health of the children? I would remind those who advocate such a large extension of the boarding-out system that it is facts more than opinions that we require, and I have not forgotten a very important fact that was brought out in Mr. Henley's excellent report on boarding-out in Scotland, and that fact was that the death-rate among the children boarded-out in Scotland was more than double the death-rate in the much abused district schools of England, as children that are so ill as to require constant medical attendance are not supposed to be sent out the very reverse ought to be the case. I hope the inquiry will at any rate answer this question.

The Liverpool Victoria Legal Friendly Society.

Dr. J. G. Modlin (Sunderland) writes: I see in the British Medical Journal of September 8th a note with comments from Dr. H. W. Haydon respecting the propriety of acting as medical examiner to the Liverpool Victoria Legal Friendly Society. I have acted as examiner for this Society for the last three years. The fees they pay are the same as paid by other assurance companies, namely, half a guinea for cases up to £100, and a guinea for cases above £100. I have never been asked to attend any of those assured, and can say with certainty that, in this town, life assurance is all that is offered by this Society. Medical aid is certainly not run in conjunction with assurance. It may be differently worked in other towns, but whilst the assurance is worked as a life assurance only, as it is here, I fail to see any impropriety in any medical man acting as their medical referee. I should certainly decline to do any medical aid work in connection with it.

*** No exception can be taken to this; it is only when these societies add to their ordinary business some system of medical aid that they tend to run into objectionable practices.

A Protest from the Fens.

Dr. Marten Perry (Spalding) writes: Dr. Richard Bevan (Lydd), in protesting against remarks of Dr. Dickinson in a former number of the British Medical Journal, classes the fens of Lincolnshire with the Campagna at Rome. I know nothing of the latter locality, but am quite certain that the fens of Lincolnshire will compare favourably with Romney Marsh, and I think I may say with almost any other district in the kingdom, as respects the prevalence of ague. It is certainly better drained than any other district with which I am acquainted; in fact it is by many considered to be overdrained. I have been residing at Spalding very nearly twenty-five years, and have never met with so severe a case of ague during that period as I had previously seen frequently in Essex. I have not access to the Register of Deaths, so cannot say when the last entry of a death from ague occurred. I have, however, gone through the lists of patients at the Spalding Dispensary, and do not find one case entered since March 14th, 1891, and that is called "intermittent," which we now understand to be a very mild form compared to what was formerly known as ague.

Smoke Abatement in Paris.

Paris seems to be awakening to the fact that it is in danger of losing whatever claim it may once have possessed to the title of *ville-lumière*, conferred on it by Victor Hugo, at least in the physical sense. The question of smoke abatement has become one of what French journalists call "palpitating actuality," and a competition is invited with a view to the selection of the best method of mitigating the nuisance. Competitors should send details of the method they propose to the Préfecture of the Seine (Direction Administrative des Travaux de Paris, Bureau des Eaux, Canaux et Assainissement).

Dietetic Treatment of Obesity.

Mr. W. Towers Smith (Harley Street, W.) writes: Having devoted some years to this subject, I found it necessary to provide a substitute for bread foods. I applied to a well-known firm of diabetic food manufacturers, and at my suggestion a biscuit was made as follows: 60 per cent. of Soya flour; 40 per cent. of almond flour. I named this biscuit "kalos." My patients used them, and in very many cases their numerous friends, so that I was compelled to check the supply to strangers, and all orders were referred to me. I am afraid some medical men were refused. Under these circumstances I beg to say that any medical practitioner can have them by applying to Messrs. Van Abbott and Sons, 6, Duke Street Mansions, Grosvenor Square.

Treatment of Sweating Feet.

In an article in the *Journal des Practiciens* Dr. A. Vignol, medicin-major of the French army, recommends for severe cases of sweating feet that the soles and the interdigital spaces should be painted with perchloride of iron mixed with one-third of its weight of glycerine. This liquid takes a quarter of an hour to dry, and during this time the feet must be exposed to the air and not dried. The application is to be repeated in forty-eight hours. In this way the epidermis is as it were tanned. It may be necessary to repeat the application at first every month, but subsequently at longer intervals. In the intervals between the application with the perchloride of iron the feet should be washed in vinegar and water night and morning and powdered with salycilated talc or starch and tannin.

The Mecca Pilgrimage.

The Moulvie Rafiuddin Ahmad, an enlightened Moslem, contributes, says the *San Francisco News Letter*, to the British Medical Journal an article on the Mecca pilgrims and the cholera, in which he points out that the pilgrimages as at present conducted are an international disaster. The remedy, he thinks, lies in the power of the Sultan, who should at once appoint a commission to investigate the matter. If the present state of affairs continues the recurrence of the plague at Mecca will diminish the number of pilgrims, destroy the trade dependent upon them, and cause a loss of much of the Sultan's moral influence over the Mahomedan world. This view of the subject from the standpoint of the pilgrims themselves is encouraging and indicates that the Mahomedans are not so bigoted in the matter as has been believed.

THE "MASSAGE MARKET" OVERSTOCKED.

Apropos of the massage scandal the following letter has been addressed to an official of a London hospital. It speaks for itself, and we can vouch for the genuine nature of the communication:

"Do you know of a *thoroughly competent masseuse* who could nurse and attend upon a young gentleman with paraplegia; catheter, enema, and irrigation required. One who would attend and wait on the patient, and also read to him; and at about what salary—15s. per week? She would be required to make herself generally agreeable and obliging, and not above carrying out things in patient's own manner. He is a medical student. She must be used to massaging the male subject. May I ask for an early answer.—I am, yours affectionately,

"Mr. ——————

"I should require a strong woman, and the better educated the more suitable. I suppose it would be quite impossible for me to get a masseuse for 12s. 6d. a week."

This letter fully bears out our statement that the massage market is overstocked. The public fully appreciate the fact, and a *masseuse* appears to be regarded by them as a person who not only has to make herself generally agreeable, but who will do anything and everything without question.

THE REPORT OF THE BRITISH MEDICAL JOURNAL COMMISSION ON WORKHOUSE INFIRMARIES.—ACTION OF WAKEFIELD GUARDIANS.

We have been favoured with the following letter from the clerk of the guardians of the Wakefield Union with respect to the report of the BRITISH MEDICAL JOURNAL Commission on their Workhouse Infirmary. We shall take the opportunity so courteously offered of having a reporter present, and it is greatly to be desired that all boards of guardians would show a like readiness to have their proceedings in these matters reported and discussed, the lot of the sick poor throughout England would then be greatly ameliorated:

Wakefield Union, September 3rd.

Dear Sir,—The attention of my guardians has been drawn to the report as to the Workhouse Infirmary appearing in the BRITISH MEDICAL JOURNAL of August 18th. I believe it is the intention of the guardians to discuss this report at their meeting to be held on September 19th. I believe that it is not unlikely that the Government inspector for this district will also be present at the meeting. I have written you this in courtesy to yourself, in order that if you so wish you may request the guardians to allow your reporter to be present.—Yours truly, H. BEAUMONT.

A WARNING.

DR. W. WYNDHAM POWELL writes to us from 145, Cannon Street, E.C., to warn city practitioners against a man who called at his consulting room on September 10th requesting him to visit a gentlemen in Coleman Street, whose private card he presented. It turned out to be a hoax, the probable object being petty theft. He is a spare man with sunken cheeks, medium height, and about 28 years of age. His general appearance and dress was that of a broken-down clerk.

*** A man giving the name of Montague Russell, aged 20, described as an actor, was, on September 11th, remanded by the magistrate at Lambeth Police-court on the charge of having robbed, or attempted to rob, some twenty medical men in London. He called at the house of Dr. Arthur Farr in Kennington Road, and said he wished to make an appointment for Dr. Farr to see his sister. Dr. Farr's suspicions being aroused he followed the man, saw him call at eight houses in the neighbourhood, and then gave him into custody.

PROFESSOR SOXHLET AND THE STERILISATION OF MILK.

AMONG those on whom the University of Halle conferred the honorary degree of doctor of medicine on the occasion of the two hundredth anniversary of its foundation was Professor Soxhlet, whose name is well known in connection with the question of the sterilisation of milk. The following are the grounds on which the honour was conferred as set forth in the diploma:

"Franciscvs Soxhlet, qvi cvm aliis mvltis et egregiis inventis tvm praecipve disqvisitionibvs de lactis natvra et compositione accvratissime institvtis non modo physiologiae et chemiae physiologicae progressvm havd mediocriter avxit atqve adivvit sed ratione svbtilissime excogitata illvd primarivm infantvm nvtrimentvm integrvm conservare et ab omni infectione noxia vindicare docvit cvi salvberrimo invento innvmerorvm hominvm valetvdinem atqve adeo vitam conservatam deberi ivre meritoqve praedicavit."

[To Francis Soxhlet, who by his many other remarkable discoveries, and principally by his most carefully conducted researches on the nature and composition of milk, has not only considerably furthered and assisted the progress of physiology and physiological chemistry, but shown by ingeniously devised methods how to keep that first food of infants sound and free from all injurious contamination, to which most fruitful discovery the preservation of the health and even the life of innumerable human beings is rightly and deservedly attributed.]

LETTERS, COMMUNICATIONS, ETC., have been received from:

(**A**) A. M.; Messrs. Arthur and Co., London; Messrs. Claudius Ash and Son, London. (**B**) Mr. J. H. Beaumont, Wakefield; Mr. T. Bell, Uppingham; Dr. S. W. Bryant, Kilmalcolm; Dr. R. L. Batterbury, Great Berkhamsted; Dr. L. Booth, Durham; Mr. D. Bradley, Weston-super-Mare; Mr. D. Biddle, Kingston-on-Thames; J. P. Boyd, M.B., Glasgow. (**C**) Mr. W. H. Clark, London; Mr. H. H. Crickitt, Reading; Mr. E. J. Carter, Tunbridge Wells; Mr. R. T. Cassal, Gainsborough; Dr. H. E. Crook, Margate; C. A. P.; Mr. S. Craddock, Bath; Dr. R. Craik, Conisborough; Mr. H. C. Collins, Birmingham; Mr. W. J. Charlton, Athlone; W. F. Colclough, M.B., London. (**D**) Dr. R. L. Down, London; A. Davidson, M.B., London; Mr. B. de Bear, London; Mr. P. E. Davies, Kidderminster; Dr. C. Dukes, Rugby; Miss F. de Montfort, London; Digit. (**E**) Dr. M. G. Evans, Caerphilly; Dr. J. Edmunds, London. (**F**) Mr. A. B. Franey, Banbury; Fair Play. (**G**) Mr. R. Gray, Armagh; Dr. A. J. Gregory, Cape Town; Dr. B. J. Guillemard, Cape Town; Mr. L. P. Gamgee, Birmingham. Messrs. Hockin, Wilson, and Co., London; Mr. A. W. Hall, Warrington; Mr. P. T. Herring, Leeds; Mr. J. Hutchinson, Barnard Castle; Messrs. Holt, Webb, and Co., London; D. Hooper, M.B., London; Mr. H. Hepworth, Loughborough; Mr. T. G. Horder, Cardiff; Mr. C. W. Heckrath, London. (**I**) G. W. Isaac, M.B., London; Idiotes. (**J**) Mr. W. D. James, Sheffield; J. P., M.B.; Mr. B. Jackson, London; T. H. Jones, M.B., Liverpool; Mr. J. J. Joseph, London. (**L**) Mr. J. Lentaigne, Dublin; Mr. W. Logan, Durham; Mr. H. W. Lyle, London. (**M**) G. H. Mapleton, M.B., St. Kitts, W. I.; Mr. T. Morris, Cardiff; Dr. A. Mackintosh, Chesterfield; M.D.; Member; Dr. J. D. Macdonald, London; Mr. J. Miller, London; M.A.; J. G. Modlin, M.B., Sunderland. (**N**) Mr. A. Napper, Guildford. (**O**) Observer; Old Member, M.B.A. (**P**) Mr. T. L. Pierce, Liverpool; Pyramid; Dr. M. Perry, Spalding. (**Q**) Querens. (**R**) Mr. H. W. Rake, Salisbury; Mr. J. Reynolds, London; E. D. Rowland, M.B., New Amsterdam; Retired Surgeon; Dr. J. Roche, Dublin; Professor C. S. Roy, Cambridge; Mr. R. Ruttle, Accrington. (**S**) Scalpel; Scientific Press, Limited, London; J. O. Symes, M.B., London; Mr. G. W. Sequeira, London; Mr. C. Siewers, London; J. H. Shaw, M.B., Liverpool; Dr. A. Sheen, Cardiff; Mr. C. Smith, Harrow-on-the-Hill; Dr. J. S. Scriven, Abberley; J. C. Smith, M.B., Shikarpur; Dr. J. Swain, Clifton. (**T**) Mr. J. L. Thomas, Abergavenny; Mr. W. Tiplady, Coupar Angus; Mr. J. W. Taylor, Birmingham. (**U**) Dr. W. F. Umney, London: Union. (**V**) Mr. H. B. Vincent, East Dereham. (**W**) Mr. H. White, Manchester; Dr. F. R. Walters, London; Mr. W. R. Williams, Preston; Mr. J. T. Williams, Barrow-in-Furness. (**Z**) Messrs. A. and M. Zimmerman, London; etc.

BOOKS, ETC., RECEIVED.

Prescribing and Treatment in the Diseases of Infants and Children. By P. E. Muskett. Third Edition. Edinburgh and London: Young J. Pentland. 1894.

Physical Culture for Men, Women, and Children. By A. E. Tanner. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1894.

Diet, and Cookery for Common Ailments. By a Fellow of the Royal College of Physicians, and Phyllis Browne. London: Cassell and Co. 1894.

The Treatment of Wounds, Ulcers, and Abscesses. By W. Watson Cheyne, M.B. London and Edinburgh: Young J. Pentland. 1894.

Les Eaux d'Alimentation. Epuration, Filtration, Stérilisation. By Dr. E. Grunochet. Paris: J. B. Baillière et Fils. 1894. 5 francs.

Primer of Hygiene. By Dr. E. S. Reynolds. London: Macmillan and Co. 1894. 1s.

A Healthy Home. By Francis Vacher. London: *The Sanitary Record* Office. 3s. 6d.

*** In forwarding books the publishers are requested to state the selling prices.

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Post-Office Orders should be made payable to the British Medical Association at the West Central Post-Office, High Holborn. Small amounts may be paid in postage-stamps.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to initials only.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PATHOLOGY,

At the Annual Meeting of the British Medical Association at Bristol, August, 1894.

By G. S. WOODHEAD, M.D., F.R.S.E.,

Director Research Laboratory Conjoint Board of the Royal Colleges of Physicians and Surgeons, London.

SOME PATHOLOGICAL PROBLEMS OF THE DAY.

It is my pleasant duty, as President of the Section of Pathology, to welcome not only those workers whom, as members of the Association, we may call our own, but also those distinguished in science from abroad, and also from our own country, who have consented to place the results of their labours and the benefit of their experience before the profession in this country as represented by our Association. Arising from, or as an outcome of, a feeling of brotherhood, a community of interest in a scientific commonwealth, our honoured friend and teacher Professor Chauveau, whose contributions to all branches of scientific medicine have made for him a name which not only we, but men of all civilised nations and tongues, are delighted to honour, had promised to be amongst us, but he has been unable to come. It has, however, brought amongst us our esteemed colleague Dr. Voigt, who, at considerable trouble to himself, has come to put before us interesting information connected with the subject of this day's discussion. I am sure, gentlemen, that you join with me in extending to Dr. Voigt, and to those who, though not members of the Association, have at our request come forward to take part in the discussion of a much-vexed question, a most hearty welcome.

It is now my privilege to open the proceedings of this Section with a few remarks—and they shall be few, as we wish to get to the real work of the Section—concerning some of the pathological problems that are occupying the attention of those most actively engaged in widening the boundaries and strengthening the stakes of this great domain of scientific medicine. A few years ago such terms as phagocytosis and chemotaxis were looked upon with distrust as new-fangled terms which represented in the minds even of those who first used them but nebulous or half-formed ideas; but now they are in such wide use, and have been discussed so generally and so freely, that everyone who takes the slightest interest in pathology may be said to have grasped, in some degree at least, the meaning of these terms, both in their extension and in their intension, as they were originally used. But as each advance is made and as we obtain a clearer view of our subject and accumulate additional knowledge of the properties of living cells we are constantly confronted by the fact that we have still much to learn of the part that these vitally active cells play in physiological, and still more, for our purposes, in pathological processes. The leucocyte which has for long loomed so largely in the eye of the pathologist overshadowed for a time what at an earlier period had already been sketched in outline—the very active share that so-called fixed cells, as represented in the endothelial cells of the connective tissue, of the walls of capillaries, and of similar structures, play in normal and in pathological conditions. At one time it was the leucocytes which in inflammatory processes became "sticky" or "tacky," thus increasing the friction of the blood flow by its adhesion to the vessel wall. Now, however, the cells of the vessel wall are gradually assuming a greater and greater importance in connection with this process, and the leucocyte is looked upon merely as a coadjutor or an assistant in the process. At one time arterial and venous tension were supposed to play an all-important part in the throwing out of lymph from the blood vessels into the lymph-spaces; the capillary walls were looked upon as forming merely a kind of membrane through which fluid might pass in or out by a process of filtration, osmosis, or diffusion. Then, as the outcome of Heidenhain's careful and brilliant researches, corroborated in some points, corrected in others, and greatly extended by numerous workers, both in this country and abroad, it appeared to be almost demonstrated that the cells of the capillary walls act as true secreting cells; a theory held as long ago as in Goodsir's time—that when they are stimulated under certain conditions there is an increased outward flow of fluid lymph from the blood into the surrounding spaces; whilst, if their vitality be somewhat lowered by cutting off their blood supply for a time and then stimulating them their power of secretion is interfered with in a degree corresponding to the extent to which their vitality is lowered, this resulting in a proportionate diminution in the amount of lymph secreted.

Here, however, the matter is not allowed to rest. Starling and Bayliss, working over much of the same ground, have obtained evidence of a most positive nature that, after all, blood pressure plays a considerable if not an all-important part in determining the rate of passage of lymph from the vessels into the lymph spaces. They find, however, that they are still unable to eliminate what may be spoken of as the vital action of the cells of which capillary walls are made up, which indeed undoubtedly appears to play a not unimportant part in the process of lymph transudation. In considering this question, however, it may be well to glance cursorily at the action of two sets of substances which, as experimentally proved, act as lymphogogues, for it appears that some of the confusion that has arisen may be put straight by a careful analysis of the process as set up by these two sets of substances.

It has long been known that when certain crystalloid bodies such as sugar, sodium chloride, and sulphate, etc., are injected into the circulation, they are rapidly excreted (1) directly by the kidneys, and (2) into the lymph channels; and this goes on until a kind of equilibrium is set up. Sugar thrown into the blood always gets out of it as quickly as possible, but it not only gets out itself, but, especially when the amount of fluid in the blood is increased, it takes out along with or draws after itself a considerable quantity of fluid. More than this, however, if it cannot attract a sufficient quantity of fluid from the blood, it draws freely on the fluid in the tissues until it is diluted down to a certain strength. In this way any excess of these crystalloid substances is gradually got rid of, especially by the tissues of the kidney, by a process of osmosis and filtration. The endothelial cells of the capillaries are no doubt somewhat affected in the process, but the whole of the changes are much more chemico-physical in their nature than is acknowledged by Heidenhain and his pupils. The process is more nearly in line with what is held to take place in the elimination of sugar by the kidney than with any other process with which we are acquainted. Heidenhain, Wright, Starling, Bruce, and others have, however, used other substances as lymphogogues—substances nearly allied to albumoses and peptones—and in many experiments these substances, pure or in mixtures, have been injected into the circulation with most startling results.

Taking the clinical fact that the consumption of crayfish, mussels, etc., is so frequently followed by the appearance of œdematous weals, Heidenhain assumed that these organisms must contain locked up in their substance materials which affect the walls of the capillary vessels in such a fashion that they allow of or promote the transudation of lymph, and from the nature of the substances separated (albumoses and peptones), he came to the conclusion that they exert such a stimulating effect on the capillary walls and also probably on the endothelial cells lining the lymph channels and spaces, that a true secreting process is accelerated, and a larger quantity of lymph is thrown out, this taking place at the expense of the fluid of the blood plasma; in this case, however, the specific gravity of the plasma remaining stationary, or even becoming less than normal; at the same time, however, there is an increase in the amount of fluid lymph, its specific gravity becomes increased; all this pointing to a process of true secretion, especially as much of the stimulating substance passes from the blood into the lymph.

The idea once being conceived that stimulation of the endothelial cells of the walls of the capillaries or capillary venules determines an increase in the passage of fluid from the blood into the lymph spaces, the pathologist is naturally led along two parallel lines: First, that dealing with the effect of mechanical or physico-chemical irritation which can in experimental work be controlled to a certain extent; and secondly, that dealing with the irritation set up by the introduc-

tion either naturally (in disease) or artificially (experimentally) of bacteria or their products, or of extracts of animal substances such as those already mentioned.

Heidenhain's experiments and his selection of the lymphatics of the abdomen as those with which the best results could be obtained have opened up a field of pathological research, one of the first gleanings from which was presented by Professor Roy and Mr. Cobbett at the meeting at Newcastle last year, where the effect of simple operations on the intestines were studied in connection with their relation to the specific gravity of the blood, but which appear to have a far more wide-reaching importance as regards the pathology of shock, whilst Dr. Starling's interesting experiments have opened up still further new ground, especially as regards the transudation of lymph from the capillaries of the liver, in which it was found that not only was the amount of lymph passing from the blood greater than in the limbs, say, but that this fluid contained a much greater proportion of solids, 6 to 8 per cent. as compared with 2 to 4 per cent. in the lymph coming from the limbs, and 4 to 6 per cent. from the lymphatics of the intestines.

It is evident then that a relatively large quantity of solid matter must pass from the liver capillaries, this being due apparently to the fact that the endothelial walls of these vessels are of extreme delicacy and activity. A similar remark applies to the cerebro-spinal system of capillaries and lymphatics. It has for long been known that whenever there is greatly increased flow of lymph from vessels, there also is a wandering out of leucocytes, or at least an accumulation of leucocytes near the walls of the vessels from which the fluid is flowing outwards. Going a step further, and in a somewhat different direction, let us turn to a number of experiments which have been carried out especially in the laboratory of the Pasteur Institute, or by old pupils of that institution—Werigo, Wyssokowitsch, and others—by which it has been proved that when particles of carmine in solution, or the dead or even the living bodies of anthrax bacilli are injected directly into the blood stream, there is a rapid hypoleucocytosis or disappearance of leucocytes from the general circulation, followed after a time by a great increase in the number of leucocytes—hyperleucocytosis. Where are these leucocytes to be found? On examining the liver it is found that some at least have made their way to and become lodged in this organ. They crowd the portal capillaries, in some cases forming small thrombi; in them the particles of carmine, or the bodies of the bacteria as the case may be, are constantly present. Beyond this, however, it is seen that they are in close contact with the endothelial cells of the capillaries, adherent to their processes, or sticking to their surface; whilst within these same endothelial cells similar particles or bacilli, though fewer in number than in the leucocytes, are also to be seen.

The endothelial cells are apparently in a stimulated or excited condition, their bodies are swollen, the nucleus is distinct, the processes are prominent, and there is evidently a great attraction between the endothelial cells and the particle bearing leucocytes, some of which appear to be taken into, or make their way into, the endothelial cells, whilst others are sometimes found outside the capillary wall altogether.

Whatever else happens, there is certainly increased friction, and probably also increased pressure behind this area of increased friction; but, in addition to this, we have the increased activity of the endothelial cells, and therefore if there is anything in Heidenhain's theory, all the most important factors necessary for increased lymph flow and the passage outwards of leucocytes are present.

The injection of albumoses and peptones into the blood gives rise, as we have seen, to an outflow of lymph, especially from the liver capillaries; accompanying this, as pointed out by Wright and Bruce amongst many observers, there is, just as in the case of the injection of carmine or bacteria, a great diminution in the number of leucocytes in the larger vessels of the systemic circulation: so marked is this, indeed, that it has led some observers to suppose that when peptone is injected into the blood the leucocytes are broken down in enormous numbers, and so practically disappear. Recently this theory has received some sort of check by the observations of Surgeon Bruce in this country and of several observers abroad, who have found that coincident with this disappearance of the leucocytes from the larger vessels they were, as above pointed out in connection with the liver where discrete particles were used, found in greatly increased numbers in such organs as the liver, spleen, and lungs, not only crowded together along the walls of the capillaries, but also in the lymph spaces surrounding them, where they seem to have followed the peptone-holding lymph. The condition is invariably associated with an altered condition of the endothelial cells of the minute vascular channels. Here, then, we have a substance in perfect solution and containing no discrete particles, which sets up changes in the liver similar to those resulting from the presence in the blood of particles of carmine and bacteria, bringing about an accumulation of leucocytes at those points where there are marked changes in the endothelial cells—changes which are evidently the result of stimulation.

The importance of these observations on the doctrine of phagocytosis is evident, and their bearing on chemotaxis is equally obvious, but it is not with these processes in view that I now bring them forward. My object is to try to indicate the bearing of these experimental facts on clinical observations and to bring into line a few clearly defined pathological data.

The products of certain micro-organisms have the power of acting directly on the endothelial walls of capillary blood vessels. Taking the case of malignant œdema, for example, it is a well-ascertained fact that accompanying the emphysematous condition of the subcutaneous tissues following the introduction of a virulent culture of the bacillus of malignant œdema into these tissues there is a marked increase in the quantity of fluid at and around the seat of inoculation. There can be no doubt that, in this case, there is a direct action of the products of the bacillus on the walls of the vessel, as in addition to the œdema there are evident traces of a more serious vascular disturbance in the petechial hæmorrhages that are so frequently associated with this condition. A further proof of this may be obtained in the fact that there may be separated from the filtered products a culture of the bacillus of malignant œdema—a toxic material which, when injected intraperitoneally, causes death extremely rapidly, and makes manifest its action on the vessels by inducing small petechial hæmorrhages. The same thing has often been observed in connection with the injection of the toxic products of certain other bacteria.

It is evident, then, that the symptoms of "congestion of the liver," taking it as a type for our present purposes and leaving the spleen and other organs out of consideration, assume an importance in cases of organic poisoning which hitherto has only been appreciated by those who are engaged in practice, but which has even by them been only imperfectly understood. The capillaries of the lungs and brain and the blood channels in the spleen are, no doubt, affected very similarly, but the observations made on them are naturally not so complete as are those made on the liver—an organ that lends itself so readily to macroscopic and microscopic examination; but once let it be borne in mind what an important part this increased vital activity, with the accompanying changes in the relation to the fluid and cellular elements of the blood, plays in those cases when bacterial products, albumoses, peptones, not to speak of distinct organised and non-organised particles, are present in the circulation and the changes in the circulation through the capillaries of organs will assume an importance to the clinical observer greatly surpassing that which they even now hold. Take pneumonia as an example of a disease which may be set up by obstruction of the capillaries in another organ brought about in such a fashion, or think of the obstructive changes that may be set up in the cerebro-spinal capillaries, not to mention the more marked lesions that may occur in the nerve centres as the result of prolonged vascular irritation and hyperactivity; viewed in this connection and light such conditions as shock, and acute localised or generalised inflammatory changes followed by more chronic processes, assume a new significance.

One word and I have done. The extract of crayfish, which sets up changes in vessels far less delicate than any of those found in the liver—the capillaries of the skin—probably

exerts a still more marked influence on the delicate capillaries of the liver and other organs. The relation of these products to the various degenerative changes of other protoplasmic structures is one that at present does not allow of much discussion, as the data at command are too meagre to be of much use; but it is now being worked out by several investigators, this much at least may be taken as settled, that in addition to the direct action of the poisonous material on the protoplasm of the liver cells, say, there is an alteration in the relations of the vascular and lymph supply due in great measure to the changes that take place in the wall of the capillary vessel, which must materially help to disturb the trophic equilibrium of the liver cells.

Gentlemen, the important questions bearing on immunity, the relation of the lower forms of organic life to variola, variola vaccine, and many questions of interest and importance are to be discussed during this meeting, and the time at our disposal is limited; I have already occupied too much of it, so commending to your more careful study the work that has suggested these scattered thoughts I beg to open our session.

DISCUSSION ON THE PATHOLOGY OF VACCINIA.

I.—S. Monckton Copeman, M.A., M.D.Cantab., M.R.C.P., Lecturer on Hygiene and Public Health, Westminster Hospital Medical School.

I must confess to considerable doubt as to the possibility of presenting, especially in the limited time at my disposal, anything like a complete summary of the vast amount of experimental work which has been carried on with the object of dispelling the obscurity in which the pathology of vaccinia has for so long been shrouded. Indeed so impossible do I consider such a task, that in what I propose to say I think it will be well practically to confine myself almost entirely to a consideration of the work bearing on this problem which has been done within the last few years.

The results which have thus far been obtained by various observers, although in my opinion tending for the most part in the same direction, undoubtedly show discrepancies which at first sight it appears difficult to harmonise; but I shall endeavour to show in the first place in what these discrepancies consist, and secondly how far they can be reconciled.

From the time that vaccination was first introduced as a prophylactic against small-pox, the main dispute with reference to the pathology of the disease has centred round the term variola vaccinæ given to it in the first instance by Jenner, who undoubtedly looked upon it as "small-pox of the cow." The question for consideration is then whether vaccinia is or is not one with small-pox, or whether it is an absolutely distinct disease.

This problem has been attacked from two separate points:—(1) Microscopic pathology including bacteriology; and (2) experimental work, having for its object the production—if that be possible—in the bovine animal by inoculating it with small-pox lymph, of a disease indistinguishable both in its local and in its general effects, by any means at our command, from true vaccinia.

Vaccinia and Variolisation.—Whatever may be their views as to the desirability of the practice of vaccination, and more particularly of compulsory vaccination, I suppose that there are very few scientists at the present day who would deny that vaccination affords, for a time at any rate, protection against invasion of the system by small-pox. If this be so, the fact affords strong presumption of, at the least, an intimate relationship between these two diseases, since we have but little reason to suppose that protection can be afforded against any given disease by the inoculation of the living virus of another and essentially distinct malady. I am, of course, aware that from time to time apparent exceptions to such statements have been brought forward, but to these it is impossible for me to do more than refer on the present occasion.

Taking into consideration, in the first place, the experimental work having for its object the variolation of the bovine animal, it is obvious that the literature of the subject is so extensive that it is impossible here even to mention the names of all those who have engaged in this branch of the subject. What I believe to be a fairly complete list, however, will be found in a paper which I have recently published in the *Journal of Pathology and Bacteriology*.

It is a noteworthy fact that of the various observers mentioned in that list, everyone, with the exception of Chauveau and his colleagues of the Lyons Commission, claim to have obtained positive results as regards the production of typical vaccinia, after one or more removes, as the result of variolation of the cow or calf. In many cases, it is true, a large number of experiments are stated to have been abortive, especially among the older observers, who made use, for the most part, of heifers or milch cows. Subsequent experience has shown, however, that success is much more likely to be obtained if, instead of heifers or cows, calves be used. On this account, perhaps, Chauveau's want of success may be in part explained.

With reference to recent experiments on variolation of the calf, it is worthy of note also that different observers have obtained results differing considerably in certain instances in the immediate effect produced. In some cases inoculation of human small-pox lymph has given rise on the first animal operated on to a vesicular eruption indistinguishable from that of vaccinia, either at the actual point of incision, puncture, or scarification, or appearing in the form of independent or accessory vesicles at a distance from the actual site of operation. Such a result has been placed on record by Ceely and later by King, Simpson, and Hime.

In other cases, however, on the first animal operated on, there has been observed perhaps some redness and elevation at the site of operation, and possibly the appearance of accessory vesicles of imperfect type. Successive reinoculations from one animal to another, however, has resulted, after two, three, or more removes, in a vesicular eruption at the points of operation, which again is indistinguishable from the result following on ordinary vaccination of the calf. Instances of such a chain of events is found in the experiments of Voigt, Fischer, Haccius, Eternod, and myself.

Lastly, even successive removes through a considerable number of animals may be unattended by any evidence of actual vesiculation, although an inoculable disease is obviously transmitted throughout the series, tending indeed in successive removes to "take" at each inoculated point with greater certainty. Such has been the recent experience of Klein, who found however that lymph taken on the seventh day from certain incisions of the fourth calf of a series, when inserted into the arm of a child, gave rise to a vesicular eruption in the latter, typical in all respects on the eighth day of vaccinia. On transferring lymph from this child's arm back to the bovine animal, he obtained in the retrovaccinated calf results not to be distinguished from that current in the calves vaccinated in the ordinary course at the Local Government Board's Animal Vaccine Establishment. Finally, after a lapse of six weeks, Dr. Klein submitted this retrovaccinated calf, and other calves vaccinated from it, to the test of a further and thorough vaccination with current calf lymph, and with the result that all these animals entirely resisted vaccinia.

Of my own experiments the most successful series may briefly be described as follows:

With variolous lymph (contained in two capillary tubes) taken on July 30th, 1892, from a vaccinated girl, aged 16, at the fifth to the sixth day of the eruption of discrete small-pox, I on August 11th inoculated a cow-calf (A) about six weeks old by thirty-two linear incisions and two super-ficial scarified patches made on the abdomen.

On August 13th (the third day) this calf presented nothing but a slight scab over the scarified patch.

On August 15th (the fifth day) some of the incisions were somewhat red and elevated, more particularly at several definite points which tended to be vesicular. At this date, on the inner aspect of each thigh and distant in each instance from extra incisions or scarifications, was a crop of shotty and incipiently vesicular pimples.

On August 17th (the seventh day), having clamped three of the incisions, including those with the quasi-vesicular appearance, I removed the lymph with the crusts by scraping, and used the material for the inoculation, on this date of Calf B in fifty-two linear incisions on the abdomen. The accessory incipient vesicles I left untouched.

From first to last Calf A never exhibited any appreciable rise of temperature or indisposition of any sort. On the ninth day the linear incisions, the cross scarifications, and the accessory vesicles were in their decadence, and in a few days more the whole process was at an end.

More than a month later, namely, on September 22nd, I vaccinated this calf A in twenty-three linear incisions with calf lymph obtained from the Animal Vaccine Establishment. The result was absolutely negative.

On August 17th, with the scrapings obtained the same day from Calf A, I inoculated a cow-calf (B) 2 months old in fifty-six linear incisions on the abdomen. On the third day every one of these incisions were distinctly raised and bordered by a delicate pink flush.

On the fourth day (August 20th) all incisions had evidently "taken," the areola about each being now well marked, and about one-eighth of an inch in width, but there was no definite vesiculation. At this date, after clamping, scrapings were taken from certain of the incisions for further experiment. No accessory vesicles appeared in this calf, which, along with Calf A, was vaccinated on September 22nd in seventeen linear incisions with calf lymph obtained from the Animal Vaccine Establishment. The result, as in Calf A, was absolutely negative.

On August 20th, with scrapings taken the same day from Calf B, I inoculated a small cow calf, C (7 weeks old) in twenty-seven linear incisions on the abomen. On the fourth day (August 23rd) every incision had "taken," and in most of them there was evidence of commencing vesiculation. Two days later (August 25th) vesiculation was distinct in several of the incisions. At no time were there any accessory vesicles. This calf also was vaccinated (September 22nd) with calf lymph from the Animal Vaccine Establishment. Again the result was altogether negative.

Thus far I have obtained an undoubtedly successful result in one series only out of four attempts, but I have at any rate been able to satisfy myself that it is possible to variolate the calf, and further that the result obtained in the first instance may become greatly modified in the course of successive removes; and, again, that animals which have been thus treated are no longer susceptible to vaccination.

I may perhaps mention here that all my experiments were conducted at the Brown Institution to avoid any possibility of contamination with vaccinia; that as a further precaution new scalpels were used, which were invariably first carefully sterilised in a flame; that before and after use the table was thoroughly washed with carbolic acid and hot water, and during the intervals of use kept exposed to the open air.

The final test of the vaccination of children with lymph passed through several removes from the calf first variolated has been extensively carried out in connection with the recent experiments of Haccius, King, and Simpson, and to a less extent with those of Hime and Kleir. Altogether many thousands of children have been inoculated with lymph descended from an ancestral case of true small-pox, but although this is so, I believe I am correct in saying, at any rate as regards Haccius's "variolo vaccine" lymph, that in no single instance have any of the ill effects of variolous inoculation been produced. Nevertheless, those who deny the relationship of small-pox and vaccinia will say that these children have been variolated, and not vaccinated. One, of course, admits that they have been variolated in the sense that they have been inoculated with lymph descended from a case of human small-pox, just as was probably the case in the enormous number of children on whom Badcock's lymph was used, but differing from the mild inoculations of Adam Dimsdale and the Suttons in that the resulting disease is no longer contagious. If, then, it can be conclusively proved that small-pox lymph, by residence in the tissues of the calf, can be so attenuated and altered in character as to become deprived of its power of causing a generalised eruption, and more important still, that by such treatment it loses its contagious nature, while causing at the site of inoculation what is indistinguishable from a typical vaccine vesicle, one is, I think, irresistibly drawn to the conclusion that vaccinia is a modification of, if not identical with, variola, especially as these two diseases exert a mutually protective action against one another.

Bacteriology of Vaccine and Variolous Lymph.—Since the days when Chauveau and Burdon Sanderson first demonstrated the probability of the particulate nature of the specific virus of vaccine lymph a great number of bacteriologists have devoted themselves to the search in this lymph for a micro-organism to which the special and peculiar effect resulting on the inoculation of such lymph was due.

At various times numerous micro-organisms have been isolated and described, of which some have been regarded by their discoverers as the active contagium, but on further investigation this has hitherto been found not to be the case.

In 1890 Pfeiffer described certain protozoa and zoösphores as found by him in the vaccine "vesicle"—as in all other vesicular eruptions in man and the lower animals—mainly within the epithelial cells. Pfeiffer has since published a further account of these supposed organisms, while the presence of protozoa has also been described by Van der Loeft, Guarnieri, and Doehle. Quite recently in this country Ruffer, who has been kind enough to show me his specimens, has called attention to the fact that these bodies occur in and among the epithelial cells of an inoculated area.

It should be mentioned that the most recent experiments in this direction have been carried out on the cornea of the rabbit, an animal which in my experience is insusceptible to vaccinia. I may also add that, to the best of my belief, no such appearances have been produced in a further series of rabbits by the carrying on of the infection from the animal first operated on. Neither have these bodies been satisfactorily demonstrated in vaccine lymph itself. It is therefore, I think, conceivable, especially in the light of D'Arcy Power's recent work, that the bodies in question may represent merely the result of epithelial irritation caused by the scarification, together with that—of a non-specific nature, however—set up by the vaccine lymph employed.

In this connection, however, I desire to call attention to the fact that during the past year I have found it possible, by certain staining methods, to demonstrate in vaccine lymph the presence of a small bacillus, sometimes in considerable numbers. This bacillus is to be found most readily in lymph taken on the fourth or fifth day (seventy-two to ninety-six hours) in the calf, while, later lymph, such as that obtained at the ordinary period for purposes of vaccination contains but few at most. This fact, which not unlikely has relation to spore formation by the bacilli at about the time of maturity of the vaccine vesicle probably accounts for their presence having been overlooked by other workers in this field. If proper precautions be taken in the collection of the lymph it is usually found that although these bacilli are present, often in extraordinary numbers, other bacteria are conspicuous by their absence.

Dr. Klein, who is unfortunately not able to be present, has also, though by a completely different process, invariably been able to demonstrate under similar circumstances a bacillus which, as far as can be gathered from descriptions and photographs (for at the time of writing I have not seen his specimens) tallies in all respects with that which I myself have noted, and which I propose, with the assistance of my fellow worker Mr. Kent, to demonstrate to you to-day. I think it only right however to mention here that although our work has been done entirely independently, it is undoubtedly to Dr. Klein that the honour belongs (although his work is not yet actually published) of having been the first to call attention to the presence of this bacillus in vaccine lymph. Its occurrence in variolous lymph was first described by Besser. We however have gone a step further, and have been successful in demonstrating what we believe to be the same bacillus, actually in the tissues themselves; having made, partly with this object, a series of sections of the vaccine vesicle in the calf, ranging from the first day of the inoculated disease onwards. For purposes of comparison with our lymph specimens, Dr. Klein has kindly sent me photographs of his own preparations.

The fact that apparently identical bacilli are to be found in variolous lymph of about the fifth day or eruption, tends I think to support the hypothesis that these bacilli in reality constitute the active contagium of the diseases in question. Unfortunately up to the present it has not been possible to cultivate this particular bacillus in artificial media (although we have some reason for believing that we may eventually be successful) but this very fact tends to show that it is not a merely "extraneous" saprophytic organism.

Although this is apparently so at present, I have shown elsewhere[1] that it is possible to prepare for purposes of vaccination, for instance, a substance containing what may probably be regarded as a pure culture of the organism peculiar to vaccinia. It has been abundantly shown that vaccine lymph as ordinarily obtained gives rise when inoculated into various nutrient media, of which plate cultivations are subsequently made, to growths of various saprophytic organisms to which I have applied the term "extraneous" for the reason that they have obviously no part in the specific action of the lymph in which they occur.

[1] *Transactions of the International Congress of Hygiene, London 1891*

If, however, previous to making a plate cultivation, the lymph has been intimately mixed with a certain proportion of either glycerine or anhydrous lanolin, and subsequently kept protected from the air for a period of from a few days to a couple of months, it is found that all "extraneous" organisms have been killed out, and no growth occurs in gelatine or agar plates. At the same time, the mixture will be found to have gained in efficiency as vaccine rather than the reverse. These facts, to which I first called attention, have since received—as far, at least, as concerns the use of glycerine—ample corroboration from certain French observers.[2]

Both of these substances have, of course, been in use for some considerable time past for the multiplication and preservation of vaccine lymph, but I am not aware of the peculiar action exerted by them in the elimination of "extraneous" organisms having, previously to my work, been pointed out.

In view of the fact that by the use of such substances in admixture with vaccine lymph one can apparently obtain the essential contagium of vaccinia in an uncontaminated state, we propose using such glycerinated and lanolin lymph in a further series of cultivation experiments which we have in contemplation.

In conclusion, I may express my firm belief in the theory as to the pathology of vaccinia expressed in the term "variolæ vaccinæ" given by Jenner to this disease. However imperfect in the first instance may have been the experimental methods on which such theory was based, it has in my opinion received during the century which has elapsed since Jenner wrote, and more particularly during the last few years, most ample scientific corroboration.

II.—A. F. Stanley Kent.

THE HISTOLOGY OF THE VACCINE VESICLE.

(A Preliminary Communication.)

Although I have now been working upon the subject of the histology of the vaccine vesicle for some time, and have followed the changes taking place from the time of inoculation up to the fourteenth day, I have decided that upon the present occasion it will be profitable to devote myself more especially to two points only—

(*a*) The occurrence of micro-organisms in the tissues.

(*b*) The changes taking place in the nuclei and cytoplasm of cells as a consequence of vaccination.

Micro-organisms in the Tissues.—Although numerous workers have taken up the task of isolating the specific virus of vaccinia, and although numerous organisms have been isolated from vaccine lymph and cultivated, yet up to the present no organism has been discovered which can be claimed to have fulfilled the conditions necessary to admit of its being recognised as specific of vaccinia, and it may be taken as proved that up to the time my observations were commenced the specific virus remained undiscovered.

Regarding the great difficulty that has always been experienced in working with lymph alone, and considering the inability of previous workers to obtain pure cultures of the virus, and the resulting absence of any accurate knowledge of the material actually used, it appeared to Dr. Copeman and myself that good results might follow the simultaneous study of the lymph on the one hand and of a series of sections of the vaccine vesicle on the other.

The result has justified our expectations. For whilst by a modification of Loeffler's methylene blue staining we have been able to show that there exists in the lymph a bacillus which we have reason to think has an intimate relation with vaccinia, in the sections we have been able to demonstrate by a modification of Gram's staining method, the presence of an organism which, if not identical with that found in the lymph, at all events very closely resembles it.

In the lymph the organism is generally seen to occur as colonies consisting of from two or three up to thirty or forty individuals, each of which presents itself as a rod about 1 foot in length, and rather less than half of this in thickness. The ends are rounded, and both in methylene blue and Gram preparations there is an appearance of a deeply stained portion at each end and an almost unstained portion in the middle. This unstained portion may represent a spore which would be of interest, as possibly explaining the permanence of vaccine lymph when preserved dry on points.

In the tissues the organisms have much the same general appearance, except that they are smaller; this, however, is of less importance, as in hardened tissues one expects to find micro-organisms smaller than in dried cover-glass preparations. One point of importance, however, is that very frequently in the tissues the organisms occur in groups of two or three to eight or ten, contained in cells, these cells apparently being generally wandering cells, but occasionally resembling fixed corpuscles. These cells are so numerous that in a circle of $\frac{1}{25}$ of an inch as many as thirty to forty may be seen, each containing from two to three up to ten or twelve individual organisms. The organisms occur sometimes in the cytoplasm, sometimes in the nucleus.

These organisms we have been able, by adopting special means, to cultivate, and the culture inoculated in calves has given rise to vesicles which up to the fourth day are indistinguishable from those produced by normal lymph.

Changes in the Cells.—The changes occurring in the cells may be divided into two classes:

(*a*) Those occurring in the nucleus.

(*b*) Those occurring in the cytoplasm.

(*a*) Those in the first class present themselves as a breaking up or fragmentation of the nucleus of such a nature that the original nucleus comes to be represented by a number of more or less angular fragments which still stain very well with nuclear dyes, and from which it is almost impossible to wash the violet tint of Gram's stain. This process of fragmentation appears to go on until the nucleus is unrecognisable, and the cell finally undergoes disintegration. Occasionally a cell may be seen in which the nucleus appears to be splitting into two, and from the opening darkly-staining granules appear to be extruded.

(*b*) The changes in the cytoplasm are more complex, and have for their result the appearance of rounded or spherical masses without any very marked affinity for stains, and containing a central particle which stains darkly with hæmatoxylin. The nature of the bodies I am at present investigating.

The paper was illustrated by lantern slides.

III.—Dr. Leonhard Voigt,

Oberimpfarzt, Hamburg.

ON VARIOLA VACCINIA AND THE NATURE OF VACCINE LYMPH.

Jenner considered the protection afforded by vaccination to be due to the fact that the virus which he employed was the active agent of human small-pox, modified by transmission through the bodies of animals, especially the horse and the cow, but he did not himself try to get variola vaccine by transmission of small-pox virus to cattle. The first who attempted this experiment in Europe was Dr. Gassner, district surgeon at Günzburg, Bavaria. In 1807 eleven attempts gave but one successful result. But evidence was at once forthcoming from other experimenters to prove that vaccinia could not thus be induced. Then follows, in 1828, Dr. Sunderland's well-known experiments of infecting cows by means of blankets that had been used by patients affected by severe types of small-pox. In the hands of others, however, similar attempts failed; yet ten years later Mr. Ceely reported a similar instance of accidental infection. In the interval inoculations of small-pox in cows had been followed by successful results in the hands of Thiele, Ceely, and Badcock. In 1836 Thiele, at Kasan, made numerous attempts to inoculate cows with variolous matter, and succeeded in some—I believe in seven—cases in producing vesicles with the physical characters of those of cow-pox. He continued his new stock of lymph through seventy-five removes on man, and he vaccinated no fewer than 3,000 persons.

Independently of Thiele, but just at the same time, Ceely, of Aylesbury, obtained a new variola vaccine stock of lymph by inoculating cows with the matter of small-pox eruptions,

[2] Chambon and Ménard, *Gazette des Hôpitaux*, December, 1892.

Ceely vaccinated personally with this new lymph 12,000 children, with no worse result than the occasional occurrence of rashes recognised as those occasionally accompanying ordinary vaccination. The Ceely lymph became then highly valued, and spread universally. It was sent to Hanover by request as being preferable to that vaccine hitherto in common use there. But Dr. Schneemann, the district surgeon of Hanover, a year later, stated, in a somewhat disappointed tone, that he could not find any difference in the value of the new and the old stock of lymph. Accordingly, Schneemann in 1838 verified the true vaccinal nature of Ceely's lymph, but, according to Professor Crookshank, it is, since 1889, quite a mistake to speak of this operation as vaccination; it is, rather, a simple modification of the Suttonian system of small-pox inoculation in which, in the first remove, the cow was substituted for the human subject.

Badcock made no fewer than 300 experiments for the purpose of obtaining variola vaccine lymph and succeeded in 37 instances. Irrespective of the large number vaccinated by Badcock since 1840, many thousands of children were operated upon by 800 practitioners, who were thus supplied; and lymph of this nature doubtless is continued by transmission up to the present time in the south of England.

I cannot agree with Professor Crookshank when he says all those who have been inoculated with Thiele's, Ceely's, and Badcock's lymph have not been in the true sense of the word vaccinated; they have not been "cow-poxed," but they have been variolated. If it is suggested that the lymph of Thiele, Ceely, and Badcock did not lose the type of small-pox, then we must demand evidence of cases in which small-pox is conveyed to other people by vaccinated children.

The new lymph of Thiele, Ceely, and probably also that of Badcock, caused powerful local and universal reaction: and some of the vaccinated children are said to have suffered from illness on the third and fourth and the eleventh and thirteenth days. Also rashes or some other secondary eruptions occurred more frequently than after the application of ordinary vaccine lymph. If this was unmodified small-pox, then contagion must have spread and become known after such innumerable insertions, but not a single case of small-pox occurred. Certainly not every inoculation of bovines with small-pox lymph extinguishes sufficiently its small-pox type. In three or four cases—one occurred in Berlin in 1847—small-pox succeeded the retransfer of the first remove of variola vaccinia from the cow to children. In one case, that of Gauthier and Claubry, as Parola mentions, the result was a greater spread of the disease.

Dr. Reiter, of Bavaria, inoculated during a long series of years fifty cows with small-pox lymph, but he obtained only in one case in 1839 a characteristic vesicle. After taking lymph from this vesicle he inserted it in the arm of a baby. The vaccine took pretty well, but a secondary eruption, fifteen vesicles, appeared like varicella. The child recovered, and other members of the family were not affected, but some days later in the cowshed of the animal inoculated two cases of cow-pox appeared, providing good vaccine.

Thus we have very different reports as to the effect of retransfer of the first remove of variola vaccinia from the cow to the man. On the one side innumerable cases of harmless reaction and powerful protection against small-pox, on the other side few cases of propagation of this disease. Here progress stopped until 1865, when the Commission of Lyons assembled under its President, Chauveau. It is true some successful transmissions of small-pox to the cow had become known, for instance, that of Adams in Waltham and of Putnam in Boston. In both cases splendid vaccine was obtained, but experimenters were somewhat discouraged. The conclusions arrived at by the Commission from Lyons have since been proved to be partially correct, but the President, Chauveau, has stated as recently as 1891 that "vaccine virus never gives variola to man. The virus of variola never produces vaccinia in the ox or horse. Vaccinia therefore is not attenuated variola. The two virus, variola and vaccinia, cannot be reduced to a single virus."

The principal advance made by the Commission of Lyons was in connection with their experiments by the inoculation of human small-pox through a series of bovines. The Commission reported that human small-pox matter did not produce vesicles on cows like vaccinia, but papular elevations, and that if the scanty lymph in these eruptions were transmitted to other cows its power was speedily extinguished. In man it produced vesicles at the point of insertion, but small-pox seemed to result. They stated, further, that bovines after this inoculation were protected against secondary vaccination on inoculation.

So great was the weight allowed to the opinion of the Lyons Commission that it seems to have restrained independent observers. Variola vaccine was obtained by Dr. Vy at Elbœux, and in 1871 by Dr. Senfft in Wiesbaden, but these experimenters did not venture to test this new lymph on man. Meanwhile the cultivation of animal vaccine by continued transmission from one calf to the other was alone studied and used.

During the last thirteen years I have inoculated 11 calves with small-pox virus, and in 2 cases was supplied with one good vesicle—a total contradiction to the experiments in Lyons. In the other 9 cases appeared, just as in Lyons, only papular eruptions, yielding immunity to these animals against secondary inoculation or vaccination, and containing scanty lymph, which could not be removed successfully to a second or a third calf.

I undertook my first successful experiment in 1881, and have since continued my stock of lymph until the present day only on animals. With the lymph of the second generation one child was inoculated; with that of the third, 4 children; and I noticed on these children not exactly secondary feverish symptoms, but some undesirable appearances, so that I continued the stock through 21 calves before I used it for public vaccination.

The second successful attempt occurred in 1892, but I did not continue this lymph to a second calf, being then occupied with other researches.

In the first experiment, which procured the much discussed Hamburg variola vaccine, I had inoculated the calf experimented upon with small-pox and vaccine at the same time in two distant parts of its body, on the one part vaccine on the other small-pox.

Chauveau and Berthet maintain that my new stock of variola vaccine has never been more than a continuation of the animal vaccine until then used in Hamburg, and has nothing to do with small-pox. On the contrary, Layet and Crookshank assert that it has always remained small-pox, and that the tendency of this lymph in less early removes to produce small-pox is probably the reason why I abandoned its use in favour of ordinary cow-pox. To this I am compelled to reply. I do not know why or in what manner Dr. Layet and Professor Crookshank acquired this erroneous information. I have propagated my stock always from one calf to the other from 1881 until now. During all these years it was in common public use in Hamburg, as well as in a great part of Germany; and also for many years in the Royal Central Vaccination Institute at Copenhagen, and there was not to be found the slightest trace of its origin, the small-pox. Consequently this lymph must be regarded as pure vaccine and not as small-pox.

To the objection of Chauveau and Berthet I must reply: My new stock was, when I used it first for public vaccination, much more vigorous than the Beaugency stock, which I used previously. Not only the security of successful vaccination of children and animals by transfer from body to body was much improved, but also the duration of the stored lymph was much increased. Afterwards it only retained the value of ordinary animal vaccine. Such an improvement of animal lymph is unheard of; I had procured a new and vigorous stock.

After the publication of this observation, all later experimenters decided to act in the same manner, that is to say, to avoid the reappearance of small-pox by continuing all their new variola vaccines through a series of animals.

In 1886 and 1891 the Privy Councillor, Dr. Fischer, as Director of the Institute for Vaccination at Carlsruhe, obtained by inoculation of two calves with small-pox matter two series of variola vaccine, which since have been always propagated upon animals, and are in common use, especially in the southern parts of Germany. In the first case he transferred the twelfth remove of lymph to the human body, and in the second stock the third remove. In the latter case he

was so fully convinced of the complete modification of the small-pox to the cow-pox type, that he chose his own grandson as the first human subject for vaccination.

Nearly at the same time Haccius and Eternod of Geneva procured three new stocks of variola vaccine, but their later attempts failed. These three stocks are now used far and wide in Switzerland. In July, 1891, Haccius sent a quantity of the seventh remove of the new lymph to Chauveau, to convince this champion of the duality of the two virus. Chauveau inoculated two cows with it, but, obtaining no evident result, he did not assert that the lymph from the institute of Haccius had been deteriorated during the transport in the hot season, but that, being not transportable to other animals, it must have retained the small-pox type. At the same time, Chauveau also urged the duality of small-pox and cow-pox, and that he must entirely deny the success of all experimenters so far proved in the vaccination institutes. The so-called variola vaccinia, he said, could not have been more than vaccinal eruption, caused by spontaneous contagion or after intentional vaccination of the animals experimented upon during their stay in the institute. To Chauveau's bold assertion we oppose the simple fact that until now, at least in Germany, not a single case of spontaneous contagion has occurred in vaccination institutes. Vaccinia in animals is propagated only by local insertion.

Meanwhile unbiassed observers one after the other gave new accounts of similar experiments, many unsuccessful, some few successful. Let us omit the failures and proceed to the reports of Dr. Hime in Bradford, and of Surgeon-Lieutenant-Colonel King in Madras. Both gentlemen produced most satisfactory results on man after having passed the new lymph through seven calves.

A year later King published a report of this new lymph, which had then already been used in more than 400 000 human beings, without affording any reminiscence of its origin—small-pox. Instead of having been rewarded for his zeal and good services, Surgeon-Lieutenant-Colonel King was, as a punishment, relegated to military duty by the Madras Government, which declared that Dr. King was guilty of a breach of trust in professional ethics and towards the Government. This verdict provoked such an agitation among the professional brethren of Dr. King that they supported him in making an appeal, in consequence of which he was fully reinstated. Later in India a real series of transformations of small-pox to cow-pox has been witnessed by Dr. Shordt at Simmery, Dr. Lawrie in Hyderabad, and Dr. Simpson in Calcutta. Finally, in Germany, Dr. Freyer of Stettin, and in France Pourquier and Ducamp, obtained variola vaccinia, but the last two gentlemen did not venture to contradict the opinion as to the duality of the two virus, which prevails in France.

In spite of all these successful transformations of small-pox into cow-pox by well-known and reliable experimenters, opposition did not cease. It was objected in the first place that small-pox might reappear by retransfer of variola vaccine to the human body. Now we must admit that symptoms similar to small-pox in man appeared in some cases after the insertion of cow-pox accidentally discovered, as well as after the insertion of first removes of variola vaccinia. For instance, in England in 1798 Woodville vaccinated with accidentally found cow-pox 107 persons, and saw among them in several cases symptoms resembling small-pox more than cow-pox. It is not exactly known from what source this cow-pox rose, and it is very possible that its origin was small-pox, because this disease was then common; but if we insert small-pox matter into bovines and obtain variola vaccinia, the source of lymph can be only small-pox. Variola vaccine, in its earliest removes, is not fit for vaccination purposes because reappearance of the small-pox type is not impossible. If we are compelled to test its virulence, we must take special precautions. Experience has proved later removes to be free from all danger. By an exaggerated precaution I in 1881 only offered my new stock for public use at its twenty-first remove. King, Shordt, and Hime took the seventh, Fischer even the third remove. The right term must be determined by the vigour of growth of vesicles on the animals, and by some vaccinations on man.

A second objection was founded on the assertion that small-pox produces in bovines no vesicles but only papular elevations, and becomes extinguished in the next removes, and consequently never becomes cow-pox. It was said that if vesicles of vaccinia appeared in bovines after small-pox had been inoculated, it was because the precautions necessary to prevent transfer of vaccinia to these animals had probably been neglected, especially by detention of the animals in a vaccination institute. If Chauveau and the Lyons Commission were discouraged after unsuccessful inoculation of twelve cows, other experimenters were not so easily puzzled. I failed in nine consecutive trials. Reiter succeeded only after the inoculation of forty cows. If Chauveau continues his investigations he will some day be convinced of the reality of variola vaccine and become its champion. The spontaneous transmission of vaccinia from one calf to the other by contagion only is an unheard of event. I have vaccinated between 2 000 and 3 000 calves in my institute; many of them remained there nine days, and I have seen no other transmission than by the lancet.

The permanent successful continuation of a stock of animal lymph on bovines can only be obtained by the exercise of great care. Very few institutes have been able to do so, and animal vaccine would have disappeared long ago if not carefully continued by the lancet. If continued only on animals it often loses vigour and in consequence vanishes, and it is hardly ever possible to restore its lost vigour. Accordingly, if after inoculation of animals with small-pox matter an entirely new lymph appears, of a character and growth differing from ordinary animal or human vaccinia by producing greater local reaction, it cannot have been produced by ordinary animal vaccinia.

The vesicles of ordinary animal vaccinia mature in the hot season within four days, in cold seasons within five days, and in the next twenty-four hours they turn yellow and the contents lose their contagious value. On the contrary, vesicles of variola vaccinia of the first removes mature within five days, and continue to grow until the seventh, eighth, and ninth, sometimes even to the tenth day or longer. During all these days the lymph continues quite pellucid, and extremely contagious; the vesicles show no purulent admixture and the scabs dry slowly away. The difference between the duration and maturity of vesicles of ordinary animal vaccinia and variola vaccinia amounts to six days, and is so striking and so regular that it cannot be mistaken. We can, therefore, concede accidental contagion of vaccinia, if at all, only in a case of variola vaccinia in which this difference is absent, but such a case has not yet occurred. In later removes this difference disappears gradually.

In addition to my own stock I have studied those of Fischer and Hime, both proved to have the above mentioned character. From Hime I received lymph of the first remove, which was taken from the calf nine days after inoculation. It acted powerfully after the journey to Germany. Ordinary animal vaccinia from the ninth day is ineffectual. The growth of early variola vaccine equals that of newly found cow-pox, and proclaims the equality of both. The frequent failures to obtain variola vaccine demand deep reflection. Experimenters have inoculated for this purpose, not only lymph, but also scratched off particles from the basis of small-pox vesicles in every stage of maturity without obtaining constant success. Immediate transfer of lymph seems to be important. Beyond this we have no knowledge of any essential, and I am unable to offer any advice from my own experience.

The great difference between the contagious value of primary and secondary eruptions of small-pox must be remembered. Small-pox in man produces no visible primary affection, but, though not visible, primary affection must exist to open an entrance for the spread of virus through our organism. A primary small-pox vesicle is formed only if virus is inoculated by the lancet, and this vesicle attains greater size and virulence than vesicles which appear as general or secondary eruptions. As soon as the virus has thoroughly invaded our organism, a paroxysm of fever announces our self-defence against this invasion, and it is not impossible that the value of the virus may be altered or debilitated by this fever, and that the vesicles of the general or secondary eruption contain lymph less contagious than primary vesicles.

Down to the present time the inoculation of cows has

always been done with matter taken from a general small-pox eruption. It produced in most cases an abortive reaction in these animals. The scanty lymph of these abortive papular elevations produces nothing if transferred to a cow, but if transferred to a child, as Chauveau has shown, a primary vesicle is the result, followed by an unwelcome secondary eruption of mitigated size. As a mitigation of virus is brought about by its passage through the cow, this may be ventured, but cautiously. If we now take the lymph of this primary vesicle from the child and insert it, not in a child, but in a calf or a cow, we shall most probably procure variola vaccinia or cow-pox.

I have not yet performed this experiment; I have had neither time nor a case of small-pox in Hamburg, but I propose to make the experiment, and I have no doubt it will answer the question. I expect that by 1896 variola vaccinia, as well as the etiology of vaccinia and variola, will be decided, and that when, on May 14th, 1896, we celebrate the centenary of Jenner's first inoculation of cow-pox on man, cow-pox and small-pox will have been universally acknowledged to be due to the same virus.

IV.—M. Armand Ruffer, M.D.,

Director of the British Institute of Preventive Medicine.

Dr. Ruffer said that he could confirm Dr. Copeman's results with regard to the possibility of inoculating vaccinia successfully into monkeys, but in contradiction to Dr. Copeman, he had been able to inoculate rabbits, provided this was done on a moist surface. He was astonished to find that Dr. Copeman had drawn no distinction between the protozoa described by Pfeiffer and those described by Guarnieri and himself. It was absolutely necessary to draw a distinction between the two. He gave a short account of the appearances found in the early and mature pustules.

V.—T. W. Hime, M.D.,

Bradford.

Dr. Hime said the question of the identity or otherwise of vaccinia and variola was of great interest to two very different parties; the antivaccinationist proclaimed that as one could not say if vaccinia should protect against variola, therefore it did not protect—an absurd argument. Scientific men were supremely interested in solving a question of great practical importance, namely, if after variola had been transformed into vaccinia it cannot be retransformed into variola, and further what was the nature of the virus, and how it could be cultivated. That variola vaccinia ceases to be variola is proved by the following:—

1. The difference in febrile phenomena; vaccinia loses the characteristic double fever of variola.
2. Its life-history became much shorter.
3. It ceased to become generally eruptive (the rare cases of generalised vaccinia might be a reversion to the variolous type).
4. It ceased to become infective by aërial carriage.
5. Variola vaccinia never produced variola. Chauveau's Lyons cases were phenomenal.
6. In Dr. Hime's own experiments the vaccinal eruption on the calf appeared in many instances, not at the point of insertion, but quite apart, as a result of general infection and there was accompanying fever.
7. Variola vaccinia might be transferred from calf to child without becoming retransformed into variola, and back from child to calf.
8. Any variations of variola vaccinia from original vaccinia (so-called) which appeared in the first generation, disappeared in continued cultivation through a few generations of calves.

Variola vaccinia was not merely attenuated variola, because, as he had stated, it had quite new properties and it could not be brought back to its original form (variola) as all Pasteur's attenuated viruses could. Dr. Hime observed that he had not thought it desirable to use his variola vaccine except experimentally in the few cases necessary to prove the nature of his result, though in Germany many strains of variola vaccine were in regular use in Goverment stations, for example, at Hamburg, Carlsruhe, etc. The beautiful preparations shown by Dr. Kent on the screen were an object lesson, showing the undesirability of using the "lymph" exuded from the pock only. The virus (as no doubt it was) was seen to be deep in the tissues, not merely on the surface. Hence scrapings from the pock, which carried away the specifically infected cells, were the most effective for use, besides possessing the additional advantage that the surface parts were so much more easily fouled by atmosphere, dust, etc. Glycerine mixed with vaccine was first used by Mueller, in Berlin, and was approved by the Government of Germany, after careful investigation by Koch and others. Its action was twofold: (1) as an extractor of the virus; (2) as a disinfector, destroying extraneous impurities which it was sometimes difficult to remove even by the most careful cleaning of the calf. Hence there was a great advantage in using glycerised calf vaccine as compared with vaccine taken direct from calf to arm. This latter practice, which is carried on by the Local Government Board, was not commonly adopted in the institutions of other Governments. The use of glycerine was thus seen to be no fraud, but a great improvement. It was hardly to be suggested that Governments would use it with fraudulent intent. Glycerised calf vaccine is generally used by Governments not only abroad but by the military authorities of this country, our army and navy being both vaccinated with glycerised calf vaccine.

VI.—Surgeon-General Cornish, C.I.E.

Surgeon-General Cornish said that he quite agreed with Dr. Voigt as to the identity of the vaccine and variola virus. He illustrated this point by the experiment of Dr. W. G. King, Sanitary Commissioner of Madras, who after passing variolous lymph through a succession of seven calves, vaccinated a child which passed through the regular stages of vaccinia, and from that source procured a supply of lymph, with which about 400,000 children were vaccinated.

VII.—G. S. Woodhead, M.D.,

Dr. Woodhead, the President of the Section, said that it was a matter of interest not only to the members of this section but also to the profession and to the public to find three experts, all of them men actively engaged in the study and practice of vaccination, who were practically unanimous in looking upon vaccinia as a transmuted variola obtainable experimentally in one way only, and that was by the passage of variolous lymph through young bovines. The bacillus described could not yet be accepted as being the main etiological factor in the production of the process, as it seemed to resemble in some most important respects the bacillus or class of bacilli associated with the hæmorrhagic septicæmias and similar processes. In conclusion, he thought that it was singularly appropriate that such a discussion should take place in Gloucestershire, and he hoped that when 1896 came, Dr. Voigt's wish that much new light might be thrown on the subject would be realised.

Dr. Voigt.

Dr. Voigt, in reply, said that he had, in 1885, inoculated calves with the micrococci of vaccinia lymph, and in one case had seen develop, not at the point of inoculation but on the gluteal region, a number of vaccine vesicles. In 1893 he had obtained good vaccine vesicles at the point of local insertions after inoculation of similar vaccinal cocci, given to him by Dr. Ruete, in Hamburg. Dr. Voigt had continued these stocks of lymph through many removes in calves, and used the lymph for public vaccination.

AN EXPERIMENTAL INVESTIGATION INTO THE CAUSATION OF CANCER.

By D'Arcy Power, M.A., M.B.Oxon., F.R.C.S.Eng.,

Surgeon to the Victoria Hospital for Children, Chelsea; Demonstrator of Surgery at St. Bartholomew's Hospital.

[From the Conjoint Laboratories of the Royal Colleges of Physicians (Lond.) and Surgeons (Eng.)]

I brought before you, gentlemen, in a former paper[1] certain positive results obtained in the course of an experimental study of the causation of cancer. I propose now to give you a short account of the continuation of a series of experiments upon the same subject. A double purpose will thereby be served, for it will show that, so far as I am concerned, the experimental side of the cancer question is limited, whilst

[1] British Medical Journal, ii, 1893, p. 830.

the time of other investigators will be saved by stating the directions in which my work has failed. In the present series of experiments I assumed that a protozoon was present in cancer, and I have endeavoured to trace it from the tissue forwards into the soil, and thence onwards into the animal. I endeavoured to prepare each animal as far as possible for the reception of the germ by the methods which clinical experience has taught us to be the most favourable for its production or for its development. With this object in view, very old or very young animals were selected, and of varieties as far as possible removed from the wild type, for it is well known that fancy breeds are more delicate and are more prone to new growths than their wild fellows.

Mr. Haviland has come to definite conclusions in regard to the frequency with which cancer occurs in different localities. His results were arrived at entirely by statistical methods, and it therefore appeared to be worth while to ascertain whether they could be checked by experiment. In his book on *The Geographical Distribution of Disease in Great Britain*[2] Mr. Haviland says: "In the counties having a high mortality from cancer we find that the tributaries of the large rivers rise from soft, marly, or otherwise easily disintegrated rocks, and then fall into sheltered valleys, through which the main rivers flow. These rivers invariably flood their adjacent districts during the rainy season, and have generally their water coloured by the suspension of alluvial matter. The Thames counties characterised by their tertiary soil and frequently flooded river, form, as it were, a typical cancer field."

Dr. Fiessinger, who practises at Oyannax, a small town in the Department of the Ain, situated on the banks of the Ange and the Sarsouille, in a similar manner has traced out a series of cases of cancer occurring almost in the form of small epidemics. He points out[3] that these outbreaks are particularly liable to occur on the banks of streams and at the edges of woods, though he does not, like Haviland, attribute them to the soil, but thinks that they are associated with the insects which abound in such situations. Lastly, those who had the good fortune to hear Mr. Shattock's recent Morton Lecture will not have forgotten Mr. Law Webb's most interesting case, where his patients seem to have suffered from the infective nature of cancer possibly transmitted through the agency of water.

Acting upon these hints, I obtained soil from the valley of the Warwickshire Avon about ten miles below Stratford, from the Thames at Oxford, from the Ouse at Bedford, and from the Kennet at Malton, in Yorkshire—all places of evil reputation, according to the statistics of Mr. Haviland, on account of the frequency with which cancer occurs in their neighbourhood. In each instance soil was taken from a low-lying district near the river after a heavy rainfall, when the floods had recently subsided, and from land situated below the town so that the soil might be saturated with as many impurities as possible.

The soil of the Avon was taken from that part of its course which is marked in Mr. Haviland's first series of maps in the deepest blue—that is to say, where the mortality from cancer is more than 7 for every 10,000 females living. The soil had been under cultivation for many hundred years; it was subject to seasonal floods, the flood water being usually discoloured by alluvium. The surrounding country is flat, so that the floods do not easily run off.

The soil from the Thames was taken from a point just opposite the mouth of the Cherwell, in one of the wettest Februaries of late years, when the rainfall in Oxford had been 0.72 inch above the average.[4] The mortality of this part of the Thames valley is given by Mr. Haviland's amended statistics as 4·5 annually for every 10,000 females living between 1851 and 1860; the district is therefore marked in his map a lighter blue.

The soil from the Ouse was taken in that part of its course where the mortality from cancer was about the same as that of the Oxford district.

The soil from Malton was sent to me by my friend Dr. Colby, who believes that cancer is increasing in the district for which he is the medical officer of health. Dr. Colby took the soil from a field which is liable to be flooded by the Yorkshire Derwent. Mr. Haviland showed in 1875 that the Pickering district, which immediately adjoins Malton, and is served by the same river, had a cancer mortality of more than 7 per 10 000 females living in it, and it is shaded in the deepest blue in his maps.

The soil thus obtained seemed to fulfil all the conditions required by Haviland for the successful propagation of cancer. I did not, of course, for an instant expect to find any cancer germ in this soil, nor did I look for it. I merely assumed that it might be, or might be made to become, the habitat of a hypothetical cancer organism. After assuming, for the sake of experiment, that such a germ existed, and that a part of its life was passed in earth, the next step was to provide the organism. Carcinomata of various kinds were therefore taken directly from the operating theatre; they were freed as far as possible from healthy tissues, were ground up in a mincing machine, and were afterwards braised in a mortar with normal saline solution. The pulp was then placed in the glass receptacle of a steam spray producer, and the soil was subjected to the action of the spray for about ten minutes at a time, though it was often difficult to obtain a continuous spray for so long, as the nozzle got clogged. The rest of the cancerous pulp was afterwards thoroughly incorporated with the soil, which was then spread in tin trays to a depth of two inches, and the soil thus prepared was repeatedly moistened with sufficient water to keep it damp without making mud of it. Cages of open wirework were put upon the soil, and white rats were placed in the cages, so that their feet and tails remained in constant contact with the earth.

Each animal was fed daily with bread moistened with half a drachm of tincture of belladonna to prevent as far as possible any secretion of sweat. I hoped by this means to put the rats into the most favourable conditions for the absorption of cancer germs should they exist. Wasmuth, however has shown[5] that the healthy uninjured skin of man and animals is permeable to microbes, which enter between the sheath and shaft of the hairs, but not through the orifices of the sweat and sebaceous glands, and as this may be assumed to be true for the hypothetical parasite, the precaution of administering belladonna was futile. The rats from time to time were sprayed with cancer pulp, and throughout the experiment care was taken to keep the mucous membrane of their vaginæ in a state of slight but chronic irritation by the daily application of lin. iodi, so as to provide, if requisite, a *locus minoris resistentiæ*. I hoped by these means to provide a suitable soil and a suitable receptive medium.

It will be sufficient to give details of the rat living upon the soil from Bedford, for what was done to one was done at different times to all. It was treated with scirrhous glands on January 9th, with scirrhous breasts on January 14th, 30th, and 31st, and on February 4th, with a colloid on February 21st, and with rabbits' livers containing coccidia on June 8th, 1893. Five other rats underwent the same treatment. They lived upon the soil for about eleven months each; four were killed, and two died, one from cold, and the other at the *post-mortem* examination was found to have a large tapeworm lying free in its peritoneal cavity. A careful necropsy was made in each case, but in no instance could a trace of cancer be detected in any of the organs or tissues either by the naked eye or microscopically. The lungs of two of the rats which had been subjected to the spray were found to be shrunken, and their edges were studded with dense white nodules. The centre of each nodule was softer than the outside, and consisted microscopically of round cells of the type of ordinary granulation tissue, whilst the external portion was formed of the pulmonary alveoli blocked with cells apparently derived from the epithelial lining. There was a considerable quantity of extravasated blood in the vesicles, and the red corpuscles were in many cases undergoing disintegration. Numerous spheroidal and granular cells, such as are common in irritated epithelium, and exactly resembling those found in the segmentation cavity of an incubated hen's egg, lay in the blocked vesicles. They were in all probability eosinophile leucocytes. The deeper portions of the cortex of the nodule consisted of newly-formed fibrous tissue. The explanation of these appearances in the lungs seems to be that as a result of the irritating action of the spray, or of substances

[2] Lond., 1892 edit., p. 37.
[3] *Rév. de Méd.*, 1893, p. 13.
[4] The *Times* March 28th, 1893, "London Water in February."
[5] *Centralbl. f. Bakt.*, December 20th and 28th, 1892.

introduced by the spray, there was congestion leading to an extravasation of blood into the alveoli; farther irritation led to multiplication of the epithelial cells lining the pulmonary alveoli; finally there was a fibrillation and contraction of the newly-formed inflammatory products. In other words, there were set up all the changes leading to the condition known as "pseudo-tuberculosis," the results of a defensive or phagocytic inflammation.

Assuming that cancer is produced by an organism, it is clear that the organism must gain access to the body unless it be held that the host was born with the germ—an untenable hypothesis. It is probable that such a germ would only grow and multiply in those bodies whose tissues afford it a proper food supply. The only ways in which such a parasite could effect an entrance into the body is by the respiratory or digestive tracts, direct inoculation of a wound, or by implantation into the skin or mucous membranes. Messrs. Ballance and Shattock have shown that cancer cannot be produced by feeding experiments; my own results prove that it cannot be introduced through the mucous membranes. Many experimenters (Hanau, Langenbeck, Follin, and Lebert) have demonstrated the extreme difficulty with which cancer can be inoculated from without, and even the positive results which they have attained do not appear to be absolutely free from fallacy. It seemed, therefore, that cancer might possibly enter the body through the respiratory passages, and might then travel to the tissues most suitable for their growth and development, as is the case with many infective organisms. The rats were therefore sprayed in the manner I have described, and their mucous surfaces were kept in a state of chronic irritation, for cancer occurs where epithelial cells, or rather tissues, are undergoing degenerative changes.

Another question which arises out of a consideration of the etiology of cancer is, How is the disease distributed? The conclusions arrived at by Surgeon Hehir and by the great Italian school of scientific medicine in regard to malaria appear to have a certain bearing upon this question. Ague certainly, and cancer possibly, are produced by specific organisms of the nature of protozoa, which gain access to the body from without.

The disease cannot be inoculated in either case, or, in other words, in neither disease does the organism when once it has been introduced into the body leave it again in a condition fitted to reproduce the disease. Malaria however differs from cancer in its termination. In malaria there is no tendency on the part of the parasite to kill its host; in cancer the disease usually progresses steadily towards a fatal issue. This at once marks a difference between the two organisms, and it may lead to a better knowledge of the distribution of these diseases. In a very able paper, which appeared in the *St. Thomas's Hospital Reports*, for 1892,[6] entitled Specific Diseases Considered with Reference to the Laws of Parasitism, Dr. Payne points out (p. 86) that if death is a usual or frequent consequence of any parasitic disease, it raises the presumption that the vitality of the infecting organism is not destroyed, or even that the continuance of the species may be favoured by this event. Many difficulties at once offer themselves in regard to the parasitic theory of the origin of cancer if it be considered from this standpoint. The disease is too exclusively human for any wide distribution to be effected by the disintegration of the host's body such as takes place in anthrax, the plague, or typhus. It is possible to assume that the hypothetical protozoon causing cancer is only one stage in the development of a higher organism, that is to say, it is one stage in the alternation of generations which is so frequent in the lower forms of animal and vegetable life, and it is this point which I have endeavoured to elucidate, but so far without success. It is of course possible, too, to assume that the cancer germ is exclusively human in its proclivities, as appears to be suggested by the ease with which Hahn and von Bergmann are reported to have transferred cancer from one part to another of a cancerous patient's body, though here again their experiments are open obviously to another interpretation.

The "cancer organism," which was described by Dr. Ruffer in his earlier papers, appears to be exclusive human in this sense, for after grafting cancer upon the irritated mucous membranes of animals I have succeeded[7] in obtaining appearances which resemble these bodies, and which I have not yet found as a result of the simple irritation of tissues, or after the grafting upon them of such normal epithelial cells as those on the anterior surface of the cornea. In the rabbit the structures resembling Ruffer's "cancer" bodies are intracellular, and are also found between the cells, but they entirely disappear within a week of the introduction of the cancerous tissue, and I have not yet ascertained what becomes of them. They are, perhaps, destroyed by the cells which they have invaded. If this be so, and assuming that such bodies are the cause of cancer—an assumption which is still gratuitous, for it has to be proved—we have an explanation of our inability to produce the disease artificially in animals. It may be that the "cancer bodies" are merely phases in the degeneration of cells, and that, as the changes become more marked, these striking appearances disappear.

The result of my experiments is negative as regards the propagation of cancer, but interesting preparations have been obtained showing the various forms of cell degenerations. Many of these degenerated cells have been described by different writers as parasites. They are met with, as I shall show next week at the Oxford meeting of the British Association, in normal epithelium which has been slightly irritated, and I am therefore bound to confess myself an unbeliever in any of the "cancer bodies" which have yet been discovered. No evidence has been adduced to show that they are other than the results of cell degenerations, modified, it may be, by the conditions under which they occur, but not differing essentially from the changes which take place in cells as a result of chronic irritation. The cause of cancer has still to be discovered, but we are one step nearer to it if by a process of exclusion we are able to say that it is not due to any one appearance or group of appearances met with in carcinomatous cells.

Dr. W. RUSSELL thought that the work of Mr. D'Arcy Power was of a most important kind. His own position was that no one now doubted the existence of the intracellular bodies, but the two views as to their nature would remain until a further step was taken in the investigation, and that had to be waited for.

Dr. CATTLE agreed with Dr. Russell that up to the present it was impossible to decide whether the so-called "cancer bodies" were actual parasites or products of cell metamorphosis. Nevertheless, the persistent growth, the tendency to become generalised and to cause death on the part of cancer afforded good reason to believe that it was caused by an extraneous agent.

Dr. MCWEENEY considered that a debt of gratitude was due by the general body of pathologists to those gentlemen who, like Mr. Shattock and Mr. D'Arcy Power, had carried out lengthy series of troublesome investigations with negative results. These gentlemen cleared the ground for subsequent investigation. He did not think that Mr. Power's plan of introducing the cancer organism into the specimens of soil could be expected to fulfil its object, for by whatever means the supposititious cancer germ found its way into the soil, it could hardly be by direct transference from cancerous tumours, which, being buried with their subjects, underwent complete anaërobic decomposition in a somewhat deeply situated layer of the soil; some intermediate form must be assumed. With regard to the claims of the "cancer parasite" to be regarded as the cause of the disease, or even as an independent organism, he would frankly express his opinion that the principle of authority could hardly be allowed to prevail in the absence of logically conclusive evidence as to the true nature and *rôle* of these structures.

[6] N. S., vol. 20, pp. 59-106. [7] BRITISH MEDICAL JOURNAL, 1893, ii, p. 839.

THE FUNGUS-FOOT DISEASE OF INDIA.

By R. W. BOYCE, M.D.,
Professor of Pathology, University College, Liverpool,
AND
N. F. SURVEYOR, M.D.,
From the Pathological Department of University College, London.

SINCE our last paper read before the Royal Society[1] on the "Fungus-foot Disease of India," our work has been chiefly

[1] *Journal of Pathology and Bacteriology*, vol. iii, 1894. *Proceedings of the Royal Society*, 1893. *Transactions of the Royal Society* April, 1894.

directed towards cultivating the organisms found in both the varieties of the disease, namely, the black and white, and we have to thank Brigade-Surgeon-Lieutenant-Colonel Keith, of Hyderabad (Sind), and Surgeon-Major Hatch, of Bombay, for placing fresh material at our disposal.

Numerous glycerine-sugar-agar tubes were inoculated by Dr. Keith and his assistant Dr. Boccaro, and sent over to England, while in Bombay one of us had the opportunity of making inoculations on similar tubes from a case of the white variety which was in the J. J. Hospital under Dr. Hatch. The great difficulty experienced both here and in Bombay was to get the cultures free from putrefactive and pyogenic micro-organisms. In March last Dr. Boyce succeeded in getting a tube with white particles which showed hardly any contamination, and the result has been the cultivation of a streptothrix.[2] Dr. Vincent, of the Pasteur Institute, Paris, has been working at the same subject, and he has kindly placed at our disposal cultivations of a similar streptothrix from a case of the white variety which he came across in Algiers.

In the present communication we give an account of the life-history of the organism, and compare it with similar organisms, especially actinomyces. This organism grows very slowly on most of the nutrient media we have tried. In gelatine and broth it does not seem to grow at all, but cultures taken from these media begin to grow when transferred either to potato or glycerine-sugar-agar. On these media the growth does not appear to make any progress for about a week, but after that the margin round the inoculated area shows slight projections, which thicken gradually, and give to the growth a radiate appearance. Minute colonies are formed round the central growth, and these show a cross-like depression, which becomes more marked as they increase in size. The growth is firmly adherent to the nutrient medium at the margins, while the central part is loosely attached. Its colour is dull white or slightly pinkish. When manipulated with a platinum needle it appears like brittle membrane, and crumbles to pieces on trying to tease out a particle. The mode of growth is almost identical on agar and potato. It grows best in oxygen at a temperature of 37° C. on glycerine-sugar-agar or potato, rendered alkaline by being boiled in sterile broth. stab inoculations only grow at the surface. In an atmosphere of hydrogen the growth is excessively slow. In this respect it differs from actinomyces, which grows easily in an atmosphere of hydrogen. Coverglass preparations take up the aniline stains very easily. The best results are obtained with Gram's method. The specimen shows a dense network of mycelia, individual filaments of which are easily recognised at the periphery of the network. The filaments are long and very slender. No septa could be made out, nor has any dichotomous division of the filaments been observed. Under the microscope these filaments appear identical with, but slightly thicker than, those of actinomyces. They differ from cladothrix alba and asteroides in having no septa, and from cladothrix dichotoma in the absence of pseudo-division. When examined fresh these filaments appear to have a very thin cell wall and finely granular protoplasm. No spores have been observed, nor can any motion of the filaments be detected. From actinomyces[3] filaments they differ in the rapidity with which they take up aniline stains. Some of the filaments appear to be slightly bulbous at the end, but no spores can be detected at this part. They are very brittle, and on attempting to separate them they generally break up into short pieces.

While in Bombay one of us had the opportunity of examining fresh particles of the white variety, and the purulent discharge from the sinuses in a case placed at our disposal by Drs. Hatch, Parukh, and Nanavahi. The fresh particles showed numerous acicular crystals, which were easily dissolved up by alcohol and ether, leaving the particles free, and thus clearly showing the radiating filaments of the fungus.[4] The fresh particles, when examined with Nicol's prisms, showed a peripheral zone which rotated polarised light. Particles, after being treated with alcohol and ether, did not show the same zone, thus proving that these reagents had dissolved away the crystalline structure. The discharge showed numerous oil globules and dark red pigment granules. On treating these granules with hypobromide of soda solution, according to the method we applied for decolorising the particles found in the black variety of mycetoma, they did not lose the colour easily, nor did they show any fungus at all. On leaving them in ferrocyanide of potassium solution for about fifteen minutes, and subsequently transferring to dilute nitric acid, the Prussian blue reaction for iron was easily obtained. When treated in the same way with ferrocyanide of potassium and dilute nitric acid a green colour was obtained. Some of the sections showed similar particles in the inflammatory area, and these also gave the same reaction. In one of the cases the chief peculiarity noticed was the invasion of the muscles of the leg thus converting them into bags full of the white particles.

Our attention was drawn to the question whether the lower animals suffered from a similar complaint or not. Dr. Goudinhoe, of Bombay, showed to one of us a small piece of tissue excised from a horse suffering from a disease called the "kankir" or "barsati" growth. This disease generally appears during the rainy season, and thus it is called the "barsati growth." A chronic ulcer forms on one of the extremities, from which white particles are discharged. The term "kankir" is applied to the disease on account of the presence of these particles. The veterinary surgeons generally excise it, but the disease reappears often in the same part during the next rainy season. Secondary growths have been described as occurring in the lungs. An excised piece was examined by us for the presence of a fungus similar to the mycetoma fungus. The particles were very hard and horny. Pure nitric acid made them swell up and dissolve. Treating them with hypobromite of soda did not show any fungus, neither did sections of the tissue with the particles *in situ* show it. The fact of secondary growths in the lungs, however, points to the presence of an infective agent in these particles.

In conclusion, returning to the mycetoma fungus, we have only to state that inoculation experiments have not been as yet carried on with the cultivated organisms. Finally, we have to thank Professor Horsley and Professor Childe, of Bombay, in whose laboratories the observations were made.

The President (Dr. Woodhead) thought that the special interest of the communication lay in the fact that it afforded additional evidence of the parasitic nature of Madura foot, which had so long been insisted upon by British pathologists in India. Although inoculation experiments had not been successful up to the present, there could be no doubt that the evidence of the parasitic nature of the disease was becoming stronger every day. The relation of the disease to a group similar to actinomycosis, and the identification, separation, and cultivation of an organism of the streptothrix group were all advances for which pathologists were deeply grateful to Dr. Surveyor and Professor Boyce.

[2] *Hygienischen Rundschau*, 1894, No. 12
[3] Dr. Carter and Dr. Kanthack.
[4] Dr. Carter and Drs. Lewis and Cunningham.

CANCER AND PHAGOCYTOSIS.

By Herbert Snow, M.D.Lond.,
Surgeon to the Cancer Hospital.

The author pointed out that every variety of malignant new growth exhibits from its earliest initiation the phenomenon of an extremely copious leucocytic immigration; that the leucocytes steadily and progressively increase in number throughout, but are always restricted to the normal tissues, generally fibrous, immediately bordering on the cancerous parenchyma. Penetration, even of the cell masses, is exceptional, and it is doubtful whether the few leucocytes found among the cancer cells, in sections from tumours at an advanced stage, are not merely the result of displacement in preparation for the microscope. In any case the great majority remain outside the parenchyma, as may be readily seen in any such thin section; and the leucocytes seen upon or among the cancer cells are extremely scanty. On the question whether they actually penetrate the individual cell, the author, starting with the belief that they do, had examined numerous slides and also fresh scrapings; and had been forced to the conclusion that the very few microscopic appearances which might be construed in an affirmative

sense were similarly due to artificial displacement. On the supposition that the phagocytes attack the invading cancer cells, and per sh in the fight, we should hardly fail to find ample evidence of the fact in early suppuration; but that is often wholly absent, is always a relatively late occurrence, and is always preceded by the decay of large cell masses, with resultant evolution of poisonous products. On these data it was argued that in cancer the leucocytes do not check, but on the contrary aid the progress of the infiltration, by macerating the inhibiting barriers of fibrous tissue.

In the second place the phenomena of myeloid corpuscles were discussed. It was remarked that the giant cells of sarcoma, of tuberculosis, of bone absorption, of bone generation, and of some other conditions, could not be differentiated; and that no explanation of their presence could be framed for one of these lesions or natural processes, which did not apply equally to the remainder. In malignant disease the myeloid was regarded as a fibrinous mass, of passive character, associated with marked hyperæmia, and with no pretensions to the character of a macrophage.

Magic lantern slides, photographs, and drawings were exhibited in support of these views.

HYDATIDS IN BONE.

By J. H. TARGETT, F.R.C.S.,

Curator of the Pathological Museum of the Royal College of Surgeons.

MR. TARGETT gave a demonstration of the effects produced by the development of hydatid cysts within the long bones, illustrating his remarks by means of a large number of lantern slides. After a few introductory observations on the rarity of the lesion, the general characters of the parasite as met with in the osseous system, and its mode of reproduction, a series of specimens were shown in which the diaphyses of certain long bones were affected. By the gradual destruction of the medullary tissue and absorption of the compact layer from within, the shaft of the diseased bone was, he said, converted into a thin-walled tube filled with very numerous small hydatids and *débris*. Ultimately this thin wall was perforated, or cracked and became bulged out forming a spindle-shaped swelling, or led to a spontaneous fracture. The periosteum took no part in the process, so that the exterior of a bone might present no abnormal appearance, though extensively destroyed within. Further, a fracture of such an excavated shaft excited little or no repair. Large sequestra were not met with in the diaphyses and the parasites, unlike the familiar condition of the hydatid in the liver or other viscus, were free from any limiting membrane or parent cyst. The lining described by some writers as found in the bony cavities was inflammatory, and due to the infection of the hydatid focus with septic material.

The changes wrought in the articular extremities of the long bones were next considered. Owing to the preponderance of cancellous tissue and an increased liability to septic infection, the course of events differed materially from that described above as occurring in the diaphyses. The spongy tissue of the articular ends became infiltrated by budding cysts in all directions. The interference with nutrition thus caused, more especially if suppuration were excited, led to the formation of large sequestra of cancellous bone and extensive excavation of the epiphyses. The compact tissue might become perforated or broken, the articular lamella yielded, so that the joint surfaces were flattened out, and profuse suppuration occurred with burrowing of pus in all directions. Though the changes at this stage were almost entirely referable to the suppuration, yet it could not be said that the parasite was quite superseded: for there was evidence that budding (and therefore living) hydatids might be borne by the stream of pus into the surrounding soft parts, where they might develop fresh colonies. In advanced cases the abscesses and purulent tracks connected with the invaded joint were invariably occupied by growing parasites.

The effects of hydatids on the joints themselves were briefly mentioned in conclusion. Though the joints were involved with considerable frequency, the condition was always secondary to disease of the adjacent epiphyses. The cavity was invaded by perforation of the capsule, or more commonly by destruction of the articular lamella and sloughing of the overlying cartilage. Pus was admitted to the articulation, and produced its usual effects. In consequence of the loss of support due to excavation of the epiphyses the articular surfaces sank, and much shortening of a limb might result. In the case of the hip-joint this shortening might be excessive owing to the upper end of the femur having perforated the diseased acetabulum, and passed into the pelvic cavity. A few illustrations of the clinical aspects of this disease entailed a short review of its symptoms and treatment. The author had examined specimens from 17 different cases, and there were about 55 other cases on record.

DEGENERATIONS CONSEQUENT ON EXPERIMENTAL LESIONS OF THE CEREBELLUM.[1]

I.—By J. S. RISIEN RUSSELL, M.D., M.R.C.P.,

Assistant-Physician to the Metropolitan Hospital.

[From the Pathological Laboratory of University College, London.]

DR. RISIEN RUSSELL gave an account of the tracts which degenerate after ablation of one lateral lobe of the cerebellum, and after extirpation of its middle lobe. It was found that all the cerebellar peduncles on the side of the lesion contained degenerated fibres after removal of one lateral lobe of the organ; and that in addition to this degenerated fibres were present in the superior peduncle of the opposite side, whereas neither the middle nor inferior peduncle of this side contained any degenerated fibres. The degenerated fibres in the superior peduncle on the side of the lesion were traced to the opposite red nucleus and optic thalamus, where they terminated, after decussating in the region of the posterior corpora quadrigemina. Those in the opposite superior peduncle were fibres which degenerated from the seat of lesion, traversed the intact half of the cerebellum, and left it by this peduncle. A special position in the peduncle, as seen on transverse section, was occupied by these degenerated fibres; a part which was comparatively free from degenerated fibres in the peduncle on the side of the lesion, and a part occupied by degenerated fibres in both superior peduncles when the cerebellum was divided into two lateral halves by a mesial incision. These facts controverted Marchi's statement that none of the cerebellar peduncles contain commissural fibres.

The fibres which degenerated in the middle peduncle on the side of the lesion could be traced chiefly to the grey matter of the opposite side of the pons. Though degenerated fibres passed between the pyramidal bundles, there was no evidence that they accompanied the pyramidal fibres, either upwards or downwards, for any distance. No degenerated fibres passed from this peduncle to the corpora quadrigemina or antero-lateral region of the spinal cord by way of the fillet or posterior longitudinal bundles, as has been asserted by Marchi.

The inferior peduncle contained degenerated fibres, which occupied chiefly the periphery of the lateral region of the medulla oblongata. As they descended they became more and more scattered, and could no longer be said to form a tract below the level of the superior pyramidal decussation, or decussation of the fillet. A few scattered degenerated fibres might be found in the antero-lateral region of the cervical cord, beyond which none could be traced. Degenerated fibres could be traced into both inferior olives from this peduncle, but no well-marked tract to the opposite inferior olive, as described by Ferrier and Turner, was found. The results, however, accorded with those of these observers, in that Marchi's statements to the effect that degenerated fibres passed from this peduncle to the ascending root of the fifth, the roots of the cranial nerves through the posterior longitudinal bundles, and the spinal nerves by the descending antero-lateral tract, could not be corroborated.

Extirpation of the middle lobe of the cerebellum was followed by degeneration in all the peduncles of the organ. This fact was in harmony with the results of Marchi, but contrary to the observations of Ferrier and Turner. The degenerated fibres in the superior peduncles occupied all parts of them, as seen on transverse section, that is they were to be found both in the parts of this peduncle which they occu-

[1] Part of the expenses of this investigation have been defrayed by a grant from the Scientific Grants Committee of the British Medical Association.

pied on the side of the lesion after removal of one lateral lobe, and that which they occupied on the opposite side after this unilateral lesion. These degenerated fibres decussated in the region of the posterior corpora quadrigemina, and terminated in the opposite red nucleus, beyond which no degenerated fibres could be detected.

The degenerated fibres contained in the middle peduncles passed to the grey matter of the pons, much in the same way as after ablation of one lateral lobe of the cerebellum. Those in the inferior peduncles become more and more scattered as they passed down, and could not be said to form a lateral tract below the level of the lower end of the inferior olives. There was no evidence to support Marchi's statement that degenerated fibres from this peduncle passed to the cranial nerve roots through the posterior longitudinal bundles, and to the antero-lateral columns of the cord by way of the fillet.

It was held, in agreement with Ferrier and Turner, (1) that no antero-lateral tract, such as that described by Marchi, degenerated in the spinal cord after lesions limited to the cerebellum; (2) that accidental injury to adjacent parts was responsible for degeneration of this antero-lateral tract was rendered probable by the fact that Ferrier and Turner found a similar tract degenerated after injury to Deiter's nucleus, and that Mott also found such a degenerated tract after injury to the posterior column nuclei.

II.—ALFRED W. CAMPBELL, M.D.,

Pathologist, Rainhill Asylum, Lancashire.

THE study of the anatomical connections and functions of the cerebellum has recently received a large amount of attention at the hands of experimental neurologists, and thereby our knowledge of an organ, the anatomical connections of which are, to say the least, most complicated, and the functions most difficult of comprehension, has been vastly increased. The object of the present investigation was to ascertain whether in the human being similar or comparable degenerations to those described in the case of the lower animals followed natural, destructive, cerebellar lesions. Working as pathologist to the Rainhill Asylum, I have been fortunate in obtaining a series of five cases, in all of which the necropsy revealed a recent thrombotic or embolic softening, or a hæmorrhagic condition, occasioning the destruction of some part of the cerebellum. In all these cases I have made a careful microscopic examination of serial sections of the cerebellar peduncles, crura cerebri, pons Varolii, medulla oblongata and spinal cord—all stained by the method of Marchi—and the result of my observations I now desire to put on record.

CASE I. *Thrombosis of the Left Posterior-Inferior Cerebellar Artery, with Destruction of the Parts supplied by that Vessel.*—The patient was a female, aged 62, who two years before death, without losing consciousness, became suddenly paralysed in her left arm and leg. These members remained paretic for the rest of her life. There were no sensory anomalies. At the necropsy the uvula and pyramid of the inferior vermis, the tonsil, the velum medullare posterius, and parts of the inferior anterior, middle, and posterior lobes of the left hemisphere of the cerebellum were destroyed, and the left posterior, inferior, cerebellar artery thrombosed. On microscopical examination some degeneration was seen in the left middle cerebellar peduncle; more, however, was visible in the left inferior peduncle, and this lower down became collected in the left direct cerebellar tract and the funiculus cuneatus, there being much more disease in the former than in the latter. At this level the anterior pyramids were healthy. Passing to the spinal cord, in the cervical region there was a fringe of degenerated fibres in the position of the direct cerebellar and ascending antero-lateral tracts. There was also a small patch of degeneration in the left postero-external column, which occupied the inner third of the column in the upper part of this region and the dorsal third in the lower part. Also there was some disease of the nerve cells occupying the anterior cornu of the cervical swelling. Pursuing the degeneration downwards, it was observed that the left direct cerebellar tract was completely degenerated at its entire length, also that there was a considerable extent of disease in the adjacent lateral pyramid; further, that the columns of Clarke were on both sides small.

CASE II. *Softening of the Upper Surface of the Left Hemisphere of the Cerebellum.*—A male, aged 73, who when admitted was distinctly weaker in his left arm and leg than in his right. No convulsive attack had ever been noticed. The activity of all his tendon reflexes was diminished. He was very ataxic but suffered from no sensory disturbance. At the necropsy a recent softening was found on the upper surface of the cerebellum, the parts involved including the inner two-thirds of the left lobus culminis, the whole of the culmen monticuli, and about a quarter to half an inch of the adjoining part of the right lobus culminis. In these parts the cortex and about half an inch of the subjacent white matter were of a brownish-yellow colour, of buttery consistence, and obviously degenerating. On microscopical examination a patch of degeneration was traced upwards in the left superior cerebellar peduncle, this crossed to the right side at the decussation of the conjunctival brachia, and could be followed into the nucleus ruber of the opposite side. Some few fibres did not decussate. In the left middle cerebellar peduncle were numerous degenerated fibres running transversely towards the middle line, which they in some cases reached. Passing downwards there were numerous degenerated fibres in the left corpus restiforme, these were continued into the nucleus cuneatus. From the nucleus cuneatus they passed on downwards in the funiculus cuneatus, and were continued in the postero-external column of the spinal cord. In the upper cervical region they were fairly evenly distributed throughout this column, but at the level of the sixth cervical pair of nerve roots they occupied the outer half of the column. Further at this latter level thin degenerated fibres were distinctly traced running in an arched direction in the grey matter of the left side from the middle of the posterior cornu to the lateral group of nerve cells in the anterior cornu, and in examining stained specimens it was discovered that every member of that group of nerve cells was swollen and degenerating. Below this level the number of degenerating fibres in the postero-external column progressively diminished, until at the level of the sixth dorsal nerve roots they were no more seen.

CASE III.—A female, aged 48, who during life presented no signs of cerebellar disease, but in whom at the necropsy several partially sclerosed patches due to extravasated hæmorrhage in the dentate bodies of both sides, and in the white matter immediately surrounding the nuclei, were discovered. There was somewhat more tissue destruction on the right side than on the left. The cortex of the cerebellum was healthy. On microscopic examination some degenerated fibres could be traced upwards in the ventral segment of the superior cerebellar peduncles as far as the decussation. Among the horizontal positives fibres were also seen some degenerating fibres. Proceeding downwards a considerable number of acutely-diseased fibres could be tracked along the corpora restiformia into the direct cerebellar tracts. These degenerated fibres were much more numerous on the right side than on the left. Further, on both sides some of the internal and external arciform fibres were degenerated, and both olives were atrophied. In the spinal cord the decussation could still be indubitably followed, the inequality between the number of degenerated fibres on both sides being maintained. The degeneration progressively diminished as one passed downwards until at the level of the ninth dorsal pair of nerves no more was visible. The columns of Clarke seemed unaltered.

CASES IV AND V.—The next two cases serve to illustrate what changes occur after complete destruction of the corpus dentatum. In both no phenomena pointing to cerebellar disease were noticed during life, and in both the artery supplying the corpus dentatum of one side was found *post-mortem* to have been plugged. This was the sole lesion. In each there was some ascending degeneration in the superior cerebellar peduncle on the side of the lesion. In each the olivary body contralateral to the lesion was enlarged to twice its normal magnitude, causing an unusual projection in the outline of the medulla oblongata, and its nuclear cells were swollen, blurred, and clearly degenerating. In both cases degenerated fibres could be followed down from the lesion into the corpus restiforme, these passed into the middle and internal arciform fibres on the side of the lesion; they next crossed in the raphe, and entered the olive by the olivary peduncle. The stratum zonale of the diseased olive was degenerated, and diseased fibres were seen in each set of external arched fibres.

REMARKS.—The first two cases provide us with excellent examples of cortical cerebellar lesions with secondary spinal degeneration, but at the same time the degenerations which have resulted are very extraordinary and absolutely contrary to what one would be led to expect from our knowledge of the physiology of the spinal cord and from what is to be learnt from recent experimental investigation on the spinal connections of the cerebellum. In Case I, after a lesion destroying the greater part of the under surface of one cerebellar hemisphere, complete degeneration of the entire direct cerebellar tract on the side of the lesion has occurred. In other words, in consequence of a central lesion complete descending degeneration has resulted in a tract, which the labours of Flechsig, Mott, Tooth, and others seem to have proved to be a centripetal one. I cannot think that, in consequence of the destruction of the terminus to which these fibres run, a secondary atrophy and not a true degeneration has resulted: first, because the change seems to have followed too rapidly upon the cerebellar lesion: and secondly, because in Case III a precisely similar acute parenchymatous descending change has taken place in some of the nerve fibres of the direct cerebellar tract as a direct result of a cerebellar lesion on that side. It seems, therefore, that a descending degeneration may occur in the direct cerebellar tract in consequence of a cerebellar lesion, as well as an ascending one in consequence of a spinal lesion. Cases I and II are of further interest, since in both degeneration has also occurred along the restiform bodies to the cuneate nuclei, thence along the funiculi cuneati and thence down the postero-external columns of the spinal cord as far as the commencement of the dorsal region. I have also been able in both to demonstrate in a most striking way a connection between these postero-external fibres and the ganglial cells situated in the lateral projection of the anterior cornu in the

[1] A fuller description of this case was published in the *Liverpool Medico-Chirurgical Journal*, January, 1894; but, as it is a unique case and constitutes one of the most important of my series, I run over its main features again.

cervical region—a connection which, so far as I am aware, has not yet been established. In my specimens the method of Marchi distinctly bring into pencils of degenerating fibres, curving along in the grey matter from the postero-external columns to the immediate neighbourhood of these ganglial cells, and carmine-stained preparations show equally clearly that this group of cells is acutely diseased. I would draw particular attention to the following points concerning the degeneration in this column: (1) That it practically does not extend beyond the cervical region; (2) that by no means all the fibres of the column have undergone destruction; (3) that the degeneration is mainly confined to its outer half—that part of the column, I may remark, which is so rarely sclerosed even in advanced cases of tabes dorsalis. Judging by these cases, therefore, I am inclined to regard this part of the postero-external column as a direct descending cerebellar tract, connecting the cerebellum with the lateral anterior cornual cells of the lower cervical region on the same side.

Comparing the results of these few observations with those of experimental workers, I find that in no case has a degeneration of the direct cerebellar or postero-external tracts been observed after experimental lesions in the lower animals, and in none of my cases have I observed any degeneration along the antero-lateral columns such as Marchi describes.

Next, it has long been recognised that in consequence of atrophy or destruction of one cerebellar hemisphere degeneration of the contralateral olivary body ensues. Cases IV and V, in which the sole and essential lesion was destruction of the corpus dentatum cerebelli of one side prove that such a lesion is quite sufficient in itself to bring about contralateral atrophy, and that it is quite unnecessary for the whole cerebellar hemisphere to be obliterated. They also show that the main path for the passage of fibres from the cerebellum to the olive leads along the restiform body into the internal arciform fibres, thence to the opposite side by the raphe, and into the olive by the peduncle of that body. I am uncertain whether in my specimens there is any degeneration in the spinal olivary bundle of Bechterew, the fibres composing that bundle are so small and the medullated cylinders so delicate that the diosmic method is not adapted for bringing out degeneration in them. Also in the central tegmental tract I could not certainly trace any degeneration.

With regard to the degeneration which has resulted in the superior and middle peduncles, my observations agree fairly consistently with those of experimental workers, and call for no comment.

Lastly, Marchi observes that after cerebellar hemi-extirpation degenerated fibres are to be seen passing along the roots of nearly all the cranial nerves. I would mention that I repeatedly saw such degeneration in my cases. The degeneration was equal and bilateral, and mostly affected the third, fifth, sixth, seventh, and twelfth roots and the striæ medullares.

The President (Dr. Woodhead) spoke of the importance of controlling experimental work by clinical and *post-mortem* observation. So far there seemed to be certain fundamental differences in the results obtained, and although we must necessarily ultimately turn to the clinician, it must be the experimentalist who laid down the lines or suggested the methods of observation. There could be no doubt that ultimately explanations of the differences observed in man and animals would be obtained. Some of them had already been cleared up. One of the most important discrepancies observed in the lesions following injury artificially produced, and lesions in the cerebella in the patients described by Dr. Campbell, was that in the experimental ablations there were no lesions in what might be spoken of as the direct ascending tracts, the direct cerebellar tract, ascending, antero-lateral, etc., whilst in the case of the disease lesions in the lateral lobe of the cerebellum there were distinct degenerative lesions. At first one was tempted to believe that in these cases there must be some superadded peripheral lesion, especially as Dr. Campbell described lesions in those cranial nerves which were so frequently met with in tabes dorsalis—olfactory, ocular, glosso-pharyngeal, etc.—but this was put out of court when the case of the recent lesion in the lateral lobe was found to be followed by a descending degeneration of an ascending tract, limited in extent for a short distance down from the comparatively acute lesion. It was interesting to note the several points of agreement as regards the lesions in the middle cerebellar peduncle. There could be no doubt that the *post-mortem* room observations must be accepted, but in all probability they would have to be controlled and explained by carefully-conducted experiments.

Dr. Mott, referring to Dr. Campbell's descending degenerations in the cord, said that, if the lesions were of long standing, it was possible to explain the degeneration in the cerebellar tract. The fillet degenerated downwards after chronic lesions of the cortex or basal ganglia, as Flechsig and Hósel had shown. Experimental destruction of the cortex produced no such result. Referring to Dr. Russell's remarks about the physiological effects of removal of the middle lobe, Dr. Mott would attribute the results mostly to cutting away the end station of the afferent spinal cerebellar tract.

THE PATHOLOGY OF A CASE OF AMYOTROPHIC LATERAL SCLEROSIS.

By F. W. Mott, M.D., F.R.C.P.,
Assistant Physician to Charing Cross Hospital.

Dr. Mott gave a lantern demonstration to illustrate the pathology of amyotrophic lateral sclerosis. The specimens were obtained from a woman, aged 39, who died in Charing Cross Hospital from this disease. It commenced in an unusual manner, affecting first the right leg, then the right arm, then the left leg and left arm, eventually terminating in bulbar paralysis and death within one year of the onset. In other respects the case was quite typical.

The microscopical sections of the central and peripheral nervous systems stained by the Marchi, Weigert, and Pal carmine method showed a degenerative change and sclerosis in the whole motor path from the cortex of the central convolution through the intracerebral pyramidal tract namely, internal capsule, middle third of crus cerebri, pons, and pyramids. In the spinal cord, the crossed and direct pyramidal tracts were degenerated and sclerosed throughout their course. There was also a disappearance of the large motor pyramidal cells of the cortex; and after the hemispheres were hardened in bichromate of potassium, a shrinking of the ascending frontal and lower part of ascending parietal convolutions, with a corresponding broadening and deepening of the adjacent sulci, was noticed.

The lower segment of the motor path showed atrophy and degeneration of the anterior horn cells in the lumbo-sacral and cervical regions especially, but also in the dorsal region, the anterior and internal groups of cells being, generally speaking, in a much more advanced stage of destruction than the posterior and external. The hypoglossal, lower facial, and spinal accessory nuclei were commencing to undergo destructive degeneration.

The anterior root zone, the lateral limiting layer of ground fibres, and the anterior roots showed a sclerosis or degenerative process in proportion to and corresponding with the anterior cornual destruction. In the medulla the posterior longitudinal bundle was hardly at all affected. The following nerves—phrenic, vagi, ulnar, median, and sciatic nerves—were examined both in fresh teased preparations stained by osmic acid and in sections after suitable hardening and staining. There were found numbers of degenerating fibres in the phrenic, a few in the vagus, but none could be found in the teased preparations of the ulnar or median nerves. This fact was explained by sections because the bundles of nerve fibres were seen to be shrunken and to contain proportionally a greatly diminished number of nerve fibres, interstitial fibrous tissue replacing the fibres which had been destroyed.

Some of the bundles showed that the fibres were reduced to one-half, while other bundles, presumably sensory, were nearly normal in appearance. This degenerative change was most striking in the ulnar nerve, and the fact agrees with the clinical conditions observed during life, "*main de griffe* having been a prominent feature." The membranous arachnoid and pia mater were thickened and undergoing a moderate but universal chronic inflammatory change. There was thickening of all the small arteries and capillaries, and

numbers of minute hæmorrhages were seen beneath the membranes and in the substance of the cortex cerebri. Judging from the clinical symptoms and the stage of degeneration in the internal capsule as compared with the pyramids, it appeared that the process commenced synchronously in the whole motor tract, and therefore not a process creeping up the cord. Possibly the chronic inflammatory process and the change in the vessels noted may have had some causal connection. This view seems likely, inasmuch as the kidneys were shrunken and undergoing a chronic interstitial fibrosis.[1]

THE MORBID ANATOMY OF INFANTILE PARALYSIS.

By E. F. Trevelyan, M.D., M.R.C.P.,
Assistant Physician to the Leeds General Infirmary.

Dr. Trevelyan read a paper on the morbid anatomy of a case of infantile paralysis occurring in a child aged 6 years. Both legs were paralysed, and to a less extent the right arm. The left arm was also weak. The disease was of about eleven months' standing when death took place from independent causes. A number of sections were examined from each segment of the cord, and the disease found to extend from immediately below the decussation of the pyramids throughout the cord. It was most intense in the grey matter of the lower cervical and upper lumbar regions. The changes in the neuroglial elements were marked, consisting in cellular infiltration especially about the vessels, considerable hypertrophy of the neuroglia fibres, with destruction of nerve fibrils and great development of larger spider cells. There was marked destruction of ganglion cells throughout, and where the disease was less pronounced a few more ganglion cells were found on the left side than on the right. The cells of Clarke's column were considerably involved. The changes were such as to support the notion of the interstitial and vascular origin of the disease as against the parenchymatous.

The President (Dr. Woodhead) took the opportunity of referring to a feature in connection with this and some of the other cases discussed that had been suggested many times, and that he had referred to in his opening remarks. If the products of bacteria or bacteria themselves had any effect on the walls of capillary vessels, here they should make themselves manifest. The lymph flow was probably nearly as great as in the liver, and if so, as was now demonstrated almost beyond doubt, we should expect to find well-marked vascular and perivascular interstitial changes. In this way we might find, as Dr. Mott and Dr. Trevelyan suggest, that there was a much more constant type of pathological process than was sometimes held, the differences being in degree and in clinical manifestations. This, of course, did not exclude the importance of secondary degenerations.

ON THE CENTRAL CONNECTIONS AND RELATIONS OF CERTAIN CRANIAL NERVES.

By Aldren Turner, M.D.,
Physician to the Hospital for Epilepsy and Paralysis, Queen Square.

Dr. Aldren Turner's paper dealt with the following points. He observed that:

(1) The hypoglossal nucleus was solely a nucleus of origin. The efferent fibres were the axis-cylinder processes of the cells of the nucleus of the corresponding side, and had no direct communication with the opposite nucleus or with the nuclei of Roller and Duval. The afferent hypoglossal fibres were derived from the pyramids, forming in chief part the fibræ propriæ from the reticular formations, and possibly from the fillet.

(2) The nucleus ambiguus was the nucleus of origin of the motor fibres contained in the roots of the glosso-pharyngeal, vagus, and vago-accessory nerves, and innervated among other structures, the levator palati and internal thyro-arytenoid muscles. The afferent fibres of the glosso-pharyngeal and vagus roots were the axis-cylinder processes of the ganglia upon these nerves, which terminated in the posterior vago-glosso-pharyngeal nucleus and in the gelatinous substance around the fasciculus solitarius (Kölliker). These facts were confirmed by observation of cases of bulbar paralysis and by experimental section of the glosso-pharyngeal nerve roots. This was followed by degeneration of the solitary bundle, or so-called ascending glosso-pharyngeal root. These structures, therefore, formed the nuclei of termination of the combined vago-glosso-pharyngeal nerve.

(3) The substantia gelatinosa and spongiosa, situated in the lateral parts of the medulla oblongata and pons Varolii, formed the end nucleus of the so-called ascending trigeminal root, the fibres of which were the axis-cylinder processes of the cells of the Gasserian ganglion (Kölliker). Section of the sensory division of this nerve was followed by degeneration of the ascending root through the gelatinous substance into the substantia spongiosa, where the fibres broke up into end tufts. In this situation were cells, chiefly of Golgi's first type, whose axis-cylinder processes passed into the reticular formation.

(4) The motor nucleus of the fifth nerve was the nucleus of origin of most of the fibres of the motor root, the fibres being the axis-cylinder processes of the large multipolar cells of the nucleus.

(5) The so-called descending trigeminal root was composed of the axis-cylinder processes of the cells in the outer part of the Sylvian grey matter and joined the motor division of the nerve. It was not improbable that this nucleus innervated some of the muscles supplied by the fifth cranial nerve. It was certainly not "trophic" in the sense used by Merkel.

(6) There was no direct cerebellar root of the fifth nerve—what had previously been described as such, was a tract of fibres passing between the roof nuclei and the nucleus of Deiters, probably also between the superior olivary bodies and the roof nuclei of the cerebellum (Bruce).

THE BIOLOGY OF THE RINGWORM ORGANISM.

By Allan Macfadyen, M.D.,
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The morphology of the tricophyton tonsurans is not touched upon in this paper—a subject which is being so carefully worked out by Dr. Sabourand and others. The object of this research was to determine whether the tricophyton produces ferments, and, if so, what their nature is.

It has been found that those bacteria which liquefy gelatine do so by means of a soluble ferment or enzyme. This subject has been investigated by Bitter, Fermi, the writer, and others. The present writer's observations had been hitherto confined to the bacteria. It was with a view of extending these investigations to the group of the moulds that the tricophyton tonsurans was selected in the first instance. The results briefly summarised were as follows:

(1) The ringworm organism produces a proteolytic enzyme, which liquefies gelatine very rapidly.

(2) This enzyme is capable of acting even when greatly diluted, and is very stable, as its action can be demonstrated in cultures three months old.

(3) This enzyme acts most rapidly and energetically at or near blood heat. At blood heat a complete liquefaction of 10 per cent. gelatine was produced in fifteen to seventeen hours.

(4) Exposure to a temperature of 100° C. for two minutes destroys the ferment.

(5) The proteolytic enzyme is also produced in simple beef broth; acidity hinders, and alkalinity favours its production.

(6) The gelatine containing the active enzyme did not exert any inimical action upon the staphylococcus pyogenes aureus or the bacillus pyocyaneus.

(7) The formation of a diastasic ferment by the ringworm organism was not demonstrated, but it grew well in solutions of grape sugar and milk sugar.

(8) A slight growth was obtained on cane sugar soils, and evidence obtained of the presence of a feeble inverting ferment.

[1] This case will be published in full in the October number of *Brain*, together with a full reference to the literature, clinical symptoms, etc.

(9) A milk-curdling ferment is not produced by the tricophyton.

(10) The best soil for its growth was Dr. Sabourand's beer-wort agar, consisting of beerwort with the addition of 1.5 per cent. of agar.

(11) It may be that the proteolytic enzyme aids the organism in softening the tissues and overcoming their resistance to the penetration of the hyphæ. It would be interesting in this connection to test the action of the enzyme on keratin, and experiments are being at present carried out in this direction.

THERMOPHILIC BACTERIA.

By ALLAN MACFADYEN, M.D., and FRANK R. BLAXALL, M.D.
[From Professor Macfadyen's Laboratory, British Institute of Preventive Medicine.]

THE range of temperature at which it is possible for bacteria to grow is very great, extending from zero to 70° C. There is undoubtedly a class of organisms which can grow at temperatures above 50° C., finding at such high temperatures the best conditions for their growth and development. Miquel's bacillus thermophilus is, perhaps, the most familiar example. This bacillus was cultivated by Miquel at 70° C. Globig also isolated from surface soil bacteria which grew best at 50° to 70° C. We undertook this investigation in order to determine whether the bacteria which grow at such high temperatures are widely distributed and their number considerable. In other words, whether they are to be looked upon as mere bacteriological curiosities, or as organisms which from their wide distribution and number probably fulfil some function in the economy of Nature.

To those organisms that grow best at very high temperatures we have in this paper applied the name of "thermophilic bacteria." Our experiments were made at 60° to 65° C.—a temperature far removed from that at which the ordinary saprophytic bacteria will grow. We found that our culture media were quite free from such organisms, and that the ordinary saprophytic bacteria to be met with in the soil and in water will not grow at these high temperatures. Our first experiments were made with garden soil. We found that after inoculating agar-agar with garden soil an abundant growth of bacteria was obtained at 60° to 65° C.

These bacteria were found to be widely distributed in Nature. We found them in the fæces of man and the lower animals, in sewage, Thames water, and Thames mud, also in surface soil and in soil to the depth of 5 feet. Dust collected from the streets invariably contained these thermophilic bacteria as well as straw, and they were also found to be present in sea water. These organisms are therefore widely distributed, and may almost be termed ubiquitous. They grow very rapidly at 60° to 65° C. We were able to obtain pure cultures of these organisms by means of agar plate cultures. All the thermophilic organisms isolated by us were bacilli. They did not belong to one species. We isolated about twenty different forms, and the number might have been easily extended. There are quite a number of bacilli to which the term "thermophilus" may be applied. All those which we carefully examined were, with one exception, spore-bearing organisms. A number of the organisms were actively motile. There was further a marked tendency to the formation of long chains of bacilli. These chains were straight, curved, or twisted. The bacilli could be easily stained by the ordinary aniline dyes. Good growths of the organisms were obtained on gelatine, agar, broth, potato, peptone water, and milk. The quickest growth was generally obtained on agar, and differentiations in pigment came out best on potato.

The thermophilic bacilli isolated by us did not grow at 22° C., nor at blood heat. The first growth was obtained at 40 to 42° C., and that in one instance only. A certain number began to grow slowly at 50 to 52° C. The temperatures, however, between which they grew best were 55° to 65° C., and the optimum temperature lay between 60° and 65° C. At 75° C. no growth took place. As regards the biology of these organisms, the following points were observed: A certain number liquefied gelatine, others did not. A number of them curdled milk, and one bacillus converted starch into sugar. A putrefactive decomposition took place in broth and agar cultures, accompanied by the production of iodol and sulphuretted hydrogen. In urine a good growth was obtained, but they did not thrive on soils containing sugar. The organisms produced an active decomposition of meat and blood albumen. A certain number produced pink, yellow, or brown pigments at 60 to 65° C. We found that several of the bacilli produced a fermentation of cellulose. A certain number of the bacilli grew anaërobically as well as aërobically.

We have, then, existing in Nature a large number of bacteria for which 60° to 65° C. is an optimum temperature, and which will not grow at or below blood heat. At this high temperature these organisms exercise perfectly all the functions common to saprophytic organisms. It is, indeed, remarkable to find cell protoplasm existing and exercising all its functions at a temperature which is usually fatal to its life.

How do these organisms exist under ordinary conditions? The conditions of climate existing in this country are not favourable to these organisms, and yet they are most widely distributed, as our experiments show. It seems, therefore, that they do find conditions under which they are able to exist. In this connection, one point seems to us well worthy of investigation: we refer to the temperatures at which various fermentations take place, and the internal heat that is developed in the course of such fermentations. In the course of the fermentation of manure by bacteria, considerable heat is developed. Schlösing found that he could start a very active fermentation of cellulose in manure by heating up to 42° and 52° C. Tappeiner found that bacteria contained in the intestine of cattle produced a fermentation of cellulose. The cellulose fermentation is favoured by a high temperature, and is most energetic in summer. When hay is packed moist, fermentation may occur, and so great a heat result that the hay may catch fire. In silos the fodder becomes hot from oxidation. Carbonic acid and other gases are developed. Mr. Warrington states that the temperature of the silo goes up to 140° to 160° F.

In the fermentations that are going on constantly in Nature, a great amount of heat is developed, and the thermophilic bacteria might find under such circumstances conditions favourable to their growth. It may be that they are agents in the fermentation of cellulose, and the subject deserves further investigation. It is difficult to believe that these organisms are simply freaks, and that they only develop when a bacteriologist appears on the scene with an incubator. Their wide distribution, their good growth at these high temperatures, and their active fermentative properties, all point to their fulfilling some useful function in the economy of Nature.

THE EFFECT OF CREASOTE ON THE VIRULENCE OF THE TUBERCLE BACILLUS.

By W. KINGTON FYFFE, M.B.Cantab., M.R.C.P.Lond.,
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[From the Laboratory of the Conjoint Board.]

THIS investigation was undertaken with a view to finding out whether, when creasote is given by the ordinary methods, it acts by any restraining influence it exercises over the growth of the tubercle bacillus, or whether its action be not rather due to its powers of improving the digestion, and so aiding the assimilation of food.

Creasote is given at Victoria Park in one of three ways: (1) as an inhalation, (2) by the mouth, (3) by means of the creasote chamber. The first two methods need no comment; the third consists simply in placing a patient in a small room in which creasote (commercial form) is heated till the air is saturated with the vapour. This latter method was initiated as far as I know by Dr. Chaplin, Assistant Physician to Victoria Park Hospital.

An attempt was made at first, by constantly examining the sputa of patients taking creasote, to see if anything could be learnt from alteration in the morphology of the bacillus. Some twenty cases were examined twice a week for two

months, and differences in the numbers and formation of the bacilli noted and compared with cases not treated with creasote—this plan was however abandoned because the number of bacilli bore little or no relation to the patient's health, and no distinction could be drawn, either in number or morphological appearance, in the bacilli of those cases treated by creasote and those taking other drugs.

The next method adopted was that recommended by Professor Delépine, namely, that of injecting tuberculous sputum into the leg of the guinea-pig. A regular sequence of lesions is the consequence. The glands are affected in order, then the abdominal viscera, finally the lungs. At the end of about three weeks the animal succumbs. Such is the normal course of things. Anything that interferes with the virulence of the organism should interfere with the rate of growth of the bacillus, and the virulence of the bacillus can be gauged by the extent of the lesion produced.

To take the first series of cases (that is, those taking creasote by inhalation alone), injections into guinea-pigs were made before any treatment was begun, and again after the patient had been two months under treatment by creasote in this form. No difference was observed either in the time the guinea-pigs lived or in the extent of the lesion, in either case whether before or after treatment with creasote. Twelve such cases were tested with no result as to diminution of virulence.

In the second method of administration of the drug, that by the mouth, the results were much more satisfactory. Even in small doses (m ij. t. d.) after two months' treatment the guinea-pig lived seven weeks instead of dying at the end of the third. A second specimen of sputum from the same case was injected into the leg of a guinea-pig, and the animal killed on the fifteenth day—this before creasote treatment was begun. All its organs were found affected with tuberculosis. A second inoculation made after two months' treatment gave the signs of tuberculous infection only in the popliteal, inguinal, and lumbar glands, where the animal was killed on the fifteenth day. As the dose of creasote administered internally was increased, so the virulence of the poison was proportionately diminished. Thus, in the case of a patient taking 6 minims of creasote three times a day, the guinea-pig lived nine weeks after the second inoculation; in another case in which the dose amounted to mx twice a day, the animal lived twelve weeks. Twelve cases were experimented on, and certainly in eleven of these it was abundantly proved that the greater the dose the greater was the diminution of the virulence of the poison; the animals, however, invariably died of tuberculosis in the end.

I have only three cases treated by the third method—that of the creasote chamber. In the first case, with inoculations made in the usual way, after treatment for two weeks by this method, the inoculated animals lived eleven weeks. A guinea-pig killed on the fifteenth day showed tuberculosis only at the seat of inoculation and in the popliteal and inguinal glands. In the second case, after two months' treatment by this method, the guinea-pig lived fifteen weeks. In the third case the animal died of septicæmia. Certain supplementary experiments were made. Two guinea-pigs were inoculated with tuberculous sputum in one leg. Into the other 10 minims of creasote were injected. This was followed by the injection of 5 minims twice a week. A third animal was used as a control experiment. One guinea-pig succumbed at the end of a week from cellulitis due to the creasote. Tubercle bacilli were found only at the seat of inoculation. The second pig lived sixteen days, and then succumbed to cellulitis. Here, again, bacilli were found at the seat of inoculation, and nowhere else. The control animal killed on the sixteenth day had extensive affection of the glands, spleen, and liver. These experiments were repeated twice with practically the same results, only that the doses of creasote were smaller, and the animals lived longer.

A guinea-pig was injected with tuberculous sputum, and the disease allowed to take its course up to the fifteenth day. Creasote was injected in doses of 5 minims every other day. In four such cases the drug had no effect whatever, the animals dying tuberculous about the twentieth day. If, however, creasote injections were begun at the end of seven days, it was possible (three cases) to keep the animal alive for a month or six weeks; the cause of death was cellulitis from the creasote, the tuberculous lesions not having extended beyond the limits of the lumbar glands.

To sum up the conclusions arrived at:

(1) In the first series of cases—those that were taking creasote simply as an inhalation, in addition to such drugs as cod-liver oil and the hypophosphites—no effect on the virulence of the disease was noted.

(2) In the second series, in which creasote was administered by the mouth, in doses ranging from 2 to 12 minims three times a day, though, when the smaller doses were given the diminution of the virulence was slight, yet, when the larger amounts were reached, there was an extremely marked diminution in virulence.

(3) In the third series it may be pointed out that, though it is impossible to dogmatise from such a small number of cases, the animals lived longer than in any other instance.

(4) Creasote injected under the skin in tuberculous guinea-pigs, provided the disease were not too far advanced, had a markedly restraining effect on the poison.

In conclusion I must express my indebtedness to the staff of the Victoria Park Hospital for their kindness in allowing me to use material taken from their cases in the wards, and especially to Dr. Arnold Chaplin for the use of tuberculous sputum from his patients treated in the creasote chamber.

The President (Dr. Woodhead) agreed that it might be that the virulence was attenuated. Professor Delépine had made similar observations, and Dr. Wood and he had also obtained similar results, but using heat instead of creasote as the attenuating agent.

SECTION OF DERMATOLOGY.

A. J. Harrison, M.B., President.

A DISCUSSION ON THE MANAGEMENT OF ECZEMA.

I.—Malcolm Morris, F.R.C.S.Ed.,
Surgeon Department of Diseases of the Skin, St. Mary's Hospital.

In opening a discussion, I take it that what is required of the person to whom that honourable task is entrusted is not an exhaustive address on the subject proposed, but rather the suggestion of a few questions to set the wheels of debate in motion. I must in the first place congratulate the Secretaries of the Section on the choice of a subject so far removed from what may be called therapeutic sensationalism, and so practical, as the management of eczema. It has been said that every true-born Briton thinks the capacity of dealing with the most obscure problems of theology a part of his intellectual birthright. In much the same spirit every medical fledgling just escaped from the academic nest will undertake the management of a case of eczema with a light heart. Experience may be trusted to teach him a better sense of our limitations in this direction, for of eczema it may be truly said that familiarity breeds the very opposite of contempt in those who have to treat it.

The time at my disposal will allow only of the discussion of principles, not of details—still less of reference to the methods and results of others. I propose therefore, in as summary a manner as possible, to present the general results of my own experience in the treatment of eczema, inviting special attention to the points as to which a comparison of experience seems to be most desirable. If the conclusions which I have to submit to you have little of novelty, they are at any rate the outcome of a tolerably large experience, and represent what appears to me to be the good therapeutic grain left after a pretty thorough sifting of the numerous remedies which have at one time or another been recommended for eczema.

As rational treatment must be based on a true conception of the process which has to be dealt with, a preliminary word or two as to the pathology of eczema may not be out of place. Opinions still differ as to whether the disease is constitutional or local in origin. My own view is that the

constitutional element is in most cases altogether secondary, the lesion being chiefly the result of parasitic irritation. A constitutional dyscrasia—such as gout, glycosuria, kidney disease, rheumatism, rickets, or scrofula—no doubt often has a serious modifying influence on the local process, intensifying it, and preventing or retarding recovery, but the *causa causans* is, I believe, in the majority of cases the action of micro-organisms. I am also of opinion that seborrhœa is a very common precursor of eczema, for which, in fact, it prepares the way by making the skin vulnerable by microbes. For a demonstration of the close relationship which exists between seborrhœa and eczema we are largely indebted to Unna, but I think that distinguished dermatologist goes too far when he teaches that eczema is always and in all cases the result of microbic action.[1] That seborrhœic eczema is always parasitic in origin I freely admit, but I do not believe that all eczemas are seborrhœic. I have often seen the disease arise on perfectly healthy skin, apparently as the result of some disturbance of the nervous system, caused, it may be, by mental shock, strain, or depression, by the action of cold, or by reflex irritation from the uterus, stomach, intestine, etc. Even in cases in which disordered innervation seems to be the starting point, I think it probable that the parasitic factor plays a leading part in the process; the weakening or suspension of nervous control—in other words, the inhibition of trophic influence, in certain parts of the skin creating weak points through which the micro-organisms normally present on the surface of the skin can penetrate into the deeper layers.

Whatever differences of opinion there may be as to the pathogeny of the disease, all will agree that the management of eczema must in every case be carefully adapted to the special indications present. There is no general therapeutic formula applicable to all cases of eczema; it is not the abstract name but the concrete disease that has to be treated, and not the disease alone, but the patient, with his peculiarities of structure and constitution, behind it.

Before touching on the points that appear to me to be open to discussion, I think it well to clear the ground of a question which, though fundamental in its practical importance, is to my mind so far settled as to be outside the domain of controversy. I assume that in all cases eczematous lesions should be cured as rapidly and as thoroughly as the therapeutic resources at our command will allow. Some appear to look upon a patch of eczema as a kind of overflow pipe for the escape of "depraved humours," which would otherwise—to borrow the language of popular pathology—"settle on" the lungs or other internal organs. I confess I looked upon this as an absolute superstition till I found that the notion still survives in quarters not open to the least suspicion of scientific heterodoxy. All I can say is that it is absolutely opposed to my own experience. In every case of eczema that comes before me I do my best to heal the disease as quickly as I can, and of the numerous cases which I have treated in not one have I seen the slightest ill-effect follow the cure of eczematous lesions.

I. The first point which I propose for your consideration is: *Are internal remedies required in eczema? If they are, what are the precise indications which should guide us in the use of them?*

My own view, stated broadly, is that as a general rule the less internal medication there is in eczema the better. If a constitutional dyscrasia underlie the skin affection it must of course be treated on the ordinary principles of medicine; if the neurotic element be pronounced remedies directed to the restoration of the nervous tone are obviously indicated; if the patient be broken down by want of sleep and the exhaustion consequent upon prolonged suffering, sedatives and general tonics will be required; similarly if there be disorder of the digestive apparatus this must be rectified by appropriate measures. Where, however, there are no definite indications of the kind that have been referred to, I am strongly of opinion that internal medication is not only useless, but positively injurious by disordering the digestion. In an ordinary chronic eczema, where the patient's health appears to be unaffected, and there is no reason to suspect constitutional dyscrasia, I trust entirely to local treatment. Where internal remedies are given the selection of the particular drugs employed must be governed by certain definite indications. When the lesions are acutely inflammatory in character, I find antimony most valuable. I begin by giving ɱx to xiij of the vinum antimoniale, repeating the dose in an hour, and, if need be, again two hours later. The interval between the administrations is gradually increased, the dose being at the same time reduced till one of ɱvj is reached. This should be given thrice in the twenty-four hours until a distinct subsidence in the intensity of the inflammation becomes manifest. The indication for antimony is the presence of arterial tension; on the other hand, depression is a positive contraindication of this drug. I am aware that a freer use of antimony has been recommended by some practitioners, but my own experience has not led me to see any necessity for larger doses than those which have been mentioned. If a neurotic element is clearly present in the case, sedatives and nerve tonics must be combined with local treatment. In such cases the sheet anchor is opium, under the influence of which the patient should be kept almost continuously until the nerve storm subsides. In such cases I have often found it of the greatest advantage to begin the treatment with a full dose of calomel, and afterwards the constipating effect of the opium should be counteracted by the administration of a saline aperient, such as Carlsbad salts, Friedrichshall, etc., every morning. If opium disagrees, some other sedative, such as sulphonal, must be substituted. The indication for the use of sedatives is great nervous excitement, accompanied by sleeplessness.

If, on the other hand, the neurotic element shows itself in the form of depression nerve tonics are indicated; of these the most useful on the whole in my hands has been quinine. This may advantageously be combined with opium. If there be much discharge belladonna may usefully be combined with the quinine. Phosphorus is another drug of great value in counteracting nervous depression in these cases, and strychnine also often does good. Arsenic, though undoubtedly useful in some cases, is far from being a specific in eczema, and if injudiciously used will do harm instead of good. The indication for its use is deficiency of nerve force combined with absence of acute inflammation in the lesions. If the eruption be of an actively inflammatory type arsenic is positively contra-indicated. If the disease process shows a marked tendency to frequent exacerbations, ergotin may be useful by the control which it exercises over the vasomotor apparatus.

Malnutrition, weakness, and anæmia are indications for cod-liver oil, and general tonic treatment on ordinary principles. Iron, however, is contraindicated by the presence of acute inflammation; in such cases it adds fuel to the flame. Of course, if any definite source of peripheral irritation is discovered it must, if possible, be removed. In women menstrual derangement or uterine disease must be remedied, and hysteria or the disturbances incident to the climacteric period must be combated by such remedies as musk, valerian, etc.

II. The second point which seems to me specially to call for discussion is the *influence of diet in eczema*. I may frankly state that my own view is that diet has no influence at all except indirectly. Thus, if a constitutional condition such as gout or diabetes underlie the eczematous process, of course the dietetic restrictions indicated in the circumstances are called for. Again, if the lesions are of an acutely inflammatory type, the diet should be limited in quantity, and bland and non-stimulating in quality. Apart from these indications, I have seen no reason to think that restrictions of diet had any good effect; on the contrary, I have seen a "lowering" regimen do positive harm by weakening the patient. The true principle in the management of eczema, as far as diet is concerned, is to let the patient take such food as he finds most suitable to his digestive powers. Anything, however, which disorders the gastro-intestinal tract, or which causes acidity, insomnia, flatulence, palpitation, or vaso-motor disturbance must be avoided. The same principle applies to drinks; but here, it is almost needless to add, strict moderation in quantity is necessary. It is only in acute forms that beer is contraindicated, as are all other beverages likely to cause flushing. I place no restrictions on my patients in the use of tea or coffee unless these beverages are contra-

[1] On the Nature and Treatment of Eczema, *Brit. Journ. Derm.*, 1890, p. 231.

indicated by definite ill-effects on the digestion or nervous system. In short, as far as diet is concerned in eczema, I am disposed to say with Bacon in his essay *Of Regiment of Health*, "A man's owne observation, what he findes good of and what he findes hurt of, is the best physicke to preserve health."

III. The third question which I submit for discussion is, *What are the principles on which the local treatment of eczema should be carried out?* It is impossible here to go into the details of the local treatment of eczema of different forms and in different situations; this is the less necessary as my methods have been fully described elsewhere. Speaking generally, I treat every case as if it were of parasitic origin. Even if micro-organisms are not the exciting agents in the causation of the process in all cases, parasitic irritation always comes into play sooner or later as a secondary factor, and requires to be appropriately dealt with. The objects which I aim at in the local treatment of eczema are, first, to destroy micro-organisms; secondly, to protect the inflamed surface from the air and from further microbic invasion; thirdly, to soothe irritation. The general principles which guide me in the application of local remedies are, first, to temper the strength of the remedy to the tolerance of the patient's skin; and, secondly, to keep the remedy continuously in contact with the affected parts. I therefore begin with a very weak parasiticide, and feel my way towards the use of stronger applications, with the most watchful care not to cause any irritation. The best remedy for local use in dry, chronic eczema, especially of seborrhœic origin, in my experience, is sulphur, and next to that I place resorcin. Both these drugs have this special advantage, that they not only destroy the micro-organisms on the surface of the skin, but give rise to exfoliation of the horny layer, and bring away with it the microbes which have penetrated to the deeper parts of the epidermis. I use at first an ointment composed of 10 grains of precipitated sulphur, or the same quantity of resorcin in ℥j of zinc ointment or some other soothing application; the amount of the antiparasitic agent is increased very gradually. When the inflammation is acute, ichthyol is particularly useful, as it is a vascular sedative as well as a parasiticide. Other antiparasitic remedies which are of service as applications in eczema are salicylic acid, white precipitate, boracic and carbolic acid. I use them with cooling "creams" as vehicles when there is much irritation. For the continuous application of local remedies in limited areas of chronic character I have found nothing so useful as the plaster mulls devised by Unna, those I find most generally useful being carbolic acid and mercury, and oxide of zinc.

When discharge is profuse I wash the part with a weak solution of boracic acid, afterwards drying it with muslin bags containing starch and powdered boracic acid, or with flour mixed with a small quantity of the same antiseptic. If itching is troublesome, I find weak lotions of carbolic acid or tar most beneficial. For very persistent chronic eczema of the flexures I have frequently had good results from chrysarobin.

I may sum up the principles on which the local treatment of eczema should be conducted as follows: Soothe when the inflammatory process is acute; stimulate when it is chronic; and in either case keep the parts under the continuous influence of antiseptics and parasiticides, of a strength carefully regulated in accordance with the intensity of the disease and the sensitiveness of the skin.

IV. A fourth point on which discussion is likely to be useful is, *How is the tendency to recurrence of eczema in those predisposed to the disease to be overcome? Is there any plan of alterative treatment by which this result can be brought about?*

Change of climate is often productive of good in this direction, especially if accompanied by complete rest of mind as well as body. I know of no special indications in respect of climate except that eczema, being a catarrhal disease, it will be well to avoid climates which are apt to produce catarrh of any kind. A too bracing climate—especially places where the north-east wind holds sway—should be avoided. The same may be said of sea air. As regards altitude, there is no general rule; as in the case of climate, it is largely a matter of idiosyncrasy. The true principle is to discover what suits the patient. After all, it is the change that is the most powerful alterative. Sea bathing very often produces a recurrence of the disease, but it sometimes undoubtedly counteracts the tendency to relapse.

As to waters, in estimating their usefulness, the effect of the change of scene and surroundings which a visit to a spa involves must be taken into account, as well as the chemical constitution of the springs. In my experience they are beneficial chiefly, if not so solely, in obstinate chronic cases. In selecting a spring for a particular case we have not much in the way of definite indications to guide us. The alterative influence of spas in eczema is a large subject, which in itself might well occupy the whole time allotted for this discussion. I can only touch on it here in the most cursory way, leaving it to others of large experience in this particular direction to give us the benefit of the knowledge so gained. On the whole, the sulphur springs—especially those of Harrogate and Strathpeffer—are best for external use; if there be a marked tendency to acute inflammation they are apt to aggravate the disease. The internal use of sulphur waters is particularly indicated in cases in which gout or rheumatism underlies the skin affection. Chalybeate and arsenical waters are useful in cases in which general tonics are indicated. The St. Victor Spring at Royat is one of the richest both in iron and in arsenic, and is therefore particularly useful for eczema in anæmic patients. Of the purely arsenical waters, the most useful in eczema are those of La Bourboule and Levico. The alkaline waters of Vichy and Ems have not seemed to me to be of any particular use in cases of eczema even in gouty subjects. In many cases the waters of Bath do good. The springs which I have mentioned are those which in my own hands have proved of greater service in cases of eczema.

I may sum up my own conclusions as to the utility of springs in the following propositions:

1. No spring known to me has any specific action on eczema.

2. Such virtue as sulphur waters externally applied possess is due chiefly to the parasiticide action and partly to the temperature at which they are applied.

3. Such virtue as sulphur, chalybeate, or arsenical waters possess when taken internally is due to their action in quickening the processes of metabolism, increasing the number of red corpuscles in the blood, and giving tone to the nervous system.

II.—E. D. Mapother, M.D., F.R.C.S.I., London.

Dr. Mapother referred to the management of one form of eczema—the oozing, postvesicular, especially of the adult and the aged. Having always held that the uric acid diathesis was causative of this condition, he had used for the last two years that wondrous solvent of the urates—piperazin—with most satisfactory results. The only other drug employed was a blue pill about once weekly, which either acted as a cholagogue, or an eliminant of uric acid. Copious drinking of pure water, such as the distilled water sold under various trade names, promoted diuresis and relieved the constipation so usual. When carbonated it was more agreeable, and lithia was often a useful addition. Of dietary articles, fresh fruits and unboiled vegetables were of great use. As to local measures, he thought ablution of the part several times daily, and of the whole skin as by a sponge bath once a day, essential. In Dublin and Glasgow the supplied water was practically pure, holding some 4 grains of solids to the gallon, and in London distilled water was delivered at 6d. per gallon. Ablution was needed to remove the irritating and probably toxic materials which oozed out. Of course the water should be tepid, and the drying should be done with the greatest gentleness; but after a sponge bath a good rubbing of the safe regions was serviceable. The continuous application of water often brought out a rash, but this was substitutive of eczema, often curative, and at any rate, like drug rashes, would cease on the removal of the cause. To refer to one most common site—the leg—he usually applied a single layer of old linen and a cheese-cloth bandage, to be moistened and renewed at least twice daily. When the case was acute, horizontal rest was needed, but inactivity promoted the constitutional condition which he thought causative, and passive exercise in the open air was always admissible. In a few cases connected with varicose veins, rubber bandages were useful. For

the initial step—the removal of crusts—he had found spongiopiline soaked in water, sometimes with a little soft soap dissolved in it, efficient. Although he was against sealing up the discharging surface, he acknowledged that for the night, to prevent itching, vaseline with a little ammoniated mercury, should be smeared over the surface.

III.—A. S. Myrtle, M.D.,
Harrogate.

Dr. Myrtle congratulated Mr. Morris on his interesting address, and was pleased to find that his experience as regards the management of eczema was in accordance with his own. He had long felt that internal remedies were, in the majority of cases, not only superfluous but injurious. Every variety could be dealt with sucessfully by local measures, and most of these belonged to the coal-tar series. He also considered any strict system of diet uncalled for. He had been unable to trace any connection between gout, uric acid, and eczema, although when it appeared in combination with diathetic conditions treatment must necessarily be directed to lessen or remove such. Whilst agreeing so far with Mr. Morris Dr. Myrtle could not accept his proposition that eczema was caused by the presence of any bacillus or micro-organism whatever. He maintained that in the vast majority of cases its origin was neurotic. Somehow the delicate nerve filaments became irritated, lost their healthy tone; alteration in cutaneous cell life followed, and eczema was developed. A patient suffering from an acute attack of eczema got perfectly well, was dismissed cured, in a few hours or days he was as bad, if not worse, than ever; he attributed his relapse to a chill, error in diet, or bother of one kind or another. A gentleman who had suffered from eczema of a most virulent type in both hands, complicated with sluggish liver for years, got perfectly well under his care. Before leaving he dined with him. When dinner was half through his hands began to burn and itch, the skin became tense, brick red; in half an hour it was in a state of active exudation, and from the tips of the fingers to the wrists, the disease raged again. Children treated for scabies by the free inunction of sulphur ointment at night and soft soap and hot water next morning, quickly got rid of the itch, but no sooner was this cured than in some cases acute eczema appeared spreading from the fingers up the arms to the face and head. Was it to be supposed that whilst they annihilated the itch parasite they created myriads of microbes of another sort? About three weeks ago a gentleman covered with eczema from head to foot had consulted him. He had been in this plight for two months. He (the speaker) asked if he could assign any cause for the outbreak; his answer was "The telephone." Some time before eczema appeared, he put a telephone in his office. He was engaged in most important and very difficult calculations, and when his mind was deeply engaged, ring went the bell, away went his thoughts, and he believed this annoyance proved the exciting cause of his skin trouble. In very obstinate circumscribed eczema looking like lupus, he had found nothing act so satisfactorily as a solution potassa fusa. He painted the patches over with a 15, 30 or 45 grain solution to 1 ounce of distilled water; three or four applications were generally sufficient, but the pain for a short time was intense. He never attempted the sealing up of eczema during its exudative stage, and had seen much harm result from this method. Mr. Morris mentioned Harrogate, and he (the speaker) could truthfully add that he had seen the most splendid results from the proper use of its waters and baths in cases where every other plan of treatment had failed, even a protracted course at foreign springs. This was all the more likely to occur when eczema was complicated with hepatic and dyspeptic troubles.

IV.—R. L. Bowles, M.D., F.R.C.P.,
London.

Dr. Bowles raised the question whether the cure of eczema by external remedies did not depend more upon the hydrocarbon vehicles in which the numerous remedies were mixed than upon the remedies which were credited with the cure. He was led to this suggestion by the successful results on very bad cases of chronic eczema, lichen ruber, and psoriasis treated with oleum deelinæ alone; this oil was thin and penetrating in its effects, and Dr. Bowles thought it possible that if eczema depended on a microbe, it might be destroyed by the oil depriving it of the oxygen necessary to its existence. He referred also to the successful use in many such cases of coloured lotions and ointments in the hands of the late Mr. Startin. These might have owed some of their benefits to exclusion of the irritating rays of light. In this view Dr. Unna appeared to agree with him.

V.—Dr. Unna.
Hamburg.

Dr. Unna said he showed in 1881 that the influence of sulphur in eczema might do harm as well as good. The value of his plasters had been called in question by Dr. Myrtle, but the cause of failure was often their improper use. The microbic theory of eczema had met with great opposition, but was steadily gaining ground in England as well as Germany. He had convinced himself of its truth by a research extending over many years. He claimed that ichthyol had a powerful effect on eczema when given internally.

VI.—Stephen Mackenzie, M.D., F.R.C.P.,
Physician to the London Hospital.

Dr. Mackenzie agreed entirely with Mr. Malcolm Morris that eczema was in nearly all cases a local disease, and therefore to be treated by local measures only. He agreed also with him that diet was of little or no importance in eczema *qua* eczema, but when there was dyspepsia or any other condition requiring treatment dieting might be desirable on that account. As regarded the principle of treatment, he believed strongly that the general principle was to soothe the inflammation and heal the surface. The next point was to render the skin aseptic. He attached greater importance to the first than the second. As regards the microbic theory of eczema, though he had been in the habit of disregarding it in practice whilst inclining to believe it, he was quite open to conviction by Dr. Unna that eczema was of parasitic origin.

VII.—Horace Jefferies, M.R.C.S.,
Bolton.

Mr. Jefferies cited the case of a child who developed acute eczema about the eruptive period of the first teeth, which, being cured by local and internal remedies, was followed by an epileptic fit, the first of which increased with age, and lasted till death at the age of 14. He asked the question, Could this eczema be regarded as a nervous explosion, and as such conservative, and was the rapid curing of the case in any way connected with the epilepsy?

VIII.—Frederick Pearse, F.R.C.S.,
Southsea.

Mr. Pearse said that a principle of treatment which had not been mentioned in the discussion was that based on the fact that alkaline applications would check alkaline secretions, and acid applications acid secretions. While some cases of apparent eczema would only recover under some form of parasiticides, a large number were relieved and cured by alkaline applications. In acute cases with copious weeping surface, very diluted alkaline solutions were to be recommended, the strength being gradually increased according to the less acuteness or chronic nature of the affection.

IX.—John Roberts, M.D.,
Chester.

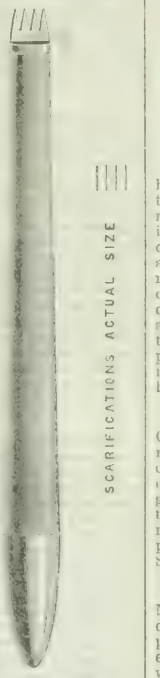
Dr. Roberts observed that ointments frequently aggravated both the pain and the inflammatory condition. Fomentations were most useful, and soothing in cases of acute local eczema. A weak solution of potassa fusa was the best remedy he had used in chronic eczema of the ears. Oleum deelinæ was most useful in chronic cases of eczema, but should never be applied during the early stages.

According to the *Australasian Medical Gazette*, 131 coroner's inquests have been held on infants in Sydney and its suburbs during the last five years, nearly all of who were illegitimate or "not known." In the great majority of cases the verdict returned was "Found Dead: Wilful Murder by Persons Unknown."

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

VACCINATION SCARIFIER.

Surgeon-Lieutenant Colonel W. G. King writes from Madras with reference to Dr. Napier's vaccination scarifier described in the British Medical Journal of June 23rd: It is with satisfaction that I find I have the support of a medical man of experience as to the soundness of principles adopted by me for use in this country in 1891; of this I send a sketch—exact size. As this succeeded the more complicated instrument issued by me to the Madras Vaccination Department in 1890, the teeth of which were of the same shape as that now shown but were capable of protrusion beyond a guard by means of a screw, it was necessary to name this King's Scarifier No. II., to distinguish it from the first issue which was thereafter known as No. I. The result of the following of the same principles by Dr. Napier and myself has been to produce an instrument very similar in character, although we have had no opportunity of communicating with each other. This scarifier was devised by me to meet the requirements of native vaccinators too unskilled to be trusted with the lancet in using my preparation of preserved lymph known as lanolin vaccine, now largely used in this country—that is animal vesicle pulp mixed with anhydrous lanolin, a preparation which I found, after a careful series of experiments in 1890, to be specially suited for use in this hot climate. The scarifier consists of a single steel bar with small teeth at one end, and a spatula at the other. The surface of the metal is slightly round, it is coloured blue except at the two exposed ends, with the object of being less like a dangerous weapon to timorous mothers. When comparing the instrument with Dr Napier's, I would call special attention to the shape and arrangement of the teeth. The outer teeth on either side have a diamond shape as in the case of the other two, but Dr. Napier's are cut straight; and I think experience will show him that if this be retained, the outer teeth are apt to make irregular and deeper scratches than the inner, whereas if all be made of the same shape, the pressure applied is met with uniform resistance from the skin at all points, and the result is more uniform. The instrument is held in the right hand in the attitude of a pen but in a more vertical position, whilst the left stretches the skin of the arm; with a single movement the epithelium is removed, exposing, without penetrating sufficiently to cause bleeding, the true skin. Four uniform and equi-distant scratches are thus produced. In applying the lanolin vaccine or other preparation, the skin is stretched by the forefinger and thumb of the left hand, so as to make the scratches gape, and insertion is then effected with the spatula end. Whilst the ordinary instrument is provided with four teeth, I may state I have also used three and two teeth successfully, according as the degree of concentration of the preserved lymph demanded either a large or small area for absorption: the instrument with two teeth is particularly useful for use with fresh lymph. Dr. Napier's experience as to the rapidity with which operations can be effected coincides with my own. Aided by two assistants, one inserting the lymph, and the other cleaning a spare instrument, at Bangalore in 1891 I vaccinated in an ordinary working day, over one thousand soldiers and followers, showing that with preserved animal lymph available a whole army could be vaccinated before proceeding on service at a moment's warning.



AURAL AUSCULTATION TUBE.

Dr. Arthur Cheatle sends us a description of the simple contrivance represented in the cut, which has been made for



him by Messrs. Mayer and Meltzer, to avoid any shifting of the nozzle of the auscultation tube and any irritation of the meatus, resulting from frequently screwing the plain nozzle into the ear in attempts to fix it. The contrivance consists of a light, nickel plated spring, hinged in the middle, having at one extremity a small catch which holds the nozzle (the nozzle being made of wood covered with a removable nipple of soft rubber), the other extremity plain, for resting lightly on the head. It fits either ear, is extremely comfortable, and when the spring is folded and the nozzle removed from the catch takes up very little room. The spring for the patient is not nickel plated, and the nozzle for hospital work is better plain wood for cleanliness sake, a white bone one being used for syphilitic cases.

OTÆNA.

Otæna is a flour specially prepared from wheat and oats for making "oat beer." A liquid prepared according to the directions—namely, two tablespoonfuls of otæna to a quart of boiling water, and straining—is very similar to strained gruel, but it is in no sense a beer as is usually understood by the term "beer." The claim that "oat beer" is wholesome, nourishing, and satisfying is probably correct. Otæna is prepared by Messrs. R. H. Barlow and Co., 15, Upper East Smithfield, E.

MARZA WINES.

Marza wine is a medicated wine prepared with the object of combining in a palatable form iron, phosphorus, coca, and pepsin, with an alcoholic stimulant. The results of our examination of a sample supplied by the American firm by which it is manufactured show that it is a non-astringent wine resembling port, containing a small amount of coca extractive with some iron and pepsin. Marza meat and malt port wine claims to combine the nutritive characters of meat juice and the diastasic action of malt. The sample examined had no appreciable solvent action upon starch. Both these wines are manufactured by the Marza Manufacturing Company, 19 and 21, Wilson Street, Finsbury, E.C.

MEDICINE TIME INDICATOR.

The beneficial effects of medicine are, no doubt, promoted by regular administration in the proper doses, and, in order to secure that condition, Mr. Feaver, of Anerley, has introduced a contrivance by which the time of taking a dose of medicine can be recorded on the bottle so as to show exactly the hour at which the subsequent dose is to be taken. The arrangement is very simple, and it admits of being easily fixed upon medicine bottles. A similar contrivance can be attached to pill boxes. These indicators also serve the further purpose of facilitating the identification of the bottles from which medicine is to be taken internally, that

is to say, if attention is paid to their presence on the bottles; and in that case the use of them may be very serviceable in preventing the mistakes which so frequently occur by the substitution of one bottle for another. Mr. Feaver's time indicators are certainly deserving of the attention of dispensing chemists, and their use should be recommended by medical men as being eminently calculated to ensure safety as well as other desirable results.

SUN-DRIED BANANA FLOUR.

IN relation to the larger relative amount of starch in the banana as compared with wheat and some other cereals, this flour has in this respect a considerable food value, and may be usefully substituted for rice and similar materials. Its manufacture is being commenced by Messrs. H. C. Hamilton and Co. at Las Palmas, Grand Canaries, and it is probable that it may become a useful food material.

INVALID FOODS.

BRAND AND COMPANY'S (11, Little Stanhope Street, Piccadilly, W.) meat essences are preparations made respectively from beef, veal, mutton, and chicken, and are described as consisting solely of the juice of meat extracted without any addition. They are convenient, and frequently very useful, substitutes for beef-tea. Their gelatinous form when cooled is agreeable to invalids, and the absence of fat renders them more palatable. Like ordinary beef-tea or flesh broth they have small nutritive value as compared with the meat from which they are made, but they present for the use of sick persons the stimulant constituents of flesh in a very convenient form, readily available on emergency. The samples we have examined are excellent in character, and give evidence of having been prepared very carefully, and put up in such a manner as to ensure their preservation in a sound condition.

Messrs. Brand's invalid turtle and other soups are a concentrated form of soups prepared more especially for use in the sick room; but they may frequently be turned to account with advantage under other circumstances. The samples we have examined are of excellent quality in every respect.

The essential feature of the "meat juice," distinguishing it from those corresponding to beef-tea, is that in addition to the stimulating constituents of flesh it contains albumen, uncoagulated and in a state adapted for ready assimilation. Such a preparation is often of considerable value for sick persons, and the sample of Brand's meat juice we have examined is as well suited for the purpose as might be expected considering the long experience of this firm in the production of such articles.

DIKE'S PEPSIN.

THIS is a scale preparation of considerable activity, which bears evidence of having been made with great care. It is almost free from the faint disagreeable odour characteristic of many kinds of pepsin in the solid form, is readily soluble in water, and is stated to be capable of dissolving three thousand times its weight of albumen when treated in the manner directed by the new edition of the *United States Pharmacopœia*. Examination of a sample has given results confirming that statement, and showing that when tested by the more severe test of the *British Pharmacopœia* Dike's pepsin is capable of dissolving 250 times its weight of albumen. According to these results, Dike's pepsin is five times the strength which the *British Pharmacopœia* pepsin is required to possess. In making this comparison the difference between the two methods of testing must be considered. Pepsin which will, like that of the *British Pharmacopœia*, dissolve fifty times its weight of albumen when digested for thirty minutes at 130° F., will dissolve twelve times as much albumen when tested according to the *United States Pharmacopœia* by digesting for six hours at 100° to 104° F. The pepsin is made by Messrs. F. Stearns and Co., Detroit, U.S.A., and the English agents are Messrs. T. Christy and Co., 25, Lime Street, E.C.

THE statue to Dr. Thomas Blaney, C.I.E., which the people of Bombay subscribed for, was unveiled there on June 2nd by Mr. H. A. Ackworth, the Municipal Commissioner. The statue stands in front of the municipal offices, where five roads converge. It is of Carrara marble, and is fully 8 feet high. It is the work of Signor Valla, of Genoa. The cost was 15,000 rupees.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

SPECIAL COMMISSION OF THE "BRITISH MEDICAL JOURNAL."

XVII.—KEIGHLEY.

KNOWING that the good people at Keighley have their own opinion as to the value of vaccination, we felt curious to see the workhouse infirmary, and wrote to the medical officer, Dr. Gabriel, asking that we might be introduced to the master. Dr. Gabriel most kindly met us at the infirmary, and we had the benefit of his escort and that of the matron through the infirmary.

THE INFIRMARY.

The infirmary stands quite apart from the workhouse, within sight, but a quarter of a mile away on another road. It is nominally under the authority of the master and matron, but taking into consideration the fact of its situation, we wonder that the guardians do not appoint a trained nurse as matron over the infirmary. We found the ground strewn with building material, as extensive alterations and enlargement is in progress, and when these are finished the infirmary will be much improved. A porter's lodge is being built, containing receiving wards for male and female patients, as well as living rooms for the porter and his wife; and to these are added bath rooms and all other conveniences. Separate blocks are in progress for the imbeciles and fit cases, with provision for the separation and control of a case of insanity, and a separate block is being built for the lock and offensive cases. The present infirmary is deficient in all these particulars; it is crowded, and there is but little classification; the lock cases are kept as far apart as possible in a small block, the male patients being attended to by the porter.

WARDS.

These are in two blocks in the block standing to the front; there are six wards, three on the male and three on the female side; one large ward and two smaller on each side; in the block behind are four wards for foul cases. This provides accommodation for 98 beds. There is no children's ward; the labour ward is for four patients, it opens out of the convalescent ward, and has separate offices. Carpeting down the centre of the wards gives them a look of comfort, and those patients who were up were seated in cushioned armchairs; flowers and pictures distributed about the wards complete the picture. There is cross ventilation by means of the windows, and as one might expect in Yorkshire, there were large fires burning in the wards, which are lit with gas. There are bathrooms, with a supply of hot and cold water. We noted that some of the closets are on the lower landings; this always seems to us an objectionable arrangement, and we hope that it will be avoided in the blocks that are in process of erection. In each ward the patients have a large locker cupboard wherein they keep their own possessions; in the one that was opened for our inspection there was no food kept nor any vessels, simply books and some clothing.

Bells ring from all the wards into the administration rooms, which are in the centre of the block, but there is no telephone to the workhouse; if the doctor is required in the night the nurse has the power to send a messenger for him, without the routine of communicating with the master.

SYSTEM OF NURSING.

There are two trained nurses, one on by day and one by night; they take a month about alternately, and besides there are two probationers in training; they are generally on duty during the day, unless, as was the case when we went round the infirmary, there may be special duty wanted by night, the doctor had a case of morphinomania, for whom he had the probationer doing special at night. Pauper help is made use of in the wards. The day nurse told us that the paupers make the beds and wash and bathe the patients

under the direction of the nurse; they also feed the patients and wait on them. The infirmary is, to all intents and purposes, a hospital—acute cases are under treatment, major operations are performed when necessary, as the only other hospital in the town is a small cottage hospital. The doctor has lectures for the nursing staff. The nurses' quarters need improving; they have no mess room, and have to take their meals in the kitchen. The infirmary has its own cook and kitchen, but we understand that these matters will receive attention in the new building.

Patients.

We saw a number of acute cases in the wards—the morphine patient above referred to, of whose ultimate recovery the doctor had very good hopes, pneumonia, typhoid fever, bronchitis—in fact, such diseases as would be seen in a general hospital and the infirm and helpless cases besides; in all there would be about thirty patients in bed. The visit of the doctor is required every day once at least; on occasions he visits again in the evening. We felt that the nursing staff was under the mark, that the pauper helps must of necessity have more of the actual nursing to do than they ought, as these patients were in both blocks, and there was a good number of bedridden cases to be washed and waited on. There was a wardsman or wardswoman in each ward.

Recreation Grounds.

The airing courts were in the possession of the workpeople, so that we could form no idea of their extent or suitability, and they will be quite altered by the time that the work is done; at one end of the present infirmary there is a garden in which we are informed that the patients may walk under certain restrictions, but we must confess to a feeling of doubt as to how far the gardens are really for the use of the patients; we should like to see seats provided for them, and an air of welcome in these grounds. The poor old people would rather sit about than walk round the walks under certain restrictions, especially as we do not recollect seeing much day-room space in the infirmary.

Recommendations.

As the board are making an effort to increase and improve the sick department, it anticipates the suggestions that arise; but, from the long experience we have had in watching the working of the trained nurses under the Poor Law, we would urge that the infirmary should be made into a separate establishment, under a superintendent nurse; that the staff of nurses and probationers should be increased to take place of the pauper help, the latter being kept as servants in the hospital, and that the hospital be available as a place of training for workhouse nurses. This is quite possible under the care of the medical officer, who would then be responsible for the education of the nurses, their clinical duties being taught to them by the head nurse. This will complete the work that appears to be in satisfactory progress; but, on the other hand, if the hospital is only treated as a part of the workhouse, it is a patch that will tear a rent in the discipline. In assigning the wards to the various classes of patients, we trust one is intended for the children; no hospital is perfect that does not keep the pauper children apart from the adults.

Lanchester Union Workhouse Infirmary.

We have received from Mr. Will. Logan, Chairman of the Lanchester Board of Guardians, a letter in which he questions the accuracy of some of the statements made by our Commissioner with reference to the Lanchester Workhouse Infirmary.

1. Mr. Logan states that from eighteen years' experience he agrees with the medical officer that the ventilation is effective, and he denies that there was an offensive case (paralysis of sphincters) in the male ward.—On the occasion of our Commissioner's visit there was a strong odour of urine in the male ward, and the nurse stated that a patient suffering from paralysis had no control over the sphincters.

2. Mr. Logan states that there are two wards for isolation.—Our Commissioner's statement was based on the information conveyed by the nurse that there was no ward in which an offensive case could be isolated; and we gather from Mr. Logan's observations that the isolation wards to which he refers are for infectious cases.

3. Mr. Logan disputes the statement that there was "in the male ward a man with syphilis, a most decidedly offensive case."—Our Commissioner's statements were based on notes, taken at the time, of the diseases for which the patients were stated to be under treatment.

4. Mr. Logan takes exception to the statement that all the feeble-minded patients would be in the infirmary, on the ground that at the time of our Commissioner's visit there was only one feeble-minded patient in the infirmary; the remainder of the feeble-minded inmates, fifteen in number, being in the workhouse.—Mr. Logan has misunderstood our Commissioner's point. The remark applied to such feeble-minded inmates as might be from time to time admitted to the infirmary for treatment. For them there is no separate ward.

5. The statement of our Commissioner as to the labour ward, which was guarded by the phase "if we remember rightly," was incorrect. Mr. Logan states that there is one bed in the labour ward and five beds in the lying-in ward. He adds that before the visit of our Commissioner alterations had been, and are, contemplated.

6. Mr. Logan states that the drainage put down fourteen years ago had not been touched during that time, and is still in perfect order. Our Commissioner's statement was founded upon information given on the spot, to the effect that certain excavations were in connection with work on the drains, which were not yet complete. Mr. Logan assures us that this work was in connection with the water supply.

7. Mr. Logan quarrels with the statement that the earth closets were "unsavoury"; he will go no further than to admit that there is a "smell" when they are used. Reference to the report will show that our Commissioner upheld the system of earth closets, but condemned the manner in which it is carried out at Lanchester, where the earth was insufficient to cover the soil.

8. With regard to food Mr. Logan writes: "There are three dietary tables in the infirmary, any one of which the medical officer may order, and he can go further and order any addition or alteration that he may think the patient requires. I most emphatically assert that any of the diets is superior in quality, more varied, and better cooked than the patients would have received in their own houses, if fortune, in their position in life, had always smiled upon them, and sickness had overtaken them in their homes." The question of food is not peculiar to Lanchester. The diet for the old and sick, as sanctioned by the Local Government Board, requires revision.

EPIDEMIC MUSCULAR RHEUMATISM.

Dr. Isaac Newton (Tonbridge, Kent) sends us the following note on an affection which has appeared in Kent recently:

I have seen a comparatively large number of cases (43) of acute muscular rheumatism during the last five weeks, all presenting an extraordinary similarity, so much so that I was able confidently to predict the exact course that any individual case would take. I have seen no record or description of anything of this nature occurring in such an epidemic form. It comes on suddenly, and is characterised by pain, increasing in intensity for a few hours until it reaches its maximum, situated in and affecting the abdominal and lower intercostal muscles, rendering breathing painful, short, and rapid, not infrequently also affecting the muscles of the back, especially in the lumbar and upper sacral regions. It is accompanied by a rise of temperature, ranging from 100° F. to 104° F., according to the severity of the attack, with its usual concomitant effects of headache, injected conjunctivæ, and furred tongue. The pulse remains comparatively slow, 80 to 90 beats a minute, occasionally 100. The patient perspires more or less profusely, giving off the peculiar acid odour of a rheumatic affection. There is no vomiting, feeling of nausea, or other gastro-intestinal disturbance. If treated with such drugs as quinine, acetate of ammonia, or sweet spirits of nitre, or, if it be left untreated, it runs a course of about three or four days, the pain and fever gradually abating on the second or third day. In two cases it was accompanied on the second day by acute endocarditis.

I look upon it as entirely distinct from influenza, which it resembles, and as having a rheumatic origin, for the following reasons:

1. Although I have seen such a considerable number of cases during the last few weeks, I have not had a single case of any of the recognised varieties of influenza.

2. It is not followed by any of the marked depression or weakness so characteristic of influenza.

3. It is peculiarly amenable to treatment, 10-grain doses of salicylate of soda together with 15 grains of bicarbonate of potash administered every four hours invariably brought down the temperature in from six to twelve hours. This combination of drugs has, so far as I know, no such specific effect in influenza.

4. If infectious, it is very slightly so; as, of all the cases observed, in only one instance has more than one member of the same household been affected. (A servant had it, then in exactly seven days the wife, and seven days later the husband were attacked.) I conclude that it is not infectious, a strong contrast to influenza.

5. There has been no complication or affection of either

lungs, air passages, or nasal cavity concurrent with or as a sequel to it in any single case.

6. Lastly, and not least, the heart complication points strongly to a rheumatic origin.

Example.—G. J., aged 32, was taken with acute pains in the abdomen and in the lower intercostal region on the afternoon of August 4th. That evening I found him in bed, with difficulty of breathing owing to the affection of the lower intercostal muscles on both sides; pulse 92; temperature 103.4° F. He was perspiring profusely, the acid odour of the perspiration being well marked. The heart sounds were normal, and nothing abnormal was to be found in the lungs. I prescribed the following: ℞ Sodii salicylatis, 5j; potassii bicarbonatis, 5j; liquor opii sedativi, 3ss; spiriti chloroformi, 3jss; aquam ad, 3viij; one-sixth part every four hours. I saw him twelve hours later, and found that all pain had ceased after taking two doses; the temperature was 98.4° F. The patient was practically well. He got up that afternoon, and I put him upon an alkaline and gentian tonic. On August 6th he returned to work; he has since felt no return of the pain, and has been perfectly well. This tallies exactly with and might be an exact description of all the other cases so treated.

The cases above mentioned of heart complication occurred before I had discovered the specific effect produced by salicylate of soda and bicarbonate of potash. There was no valvular disease in them previous to the attack. Only a few weeks before I had both these patients under notice; the condition of their hearts was noted accurately, and there was no trace of any cardiac murmur or trouble to be made out then. I attribute these attacks to the exceedingly wet summer that we have experienced this year. This district lies especially low in the valley of the Medway.

SMALL-POX AND VACCINATION IN 1894.

X.—HINCKLEY.

WE have been favoured with a copy of the report of Dr. Wm. Young, medical superintendent of the Hinckley Small-pox Hospital, on the recent prevalence of small-pox as it affected the town and rural district. The report has interest in many ways, since it relates mainly to a town district of about 10,000 population in which there was an absence of compulsory notification and hospital accommodation when the disease appeared. The initial case occurred in the village of Barwell (population 2,000) and the first in the town on April 3rd, both of uncertain origin. It was from this second attack that the disease spread rapidly. It was not until the epidemic had begun to spread that the sanitary authority set about the erection of a hospital, and before this iron structure was opened on May 29th very many cases had had to be treated in their homes. It was not till May 15th that daily vaccination was started, but this need not necessarily infer neglect, since opinion will differ as to the wisdom of too frequent vaccination attendances, even during a small-pox prevalence, though the usual objections would have held in this case, seeing that all the operations were done with calf lymph. During the six weeks of daily vaccination there were 200 primary and 1,600 revaccinations performed, besides those privately accomplished. Five days after the opening of the hospital it was full, and thereafter three large marquees and two wooden erections had to be called into requisition. Only when these were ready (on June 16th) could all the cases be isolated as they arose. The last admission was on July 2nd. The total cases sent to hospital amounted to 108, only 11 being rural cases. In all 118 attacks were chronicled; of these 99—84 per cent.—were vaccinated, and 19—16 per cent.—unvaccinated; or, reckoning 5 successfully vaccinated during the period of incubation, the numbers were respectively 104 and 14. Under 15 years of age the percentages attacked were 6 of the vaccinated and 84 of the unvaccinated.

This is a striking commentary on the usefulness of infantile vaccination, albeit the numbers are of course small. A house-to-house visitation in a crowded part of the town led to the finding of over 20 per cent. of the children under 10 years of age still unvaccinated, and this, be it said, at the conclusion of the epidemic. That the disease did not spread further than it did is to be attributed in great measure to the fact that all persons known to have been in contact with infected persons were vaccinated immediately.

Of the 10 deaths, 7 were in vaccinated individuals, a percentage of 6.73; and 3 in unvaccinated, equal to 21.4 per cent. Of the 7 deaths, only 1 was in a person under 15, and all the 3 deaths were in children under 4 years old. One patient, aged 64, had a second attack after an interval of fifty years. Of 7 revaccinated sufferers, only 2 had been operated on outside the period of incubation (fourteen days), one twenty, the other thirty-four years after revaccination. All these cases were mild. None of the hospital staff of 15 contracted the disease.

Dr. Young points out that the data of the epidemic do not suggest any protective power of many over few marks, but the data hardly admit of any definite opinion on this matter, and nothing is stated as to area or foveation of scarring. The material is, however, conclusive in its evidence as to the happy influence of vaccination in relation to small-pox.

THE EPIDEMIC SKIN DISEASE IN LONDON INFIRMARIES.

THE ST. MARYLEBONE INFIRMARY.

LAST week we referred to the outbreak in the St. George-in-the-East Infirmary, and now, by the courtesy of Mr. J. R. Lunn, medical superintendent, and of Dr. Bliss, assistant medical officer, of the St. Marylebone Infirmary, we are able to give some particulars concerning the cutaneous affection which is at present to some extent prevalent in that institution.

It will be remembered that when attention was first called to the matter by Dr. Savill in 1891 the St. Marylebone was then, perhaps, the most largely affected of any of the metropolitan infirmaries. From May, 1891, to November there had been 193 cases (105 males and 88 females), with 23 deaths. On the present occasion there have been 65 cases, 41 occurring among the men and 24 among the women. A considerable number of the patients have already recovered from their skin malady, and 5 have died; most of those now in the wards are obviously convalescing, and as no fresh cases have presented themselves for some little time, we may hope that the "epidemic" is on the wane.

As regards the nature of the disease, anyone who has had experience at a hospital for diseases of the skin or at the skin department of a general hospital must be struck with the strong resemblance which the majority bear to cases of what is generally considered to be an "eczema." The rash is frequently at first papular, passing on to desquamation and sometimes to exudation; and intense itchiness appears to be a prominent symptom in nearly all the cases. If we leave out of consideration for the present the apparent epidemic and contagious character of the disease, it is difficult to find any distinct clinical features differentiating these cases from those of so-called "eczema," "pityriasis rubra," etc., which not infrequently crop up in ordinary hospital and private practice. We are quite aware that a series of "textbook" distinctions have been drawn up, but we doubt their practical value.

In several instances the extensor surfaces have been, in the beginning, affected as much as or more than the flexor; the tips of the elbows have been sometimes the first parts attacked. In others, patches, indistinguishable from common eczema, have remained localised for weeks or months, and the dermatitis has subsequently spread or has not developed elsewhere. Thus, one old woman has been affected for seven weeks only on one thigh, and another has had eczematous legs for a long period before the "rash" extended upwards.

The cases at this infirmary seem to show that the disease is certainly not endemic in the institution. A considerable number have been brought into the infirmary with the disease upon them, several having been admitted from the workhouse, which is situated many miles away, and others from the district in the neighbourhood of the infirmary, having arisen sporadically. It is fallacious, therefore, to regard the infirmary as the cause of the epidemic. It has no doubt been brought in and spread by contagion, of which there is considerable evidence. In 1891 several members of the staff contracted the disease; and there are now in the wards instances of the affection developing in patients occupying neighbouring beds, and of its being communicated to healthy attendants, etc., as, for example, to a porter who had been temporarily on "bath duty."

Some importance seems to have been attached to the supposed fatal character of the malady. On the last occasion,

the mortality at this infirmary (and at the Paddington) was about 12 per cent., but during the present epidemic it has so far not been more than 8 per cent. At Marylebone the ages of the five patients, all men, who have died were respectively 83, 79, 69, 83, and 37. This last case was in the infirmary for Bright's disease, which is no doubt correctly put down in the certificate as the cause of death. It must be remembered, indeed, that a large majority of the persons affected with the skin disease at these infirmaries are old and infirm individuals who have been suffering from other, and often severe, complaints, and whose feeble systems were little calculated to bear the strain of a superimposed irritating malady. In short, it would be fairer to consider the deaths of these people accelerated rather than caused by the skin affection.

The daily papers are, of course, at this season publishing paragraphs about the "mysterious," "strange," etc., "workhouse epidemic," and—equally of course—full of misleading statements. The public may rest assured that it is not an "alarming outbreak;" that it is not "of a more than usually virulent nature;" and that they need not fear the "putrefying microbe," which, if they were bacteriologists, they could probably find in most decomposible liquids.

PREVENTIVE INOCULATION FOR CHOLERA IN INDIA.

The following are the full particulars, kindly placed at our disposal by Surgeon-Major R. Macrae, M.B., Indian Medical Service, of the trial of Haffkine's method of preventive inoculation against cholera in Gaya Gaol, to which we referred briefly last week.

It will be seen that the report possesses a special value because the conditions under which the trial was made were such as to give the test the value of a scientific experiment. Owing to the fact that not all the prisoners in the gaol when cholera made its appearance volunteered to be inoculated, we have two contrasted groups of persons, representing various ages and both sexes, living under the same conditions and differing only in the circumstances that some were subjected to the inoculation and others not. It will be observed that Surgeon-Major Macrae has arrived at the conclusion that the inoculations do confer immunity, although the facts are not of such a nature as to afford any information as to the length of time for which this immunity is likely to endure.

Since, as already said, the prisoners were allowed free choice as to whether they would submit themselves to the inoculation or not, there can be no political objection to the repetition of such trials, and we sincerely trust that the Government of India, in the interests alike of science and of the welfare of the people of that country, will take means to give the method a fair trial. With the approval of the Indian Government it will be possible not merely to inoculate a large number of people, but in the case of soldiers and of the gaol populations to follow up individuals and in time to ascertain the extent and duration of the immunity conferred by Haffkine's inoculation.

The following account of the results obtained from M. Haffkine's method of vaccination in Gaya Gaol during an epidemic will I trust be of interest to the readers of the Journal.

The disease is at present widespread in all the Behar districts and in those of the North-Western Provinces, and has already caused considerable mortality among the troops of different garrisons, notably Lucknow, where it has been unusually fatal. In this particular district it has been general, having spread with great violence since the commencement of the rains. It has frequently been noted that epidemics in Behar occur during the rainy season, but in scarcely any district does cholera disappear entirely at any period of the year. It is also noticed that the virulence of epidemics observes a certain periodicity, and that every third or fourth year they attain a maximum. While, for example, during the month of July, 1893, only 126 deaths were recorded, in Gaya district, in July, 1894, 6,005 deaths were registered. The mortality of the whole district during 1893 was only 748.

The disease broke out in the Gaya Gaol on July 9th, and from that date to August 2nd, 34 cases occurred with 20 deaths, there being at the date of first attack 422 prisoners in gaol. The disease was clearly traceable to importation, but its diffusion among the prisoners was a question of much greater difficulty. The sanitary condition of the gaol is excellent; it was built quite recently on the latest plans, and is generally considered a model gaol. The water supply, which is from a well, is of excellent quality, and protected from pollution, and it is believed that the spread of the disease was largely due to the agency of flies, finding access to food and milk after being in contact with cholera poison, and contaminating them. From July 9th to 17th, 6 cases occurred with 5 deaths.

Many of the prisoners on being told about preventive inoculation wished to be inoculated, and M. Haffkine, who had previously been communicated with, and whose zeal and enthusiasm in the cause that he so well advocates are beyond praise, arrived here on July 18th, and I in the presence of Surgeon-Colonel Harvey and myself inoculated 147 prisoners, and on July 19th 68, making a total of 215 out of 433 present in the gaol on that date.

Being purely voluntary, no selection of prisoners was possible, but all classes in the gaol were represented—male and female, old and young, habituals and less frequent offenders, strong and weakly, convalescent and even hospital patients. No difference of any kind was made between inoculated and non-inoculated prisoners; they were under absolutely identical conditions as regards food, water, accommodation, etc.—in short, in every possible respect.

I have stated that up to July 17th 6 cases and 5 deaths occurred. As, owing to the progress of the epidemic, a large number of prisoners were removed from the gaol into camp, it will be convenient to consider the anticholera inoculation experiments under three headings: (*a*) The first will include the period from July 18th, the date of first inoculations, to July 24th, the date on which final reinoculations were made, and refers to all the prisoners; (*b*) the second concerns the prisoners who remained in gaol after the majority were removed into camp, and comprises the period from July 25th to August 2nd, on which date the final case occurred among this body of prisoners: (*c*) the third refers to the body of prisoners who were moved into camp on July 25th, and includes the period between that date and August 1st, when the final case occurred among this body.

Table I.

First Period. The daily totals are those actually present, after deducting cases attacked, and releases, and adding admissions, if any.

Date	No. of Inoculated Prisoners Present.	No. of Uninoculated Prisoners Present.
18th July 20th	215. Cholera cases, 2; fatal, 2	213. Cholera cases, 2; fatal, 1
,, 21st	213. Cholera cases, *nil*	210. Cholera cases, 1; fatal, 1
,, 22nd	211. Cholera cases, 2; fatal, 2	210. Cholera cases, 4; fatal, 3
,, 23rd	209 (inoculated, 161; reinoculated, 45); Cholera cases, 1 (once inoculated	206. Cholera cases, [illegible]
,, 24th	208 (inoculated, 20; reinoculated [illegible] Cholera cases, *nil*	[illegible] cases.

The deaths among the inoculated prisoners occurred on July 20th, 15th, 23rd, and 24th.

The deaths among the uninoculated prisoners on July 25th 22nd, 23rd, 23rd, and 24th.

The next two tables afford an opportunity of contrasting two independent groups of observations occurring during the same period of time. On July 23rd 45 prisoners, and on July 24th 143 were reinoculated with the final vaccine, which completes the treatment as practised by M. Haffkine. On the morning of July 25th 325 prisoners were moved into camp, while 84 remained in gaol.

TABLE II.

The Number of Inoculated Prisoners and the Occurrences in the Gaol from July 25th to August 2nd.

Date.	No. of Inoculated Prisoners Present.	No. of Uninoculated Prisoners Present.
1894.		
July 25th	34 (inoculated, 3; reinoculated, 31). Cholera cases, 1 (reinoculated)	50. Cholera cases, 1.
,, 26th	33 (inoculated, 3; reinoculated, 30). Cholera cases, *nil*	48. Cholera cases, 1; fatal, 1.
,, 27th	33 (inoculated, 3; reinoculated, 30). Cholera cases, *nil*	48. Cholera cases, *nil*
,, 28th	33 (inoculated, 3; reinoculated, 30). Cholera cases, *nil*	49. Cholera cases, 3; fatal, 1.
,, 29th	32 (inoculated, 2; reinoculated, 30). Cholera cases, *nil*	45. Cholera cases, *nil*
,, 30th	32 (inoculated, 2; reinoculated, 30). Cholera cases, *nil*	46. Cholera cases, 1; fatal, 1.
,, 31st	32 (inoculated, 2; reinoculated, 30). Cholera cases, *nil*	49. Cholera cases, *nil*
August 1st	32 (inoculated, 2; reinoculated, 30). Cholera cases, *nil*	49. Cholera cases, *nil*
,, 2nd	32 (inoculated, 2; reinoculated, 30). Cholera cases, *nil*	53. Cholera cases, 1.

The deaths occurred on July 27th, 28th, and 30th.

TABLE III.

*The Number of Inoculated, Reinoculated, and Non-inoculated Prisoners, Removed into Camp on July 25th, and the Daily Occurrences till August 1st.**

Date.	No. of Inoculated Prisoners Present.	No. of Uninoculated Prisoners Present.
1894.		
July 25th	174 (inoculated, 17; reinoculated, 157). Cholera cases, *nil*	151. Cholera cases, *nil*.
,, 26th	171 (inoculated, 17; reinoculated, 157). Cholera cases, *nil*	151. Cholera cases, 3; fatal, 2.
,, 27th	174 (inoculated, 17; reinoculated, 157). Cholera cases, 2; fatal (reinoculated), 1	147. Cholera cases, *nil*.
28th	171 (inoculated, 17; reinoculated, 154). Cholera cases, *nil*	150. Cholera cases, 1.
29th	170 (inoculated, 17; reinoculated, 153). Cholera cases, *nil*	144. Cholera cases, *nil*.
,, 30th	170 (inoculated, 17; reinoculated, 153). Cholera cases, *nil*	147. Cholera cases, *nil*.
,, 31st	170 (inoculated, 17; reinoculated, 153). Cholera cases, *nil*	141. Cholera cases, 1.
August 1st	168 (inoculated, 17; reinoculated, 151). Cholera cases, *nil*	141. Cholera cases, 1.

The death occurred among the inoculated prisoners on July 27th.
The deaths occurred among the uninoculated prisoners on July 26th.
* The average present in column "Inoculated" in this and the preceding tables includes both inoculated and reinoculated.

TABLE IV.

Summary of the Three Preceding Tables.

Number of Table.		Average Present.	Cholera.	Percentage of Average Strength.	Deaths.	Percentage of Average Strength.	Percentage of Deaths to Cases.
I.	Inoculated	211·2	5	2.37	4	1.89	80.0
	Not inoculated	209.0	7	3.34	5	2.39	71.42
II.	Inoculated	32.5	1	3.07	*nil*	*nil*	*nil*
	Not inoculated	48.55	7	14.42	3	6.18	42.86
III.	Inoculated	171.42	2	1.16	1	0.58	50.0
	Not inoculated	146.5	6	4.09	2	1.36	33.33

Table I shows that out of an average of 211.2 inoculated prisoners present during the first five days of observations, 5 cases were attacked, a percentage of 2.37; while out of an average of 209 non-inoculated prisoners, 7 cases were attacked, with a percentage of 3.34. The mortality being in both groups: Inoculated, 4 deaths, per cent. to population 1.89; non-inoculated, 5 deaths, per cent. to population being 2.39.

M. Haffkine has always stated that these inoculations would not become effective immediately; the results shown in the tables are in accordance with this belief. One of the chief points disclosed by the figures of Table I is that both classes of prisoners, inoculated and non-inoculated, appear to have been equally exposed to infection, which makes the results shown in Tables II and III still more significant. So far as any difference appears in the results of Table I it is in favour of the inoculations both as respects liability and mortality.

The summaries of Tables II and III after reinoculations were made show a very marked difference as regards liability, while among an average inoculated of 32.5 prisoners in gaol 1 case occurred which did not prove fatal, a percentage of 3.07; among an average, non-inoculated, of 48.55, 7 cases occurred with 3 deaths, a percentage of 14.42, that is to say nearly five times as many were attacked. The same result is disclosed in the summary of Table III. In an average inoculated of 171.42 prisoners there were 2 cases and 1 death, while in an average uninoculated of 146.5 prisoners there were 6 cases and 2 deaths, in other wards, 1.16 per cent. against 4.09 per cent. were attacked.

The conclusions to be drawn from the results above recorded appear to me to be that for the first few days the inoculations have scarcely any protective influence, then their effect seems gradually to increase. M. Haffkine, in his publications, has laid stress on the fact that he anticipated a period of ten days would elapse from the date of first inoculation before the full effect would be obtained.

The above tables, showing as they do a gradually decreasing incidence of attacks and mortality among inoculated prisoners seem to justify his anticipations. The following table, No. V. brings this out very clearly:

TABLE V.

	During the first five days after first inoculations.		First three days after second inoculations.		Last six days.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Inoculated ...	5	4	3	1	*nil*	*nil*
Not inoculated	7	5	5	3	8	2

Further observations are necessary to prove whether the inoculations as now practised will prove of lasting benefit; the results obtained in Gaya Gaol seem to me to justify the conclusion that their temporary beneficial effect is undoubted.

I have been informed by M. Haffkine that he proposes to introduce a certain modification of his method with the object of affording protection to patients during the ten days necessary for the action of his vaccines. I think there is every reason to believe that better results would have been obtained here had the inoculations been performed at an earlier period instead of during the epidemic.

Gaya, Aug. 21st. R. MACRAE, Surgeon-Major.

THE annual dinner of the old and present students of the Faculty of Medicine of University College, London, will be held at the Hôtel Métropole at 6.30 P.M. on Monday, October 1st, under the presidency of Sir John Williams, Bart., M.D. Applications for tickets must be made before September 28th to Mr. Bilton Pollard, 24, Harley Street, or Dr. Hugh R. Smith, University College Hospital.

SPANISH WOMEN AND THE MEDICAL PROFESSION.—Spanish women do not seem to take kindly to the medical profession as an opening for their emancipated energies. According to a writer in the *Siglo Medico*, there are only two Spanish-speaking ladies who have adopted it as a career; they are Doña Concepcion Aleixandre and Señorita Matilde P. Montoya, a Mexican lady, who is well known in South America as the author of some charming poems.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

The New Chairman.—Distribution of Bonus of £5,000 to the Members.

An ordinary monthly meeting of the Executive Committee of this Society was held at 429, Strand, on September 13th. There were present: Dr. de Havilland Hall (Chairman), Mr. Frederick Wallace, Dr. M. Greenwood, Mr. J. Brindley James, Dr. J. Pickett, Dr. J. B. Ball, Dr. G. E. Herman, Dr. Walter Smith, and Dr. W. Knowsley Sibley.

Before the ordinary business was entered upon, Dr. de Havilland Hall, in a few words, thanked the Committee for having elected him Chairman in place of Mr. Ernest Hart who has accepted the position of President of the Society—and referred to the valuable services which that gentleman had rendered to the Society in the ten years during which he had occupied the chair.

The accounts presented showed the business to be prospering, but, as is usual at this season of the year, the number of new proposals was moderate. On the other hand, the sickness claims during the summer months have been very light, and the Society's reserves have accordingly grown rapidly.

The principal business discussed was the approaching distribution of £5,000 of the surplus funds of the Society among its members. The Secretary reported that the necessary calculations were being made, and there is every reason to hope that by the end of next month every member of the Society who has a sickness benefit of more than three years' standing will receive a substantial cash bonus. Those who have been assured for a shorter period will have a proportionate bonus placed to their credit, which will be paid to them in cash at the next division.

Prospectuses, proposal forms, and all information may be obtained on application to the Secretary, Mr. F. Addiscott, F.I.A., Medical Assurance Society, 33, Chancery Lane, London, W.C.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

IX.—We have received the following report of a severe case from Mr. Frank Godfrey, M.B. (Scarborough):

G. L., aged 13, first complained of sore throat on September 3rd. The patients did not seek advice till September 7th, by which date the disease was well established. The usual treatment was adopted temporarily, and antitoxin sent for.

On September 9th the boy looked and was very ill. The temperature was 101.6°, the pulse 120 and fairly good; the cervical glands were very much enlarged, the tongue foul; the tonsils almost met in the middle line of throat, were of livid red colour, and their opposing surfaces as well as the uvula were covered with characteristic membrane; the nostrils occluded by an acrid, foul smelling, ropy discharge; there was great headache, and the boy complained of feeling very ill. At 10 A.M. I injected 60 minims (which was all the fluid sent me) of Aronson's diphtheria antitoxin solution into the subcutaneous tissue of the back at the base of the left scapula. All other treatment was stopped save frequent douching of the nares with hot boroglyceride solution. At 4 P.M. the temperature had risen to 103°, and the left arm was almost useless. Dr. Monk, who saw him then, described it as a genuine nerve paresis. At 8 P.M. the boy looked and expressed himself as being very much better. The temperature was 101.6; there was no headache; the paresis of the arm had passed off, and he was taking food well; there was no albuminuria.

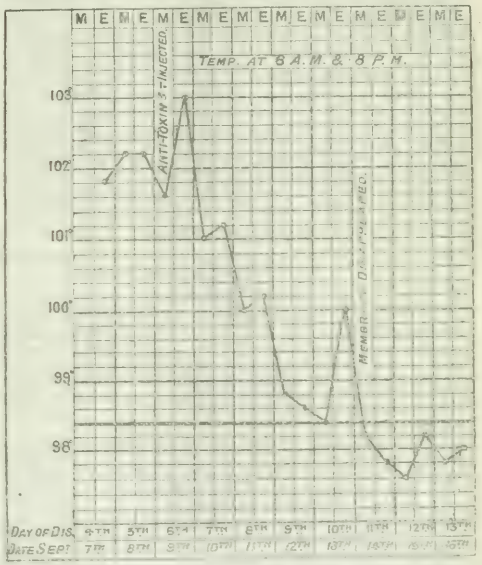
On September 10th he was much the same, but flagged towards evening.

On September 11th he was decidedly better, and was amusing himself with pencil and paper. The tonsils were paler and smaller, and the cervical glands smaller: the nasal discharge had lessened, but the membrane was present as before.

On September 12th he was very much better. The nasal discharge had ceased, the membrane was disappearing, and the cervical glands were hardly perceptible.

On September 13th the morning temperature was 98°, and he was generally much improved. After a visit from his father, whom he had not seen for some days, the temperature rose in the evening temporarily to 100°.

On September 14th the membrane had all disappeared, the tonsils were much smaller and of natural colour, the tongue was cleaning, and, though pale and reduced, the boy looked remarkably well. Since then progress towards recovery has been rapid and uninterrupted. I append the temperature charts of morning and evening records:



The rapid recovery in this case, which was a severe one; the fact that the antitoxin was not given till the sixth day of the disease, and that the single dose used was a small one, make it particularly interesting and encouraging. The passing nerve paresis of the arm is difficult of explanation.

DEATHS UNDER ANÆSTHETICS.

Ether.

Dr. H. R. Smith, Resident Medical Officer to the University College Hospital, has favoured us with the following report of a case of death under ether which occurred at that hospital. The patient, a man aged 56, was admitted to University College Hospital on August 29th, 1894, complaining of frequency of micturition and other bladder troubles. There was an indefinite history of constipation, but the bowels were said to have been freely opened on the 26th. The abdomen was somewhat distened. Enemata having failed to act, a careful examination of the rectum was made, but nothing abnormal could be found. By September 4th the abdomen was considerably distended, and no motion had been passed; his symptoms, however, not being urgent, it was decided to examine the patient under an anæsthetic on the following day, and, if necessary, perform colotomy. In the course of the afternoon of the 4th the patient's condition became very rapidly worse, the distension of the abdomen increasing greatly, so as to very seriously impede respiration, the patient becoming at the same time collapsed, with feeble pulse, and temperature 97°; it was therefore decided, as the only chance for the patient, to operate at once. He administered ether in the usual way with Clover's inhaler: the patient took it very well, and his pulse perceptibly improved. On ex-

anuining the rectum, a growth could just be reached, and left lumbar colotomy was rapidly performed. From the first incision the pulse became more feeble and the respirations shallower. He ceased to administer the anæsthetic, and gave injections of brandy, and no more ether was given, but he quietly sank, the pulse and respirations slowly failing, and a few seconds after the completion of the operation the patient ceased to breathe, the pulse having been imperceptible at the wrist for about two minutes previously; artificial respiration produced no effect. A very small quantity of ether was used, and the anæsthetic was stopped for five minutes before death. The necropsy revealed free gas in the peritoneal cavity, which had escaped through a perforation at the base of one of the numerous stercosal ulcers in the cæcum. There was extensive carcinoma of the upper part of the rectum, forming a mass which pressed upon the bladder, which accounted for his bladder symptoms, and there were numerous secondary growths in the liver. The heart was normal. There was some congestion of both bones of the lungs, which were otherwise healthy. As will be seen from the above particulars, the patient's death can scarcely be attributed to the ether, but was rather due to shock, added to his collapsed condition subsequent to the perforation of the bowel.

THE BRITISH PHARMACOPŒIA AND IMPERIAL NEEDS.

THE Subcommittee of the Melbourne and Victoria Branch appointed, in accordance with the request of the General Medical Council, to make suggestions with a view of assisting the Pharmacopœia Committee of the General Medical Council have now presented their report. Our Melbourne correspondent writes that the report has been conscientiously and carefully compiled, and contains a good deal of information which is bound to be of service to the Home Committee. The recommendations consist:—

1. In enumerating a large number of medicinal plants in the *B.P.* which grow in this colony equally as well as in the regions recognised as official, and in suggesting that, as far as Victoria is concerned, the present restriction as to growth and preparation should be removed.

2. To introduce the preparations of duboisina as officinal. The dose of duboisina would be $\frac{1}{15}$ to $\frac{1}{5}$ of a grain internally. In ophthalmic application 1 or 2 drops of a solution 4 grains to an ounce.

3. To adopt the metric system of weights and measures, and failing this, that the strength of the liquors of the alkaloids revert to gr.j in ʒij.

4. That certain official formulæ for eucalyptus alone be used.

5. That a number of preparations and drugs at present unused in practice and unnecessary in therapeusis be omitted from the new Pharmacopœia.

6. That adeps lanæ and paraffinum molle be altogether used as the bases for ointments, and that cacao butter be recognised as the sole basis for suppositories.

7. That the tests for chloroform, carbolic acid, and other drugs be improved, and that there be mentioned with the test the specific impurity of which it is destined to show the presence or absence.

8. That the standardisation of drugs such as opium be extended to other powerful drugs such as aconite, digitalis, etc.

9. That a number of new drugs and preparations be made official, such as chloral cum camphora, some of the elixirs and syrup compounds, β naphthol, salicylate of bismuth, salol, resorcin, ichthyol, ethyl chloride, malt extract, a solution of copaiba cubebs and buchu, and others.

10. That the list of tabellæ for hypodermic use and the trochisci be increased.

11. That, like the decoctions, all the infusions be made up to a definite quantity.

12. That in certain drugs (tabulated) the maximal doses should be increased, and in others the minimum dose lessened, and other inconsistencies rectified.

13. That an excessive dose be not dispensed unless it has been initialled or attention otherwise drawn to it by the prescriber.

THE CHOLERA.

THE official weekly bulletin issued by the Imperial Board of Health on September 12th shows that from noon on September 3rd to noon on September 10th there were 36 cases and 15 deaths in the German Empire, against 53 and 21 respectively in the preceding week.

The number of cholera cases is constantly increasing in Galicia and Bukowina. Two further deaths were reported on September 13th from the Lemberg district in Galicia, the total number of cases in the province on September 12th being 118, with 75 deaths. In the Bukowina on the same day there were 12 cases and 4 deaths. The report issued on the morning of September 13th for the previous twenty-four hours announced 200 new attacks and 133 deaths in that interval. This includes 3 fatal cases in the town of Lemberg among the civil population, but there have also been deaths among the troops of the garrison. On September 15th 128 cases and 87 deaths occurred in Galicia, while 10 cases and 7 deaths occurred in the Bukowina.

The malady has made its appearance in the county of Pressburg in Hungary.

A Reuter's telegram from Constantinople, dated September 12th, states that, on account of the outbreak of cholera at Broussa, the Porte desired to impose on all arrivals from that place a quarantine of ten days, to be carried out at Touzla. The foreign members of the Sanitary Board refused to agree to this, as there is no lazaretto at Touza. The Turkish Government has consequently given directions that no arrivals from Broussa shall be allowed to enter Constantinople.

Fresh cases were reported on September 13th from Breslau, Thorn, Lauralhütte, and Myslowitz. In consequence of the spread of cholera in East Germany, the frontier of the district of Marienwerder has been closed against traffic from Russia, except at Ottlotschin for railway passengers, and at Schillno for water traffic. Further, the Russian dealers have been prohibited from visiting as usual the weekly market in Posen. Two more fatal cases occurred at Dinsberg, on the Rhine, on board a vessel from Rotterdam. At Liége, on September 12th, 16 fresh cases of cholera and several deaths were reported.

The following cholera returns for Russia were published on September 15th: From September 8th to the 14th, in St. Petersburg, 92 cases and 50 death; and in Warsaw, 35 cases and 16 deaths. From August 12th to September 8th, in Plozk, 910 cases, 494 deaths. From August 27th to September 9th, in Nijni Novgorod, 535 cases and 347 deaths.

LITERARY NOTES.

THE *St. Louis Clinique* has passed under the editorial control of Dr. Emory Lanphear, late of Kansas.

La Clinique is the name of a new monthly medical journal which has recently begun to appear in Montreal. It is to be devoted to diseases of the nose, throat, ears, and eyes.

In the Free Library at Manresa Road, Chelsea, there is now on view a collection of relics of and pertaining to John Keats. Among them are Keats's notebooks when he was a medical student. The relics are deposited in the place mentioned "on loan in perpetuity."

Le Correspondant Médical, a new journal which has begun to appear in Paris under the editorship of Dr. E. Leblanc, marks the invasion of medical periodical literature by the spirit of the "New Journalism." Each number will contain a biographical sketch of a medical celebrity, with a portrait.

The *American Journal of Insanity* has recently become the property of the American Medico-Psychological Association, of which it will henceforth be the accredited organ. The journal will be edited in the meantime by a publication committee, consisting of Dr. Edward Cowles, President; Dr. Henry M. Hurd, Secretary of the Association; and Dr. Richard Dewey, the last-named gentleman being in immediate editorial charge. The office of publication has been transferred to Chicago.

The publication of a series of classical medical works been commenced by Lehmann, of Munich, under the title of *Bibliothek medicinischer Klassiker*. The series is issued under the editorship of Dr. J. C. Huber. The first part has just been issued, and consists of "Die Gynäkologie (περὶ γυναικείων) des Soranus von Ephesus." The translation is by Dr. H. Lüneburg, and the commentary by the editor.

A "General Register" to the first twenty volumes of the *Zeitschrift für Ethnologie* has just been issued. The index covers the years 1869 1888, and is divided into two parts, the first belonging to the *Zeitschrift* and the second to the *Verhandlungen der Berliner Gesellschaft für Anthropologie, Ethnologie, und Urgeschichte*. The arrangement is similar to most German indices, and consists of an "Autoren Register" and a "Sach Register." Of the uselessness of the former part a good illustration may be obtained by turning up "Virchow (R.)," under this head will be found nearly nine hundred references, these are to pages only, there being no indication of the nature of the reference.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, SEPTEMBER 22ND, 1894.

ENGLISH CHOLERA ADMINISTRATION: CENTRAL AND LOCAL.

The report of the medical officer of the Local Government Board, of which we recently gave a summary, though containing as usual an account of all the proceedings of the medical department for the year 1892-93, is evidently largely aimed at bringing forward a number of considerations which have a bearing on the protection of this country from Asiatic cholera. And these considerations deserve the more to be recalled because this year's cholera has, contrary to many anticipations, shown itself to be in certain parts of Europe more capable of spread and more fatal than it was even in 1893. This is especially the case as regards Russia and Galicia, and the disease is, at this comparatively late season of the year, marching steadily in the direction of the Austrian capital, and of an area which has heretofore escaped invasion.

We may usefully recall the efforts that have been made, and are still being made, to control cholera in case it should be imported in our midst. Dr. Thorne Thorne has explained in his report how the inspection of our ports has led in many cases to renewed and well sustained activity in the medical inspection and control of vessels coming from infected ports, and how, during the autumn of 1892, this was absolutely successful in preventing the occurrence of any case of cholera in this country, except as regards 35 persons who arrived from abroad either suffering from or incubating the disease. Ever since that date the same vigilance has been exerted, port authorities have been urged to perfect their arrangements for the immediate isolation of cases of cholera, and for the medical examination of crews and passengers. In many cases there has been a ready response, and we have along our eastern coast (between London and the Tyne) some of the best organised port districts which the world possesses; but, unfortunately, this is not everywhere the same, and on this very eastern coast we fear that there are places by which cholera could, without much difficulty, effect an entrance. For this reason alone we are glad to know that the cholera survey commenced in the autumn of 1892 is still in progress.

But even where there is efficient port sanitary administration we can never expect to exclude all chances of cholera. Even in 1892, some who landed in apparent health sickened after making their way inland. And last year cholera evidently had its beginnings in so mild a form, that it either was altogether unrecognised, or could with official impunity be put down to a mere infective or choleraic diarrhœa, until the disease having got some foothold, it either became obvious that cholera was in question, or policy decided that the official eyes should no longer be closed to a fact that had been already for some time suspected. For every reason, then, we must remember that there is danger in our inland districts, just as there is along our coasts; and we learn with satisfaction that for some two years past there has been steadily maintained a system of medical inspection of such inland districts as are known to exhibit sanitary defects likely to give to imported cholera the chances which it needs for spreading. Attention is on these visits especially paid to water supplies and to means of sewerage and drainage. Typical amongst places where the gravest danger lies are localities supplied from rivers befouled, such as was the Tees in 1891 and 1892, or such as Rotherham. King's Lynn, and Ashton-in-Makerfield, localities in which there had been persistent pollution by human excreta of the sources of public water supplies, these supplies being at times derived from rivers subject to the constant risk of sewage pollution or again from gathering grounds where contamination of the sources of water was either ignored or even deliberately connived at.

What, for example, can be said of the practice of the Ashton-in-Makerfield urban authority, who, though warned as to the state of their gathering ground, could be found "actually making a present" of the excremental contents of the town closets to "the cultivator" of a part of the gathering ground from whence the town water was derived? These and similar practices are forcibly exposed by Dr. Thorne; and we note with satisfaction that he adopts a tone similar to that which we have taken concerning the maladministration of infirmaries by Poor-law guardians, and he implies distinctly that those who elect, and continue to elect, representatives on local bodies who fail in their duty, are as much to blame as are the representatives themselves. "It is no part of my duty," writes Dr. Thorne, "to appraise the responsibility attaching respectively to electors or elected for action such as has been referred to. . . ."

We have often pointed to the danger of water supplies as a means of distributing the infection of cholera; and we may express a hope that, in this country at least, no widely diffused epidemic could take place apart from a specifically contaminated water service. But we shall never be free from risk of the blazing up of an imported infection until our public water services are freed from such foul contaminations as those that are specified in the recently issued report of the medical officer of the Local Government Board. Polluted water supplies have ever been in this climate the greatest danger in respect of cholera as of enteric fever: and the Ashbourne experience of last year has told us convincingly that befouled drinking water remains for us a danger not far different from that of the filthy Indian tank water.

But whilst we thus contend so strongly for the freeing of our water supplies from contamination, we have no wish to ignore the influence of an air or soil contaminated by excremental filth, whether by reason of the foulness of midden privies, loading air and soil by their emanations and soakage, or by reason of faulty drains and sewers leading to the contamination of air breathed, of the soil on which our towns

stand, or of local wells. But we are hopeful that any cholera thus induced would not prevail on the same scale as that which has marked our water epidemics. Indeed, we are inclined to think that our comparative immunity last year was due to the happy circumstance that, apart from the pollution of an occasional local well, water did not happen to be the medium into which the infection made its way, and by means of which it diffused itself.

Lessons like these we gather to be one of the principal objects of Dr. Thorne's recent report. The story of the cholera from east to west, as told in the appendix, abounds in instances, proving to the hilt the water theory, whether by river or by well; but it also shows that the places in which cholera diffused itself were those in which there was a low standard of sanitary progress, or in which there was practically no sanitation at all. The report also contains a warning as to reliance on any other methods of prevention than the adoption of measures of public health. It recalls, and enforces by detailed examples, the futility of quarantine restrictions; and it shows that as yet there is no evidence of real immunity as the result of prohibitive inoculations. We hope the steady survey of suspicious English towns, villages, and ports, will be sustained; for we cannot pretend to suggest that we shall be free from danger after this year closes; and whilst we recognise to the full how ably and devotedly many local medical officers of health have worked with a view of removing from their districts the means by which cholera is apt to spread; we strongly feel that the encouragement of support by the central authority is still needed in many parts of England if the advice given locally is to be followed out by the responsible governing bodies. Thus far our system of cholera prevention, whether judged at the centre in Whitehall or in the numberless local areas into which the country is divided, has borne the test with such a measure of success as has secured approval both at home and abroad. But the system needs to be maintained and to be extended before we can boast of anything approaching to immunity either along our coasts or in our inland districts.

POISONOUS AND EDIBLE MUSHROOMS.

There is a constantly increasing number of students interested in the study of mycology; moreover annual fungus forays are held in various parts of the country where the commoner kinds are grouped into edible and poisonous sections, and their leading features and relative merits from a culinary point of view are explained to the public by competent persons; and further there is an excellent little book by Dr. Cooke containing coloured figures of the reliable edible kinds along with the best methods of cooking. Nevertheless the fact still remains that a certain number of persons suffer to a greater or less extent every season owing to a failure to discriminate between edible and poisonous kinds of fungi. This year sad cases have been very numerous.

This condition of things is somewhat remarkable considering the very few kinds of poisonous fungi that can possibly be mistaken for the two most generally known edible species, the common mushroom (*Agaricus campestris*) and the parasol mushroom (*Lepiota procera*). Leaving out of consideration for the present those who collect and eat indiscriminately everything that suggests an affinity with the mushroom family, as indicated by the presence of a cap bearing gills on its under surface, and being supported on a stem, it may be assumed that by far the greater number of persons are impressed with the idea that the common mushroom is the only kind good to eat, and start out with the intention of collecting only this particular kind. This being so, it is difficult to understand how so many mistakes can arise. There are, it is true, some half-dozen species closely related to the common mushroom which, by the ordinary observer, would probably be considered as one and the same species; nevertheless, all these allied kinds are perfectly safe, and some, as *Agaricus augustus* and *Agaricus elvensis* are of a much better quality than the common mushroom.

In most cases of poisoning it is not possible to ascertain with certainty the particular kind of fungus that has been eaten, but where this has been done it appears that, both in this country and in France, the species almost invariably proves to be *Amanita phalloides* (Fries), or some closely allied species. *Amanita phalloides* is a fungus having a white or very pale yellow cap about the size of that of the common mushroom, but differing from it in having permanently white gills, and a large loose sheath or volva surrounding the base of the stem. *A. phalloides* is undoubtedly one of the most poisonous of known fungi, the active poisonous principle being a vegetable toxalbumine called phalline, present to the extent of 1 per cent. in the dried fungus. Phalline is a virulent blood poison, death being caused in cats and dogs by the subcutaneous injection of half a milligramme per kilogramme of the animal. Phalline differs from others of the toxalbumine series in not being neutralised by heat.

When the collector possessing only an imperfect knowledge of species attempts to include *Lepiota procera* in addition to the common mushroom, the chances of collecting poisonous species is greater, and *Amanita pantherina* is not infrequently gathered in mistake for the parasol mushroom. Here, again, the resemblance between the edible and poisonous species is in reality very slight, even to the casual observer, and does not turn on those minute features realised only by the expert. Apparently the only reason to which the mistake can be attributed is the fact that the two kinds grow in similar localities, and not infrequently intermixed.

The poisonous effects caused by *A. pantherina*, are felt from one and a-half to two hours after eating, whereas in the other poisonous species of *Amanita*, as *A. phalloides* and *A. muscarius*, no inconvenience is experienced until from eight to twelve hours after partaking of the fungi. Sulphate of strychnine, taken in coffee, has been proved to be an antidote to the poisoning caused by eating *A. pantherinus*.

Helvella crispa and other species belonging to the same genus are excellent when properly cooked, but have in some instances caused serious inconvenience when eaten raw. This is due to the presence of a poisonous substance called helvellic acid, which disappears during cooking, or even after placing the fungus for a short time in warm water. In all probability the poisonous element in most fungi is readily decomposed by heat, and if thoroughly cooked, instead of being placed in a frying pan for a few minutes, as is the rule in this country, we should hear of fewer cases of poisoning. In some of the rural districts in France fungi are first cooked for a few minutes in anise water; the liquid

is then drained away and the cooking finished according to taste.

Strong alcoholic drinks should never be taken along with, nor soon after eating fungi. An experienced mycologist and enthusiastic mycophagist, whose favourite dish is *Coprinus atramentarius*, suffered violently from pains in the limbs, and a feeling as if the head was swelling to enormous proportions after partaking of this fungus, and could only attribute the unusual occurrence to his having taken two glasses of whisky shortly after the meal. To verify this idea another meal of the same fungus was taken, followed by a glass of whisky after an interval of an hour, and within a short time the same symptoms were developed. Since this experiment the fungi have been eaten on several occasions, minus the whisky, with the most satisfactory results.

Finally, it is necessary to state emphatically that the various rule-of-thumb methods for discriminating between poisonous and edible fungi are absolutely untrustworthy. Specific characters are as sharply marked in the higher fungi as anywhere in the vegetable kingdom, and a knowledge of these characters will alone enable anyone to determine correctly the kind of fungus they are dealing with. To those who have neither the ability nor the inclination to master such distinctive characters we can only say, Do not eat fungus.

The genus *Amanita*, which includes the most poisonous species and those most frequently mistaken for edible kinds, is easily recognised if attention is paid to the following points: 1. The gills remain permanently white, and do not touch the stem. 2. The stem furnished with a thin ring or frill at some distance from the top, the bottom of stem surrounded by a loose sheath or volva.

AUTUMN HOLIDAYS.

II.

Our east coast resorts have been gaining greatly in popularity of late years, and communication with them both by rail and by steamboat, has been recently greatly facilitated. Clacton, Walton-on-the-Naze, Felixstowe with its fine golf links, and good bathing; Southwold, quiet and picturesque; Lowestoft, Yarmouth, Cromer, Sherringham, and the adjacent "Poppy Land," Hunstanton, Skegness, with its fine spacious sands, possess the same bracing characters, and there is this peculiarity about these resorts that their climate is particularly fine and genial in the late autumn, and improves as autumn advances into winter, and fishing and boating on the Norfolk Broads make a fine holiday.

Bridlington, Filey, Scarborough, Whitby, and Saltburn are fine bracing resorts, deservedly popular in our north-eastern counties, and presenting many attractions also to visitors from the south. Grange, Morecambe, Fleetwood, Blackpool, and Southport on the opposite north-western coast have a local popularity, but cannot be said to possess any particular attractions for visitors from a distance.

The same remark applies to Rhyl, Llandudno, Colwyn Bay, and most of the resorts on the coast of North Wales. The beauty of the situation of Penmaenmawr and its surroundings may, however, prove attractive to many admirers of natural scenery, and, together with some of the neighbouring less-known resorts, may be recommended to those who have grown tired of the resorts on our southern coasts. We get here on this coast a combination of sea and mountain scenery and opportunities for climbing which should prove very attractive to hardy pedestrians.

Tenby, in South Wales, is an excellent resort for sea bathing, and numerous pleasant excursions are to be made from it; but, like resorts on the coast of South Devon, it has the character of being somewhat less bracing than is perhaps desirable in a summer resort.

Attention has recently been called to the Mumbles, as deserving more notice as a seaside resort than it has hither to received. It is finely situated on the end of the Bay of Swansea, and nearly opposite to Lynmouth on the opposite side of the Bristol Channel.

Those who have attended the annual meeting of the British Medical Association at Bristol will scarcely need to be re minded of the many picturesque seaside resorts close at hand on the Bristol Channel and the adjacent north coasts of Devon and Cornwall. A most delightful holiday may be spent in exploring the beauties of this coast-line from Minehead to St. Ives, especially the rugged Cornish coast, washed by the great rolling waves of the Atlantic.

This brief glance at the chief health resorts on our sea coasts—and we have named only the better known—will give some idea of the richness of our resources in this direction. But there are many with whom the climate of the sea coast does not agree, and this is especially the case in those localities which are built on a level with the sea and close to it. Many delicate persons become dyspeptic, nervous, despondent, and sleepless in such situations. They suffer from "sluggish livers" and from chronic gastric catarrh; indeed, there is undoubtedly a form of dyspepsia which might be called "seaside dyspepsia." It is important to recognise this, as we have seen much unnecessary suffering caused by ignoring it. It is far less likely to occur in those seaside resorts in which the residences are built on high cliffs, some considerable height above the sea, or in such resorts as, for example, Eastbourne, where some of the best residential quarters have been built at some distance from the sea shore; and this brings us to the consideration of inland holiday resorts. And here we must admit that England presents but few inland resorts where a healthy and active man might be expected to be content to spend his autumn holiday. For those who are more or less of invalids, or who are simply seeking rest in pure bracing air, we might point to Tunbridge Wells and Crowborough, to Malvern, to Buxton and Matlock, to Harrogate and the adjacent Yorkshire resorts of Ilkley, and Ben-Rhydding, to the New Forest in Hampshire, and to Dartmoor in Devonshire. But most holiday makers will require something more in the way of interest and activity than a residence in these resorts affords, and a tour of some kind is best adapted to their requirements.

We will briefly indicate a few districts in which riding, driving, or walking tours may be made amidst beautiful and varied scenery, and in good air.

The counties of Surrey, Sussex, Kent, and Hampshire present a great variety of attractions to those who are inclined to follow a well planned tour through their more picturesque districts. We need only mention such spots as Box Hill, Dorking, Leith Hill, Horsham, Guildford, Godalming, Witley, Haslemere, Hind Head, the New Forest, Chislehurst, Sevenoaks, Tunbridge Wells, East Grinstead,

Crowborough, and Uckfield, in order to indicate a few out of the many localities in these counties which are full of charm to the lovers of rural scenery.

How many beautiful spots for quiet repose may be found in a holiday spent on our glorious Thames from Richmond to Oxford. The banks of the Wye between Monmouth and Gloucester, and those of the Severn, have also their attractions. Then there is Derbyshire, with its picturesque hills and dales, especially in the neighbourhood of Buxton and Matlock, excellent centres for excursions into this interesting region, and affording the opportunity of visiting such historic mansions as Haddon Hall, Chatsworth, etc., etc. Taking Leamington as a starting point a very easy and interesting tour may be made, embracing Warwick and Kenilworth Castles, Guy's Cliff (so finely situated on the Avon), Stoneleigh, Stratford-on-Avon, and the ancient town of Coventry, finishing with a visit to the celebrated salt baths at Droitwich, and the popular health resort Malvern. The many attractions of the Lake District and of North Wales need no recommendation.

The bracing air of Dartmoor, and the rough, wild scenery it presents contrasting strongly with the richly cultivated and beautiful spots which fringe it, will suit those who are weary of town life, and who are seeking for a few weeks a life which shall be in all respects the reverse of it.

To those of artistic tastes we may commend a visit to some of our cathedral towns, and a study of those glorious monuments testifying to the religious zeal and architectural skill of our ancestors. There is a drawback, however, which will occasionally make itself unpleasantly felt, especially to the fastidious traveller, in following some of the tours we have suggested, and that is the indifferent accommodation provided in many districts for the visitor and tourist. Hotel accommodation still remains, in all but the most frequented resorts, far behind what it should be, and coarse fare, hard beds, and stuffy and badly-furnished rooms will shock the traveller who has been accustomed to the excellent provision for his comfort made in the hotels of Switzerland and other Continental resorts. Even in many of our popular seaside resorts the hotel accommodation is by no means what it should be, and we have known several instances in which members of our profession have had much occasion to complain of want of civility and attention from the managers of hotels at fashionable seaside towns. This is in striking contrast to the particular attention and polite consideration which is almost invariably shown to members of the medical profession by the managers of hotels at Continental resorts.

Medical men have constantly to consider to what resorts and to what hotels in these resorts they shall commend their patients, and they are naturally prone to conclude that where they have themselves been ill-treated their patients are likely to share the same fate. But the perfunctory, supercilious hotel manager or manageress, indifferent to the comfort and convenience of their guests, is far too commonly encountered in our home health resorts, and in order to make these as attractive as those on the Continent much improvement is still urgently called for in the matter of hotel management.

On and after September 29th, the offices of the Royal National Pension Fund for Nurses will be 28, Finsbury Pavement, E.C.

THE TROUBLES OF QUARANTINE.

Portugal still pins its faith on quarantine, much to the discomfiture of its trade. The diminished customs receipts show how hampered trade is in Portuguese ports by the absurd quarantine regulations which are still enforced. At present, the countries and ports officially declared to be infected with cholera include Japan, China, Burmah, British India, the ports on the Persian Gulf and those of Asia Minor, Odessa, St. Petersburg, Dantzig, Rotterdam, Amsterdam, Marseilles, and Paraguay. A number of others are catalogued as suspected, and under the circumstances it is not to be wondered at that the trade of Portugal is falling off.

A MUNIFICENT GIFT.

It is announced from Vienna that Baron Albert de Rothschild has given half a million florins (£50,000), to be called the "Bettina Fund," to the Vienna hospitals. Out of this sum a pavilion is now being built for women suffering from cancer, on the grounds of the Empress Elizabeth Hospital, in the western suburb of Rudolfsheim. It was the founder's special wish that small rooms only were to be arranged in this pavilion, twelve of which have one bed only, while the wards are to contain certainly not more than five beds. There is to be an operating room and consulting rooms for out-patients. The buildings will be completed in 1895, and opened for use in the first months of 1896. It will be remembered that Baroness Bettina Rothschild died of cancer herself after a protracted illness and several operations.

IRISH WORKHOUSE INFIRMARIES.

We are glad to learn that a conference of the medical officers of workhouse infirmaries will shortly be held in Dublin, with a view to concerted action for the improvement of these institutions. Bad as are the arrangements in some cases in England, the conditions existing in many rural workhouse infirmaries in Ireland are even worse. Nursing, except in the metropolis, hardly exists; that is, it is in the great majority of cases entrusted to untrained paupers. An inspection of these places, such as we have been carrying out in England, would reveal some terrible pictures of the housing and care of the sick. The medical officers are to be pitied in the circumstances, but we have no doubt that the effort which they are about to make will have the best results.

HOSPITAL SUNDAY IN GLASGOW.

For the first time the experiment of a Hospital Sunday is to be tried in Glasgow on October 28th. The credit of organising the scheme is mainly due to the exertions of the Hon. the Lord Provost, who has been bringing all his influence to bear in the effort to relieve the large hospitals of Glasgow from the heavy financial burdens under which they are at present groaning. From 300 Presbyterian churches and from the Roman Catholic churches of Glasgow and neighbourhood replies favourable to the proposal have been received. It is expected, also, that valuable aid will be received from the 400 Sabbath schools of the city.

DIPLOMA OF THE SOCIETY OF APOTHECARIES.

It is extremely rare to find any misunderstanding now existing with regard to the status and privileges of a licentiate of the Society of Apothecaries whose diploma has been granted since June 30th, 1887 (the appointed day named in the Medical Act, 1886), but from a letter we have received from a correspondent, it appears that the public body to which he refers is under such a misapprehension. The diploma of the Society of Apothecaries dated after June 30th, 1887, is of precisely the same character, and confers precisely the same privileges, as the diploma of the Conjoint Board of the Royal College of Physicians and Royal College of Surgeons, or of any other two licensing bodies. The examinations for the diploma are of the same standard as those

of the Conjoint Board, and the sufficiency of the examinations held by the Society is proved by the recent report of the visitor and inspector appointed by the General Medical Council under the provisions of the Medical Acts. Any such licentiate is also eligible for appointments under the Poor-law Board, and appointments in the Army, Navy, and Indian Medical Services.

THE MEDICAL EXAMINATION OF VAGRANTS.

The desirability of enforcing the systematic medical inspection of vagrants has been discussed freely of late; the Northallerton Guardians have however taken the bull by the horns, as at a recent meeting they resolved, *nem. con.*, that the medical officer be instructed to inspect all vagrants before they leave the workhouse. The need of such inspection appears to have been brought home to the guardians by reason of complaint being made that a late inmate of the Northallerton casual ward had been discharged while suffering from itch. Of course the man might equally well have been the subject of small-pox, in which case the non-recognition of the fact of the existence of the malady might have had more serious results. It may be noted that the chairman of the meeting gave notice that in view of the extra work which would be imposed upon the medical officer, he would move that the remuneration of that official should be reconsidered. Another proposal made at the meeting was that the Local Government Board should be asked to issue a general order compelling other unions to enforce the medical examination of vagrants. If such examination is to be carried out at all it must be generally enforced, isolated action such as that to which Northallerton has committed itself cannot be of much use.

HOLIDAYS IN IRELAND.

Our Dublin correspondent writes: Yet another agency has been established for the purpose of arranging excursions for the holiday maker. Its efforts will be directed in a large degree to Ireland. Already the two principal agents who are so well known have done much to attract the tourist to Ireland and this year quite a remarkable movement has been set going by the railway companies to facilitate travelling and to provide better hotel accommodation. We can very earnestly recommend our tired *confrères* to go to Ireland, if they have not yet visited that country. Its western, southern, and northern coasts are crowded with places of interest ranging from the wildest of mountains and cliffs in Donegal and Connemara to the softer beauties of Killarney and Glengariff. There is plenty of good fishing to be had. The autumn and winter in the south are especially beautiful, and many an apparently hopeless case has dated its recovery from a visit to the balmy shores of Glengariff Bay. The fagged worker who hurries away to the continent to go through a course of picture galleries, often in sweltering heat, would be far better off if he journeyed to a peaceful corner of Ireland and spent his days on some breezy golf links or on some lake or mountain stream where his skill as a fisherman will have full scope. He will not always find luxurious accommodation of course, but he can get wholesome plain fare, and, on the whole, the change in this respect will probably be to his advantage.

THE WATER SUPPLY OF EAST LONDON.

It is stated that, owing to the action of the East London Water Company in cutting off water nightly at 9 P.M., a large part of East London is now without water at night time, or if it gets any it is only through the agency of cisterns, which, according to the teaching of sanitary science, ought to be done away with, which, up to the last few weeks have been, as a matter of fact, little if ever used, and which, being now suddenly called into use to hold water for drinking and preparing food, at least, during the night, cannot possibly be in a suitable condition for such purposes. Many of the waterclosets also throughout this district are of the "wash-out" description, which require a flush by means of a specially-constructed apparatus to cleanse them and are directly on the main, so that another direct result of this stoppage of water is an inability to flush any of these waterclosets during the night. The Metropolis Water Act, 1871, enacts that, on complying with certain conditions, which have in most parts of London been complied with, the London water companies may be compelled to furnish the ratepayers with a constant supply, and may become liable to a fine of £200 on failing to carry out this obligation, unless they can show their failure has resulted from certain unavoidable accidents, among which "frost" and "unusual drought" are mentioned. It appears that about the end of last year the Improved Industrial Dwellings Company took legal action against the East London Water Company for failing to supply water as required by law. The chief plea of the water company in this action was, as may be imagined, the unusual drought of 1893; and this was admitted by the Court. But if can hardly be said that 1894 has been a year of drought, yet the East London Water Company are actually cutting off water more extensively than during 1893.

HUMOURS OF HOMŒOPATHY.

Richard Bentley, the famous scholar, who had as much experience of controversy as any man that ever lived, used to say that no man was ever written down except by himself. We commend this maxim to the attention of the disciples of Hahnemann. These guileless persons often complain that they are evil-entreated by the professors of scientific medicine, their doctrines being misrepresented and their practice unjustly ridiculed. But are not their worst enemies those of their own household? Take the following samples of their teaching as set forth in all seriousness in their own organ. The *American Homœopathist* gravely assures all whom it may concern that if a patient sleeps with his knees apart chamomilla is indicated; if with his legs stretched out at full length, pulsatilla; if with one leg drawn up and the other stretched out, stannum. If the patient has his head always turned to one side, cina is indicated: if he bends his head forward, staphysagria; if backward, hyoscyamus. So much for the head and the legs. The hands and arms are the object of still more mysterious refinements. If the patient lie with his hands on his abdomen, pulsatilla is indicated; the same drug is to be used when a woman sleeps with her hands over her head, but when a man does so, he requires nux. There is something suspicious in this difference in which we fear the "New Woman" will see a fresh instance of the denial of equal privileges with the tyrant man. We confess ourselves utterly unable to appreciate the clinical significance of the phenomena that have been enumerated: it would almost seem as if the prophets of the pilular philosophy believed man to be under a curse like that of Ernulphus, and that he is banned in all his limbs—in sleeping, in sitting, in lying, etc. There is one position of the hands which, strangely enough, is not provided for: the resources of homœopathic therapeutics seem to fail before the contingency of a patient who, like the vulgar little boy of the *Ingoldsby Legends*, should "put his thumb unto his nose and spread his fingers out." This omission is the more remarkable since the homœopathic practitioner would seem to be prepared for even less decorous manifestations on the part of his patients. Thus we are told that "if a patient 'cusses' you, spits in your face, and pulls your whiskers," you are to soothe her excited feelings with chamomilla. There is a refreshing candour about the following: "If a patient gets suddenly better, it is a bad sign"—for the doctor, we presume. The *North American Journal of Homœopathy* published recently an article on "Some Peculiar Sweats," in which also the subtleties of homœopathic therapeutics are strikingly displayed. Thus we are told that if only the upper half of the body sweats

nux vomica or opium is the thing; if the lower, crocus or cyclamen; if the back, ananita or phosphorus; if the right side, aurum or sodium; if the left, fluoric acid and jaborandi; if the face alone, ignatia. Lastly, if the patient sweats "in spots" the sovran'st thing for this distressing condition is tellurium. For sweats in the morning, angostura (to the profane mind more suggestive of dinner time) is prescribed: for sweats while eating you have a specific in "oleum animalis;" we can only hope that this drug agrees with those to whom it is administered better than the component elements do with each other. It is interesting to learn that if the sweat smells like horse's urine its natural fragrance may be restored by nitric acid. Then in the *Southern Journal of Homœopathy* we find some curious information about "Peculiar Coughs." Thus, when the cough comes on at the inconvenient hour of 6 A.M., you must put your trust in cedron; if it is worse when the patient lies on his belly give him baryta; if it is worse when lying on the left side, mercurius. We are unkindly left in the dark as to what is to be done if the cough is worse when the patient lies on his right side or on his back. When the cough is aggravated by music creasote is indicated. We are thankful for this suggestion, but it is disappointing that no information is vouchsafed as to how we are to deal with those other common exciting causes of cough—a dull sermon or a drowsy lecture. We could add indefinitely to this *florilegium*, but this would hardly lead to edification. It would be gross flattery to call this stuff heresy or even superstition; it is sheer unadulterated nonsense. It is the homœopaths themselves who write themselves down—what poor Dogberry was so anxious to be written down. Certainly the most malicious "allopath" could not invent anything that tends to laughter more than these simple gentlemen invent on themselves.

THE SICK POOR IN PROVINCIAL WORKHOUSES: KEIGHLEY.

It will be observed from the report of our Commissioner's visit to this town that many alterations in the hospital department are in process of being carried out. In going through the wards it was evident that the infirmary is overcrowded, and there are no means of classification, except that the foul cases are treated in a small block of wards standing behind the infirmary proper. The number of beds at the present time is ninety-eight, and the infirmary stands at some distance from the workhouse, so that it must be a self-contained building. At the time of our Commissioner's visit there was a fair proportion of acute cases under the care of the nursing staff, one in particular—a woman who was suffering from the effects of morphine—required watching incessantly. We are glad to hear that the doctor gives good hopes of her recovery, but the care which such a patient necessitates must be a cause of great anxiety to the nurses, working as they do with help from the inmates. The patients in the wards represent a large number from the town, for the only other hospital is a small cottage hospital, principally for accidents in the mills, and the doctor stated to our representative that he has major operations under his care in the infirmary; indeed, he does whatever is necessary in carrying through the treatment of his patients. As the infirmary is in the process of enlargement and to a certain extent of reconstruction (for our Commissioner reports that several blocks are being built to accommodate more patients, and to provide for their classification), we do not feel that we should be acting rightly in criticising the existing methods of working, but we may perhaps be permitted a few suggestions whilst the work is in hand. One thing that occurs to us in reading the report is that there appears to be no ward provided for the sick children; there are receiving wards, wards for the offensive cases, wards for the feeble-minded, with a ward for the safe detention and watching of any case of insanity (a most wise provision), also means for isolation in the event of a suspicion of infection; all these were in course of erection at the time that our representative visited the infirmary, but there is no mention of separate accommodation for the children; we most earnestly hope that this point will receive consideration. Then, again, we trust that the infirmary will be put under the care of a matron, herself a trained nurse, and that an increase in the number of nurses and probationers will put an end to the pauper nursing; thus planned, we venture to predict that Keighley will possess a perfect hospital for its sick poor.

THE SANITARY CONDITION OF THE ROYAL NAVAL SCHOOLS.

From a circular issued to the parents of the boys at this school, it appears that since their dismissal in consequence of an outbreak of diphtheria a complete investigation has been made by Dr. Louis C. Parkes, Medical Officer of Health for Chelsea, regarding the sanitary condition of the school and the cause of the outbreak. He looks upon the recent outbreak as largely due to the accidental introduction of infection from outside, and he is unable to attribute the illness, or any portion of it, to the sanitary conditions, which he considers to be satisfactory. He has, however, made certain recommendations as to improvements in details, and he has also recommended a more perfect system of isolation of infectious cases. Many of the improvements suggested, though not put forward as urgent, will be already completed before the beginning of the term, and the entire disinfection of the buildings, furniture, etc., has been carried out in accordance with his directions. For further security in the future it has been arranged that the College shall have the services of Dr. Allan, medical officer of health for the Strand District, as honorary consultant in health, and should doubtful cases arise resort will no doubt be had to bacteriological cultures. With regard to the letter of "A Parent" in the British Medical Journal of September 8th we are informed that the attack of scarlet fever there referred to consisted of a single case at the very beginning of the Lent term. The outbreak of chicken-pox, however, which occurred at the beginning of the summer term, ran through many cases. The diphtheria affected four boys, one of whom, the first attacked, died on July 26th. Of the boys dispersed at the end of that week it is believed that none afterwards developed any throat illness.

UNIVERSITY REFORM IN LONDON.

It will be remembered that after the unsatisfactory termination of the attempt to obtain a formal expression of the opinion of Convocation upon the report of the Commission on University Education in London last spring a committee of graduates was formed, with Mr. Cozens Hardy, Q.C., M.P., as Chairman, to elicit the opinion of members of Convocation by a direct appeal. In response to this appeal 850 signatures have now been received of graduates who "approve in general of the recommendations contained in the report of the Commission." A very weighty memorandum has been issued this month by the Committee, asking for further support. The memorandum points out that when in 1858 the Senate practically renounced, in other faculties than that of medicine, all connection with teaching institutions, they did this notwithstanding the strenuous and almost unanimous opposition of the graduates. It was not long before the weak points in the scheme of 1858 were perceived, and for twenty years numerous efforts have been made to bring the University more into harmony with the advancing conditions of higher education. It is pointed out that the recommendation that there should be "one University only in London, not two," is in agreement with the view uniformly taken by Convocation since the question took definite shape in 1885. That a teaching university must soon be established in London is considered certain, and it is

urged that it would be every way better that the existing University should take on the new functions than that a second University should be established. Even on the selfish ground of "vested interests" in a degree difficult to obtain, the memorandum before us points out, and we believe justly, that the value of a University degree in public estimation depends largely on the rank and eminence of the University in which it is held; and that if, as would certainly follow from the foundation of a second University, the whole area of higher metropolitan teaching were withdrawn from it, the University of London could not fail to lose greatly in character and influence. It is extremely unfortunate that, owing no doubt to the great pressure upon the time of the House of Commons, the Government did not introduce a Bill during the last session to appoint a Statutory Commission. The duties of such a Commission would be executive and constructive. It would have power to modify the Charters and Acts of the various bodies concerned, and to bring them into harmony with the general scheme of the new University, thus saving a vast amount of expense to the existing universities, colleges, and schools. The Commission, while empowered to make minor alterations, with the approval of the bodies concerned, would be bound by the broad features of the scheme of the last Royal Commission, which has now been accepted not only by the Senate of the University, but also by the Royal Colleges of Physicians and Surgeons, the metropolitan medical schools, and most of the other bodies interested.

PAY WARDS AT THE GREAT NORTHERN HOSPITAL.

It is announced that "a certain number of small pay wards," holding either one or two beds, are about to be opened "to the paying public" at the rate of one or two guineas a week, "according to the patient's requirements." Our contemporary the *Echo* speaks of this "experiment" as though it were a novelty; but our readers are of course aware that paying patients are received at St. Thomas's, Guy's, and perhaps at other public hospitals. We confess that we regret that it should be so, for though firmly convinced of the desirability, if not necessity, for pay hospitals in great cities like London, we think that they should be kept apart from the charitable institutions. The latter are the great schools of medicine and surgery, and every bed which is let at such a hospital as Guy's to a paying patient (to whom, in the phrase of the *Echo*, "the publicity of the ordinary hospital ward would be both distressing and harmful"), is so much subtracted from the already inadequate material for teaching. By the way, why should such publicity be "distressing and harmful"? The attention which the presence of students secures for hospital cases is, to our minds, of the greatest benefit, and if the case were our own would be most welcome. Practically, however, these paying wards are deducted from the public hospital, and although the plan may be justifiable in the case of a hospital in pecuniary difficulties—and in fact must be allowed to be so, because it is sanctioned by the Charity Commissioners—it cannot but be a lamentable necessity, a thing which ought to cease as soon as possible at every hospital which is also a school of medicine. And even at hospitals like the Great Northern, which, though not medical schools, yet are public charities, we cannot but regard the scheme with much suspicion. The *Echo* talks, of course, of "the small tradesman, the governors, clerk, or clergyman" for whom it is a real charity to provide board, lodging, and medical or surgical treatment under two guineas a week, but we have a right to know what the regulations are which ensure that the charity is restricted to such proper objects. What are the arrangements for the remuneration of the medical attendants, and what check the latter can exercise upon the bestowal of this so-called "charity." Are the surgeons of the Great Northern Hospital to be liable to be called upon to operate on and treat any person who chooses to take a bed at their hospital and pay two guineas a week during his convalescence from an amputation or other capital operation? and is such an arrangement to be denominated "charity?" We have no wish to prejudge a question on which our information is imperfect; but the matter is one of some importance, and we should be glad of complete details of the new regulations at the Great Northern Hospital.

MORTICOLIA.

Mons. Léon Daudet, son of the admirable Alphonse, has written a novel entitled *Les Morticoles*, in which the medical profession is not ineffectively satirised. There are no healthy people in "Morticolia," everybody is ill except the doctors. Those who deny it are impostors, who are treated with severity, "for they constitute a public danger." The people are all sick or insane, and all power is in the hands of the doctors, who study them at their leisure. As the *Morning Leader* observes, Mons. L. Daudet's satire on latter day doctor-worship would have been more effective had not his pages been disfigured by wanton and needless descriptions of disease and its circumstances—details to turn the stomach of the reader. The satire has been said to lie in the allusion to the kind of doctor who considers that "disease is chiefly not something to be cured, but something to be studied—that hospitals exist not for the relief of suffering, but for the glory of science." This is not quite a happy way of putting the matter; no science or applied science has ever made continuous progress which was not pursued for the love of knowledge itself apart from all practical purposes. The reason why the Germans, for example, have run away with the rewards, say, of the art of colour-dying is that in Germany chemistry is pursued broadly and disinterestedly, whereas the English chemical manufacturer learns just so much chemistry as may at the moment seem useful to him; he has no thorough grasp of principles, and so his fertility soon ceases. M. Daudet's satire hits rather the kind of doctor who allows his love of knowledge to blind him to the claims of the individual sufferer; or who is so impressed by the need of physical health that he could breed men and women for bodily quality alone, as we breed cattle and sheep. In England, at any rate, this satire may fall flat, where, as our contemporary justly says, for us "medical traditions do not run readily to aggressive, uncompromising materialism."

DOCTORS' FEES.

Who shall account for all the vagaries of the public mind, or give a reason for some of the crude ideas that occasionally take possession of the minds of certain sections of society? In a recent issue of *Tit-Bits*, a correspondent, among other sage remarks, gives vent to the following extraordinary statement: "It seems often to be lost sight of, or forgotten, that doctors' fees are an important factor in sapping the earnings of the poor." It is true indeed, that the more you give the more you may give, and if you foolishly concede at times an inch your self-denial will be rewarded by the claim for the proverbial ell, and in like manner a profession, which from time immemorial has been distinguished for the amount of its gratuitous work, and for the immensity of its charitable establishments, is now accused of "sapping the earnings of the poor," although its profuse liberality has led to the pecuniary ruin of many of its own members, who are often driven to accept the pay of unskilled labourers. We are further told that "doctors' bills keep thousands poor and on the brink of starvation." Where the writer got his information from, it would be interesting to know. It is an undisputed fact that doctors' bills are always the last to be paid, and it would not be departing very widely from the truth to say that where there was much difficulty in settling them, in a large majority of cases they are never settled at all, that is, to the satisfaction of the doctor. What medical man ever takes legal process

against a debtor on "the verge of starvation," and if he does, what satisfaction is he likely to get at the county court beyond that of paying his own costs? We know of many cases where debtors far removed from the "verge of starvation" have been ordered by the judge to pay off a debt of £5 or more at the rate of 1s. a month. In fact, so utterly impossible has it been found by the profession to recover debts from poor patients that they have long given up all idea of trying to do so, and are in many cases endeavouring to follow the advice so kindly given by his Honour, when he judicially shows them the practical impossibility of a recovery of their debt, namely, not to run bills, but to demand payment at the time of rendering their services. It is not to be denied that on some occasions instances may be met with where patients have hidden their necessities from the eyes of their doctor, and have gone to great straits of self-denial to pay his account; but such cases seldom occur among the working or lower middle classes; when they do occur, it is far more often where the patient has been unfortunately reduced from a social position by misfortune. The dispensary and medical insurance societies, to which allusion is also made, are already only too plentiful throughout the country, but as in most cases such institutions furnish medical relief to those well able to pay the ordinary fees of medical practitioners quite as often as they save the working classes from long "doctors' bills," their final result is rather to depreciate the legitimate earnings of the medical profession than to relieve the class, whose interests this writer seems to have most at heart.

THE PASTEUR TREATMENT OF HYDROPHOBIA.

A good deal has been said of the tragic death of the late Lieutenant Malcolm Stevenson, who had undergone treatment at the Pasteur Institute for the bite of a rabid dog. The authentic facts are that Mr. Stevenson was bitten on June 10th in India, and his treatment at the Pasteur Institute was commenced twenty-one days afterwards, and continued in regular course. The bite was on the right hand on the third phalanx of the fourth finger. He died on July 25th. The mortality after the Pasteur treatment is still 2 to 3 per 1,000 instead of 200 per 1,000.

MEDICAL OFFICERS TO ELEMENTARY SCHOOLS.

The appointment of Dr. Kerr to supervise the health conditions of the children in the Bradford schools is a welcome sign of progress. Such appointments are highly desirable in connection with the schools of every town, not only for the regulation of sanitary matters, but also as providing an authority who can deal with the difficulties arising from defects of sight among children, and other matters. Under the new Education Act of 1893 school authorities are required to make provision for the education of the blind and deaf children, whose attendance is compulsory up to the age of 16; such children are frequently the subjects of chronic disease, and need watching. Weakly children being accumulated in schools by legislative action need some skilled supervision to safeguard them against possible harm from a want of knowledge of their special conditions on the part of their teachers who we are sure would, as a rule, welcome aid in this direction. It is not our wish that day schools should become places for medical treatment, but advice in school is much needed in many cases, and those children who present infectious diseases or other conditions calling for treatment might be referred to the hospital or dispensary. It is not only in connection with sanitation and disease that medical officers to schools are needed. It has been abundantly shown by Dr. Francis Warner's reports for the British Medical Association on 100,000 children seen in schools that there are many "exceptional pupils," amounting to about 16 per 1,000 children, who are epileptic, paralysed, crippled, or present a mental deficiency, besides many others of lesser grades of defectiveness, and in the responsible care of these weakly children much help might be rendered to the teachers by skilled advice, to the great benefit of the children concerned. The doctor's advice is not necessarily to remove the pupil from school, but more often in the direction of smoothing the way for his beneficial attendance, possibly with his exemption from examinations if strength be not equal to the trial. In this and in many other ways the teachers may be reasonably relieved from the responsibility of dismissing a child on health grounds or forcing him through examinations for which he is unfitted.

THE FEEDING OF CHILDREN.

The *St. James's Gazette* contained recently an admirable article on the question whether "parents underfeed their children." It is only too true that underfeeding prevails in the nursery, the home, and the school, particularly the girl's school—not the underfeeding of necessity, but the semi-starvation due to ignorance or meanness. The facts would be revealed at once, and the greatest benefit be conferred upon the life, health, happiness, and growth of children, if we could impress upon parents and teachers the value of scales and measure. Every age has its normal height and weight, and every season and every year its normal rate of growth. The diet may be inadequate in proportion to the work required to be done, especially where work is required before food, as in early morning lessons. The infant is the greatest sufferer. It commences life with butter and sugar or castor oil. This is followed in a large proportion of cases, when milk is permitted to be tasted at all, by every other milk but the mother's. After it has been irregularly or injudiciously fed for a time, through a bottle with a tube as long and often as foul as a sewer, those concerned in its rearing are fully persuaded that it cannot digest milk, and, with the curious perversity of human nature, resort to one of the various farinaceous "foods for infants," whose name is legion, although starch, which is the natural food of the infant, is conspicuous by its absence; the result is a mortality larger at this period of life and from this cause, and ill-health from deteriorated digestive organs in those who survive. There is only one phase of bad feeding that exceeds in iniquity such treatment, and that is to give to the child of riper years artificial meat juices and essences, which, to it, are very much like dram-drinking. After infancy children frequently fare little better, for milk is taken away from them, except as an addition to farinaceous puddings, with which they are plied so everlastingly that as soon as they become older they refuse to touch them altogether, and they have tea and coffee to drink instead. Yet it has been proved by researches on factory children that the rate of growth on milk is twice that on the latter beverages; the infant during its first year of life, while living on milk only, adds about 7 inches to its height. Children are stinted in sugar demanded for the growth and activity of the muscular system. Their bread is made of the whitest flour, is obtained by casting aside the valuable salts of the external coats of the grain, and they are allotted the crumb instead of the hard crust, which is more digestible, and when masticated strengthens their teeth. Parents and teachers deem it their duty to endeavour to crush out likes and dislikes in the question of meat and fat. This is a further source of stinted food and defective growth. The fat of meat is repulsive to some children because it disagrees with them, especially when tired, while they can partake of butter, cream, and bacon with relish. This, with a plentiful lack of common sense, is termed fastidiousness. Children sometimes waste and develop a form of scurvy owing to receiving a deficient quantity of vegetable salts. "They will not eat vegetables," it is said, but who ever heard of a child who was not eager for fruit, which is the

form of vegetable food they find easiest of digestion. Underfeeding from delicacy of appetite due to feeble health can be overcome to a large extent by the meal being well and tastefully served. Further, insufficient care is taken at home, and still more at school, to provide an adequate variety in feeding. It is often the same day after day, week after week, and year after year. The outcry against the feeding at schools which arises from time to time is frequently to be traced to this defect. Most of the causes of the underfeeding of children, both at home and at school, would disappear if the scales and measure were systematically resorted to, for they would instantly point out those children who were not thriving. Unnatural and unreasonable restraints would be removed by parents and teachers if hindrances to growth were so palpably presented to them.

BEER IN ASYLUMS.

Various lay journals are criticising in pungent terms the withdrawal of beer from the dietary, which has been the rule for a few years past in the asylums now conducted by the London County Council. The occasion has been afforded by the complaint of the Commissioners of Lunacy that, at Colney Hatch, beer is not given to the workers, a custom which, it is alleged, keeps down the percentage of employed patients. The Commissioners in their last report, just issued, following on the lines of a previous report in 1892, appear to have come to their opinion on the ground that the absence of beer provokes "morbid discontent of the sober patients." They also deliver a brief homily on the superiority of "temperance" over "total abstinence," a question, we should have thought, foreign to the investigations of Commissioners in Lunacy. The true question is, whether beer, or abstinence from beer, is the more likely to promote the recovery of the insane? The Commissioners practically supply the proper answer in the following words, when reporting on another asylum where there had been a complaint against the stoppage of the dinner beer: "We found all the patients quiet and free from active excitement." The superintendents have the best opportunities of observing the results of the withdrawal of beer, and we feel certain that there would be a preponderating testimony from them as to the beneficial effect on the inmates. Mental tranquillity is apt to be disturbed by alcohol, which excitement of individual patients is reflected in infraction of discipline, restless, and chafing under restraint. We should be glad to see in future reports no more expressions of regret at the absence of beer, and of gladness at the workers having beer, or of "pious opinions" on moderation *versus* abstinence. The Commissioners have done their work thoroughly and conscientiously, and we have no hesitation in suggesting to them that a synopsis of the opinions of the various superintendents on the effect of the discontinuance of beer on the inmates would greatly enhance the value of their weighty annual report.

WATERBORNE CHOLERA.

During the progress of the Hygienic Congress at Buda-Pesth Professor Gruber, while expressing the opinion that cholera was characterised by the presence of vibrios, and that these were the cause of the disease, laid stress on the difficulty of distinguishing the cholera vibrio from others with absolute certainty. Professor Metchnikoff also laid stress on the question of immunity or receptivity in the individual, and on the effect of coexisting organisms in promoting or retarding the activity of the comma bacillus. In relation to these views it seems desirable to refer to certain remarks in a paper read for Mr. Ernest Hart, who was unable to be present, before the same Congress. He drew special attention to the fact that the truth of the theory that cholera is a waterborne disease in no way hinges or depends on the correctness of the observations which have been made regarding its connection with any particular micro-organism. Doubtless, if it can be proved that any microbe, Koch's comma bacillus for example, is the real *contagium vivum*, it will add unity and completeness to our conception of the disease, but the proof that cholera is a filth disease and waterborne, lies quite outside the domain of bacteriology, and rests on the broad facts of the history of certain well-defined epidemics, their occurrence in areas coincident with those of the distribution of water subsequently proved to have been defiled, the cessation of these outbreaks when the tainted supply has been stopped, and on the manner in which cholera marches across continents, taking root and spreading where access of its poison to drinking water is open to it, shrinking into harmlessness where such access is denied it. It is on facts such as these, and on the extending experience that by securing pure water whole populations can be rendered indifferent to the disease, that the water carriage theory of cholera is based. A bacteriological proof would always be welcome, but it is quite independently of that, that Mr. Ernest Hart asserts that exotic cholera certainly, and endemic cholera probably, is in its ordinary development a waterborne disease. Dr. Kuborn, of Liége, enforced this lesson when he showed the important influence which the substitution of a proper water supply for the former system of wells and cisterns had had in lessening the intensity of the epidemic of 1892 in Belgium compared with previous outbreaks, for cholera had not in the recent epidemic attacked any district enjoying the new water supply, and the total mortality had been enormously diminished. Dr. Clemow, of the British Seamen's Hospital, also illustrated the same thing by his experience in Russia, proving the dissemination of the disease by water, and further citing the case of an outbreak on a British ship in Cronstadt through water taken from the gulf opposite the harbour.

ST. BARTHOLOMEW'S HOSPITAL.

The election of an ophthalmic surgeon to fill the vacancy caused by the retirement of Mr. Power will take place on Thursday, September 27th, from 11 A.M. to 3 P.M. We are informed that Mr. H. Work Dodd and Mr. W. T. Holmes Spicer, who were candidates, have retired from the contest. The only remaining candidates are Mr. Walter Jessop, Surgeon to the Central London Ophthalmic Hospital, and Ophthalmic Surgeon to the Children's Hospital, Paddington; and Mr. Ernest Clarke, Surgeon to the Central London Ophthalmic Hospital. We understand that Mr. Jessop has the unanimous support of the medical and surgical staff. His claims are undoubtedly very strong. He has served the hospital and school for thirteen years, and thus, in addition to special experience in ophthalmic surgery, he has been for many years known as a successful teacher. He is also the author of many valuable monographs on subjects connected with the eye and its diseases.

THE EXPATRIATION OF CONSUMPTIVES.

We have on many occasions drawn attention to the great risks and hardships which patients suffering from consumption, especially young men of scanty means, may run by making long journeys in search of a more favourable climate for the winter. We are therefore glad to see that a note of warning addressed by a correspondent at Bloemfontein to the *Scotsman* is being extensively quoted in the press. The letter says: "No man should come out here for the sake of his health who cannot live at his ease. Our climate, though exceptionally good for persons with delicate chests, when they can live quietly at their ease, is nevertheless very trying for those who have to work hard for their living. In fact, they had much better stop at home. It is really becoming a very painful sight to see the number of young men who are sent out by their doctors who know absolutely nothing of this country and conditions. These men have to work hard from 6 A.M. to 6 P.M., the usual hours here, and get bowled over in no time. The cheapest board and lodging of the roughest kind for invalids cost £7 1s. per month." The writer speaks severely of the doctors, but he probably

does not recognise how often it happens that a medical man is asked for his opinion rather than for his advice. People are swayed by fashion and crowd to any place which "gets into the papers," and so long as the crude question "is the climate of South Africa suitable for my case?" is all that is put to the doctor, any inquiry as to ways and means being resented as an impertinence, so long will the buoyant hopefulness of the average consumptive lead him into difficulties. For such results medical men are surely not responsible. We would, however, seriously urge that members of our profession should take as wide a view as possible of this question of health resorts and for all except the wealthy make it include a careful consideration of the possibility of earning a living.

THE BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.

Since the publication in the British Medical Journal of August 18th of the important communication by Dr. Hermann Biggs regarding the bacteriological diagnosis of diphtheria, the general press has repeatedly referred to the subject. It must not, however, be imagined that London has been absolutely supine in the matter. The report of the medical officer to the Local Government Board for 1891-92 contained a report by Dr. Klein showing that by bacteriological investigation the cases in which scarlet fever was complicated with membranous sore throat could be divided into two classes, one of which was truly diphtheritic and the other was not, with this general result, confirming what had been discovered before, that membrane occurring in the early days of scarlet fever was not diphtherial, whereas that which came on in the later stages and in convalescence was true diphtheria. On March 15th of this year a paper was read before the Medical Society by Dr. Wethered, on the Diagnosis of Diphtheria by Bacteriological Cultures, giving details of the process and its results. The medical officers of the hospitals of the Asylums Board have endeavoured to differentiate the mass of membranous throats coming before them into the true and the false types. In the report of the Statistical Committee for 1893 mention is made of certain bacteriological investigations having been undertaken. Some of the results were reported to the Clinical Society by Drs. Washbourn and Goodall on January 12th, and more lately the method has been largely used at the South-Eastern Hospital by Dr. Thomson. No doubt the pathologists at the various general hospitals have also carried out investigations on the same lines but on a smaller scale, and the Clinical Research Association, the institution of which we noticed last week, is ready, for a small fee, to examine membrane forwarded to it and report by telegram. What, however, has not been done, we believe anywhere except New York, is to create a municipal organisation by which, as part of the ordinary sanitary machinery of the health department, the bacteriological diagnosis of diphtheria shall be put at the disposal of the profession. The organisation there is so complete and its efficiency is so highly spoken of by Dr. Hermann Biggs that we cannot but hope that some county council, preferably that of London, will take the matter up in the same spirit. The culture tubes would be stored at numerous depôts, probably the vestry offices. All that the doctors would have to do would be to obtain the tube, inoculate it by means of a sterilised swab supplied in a separate tube along with the culture medium, replace the cotton plug, and return the tube to the depôt. At a certain hour every afternoon these tubes would be collected from all the stations, and taken to the central laboratory, where by noon the next day the diagnosis would be ready to be despatched by letter or telegram, according to the urgency of the case. The importance of the matter is greatly increased by the assertion of Dr. Biggs, in which he merely confirms the observations of Prudden and Baginsky, that a very large number of cases of membranous sore throat are not due to the bacillus of diphtheria, but merely to ordinary cocci,' and that the mortality of such cases is practically *nil*. In New York they do not accept these non-bacillary cases at the hospitals, and on the other hand they do not discharge those of true diphtheria until bacilli cease to be found, sometimes not for several weeks. When the tubes are prepared wholesale the expense is said not to be great, and probably as an experiment the bacteriological work would be undertaken by one of the existing laboratories.

CHARITY ORGANISATION AND MEDICINE.

At the nineteenth annual meeting of the American Academy of Medicine, held at Jefferson, New Haven, on August 29th and 30th, the President, Dr. George M. Gould, of Philadelphia, delivered a masterly address on Charity Organisation and Medicine. The design of the paper was to induce the medical profession to recognise the important and effective means and methods of therapeutics offered by the charity organisation societies. As commonly practised, charity was a sin, a selfish charity tending to increase and not to prevent the evil. Charity organisation aimed at making benevolence scientific. It said: "(1) Don't help frauds. (2) Help so as to make future help unnecessary. (3) Don't hire people to be miserable. (4) Prevent dependency." The medical profession should square its practice to these principles. Hospital abuse was a disgrace to the profession. It existed in all large cities, but he instanced London, where during 1893 the returns of the 181 hospitals showed nearly four million out-patient visits. The indiscriminate free treatment of disease increased the evil itself, for the energies of the profession were absorbed in the gratuitious curing of disease instead of in its prevention. Dr. Gould then passed in review the principles of treatment advised by the charity organisation societies for the various subdivisions of the "dependent class"—the pauper, the orphan, the beggar, the crippled, the blind, the epileptic, the idiotic, the insane, and the criminal. The evils of idleness among asylum patients were pointed out, and the remarkable results achieved in epileptic colonies, and the good that might be hoped from individual treatment, from colonisation, and from home treatment were set forth. Dr. McIntire, who read a paper on the medico-social relations of "Retrogressives" to the medical profession, stated that out of every ten of the entire population of the State of New York, one was a beneficiary patient, either in the hospitals or dispensaries, in the year ending September 30th, 1892. Over and above this he stated that one physician out of every eighty-nine in the State of New York was giving his time to the care of the insane, and was receiving a salary therefor, and that at least one physician out of every twenty-five in Pennsylvania was receiving some salary for the professional care of retrogressives. His conclusion that such facts demanded organised scientific investigation by the medical profession will be generally accepted. Dr. H. Webster Jones contributed a paper in which he sketched the growth of the provident dispensary system in England. He pointed out that the first dispensary in London was established by physicians in 1699 in Warwick Lane, upon the principle of "voluntary contributions from the charitably disposed members toward a joint stock for the purpose of preparing and delivering medicines to the poor at rates near the intrinsic value." This and the other early dispensaries were designed for "the meaner sort of tradesmen, their apprentices, the servants, and the poor." To claim relief under the latter division required a certificate from a clergyman, churchwarden, or overseer of the poor of the district in which the patient lived. After about a quarter of a century the dispensaries disappeared; this was probably not unconnected with the foundation of Guy's Hospital in 1725, of St. George's Hospital in 1733, of the London Hospital in 1740, and of the Middlesex Hospital in 1745. The next efforts in a similar direction were put forth in the Midlands about 1823, but in

London the tendency had continued to be towards free relief. Habits of dependency had thus been fastened upon hundreds of thousands, and the hospitals were converted into schools of pauperism. The provident dispensary system had been the best practical effort to remedy the evil; its cardinal feature was that it was to be self-supporting, no public appeal being made for contributions.

HOUSE SANITATION AT THE INTERNATIONAL HYGIENIC CONGRESS.

The unexpected always happens, but few of those who had read the series of resolutions which Dr. Corfield proposed at the International Congress of Hygiene and Demography, would have anticipated that they would have been likely to meet with much opposition from members of the Congress, still less that they would have given rise to what has been described as a somewhat heated discussion. The resolutions affirm that the spread of disease is prevented by the frequent removal of all foul matter, and by a copious supply of pure water; that the paving of streets should be smooth and as far as practicable impervious; that basement floors should be impervious, and that damp courses should be provided; that house drains should be water tight, freely ventilated, and provided with disconnecting traps; that street sewers should be ventilated and well flushed; that streets should be not less than 12 metres wide, and that the height of the house should not exceed the width of the street, and that houses should not be built back to back. The opposition of Mr. Arthur Cates, who protested against the height of the house being limited by the width of the street, may be expected to carry with it a certain contingent; but the defence of the back-to-back principle in building houses, and the abuse of the disconnecting trap between the house-drainage system and the sewer, are two lines of argument that it seems strange to hear were adopted at a hygienic congress.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

Since the publication in the British Medical Journal of several cases successfully treated by the diphtheria antitoxin we have received numerous inquiries as to the possibility of obtaining the curative substance. We are advised that at present it may be obtained from Messrs. Minter, Lucius, and Beunig, Höchst-am-Main, Frankfort, or from the Institut Pasteur, Rue Dulot, Paris, the dose being 10 c.c. injected under the skin. The British Institute of Preventive Medicine will, it is hoped, shortly be able to supply it to medical men who apply for it. A word of warning is necessary, as otherwise much disappointment may result from its use. We are informed by one who has specially studied this point that the "antitoxins" already in the market differ considerably in strength, and that whereas some prove very efficient, others by no means fulfil what is claimed for them. Thus some antitoxins are ten times as efficient as others. We must remember that the making of antitoxins is yet in its infancy, and that the strength of a solution can only be measured by experiments on guinea-pigs. The mode in which it is estimated is by finding out the dose of diphtheritic poison which will kill a guinea-pig of a certain weight in a certain time. The strength of the curative serum will be estimated according to the dose of serum necessary to protect an animal into which ten times the fatal dose of diphtheria poison has been injected subcutaneously. The standard solution or immunity units being a serum 0.1 c.c. of which will protect a guinea-pig inoculated with ten times the fatal dose. If a dose ten times smaller, or 0.01 c.c., will protect, the serum may be said to contain ten immunity units; whilst if 0.001 c.c. protects, it contains 100 immunity units. It is evident that this is a rough way of estimating the strength of a curative serum, and, moreover, the question is still further complicated by the fact that we do not accurately know as yet how much serum is necessary to cure the disease in a child or adult. The importance of further clinical and experimental study on this subject can hardly be over-estimated, and can only be undertaken by men highly skilled in clinical medicine and bacteriological science. In every case of diphtheria or suspected diphtheria treated by the curative serum the following points must be attended to: 1. The bacteriological examination of the membrane must be made, and the diphtheria bacillus isolated. 2. The treatment must be carried out with curative serum of a well-ascertained strength, the age and weight of the child, the day of the disease, the dose injected, and clinical manifestations accurately noted. 3. The bacteriological examination must be made at intervals until the respiratory passages of the patient are found to be free of the diphtheria bacillus. We understand from the Director of the British Institute of Preventive Medicine that, in view of the importance of this subject, the staff of the Institute will undertake, free of expense, to make the bacteriological diagnosis in any case of diphtheria or suspected diphtheria treated by antitoxin serum. Application should be made to 101, Great Russell Street, W.C.

APPOINTMENTS TO THE SCOTTISH LOCAL GOVERNMENT BOARD.

The following appointments to the Local Government Board for Scotland have been officially announced: Mr. John Skelton, C.B., the present Chairman of the Board of Supervision, to be Vice-President; Mr. James Patten Macdougall, Member of the Faculty of Advocates, to be second member; and Dr. James M'Lintock, Medical Officer of Health for Lanarkshire, to be the third member of the same Board. The appointment of Mr. Skelton was a foregone conclusion. It was necessary in order to secure a proper degree of continuity in the administration of the department, for which his long experience as Chairman to the Board of Supervision amply provides. Mr. Patten Macdougall is Secretary to the Lord Advocate, and was largely concerned in the preparation of the Local Government Act under which the new department has been created. Dr. M'Lintock has had a large and varied experience as a health officer, first in the Colne Valley district, afterwards in Bradford, and finally as County Medical Officer of Health for Lanarkshire.

THE VENTILATION OF SMALL-POX HOSPITALS.

Whatever may be its explanation, the fact that residence in the immediate vicinity of a small-pox hospital involves some degree of increased exposure to infection is now generally accepted, and recent experience at Bradford and elsewhere has added to the number of those who believe with Mr. Power that the small-pox virus can be carried through the air for considerable distances. In accordance with this view, certain of the isolation hospitals erected during the last few years have been provided with means whereby the air passing from the wards is to be cremated, or at all events subjected to high temperature, with the object of destroying the microbes it may contain. The Barnsley, Nottingham, and Bradford Hospitals—or rather the small-pox wards attached to them—are constructed on this principle, and Dr. Barry has investigated experimentally the practical efficiency of the appliances adopted for the purpose in these three hospitals. The results, given in a Local Government Board memorandum, are interesting and important but scarcely reassuring. At Barnsley reliance was placed upon gas jets in the outlet flues; but Dr. Barry found that not only was this extraction insufficient to prevent occasional out draught into the open air through gratings intended for inlets only, but the extracted air, after passing the gas jet, contained microbes capable of cultivation on agar gelatine. How many microbes had perished in transit or what would be the fate of actual small-pox germs under like conditions are matters for conjecture, but, at all events, the disinfection proved in practice to be of a very limited

and imperfect character. In the Nottingham Hospital the attempted sterilisation was still more conspicuously unsuccessful. Pieces of cotton wool and tissue paper passed through unsinged, and the draught often extinguished the flame. At Bradford the conditions were different, air being admitted to the wards only through special shafts and extracted by other shafts leading to a powerful furnace. Here, again, the air, after passing the furnace, still contained living microbes, capable of growth upon agar gelatine. The ventilation seems to have been efficient during the period of observation, but, as Dr. Barry points out, it is entirely dependent upon the furnace being kept constantly at work night and day, and is consequently liable to cessation in case of neglect in stoking. It does not seem probable therefore that a complete solution of the problem of ventilation of small-pox wards will be found in extraction alone. In an appendix Dr. Barry gives particulars of the method adopted in the Victoria Infirmary at Glasgow, which offers distinct advantages for the purpose. Here the air is drawn down a glazed-brick shaft, and is screened, washed, and warmed *en route*; it is then forced by fans into the wards. The system is in short one of propulsion, and has been found to work well. If applied to small-pox wards it would no doubt be possible to supplement it by special appliances in the outlet, designed to expose the outgoing air to heat, and to ensure its delivery at a high level, with upward velocity, thus minimising whatever risk there may be of diffusing infection in the neighbourhood of the hospital.

THE THERAPEUTIC USE OF TUBERCULIN.

Dr. E. Thorner is one of the few medical men who, not terrified by adverse criticism, have continued in their practice to make cautious use of Koch's tuberculin since its introduction in 1890 to the present time. He now gives us his conclusions[1] as to the best method of using tuberculin, together with cautions to be observed in its use and the results which he thinks may be obtained. In this pamphlet Dr. Thorner carefully reviews the early literature of tuberculin, especially the three papers by Koch himself, those by Fraentzel, von Bergmann, Rosenbach, von Noorden, Wolff, Fürbringer, B. Fraenkel, and Virchow. Professor Virchow's cautions, founded, as they were, on observations made at *post-mortem* examinations, Dr. Thorner has always kept in mind, but finds that tuberculin may safely be used, even in the case of patients with fever and advanced pulmonary lesions, provided that the treatment be commenced with doses of only $\frac{1}{10}$ milligramme and not increased to more than 1 milligramme, unless the patients be free from fever. He considers that the maximum quantity used for an injection should never be more than 1 decigramme. Great caution is necessary that the solutions used be absolutely aseptic and that no mistake be made in the quantity used. Many patients, provided that they live in the neighbourhood and have no fever, can very well visit the doctor to have the injections made. In the favourable cases injections are to be continued until all the morbid symptoms have disappeared, and, later on, test injections are advisable. Small doses ($\frac{1}{10}$ milligramme) should be used at the commencement in all cases, and, when the treatment has been interrupted for any reason small doses should be used on beginning again. Loss of appetite or the onset of anæmia may render a suspension of the treatment necessary, so also may intercurrent infectious diseases, but not syphilis, as it seems. Phthisis, when "quiescent," had better not be treated with tuberculin. Dr. Thorner mentions other cautions to be observed and expresses a hopeful view as to the therapeutical use of tuberculin. He thinks that proper feeding and climatic treatment cannot in most cases replace the use of tuberculin altogether though they aid in the good effects produced. It may be observed, however, that in the present pamphlet Dr. Thorner does not furnish us with an account of the cases on which his opinion is founded nor does he give enough in the way of statistics to enable us to compare his results with results of the treatment of consumptive patients without tuberculin.

[1] *Zur Behandlung der Lungentuberculose mittels Koch'scher Injectionen.* By Dr. E. Thorner, of Berlin. Berlin: S. Karger. 1894. (Demy 8vo, pp. 36.)

THE PREVENTION OF PHOSPHORUS POISONING.

Dr. Magitot gives in the *Revue d'Hygiène* the history of a curious strike threatened by the workpeople employed in the match factories of the French Government near Paris. The strike was not for increased wages or shorter hours, but against a certain part of the regulations imposed by the authorities for the prevention of the occurrence of necrosis of the jaw. In addition to regulations with regard to the administration of the workshops all the workpeople were required to submit themselves to examination when applying to be taken on to the establishment. If the mouth was found to be in a thoroughly healthy state they were allowed to enter the dangerous shops; if not they were only admitted to other parts of the manufactory, where they would not come into direct contact with the fumes of the white phosphorus, still employed in the manufacture of the State matches of France. To this examination no exception seems to have been taken; but the further regulation that the workpeople should submit themselves to monthly examinations was always disliked, and the objection was increased when it was found that the dentists who made the examination were not content to refuse permission to continue in the manufactory, but undertook various dental operations, such as extraction and the opening of abscesses. Dr. Magitot urged not only that this was an invasion of the private rights of the individual, but also that it was a surgical error, inasmuch as persons exposed for considerable periods to phosphorus fumes became "phosphorised," and in them even slight injuries about the mouth were liable to lead to serious inflammatory processes. While recognising fully that the real remedy would be the prohibition of white phosphorus and the substitution of the amorphous variety, he insisted that until this was brought about, certain precautions might be taken which would at least very much diminish the occurrence of serious inflammation. Chief among these he placed the primary examination at the time when application was made for employment, followed by periodical examinations of the mouth, and the suspension of any person showing signs of phosphorism. Such persons should be placed under proper medical and surgical treatment, and not allowed to return to work until they had recovered, not only from any local lesion of the mouth, but also from the condition of anæmia and general deterioration of health to which he applied the term "phosphorism." In the discussion which followed the reading of the paper at the Société de Médecine Publique, Dr. Armaingaud said that the application of precautions of this nature at the State match factory at Bordeaux had been completely successful in preventing symptoms of phosphorus poisoning among the workpeople; the dentist entrusted with this duty, however, had special instructions not to perform any operation at the factory.

WAKEFIELD WORKHOUSE INFIRMARY.

On Wednesday, September 19th, a meeting of the Wakefield Board of Guardians was held, when Mr. H. O. Kennedy, Local Government Inspector of Workhouses for the Yorkshire District, made a statement in reference to the report on the working and administration of the Wakefield Workhouse, published in the British Medical Journal of August 18th. The report of the meeting reaches us as we go to press, and we hope to deal with Mr. Kennedy's observations in our next issue.

DEAF-MUTISM.

Dr. W. H. Hubbard, in the *Leisure Hour* for July, shows by statistics drawn from the recent census that the proportion of deaf-mutes to population is one to every 2,043. In 1851 there was 1 deaf-mute to every 1,738 of the population. This diminution is mainly traceable to greater knowledge and care in the management of scarlatinal otitis. The close relation of deaf-mutism to cretinism is pointed out, while its remarkable prevalence in Israelitish communities, owing to heredity and consanguineous marriages, is also recorded. In small and restricted communities the proportion of deaf has risen as high as 20 per cent. It seems to follow that the dangers of institutions, where signs are used which tend of course to separate the deaf from the hearing, and thus inevitably foster acquaintance among the deaf, and lead to intermarriage, are very real. Since the authoritative pronouncement of the International Congress at Milan in 1880 in favour of the pure oral system of teaching the deaf, sign system has received its quietus, though Dr. Hubbard does not say this in so many words. He seems, however, to have some leaning to the combined system, which aims at giving to the deaf the benefits of sign and lip reading at the same time. Practically, we fear, it will be found to debar them from the full advantage of either plan of teaching. The "combined," indeed, is, as being an amalgamation of two inconsistent measures, hopelessly discredited. Deaf children who have adequate intelligence for the sign system can be brought to a far happier condition by the oral plan. The Royal Commission has made its report, and an Act of Parliament has been passed placing England in as favourable a condition as other civilised nations for grappling with the needs of its deaf children. Teachers are being prepared at Fitzroy Square and at the "Ealing Training College for Teachers of the Deaf," to hold office in board schools and elsewhere; and the eyes of the Education Department are open to the necessity of well-trained teachers, and raising the deaf gradually to a condition in which they will be fitted to hold their own in the battle of life and take their place once more in the hearing and speaking world.

FOOTBALL AND BODILY DEVELOPMENT.

In view of the undoubted fact that football is a dangerous game, we may well inquire what are the benefits which are to compensate—and, according to some, to do much more than merely compensate—for the risks run. Does the practice of the game and the training it involves so set men up that football can be credited with that robust, athletic development which crack football players undoubtedly display? To this one can certainly answer, No. Dr. Beyer,[1] comparing the average football players among the cadets at the naval academy with the average student at the same place, finds that, while the players were but two months older than the others, they were 4 per cent. superior in height, 28 per cent. in weight, 21 per cent. in lung capacity, and 49 per cent. in total strength. These were only average players, many of whom never played in a big game, and nearly all the measurements represented the player as he was at the beginning of the training period. Between the average Yale student and the average American football player the players were one year and one month older, but they were 2.8 per cent. taller, 20 per cent. heavier, had 10 per cent. more lung capacity, and were 40 per cent. stronger than the 50 mercantile grade of Yale students. Between average American players and Amherst students the comparison is on rather a different footing, because here the students are nearly two years older than the players, but the latter have a superiority of 3 per cent. in height, 23 per cent. in weight, 20 per cent. in lung capacity, and 37 per cent. in total strength. Clearly football has a selective influence, and this natural selection, by which the stronger youths are drawn to take up the game to the exclusion of the weaker sort, has a great deal to do with manly forms seen on the field. The game thus cannot be credited with the product; the players are originally recruited from a select type. Even the quite little boys who form themselves into "teams" are superior in height and weight to the ordinary average school boy of the same age. If we turn to the question what effect does the game itself and the training for it have in developing the frame, we unfortunately have not many reliable data to go upon. Dr. Beyer gives a series of observations taken before and after training for football and other forms of sport which, so far as they go, are of considerable interest. It should be noted that the phrase, "total strength," here made use of, is the sum of the pressures produced on a series of dynamometers arranged to test the chief movements of the body, including the expiratory strength. It was found in 1892 that after a couple of months of football the average weight of 25 players had increased by 3.6 kilos., or 4 9 per cent., and in 1893 by 3 28 kilos., of 4.7 per cent. of their original weight. As regards lung capacity the increase was 3.9 per cent., and in total strength the increase in 1892 was 16.4 per cent., and in 1893 was 14.2 per cent. of their original strength. To ascertain whether this rapid increase of strength passed away as quickly as it was acquired, a comparison was made between the results obtained after playing in 1892 and before beginning in 1893, with the result of showing that out of the 16 per cent. gained during the preceding year's play, less than 1 had been lost during the time out of training. As a means of physical training, then, football is a good game, capable of largely developing the bodily powers, but it may be observed that in neither of these series of observations was there any increase of the "vital index" (obtained by dividing the lung capacity by the weight). In both series, in fact, it was diminished, the lung capacity not increasing in as great a ratio as the weight. The question whether football is the best means of developing the body is another matter; and, in regard to this, the following comparative observations given by Dr. Beyer are of interest:

	Age. Yrs.	Age. Mos.	Gain in Height Per Cent.	Gain in Weight Per Cent.	Lung Capacity Per Cent.	Total Strength Per Cent.	Time.
Results of training—							
Football, 1892	19	6	0.0	4.9	0.0*	16.4	2 mos.
,, 1893	19	11	0.0	4.7	3.9	14.2	2 ,,
Oarsmen, 1893	19	3	0.2	4.7	7.3	28.0	2 ,,
Cadets' gymnasium, 1892-3	18	0	0.5	1.3	3.8	32.0	6 ,,
,, ,, 1893-4	18	0	0.8	1.0	6.5	25.0	6 ,,

* The observations regarding lung capacity in 1892 were not taken at the beginning of the season.

So far as these results go it would appear that boating and systematised gymnasium drill are far superior to football as means of bodily training; and the large increase of lung capacity produced by boating is especially noteworthy. Whether, however, pulling at an oar or drilling in a gymnasium will impart or develop the quickness, pluck, and readiness of resource so characteristic of football and so useful in after-life is another matter, and one on which players of the game will probably speak with no uncertain voice. The game certainly should be preserved, which makes its reformation and the elimination of useless and dangerous risks all the more important.

[1] *American Journal of the Medical Sciences.*

DOCTORS AND DOOR-KEEPERS.

One of the few things as to which doctors do not differ is that theirs is a poorly paid profession. What with hospitals which deem nothing that is human foreign to themselves, cheap dispensaries run on the principle of small profits and

quick returns, false brethren within and unscrupulous quacks without the fold, the medical practitioner who knows his art but not his trade is severely handicapped in the struggle for existence. His therapeutic skill avails naught against that most depressing of diseases which Byron calls "the inflammation of the weekly bills." For most members of our fraternity the new death duties have none of the terrors which they excite in ducal bosoms. The philosopher may find some comfort in this thought, but the ordinary man is more likely to be moved to envy when he reads of the fortunes left, not by the Clarks and Gulls, but by some of the camp followers of his profession. The French papers are commenting with a kind of awe on the fact that a site in the Rue de Vaugirard in Paris, which was surveyed the other day and valued at 600,000 francs (£24,000), turned out to be property of a former hall porter of Ricord's. That sum certainly represents very pretty pickings, but we have little doubt that the case could easily be paralleled in this country. The august functionary who guarded the portals of a certain Court physician used, it is said, to think, like the Emperor Titus, that he had lost a day when he did not pocket six or seven sovereigns in "tips;" another estimated his revenue from what he playfully called the "guinea bell" at £600 a year; a third ran his master (a celebrated specialist now deceased) as if he were a show, and had a regular scale of prices for admission, with reserved seats—on the stairs or in the hall opposite the great man's door—and other special privileges for such as cared to pay for them. To achieve this measure of success the hall porter of a fashionable physician must play jackal to his master's lion. He must possess all the qualities that go to the making of a diplomatist; as someone defined an ambassador as a person sent to *lie abroad* for the good of his country, it may be said of a hall porter that a considerable part of his duty is to *lie at home* for the good of his master. One Cerberus, who in his best days was almost without a rival in his particular line, used to repudiate any responsibility for the deviations from strict veracity into which he was led while labouring in his vocation, on the ground that the Recording Angel must as a matter of simple justice debit all such peccadilloes to his master, in whose interest they were committed. Many a practitioner who takes a patient to one of the modern oracles of Apollo must have felt that it would be greatly to his pecuniary advantage if he could sink his professional dignity, and change places with the sleek familiar who guards the approach to the shrine.

THE EIGHTH INTERNATIONAL CONGRESS OF HYGIENE & DEMOGRAPHY

Held in BUDA-PESTH, September, 1894.

[FROM OUR SPECIAL CORRESPONDENTS.]

WORK IN THE SECTIONS.

The International Military Medical Committee.

During the Congress this Committee held six meetings, the chief object being the organisation of a system of uniform statistics to be collected from the armies of the different nations represented. To this end the methods were simplified as much as possible, the diseases dealt with comprising forty to fifty in number, being defined in Latin, not classified in groups, but arranged alphabetically.

The age groups were limited to three—namely, (1) under 25, (2) between 25 and 30, (3) from 30 upwards. Two subdivisions were made in relation to time of service—namely, (1) under one year's service, (2) over one year's service. Through this organisation and simplification it is hoped that the collection of military statistics will be much facilitated and promoted, and that the system will form a basis for a most valuable statistical investigation.

The Committee consists of the following members: Drs. Billings (America) President; Mydraczs (Austria) Secretary; Notter (England), de Raptapewsky (Russia), Dziewönski (France), Hermann (Bavaria), Van der Straeten (Belgium), Von Harten (Denmark), Cav. Claudio Sfezza (Italy), Grossheim (Germany).

In due time the protocols of the proceedings will be presented to the respective Governments.

The Etiology of Cancer.

A discussion on this subject was introduced by Dr. S. Duplay (Paris), who, after reviewing recent microscopical and experimental work, expressed the opinion that the question of the etiology of cancer still remained quite unsolved. In his opinion the theory of the existence of sporozoa in cancer, which in some quarters there was a tendency too accept too readily, became more and more doubtful as research was pushed further. The conflict of opinion among different observers was quite irreconcileable. As Dr. Ruffer had justly observed at the International Congress in Rome, it was necessary, since the usual histological methods of fixing and staining had not given satisfactory results, to resort to new methods. In particular, special attention should be given to the examination of fresh tissues. M. Duplay considered that recent experience pointed strongly to the view that cancer in an individual of one species could not be communicated by inoculation to an individual of another species, and that within the same species cancer could be transmitted from one individual to another only under conditions which must be very exceptional, and were not yet understood, though hereditary predisposition, perhaps, played a certain part.

Dr. Török (Buda-Pesth) accepted the conclusions of M. Duplay. His own observations had satisfied him that the bodies regarded as psorosperms in cancer were nuclei, nucleoli, epithelial or migratory cells, red blood cells, or products of degeneration.

M. Arloing (Lyons) had been led by his own experiments to the same opinion as M. Duplay with regard to the non-transmissibility of cancer from an individual of one species to an individual of another species. They led him equally to confirm the opinion that under certain conditions cancer might be transmitted from one individual to another individual of the same species. He had seen this occur in the dog.

The Biology of the Amœba: Dysentery.

Professor Celli (Rome) reported some of the results of an investigation which he had undertaken into the life-history of amœba. The best method for study was in the hanging-drop culture, which rendered it possible to follow the development of the organisms. By this means it had been found easy to obtain pure cultures of six species, that is to say, as far as regarded the amœba themselves, for it had not been possible to exclude entirely bacteria. Amœba resisted the action of alkalies, and by using very alkaline media it was possible to obtain cultivations almost free from bacteria. A classification of the amœba could be founded upon a study of their amœboid, reproductive, resting, and cystic stages. The first and the last stages were of the greatest importance in this respect. Reproduction took place always by scission never by sporulation. Since sporulation was constant in the plasmodium malariæ, it might be concluded that this organism was not an amœba but a sporozoon. The resting stage presented characters which were only transitory, but it was important to be acquainted with them, since in the stools they might be met with in this stage. The time occupied by the cycle of development was constant under similar conditions of culture material and temperature, and afforded a means of distinguishing between the amœba. The species so far cultivated were (1) amœba lobosa (var. guttula, oblonga, ondulans, coli): (2) A. spinosa, (3) A. diaphana, (4) A. vermicularis, (5) A. reticularis, (6) A. arborescens. Several

species might be found in the same intestine. The commonest was A. spinosa, which had been found under very different conditions in healthy persons as well as in patients suffering from dysentery and intestinal catarrh. In 34 cases of dysentery which he had carefully examined Professor Celli had found A. diaphana 5 times, A. coli 4 times, and A. spinosa, A. vermicularis, and A. reticularis once. In the other cases no amœba were found. These facts showed that these protozoa must be of very secondary importance in the etiology of dysentery. On the other hand, bacteriological investigation had shown that, in the stools of dysenteric diarrhœa, the bacterium coli was constantly present, often in pure culture, at other times associated with the pseudo-typhoid bacillus. This observation did not prove that the bacterium coli was the cause of dysentery. It was indeed far from being proved that this microbe could acquire a virulence so great and so specific as to produce a disease as typical in its clinical and epidemiological characters as dysentery.

The Hygiene of Drinking Water.

A discussion on this subject was introduced by Dr. Chantemesse (Paris), who, after a brief reference to the metallic contaminations of water, and an enumeration of the parasites which might thus be transmitted by water to man, proceeded to consider the specific microbic diseases of which water might be the vehicle. He mentioned in the first place the diseases in which this method of transmission was still open to doubt, and observed that the diarrhœa of Cochin China was attributed to the bad quality of the drinking water, and that yellow fever had disappeared from Vera Cruz, where it was formerly endemic, since spring water had been brought into all the houses. Dysentery was often transmitted by the use of contaminated water. The influence of water in the production of malaria had been recognised for half a century, and M. Laveran entertained no doubt as to the influence of drinking water. With regard to tuberculosis, M. Chantemesse said that he had, in conjunction with M. Widal, shown that the tubercle bacillus could remain alive in sterilised water at a favourable temperature for seventy days. The water carriage of cholera and typhoid fever was no longer disputed by anybody, but very different importance was attached by different schools to water as a vehicle for the specific poison. It had been urged by the opponents of the waterborne theory of cholera that the vibrio of Koch had no specific value because it might be found in the intestines of persons not suffering from cholera, and because it had been found in the drinking water of certain districts and towns free from cholera. These objections have now lost their weight, for it was known that the symptoms of cholera were due to the absorption of poison formed in the intestines, not by *a* cholera vibrio, but by myriads of these vibrios. Anything which favoured the growth of the vibrio in the intestines favoured the occurrence of cholera. Certain types of the microbe, which were very virulent and produced very powerful toxins, grew easily in the intestines. Others, less virulent, could only grow freely when special circumstances particularly favoured them; among such circumstances were to be included the favouring action pointed out recently by Dr. Metchnikoff, of certain other microbes present with the vibrio in the intestines. Turning next to the water carriage of typhoid fever, M. Chantemesse observed that the fact that the disease was commonly distributed by drinking water being accepted, the nature of this contamination remained to be considered. After discussing and rejecting the non-specific contamination theory of Murchison, M. Chantemesse discussed that which supposed that the bacterium coli might be so modified as to be converted into the typhoid bacillus and so produce the specific disease. Such a modification had never been observed in the laboratory, and the theory was opposed to the facts observed by epidemiology. The bacteriological proof in every case that water which had produced typhoid fever contained the specific typhoid bacillus was difficult, owing mainly to the fact that the growth of the bacillus was easily checked by the presence of other microbes in the water, especially the bacterium coli. The proof of the water carriage of typhoid fever must rest, therefore, in most cases on epidemiological studies; but M. Chantemesse insisted that in forming an opinion as to the suitability of a water supply for drinking purposes account must be taken of the results of physical, chemical, and bacteriological examination.

Cremation.

A small collection of drawings, plans, and models illustrating the progress of cremation was brought together by the Cremation Society of Vienna, and an excellent catalogue prepared, containing numerous illustrations of crematoriums in various cities—Hamburg, Berlin, Heidelberg, Milan, Bologna, Gotha, Brescia, Stockholm, New York, Padua, Zurich, Copenhagen, and Offenbach—as well as of the columbaria existing in some of these cities. Prefixed to the catalogue, which will be a volume of permanent value, was an essay by Dr. Adolf Kronfeld, and a series of notes by Oscar Siedek, containing a list of all the known cremation societies and crematoriums, showing the date of their foundation, the cost of cremation, and other statistical particulars.

THE BRITISH MEDICAL JOURNAL INQUIRY INTO PROVINCIAL WORKHOUSES.

Action by the Bristol Guardians.

At the last weekly meeting of the Bristol Board of Guardians a discussion arose upon a proposal, which it was admitted owed its origin to the investigations now being made in various workhouses by the Commissioner of the British Medical Journal. The matter arose in consequence of the master of the workhouse, Mr. R. Kernick, who was appointed several months ago, sending to the clerk to the board the following letter:

> The nursing staff in the infirmary (of the workhouse) is insufficient, and I beg to suggest that it be increased by the appointment of an extra nurse, who shall, with the present day nurse, perform the duties of night nurse during alternate months. At the present time this work is performed by inmates—a most unsatisfactory arrangement, as they are totally incapable of efficiently discharging their duties. I would respectfully advise the appointment of a probationer, who would be duly instructed in nursing for twelve months, at a salary of, say, £12 a year, with uniform.

The Chairman (Mr. J. W. Lane) said the sick paupers in their infirmary were practically left to pauper nurses at night. It was not satisfactory that pauper nurses should have to administer milk and brandy and other things. The temptation was very strong. The temptation was strong to neglect those committed to their care. They had had this subject taken up very much by the British Medical Journal. There were good reasons why this request of the master should be acceded to. He suggested—and it was a plan adopted in some workhouses—they should advertise for a probationer. Seeing that nursing had become such a profession, they might get a probationer for less than £12 a year—["No"]—with everything found. ["No, no."] In many cases a premium was paid by a probationer. [Mr. C. Wintle: "In a hospital."] If the exposures made in various workhouses throughout the country and one not far off, he thought it was their duty to accede to the request of the master, and he hoped the board would unanimously agree to it. He moved that the board advertise for a probationer as assistant nurse at a salary of £10. [Voices: "Make it £12."]

No one seconded the resolution, but the Chairman agreed to make the amount £12, and this met with approval.

Mr H. A. Cross said perhaps the members saw that the Local Government Board in one union ordered pauper nurses to be entirely removed, and the number of paid nurses increased from four to nine; they (the Local Government Board) said the sick should be more attended to in the future than in the past. This was in one of the local unions.

Mr. R. C. Stephens remarked that there was no doubt this request was the outcome of the investigation at Bath. The suggestion of Mr. Kernick was a good one. At Birmingham, where Mr. Kernick came from, they employed paid nurses, and a great number of probationers. He hoped the board would encourage this departure, and dispense with many of their pauper nurses. He trusted they would get three or four nurses as opportunity afforded.

Mr. Lorymer (an ex-chairman) said he should have been better satisfied if this request came upon the report of the

Committee than on the recommendation of the master. Although there was a large decrease in the number of paupers, there was a large increase in the number of officers to look after them. Some years ago one nurse, and not a trained nurse, was thought sufficient for the whole infirmary. They had granted an assistant nurse. Five or six years ago there was no nurse for the old people. In regard to the order from the Local Government Board, to which allusion had been made, guardians should remember that the Local Government Board did not always enforce their orders. There were a lot of professional men who would put the ratepayers to every possible expense they could, and sometimes the other side had to be heard. It was time these expenses should be checked.

Mr. LEVY thought it should go forth that they were not quite as bad as some of the institutions pointed out. They had several paid nurses outside the infirmary, in the house, and amongst the old people. He should like a more experienced nurse than was suggested in this instance—someone fully responsible to look after the sick people. As to the payment, ordinary servants get £10 or £12 a year, and their workhouse was not the most pleasant place to live in.

Mr. W. BURLAND said he supported the resolution as a minimum of what they should do, for he agreed it would be better to appoint a trained nurse right off—a woman they could hold responsible for the wards by night. A probationer was altogether inadequate. If they proposed a probationer in addition he should heartily agree with it.

Mr. W. JENNINGS remarked that the master was only taking time by the forelock after what he had seen in the papers.

The CHAIRMAN said there was a tendency to send more cases to the infirmary than formerly. Instead of giving out relief orders, there was a disposition to give notes for the workhouse infirmary in cases where the persons were sick. It was absurd to suppose that with two nurses they could get the best results.

The resolution was then put and carried without dissent.

DEATHS FROM TETANUS IN GREAT BRITAIN.

THE cases which we published in the BRITISH MEDICAL JOURNAL of September 15th, on the treatment of acute tetanus by the antitoxin contained in the serum of horses, protected from the disease by vaccination with the specific microbe under certain special conditions, worked out by Professor Tizzoni and Dr. Cattani, of Bologna, are of considerable therapeutic interest. They are examples of a new method which promises to endow mankind with therapeutic resources for the treatment of disease as well as prophylactic methods for its prevention. It will be remembered that some years since a special committee of the BRITISH MEDICAL JOURNAL was appointed, of which Mr. Callender, F.R.S., was the President, with the view of investigating all the known methods of treatment of tetanus. It was after much research and labour, and some expenditure of funds especially provided out of the income of the Association, that the Committee was obliged to report that acute tetanus was incurable, and that although anodynes and hypnotics sometimes afforded alleviation, there was no known remedy for it.

A considerable number of cases of tetanus, treated to a successful issue by this method, have been reported from Italy, but it is not as yet possible to make any trustworthy statistical statement, since tetanus is a disease which varies considerably in severity, and in forming a precise estimate of the value of any new method of treatment a large number of observations are required in order to eliminate this source of error. The results, however, are sufficiently encouraging to render it incumbent upon surgeons to make a careful trial of the antitoxin treatment. The serum used by Mr. Dean in the case under his care which recovered, in the London Hospital, and by Mr. Herbert Evans in his case at Goring, was obtained from Messrs. Allen and Hanburys, Plough Court, E.C., who import [illegible] to [illegible].

Unfortunately, there is not likely to be any lack of opportunity for testing the method, since tetanus is a disease which causes annually a considerable mortality in this country.

The following figures show the number of deaths from tetanus in England and Wales as reported to the Registrar-General:

TRAUMATIC TETANUS.			
1875	133	1884	162
1876	191	1885	175
1877	225	1886	129
1878	188	1887	151
1879	194	1888	133
1880	192	1889	200
1881	173	1890	208
1882	187	1891	155
1883	162	1892	134
IDIOPATHIC TETANUS.			
1881	61	1887	92
1882	47	1888	55
1883	51	1889	70
1884	42	1890	70
1885	42	1891	75
[illegible]	[illegible]	1892	75

It will be seen that the number of deaths from 1879 to 1892 inclusive were, from traumatic tetanus 2,969: and from idiopathic tetanus, from 1881 to 1892 inclusive, 568.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 24th day of October next, at 2 o'clock in the afternoon.

September, 1894. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETING FOR 1894. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 24th, 1894. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before such meeting—namely, October 3rd, 1894.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election. FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

SOUTH MIDLAND BRANCH.—The autumnal meeting of this Branch will be held at the Infirmary, Peterborough, on Thursday, October 4th, 1894. The following communications have been promised:—Dr. Newman: Remarks on Abuses in the Profession, with a resolution. Dr. Walker: Case of Injury to Brain from Impaction of Spout of Oilcan; Recovery. Dr. Jones: A Fatal Case of Poisoning by Ammonia. Dr. Hartley: Case of Double Abscess of Mastoid Cells. Mr. Milligan: Six Consecutive Successful Cases of Removal of Loose Cartilages from the Knee-joint.—CHAS. J. EVANS, Honorary Secretary, Northampton.

NORTH OF ENGLAND AND BORDER COUNTIES BRANCHES.—It has been decided to hold a conjoint meeting of the above Branches at Gilsland on Thursday, October 20th, 1894. The meeting will commence at 3 P.M., and will be followed by a dinner. Members desirous of reading papers are requested to communicate with either of the Honorary Secretaries: G. E. WILLIAMSON, F.R.C.S., 8, Eldon Square, Newcastle-on-Tyne, North of England Branch; J. ALTHAM, M.B., Penrith, Border Counties Branch.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The autumn meeting will be held at Pontypool on Thursday, October 25th. Members desirous of reading papers, etc., are requested to send titles to one of us not later than October 10th.—A. SHEEN, M.D., Cardiff; D. ARTHUR DAVIES, M.B., Swansea.

South-Eastern Branch: East Sussex District.—The next meeting of the above will be held at the Station Hotel, Hayward's Heath, on Thursday, September 27th, at 3.30 P.M. Dr. Malcolm Smith, of Hurstpierpoint, will preside. A discussion on the Wants of the General Practitioner and how best to obtain them, will be opened by Dr. Withers Moore, who will treat of such topics as the following: 1. Limitation of Time during which Prescriptions should be Re-dispensed without re-dating. 2. Poor-law Retiring Pensions should be fixed by Poor-law Board. 3. Settlement of Differences between Members by the President of the Branch. 4. Cases of "Irregular Practice"—how to deal with them. 5. The Question of Dispensaries—Provident *v.* General—Wage Limit, etc. Dinner will follow the meeting at 5.30 P.M., charge 6s., exclusive of wine.—J. W. Batterham, Hon. District Secretary, Bank House, St. Leonards-on-Sea.

SOUTH EASTERN BRANCH: EAST KENT DISTRICT.

The 132nd meeting of this district was held at the Schoolroom, Lympne, near Hythe, on September 13th; Mr. R. H. Clarke in the chair. Twenty-seven members and visitors were present. The minutes of the previous meeting at Canterbury were read and confirmed.

Election of Chairman.—On the motion of Mr. Treves, seconded by Mr. Whitehead Reid, Dr. Frederick Eastes, of Folkestone, was appointed Chairman of the meeting to be held at Canterbury in November.

Archæological Paper and Excursion.—Professor Victor Horsley, F.R.S., delivered a lecture, illustrated by lantern slides and the limelight, on his excavations at the Roman Castrum at Stuttfall. At its conclusion a hearty vote of thanks, moved by the Rev. H. B. Biron and seconded by the Rev. Canon Jenkins, who spoke warmly of the value of Mr. Horsley's researches, was accorded to the lecturer. A visit was paid to the Roman Camp, and many objects of archæological interest which had been found during the excavations were exhibited.

MALTA AND MEDITERRANEAN BRANCH.

An adjourned meeting of this Branch was held at Valletta on June 28th,[1] Surgeon-Major-General Inkson, A.M.S., being in the chair.

Malta Fever.—The discussion of Surgeon-Captain Hughes's paper on this subject was resumed by Staff-Surgeon Kirker, R.N., Surgeon Ellis, R.N., and Surgeon-Major Manché, R.M.A.—Surgeon-Captain Hughes, A.M.S., then replied.—Surgeon Burke, R.N., read a paper on the Causation, Prevention, and Treatment of Mediterranean Fever. He considered causation under three heads, namely, predisposing, indirect and exciting causes. Natives were less subject to the disease; 25 was the most common age to be attacked; persons suffering from incipient phthisis were more frequently attacked than healthy people; errors of diet, indulgence in drink, and sedentary life on board ship without any distraction led first to congestion of the liver, and then to remittent fever; and, lastly, the long stay of a ship in one locality, whether it be in the Maltese harbour or in any other in the Mediterranean, gave the largest number of admissions. Under the second he mentioned want of exercise. Exercise in the sun did no harm provided the men wore a good headdress, but exposure to chills after exercise was just what started the attack. Under the third, he placed in addition to the exposure to chills, living in an insanitary place and inhaling the poisonous air. He did not consider that the poison of remittent fever was taken in with the water, as was generally the case with enteric fever. He consequently urged the necessity of accurately analysing the air of unhealthy places, that coming from sewer ventilators in particular. As regards prevention, there was little to be said except that attention to the ordinary rules of hygiene was necessary. The real poison of the fever had not yet been discovered. With regard to treatment, bleeding should be used on strong men at the height of fever and when symptoms of congestion of the brain were present; purgatives should be given to clear the bowels of the putrefying matter, calomel being the best remedy for the purpose. Cold or tepid baths should be given to lower the temperature. For the disinfection of the bowels, phenol and naphthol given by the mouth were very advantageous, and so also was the irrigator (enteroclysnia) with boracic acid solution. Antipyrin only served to relieve the pain in the head and to lower the temperature for a brief period, but it had no effect in cutting short the attack. Sulphate of quinine was worse than useless, for it had no effect on the long-protracted fever, and it irritated the stomach. The diet should be exclusively liquid; alcohol, administered frequently and in small doses, was advantageous. In cases of protracted fever, with relapses, excessive prostration, and recurrent rheumatic pains, change of climate was the sheet anchor; this change should be from one country to another, or to a sanatorium far from the sea coast. A short cruise on board ship was useless.—Surgeon-Major Tidbury, A.M.S., Surgeon-Major Twiss, A.M.S., and Surgeon-Major Manché, R.M.A., took part in the discussion.

Votes of Thanks.—Votes of thanks were passed to Surgeon-Captain Hughes, A.M.S., and to Surgeon Burke, R.N., for their interesting papers. Surgeon-Captain Hughes proposed a vote of thanks to the Chairman for the manner in which he conducted the animated and long discussion on both sittings; and Surgeon-Major-General Inkson, A.M.S., proposed a vote of thanks to the Honorary Secretary for the trouble he had been taking in promoting the welfare of the Branch.

[1] See British Medical Journal for July 28th, p. 220.

BRITISH GUIANA BRANCH.

The quarterly meeting of the Branch was held in the pathological room of the Public Hospital, George Town, on July 26th, 1894, Dr. J. S. Wallbridge (the acting Surgeon-General, was in the chair). Dr. Daniels read the minutes of the last meeting in the absence of the Secretary.

The British Institute of Preventive Medicine.—A letter of thanks from Dr. Armand Ruffer, acknowledging a subscription from the Branch to the funds of the British Institute of Preventive Medicine, was read.

New Member.—The Chairman announced the election to the Branch and the Association of E. M. Knott, M.R.C.S.Eng., L.R.C.P.London.

Auditors.—Drs. Snell and Irving were appointed auditors as suggested by the Council.

Mode of Election of President.—The Chairman then mentioned the desire that there was amongst some of the members that the President should not be *ex-officio* the Surgeon-General, but that he should be elected annually, as the other office-bearers. He suggested that the matter be discussed on a formal motion to be made at the next meeting.

Infantile Convulsions and Malaria.—Dr. Daniels then read a paper by Dr. Ferguson, who was unable to attend, on infantile convulsions. The writer drew especial attention to the influence of malarial poisoning as a cause of them in this Colony, and strongly urged the use of quinine—even hypodermically. The debate on the paper was postponed, in order to allow the writer to be present, on the motion of Dr. Von Winckler.

Specimens.—Dr. Daniels showed several specimens he had prepared. 1. Aneurysm of the Cœliac Axis. 2. Complete Congenital Occlusion of a Portion of the Jejunum: the child lived two days. 3. Two Vesical Calculi from a negro, a native of the Colony. 4. A Renal Calculus and a Calculus Impacted in the Ureter of a male East Indian. 5. Adult and Embryo Anguillula Intestinalis from a female negro, a native of the Colony.

SYDNEY AND NEW SOUTH WALES BRANCH.

The 119th general meeting of the Branch was held at the Royal Society's Room on July 6th, 1894. Present: Dr. Crago, President, in the chair; Drs. Clubbe, Fiaschi, Jenkins, Chisholm, E. Fairfax, Ross, Hankins, Foreman, Neill, Traill, Quaife, Angel Money, Van Someren, O'Hara, G. A. Marshall, A. Parker, Thring, Sydney Jones, Tidswell, Abbot, Bennet, Worrall, W. S. Bowker, Morgan, Martin, Pockley, Thomas, Huxtable, Fieldstadt, Hinder, C. Martin, Mullens, James Dick, Jamieson, Murray, Will, James Macleod, Fizell, Hetherington, Armstrong. The minutes of the 116th general meeting, special and adjourned special meetings were read.

New Members and Visitors.—The President stated that Drs. Tennant, Thomas Evans, and W. Smith had been elected as members of the Association. The President welcomed Drs. Smith and C. Bowker as visitors to the Branch.

Paper.—Dr. van Somerén read a paper on cases occurring in practice. A discussion ensued in which Drs. Crago, Chisholm, Fiaschi, Worrall, Jenkins, Thring, Sydney

JONES, HUNTABLE, QUAIFE, FOREMAN, THOS. DIXON, and EDWARDS took part. Dr. VAN SOMEREN replied.—Dr. SYDNEY JONES exhibited a clinical thermometer for Dr. SMITH, of Cowra, and explained its peculiarities.—The PRESIDENT said he thought it would be well to take the discussions on the papers of Dr. Angel Money and Morrall and Hankins together.—A discussion ensued in which Drs. SYDNEY JONES, FIASCHI, QUAIFE, HANKINS, HINDER, CHISHOLM, WORBALL, THRING, and C. J. MARTIN took part.

SPECIAL CORRESPONDENCE.

PARIS.

The Dangers of Preserved Food.—Sanitary Decrees.—Entomology and Jurisprudence.

M. NOCARD, in accordance with the request of the Police Prefect, has sent in to the Seine Health Council a report on the process of preserving meat and fish with borax, boric acid, and sodium bisulphite. The report states that the use of the above substances is deleterious in two ways—they permit unsound articles to be preserved, and their direct action may deprive food thus preserved of some of its nutritive properties by facilitating the formation of organic elements absent in fresh meat. It is likewise probable that sulphuric acid, which is manufactured arsenical pyrites, and the sulphur compounds obtained by its aid, may contain traces of arsenic. M. Nocard condemns the use of borax, boric acid, and the bisulphites of sodium and potassium.

The Prefect of the Seine has issued a decree in which appears the following clauses: In every flat or single room let with a kitchen, and in every three rooms not constituting a flat, there must be constructed a watercloset. It must be placed on the flat or close to the rooms let with it. In shops, hotels, theatres, factories, workshops, offices, schools, and such-like establishments, a sufficient number are to be constructed for the use of the inmates. The landlord or tenant, according to circumstances, will be responsible for the sanitary condition. Water must be supplied to all in sufficient force to flush and cleanse the pan. Plans must be submitted to the municipal council of the different systems, and apparatuses used before they are adopted. *Tinettes* and cesspools are to be abolished. The latter are to be cleansed, disinfected, and filled up. All sewage is to be carried by pipes direct into sewers.

M. Mégnin, in a work presented to the Paris Academy of Medicine on the fauna of dead bodies, indicates the importance of these entomological studies with regard to medical jurisprudence. The insects appear in relays according to the period of putrefaction. The first which appears is the musca curtonea and callophora. It is present on dead bodies buried in the most careful manner. The eighth group, coleoptera, are found in dead bodies which have been buried four years. The dust that remains after the decomposition of the body is really the excreta of these animals.

ST. PETERSBURG.

New Chemical Laboratory in the St. Petersburg University.—Proposed School of Medicine for Women in St. Petersburg, with Power to Grant Diplomas.—Factors which Determine the Age at which Menstruation Commences in Russian Women.—Decline of Cholera in St. Petersburg and Increase of Cholera in the Provinces.

A NEW chemical laboratory, in connection with the Imperial University of St. Petersburg, will be opened next month. It has been built at a cost of 250,000 roubles (over £25,000), four-fifths of this sum having been provided by the Minister of Education, and the remainder by the University. The new building contains not only laboratories and lecture theatre, but also dwelling accommodation for the professors and their assistants.

A Medical Institute for Women, the first of the kind in this country, will, if the scheme be approved by the Imperial Council, shortly come into existence in St. Petersburg. Two-thirds of the funds required to start the Institution have been already promised, and the municipal authorities have undertaken to provide it with quarters free of cost. Women between the ages of 18 and 35 will be enabled to pass through a six years' course of medical education, the last two years of which will be occupied in practical work in hospitals devoted to obstetrics and the diseases of women and children. At the end of the course candidates may obtain the diploma of "Woman-Doctor," granting the right of general practice, or of practice as specialists in the diseases of women and children. In the last capacity appointments to Government or municipal institutions for the care of women or children will be open to those who hold the diploma.

Dr. Gruzdef[1] publishes the following conclusions as to the average age at which menstruation appears in Russian women. The conclusions are founded upon the statistics of 64,759 cases (1) without distinction of race, social or other conditions, the onset of menstruation most irequently occurs in the sixteenth year (21.6 per cent. of the total), then in the fifteenth year (19.4 per cent.), in the seventeenth (17.2 per cent.), in the fourteenth (15 per cent.), in the eighteenth (9.9 per cent.), in the thirteenth (6.9 per cent.), and finally in the nineteenth year (4.7 per cent.); the average age was 15.83 years. (2) Women of the Semitic and allied races attained sexual maturity earlier than others, followed in order by those of the Slavonic race, those of the German race, and, finally, by those of the various branches of the Finnish race, who were the latest of all. (3) In Northern Russia the average age was 16.64, in Central Russia 15.82, in Southern Russia 15.3. (4) Among the "privileged" classes the age was 15.18, among poorer women in towns it was 15.8, among peasant women in the country it was 16.21. (5) The onset was earliest in women occupied in mental work, and was generally early in proportion to the psychical development of the individual. (6) It was early in women of weak physical constitution, and in those of short stature. (7) It was earlier in brunettes than in blondes.

The cholera epidemic is clearly, if slowly, declining in St. Petersburg. The daily number of fresh cases has sunk from hundreds to tens, and even to units. The hospitals are closing gradually their cholera wards. The sanitary authorities are diminishing their medical staff, which had been temporarily augmented, and many medical men who had been prevented from taking their usual summer holiday, or who had been summoned back from it in haste when the epidemic broke out, are now able to leave the city for a short but much needed change. Over seventy cases of cholera still remain in hospital, and about a dozen fresh cases occur each day, but when these figures are compared with those of a month ago, when as many as 885 cholera cases were under treatment at one time and about 200 persons were sickening daily, it will be seen that the difference is great. The same cannot be said of the provinces. There during the past few weeks cholera has been spreading widely, and is now as prevalent as it was at any time last year. The centre of intensity of the epidemic, which in 1892 was in the Governments on the Volga, and in 1893 in Podolia and the Ukraine, is now in Polish Russia and the Governments adjoining. But other parts of the country are not exempt, and it appears from the last bulletins that three-fourths of the Governments of European Russia are infected.

CHICAGO.

The American Medical Association.—Dr. J. B. Murphy on Intestinal Anastomosis.—Visit of M. Latude.—A Holiday Book.—A Case of Acromegaly.

THE late meeting of the American Medical Association at San Francisco was not largely attended by Eastern physicians. This, however, was expected, and therefore occasioned no disappointment. Dr. Donald Maclean, the newly-elected President, is a resident of Detroit, Michigan, where he has a considerable private surgical practice. He is a Scotchman, of polished manner, and the most notable traits in his character are positiveness and constancy of pursuit. He is about 55 years of age, and for years was Professor of Surgery at the University of Michigan.

Dr. J. B. Murphy, recently returned from the International Medical Congress at Rome, was banqueted by local physicians as a mark of respect, and in congratulation of his safe

[1] *Journal of the Russian National Health Society*, Nos. 5 to 7, 1894.

return and the honours bestowed while he was abroad. Dr. Murphy is one of the most progressive surgeons in Chicago, is an industrious worker, and is fully imbued with the spirit of energy which characterises this vicinity. He has attained no inconsiderable distinction, particularly in the field of abdominal surgery. Since his return he has contributed an exceedingly valuable and exhaustive article upon the subject of intestinal anastomosis, published simultaneously in the *New York Medical Record* and the *Chicago Clinical Review*. The article covers quite completely the particular work the author has been engaged in for the past three years, and notes all cases of intestinal union by means of a device generally known as the "Murphy button." It seems some thirty-five cases have been reported wherein this mechanical instrument has been used, and the results are certainly very gratifying; so much so, indeed, as to warrant the prophecy that this will be the means hereafter used by those who become acquainted with the *technique* and advantages.

A very pleasant opportunity of a visit was recently given a few of the local profession, upon the occasion of a flying trip to our city of M. Latude, of Paris. M. Latude spent two days in Chicago *en route* to New York from Washington, where he attended the Triennial Congress of American Physicians. Notwithstanding the brief period of M. Latude's sojourn, a luncheon was arranged at the Union League Club in his honour.

Dr. Sanger Brown described a well-marked case of acromegaly at the last meeting of the Pathological Society. Instances of this strange affection are not infrequent in European medical centres, but not often seen here. The case, therefore, excited some considerable amount of interest. As is almost always the case there was nothing striking in the history of the patient leading to anything like a definiteness in the etiological conditions of the disease. The patient had been a labourer for years, and his family history was not uncommon. The case promises to have further attention, and will, no doubt, be thoroughly reported at an early date.

CORRESPONDENCE.

THE LAW AS TO BURIAL AND UNCERTIFIED DEATHS.

Sir,—I shall feel obliged if you will in an early issue of the British Medical Journal state the law as regards the burial of uncertified deaths, and, in doing so, include answers to the following questions, namely:

1. Has the local registrar the power to give a burial certificate when a medical certificate has been refused? or, again, where no medical man has been in attendance on the deceased person?

2. Is it not incumbent on the local registrar to communicate with the coroner in cases such as described in the first question, and to await and abide by the coroner's decision?

3. Has the officiating clergyman of the parish the power or right to refuse burial in such cases (on the local registrar's certificate only), and where it appears the coroner has not been communicated with?—I am, etc.,

Bernard Kendall,
Surgeon-Major Retired List.

Penally, R.S.O., Pembrokeshire, Aug. 27th.

*** The official instructions issued for the guidance of registrars of births and deaths require such officer to report all cases to the coroner in which it "appears that the death was caused directly or indirectly by violence, or was attended by suspicious circumstances, and whenever the cause of death is stated to be unknown." Registrars are not, however, instructed to report to the coroner all cases in which no certificate of a registered medical practitioner is produced, unless there are any "suspicious circumstances" connected with the case. If, however, the registrar were aware that in any particular case the medical practitioner in attendance on the deceased had refused to give a certificate, it would clearly be his duty to report such a case to the coroner previously to registering the death, as such refusal must obviously be taken to imply "suspicious circumstances." There is no clear instruction to the registrar to report cases in which the deceased person has had no medical attendance, although a large proportion of such cases are reported to the coroner. It should, however, be pointed out that very few coroners hold that the absence of medical attendance or of a medical certificate alone affords sufficient cause for holding an inquest. The officiating minister has no authority to refuse burial if a certificate of registry, signed by the registrar, or an order for burial issued by the coroner, is produced at the time of the interment.

CHELSEA HOSPITAL FOR WOMEN.

Sir,—May I be allowed to state that during the year 1893 I had two deaths in the Chelsea Hospital for Women, after operations of all kinds. The two deaths resulted after curetting to remove placental *débris*. I have had no death in the hospital from any abdominal section since August, 1891.—I am, etc.,

Queen Anne Street, W., Sept. 18th. Fancourt Barnes.

MEDICAL AID ASSOCIATIONS.

Sir,—In the British Medical Journal of August 11th, p. 348, Dr. Leslie Phillips writes that "the College of Physicians of Ireland has absolutely forbidden its Licentiates from holding office of surgeons to medical aid associations."

As I very much doubted the above statement, I have communicated with the Registrar of the Royal College of Physicians of Ireland, and have been favoured with the following official reply:—

"At a meeting of the President and Fellows assembled in the Hall, November 3rd, 1893, the following resolution was passed:

That the College express their disapproval of their Licentiates accepting office in medical aid associations as at present conducted in England, inasmuch as the independence of the physician is destroyed by the system, and his services are used so as to produce a profit for lay persons.

It is manifest from the above resolution that the College has simply expressed their disapproval of appointments in connection with friendly societies, and it is still left to the discretion of the "Physician and Licentiate in Medicine of the said College" as to whether he will accept such appointments. Dr. Leslie Phillips, therefore, was in error when he stated that the College has absolutely forbidden its Licentiates from holding office of surgeons (physicians) to medical aid associations, and I must ask you to insert this correction in the next issue of the Journal.—I am, etc.,

Scunthorpe, Sept. 17th. R. Chambers Owen, M.R.C.S.

ANTITOXIN TREATMENT OF TETANUS.

Sir,—There are two cases of traumatic tetanus recorded in the British Medical Journal of September 15th in which recovery took place under antitoxin injections. In Mr. Dean's case the injury was received on June 28th, tetanus developed on July 24th (twenty-six days after), and the patient was well on September 4th. In Mr. Evans's case the injury occurred on June 8th, tetanus set in on July 16th (thirty-eight days after), and the patient was well on August 11th.

The clinical history of such cases up to now is, that where tetanus supervenes soon after injury, no treatment is of any avail, and that where it comes on after a long interval careful nursing and perfect quiet are sufficient to carry the case to a favourable termination. I maintain that such cases as are here recorded are of little value; what we want is a record of cases of acute tetanus coming on within a few days of injury, treated by antitoxin, and ending in recovery.—I am, etc.,

A. Sheen,
September 18th. Surgeon, Cardiff Infirmary.

HOSPITAL APPOINTMENTS.

Sir,—The British Medical Journal of September 8th contains another letter from Dr. W. Steele relating to the recent election of a surgeon to the Surrey Dispensary, and as my name is mentioned in connection therewith I feel it only right and fair to Dr. Steele and his fellow sufferers to state that his account of my painful and uncongenial office in the matter is quite correct.

Unfortunately the advertisement inviting applications for the appointment was not drawn up either in conformity with the requirements of the case or with the new rules of the

institution. The essential qualifications were—(1) the Fellowship of the Royal College of Surgeons, and (2) the membership of the staff of one of the leading metropolitan hospitals. Both these points were unhappily omitted from the advertisement, the defectiveness of which was, however, at the meeting of the selecting committee, brought by me to the notice of the chairman. Some twelve candidates attended the said committee, and a more gentlemanly and more highly qualified group of general practitioners it would, perhaps, be impossible to assemble. And therefore, when communicating to them, as deputed, the decision of the Committee I did, and do still, deeply sympathise with them for the annoyance, trouble, and expense to which they were subjected.

I trust, however, that in future all such advertisements will be submitted to competent medical purview previous to publication. The dispensary is a leading one and will doubtless always command the services of the *élite* of the profession.—I am, etc.,

JOHN INCE, M.D.,
Swanley, Kent, Sept. 12th. A Life Director of the Surrey Dispensary.

*** This correspondence must now cease.

WANTED—AN "ANTIFAD" SOCIETY.

SIR,—As far as I am aware no existing corporation or society makes any practical endeavour to counteract the evil influence of the faddist and quack literature which, in the form of pamphlets and letters to the newspapers, is disseminated all over the kingdom. You, Sir, and your medical contemporaries occasionally lift up your voice and expose some flagrant nonsense which is calculated to impose on the public; but unfortunately your words do not reach the ignorant, who are as the sands of the sea, and are such facile dupes. The wily antivaccinators, antivivisectionists, etc., well know that professional men of position are chary of seeing their names in sensational journals, and that falsehoods concerning medical subjects can be scattered broadcast in the newspapers with but little fear of valid contradiction. When Mr. Tebb and enthusiasts of that ilk write to the BRITISH MEDICAL JOURNAL, their misstatements are soon shown up by those who are competent: but we cannot follow them in the pages of the "*Evening Planet*," the "*Mudford Herald*," and so forth.

Personally, of course, many of us are not affected by the efforts of these faddists, and we may regard them with contempt; but there can be no doubt that incalculable harm is done and sanitary science impeded by their means. If we wait for universal enlightenment we shall have to wait a very long time; but meanwhile, it seems to me, the only practical way is to meet these gentry with their own weapons. I would suggest that an "Antifad and Antiquack Society" be at once formed, with a paid secretary, whose chief duty shall be to reply, under instructions from an expert committee, to letters, pamphlets, etc.; to issue counter-advertisements and circulate tracts and flyleaves among the public. Such a society would, I believe, be largely supported—and by many educated persons outside the medical profession. Or better still, our own British Medical Association might, perhaps, take up the matter and devote a few hundreds a year to work of the kind.—I am, etc.,

London, Sept. 15th. Αλφα.

INHERITANCE IN RELATION TO DISEASE.

SIR,—The interesting debate on heredity in relation to insanity in the BRITISH MEDICAL JOURNAL of September 8th shows clearly the hopeless confusion in which the subject of the inheritance of disease is at present involved. I believe the cause of this state of things is fundamental misconception as to the nature of pathological heredity, and failure to recognise the difference between it and physiological heredity. In physiological inheritance the rule is that like begets like, or, as Darwin puts it, "the inheritance of any character whatever is the rule, and non-inheritance the anomaly." To apply this principle to the inheritance of disease, as Haycraft, Andriezen, and so many others have done, is a serious error, which the data derivable from the statistical investigation of the family history of disease contradicts in the most unmistakable manner. These show that morbid conditions, like other recently acquired characters, are never reproduced in the offspring with the same constancy and regularity that normal conditions are. In the long run the tendency always is to normality rather than to abnormality; hence all diseases tend to die out in the cause of transmission. So great is the preponderating influence of the previous ancestral balance that even in families where hereditary tendency to disease is strongest, most of the members usually escape.

As an example of this prophylactic power of heredity—nowadays almost universally overlooked—reference may be made to the transmission of deaf-mutism. Buxton's researches show that of 303 marriages in which both of the contracting parties were deaf and dumb, only 1 in 20 of the offspring were similarly affected, and that of 310 deaf-mutes married to hearing people the proportion of deaf and dumb among the offspring amounted only to 1 in 135. Independent investigations since carried out by Mygge, Hartmann, Myguid, and others have fully confirmed Buxton's results. In addition to demonstrating the prophylactic power of heredity, these data also make manifest the second great principle governing the inheritance of disease, which is that the descendants of an individual in whom a new morbid variation has appeared are, other things being equal, more likely to vary again in a similar way than are persons whose ancestors have never manifested such variation.

These are, I believe, the two most generalised statements that in the present state of our knowledge can be made with regard to the inheritance of disease. By keeping these two principles steadily in view the present confusion will be dissipated and much of the darkness of this obscure subject will eventually be made light.—I am, etc.,

Preston, Sept. 8th. W. ROGER WILLIAMS.

HÆMORRHAGE AFTER AMPUTATION OF THE HIP.

SIR,—My experience with reference to the best mode of restraining hæmorrhage in amputation at the hip-joint may be of use to Mr. James Couldrey, whose remarks on the subject I have read with interest in the BRITISH MEDICAL JOURNAL of September 8th. I have had occasion to do the operation twice within the last twelve months. I chose the proceeding known as "disarticulation by the anterior racket incision," and figured in Treves's *Manual of Operative Surgery*, fig. 148, page 537. After making the skin incisions the femoral artery was tied in two places, just below Poupart's ligament and divided between, as also was the vein. The external circumflex artery and vein were treated in the same way, and the internal circumflex. In short, you tie the vessels as you go along, as in the removal of a large tumour. I have never tried skewers or levers to restrain hæmorrhage. In the above operation the loss of blood is trifling.

Many years ago I removed the entire thigh in a big, muscular man, by transfixion, as recommended by Sir W. Fergusson, and notwithstanding the assistance of a competent surgeon of experience, there was lost a great quantity of blood. I may mention that all these cases did well.—I am, etc.,

J. T. WILLIAMS, M.R.C.S.,
Honorary Surgeon, North Lonsdale Hospital,
Barrow-in-Furness, Sept. 9th. Barrow-in-Furness.

CONSULTANTS' DIFFICULTIES.

SIR,—Mrs. M. this morning brought her daughter to consult me about an ailment concerning which she had been brought to me in 1889 by Dr. C. She said she had left his neighbourhood, and was no longer under his care. I declined to attend under any other condition than that of sending my prescription and instructions in the first place to Dr. C. Mrs. M. refused to agree to this, and our interview ended. Did I unduly strain the relation of consultant to general practitioner in my endeavour to carry out what I consider the right mode of action?

On a recent occasion a gentleman consulted me on the recommendation of his mother's medical adviser, Dr. S. I gave him a note and prescription to convey to Dr. S. A few days later I received a letter from Dr. K., saying that the gentleman, his patient, had brought him my letter to Dr. S. I wrote to him stating that the patient had come to me through Dr. S., and that I could only correspond with Dr. S. about him. I afterwards ascertained that Dr. S. had handed my note to the patient to give to his usual attendant, Dr. K. Dr. S. having no intention of making me a means of transferring another practitioner's patient to himself. I understand that Dr. K. rather resents my proceeding; and in

order to avoid such untoward results I am anxious to elicit from you, Sir, an opinion as to the best line of conduct to pursue under similar circumstances. In the first case I have no doubt lost a patient, in the second the good will of a general practitioner.

As one who looks to the profession rather than to the public, I am anxious to have your guidance in these two cases, which are fairly typical of the difficulties besetting one who strives to act as

London, Aug. 27th. A Loyal Consultant.

*** There cannot, we apprehend, be any reasonable doubt that, in each of the cases referred to, "A Loyal Consultant" erred owing to a lack of knowledge of the true principle of medical ethics as laid down in the general code. In that of Mrs. M.'s daughter, we venture to affirm that, under the circumstances related, he was not medico-ethically justified in withholding his advice, and that in so doing he "unduly strained the relation of consultant to general practitioner." Moreover, as we view it, he alike erred in his assumed ethical obligation to correspond only with Dr. S. instead of Dr. K., the person in question being a patient of the latter.

THE BOILING POINT OF MILK.

Sir,—At page 570, column 2, of the British Medical Journal of September 8th, referring to the temperature at which typhoid bacilli are killed, a correspondent assumes that milk boils at 180° to 190°. This is a mistake which needs correction. Milk boils at a temperature higher than that of water, and it is well known that boiling milk inflicts a much more serious scald than boiling water. The point at which milk boils will vary half a degree or more according to the amount of its saline and other non-aqueous constituents. but I find that a fair sample of milk, taken from my own kitchen, boils at 213·5° when tested with a standard chemical thermometer. I have always advised that milk boiled for one minute is made safe by the killing of any infective germs which it might have contained.

The butter contained in milk does not seem to raise its boiling point, but it is well known that butter and other fats and fixed oils boil at a very much higher temperature, and that boiling fixed oils destroy the skin as effectually as melted lead. In the manufacture of tin plate, that is, sheet iron plated with tin, the tin is kept melted under melted tallow and the clean sheet iron is tinned by being passed through this bath of molten tin. Fixed oils may be heated to about 500° F. without undergoing material change, but at about 600° they begin to boil, owing to the evolution of gases, which are set free as a process of destructive distillation.

It is generally held that the typhoid infection of milk is due to contaminated water used for washing the milk vessels or for augmenting the bulk of the milk by fraudulent additions. My own opinion is that an escape of fæcal matter from the cow while being milked often falls into the milk pail, and that this is generally the real cause of typhoid infection in milk. I have actually seen this to occur when inspecting dairies and examining suspected cows, and I am perfectly sure that it often takes place. The polluted water theory seems to me to be far fetched and inadequate.—I am, etc.,

Dover Street, Piccadilly, W., Sept. 7th. James Edmunds, M.D.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL EXCHANGE STAFF.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A Surgeon-Captain, under orders for India about February, wishes to effect an exchange with an officer having two years more to serve at home. Address, Medical Officer, Landguard Fort, Felixstowe.

A Surgeon-Captain, who expects to go abroad early next year, is desirous of exchanging with an officer having at least two years to serve at home from that date. Address, Surgeon-Captain, care of Sir Charles MacGrigor, Bart., and Co., 25, Charles street, London, S.W.

THE NAVY.

The following appointments have been made at the Admiralty: George F. Collins, Surgeon, to the *Pembroke*, additional, September 13th; Edward G. Swan, Staff Surgeon, to the *Briton*, September 27th; Henry J. Hadden, Surgeon, to Bermuda Hospital, September 17th; Alexander G. W. Bowen, Surgeon, to the *Partridge*, September 17th.

INDIAN MEDICAL SERVICE.

Surgeon Captain W. W. Webb, Bengal Establishment, who was placed on the temporary half-pay list, August 22nd, 1892, now retires from the service on half-pay from that date. He was appointed Surgeon, September 30th, 1882.

Surgeon-Colonel A. Stephen, M.B., Bengal Establishment, officiating as Principal Medical Officer, Assam District, is appointed Principal Medical Officer, Presidency District, *vice* Surgeon-Colonel R. Harvey, D.S.O., who is confirmed in the appointment of Inspector General of Civil Hospitals, Bengal. Surgeon-Colonel Stephen will continue to officiate as P.M.O., Assam District, during the absence of Surgeon-Colonel W. P. Warburton, on deputation.

Inspector-General of Hospitals, George Schuyler Cardew, M.D., J.P., Retired Bengal Establishment, died at Bath, on September 10th, aged 7-.

THE VOLUNTEERS.

Surgeon-Lieutenant W. R. Dalzell, M.B., 1st Cheshire Engineers, Fortress and Railway Forces, Royal Engineers, has resigned his commission, which was dated January 14th, 1883.

VOLUNTEER MEDICAL OFFICERS ON RETIREMENT.

A Retired Surgeon writes: After twenty-five years of active service as medical officer I applied to the Colonel of the Battalion for the long-service medal granted to other officers. He acquiesced most cordially in this act of recognition, and sent the application to the Adjutant. It never got out further than his office, in consequence of a recent order from headquarters forbidding applications to be made on behalf of non-combatant officers for the decoration, as they are deemed ineligible for this distinction. I claim that I was a very energetic omcer, and as such recommended by the commanding officer. I regard the refusal as an unmerited slight.

*** If such an order as the one here referred to exists, and is acted on, we shall do our best to call the attention of the Secretary of State for War to it. Perhaps our correspondent could send us a copy of it.

UNION OF THE MEDICAL STAFF AND INDIAN SERVICES.

A correspondent avers there is rather a tendency among men of the Indian Medical Service to believe they are not favourably treated in these pages when matters affecting the two services are being discussed, but there can be no good in drawing comparisons between them: their amalgamation should be brought about as the union of friends without bitter suggestions.

*** We can assure our correspondent we endeavour to "hold the scales" evenly on all such questions, and make every endeavour to smooth over differences between the services—not an easy matter in all cases.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL CLUBS IN AUSTRALIA.

It would appear from a report in a Queensland contemporary that the legal responsibilities of medical officers to the members of friendly societies in Australia are on a footing different from that in this country. At the Toowoomba District Court, before Judge Paul, Dr. Garde sued E. C. Schmidt, a member of one of the local lodges of the Manchester Unity Independent Order of Odd Fellows, for £6 8s. for professional attendance. The defence was that the plaintiff, as lodge doctor, was bound under his agreement to attend him free, and to perform any necessary surgical operation. The judge, who seems to have held some very original views as to the relationship between medicine and surgery, ruled otherwise. "Surgery," said he, "is an exact science, medicine is a game of chance." He then gave verdict for the amount claimed on the ground that the doctor's agreement with the lodge only contemplated medical attendance as distinct from surgical. We agree with the *Australian Medical Gazette* that Judge Paul's address "did not quite hit the mark," and if he adheres to his present opinion, it is by no means unlikely that before long he will have some other very complex judicial questions to solve, and it will be interesting to observe how he will be able to distinguish between medical and surgical attendance in all its phases.

UNREGULATED MIDWIFERY.

On September 13th Mr. A. Braxton Hicks held an inquiry at the Star and Garter, Church Road, Battersea, with reference to the death of the male child of Edward Arthur, a bricklayer, residing at 5 Block, Victoria Dwellings, Battersea Park Road. Edward Arthur stated that on September 5th his wife was expecting her confinement, and she had engaged the services of a Mrs. Pugh, whom she believed to be a duly certificated midwife. This person called at the house on the evening of the 5th, and told the witness that if she were required during the night he was to fetch her from 10, Milton Street. At 1.30 A.M. his wife was taken ill, and he went to the address mentioned, but was unable to find Mrs. Pugh, who was out. The coroner said he had ascertained where the woman was. He added that if Mrs. Pugh led people to believe that she was a certificated midwife, and they engaged her in consequences, she would be amenable to a charge of obtaining money by false pretences. The witness went on to say that his wife was confined without Mrs. Pugh's assistance, Mrs. Yates, a neighbour, attending to her.

Mary Ann Puch, living at 94, Wadhurst Road, Battersea, said she was not a certificated midwife, and had never told people that she was, in fact she always gave her patients to understand that she

was not "followed" by any doctor. She did not keep any books, always trusting to her memory. Sometimes she had several persons of the same name to attend. The Coroner: That is a very poor excuse. Do you call that a proper way of doing business? The Witness: I have had twenty years of it. The Coroner: You are placing the lives of mothers and children in jeopardy. How many cases have you in hand now? The Witness: About six, I think, Sir. The Coroner: What fee do you charge? The Witness: Five shillings. The Coroner said he would not go so far as to say that in this case Mrs. Pugh had been guilty of gross carelessness, but it amounted to "muddle-headed stupidity"—that was what he called it.

Dr. F. G. B. Clarke, of 103, Battersea Park Road, gave his opinion that if a medical man had been in attendance, the child would unquestionably have survived its birth.

The jury retired a verdict in accordance with the medical evidence, and requested the coroner to censure Mrs. Pugh, and to advise her to cease attending people.

This the coroner did, telling her that she was too old and too ignorant to act as a midwife, and that if she continued doing so she would one day be sent for trial. He then ordered her to leave the court and disallowed her expenses.

CLUB FEES.

Q. writes: I have come to the conclusion that it is not possible to conscientiously attend a general labourers' club, containing old and young men, in a radius of three miles and supply them with all necessary medicines, etc., at 3s. per head per annum without incurring actual loss. Kindly say whether you think my conclusion correct, and also whether one would be justified in trying the experiment at 5s. per head for a year.

*** Our correspondent is the best judge whether or not he can take such a responsibility at the cost of 5s. per annum per member. The amount is little enough, but a thorough knowledge of all the local conditions is absolutely necessary before any opinion could be given on such a question as this. As to the question of giving medical attendance, etc., at the rate of 3s. per annum per member, this may safely be answered in the negative.

A CURIOUS COMPLAINT.

W. T. writes: B. is ill, and A. has attended her for some weeks: early one morning a note is left asking C. to come immediately to see B. C goes, and on arrival finds that A. is still in attendance. C. informs B. that he can do nothing under the circumstances, and declines fee for visit. Has C. acted wrongly towards A., who says that C. acted meanly?

*** Assuming that the above statement is a faithful record of the facts, we have no hesitation in affirming that C. acted in strict accordance with the true principle of medical ethics, and, moreover, that A.'s ill-advised and ungenerous imputation of meanness should be withdrawn and an *amende honorable* be made, *vide Code*, chap. ii, sect. 5, rules 7 and 9.

ST. JOHN AMBULANCE LECTURES: A MEDICO-ETHICAL QUESTION.

T. G. K. writes: An ambulance class in connection with St. John Ambulance Association is being formed in a village under the auspices of the Technical Education Branch of the County Council. The resident medical man offered his services at five guineas for the course of lectures, his reason for asking this sum being that the above fee is usually paid in such cases. A doctor practising in a large town five miles away, and having no professional connection in the village, offers his services gratis through his brother, who is secretary of the local committee. Is this doctor's action in accordance with medical etiquette?

*** We hesitate to express an opinion on this question of medical etiquette, as it is not completely clear that the doctor inculpated did make the offer. It has become so common a practice for the lectures in connection with the St. John Ambulance Association to be given without fee, that we can quite understand an energetic secretary asking a medical man to give a gratis course, and can readily believe that in undertaking to do so the doctor meant no harm to anyone else. Last year there was a correspondence in our pages[1] on the subject of asking payment for these lectures, and opinion on the matter seemed to be divided. The aspect of the case, however, is somewhat altered by the county council taking up ambulance work as a branch of technical education. There seems no reason why medical men should work for the county councils without fee; on the other hand, it must be remembered that if these bodies pay fees they will probably appoint their own travelling lecturers, which might not always fall in with the wishes of the local medical men.

DENTISTS AND THE VISIT OF CEREMONY.

QUERENS writes: 1. Is it correct for a fully qualified medical man who intends practising dental surgery as a speciality, and doing no other medical or surgical work, to call upon the medical men in the neighbourhood in which he intends to practise, just as he would if he intended practising general medicine and surgery? 2. Would it be correct for a gentleman only holding the licence in dental surgery to do so?

*** Notwithstanding that "Querens" is a fully qualified medical man, we entertain no doubt that, inasmuch as he intends to practise solely as a dentist, it would be an exceptional proceeding, having no relation to professional etiquette, to call, *qua* dentist, upon the local medical faculty. His second query is answered in our response to the first.

AN INCONSIDERATE PATIENT.

C.—If our correspondent had as carefully analysed the thoughtfully written comments (as rational deductions from the case submitted under this heading in the BRITISH MEDICAL JOURNAL of July 21st, p. 162), as we dispassionately considered the medico-ethical points involved, we venture to believe that he could not have failed to recognise the justness of our review. Be that as it may, we feel impelled to ask if "C." adopted the usual prudent course of inquiring whether the patient A. was or had been under the care of another practitioner ere examining and prescribing for him. The party *de facto* to blame is, in our opinion, the patient himself, to whose case, moreover, as we view it, the rule (chap. ii, sec. 5, rule 9), referred to by "C.," is not ethically applicable.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF DURHAM.

EXAMINATION FOR DEGREES IN MEDICINE AND SURGERY.—First Examination for the degree of Bachelor in Medicine. The following candidates have satisfied the Examiners:

Elementary Anatomy and Physiology, Chemistry with Chemical Physics, and Botany with Medical Botany.—M. D. Wood, College of Medicine, Newcastle-upon-Tyne.

Chemistry with Chemical Physics, and Botany with Medical Botany.—H. J. Godwin, St. Bartholomew's Hospital; B. C. Green, St. Bartholomew's Hospital; M. S. Paterson, M.R.C.S., L.R.C.P., St. Mary's Hospital.

Botany with Medical Botany.—H. E. M. Baylis, St. Bartholomew's Hospital; E. Bramley, Sheffield School of Medicine.

(*New Regulations.*)

Elementary Anatomy and Biology, Chemistry, and Physics.—Honours—First Class—W. B. Milbanke, College of Medicine, Newcastle-upon-Tyne. Honours—Second Class.—H. C. Coxon, College of Medicine, Newcastle-upon-Tyne; C. M. Gover, College of Medicine, Newcastle-upon-Tyne; G. G. Turner, College of Medicine, Newcastle-upon-Tyne. Pass List.—J. E. Baker, College of Medicine, Newcastle-upon-Tyne; F. W. Burn, College of Medicine, Newcastle-upon-Tyne; F. A. Cooke, College of Medicine, Newcastle-upon-Tyne; L. S. Davison, College of Medicine, Newcastle-upon-Tyne; D. Hethcote, College of Medicine, Newcastle-upon-Tyne; G. W. Middlemiss, College of Medicine, Newcastle-upon-Tyne; F. O'Neil, College of Medicine, Newcastle-upon-Tyne; C. M. Pennefather, College of Medicine, Newcastle-upon-Tyne; W. G. Robson, College of Medicine, Newcastle-upon-Tyne.

Elementary Anatomy and Biology.—A. M. G. Walker, College of Medicine, Newcastle upon-Tyne.

Chemistry and Physics.—W. C. Brown, College of Medicine, Newcastle-upon-Tyne; C. E. Fenn, King's College Hospital; H. A. Fielden, College of Medicine, Newcastle-upon-Tyne; L. F. Hemmans, College of Medicine, Newcastle-upon-Tyne; C. Johnson, College of Medicine, Newcastle-upon-Tyne; F. Pope, Mason College, Birmingham; A. Riley, Westminster Hospital; J. A. Swindale, Mason College, Birmingham; A. W. Tuxford, St. Mary's Hospital.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,103 births and 3,180 deaths were registered during the week ending Saturday, September 15th. The annual rate of mortality in these towns, which had been 15.2 and 15.3 per 1,000 in the preceding two weeks, further rose to 15.9 last week. The rates in the several towns ranged from 12.1 in Nottingham and 12.5 in Plymouth to 22.0 in Brighton and 24.5 in Sunderland. In the thirty-two provincial towns the mean death-rate was 16.6 per 1,000, and was 1.7 above the rate recorded in London, which was 14.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.3 per 1,000; in London the rate was equal to 2.1, while it averaged 2.5 per 1,000 in the thirty-two provincial towns, and was highest in Wolverhampton, Sunderland, and Preston. Scarlet fever caused a death-rate of 1.3 in Salford; whooping-cough of 1.5 in Norwich; "fever" of 2.7 in Sunderland; and diarrhœa of 4.0 in Portsmouth, 4.3 in Wolverhampton, and 5.6 in Preston. The mortality from measles showed no marked excess in any of the large towns. The 80 deaths from diphtheria in the thirty-three towns included 55 in London and 4 in Sheffield. Three fatal cases of small-pox were registered in London and 3 in Birmingham, but not one in any other of the thirty-three large towns. There were 109 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, September 15th, against 158, 163, and 129 at the end of the preceding three weeks; 19 new cases were admitted during the week, against 31, 40, and 13 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,117, 2,112 and 2,026 at the end of the preceding three weeks, had risen again to 2,079 on Saturday last; 269 new cases were admitted during the week, against 232 and 212 in the preceding two weeks.

[1] BRITISH MEDICAL JOURNAL, 1893, ii, pp. 764, 868, 931, 970, 1452.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, September 15th, 815 births and 442 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 15.6 per 1000 in each of the preceding two weeks, declined to 15.5 last week, and was 0.4 per 1,000 above the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 10.8 in Leith to 24.2 in Greenock. The zymotic death-rate in these towns averaged 2.2 per 1,000, the highest rates being recorded in Edinburgh, Paisley, and Greenock. The 204 deaths registered in Glasgow included 6 from scarlet fever, 4 from diphtheria, and 3 from "fever." Two fatal cases of small-pox were recorded in Edinburgh.

BAKEHOUSES AND BAKERS.

DR. ORR, Medical Officer of Health for Putney, makes the following remarks in his monthly report on the alleged insanitary condition of bakehouses in London. He says: "There has lately been a great attack on and a so-called exposure of the sanitary condition of London bakehouses. To judge from some of the reports lately published the public would be made to believe that London bakehouses are sinks of sanitary iniquities, in which all kinds of horrors are allowed to pass unnoticed. A cry for fresh and more stringent legislation has been raised in regard to these places. It appears to me, so far as I can judge by my own district, that there is a great deal of the alarmist element in this outcry. Bakehouses must always be, in the nature of things, to a certain extent unhealthy. If there are, however, any insanitary conditions present which are capable of removal, we have ample power under the Public Health Act and the by-laws framed by the County Council to effect it without the necessity of further legislation."

INVITING THE CHOLERA.—V.

AT the quarterly meeting of the Glamorgan County Council, held on September 8th, DR. WILLIAMS reported that the water supply of the Cowbridge district was still very unsatisfactory, but that it was gratifying to find that the authority now recognised the danger that might result to the inhabitants through using water from some of the public pumps, and had put up warning notices. Dealing with the Briton Ferry district, DR. WILLIAMS stated that the water supply of the village of Giant's Grave was supplied from a "pistyll," which was far from satisfactory, especially in position, for on a higher level not far away were several cesspools and a graveyard.

GENERAL DISTRIBUTION OF TESTIMONIALS.

WE have received a communication in reference to this subject which was noticed at page 446, BRITISH MEDICAL JOURNAL, August 25th, 1894, and have been asked further questions on it.

Our reply to these must be to the same effect as there expressed, namely, that testimonials should only be sent to those persons having votes or power of appointment. If a candidate were to send them to others, even if these should be his own patients, his doing so would not in our opinion be strictly correct.

GLASGOW SEWAGE PRECIPITATION SCHEME.

A SCHEME is being prepared by the Commissioners of Police of Glasgow which, if carried out, will deal with the whole sewage of Glasgow and its suburbs, and will ultimately involve the cessation of the pollution of the river Clyde. By the sewage precipitation works recently completed in the east end of the city, the drainage of the whole of the east end and a portion of the central district of the city has been provided for, an area covering 3,465 acres. On the north side of the river an area, covering within the city limits 5,324 acres, remains to be dealt with, and it is proposed to carry the sewage from this area westward by an intercepting sewer, 9½ miles long, to Dalmuir, where the Corporation of Glasgow owns lands, suitable as to position, levels, area, and configuration for the requisite works. In its course westwards the intercepting sewer can be made also to receive the drainage of the suburbs of Dowanhill, Partickhill, and Kelvinside, while the large district of Partick can be similarly included in the scheme. It may be that Patrick and its neighbour on the south side of the river, Govan, which have hitherto fought successfully against inclusion in the city, may be prevailed upon finally to link their fortunes with Glasgow, and share the benefits of such purifying schemes. It is, at any rate, certain that when Glasgow has achieved the object of these engineering projects, she will no longer refrain from laying a heavy hand on small neighbours up and down the river who continue to pollute the stream she has expended so much to cleanse.

PAWNED CLOTHES AND DISEASE.

DR. ANTONY ROCHE (Professor of Hygiene, Catholic University, Dublin) writes: Investigation into the sources of the diffusion of infectious diseases is one of the most important duties of the medical officer of health. I beg to draw attention to one very rarely referred to and hence easily overlooked by pawnbroking establishments. The poor, when sick, are frequently obliged to pawn their clothes, bedding, etc. These are made into bundles and placed in rows in frequently ill-ventilated rooms. There are often hundreds of these bundles in one room. Should any of the clothes be infected, the other bundles run a great risk of becoming so. When they are redeemed they carry the disease into many houses. The possible evil does not end here. Should the clothes be not redeemed, they are sold by auction at the end of the year, and so find their way into secondhand shops, thus again spreading disease. Not alone may infectious fevers be so spread, but possibly, if not probably, tubercŭlous and parasitic diseases. The remedy is not easily applied. Pawnbrokers should be obliged to send daily to the public disinfector the soft goods received each day before storing them. Should it be found impossible at first to insist on daily disinfection, it might be done weekly, and certainly all forfeited goods should be disinfected before they are sold by auction. I should be pleased to hear any observations or reports upon this subject.

**** There would be considerable practical difficulty in carrying out Dr. Roche's suggestion in its entirety, but it deserves consideration, and especially in times of epidemic. There can be no question of the dangerous facilities which pawnshops afford for the diffusion of infection and parasites.

STATEMENT OF NOTIFICATION CHARGES.

A MEMBER'S quarterly account for notification fees has been sent in, and certified by the medical officer of health, but the sanitary authority refuse to pay unless a detailed statement is furnished. He asks if their refusal is legal.

**** The objection seems vexatious, and could probably not be sustained legally. The Act says nothing as to any obligation of the kind, and the particulars are already known to the medical officer of health; at the same time, it is by no means clear that the point is worth contesting.

DUAL NOTIFICATION.

A. T. S. writes: A. and B., principal and registered assistant, practise in a notifiable district. B. takes on A.'s patients, and visits infectious cases already notified by A. Is it compulsory on B. to renotify, and does he render himself liable to prosecution if he refrain from so doing?

**** It is not usual for the assistant to "renotify" under the circumstances named, and probably the sanitary authority would demur to such a course. Nevertheless, the wording of the Act seems to require him to do so; but it is not likely that any question of prosecution would arise, or that any bench would regard the omission as contravening the spirit of the Act.

A STRING OF QUESTIONS.

G. C. P. asks:

1. Is it compulsory upon the landlord to find well ropes for his tenants dependent for their drinking water upon a well supply. The wells in question are 200 to 300 feet deep, and a rope costs about £2 10s. It has been the custom here for the cottagers to club together and find their own ropes, to which the squire subscribes. In other villages the landlords mostly find ropes. What is the ordinary custom?

2. Is it the duty of the sanitary authority to provide disinfectants to the schools (public elementary) in the district, as an ordinary rule? (In case of an epidemic I recognise that it is their duty; my question refers to other occasions).

3. With regard to school closing in case of epidemics. The ordinary custom, I assume, is to consult the medical officer of health as to the advisability or not of closing. Should he recommend closing, and the local authority order the same, he gives a certificate to that effect, but sometimes the medical officer of health is not consulted, and then one of two things happens—either the school is closed by the managers on their own authority, or they get the certificate of a medical man (not the medical officer of health). This is not the course ordered by the Education Department, but it seems that they must accept these certificates as valid, otherwise I should have been appealed to, I am sure. Again, if instead of closing I, on authority of a sanitary authority, order several children to be prevented from attending school, the managers appeal to me that unless the school is closed they will lose their grant. Am I justified on these grounds alone (where prohibition would be enough without closing) to recommend closing? Do the Education Department recognise this difficulty, and were I to certify that several children were prevented from attending would they allow these attendances in considering the grant?

4. Is a medical officer of health entitled to copies of Acts (sanitary) at the expense of the local authority. Should he apply to Clerk for same, or can he get them and charge the authority. If so, which is the best way to get them—singly or in book form?

5. In case of prosecution undertaken by the sanitary authority, can the sanitary authority compel the medical officer of health to conduct a case? The clerk is also clerk to the magistrates, hence some difficulty presents. To my surprise I was recently called upon to conduct a case, the clerk being present.

6. Is it the rule that permission to a patient suffering from a notifiable disease to go out in the street comes from the medical attendant or the medical officer of health? If the medical officer of health considers the isolation too short in any case what course should he pursue?

7. In a wide district such as this with an inversely proportionate salary, in case of a general survey or a special report (ordered by the Local Government Board) entailing a special survey would it be reasonable to ask for a special honorarium, or if this is not reasonable should I be entitled to expenses incurred in making the survey? I keep three horses and consider that the third is necessitated by my health appointment. I do not expect to get any recompense for this, but in making a survey and visiting sometimes three or four villages a day on this account I find the expenses of stabling, etc., considerable. Can I reasonably expect this to be repaid? The district embraces about 80,000 acres, population about 17,000, salary £50.

**** 1. Where a deep well constitutes the water supply, it seems reasonable to regard the rope as part of the necessary fittings, for which the landlord is responsible.

2. It is not the duty of a sanitary authority to provide disinfectants for routine use in public elementary schools.

3. If the medical officer of health is satisfied that the exclusion of certain children from a school is all that is necessary, he would not, strictly speaking, be justified in closing the school merely in order to save the grant. Usually a further reason is found for the latter course on grounds of public safety. We are unable to say whether in con-

sidering the grant the Education Department would take into account the exclusion of scholars by order of the sanitary authority.

4. It is usual for the medical officer of health to be supplied with copies of the necessary Acts of Parliament, but it is a matter entirely at the discretion of the local authority.

5. It is not a part of the duty of the medical officer of health to conduct cases in court.

6. It is within the discretion of the medical attendant to give such permission. If the medical officer of health considers the isolation too short, he should in the first instance confer with the doctor in attendance upon the case.

7. There would be nothing unreasonable in asking for a special grant for special services rendered, and the case described seems to come within that category.

AMPUTATION BY A DISTRICT MEDICAL OFFICER.

DISTRICT MEDICAL OFFICER, who holds the degrees M.B. and Master of Surgery, writes to ask for information concerning a case where amputation of a limb is likely to be required, and says, "Am I to believe that before interfering I must go to the expense of calling an L.R.C.P. or M.R.C.S. from some distance for consultation?"

*** Our correspondent can, if he likes, perform the amputation at any time, without any advice or assistance, but in order to enable him to obtain the extra fee allowed for an amputation, he must (unless the case is one of accident immediately threatening life), before operating, obtain the advice of some one registered under the Medical Act of 1858, and produce to the guardians the certificate of such person, stating that in his opinion it was right and proper that such amputation should be performed.

INCREASE OF SALARY.

AT the last meeting of the Chesterfield Town Council it was decided to increase the medical officer's salary (Dr. J. Gould) from £200 to £300 per annum.

OBITUARY.

IT is with regret that we have to announce the death of Brigade-Surgeon HAMILTON MITCHELL, late 96th Regiment, at his residence Lanowlee, Derry, after a short illness. Brigade-Surgeon Mitchell entered the army in 1854 as a Staff Assistant-Surgeon. In September of that year he was ordered to the Crimea, where he served from November 8th, 1854, to February 18th, 1855, being present at the bombardment and fall of Sebastopol. For distinguished services he was awarded a medal and clasp, and also the Turkish medal. He was subsequently gazetted Assistant-Surgeon to the 96th Regiment, in which he served for over twenty-one years in various parts of the world. He was compelled to retire from the service at a comparatively early age owing to a weak heart, and took up his residence at Derry. He survived his wife only six months, and leaves a large family.

THE death is reported of Dr. H. F. CARTER, of Brighton, after an illness of more than eight years. He was born on September 15th, 1820, at Avranches, in Normandy, and was therefore at the time of his death, which occurred on September 14th, on the eve of completing his 74th year. He was an M.D. of King's College, Aberdeen, having taken the degree in 1859, and had also qualified as an extra licentiate of the Royal College of Physicians of England, F.R.C.S.Eng., and L.S.A.Lond. After practising a few years at Shoreham, he went to practise at Brighton about forty years ago. He retired from practice some eight years ago owing to continued illness. The deceased was twice married. The burial service was read at the Parish Church of St. Peter on September 18th, and the body was then removed to Woking for cremation.

HOSPITAL AND DISPENSARY MANAGEMENT.

CARLOW DISTRICT ASYLUM.

THE governors having been unable to elect an assistant medical officer owing to repeated "ties" have requested the Lord Lieutenant to make the appointment, or, a period of two months having passed, and the governors' right having therefore lapsed, to restore the right to them.

BELFAST ROYAL HOSPITAL.

THE new buildings for the extern department are approaching completion under the supervision of Mr. Vincent Craig, C.E. They will afford ample and much-needed accommodation for the large and constantly increasing out-patient department of the hospital, which now amounts to about 25,000 cases annually. In addition to several surgical dressing rooms, the new buildings contain a fine room for ophthalmic work, a dark room, and dressing and consulting room for the assistant physician.

CONSUMPTIVE HOSPITALS FOR SCOTLAND.

THE scheme of the first hospital for consumptives in Scotland, talked of for a long time, is being realised by one man, Mr. Quarrier, famous as the founder and director of the Orphan Homes of Scotland. We described recently the laying of the foundation stone of the hospital, which is being built on ground at Bridge of Weir, sixteen miles from Glasgow, in the immediate vicinity of the homes, and in one of the most salubrious districts in Scotland. The present building is only one of a series of six or eight, expected to cost something like £30,000, and the whole project has been very carefully thought out and planned to meet every requirement modern medicine can suggest. The site is sheltered from the north and east. The buildings will be detached from one another, each capable of accommodating from 35 to 50 patients, the arrangements providing as far as possible apartments for single patients. Each patient will have 1,200 cubic feet air space. The walls will be built hollow, and the windows will be provided with inner sashes to prevent rapid changes of temperature. The floors will be of pitch pine, waxed; no projecting woodwork or skirtings will be allowed, and the walls will be finished with hydraulic plaster, wrought to a perfectly smooth and hard surface and rounded at all corners, so that as little surface as possible will be presented for the attachment of solid particles. The ventilation will be by propulsion, the arrangements providing for the heating or cooling of the air as required and for washing impurities from it. The plans provide also for a doctor's house, separate storehouses, washing house, and laundry. The dedication ceremonial was attended by a large and influential assembly, among whom was Professor Gairdner, who delivered a very sympathetic speech. Already and without any canvassing £12,000 have been put into Mr. Quarrier's hands for this work, mostly by anonymous donors.

MEDICAL NEWS.

DR. B. J. GUILLEMARD, formerly of Southsea, District Surgeon for Aliwal North, Cape Colony, has been appointed Justice of Peace for the district of Aliwal North.

THE monument to Villemin, the discoverer of the infectious nature of tuberculosis, will be unveiled at Bruyères (Vosges) on September 30th.

PRESENTATION.—Mr. Hy. Thomas Benson has been presented with a silver tankard, cigarette case, inkstand, and silver knives by the Market Deeping and district ambulance classes.

MEDICAL MAGISTRATE.—Upon the recommendation of the Right Hon. the Earl of Dartmouth, Lord-Lieutenant of Staffordshire, the name of Dr. Joseph Quirke, of Handsworth, Birmingham, has been placed in the Commission of the Peace for the county of Stafford.

HACKNEY SCHOOL SCANDAL.—At the last meeting of the Hackney guardians it was proposed that a letter be written to the Local Government Board, stating that the guardians desired to withdraw their proposal to grant a pension to the Hadwicks. The motion was ultimately carried, but notice was given by one of the guardians that at the next meeting he would move that it be rescinded.

DONATIONS.—Lord Rothschild has given 100 guineas to the Royal Hospital for Diseases of the Chest, City Road. Mr. John S. Gilliat, M.P., and Colonel Makins, have both sent 10 guineas. The special fund which the hospital desires to raise is a sum of £2,000.

WORK AT HIGH ALTITUDES.—Mr. Whymper, in the Andes, and Mr. Conway, in the Himalayas, both found that the amount of fatigue experienced at very high altitudes was much greater in proportion to the amount of climbing done than at the altitudes met with in the Alps. Mr. Conway's Swiss guide was very clear on this point. An estimate has been made of the amount of work done by the navvies engaged in making the Central Railway in Peru at altitudes reaching and, at one point of the line, exceeding the highest Swiss peaks. Up to about 9,000 feet the amount of work done was about the normal. Above this altitude a falling off was noticed, and increased so rapidly that at 12,000 feet the amount of work done was from a quarter to a third less. Above this height the diminution continued, and at the highest point of the line—the tunnel of Galeria, about 16,400 feet above the sea—100 men were required to do the work which could have been accomplished easily by 50 at the sea level.

Professor Carl Fraenkel, of Marburg, has accepted the Chair of Hygiene in the University of Halle, rendered vacant by the transfer of Professor Renk to Dresden. Professor Fraenkel will not take up his new duties until Easter, his place being supplied during the winter session by Dr. Behring, whose discovery of the diphtheria antitoxin has made his name so well known.

MEDICAL VACANCIES.

The following vacancies are announced:

BETHLEM HOSPITAL.—Two Resident Clinical Assistants. Apartments, rations, and attendance provided. Applications, endorsed "Clinical Assistantship," to the Treasurer by October 1st.

BRIDGWATER INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board and residence. Applications to Mr. John Coombs, Honorary Secretary, Bridgwater Infirmary, Bridgwater, by September 27th.

CAMBRIDGE UNIVERSITY.—John Lucas Walker Studentship. Applications to Professor Roy, New Museums, Cambridge, by September 30th.

CANCER HOSPITAL (FREE), Brompton, S.W.—Two House-Surgeons. Salary at the rate of £60 and £50 per annum respectively, with board and residence. Applications to the Secretary by October 5th.

CHILDREN'S HOSPITAL, Nottingham.—House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £100 per annum. Applications to the Secretary by September 24th.

CITY ASYLUM, Birmingham.—Resident Clinical Assistant, for three or six months, without salary. Applications to the Medical Superintendent.

CLUTTON UNION.—Medical Officer of Health to the Sanitary Authority. Salary, £100 per annum. Applications to Edward H. Ferrin, Solicitor, Clerk to the Rural Sanitary Authority, Temple Cloud, near Bristol, by October 3rd.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House-Surgeon. Salary, £40 per annum, with board, lodging, and washing. Appointment for one year. Applications to the Secretary by October 9th.

DENTAL HOSPITAL OF LONDON, Leicester Square.—Assistant Dental Surgeon. Must be Licentiate of Dental Surgery of one of the licensing bodies recognised by the General Medical Council. Applications and testimonials to J. Francis Pink, Secretary, by October 8th.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis Road, Shadwell, E.—House-Physician. Board, lodging, etc., provided, but there is no salary attached to the post. Applications to the Secretary by October 6th.

GENERAL HOSPITAL, Birmingham.—Resident Surgical Officer and House-Physician. Salary, £130 and £70 per annum respectively, with residence, board, and washing. Appointments for one year, but candidates will be eligible for re-election for two subsequent years. Also two Assistant House-Surgeons, appointment for six months, but eligible for re-election for another six months. No salary. Residence, board, and washing provided. Applications to Howard J. Collins, House Governor, by October 6th.

GENERAL INFIRMARY AND DISPENSARY, Doncaster.—Indoor Dispenser and Assistant to House-Surgeon. No salary, but board, lodging, and washing provided. Applications to Joseph Clark, Honorary Secretary, by September 27th.

GREAT YARMOUTH HOSPITAL.—House-Surgeon; must be doubly qualified. Salary, £90 per annum, with board and lodging. Applications and testimonials to Richard F. Ferrier, Honorary Secretary, by September 22nd.

LEITH HOSPITAL.—House-Physician, House-Surgeon, and Surgeon for the Outdoor Department. Appointments for six months. Salaries at the rate of £50 a year each, with board in the hospital. Applications to the Secretary, Mr. George V. Mann, 33, Bernard Street, Leith, by October 1st.

LONDON COUNTY ASYLUM, Hanwell.—Fifth Assistant Medical Officer; doubly qualified and between 23 and 30 years of age. Salary, £120 per annum, rising £5 a year to £150, with board, furnished apartments, and washing. Applications on forms to be obtained at the Asylum Committee Office, 21, Whitehall Street, S.W., where such forms, duly filled up, must be delivered by 12 o'clock on September 22nd.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park Place, Cheetham Hill Road.—House-Surgeon. Salary, £80 per annum, with apartments and board. Applications to Hubert Teague, Secretary, 38, Barton Arcade, Manchester, by October 3rd.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—House-Physician, House-Surgeon, and Assistant House-Surgeon. Appointments from November 1st, 1894, to March 31st, 1895. Salary at the rate of £60 a year for the two former, and at the rate of £50 a year for the latter. Applications to Charles H. Byers, Secretary, by October 1st.

NEW HOSPITAL FOR WOMEN, 144, Euston Road, N.W.—Female Assistant-Physician; appointment for two years. Also two Clinical Assistants for Out-patient Department; appointment for one year. Applications and testimonials to Margaret M. Bagster, Secretary, by September 26th.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—Resident House-Surgeon and Dispenser; unmarried. Salary, £70 per annum, with board and lodging. Applications to F. D. Wise, Honorary Secretary.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiner in Public Health. Applications to the Secretary by September 27th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, Cavendish Square, W.—Resident Medical Officer, doubly qualified. Salary, 100 guineas per annum, with an annual increase of 10 guineas to a maximum of 120 guineas, with furnished apartments, attendance, coal, and gas. Applications to the Secretary by October 1st.

SEAMEN'S HOSPITAL SOCIETY, *Dreadnought*, Greenwich, S.E.—House-Physician and House-Surgeon to the Dreadnought Hospital. Salary, £75 and £50 per annum respectively, with board and residence. Also Junior House-Surgeon for Branch Hospital, Royal Albert Dock, E. Salary, £50 per annum, with board and residence. Applications to P. Michell, Secretary, by October 3rd.

THE COPPICE ASYLUM, Nottingham.—Assistant Medical Officer; unmarried and not exceeding 28 years of age. Salary, £120 per annum, with apartments, board, attendance, and washing. Applications to Dr. Tate at the Asylum.

THE GENERAL INFIRMARY AT GLOUCESTER AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Surgeon; must be F.R.C.S. or M.R.C.S.Eng., or F.R.C.S. or L.R.C.S. of Ireland or Edinburgh, or graduate of University recognised by the General Medical Council. Applications and testimonials to Henry T. Pike, Secretary, by October 10th.

VICTORIA INFIRMARY OF GLASGOW.—Superintendent and Resident Medical Officer. Salary, £300 per annum, with board and lodging in the infirmary. Applications to Francis Bisset, Secretary, by October 3rd.

MEDICAL APPOINTMENTS.

ACHESON-WILKIN, J., L.R.C.P.& S.Edin., L.F.P.S.Glasg., L.M., appointed Assistant Surgeon, East Dispensary, Liverpool, *vice* T. B. P. Wilkinson, M.B., resigned.

ANDERSON, T. A., M.D.Edin., appointed Medical Officer of the Isolation Hospital of the Epsom Local Board.

CHRISTIE, W. L., M.D., M.R.C.S., appointed House-Surgeon to the Bristol Hospital for Sick Children and Women, *vice* Alexander Jamieson, M.B., resigned.

CLARK, Francis W., M.B.Durh., L.R.C.P.Lond., reappointed Medical Officer of Health for the Borough and Port of Lowestoft and Medical Superintendent to the Lowestoft Sanatorium.

COLLIER, Herbert, M.D.Brux., M.R.C.S.Eng., L.R.C.P.Edin., appointed Medical Officer for the South District of the Great Yarmouth Union, *vice* James Ryley, M.B.Lond.

ELLISON, Dr. F., appointed Resident Assistant Medical Officer to the Mayo Lunatic Asylum.

HICKS, Thomas W., M.B.Lond., L.R.C.P., M.R.C.S., appointed Medical Officer of the Highgate Division of the Great Northern Railway and Medical Officer to the Sixth District of the Barnet Union.

HOFFMEISTER, William, M.D.Heidelb., reappointed Medical Officer of Health to the Cowes Port Sanitary Authority.

MARTIN, Antony A., M.R.C.S., L.R.C.P., late House-Surgeon to St. Mary's Hospital, W., appointed Third Assistant Medical Officer to the Hants County Asylum, Fareham.

MIRZA, Ahmed, M.B., C.M., B.Sc.Edin., appointed Medical Officer of Health for the City of Hyderabad, Deccan, India.

PARRY, R. H., L.R.C.P., L.R.C.S.Edin., appointed Honorary Surgeon to the Royal Hospital for Sick Children, Glasgow, *vice* Professor Macewen, resigned.

PETTEY, T., M.B., C.M.Edin., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant House-Surgeon to the General Infirmary at Gloucester and the Gloucestershire Eye Institution, *vice* E. S. Humphreys.

ROBERTSON, John, M.D.Edin., appointed Medical Officer of Health for the St. Helen's Urban Sanitary District, *vice* Robert McNicoll, M.R.C.S.Eng., resigned.

SHAW, Richard Holgate, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of Health for the Liversedge Urban Sanitary District, *vice* John Shives, M.D.Aberd., resigned.

THOMAS, David Edward, M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Christchurch and Nash Districts of the Newport Union.

TWEEDIE, Francis King, M.B.R.C.I., B.Ch., reappointed Medical Officer of Health to the Hucknall Huthwaite Local Board.

USHER, Charles H., M.B.Camb., F.R.C.S.Edin., appointed Ophthalmic Surgeon to the Aberdeen Royal Infirmary.

WINDLE, Jabez Davenport, L.R.C.P.I., L.R.C.S.Edin., reappointed Medical Officer of Health to the Southall and Norwood Urban Sanitary Districts.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

HINGSTON.—On August 26th, at Liskeard, Cornwall, the wife of Richard Hingston, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGE.

LIGHTFOOT—DODDS.—On September 19th, at St. Michael's Church, Stockwell, by the Rev. S. Bell, M.A., J. P. Lightfoot, M.R.C.S.Eng., L.R.C.P. Lond., of Leyburn, Yorks., to Kate Marion, eldest daughter of R. R. Dodds, Esq., of 33, Stockwell Park Crescent.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A MEMBER asks if there is a reliable pamphlet on the reduction of obesity.

ALPHA.—We do not anticipate that our correspondent, supported as he is by the house committee, will have any difficulty in answering "P.'s" question to the satisfaction of the board. If a patient dying from cancer find suet pudding to agree with her, why, in the name of common sense should she not have suet pudding? How to deal with unqualified practice by P. is a more difficult matter. In the present instance a question from a friendly guardian might elicit the information why it had been found impracticable to give the patient the relief which an early operation would have afforded. And if the coroner could be induced to hold inquests on some of the cases attended by P. up to within a few days of death, the eyes of the public might be—we do not say would be—opened to his true character.

M.R.C.P.I. writes with reference to an answer published in the BRITISH MEDICAL JOURNAL of September 8th to the effect that it would be very unusual for a Member of the Royal College of Physicians to put "Physician" on his doorplate, to ask what physicians who do not possess a University degree ought to do.

*** It will be recollected that we did not say more than that it would be unusual to put the word "Physician" on a doorplate or visiting card. We did not say, and do not desire to be understood to have meant, that there would be anything "incorrect" in doing so, but owing probably to the fact that the great majority of physicians do possess a University degree it is distinctly uncommon.

INSTITUTIONS FOR IDIOTS.

J. asks: Is there any institution (1) in the midland counties where an idiot could be received on payment of a small sum? (2) is an idiot entitled to free admission into an ordinary county asylum, in the same way as an ordinary pauper lunatic?

1. Royal Albert Asylum for Idiots, Lancaster. 2. Yes.

CLIMATE FOR EARLY PHTHISIS.

H. S. asks: Which of the following places is the most suitable for a patient with a tendency to phthisis to winter at—Chateau d'Oix, Vevey, Locarno, Nervi, or Castellamare?

*** We should be disposed to select Nervi as, on the whole, the most suitable resort of those mentioned.

TREATMENT OF SWEATING FEET.

A. M. S. writes: Perhaps some of your readers may be able to give me their experience of treating sweating feet with unpleasant odour in boys. One of mine, aged 13, suffers from this. I will feel obliged for any effectual remedy of simple application. I see one in the BRITISH MEDICAL JOURNAL of September 15th from a French military medical man, but it seems rather a severe one. I have been using a solution of alum after careful washing at night, but the trouble continues.

ANSWERS.

AN OLD MEMBER B.M.A.—The matter is not one which would come within the cognisance of the General Medical Council.

DUNELMIAN.—The value of Smellie's *Midwifery* is rather historical than monetary. The work would probably only sell for a few shillings, but much would depend upon its condition.

ÆSCULAP.—If our correspondent can prove that the charges were maliciously made, and were entirely groundless, we think he would have good cause for an action. But he should consult his solicitor.

CREMATION.

AN OLD MEMBER could find the information he asks for by referring to former volumes of the BRITISH MEDICAL JOURNAL, or by writing to the Secretary of the Cremation Society, 8, New Cavendish Street, London, W. The whole subject of disposal of the dead has been fully treated by Sir Spencer Wells, in the second volume of Stevenson's and Murphy's *Treatise on Hygiene and Public Health*, published last year by Churchhill.

DOWNWARD COMPETITION.

A STRUGGLING PRACTITIONER.—We thoroughly sympathise with our correspondent, and strongly condemn such a system of "touting" as he describes. It is sad to learn that some medical practitioners have so little regard for the ethics of their profession as to resort to them. As to bringing such matters under the notice of the General Medical Council we do not think much good would result therefrom. In the case of the Medical Aid Association, that body apparently came to the conclusion that it had no power to interfere with the downward competition to which their methods inevitably tended.

MIDWIFERY IN THE ARMY.

H. T. R. is informed that attendance by army medical officers on midwifery cases is optional, under the terms of the following regulation (Medical Regulations) para. 707: "Attendance cannot be claimed for the wives of officers or soldiers during their confinement (with the exception of the wives of soldiers admitted into a hospital for such cases) unless the assistance of a midwife or civil practitioner cannot be procured, or unless the midwife or civil practitioner privately employed should require the assistance of a medical officer in any case of danger."

NOTES, LETTERS, ETC.

WE are asked to state that any gentleman now or formerly connected with Charing Cross Hospital who may not have received an invitation to the *conversazione* on October 1st, when Professor Alexander Macalister will distribute the prizes, is requested to communicate with the Dean at the Medical School.

THE BRITISH MEDICAL JOURNAL COMMISSION ON THE PROVINCIAL WORKHOUSE INFIRMARIES—NOTES OF PROGRESS.

WE see by a report in the *Cornish Times* that that paper has sent a representative to follow our Commissioner through Liskeard Infirmary, with this gratifying result that the facts as stated in our report have been substantiated, the two inspections differing only in unimportant details. The insufficient staff of nurses, the absence of night nursing, the extensive use of paupers as ward helpers, the want of hot water and of a sufficiency of baths, the carelessness in serving the food—all these charges are to be found in both reports. The *Cornish Times* representative cannot discern what is wrong with the nursery, nor with the lying-in room; this may be caused by a want of experience in hospital management, but we are quite sure that any unprejudiced visitor would condemn both these rooms, and we trust that the *Cornish Times* will help us in our endeavour to procure some more suitable nurse for these babes than the pauper women who at present rule and reign over the infants. It is a matter of great satisfaction to us that we have aroused local interest in this question, and we are glad to hear that previous to our Commissioner's visit the Board were advertising for more nurses, and also had plans for an improved supply of water for the infirmary. We trust that our Commissioner's visit will strengthen their hands with the ratepayers in carrying out these and other necessary improvements.

The Plymouth Board at its last meeting discussed the report on that infirmary as it appeared in the BRITISH MEDICAL JOURNAL of September 8th, and from the liberal tone of the discussion, "the governor with the other guardians being grateful for the discussion in the newspapers," we shall look for much reform in the workhouse infirmary, and will use our best endeavour to second their efforts. The *Western Morning News* says: "A series of articles is being published by the BRITISH MEDICAL JOURNAL describing the nursing and administration of the provincial workhouses and infirmaries. Is it acting the part of a captious critic to say that the best remedy is to build? The Plymouth Infirmary might be made into a hospital under its trained head, with its staff of nurses and probationers. With the teaching material in its wards it would form a valuable adjunct to its near neighbour, the South Devon and East Cornwall Hospital."

A special commission appointed by the BRITISH MEDICAL JOURNAL, says the *Western Mercury*, reports on the nursing and administration of provincial workhouses and infirmaries. Among the institutions visited is that of Plymouth, and the remarks made on the accommodation, etc., should receive the careful attention of the guardians. Whilst the arrangements that are made for care of the imbeciles are highly commended, the same cannot be said for the sick wards. The building used is quite behind the age, and quite unsuitable for the purpose. The Commission recommend the building of a new infirmary, and an increase of the staff of nurses in the meantime. There are other points which deserve attention, and doubtless the board of guardians will give due weight to what has been suggested for ameliorating the lot of those under their care.

Referring to the report on the provincial workhouse infirmaries which the BRITISH MEDICAL JOURNAL is now publishing, the *Western Morning News* writes: Amongst the many persons who divide the responsibility for this state state of things, it is difficult to apportion the fair share of blame. The guardians, the workhouse officials, and the Government inspectors are all of them somewhat, if not equally, culpable. Probably they are not cursed with a larger share of inhumanity than are their inferior brethren. We think it arises from utter crass ignorance of what ought to be, and with many of them this ignorance is invincible. Even when the more glaring defects are pointed out, they fail to recognise their existence. It is an astonishing thing that a Government inspector, a highly paid official, perfectly independent, and endowed, we presume, with some special qualifica-

tion for his post, should permit, even for a day, such scandals as have been lately exposed to exist without the faintest remonstrance. Equally astonished are we that there are not to be found amongst boards of guardians at least one man with sufficient knowledge of right and wrong, and with moral courage enough to be the champion of reform. The reforms initiated at Newton Abbot are due to the unflinching attitude of a few men of this stamp. And now that the scandal has come to our own doors, and the Plymouth Workhouse has been condemned by a competent observer for its treatment of the sick poor, it is our duty to aid the cause of sanitary reform. Out of the 600 inmates of the Plymouth Workhouse on an average 120 are laid aside in the infirmary, many of them afflicted with the worst ills that flesh is heir to. Some are suffering from acute maladies, such as pneumonia and rheumatic fever; others again have chronic ills, cancers, sloughing sores, one with an ununited fracture of the thigh, diseases of the hip-joint, together with the usual run of cases of paralysis with all its miserable accompaniments. In a well-appointed hospital, such, for instance, as the south Devon, the allowance of nurses is three day and one night nurse to each 18 patients. It will be a shock to the most callous ratepayer that for these 120 miserable sick inmates of the Plymouth Workhouse Infirmary there are appointed two nurses only, one of whom has never been trained, and the other, although having had some sort of training, does not seem from the Commissioner's report to be very well fitted for her position. There are no night nurses at all, the care of the sick being left to aged paupers, who are often sent up at night, but occupy a bed in the ward. We can well imagine the regularity with which acute cases are fed, and their medicine administered during the long weary hours of the night. It is true that "watchers" sometimes sit up at night, but this seems to be the exception to the general rule, and they are only obtained from among the pauper inmates. There is very little attempt made at classification, so that amongst the respectable inmates, and there are such in all workhouses, the unfortunate lock patients are found distributed. As to the wards themselves there is much to be condemned. The ventilation is deficient and the smells abominable. There are no lockers for the patients' clothing, no supply of hot water, and no slop sinks. The lavatories and closets are so remote from the wards as to be very trying for old and infirm people. There seems to be but one bath, and that, from inscriptions, seldom used. The lying-in ward is very small and destitute of comforts. No doubt exposure will in this, as in other cases, be followed by reform, and that, we trust, without delay or bickering. There are a sufficient number of men of light and leading amongst the guardians to insist upon all that can be done being carried out, and we only regret that outside pressure was needed to set in motion forces which should have long since acted from within.

The Newton Abbot Board at its last meeting gave consideration to the department of the head and assistant nurses, and have framed the following resolution: "The head nurse shall attend all cases, sick children, and infants, to render assistance in cases requiring medical attendance; and that the medical officer shall be accompanied in his rounds, and everything reported, and that application shall be made to the master for all domestic appliances, and that she should be responsible for the whole nursing arrangements." The duties of the assistant nurses are "to obey the directions of the medical officer, to carry out everything directed by him, and to take charge of any serious case that may occur, and be responsible for the ventilation of the wards, to see that cleanliness prevails, report the condition of patients to the head nurse." We seem to see the cloven foot of pauper help between the lines. If the assistant nurses are "to take charge of any serious case that may occur," who is to look after the chronic and less serious cases? Is it the head nurse "who shall attend all cases"? Then with regard to the status of the head and assistant nurses; the assistant nurses "are to obey the direction of the medical officer;" in his absence whose directions are they to obey? as no medical man can provide for the unexpected. We would suggest that the duties and position of the head and assistant nurses should be more defined.

The Opium Report of the British Medical Journal.

Although the report of the Opium Commission is not expected to be ready before Christmas, says the *Midland Counties Herald*, the British Medical Journal says that its gist, which will be unanimous, will not be found to differ greatly either in weight of evidence or in the character of the conclusions (which are in favour of the frequent usefulness, general harmlessness, and rarity of mischief from the use of opium) collected from the replies of 120 leading Indian doctors and magistrates to a schedule of questions issued by Mr. Ernest Hart. If this contention will turn out to be true, our contemporary has some reason for the following statement: "As the cost of our report was about £40, and that of the Commission at least £40,000, our method of proceeding by schedules of detailed questions has at least the advantage of economy, and if adopted as a preliminary measure by the Government would probably have prevented the issue of this costly roving commission."

The British Medical Association has, says the *Christian Leader*, collected a large amount of evidence and opinion from medical men and others in India which has been sifted and reported on by Mr. Ernest Hart. From this summary one may obtain a fair estimate of the question from the medical point of view. Opium is used in but few places, rarely used at all in bracing and cool districts; when taken in any quantities is regarded as a stimulant, like alcohol. The consumption is mostly by eating, and it has not grown faster than the population during the past decade. Opium is most used in malarial districts; it is prized by the natives as imparting staying power when the food supply is small. Tobacco serves a similar purpose in other quarters. The witnesses consulted are concordant in the opinion that the use of opium is very moderate throughout India; and they distinctly assert that acts of violence are never traced to its use, and cases of lunacy from it are very rare, much rarer than from alcohol in England, which supplies one-third of the inmates of asylums. There is no doubt that the general medical opinion in India is in favour of opium in moderation. But this evidence does not touch the opium dens of the large cities, and an onslaught on these should receive no opposition from medical men, even though they do not advocate total abstinence.

Mr. Ernest Hart has made a very important practical contribution, says *Indian Messenger*, to the discussion of the opium question by ascertaining and summarising in popular form the opinions of trained scientific witnesses living among and working for the people of India, and thus possessing the amplest opportunities of observation and judgment. The pamphlet is in no way controversial, except from the fact that its testimonies almost uniformly tend in one direction—in favour of letting opium alone. We abstain from argument in the meantime, and merely present the outstanding results of Mr. Hart's inquiry.

A Warning.

Dr. Edwin G. Bull (Birmingham) writes: During the week before last a one-legged Scot called upon me and represented himself to be an agent of Messrs. Cassell and Co., Limited. I gave him the price of a certain volume and he wrote me a receipt. Up to now the book has not arrived, and Messrs. Cassell inform me that no person named Connell is in any way connected with their business.

An Antivivisection Rhymer.

The *Echo* publishes the following charming and amiable verses:

To a Vivisector.

Oh, cruel man, how dost thou dare,
With selfish ends in view,
To torture thus a creature fair,
Who never injured you?

Do you not know the God of love,
Whose are the creatures all,
Looks down from His high throne above,
And hears them when they call?

He sees the hand with blood-stained knife,
He hears the piteous cry;
Then spare, oh spare, that poor beast's life,
Oh do not make him die!

The God who made him made you too,
For He did all things make;
Then show much love in all you do,
For your kind Maker's sake.

Ampfield, Romsey. J.F.M.

These lines are addressed, it seems, to a vivisector. Ought they not rather to be addressed to the butcher or slaughterer, the agriculturalist who spays the pigs, gelds the horses, and capons the fowls, and to those who live by the results of these murderous activities of the blood-stained knife to the sportsman, the stag hunter, the foxhunter, the courser and the pigeon shooter? When the editorial staff of the *Echo* and its readers agree to put up uncomplainingly with the results of the bite of mad dogs, of anthrax in beasts, and man, of foul cholera, of of the silkworm disease, of tetanus, of cholera, and of diphtheria, then they may be fairly addressed to the bacteriologist and the experimental physiologist.

The Climate of Cornwall.

Mr. Nevell E. Norway (Newquay, Cornwall) writes: In the British Medical Journal of September 8th, you say in your interesting article on "Autumn Holidays in England:" "Further west on the Dorset, Devon, and Cornish coasts there are many beautiful resorts, somewhat moist and relaxing, however, in comparison with those of the east." This may probably be true of those places on the south coast which you name, but the north coast of Cornwall ranks second to no other part of England in regard to the bracing character of its climate, its hours of sunshine, and the dryness of its atmosphere. The extraordinary equability of the temperature—the daily range often being as little as five degrees—seem to me to indicate it as the sanatorium of England. In summer this coast is among the coolest spots in the country, and in winter it is almost the warmest, being second only to the south coast of the county and the Scilly Isles. The advantage of the north coast over the south is the much smaller rainfall and the dryness of the soil. The range of hills forming the backbone of the county intercepts the rainclouds coming from the south, and the shallow soil and the absence of many trees give dry roads almost as soon as the showers cease. When one grasps that frost in the daytime is rare in winter and snow almost unknown, while the hours of sunshine in winter are almost as many as on the Riviera, with a range of temperature of one-half and a mean temperature only a few degrees less than that of, say, Mentone, it is not difficult to predict a great future for this coast as a health resort.

Cheap Temperance Drinks.

T. L. writes: In the British Medical Journal of July 28th you say that a "still and pleasing liquor has not yet been forthcoming—at least such a one as would prove acceptable to the public." There is probably no temperance beverage so delicious as well-made raspberry vinegar, in the proportion of one or two tablespoonsful to a tumblerful of water. As a refreshing drink in warm weather it would, I believe, prove acceptable to almost everybody. No doubt care in the preparation is of the utmost importance. Every "popular" beverage—coffee for example—is apt to be prepared in a slipshod manner, and as cheaply as possible, hence the result is highly unsatisfactory. The best raspberry vinegar would no doubt be beyond the means of the very poor, but it would satisfy the requirements of an immense number of people. Here also is a very possible source of gain for farmers and market gardeners, far more useful to the community than some patented monopoly. As a dinner drink for abstainers there seems to be nothing equal to pure water, if it can be got, followed perhaps by a cup of strong black coffee, without a trace of chicory; but this is a cultivated taste, and to some extent a luxury for the comparatively well-to-do, as also are effervescing waters, which are highly palatable with raspberry vinegar. With the last-mentioned beverage, good tea and coffee, and last not least, pure water, the total abstainer would have little cause to envy those who enjoy their beer or wine.

ON THE VENOMOUS BITES OF SOME KINDS OF GAD-FLIES.

MR. C. A. KELLY, M.R.C.S., L.R.C.P. (Norwich) writes: I have suffered whilst in different parts of the country from the bites of some of the gad-flies, followed by the disagreeable effects as described by Surgeon-General G. Bidie. Having nothing else at hand one night on retiring to bed to relieve the irritation, I moistened a piece of ordinary soap, scraped some off, and pasted it over the swellings. In the morning, to my surprise, both irritation and swelling had gone. I have repeated this remedy on several other occasions with the same benefit.

THE TREATMENT OF ANTHRAX IN MAN.

DR. A. ANDERSON (Mirfield, Yorkshire) writes: Although I have not tried Dr. Illingworth's method with anthrax, I think with him that the treatment by excision usually recommended is unnecessarily severe. All the cases I have had—one on the forearm and three on the face—have been easily cured in a simpler, less painful, and less defacing way. I make a thorough application of pure liquid carbolic acid all over the pustule and just beyond its margin. The sore becomes milky white; the liquid contents of the vesicles beading out are thoroughly mopped up to prevent their running over the neighbouring skin; a simple protective dressing is applied, and nothing more is required. A dry scab forms, leaving very little perceptible mark.

The pustules so treated were mostly about the size of a shilling; but one on the cheek, which I did not recognise when the patient came to me, was as large as half-a-crown when I was called to visit her. The eye was closed up, the whole side of the face and the lymphatic glands of that side were intensely swollen, and the temperature was 102° F. The carbolic acid was freely applied; a second marginal application was made on the following day, and the patient soon got well with a scarcely noticeable scar. My cases all occurred in workers in wool, except one, which was in the immediate vicinity of a mill where various kinds of wool were used.

SMALL-POX IN LONDON.

MR. W. M. ACWORTH (London) writes to say that the summary of his paper on Small-pox in London, read at the International Hygienic Congress at Buda-Pesth, which was published in the BRITISH MEDICAL JOURNAL of September 15th, contained certain inaccuracies. He therefore wishes to disclaim responsibility, but adds that the errors were no doubt due to the unfavourable conditions under which Press work at the Congress had to be done.

MEDICAL AID SOCIETIES AND "NUCLEUSES."

VIGILANS writes to us, giving the usual account of the professional degradation involved in accepting the position of medical officer to societies of this kind. He says: "The Liverpool Victoria Legal Friendly Society has attached to it another, a parasitic growth called the National Medical Aid Company, Limited, which professes to have a separate and distinct management, but in reality both are worked with one staff of agents."

If the London Victoria Legal Friendly Society has any connection with the National Medical Aid Company, the cards of which our correspondent has forwarded to us, together with the nomination forms of the medical referees, it is much to be regretted. Apart from the vicious system of applying the limited liability principle to the trafficking in the necessities of the needy members of the profession, for in nearly all cases the acceptors of office in these societies would probably confess that "their poverty and not their will consents" the amount offered in remuneration to the medical referees would seem to be on a scale which could hardly be reduced much lower without vanishing altogether. The medical referee is expected to accept 80 per cent. of the gross sum collected from members, and the premiums paid by members are at the rate of 3s. per annum per adult member, and 1s. 10d. per annum for members under 14 years of age. This certainly from a pecuniary point of view, is a pleasant look out for the medical referee.

Our correspondent ends his letter with the following very pregnant warning: "I may add that I know as a positive fact that lists of members, which have been taken from other medical men for various reasons are occasionally sold to young doctors commencing practice as a nucleus, and from £5 to £20 has been asked for such."

It is much to be feared that many of the nucleuses advertised for sale at low prices to tempt the young practitioner to launch forth into independent practice may be made up in some such unscrupulous way as here indicated, and it is to be hoped that before entering into negotiation with the vendors of cheap practices the would-be buyer will carefully study this warning, as he may by so doing save himself from a step which he might long subsequently regret.

HOSPITAL APPOINTMENTS.

GLASGOW writes: As a former house-surgeon of the Glasgow Maternity Hospital I should be glad to have the opportunity of repudiating "M.O.'s"[1] charge against the directors of that institution of showing undue preference for Glasgow as opposed to Edinburgh graduates. During the last ten years quite as many house-surgeons have hailed from Edinburgh as Glasgow, and I can safely say without fear of contradiction that in the selection of candidates no institution in Scotland at any rate, is more free from local prejudice.

THE STATUS OF ASSISTANT MEDICAL OFFICERS IN LUNATIC ASYLUMS.

IN our report of the discussion on this subject in the Section of Psychology at the annual meeting of the British Medical Association at Bristol (September 8th, p. 559), the following remarks by Dr. Sutherland Rees Philipps (St. Ann's Heath, Virginia Water, Surrey) were accidentally omitted: Dr. Rees Philipps said he fully agreed with Dr. Mercier that the present position of assistant medical officers of asylums was unsatisfactory, and that something ought to be done to improve it. How it was best to be done was a matter for consideration. He would be very glad if any assistant medical officers, who felt strongly on the matter, would put themselves in communication with him, of course with the most complete confidence, so that he could discuss with them their grievances and see how best he could help them in improving their position.

[1] See BRITISH MEDICAL JOURNAL, September 8th, p. 559.

LETTERS, COMMUNICATIONS, ETC., have been received from:
(**A**) Mr. A. H. Allen, Sheffield; Æsculap; A. A. M.; Anxious; Mr. T. R. Atkinson, Sherborne; A. M. S.; Alpha. (**B**) Mr. F. Barnes, London; Dr. W. A. Bullen, Coventry; Mr. R. P. Brown, Eltham; Mr. S. Baines, Sunderland; Dr. E. Blake, London; Mr. H. Browne, Salisbury; Mr. D. Biddle, Kingston-on-Thames; E. G. Bull, M.B., Birmingham. (**C**) Mr. A. Clay, Birmingham; Mr. J. Clark, Doncaster; J. Carroll, M.B., Ilkeston; Miss J. W. Carr, Derby. (**D**) Dr. G. De Saussure, Charleston; Mr. J. H. Drysdale, London; Mr. W. H. C. Davey, Liverpool; D. M.; Mr. W. Dodds, Newcastle-on-Tyne. (**E**) Enquirer. (**F**) F.R.C.S.; F. H. W.; Fair Play. (**G**) Dr. F. Ganrigon, Luchon; Dr. A. G. Gairdner, Hertford; Messrs. W. A. Gilbey, London; Mr. T. Gurney, London; Mr. H. Greenway, Plymouth; E. Greville, M.B., Edinburgh; F. Godfrey, M.B., Scarborough. (**H**) Mr. W. B. Henley, London; Mr. J. Humphrey, London; Dr. S. Haynes, Melbourne; Mr. F. T. Heath, London; Dr. E. J. Hicks, Melton; R. W. T. Haddow, M.B., Birmingham; T. W. Hicks, M.B., London; Mr. R. H. Hall, Felixstowe; Mr. E. H. Hackett, Halifax; Mr. T. G. Horder, Cardiff; Mr. R. Hingston, Liskeard; Mr. G. Hartridge, London; Dr. W. W. Hardwick, East Molesey. (**I**) Dr. J. Ince, Swanley. (**J**) Mr. R. Jeffreys, Bromley; Mr. B. Jackson, London. (**K**) Mr. C. T. Kingzett, Chislehurst; Dr. T. G. Kelly, Desford. (**L**) Mr. R. Lyddon, Deal; Mr. E. T. Larkham, Birmingham; Dr. Langston, London. (**M**) Mr. J. P. Myles, Parsonstown; Member of the British Medical Association: Dr. H. W. G. Mackenzie, London; J. B. Milne, M.B., Sheffield; Mr. F. F. Manning, London; Mr. E. B. Miller, London; Medicus; Member; A. D. Maitland, M.B., West Kirley; M.; Mr. W. G. McElligott, Belper; Messrs. Methuen and Co., London. (**N**) Dr. R. Neale, London; Mr. N. E. Norway, Newquay. (**O**) Mr. R. C. Owen, Scunthorpe. (**P**) Mr. S. Partridge, Darlaston; Mr. W. Planner, London; Mr. S. Paget, London; Mr. W. W. Powell, London; Puzzled: Dr. A. Packman, Rochester; P.; Mr. J. Prince, London; Perplexed; Prosperity; Mr. T. D. Patmore, London. (**Q**) Querist; Mr. J. Quicke, Handsworth. (**R**) R. H. S.; Royal National Pension Fund for Nurses, Secretary of, London: Royal Hospital for Diseases of the Chest, Secretary of, London; H. T. Rutherford, M.B., Taunton; Mr. A. Roche, Dublin; Mr. T. F. Raven, Broadstairs. (**S**) Mr. H. R. Smith, London; Mr. J. Stretton, Kidderminster; Mr. C. Smith, Harrow; Dr. E. Seaton, London; Dr. T. Sanctuary, London; Mr. J. Startin, London; Mr. A. L. Sharpin, Bedford; Mr. G. F. Stone, Bristol: Dr. J. F. J. Sykes, London; Dr. E. Sajous, Paris; F. P. Sarjant, M.B., Manchester; Dr. S. A. Strahan, Northampton; Mr. H. H. Sturge, New Eltham; Student. (**T**) Mr. N. G. Thomas, Rhondda; D. A. Turkhud, M.B., Chowpathy; Mr. W. C. Taylor, Scarborough; Mr. J. W. Taylor, Birmingham. (**V**) Veritas. (**W**) Mr. H. White, Manchester; Mr. J. A. Wilkin, Liverpool; Messrs. Warrick and Co., London; Dr. E. F. Willoughby, London; Mr. J. A. Wanklyn, New Malden; Mr. H. B. Wilder, Pangbourne, etc.

BOOKS, ETC., RECEIVED.

A Practical Manual of Mental Medicine. By Dr. E. Regis. Second edition. Utica, New York: Press of American Journal of Insanity. 1894.

Medical History from the Earliest Times: A Popular History of the Healing Art. By E. D. Withington, M.A., M.B.Oxon. London: The Scientific Press, Limited, 428, Strand, W.C. 1894. 12s. 6d. nett.

Descriptive Catalogue of the Pathological Specimens contained in the Museum of Guy's Hospital. Third edition. Vol. I. Morbid Conditions of the Respiratory Organs and Alimentary Tract. By L. E. Shaw, M.D.Lond., F.R.C.P., and E. Cooper Perry, M.A., M.D.Cantab., F.R.C.P. London: J. and A. Churchill. 1894.

By Ocean, Firth, and Channel: Amateur Cruising on the West Coast of Scotland and North of Ireland. By Diagonal White. London: The *Yachtsman* Offices, 143, Strand, W.C. 1894.

Lays of St. Andrews. By Clement Bryce Gunn, M.D.Edin. Illustrated. St. Andrews: Joseph Crook and Son. 1894.

Die Extraktion der Zähne: ihre Technik und Indikations-stellung mit Einschluss der Betaubung. Von Professor e. o. Dr. F. Busch. Berlin: Verlag von August Hirschwald. 1894.

State Obligations in Matters of Public Health. A lecture delivered before the members of the Wordsworth Institute, Cockermouth, January 29th, 1894. By J. Highet, M.D. Workington: G. H. Smith and Co.

Recherches Cliniques et Thérapeutiques sur l'Epilepsie, l'Hysterie, l'Idiotie, et l'Hydrocephalie. Par Bourneville. Avec la collaboration de MM. Gencourt, Cornet, Leloir, Jules Noir et P. Sollier. Vol. xiv. Paris: Aux Bureaux du *Progrès Médical* et Felix Alcan. 1894.

*** In forwarding books the publishers are requested to state the selling prices.

SIXTY-SECOND ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF DERMATOLOGY.

A. J. Harrison, M.B., President.

THE PRESENT POSITION OF THE QUESTION OF VEGETABLE HAIR PARASITES.

By Leslie Roberts, M.D.,

Dermatologist to the Royal Infirmary, Liverpool.

Considering the amount of research which has been given to the vegetable hair parasites since the time of Gruby, it is surprising how little progress has been made in the direction of real knowledge. One cause of our backwardness, I think, is the want of a sense of the relative importance of the different methods of research. These methods are chiefly three in number, and may be designated as (1) the histological, (2) the phytocultural, (3) the physiological. Each of these methods of research has its own limits and direction, and is more or less useful according to the ends we aim at. If we were botanists our aim would be to ascertain the mode and character of growth of these hair fungi, and to discover their homologous relations to the higher members of the same series.

To this end microphytic culture, with the aid of the microscope, would be most useful. But as practitioners of medicine this sort of knowledge is not at all profitable to the practical aims of our profession. These parasites are a source of inconvenience and annoyance to ourselves and our domesticated animals, and the practical point at issue for us is to know where and what are the sources of infection, so that we may guard ourselves against them. To know this is to know the life-history of these parasites, the hosts which they attack, their mode of transmission from one host to another, their interparasitic mode of living, their relation to the seasons, to climate, etc. To acquire information on these points is the aim of the physiological method. The question of species so much disputed at present is important to us, just so far as it concerns differences of origin or implies various modes of attack or other variations in their life-history. Considered apart from these points it becomes a question of abstract interest merely.

A series of memoirs have been recently published by M. Sabouraud on the plurality of the species of hair parasite. These publications have attracted a good deal of attention. Many of the opinions maintained so strongly by their author have passed into medical currency with very little inquiry on the part of those who have received them. But Sabouraud's conclusions reach to such lengths that we could have no confidence in abandoning the old teaching without the utmost scrutiny of the new doctrines.

After careful consideration of these conclusions I must say that, in my opinion, they go beyond their evidence. Even the successive memoirs are self-contradictory to some extent, and no wonder, for they appear with a rapidity which is unusual in scientific research, and suggest to the reader the necessity of reserving his judgment. Thus, in memoirs I. II, and III trichophyton microsporon is dogmatically put down as a distinct species of tricophyton, but in memoir VI it is asserted with equal assurance that it is no trichophyton at all, and that it is "as distinct from trichophyton megalosporon as this fungus is from favus."

The conclusions at which Sabouraud arrives are related chiefly to the question of species. He asserts that there is one large family of trichophytons, named by him the megalosporons, which may be divided again into two divisions, according as they are of animal origin or human origin. Those of the former origin are found on the human host generally in any position but the scalp, though occasionally they may attack this part also. Their favourite locality is the chin, where they produce various lesions. The megalosporons of human origin generally attack the scalp, but may travel to smooth parts. These two divisions of the megalosporons are, according to this observer, histologically distinguished from each other by the fact that the megalosporons of human origin do not trespass beyond the limits of the sheath of the hair, being confined to its interior substance, while that of animal origin vegetates outside as well as inside the sheath. The new doctrine, then, is this: When we find a hair with a megalosporon fungus vegetating around the sheath, we are to label the fungus "of animal origin." I shall presently afford you demonstrative proof that we have no right to do this, and that the doctrine is highly misleading. But before coming to particulars it will be well if we take critical notice of M. Sabouraud's methods by which he arrives at these and certain other broad conclusions. With this observer the question of species is decided by a triple test, consisting of: (1) the clinical features of the disease; (2) the form and position of the parasites in the hair or scale; and, finally, the external appearance of the cultivated vegetations.

The application of this threefold test has discovered the fact that fungi of certain forms in hair correspond broadly with certain forms in their cultivated states; on this correspondence of form M. Sabouraud has founded his species and his conclusions. But if anyone could demonstrate that specimens picked out from these so-called species could manifest both forms on different occasions, he would have afforded sufficient proof that Sabouraud's triple test is unreliable as a means of determining the question of species. This proof I am able to give you. Before coming to this it will be well if we examine the method now so commonly employed—namely, experimentation by cultivation, as to its limits and possible usefulness.

The Phytocultural Method and its Limits.

Experiments in cultivation have been made by botanists since the time of De Bary and Brefeld for the purpose of following under the microscope the uninterrupted development of fungi, and of tracing the organic continuity between various forms of phomorphous fungi. The scientific abuse of this method, as carried out by Sabouraud and many others, is fortunately unknown to botanists. According to Sabouraud, if we rear trichophytons in the same soil, naked-eye distinctions of form and colour are sufficient to permit of our allotting the different vegetations to distinct species. With botanists the question of species among fungi can be decided only by the examination of their seminal reproductive organs, and if no seminal apparatus is formed they must be placed among the doubtful species. No fungologist would decide the species of a given specimen, even from a microscopical scrutiny of its mycelium, and we find Sabouraud's species-making distinctions to consist merely in differences in the mycelium. The scientific absurdity of this method, which is the method commonly employed, becomes apparent if we suppose an analogous method adopted towards the higher plants. What should we say if an investigator proceeded to classify the trees in an orchard by the shape of their branches, or the colour displayed by their fruit? The logic, as De Bary says, does not change with the size of the objects or with our apparatus and manipulation. The trichophytic fungi differ from the higher groups of fungi in their imperfect or incomplete organisation. They show certain marks which reveal their parentage and relation to the higher fungi. Experiments in culture with them have failed to produce the higher marks of parentage, such as seminal modes of reproduction. No phytoculturist has succeeded beyond the bud formation.

It is so important to fix clearly in our minds the relative importance of the phytocultural method that I shall ask you to look attentively at two cultures made in my laboratory some time ago. One of them presents a coal-black colour, the other is one of the light-brown powdery vegetations. If we placed any confidence in appearances, we should say at once that these were two perfectly distinct species, and yet they are merely successive generations of one and the same hair fungus, grown in identically the same

soil. These is no mistake in manipulation, both are pure cultures. The light-brown powdery vegetation began life in the black form, and would have developed like its parent if I had not changed a certain potent factor in its surroundings, namely, temperature. It was effected in the following way: As soon as the sowing had been done, the flask was placed in snow (for the season was midwinter) and remained there three days. At the end of this time it was placed in a warm corner in my laboratory. It remained barren over the due period, but then grew till large enough for me to see the black centres similar to those of its parent. I then raised the temperature of the liquid soil (infusion of malt) rapidly over a spirit lamp to the point of ebullition, and then immediately lowered the temperature by plunging the flask under a running stream of cold water, taking care, of course, that no water entered the flask. The vegetation has grown since then to its present size, but the treatment it was subjected to has so completely altered its outward aspect, that no one not otherwise informed would suspect its parentage. I think there are some useful lessons that we may learn from this observation. The black vegetation is a naturally pigmented variety. Its primary ancestor I obtained from the head of a lad in Vienna, who had a curious form of ringworm of the scalp, with a pigmented margin surrounding the affected area. The fungus must have acquired this peculiarity of pigment in its natural struggle for existence, and the point to be specially noticed is that a naturally acquired feature may be lost, temporarily at least if not permanently, by a change of treatment. It is a significant fact never to be lost sight of that new characters may be acquired by the simple filamentous fungi in their natural existence. When our experience of these fungi becomes wide enough, we shall cease to be astonished at every variation which crops up, and when we desire to make more species we shall set about the task more logically than hitherto.

I have described elsewhere how, by an analogous change of treatment, the snow-white downy vegetations may have their outward aspect completely altered. I will merely say here that by rearing these vegetations at the temperature of the body (37° C.) I have obtained a black multiple-centred variety.[1] Thus, when M. Sabouraud affirms that the differential character between his powdery and downy vegetations is "absolute, constant, and does not present any exception," we have simply to bear in mind these observations to be convinced that he is in error in raising these differences to the rank of species-making differences.

The method breaks down when used as an instrument for determining species, because it takes no account of the fact that variations in form may arise when the fungus changes its soil or mode of attacking its host. In order to establish this crucial point, I must explain a method which I have called the physiological method, by which we can observe this change of soil and mode of attack under very precise terms.

The Physiological Method.

In experiments in culture we systematically exclude all natural competition, and in so doing depart from natural methods as widely as possible. If we wish to ascertain in a practical manner whether distinct species exist, we must follow a method of research which will afford us opportunity of observing these fungi at their own work.

The plan I have formed for this purpose is the reverse of that usually followed. Instead of carrying the parasitic plant to the animal and inoculating it, I bring the desired part of the animal—namely, the hair—to the parasite. It is effected in the following way:

The fungus in question is cultivated in the usual manner in a sterilised shallow glass dish. I prefer liquid soils to solid ones, and give the preference to a 10 per cent. infusion of best English malt. When a fair sized vegetation has formed on the surface of the liquid, it is ready for receiving the hair. The piece of hair shaft must be shorter than the surface of the vegetation on which it lies. It is important to bear in mind that the "parasitic" energy is greater during the active growth of the fungus than after its complete maturation. I therefore introduce the hair before the fungus has attained its full size. A large piece of bibulous paper, wet with weak corrosive sublimate solution, is laid on the lid of the dish, which is then gently and slightly raised vertically upwards under this protecting germ-proof sheet. The hair is then introduced by means of a sterilised forceps and laid on the surface of the vegetation, the lid quickly replaced, and the dish put back into the incubator. The temperature of the incubator must be adjusted according to the object in view. It is part of the object of this research to examine the action of these moulds at different temperatures; 30° C. will do as well as an ordinary temperature. Further precautions need not be taken. To sterilise the hair would damage its texture. Our object is to imitate Nature as closely as may be, and, as in her domain growth is an open competition, our purpose is to let the trichophyton take its chance with other microphytes which may be present in the hair.

I exhibit some specimens which show the method in active operation. It will be seen that the affected hairs have all the appearance of the naturally-produced disease.

[1] Full details of this experiment are given in the author's monograph on the Parasitic Fungi.

The Saprophytic Origin of the Hair Parasites.

These experimental devices enable us to observe the fungi at their own work in a way which must come nearer to the natural processes than any mode of observation with which I am acquainted. The infusion of malt in our experiments represents a piece of inanimate Nature supporting the fungus after the manner of a saprophyte. The portion of hair represents the man or animal which comes in contact with the saprophyte; in due time the hair is invaded. By this device we have reduced the terms of natural inoculations to their simplest forms. In the simplicity of the method lies its precision, for here we have no complications arising out of the symbiotic relationship between host and parasite, but we can study the growth in the vegetable soil and transference to animal tissue without any change in the saprophytic habit of the plant. By following the physiological method in this way we are led quickly into a new field of inquiry which promises to repay us richly for our pains. As practitioners of medicine, too busy to give heed to abstract questions of classification, it is well worth our while to pursue these investigations; for it is the business of a medical man to be acquainted with the sources of disease as with the means of curing them, and these experiments point, I think, with the force of a demonstration, to a source of ringworm and other vegetable parasite diseases hitherto scarcely suspected, namely, dead organic matter.

The possibility of this transference being thus proved, we may follow up this inquiry by searching for its prototype in Nature. Sabouraud affirms that he has experimentally reared a trichophytic fungus on humus or decayed woody fibre (a favourite soil with saprophytes); also on greenhouse-leaf mould and grain in the natural husk. I have not yet had an opportunity of repeating these observations, but I am fully prepared to believe in their accuracy. If corroborated, they will form a valuable link in our present inquiry.

I have frequently observed with astonishment the very simple conditions under which germination and mycelium formation may occur when favus and the trichophytons occupy hair or scales, or scutula. Thus I find that distilled water is sufficient to set up germination in a fragment of favus scutulum, and also in trichophyton if the quantity of fungus in the hair is large. The germination is more obvious in spring water, and still more so in mineral water, especially if ferruginous. I show you here my method of carrying out these observations. A shallow glass dish serves as a well, and a short bridge of bibulous paper serves to carry the water from the well to the stage on which the particular hair or scale is placed in a drop of the same water, which is protected by a cover-glass; a watchglass may be substituted for the plane stage, but mixed vegetations are more apt to come with the convex stage, especially if mineral water is used. By the use of the plane stage I have been able to watch the uninterrupted development of fungi in scales, not only through germination, but as far as bud fructification.

These simple conditions of germination are peculiarly saprophytic. In some of these open spring water cultures I have observed trichopyton and the common saprophyte, blue mould, growing side by side. In the light of this observation and those recorded above I cannot see how it is possible to avoid the conclusion that the hair-attacking fungi belong essentially to the saprophytes, but to that class of saprophytes which may, under certain conditions, adopt the parasitic life.[2] The search for the *via naturæ* of these fungi by which they ascend to their parasitic position on man may be hopefully undertaken. The truth of these experimental observations is the warrant of our ultimate success.

[2] Fungologists name saprophytes of this sort facultative parasites, since they have the faculty of living through their development wholly or in part as parasites.

The Ascent to the Parasitic Position.

The link which connects the lowest parasitic position with the saprophytic habitat of these fungi is yet missing. But there are numerous observations regarding the transmission of favus and ringworm from the lower animals to man. It has not hitherto been pointed out, so far as I know, that these fungi attack only domesticated animals, but this I believe is the truth. Mr. Thomson, the head keeper of the Zoological Society's Gardens, London, tells me that ringworm has never, to his knowledge, occurred among the wild animals under his care, nor has he ever heard of it attacking animals in a state of Nature, excepting foxes. Our President, Dr. Harrison, as chairman of the Zoological Society, Clifton, assures me that during the last ten years his attention has never been drawn to favus or ringworm in wild animals. It is quite conceivable, however, that ringworm and favus might readily be overlooked in wild animals, owing to natural difficulties in making observations. But the inquiry, I think, will repay investigation. The physiological method will be useful here, and I have now a fair collection of hairs derived from many of the wild and domesticated animals. Since these observations are not yet concluded, I must limit my present remarks to a few points.

There is, so far as my observations have gone up to this date, a notable difference between wild and domesticated animals in regard to the character of their hair. Speaking broadly, hair of wild animals appears to be more cellular, protoplasmic, than hair of domesticated animals.[3] In civilised man, the most domesticated of animals, and the most remote from a state of Nature, the hair makes, perhaps, the nearest approach to a non-protoplasmic appendage. And this same tendency may be noticed in those animals which we have drawn within the circle of our domesticated habits. By "domesticated animals" I must be understood to mean not only those animals which dwell in our homes or serve us for trained purposes, but also those which are habitually attracted within the sphere of our domesticated life by the prospects of obtaining food—such, for example, as foxes, mice, rats, ferrets, etc. So far as we know at present, it is only within this domestic circle that the trichophytic saprophytes can ascend to their parasitic position.

Soil Influence in the Production of Microscopic Variations.

By following the physiological method we have learnt some facts. We have seen that without any change in its saprophytic habitat the fungus may pass from an inert vegetable soil to animal tissue or hair. We have learnt that germination may occur under simple saprophytic conditions side by side with common well-known saprophytes; but I wish to direct attention specially to some observations made by this method which show that the soil and mode in which the fungus attacks its host have a considerable share in producing microscopic variations.

When trichophyton megalosporon of human origin attacks scalp hair its vegetations, according to Sabouraud, are confined to the interior of the hair shaft. The sheath of the shaft remains intact. The fungus grows progressively from the apex of its terminal cell, transverse walls forming rapidly behind the growing point, so that the filaments are composed of segments about 5μ to 7μ long.

I took a hair invaded by this fungus and made from it a pure cultivation in an infusion of malt. When the vegetation had become aërial, and before it had ceased growing, I laid a piece of healthy scalp hair and beard hair taken from the head of a man, on the aërial surface, in the manner described above. A week later both hairs were examined under the microscope, and found to be thoroughly pervaded by the fungus. I submit these hairs to inspection; it will be seen that the original character of the trichophyton megalosporon is very considerably altered. The sheath is utterly corroded, as in hairs invaded by trichophyton microsporon, and the fungus vegetates around the shaft like a megalosporon of animal origin. The filaments do not lie so parallel to the long axis of the shaft, nor are the segments so large as in the original fungus.

These observations clearly demonstrate the weakness of the triple method. They teach us that when the fungus ascends to its position in hair from dead organic matter it may vegetate outside the sheath, so that we have no right to label every trichophyton "ectothrix" "of animal origin." Nor can we say that the character of forming ectothrix vegetation is of itself sufficient ground for specifying one kind of megalosporon from another, for on one host the fungus may form ectothrix vegetations and on another entirely endothrix vegetations. This may readily be observed in the transference of the fungus from man to one of the lower animals. I have noticed it in transferring human trichophyton megalosporon through an inert soil to the guinea-pig. In the child's hair the vegetation was confined within the sheath, in the hair of the guinea-pig it was ectothrix and endothrix.

M. Sabouraud's observations may prove valuable if we do not attempt to overreach their simple testimony. The ectothrix vegetation has been frequently found where it is highly probable, if not certain, that the origin of the disease has been directly from one of the domesticated animals. We may therefore take the ectothrix vegetation to suggest direct animal origin, but by no means to prove it. In a sense every case of vegetable parasitic hair disease is of animal origin, for domesticated animals come habitually into closer contact with saprophytically decomposing matter than we ourselves. The hair fungi ascend to man through the chain of domesticated animals. When they have reached this position they may perpetuate themselves at this level by transmission from one individual to another.

Another point which M. Sabouraud endeavours to establish is that distinct forms of disease are associated with the several varieties of hair fungi; but here again the ardour of this observer to reach final conclusions has carried him beyond his evidence. Thus the clinical picture which he draws of the variety of scalp ringworm produced by megalosporon is different in many respects from the same variety as observed in Liverpool, as is shown by the following table:

Clinical features of T. megalosporon (scalp) in Paris.	Clinical features of T. megalosporon (scalp) in Liverpool.[4]
"A plaque more often large than small."	Minute spot, sometimes enlarging to form a patch.
"Secondary inoculations on the scalp rare."	Secondary inoculations frequent.
"The aspect resembles alopecia."	The aspect resembles a seborrhœa in spots and has passed in some instances for seborrhœa.
"The hairs break very close to the scalp."	The hairs break 1 or 2 lines from the orifice; they may be invaded by fungus sometimes before ture occurs.
"Is benign and easily stamped out."[4]	Is specially rebellious and difficult to control.

Speaking broadly, there is a certain tendency in like hair fungi to produce like lesions, but this tendency is not of the strict order and regularity of the pathogenic blood organism (zymotic fevers). Ringworm is not a very high order of parasitism since the hair approaches in texture to a non-protoplasmic appendage, and we can expect the symptoms to vary with the character of the hair and the mode in which it is attacked. In a given district these symptoms may be fairly constant, enabling us to foretell the fungus (megalosporon or microsoporon) which provokes them. But we must not lose sight of the fact that these symptoms are not universally true.

Time will not allow me to enter on the question of the "large spore" and "small spore" varieties of trichophyton, or, more accurately speaking, on the large segmented and small segmented kinds. I can merely say now that there are doubtless a large number of variations which we have yet to meet with. We shall learn as our experience enlarges what importance to attach to these variations, and in what mark or feature of the fungus lies its essential character. It would be better for the work we are engaged in if in the future we endeavoured to increase our acquaintance with the amount and

[3] This statement, at present, can only be taken as a working hypothesis; future research may require of us to abandon it. The microscopical character of human hair varies with the race; I have not yet examined the suitability of these racial hairs as soil for trichophytons.

[4] That these clinical features are met with in the neighbourhood of Paris is evident from Dr. Louis Wickham's recent description of an epidemic of tinea tonsurans at L'Asile Lambrechts. See *Annales de Dermatologie*, June, 1894.

ind of these variations, instead of dogmatising about species. I venture to put forward a plea that we cease henceforth to appeal to phytoculture as a means of making species. The method is quite unsuited for this purpose, and should be suffered to pass into oblivion with other wrecks of human ingenuity. In the future we must allow much greater influence to soil in determining variations than we have done hitherto. This is the lesson which the physiological method has to teach.

Dr. Phin. S. Abraham agreed with Dr. Leslie Roberts that M. Sabouraud's conclusions as to the parasitic fungi had been accepted too readily by the profession. He had seen cases in which the large segmented variety occurred on the body contemporaneously with the small segmented variety on the scalp.

A DISCUSSION ON THE ETIOLOGY AND TREATMENT OF ACNE VULGARIS.

I.—By Stephen Mackenzie, M.D., F.R.C.P.,

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I must premise my paper by at once saying I have no new views to put forward as to either the etiology or treatment of acne, but have chosen the subject of acne to raise a discussion and to ascertain how far opinions are at the present day agreed as to the relative share which local and constitutional conditions take in causing this disease. The treatment necessarily follows the opinions held. This battle has been fought many times with such doubtful results that each side has felt unvanquished, and ready to fight another day. Has knowledge in pathology and therapeutics advanced sufficiently at the present day to enable us to set the question at rest?

I shall touch on pathology only so far as it helps us to understand the etiology of acne. It is now generally agreed that in acne vulgaris the primary condition is a blocking of the ducts of the sebaceous glands, indicated generally by the production of comedones (acne punctata). This leads to inflammation of the gland (a. simplex), which very frequently ends in suppuration (a. pustulosa). Sometimes the inflammation is deeply seated and involves the perifollicular tissues (a. indurata).

The first question to be settled is the cause of the blocking of the sebaceous ducts. This has been shown, and the fact can be verified at any time by microscopical examination, to be due to collection of sebaceous cells (glandular cells) in the ducts which, owing to incomplete involution or devolution, instead of becoming filled by oily particles and breaking down to form the oily secretion intended to lubricate the skin, resist the natural process of disintegration, and accumulate in and and block the ducts. That the later effects are due to such blocking is shown by similar inflammatory results in the glands and tissues around taking place when the orifice of the duct is occluded by adventitious substances, as in tar acne. Why in some cases the ducts should remain blocked for an indefinite period without inflammation occurring, whilst in others it occurs more readily, is unsettled, and some have suggested an additional factor is requisite to call inflammation into play. As regards suppuration, which is so common a feature in acne according to prevalent pathological doctrines, the pus coccus (the staphylococcus pyogenes aureus et albus) is probably the excitor, and in a part which is exposed to the air and honeycombed by the mouths of little pits, there is no difficulty in understanding how these reach the diseased part.

It being then agreed that the pathology consists in blocking of the ducts and inflammation of the secreting glands behind, we are next led to inquire what are the causes which bring about the blocking of the ducts by the imperfectly elaborated glandular products.

It is admitted by all that the physiological excitation of the sebaceous glands which accompanies the growth of the hair in connection with puberty is the starting point of acne, and that acne lessens and finally disappears as this physiological activity subsides. Whenever there is great functional activity there occurs the liability to aberrations; hence in the heightened functional activity of the hair follicles and sebaceous glands occurring in connection with puberty, some or many of the sebaceous ducts become occluded, and acne results. Few people escape acne altogether, but in many it it so slight and occasional as not to merit notice or treatment.

What is the element that causes some persons to suffer so much more from blocking of the sebaceous ducts than others, that is, becoming the subjects of acne? Whilst an occasional acne pustule may be seen in the healthiest-looking skin, in the majority of cases of acne there is a peculiarity of skin which all recognise. It is variously designated as opaque, doughy, coarse, muddy, thick, sluggish, etc. I know some dermatologists would have it no one can say a person has a thick skin, in spite of the general belief to the contrary, which has led to the term being applied metaphorically to moral states. But, however we describe it, there is a peculiarity of skin which renders the owner more liable than others to acne. Some have thought the "thick" skin causes the ducts of the sebaceous glands to be narrowed and thus impede the flow of sebum. This is unsupported by any evidence, and it seems rather to be a peculiarity of the epidermis which renders the involuted epithelial cells which constitute the glandular cells of the sebaceous glands resistent to the disintegrative or metabolic process which converts them from living protoplasmic cells into an oily secretion which should be excreted through the ducts. In consequence of this they accumulate within and block up the ducts, and inflammation sooner or later results.

So far, then, the process is a local one. Are there any constitutional conditions which favour this process? Here we approach very debatable ground. The great majority of observers and writers, noting the frequent association of various aberrations in the general health and disturbances of function in different organs, believe these stand in etiological relationship to acne. They point out that in many cases there is evidence of a debilitated state of health, that the circulation is languid, the patient anæmic, and state that in a majority of cases there will be found disturbances in the digestive or sexual functions. These may all be conceded as frequently concurring with acne without admitting they are related in any way as cause and effect. The truth is all the conditions which are frequently found associated with acne are such common ailments that their frequent concurrence with acne proves nothing at all. They will be found with about the same frequency, and bear about as much relationship to psoriasis and scabies as they do to acne.

For many years I used to see the patients in the skin department, of which I have charge, on the morning of the same day that I saw general medical out-patients in the afternoon, and I used to find, and paid particular attention to the point, the same functional derangements and irregularities in about the same proportion in patients suffering from the most varied diseases (nervous, vascular, respiratory, etc.) in the afternoon as in the patients suffering from acne seen in the morning. Of course it is admitted by all that many patients suffering from acne are free from dyspepsia, constipation, irregularities of menstruation and sexual malpractices, and that many patients suffering from acne are in other respects than their skin in good general health. These derangements are not held by them to be the sole, but the contributory, causes of acne, and they urge as an argument in favour of this view that they cannot get the acne well until they have corrected the general or functional derangements of health from which the patients are suffering. It must, however, be remembered that whilst they are remedying these derangements, they are at the same time treating the disease locally, for I have not come across anyone who has essayed to treat acne by general measures alone, and one is tempted to repeat Hebra's paraphrase of Plenck's dictum, "*Tempus varos curat.*"

So far I have taken collectively the various associated conditions which are believed by many to be etiologically related to acne. If we take any of these individually and examine into the evidence connecting them with acne, I do not think it will be found that the case is strengthened.

Let us take anæmia. Some esteemed writers point out

that many of the patients manifest a slight degree of anæmia. This is doubtless true, as acne—a disease more common in females than males—occurs at a period when some forms of anæmia are particularly common. But acne bears no relation to the degree of anæmia, and the cure of the anæmia will do no good to the acne unless the skin is treated locally also. So again with constipation. Many patients who consult me for acne are found to suffer from constipation. Constipation is a very common complaint, especially in young adolescents: but, as a general physician, I am consulted yearly by a number of young patients for constipation who are in no way troubled with acne. The fact is, I believe, that the connection between acne and constipation is so firmly rooted in the professional mind that when they concur it is held to strengthen and confirm the rule, and when constipation is absent in acne it is disregarded and the case atypical. In a similar way weather prophets' reputations are made. By a happy accident they prognosticate some phenomenal weather, and this makes a great impression on the minds of many who do not remember the numerous occasions on which their forecasts are erroneous.

Let us, again, consider the evidence with regard to irregularities of the reproductive organs. It is often stated that in many cases of acne dysmenorrhœa and amenorrhœa are present, and that it is only when these irregularities are corrected that the acne improves. That they are frequently associated of course there is no doubt. Every physician knows that these diseases are so exceedingly common that, no matter what disease he is investigating, he will find irregularities of the menstrual functions present in a large proportion of his cases. The evidence at first sight seems more strongly in favour of menstrual disorders being connected with acne than the other alleged causes of acne, for it must be admitted that in some sufferers from acne the eruption is increased at each menstrual period. On the other hand, it will often be found when this is the case that the menstruation is perfectly natural in time, quantity, and character. It is probable that, just as the development of the sexual organs is associated with a correlated development in the pilo-sebaceous apparatus, so there is a tendency to a physiological excitation of this apparatus at each catamenial period, and that where from local causes there is a tendency to blocking of sebaceous ducts acne will be particularly prone to occur when the glands are especially active. Masturbation is found associated with acne and blamed for inducing or increasing it, but the evidence on which this opinion rests is extremely slender. That the disease sometimes follows on the exanthemata is admitted, but I should attribute this to nutritional alteration in the skin induced by exanthem.

Greater importance undoubtedly attaches to fluxionary congestions of the skin of the face brought about by various agencies—indigestion, use of stimulants, changes of temperature, excitement, and exalted self-consciousness, etc. This flushing tendency is no doubt of a reflex character, and is found associated with some cases of acne. I believe it will aggravate or exaggerate acne when the local conditions are favourable for its occurrence, but that it will not produce it unless they are ready to hand. This reflex congestive mechanism is much more prone to give rise to erythematous eczema of the face, rosacea (which is now commonly separated from acne), and lupus erythematosus than acne. Moreover, the fact that we have such a variety of consequences connected with a single cause implies some other factor that determines the eruptive conditions that follow upon this tropho-neurotic element. This factor is tissue proclivity, determined by inheritance, age, co-operating local influences, irritation, etc. I might take all the alleged conditions that influence the causation and maintenance of acne and discuss them at length, with the result, I believe, of showing their association is accidental merely. I have chosen those for discussion to which the greatest importance is attached. I have tried to study and discuss the question impartially, but the conclusion at which I have arrived, partly, I believe, because I am not merely a dermatologist but also a general physician, is that the local conditions are all important, and that the general or constitutional state has little influence on the production of acne. In a very general way it may be admitted that all conditions which debilitate the individual will be less favourable to the proper discharge of the functions of the pilo-sebaceous glands as well as other secretive glands, and these cause or aggravate acne; but when we physicians are constantly being consulted for the maladies and functional derangements supposed to share in the production of acne, and find that only a very small proportion of these suffer from acne, and when we see so many cases of acne in young persons of both sexes, in all other respects in ideal health, we are led to the conclusion that the asserted constitutional conditions and functional derangements do not cause acne, "or raise a pimple in a beauteous face," and that their association is purely fortuitous; the constitutional and functional disturbances on the one part and acne vulgaris on the other part, being very common complaints, are often found in association.

Having disposed of the so-called constitutional causes of acne, let us revert to the local causes. We have seen that the essential cause of acne is plugging of the ducts of the sebaceous glands, and that this is mainly due to perversions of the normal and physiological development of the pilo-sebaceous structures, occurring especially at puberty, and that it is mainly a congenital peculiarity of skin. Are there any local conditions that aggravate or intensify this? It must be pointed out that acne occurs especially in the face, at a part where the sebaceous glands are very numerous. It does not occur at those parts of the face where the hairs grow thick and strong, but on the contrary where the hairs are less fully developed. In the lesions of acne one or more abortive hairs are nearly always found, and it would appear that it is in those parts of the skin where the sebaceous glands are especially active, whilst the hair formation is relatively defective in development that acne is prone to occur. The fact that the face is especially the seat of acne suggests that exposure has something to do with its occurrence. The alterations of temperature to which the skin of the face is subjected must lead to irregular stimulation of its glandular apparatus, and we often see the most aggravated forms in those whose occupations expose them to unusual degrees of heat, especially when this is associated with dust. Thus some of the most aggravated cases of acne I have ever encountered have been in stokers and engine drivers, where these two conditions are combined. Dust and dirt, then, getting into the mouths of the hair follicles will tend to produce acne. Neglect of washing and excessive use of soap are both blamed. Acne is not more common amongst the "great unwashed" in my experience, however, and repeated washings often fail to keep it off. It is possible some soaps may irritate the follicles, but it is eczema which is usually produced in these circumstances, and I cannot remember to have met with a case in which I thought soap was a factor in the production of acne. Cosmetics are asserted to sometimes cause acne, and it is possible they do, but it has been remarked by most writers that their use suggests a previous cutaneous defect. Acne has been attributed to atony of the arrectores pilaris, but these small muscles are but little developed in the face, the mobility of other muscles attached to the skin of this part apparently replacing the necessity for their aid in expelling the contents of the sebaceous glands. This may be a factor in other parts, as the neck and chest, but has not been demonstrated. Acne is said to be more common in the winter than the summer, and this can be readily understood, as alterations of temperature and lessened activity of the skin occur in cold weather.

The Treatment of Acne Vulgaris.—It follows from the foregoing that in my opinion we should concentrate all our efforts in the treatment of acne on local measures. We may divide the local treatment into two heads: (1) Preventative treatment in those predisposed to acne; (2) the treatment of the developed disease.

Preventative Treatment.—This is obviously of the highest importance, but it is that which has received the least attention. It is desirable to keep clearly in mind what has to be attempted in the case of persons who are from the conformation of their skin liable to acne. Persons who are merely liable do not as a rule take medical advice, but careful mothers do sometimes consult us because they notice their children's complexions are losing their natural appearance. Again others consult us for only very slight acne, and,

lastly, the preventative treatment is involved in the advice we give to those who have been under treatment for acne, and are so far improved that they are dismissed by their medical advisers, or discontinue attendance. The objects we have to keep in view in the local preventative treatment are threefold: (1) To remove the superfluous seborrhœic secretion, and exercise a dermatolytic action on the epidermic accumulations in and at the mouths of the sebaceous ducts; (2) to stimulate the sebaceous glands into healthy activity; (3) to keep the skin aseptic and thus prevent the pus cocci from gaining admission to the mouths of the follicles.

Fortunately we have in our hands at the present greatly increased, and really effective, means of accomplishing these results. In medicated soaps we have powerful and convenient therapeutical remedies, cleanly and convenient in their use, and free from all objections. In my opinion the profession is under a real debt of gratitude to Dr. Eichhoff of Elberfeld for the painstaking efforts he has made to extend and perfect the treatment of disease by means of medicated soaps. Until Dr. Eichhoff, at the instigation of Dr. Unna, took up the subject, and entrusted the manufacture of soaps to Ferdinand Mühlens of Cologne,[1] under his own supervision and guarantee, there was no certainty as to the composition of medicated soaps, and therefore no precision in their use. Dr. Eichhoff has written fully on the subject, explaining the mode of manufacture, the exact composition of each soap, and the indications for their use. These soaps are made in two forms—cake soaps and powdered soaps—and of each kind there are many varieties. Moreover, most kinds are made with three soap bases—superfatted, neutral, and alkaline. I shall confine my observations, of course, to their employment in acne and its prevention. I have recently been trying these soaps with satisfactory and encouraging results. The alkaline soaps are generally indicated in the prevention and treatment of acne, on account of their greater activity in dissolving the fatty matters on the skin and removing epidermic accumulations, and the natural peculiarity of the skin in persons suffering from acne allows of the use of these stronger soaps, which would irritate more delicate skins. There are four ways of using these medicated soaps:

1. Simply for washing.
2. Rubbed into the skin with a piece of flannel or woollen cloth.
3. Rubbed into the skin and allowed to remain.
4. Rubbed into the skin and then covered with a watertight dressing.

These methods are given in the order of their activity. The most useful of the cake soaps for the prevention of acne are the alkaline camphor-sulphur—Peruvian balsam soap and creolin soaps, and the alkaline brimstone and the alkaline sulphur powdered soaps, and creolin powdered soap; and the neutral salicylic sulphur, the salicylic resorcin-sulphur powdered soaps. The face should be steamed or bathed with hot water previous to the application of the soap, and hot water used in making the lather. The soap should be simply used for washing, rubbed in and afterwards washed off, allowed to remain on, with or without a watertight dressing, according to the activity of treatment demanded. Brisk towelling is also of service in exciting the languid vascularity of the skin and in compressing the glands and aiding in the expulsion of the sebum from the ducts. It is needless to say the treatment must be as persistent as the condition which calls for it, and it is of the greatest importance to urge this on those who are, or are liable to be, sufferers from the disease.

It will be seen that in the soap treatment we have fulfilled all the conditions I indicated as necessary to prevent acne. The soap bases, especially the stronger and alkaline forms, dissolve and wash away any sebaceous excess on the surface of the skin, and, in the more powerful modes of using the soap alluded to, penetrate the surface and act on the contents of the sebaceous follicles. At the same time, the dermatolytic action of the soap dissolves the imperfectly evoluted epithelial cells in the follicles and the epidermic accumulations at the mouths of the follicles. The bathing with hot water or steaming, rubbing in the soap with a flannel or flesh-glove, and the towelling afterwards must have a decided influence in stimulating the sebaceous glands, an influence which is further aided by the various medicaments, such as sulphur, camphor, Peruvian balsam, etc., incorporated in the soap. Lastly, and as I believe one of the chief effects of these medicated soaps is their efficiency in keeping the skin aseptic, in preventing the staphylococcus pyogenes from penetrating the mouths of the follicles, and thus preventing the occurrence of pustulation. It may be safely asserted that, if we can free the skin from the bacteria which excite inflammation and suppuration, we shall remove one of the two factors in the production of acne; the other and mechanical one, which leads to plugging of the ducts of the glands, we have already seen is also remedied by the action of the soap as a soap. Sulphur, camphor, salicylic acid, Peruvian balsam, resorcin, brimstone, creolin, etc., are all parasiticides, and the activity of these remedies is greatly increased by the penetrative action of the soap. Probably if these soaps are regularly used by those predisposed to acne, comedones will not form, but if they do they must be removed by the usual methods.

The Treatment of Acne.—It is well here also to lay down the principles to be kept in view in dealing with a case of acne. These are:

1. To remove the plugs which occlude the sebaceous ducts, and the epidermic accumulations about the mouths of the follicles.
2. To subdue any existing inflammation.
3. To remove the conditions which, if allowed to remain, will lead to a recurrence of the disease.

To the first end all comedones should be removed by expressing them. The soap treatment, described under preventive treatment, is also of great value and importance. When the skin is irritable from inflammation, the milder soaps are indicated in the superfatted forms, as the superfatted menthol soap or the superfatted menthol eucalyptol soap. The use of the soap implies the use of hot water to the affected parts by bathing and steaming.

All pustules should be opened at once, and the acne lancet is much less formidable in appearance than a sharp-pointed bistoury, and quite efficient in deep-seated acne pustules. No cases give more brilliant results than the worst cases of acne indurata treated by puncture of every indurated pustule—as long as the patient remains under medical care; but of course such cases are prone to relapse when it is discontinued unless the preventative treatment already advised is carried out. Some persons will not consent to have the pustules opened by the medical adviser, and it is almost impossible to get the patient or relatives to use the acne lancet. When this is the case I often recommend and employ the method introduced by Dr. Walter Smith of Dublin of touching every pustule with a drop of liquefied carbolic acid, and then covering each spot with collodion. For the inflammation which often occurs in the skin around and between the inflamed sebaceous glands, any of the soothing applications in general use may be employed. The most efficient plan, and that least inconvenient to the patient, is to use ointments at night and lotions in the day time. The benzoated oxide of zinc ointment, carbonate of zinc made up with cold cream, ointment of the glycerine of subacetate of lead, and boric acid ointment, are all good applications for night use; and a calamine lotion an efficient and inconspicuous remedy for use in the day time. When the inflammation of the skin around the acne lesions is only slight or absent, we may make use of stimulating ointments such as sulphur, at night. Belladonna is also of much service in some cases. Two drachms of the extract made into an ointment with lano-vaseline, or added to oxide of zinc ointment may be used, and it may be used stronger, or the simple extract of belladonna rubbed into the skin in obstinate cases, care, of course, being taken that none reaches the eyes. The ointment should be washed off in the morning and a calamine or creolin lotion used afterwards. Sulphur in powder or suspended in eau de Cologne is also a good day application. I have not found any good from the internal administration of calx sulphurata (commonly called sulphide of calcium), and have discontinued its use. When we have got rid of all or most of the active lesions in a case of acne, we have to fulfil the third indication of treatment, namely, to remove or prevent the conditions which, if allowed to remain, will lead to a recurrence of the disease. This is

[1] Mr. R. J. Reuter, 62, New Bond Street, is the London manager.

done by advising the patient to carry out what I have called the preventative treatment by means of medicated soaps, so as to remove superfluous sebaceous secretion and accumulations in the ducts, to stimulate the glands, and to keep the skin aseptic.

It will thus be seen that I trust to local measures, and local measures alone, in the prevention and treatment of acne. Unless these are appropriate and are carefully and sedulously carried out acne is apt to be a very troublesome and lasting disease. In any case where there is a predisposition to it it must be impressed on the patient that this is an enemy which can only be kept at bay. Unfortunately this is a difficulty which it is useless to ignore in securing the necessary continuity of treatment, and thus acne remains an opprobrium of medicine. I have said nothing about the constitutional treatment of acne, believing, as I do, that it is neither necessary or useful. Of course, we should treat any maladies from which our patients are suffering, for it is our duty to endeavour to make our patients as well as we can in every respect. It is, however, of great importance that we should keep clearly in mind the difference between curing our patients of dyspepsia or amenorrhœa, or dysmenorrhœa, and the acne from which they may be simultaneously suffering. But unless we treat the local disease by effective local treatment we shall never deal successfully with acne.

II.—Phineas Abraham, M.D.,

Lecturer on Physiology and Histology, Westminster Hospital; Physician Western Hospital for Skin Disease.

Dr. Abraham agreed with Dr. Mackenzie that external remedies were of primary importance in the treatment of acne, especially copious lathering with medicated soaps, of which he principally used ichthyol soap. He could speak in strong terms of Dr. Walter Smith's excellent method of applying pure carbolic acid to each pustule. The results were most satisfactory, and very bad cases soon cured, if the application were carefully made.

III.—John Broom, M.D.,

Physician Bristol Institute for Skin and General Diseases.

Dr. Broom said that he agreed for the most part with Dr. Stephen Mackenzie, but he thought the constitutional treatment of acne was justified by its results.

IV.—Malcolm Morris, F.R.C.S.Ed.,

Surgeon, Skin Department, St. Mary's Hospital.

Mr. Morris said that he was pleased to see a greater tendency in the profession to treat acne on local principles. He considered it a local disease where the anatomical element was the sebaceous gland, the physiological element being the oversecretion of fat, while probably there was a third or bacteriological element.

V.—H. Radcliffe Crocker, M.D., F.R.C.P.,

Physician, Skin Department, University College Hospital.

Dr. Crocker said that he could not consent to abandon internal treatment entirely. He still believed that attention to the condition of the alimentary canal and other disorders, as well as well-directed local treatment, was a quicker and more efficient method than local treatment only. With regard to local treatment, he believed that all soaps efficiently applied were useful, and he was a strong advocate for thorough disinfection of the pustules after being opened.

VI.—Dr. Unna,

Hamburg.

Dr. Unna said he had long advocated the use of soaps. He found resorcin sublimate paste of great value in the treatment of acne.

VII.—Leslie Roberts, M.D.,

Dermatologist, Royal Infirmary, Liverpool.

Dr. Leslie Roberts said that he entirely agreed with Dr. Stephen Mackenzie as to the anatomical and physiological elements in the etiology of acne. He considered the disease a local one. At bottom acne was an epithelial secretion of fat be, ond what could be consumed by the integument. In consequence of this a deposit of unused fat collected in the ducts of the gland. The deposit or comedo became the seat of microbes and microbic change. During the last two years Dr. Unna had demonstrated a bacillus which he claimed to be the "acne bacillus." In his (Dr. Leslie Roberts) opinion there was not a sufficient basis of fact for this belief. We could not argue from the fairly constant presence of an organism that that organism was the actual cause of the disease. There was a certain affinity or attraction between certain soils and certain microbes. Possibly in the future these bacilli might be shown to possess a pathogenic relationship to acne, but until they had been cultivated in the pure state, and experimentally reproduced the disease, they could not be incriminated with the charge of being the actual cause of acne. In the treatment of acne he distinguished between the indolent and congestive varieties. In the former sulphur and salicylic acid were, in his opinion, the most reliable agents. The sulphur could not be used too strong. He had a night treatment and day treatment for acne. In the congestive variety ichthyol was valuable both internally and externally. He believed that constitutional treatment had no direct effect on indolent non-congestive acne. If the patient had any internal derangements they should be treated on general principles.

VIII.—J. Frank Payne, M.D., F.R.C.P.,

Physician St. Thomas's Hospital and Hospital for Diseases of Skin, Blackfriars.

Dr. Payne said acne in its origin, in the form of comedones, was a developmental affection residing, not in sebaceous glands alone, but in rudimentary hairs, such as occurred on the face, the shoulders, chest, and other parts. These imperfect hair follicles produced numerous abortive hair shafts, and their glands, being also imperfect, produced imperfect sebum, which was too thick to be diffused along the hairs, but clogged up the follicles. Hence this condition could not be removed by constitutional treatment, though its morbid products might be removed and its consequences. The second factor in ordinary acne was inflammation, which was produced by micro-organisms entering the morbid follicles. Hence the local treatment so ably described by Dr. Stephen Mackenzie was the right one. Though much more of a localist than a constitutionalist in the treatment of acne, he thought very inadequate weight had been laid upon diet; for instance, some young men could produce pustular acne with almost certainty by drinking beer, and could get rid of it by leaving off beer; so in children excessive consumption of sugar had the same effect.

IX.—Henry Waldo, M.D.,

Physician and Physician in charge of Skin Department Bristol Royal Infirmary.

Dr. Waldo observed that the injurious effect of improper diet could often be counteracted by a proper amount of exercise.

X.—G. G. Stopford Taylor, M.D.,

Physician Liverpool Hospital for Cancer and Skin Diseases.

Dr. Stopford Taylor said that he had found the linimentum saponis (*B.P.*) superior to medicated soaps, because this liniment could have almost any drugs incorporated with it. The liniment could be used pure or diluted with water to suit the skin. Nothing removed the seborrhœa sooner than the linimentum saponis, and it would also remove the smaller comedones. For destroying the pus organism in acne, as in other diseases, nothing was equal to the ammoniated mercury ointment gr. v or gr. x ad ʒj. This was best rubbed in at night. For destroying the pustules nothing acted so well as a sharpened match dipped in carbolic acid. Face wounds healed so quickly that it was better to break up the acne nodule rather than puncture it with a needle or other sharp steel instrument. Constipation was the most important factor in producing acne. That nerve influence considerably affected acne was witnessed during menstruation and dyspepsia.

Dr. Stephen Mackenzie's Reply.

Dr. Mackenzie, in reply, said that the local condition was an all-important matter both in the etiology and treatment of

acne. He himself went further, and said that the disease and treatment were entirely local.

A CASE OF MYCOSIS (GRANULOMA) FUNGOIDES WITH A PREMYCOSIC STAGE OF UNIVERSAL DERMATITIS.

By T. COLCOTT FOX, M.B.,

Physician to the Skin Department of the Westminster Hospital.

THE case which I propose to narrate is of interest on account of the rarity of the disease and its nature, but particularly for the type presented. The record is imperfect in respect to the early phases of the malady and in the absence of a *post-mortem* examination.

C. O., aged 50 years, a man of fine physique, a native of Suffolk but long resident in London, presented himself in the Skin Department of the Westminster Hospital on August 5th, 1893, for the relief of a chronic disease of the skin. He was the only child of parents who died young. He stated that he had enjoyed good health till four years previously, with the exception of contracting scarlet fever and small-pox. The man had done a great deal of hard navvy work on railroads in earlier years, but in recent years had been a bricklayer's labourer. For the last seventeen years he had been a total abstainer from alcohol, and was the father of fifteen children born during thirty years of married life; nine of these children died in infancy, and six survive and are well and strong.

The earlier history of his illness is probably not of much value for any points of detail. The patient stated that four years previously he noticed on his chest brown spots about the size of a pea, accompanied by great itching. Afterwards the eruption spread over the trunk, face, scalp, and limbs. He applied for relief to a dispensary, and says he was told his blood was poisoned. About this time both legs "broke out" badly and suddenly, and were the seat of a watery discharge, and later of free desquamation. I carefully cross-examined the wife on these points. She assured me that the eruption began on the chest as an itching red rash, just like measles; that it appeared next on the hands, and then spread more widely. About four months after going to the dispensary the man was "covered all over." Some months later he applied at a hospital for diseases of the skin, where he attended on and off for two years. The course of the disease varied, for at one time the entire surface was involved and weeping in parts, at other times he was comparatively well. Whilst attending some repairs in a baker's hot oven big "water blisters" formed on the face, body, and limbs. This statement was confirmed by the wife, who remembered that "big bags of water hung from his elbows." In July, 1890, he was admitted to one of the great metropolitan hospitals, and his symptoms, except the intolerable itching, were greatly relieved. It may be well to note that the patient was then under the care of an accomplished physician who is interested in diseases of the skin, and had these new growths presented they would certainly have attracted attention. After leaving this hospital the patient gradually relapsed into his former condition, and again sought relief at another hospital for diseases of the skin, but after six months' attendance and his state becoming aggravated, he applied at the Westminster Hospital.

When I first looked at him my impression was that I had to do with a case of universal inveterate scaly eczema. From the crown of the head to the soles of the feet and the palms of the hands the skin was universally reddened, much thickened, and scaling. The itching was described as intolerable, and the surface was covered with oval or rounded deep excoriations, the size of a split pea, due to fierce tearing with the nails. Many of these excoriations were surmounted by blood crusts, which formed a conspicuous feature. On stripping the patient it was evident that there were a number of new growths present, though the majority were small and concealed and hidden in the thick scaly and crusted skin that they were only appreciable here and there to the touch. These nodules were clearly not abscesses and furuncles such as may be met with in some cases of chronic eczema.

As far as the man could remember, the "lumps" had existed for six or eight months, and, according to the wife's impression, for about a year.

A few days later I made the following detailed notes in the wards: "The scalp is universally diffused, infiltrated, and scaling. There is a small nodule in the dermis over the posterior part of the left parietal bone. The face and ears are in a similar condition, and in some respects remind one of a leper. The lines of flexion are in deep fissures. There is ectropion of the left eye, the eyebrows are nearly gone, the surface is studded with blood crusts. The inflammation extends just within the nostrils, but the mouth and tongue and pharynx are not affected." I will save a good deal of repetition if I condense these notes in the statement that every inch of the surface of the head, neck, trunk, and limbs was similarly affected, and any given portion of skin was quite indistinguishable from an inveterate patch of eczema. The skin was more infiltrated and leathery to the feel and sight than a pityriasis rubra, and the scales not so large and profuse.

In the neck the glands were moderately enlarged. In the left supraclavicular region was a lumpy infiltration about the size of a sixpence, and excoriated by scratching. The trunk was dotted with excoriations, from a mere speck to a pea in size. The axillary and inguinal glands were enormously enlarged. The skin of the breasts was so infiltrated that the mammæ appeared to be hypertrophied. Scattered over the abdomen were a multitude of livid or violaceous circumscribed infiltrations (new growths), varying in size from the finger-nail downwards. They were mostly excoriated on the surface, and only to be detected in the thickened scaly skin by close observation. On the back of the left shoulder blade was a diffuse violaceous patch of induration the size of a shilling, but only slightly raised above the surrounding infiltration. There were also a number of other growths distributed over the back—violaceous, slightly raised—and many only to be made out by the touch. Some excoriations were very deep, and appeared to be mostly seated over nodules of new growth. On the upper extremities a few violaceous growths were dotted about and mostly excoriated. Their borders were ill defined, and melted away into the surrounding thickened skin. On the left arm were the most characteristic growths. Here one or two were considerably raised, so as to be clearly circumscribed, with steep abrupt sides, and attaining the area of half-a-crown piece. Some were superficially ulcerated. One, the size of a small tangerine orange, was slightly fungating. About the elbow were four or five conspicuous growths; one, a solid nodule the size of a nut and resembling a gumma, two with steep sides rising abruptly out of the skin, one more diffuse and flattened. The nails were striated, grooved, and stained; the palms harsh and dry. The lower extremities were the seat of a vast number of violaceous or brownish solid papules or nodules, from a pin's head to a split pea in size, imbedded in the skin, and, here and there, confluent. On the legs were patches of weeping eczema. The feet were desquamating in large flakes.

The man's strength and appetite at this date (August, 1892) were fairly good, but he stated that he had fallen away in flesh and vigour, and felt quite unequal to do any work. As the disease was not unlikely to run a protracted course, I induced the patient to apply for admission to the Lambeth Infirmary, where he remained until his death at Christmas, 1892. Some new growths increased in size, but there was practically little change in the condition of the skin, except that the intolerable itching was somewhat mitigated by oleaginous antiseptic applications. Arsenic and other drugs were exhibited without any remediable effect. About a fortnight before his death the patient had an apoplectic seizure (possibly thrombosis), followed by right hemiplegia. He died suddenly from a second attack of a similar kind. It is much to be regretted that it was found impossible to carry out any *post-mortem* examination.

I never could detect any visceral disease. There was no albuminuria, and, as far as my observation went, nothing special to note about the temperature. I could not detect any increase of white blood corpuscles or other changes in the blood. I have the pleasure of expressing my acknowledgments to Dr. Lloyd, the Medical Superintendent of the Lambeth Infirmary, for his courtesy and kindness in allowing me to visit the patient whilst under his care.

With the patient's consent some of the larger tumours were removed in the Westminster Hospital, and my colleague, Dr. Hebb, was kind enough to search for a micro-organism, though without success. Cultivation and inoculation experiments were not carried out. The sections displayed the characteristic features of mycosis fungoides, and I agree with the conclusions of Dr. Payne and others that the growths are granulomatous in nature.

The disease ran its course in about four and a-half years, and for the first three years no new growths were detected. The striking symptoms were: (1) the eczematoid dermatitis, which, becoming more and more generalised, finally involved the entire surface in a condition simulating an inveterate scaly eczema; (2) the intolerable itching, which does not appear to characterise all cases, and the multitudes of deep excoriations; (3) the widespread evolution of vast numbers of small nodules (? the lichenoid stage of Bazin) embedded and obscured in the infiltrated skin, and for the most part only detected by careful examination; (4) the ultimate growth of large tumours of various aspects; (5) the gradual failure of strength: and (6) the progressive, though remittent, course of the malady. What the exact aspect of the early dermatitis was it is difficult to say, and there is no evidence in this case to help us to determine whether the eczematoid aspect is primary, and if so whether it is only a diffuse superficial form of granuloma or new growth; or how far it is the result of the constant rubbing and scratching of a preliminary pruritic congestive eruption (erythrodermia). As far as my reading goes the occurrence of a premycosic universal dermatitis is most exceptional, though it may be widely generalised. Besnier has recorded a case of Kaposi's lymphodermia perniciosa, in which the dermatitis was absolutely universal, and in Riehl's case of leukæmia cutis the dermatitis was universal. I could not, however, detect any leucocytosis in my case. I regard the vast numbers of small nodules which evolved in the skin as certainly new growths, and not very large prurigo papules. This opinion is confirmed by what I have observed in another case, where there was comparatively little dermatitis, and nodules as large as peas could be seen arising in portions of skin otherwise unaltered apparently. My case differed from others, also, in the comparatively few growths of larger size. They were certainly not at all a con-

spicuous feature, and in this respect differed greatly from many of the recorded cases of mycosis fungoides.

A surgical colleague put to me the question why the larger growths were not sarcomata, arising secondarily and as a complication to the chronic dermatitis. From a study of the numerous cases on record it is clear that this view cannot be sustained. Mycosis fungoides is almost certainly due to a progressive infective process, and is for the most part marked by the different stages just discussed. Still there is a wide diversity in the course run, as with glanders, for instance. The limits of the disease are yet for determination, especially in relation to the so-called lymphodermia or leukæmia cutis.

A CASE OF MYCOSIS FUNGOIDES.

By GEO. STOPFORD TAYLOR, M.D.,

Honorary Physician, Liverpool Hospital for Cancer and Skin Diseases.

DR. TAYLOR read notes of the following case:—

W. J. C., aged 45, first came under observation early in 1891, and gave the following history: At the age of 35, in the year 1881, he had a roughness and scaliness of the skin in the flexures of the joints. Over the hips and on both sides of the knee-joints purple spots or patches appeared. At the age of 20, the scalinessand roughness increased, extending all over the limbs, neck, scalp, sides of forehead, and eyebrows. The trunk then became involved. Itching is unbearable at times, particularly when in bed. He has also been very much troubled with boils, of which he has had forty or fifty. He takes his food badly on account of defective teeth and inflamed gums. In other respects he is healthy. The family history was good. His appearance on February 11th, 1891, was as follows: The scalp was covered with loose branny-like scales, the forehead and eyebrows with more adherent and larger scales upon a reddened base. The neck, extremities, and trunk were more or less involved with reddish looking, non-elevated scaly patches, the margins of which were well defined in some instances, in others passing insensibly into apparently healthy integument. The colour of the patches varied also, those on the lower parts of the trunk, especially on the nates and on the inferior extremities, were of a darker hue than those on the upper parts of the body. The intervening and apparently healthy skin had a distinctly greasy feel and was of a sallow colour. The anterior and posterior sweat gutters were free from eruption. The palms of the hands and the soles of the feet were thickened and inclined to peel. There was no perceptible thickening of the skin anywhere else. The glands of the inguinal region were notably enlarged, but those of the axillary less so. He had a good crop of hair and his nails were healthy. A provisional diagnosis of pityriasis rubra following a psoriasis or seborrhœic eczema was made.

The patient remained under treatment until June, 1891, when he went to Ireland. He came again under my care at the end of 1891, when his condition was on the whole worse. In the spring of 1892 I had him admitted to a private ward in the hospital. The rest in bed, careful nursing, and a proper application of local remedies had a decidedly beneficial effect. He returned to business after three months' treatment, but soon relapsed into his former condition.

I saw nothing of him for about twelve months, during which time he had been under treatment by chrysophanic acid and arsenic. These remedies had aggravated his condition considerably, as he had well-marked arsenical keratosis of palms and soles, and his skin generally was much more inflamed.

In the early summer of 1893 I advised him to see Dr. Radcliffe Crocker, and he returned to me looking certainly better. Dr. Crocker's treatment was faithfully carried out by me. The thyroid tablets which he had been ordered were increased to four daily, but as they did not seem to affect him he was put upon a glycerine extract of the thyroid gland at the end of October. A few doses soon produced thyroidism. His skin became much redder and scaled in larger quantities, so I deemed it wise to stop the remedy. Before the glycerine extract was used a few sores, like abrasions, appeared, and these, after discharging pus for a few days, took on a granulomatous condition. One large growth came on the back of the left wrist and one on the calf of each leg. These became much increased in size by the development of fresh growths close by, and formed fungiform irregular elevations, covering an area as large as my hand. It was noticed, also, that some of these growths were preceded by purplish-looking plaques, more or less circular in outline and slightly elevated. The epidermis then disappeared, apparently owing to pressure from the subjacent papillary body, which rapidly grew and formed a granulomatous mass. The pus from these growths seemed to undermine the surrounding skin and caused a separation of its cuticle, which stripped off for a considerable distance in some instances, and from this denuded derma fresh granulomata developed. With the exception of the large growths I have mentioned, the fungoid excrescences did not exceed an inch or two in circumference, and numbered in all between twenty and thirty. Some few were depressed in the centre.

In January, 1894, the whole of the man's body and the extremities were more or less covered with abrasions of the derma, varying in size from a sixpence to half a crown, and, as these not only refused to heal, but in many cases increased in size, and the suppuration from them and the papillomata being most offensive, it was decided to put him in a tank or continuous bath as the only means of preventing a fatal termination. On January 25th I asked my friend Dr. Barr, of the Liverpool Northern Hospital, to see him as to the advisability of this plan of treatment. I am indebted to him for the following suggestions with regard to the continuous bath: The following measurements were agreed on: Length of the tank, 6 ft. 4 in.; depth, 18 in.; width, 33 in. A large wooden case was first made, lined with lead, and placed on trestles. A frame 8 in. deep was made to place inside the bath, resting on the bottom; to this canvas was stretched laced to the sides of the frame, which was tightly wedged to the sides of the bath, to prevent it floating. A head rest was made of a light wood, and laced with cords, upon which a hair pillow was placed. Three-fourths of the bath was covered in with a light wooden lid, in sections; over this were placed blankets and a mackintosh sheet. The remaining fourth was covered with a light blanket, through the centre of which a slit was made for the patient's head to protrude. A pint of peroxide of hydrogen was added night and morning to 70 gallons of bath water. The most suitable temperature of the bath was found to be 96° during the day and 97° at night. This was regulated by means of a small cylinder containing 8 gallons, 2 gallons of which at a temperature of 120° were sufficient to raise the bath temperature one degree. This required adding every hour or hour and a-half.

The patient presented the following appearances on February 1st when he was placed in the tank:—"Fairly well-nourished, secretions normal; hair of head cut short and face shaved; scalp in a condition of pityriasis; skin of face tightly drawn and reddened; greasy-looking scales on both cheeks, in nasolabial furrows, and on each frontal prominence; conjunctivæ somewhat congested; eyelids tightly drawn, granular, and discharging pus; lashes wanting. Nearly the whole of the body presents a reddish tint, which becomes of a purplish colour over the buttocks and the inferior extremities. This condition of erythrodermia is covered more or less with loosely adherent papery scales, which here and there have a tendency to form marginated patches. Palmar and plantar surfaces present the appearance of arsenical keratosis with corn-like elevations. Scattered all over the body and extremities are seen superficial sores or abrasions, and purplish plaques, in various conditions and sizes, all more or less circular in outline. Some are raw and indolent, others are discharging pus and spreading; some are healing or healed, and on others again fungating granulomata have formed. The epidermis on the healed plaques being thickened and elevated; axillary and inguinal glands enlarged. He remained in the tank twenty-nine days."

The bath had a marvellous effect upon the patient's condition. The odour disappeared. The colour of the skin became almost normal. The corn-like indurations on hands and soles peeled off. The scaling ceased. The abrasions quickly healed. A few of the granulomata underwent spontaneous involution; those that required stimulating were mopped with a solution of nitrate of silver ℈j to ℥j of spirits of nitrous ether. The larger growths were treated with the solution of acid nitrate of mercury. In the water the decrease of the growths was most conspicuous. With or without a plaque the epidermis was shed, leaving a bright red derma; owing to the stimulating effect of the warm water the papillæ grew rapidly, and appeared on the surface of the wound like minute pegs tipped with white. A few applications of the silver solution caused them to heal quickly. This rapid healing over was not without its disadvantages, for sound cicatrisation did not take place for some time afterwards. The epidermis remained thickened and sodden, and was elevated by the subjacent and hypertrophied papillæ into small mounds, which stood out quite perceptibly from the surrounding skin. In some cases the epidermis seemed to melt away, and the healing process had to be gone over again. The skin of the palms and soles presented the appearance of a drowned person who had lain in the water for some days. After three weeks' immersion a sweat rash developed over the entire trunk and extremities. This eruption was partly papular and partly vesicular, the latter leaving minute saucer-like depressions in the skin. On the palms the impounded fluid gave rise to painful elevations, the contents of which ultimately became purulent and led to the complete separation of the horny layer. This eruption left a cribriform appearance on the plantar surfaces.

While in the bath the patient took his food well, and in the early part slept six or seven hours during the night; the temperature remained normal. The pulse rate, usually 60, was increased to 90. Unfortunately no actual measurement of the urine was made, but the amount was evidently less and the specific gravity increased.

During the last week the patient became nervous and low-spirited, and it was with difficulty that I could get him to remain in the water. On March 1st he was removed from the tank. Although he had lost weight during the immersion he was much better in health, and was jubilant at the improvement in condition. Unfortunately this was not long maintained. The reaction set up by his removal from a bath of 96° to bed in a room of the temperature of 65° caused a recrudescence of the erythrodermia, and considerable scaling. This, however, was relieved by lanolin pomade. The epidermal covering of the healed abrasions and growths became dry, hard and shrivelled, and in some cases separated from the papillæ beneath.

Fresh plaques began to appear, and there was a tendency for some of the old ones to break down; they were all mopped with a silver solution. The erythrodermia varied in its intensity, and from no obvious cause. In some localities,

especially the buttocks, thighs, and legs, the dilated venules were distinctly seen as fine tortuous lines or threads in the cutis, the cuticle in these situations having an old or wrinkled appearance. About the knees it was so thin that it could easily be rubbed off, therefore great care was necessary in locomotion and in preventing the friction of the bed-clothes and the under garments.

On March 26th the skin was much redder again, peeling in large dry papery scales. The face was cracked and fissured. The horny layer was easily detached and peeled off, leaving the mucous layer exposed. From this date the patient was enveloped in boric acid ointment.

By April 11th patient was much improved again, and went to business for a few hours every day. From this date he was sometimes better and sometimes worse. The wounds, which had healed, broke down again and again healed, this process being repeated two or three times. There was little or no scaling, but the erythrodermia was almost universal. Fresh plaques or nodules in the derma kept appearing and disappearing of their own accord, while a few small ones fungated. At the end of the month the patient went to Ireland, hoping that his native air would benefit him. He returned to Liverpool on July 12th. He stated that his sores had all healed while away, but that after being subjected to a great nervous shock some fresh ones had broken out.

Condition on July 13th. I noted that the erythrodermia varied from a raw ham colour to a purple. There was some scaling on face, none anywhere else. The horny layer was thickened over healed plaques. The majority of granulomata consisted of hard nodules in the skin. There was no important thickening or infiltration of skin except about the nodules and plaques in the derma.

I have had the opportunity of seeing three cases in which the diagnosis of mycosis fungoides was undoubted—two in England and one at Hamburg in Dr. Unna's clinic.

M. Baretta's marvellous models at the museum of the Hospital St. Louis, the various types of mycosis fungoides, may be divided into two classes: those with a pre-existing dermatitis, and those in which the primary and sole lesions have a fungoid neoplasm. Whether the latter should not be catalogued as sarcomata is, I think, still undetermined. As to the cause or causes of this malady we are still in the dark. Micro-organisms have been sought for by the most skilful investigators, with contradictory results. Inoculations and cultivation experiments have failed to throw any light upon this question. Taking the symptoms one by one as they disappeared while the patient was immersed in the tank, the first change observed was the reduction of the erythrodermia to an almost normal condition, the relief of the pruritus, and the cessation of the desquamation. The alleviation of the first of these symptoms was brought about either by the stimulation of the vasomotor system or mechanically, by the weight of the surrounding water supporting the dilated cutaneous vessels, or possibly by both. The colour of the face and head, however, was but little affected. The cessation of the scaling and pruritus was a natural sequence of the reduction of the passive congestion of the papillary vessels and the soothing influence of the bath combined.

Is mycosis fungoides a disease of the nervous system? In this case the erythematous areas gradually invaded the whole integument until scarcely a healthy island was left. Here and there they terminated in an abruptly marginated crescentic border: other areas, however, faded insensibly into the healthy skin.

These phenomena can be explained physiologically. Landois and Sterling say: "Although there is one general vasomotor centre in the medulla which influences all the blood vessels of the body, it is really a complex composite centre, consisting of a number of closely aggregated centres, each of which presides over a particular vascular area."

Whether the existing cause of this vasomotor disturbance is due to "toxins generated within the body," as suggested by Dr. Payne, we are unable of course to say, but reasoning from analogy, the toxin theory is very probable.

Although I could not satisfy myself that the abrasions were preceded in every case by a plaque, yet with few exceptions the plaques became abrasions, that is to say, when the epidermis was rubbed off. These symptoms seemed to appear in crops and without any premonitory warning, for on retiring to rest at night the patient had no idea how many plaques and abrasions would be apparent in the morning. The plaques were of a brighter tint than the surrounding skin, oval in shape and composed of enlarged papillæ. Some underwent involution, while a few of the abrasions healed spontaneously. The suddenness of this eruption leads to the belief that it was due to some trophoneurosis. From the plaques and abrasions the granulomata developed.

In the tank, freed from pus, scales, and other detritus, the growth of the papillæ was seen to advantage. What size they would have attained but for the energetic treatment they received may be judged from the growth on the back of the wrist. It measured about ½ an inch high and 1½ inch in diameter, became covered with epidermis and was depressed in the centre somewhat like a tomato. This was the first that appeared, and I observed it for some weeks undetermined whether or not to excise it.

The appearance of other growths on different parts of course deterred me. The absence of marked infiltration of the skin except in the tissues beneath the plaques and the activity of the sebaceous and sweat glands are also a remarkable feature. The gradual and painless enlargement of the axillary inguinal and cervical glands was not so marked as in the case lately described by Mr. Malcolm Morris.

I need hardly say that numberless remedies (internal and external) were tried with only temporary relief, and from experience gained during the long-continued treatment of this case I am of opinion that a soothing, protective, and supporting plan is the best.

THE FUNCTION OF THE COIL GLANDS.

By Dr. Unna,
Hamburg.

Dr. Unna said that his opinion on the function of the coil glands was the same now as formerly, notwithstanding Dr. Beattie's researches. The honour of discovering fat in coil glands was due to Professor Krause fifty years ago. He had examined the skin of the palm in thirty-seven cases, and found in all that the sweat glands contained fat. The mark of a clean finger showed the presence of fat when treated with osmic acid. The fat secreted by the coil glands was increased in eczema seborrhœicum. Drawings and microscopical sections were demonstrated to the Section.

Dr. Savill (London) would like to ask what was the relative quantity of fat secreted by the sebaceous and coil glands.

Dr. Colcott Fox asked Dr. Unna to describe his method of demonstrating fat in the tissues.

Dr. Norman Walker said that error had crept into Dr. Beattie's researches owing to his having used Müller's fluid, in which the tissues had been allowed to soak for many months.

Dr. Unna, in replying, said that the quantity of fat secreted at any given time by the coil glands was not a fixed measure. It was possible for fat to be absent from these glands as during excessive secretion of sweat, in which case the fat was swept out of the glands. There was a vast physiological difference between the sweat-gland secretion of fat, and the sebaceous-gland secretion. In the latter case the fat was formed by the actual destruction of protoplasm, in the former case the fat was expelled in minute drops from the protoplasm. Dr. Unna then entered upon a description of his method of demonstrating fat in the tissues. The essential points were that the amount of tissue to be examined be of very small dimensions, and as free from water as possible. Osmic acid attacked the dry parts readily, but the wet parts very slowly.

OBSERVATIONS ON THE INFLUENCE OF SOLAR RAYS ON THE SKIN.

By Robert L. Bowles, M.D., F.R.C.P.,
London.

A beam of light as it arrives from the sun appears elementary and white, but we know that it is a compound, and may be separated into its several elementary colours and properties by passing it through a glass prism, and thus a solar spectrum is formed. At the red end there is a dark portion representing waves of greater length

than those at the violet end; the former represent the dark or long heat rays, and the latter the light and so-called actinic or photogenic rays. The former indicate what we, by our senses, know as heat; the latter those phenomena of light and of a chemical character produced by light, as well as by invisible rays extending beyond the violet, the properties of which are best displayed by the effects of photographic art, and by those truly marvellous changes in the vegetable kingdom connected with the formation of chlorophyl and the deposition of starch. This beam of light then is a compound not only of colours, but also of three different forms of rays—heat rays, light rays, and chemical or photogenic rays, all three of different wave lengths and possessed of different properties, but all three in common full of "energy," excitors of electro-magnetic action, and convertible the one into the other, so that a beam of light has come to be regarded as "radiant energy."

Transparent substances transmit some of these rays and stop others; for example, rock salt transmits all forms of rays, while white glass is athermanous—that is, it does not transmit the dark heat rays (those long wave rays at the red end of the visible spectrum), whereas the light rays and chemical rays pass freely through. On the other hand there are substances, such as iodine dissolved in bisulphide of carbon, which stop the light and transmit the heat and chemical or photogenic rays, facts of vast importance when considering the effects of sun on plant and animal life.

Sun on snow burns the skin more quickly than sun on rocks, or in the heated valleys at a lower elevation, although one may feel the heat more in the two latter situations. It is when one reaches the snow that one adopts veils, masks, and snow glasses. This increased power of burning appears singular when one reflects that the heat rays must be occupied in the melting of the snow and thus rendered latent. Glassworkers, ironworkers, and others are constantly exposed to a heat of 400° to 500° F. and yet do not become burnt, and the enormous radiation from heated rocks and valleys, in addition to the direct rays of the sun, make up an amount of heat far greater than is ever experienced on even a very sunny snow slope, and yet one does not become sunburnt. The surface of the snow reflects, scatters, and disperses light, but certainly far less than it receives; for, as above stated, heat rays are absorbed and rendered latent by the snow melting and by evaporation. Experience fully corroborates this, for one may often lie on one's back and freely expose the face for long periods to the sun and yet remain unburnt. There must, therefore, be some other factor than heat alone.

Dr. Tyndall first drew my attention to the very interesting and significant fact that he was never more burnt on the Alpine snows than he was whilst experimenting with the electric light at the North Foreland Lighthouse, where there was no heat sufficient to produce such an effect, and where no snow was present.

So far, then, all evidence goes to prove that some other active principle must be at work besides heat to irritate the delicate arterioles and capillary vessels of the skin, and to cause them to fill with blood and exude those products connected with inflammation, giving rise to redness, swelling, blistering, and subsequent peeling of the skin. Sometimes, in peculiar conditions of the atmosphere the direct sun's rays will burn. I have met with some singular instances where several persons have been burnt by these direct rays on the same day, even in England, who had never previously suffered in that way. I am further aware that sometimes, not always, on a ship's deck in a dead calm one may be severely burnt, and that in boating on a river the same may frequently happen. These experiences do not, however, detract from the induction that there is in snow burning some cause in addition to heat which is constantly in operation; indeed, they suggest that the sun's rays are in some way, hitherto unexplained, at times acted upon by atmospheric, electric, or other causes, and brought into a condition similar to those rays which are reflected from snow. Sunlight reflected from freshly fallen snow acts much more energetically on the skin than that reflected from older snow.

If these premises are in the main correct, there are other matters of interest connected with snow burning, such as the modification of its effects by colour and complexion, or a special susceptibility of the nerves of the skin, its effects on the eye in producing snow blindness, the dark colour acquired in the Upper Alps by the chalets, where they are exposed to the combined influences of sun and snow, and the curiously brown colour of the complexions of those who spend their winters in the Engadine.

In June, 1879, a gentleman of very fair complexion and light eyes became extremely ill from the effects of sun burning. He had been up the Titlis on the preceding day; his face was immensely swollen, red, and painful, and his arms up to the elbow in the same condition, hard, and extremely painful. They felt benumbed, stiff, and useless; he had scarcely slept the preceding night in consequence of the pain and discomfort. The next day the parts were all covered with yellow blisters, and he felt very ill; the only parts not inflamed were those that had been protected by coloured spectacles. It appeared that he had turned up his shirt sleeves on ascending the snow slopes. He was quite ill, and confined to his bed for a time. Such cases as these are by no means uncommon during the climbing season in the Alps.

On a subsequent occasion, a few years later, I encountered the same gentleman at Bel Alp on the morning after he had made an ascent in the snow; again he was suffering severely from sunburn. The face was much swollen, but I observed that it was pitted in various parts, and that each pit corresponded to a freckle. The following day the face was more swollen and inflamed, and the third day the pitting had all disappeared. The brown pigment of the freckle had prevented the immediate influence of the light rays, but subsequently the freckles had become involved in the general inflammation.

Everyone knows the beneficial influence of a brown veil and brown glasses to protect the eyes, and I assumed that freckles must have a similar protecting influence. I determined to try the effect of colour on my own person. I painted my face brown, and on a brilliant day, with eighty other people staying in the hotel, ascended the Gorner Grat at a time when there was much snow. In the evening every individual who had been up the Gorner Grat (myself excepted) was smarting under the effects of sunburn. The twenty people who had kept near the hotel, although they had been fully exposed to the sun, were quite unaffected. On another day a lady wearing a red and-white striped shirt found on her return from the snow that she was suffering from sunburn on her neck and arms. On inspection it was found that she was burnt in stripes; beneath the red stripe the skin was perfectly white, whereas under the white stripe it was everywhere crimson. I observed, however, that the white stripe was not so closely woven as the red, so some allowance may be made for that fact.

Since then I have performed many experiments with colours on myself, on friends, on ladies, when I could catch willing ones, and on boys: these experiments all corroborated the results of those of the day on the Gorner Grat: where paint was, there was no burning, and where it was not, there was inflammatory action more or less severe. Colour, then, stops that energy in reflected solar rays which gives rise to inflammation. In connection with this I took the temperature, as carefully as one could under the circumstances, on rocks, on grass, and on snow, at the same moment and at the same elevation, and I quite satisfied myself that on snow, where one burnt most, the temperature was lowest.

The Hon. Ralph Abercromby, in a letter to *Nature*, April 15th, 1886, relates, as one of those strange anomalies in which physiological experience contradicts the teachings of pure physics—first, that in Morocco and all along the north of Africa the inhabitants blacken themselves round the eyes to avert ophthalmia from the glare of the hot sand: that in Fiji the natives, who are in the habit of painting their faces with red and white stripes as an ornament, invariably blacken them when they go out fishing on the reef in the full glare of the sun; and, lastly, in the Sikhim Hills the natives blacken themselves round the eyes with charcoal to palliate the glare of a tropical sun on newly-fallen snow.

In the British Medical Journal of June 24th, 1893, is a paper on Eye Symptoms after Witnessing Electric Operations, by Mr. Bendelack Hewetson, of Leeds. He relates cases of electrical engineers whom he found suffering from severe pain in the head and eyes, unable to open their eyes, the blepharospasm being so severe; the conjunctiva injected

and the pupils contracted and fixed. All this arose from exposure to the electric light rays, and rays from the molten iron. Six or eight hours afterwards the pain had gone, the conjunctiva was less injected, the vision was perfect, and the pupils and tension normal. From the rapid recovery of the vision, and from the utility of the application of cocaine, it is probable that the chief suffering arose as in photophobia, from the irritated filaments of the fifth and vasomotor nerves, and it would be worth trying how much suffering might be saved by painting the neighbourhood of the eyes and the eyelids with some one or other pigment, like the natives of Sikhim, for the prevention of snow blindness.

In my experience sunstroke is not heard of in mountainous regions, and Mr. Ralph Abercromby, who has travelled much, tells me that equatorial regions are not the worst for sunstroke, but subtropical and semitropical dry countries, such as Scinde, South-Western Bengal, the United States, and Italy.

Lately, however, I have been struck by an account by an Indian officer (signing himself "R. E."), of his suffering from sunstroke and his cure, on lines similar to those connected with sunburn and snowburn. Being an amateur photographer, "R. E." conceived the idea that as red or yellow stopped the chemical rays, he would line his clothes with yellow, and he never suffered again from sunstroke or sun fever, except on one occasion when he unwittingly went without his coloured clothes.

Rays reflected from snow have a special influence in promoting pigmentary changes in the skin. Unna says[1] that "pigment does not originate in the epidermis, but is transported thither from the cutis." This pigmentary deposit is then derived from the vessels, and there can be little doubt that it is an effort of Nature to protect by colour the delicate nerves and vessels of the skin from further irritation. This irritation is excited in the first instance by the action of rays of a certain kind on the living tissue, acting directly on the deep cells of the epidermis, and indirectly through them on the afferent and efferent vasomotor nerves; or they might act directly on the latter, and the deep cells of the epidermis be affected indirectly by the local congestion.

Chalets in the less elevated regions, which are less exposed to the snow, do not become brown, or only very little so; but, as far as I have seen, and my experience is now considerable, they invariably do so amongst the snows. I have investigated this point with some care, and found that the parts of the chalets which are covered by the snow four or five feet from the ground, and the north sides, and those parts so shaded that no rays reflected from the snow could reach them were of a dirty white colour, as were also the insides of the chalets and shaded parts between the timbers.

In a few I found even the north sides brown, but then there was, near by, a bank sloping at such an angle that the sun's rays must necessarily be reflected from the snow on to the north side of the chalet. At Zermatt, Mürren, and Bel Alp are many illustrations of this interesting observation. There is yet another point of interest: invariably over the doorways of the cow chalets the timber is white, even where most exposed to the sun and snow. At first I wondered whether this was due to some chemical change produced by the carbonic acid of the expired air of the animals, but I am disposed to explain the white colour by the constant presence of a very large amount of water vapour emanating from the upper part of the doorway, more than to the carbonic acid.

Since then, during my winter visits to the Alps, I have found that at that period of the year the water vapour over the doorways of cattle chalets was frozen on to the wood, forming a layer of ice or rime of varying thickness, and I then supposed that the penetration of this by the light rays, explained the phenomenon, but, on scraping off the white surface, it was found to be soft and moist and greenish underneath, suggesting some vegetable growth. Through the kindness of Dr. Oliver, Professor of Botany at University College, this was examined, and found to be full of micrococci and fungous growth, both between and within the woody fibres, most of which had been deprived of their natural qualities and converted into pure cellulose; so that this whitened surface (cellulose) was the result of, perhaps, many causes—warmth, moisture, carbonic acid, light reflected by ice, and parasitic microbes and fungi.

In conclusion, then, I may state generally:

1. That heat *qua* heat is not the cause of sunburn.

2. That there is strong evidence for believing that it is caused by the violet or ultra-violet rays of light reflected from the snow, which reflected light is not necessarily of the same quality as that which is incident.

3. Captain Abney finds that the violet or ultra-violet rays are very strong at high altitudes, and believes that altitude has much to do with sunburn.

4. That altitude alone does not explain sunburn, for one may not be sunburnt on rocks, say, at 10,000 feet, and yet be immediately affected on descending to a glacier 3,000 or 4,000 feet lower down.

5. That sunburn and snow blindness arise from similar causes, and that sunstroke may be associated with them.

6. That rays from the electric light produce much the same results as sun rays reflected from snow.

7. That the bronzing of the skin and the browning of the wooden chalets are probably produced by rays reflected from snow.

The varied experiences just related would probably all be readily explained by a few simple physical laws—for example, glass is athermanous to the dark or long heat rays which arrange themselves at the red end of the spectrum; but glass, on the other hand, transmits the light rays, which are readily decomposed by objects on the farther side of it, and there degraded into long heat rays, which are now radiated as sentient heat. This is well illustrated in a greenhouse. The light rays are alone admitted through the glass, and practically all the energy in the house is degraded and then radiated as heat rays from the earth and other objects within the greenhouse which have been agents for the degradation of the "light energy" into the heat form. After a similar fashion the transparent epithelial layer of the fair skin will transmit the light rays to the nerves, vessels, and other tissues immediately beneath; the light rays would there be degraded into dark or long heat rays, and excite in the very vessels themselves those primary actions which lead to inflammation and its consequences. Black skins, on the other hand, and various pigments would absorb these light rays and stop their transmission to those vital parts which may be excited to inflammatory action.

If the sun's rays will produce sunburn, erythema, eczema solare, inflammation, and blistering, it is clearly capable of producing deep and intractable ulcerations of a low and chronic nature. It only requires a peculiar susceptibility in the individual—that unknown quantity, "idiosyncrasy"—to allow the graver local changes to occur. The same may be said of the general conditions of sun exhaustion, sun fever, and sunstroke, illnesses due as much, perhaps, to the physical effects of the sun's rays as are the local or surface conditions which lie more especially within the cognisance and province of the dermatologist.

Dr. UNNA said that xerodermia had no connection with the heat rays, only with the chemical rays. He had found that an extract of cucumber of pale yellow colour was sufficient to cut off the chemical rays. This afforded considerable help in the treatment of these cases. Cases of oversensibility of the skin to the action of the chemical rays were likewise benefited by this substance, which might be advantageously used in the treatment of other cutaneous diseases such as eczema.

Dr. ROBERT L. BOWLES, in reply, after referring to the interesting fact that Dr. Unna had made independent observations on the same subject, and had confirmed these views, showed that many colours, especially the shades of red, produced the same effects as carmine, and avoided the irritation of the branches of the fifth nerve, and that quite possibly the perfect protection of all the skin nerves might prevent sunstroke and sun fever. It was also possible, too, that the severely destructive conditions of skin shown by Mr. Hutchinson might be started by the sun, and then followed by one or other of the mischievous microbes which were always ready to settle on an injured part.

[1] *Selected Monographs on Dermatology*, New Sydenham Society, 1893, p. 118.

THE TREATMENT OF PSORIASIS.

By James Startin, M.R.C.S.,
London.

Mr. Startin read a paper on psoriasis, in which, after describing the disease and mentioning the varieties in character and distribution, he dwelt on the difficulties which stood in the way of the general employment of chrysophanic acid. Dermatologists were much divided as to the efficacy of the drug, but all agreed that it should be used with caution. Mr. Startin had found that the best way to use chrysarobin or chrysophanic was as a solution in liquid gutta percha or some other varnish, which could be applied to the patches easily and exactly. When thus used it did not irritate the surrounding skin nor stain the clothes. The value of tar was generally recognised, and Mr. Startin had found creasote, oleum cadini, or oleum rusci, or the tincture saponis viride cum picis (Hebra) useful applications. Intractable patches might be blistered with blistering fluid, and carbolic acid was not only curative, but allayed the itching. Before making local applications it was essential to remove scales. Tar baths and baths made by adding liquor carbonis detergens to the water and mixing well were very efficacious.

The President said that he now used arsenic internally much less frequently than at one time. He removed the scales after soaking in oil or soft soap, and then employed a creolin ointment with or without salicylic acid.

Dr. Eliza Walker Dunbar said that she had not been able to use chrysarobin in her practice except in very small quantities on account of the erythema which it produced.

Dr. Leslie Roberts said that chrysarobin was our most valuable drug in the treatment of psoriasis. The occurrence of conjunctivitis and dusky erythema of the face was an accident which might be easily avoided by properly cautioning the patient. It was due to bringing the ointment accidentally into contact with his face. In order to obtain the best results, rather large quantities had to be used. The occurrence of dusky erythema of the body around the psoriasis patches was a welcome sign, as the efficacy of chrysarobin was in proportion to the amount of dusky erythema produced. When this erythema was not produced the effect of the drug was very slight or even *nil*.

Dr. Stopford Taylor observed that he could not get his patients to confine themselves to bed for the treatment of this disease. He had given up the use of chrysarobin in hospital practice.

Dr. Stephen Mackenzie, as a result of considerable experience, had come more and more to believe in local treatment and less in constitutional. He found that where the patient would submit to confinement to bed, and as a rule he found no insuperable difficulty in getting patients in private or the hospital to submit to this, enveloping them in a lotion of glycerine of subacetate of lead quickly removed the scales and reduced the hyperæmia; in a few days a simple soothing ointment sufficed, the patient being well in two or three weeks. Whilst admitting the efficacy of thyroid extract, he thought it was a remedy only to be used with caution, and that we had local treatment in which we had confidence which was quite as efficacious if carried out as carefully.

Mr. Hancocke Wathen drew attention to the value of the pigmentation produced by chrysophanic acid as showing where the disease had been, the area being white compared with the dusky tint around.

EPIDEMIC SKIN DISEASE.

By Dr. Unna,
Hamburg.

Professor Unna presented a paper prepared by Dr. Echeveria in his laboratory, entitled "A Histological Study of Dr. Savill's Epidemic Skin Disease." The author describes in detail his methods of preparation and the results obtained, and arrives at the following conclusions: (1) That the epidemic disease, from a histological standpoint, is a totally different process from chronic eczema; (2) that it belongs, nevertheless, together with chronic eczema, to a larger group of inflammatory diseases of the skin, which show hypertrophy and scaling of the epidermis, with superficial cell infiltration of the cutis, that is, to the group of catarrhs of skin, and among these to the smaller group of parakeratoses (Auspitz-Unna), because the special feature characterising the parakeratoses, namely, loss of keratohyalin in the epidermis, is common to both diseases; (3) that Savill's disease differs from chronic eczema, besides other minor histological features, principally by a remarkable and new sort of degeneration of the nuclei of the prickle cells (namely, the peridiaphania of the nuclei).

Demonstrations.

Dr. Phineas S. Abraham demonstrated an instrument for applying remedies to the scalp under pressure, which he had found useful in the treatment of ringworm.

Mr. Malcolm Morris showed an unusual form of urticaria in a man in whom the wheals, after disappearing, left scarlet-like spots.

Dr. Unna (Hamburg) demonstrated the acne bacillus, which, he said, was constantly found in this disease.

Dr. Unna also demonstrated several sections illustrating micrococci in chronic eczema. He said that he had investigated histologically more than seventy cases of chronic eczema, and in all he had identified the fungus. Micrococci in solid soils were peculiar in the close manner in which they were aggregated together, forming mulberry-[illegible]. This appearance was seen in vesicles the contents of which had coagulated. In fluid vesicles they were scattered [illegible]. He had cultivated them, and found that they required oxygen for their existence; they never [illegible]. These two points were of practical importance in the treatment of eczema.

Dr. Unna said that a special bacillus of trichorrhexis had been discovered by Dr. Menachem Hodara, of Constantinople, in which city an epidemic of trichorrhexis had occurred among ladies. Dr. Unna demonstrated pure cultures of the bacillus.

Dr. Radcliffe Crocker referred to the discovery by Ramond of an organism which occurred in pubic hair.

DISEASES OF CHILDREN.

John Edward Shaw, M.D., Vice-Presid[illegible].

APPARATUS FOR PROLONGED ARTIFICIAL FORCIBLE RESPIRATION.

Presented by Dr. William Perry Northrup,
New York.

The apparatus which I have to demonstrate is O'Dwyer's improvement on that devised by Dr. George E. Fell, of Buffalo, New York. Dr. Fell successfully employed his method on a series of opium poisoning cases.[1] Dr. O'Dwyer says: "In the performance of artificial respiration by any means it is important to remember that all we have to do is to get air into the lungs and give it sufficient time and room to escape, the power generated and stored up in overcoming the resistance to inspiration being amply sufficient to carry on expiration."

Dr. Fell's method is identical with that employed in laboratories to carry on respiration in animals, forcing the air into the lungs by means of a foot bellows, the connection between the bellows and the lungs being effected by means of rubber tubing attached to a cannula in the trachea or to a mask applied over the mouth and nose. To both of these means of making the connection there are serious objections. "In one, not only has tracheotomy to be performed, but the wound around the cannula must be made airtight and the trachea either tied or tamponed above the incision to prevent the air from escaping upward through the larynx." Again: "In forcing air through the mouth or nose of an insensible patient the tongue, unless secured, is almost certain to cause obstruction or the vocal cords may be forced together by the

[1] Fell Method—Forced Respiration, read before the Section of General Medicine, Pan-American Congress, Washington, D.C., September 7th, [illegible].

inrushing air and act as a valve, as in paralysis of the abductor muscles, because there is no expansion of the glottis as in normal inspiration. Should the larynx become obstructed from any cause the stomach will be inflated instead of the lungs."

The apparatus is practically the same as Dr. Fell's, except that Dr. O'Dwyer has substituted an intubation attachment, and so obviated the necessity for tracheotomy and removed the embarrassments of relaxed tongue and larynx. The apparatus consists of a foot bellows, tubing, and intubation attachment. The laryngeal end of the metal intubation tube is curved on a right angle, tipped with a conical head, and is designed to be of the right size to wedge itself into the larynx and prevent air from returning between it and the laryngeal wall. The proximal end is practically bifurcated, one branch receiving the ingoing air from the bellows and tube, the other branch stopped with the operator's thumb (which is to act as a valve) serves for the exit of air.

Illustrative Case: Brain Tumour: Apnœa.—Artificial forcible respiration with O'Dwyer's modification of Fell's apparatus, continued twenty-five hours. Presbyterian Hospital. The patient, a small woman, had been about the ward as usual for several days. On this day, not feeling quite so well, she preferred to remain in bed. At noon, suddenly, while lying in bed, she became unconscious; respiration became slow, not laboured, and in a few minutes ceased altogether. The heart continued in good rhythm and fair force. Certain interesting nervous symptoms occurred, but are not pertinent to our subject. Suffice it to say that in less than twenty-five minutes her breathing had ceased, while her heart laboured on. The Sylvester-Hall method of artificial respiration was begun at once, and a few minutes later replaced by the method now described.

The house-physician, without any experience in intubation of any kind, without any instruction, successfully and promptly inserted the tube in the woman's larynx, gently inflated the chest sixteen times a minute, and by the time Dr. O'Dwyer had myself arrived his patient had been breathing deeply and regularly for several hours, the pulse, aided by cardiac stimulants, beating with good force and rhythm. The patient was in profound coma, the temperature subnormal, the skin pale. The points of interest were briefly these: 1. Artificial respiration was kept up for twenty-five hours, the patient at the end seeming to be in about as good condition as at the beginning. In order to prevent drying of the air passages sterilised water was at intervals thrown into the tube with a small glass syringe. 2. The respiration was continued with ease, part of the time by one individual, part of the time by two.

First the house-physician superintend the breathing, then each of his assistants; at length an orderly took charge; occasionally a female nurse took a turn, and before the twenty-five hours were passed everybody who had a desire to practise had learned all he or she wished.

After twenty-four hours, the prognosis being absolutely grave, it was concluded to stop artificial respiration. For twelve minutes the heart continued to beat as determined by the stethoscope, and then ceased. For further testing the effect of continued respiration the tube was reinserted, and the lungs regularly and deeply inflated as before. Again the heart began, and came up to its former standard of excellence in work, and the patient was as good as ever in the last twenty-four hours. After twenty-five hours of artificial of forced respiration by this method, the patient was allowed to complete her history. Subsequent *post-mortem* examination revealed no abrasion of the larynx or pharynx. The lungs were normal. They seemed rather "dry." Beyond this nothing could be said of them.

It is thought that this apparatus may prove of service to surgeons in operations about the mouth, preventing blood from entering the air passages, while providing for an excellent normal respiration, also for cases of suspended respiration in ether and chloroform narcosis. In surgical work a lateral curve can be given to the proximal end if desired to make room. In surgery it is expected of course that the patient is capable of automatic respiration, the anæsthetic with air is inhaled through the tube, the apparatus simply serving to keep blood and vomitus from the larynx.

To physicians it will suggest itself in opium poisoning and the like. All large hospitals sooner or later find opportunity for the use of such instruments. This apparatus has been brought into play several times at the Presbyterian Hospital and at the Foundling Asylum.

The case cited above lived along through my service at the hospital, and died in the service of my colleague, Dr. Wm H. Flint, with whose consent I report it.

THE STUDY OF CHILDREN'S DISEASES AND ITS PLACE IN THE MEDICAL CURRICULUM.

By W. Barrett Roué, M.D., M.S.,
Physician Bristol Children's Hospital.

I should be sorry if these few words of mine were to be taken to mean that I am an advocate for the transference of the study of children's diseases into a so-called speciality. I am not; but the healing art is ever growing and enlarging, and it seems now pretty well admitted that few of us can hope to fill more than moderately well the combined offices of physician and surgeon, so that by general consent these positions in connection with hospital practice, at any rate, have been separated, to the great advantage, I think, of both. But this great division once admitted and approved, is there any one factor that can be considered of sufficient importance to account for the subdivision of these into specialities; I think there is. I fear it is the want of good all round study upon the part of medical students, and consequent deficiency of knowledge in certain branches of medicine and surgery, that makes the specialists. It seems that most students work to pass and to pass only, and as long as examinations can be got through without any attention being paid to certain subjects, so long will those subjects be neglected. Junior practioners know, too, that they can rely on outside help in those cases where any difficulty arises, and this constant reliance has unfortunately educated the public mind in the supposed necessity of specialism. Of course, I am not now speaking of cases demanding dextrous manipulative skill, or of obscure cases of difficult diagnosis, but of cases to which a practitioner, say of ten years' standing, would never think it needful to call in a special consultant, but would treat upon his own responsibility as the result of his past experience. But it has taken him ten years of private practice to learn what he could have mastered in as many months in the wards of a special hospital. Heaven forbid that I should make any attempt to add to the already heavy burden that the modern medical student has to bear, yet, in spite of this assertion, I consider it a great misfortune for him, and a neglect of his interests, that the study of children's diseases has not been made compulsory. There are other subjects he is now examined in which might have been exchanged for it with advantage.

Professor Huxley ended his address to the medical students at University College, London, with these words: "I entertain a very strong conviction that anyone who adds to medical education one iota or tittle beyond what is absolutely necessary, is guilty of a very grave offence. The subjects with which you have to deal being so difficult, their extent so enormous, and the time at your disposal so limited, I could not feel my conscience easy if I did not, on such an occasion as this, raise a protest against employing your energies upon the acquisition of any knowledge which may not be absolutely needed in your future career."

Now this is a very strong protest by one capable of judging against the evil of overloading the medical curriculum. But there is another side to the question, and had I the power and ability I would like to make an equally strong protest against neglecting to include in the list of compulsory studies, one that is of the greatest importance both to the profession and the public, I mean the study of children's diseases. Few branches of the healing art are so neglected by us in our student days, and yet in our early years of practice, perhaps children constitute two-thirds of our patients. Whilst speaking on the subject of our "Methods of Medical Study," I should like to add that I am not at all sure we have done well in altogether abolishing the "apprenticeship system." It had its difficulties and dangers, and its weak side; but surely we have erred in going altogether to the other extreme. I think there were much better chances of seeing certain diseases such as measles, scarlet fever, whooping-cough, chicken-pox, and the like, in company with a busy and competent general practitioner, than there are now under the present system, to say nothing of opportunities for becoming dextrous in many a minor surgical procedure. I hold a strong opinion that a partial return to this discarded apprenticeship system would be a step in the right direction. This return and the compulsory study of diseases of children are the additions to the medical curriculum which this paper is intended to suggest, with hope and confidence to the "powers that be."

Mr. J. Ewens emphasised the remarks made by the speaker, especially in reference to a quasi-apprenticeship and compulsory attendance on a hospital for children's diseases. From want of experience in children's diseases, young men of high medical and surgical knowledge often fail in diagnosing between the exanthemata, and in dealing with young children from want of manipulative tact, often find a

difficulty in estimating the situation and amount of pain; for example, in a limb which has sustained an accident, or in joint disease.

Remarks were made also by Mr. F. Eve, Dr. Elliott, Dr. Blackader (Montreal), and Mr. Luke Freer.

THE TREATMENT OF SPINAL CARIES AND ITS RESULTS BY LAMINECTOMY.

By Alfred Parkin, M.S., M.D.Lond., F.R.C.S.Eng.,
Surgeon to the Victoria Hospital, Hull.

There is much divergence of opinion at the present time as to the value of laminectomy in cases of paraplegia due to spinal caries. Some maintain that extension of the spine for a lengthened period, in some instances for one or two years, results in recovery; others rely upon an early laminectomy, with removal of the cause of the paraplegia. Statistics are of little use in deciding the point in question, for they include isolated cases and take no count of failures that have not been put on record. The following six cases have been under my care, and, presenting as they do many points of interest, I purpose to record them briefly, and hope that the conclusions naturally arrived at may be justified by future results.

Case I.—Male, aged 8, admitted into the Victoria Hospital, Hull, on September 15th, 1892, for partial paraplegia of two months' duration. This case was reported in full in the British Medical Journal for April 15th, 1893. Laminectomy was performed on October 13th, 1892. A large mass of caseous material in direct contact with the anterior surface of the cord had obviously compressed the cord against the lamina. All the caseous matter was removed, along with many pieces of dead bone, some ½ inch long, leaving a cavity in the bodies about 1½ inch long and 1 inch deep. The progress of the case was very satisfactory; the knee-jerks returned, the rigidity disappeared, sensation became normal, and at the end of six months the boy was running about at the seaside. A small sinus persisted at the site of the operation, and he has recently had some further tuberculous trouble in the neighbourhood, along with caries of one of the ribs, necessitating further treatment. At the present time the boy is in excellent health, there has been no return of the paraplegia, and he can walk about without the least difficulty. The spinal deformity remains the same.

Case II.—Male, aged 9, came under my care in May, 1893, for paraplegia, which had come on gradually for some months. He was said to have had caries of the cervical spine since 3 years of age; it had been treated in the usual way with jury-mast, etc. On admission he was cyanosed, and numerous *râles* could be heard all over the chest. The diaphragm was not acting, but there was exaggerated movement of the chest with over-action of the accessory respiratory muscles. The legs were quite rigid, and it was only with great difficulty that the patient could stand up and take a step or two forward. The knee-jerks and ankle-clonus were absent. The superficial reflexes were present, and sensation was good all over. The sixth and seventh cervical spines were very prominent, and above the sixth there was a deep depression caused by a displacement forwards, easily recognised by tracing on each side the line of the transverse processes. As a result of this the occiput was only 2 inches from the sixth cervical spine, and the chin was on a level with the top of the sternum. Over the affected area there was slight tenderness.

Extension and counter-extension was tried for three days, but at the end of that time the respiratory difficulty was greater and the paraplegia complete. The abdomen was distended and the condition of the child extremely critical. On May 31st the sixth cervical spine and laminæ were removed and the cord exposed. At its upper exposed part it narrowed considerably, and passed upwards and forwards into a mass of bone and fibrous tissue, the condensed remains of the fourth and fifth vertebræ, which, being displaced forwards, caused quite an acute bend of the cord at this point. The cord was completely freed from all compressing material at the sides and posteriorly up to the third vertebra, and its lower part was then felt to pulsate freely, whereas when first exposed no pulsation could be felt. At the close of the operation the abdominal walls moved faintly forward in inspiration, indicating some slight movement of the diaphragm.

The day after the operation the rigidity of the limbs was less marked, the knee-jerks had returned, and the abdomen moved well in inspiration. The wound healed quickly, all the lung signs disappeared, and the patient rapidly improved, so that at the end of two months there was no trace of paralysis, and he was one day found sitting up in bed without any support to the head. For about a fortnight after the operation there was partial paralysis of the left deltoid, biceps, and interrossei, due to some injury to the cervical nerve roots whilst probing the bodies of the vertebræ.

Unfortunately, about the end of July, just when the patient could walk fairly well, he developed symptoms of tuberculous meningitis, and later refused food on account of difficulty in swallowing. The symptoms became more pronounced, double optic neuritis was found, and he died on August 20th, 1893, nearly three months after the operation.

Post mortem there was found to be a large caseating gland to the right and in front of the bodies of the third, fourth, and fifth vertebræ. These vertebræ presented evidences of old caries, were displaced forwards, and were reduced in size to small wedge-shaped masses. There was no caseation or any evidence of recent caries. The cord was quite free from pressure, and seemed to be of the usual size; posteriorly it was protected by a firm mass of fibrous tissue, with some pieces of bone left at the time of the operation. The brain presented the usual appearance of tuberculous meningitis.

Case III.—Female, aged 8, admitted under my care in June, 1893, for spinal caries of three years' duration. There was a large boss, extending from the seventh dorsal to the second lumbar vertebræ. Besides the kyphosis and consequent lordosis in the lumbar region, there was advanced scoliosis, the dorsal and lumbar spines being convex to the right, the cervical portion of the spine and the head being bent in the opposite direction.

The child walked awkwardly and with much difficulty, so much so that she had been obliged to use crutches for four months previous to admission. There was some rigidity of the legs, and the knee-jerks, though present, were feeble. The superficial reflexes were normal, and sensation unimpaired. Extension by weights was tried for a month, at the end of which time waiking was even more difficult, and both legs were much wasted. On August 2nd, the spines and laminæ of the tenth, eleventh, and twelfth dorsal vertebræ, forming the most prominent part of the curve, were cut away, and a considerable quantity of caseous material, in contact with the front of the cord, was removed from the bodies of the tenth and eleventh vertebræ.

The next day both knee-jerks were easily obtained, and the rigidity of the legs was less marked. The wound healed well, a small sinus persisting until October 9th. There was no rise of temperature at any time. Extension of the spine by Hilliard's apparatus was applied on September 16th, and on October 25th a Sayre's jacket was put on whilst the patient was slung face upwards by a broad bandage passing under the most prominent part of the boss, so that the spine was, as it were, unfolded, the head and heels only touching the ground. This mode of application I have adopted in several instances without the patients being at all inconvenienced, and I look upon it as a valuable means of diminishing spinal deformity.

The child was discharged on November 13th, 1893. The lateral curvature had been quite corrected and the dorsal prominence was much diminished. The child at this time was in excellent health and could walk well.

I regret to say that this patient has, during the last month, again come under my care for a psoas abscess. Immediately after her discharge her mother removed the plaster jacket and dragged her about the country for begging purposes, frequently depriving her of food for days together. There is no lateral curvature, but the dorsal boss is more prominent, and the patient, although improving steadily, is in a less satisfactory condition than on her discharge. This, under the circumstances, is hardly to be wondered at.

Case IV.—Male, aged 10, first came under my care in December, 1892, for painful micturition. There was at that time loss of mobility in, and tenderness over, the dorso-lumbar portion of the spine. He was kept lying down for a month, and discharged in a Sayre's jacket. He attended regularly as an out-patient, and in March, 1893, the knee-jerks were very brisk, ankle-clonus was present, and the superficial reflexes were diminished. He was admitted for the third time on May 5th, 1893, when he walked stiffly and with difficulty. There was slight prominence of the eleventh and twelfth dorsal spines. Both legs were rigid, but could be bent up by the patient. There was well-marked knee- and ankle-clonus. The plantar, abdominal, and epigastric reflexes were absent. There was complete anæsthesia and analgesia up to the nipples in front and to about the angles of the scapulæ behind. He complained of shooting pains in the back.

Extension was tried for a month, and at the end of that time the paraplegia was even more marked. He could not raise himself in bed, and, when lifted up, he could not stand.

On June 14th the lower dorsal region of the spine was explored, and on grasping the eleventh and twelfth spines it was found that these two vertebræ could be moved laterally on each other to an unusual extent. Both these spines and the corresponding laminæ were removed, and the cord bulged freely up into the wound as if possibly relieved from pressure, but no caseous matter was found in the bodies. Some granulation tissue was removed from between the two centra. The dura mater was not opened. The rigidity of the legs had quite gone next day, and did not return. On August 2nd he was able to use his legs, and in a few days could lift them up easily. The wound healed quickly, and there was no rise of temperature. On June 18th the knee-jerks were normal, and there was a slight plantar reflex. On June 25th sensation had returned on the front of the thighs and inner sides of the legs. Ankle-clonus no longer obtainable. A Sayre's jacket was applied on July 8th, and on the 23rd the boy was allowed to walk, which after a few trials he managed without crutches. On August 2nd he was seen as an out-patient. He could walk well, and even run short distances. Sensation good as high as the groins. By the end of October sensation was quite restored, and the patient left off wearing his plaster jacket. The spine was not only perfectly stable, but had regained its mobility entirely. The patient is still under observation, and in all respects remains perfectly well.

The exact explanation of all the points in this case is not an easy matter. There was distinct caries between the eleventh and twelfth dorsal vertebræ, and in all probability sufficient displacement to set up a myelitis, not only affecting the motor columns of the cord, but also ascending along the posterior sensory tracts.

Case V.—Male, aged 3, admitted October 19th, 1893, for cervical caries of uncertain duration. His head was said to have been drawn back for about two months. The seventh cervical and first dorsal spines were prominent, and above them was a deep depression similar to that in Case II. The head was kept fixed, there was much pain on rotation, and the chin was 1½ inch below the level of the top of the sternum. The dorsal and lumbar spinal curves were obliterated. The child could not walk well, and was much emaciated. The knee-jerks were absent, the other reflexes normal. The head was kept fixed by sandbags, and the child as still as possible for three months, but during this time there was little or no improvement. During my absence he was discharged, but on readmission in February he could not walk. The knee-jerks were absent, there was no ankle-clonus, and the plantar reflexes were slight; the legs were much emaciated, and as the child lay in bed they were kept everted and motionless; there was no loss of power in the arms, and sensation was good all over. The abdomen was much distended and the superficial reflexes absent. In inspiration the upper part of the chest did not move, and the lower ribs were pulled in; respira-

tion was carried on only by the diaphragm; there were numerous *rales* in the chest.

On February 10th the cervical spine was explored, and the laminæ and spines of the sixth and seventh cervical vertebræ removed. The cord could not be felt to pulsate until the upper laminæ had been taken away. There was evident caries of the fifth and sixth cervical vertebræ, which were displaced forwards on the seventh, so that an acute bend of the cord resulted at the junction of the sixth and seventh. No carious matter was found, but some granulation tissue was removed from between the affected vertebræ. The subsequent course of this case was very satisfactory. Two days after the operation the upper part of the chest moved forwards in inspiration, and in the course of a few weeks the thoracic and abdominal paralysis quite disappeared, and the knee-jerks returned. The wound healed quickly, and never gave any trouble. The child began to move his legs at the end of the first week, and though convalescence has been somewhat tedious and slow, the present condition is exceedingly satisfactory. On April 19th he was found to be sitting up in bed without any support for the head, and he can now walk quite well by himself, and is rapidly gaining weight. The chin is now 1½ inch above the level of the sternum, and the patient can move his head in any direction; he rolls about all over his bed for the sake of amusement.

Case VI.—Female, aged 8, admitted under my care February 27th, 1894, for caries of lumbar spine of two years' duration. For a year the child had walked badly, and had complained of severe pain in the legs.

There was a prominent boss in the lumbar region extending from the last dorsal to the sacrum. The legs were rigid but could be drawn up with, however, much loss of power. Walking was possible only when the child had some support. Bowels and bladder acted involuntarily; knee-jerks absent. Plantar reflexes absent, but other reflexes normal. Sensation of feet and legs impaired.

On March 13th the spines and laminæ of the second and third lumbar vertebræ were cut away, and a considerable quantity of caseous matter removed from the corresponding bodies. This caseous matter was lying in contact with the dura mater. The next day there was a good right knee-jerk, and both plantar reflexes had returned. The wound did not heal at all well, its edges took on a tuberculous action, and have had to be twice scraped under chloroform. At the present time it is soundly healed except for the small sinuses. Sensation gradually returned, and at the end of a month the legs were no longer rigid, could be easily drawn up, both knee-jerks had returned, and the incontinence had disappeared.

Convalescence has been retarded by the formation of a psoas abscess, which was drained. At the present time there is little or no discharge from the sinuses, and the child is gaining flesh rapidly. As there is such a marked tuberculous tendency, I am keeping her in the recumbent position for a much longer period than I usually do, but I have no doubt that in a few weeks she will be able to go to a convalescent home.

The paraplegia in these cases seems to have been caused in three different ways:

1. By the direct pressure upon the cord of a mass of tuberculous granulation tissue or a mass of caseous material, as in Cases I, III, IV, VI.

2. By a displacement of the bodies of the vertebræ and consequent bending of the cord or compression of the cord by bone, as in Cases II and V.

3. By a gradual constriction of the cord by newly-formed fibrous tissue, as in Case II, a condition first described by Macewen (external pachymeningitis).

Of these, the first is the commonest condition, and is easy to understand. A tuberculous deposit in the body of a vertebra as it enlarges may make its way posteriorly and so press directly upon the cord; should it, however, open out on the lateral aspect of the centrum, the pressure backwards is relieved, there being much less resistance towards the abdomen than towards the laminæ, and a spinal abscess results. It is a very rare condition to find patients with spinal abscesses suffering from paraplegia also; obviously it is only when the sides and front of the affected vertebral column are intact that paraplegia is likely to occur. This is an important factor in the stability of the spinal column after laminectomy.

When considerable deformity of the spine is present, there in all probability has been sufficient repair going on at the front and sides of the spine to prevent the caseous matter obtaining an exit in these directions. All the caseous cavities met with in my cases were bounded all round by a bony wall. What the exact changes are in the spinal cord itself resulting in various degrees of paraplegia is a subject which scarcely admits of discussion in this paper. The clinical conditions of my patients have been variable, not only in the amount of paralysis and anæsthesia, but also in the presence or absence of knee-jerks and ankle-clonus. Few patients that I have seen have had a typical spastic paraplegia; many have had paralysis without rigidity, and with complete absence of knee-jerks. Pain is seldom complained of unless there is actual compression of the nerves themselves.

It will be seen that in four of the six cases I tried extension and counter-extension for varying periods, and in no case did any good result; in fact the patients got worse whilst under observation. Recumbency is, of course, a necessary part of any treatment. I may have been unfortunate in the results of extension, but I cannot imagine how it can be of much use except perhaps in cervical caries, and both of my cervical cases were too acute to admit of long delay.

When the interior of a centrum is carious I fail to see how any amount of extension can benefit a patient except by the delay allowing the caries to extend to the outside of the centrum, so relieving the pressure on the cord. This, I take it, is what usually happens when such treatment is adopted for a long period. Dr. W. Thorburn, in his recent lectures at the College of Surgeons, advocates extension for so long a period as eighteen months, and quotes Meyer as saying that 55 per cent. from a series of 218 cases so treated recovered. Unfortunately Meyer also states that 41 per cent. of these patients were lost sight of or had not yet recovered, and Dr. Thorburn says, further, in patients so treated relapses are unquestionably common, and recovery is rarely, if ever, absolutely perfect.

Contrasting such results with those obtained by Mr. Lane in his series of eleven cases read before the Clinical Society in October, 1891, in which a complete laminectomy was done, that is, not only the removal of the laminæ to relieve the pressure on the cord, but also a careful search for caseous material and as far as possible its entire removal, one cannot but be struck both by the immediate benefit derived as the result of such treatment and by the permanency of the results. Caseous masses in the spine have been tolerated because they were thought to be inaccessible; in other regions of the body they are said to demand immediate removal wherever this is possible.

Besides the relief of paraplegic symptoms the performance of laminectomy and the removal of the caseous matter appears to have an important effect on the tuberculous disease. Cases of spinal caries so treated get well quicker than with the usual treatment, although as a rule they are the worst types of that disease. Besides this, the operation allows of a subsequent correction of the spinal deformity to a great extent. In Cases III and V, after the healing of the wound, it was possible by the means already described to considerably alter the spinal curves; this is well shown in the photographs of those cases. In this way an undoubted benefit is conferred on the patient.

It has been argued that the stability and mobility of the spine are much interfered with by operative measures. The photograph in Case IV shows that in this instance the mobility of the spine is perfect, whereas such a movement as that shown was before operation quite impossible. An equally good result was obtained in Case V.

As for the stability of the spinal column, the laminæ and spines are in no way utilised in the normal subject for bearing the weight of the body, and I personally fail to see how their removal can affect a function which they do not possess. It is obvious, however, that the disease for which laminectomy is done may considerably interfere with the stability of the spine, hence the obvious conclusion, if possible—remove the disease.

When the miserable condition of the case operated upon in hospital practice is taken into account, it cannot but be a matter of surprise that such good results can be obtained. In my own series Case IV was so brutally treated on leaving the hospital that I am surprised that she is still alive.

Case VI is a good illustration of the risk run in operating upon a patient in bad condition and very susceptible to the attacks of the tubercle bacillus. The immediate infection of the wound by the caseous matter removed, and general infection of the system, are risks that have to be run in nearly every operation on tuberculous foci; but such a risk is constantly being run so long as that focus remains *in situ*. Of this, Case II is an example, for after complete recovery an overlooked and inaccessible focus caused meningitis. The duration of treatment after laminectomy varies considerably. I usually allow my patients to retain the recumbent position until of their own free will they sit up or stand up; this appears to me the best course to adopt in children, and one that entails least risk.

The conclusions which appear to me justifiable are as follows:

1. That extension and counter-extension of the spine, however carefully applied, has little or no effect on cases of paraplegia.

2. That, as a rule, laminectomy has an immediate effect on the paralysis when due to caries of the spine, and that most cases so treated recover entirely from their paralytic symptoms.

3. If the tuberculous focus can be eradicated from the vertebræ there is every prospect of the result being permanent, otherwise relapses may take place, or further tuberculous troubles may arise, as in tuberculous disease elsewhere.

4. It is possible by means of laminectomy to considerably improve cases of severe deformity from spinal disease.

5. That advanced cases of spinal caries, in which it is probable that a caseous mass exists may be greatly benefited by laminectomy and the direct treatment of the diseased focus.

6. That the operation itself is not a difficult one, unless there is grave respiratory trouble. It does not interfere with the future stability or mobility of the spinal column; the disease for which such operation is performed may, however do so.

Mr. Noble Smith was opposed to laminectomy in acute caries; that is to say in the early stages. He had met with so great a success by treating them by fixation of the diseased parts, that unless he met with some evidence of pressure from a piece of necrosed bone he always depended upon that treatment alone. In all cases of active disease there existed a condition which must take many months before a cure could be expected, and even when laminectomy had been performed a prolonged after-treatment would be necessary.

Brief remarks were made also by Messrs. W. R. Murray, J. Ewens, J. E. Shaw, and G. A. Wright.

VARICELLA BULLOSA.

By George Morgan, L.R.C.P.Lond., M.R.C.S.,
Assistant Surgeon, Children's Hospital, Brighton.

Varicella bullosa, whether regarded as a variety or a complication of chicken-pox, must be very rare. I judge this not simply because we so seldom meet with it in hospital or private practice, but because of the scant attention it has received at the hands of authors, especially British. Eustace Smith, Ashby and Wright, Ellis or Henoch, do not mention it by name, or in any way refer to it. Osler in his 1892 edition and Hebra in his work on *Dermatology*[1] mentions it. Willan speaks of it as varicella globularis, and Dr. Gee uses the same title in his article on Varicella in Reynolds's *System of Medicine*. But the best account of it is found in Ziemssen's *Cyclopædia of Medicine*.

In 1886 two cases were brought to Dr. Mackey's out-patient room at the Children's Hospital from Portslade and Southwick, two seaside villages three and four miles out of Brighton. At that time I visited the board schools in these villages to see if other cases could be traced. The master told me of two other cases he had sent home from school on account of their having large blebs on the face and neck. I found these cases were well at that time. The notes of these cases, I am sorry to say, have been mislaid or destroyed, but from what I remember they were not so marked, either in the number or size of the blebs, as in the following case:

F. C., aged 7 months, was brought to me at the Children's Hospital on September 14th, 1892. He was one of four children, all previously quite healthy. The mother herself seemed strong and healthy, and not the least suspicion of syphilis or tubercle could be traced in her family history. None of her children had suffered from any skin eruption. At the time she brought this child to the hospital all her children were either suffering from chicken-pox, or recovering from it. The child moaned constantly, but took the breast regularly. The tongue was furred but moist; the bowels regular; the temperature 101°. His body and arms were covered with fine varicellous vesicles; several vesicles on the face, scalp, and legs were here and there already crusting. Interspaced amongst these typical vesicles were a number of large bullæ. One on the left side of the face was much larger than a five-shilling piece. There were three smaller bullæ on the left side of the neck, two on the front of the chest, three on the back, and one on the right arm. The epidermal covering of the bullæ was exceedingly thin; in several it had already burst at its upper part, leaving an excoriated but healthy-looking surface, not showing the least tendency to necrose or ulcerate. Below, the covering still retained some semi-transparent serous fluid. Only in one bulla, namely, that on the right arm, was the covering tensely stretched by profuse fluid contents, like the blister of a pemphigus or a burn, and in this one the contents were more opaque. On September 15th two fresh bullæ had formed, one on the forehead, and one on the right temple. The legs were now covered with the ordinary fine varicellous vesicles. On September 17th the child still continued moaning, but took the breast well and looked about the same. Two fresh bullæ had formed on the chest during the night. On September 19th one fresh bulla, the size of a filbert, formed on the right wrist. On September 24th he seemed rather weak, but continued to take the breast well. No fresh bullæ had formed, and the old excoriated patches were healing rapidly. On October 1st all the sores had healed, except one the size of a haricot bean over the left eyebrow. The general health had much improved. On October 15th the child was quite well, and has since remained so.

Distribution of Bullæ.

1 left cheek largest	3 on the back
1 right temple	4 „ chest
1 forehead	1 „ right arm
3 left side of neck	1 „ left eyebrow

Fifteen in all; 14 being on the face, neck, and trunk, only one on the extremities, namely on the right arm.

Treatment.—The only treatment adopted was a 2 per cent. carbolised dusting powder for the skin affection. A little saline mixture for the first few days; afterwards, iron wine, and cod-liver oil.

In this case there was no difficulty of diagnosis, but from what Hebra, and other Continental writers have said, it seems that at times there is considerable difficulty, and that many cases of bullous varicella have been described as acute infectious pemphigus.

Let me quote from Hebra's work on dermatology, translated by the New Sydenham Society. He says: "We frequently read in medical works on diseases of the skin, as well as in medical journals, descriptions of an affection termed pemphigus acutus, which is said to pass through regular stages, like the exanthemata, to terminate within four weeks at least, and to have no tendency to relapse. Now I have never been so fortunate as to meet with a pemphigus presenting these characters, and I base this statement not only on the patients under my own care (of which the number now exceeds 80,000), but also on the experience of my colleagues in this city, whether in the general hospitals or other institutions for the sick. This for a period of over twenty years represents such an enormous number of patients that one may estimate them at about a million. Now amongst these patients no single instance of an acute typical pemphigus running its course after the manner of the exanthemata has ever presented itself." It is evidently Hebra's opinion that some of the cases described as acute contagious pemphigus have really been varicella bullosa.

Again, Dr. Edwards Sparks, whose article on Pemphigus in Quain's *Dictionary of Medicine* was revised by Dr. Alfred Sangster, says, "Various epidemics, chiefly amongst children, have been described, one in 1869 at Halle, and one in Paris in 1874, but it seems doubtful whether these were cases of true pemphigus, and not rather allied to varicella."

That the case now recorded was true varicella bullosa and not pemphigus to my mind there can be no doubt.

1. It ran its course quickly as an ordinary case of chicken-pox. In a fortnight or three weeks the child was quite well.

2. Chicken-pox was epidemic in the street at the time. There were four cases in the same house. A girl, nearly 3, sister of the one whom I was attending, whom I did not see until she was nearly well, had chicken-pox with a similar complication. In her case there were four or five large bullæ, one being much larger than any in her infant brother's case. It was situated on the epigastrium, and was at least 2 inches across.

3. The presence of typical varicella vesicles covering the whole body.

The following points are worthy of emphasis:

1. The exceedingly thin epidermal covering of the bullæ, a covering thinner than that of a bleb from a burn or in pemphigus.

2. The thin covering rupturing early, generally at its upper border, before it has time to become tensely stretched by its fluid contents, as in pemphigus.

3. The rapid way in which the excoriated surface heals.

4. Its liability to chiefly affect very young children, the ages of the cases I have seen being—this case, 7 months; her sister, 2½ years; one of Dr. Mackey's cases, 8 months.

In conclusion, I would suggest the importance of keeping this rare complication in mind, lest we at any time admit a case of it for a case of pemphigus, and so start an epidemic of chicken-pox in the wards.

[1] New Sydenham Society's Translation.

HOW THE HEALTH OF INFANTS IS INFLUENCED BY THEIR FOOD.

By Hugh R. Jones, M.A., M.D.Camb., B.Sc.,
Honorary Assistant Surgeon to the Infirmary for Children, Liverpool.

In his inaugural thesis, which is dated 1645, Dr. Whistler inquires "whether it be best for the health of children to be suckled by their own mothers," and the same question in all its phases has been frequently considered and much debated since that time.

The growing tendency on the part of mothers, observable in all classes of society, during recent years to rear their children wholly on artificial food (with the tacit sanction, even if not with the active encouragement, of their medical attendants) deserves more than passing notice. The general necessity for this abrogation of maternal duties is not always so apparent as it is among many of the wage-earning classes, for the employment of young married women in industrial occupations makes nursing difficult if not impossible. The subject appears to me to be of sufficient importance to call attention to the frequency of disorders of digestion leading to death in many cases, or to prolonged ill-health and debility. I shall content myself with giving a number of statistics, and shall not attempt to discuss, in any detail, remedial measures. The rate of infant mortality 1881-90 was 142 and in 1891 was 149, and I append analyses of the registered causes of death.

1881-90—Deaths of Infants per 1,000 Births.

Cause of Death.	Rate of Mortality.	Cause of Death.	Rate of Mortality.	Cause of Death.	Rate of Mortality.
Miasmatic diseases	10.70	Constitutional diseases	9.47	Diseases of urinary system	0.19
Diarrhœal diseases	13.60	Developmental diseases	18.20	Diseases of bones	0.07
Malarial diseases	0.02	Diseases of organs of special sense	0.10	Diseases of reproductive system	0.03
Zoogenous diseases	0.05	Diseases of nervous system	24.26	Diseases of skin	0.60
Venereal diseases	1.80	Diseases of circulatory system	0.30	Violence	2.30
Septic diseases	0.70	Diseases of respiratory system	27.08	Others	23.70
Parasitic diseases	0.70	Diseases of digestive system	7.80		
Dietetic diseases	0.30	Diseases of lymphatic system	0.03		

Deaths of Infants, 1891.

—	Male.	Female.	Total.
All causes	76,257	59,544	135,801
Specific febrile diseases	11,133	9,943	21,076
Parasitic diseases	289	227	516
Dietetic diseases	147	117	264
Constitutional diseases	4,871	3,712	8,583
Developmental diseases	10,870	8,664	19,534
Local diseases	35,920	26,386	62,306
Violence	1,321	1,313	2,634
Ill-defined causes	11,706	9,182	20,888

If we group together the deaths which may be attributed to disorders of the digestive system, the following tables show the proportion of such deaths to deaths at all ages :—

Rates of Infant Mortality, 1881-90.

Zoogenous diseases	} 22.45
Diarrhœal ,, ...	
Parasitic ,, ...	
Dietetic ,, ...	
Digestive ,, ...	

to which must be added (the reasons for the inclusion of the undermentioned causes are discussed by me elsewhere)[1]

Debility	21.80
Rickets	0.23
Tabes mesenterica...	4.40
Convulsions	20.40

making a total of 69.28 per 1,000 births, or nearly 50 per cent. of all deaths.

[1] *Journal*, Royal Statistical Society, March, 1894.

Deaths of Infants, 1891.

Disease.	Male.	Female.	Total.
Diarrhœa	5,085	4,115	9,200
Parasitic	289	227	516
Digestive...	4,934	3,734	8,668
Dietetic	147	117	264
Convulsions	10,395	7,810	18,705
Debility	10,966	8,558	19,524
Total	32,316	24,561	56,877

It is thus seen that 42 per cent. of infant deaths may be referred to digestive disorders. Even if we admit that a number of the deaths included among the above ought not to be ascribed to digestive disorders, the residuum forms a large percentage of the total number of infant deaths from all causes, and we may conclude that the rate of infant mortality will be governed largely by the death-rate from digestive disorders.

If we now consider the influence of food and methods of feeding in the causation of digestive disorders, the statistics of the varying rate of infant mortality in different European States are important. The lowest mortality (10 per cent. to 13 per cent.) is in Sweden and Norway, where almost every child is nursed by its own mother. In Würtemberg the mortality of breast-fed children is 13.5 per cent., of artificially fed children 42.7. In Munich the mortalities are respectively 15 and 85. In Lower Bavaria, where maternal nursing is the exception, the mortality is 50 per cent. But the dependence of mortality on methods of feeding may be shown in other ways.

Dr. Hope, medical officer of health for Liverpool, investigated the methods of feeding in 1,000 fatal cases of diarrhœa. Out of 718 cases occurring among infants, 30 occurred amongst breast fed-infants, and 391 amongst infants reared wholly on artificial food; while 297 occurred in infants reared partly on the breast and partly on artificial food. If the proportion per cent. of children fed on the breast alone 0—3 months be 50, and 3—6 months be 20, and on food alone 0—3 months be 15, and 3—16 months be 20, as Dr. Hope estimates, the excessive incidence of fatal diarrhœa on food-fed infants is obvious. Breast-fed children are least liable to diarrhœa while partially breast fed, partially food-fed infants suffer in an intermediate degree.

Dr. Hope's Fatal Cases of Diarrhœa.

Age.	Breast.	Breast and Food.	Food.	Total.
0— 3 m.	16	110	107	233
3— 6 m.	7	86	137	230
6—12 m.	7	101	147	255
	30	297	391	718

In order to determine the influence of food on health, I analysed the methods of feeding of 630 consecutive infants brought to the out-patient department of the Liverpool Infirmary for Children.

Methods of Feeding.

Age.	Breast.	Breast and Food.	Food.	Total.
0— 3 m.	93	47	62	202
3— 6 m.	58	39	61	158
6— 9 m.	50	38	59	147
9—12 m.	32	49	42	123
	233	173	224	630

It thus appears that the percentages of breast-fed children and artificially-fed children are as under:

Age.	Breast only.	Food only.
0— 3 m.	46	30
3— 6 m.	36	38
6— 9 m.	34	40
9—12 m.	26	34 (?)

These figures of course relate only to hospital patients, for the great majority of children (0—3 months) are entirely or partially breast fed, and at 6—12 months food fed either entirely or partially, and a diminution of the number of food-fed infants suffering from digestive disorders at later age periods was to be expected.

I then divided the diseases from which the infants were suffering into digestive and non-digestive:

Age.	Breast.		Breast and Food.		Food.	
	Digestive.	Non-digestive.	Digestive.	Non-digestive.	Digestive.	Non-digestive.
0— 3 m.	32	61	26	21	50	12
3— 6 m.	18	40	21	18	49	12
6— 9 m.	19	31	21	17	49	10
9—12 m.	14	18	27	22	32	10

Expressing the numbers suffering from digestive disorders as per cent. ages of the number fed on the breast, on breast and food, or on food the following table was constructed:

Age.	Breast.	Breast and Food.	Food.
0— 3 m.	33	55	80
3— 6 m.	31	54	80
6— 9 m.	21	55	83
9—12 m.	23	55	78

We may therefore conclude that infants fed on artificial food alone are most liable, and breast-fed children least liable, to disorders of digestion. I have no means of ascertaining the respective mortalities.

Insurance Statistics.

Age.	Cases.	Insured.
0— 3 m.	89	56
3— 6 m.	55	41
6— 9 m.	65	50
9—12 m.	33	42
12—15 m.	78	60
15—18 m.	88	62
	408	305 = 71 %

The great incidence of fatal diarrhœa on food-fed children as shown by Dr. Hope's investigation, and the excessive incidence of digestive disorders on the same class by my statistics. The question of infant feeding is therefore of primary importance. I need not dwell upon its influence on the after-life of the child. Nor need I discuss here how the methods may be improved. Suffice it to say that it is best to encourage maternal nursing, to discourage early weaning, and that it it is advisable to introduce into our national system of education either in board schools or by means of the technical instruction grant, sound teaching on this subject.

I append here, without comment, statistics of child insurance; 428 consecutive cases were investigated, and the statement of the parent accepted. It is of interest, however, to remark that Jews and foreigners never insure their children.

A PLAN OF INFANTILE MEASUREMENTS.

By Henry Dwight Chapin, M.D.,
New York.

The extremely rapid growth of the infant after birth makes a careful observation of all the phenomena connected therewith not only interesting but important to the physiologist and practical physician. As a partial index of this growth, an accurate system of measurements is desirable, not only as noting a proper rate of evolution, but also for comparative purposes, after a sufficiently large number shall be made. All that is required is a tape measure, a strip of sheet lead, a pencil, a pair of calipers, and a table. As the skull is fairly representative of the brain during the years of its development, the measurements taken during infancy are more instructive as to brain size and development than those taken in later years. Ninety-eight cases, from birth up to 2 years, were carefully measured, and the results incorporated in a table. With increase in the age of the infants, there is noted a gradual and steady enlargement of the great circumference of the skull, and from this of its estimated volume. The naso-occipital arc likewise increases at about the same general rate as the great circumference. The naso-bregmatic and bregmato-lambdoic arcs are very similar in the series, although after seven months the former arc becomes slightly larger from the development of the frontal part of the brain. The binauricular arcs through the bregma and lambda are quite similar. The cephalic indices showed the cases to be divided as follows: Under one week, mesocephalic; from one week to one month, dolicocephalic: from one to three months, mesocephalic: at three and four months, dolicocephalic; five and six months, dolicocephalic; seven and eight months, brachycephalic; nine and ten months, dolicocephalic: eleven and twelve months, brachycephalic: from twelve to eighteen months, dolicocephalic; and from eighteen months to two years, dolicocephalic.

None of the averages being below 70 or above 90 could be considered abnormal. In a few individual cases, however, the head was abnormal. A study of the configurations shows slight asymmetry in all the cases, but only in a few instances is it well marked. The posterior transverse diameters of the configurations are nearly always greater than the anterior diameters. This would be expected, as the sensori-motor parts of the brain are more developed in infancy than the other areas. The circumference of the chest is several centimetres larger, on an average, than that of the abdomen. A disproportion between the measurements of the chest and abdomen may be regarded as a handy way of recognising rickets. Moreover, the ratio between the circumference of the abdomen and chest is not only a sign, but, to a certain extent, a measure of the degree of rickets. The length of the body increased steadily in all the cases measured. Breast-fed babies invariably presented larger measurements than those artificially fed.

Another Proposed Addition to the Medical Curriculum.—The Medical Council of the Province of Brandenburg, whose headquarters is in Berlin, recently addressed to the Prussian Government a petition asking that arrangements may be made for the supply of instruction to medical students on all that concerns insurance against sickness, accident, old age, and infirmity. It is urged that such instruction should be practical as well as theoretical. The Cultus-Minister has accordingly sent a circular letter to the presidents of the other provinces of Prussia, asking them to obtain an authorised expression of opinion on the subject from all the medical councils in the kingdom.

REVIEWS.

AN ILLUSTRATED DICTIONARY OF MEDICINE, BIOLOGY, AND ALLIED SCIENCES. Including the Pronunciation, Accentuation, Derivation, and Definition of the Terms Used in Medicine and the Allied Sciences. By GEORGE M. GOULD, A.M., M.D. Philadelphia: P. Blakiston, Son, and Co. London: Baillière, Tindall, and Cox. 1894. (Large 8vo, pp. 1,633. £2 nett.)

THERE could be no more striking evidence of the rapidity with which medical science is advancing all along the line than the large and ever-growing additions to technical terminology which are made necessary by the daily discovery of new facts and the ceaseless birth of new ideas. It is hardly too much to say that to a medical man who left the schools fifteen or even ten years ago, and whom circumstances have since kept outside the scientific movement, much of current medical literature is hardly intelligible. Even to those whose delight it is to raise the Olympian dust in the race of discovery, or who follow its course with intelligent interest, it is not easy to keep fairly abreast of the corresponding development of language. Many of the new terms which come into use are but sparks struck out as crude fact is fashioned into theory, and die out. Others are welded into the solid fabric of established truth, and live. All, however, must be understood by those who do not wish to be left behind in the onward march of science. Hence the need of a medical dictionary explaining not only the etymological meaning but the full scientific connotation of all the terms actually in use in medicine, and its ancillary and allied sciences. Though there are several good dictionaries in existence, this want has never, as far as the English language is concerned, been adequately supplied till the appearance of the great work now under review.

Dr. GEORGE M. GOULD is already favourably known as the author of smaller dictionaries which have attained a wide popularity, and as the scholarly editor of the Philadelphia *Medical News*, one of the leading medical journals of the United States. In addition to these literary qualifications Dr. Gould has achieved distinction as a practical worker in the field of ophthalmology. He is, therefore, exceptionally well equipped for the gigantic task which he has now brought to a successful issue.

The *Dictionary* before us is not the outcome of a pouring of new wine into old bottles; it is a fresh gathering from the living literature of the day. In this work the author has had the co-operation of "a tireless *corps* of friends and assistants," including several well-known philologists and biologists, as well as medical experts. It is to be accounted to Dr. Gould for literary righteousness that he acknowledges the help he has received in the frankest and most generous manner.

Though the title of Dr. Gould's *Dictionary* might suggest to an English reader a work somewhat similar in scope to that which bears the name of Sir Richard Quain, it is not an encyclopædia, but strictly a lexicon. The meaning of each term is concisely but clearly explained, and the derivation of each word is given from the nearest source without philological pedantry. The pronunciation is indicated in a simple manner, without complicated symbols. In regard to this matter, however, we have noted one or two slight eccentricities. For instance, we do not quite see why the penultimate of "masseter" should be marked short, while that of "ureter" is allowed to retain its native quantity; nor do we quite understand why, in respect of the word "phthisis," we should be left the right of private judgment in choosing between *thi'-sis*, *ti'-sis*, or *te'-sis*, while as regards "phthisical" we have one pronunciation, *tiz'-ik-al*, imposed upon us on pain of lexicographic excommunication.

A specially commendable feature in Dr. Gould's *Dictionary* is the inclusion of all the more commonly-used terms of biology —a point of the greatest importance in view of the modern recognition of the great truth that biology is the foundation of medicine, as far as the latter can claim to be a science. As illustrating the great value of the work in this respect, we may refer to the headings "Person," "Law," "Heredity," "Evolution," and "Ovum," in which the most recent additions to knowledge on all these points are embodied in a form at once succinct and lucid. Throughout the work all the more important terms are elucidated by terse summaries of the principal facts and practical applications falling within the scope of the definition. This makes Dr. Gould's work more interesting as well as more instructive than most of its class. Few persons read dictionaries, as Théophile Gautier did, for pleasure; if, however, all dictionaries were as readable as the one under consideration his taste for this kind of literature would be less singular. To take a few examples among the first that occur: Under the heading "Alimentation" the principal formulæ for nutrient enemata are given; under "Artificial Respiration" no fewer than twelve methods (Bain, Byrd, Dew, Forest, Marshall Hall, Howard, Pacini, Satterthwaite, Schröder, Schultze, and Sylvester) are described; under "Craniometric" all the points of measurement used in craniotomy are enumerated; under "Electric," the various electric units are explained; under "Listerian Methods of Dressing Wounds," the different phases in the evolution of the antiseptic treatment, to the number of seven, are set forth; under "Mulatto," the various shades resulting from the intermixture of black and white blood are differentiated, and as far as may be, quantitatively estimated; under "Treatment," all the methods associated with the name of a particular man (for example, Bülau's treatment of empyema; Debove's method of forced feeding in tuberculosis; the methods of Banting, Ebstein, Oertel, Salisbury, Schweninger, Vogel, Yeo in the treatment of obesity, etc.) are briefly but sufficiently described. Under such words as "Albuminuria," "Anæsthetics," "Diabetes," "Diarrhœa," "Eczema," "Fetus," "Food," "Insanity," "Paralysis," "Phthisis," "Pregnancy," "Syphilide," "Tuberculosis," "Urine," "Ventilation," what may be called an outline sketch of the subject is given, which is likely often to be of service as a means of intellectual orientation when the memory has become misty. The number of varieties enumerated under the head of "Fever," recalls to mind Syme's famous gibe that modern physicians had made 300 fevers out of the simple continuous and remittent types which satisfied the rude forefathers of medicine.

One of the most useful features of Dr. Gould's work is the large number of tables in which all the facts relating to an important heading are brought together and classified. Thus there is a table of bacteria extending to 29 double-columned pages; further, the principal types of bacilli are figured in a series of illustrations showing their morphological characters and arrangement. Forty-two pages are devoted to "Parasites." There are tables of the arteries and nerves; each of these is illustrated by diagrammatic representations showing the ramifications and distribution of the arterial and nervous systems. The bones, muscles, ligaments, ganglia, cerebral convolutions, regions, sinuses, and various forms and deformities of the pelvis are also set forth in tables with appropriate illustrations. Among the other subjects tabulated in a manner excellently adapted for ready reference are the following: The electric batteries used in medicine, with their respective elements and fluids; the exanthemata; the positions and presentations of the fœtus; the expectation of life at different ages; motor points; poisons; tests; localisation in the brain and spinal cord; and urinary calculi and sediments. Every variety of bandage and "handkerchief dressing" which it has entered into the surgical mind to conceive is described and figured; "knots" and "sutures" of every degree of complexity are clearly illustrated.

Every student of medical literature is pretty sure to be puzzled occasionally by references to some unknown "Bunkum's disease" or "Funkum's operation." Dr. Gould's *Dictionary* supplies a ready key to all these irritating mysteries. The "Table of Eponymic Diseases" extends to more than twelve pages, and includes, besides the explanation of the term and its various synonyms, a summary of the chief points in the symptomatology, pathology, and etiology of the disorder. The list seems fairly complete, but there are two or three misprints, such as "Flajan" for Flajani, one of the scientific godfathers of exophthalmic goître; "Lænnec" for Laennec; "Sæmisch" for Saemisch; and "Littré's hernia." The last is an error consecrated, if one may say so, by almost universal misuse. It evidently takes its origin in the prin-

ciple, "Unto him that hath shall be given"; but Emile Littré has sufficient titles to enduring fame without its being necessary to add to his laurels by stripping the brows of poor Littre, whose unaccented name was honourably known in his day (1658-1726).

The "Eponymic Table of Operations and Methods of Surgery" extends to some 31 pages; this list is the most complete of the kind we have ever seen. It displays the most catholic impartiality as regards persons and nationalities, and will be invaluable to surgeons. Another useful list of the same kind is the "Table of Eponymic Signs and Symptoms of Disease"; if anyone should happen not to know, for instance, what "Skeer's symptom" or "Filopovitch's sign" may be, Dr. Gould will enlighten him. There is a most elaborate "Table of Stains, Fluids, for Fixing and Hardening Media for Examination and Preservation, etc., and Methods Employed in Biologic Investigation," unique in fulness and modernity, which will be of the greatest use to students of microscopical and bacteriological literature. Under the headings "Thermometer" and "Weights and Measures," the fullest information is given as to the various scales and standards; the principal units of the metric system are made appreciable by the eye, and tables of comparison are given which make the often irksome task of conversion of one scale into another easy even to persons in whom the calculating faculty is imperfectly developed.

Enough has been said to give the reader an idea of the general character of the work. The effect of merely turning over the pages must be to penetrate the ordinary man with a chastening sense of the depth and breadth of his own ignorance. We cannot pretend to have examined the work exhaustively, but we have tested it in the most practical manner by constant reference ever since it came into our hands, and we have never yet found it wanting. We have noted no serious omissions; indeed there is rather a glut of what Carlyle would have called "vocables." Some of these are exceedingly retiring in their habits, and might well have been left undisturbed in their seclusion. Such a one is "adenochirapsology," which is explained to mean the doctrine of the "royal touch;" surely this word must have been invented by Dr. Samuel Johnson who was himself "touched" by Queen Anne for the King's evil.

Of course in a work so vast in its scope there are a few errors *quas aut incuria fudit aut humana parum cavit natura*. Where the whole is so perfect, we are almost ashamed to hint at the slight defects which after careful search we have detected here and there. Your reviewer, however, like Iago, is nothing if not critical; it is his function to count the freckles on the face of Venus. One or two small errors of the press have already been pointed out. There are a few others which might with advantage be corrected in the next edition; such are "alterius" for alternis diebus (p. ix), a mistake which is repeated in alterius horis and diebus alterius. Again, we have "diebus tertius," "fiat" for fiant piluke (p. ix), "foliæ" for folia (p. ix), "sumet" for sumat (p. x), "vesicatorum" for vesicatorium (p. x). In "oculus dextra," "oculus sinistra" the classical reader will, with Holofernes, "smell false Latin." Priscian is also a little scratched in such a phrase as "mutatis characteris" (p. xiii). Among other misprints may be cited "bacille de pneumonie" (p. 158); "carbonichio" for carbonchio (p. 159), "bacillus albus putridis" (p. 159), "Gaubins" for Gabius (p. xvi), "oleomargin" (p. xvi). The patronymic of the Paris physician, whose misadventures in the cloudland of hypnotism have made a name once honourably known now "something smack" to the scientific palate, is Luys not "Luy" as given at page 710. A few of the definitions are perhaps open to criticism of the minuter sort. When we are told that a "pendulous abdomen" is "a relaxed and pendulous condition of the abdominal walls" we are reminded of the definition of an "archdeacon" as "a person who exercises archidiaconal functions." To define an "abscess" as "a pus formation *within some cavity* of the body" is surely somewhat arbitrarily to narrow the meaning of the term. "Costen" is a word which we never remember to have seen before, and, unfortunately, little light is thrown on it by the definition "belonging to a rib in itself." These are, however, but trifles, which in no way detract from the value of the work; we mention them only for the satisfaction it gives men of common clay to find that even a lexicographer is after all human.

The book is excellently printed, and the illustrations, which are very numerous and selected from the best sources, are admirably executed. The binding is substantial and even handsome, but the businesslike "get-up" of the book makes it well fitted for use as well as for the adornment of a bookshelf. The most impetuous reader will not find it necessary to do violence to its back in order to keep it open at whatever page he wishes to consult, and careful provision for the convenience of those who wish to refer to it is made in the indentations at the edges for the thumb, which enable one to open the book at once at any particular letter. As an instance of the luxury of help which is given the reader, it may be mentioned that there is a special index of the tables and important definitions (more than 100 in number), so that any particular information—for example, on the numbering of spectacle lenses—can be found at once. Dr. Gould gracefully acknowledges his obligations to his publisher, who indeed seems to have spared no pains to bring out the work in a form worthy of its substance. If the author has been happy in his publisher, it must be said that the publisher has been even happier in his author. We heartily congratulate both on the complete success of an enterprise which must have taxed the ability, energy, and patience of all concerned to the uttermost. The English-speaking part of the medical profession is also to be congratulated on having at last placed in its hands a dictionary fit to compare with the classic work of Littré, to which it is equal in scientific accuracy, and superior both in the amount and in the quality of practical help which it gives the student. In this splendid book Dr. Gould has raised a monument of his own wide knowledge and conscientious industry more enduring and far more useful than three-fourths of the showier intellectual produce given to the world as "original scientific work."

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A MILK FOOD FOR INFANTS.

We have received from Messrs. Allen and Hanburys specimens of two dried milk foods which they have manufactured for use in the artificial feeding of infants. In the preparation of these foods they have been guided by the average chemical composition of human milk. As is well known, the *cow* in devising a good substitute for human milk has been the large proportion of casein contained in cow's milk, and the fact that dilution of the milk to bring down the proportion of caseine reduces the amount of fat and sugar very far below what is required by the growing organism of the child. The quantity of hydrocarbon in human and in cow's milk is about the same; but the amount of carbohydrate is actually greater in human milk. Most kinds of condensed cow's milk are loaded with cane sugar, which is not a suitable food for the young infant, and all kinds are liable to be deficient in fat. While there is no substitute for the mother's breast, and while it is true that fresh cow's milk, properly treated, is probably the best basis of an infant's diet, it is also true that there are very many occasions when this cannot be obtained, and when a thoroughly reliable dried milk product would be of inestimable value.

First Food for Infants. No. 1.—This food, we are informed, is prepared from fresh selected cow's milk. The proximate composition is ascertained, the excess of caseine removed, and sufficient quantities of cream, soluble albumen, and milk sugar are added to bring up the proportions of these constituents to the required standard; the material thus obtained is sterilised, concentrated *in vacuo*, and packed in tins which are hermetically sealed. A trial of this food has been made for us, and the results have been remarkably satisfactory. It appears to be readily taken by infants, and to be easily digested. In marasmic children the general nutrition has been observed to improve, and vomiting and diarrhœa

to decrease. In certain instances children who are unable to digest diluted cow's milk assimilated this food readily. We are indebted to Dr. E. A. Ware, lately resident medical officer to the East London Hospital for Children. Shadwell, for making a series of observations on infants suffering from atrophy and other wasting diseases; he reports that decided improvement was observed in many instances and an increase in weight, though he does not consider that the actual amount of this increase can be taken as a criterion of the nutritive value of the food, which must be ascertained by observations on healthy infants. The powder appears to keep well for a reasonable time after the tin is opened, and food of proper strength is easily prepared from it. The food seems to be thoroughly well manufactured. Its composition is based upon correct scientific principles, and the preparation appears to be well worthy of extended trial, especially in hot weather and in warm climates. It is specially designed for the use of infants under 3 months of age.

Food No. 2 (Mother's Milk Food).—This is specially designed to meet the case of infants between 3 and 7 months of age. It consists, we are informed, of the first food with the addition of some maltose, a small proportion of dextrine, and some soluble phosphates, resulting from the mashing of crushed whole wheat with barley malt. The object of adding the dextrine is to afford "some slight stimulus to the exercise of the digestive functions." The mixture is filtered in the liquid condition, no unconverted starch being allowed to remain in the food. It is concentrated *in vacuo*, and packed in closed vessels. We are not convinced that this is a desirable test to which to put the digestive powers of the majority of infants at the age mentioned; and as a matter of fact the clinical trial has not been so satisfactory as with the "First Food." It should in justice be added that the infants to whom it was given were suffering from various forms of debility. The transition from the First Food to Food No. 2 should be made with some caution. Probably in the management of delicate children the First Food might be used with advantage to an age considerably later than the manufacturers suggest.

Food No. 3.—This is the malted food which has been manufactured by Messrs. Allen and Hanburys for many years, and has been found by a wide experience to be a useful food for infants at, and for some months before, the first dentition.

The advantages claimed by the manufacturers for this series of foods are thus stated:—

"1. This series supplies foods for infants truly adapted to the physiological requirements of the digestive powers at different ages and stages of development.

"2. The milk contained in the first and second foodsbeing chemically examined, and its leading ingredients being reduced or made up to a given standard, and being at the same time sterilised, uniformity and purity, that is to say, freedom from pathogenic germs, are insured. Of how great importance these two points are, those who have had most experience will best understand.

"3. Having obtained the solid constituents of human milk in their normal proportions, the addition of the right quantity of water is alone required to produce an exact equivalent of human milk. To have the means of accomplishing this at any moment by the simple addition of hot water with the certainty of the product being uniform and absolutely free from the possibility of containing active germs of any contagious disease must surely be recognised as an advantage of the highest importance in the feeding of infants, especially in places where milk is scarce and unreliable."

REMY'S PUDDING POWDER.

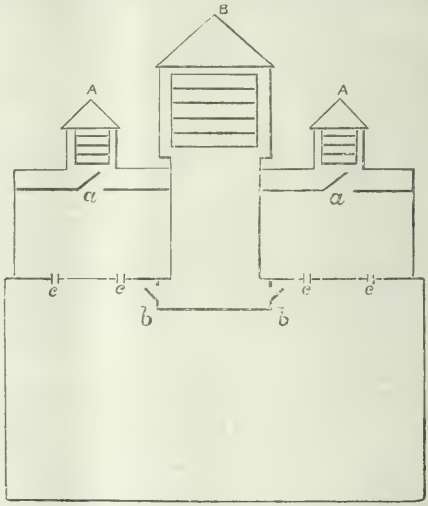
This is a well-prepared rice starch suitable for making custards, puddings, blancmange, and for other culinary purposes which require a superior kind of starch. The amount of ash is 0.9 per cent. The powder compares favourably with the various kinds of arrowroot in quality, and, as the price at which it is sold is very much less, it offers decided advantages over those more costly forms of starch.

The address of the manufacturers is Louvain and Antwerp, Belgium. The London agent is H. Becker, 8, Lower Thames Street, E.C.

AN IMPROVED SYSTEM OF VENTILATION.

Mr. Albert Napper, of Guildford, an old and respected member of the British Medical Association, has introduced a new method of ventilation which involves points of some interest. The following is Mr. Napper's account of it as practically and successfully applied to a public hall in Guildford:

"To ventilate the hall I placed a turret B on the ridge of the roof to admit cold air into it by means of a shaft which passed through the loft as well as the ceiling, where it terminated in an enclosed platform in the room below, with flaps—*b b*—at each end made to open and shut by means of a string to regulate the quantity of air admitted, care being taken that the flaps should not be allowed to drop quite to the horizontal line, then by directing the current upwards, no draught will be felt. This air from its density will readily fall to the floor and force the rarefied and foul air up to the ceiling, through which it will pass by means of a few small



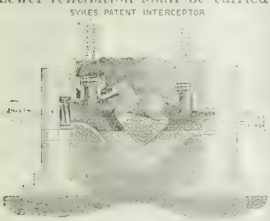
holes—*c*—communicating with the loft above, which quickly becomes choked with warm and foul air, to dispose of which no means have ever hitherto been found effectual, constituting the long standing obstacle to true and perfect ventilation. It has been to the removal of this obstacle that my attention has been chiefly directed, and I venture to think I have at length succeeded in breaking the spell. To remove this obstacle it struck me that a current of cold air directed upon the warm air in the loft above the ceiling would have the effect of shrinking the bulk of it, thereby creating a vacuum to be replaced from below, and by increasing its density giving it a better chance of escaping against the pressure of the outside atmosphere. To effect this I added two small turrets—A A—for the admission of the cold air. The result was most satisfactory, but what the physical action of it is I have had no opportunity of testing, but I believe the main effect produced is by the rapid cooling of the warm air.

"Within the last fortnight a hundred soldiers that were passing through the town were entertained as usual in the hall, nearly all of whom were smoking. The person in attendance on them told me the next morning that the effect of the ventilation in maintaining the purity of the atmosphere was most satisfactory. I may in conclusion state that the hall is let to Mr. Savage, confectioner, whose premises adjoin, who will be pleased to show it to anyone wishing to see it. I may also state that the discovery is not patented, but is open to the free use of the public."

We have no doubt that the arrangement will act in an efficient manner; it should be pointed out, however, that, as in all analogous contrivances, the direction of the air currents will depend much on temperature and on the opening and closing of doors and windows. One great advantage of the plan lies in its adaptability for very varying degrees of ventilation. No doubt when only a moderate amount of air movement is required the shaft B is superfluous. The shafts A A maintain a free ventilation of the loft, which really serves as a mixing chamber, and a separate but much less active circulation is set up between the air in this chamber and that in the hall below through the openings *c c*, draughts being avoided in consequence of the comparatively slight difference of temperature between these two masses of air. When, however, more ventilation is required, opening the flaps *b b* will let in any desired quantity of air.

SYKES'S PATENT INTERCEPTOR.

THIS is an intercepting trap intended to be used either with or without an intercepting chamber, made by the Albion Clay Co., 18, New Bridge Street, E.C. Its chief peculiarity is the provision of an opening at each end of the trap, the one serving as an air inlet for the ventilation of the house drain, the other as an air inlet for the ventilation of the sewer, where such ventilation is required. Both these openings are provided with proper junctions, the intention being that the sewer ventilation shall be carried by cemented pipes above the level of the roof, and that the fresh-air inlet instead of opening out of the manhole, which when deep becomes a large reservoir of more or less foul air, shall be extended above ground, terminating in proper head, just as is done when no chamber is provided.



The inventor points out, with a certain amount of reason, that where the chamber is large and the sewage crosses it in open channels a certain amount of fouling of the air takes place within it which is objectionable, and makes it necessary to use an air-tight cover. By making the air inlet independent of the manhole, however, this reservoir of polluted air is done away with. Under these circumstances the cover need not be air-tight, thus saving some expense, and the manhole becomes what its name expresses—a hole for a man to go down for inspection or repair. If this trap be used in a district where it is not customary to carry sewer ventilators up the house side, the opening for that purpose can be closed by a screw stopper.

AN INTERCHANGEABLE CARRIAGE.

MESSRS. ATKINSON AND PHILIPSON, of Newcastle-on-Tyne, have introduced a carriage which promises to be of great utility. Desirable as it is to be provided against all seasons, and many as have been the attempts to produce a convertible carriage which can be made suitable for both fine weather and wet, we cannot say that the outcome of these efforts have hitherto been very successful.

No doubt for those who live in town and drive a pair, a landau very comfortably solves the difficulty; but we do not all drive pairs, nor do we care to drag landaus up hill and down dale all the country over. What we want is something as light as a victoria, and capable at the same time of being turned into a brougham in the winter or when the weather is bad, and this would seem to be what Mr. Philipson is providing. Instead of so arranging the carriage that the body shall be capable of being opened or shut as in the landau, an arrangement which always involves iron work and weight, he has hit upon the simple device of making the under-carriage and the driver's seat complete in themselves, and on this basis fitting any form of body which may be desired.

For a medical man the power of using either victoria or brougham on the same set of wheels must be a very great advantage, and far better than dragging about with him the whole weight of the combination when he only wants the victoria, and having to put up with a closed carriage with many joints when he wishes it to be watertight, as is the case with some of the convertible carriages we have seen.

In Mr. Philipson's invention the bodies are each complete in themselves, and the closed carriage is a perfect brougham. Of course the cost is greater than that of a single carriage, but it is less than that of two, and the economy of space in the coachhouse also has to be considered, besides the fact that one licence duty is sufficient.

There are many in our profession who justly enough consider that they owe their health to driving in the open, and who, therefore, limited as they may be to one carriage, hesitate to change to a brougham, conscious though they are of the risks they run in bad weather. They would gladly accept the protection of a brougham in stormy seasons, if it did not involve giving up the open-air life in fine weather. For these Mr. Philipson's invention should be a great boon.

THE "M.D." WATCH.

THE "M.D." watch is made by Mr. H. White, of 104, Market Street, Manchester, and is specially designed for the use of medical men, by whom it will be found very useful. It has a keyless three-quarter-plate lever movement, breguet hair-spring, and compensation expansion balance, which ensures accuracy under almost any extremes of climate. It is jewelled in ten holes and fitted in a solid 14-carat gold case. The dial of the watch, which is sunk, is divided into fifths of seconds, which renders it valuable for timing the beats of the pulse. It is an excellent watch, and, considering its quality, remarkably low priced.



A SIMPLE PERCUTEUR.

MR. FISHER, of Matlock, has invented a simple instrument by which "tapotement" can be self-administered. The instrument consists of a long flexible metal spatula, to the end of which a leather-covered pad is riveted. By agitating the handle, a rapid to-and-fro motion is given to the pad, which with a little practice can be made to strike the part with great lightness and rapidity. Dr. W. C. Sharpe, of Smedley's Hydropathic Establishment, Matlock, who has introduced the implement to our notice, thinks that it will be of use, also, in the self-administration of "nerve vibration." The pad has two surfaces, one softer than the other.



EMOL-KELEET.

EMOL-KELEET, received from Messrs. Burroughs, Wellcome and Co., is a silicate of aluminium and magnesium, coloured with a little iron oxide to a very delicate shade of pink. It also contains a trace of lime; silica and alumina predominate. When used as a soap it has a cleansing action on the skin, leaving a mild astringent feeling. It has great absorbent qualities.

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A large number of Medical Officers of Health have kindly responded to the request of the Honorary Librarian by sending copies of their reports.

Calendars of all the important Medical Colleges and Schools for the session 1894-5 have been received in response to our request.

Medical Graduation in Portugal.—The number of students who received a medical diploma from the Medico-Chirurgical School of Oporto this year is 28, while 17 obtained their qualification from the Lisbon School. The University of Coimbra conferred the degree of Doctor of Medicine on 1 candidate, that of Licentiate on 2, and that of Bachelor of Medicine on 25.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XVIII.—TRURO.

The visit of our Commissioner to Truro coincided with the meeting of the board of guardians; being advised to make request for permission to visit direct to the chairman, our Commissioner received from him a courteous invitation to take a seat at the board whilst the guardians transacted their business. The board having met us so cordially, and having most freely placed themselves and their officers at our service, we trust that such criticism of the arrangements for the sick poor which we may feel to be necessary will be accepted by them in the same friendly spirit.

The Workhouse

stands about two miles from the city. It is a large building, licensed for 500 inmates. The structure is old, and in many ways quite behind the times, but capable of improvement within existing limits. The matron accompanied us round the infirmary, two of the guardians kindly introducing us, and authorising her to give us all the information which we might require.

The Infirmary

is in a separate building at the back of the main part of the house. It accommodates 78 patients. The appearance of the wards is dreary; the whitewashed walls have a rough surface, which is objectionable from a sanitary point of view, as it affords so many resting places for dust and the germs of disease, while the whitewash is wearying to the eyes of the sick. The matron and the nurse had fastened up pictures from the illustrated papers to relieve the monotony of the bare walls, and some of the inmates had decorated the private corners round their beds with their own treasured pictures.

The Wards

are all small, holding 6 or 7 beds each, and are distributed on the ground and first floors; the patients are scattered among them without much attempt at classification. There are no day rooms, so the men, if they smoke, smoke in the wards; the matron says they do not smoke at night. They are supplied with the old-fashioned narrow bedstead, rather low; the beds are mostly of straw, with a few of mill puff; there is one water mattress. There did not appear to be any provision for drying the straw; when we asked the matron how it was ascertained that the straw was properly dried, she told us that it was always dry. Macintoshes are not used in the infants' cradles, for we saw a stream trickling from beneath one cot, and the matron told us that the moisture drained through, so we may be pardoned if we doubt the invariable dryness of the straw. On one of the beds turned down for our inspection there was a stain on the "tie," or, as we should say, the tick, as though some moisture had thus "drained away." There was the usual scarcity of arm chairs in the wards, the few that we saw not being sufficient for the patients that were up; there were no couches.

The Patients

were of the usual type that is found in the workhouse ward. On the female side there were about twelve in bed: a rather bad case of heart disease, paralysis, fits, hysteria, old age, and several with bad legs. In a separate ward an old married couple, both bedridden, were ending their days; both suffering from incontinence. The room had a strong odour of ammonia, which the matron explained by informing us that the man was supplied with a urine bottle, which he was always upsetting in the bed; his clothing appeared soaked with urine. An old pauper woman was in charge of these married quarters, and probably she did her best, but it is evident that she was not able to do all that was necessary for the helpless man. On the male side we saw nine patients in bed; a man who had had a severe fit was in a state of helpless incoherency; another had dropsy, a bad case of phthisis, paralysis in its various phases, and senile debility; the other patients were infirm and aged.

The Nurse

is not trained, she has been at the work for some time and was evidently interested in her patients. The doctor had instructed her in midwifery, and she now attends the natural labours. On questioning her as to the treatment of the leg cases, she said that they were washed with carbolic lotion, but that no particular ointment was used; some of the patients did their own legs: doubtless it was an occupation.

There is no night nurse. In answer to an inquiry as to what course would be pursued if a case required systematic poulticing, we were told that a poultice would be applied before the nurse went to bed, and be changed as the first duty of the morning's work. There is no night feeding, but milk would be left beside a patient for whom it was ordered. The nurse informed us that when the infirmary is full in the winter she might be called up three or four times in the week. The washing of the patients and the bed making is done by the paupers: this is the inevitable result of one "nurse" to 78 beds, more especially as those beds are in several small wards on two floors. The nurse's quarters are situated between the male and female sides.

An Ancient Pauper

who boasted to us that he was 89 years old, was wardsman in one of the wards; he was well set up for his years; the other wardsmen were all venerable, far above that 40 years limit, beyond which no candidate, however otherwise eligible, can be appointed to the post of nurse in the hospitals and infirmaries under the Local Government Board. On the female side the wardswomen are either women of bad character, or of the type of the ancient dame who was "nursing" the bed-ridden couple. One can hardly expect tenderness from the one or activity from the other.

The Labour Ward

has seven beds. There is no labour bed, nor is their any means, except by the use of screens, for concealing the progress of the labour from the other inmates of the ward, all child-bearing women who are either expecting their own trial or have but just endured it. The screens are cumbersome frames, over which canvas is stretched; they are unwashable, and not easy of porterage. The ward was tenanted by a patient with a fortnight old baby. The ward was provided with a separate closet, but there was no bath room.

The Sanitary Appliances

are of the old type; in some the water flush was good; they are easy of access from the wards, but where they open directly out of the ward there is no means of cutting off the air, though we observed that it was possible to make ample cross ventilation in the lobby. There is one bath room for the whole infirmary, and that is under the stairs on the women's side; from its littered appearance we judge that it is not frequently used. It was supplied with cold water only. There is no hot water laid on; the only supply is from a copper in the infirmary laundry, out of which the hot water has to be baled when required. On the upper floors there is a trough over which is a cold water tap; this trough serves to carry off the waste. The ventilation is by means of the windows, the upper part of which has coarse perforated gauze on the outside, but it seemed possible to close up the sash; there were also brick holes in the walls of each ward.

The Infectious Hospital,

which was empty at the time of our visit, is quite remote from the infirmary, standing in the same grounds. It is self-contained, but has no bath room, only a large moveable bath and only such hot water as could be obtained from the copper. It is modern, and the walls are smooth cement. The itch ward, attached to the infirmary, is a small ward opening immediately on the court, with an open roof, a small fireplace, and no other conveniences—a ward that ought to

be condemned at once. The ward tenanted by the old couple is the lock ward, but the matron stated that there are small wards that might be used.

Bells from the infirmary communicate with the master's block and also ring into the nurse's room from the wards. The doctor, who lives about a mile and three-quarters away, has to be fetched at night by the porter.

The Diets,

the nurse informed us, were fair. We saw jacketed tins in the passage in which the food had been brought over from the kitchen, but she informed us that they were never filled with hot water. Again, we could not receive any satisfactory reply to our query as to whether the food was prepared in any special way for the toothless old people, or whether they could eat their meat when not so prepared.

The Infants

were in the charge of an old pauper, assisted by an imbecile. We saw about six of various ages in the nursery; one looked very sickly, and the matron said that it had been so from its birth. The objectionable tube bottle was in use. It was here that we saw the pool under the bassinette. It is always sad to see the unchildlike aspect of these unfortunate babes "mothered" by an old pauper, enduring a tolerated existence without any of the usual care bestowed on helpless infancy. The airing courts are better than usual, that for the men having grass and flowers, surpassing the women's in this particular. As we entered the infirmary we passed through a pretty bit of garden where we thought that some seats would be comfortable for the old people.

Recommendations.

Structures are stubborn things to deal with and that at Truro Workhouse is no exception. It is very unsuitable for infirmary work, with its small wards, many staircases, and rough walls. The latter should be cemented and washed in two shades of some pretty colour, the labour ward might be improved by taking in a piece of the adjoining dispensary. The closets might be built out with a disconnecting lobby, and bathrooms added with a hot water supply. With regard to the nursing we should advise an increased staff; there should be at least one on the male and one on the female side, and a night nurse. But even this would not be sufficient to do away with the necessity of employing the paupers to some extent as nurses, and as long as this is so we cannot be satisfied that the sick are properly nursed.

THE BRITISH MEDICAL JOURNAL INQUIRY INTO PROVINCIAL WORKHOUSES.

Discussion at the Wakefield Board of Guardians and Statement by Mr. H. G. Kennedy.

We mentioned in the British Medical Journal of September 15th, page 628, that we had been favoured with an invitation for the attendance of a reporter of the British Medical Journal at the board meeting of the Wakefield Board of Guardians on September 19th, when the subject of the report of the British Medical Journal on the infirmary of the Wakefield Union which appeared in the British Medical Journal of August 18th was to be discussed. On that day Mr. Kennedy, the Local Government Board Inspector of Workhouses, attended, and we have before us a report of his address. He is described as having spoken with much warmth, and said he considered it his duty to make certain explanations to the Board. He had taken the report very much to heart, and other gentlemen connected with that Board had done the same thing. We can only say that it is a matter of great satisfaction that Mr. Kennedy has taken the report to heart, and we take it as a good omen for future reforms.

We could wish that his explanations had been more satisfactory and dealt with what was really the main matter of the report, instead of somewhat hotly and captiously questioning minor points.

The chief charge which we bring against the Wakefield Infirmary is the insufficiency of the nursing arrangements. Mr. Kennedy has not one word to say in contravention of the statements that there are but two nurses by day for the patients—whose number he himself, after making some deduction, puts at 113—and that pauper help is very largely used. He prefers to insist rather on the fact that a single night nurse has recently been added to the infirmary staff. We congratulate the board on a step in the right direction, but we cannot agree that the nursing staff is yet sufficient. Does Mr. Kennedy seriously contend that the nursing is in any way adequate to the needs of these patients? If not, we must call his attention to the fact that he has really failed even to touch the main charge.

Then as to the isolation block which we condemned. Mr. Kennedy makes the lame excuse that between 10 and 11 o'clock in the morning, when the beds were being made and the rooms were being cleaned, was the worst time for making a visit to the house. Our Commissioner was a person peculiarly well able to make the necessary allowances in this matter. Mr. Kennedy observes that the arrangements were not as complete as desirable. Our contention is that this ward is a disgrace and that it needs to be condemned. We are inclined to suppose that "incomplete arrangements" may be Mr. Kennedy's euphemism for this state of things. It is one which we cannot admit and which we contend it is contrary to his duty to employ. We have no doubt that Mr. Kennedy is conscious of some of the difficulties of this place, and we are glad to learn that one or both of the buildings are likely to be pulled down; but we very much doubt whether he is an adequate judge of what is needed in nursing and what is proper for the construction and administration of isolation wards.

Touching upon our statement that the patients were not allowed in the garden, Mr. Kennedy "alluded to the danger of a deep and dangerous cutting on to the railway at the top of the workhouse garden, which inmates, especially imbeciles, were likely to get over if left to themselves in the garden."

It is hardly possible to find a better example of the official excuse for doing nothing. If the guardians omit to put a proper fence at the top of the cutting, or if they omit to have someone to watch the inmates, "especially imbeciles," who is to blame? and why does Mr. Kennedy think it his duty to hotly make excuses for not doing what is proper, instead of pointing out the means of doing it?

As to the overcrowding of the wards, according to the inspector's reckoning they contain each 7,000 cubic feet (35 feet by 20 feet, by 10 feet high). This gives 700 cubic feet to each patient, which is below even the Local Government Board minimum. If the beds had been placed with the head to the wall, the passage would have been too narrow, and the excuse that they were so placed to prevent patients from falling out of bed cannot be accepted.

It would be a waste of time to go through the minor corrections which Mr. Kennedy makes, most of them incorrectly. We are satisfied with his practical admission that the isolation ward is what we describe it, and that the nursing arrangements are inadequate

Mr. Kennedy may be of opinion that 33 inches is sufficient width for the bed of a bedridden patient, especially a male patient. We are of the opposite opinion.

We may remark, finally, that we did not mention Mr. Kennedy, and made no attack upon him, or charge against him; but he now places himself in a very invidious position, and we can only ask the Local Government Board to supply Mr. Kennedy with the eyes and knowledge which he apparently does not adequately possess, by sending down a medical inspector to examine this place, and to make necessary recommendations. It is not at all a question of *amour propre*: it is the treatment of the sick poor. We have no doubt that this officer is well intentioned, and that both he and the guardians are open to conviction, and willing to do their duty in that case. More knowledge is required, and Mr. Kennedy should supplement technical deficiency by applying for the assistance of a medical colleague.

We do not desire to hurt anyone's feelings, but it is our duty to describe the actual state of things as we find them and to point out the urgency of remedy. We think that Mr. Kennedy would also be better employed in that way than in using the mildest official phrases to palliate obvious de-

fects. We have no doubt, therefore, that this discussion will be of solid benefit, and we shall be the first to welcome the changes which it will inaugurate, and to tender our thanks, as we do now in advance, to the board and to the Local Government Board inspector for the attention which they have given to the report we have published.

THE BATH WORKHOUSE INFIRMARY.

The report of the Committee appointed by the board of guardians at Bath to consider the report of the Local Government Board in respect of the workhouse infirmary, while containing much that will affect the welfare of the poor of that union, also teaches lessons which should be taken to heart by medical officers to workhouses all over the country.

As regards the poor, perhaps half a loaf is better than no bread, but it must be observed that the suggestion of the Committee that there should be five resident nurses, and two night nurses living out of the house, with tea and breakfast only provided, is but a poor substitute for the nine nurses recommended by the Local Government Board.

It is perhaps not unnatural that the guardians should snatch at an obvious answer to Dr. Fuller's criticism that "the wards are dirty and ill kept" in the repeated entries by Mr. Longe, another Local Government Board inspector, to the effect that the wards and bedding were clean, and the inmates appeared to be comfortable and well cared for. Probably outsiders will see in this condemnation of the system of inspection rather than any guarantee of the perfection of the workhouse.

The lesson to medical officers in general is, however, to be found in the fact that directly any complaint is made regarding the past condition of a workhouse search is made in the medical officer's report book, and if these matters are not found duly entered therein doubt is sure to be thrown on any complaints dating back to such times. Of this we do not complain; it is perfectly right; the book is put there for a purpose, and should be used. We fear, however, that too often medical officers do not care to be "always grumbling," and deficiencies or abuses are mentioned casually to the master or to some of the guardians instead of being entered in the book. This is doubtless done with the best of intentions, but the doctor who does it merely gives himself away into the hands of the enemy if in the future he requires to draw notice officially to these things. Every medical officer to a workhouse should clear himself from responsibility by entering a note of every defect in the book provided for the purpose, even if it has to be repeated week after week.

THE KEIGHLEY WORKHOUSE INFIRMARY.

We are very glad to find that our report on the Keighley Workhouse Infirmary is published in full in the *Bradford Observer* of September 22nd. There is no doubt that the republication of these reports in the local newspapers are of great value in extending their usefulness.

LITERARY NOTES.

The October number of the *English Illustrated Magazine*, which is now published at the office of the *Illustrated London News*, contains a very readable account, illustrated by outline drawings, of the Bertillon system of identifying criminals, from the pen of Colonel Howard Vincent, C.B., M.P.

O Archivo Medico da India is the name of a new "monthly journal of the medical sciences and pharmacy," which has recently begun to appear at Mapuca (Goa). The editors are Drs. Luis Napoleão d'Athaide and Angelo Custodio Martins. According to the editorial prospectus it is intended "to serve as a professional organ for Indo-Portuguese practitioners." One chief function of the periodical is stated to be to make known to its readers all that is interesting in foreign medical literature. We are gratified to observe that in discharging this part of its mission our Indo-Portuguese contemporary apparently finds the British Medical Journal and its Epitome particularly useful. A large part of the foreign news given by *O Archivo Medico* is taken from our columns; in every case, however, the source is carefully acknowledged—an example rare enough to be worthy of special commendation and imitation. *O Archivo Medico da India* publishes as a supplement a series of extracts by Dr. Galasio Dalgado from H. von Rheede's great work *Hortus Indicus Malabaricus*. The extracts are given in the original Latin, the names of the plants being also given in Portuguese and in *Komkani*. Dr. Dalgado has classified the plants described according to the system now generally adopted by botanists, and he proposes to add as an appendix a therapeutical classification of the plants of Goa and Savantvadi, with a posological table. Dr. Dalgado's compilation, when complete, will be issued as a separate work, under the title of *Vires Plantarum Malabaricarum*.

At the unveiling of the statute to Sydenham, which was recently presented to the Oxford Museum by the Warden and two Fellows of All Souls', Sir Henry Acland quoted the following passage from the preface of the great work of the English Hippocrates on acute diseases. We give it in full, as a singularly noble description of the spirit in which the healing art should be practised:

Whoever takes up medicine should seriously consider the following points:—Firstly, that he must one day render to the Supreme Judge an account of the lives of those sick men who have been entrusted to his care. Secondly, that such skill and science as, by the blessing of Almighty God, he has attained, are to be specially directed towards the honour of his Maker and the welfare of his fellow creatures, since it is a base thing for the great gifts of heaven to become the servants of avarice or ambition. Thirdly, he must remember that it is no mean or ignoble animal that he deals with. We may ascertain the worth of the human race, since for its sake God's Only-begotten Son became man, and thereby ennobled the nature that He took upon Him. Lastly, he must remember that he himself hath no exemption from the common lot, but that he is bound by the same laws of mortality, and liable to the same ailments and afflictions with his fellows. For these and the like reasons let him strive to render aid to the distressed with greater care, with the kindlier spirit, and with the stronger fellow-feeling. In all cases it behoves each and all of those physicians who have the desire not only to *seem* but to *be* prudent and honest, to acknowledge and entreat the Divine Goodness, that from this they may look for wisdom and good fortune; and they ought not to be satisfied with simply giving health to the sick, but they should strive to add greater certainty to the art that they administer; and they should so direct their experiments that the science of medicine may grow day by day more clear and more efficient. In this way the human race may reap the advantages thereof generally and with safety, even after they themselves had been laid in their graves.

Whatever changes the growth of knowledge may bring in the practice of medicine, *this* part of Sydenham's teaching can never be superseded.

In the current number of the *Asclepiad*, Sir B. W. Richardson points out that Sir Spencer Wells, in dealing with the early history of ovariotomy, has omitted the name of Mr. Power, a surgeon who practised at Bosworth, in Leicestershire, and who gave reasons of an original kind for the performance of the operation. Power communicated his ideas to Erasmus Darwin (author of the *Origin of Species*) after the examination of the body of an elderly lady who died of ovarian disease on March 29th, 1793. In this communication Power says:

On opening the abdomen I found a large cyst attached to the left ovarium by an elastic neck, as thick as the little finger, and so callous as not to admit of being separated by scissors without considerable difficulty. The substance of the cyst had an appearance much resembling the gravid uterus near the full period of gestation, and was as thick. It had no attachment to the peritoneum, or any of the viscera, except by the hard callous neck I have mentioned, so that the blood must with difficulty have been circulated through it for some time. Its texture was extremely tender, being easily perforated with the finger, was of a livid red colour, and evidently in a sphacelated state. It contained about two gallons of a fluid of the colour of port wine, without any greater tenacity. It has fallen to my lot to have opened two other patients, whose deaths were occasioned by encysted dropsy of the ovarium. In one of these the ovarium was much enlarged, so that eight or ten cysts on its surface, but there was no adhesion formed by any of the cysts to any other part; nor had the ovarium formed any adhesion with the peritoneum, though in a very diseased state. In the other the disease was more simple, being only one cyst, without any attachment but to the ovarium.

As the ovarium is a part not necessary, and dropsies of this kind are so generally fatal in the end, I think I shall be induced, notwithstanding the hazard attending wounds which penetrate the cavity of the abdomen, to propose the extirpation of the diseased part in the first case which occurs to me in which I can with precision say that the ovarium is the seat of the disease, and the patient in other respects tolerably healthy, as the cavity of the abdomen is often opened in other cases without bad consequences.

In this communication Darwin adds:

An argument, which might further countenance the operation thus proposed by Mr. Power might be taken from the disease frequently affecting young persons, from its being generally in these subjects local and primary, and not, like the ascites, produced or accompanied with other diseased viscera; and, lastly, as it is performed in adult quadrupeds, as old sows, with safety, though by awkward operators.

[illegible] vol. iii, pp. 270-72, in 1891.

The adjourned special general meeting of the members of the Medical Defence Union will be held at 20, Hanover Square, London, W., on Wednesday, October 3rd, at 4 P.M. Special general meetings will be held on October 4th, at the Victoria Hotel, Manchester, at University College, Bristol, on October 5th, and at the Medical Institute, Birmingham, on October 6th; on each occasion at 8 P.M.

Plucky Rescue by a Medical Man.—Dr. Vezier, a retired medical officer of the French army, rescued a boy of 12 from drowning the other day at Dunkirk, under somewhat exceptional circumstances. Dr. Vezier, who is 71 years of age, was fishing on the jetty when he saw the boy fall into the water. Without a moment's hesitation Dr. Vezier dived in, fully clothed as he was, and with some trouble got out the boy, who was already unconscious. Though himself injured in the hip, Dr. Vezier proceeded to carry out the necessary treatment, and succeeded in restoring animation.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st. Members of Branches are requested to pay the same to their respective secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, SEPTEMBER 29th, 1894.

THE EPIDEMIC SKIN DISEASE IN LONDON.

The information concerning the wave of epidemic skin disease which is now passing over the metropolis is not altogether complete, but it will be interesting to briefly consider certain points in the symptoms and etiology of the affection which the present outbreak reveals. It is especially rendered desirable that we should notice the subject in view of the somewhat alarming and misleading reports which have gained admission to the columns of some of our lay contemporaries.

Since the malady was first described by Savill in 1891 cases of the disease have each summer and autumn been observed in different parts of the metropolis chiefly, but not by any means entirely, among the workhouse infirmaries—sometimes in outbreaks, sometimes sporadically. Thus, in the following year, 1892, a few cases occurred both at the Paddington and Marylebone Infirmaries, some being among the patients who had suffered the year before; and it is worthy of note that two out of the fourteen cases at the former institution were admitted with the eruption upon them, they having contracted and developed the disease outside the building. All these cases were less severe than those of the year before, and only one of them died.

In the autumn of 1893 three cases of the disease, all fatal, occurred among the patients under the care of Mr. Steer at the Fulham Infirmary; and in the same year no fewer than 86 cases arose in the sick-wards of the Bethnal Green Workhouse during the short space of five weeks (May 4th to June 10th), giving an attack-rate of 10 per cent. among all the patients in the sick wards. These cases were of a much milder type, and only 5 of them died. In general terms, this outbreak was only half the severity of that at Paddington in 1891.

During the current year, 1894, the disease is known to have been present in at least five of the metropolitan infirmaries. Reference was made in our last issue to the outbreak at Marylebone Infirmary, where 65 patients and one officer have been attacked or admitted with the disease, and 5 deaths have occurred. It will be noticed that some of these cases were somewhat variable in their type. The previous week we presented to the readers of the British Medical Journal a brief account of the epidemic at St. George-in-the-East Infirmary, which presents some special features of interest. Here about 70 or 80 patients have been attacked, and about 17 are alleged to have died of the disease.

In some of the cases at St. George-in-the-East there seems to have been a new, or at any rate unusual, symptom in the shape of pyrexia. This was of a more or less intermitting type, and sometimes started abruptly a few days, or even in one case two weeks, before the eruption made its appearance. There were, it is true, many instances where the eruption followed its usual and typical course without being attended by any noticeable elevation of temperature; but, on the other hand, there were certain other patients who, though they did not develop any rash, suffered from *malaise*, sickness, and feverishness of much the same type as the others, and whom, therefore, Dr. Bowlan, the medical superintendent, includes in the same category. It will be interesting to learn more details concerning those patients with pyrexia only, for there is the possibility that they were suffering from some totally distinct malady, such as influenza. And as to those who suffered from both eruption and fever it is important to know the precise characters of the two sets of symptoms before their relationship, if any, can be made out.

At the Shoreditch Infirmary, excluding the slighter cases, 60 patients have been attacked with well-defined symptoms of the disease, and 6 of these have died. At the City of London Infirmary 35 inmates and one officer have been attacked or brought in with the malady: and one has lately developed the rash in the Fulham Infirmary. The known cases at the present time amount, therefore, to an aggregate of about 240, and give an approximate fatality of 11.6 per cent. among thecases recognised in Infirmaries.

Our lay contemporaries may, however, rest assured that the disease is certainly not more than usually virulent, and that it has not those mysterious qualities with which they endow it. The cases at the present time seem, like those of the two preceding years, to have been of a somewhat milder and less fatal type than those of the year 1891, which had an infirmary case-mortality of 12.8 per cent. The eruption has always presented, in greater or less degree, the three characteristic qualities of symmetry, desquamation of the cuticle, and fairly regular course and duration.

But the most interesting question at the present time concerning this disorder is its etiology. And, first, why should it seem to prevail in workhouses and infirmaries? There exists undoubtedly a predisposition on the part of those advanced in life and infirm in body to contract the disease; this is well established. But something must also be attributed to the circumstance that the medical superintendents of infirmaries are now, since 1891, quite familiar with the disease, and are on the look out for it; and this may account for its apparent predominance among infirmary patients. However, the disorder is not, as a matter of fact, altogether confined to infirmaries and workhouses. Dr. Lees has recorded cases which were under his care at St. Mary's Hospital in 1891, and we believe that there have been instances of the malady this year in the same hospital. A fair number of isolated cases are also known to have arisen in other institutions, as well as in private practice.

In the second place what is the immediate and proximate cause of this epidemic malady? Savill, in 1891, clearly established on clinical grounds the fact that the disease is a

contagious one and spreads with great rapidity from patient to patient where a predisposition exists. He also isolated, with some difficulty, a micrococcus with which he produced skin symptoms and a fatal issue in a rabbit, from whose blood pure cultures of a microbe having the same characters were obtained. Russell found by independent researches the same organism in the skin, blood, and tissues of persons dying of the disease.

Various articles of food as possible causes were discussed at that time but none of them could be blamed for the introduction of the poison into the system. However, during the epidemic in the Bethnal Green Workhouse in 1893 suspicion was cast upon the milk consumed by the inmates, and we understand that this outbreak is still the subject of inquiry by the Local Government Board from this point of view. If one may judge by certain comments in the lay press, the public are getting impatient that the results of that inquiry have not yet been made known. This year, (1894) suspicion is again cast upon the same article of diet, this time by Dr. Forbes, the medical superintendent of the Shoreditch Infirmary. He formed this opinion because many of the cases occurred amongst those who took cow's milk as a beverage. Moreover, he observed that only a few cases arose in the workhouse proper, where milk is but little used, and three of the cases which did arise there happened to be on allowances of milk as extras in their dietary. The milk was therefore submitted to a bacteriological examination by Professor Crookshank, and, meanwhile, the guardians enabled Dr. Forbes in the month of August to order condensed milk for those who took it as a beverage, the cow's milk being used only in puddings, and therefore after being boiled. Coincidently with this alteration in the dietary of those who were upon a milk diet, the cases began during the latter part of August to arise with less frequency. The bacteriological examination is probably not yet concluded, but the report presented to the guardians at their meeting on August 22nd simply mentions that the samples submitted contain "putrefactive bacteria of a serious nature," and recommends that other milk should be supplied. In an "interview" given in one of the morning papers, Dr. Crookshank is reported to have said that no specific microbes (such as the one to which we have just referred) were discovered to which the outbreak of dermatitis could be attributed; and the result was absolutely negative as regards the causation of the disease.

Nevertheless a superficial examination of the phenomena of the Shoreditch outbreak certainly suggests the milk as a possible source of mischief, and this suspicion receives confirmation from the fact that the two principal infirmaries involved in 1891, Paddington and Marylebone, received their milk supply from the same contractor. Dr. Forbes was certainly warranted on these grounds in taking the action which he did about the middle of August, and ordering condensed in lieu of ordinary milk for his patients.

On the other hand there are data of importance which considerably diminish the weight of the foregoing circumstances as evidence in support of the view that the milk was the source of the poison.

Among the inmates of an infirmary, milk diet is chiefly employed for the aged and those who are specially broken down in health; and it is this debilitated condition, especially when it is accompanied by old age, that has been conclusively shown to give rise to a special predisposition to contract the malady. Again, it is true that the inmates of a workhouse proper are not generally supplied with milk as a beverage, but it is equally true that they are always healthier and often younger than the inmates of the infirmary.

As regards the decline of the cases during August it is well known that the influence of season is a very distinct element in the causation of the malady. Nearly all the cases have arisen during the summer months and there is nearly always a marked decline of cases in the latter part of August even when no modification has been made in the dietary and cow's milk has been liberally supplied. Finally it is a remarkable fact, unexplained on the hypothesis of milk causation, that now, as in 1891, several infirmaries are affected which are situated far from each other and obtain milk from totally different sources, like Paddington and Lambeth in 1891 and Marylebone and Shoreditch in 1894.

It is, of course, possible that milk may convey the contagion of this disease from person to person as it does that of scarlet fever, diphtheria, or typhoid, but in the absence of stronger evidence than that before us it would be difficult to subscribe to the doctrine that milk, or the swarms of putrefactive organisms which it habitually contains are the essential causal factor of the disease.

BARRACK SCHOOLS.

VII.—Their Alternatives.

It would not be in accordance with our usual practice if we allowed only one view of any problem to be stated, especially when on the right solving of that problem depends the lives and characters, consequently the happiness, of many thousands of children. Our readers will therefore not be surprised if we devote another article to a third and a fourth method of dealing with pauper children, methods which have been in vogue long enough to prove their failure or success. We refer to the cottage homes and to emigration. We will begin with the former. *A priori*, this method has all the arguments in its favour. The children are placed in cottages where, like a large family, they are ruled by a foster parent or parents. In the case of girls the parent is a woman, a person of the same class as those at present employed in the barrack schools as housemaids, girls' attendants, and laundry women, but she is generally older, is in many cases a widow, and, having had experience in the usual walks of life among the working classes, is the better able to guide the girls under her care, not only in domestic matters, but in those moral precepts and ethical practices the observance of which tend so largely to create success, whatever be the social station of those who practise them.

The common life of a child who is a member of a large family is, as far as possible, imitated in these State-created families. The child goes to school, taking care of the younger, or being herself taking care of. The elder girls stay at home, and by helping the house mother learn domestic work. The children return to meals, go out to play, and gather round the table when dusk closes in to darn, mend, patch, and knit.

Such homes have now been built in sufficient number by Dr. Barnardo's supporters as to form a children's village at Ilford. A colony of 900 homeless girls there find homes.

The school passes 96 per cent., and the health returns leave nothing to be desired. There we find no ophthalmia, no glandular swellings, no ringworm or itch, little eczema, and no epidemics. Indeed, from these cottages the health returns are remarkably good, the infirmary patients being but 1.85 per cent. It might be thought that these figures are hardly reliable, or are produced in such a way as to encourage subscriptions, were it not that in another of Dr. Barnardo's institutions which he conducts on the barrack system we learn that 35 per cent. of the children were stricken with ophthalmia. In the cottages the children are placed in groups of 16 and 25, numbers, in our opinion, still too large to allow of the individual development of individual characters, but small enough to permit of rules being suspended, amended, or extended without producing a revolution, and sufficiently limited to allow the foster parent or parents to give that personal care to the comfort and hygienic condition of each inmate which alone can insure good health in growing children.

It is now fourteen years ago since the Birmingham Board of Guardians decided to adopt a similar plan, and built their homes for union children on the cottage plan at Marston Green. There each home holds 30 children, who sleep in 3 rooms, each containing 10 beds. The boys' homes are presided over by both a "father and mother," the girls only by a "mother;" the "fathers" are chosen largely on the ground of their suitability as trade trainers, and the industrial education given in these homes includes painting, plumbing, whitewashing, glazing, baking, carpentering, shoemaking, whitesmithing, and tailoring, besides the knowledge that any boy of average intelligence is able to acquire as he works in the garden or the farm. Each child is dressed differently, and the wholesome rivalry that is engendered by the desire of the foster parents that their charges should look as well as those of any other house is not an influence to be despised or ignored. We may quote from a paper of Mr. J. T. Kilner, of Hudderfield Union, the following pleasing opinion; he says: "These homes were exceedingly well kept and exceptionally clean; the children were healthy, and had an appearance of neatness owing to the variety in the clothing, and generally there was an air of comfort and homeliness about the whole establishment which is only obtainable under the cottage-home system."

In London the Kensington and Chelsea Unions have combined to erect and maintain a similar village. In this institution the numbers in each house are, we venture to think, too large; 36 is a larger family than any two people are usually given by Nature to supervise and upbring, and the assistance that is rendered by the "give and take" of simple human relationships is considerably reduced if the numbers are sufficiently numerous to necessitate domestic rules and the constant reference to them.

That the ratepayers save in the increased health of the children brought up in cottage homes, in contrast to those educated in the barracks, is proved by the following figures at the Banstead Cottage Home:

From	1881	to	1884	4.58	per cent. of children were sick in infirmary.	
,,	1885	to	1888	2.17	,,	,,
,,	1889	to	1890	1.88	,,	,,
,,	1891	to	1892	2.74	,,	,,

added to which we learn from the report of Dr. Cox, the medical officer, that there has been "complete freedom from the scourge of public schools—ophthalmia—and that "there has been only one case of scarlet fever, and, this being promptly isolated, the further spread of the disease was prevented." If these figures are compared with those in a report of a barrack school which we have before us there can be but little doubt that, if judged solely by the health results, the cottage system must bear off the palm. In this report we learn that 57 out of 660 children are under medical treatment, or something like 9 per cent., and that besides something like half the children have to be kept under tonics or extra diet.

The plan of similar homes, not grouped together, but scattered about the union, has been adopted by the Sheffield Board of Guardians, but, though this scheme has obvious advantages, such as that of allowing the children to go to different Board schools and the avoidance of epidemics, it yet has not been sufficiently long in existence as a working scheme to justify judgment.

To the traveller in Canada the ever-recurring question is "Why are pauper children not sent here?" The vast stretches of land waiting to be used; the demand for labour; the healthy climate; the abundance of food; the simple habits of the people; the space available in their homesteads are all circumstances that combine to make the children welcome and their future welfare secure.

The cost of emigrating such children is but small. The cost of a child in a big barrack school is, say, £30 a year. Supposing that he spends six years of his young life in such an institution (and many spend their whole childhood—say twelve years), the cost to the community would be £180, not counting the loss of interest. To emigrate him would cost about £15, including the necessary preliminary training. In a speech that Mr. Samuel Smith made before the House of Commons, he stated that a society with which he was connected in Liverpool had during the thirteen years in which it had been at work emigrated 2,000 children of this class, and he affirmed "that 95 per cent. of them have done well," adding that "no difficulty whatever has been found in placing younger children in comfortable and happy homes in Canada," and that by "the time they reach manhood and womanhood, they are to all intents and purposes indistinguishable from ordinary Canadian citizens," so completely have they been absorbed into the population.

In spite of this testimony and similar reports from the Waifs and Strays Society, who have emigrated something like 700 children in eight years, we yet learn that the guardians are so backward in using this outlet for children dependent on the State, that all the boards together of England, Ireland, Scotland, and Wales only emigrate about 150 children a year. The cause of this fact must be sought. It is not enough to attribute it only to apathy and ignorance. There are many enlightened boards who would be glad to relieve the rates of the expense, and themselves of the care, of children who are a drug here and in demand on the other side of the Atlantic, unless there were some other reason which operates against free use of Canada as an outlet and a home for them. The Local Government Board professes to be in favour of emigration, but they have done very little to promote the work, and they have made and wish to have observed two rules which have a tendency to hinder the work. They insist that the Canadian Government shall report annually upon all pauper children emigrated, and

they have a regulation that children are only allowed to go to Canada direct from the workhouse schools.

Both these rules work against emigration, especially the latter. At the recent conference held by the Reformatory and Refuge Union on Juvenile Emigration, there was but one opinion on the necessity of training the children in homes (not institutions) before they could be fit to be welcomed by the prosperous and thrifty farming population of Canada as members of their households; and another worker of vast experience points out that supervision of children that are supposed to be incorporated into the families of those supervised is not to be undertaken and carried out as a piece of State machinery, but should be done in such a manner and under such conditions as will lead to the closer union of adopted child and parents, and the further extension of the plan.

It will be one of the duties of the new Commission, when it gets to its work in November, to inquire into the Local Government Board rules which affect emigration, or if necessary to cause their abolition or modification.

That the present system of pauper education is not satisfactory is proved by the following statement made by a Member of Parliament of good repute and philanthropic character: "At an entertainment given in the East End of London to about 1,900 lads of the destitute or unemployed class, those who came from pauper schools were asked to stand up, and 1,400 lads stood."

We have made inquiries in the best informed quarters concerning an alleged establishment, or rather establishments, in Paris where "morphino-maniacs" are said to congregate, and of which minute and dramatic particulars have been very widely circulated in the press throughout the length and breadth of the land. We are assured that there is no such place known either to the police or the profession. The whole thing is a pure product of the imagination.

DIPHTHERIA AT HAWARDEN.

With reference to the outbreak of diphtheria near Hawarden, we are informed by Dr. A. L. Evans, the medical officer of health to the Hawarden Rural Sanitary District, that it has been confined to a low-lying, flat, and badly drained part of the parish called Penton, situate about two miles from the village. In all about twenty-four people were attacked; with one exception, they were all children. There are great physical difficulties in draining this district. The houses are old and dilapidated, and the people are, as a rule, very poor and ignorant. The water supply is good, and the milk supplied to these houses has been tested, but nothing deleterious has been found in it. Twelve deaths have occurred. Dr. Evans is of opinion that inefficient drainage accounts for the outbreak. The Compulsory Notification Act is not in force in the Hawarden Union.

THE RED CROSS IN THE FAR EAST.

With reference to the accounts of severe fighting between the Chinese and Japanese, which have filled the newspapers during the last few days, we are informed that in 1884 the International Conference of Red Cross Societies, held at Geneva, was attended by Dr. T. Hashimoto, Director of the Military Hospitals at Tokio, and Baron de Siebold, Secretary of the Japanese Legation at Berlin, and on June 5th, 1886, the Convention of Geneva was officially accepted by the Government of the Mikado. In 1887 two delegates were sent by the Government and two by the Central Committee of the Japanese Society to the International Conference at Carlsruhe; and at the last Conference, held at Rome in 1892, the Government was represented by the Japanese Chargé d'Affaires at the Italian Court, and the Central Committee at Tokio by two delegates, Dr. Shimpei Goto and Baron de Siebold. It is satisfactory to learn from a telegram that the Empress of Japan, a patroness of the Japanese Red Cross Society, has personally set the example of preparing lint and bandages for equal distribution among wounded Chinese and Japanese without distinction, and that in this humane work Her Majesty is assisted by all the ladies of the Court.

THE SALE OF POISONS.

At the Carlow Petty Sessions on September 22nd Mr. Thomas Richards, a druggist and hardware merchant, was prosecuted by the police at the suit of the Pharmaceutical Society of Ireland for having sold poisons within the meaning of the Act, not being a chemist duly qualified. Professor Tichborne proved that one of the packets submitted to him was a bottle of Winslow's soothing syrup containing morphine, and the other a vermin paste containing phosphorus. For the defendant it was proved that the syrup was obtained at a pharmacist's to oblige the purchaser, but the magistrates imposed a fine of £5.

MR. GLADSTONE.

We are glad to be able to state that the operation for cataract performed on Mr. Gladstone's right eye last May has given an excellent result. At the time of our last annotation (issue of July 28th), there was enough of residual opacity in the pupil to prevent accurate vision, and it was believed that a needle operation would be required. Subsequently, however, the sight cleared so much that for some weeks past Mr. Gladstone has depended entirely upon this eye for reading; so that when, on September 20th, Mr. Nettleship found that the operated eye could read the finest print (No. 1 Jaeger), and see distant objects well, he decided not to interfere. The cataract in the left eye, though still immature, has made progress since the right was operated upon, and this eye is no longer useful for reading ordinary type. Mr. Gladstone is in very good health and spirits, gets through a large amount of reading and writing, and takes walking and carriage exercise daily.

RESEARCHES ON LEPROSY IN ICELAND.

A young Danish physician, Dr. Edw. Ehlers, has sojourned in Iceland this summer, in order to study the leprosy question there. He has, through prolonged studies abroad, chiefly in France, gained great knowledge of his speciality, namely, skin diseases. For a long time he has contemplated the researches on which he is now engaged, but it was first this year that he was enabled to carry them out by a grant from the Rigsdag. That leprosy exists in Iceland has long been known, and in all probability the fell disease was imported from Bergen, on the west coast of Norway. But the last Icelandic official statistics return only seven cases, all of the so-called "smooth" kind. However, Dr. Ehlers has come to the conclusion that, as the disease *de facto* exists in the island at all, there are no doubt more cases, and that old as the disease is—for it is mentioned in the Sagas as well as in the most ancient laws—it might have descended in less virulent forms, such as leprosy is wont to assume when on the point of dying out. Dr. Ehlers found confirmation in this view by the discovery recently made by a French specialist on skin diseases, who, during a journey in Brittany, came upon some beggars on whose fingers he at once recognised the signs of the last remnants of the disease. It is well known that leprosy was prevalent in Brittany in remote times, but modern statistics do not mention the disease, probably because the local physicians do not recognise its less specific forms. Dr. Ehlers argues that something similar may be the case in Iceland. When the disease for centuries

has been found in the island, and when at present only a few "smooth" or "nervous" cases are known, he thinks it curious there should not be more acute cases, and that there should not be numerous instances of the disease in its last stages. As Bergen, the old Norse capital and subsequent Hanse Town, its chief centre in Norway, had extensive commercial connections with Ireland for centuries Dr. Ehlers came to the conclusion that the disease should have been most virulent where in olden times stood the then capital of Ireland, Orebakke (not Reykjavik), on the south-west point of the island, and on the other side of the peninsula. And to confirm this view is the fact that in this very spot are still found the few cases officially returned. Dr. Ehlers last year visited Bergen, being the correspondent of the *Semaine Médicale*,, at the Medical Congress held in Gothenburg; at the close of which he travelled thither in order to study the disease and consult the Norwegian specialists. On his return he petitioned for a State subsidy towards his researches; and the Rigsdag granted 3,000 kr. (£170). Dr. Ehlers's plan attracted much notice at home and abroad, he being overwhelmed with applications from medical men for leave to accompany him; but as the means of travelling are limited and poor in the island, he had to decline all but one. He travels therefore only accompanied by his wife, a French *savant*, and his assistant.

INTOXICATING TEMPERANCE DRINKS.

We learn from the local journals that a vendor of hop beer, supposed to be non-intoxicating, has been fined at Lancaster for selling intoxicants without a licence. Samples of a Morecambe vendor's hop beer had been analysed at Somerset House and found to contain 3.4 and 4.34 and 2.3 per cent. of alcohol, the law, it is stated, allowing no more than 2 per cent. Drinks sold as temperance beverages had been obtained locally, containing 10 and 12 per cent. of alcohol. We welcome this action of the Excise authorities as most valuable in the interests alike of the general sobriety of the community and of true temperance. The law allows an ample margin of alcohol before regarding a drink as legally an intoxicating beverage, and the strict enforcement of the law will prove an undoubted boon to the public health, protect abstainers from being deceived into drinking a really intoxicating liquor, besides adding to the Revenue moneys of which the people have been defrauded. We trust that the same course will be followed continuously in every part of the United Kingdom.

THE SICK POOR IN PROVINCIAL WORKHOUSES: TRURO.

The workhouse infirmary at Truro is licensed for 78 beds, and in winter it is probable that the greater number of beds are occupied, yet there is but one nurse in charge of the patients. Whatever allowance is made for the difference between the class of patients in the Poor-law infirmaries and those in hospital, it will hardly be maintained that these sick people are nursed in the sense in which medical men and trained nurses are accustomed to use that word. Our Commissioner's report of a visit to Truro Infirmary shows how much reliance is of necessity placed on pauper help, the nurse's efforts on behalf of her patients being supplemented on the male side by old men (one of them had reached the ripe age of 89), and on the female side by equally aged women, or younger ones who had lost their character. An old married couple, who were in a small ward together, both bedridden, and both suffering from a want of control of the sphincters, were under the charge of an old pauper. Is it wonderful that the Commissioner found the room very unsavoury, or that the man's bedclothes were soaked with urine? But such a state of things, if inevitable under the circumstances, points most clearly to the necessity for increasing the nursing staff. There appears to be the usual lack of bath rooms, of hot water, of conveniences for the use of sick people. The provincial infirmaries are generally old buildings, which were never designed for the purpose to which they are now applied, and boards of guardians who seek to do their best for the sick are constantly checked in their desire for reform by the stubborn facts of unsuitable structure; but while they hesitate to incur the expense of bringing the building and the sanitary appliances up to the standard of modern hospital requirements, there is one reform which takes no time and comparatively little money; it is almost always possible to increase the nursing staff. When the doctor's skill and care are supplemented by an adequate number of trained nurses, the unfortunate pauper has a fair chance of recovery, or at least of ending his days amid such alleviations of sickness as modern science affords. We would urge the Truro Board in the name of humanity and of common sense to turn their attention to this matter. We are glad to hear that there is a Ladies' Visiting Committee.

DUBLIN HOSPITALS.

The 36th report of the Board of Superintendence of Dublin Hospitals has been issued. This document deals only with hospitals which receive some assistance from Parliament. There were 11,108 cases treated in the wards during the year, and the mortality amounted to 4.47 per cent. The daily average in hospital was 793. The Board advocates the establishment of a central pathological institute, in connection with all the Dublin hospitals, and it very properly points out that all medico-legal necropsies should be made there. Undoubtedly this would be a valuable addition to the Medical School in Dublin, but there are difficulties in the way—financial and other—which would not be easily overcome. The reports regarding the management of the hospitals are favourable or laudatory. The Board very properly calls attention to the dairy yards in proximity to some of the hospitals, and it fixes responsibility upon the Corporation, and demands that at least the soil should be removed daily. We have ourselves frequently called attention to this scandal in Dublin. The Corporation and its officers ought to be compelled to do their duty. The average annual cost per bed in the general hospitals—exclusive of buildings and furniture—varies from £64 2s. 4d. to £50 17s. 10d.

A UNIVERSAL LANGUAGE FOR MEDICINE.

Decidedly the question of a universal language of medicine is in the air. During the last few months we have had occasion to refer to several proposals of the kind. Now comes another, this time from Italy. Dr. E. Vitali, of Bari, has addressed a long letter to the Italian Minister of Public Instruction, Dr. Baccelli, inviting him as President of the International Medical Congress to propose to the Organising Committee that Latin be recognised as one of the official languages at the next (Moscow) Congress, and as the sole official language at all future Congresses, beginning with the fourth from the one held this year in Rome. Dr. Vitali's argument is briefly that while all medical men have some smattering of Latin, comparatively few know any modern language but their own. Very few understand all the languages used at congresses, which hence serve to give an idea of the Tower of Babel as far as confusion of tongues is concerned. However bad may be the Latin spoken, it will always, Dr. Vitali maintains, be more intelligible than any one modern language to the largest number; and that, after all, is the main point. For anyone really in earnest in the matter there need be no difficulty in acquiring sufficient fluency in Latin for the purpose in view. Dr. Baccelli has sent a diplomatic reply to Dr. Vitali's communication, in which he promises to give the subject proper consideration, etc. There, so far as we know, the matter rests; and there, we imagine, it is likely to rest. There would unquestionably be many advantages in the revival of Latin as the *lingua franca* of science, nor does the scheme involve any insuperable difficulties. As Dr. Vitali

says, every medical man retains in his cortical cells some "rudiments" of Latin, which might without much trouble be developed into articulate speech at least as good as the French one usually brings away from school. Handled as a living language—as is done, for instance, in the theological schools of the Roman Catholic Church—Latin will be found equal to all the demands likely to be made on its resources by the progress of modern science. The Pope finds no difficulty in discussing such matters as strikes, the "living wage," and the eight hours' movement in Latin as least as choice as the English of an average M.P.; there is therefore no reason why a new bacillus or a modification of an old operation should not be described in the same language. The style need not be Ciceronian; it would be sufficient if it were intelligible. Scientific works are still occasionally written in Latin, and prescriptions are drawn up in something that passes for it: what is proposed, therefore, is not so much a new thing as a revival of a practice not altogether extinct. It is not so very long ago since even bedside teaching was given and examinations conducted in Latin in this country. In Scott's *Surgeon's Daughter* we find Hartley conversing with his old fellow student in Latin, "with which both were familiar (for in that time the medical studies at the celebrated University of Edinburgh were, in a great measure, conducted in Latin)." Graves speaks disrespectfully of the Latin heard in his early days in the wards of Dublin hospitals. In an interesting article in *Temple Bar* for August it is stated that the celebrated Dr. Bozzi Granville, when he wished to enter the English navy, had some difficulty about his examination at Haslar, as none of the medical staff spoke any European language but their own. "At the suggestion of the surgeon of the *Raven*, whose communications with his assistant had been carried on in Latin, that language was employed; the Italian doctor passed triumphantly." Dr. Vitali does not refer to one practical difficulty, namely, the diversity of pronunciation used in different countries. There is a story, which may well be true, of a British ecclesiastic who made a speech in Latin to the Pope, to which the Holy Father excused himself from replying on the plea that he did not understand English. A Spaniard's Latin is absolutely unintelligible to the uninitiated, and a Frenchman is not easy to follow when he quotes Virgil. But this difficulty might be got over with a little ingenuity, as, in fact, it was at the Œcumenical Council held in Rome in 1870. The scheme, therefore, is not impracticable; that it has any chance of being translated into action may well be doubted. Still, the fact that such a proposal has been seriously made adds one more argument against the elimination of Latin from the programme of preliminary studies. At the recent Congress of Hygiene at Buda-Pesth the linguistic difficulty made itself felt so keenly that M. Chantemesse, the principal delegate of France, at the last meeting brought forward a proposal that Latin should be formally adopted in future as the official language of the Congress. "The scientific language of the Middle Ages," he said, "forgotten for so many years, reappears as a symbol of a common understanding." As a matter of fact, the International Committee of Military Hygiene has already adopted Latin as the language for its statistical researches.

A SERUM TREATMENT OF PHTHISIS.

The amount of success which has thus far attended the therapeutic use of the serum of immunised animals in the treatment of diphtheria and tetanus is likely to give an impetus to the further study of the treatment of specific infective diseases by antitoxins. We can only hope that no precipitate announcements will encourage expectation which cannot eventually be realised. It was with some misgiving that we read a telegram in the lay journals announcing a "new" method of treatment for phthisis; but we find on inquiry, and from information received through Dr. Cordes of Geneva, Dr. Sinclair Coghill, and others, that Dr. Viquerat has given serious attention to the possibilities of the subject, and that he was recently invited by Professor Julliard to give a lecture in the University of Geneva. Dr. Viquerat observed in the first place that there had long been a popular opinion that asses' milk was of value in the treatment of consumption, and that koumiss—a milk beverage manufactured from mares' milk—had been considered to give good results. Mares very seldom suffer from tuberculosis, and asses and mules are not known to contract it under ordinary circumstances; in fact, in them injection of tuberculous material causes only some local swelling, followed by cicatricial induration, but not by suppuration or caseation. Tuberculous material injected into the jugular vein in the ass produces miliary tuberculosis of the lungs, but without fever and there is no subsequent caseation. In asses examined forty-five days after such an inoculation no lesion is discoverable in the organs and the bacillus cannot be demonstrated. The animal does not suffer from any illness, but, on the contrary, shows an "extraordinary appetite." When taken by the mouth tuberculous material does not produce either enlargement of the glands or intestinal lesions. Dr. Viquerat concludes, therefore, that the ass possesses a natural immunity to the tubercle bacillus, and that its blood and tissues contain a substance unfavourable to the development of tuberculosis. It appears to be the only known species of warm-blooded animal endowed with this immunity. When inoculated with tuberculous material it produces, Dr. Viquerat believes, a larger quantity of this antituberculous material. The blood of the ass forty-five days after inoculation possesses a very great antituberculous power. The only experiments which M. Viquerat appears to have advanced in support of the view that the serum of asses thus treated has a curative power were some on guinea-pigs. Such animals, after being rendered tuberculous, and subsequently submitted to injection every other day with the serum of the ass, recovered; and he stated that he had in his possession certain guinea-pigs which had survived in good health for a year. His proposal is to treat pulmonary tuberculosis, which has not yet reached the suppurative stage, by injecting under the skin every other day 10 c.c. of the serum of asses, previously subjected to inoculation with tuberculosis in the manner described. It is impossible as yet to form any opinion as to the possible value of the method, but we are informed that 25 individuals have been already subjected to the treatment; in 13 the treatment has been concluded, and it is reported that 12 appear to be cured; of the 12 cases remaining under treatment 10, it is stated, are improving. It is further announced that an institute is about to be established at Côte-Drize, Geneva, where the experimental investigation will be continued, and where, at the beginning of November, the treatment of out-patients will be commenced. Meantime we once more strongly deprecate the premature announcement of successes based on an inadequate and incomplete experience.

METHYLATED SPIRIT DRINKING.

It is stated that an inquiry in the East End of London has revealed the existence of a growing habit of the drinking of methylated spirit mixed with lemon juice. Saturday night seems to have been the most popular time for this traffic. In Glasgow and Edinburgh some years ago, the whisky shops being shut from Saturday evening till Sunday morning, a certain grade of chemists used to retail this repulsive and cheap drink, but this Sunday retailing has been substantially reduced by the activity of the police. In a part of the North of Ireland, where this degraded indulgence had sprung up, it was curtailed after Mr. Ernest Hart's report on the subject by making the spirit still more nauseous, and by increased vigilance over the retailers. In East London so much mischief was wrought that the chemists and oilmen in the district were desired as a favour not to sell the stuff on Saturday evenings, a request which was favour-

ably responded to by a considerable proportion of the druggists and oil retailers. One starving family of seven, owing to their parents having renounced the habit through this crusade, are now stated to be prospering. The retailing as a beverage of an intoxicant drug forbidden by law to be used in alcoholic tinctures as medicine ought to be rigidly prohibited under heavy penalties.

EAU-DE-COLOGNE TIPPLERS.

It has recently been currently stated that intemperance in eau-de-cologne is spreading among women, particularly of the higher classes. There is, unfortunately, too much truth in the statement. Eau-de-cologne is easily procurable, and is a convenient means of securing the transient pleasurable effects of alcoholic exhilaration and intoxication. A lady can keep a goodly-sized bottle of the liquid on her toilet table without the suspicion at once aroused by a wine or spirit flask. The statement that the scented spirit is first taken in the quantity of a few drops to relieve faintness is true; but it is somewhat of an exaggeration to say that by-and-by the drinker "takes the stuff by the wineglass." In a minute proportion of cases this may be done; but we are inclined to think that, even in advanced cases, as a rule half a wineglassful dissolved in an ordinary half-pint tumbler is the usual mode of taking. At first, when the dose is limited to drops, the eau de-cologne is often taken on a lump of sugar. Female morphine and cocaine inebriates occasionally try to substitute eau-de-cologne in an endeavour, generally vain, to be weaned from their enslaver. We are of opinion that the injurious effects—bad as they undoubtedly are—are a little overrated when it is added that this form of alcoholism is one of "the most deadly forms of the evil, for not only is the stuff made of impure and immature alcohol, but it also contains essential oils, which are poisonous even in small quantities.' We, however, concur in the warning as well-timed and really needed.

SLEEPLESSNESS.

The subject of sleeplessness is once more under public discussion. The hurry and excitement of modern life is quite correctly held to be responsible for much of the insomnia of which we hear; and most of the articles and letters are full of good advice to live more quietly and of platitudes concerning the harmfulness of rush and worry. The pity of it is that so many people are unable to follow this good advice and are obliged to lead a life of anxiety and high tension. Hence the search for some sovereign panacea that will cure the evil. Many are the remedies suggested—hot baths, cold baths, hot drinks, cold drinks, long walks (some say on bare foot) before retiring to rest, and so forth. Some recommend the well-known plan of steady and monotonous counting, while others advise the more difficult feat of thinking about nothing. There can, however, be no doubt that different remedies suit different cases. Where a holiday and complete change of employment and surroundings is impossible, we would advise what the sufferer finds to be most soothing to his temperament. Some will find this in a long walk, while others will only be excited by the undue exercise; some may find a hot bath, others a cold bath beneficial; some are lulled by tobacco, others by novel reading; others still by a glass of grog. To be read off to sleep by a gentle voice is, perhaps, the pleasantest way of all. We know some who are lulled by very simple measures, such as brushing the hair, or the application of a cooling lotion to the temples. Others have apparently to adopt more heroic measures if we may judge from their letters. We give a quotation from one of these, culled from the *Glasgow Herald*:

> Soap your head with the ordinary yellow soap; rub it into the roots of the hair until your head is just lather all over, tie it up in a napkin, go to bed, and wash it out in the morning. Do this for a fortnight. Take no tea after 6 P.M. I did this, and have never been troubled with sleeplessness since. I have lost sleep on an occasion since, but one or two nights of the soap cure put it all right. I have conversed with medical men, but I have had no explanation from any of them. All that I am careful about is that it cured me.

We cannot help thinking that some of our sleepless readers would prefer the disease to the cure. But if any should like to try it, may we advise that they should first, at any rate, follow that part of the advice which relates to the tea, and leave the soap part as a last resource.

AUTUMNAL SENSATIONS.

Just about this time of year the sea-serpent and the foreign hypnotiser make their appearance with annually renewed vigour. Luys with his iron crown at La Charité, and the great sea-snake, have been severely scotched, but by the aid of foreign telegrams they have been resurrected at the customary dates. To this is now added the misdeeds of an Austrian hypnotiser, and the fatal syncope of his "subject." To the instructed, who are now well aware that the hypnotic condition is only a self-induced suspension of will power due to suggestion, there is nothing surprising or even novel in such an accident. But a large part of mankind love mystery, and dote on "mysterious" occurrences, so that it will be long before we hear the last of this unfortunate victim of what is now a common conjuror's trick.

CREMATION AND THE CHURCH.

Cremation is one of the subjects to be discussed by the Oxford Diocesan Conference this week. Mr. H. B. Blandy will move: "That, in view of the increasing practice of cremation and of the greater facilities demanded on behalf of burial authorities for the establishment of crematoria, this Conference is of opinion that it would be desirable that the Church, through her Convocation, should express an opinion if there is anything abhorrent to the teaching of the Catholic Church in the disposal of our dead by cremation." The Rev. R. Hutchinson will move as an amendment: "That, while any rubrical recognition of cremation is most undesirable, that uncatholic innovation will be better left to popular sentiment, common sense, and the spread of sounder views as to the right and due disposal of the dead than formally condemned by the Church in her Convocation."

DEATH IN THE FOOTBALL FIELD.

A football player named Hudson was killed, or rather killed himself, at Shipley on September 22nd. He charged the forwards, and so injured his neck and spine that he died on the following day. Our recent remarks on the dangers attending the present style of play and the need for some revision of the rules have excited the indignation of certain friends of the game; but such incidents as this serve to prove that the best friends of this sport are those who desire to see it shorn of those elements which tend to brutalisation. The reports state that during the game at which this accident happened there was so much roughness that three players were ordered off the field. We trust that the comments we have recently made, which have been, we are glad to see, quoted extensively throughout the press, will have the effect of strengthening the authority of umpires, and of encouraging them to interfere in time to prevent the repetition of the disasters which during recent years have outraged public sentiment.

DIPHTHERIA IN LONDON.

There are as yet no definite signs that the epidemic of diphtheria—or perhaps it would be more correct to say the increased prevalence of diphtheria in London, for the disease is never absent—is declining. During the past week the beds at the disposal of the Metropolitan Asylums Board have been completely filled, so that it has been necessary to refuse admission to many cases, which consequently

are being treated at home. The number of deaths from the disease in London rose rapidly at the end of July and the beginning of August, reaching the high total of 62 in the week ending August 11th. Subsequently a decline took place, until the total of 33 was touched in the week ending September 1st. Since then there has been an increase, the total number of deaths last week being 52, and in the week before 55.

THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

THE graceful compliment which the Queen has paid to Dr. Thorne Thorne, C.B., the Principal Medical Officer of the Local Government Board, by expressing to him her appreciation of the services of the medical department over which he presides in connection with the prevention of cholera at our seaports is well deserved. The very completeness of the success which has attended the well-considered measures taken has perhaps tended to prevent the public from fully appreciating the greatness of the service rendered. The inspection of the ports by the medical officers of the Local Government Board has revealed the weak points in our first line of defence, and has stimulated local exertions. In remedying these defects the local medical officers of ports have displayed, as a rule, the greatest zeal. Very much has been accomplished, although in various directions—especially in the smaller ports—much remains to be done. In his address the other day Professor Koch said every nation had two duties: to keep off the cholera from its own country, and learn how to stamp it out. These ends are only to be attained by vigilance at the ports and by the rigid application of sanitary principles throughout the kingdom, especially those directed to the purity of water supplies. When the epidemic of cholera, which has not yet died out, and which Professor Koch thinks is likely to persist in Europe for several years more, first made its appearance, it was generally felt that our sanitary system was about to be put to a severe test. It is generally admitted that it has come well out of it, and it is pleasant to find that the services of Dr. Thorne Thorne and his medical colleagues have received the public recognition which they so well deserve.

FALSE MEDICAL CERTIFICATES.

A MEDICAL practitioner at Blyth, near North Shields, was recently prosecuted, by direction of the Registrar-General, for giving a medical certificate for registration purposes falsely stating that he had attended a deceased person during his last illness. It appeared in evidence that the deceased person, who had been suffering from phthisis for some time, was suddenly taken very ill on the night of July 8th last, and died about 6 o'clock the following morning, having only been seen during this attack of illness by an unregistered assistant. The certificate was, however, signed by the registered medical principal, and contained a statement that the deceased had been last seen by this practitioner shortly before death. The defence was that the deceased had in fact been seen by the practitioner "during his last illness," which was stated to have been of three years' duration, and that the date when the deceased was last seen not being an essential part of the certificate, the false statement in this respect was not a statutory offence. The practitioner's partner proved that the deceased had been supplied with medicine from the surgery, but this could be no evidence that the patient had been seen by the practitioner who signed the certificate. Moreover, it was suggested that, as the deceased was a postman, and frequently delivered letters at the practitioner's house, he must occasionally have been seen in this way; but could this constitute attendance? The magistrates, however, held that the offence was proved, and inflicted a fine of 40s. and costs. The legal representative of the defendant asked the magistrates to state a case as to whether a medical practitioner was bound to state in his medical certificate "when" te last saw the deceased, a request which was granted. We believe it to be undoubtedly true that the present law does not impose upon the practitioner the necessity for stating the date when the deceased person was last seen. The above-mentioned case, however once more shows the value of the information, without which the certificate could not have been proved to be false within the meaning of the Registration Act. Dr. Ogle, late statistical superintendent in the General Register Office, gave much valuable evidence on this point before the Select Committee on Death Certification. He stated that the Registrar-General had been advised by the legal advisers to the Local Government Board that no legal obligation is imposed upon medical practitioners to state that they attended the deceased person, or even to use the form of medical certificate furnished for their use by the Registrar-General. Dr. Ogle gave much evidence to show the mischievous result of this state of the law, and the facilities it afforded for the issue of false certificates, and urged that when the law relating to death certification is amended the form for the medical certificate should be amended, should be scheduled in the Act, and that its use should be made obligatory on all registered practitioners. Such a reform would not, we feel assured, be unacceptable to the large majority of the profession, more especially if this reform were accompanied by provision for payment for the service rendered to the State by filling up these certificates.

THE INDIAN MEDICAL CONGRESS.

A FULL programme of the arrangements for the first Indian Medical Congress, which will open in Calcutta on December 24th next and close on December 29th, have now been issued, and copies can, we understand, be obtained in this country from Brigade-Surgeon-Lieutenant-Colonel Kenneth McLeod, 39, Clanricarde Gardens, Bayswater Road, London, W. The Congress will be divided into six sections (1) Medicine and Pathology, (2) Surgery, including Ophthalmology, (3) Obstetrics and Diseases of Women and Children, (4) Public Health, (5) Medico Legal Medicine and Insanity, and (6) Pharmacology. In the last named section special attention will be given to Indian drugs, of which a long list has been prepared for consideration. Although the Congress is primarily an Indian one invitations have been sent to medical men in other countries, and it is hoped that many such visitors will attend. A special Committee has been formed to make arrangements for their comfort: the Secretaries of this Committee are Surgeon-Captain H. W. Pilgrim, General Hospital, Calcutta; and Dr. Prandhan Bose, Calcutta Medical School. Applications for rooms should be made to either of these gentlemen, or to the Central Secretaries, Dr. W. J. Simpson and Dr. D. M. Moir, Calcutta.

SEWER GAS.

MR. J. MCGARVIE SMITH, in his report to the Metropolitan Board of Water Supply and Sewerage, Sydney, entitled "Investigation of the Composition of the Air in the Sewers of Sydney, with Special Reference to the Presence of Germs," goes over some of the ground traversed by Drs. Carnelly, Haldane, and Anderson in their report on the "Air of Sewers," presented some years ago to the Royal Society; and although his results vary slightly from those obtained by the Dundee observers, they in the main confirm the accuracy of the earlier observations. It appears, however, from a consideration of the report that sufficient importance is not attached to the fact that putrefactive germs must necessarily be present in every sewer, and that, therefore, the presence of a few of these organisms in the air in the sewers is not to be wondered at. It should also be remembered that sewer gas, though only a product of micro-organisms acting on the organic matter in the liquid sewage, may nevertheless be endowed with exceedingly poisonous properties, and may thus be a real source of danger, even though

the number of micro-organisms found in this sewage gas may be comparatively small. Pathogenic organisms in sewage are on quite a different footing from saprophytic and putrefactive organisms, the latter aiding in the normal decomposition of sewage, the former living for their own hand, and merely waiting an opportunity to attack higher organisms. In the bacteriological investigation of sewage, as in all other bacteriological investigations, this point cannot be too strongly insisted upon.

PHYSICIANS' FEES.

A well-informed correspondent writes: An American estimate of fees of London physicians has been circulated which is curiously and circumstantially exaggerated. I happen to know that the tariff of fees attributed to Sir William Gull and Sir Andrew Clark for country attendances is multiplied by ten. The total of fees earned by Sir Morell Mackenzie for his prolonged attendances on the German Emperor, extending over months, is doubled; and no such fee as £50,000 was ever earned by any surgeon in India. It is a pity that all these great fees are so mythical; perhaps one day they may be realised. The earnings of the medical profession have never been so low as during the last decennium, and with the help of preventive medicine and medical aid societies they are likely to undergo yet further shrinkage. The doctor of the next generation is, in my opinion, very likely to be a State paid official, giving his services free and with no fee or reward from the individual, as the clergyman does.

THE NAVAL ENGAGEMENT AT YALU.

Among the list of the small number of officers whose loss Japan has to deplore through the recent naval engagement we notice the usual large proportion of "non-combatant" medical officers—a fifth of the whole number. Especially will be noted in this list with deep regret by all who are cognisant of the enormous progress Japan has made in medical science and practice the name of Surgeon-General Myaki. Dr. Myaki spent some time in England, and it may be remembered that in the account which Mr. Ernest Hart, during his visit to Japan, gave in these pages of the admirable organisation, advanced instruction, and remarkable proficiency of the classes of the medical department of the University of Tokio, a special tribute was paid to the part which Dr. Myaki had taken in bringing Japanese medicine of the new school up to a very high level, tried by the most exacting European standards. He mentioned that the naval medical department of Japan was conducted on English lines, and that the English language was obligatory in teaching and in examination work. The army, on the other hand, is modelled very much upon German originals, and most of the army medical officers are trained either in German universities or by Japanese professors who have studied there. We have before us photographs which were taken on the spot at the time of his visit specially for Mr. Hart, showing the laboratories, the dissection rooms, the museums, and the professors at work in their class rooms in Tokio; and a very interesting series they are. Prominent among them is the class room of Dr. Myaki. They have now such a special interest that, if space can be found, we shall hope to be able to reproduce some of the series. It is a noteworthy fact that the whole of the teaching of the medical department of the Tokio University is now in the hands of accomplished and proficient professors, who are native-born Japanese.

TYPHOID FEVER AND WATER SUPPLY.

In his address at the Buda-Pesth Congress on the Occurrence of Typhoid in Large Towns in Recent Times in Relation to Drinking Water, Professor Drasche, of Vienna, said that the decrease in the morbidity and mortality of typhoid of recent years was by general assent attributed to various factors—improved water supply, drainage, and scavenging, more intelligent and active co-operation for prophylaxis, and the better condition of the lowest classes. By none of these was the influence upon typhoid so obviously shown as by the drinking water. The conflict of opinion on this point is explained by the complicated nature of epidemiological observations, and the liability to error in interpreting them. In illustration of these statements Professor Drasche quoted the evidence collected by Hueppe, who found on examining the typhoid statistics of 48 German towns a decrease in 12 out of 17 towns devoid of all sanitary precautions; a decrease in 10 towns on being supplied with good water, whether drained or not; a decrease in 17 out 21 towns where the drainage, but not the water supply, was improved. In Munich, formerly infested with typhoid, the disease had decreased in astonishing degree since its water supply and soil had been purified. Pettenkofer's contention that the water had no influence on the spread of typhoid was controverted by the conclusions of competent authorities about the last epidemic (1893). In Gratz Kralter reports 55 per cent. of typhoid deaths in houses supplied with good water, only 32 per cent. in those with bad—the largest typhoid mortality in parts supplied with good water. From Stockholm Linroth reports: "A decided decrease of typhoid mortality takes place through the peculiar high water condition as soon as the contents of the sewers find access to the water supply." In England the spread of typhoid is attributable sometimes to water, sometimes not. From Vienna, however, the evidence of the influence of the water is most obvious and striking. During eighteen years preceding the pure water supply, the average typhoid mortality was 800 annually; subsequent to that supply, only 200. It is true that with the general improvements in 1862 there was a gradual typhoid decrease, but insignificant compared with that which immediately followed the pure water supply. The contemporary reduction of intestinal catarrh and dysentery was shown from the hospital reports in still more striking manner. Further evidence corroborative of this influence was afforded by the outbreak which immediately followed the introduction of polluted water in 1877; by the far higher ratio of cases where the polluted water was used, whether grouped as individuals or in houses, streets, or districts; and by the remarkable immunity in barracks of those using the pure compared with those using the polluted water. Other illustrations of this influence are given in the case of Naples (typhoid mortality reduced from 3.01 to 0.69 per cent.); of Buda-Pesth, where Körösi and others demonstrated in a remarkable manner how the drinking of unfiltered water "goes hand-in-hand with the increase of typhoid," and *vice versa*; and of Zurich, where the explosive outbreak of 1884 corresponded with an accidental pollution of the water most generally used. Several instances were adduced in which the typhoid spread began to diminish as soon as the polluted water was cut off; and a considerable number of outbreaks in England and Germany were attributable indirectly to polluted water through the milk supply. The evidence brought forward showed sufficiently the influence of drinking water on the spread of typhoid, whatever effect be due to the other factors mentioned, and indicates the great necessity of pure water and the proper control over the milk supply.

THE RACIAL FACTOR IN PATHOLOGY.

The influence of race as it affects predisposition to certain diseases or immunity therefrom is still very imperfectly understood. It is generally believed that the negro races show a special proclivity to tuberculosis and cholera, and they are also particularly liable to tetanus. On the other hand, they enjoy comparative immunity from cancer, malaria, and yellow fever, and are seldom attacked by diphtheria or dysentery. The yellow races are very prone to ophthalmia and myopia, and insanity is said to be relatively more common among them than among other

races; on the other hand, they show greater proclivity than the black races to tetanus, while they are more subject to tuberculosis and cholera than white races. Among white races and Europeans, M. Bordier, who has recently studied the subject, points out that almost the only observations recorded relate to the Jewish race, which exhibits a special predisposition to diabetes and nervous disease, while, on the other hand, it appears to enjoy some measure of immunity from croup. The population of France, as is well known, is made up of three great ethnological divisions, corresponding more or less closely to those found by Julius Cæsar: north of the Seine, the Belgians; in the centre between the Seine and the Garonne, the Celts; and in the south to the Pyrenees and the Mediterranean, the Aquitanians and Ligurians. These three divisions present certain differences in stature, complexion, etc., which are the marks of a different origin. Thus in the north the men are well grown, dolichocephalic, fair, and blue-eyed, while in the centre and the south they are short, brachycephalic, and dark in complexion. As showing the difference of stature, the rejections among conscripts on this account in the Belgian part of France from 1831 to 1860 (when the minimum stature for military service was 1.56 metre) were from 24 to 56 per 1,000, whilst in ancient Aquitania and Liguria the proportion was from 57 to 81 per 1,000; in the part of France corresponding to Celtic Gaul from 84 to 174. It was, therefore, in the north-eastern part of France where the population is Cymric that the rejections for defect of stature were least numerous. The people of the east, in French Flanders and in Picardy have fair hair; those of Brittany and Anjou have chestnut hair; those of Auvergne and Haute-Loire, black hair. In Cymric women the breast is conical or pear-shaped, while in Celtic women it is globular and rounded; the latter begin to menstruate earlier. In the Cymric element in the French nation the pulse is normally more rapid than in Celts, and the northern races are more long lived than those of the south. Velpeau remarked, at the time of the Crimean war, that the English soldiers recovered better from wounds and from operations than the French. The French soldiers themselves used to say the English "flesh" was different from theirs. Statistics show that tuberculosis is more frequent in the north than in the south of France. Myopia is more frequent in ancient Aquitaine and Liguria; caries of the teeth and varicose veins in the Cymric departments; hernia in the Norman departments. The Cymric seem to have a special tendency to sweating sickness.

THE SAVAGE OF AVEYRON.

AMONGST the many and great services which Dr. Bourneville has done, not the least meritorious is the editing and publication of memorable documents connected with the history of medicine. Amongst the goodly list of books brought out at the office of the *Progrès Médical* is his *Bibliothique Diabolique*, containing records of old cases of sorcery and imposture. Dr. Bourneville has now reprinted the original report by Itard upon the Savage of Aveyron.[1] Before this little book came to hand we had only seen the pamphlet in the English translation, published in 1802, with an engraving, in which we recognise a *facsimile* of the one reproduced by Bourneville. The so-called savage was a boy between 10 and 12 years old, found wandering in the woods of Caune, in the South of France, by three hunters, in the year VII of the French Republic. He was quite naked, and fed upon nuts and roots. As owing to the writings of Jean Jacques Rousseau savages were much regarded in those days, the wild boy was brought to Paris. He appeared to be dirty and disgusting, affected with spasmodic movements, restless like a beast in a cage, biting and scratching those who refused him anything, and showing no affection for those who were kind to him, indifferent to everything, and paying attention to nothing. Pinel pronounced him to be an idiot, but he attracted the attention of Dr. J. M. G. Itard, Physician to the Deaf and Dumb Institution at Paris. Itard, who had a real genius and passion for teaching, thinking the boy was a neglected foundling, tried during four years to bring out by education his human capacities. Naturally the skilful instructor was disappointed at the result, which, nevertheless, was a great deal more than what Pinet could have expected. What makes Itard's report so noteworthy is that in his attempts to educate this boy he put in use, almost for the first time, the physiological methods of education, awakening the mind through the senses. His pamphlet is well written, and bears on every page the indubitable stamp of a superior mind. In his preface Bourneville claims for Itard the merit of being one of the first to teach speaking to deaf-mutes. The book concludes with some official documents about the savage of Aveyron and the methods of education pursued by his instructor.

[1] *Rapports et Mémoires sur le Sauvage de l'Aveyron.* Par Itard, avec une appréciation de ces rapports par Delasiauve, Preface par Bourneville, Eloge d'Itard par Bousquet. Paris: Alcan. 1894. (Demy 8vo, pp 190. Fr. 4.).

ST. BARTHOLOMEW'S HOSPITAL.

THE election of an ophthalmic surgeon to fill the vacancy caused by the retirement of Mr. Power took place on September 27th. Mr. Walter Jessop was elected by a large majority of votes. The result was received with loud cheers, Mr. Jessop having been attached to the hospital as a teacher for many years.

THE NOYADES IN FRANCE IN 1794.

THERE can be few greater contrasts than to compare Paris in July, 1794, with the Paris of to-day. One hundred years ago the Terror was at its height, for on June 10th, 1794 (22 Prairial, Year II) the law took away from the prisoners their last chance of a fair trial by depriving them of the help of counsel. The result of this action is startling, from the beginning of October to June 9th, (21 Prairial) a period of thirty six weeks, 1,165 individuals were condemned to death and executed, an average of over 32 a week. For the period of seven weeks between June 10th and July 27th (9 Thermidor) 1,376 individuals were sent to the guillotine, or on an average of of over 196 a week. The provinces suffered earlier in the year. J. B. Carrier was chosen to rule Nantes on October 13th, 1793. Six days later he established himself at the head quarters of the Vendéan insurrection, and at once organised his reign of terror. Mr. Morse Stephens, the latest and most reliable historian of the French Revolution, thinks that the first noyades were the result of an accident due to the sinking of the old hulks in which the priests were confined on account of the crowded state of the prisons. The later executions, however, of which the engravings by Duplessis Berteaux in the Tableau Historiques de la Révolution Française give graphic representations, were undoubtedly premeditated. The worst features, however, in these inhuman proceedings were exaggerated, and the "horrible republican marriage" in all probability owe their existence to rumour. The wholesale executions were followed, as might be expected, by pestilence and famine. In January 1794 Jullien reported to the Great Committee at Paris that "a crowd of royalist soldiers have been shot, not far from the city, and the heaped-up masses of corpses, joined with the pestilential exhalations of the Loire, which is entirely polluted with blood, have corrupted the air so that two thousand persons have died in less than two months of a contagious disease The mouth of the Loire too has been quite blocked up, which prevents food from arriving, and the city is prey to the most horrible famine." It is difficult to imagine that such atrocities took place only a hundred years ago, and yet the accounts given by Gracchus Babeuf, by Phélippes Tronjolly and more recently in Lallié's *Les Noyades de Nantes* published in 1879 leave no doubt that they were actually perpetrated.

CONGRESS OF THE SANITARY INSTITUTE AT LIVERPOOL.

The Fourteenth Annual Congress of the Sanitary Institute was opened in Liverpool on September 24th. The initial ceremony took place at 1 o'clock at the Town Hall. The Lord Mayor (Mr. W. B. Bowring) held a formal reception of the members and others attending the Congress. A public luncheon was held at the Adelphi Hotel, an adjournment being afterwards made to the University College, where the sittings of the Congress took place.

Sir Francis Sharp Powell, M.P., there delivered his presidential address. He congratulated the Congress as a Lancashire man upon meeting in Liverpool, a maritime centre to which men of every nation resorted, and where the authorities in their encounter with evils of no ordinary magnitude had obtained exceptional powers, and exercised them with unfailing vigour. It was impossible to survey the field without a sense of satisfaction and almost of triumph, for difficulties hindering progress diminished both in area and gravity. Viewing the achievements of the past, the President referred to the fact that in the last twenty years the Local Government Board had sanctioned a capital expenditure, chiefly for sanitary purposes, of £53,021,334 in urban, and of £3,923,270 in rural districts, whilst in the same period local Acts had authorised a further expenditure of £67,335,956. Of specific questions he first mentioned that of quarantine, remarking with satisfaction its practical abolition in this country. Had it been in force the result would have been that in five days in November, 1892, during the cholera scare, Calais being an infected port, 10,801 passengers would have been detained at Dover. Without quarantine, by means only of strict execution of carefully devised regulations, our country was protected from the epidemic cholera, having been confined to the thirty-five imported cases. Turning to vaccination, the President remarked that it was surely true wisdom to follow the judgment of those best entitled to judge, and it might reassure some of the doubters to know that increased precautions were being taken to secure efficiency and safety of vaccination. Phthisis was now recognised as a disease capable of dissemination, and, at the same time, of control. On the subject of insanity, there was ground to hope that there was no increase of this affliction. The cause of disease could not be excluded from consideration, namely, adulteration of food, as to which the evidence, yet incomplete, of a Committee of the House of Commons, afforded evidence that fraud and danger to health was still practised. Public health, however, must ever largely depend on the condition of the house, and rich and poor alike, in town and country, had paid heavy penalties for errors and neglects. Nevertheless, there had been progress in administration rather than legislation. The factory and the workshop were comprehended in the wide range of the sanitary province. For these each political party showed equal care, and the present Home Secretary executed with sympathy and appreciation the statute passed by his predecessor. Nevertheless it would not suffice to guard the workshop and the dwelling from injurious influences within. The smoke nuisance must be abated, and he, for one, would replace the old saying that "Smoke brings money," by a newer and better one, "Smoke brings cost." There had been progress in bringing under control chemical gases and residual products. Beneficial methods were also being applied to lead works and the like. The pollution of rivers was one matter forming an exception to the statement that improved administration, rather than amended legislation, was first wanted. The defects of the Act had become facts of common knowledge. He hoped the Government would grant an inquiry by a Select Committee. As to the Thames, the legislation respecting it was, on the whole, worthy. Amongst the matters in which legislative action must be taken were those dealing with pauper children, lodging houses, slaughter houses, and the like. In conclusion he endorsed the observation that the physical and moral health of our nation, as well as its military strength, suffered from the over-rapid pressing into city and factory life.

At the conclusion of the President's address a vote of thanks, moved by the Lord Mayor, and seconded by Mr. Symonds, and supported by Sir Charles Cameron, the retiring President, was passed, and briefly acknowledged by the President.

At 8 P.M. a health exhibition was held in connection with the Congress in the drill hall of the 2nd V.B., Upper Warwick Street, was formally opened by the Lord Mayor, who was accompanied by the President and others.

The Congress resumed on Tuesday, September 25th, sittings being held in five sections.

Sir W. B. Forwood presided over the section on the Sanitation of the Passenger and Mercantile Marine Services, and expressed the opinion that great progress had been made in this matter during recent years, and there was little room for further legislative interference. Papers were read on the medical inspection and the accommodation of emigrant ships, the position of ships' surgeons, and the Atlantic cattle trade.

The conference of medical officers of health was held under the presidency of Mr. C. E. Paget, medical officer of health of Salford. Discussions took place on the inspection of diseased meat, the present position of the sewage system, and the further systematisation of mortality returns.

Mr. A. M. Fowler presided over the conference of the municipal and county engineers, and in his address dealt with various aspects of the question of the housing of the poor.

At the conference of sanitary inspectors Dr. Vacher presided, and papers were read on the position of rural sanitary inspectors under the Parish Councils Act, and difficulties in carrying out the Sale of Food and Drugs Act.

The Lady Mayoress of Liverpool presided over a ladies' conference, and addresses were delivered on the ethics of sanitation, education in sanitary science, and other topics.

In the evening Dr. C. B. Longstaff, L.C.C., delivered a lecture to the Congress on the overcrowding of houses upon land.

EPIDEMIC MUSCULAR RHEUMATISM.

Mr. F. J. Grindon, M.R.C.S. (Olney) writes: Dr. Newton's interesting account of an epidemic of muscular rheumatism in the British Medical Journal of September 22nd, is what I have been looking for in your Journal for the last few weeks, as I have had a similar epidemic here of at least eighty cases exactly answering to the description given by Dr. Newton, so that I need not repeat the symptoms, except I might say I have not found pain in the head by any means a common occurrence. The attacks commenced with acute pain in lower intercostal muscles, more often on the left side at the level of the diaphragm, which muscle was also affected. It then radiated across the chest, and ascended as high as the collar bone or side of neck. Like other rheumatic affections it often left one side, to reappear in the opposite especially if belladonna or hot applications were applied. Like Dr. Newton I think this complaint cannot be infectious, as I have not seen two cases in the same family. It certainly is quite distinct from influenza, although a few cases seemed very like it. Most of my cases were in young adults, none over 40, but several in children under 4 years of age, and in each of these, owing to the rapid breathing, they were thought by their parents to be suffering from a bad form of bronchitis. Happily this complaint is of short duration, and whether treated or not lasts but three or four days, but opium with quinine or salicin I have also found most serviceable. Perhaps now Dr. Newton has described this curious epidemic we shall hear more about it.

Dr. C. Stuart Vines (Ramsgate) writes: I was taking charge of Dr. Baron's practice at Pailton, near Rugby, an agricultural neighbourhood on the borders of Warwickshire and Leicestershire, during the whole of August and came across a large number of patients suffering from this epidemic. There had been only 2 cases before August 1st, but during the month there were fresh cases nearly every day.

The most prominent symptom was severe pain, usually most marked in the left intercostal region but spreading later to the muscles of the abdomen and back. The pain was greatly aggravated by movement, cough, on deep breathing. The rise of temperature, though always present, was seldom high (101° to 102°). The respiration was quick and shallow

and the pulse comparatively slow, often not more than 60 to 80 per minute.

In one case I noticed a very transient systolic murmur at the apex of the heart, in 3 cases herpes of the lips, and in 1 case purpura on the arms and legs. I found the same treatment efficacious as that Dr. Newton employed—frequent doses of salicylate of sodium. I cannot say I found morphine poultices or even strong counter-irritation of any use in relieving the pain.

As to Dr. Newton's typical example—many of my cases were considerably more severe and in several of them there was depression and prolonged weakness.

Since writing the above I have heard from Dr. Baron, of Pailton, that he has had a few fresh ases during September. In reference to Dr. Isaac Newton's tabulated paragraphs we differ from him in considering the cases were like influenza.

1. In (*a*) their sudden onset, (*b*) often accompanied by frontal headache, (*c*) sometimes by nausea and vomiting.
2. In our cases there was often marked depression and weakness.
3. Salicylate of soda and bicarbonate of potash, which were most useful, have been vaunted as almost specifics in influenza (See "Althaus.").
4. In several households (I remember four) there was more than one case.
5. The mildness of the weather may have been the reason of the lungs and air passages escaping.
6. The heart complication was rare, and may have been functional.

It would be interesting to find out whether the influenza bacillus has been observed in any of these cases.

VACCINATION STATISTICS.

THE "London Society for the Abolition of Compulsory Vaccination" distributed at a recent meeting a handbill containing the alarming statement that during the epidemic of small-pox in Leicester in 1892-3:

	Per Million Living.
The death-rate from small-pox of the *re*vaccinated was ...	270
" " " " vaccinated	159
" " " " *non*-vaccinated	109 only

We pointed out at the time the utter falsity of this statement. We regret to find that the *Star* still seeks to justify this wholly unjustifiable statement. Our contemporary now announces that by "an inadvertence" the secretary altered the words "unprotected," "protected," and "doubly-protected," into "non-vaccinated," "vaccinated," and "revaccinated," and proceeds to explain why "protected" should be limited to children under 10 years of age, and among the "unprotected" should be reckoned all the vaccinated about that age. Our contemporary will, we are sure, excuse us for pointing out that this is only another way of cloaking an absolutely unfounded statement.

All the experience of every small-pox epidemic—that of Leicester included—and every small-pox hospital, is that, although in later life some of the protection afforded by early vaccination gradually wears off, yet the vaccination, in proportion to its original efficiency, mitigates the severity of the disease if the individual contracts small-pox, and reduces enormously the likelihood of a fatal result. So fully do the "antivaccinators" recognise this, that they habitually speak of all who are "vaccinated" in infancy as though they ought to be fully protected all through life, and base their false comparisons upon this assumption. Of the extent of protection which vaccination in infancy affords, Leicester gives a fair example. During the last epidemic, 176 persons above the age of 10 years who had been vaccinated in infancy caught small-pox, only 1 of them died; whilst, out of 153 unvaccinated persons of all ages who were attacked, as many as 19 died. Moreover, it appears from the report of the health officer of Leicester—and we have not seen this easily-verified statement disputed in any way—that of the 134 unvaccinated who recovered, as many as 112 are mere or less "pitted," most of them severely; whilst out of the 177 individuals vaccinated in infancy who recovered, only 43 have any "pitting whatever," and in only 4 of those cases is the "pitting" at all severe. Of the vaccinated under 10 years of age, none died.

In this particular the Leicester cases have had the same result as cases elsewhere. It is inexplicable why those who persistently oppose vaccination because they are professedly convinced of its uselessness will persist in shutting their eyes to these very plain irrefutable facts.

As regards the statement that 270 per million of the revaccinated died, this wide deduction, dealing apparently with millions, is based on the assumption that, notwithstanding the definite opinion to the contrary of the medical officer who personally had to do with every case, one of the fatal cases had been revaccinated, because "he had been in the Marines." The comments of the *Star* do not by any means convince us that this was so, but, assuming for the moment that the case in question had been revaccinated, how can that single case be properly magnified to deceive the eye, into 270 per million? Such a rate is equivalent to 1 in 3,700, but why that number should be assumed any more than 37 or 37,000 is not stated or at all evident. It is purely arbitrary, fanciful, and valueless.

We ask the *Star* to fairly put before its readers the actual figures as to the cases and deaths in Leicester last year; they are sufficiently convincing by themselves. They show that only 2 vaccinated children under 10 years caught the disease, and that neither of them died; but that 105 unvaccinated children of the same tender age caught the disease and 15 of them died (14.3 per cent.); and that although 176 vaccinated adults (vaccinated in infancy) caught the disease—mostly very mildly—only 1 succumbed (0.57 per cent.), whilst out of the 48 unvaccinated adults who were attacked 4 died (8.3 per cent.).

Our contemporary also refers to the fact that in Leicester last year the unvaccinated deaths were 15.8 per cent. of the unvaccinated cases of small-pox, whilst the average of eleven towns enumerated in the BRITISH MEDICAL JOURNAL of April 11th was 36.2 per cent., and argues that "the small-pox death-rate of Leicester among the unvaccinated is a ratio of 20.4 per cent. less than the average" of those eleven towns. What is the deduction?

We fail to see the conclusions aimed at. What would be at once more instructive and profitable to the readers of the *Star* would be a reproduction of the whole of our table referred to, from which the *Star* quotes only dislocated figures which have no meaning. It would then be seen that, taking the small-pox during 1893 in the eleven towns—Birmingham, Leicester, Brighouse, Manchester, Salford, Glasgow, Liverpool, Halifax, Warrington, Aston Manor, and St. Albans—while 33.9 per cent. of all the unvaccinated cases terminated fatally, only 4.1 per cent. of the vaccinated cases died, and that whereas only 1, or 1.4 per cent., of the 69 attacks amongst vaccinated children under 10 years were fatal, as many as 69, or 31.2 per cent., of the 221 unvaccinated children attacked ended fatally.

We ask the *Star*, to whose fairness and desire not to mislead their unlearned readers we appeal, to quote these facts and to let us have the benefit of its explanation. Why should they be shirked?

Once more we would point out that a great question of life or death is involved in this subject, and we would ask the *Star* to pause before it assumes the great responsibility involved in assisting to spread incorrect and incomplete data and unjustifiable deductions amongst those of the population who are least able to work the matter out for themselves, and sift the wheat from the chaff.

THE AUSTRALIAN HEALTH SOCIETY AND ITS WORK.—At a recent meeting of the Australian Health Society at Melbourne, Dr. Louis Henry was present by invitation to explain the details of a scheme whereby he believed the aims and functions of the Society might be considerably enlarged. He proposed that the Society should take into its membership boys and girls attending school, with prizes for those who distinguished themselves according to certain tests to be formulated, and a badge to be worn by all, binding the wearer to carry out in practice the precepts which he had been taught. He also advocated the establishment of subcentres on a self-supporting basis, and an extension of the system of classes, to be followed by examinations in the subjects of instruction, as it might be assumed that each member of a class would raise the sanitary standard of the family of which he formed a part. He thought the Health Society might advantageously try the effect of "exclusive dealing" in the further ance of sanitary reform by boycotting shops in which the laws of hygiene were flagrantly set at naught. Dr. Henry concluded by referring to the good work done by the Society during the eighteen years of its existence.

POISONOUS FOODS.

During the months of June, July, and August of the present year, a considerable number of cases of poisoning with various articles of food have occurred in different parts of England and Wales. In several of these cases analytical investigations of the various articles of food concerned have been made, but in no case has the poisoning been found to be due to admixture with any known poison. Reports of the following cases have reached us during the past three months from various sources; the cases are tabulated in order to show the different articles of food that have been responsible for the toxic symptoms, and also to show the number of deaths that have occurred:—

Article of Food.	Number of Cases.	Number of Deaths.
Potted meat	19	
Meat and kidney pies	19	
Meat (kind not stated)	10	1
Tinned salmon	2 families and 1 other person	1
Brawn (made from fresh meat) ...	2 families	1
Pork	5	1
Lamb	5	
Tinned sardines	1	
Ham	3	
Green cheese	3	
Fried fish (kind not stated)	1	1

Such cases are especially likely to occur during the summer months, owing to the high temperature facilitating the growth of the micro-organisms in the articles of food, and the consequent development of animal toxic substances, and also, perhaps, to the larger number of micro-organisms present in the atmosphere during the summer weather. The principal symptoms were vomiting, diarrhœa, violent abdominal pains, cramps, and collapse. With regard to the cases referred to in the table, the articles of food, with one exception, all appeared to be sound and normal as far as could be judged by appearance, smell, and taste. The single exception was the fatal case of poisoning with fried fish, the victim of which, a man aged 21, remarked, while eating the fish, that it had a peculiar taste. In one of the tinned salmon poisoning cases, the tin was opened one evening, and half of the contents eaten for supper by a family who experienced no ill-effects; another family, to whom the tin was passed on, consumed the remainder for breakfast the next morning, and all suffered from serious symptoms of poisoning. Recently the greater part of the population of a village in Prussian Poland are reported to have been taken ill after eating tainted herrings, and eighteen deaths have occurred.

The toxicity of such poisonous foods is due either to the presence of specific living micro-organisms which produce a general disease, or to the presence of an organic chemical poison, which may be a ptomaine, albumose or toxin, or to both causes combined. Most probably the material that is immediately responsible for the production of the symptoms of poisoning is the organic chemical poison, which may be either present in the food when consumed, or may be produced after the introduction of the food into the human body. In the former case the poison, whether a ptomaine, albumose or toxin, is probably a product of the action of the specific micro-organism on the proteid constituents of food: in such poisoning cases the symptoms are produced shortly (half an hour to a few hours) after taking the food, and without the intervention of an incubation period. In the latter case an incubation period is present, after which the toxic symptoms that arise are probably due to the formation of a poisonous chemical substance, ptomaine, albumose or toxin, as the result of the growth and cultivation within the body of the specific micro-organism introduced in the article of food. This, no doubt, is the explanation of the observed varying periods of time that occur between the ingestion of toxic or infected food and the appearance of symptoms, since, if specific micro-organisms alone are present in food that is consumed, they would require time for their growth before they could develop their poisonous chemical product, whereas if the toxic substance is already present in the article of food it would operate more speedily.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

Dr. E. W. Goodall, Medical Superintendent, Eastern Hospital (Homerton) writes:

Eighteen cases of diphtheria treated with antitoxin have been reported in the British Medical Journal by observers in different parts of the country. As it is important to know whether antitoxin is able to prevent any of the late changes that are due to the poison of diphtheria (nerve degeneration, for example), would it be too much to ask the reporters to send a second note of their cases at the end of, say, twelve weeks from the beginning of the attack of diphtheria? It is also surely important that writers should state the source from which the remedy has been obtained, seeing that in the current number of the Journal we are warned that antitoxins of varying strength are in the market; but in six of the cases this information is not given.

It has been suggested that the injection of antitoxin may be used as a prophylactic measure in the case of those who have been "exposed to the infection of diphtheria"; and statistics are brought forward to prove the usefulness of such a proceeding. It is with much surprise that I see Professor Roux stating, in the paper he read at Buda-Pesth, that 128 children suffering from forms of angina other than diphtherial, and treated with antitoxin, "remained some days exposed to contagion without being infected, a proof of the prophylactic value of the serum."[1]

In these cases apparently the children were admitted into diphtheria wards as diphtheria cases. How the 72 children inoculated with antitoxin by Dr. Katz[2] were exposed to the disease is not stated, but presumably in the same way. I venture to assert, however, that these observations, as reported, though interesting as showing that antitoxin is harmless to a person not affected with diphtheria, are quite worthless as in any way proving the prophylactic action of the serum. In the course of the year a considerable number of patients are sent into the diphtheria wards of the Eastern Hospital who are found not to have diphtheria: yet it is very uncommon for any of them to get it. Again, I have on several occasions seen a case of severe diphtheria arise in a scarlet fever ward containing a number of children, and yet no fresh cases have arisen. In these instances children have been "exposed to the contagion of diphtheria" have not been injected with antitoxin, and have not contracted the disease. In fact if Dr. Katz's observations relate to cases of disease other than diphtheria admitted into diphtheria wards, then I should say that eight contracting that disease out of seventy two is a large proportion, and nothing to boast of in the way of prophylaxis. Apparently the antitoxin is at present, as far as this country is concerned, not easy to obtain and expensive. Do not let us therefore waste what can be obtained by injecting it indiscriminately into those who are said to be exposed to the infection of diphtheria.

ANTITOXIN TREATMENT OF TETANUS.

Dr. F. W. Burton-Fanning, Hon. Physician to the Norfolk and Norwich Hospital, writes: While the efficacy of antitoxin in tetanus is still *sub judice*, it is desirable that all cases thus treated should be reported. The following case proved fatal, and affords some support to Dr. Sheen's contention "that when tetanus supervenes soon after injury no treatment is of any avail."

L. T., aged 38, trod on a nail on May 8th: four days later he had "rheumatism" in the ankle and wrist of the same side. On May 16th he complained of much stiffness in the neck and back, and was unable to open his mouth or swallow; later in the day he was admitted into the Norfolk and Norwich Hospital. He had a small scar on the sole of the left foot. He suffered from constant opisthotonos, and during the two next days he had five spasms, during which respiration ceased, and the face became blue. His temperature rose to 101°, the pulse varied from 78 to 90, and was weak. Professor Roux had already been kind enough to supply us with the amount of antitoxin required for the treatment of a single case: the whole of this was injected hypodermically under

[1] *Lancet*, September 22nd.
[2] British Medical Journal, August 25th.

chloroform in four equal doses. The first administration was made on the evening of May 6th, it was repeated every six hours without appreciable effect, the patient dying in a spasm on the evening of the 17th.

DEATHS UNDER CHLOROFORM.

Dr. Freeland Fergus, Surgeon to the Glasgow Eye Infirmary, and Secretary to the Glasgow Branch of the British Medical Association, writes: In the British Medical Journal of September 15th there are recorded no fewer than four cases of death from anæsthetics. Such frequent fatalities must to a very large extent destroy the comfort of operating surgeons, and cannot but to a certain extent deprive them of that assurance which is so important a desideratum. As I personally was most anxious if possible to gain something approaching to certainty on this matter, I have very frequently during the past year asked Dr. Robert Kirk, of Partick, to administer the anæsthetic for me. He has now given it in a large number of cases in my presence, although perhaps not to such a number as to enable us to be absolutely confident. All I can say is that in no case have we had anything serious in the nature of a fright. Many surgeons of great repute have constant trouble, perhaps some of them have even to pull the tongue out as often as once in three cases, or require to have recourse to artificial respiration. With the huge doses administered by Dr. Kirk we have had none of this trouble. To a child some 10 years old two ounces were given for the enucleation of an eye; that is a sample of the dose he gives. In view of many such cases it cannot be said that when a patient dies after the administration of a few drops that he has died from an overdose. Dr. Kirk's contention is that he dies from an underdose. I have no theory of my own. I merely wish to state the clinical facts that I have seen with Dr. Kirk. He uses no special inhaler or drop bottle. All that he requires is a well-folded towel, on which the chloroform is freely sprinkled. On reading of the four cases last published, I wrote to him, drawing his attention to them. I have from him the enclosed reply, which perhaps you will kindly publish:

Newton Cottage, Partick, Glasgow, September 18th, 1894.

My Dear Fergus,—I need not say I was much interested in your letter re the four recent deaths from chloroform. I may say of the three first, of which we have some account, that the dangerous symptoms in all were plainly those of the vapour reaction, almost identical with the same as they are to be observed in cats. With reference to the second case, you remark that 3 drachms were administered in six minutes, and that this was a fair quantity, so that according to my views the danger of reaction ought to have been over. I answer that there is no evidence that the anæsthetic was distributed uniformly over this time, and that the time itself was not estimated by the watch. In none of the cases were the symptoms of reaction more pronounced.

I may be excused for saying that this question has now assumed an aspect which to me seems almost pitiful. I consider that it may be settled as conclusively by a single observation on the pupil of the cat, as the circulation of the blood may be proved by a demonstration on the web of the frog's foot. But the evidence I have laid before the profession and the appeal I have made for further investigation have hitherto been equally unavailing. Meanwhile, to use the language of Professor Wood, "the carnage goes on."—I am, yours sincerely, R. Kirk.

THE BRITISH PHARMACOPŒIA AND IMPERIAL NEEDS.

In addition to the report from the Melbourne and Victoria Branch of the British Medical Association to which reference was made last week (p. 656), we understand that communications with regard to the next issue of the *British Pharmacopœia* have been received by the Pharmacopœia Committee of the General Medical Council, through the Colonial Office, from the Governor of Hong Kong, and from the Board of Medical Officers in Ceylon appointed to report on the subject. A communication has also been received from the Governor of South Australia transmitting memoranda from the Medical Board of South Australia, from the Adelaide and South Australian Branch of the British Medical Association, and from the Pharmacy Board of that Colony. A report by a Committee appointed in India has also been received through the Privy Council from the India Office. We are informed further replies are under consideration by other Government departments, and will shortly be transmitted to the General Medical Council.

In the communications already received some new drugs and a few foreign species of medical plants are proposed for admission to the *Pharmacopœia*, and several new preparations are suggested. Recommendations are made also as to the omission of certain articles considered useless, and for the modification of some old preparations by leaving out certain ingredients regarded as without effect. A large number of other alterations of existing formulæ are suggested, and some few adaptations to render preparations more suitable for naval and military purposes.

Local climatic conditions have given rise to a desire for harder ointments and for non-drying extracts. The climate of the British colonies and dependencies varies so much that it is probable that in place of slightly varying formulæ, or any one average formula, it will be found necessary to give a general permission to vary the proportions of hardening and softening components.

CYCLING AND ITS DANGERS.

The recent discussion on cycling—or rather the abuse of that form of sport, which the learned call by the imposing name of *vélocipédisme*—at the Paris Académie de Médecine, was a good deal livelier than the debates in that distinguished assembly usually are. At a previous meeting Dr. Petit had presented a communication on three cases in which sudden death had occurred during, or immediately after, bicycle exercise.

One case was that of a man, aged 65, with a weak heart, who had been taking lessons for a month, and who died in the arms of his teacher while in the act of alighting after practice.

Another was that of a medical man, aged 48, who took up cycling as a means of counteracting a growing tendency to obesity following an attack of typhoid fever. He had not complained of any symptoms pointing to heart disease; but one day, some months after he had begun to cycle, while riding he was suddenly seized with breathlessness and acute pain in the region of the heart. He dismounted, sat down on a bench, and died in a few minutes.

The third case was that of a "clubman," aged about 40, who died on his bicycle in one of the streets of Paris. He also would appear to have suffered from an affection of the heart.

The moral of these cases, according to Dr. Petit, is a peremptory contra-indication of cycle exercise. In this every medical man will fully agree with him. When, however, Dr. Petit contends that the same ruling applies to old age we confess that here, to our minds, the law is less clear, unless the condition of the tissues, rather than mere number of years, be taken as the index of age.

On September 11th Professor Hallopeau, who was incidentally described by the President as almost a professional cyclist, read an elaborate report on Dr. Petit's communication, in which, while admitting that heart disease might be a cause of sudden death on the bicycle as on horseback, or during any other violent exercise—and, indeed, contributing a case in point from his own experience—he protested against any sweeping conclusions being drawn from these facts. Granted (he argued) that bicycle riding was the immediate cause of death in these cases, the heart condition would infallibly have killed the patients the first time they had to make any extraordinary exertion. M. Hallopeau said the effect of bicycle riding on the heart had been greatly exaggerated. He pointed out that sudden death occurred only in cases of aortic incompetence. Mitral disease, on the other hand, if compensation were adequately established, need not be a bar to moderate indulgence. He maintained that under normal conditions a practised cyclist riding at a moderate pace experienced no cardiac strain, while the respiration was not so much accelerated as in walking. Inspiration was undoubtedly much fuller and deeper, especially in going uphill, but very violent excess in cycling was required to bring about dyspnœa, palpitation, or overheating. The profuse perspiration caused by the exercise was, in his opinion, a safety valve which prevented congestion of internal organs and dangerous increase of arterial tension. M. Hallopeau also strongly objected to M. Petit's extension of

the prohibition of cycling to old people. There were, he pleaded, illustrious examples to show th t one may become a *véloceman* (we thank the Professor for teaching us that word) at any age, and feel all the better for it. As to the danger of falls—which he prefers to speak of, in a phrase Mr. Gladstone might have envied, as *descentes involontaires*—M. Hallopeau treats that with the contempt of the skilful rider.

M. Daremberg was not inclined to think so lightly as M. Hallopeau of the effect of cycling on the heart; he had known cardiac dyspnœa come on in persons who had been altogether free from it till they began to learn to cycle. Wherever arterio-sclerosis was present cycling, he thought, should be forbidden. The exercise was also likely to be injurious to the subjects of tuberculous disease; there was a great risk of hæmoptysis being produced, and he had seen a case in which phthisis which had been quiescent for many years was kindled into activity soon after the patient had taken up cycling.

M. Verneuil spoke strongly of the danger of spinal disease becoming developed "under the influence of the deplorable anti-physiological attitude adopted by bicyclists."

M. Cadet de Gassicourt expressed the opinion that it was chiefly in the case of young children that cycling was attended with any risk. Dr. G. Lagneau pointed out that all the hygienic objections to cycling applied with equal force to all forms of athletic exercise. The enthusiastic approval of the bicycle which M. Lucas Championnière expressed not long ago, was referred to by the President, who appeared to find a special significance in the fact that the only two Academicians who had achieved distinction as cyclists were strongly in favour of the exercise. After a good deal of discussion the following resolutions were adopted:

1. A medical examination should precede the use of the bicycle; this exercise should be allowed only to persons having no flaw, either cardiac or tuberculous.

2. In an experienced subject the moderate use of the bicycle in no way disturbs the functions of the heart.

3. The efforts connected with the learning stage, or with too rapid a pace, or with going uphill, should alone be looked upon as dangerous.

4. It is especially in patients suffering from aortic incompetence or uncompensated mitral disease that prohibition should be absolute.

5. The Academy would be glad to receive all the evidence which practitioners could supply on these questions.

6. The Section of Hygiene is invited to inquire whether the municipal statistics indicate the conditions under which the sudden deaths occurring in Paris take place.

On the whole, medical men will agree with this finding. As regards cycling, and every other form of exercise, the golden rule for persons of sound body is expressed in the maxim of the old philosopher, *Ne quid nimis*. It must, of course, be understood that "*nimis*" is a variable quantity, not only in different persons, but in the same individual under different circumstances; its precise determination in any given case should be left to the medical adviser. In the matter of bodily exercise, more perhaps than in anything else, the man who is his own physician has a fool for his patient.

At a later meeting M. Marey, the well-known physiologist, pointed out that bicycle riding had the advantage of requiring a minimum of muscular exertion, and was therefore less fatiguing than most gymnastic exercises. On the other hand, it tended to produce a forward stoop of the body which might become permanent, and it did not call into play the muscles mostly used in locomotion. These drawbacks might, he thought, be removed by putting the saddle nearer the pedals, so as to straighten the body of the rider, and force him to exercise the powerful muscles used in walking. He proposed to investigate the subject from the physiological point of view. After some further discussion the President proposed that a committee should be formed to report on the whole subject.

THE CHOLERA.

At the last meeting of the Imperial Cholera Commission it was announced that the disease had ceased to spread in the province of East Prussia, though all precautions will still be taken. Up to September 16th there were 21 known cases in East Prussia. In the province of West Prussia 180 cases and 79 deaths had been recorded up to September 17th. There is reason to expect that an increased number of cases will occur later on at the time when the ratts descend the Vistula. In view of the spread of the disease in the Dutch ports the Commission recommended a supervision of the traffic on the Rhine as far as Duisberg.

The Berlin Imperial Board of Health publishes the following cholera bulletin for the week ending September 17th: "In East Prussia, in the Vistula district, and in the Netze-Warthe district there were altogether 28 fresh cases and 9 deaths; in the Elbe district and in Hesse-Nassau, 1 case each; and in the Rhine district 2 fresh cases and 2 deaths. In Silesia, where the epidemic is more severe than in the other provinces, 54 cases and 23 deaths occurred between September 8th and 14th."

A telegram from Odessa, dated September 20th, reports that the latest official weekly cholera bulletin gives the total number of fresh cases during the last seven days as 8,815, of which 4,329 proved fatal. The number of Governments in European Russia now infected are 41 as compared with 31 suffering from the visitation only three weeks previously.

The weekly cholera returns show that from September 15th to the 21st there were 51 cases and 29 deaths in St. Petersburg, and from September 9th to the 15th 15 cases and 9 deaths in Warsaw.

From September 11th to September 17th 93 cases of Asiatic cholera and 31 deaths occurred in the German Empire.

No case occurred in the twelve districts of Galicia from September 11th to September 22nd. In the district of Chrzanow one further case is reported against 6 recoveries.

The Local Government Board has received information through the Foreign Office to the effect that cholera has broken out at Archangel.

A European lady is reported to have died in August at Cawnpore, and 2 fresh cases were reported among the troops at Cawnpore on August 24th. It is stated that in the outbreak of cholera at Cano in the Cawnpore district no fewer than 1,300 people have died up to the end of August.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 24th day of October next, at 2 o'clock in the afternoon.

September, 1894. FRANCIS FOWKE, *General Secretary*.

NOTICE OF QUARTERLY MEETING FOR 1894. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 24th, 1894. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before such meeting—namely, October 3rd, 1894.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election. FRANCIS FOWKE, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will take place on Friday, October 26th, at St. Bartholomew's Hospital, Rochester; Mr. Prideaux Selby in the chair. Gentlemen desirous of reading papers and of exhibiting specimens are requested to inform the Honorary Secretary of the District not later than October 6th. —EDWARD GROUND, Honorary Secretary, 1, Ashford Road, Maidstone.

SOUTH EASTERN BRANCH: EAST SURREY DISTRICT.—A meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 11th, at 4 P.M.; Mr. H. S. Stone, M.B., of Reigate, in the chair. Agenda:—Minutes of Croydon meeting. To decide where the next meeting shall be held, and to nominate a member to take the chair thereat. The following papers, etc., have been promised: Mr. Watson Cheyne: Appendicitis. Dr. W. Hunter: The Blood, with special relation to Anæmia. Members desirous of exhibiting or reading notes of cases are invited to communicate at once with the Honorary Secretary. Dinner at 6 P.M.; charge 7s., exclusive of wine. All members of the South Eastern Branch are entitled to attend, and to introduce professional friends. The Honorary

Secretary would be much obliged if members would kindly inform him by post-card whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner.—HENRY J. PRANGLEY, Honorary Secretary, Tudor House, Anerley.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held in the Council Chamber at the Municipal Buildings, Taunton, on Friday, October 26th, at 4.30 P.M. Professor W. Cheyne, F.R.S., of King's College, London, will deliver an address at 5 o'clock on The Development of Modern Methods of Wound Treatment, upon which an interesting discussion may be expected. Members of the Bath and Bristol and the South Western Branches are invited to be present to form a conjoint meeting. Gentlemen wishing to bring forward communications and those intending to be at the dinner are requested to send early notice to the Honorary Secretary that he may make the necessary arrangements. Dinner (5s. a head exclusive of wine) will be served at the Castle Hotel at 7 o'clock, and tickets may be got at the bar of the hotel.—W. M. KELLY, Honorary Secretary, Taunton.

LANCASHIRE AND CHESHIRE BRANCH.—The adjourned annual meeting of this Branch will be held in the Memorial Hall, Albert Square, Manchester, on Wednesday, October 10th, 1894, at 4 P.M. Agenda:—Election of two representatives on the Parliamentary Bills Committee. Election of auditors. Protest against, and reasons for dissent from, the report of the Committee on the question of midwives' registration by a number of the members of the Branch. Mr. W. Macfie Campbell and Dr. A. C. E. Harris will move and second: "That the following addendum to Rule 10 be adopted: I. 'And no new member shall take part in the business of the Branch, unless he has paid his first subscription.' That the following 'note' be added to Rules 13, 14, and 15: 'II. That no grant of money for any purpose shall be valid unless passed by a majority of two-thirds of those present.'" Dr. Woodcock will move, and Dr. Jas. Brassey Brierley will second: "That the position on the Lancashire and Cheshire Branch Council of gentlemen who continue to grant 'diplomas' or 'certificates' to pupil midwives—a practice condemned by the General Medical Council and this Branch—is anomalous." Dr. Sinclair will move: "That in the opinion of this Branch of the British Medical Association the Legislature should take in hand and settle the midwives' question by enactments regulating the education, examination, and registration of midwives, and providing for the supervision and control of their practice." Dr. J. B. Brierley will move and Dr. A. H. Rideal will second: "That in the opinion of this meeting it is not desirable to give undue prominence in our JOURNAL to the proceedings of the Registration of Midwives' Association, and that a copy of this resolution be sent to the Council of the Association." Medical and Surgical Communications: Dr. Wm. Armstrong: The Electric Bath as a Therapeutic Agent. Mr. Thomas Jones: Two Cases of Traumatic Stricture of the Urethra treated by Excision (Urethrectomy). Dr. Berry: On Contract, Club, and Dispensary Practice. G. G. Stopford Taylor, M.D., will show Watercoloured Drawings and Photographs of Rare Skin Diseases.—JAMES BARR, M.D., Honorary Secretary, 72, Rodney Street, Liverpool.

SOUTH MIDLAND BRANCH.—The autumnal meeting of this Branch will be held at the Infirmary, Peterborough, on Thursday, October 4th, 1894. The following communications have been promised:—Dr. Newman: Remarks on Abuses in the Profession, with a resolution. Dr. Walker: Case of Injury to Brain from Impaction of Spout of Oilcan; Recovery. Dr. Jones: A Fatal Case of Poisoning by Ammonia. Dr. Hartley: Case of Double Abscess of Mastoid Cells. Mr. Milligan: Six Consecutive Successful Cases of Removal of Loose Cartilages from the Knee-joint.—CHAS. J. EVANS, Honorary Secretary, Northampton.

NORTH OF ENGLAND AND BORDER COUNTIES BRANCHES.—It has been decided to hold a conjoint meeting of the above Branches at Gilsland on Tuesday, October 30th, 1894. The meeting will commence at 3 P.M., and will be followed by a dinner. Members desirous of reading papers are requested to communicate with either of the Honorary Secretaries: G. E. WILLIAMSON, F.R.C.S., 8, Eldon Square, Newcastle-on-Tyne, North of England Branch; J. ALTHAM, M.B., Penrith, Border Counties Branch.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The autumn meeting will be held at Pontypool on Thursday, October 25th. Members desirous of reading papers, etc., are requested to send titles to one of us not later than October 10th.—A. SHEEN, M.D., Cardiff; D. ARTHUR DAVIES, M.B., Swansea.

EAST ANGLIAN BRANCH.

THE autumnal meeting of the East Anglian Branch was held at the Great Eastern Hotel, Harwich, on Thursday, September 20th.

Council Meeting.—At a meeting of the Council the following gentleman was elected a member of the British Medical Association and of the East Anglian Branch: Vernon Francis Allen, Swaffham. The following members of the British Medical Association were elected members of the East Anglian Branch: William Betenson Betenson, Bungay; Maurice J. Doidge, B.A. Cantab., Haverhill, Suffolk; Samuel Evans, Harwich; Harold Gurney, Harwich; George Frederic Hulme, M.D., Felixstowe; Richard Richmond, M.D., Great Bardfield; and Thomas Edmund Stuart, Harwich. It was resolved that the annual meeting at Framlingham be held on the second Thursday in June.

General Meeting.—The general meeting was held at 2.30 P.M., Dr. BEVERLEY in the chair. Apologies for non-attendance were received from the President (Mr. Mayo), Dr. Durrant, Dr. Holden, and Mr. Gorham.

New By-laws.—Dr. BEVERLEY, in the absence of the President, made a few remarks on the conduct and arrangement of meetings of the East Anglian Branch, and the working of the new by-laws of the Branch.

Epsom College.—A communication from Dr. Holman, asking that the Secretaries be permitted to receive contributions for Epsom College as well as for the Medical Benevolent Fund was read, and, after discussion, it was resolved on the motion of Dr. BARNES, seconded by Mr. BAXTER: "That Dr. Holman's request be acceded to."

Registration of Midwives.—A communication was read from the Lancashire and Cheshire Branch, *re* Registration of Midwives. Considerable discussion ensued, and it was ultimately resolved to defer the further consideration of the question to the annual meeting at Framlingham.

Dr. Anderson's Case.—A communication was read from Lord Stamford, *re* "Civil Rights Defence Committee and Dr. Anderson's Appeal." Dr. THOMAS CARR moved and Mr. HAVELL seconded, and it was unanimously resolved:

That the members of this Branch be invited to subscribe to this fund such small sums as each is willing to give; and that the total amount so collected be paid to Lord Stamford's Committee.

The sum of £3 11s. 6d. was subscribed at the meeting.

Proposed Ethical Section.—Dr. F. W. CLARK moved a resolution relative to the proposed Ethical Section of the British Medical Association. After discussion it was resolved to defer the further consideration of this subject until the formation of the proposed Ethical Section.

Papers.—Dr. HERBERT BROWN read an extremely interesting paper on a case of Dermoid Ovarian Cyst Complicating Labour. Mr. BRANSFORD EDWARDS, Dr. BEVERLEY, and Mr. JEAFFRESON, took part in the discussion which followed.—Dr. W. A. ELLISTON read Notes on Three Cases Simulating Sciatica.—Dr. THOMAS CARR read a paper entitled: The Present State of Knowledge of the Cholera Bacillus.

Entertainments.—The members attending the meeting had luncheon together at the Great Eastern Hotel, and were entertained at afternoon tea by Messrs. Evans, Gurney, and Stuart.

SPECIAL CORRESPONDENCE.

PARIS.

Law and Medicine.—Improvements in Ambulance Stretchers.—The Hereditary Influence of Alcohol.—Bicycling for Women.—Asylums for Drunkards.—Unhealthy Houses.—Poisonous Lobsters.—Free Medical Assistance.—General News.

THE painful result of a recent trial at the Versailles law court of a medical man for abortion is, by its apparent injustice and great importance, rousing the indignation of the medical press and attracting the attention of the daily papers. The facts are as follows. A young woman had a miscarriage, a midwife took her to a doctor, and all three were arrested for abortion in consequence of an anonymous letter denouncing the three people in question, and notifying three other abortions. The three persons accused of these criminal practices are of good reputation. Experts ascertained that a fœtus had been expelled. The girl readily admitted that she was delivered of a three-and-a-half months' male fœtus. She attributed the abortion to a fall from a ladder, and declared that she had thrown the fœtus into the Seine, and did not accuse anybody. The same day later on it was rumoured that the midwife was called in, and conducted the patient to the doctor in question. Questioned again, the girl accused the doctor of practising abortion on her. This was declared by the experts in medical jurisprudence to be "unlikely," "incoherent," and "lying." Nevertheless the medical man has been sentenced to be imprisoned three years, the patient two years, and the midwife has been acquitted. The doctor has been condemned with "extenuating circumstances," which renders the sentence still more objectionable. He is either guilty or not. His counsel, M. Haussmann, terminated his defence by saying, "It is not acquittal I ask, that is unavoidable; I claim that this man be cleared of all blame. He ought

never to have been placed in the dock. Dr. Legrit, in the *Journal des Practiciens*, says: "I, a medical man, maintain that there is no proof that abortion has been practised, and no one can prove the contrary until the fœtus has been examined, which has not been done. The sentence has been appealed against, and the appeal rejected. The *Temps* recommends that the President of the Republic, who can pardon independently of legal hindrances, be appealed to. This course would not remedy all the injustice apparently lying at the door of the Versailles Court. Even if the sentence is not carried out it will have to answer for a ruined life and reputation.

During several years the war material of the Service de Santé has been undergoing improvement. The newest form of stretcher is the Franck-Pagenneville model of 1890, this is now easily put up and taken to pieces. A modified form has been made for use in mountainous countries. In war time the fatigue of transporting the wounded would soon exhaust the bearers, therefore stretchers on wheels are kept in readiness. On these the wounded are easily transported to the ambulance and hospital by two bearers. The wheeled stretchers are conveyed to the battle field on two-horse field waggons, each capable of containing sixteen stretchers. The two best examples of these waggons are those of the Artillery de Vernon and the Gril chariot. The Bréchot-Desprez-Ameline suspended three-storied stretchers of 1891 are adopted by the Army Health Service. They can be placed in goods trains and not fixed to the walls, thus the patients are more easily reached by the nurse.

M. Féré, from a study of the embryos of fowls, finds that the action of ethylic alcohol retards their development, while those submitted to the influence of amylic alcohol undergo abnormal changes, and become deformed. His preparations were demonstrated at the International Congress at Buda-Pesth. In the discussion M. Crocq, Professor of the University of Brussels, supported the views of M. Algaves, who for fifteen years has been labouring to diminish drunkenness in France, that the sale of alcohol should be a monopoly in all countries, and that taxes on wine, beer, and cider should be suppressed. The monopoly system had existed in Switzerland for four years: in Russia from last year.

The question of cycling for women is in France a leading one. Dr. W. Douglas Hogg has published in the *Journal de Medecine* the answers of leading gynæcologists in France and abroad on the subject. Many oppose this exercise for women, but the majority are in favour of it, always excepting those cases which present special pathological reasons against it.

Dr. E. Marandon de Montyel, *médecin en chef* of the Seine Asylums for the Insane, in an able article published in the *Gazette des Hôpitaux*, discusses the proposed hospital for treating drunkards. It is to be built on the Ville-Evrard domain, and will house 500 patients. The plans are to be sent in on November 30th to the Conseil Général of the Seine. The architects of this department are in a difficulty, not knowing what is required of this special asylum. In Europe there is not a similar asylum to be taken as a pattern. In America there are the Washington Home at Boston and the Walnut Lodge Hospital at Hartford, in which 400 patients are treated yearly. M. Marandon de Montyel classes drunkards under three categories—the delirious, chronic drunkards with pathological affections, healthy bodied drunkards capable of working in the fields or at a trade. He considers that a hospital for alcoholic patients should be an asylum for the insane—a hospital and an agricultural colony. M. Montyel claims that drunkards of the three categories should be admitted into the proposed hospitals, and maintains that the distinction between delirious and non-delirious drunkards has no more *raison d'être* than the formerly proposed distinction between the insane epileptic and the not insane epileptic.

The Conseil d'Etat has decided that bugs do not render a house unhealthy.

Experiments made at the Paris Municipal Laboratory indicate that poisoning cases from eating lobsters are due to the following causes: (1) These crustacea are often sold dead; (2) ptomaines may be present in their organism resulting from the food given to them when kept alive in ponds awaiting to be sent to different markets; (3) likewise, and this is believed to be the most frequent cause, they are kept in ice in pails near Paris; this ice is impure.

The Conseil Général of the Department of Aveyron has voted £4,000 for organising free rural medical help; besides the existing Brest, Morlaix, Quimper, and Quimper-le hospitals, other hospitals are to be created at different points; two of these are Crozeu and Concarneau. The expense of conveying the patients will be borne by the Department.

M. Roux, at the Institute Pasteur has controlled and confirmed M. Yersin's researches on the microbe of the pest.

A few days before the last *Journal Officiel* appeared Dr. A. Marchand, the well known surgeon attached to the St. Louis Hospital received a letter from the Prefect of the Seine informing him that his nomination as Chevalier of the Legion of Honour would shortly be announced in the journal. When it appeared it was Dr. Gerard Marchand who was thus honoured. There had been a confusion of names.

BERLIN.

Professor Koch's Address on Cholera at the Congress of the German Society of Public Health.—Some Views on Sewer Gas.

At the Congress of the German Society for Public Health, held last week at Madgeburg, the discussion on cholera was made specially interesting by a speech from Professor Robert Koch. He said that up to the present date opinion had been very much divided as to the origin of cholera, but that now we had arrived at a turning point in its history. The ten years' warfare was at an end. Even von Pettenkofer had declared some time ago that he regarded the cholera bacillus as the *x* in his conception of the etiology of cholera. Koch proceeded as follows: "We are all unanimous in believing that an accurately defined parasite is the cause of cholera. In saying this I certainly do not mean that if anyone introduces this parasite into his mouth or into his stomach, or even into his intestine, under all circumstances an immediate severe attack of cholera will be the result. I have never asserted such a thing. From the beginning I have maintained that—even though we know this chief cause—we must always take into consideration a number of auxiliary causes, which we characterise by saying that local, temporal, and personal conditions must assist the parasite for the production of the disease. . . . . Opinion at present is only divided on the nature of these auxiliary causes, and here I must confess that we know relatively little as yet. Some, of course, we do know, as, for instance, that one of these auxiliary factors is formed by man's relation to water; that the seasons probably play an important part, as also do the circumstances of traffic, the immunity question, and the state of the digestive organs. But all that does not suffice. I have always the feeling that we still stand before many a dark, unsolved problem; but still I hope that now that the quarrel about the cardinal point is settled, we can with a common effort begin to attack these dark points, and that we may, at a time not too distant, carry out the undertaking successfully. But whether one imagine the etiology of cholera to be simple or complex, it must be conceded to me that we stand before a chain of conditions, a chain that may be at one time very short, at another very long; and it must be conceded that, if from this chain I can remove one single link, I break the chain, whether it be long or short. And this we are able now to do. The link that we know and that we can attack successfully is the cholera bacillus. Of the other causes we know too little. We shall include them in our fight against cholera as soon as we know them better." Koch then spoke of the preventive measures taken during the last two years, and showed that, on the whole, they had been very successful, even though the cholera had not been entirely stamped, but, on the contrary, we must be prepared for several more years of cholera. He proceeded: "Now that we are able to protect our own country from cholera, it is almost a matter of indifference to us—from the purely national point of view, of course—what preventive measures are taken in other countries. In former times the chief care was that no cholera should be brought across the frontier. At present we feel exactly the reverse. We know that we cannot protect ourselves against the introduction of cholera; the whole weight must be laid upon making it harmless when it comes. Therefore I do not attach too much importance to international measures of prevention. The best international protection would be that each State should

do as we do—keep off the cholera in its own country and learn how to stamp it out."

At the same Congress some curious opinions were aired in a discussion on water supply and drainage system in houses. Baurath Herzberg, of Berlin—"Baurath" means a Government official for public buildings—said that the anxiety about sewer gases only owed its existence to theoretical considerations, and that, in fact, no transmission of disease by drain gases had ever yet taken place. Professor Wolffhügel, of Göttingen, corroborated, holding that, in view of the experience existing at the present time, no fear need be entertained that pathogenic germs could be carried by drainage gases.

BOSTON.

The Annual Meeting of the Massachusetts State Medical Society.—The New Buildings of the McLean Lunatic Hospital.—The Association of Trained Nurses.—Hard Times for Nurses.—The Registry for Nurses.

The coming annual meeting of the Massachusetts State Medical Society in Boston is the chief matter of interest at this late season in the medical year. Each State society has its own customs and peculiar form of meeting. The Massachusetts society is celebrating this year its 113th anniversary, in a meeting which, as usual, covers two days and attracts the physicians from all over the State. The membership of the Society is at present 1,927, in which number are 96 retired members. On the first day, in the morning the chief Boston hospitals are thrown open and public operations are performed which are largely attended. In the afternoon of the same day the Society meets in two sections, one for medicine and one for surgery. The medical section this year considers the question of vaccination, and the surgeons listen to a paper by Dr. W. T. Bull, of New York, on The Cure of Carcinomata of the Breast by Operation. The paper is then to be discussed by the leading surgeons of the State. In the evening of the first day Dr. Thomas Dwight, Professor of Anatomy at the Harvard Medical School, delivers the Shattuck Lecture on The Range and Significance of Variations in the Human Skeleton. The second day opens with a general meeting of the Society, combining medical papers and the annual discourse, this year by Professor R. H. Fitz. At 1 o'clock the annual dinner of the Society is served. This dinner is attended by some 900 Fellows of the Society, who sit down at tables in an enormous hall and listen to speeches from the Governor of the State, from the President of the Society, from some well-known clergymen, and from various other persons, who are selected for their ability to speak entertainingly. The hall is a very large one, and in a recent season of grand opera given there the voices of some of the best opera singers in the world were unable to fill the auditorium; consequently most of the speeches are inaudible, and the great number of persons to be served makes it impossible for a really good dinner to be given; yet the dinner is attended by a number of men which fluctuates very little, and which increases each year by a small percentage. The meeting of the Society is chiefly of value in keeping the country members in touch with the work and the men of the medical centres and with the medical school and the hospitals.

The eightieth annual report of the Massachusetts General Hospital contains an account of the work of the year and a description of the new buildings nearly completed at Waverly (a town several miles from Boston) for the occupancy of the McLean Insane Asylum, which is under the control of the Massachusetts Hospital trustees. The asylum is now in Somerville, one of the suburbs of Boston, but the land has become so valuable there, and the accommodation so limited, that the move to Waverly has been accomplished. The new buildings are probably the finest in the world for the reception of the insane, and situated as they are in very large grounds in the midst of a beautiful rolling country, the asylum will take its place as the best equipped in the country. The plan of separate buildings is being pursued, which are to be connected by covered passages, half underground, no higher than an ordinary garden wall. The asylum (which is to be spoken of as the McLean Hospital) stands in a park of 170 acres. The main group will consist of seven buildings for patients. There will also be an administration building with others annexed for the laboratory, the entertainment hall, etc. A gymnasium for men and another for women will be provided. There will be one or two detached buildings for a special class of patients. The ventilation, heating, etc., are in accordance with modern ideas, and the superintendent of the institution, Dr. Edward Cowles, is a well-recognised authority in the matter of hospital construction. It is of interest to note that there is at the hospital a resident instructor in physical training. Her work covers not only instruction to nurses, but the charge of the gymnasium for women patients. The report states that it is hoped to make a similar provision for the physical training of the male patients at some future time.

In the early part of the winter an Association of Trained Nurses was formed, which has been very successful in bringing the nurses in contact with each other. A club room is maintained, where the medical journals are taken and where the nurses meet socially, and for their instruction lectures have been given during the past winter every two weeks by well-known physicians. Not only has the purely nursing aspect of various questions been considered, but such scientific lectures have been given as the one on The Surgical Anatomy of the Ear by Professor Clarence J. Blake, the President of the Association. Altogether the Association is to be counted a success in its short existence of six months, and bids fair to become an institution of much usefulness to the nurses and to the medical profession through them.

Like most other occupations and professions, trained nursing has in the last winter suffered much from the hard times. Many nurses who in former years have been always occupied have this year been idle for weeks at a time. This is due, not only to the cutting down of the incomes of the better classes, making economy a necessity, but to the fact that the market is becoming overstocked by the graduation of a continually increasing number of nurses each year. At the Registration Bureau for Nurses in Boston there are some six or seven hundred men and women registered who depend largely for employment on Boston and its immediate neighbourhood. There are seven training schools for nurses in Boston, at the Boston City Hospital, the Massachusetts General Hospital, the Carney Hospital, the Children's Hospital, the Lying-in Hospital, the New England Hospital for Women and Children, and the Homœopathic Hospital. These schools send out each year a large number of young women more or less well trained for nursing. The majority of these seek employment in Boston. Moreover, the suburban hospitals—largely a growth of the last five years—for the most part have training schools and also graduate large numbers of nurses. When one considers the prices charged by these nurses, it is evident that in the near future the prices must fall or many nurses must be idle, as in any case where the supply is out of proportion to the demand. Male nurses charge from £5 to £7 a week and board and lodging; the regular price is the last named. Women get £5 a week for male patients and infectious cases, and £4 more or less for ordinary cases: women nurses without hospital diplomas expect about £3 a week, some registering for £2. If employment were steady these prices would be very high; but long intervals of idleness occur, the work may be very hard, and many nurses break down after a few years' work. As it is, these prices are accepted by the community; but a change is imminent, as can perhaps be seen by the facts mentioned.

The registry for nurses is maintained by a private corporation, whose directors are well-known physicians, and ladies who are interested in good works. A nurse who graduates from a hospital pays a registration fee, and is put upon the list. She must take the cases to which she is assigned, and all complaints are at once investigated. If these complaints prove well founded the nurse's name is removed from the list. A person applying for a nurse pays a fee of 8s. With the competition, which must inevitably become very strong, the standard of trained nursing must inevitably be raised. For this purpose the Association of Nurses will be of much help. Nor must mention be omitted of the admirable plan of the Massachusetts Emergency and Hygiene Association for the

training of "attendants." These women are not educated in hospitals as trained nurses, nor are they intended to do the work of such. They are trained for the care of elderly persons, chronic invalids, and young children, and for this work they take a course of forty lessons, followed by an examination. If they pass the examination they are registered by the Association, and are allowed to charge seven dollars a week (one-third of the price for trained nurses). This class of attendants for the sick has met a long-felt need, and almost all of the graduates of last year and of this winter have found steady employment.

CORRESPONDENCE.

AËRIAL DIFFUSION OF SMALL-POX.

Sir,—I see that you state in an editorial note that "recent experience at Bradford and elsewhere has added to the number of those who believe with Mr. Power that the small-pox virus can be carried through the air for considerable distances." On this point it does not become a layman to express an opinion, though I may perhaps be allowed to say that our somewhat prolonged recent experience at Gore Farm has convinced not a few—medical men as well as laymen—that aërial convection cannot do much where the opportunities for personal communication are reduced by strict discipline to a vanishing point. But what I wished to do was to ask whether Mr. Power's belief is shared by medical men outside this country. Certainly it is not so in all cases. In Vienna a fortnight back I visited what I was told was the last and most perfect hospital—the Franz Joseph Spital. Here I found alongside of 400 beds for ordinary patients another set of 200 appropriated to different infectious diseases, small-pox included, and separated only from the first set by a hedge with an open gate. Speaking from memory the small-pox ward may have been 100 feet from the nearest scarlet fever or measles ward, and perhaps twice as far from the nearest non-infectious ward; and the distance from the small-pox ward to the public road was certainly not more. The medical superintendent admitted that the arrangement was not ideal, but was clear that no ill results had happened; but then his arrangements for isolating patients inside the wards were much more stringent than anything we could possibly enforce in London; for example, under no circumstances were the friends of patients allowed to visit them.

At Buda-Pesth I also visited a large new hospital for infectious diseases just completed and on the verge of opening. This hospital, too, was in the suburbs of the town, closely adjoining a large general hospital, and small-pox was to be received in one or more of its eight pavilions, precisely on a par with fever or diphtheria.

I venture to trouble you with these observations because I hardly think that the extreme seriousness of accepting Mr. Power's position as a principle for public health authorities and the Local Government Board to act on has been fully appreciated. We are told that a site for a small-pox hospital will not be sanctioned, unless under exceptional circumstances, if it is not a mile and a-quarter, or at least a mile, from any except the most infinitesimal agglomeration of population. This means in other words that the hospital can only be placed in the centre of a block of vacant land of, in round figures, 4,500 or 3,200 acres respectively. Thanks to the Thames, it has been possible for us to find such a site reasonably accessible to London. But where anything of the kind can be found, say in South Lancashire or South-West Yorkshire, I am at a loss to imagine.—I am, etc.,

W. M. Acworth,
Chairman Small-pox Hospital Committee, Metropolitan Asylums Board.

St. George's Square, Sept. 24th.

DYSENTERY AND TROPICAL LIVER ABSCESS.

Sir,—In reply to my letter of June 23rd, giving figures and stating that "too often no mention is made of the state of the gut in such records of hepatic abscess," Surgeon-Major Younge, of Mandalay, in the British Medical Journal of September 15th, contents himself with replying as follows: "Such an oversight, however, could not occur under the present medical regulations, which have now been in force for many years, as these direct that in every fatal case amongst European soldiers in India a casualty report on Army Form A 21, giving a full description of the morbid changes found in each organ on *post-mortem* examination, shall be submitted to the Principal Medical Officer of the Presidency in which the death occurred," thus repeating Surgeon-Major Rennie's statement of a fortnight before. Both these gentlemen, however, neglect to quote any of the figures that are the outcome of the regulation in question; and Dr. Younge goes on to say, "the entire absence of septic lesions in the hæmorrhoidal or portal veins in cases of single abscess of the liver is also a strong argument against their infective origin." In the pages of this Journal during the last few years Dr. Younge will find records of not a few cases of single liver abscess with *post-mortem* ulcers and cicatrices of the large gut; if the hæmorrhoidal or portal veins escaped septic infection in these cases, it must have been by something little short of a miracle; for surely the radicles of these veins are involved in the ulcers, sloughs, and submucous suppurations which pathologists tell us are to be met with in dysentery in the large gut. A septic wound of the hand or foot will give rise to an abscess of axillary or femoral gland, even when only the lymphatic radicles of the skin are involved, but not every such wound causes an abscess. In the same way not every dysenteric ulcer gives rise to liver suppuration, and it is not possible to say in either case what proportion of these breaches of surface will be followed by secondary abscess formation.

Dr. Younge further writes: "It is almost a physical impossibility that pathogenic (pyogenic) organisms, which are absorbed from the rectum or colon, can lodge in such a way so as to excite a single large abscess in the liver. By the time they reached the liver, the bacilli would be so intimately mixed with the blood current that they must be more or less equally distributed throughout the organ.....in such cases (multiple) I believe, however, that the infection of the liver is due, not to the bacillus of dysentery, but to the accidental presence of streptococci in the large intestine." It would be somewhat safer to say that there is no physical impossibility in the organisms being deposited in one or any number of foci, seeing that these abscesses are met with in any number from one to many, and there is a possibility of foci running together. Cases of large, single, liver abscesses occurring in this country secondary to pelvic suppuration, have apparently surmounted Dr. Younge's physical impossibility. I would ask Dr. Younge how his large "genuine" tropical liver abscesses are brought about—by pyogenic organisms? And how are these distributed so as to make the single abscess; or, are there no pyogenic organisms here concerned?

It would contribute more to the solution of this question if those who oppose the view that tropical abscess is rarely a primary and usually a secondary affection of the liver, "can be induced," as Dr. Saundby suggests, "to publish the evidence." So far, I maintain that the great bulk of hitherto published *post-mortem* evidence on this point is in favour of the above view, and I hope shortly to go into the subject in greater detail than I have yet done. Dr. Younge speaks of the bacillus of dysentery: probably he means the amœba of Koch, Osler, Kartulis, and others.—I am etc.,

Murtle, Aberdeen, Sept. 18th. Neil Macleod, M.D.

THE MEDICAL, SICKNESS, AND LIFE ASSURANCE SOCIETY.

Sir,—Some notices regarding your position as founder of the Medical Sickness, Annuity, and Life Assurance Society have lately appeared in the public press. While no one would desire in any way to detract from the great value which your services and influence have rendered both in the formation and building up of the Society, it seems only fair to recall to the minds of the profession that the preliminary work of the movement was done by Dr. Ravenhill, of Bordesley, Birmingham, and Dr. Clibborn, now of Bridport, Dorset.

Occasional letters had appeared in the British Medical Journal advocating the formation of some provident society,[1] but anyone referring to the British Medical Journal for 1883 will see that it was the personal work of the two gentlemen I have named which fairly started the scheme.

[1] C. A. Straton (1879), A. H. Boys, W. E. S. Stanley, C. J. M. Smith, M. T. Yarr (1882), and B. Sincock (1883, January 6th).

A letter from Dr. Ravenhill appeared in the British Medical Journal of January 20th, 1883, and another from Dr. Clibborn on February 3rd. The latter received your editorial commendation. These letters were followed up by a special meeting of the Birmingham and Midland Counties Branch (February 22nd), at which Dr. Clibborn proposed a tentative scheme. This was seconded by Dr. Ravenhill, and received the commendation of all the members present.

The resolutions passed at this meeting were read at the Committee of Council on April 11th, and a resolution was passed approving the formation of a provident society and providing an opportunity for a public meeting to take place at the forthcoming annual meeting of the British Medical Association at Liverpool.

This meeting was held at Liverpool on August 2nd, and is reported in the British Medical Journal for August 11th, 1883. You, sir, were in the chair. A resolution was proposed that the Society should provide temporary aid in cases of sickness, but Mr. Ravenhill moved an amendment to the effect that nothing short of provision for cases of prolonged and permanent disablement would fulfil the requirements of the profession.

From this date and on the lines of Mr. Ravenhill's amendment the Society has grown. It is now an important body, and the exact history of its origin is not without interest to many members of the profession.—I am, etc.,

Birmingham, Sept. 16th. JOHN W. TAYLOR, F.R.C.S.

THE MEDICAL PROFESSION AND PATENTS.

Sir,—I shall be glad to know if it is against the etiquette of the profession to derive any profit from inventions of surgical or medical apparatus. Is it wrong for a medical man to patent anything and receive a royalty on its sale, or to come to a pecuniary arrangement with regard to the patent? Should this be non-professional, it means that the instrument makers who sell the same, or who patent it, trade solely on his invention on *gratis* terms.

We are aware that in the musical and scientific circles patents and royalties are invariably arranged for. One of the most noted scientific men of our day, who has lately been raised to the peerage, patents his apparatus. Surely this is not "trade?" If no patents are taken out, inferior imitations are made, and the profession and public suffer in consequence. Why, again, is the medical profession to lay its inventive genius at the foot of manufacturers, and let them have all the benefit?—I am, etc.,

September 20th. H. M.

THE LONDON TEMPERANCE HOSPITAL.

Sir,—Kindly allow me to notify to your readers the interesting fact that on October 6th the London Temperance Hospital will complete twenty-one years of consecutive and successful work.

This "coming of age," the Board of Management think, should not pass without some mark of special recognition, and they have therefore arranged to hold a reception at the hospital on Monday, October 8th, when visitors arriving at 2 o'clock or later will be conducted through the hospital by members of the Board and of the medical and nursing staffs.

Friends of the institution who, in the meantime have not received cards of admission can obtain them by a postal application to the Secretary, Mr. E. Wilson Taylor, at the hospital.—I am, etc.,

DAWSON BURNS.
September 25th. Hon. Sec.

MEDICO-LEGAL AND MEDICO-ETHICAL.

"CORONERS AND DOCTORS."

Such unseemly skirmishes as that which took place last week between Mr. Wynne Baxter and Mr. Fred. Blackwell, and was reported under the above heading in the daily papers at full length, are to be regretted in the interests of law and medicine alike; the more so, since the relations between the Coroner for East Middlesex and the medical profession have in general been most satisfactory; and on this occasion the ebullition of feeling was wholly due to misapprehension, and a sense of offended dignity on either side, the coroner not having intended any reflection on the doctor, and it might have been avoided had he courteously explained his position at an earlier stage of the proceedings. Mr. Blackwell was clearly wrong in assuming that his certificate of the cause of death rendered an inquest superfluous, or that the coroner necessarily cast any doubt on his *bona fides*, or on the correctness of his diagnosis.

On the other hand Mr. Baxter, unless his remarks were incorrectly reported, was equally in error in maintaining that the attending medical man was in every instance bound by law to give a certificate of the cause of death. Far from this, not only would he be acting illegally and render himself liable to a heavy penalty were he to certify to the cause of death with the view of avoiding an inquest in any case in which was directly or remotely due to violence, accident, or other unnatural cause, but he is perfectly justified in refusing a certificate whenever he has a reasonable suspicion that the death has been caused or accelerated by some contributory negligence or act of those in charge of or attendance on the deceased. Though on rare occasions information of this nature may be communicated to the coroner, even when nothing has occurred to arouse the suspicion of the medical man, the great majority of these inquests of expediency, as one may call them, are held either at his express request, or in consequence of his refusal to give the certificate. This he may do though he have no doubt as to the immediate cause of death, which under other circumstances he would have had no hesitation in certifying, such for example as small-pox in unvaccinated children exposed to infection, or puerperal fever, or *post-partum* hæmorrhage in women attended by ignorant midwives.

If the medical attendant were, as Mr. Baxter is reported to have stated, bound to give a certificate in all these cases (for he could not have intended to include deaths from violence, poison, or accident) few such inquests would be held; or, if the medical man were at the same time to communicate with the coroner's officer, the coroner being thus furnished with his opinion as to the immediate cause of death as well as to the suspicious circumstances surrounding it, might dispense with the attendance and fees of the medical witness, a course which some would be only too ready to take.

The particular case which has suggested these remarks was one in which a courteous consideration of the feelings of all parties would have been specially becoming, since it was one the expediency of which was very doubtful, the cause of death having been cirrhosis and delirium tremens, that is, acute supervening on chronic alcoholism. There was no question of foul play, and the only reason alleged by the coroner for holding an inquest was the wish to satisfy himself that the husband had used his best endeavours to check the intemperate habits of his wife, which would seem to most persons to involve a painful and needless exposure.

HOMŒOPATHIC MEDICINES AND THE STAMP DUTY.

Mr. James Ockenden, of 18, Moorfields, was summoned before Mr. Alderman Samuel, at the Mansion House, on September 21th, at the instance of the Inland Revenue, upon four informations, for exposing for sale a bottle of tincture of aconite, a bottle of tincture of nux vomica, and a box of eucalyptus globulus pastilles, without a paper cover, wrapper, and label provided by the Commissioners of Inland Revenue. Mr. Alderman Samuel imposed a penalty of £10 for exposing for sale of the eucalyptus globulus pastilles, and a penalty of 20s. in each of the cases relating to the exposing for sale the bottles containing the tincture of belladonna, the tincture of aconite, and the tincture of nux vomica. Mr. Lewis Thomas said that Mr. Ockenden would appeal from this decision.

NARCOTIC SOOTHING SYRUPS.

The coroner for Bolton held an inquest on September 21st, on the body of the infant son of Adam Booth, whose death, according to the medical evidence, was due to opium poisoning. The child's mother had given the infant some soothing syrup, in which there was opium. A verdict in accordance with the evidence was returned, and the coroner commented upon the danger of such syrups.

MIDWIFE'S ADVERTISEMENT.

Veritas sends the following advertisement by a midwife: "Can be consulted on all diseases of women; sample bottle of medicine, 2s. 6d."

*** Nothing can be done unless sufficient evidence can be obtained to support the bringing of an action for the recovery of the penalty of £20 incurred by persons practising as apothecaries without legal qualification. Our correspondent might communicate with Mr. J. R. Upton, Clerk to the Apothecaries' Society, Blackfriars, E.C.

"MESSAGES WILL BE ATTENDED TO."

Enquirer asks: Would there be any impropriety in exhibiting in a house in a village to which I am sometimes called a card with "Messages left here for Dr. —— will be attended to"?

*** Such a proceeding as that suggested by our correspondent would be medico-ethically objectionable if there is a resident practitioner.

FEE CARDS.

Dr. W. A. B.—Although the exceptional procedure adopted by our correspondent in imprudently "giving a card on which his fees are printed, to patients whom he attends and who call at his house," does not *ipso facto* of itself subject him to the intervention of the General Medical Council, as threateningly announced by a neighbouring practitioner. Yet it is none the less professionally objectionable and medico-ethically reprehensible, inasmuch as, in our opinion, it constitutes an indirect covert mode of advertising himself through the medium of the card of fees.

CONTRACT NOT TO PRACTISE.

Assistant.—The bond is between our correspondent and the purchaser of the business, the latter having paid the purchase money only upon his signing a bond not to practise in the district. As our correspondent made no stipulation beforehand with the vendor for payment of any sum to him for thus binding him down, we do not see how he can recover the sum he now claims from the deceased's estate for signing the bond.

SALARY OF ASSISTANT DISMISSED FOR DISOBEDIENCE.

NOX.—Provided the contract with the assistant was to pay him a certain rate per month, he has a good cause of action as each month accrued, which, once vested, was not subsequently lost or diverted by the act or disobedience. The claim for the month's salary due at the date of dismissal seems to us, subject to the above proviso, to be legal. If payment is refused, recourse can be had to the county court to recover the amount.

ASSISTANT PRACTISING IN OR NEAR DISTRICT OF LATE EMPLOYER.

L. T. E.—There being no bond between the assistant and his late employer, there is nothing legally binding on the assistant to prevent his practising in or near the district of his late employer, who some time since sold his practice. The course indicated, however, would be contrary to the honourable traditions of the profession.

RECOVERY OF FEES.

PROSPERITY.—To entitle a practitioner to recover for services and medicines supplied he must have had the necessary qualification and be registered in respect thereof at the time the services were rendered and the medicines supplied. In the case mentioned our correspondent can only recover in the county court for the services rendered and medicines supplied as from the date he was duly qualified and registered.

VACCINATION GRANTS AND DIVISION OF PROFITS.

CYMRO.—We think that the grant of the Local Government Board for successful vaccination should, in pursuance of the clause of the partnership deed cited, be treated as a receipt of partnership business and be paid into the partnership fund. The partnership deed, it is stated, permits either partner to receive a gift made to him personally by a patient; we do not, however, agree with the contention of A. that under this he is entitled to exclude the grant from payment into the partnership fund on the ground that it is a gift to him. It seems clear to us that the grant cannot be said to be a gift made to him personally by a patient.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A SURGEON-MAJOR, due for India this trooping season, wishes to exchange with a Surgeon-Major having at least two years at home. Address, stating terms, "Surgeon-Major," Guildhall Street Post Office, Folkestone.

THE NAVY.

THE death is announced of Surgeon GEORGE MCSHANE, of H.M.S. *Victor*, as having occurred at Chefoo, China, at the age of 31. His commission was dated July 28th, 1890. He was a son of Inspector-General McShane, R.N., of Southsea.

The following appointments have been made at the Admiralty: GEORGE T. BISHOP, Surgeon, to the *Edward*, September 21st; ROBERT D. JAMIESON, Surgeon to the *Grafton*, September 21st; ROBERT S. BARNARD, surgeon, to the *Victory*, additional, to be left to the *Majestic*, temporarily, September 22nd; JAMES MOWATT, surgeon, to the *Edgar*, September 24th.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN S. G. HAMILTON retires from the service, receiving a gratuity, September 26th. His commission as Surgeon-Captain dates from February 5th, 1881, and he was appointed to the 1st Life Guards on April 27th of the same year. He served with the 1st Life Guards in the Egyptian War of 1882, and was present in the engagements at El Magfar and Mahsama, in the two actions at Kassassin, at the battle of Tel-el-Kebir, and at the capture of Cairo (medal with clasp, and Khedive's star).

Surgeon-Major H. R. O. CROSS, from the Scots Guards, is appointed Surgeon-Captain to the 1st Life Guards, *vice* S. G. Hamilton, his rank of Surgeon-Major being cancelled September 26th. Surgeon-Captain Cross entered the service August 4th, 1875, and was promoted to be Surgeon-Major May 4th, 1892, on which date he was appointed to the Scots Guards. He was in the Zulu war in 1879 with the Mounted Infantry of the Flying Column, and with the Cavalry Patrol until the capture of King Cetewayo (medal with clasp), and in the Boer war of 1881 with the Mounted Infantry of the Natal Field Force.

Brigade-Surgeon-Lieutenant-Colonel JAMES MACARTNEY, M.D., is placed on temporary half-pay on account of ill-health, September 5th. He was appointed Assistant-Surgeon October 2nd, 1886; Surgeon, March 1st, 1873; Surgeon-Major, October 2nd, 1878; received the rank of Lieutenant-Colonel, October 2nd, 1886; and was made Brigade-Surgeon-Lieutenant-Colonel, December 15th, 1892. He served in the Kafir war in 1877-78, and was mentioned in despatches as having "zealously performed his duties with the wounded under a heavy fire" (medal with clasp).

INDIAN MEDICAL SERVICE.

THE promotion of Surgeon-Lieutenant-Colonel EDWARD FAWCETT, Madras Establishment, to be Brigade-Surgeon-Lieutenant-Colonel, which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the Queen.

Her Majesty has also approved of the transfer of Surgeon-Captain W. W. WEBB, Bengal Establishment, from the half-pay list to the retired list, August 22nd.

THE VOLUNTEERS.

SURGEON-LIEUTENANT W. SYMINGTON, M.B., 1st (Cumberland) Volunteer Battalion the Border Regiment, is promoted to be Surgeon-Captain, September 26th.

Surgeon-Lieutenant C. W. BASS, 3rd Volunteer Battalion the Essex Regiment, is superseded for absence without leave, September 26th.

The Volunteer Officers' Decorations have been conferred upon the following officers: Surgeon-Lieutenant-Colonels S. SMITH and D. J. DYTTON, 1st Gloucestershire Engineers; Surgeon-Major FRANK SMITH, M.D., 2nd Kent Artillery; Brigade-Surgeon-Lieutenant-Colonel S. P. SMITH, 1st Volunteer Battalion the Royal Fusiliers (City of London Regiment); Surgeon-Lieutenant-Colonel P. A. YOUNG, M.D., 1st Midlothian Artillery.

VISITING CARDS.

A SURGEON-LIEUTENANT inquires what is the correct method of printing his visiting cards. We draw his attention to our remarks in the BRITISH MEDICAL JOURNAL of June 16th, p. 1335. We have there noted how uniformity can be attained in this matter through the medical services, where, at present, nothing but diversity reigns.

THE NEW ARMY CORPS.

WHEN the new army corps system comes into force confidential reports on Indian medical officers will have to be furnished by (1) administrative medical officers of districts, military or civil; (2) by general officers commanding if the medical officer is in military employ, and by the local Government if in civil; (3) remarks by principal medical officers of lieutenant-generals' commands if in military employ; (4) by principal medical officer in India; and (5) by the surgeon-general with the Government in India. This should certainly ensure complete fitness. It is also proposed to place the medical store depots under the Government of India.

SECRETARIES OF CIVIL SURGEONS-GENERAL.

ALL the civil surgeons-general are strongly opposed to the abolition of their secretaries and substitution for them [illegible] be many disadvantages and no economy, to the secretaries [illegible] revert to military duty and an extra charge be thrown upon the Indian finances for the salary of personal assistants.

THE AGE EXTENSION.

IT is generally remarked that if the age extension is sanctioned for surgeon-major-generals a large number of officers will retire at twenty and thirty years' service, and that thus the advantages of delaying retirement in administrative grades will be outweighed by the large addition to the pension list of executive officers.

THE MEDICAL DIVISION OF THE WAR OFFICE.

IN respect to the remarks we have made on the reforms needed to place the Medical Division of the War Office more in touch with the department, we are reminded that the late Sir Andrew Smith, a former Director-General, considered that a private secretary should be attached to the Director-General, and that the appointment of such an official to confer with officers in his absence would be satisfactory to the department generally.

As regards the roster, an eminent and experienced medical officer of high rank expresses himself as follows: "Complaints regarding the roster are so numerous, and the principles on which it is managed so little understood, that a wish exists in the department that the rules on which it is conducted should be printed and promulgated; that the list should be kept hung up in the Army Medical Office for everyone's inspection and information, and that it should be rigidly enforced."

Some forcible remarks are also made on the tenure of appointments at head-quarters of the department. The constant extensions in office have led to strong comments. These extensions should be positively prohibited.

ARMY MEDICAL RELIEFS.

OUR contemporary [illegible] makes the proposals of [illegible] Medical Department [illegible] the daily [illegible] [illegible] Commander-in-Chief [illegible] Commander-in-Chief [illegible] Commands, and all but one in the South African this trooping season. We are far from saying such wholesale changes in a given year are desirable, but we fear they are at the same time unavoidable. The disturbing elements of death, sickness, and promotion bring about unselected changes in a roster that no system can provide against. An officer who has served his full time in a foreign command is entitled to relief, and cannot be made the sport of accidents, or broken faith to meet the medical requirements of annual troopships. Our contemporary laments the "want of administrative forethought displayed by somebody" but we are sure no system of reliefs can be devised by ever so much forethought which will meet unforeseen casualties. For instance, Brigade-Surgeon-Lieutenant-Colonel Rae came home from the Cape last June, only, poor fellow, to die; his place must be filled. The present system of reliefs may not be all it could be made, but no administration can provide against the unexpected and lamented death of a valuable officer.

MILITIA MEDICAL STAFF CORPS.

WE are obliged to Surgeon-Major Collingridge and Surgeon-Captain Steman for a correction regarding this new corps. Our remarks in reply to a correspondent were with reference to the militia medical reserve, not the staff corps as stated. We are glad to learn that the pay of officers of the latter is as much as 22s. per diem on appointment,

which ought to be known in connection with the fact that there is a vacant commission. Of course the pay is while out on the annual month's training.

APPOINTMENT TO STATIONS.

REPORTS from India note that exclusive power of nominating medical officers to stations lies in the hands of the surgeon-major-generals of Presidencies, by which excessive centralisation the principal medical officers of districts and commands are much hampered in the distribution, appointments, and movements of medical officers under their command. It is absolutely essential that all medical officers should be posted by principal medical officers of Presidencies to districts, and that the stations in the districts to which they should be allotted should rest entirely with the surgeon-colonels of districts, under whose command and administration they directly pass.

AGE RETIREMENT.

A VERY well-informed correspondent writes: Principal medical officerships should be made tenable for a definite period as other staff appointments in the army, and the principle of selection for the administrative grades carried out as the Royal Warrant directs. These two lines of action will get rid of the present frequent changes of principal medical officers and will bring men to the higher grades with a reasonable period to serve and in a physical condition to do so: moreover, selection will introduce a vitalising influence sadly wanted. Both of these procedures are already in existence in the army generally and why should the Medical Staff be excluded from the benefits thereof? I would further ask where does the reasonableness of physical examination for surgeon-generals come in? What is the change in requirements of this grade as compared with that of surgeon-colonel, which necessitates it? The examination required is of individuals transferred from the executive to the administrative grades and not from one of the grades to the other.

*** Our correspondent very tersely states changes needed to vitalize the administrative grades. What is good for the staff of the army generally must be good for that of the medical department. We have often thought that what prevents the limitation of administrative appointments in the Medical Staff is a fear of thereby swelling the non-effective list. But we have not heard that limitation does so in other branches of the army. We suppose the examination alluded to for the rank of surgeon-major-general has been found necessary on account of "increasing age and infirmities," as charitable appeals put it.

THE War Office have deputed a medical and military officer to each of the hostile armies in Corea. The medical officer nominated for the Japanese army is Brigade-Surgeon-Lieutenant-Colonel W. Taylor, and for the Chinese army Surgeon-Captain James. The former has for some time been employed at the headquarters of the Medical Department.

OBITUARY.

WILLIAM ALEXANDER GREENHILL, M.D.

WE regret to have to record the death of Dr. Greenhill, of Hastings, who died after a very brief illness on September 19th.

Dr. Greenhill, who was in his 81st year, took the degree of M.D. at the University of Oxford in 1841, and settled in practice at Hastings in 1851. He retired some years ago. He was for many years Physician to the St. Leonards and East Sussex Hospital, then known as the Infirmary, and took an active part in the organisation of charitable work in Hastings. He was the founder of the Albert House at St. Leonards for domestic servants, and of the Hastings Cottage Improvement Society for supplying homes for the industrial classes, and had a large share in the establishment of the local Mendicity Society.

Dr. Greenhill was a man of wide literary culture, and was the editor of the Latin edition of Sydenham's Works, published by the Sydenham Society in 1844. For many years he was a valued member of the editorial staff of the BRITISH MEDICAL JOURNAL, and a frequent contributor to its pages, which from time to time he illuminated and enriched from his great stores of classical learning. In recognition of his services to medical literature he received an annual grant from the Civil List.

A friend who knew him for many years writes thus of him in the *Hastings News*:—"He was a scholar, a gentleman, a man of soundest learning, a man of deepest piety, but this was not all. He was a man utterly without self-interest or self-seeking. He would have been a far more successful man had he been otherwise. He probably never thought of his own success, even of his own professional advancement, in the works he undertook for the benefit of others. He was a pioneer in the cause of sanitary reform, in the days when sanitary reform was thought a crazy fanaticism. He spread the stores of Greek and Arabic learning before his medical brethren in days when learning was not held in high esteem among practitioners, and all he did was done from a sense of duty none the less imperative because the performance was to him a delight. The same principles guided Dr. Greenhill in private life also. His rules of life and action were founded upon the highest morals. He was a disciple of Dr. Arnold, with all the abhorrence in which his great master held whatever was mean, base, selfish, untrue. He never shrank from giving unwelcome advice, he never minded gainsaying a favourite opinion, but he was the gentlest of advisers, the most candid of controversalists; his keen preceptions might make him at at times seem arrogant in debate, but never was there a man of more genuine humility, never was there a man more ready to own a mistake, to apologise for the semblance even of an offence. He had natural advantages—a handsome face, a winning look, a peculiarly sweet and pleasant voice. But he had a better way stil! of attracting friends—he could be trusted, could invite confidence and could keep confidences. His literary work brought him many acquaintances, and to literary men his friendship was a rich mine of profit. He was a worker with his pen all through his life, from his first contribution to an encyclopædia, nearly sixty years ago, to the unfinished book upon which he was labouring zealously with all the drawbacks of failing health, and upon which he was engaged less than twelve hours before his death. His strong individual characteristics marked his work as an author also. His severe accuracy, his desire for absolute perfectness in composition, his ready deference to opinions which he thought better than his own, his unwillingness to accept opinions which did not commend themselves to his mind, his patient attention to the minutest trifles, were as evident here as in all else that he was concerned with. He was a model worker, despising no suggestion, omitting no detail, evading no difficulty. He certainly has been a proof that a man can be a philanthropist without noise or display; as truly as those who knew him in private life could not help seeing in him a man whose life was saintly without ostentation of religion, and a profound scholar without any traces of pedantry."

WILLIAM LAUDER, M.D.EDIN.

WE regret to have to record the death of Dr. William Lauder, of Oxford Road, Manchester, which took place at his residence on September 17th. Dr. Lauder some weeks ago spent his holidays at a seaside resort in Scotland, where he seems to have caught typhoid fever. Late in the course of the fever pneumonia set in, and to this he succumbed. Dr. Lauder was the only son of the Rev. W. Lauder, of Port Glasgow. He was educated at the University of Edinburgh, where he graduated as M.B. in 1878, and as M.D. in 1886, having become L.R.C.S.Edin. in 1877. After graduating he acted as resident officer in St. Mary's Hospital, and as house-surgeon of the Southern Hospital, Manchester. At the time of his death he was an honorary physician of the Southern Hospital for Diseases of Women. Dr. Lauder always looked so well and sprightly that his death came as a sudden and great shock to his numerous friends and acquaintances, by whom he was much respected and esteemed. Dr. Lauder was 38 years of age, and leaves a widow to lament his untimely end.

A REUTER telegram from Frankfort-on-the-Main, dated September 20th, says:—"Dr. Heinrich Hoffmann, the author of the widely-known children's book called *Struwwelpeter*, died suddenly of apoplexy this morning." Dr. Hoffmann, who was born in 1809 at Frankfort, practised for a long time in his native town as a specialist in mental diseases. He occupied himself also with literature, writing principally poems and plays, of which he published a number of volumes. He adopted as his *nom de guerre* the maiden name of his wife, and was known as "H. Donner." The work by which he was best known, the inimitable *Struwwelpeter*, came to be written in this way. Among his patients there were many children, and in order to keep their attention fixed while he diagnosed their complaints or had them under treatment, he was accustomed to make pencil drawings of a grotesque and humorous nature for their amusement. He was persuaded to publish a

number of these sketches, and did so in 1845 without any expectation that his little volume would prove so extraordinarily successful as to run into 140 editions, and to be translated into nearly all the languages of Europe. The great popularity of his first attempt in this line led him to write other *Kinderschriften*, but these did not attain to anything like the success of *Struwwelpeter*. Dr. Hoffmann held the title of Geheimer Sanitätsrath in Frankfort for many years.

The death is announced of Professor Oskar Fraentzel, Director of the male Medical Department of the Charité Hospital in Berlin. Professor Fraentzel, who was a pupil of Traube's, made numerous contributions to the literature of heart disease. He was a well-known figure in the Berlin medical world, and was one of the Presidents of the Berlin Medical Society.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Christian Lemcke, Professor of Otology in the University of Rostock, and author of a valuable work on deaf-mutism, aged 44; Surgeon-General Bernhard von Beck, of the Medical Department of the German Army, well know for his contributions to military surgery; Dr. Alcee Froin, a well-known Bonapartist politician, formerly Deputy for Blaye (Gironde), and General Councillor for Saint-Ciers-la-Lande, aged 71; Professor Albrecht, of Hamburg, a distinguished anatomist and zoologist; Dr. Henri Parrot, Chief Physician of the hospital of Périgueux, author of a history of the epidemic of sweating sickness, which raged in the Dordogne in 1841 and 1842, and of an elementary work on hygiene, aged 84; Dr. Martin de Gimard, of Paris, a rising specialist in children's diseases, struck by lightning on Mount Pilatus; Dr. J. Stolnikoff, Professor of Special Pathology and Therapeutics in the University of Warsaw; and Dr. Mazzitelli, Professor of Dermatology and Syphilography in the University of Messina.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF DURHAM.

Examination for Degrees in Medicine and Surgery.—The following candidates have satisfied the examiners:

Second Examination for the Degree of Bachelor in Medicine.—First Class Honours: E. Turner, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital. Second Class Honours: C. Salkeld, B.A., College of Medicine, Newcastle-upon-Tyne; A. Riley, Westminster Hospital. Pass List: A. W. Aldridge, Mason College, Birmingham; M. Archdall, College of Medicine, Newcastle-upon-Tyne; G. Arnott, College of Medicine, Newcastle-upon-Tyne; H. E. M. Baylis, St. Bartholomew's Hospital; C. H. Clarke, Mason College, Birmingham; H. A. Crossfield, St. Thomas's Hospital; J. D. Dodds, College of Medicine, Newcastle-upon-Tyne; J. L. Frazer Hurst, College of Medicine, Newcastle-upon-Tyne; J. R. Fuller, M.R.C.S., L.R.C.P., L.S.A., St. Mary's Hospital; E. W. Gilroy, College of Medicine, Newcastle-upon-Tyne; H. J. Godwin, St. Bartholomew's Hospital; H. H. Gourlev, Edinburgh University; W. Hodges, St. Thomas's Hospital; P. W. James, St. Bartholomew's Hospital; J. Lowry, College of Medicine, Newcastle-upon-Tyne; M. G. McBean, College of Medicine, Newcastle-upon-Tyne; N. McBall-Smith, College of Medicine, Newcastle-upon-Tyne; M. S. Paterson, M.R.C.S., L.R.C.P., St. Mary's Hospital; T. O. Scott, M.A., College of Medicine, Newcastle-upon-Tyne; H. F. Shea, St. Thomas's Hospital; G. Stonehouse, College of Medicine, Newcastle upon-Tyne; E. W. Sumpter, College of Medicine, Newcastle-upon-Tyne; W. A. H. Waite, Yorkshire College, Leeds; W. L. W. Walker, College of Medicine, Newcastle-upon-Tyne; W. H. Warwick, College of Medicine, Newcastle-upon-Tyne; J. H. Wood, College of Medicine, Newcastle-upon-Tyne.

UNIVERSITY OF ST. ANDREWS.

Her Majesty's Commissioners for the Exhibition of 1851 have placed a recommendation to a science research scholarship of the annual value of £150 at the disposal of the University of St. Andrews, for the year 1895.

It was reported on September 22nd to St. Andrews University Court that the Commissioners of Her Majesty's Treasury intimated that it is intended to repeal the stamp duty hitherto payable on the degrees of M.D.

SOCIETY OF APOTHECARIES OF LONDON.

Pass List, September, 1894.—The following candidates passed:

Surgery.—S. H. L. Archer, London Hospital; G. Candler, St. Thomas's Hospital; J. W. Clegg, Manchester; H. C. Dixon, London Hospital; T. Morris, Liverpool; L. E. V. Ætna Saville, Royal Free Hospital; G. A. Skinner, Guy's Hospital; M. Umanski, Kharcoff; J. C. V. Wilkins, Guy's Hospital.

Medicine, Forensic Medicine, and Midwifery.—G. Candler, St. Thomas's Hospital; H. G. T. Major, Guy's Hospital; L. E. V. Ætna Saville, Royal Free Hospital; S. B. Stedman, St. Thomas's Hospital.

Medicine and Midwifery.—T. J. Macdonald, Toronto

Medicine.—P. G. Lodge, St. Thomas's Hospital; G. A. Skinner, Guy's Hospital.

Forensic Medicine and Midwifery.—S. H. L. Archer, London Hospital.

Forensic Medicine.—W. J. Kerr, London Hospital; A. P. Woolfright, St. Bartholomew's Hospital.

Midwifery.—H. Exell, Sheffield.

To Messrs. Candler, Dixon, Major, McDonald, Woolfright, and Miss Saville was granted the diploma of the Society entitling them to practise medicine, surgery, and midwifery.

At the recent (September) examination in arts twenty-two candidates passed, of whom one was placed in the first division. The total number of candidates is not stated.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 5,835 births and 3,155 deaths were registered during the week ending Saturday, September 22nd. The annual rate of mortality in these towns, which had increased from 15.2 to 15.9 per 1,000 in the preceding three weeks, declined again to 15.7 last week. The rates in the several towns ranged from 6·2 in Halifax and 11.2 in Nottingham to 20.2 in Wolverhampton, and 23.5 in Liverpool. In the thirty-two provincial towns the mean death-rate was 16.6 per 1,000, and was 2.1 above the rate recorded in London, which was 14.5 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London the rate was equal to 1.9, while it averaged 2.2 per 1,000 in the thirty-two provincial towns, and was highest in Newcastle-upon-Tyne, Portsmouth, and Wolverhampton. Whooping-cough caused a death-rate of 1.1 in Swansea, and diarrhœa of 2.3 in Newcastle-upon-Tyne, 2.4 in Plymouth, and 3.0 in Portsmouth. The mortality from measles, scarlet fever, and "fever" showed no marked excess in any of the large towns. The 76 deaths from diphtheria in the thirty-three towns included 53 in London, 6 in West Ham, and 2 each in Bristol, Cardiff, Salford, and Sheffield. Two fatal cases of small-pox were registered in Birmingham, and 1 in Wolverhampton, but not one in London or in any other of the thirty-three large towns. There were 160 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate [illegible] on Saturday last, September 22nd, against [illegible] of the preceding three weeks: 23 new cases were [illegible] week, against 40, 13, and 19 in the preceding [illegible] number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was [illegible] 112, 2,026, and 2,079 at the end of the preceding three weeks; 283 were admitted during the week, against 212 and 269 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, September 22nd, 840 births and 426 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 15.6 and 15.5 per 1,000 in the preceding two weeks, further declined to 14.9 last week, and was 0.8 per 1,000 below the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 9.5 in Aberdeen to 20.7 in Paisley. The zymotic death-rate in these towns averaged 1.9 per 1,000, the highest rates being recorded in Leith and Greenock. The 207 deaths registered in Glasgow included 9 from diphtheria, 7 from whooping-cough, and 3 from scarlet fever.

VITAL STATISTICS IN ITALY.

[illegible] crease of population, namely [illegible] 33.58 per 1,000, and its death-rate [illegible] the other eleven cities are given first: Milan, 32.72, [illegible] nice, 30.13, 28.89; Turin, 29.44, 28.37; Genoa, [illegible], 28.01; Florence, 28.15, 28.84; Palermo, 28.21, [illegible]. Thus it will be seen that in three of these cities, [illegible] and Florence—the death-rate is in excess of the birth-rate.

NOTIFICATION ANOMALIES.

It is well [illegible] far from [illegible] to compulsory [illegible] Under se[illegible] a hospital [illegible] n officer or the sanitary district from [illegible] t into the institution. This, too, with- [illegible] which may have elapsed since a patient [illegible] t may seem, a person coming from a dis- [illegible] ulis, and contracting by any means a [illegible] n period, [illegible] leaving no [illegible] h the fact, [illegible] of jurisdiction will not have been concerned in the matter. [illegible] anomalous is the absence of any duty to notify the case to

difficult to imagine instances in which this would prove dangerous to the community in and around the hospital. Why not limit notification to the district sending the patient, to the outside limit of incubation (or some wider and defined limit of time), making notification to the health officer, locally concerned by having the hospital in his district, compulsory in all such cases? They would never be numerous, but they may be important.

ALCOHOL IN WORKHOUSES.

THE sharp line of distinction between temperance and absolute teetotalism is very apt to be forgotten, and people seem not infrequently to assume that abstinence from alcohol in health involves also a denial of its use in the treatment of disease. All over the country medical officers of workhouses are found acquiescing in the withdrawal of alcohol from ordinary dietaries, and loyally co-operating in diminishing its use as far as possible even in disease, but it is entirely unjustifiable to make this a ground for the pretence that they have thereby deprived themselves of the right of using alcohol when they believe that it is necessary or useful in the treatment of their patients. It appears that the Penzance Board of Guardians have been objecting to pay for a bottle of champagne which their medical officer had purchased for the use of a sick inmate of the workhouse. Dr. Steer, however, informed them that as long as the Local Government Board authorised him, he should administer alcohol in cases of emergency, and he insisted on the board providing him with a proper supply of brandy; and on the clerk informing them of the law, they decided to lay in a small stock.

While we thoroughly endorse the abolition of the routine use of stimulants, we may suggest that the cause of temperance is not advanced by putting difficulties in the way of their proper use as medicines, and that such opposition as that raised at Penzance tends the rather to lead to more frequent ordering of alcohol as a means of maintaining the right to use it when required, much as a man may drive a cart occasionally over an occupation road merely for fear lest by non-user his right might lapse.

EMPLOYERS LIABILITY ACT AND ACCIDENTS TO FARM SERVANTS.

A BOY (whose mother is a widow and supports her family by washing) is working for a large farmer who is a Poor-law guardian, and when so engaged is severely kicked by one of his master's horses. The master applies to the relieving officer for a medical order for the boy, and obtains it. The district medical officer gives the necessary attendance, and orders extras, nutriment, etc. The relieving officer informs the medical officer that this is unnecessary, as the boy's master will himself provide all that the patient requires, but will not pay for medical attendance. We are asked whether the master is able to make the boy a pauper, or whether he (the master) is liable under the Employers Liability Act for medical attendance and maintenance.

*** The responsibility for having made the boy a pauper rests with the relieving officer who gave the medical order, and if his action in the case is sanctioned by the board of guardians, there the matter ends. There is, of course, even then nothing to prevent the master providing the extras ordered, if he thinks proper to do so. We are of opinion that this case is not affected by the Employers Liability Act, as by it farmers are not made responsible for the misconduct of their animals, though we believe in the original draft of the Act such was the case. This, however, has not become law.

NOTIFICATION OF SUCCESSIVE CASES IN THE SAME HOUSE.

ANXIOUS will find, by reference to back numbers, that the question he asks as to notifying each of several cases of the same infectious disease occurring in the same house has several times been dealt with. In an editorial article on compulsory notification[1] the following occurs: "The point whether second cases of similar illness in a household should be notified if occurring within a certain period of time from the initial attack is one which has been oft times discussed. In one large borough no second case of a like complaint in one house, and attended by the same practitioner, occurring within thirty days of the first case need be notified under the provisions of the local Act, and, if notified, cannot be paid for. On the whole we incline to the safer plan of requiring each and every case of notifiable disease to be brought to the knowledge of the health officer." On page 872, i, 1894, we noted that the Hartley Wintney rural sanitary authority had passed a resolution to the effect that second and more, should be paid in respect to any one house where multiple attacks of notifiable disease occur simultaneously. The illegality of this ruling would, however, seem to be beyond question, the Notification Act requiring that when two or more notifiable cases occur at the same time in the same household each shall be reported. We are aware that it has been suggested that in regard to this an alteration in the Act should be made, but at present it is the law, and if it is true that one of the important aims of the Act is that the health officer be quickly informed of the occurrence of anything like a focus of disease, with a view to preventive measures being undertaken, it is to be hoped that the law will, in this respect, remain unaltered.

NOTIFICATION OF INFECTIOUS DISEASES.

ANXIOUS.—Each case of notifiable disease ought to be notified by the medical attendant; and, strictly speaking, the fact of the case having already been reported by another practitioner does not alter his responsibility. The head of the family is also required to notify. In practice, however, it is not usual to insist upon other notification when the case has been duly reported by a medical man. In exceptional instances it is expedient and proper to enforce householder notification; for example, where there is any attempt at concealment, or where no doctor is called in.

[1] BRITISH MEDICAL JOURNAL, 1893, ii, 1333.

MEDICAL NEWS.

THE Saxon Ministry of War has established a convalescent hospital for soldiers in the neighbourhood of Dresden.

THE Apollinaris Natural Mineral Water has received the Diplome d'Honneur at the Antwerp Exhibition, the highest award at the disposal of the jury.

DR. RINGWOOD, OF KELLS.—Dr. Ringwood, of Kells, co. Meath, has been awarded a pension of two-thirds of his salary on resigning his position as medical officer of the workhouse after twenty-five years' service. The guardians present bore testimony to the excellent services which Dr. Ringwood had given, and deep regret was expressed that the state of his health made it necessary for him to retire from his office.

MIDWIVES' REGISTRATION BILL.—We are informed that a meeting of medical men at Lancaster and neighbourhood was held on September 17th, when thirteen gentlemen attended. Dr. W. W. Wingate-Saul occupied the chair, and resolutions were adopted unanimously condemning the proposed legalisation of the practice of midwifery by other than legally qualified medical practitioners, and calling upon the General Medical Council to declare "infamous in a professional respect" the conduct of practitioners who continue to issue documents purporting to be "diplomas," "certificates," or "licences" in midwifery, the diseases of women and children, or other special subjects (other than ordinary nursing) to persons who have not received a complete medical education as prescribed by the Medical Act, 1886. It was further resolved to send copies of the resolution to the General Medical Council, the Branches of the British Medical Association, and all medical societies.

TESTIMONIAL TO DR. HUGHLINGS JACKSON, F.R.S.—The medical staff on the London Hospital have resolved, on the occasion of Dr. Hughlings Jackson's retirement from the office of Physician to the London Hospital, to present to him a testimonial. A Committee has been formed and a special appeal has been made to old students of the London Hospital, within whose walls much of Dr. Jackson's great clinical work has been done. The value of this work is so high and the importance of his contributions to our knowledge of cerebral diseases so generally recognised throughout the profession that it is thought that many besides his personal pupils will be glad to take this opportunity of expressing their appreciation of his services to medicine. Subscriptions may be sent (crossed "Jackson Testimonial") to Mr. J. Hutchinson, jun., 15, Cavendish Square, W. It is intended to have Dr. Jackson's portrait painted, and it is hoped that every subscriber of 2 guineas will receive a reproduction in black and white.

MEDICAL VACANCIES.

The following vacancies are announced:

ANCOATS HOSPITAL, Manchester.—Resident Junior House-Surgeon. Salary, £60 per annum, with board and washing. Must be duly qualified and on the *Medical Register*. Applications and testimonials to A. Forrest, Honorary Secretary, before October 10th.

BETHLEM HOSPITAL.—Two Resident Clinical Assistants. Apartments, rations, and attendance provided. Applications, endorsed "Clinical Assistantship," to the Treasurer by October 1st.

CAMBRIDGE UNIVERSITY.—John Lucas Walker Studentship. Applications to Professor Roy, New Museums, Cambridge, by September 30th.

CANCER HOSPITAL (FREE), Brompton, S.W.—Two House-Surgeons. Salary at the rate of £60 and £50 per annum respectively, with board and residence. Applications to the Secretary by October 5th.

CLUTTON UNION.—Medical Officer of Health to the Sanitary Authority. Salary, £100 per annum. Applications to Edward H. Perrin, Solicitor, Clerk to the Rural Sanitary Authority, Temple Cloud, near Bristol, by October 3rd.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House-Surgeon. Salary, £40 per annum, with board, lodging, and washing. Appointment for one year. Applications to the Secretary by October 8th.

DENTAL HOSPITAL OF LONDON, Leicester Square.—Assistant Dental Surgeon. Must be Licentiate of Dental Surgery of one of the licensing bodies recognised by the General Medical Council. Applications and testimonials to J. Francis Pink, Secretary, by October 8th.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis Road, Shadwell, E.—House-Physician. Board, lodging, etc., provided, but there is no salary attached to the post. Applications to the Secretary by October 6th.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's Buildings, Holborn.—Honorary Physician; must be Fellow or Member of the Royal College of Physicians, London. Applications to W. K. Taunton, Secretary, by October 4th.

GENERAL HOSPITAL, Birmingham.—Resident Surgical Officer and House-Physician. Salary, £130 and £70 per annum respectively, with residence, board, and washing. Appointments for one year, but candidates will be eligible for re-election for two subsequent years. Also two Assistant House-Surgeons, appointment for six months, but eligible for re-election for another six months. No salary. Residence, board, and washing provided. Applications to Howard J. Collins, House Governor, by October 6th.

GENERAL INFIRMARY AND DISPENSARY, Doncaster.—Indoor Dispenser and Assistant to House-Surgeon. No salary, but board, lodging, and washing provided. Applications and testimonials to J. Clark, Honorary Secretary, before October 9th.

GENERAL INFIRMARY AT GLOUCESTER AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Surgeon; must be F.R.C.S. or M.R.C.S.Eng., or F.R.C.S. or L.R.C.S. of Ireland or Edinburgh, or graduate of University recognised by the General Medical Council. Applications and testimonials to Henry T. Pike, Secretary, by October 10th.

HOSPITAL AND DISPENSARY, Newark-upon-Trent.—House-Surgeon. Salary, £80 per annum. Will be required to do the dispensing, for which a further salary of £10 is paid. Applications and testimonials to W. Easterfield, Secretary, by October 6th.

HULL ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £60 per annum, with board and furnished apartments. Applications to the Chairman of the House Committee by October 2nd.

LEITH HOSPITAL.—House-Physician, House-Surgeon, and Surgeon for the Outdoor Department. Appointments for six months. Salaries at the rate of £50 a-year each, with board in the hospital. Applications to the Secretary, Mr. George V. Mann, 33, Bernard Street, Leith, by October 1st.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant Resident Medical Officer. Salary, £120 per annum. Applications to the Secretary by October 8th.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park Place, Cheetham Hill Road.—House-Surgeon. Salary, £80 per annum, with apartments and board. Applications to Hubert Teague, Secretary, 38, Barton Arcade, Manchester, by October 3rd.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House-Surgeon. Honorarium at the rate of £50 per annum, and board. Applications to Geo. Wm. Fox, 53, Princess Street, Honorary Secretary, by September 29th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—House-Physician, House-Surgeon, and Assistant House-Surgeon. Appointments from November 1st, 1894, to March 31st, 1895. Salary at the rate of £60 a year for the two former, and at the rate of £30 a year for the latter. Applications to Charles H. Byers, Secretary, by October 1st.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, Soho Square.—Resident Medical Officer; must be doubly qualified. Appointment for six months; residence in the Hospital and an honorarium of £10 10s. Applications and testimonials to Capt. F. Hanaley, Secretary, before October 13th.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. No salary, but board, lodging, and washing provided. Appointment for six months. Applications and testimonials to the House-Surgeon before October 18th.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House-Surgeon for six months. Board, lodging, and washing provided. No salary. Applications to Chairman of Medical Committee by October 10th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, Cavendish Square, W.—Resident Medical Officer, doubly qualified. Salary, 100 guineas per annum, with an annual increase of 10 guineas to a maximum of 120 guineas, with furnished apartments, attendance, coal, and gas. Applications to the Secretary by October 1st.

ST. OLAVE BOARD OF WORKS.—Medical Officer of Health for the District; not less than 25 or more than 45 years of age; must reside in or within one mile of the district. Salary, £200 per annum. Applications to Edric Bailey, Clerk, Vine Street, Tooley Street, S.E., by October 18th.

SEAMEN'S HOSPITAL SOCIETY, *Dreadnought*, Greenwich, S.E.—House-Physician and House-Surgeon to the Dreadnought Hospital. Salary, £75 and £50 per annum respectively, with board and residence. Also Junior House-Surgeon for Branch Hospital, Royal Albert Dock, E. Salary, £50 per annum, with board and residence. Applications to P. Michelli, Secretary, by October 3rd.

VICTORIA INFIRMARY OF GLASGOW.—Superintendent and Resident Medical Officer. Salary, £300 per annum, with board and lodging in the infirmary. Applications to Francis Bisset, secretary, by October 3rd.

WANDSWORTH BOARD OF WORKS.—Medical Officer of Health for the Parish of Wandsworth; must reside within the parish. Salary, £150 per annum, rising, subject to the order of the Board, by annual increments of £10 to £200 per annum. Applications, endorsed "Medical Officer," on forms to be obtained of the Clerk, to be sent to the Board's Offices, East Hill, Wandsworth, by October 8th.

MEDICAL APPOINTMENTS.

ATKINSON, Guy C. B., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Clawson District of the Melton Mowbray Union.

BALDWIN, Francis J. A., L.S.A.Lond., appointed Medical Officer for the Seventh District of the St. Saviour's Union.

COLLIER, Herbert, M.D.Brux., L.R.C.P.Lond. and Edin., M.R.C.S.Eng., L.S.A.Lond., appointed Medical Officer (South District) Great Yarmand Union, *vice* A. Medows, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

EDMONSON, C. R., M.B., C.M.Edin., appointed Second House-Surgeon to the Royal Southern Hospital, Liverpool.

FOOKS, Mr. W. P., appointed Assistant Medical Officer to the Workhouse and Infirmary of the Parish of Paddington.

GALBRAITH, Thos. H., M.B., C.M.Aberd., appointed Medical Officer of the Workhouse of the Wolverhampton Union.

GODSON, John H., B.A., M.B., B.C.Cantab., appointed Medical Officer and Public Vaccinator for the Cheadle (No. 3) District of the Stockport Union.

GRACE, G. H., L.S.A., appointed Medical Officer for the Castleton District of the Chapel-en-le-Frith Union.

HILL, Mr. C. H., appointed Medical Officer for the Bon District of the Chippenham Union.

HIND, Albert, L.R.C.S.Edin., L.S.A., reappointed Medical Officer for the Eleventh District of the South Molton Union.

HOGARTH, R. G., F.R.C.S.Eng., L.R.C.P.Lond., appointed Junior Resident Medical Officer to the Nottingham General Hospital.

HUGHES, H. O., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of the Abergele District of the St. Asaph Union.

LARWILL, John, L.R.C.P.Edin., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Junior House-Surgeon to the Macclesfield General Infirmary.

MARSH, J., M.B., C.M.Edin., appointed Junior House-Surgeon to the Royal Southern Hospital, Liverpool.

SANDERS, Thomas, F.R.C.S.Eng., L.S.A., reappointed Medical Officer for the Fourth District of the South Molton Union.

SCOTT, Geo. Melmoth, M.B., B.C.Cantab., appointed Medical Officer for the St. Peter's District of the Maldon Union.

[illegible], reappointed Medical Officer [illegible]

TAYLOR, Mr. J. T., appointed Medical Officer for the Leytonstone and Wanstead No. 2 District of the West Ham Union.

TURNER, Mr. E. O., appointed Medical Officer for the Missenden District of the Amersham Union.

WARING, John Alfred, M.B., L.R.C.P.Lond., M.R.C.S.Eng., appointed Senior Resident Medical Officer to the Nottingham General Hospital.

WICKHAM, Harry Townshend, M.B., C.M.Edin., appointed Medical Officer for the Tenth District of the Newport Pagnell Union.

WOODWARD, Alfred, M.R.C.S.Eng., reappointed Medical Officer of Health to the St. Helen's Urban Sanitary District.

YOUNG, James, M.D.Glasg., reappointed Medical Officer of Health to the St. George Urban Sanitary Authority.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

WEDNESDAY.

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown by Drs. Remfry, Duncan, Cullingworth, Lewers, and others. Dr. Cullingworth: Three Cases of Pelvic Inflammation attended with Abscess of the Ovary, with clinical remarks. Dr. Braithwaite (Leeds): On Atrophy with Collapse (Cirrhosis) of Fibroid Degeneration, and Angioma of the Ovaries.

FRIDAY.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, 8 P.M.—Dr. Banning's Presidential Address. Dr. Sutherland: On the Difficulties of Prognosis in Insanity. Specimen: Cat's Pelvis with Kitt[illegible]

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

COLBOURNE.—On the 24th inst., at Gorstage, Sandiway, Cheshire, the wife of Louis Colbourne, M.D., Buenos Ayres, of a son.

WILLIAMS.—On September 17th, at Penarth, the wife of W. Williams, M.B., D.P.H., of a daughter.

MARRIAGES.

CORNER—CONNELL.—On the 22nd instant, at St. Matthew's Church, Clapton, Dr. Harry Corner, Earlswood Asylum, Surrey, son of F. M. Corner, J.P., the Manor House, Poplar, to Janet Ashcombe, eldest daughter of William Connell, Springfield, Clapton.

MAYNARD—KING-BELL.—On the 18th ult., at the Parish Church, Brighton, Edward Forster Maynard, M.D., to Florence King-Bell.

PENROSE—WALTERS.—On the 20th inst., at St. Mary's, Wimbledon, by the Rev. William Jowett, M.A., Rector of Stevenage, assisted by the Rev. J. Penrose, M.A., Vicar of West Ashton, Francis George Penrose, M.D., M.R.C.P., of 4, Harley Street, London, only son of Francis Cranmer Penrose, F.R.S., of Colebyfield, Wimbledon, to Mary Helen, only daughter of Laundy Walters, of Woodhays, Wimbledon.

TURNBULL—SIMPSON.—At St. Michael's Church, Garton-in-Holderness, on September 20th, by the Rev. Alex. Donovan, Edward Thew Turnbull, L.R.C.P.& S.Edin., L.F.P.S.Glasg., of Roos, near Hull, to Edith Augusta Simpson, second daughter of George Simpson, of Garton.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

HOME FOR INEBRIATES.

INQUIRER asks: Is there any house in existence for a man addicted to drink and able to pay £1 a week?

REMOVAL OF TATTOO MARKS.

MEM. BRIT. MED. ASSOC. writes: I have a patient with a cicatrix on the nose, stained by dirt at time of accident. Is there any means of removing the tattooing without incision?

DOMESTIC MEDICINE IN INDIA.

J. C. writes: A missionary's wife, in the jungle of Eastern Province of Ceylon, asks for "some plain, useful medical guide, thoroughly reliable."

*** *A Manual of Family Medicine for India*, by Sir W. J. Moore, London, J. and A. Churchill, 12s., will probably best meet the requirement.

BOOK ON MEDICAL EXAMINATION FOR LIFE INSURANCE.

R. T. H. asks to be referred to a recent book as an aid to medical examiners for life insurance.

*** *The Medical Handbook of Life Assurance*, by Dr. J. E. Pollock and J. Chisholm, London, Cassell and Co., 7s. 6d., will probably meet our correspondent's needs.

BOOKS ON ZOOLOGY.

STUDENT asks to be recommended books to read for honours in zoology at the Inter. Sci.Lond.; he intends giving about two years to it.

*** The following textbooks may be recommended, but it must be understood that none of these cover the ground satisfactorily: 1. Lang's *Comparative Anatomy of Invertebrates*; translated by Bernard, published by Macmillan. 2. Wiedersheim's *Vergleich. Anat. d. Wirbel thiere*, or abridged translation by Parker. 3. Claus and Sedgwick's *Textbook of Zoology*. 4. Gegenbauer's *Comparative Anatomy*, translated by Lankester. 5. Balfour's *Comparative Embryology*. 6. Hertwig's *Embryology of Man and Mammals*, translated by Marks. As to practical books, we fear none exist in English which touch Mya and Ascidia. But, in addition to *Marshall and Hurst*: 7. Parker's *Zootomy* would be useful for vertebrates; and 8. Vogt and Yung's *Anatomie Comparée Pratique*, Reinwald, Paris, covers the whole ground.

ANSWERS.

H. W. (Bristol).—The description of the apparatus is too vague to enable a trustworthy opinion to be formed.

MEMBER.—We are informed that batteries can be hired from Mr. K. Schall, 55, Wigmore Street, W.

PAYMENTS BY BENEFIT CLUBS.

A MEMBER.—Our correspondent's questions may be briefly answered as follows:—1. Benefit clubs seldom, if ever, pay their surgeon at the rate of so much per visit or consultation, so that it would be impossible to suggest a maximum or minimum fee. 2. It is more usual to have a fixed sum per quarter or per annum payable by the members whether well or ill, which in the metropolis varies from 4s. to 8s. per annum, probably not averaging more than 5s. 3. These fees nearly always include medicine, the patients finding their own bottles, etc. 4. Surgical operations of a minor character are probably always included in the surgeon's duties, but trusses and surgical appliances generally would have to be provided by the members themselves. 5. Any extra assistance—as in operations, giving chloroform, or in consultation—must be paid for by the member.

TREATMENT OF SWEATING FEET.

DR. E. M. SYMPSON (Lincoln) writes: In reply to A. M. P. (BRITISH MEDICAL JOURNAL, September 22nd, 1894, p. 682), one of the best methods of dealing with this affection is to order socks or stockings to be dipped in a warm solution of boroglycoride, dried and then worn. The frequency of change varies of course with the severity of the case. The fetor disappears almost at once, and the perspiration is soon checked and finally stopped.

DR. CYRIL W. THOMAS (Mexborough, Rotherham) writes to recommend the following ointment for hyperidrosis of the feet: Acid. salicylici 3j, sevum. preparatum 3j. It is extensively used in the German Army and has received the sanction of the Minister of War.

HIBERNICUS states that in the case of a housemaid he prescribed a lotion of carbolic, 1 in 8, and ordered her to put it in a basin and soak her feet in it at bedtime. Next morning she was unable to rise owing to inflammation of both feet, the cuticle of which was desquamating in parts. He kept her in bed four days and applied dilute lotio plumbi to the feet. On the fifth day she was at work again, and from then until now, a period of about eight years, she has been free from sweating and fetor.

MEDICUS recommends the following application: ℞ Glycerini acidi tannici 3iij; glycerini acidi carbolici 3j. M. The feet should be bathed every morning in cold water, and the odorous parts afterwards freely brushed with the above. The writer has never known this remedy to fail.

TREATMENT OF THREAD WORMS.

DR. C. M. JESSOP (Redhill) writes: If your correspondent on the above subject has not tried suppositories of tannin, he will find them serviceable; or cocoa butter and extract of quassia will do equally well, both more manageable for children than quassia injection.

NOTES, LETTERS, Etc.

A WARNING.

R.W.B. writes: In the one-legged Scot who victimised Dr. E. G. Bull I recognise the same person who played on me the very same trick—booked an order for a certain volume, took the price, for which he gave me a receipt, he professing to be an agent of Messrs. Cassell and Co. Like Dr. Bull, I have never received the book.

*** We have communicated with Messrs. Cassell and Co., who inform us that they know nothing whatever of the man. They recommend that the attention of the police should be called to his proceedings on any future occasion, and offer to render all assistance in their power.

BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.

THE Secretary of the Clinical Research Association, 5, Denman Street, London, S.E., asks us to state that that Association is prepared to supply medical practitioners with culture apparatus for the bacteriological diagnosis of suspected cases of diphtheria.

PAY WARDS AT THE GREAT NORTHERN HOSPITAL.

THE Secretary of the Great Northern Central Hospital, Holloway Road, informs us that rules for the admission of patients to the pay wards have been drawn up with the view of restricting the benefits of the wards to suitable and deserving cases. Printed copies of these rules will be available shortly.

ASSISTANT MEDICAL OFFICERS IN ASYLUMS.

DR. SUTHERLAND REES PHILIPPS asks us to add to the note on this subject from him, published on September 22nd, the further fact that he invites assistant medical officers interested in the question to be his guests at St. Ann's Heath, Virginia Water, for two or three days, to discuss matters in confidence with a view to future action.

RIBERI PRIZE.

THE Royal Medical Academy of Turin offers the ninth Riberi prize of 20,000 lire (£800) to the author of what is judged to be the most important printed or manuscript work, or discovery made between 1892 and 1896. The work or discovery must deal with a subject relating to anatomy, physiology, pathology, or pharmacology. Works bearing on the history of medicine since the Renaissance are admitted to competition. The works intended for competition, which must be in Italian, French, or Latin, must be sent to the Secretary of the Academy on or before December 31st, 1896. The award will be made in 1897.

CHLOROFORM DURING SLEEP.

DR. STANLEY HAYNES (Malvern) writes: Dr. Brydon's narration of the above induces me to record that I chloroformed a little boy, whom I found asleep in bed, without awaking him. On account of his being an excitable child as well as because his mother was very frightened it was desirable to avoid any strain on their nervous systems, so I used chloroform on a handkerchief, his face being turned against a pillow. He was anæsthetised without moving. After circumcision had been performed he slept off the effects of the chloroform without having first become conscious.

THE USE OF TANNIN FOR NASAL POLYPI.

DR. RICHARD NEALE (South Hampstead) writes: More than a quarter of a century ago Mr. Bryant advised the local use of tannin in nasal polypi, and since that time, both at home and abroad, I have carried out his suggestion in every case, and generally with marked benefit. Other observers have followed Mr. Bryant's suggestion, and those interested in the subject can refer to various papers at Section 596:4 of the *Medical Digest*.

New Biological Stations.

Two biological stations on the lines of the well-known one at Naples have recently been established in Norway, one on the west coast near Bergen, the other at Drœbak, a small town in the Christiania Fjord, not far from the capital.

The Antitoxin Treatment of Diphtheria.

Dr. C. R. Illingworth (West Kensington, W.) writes: Permit me to ask what has been found to be the effect of injecting the serum of horses which are not immune; for it seems to me quite possible that the same results may be got by that fluid also, and still better by the salts ordinarily contained in concentrated serum, whether given as found or taken from a medicine chest, as they have been thousands of times secured before in a shorter time.

Cheap Temperance Drinks.

G. B. writes: I have for twelve years drunk the Montserrat lime fruit juice, and have never found that I got tired of it. The trouble is that, being pure lime juice, it wants sweetening. This I obviate by half emptying into another bottle and filling with syrup; the cost then of the two bottles is about 1s.—the lime juice is 10s. 6d. a dozen—and the cost of each tumblerful, if drunk with water, less than ¼d; if with aërated water from syphon, about 1½d.

The Management of Eczema.

A Medical Fledgling writes: In connection with the parasitic origin of eczema it is interesting to compare a note in Erasmus Wilson's *Student's Cutaneous Medicine* (Churchill, 1864), p. 94, where he says "we always add spirits of wine to this ointment (benzoated oxide of zinc) in the proportion of 1 drachm to the ounce," with the testimony in Pritchard's *Diseases of the Ear* (Lewis, 1886), p. 118, as to the value of rectified spirit as an antiseptic, "on account of its penetrating power, which enables it to make its way into all the irregularities of the bony cavity." I always prescribe this combination and obtain apparently satisfactory results. I must add that bicarbonate of potassium internally seems to assist the result, especially in children, in the combination with nux vomica, recommended by Dr. Goodhart.

The British Medical Journal Commission on the Provincial Workhouse Infirmaries—Notes of Progress.

We see with some satisfaction that the influence of the reports of the Commission of the British Medical Journal on nursing and the administration of provincial workhouse infirmaries is making itself felt, directly as well as indirectly, all over the country. Not only are the incriminated infirmaries on which we had to make adverse reports actively engaged in many places in remedying the defects pointed out, but the Local Government Board inspectors are, in accordance with Mr. Shaw Lefevre's promise, taking active measures to bring those infirmaries which we have inspected and many others up to a higher level of humanity and efficiency. The boards of guardians themselves also are awakening to the necessities of the case, and are setting their workhous-es in order. Thus at Bristol, at a recent meeting of the board of guardians, the master of the workhouse (Mr. R. Kernick) had written to the board drawing attention to the insufficiency of the nursing staff at the workhouse infirmary, and suggesting that it should be increased by the appointment of an extra nurse, who, with the present day nurse, should perform the duties of night nurse in alternate months. At present this work was performed by inmates, which was most unsatisfactory, as they were incapable of efficiently carrying out the duties, and he suggested that a probationer should be appointed at a salary of £12 a year with rations.—The Chairman said their sick paupers were practically left to pauper nurses at night, and this was a very unsatisfactory arrangement, as it was a great temptation to them with regard to milk and brandy and such things. The subject had been taken up by the British Medical Journal, and after the exposures that had been made it was their duty to grant the request of the master. He proposed that they should advertise for a probationer at a salary of £10 a year, with rations and uniform.—Many members of the board expressed the opinion that the salary should be £12, and the resolution was thus altered.—Mr. Cross said he had read that in one instance the Local Government Board had ordered the removal of the inmates, and the increase of the paid staff from 4 to 9.—Mr. R. C. Stephens remarked that there was no doubt that the present request of the master, the proposed that they should advertise for a probationer at a salary of £10 a year, with rations and uniform.—Many members of the board expressed the opinion that the salary should be £12, and the resolution was thus altered.—Mr. Cross said he had read that in one instance the Local Government Board had ordered the removal of the inmates, and the increase of the paid staff from 4 to 9.—Mr. R. C. Stephens remarked that there was no doubt that the present request of the master, the result of the investigations at Bath, and the master's suggestion was a good one. At Birmingham, from where their master came, there were paid nurses and a great many probationers in the house.—Mr. Lorymer complained of the increase in the number of their officers, and said some of the professional men would put the ratepayers to every possible expense. —The resolution was adopted.

At the meeting of the Okehampton Board of Guardians held on September 22nd a representative of the British Medical Journal applied for permission to inspect the workhouse, particularly the infirmary, which was granted. A guardian remarked as the representative left the board room, "A second edition of Dr. Ley evidently;" and another, "This may mean a lot, but we can't keep anyone out now."

The British Medical Journal and the Bath Workhouse Infirmary.

Naturally enough, says the Bath *Argus*, the British Medical Journal is jubilant at the confirmation of its report as to the condition of affairs at the Bath Workhouse Infirmary has received from the inspectors of the Local Government Board—confirmation which, in our opinion, fully justifies the position which the Bath *Argus* has all along taken up. "As it was at Newton Abbot," says our medical contemporary, "so it is at Bath: an official inspection, made with the eyes of the world upon it, is constrained to admit the truth of the charges we have brought forward." The article then proceeds to particularise the various shortcomings previously enumerated, and shows how the official inspection proves the truth of all the allegations. This building up piece by piece of evidence against their administration may not be very palatable reading to the guardians themselves, but it possesses the virtue of actual truth from beginning to end, and there is no burking plain facts. "This interest," continues the journal, "now centres in the action of the Bath guardians, who have appointed a committee to consider the matter. The Chairman is reported to have said that the report covered a good deal of ground, but it only consisted of recommendations at present; but surely the guardians must see that it also lays bare an untold amount of human suffering for which they are directly responsible. It has been owing to their action that the sick have been left at night to the care of the pauper helps, the nursing of acute cases being handed over to attendants only a few degrees removed in helplessness from the patients so recklessly placed under their care, that the nursing appliances have been defective, that even the means of securing ordinary cleanliness have been insufficient, that the wards were ill-kept and dirty, that the bath rooms were without hot water, and that there was no labour ward, women having at times to be confined in the general wards, and that, even in the daytime, the nursing staff was not nearly large enough for the work they had to do." The writer goes on to apportion the blame on the ratepayers of the city, who "must not forget that it is owing to their own action that such guardians have been elected and kept in office. On them lies the ultimate responsibility. Every day that the wards are without an efficient and sufficient staff of nurses, every day that patients with pneumonia, dropsy, heart disease, bronchitis, etc., are left uncared for by ancient paupers; every night that the helpless are uncared for, the wet cases unchanged, the children untended, the sin lies at the door of the ratepayers. Let them once understand their responsibility, and we believe they will refuse any longer to be party to, or even to tolerate, such cruelty in their midst." In conclusion, the article says that if once there is a superintendent nurse, responsible not to the master but to the guardians, with a proper staff of nurses under her, the rest will follow.

Dispensary Touting.

Dr. Frederick H. Worswick (Manchester) writes: Might I ask through the columns of the British Medical Journal your opinion regarding the issue broadcast of the enclosed sheet? This particular one was sent to my own employee, and I find them specially addressed to my patients all over the district, many of them in good positions. Even if the dispensary officials are guilty of all this, does it absolve the medical staff, who are beneficial recipients, of irregular proceedings like this? Surely it is approaching to something serious when touters are undermining our livelihood in this way, and we are held up as being extortionate whilst our professional neighbours are glad to gather up the coppers. This is the latest development of the Manchester and Salford Provident Dispensary Association.

"Hulme District Provident Dispensary, 30, Upper Jackson Street, Hulme, Manchester, 1894. Dear Sir,—On reference to the books of the dispensary we find that your name does not appear as a member of the institution, and as we are confident that there are very many who would gladly avail themselves of the advantages of membership were they fully acquainted with them, we have desired Mr. E. Bancroft, the collector, to wait upon you and explain to you the conditions and privileges of membership. With a view to gaining a large and early increase of members, we have decided to enrol from July 1st to September 30th, 1894, without payment of the ordinary entrance fee, so that should you decide to join the dispensary, and will fill in the form at the back, you will be admitted on these specially favourable terms. Signed on behalf of the committee, J. A. Todd, Chairman; Charles Behrens, Honorary Secretary and Treasurer.—Mr. C. G——, Hulme.

"A few of the advantages of membership:—First, medical attendance and medicine at a charge so small as to be no burden to a member. Secondly, medical attendance at the members' own houses in cases of serious illness without extra charge. Thirdly, all the advantages of private medical attendance without the heavy expense attendant thereon, together with the great advantage of being able to have immediate advice in cases of threatened sickness, and thus very often cutting short what might otherwise prove a serious or even fatal illness. Fourthly, the drugs supplied are of the very best quality, and where the disease under treatment necessitates the use of drugs of great expense they are freely prescribed. N.B.—There is a morning and evening attendance of the doctors at the dispensaries, and they may be consulted at certain hours at their own surgeries. This form should be filled in and returned to the dispensary as early as possible. Subscription 1d. each per week. Children under 14 years of age in one family—the first two are charged 1d. each per week, all above that number are admitted free. Medicine.—A charge of 1d. is made to the members each time that they obtain medicine, but when more than one article is prescribed at one time, the whole charge does not exceed one penny. If you wish to join please fill in this form—Name ——, Age ——, Occupation ——."

*** We gladly give insertion to Dr. Worswick's letter. Anxious as we are for the success of the Medical Provident movement, we are equally anxious that such success should be based on sound principles; that the patients and the medical men should be treated with equal justice and consideration; and this cannot be unless the rules of what is called "medical etiquette"—which is really a due consideration and equal fairness to both patient and doctor—are observed. It is obviously unfair to the doctor to admit persons capable of, and in fact in the habit of, paying the ordinary fees, to a dispensary founded on the assumption that its members cannot pay such fees and still more unfair to solicit them to join. We publish this letter in the hope that it will elicit some response from the authorities of the dispensary in question. Meanwhile let us repeat that in our view an ideal provident dispensary is one to which all the medical practitioners of the district are admissible as officers, where all the medical officers are members of the committee, and where no person is admitted as a paying member to whom a valid objection is made by a medical officer, either as being

able to pay ordinary fees, or as disqualified by chronic or incurable illness Under such a scheme, the evils alleged by our correspondent to prevail in his district need not be feared.

THE FAMILIAR SIPHON.

A WELL-KNOWN chemical expert in one of the northern suburbs of the metropolis has, says the *Western Mercury*, been recently making an independent analysis of certain samples of so-called aërated waters which are contained in the familiar siphon bottles. He has found that these popular beverages are not by any means as pure as their outward appearance might seem to indicate. In the first place, the metal composing the tap of the siphon is made of lead and antimony, and sometimes even contains arsenic. These metals get converted into a carbonate, and when the lever is pressed the pressure of the water removes these carbonates, and they enter the system, causing poisoning results.

MADNESS AND CRIMINAL RESPONSIBILITY.

THE legal test of criminal responsibility in mental disease was promulgated fifty years ago, when medico-psychological science was in its infancy. Moreover, says the *Law Journal* in an article on the subject, it was determined upon in the midst of something like a state of public panic. The genius of Cockburn had just saved the life of Daniel Macnaughton on his trial for the murder of Mr. Drummond, the private secretary of Sir Robert Peel, and there was a wild outburst of popular indignation clamouring for the legislative protection of the plea of "partial insanity," by which the notable forensic triumph was assumed to have been attained. Partly in response to this demand, the House of Lords obtained from the judges the famous "answers" sometimes, though with doubtful accuracy, called "the rules in Macnaghton's case," in which the English law as to the responsibity of the insane is still nominally embodied, and which makes the question whether a lunatic is punishable or not depend on whether he did or did not know the nature and quality of his act, and that it was wrong. These rules have had a curious history. Hardly had they received the *imprimatur* of the House of Lords when medical critics pointed out that they ignored a type of insanity known to every asylum superintendent in the land) in which mental disease affects a lunatic's will and not his intellectual faculties. Then Sir James Stephen challenged their authority on the ground that the House of Lords have no constitutional right to consult the judges except in the exercise of their legislative and judicial functions, and "testing their elasticity" after the manner of Dr. Newman with the articles, showed that they did not exclude the heresy of "partial insanity" against which they were directed. The unkindest cut of all has, however, been administered by our judges themselves, who have, with hardly an exception, recognised the fact that they required "manipulation," and have not hesitated to treat them accordingly. Even if our legal test of lunacy were—as it is not—scientific, this fact alone would render its reconsideration imperative. It is not satisfactory that on a point of such vital importance the law of England would remain in a state of "suspended animation." With the experience of 1843 before us, we are not in favour of a fresh catechism of the judges by the House of Lords. The matter should be brought before the Court for Crown Cases Reserved.

BICYCLE ACCIDENT TO A PARIS SURGEON.

WE regret to learn that Professor Berger, the distinguished surgeon to the Larisboisière Hospital, while riding on a bicycle the other day near Paris, met with an accident which might have had serious consequences. He was thrown over the handles of his machine into a small stream, striking his head in his fall against a sharp stone. Fortunately M. Berger suffered no injury beyond a scalp wound, and his accident has not prevented his attending to his duties at the hospital. Professor Berger is a member of the Académie de Médecine, but so far he has not taken an active part in the debate on the dangers of bicycling which has been disturbing the Olympian calm of that illustrious body for some weeks past. His own experience will now enable him to form a practical opinion as to the real nature of what his colleague, Professor Hallopeau has euphemistically called "involuntary descents." We are heartily glad that M. Berger's "descent" had no more serious results.

NO PROMOTION FOR THE G.P.

PERPLEXED writes: Unfortunately the road to the higher ranks of the profession lies not through the lower ranks, and a man settled as a family doctor sees no hope of anything better before him beyond a limited increase in his practice, which may mean a corresponding increase in his misery. I believe this want of stimulus, the want of something to aim at is a fertile source of despondency, and leads to want of care and lack of zeal in the work done by family doctors. Having had fifteen years' active work in the profession, and being on the verge of 40, I do not look forward with any pleasure to a long continuance of the routine of being trotted about at all times to teething babies, midwifery cases, etc., which have a peculiar habit of occurring at inconvenient times. If one has arranged for an evening's pleasure, even though no interruption should occur, the ever-present consciousness that one is not secure from call detracts somewhat from the enjoyment, and very frequently the interruptions to a man in busy practice and his inability to keep appointments lose the doctor his friends. Several methods of emancipation suggest themselves, such as (1) removing to a better locality, (2) attending post-graduate courses and endeavouring to become a specialist, (3) leaving the profession and taking up some other calling in life. There are many difficulties to be overcome before any of these methods can be made a success, and to a man who is neither a scientific investigator nor an author they appear well nigh insurmountable. I feel sure there are many members of the Association who have been in a similar position to myself, and who having wearied of the daily and nightly association with the sick, poor, and ignorant, have worked out their own salvation. If any of these gentlemen will give their experience and advice as to the means of attempting a metamorphosis from the lot of a general practitioner to one in which the society of men who are "healthy, wealthy, and wise" may be enjoyed, they will confer a favour on one who is perplexed.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(**A**) Messrs. Arthur and Co., London; Mr. T. S. Allan, Coventry; Anti-quack. (**B**) F. Belben, M.B., Bournemouth; Dr. G. B. Beale, Tottenham; Mr. J. Bark, Liverpool; Rev. D. Burns, London; Dr. A. Bronner, Bradford; L. W. Bathurst, M.B., London; T. P. Beddoes, M.B., Aberystwith; Mr. H. Burgess, Manchester; Dr. E. G. Barnes, Eye; R. W. B.; Dr. J. Barr, Liverpool; F. W. Burton-Fanning, M.B., Norwich; Mr. W. B. Benham, Oxford; Mr. C. A. Brown, Tredegar; Dr. J. S. Bristowe, London; Mr. J. G. Bride, London; Mr. J. P. Balbirnie, Staveley. (**C**) Dr. J. G. S. Coghill, Ventnor; J. Culross, M.B., Newton Abbot; Mr. W. J. Corrigan, Cardiff; Mr. G. H. Carrington, Robin Hood's Bay; C. E. F. S.; Mr. R. G. Christy, Limerick; Cymro. (**D**) District Medical Officer; Mr. D. L. Davies, Criccieth; Mr. E. Duke, St. Leonard's. (**E**) Enquirens; Mr. H. F. C. Eagle, London; C. R. Edmondson, M.B., Liverpool; Mr. W. Easterfield, Newark-on-Trent. (**F**) Mr. J. Furley, London; F.R.C.S.; Mr. J. M. Fox, Lynn; Dr. A. F. Fergus, Glasgow; R. Fullerton, M.B., Glasgow. (**G**) Mr. J. H. Godson, Cheadle; E. Goodall, M.B., London; Mr. F. J. Grindon, Olney; J. H. R. Garson, M.B., Durham; Mr. C. M. Gray, Devizes. (**H**) Mr. T. G. Horder, Cardiff; Dr. A. C. Hartley, Bedford; Mr. R. Hemmings, Coventry; Hibernicus; Mr. G. A. Hawkins-Ambler, Liverpool; Dr. R. Heelis, Nottingham; F. Hewkley, M.B., London; T. W. Hime, M.B., Bradford; F. J. L. Hart, M.B., Sydenham. (**I**) Insurance; Dr. C. R. Illingworth, London. (**J**) Dr. C. M. Jessop, Redhill; Dr. A. E. Jones, Fallowfield; Dr. J. Johnston, Bolton; Mr. M. C. Johnstone, London. (**K**) Dr. W. M. Kelly, Taunton; Mr. T. O. G. Kayton, Leamington Spa. (**L**) Mr. G. J. Long, London; Dr. B. Lacquer, Wiesbaden; Dr. A. P. Luff, London; Mr. J. W. Ley, Newton Abbot; Liable to Recall; J. Lowe, M.B., Coupar Angus; Mr. J. R. Lightfoot, London. (**M**) M.B.; Medicus; H. G. Maclagan, M.B., Derby; Mr. J. Moir, Helensburgh; J. Macfadyen, M.B., London; M.D.; Member B. M. A.; Dr. E. F. Maynard, Shanklin; Medical Fledging of 6 Years Old; Dr. E. J. McWeeney, Dublin; Mr. L. Mackenzie, Tiverton; Mr. J. C. Miller, London; Dr. M. M. Moore, Coventry; M.A., M.D.; Messrs. Mayer and Meltzer, London; Mr. J. T. R. Miller, Malton; Mr. C. R. MacFadden, Portadown; Mr. J. M. Morris, Neath. (**N**) Mr. E. Nettleship, London; Dr. A. Newsholme, Brighton; Dr. G. Newstead, Blyth; Nox. (**O**) Dr. I. Owen, London. (**P**) Purity; Dr. S. R. Philipps, Virginia Water; G. Porter, M.B., Gloucester; Mr. A. Pringle, London; Mr. H. Price, Canterbury; Mr. H. J. Prangley, Anerley. (**R**) Dr. R. Richmond, Braintree; R. M. C.; R. T. W. (**S**) Mr. C. Siewers, London; Dr. E. M. Sympson, Lincoln; Miss M. D. Sturge, M.B., London; Mr. R. R. Sleman, London; Messrs. H. T. Stent and Co., Cape Town; W. R. Spiers, M.B., Carlisle; S. W. S.; Dr. H. R. Smith, Totnes; Mr. J. A. Sinclair, London, Sir W. Stokes, M.B., Dublin; Dr. A. Sheen, Cardiff. (**T**) Mr. E. T. Turnbull, Hull; Dr. E. H. Thane, Wagga-Wagga; C. W. Thomas, M.B., Rotherham; Miss I. Thorne, London; Dr. G. G. S. Taylor, Liverpool; Mr. J. W. Taylor, Radcliffe; Tostig. (**V**) Mr. C. S. Vines, Ramsgate. (**W**) Messrs. W. Wesley and Son, London; Mr. J. G. Welsley, Exeter; Mr. E. Wilson, Exeter; D. Walsh, M.B., London; Mr. C. H. Wells, London; E. Willett, M.B., London; Mr. J. W. Walker, Wakefield; Mr. T. M. Watt, Hovingham; Dr. W. Wingate-Saul, Lancaster; W. Williams, M.B., Cardiff; Dr. J. Warnock, London; Dr. H. Waldo, Clifton. (**Y**) Dr. J. Young, Bristol; Mr. G. Yates, Birmingham; etc.

BOOKS, ETC., RECEIVED.

A Textbook of Pathology, Systematic and Practical. By D. J. Hamilton, M.B. Vol. II, Parts 1 and 2. London: Macmillan and Co. 1894. 15s. each part.

The Senile Heart, its Symptoms, Sequelæ, and Treatment. By Dr. G. W. Balfour. London: A. and C. Black. 1894. 5s.

Die Extraktion der Zähne: ihre Technik und Indikations-Stellung mit Einschluss der Betäubung. Von Dr. F. Busch. Berlin: August Hirschwald. 1894. M. 2.

Die Lehren von den Funktionen der einzelnen Theile des Ohrlabyrinths. Von Dr. S. von Stein. Jena: Gustav Fischer. 1894.

Aussere Einflüsse als Entwicklungsreize. Von A. Weismann. Jena: Gustav Fischer. 1894. M. 2.

Chirurgische Operationslehre. Von Dr. T. Kocher. Jena: Gustav Fischer. 1894. M. 10.

Ueber die vordere Tenotomie, Mobilisirung und Extraction des Steigbügels. Von Professor Kessel. Jena: Gustav Fischer. 1894. M. 0.80.

Illustrations of Pathological Anatomy, being a Series of Chromographed Plates Painted from Nature immediately after Death. With descriptive text by Professor Dr. A. Kast and Dr. T. Rumpel. English edition revised and edited by Dr. M. A. Ruffer. Parts VII and VIII. London: Baillière, Tindall, and Cox.

*** In forwarding books the publishers are requested to state the selling prices.

REMARKS
ON
THE FLAP METHOD OF OPERATING.[1]

By JOHN CHIENE, M.D., F.R.C.S.Edin., F.R.S.E.,
Professor of Surgery in the University of Edinburgh.

When Victor Horsley, in the British Medical Journal of October 9th, 1886, recommended the flap method of trephining he revolutionised, in my opinion, intracranial operations. He prevented hernia cerebri; he gave us a means of safely establishing a safety valve to relieve intracranial pressure; he diminished greatly the risks of intracranial sepsis. Many patients are now alive in consequence of this simple suggestion. In October, 1892, I applied the same principle to general surgery, and have used it systematically ever since. Now, before any operation I ask myself this question: Can I apply the flap method? In opening the abdomen, in opening joints, in dividing or lengthening tendons or muscles, in shortening tendons (structures which depend for their integrity on their free mobility and non-adhesion to the skin), in tumours in which the skin is non-adherent, these were amongst the first cases in which I applied the method. Week by week the range of cases is being added to, and the result has been so satisfactory that I desire to bring it under the notice of the profession.

The advantages are that the wound in the deeper parts is at a distance from the skin wound, the skin over the deeper wound is not interfered with, it supports the deeper tissues which have been divided, rapid healing takes place. The risk of infection of the deeper parts from impure skin is reduced to a minimum. The purification of the hands and instruments is comparatively easy; the purification of the deeper layers of skin of the patient is the difficulty in aseptic surgery. Some surgeons go the length of saying that the skin cannot be thoroughly purified. Hence the great value of this method. The flap is composed of skin and subcutaneous tissue. It should as a rule be crescentic, and not horseshoe-shaped. The incision should be made as far as possible from sources of septic infection. The main blood supply should enter the base of the flap. This, however, is of secondary importance to the first essential that the skin incision should be away from sources of septic infection.

One of the first cases on which I operated by this method was in October, 1892, for the removal of a loose internal semilunar cartilage in the knee-joint. Since that time all similar cases have been operated on in the same way. In the radical cure of hernia it is a decided improvement. After the operation for strangulated hernia a truss can be applied at an earlier date. In femoral hernia a flap is turned inwards towards the middle line. In inguinal hernia a flap is turned downwards and inwards, exposing the inguinal canal. In umbilical hernia, if the skin over the hernial protrusion is of sufficient thickness, a flap is turned downwards.

In excision of the knee the apex of the anterior flap is made at a lower level than the anterior tubercle of the tibia. In the elbow a flap can be turned upwards. In the operation for fractured patella and fractured olecranon this method will become the rule. In the removal of tuberculous glands and in subcutaneous tuberculous areas Mr. Stiles has applied the flap method. The value of the flap method in tuberculosis is very great, because the risk of infecting the tuberculous area by septic skin organisms is avoided. Every surgeon knows the evil of mixed infection in these cases.

If a muscle, as the sterno-mastoid in wry-neck, or the tendo Achillis in club-foot, is thus exposed, the muscle or tendon afterwards works smoothly under the skin. No adhesions form between the skin and deeper parts.

Recently I excised an acromion with a tumour attached to it by means of a skin flap turned up from the deltoid. I then stitched the loose end of the clavicle to the deep tissues, replacing the flap. In dislocation of the outer end of the clavicle, the difficulty of keeping the bone in position is so great that the surgeon will turn up a flap, unite with buried suture the clavicle to the acromion, and replace the flap.

In the division of a bone to remedy deformity or lameness, in the excision or division of bones in aggravated cases of club-foot, in exploring the gall bladder, kidney (by anterior incision), and in gastrostomy,[2] the method will be found most valuable. If in suprapubic cystotomy the surgeon intends to unite the bladder wound after exploring the viscus he should turn down a flap to expose the recti. In time it may come to be the case that in cases of tumours under muscles the flap will consist of muscular tissue along with the skin.

In stitching the deeper parts buried sutures are used, made of fine silk, catgut, or silver wire. In using silver wire use, as recommended by Kocher, several strands of fine wire rather than thick silver wire; it is much more pliable, and quite as strong.

In stitching the skin, horsehair is used. In this connection I may state that I have during the last year been gradually giving up knots to fix the stitches. The thread is simply passed three or four or five times, as in the first part of a common knot. Mr. Johnston, one of my dressers, has worked out the tension which such a method will bear. He finds that if a double horsehair is used, four turns bear a strain of 35 ounces; three turns, 24 ounces; two turns 12 ounces; one turn, ¾ of an ounce.

It will in all probability be found that the larger the loop—the greater the distance between the points of emergence—the more numerous will be the turns. In other words, all the portion of the circle which is exposed will consist of a series of turns. By this stitch the approximation of the edges is more easily attained. If on tightening the edges do not fit closely and accurately, it can easily be loosened and again tightened. Lastly, to keep the flap out of the way, it can be stitched back, it can be grasped with forceps which will keep it back, hanging down by their own weight, or leaded. It can be hooked back, fixing the hooks with india-rubber bands to a piece of lead. The simplest way is to stitch it back with a temporary horsehair stitch.

I am of opinion that the flap method is worthy of systematic application to general surgery. If surgeons will give it a trial I think that they will continue its use in suitable cases.

P.S.—After the paper was read I was informed by a distinguished ophthalmologist that the flap method had been used in operations on the eye for many years. It was from Horsley that I got the hint, and to him I give the credit. I am well aware that there is "nothing new under the sun."

[1] Read at the conjoint meeting of the Edinburgh and Stirling, Kinross and Clackmannan Branches of the British Medical Association.

[2] The method of opening the stomach first, I believe, devised by Professor Albert, of Vienna, was performed as follows: A flap was turned inwards towards the middle line, exposing the left rectus midway between umbilicus and ensiform cartilage. The muscle was split, the parietal peritoneum divided, the peritoneum stitched by a continuous silk suture to the anterior layer of the sheath of the muscle. The stoma was then pulled out through the wound and pushed upwards into the external tissue, an opening made in the skin, and the apex of the *cul-de-sac* drawn through the opening and attached to the skin edges. The stomach was also stitched to the edges of the opening in the rectus. The flap was then brought back into position. In four days the stomach was opened, a tube introduced, and the patient fed.

Professor L. Mauthner has been appointed to succeed Professor Stellwag as Professor and Director of the Ophthalmic Department of the General Hospital in Vienna.

An International Congress for the Protection of Children will meet at Bordeaux, July 22nd, 1895.

Professor R. Lépine, of Lyons, in an article in the *Revue de Médecine*, suggests the creation of a new degree "Doctor in Medical Biology." His contention is that persons preparing themselves for the career of teachers of medicine and surgery should be required to pass through a special course in such subjects as physiology, organic chemistry, physiological chemistry, bacteriology, and embryology, so as to qualify themselves for the duties of a professor, which, he maintains, can only be discharged in the best manner when the professor is not only a teacher but an investigator.

ON A REMARKABLE CHROMOGENIC AND PATHOGENIC BACILLUS PERHAPS IDENTICAL WITH B. CHROMO-AROMATICUS (GALTIER).

Read in the Section of Pathology at the Annual Meeting of the British Medical Association, held at Bristol, August, 1894.

By EDMOND J. McWEENEY, M.A., M.D., Etc.,

Professor of Pathology and Bacteriology, C. U. Medical School, Cecilia Street, Dublin; Pathologist to the Mater Misericordiæ, Coombe, and National Lying-in Hospitals; Examiner in Pathology, Royal University of Ireland.

WERE it not that the organism which forms the subject of this communication occurred in connection with morbid processes affecting the human subject, I should have felt inclined to reserve the following results for some strictly biological channel of publicity. The peculiar clinical character of the case from which the bacillus was isolated, as well as the virulent properties of the cultures, lead me to hope that the details may not be altogether out of place.

In January, 1894, J. S., male, aged 27, a butcher by trade, was admitted to the Mater Misericordiæ, under the care of Mr. P. J. Hayes, suffering from pyuria. His family history was good, both parents having lived to a considerable age, and his brothers and sisters, nine in number, being all alive and healthy. The patient was delicate and of weak muscular development as a child, but never had enlarged glands nor any sickness till the present attack, which began about three years ago, during the prevalence of influenza, with a bad "cold," accompanied by increased frequency of micturition, pain on attempting to retain his urine, and rapid loss of flesh. He then began to pass quantities of pus with the urine at intervals of a month or six weeks. After a day or two the urine would become clear again, and remain so till the next attack. The next symptom to make its appearance was pain in the right lumbar region, sometimes dull and aching, sometimes throbbing and sharp, worse at night than in the day, and in cold than in hot weather. It was often accompanied by shivering fits, which were followed by increased frequency of micturition and large amounts of pus. During these exacerbations he would have to micturate twenty times at night, and ten to fifteen times during the day, and he was a good deal troubled by thirst and loss of sleep. Jolting in carts over rough pavement used to give him pain in the right loin at first, for the first eighteen months of the illness, but not afterwards. During this time he was residing in the United States, where several medical men, after unsuccessful exploration for vesical calculus, treated him for nephrolithiasis.

In November last he returned to Ireland, and on New Year's Day was seized with an intense shooting pain in the perineum, which extended to the end of the penis, and, as he phrases it, caught his very heart. After this he passed in small quantities at frequent intervals an enormous amount of purulent urine. He could not say whether there was more or less pus in the first or last portion of the urine. A few days before presenting himself at the hospital he made a vigorous jump whilst walking in a field, and hurt his scrotum. The same night a small lump appeared on his right testicle. On his admission this was found to be a small tender swelling over the right epididymis, which remained stationary for two months and then suddenly increased greatly in size to that of a hen's egg, and the skin over it became red and glazed. The swelling was incised by Mr. Hayes and a quantity of pus evacuated, after which rapid healing took place.

On admission to hospital the patient was a fairly robust, sandy-haired man, in whom nothing abnormal was found outside of the urino-genital apparatus. The urine was acid and turbid from the presence of small discrete nodules of pus floating in it, and capable of removal by filtration. The filtrate gave a slight reaction when tested for serum albumin in the usual way. I could not establish the presence of peptone.

Cover-glass preparations of the pus nodules were made with some difficulty, as the material was peculiarly slimy and was spread with difficulty. All necessary precaution was taken in the analysis of this material. The first part of the stream of urine, in fact, three-fourths of the total amount, was passed in my presence into the ordinary vessel, and the last portion received directly into a sterile flask, whereupon some of the purulent flocculi were used for the cover-glass preparations, others for cultures. For the latter purpose peptone gelatine was used of consistency that enabled it to stand incubation up to, and even above, 26° C. without danger of liquefaction.

The microscope at once showed the micro-organismal flora of this man's urine to be rich and varied. There were at once distinguishable:

(*a*) Bacilli, short and long, straight and curved, fine and thick, some irregular in thickness and clubbed-looking, not unlike certain conditions of the B. diphtheriæ.

(*b*) Minute oval bacilli in long chains twisted between the (mostly polynuclear) pus cells.

(*c*) Numerous diplococci and isolated cocci, frequently enclosed in cells.

The plate cultures speedily showed development of three sorts of colonies, one white, circular, waxy-looking, with a mother-of-pearl lustre. It seemed to be non-liquefying; but after the lapse of about a week it sank into a basin of liquefied gelatine. Under a low power these colonies at first present a concentrically-zoned appearance, and subsequently, when liquefaction takes place, it assumes a peculiar cracked appearance, radiating fissures extending from centre to circumference; the disc also assumes a yellowish appearance. Transplanted into broth, it grew well at 37°, and in the hanging drop proved to consist of short, blunt bacilli like the typhoid, but seemingly devoid of motility. This I call (*a*). There were also small, prominent, pin's-head-like colonies, faintly brownish, and at first non-liquefying. They consisted also of bacilli, so short, however, as to be almost oval, and growing in chains. This I call (*b*).

All the plates were speedily liquefied by what I took to be an intensive and persistent contamination in the shape of circular, greyish, rapidly-liquefying colonies, with a sort of radiating or spoke-like arrangement of the bacterial flocculi, and the appearance of which must be very familiar to everyone who occupies himself with bacterial water analysis. The grey colour of the colonies in question became greenish as the basis of liquefaction extended, and at 25° the whole plate was destroyed in from forty-eight to seventy-two hours. I replaced the cultures with undoubtedly sterile materials, and found that these colonies made their appearance with mathematical regularity, so that I was forced to conclude that the organism was present in the pus. Broth tubes inoculated from these colonies showed in twenty-four hours at 37° C. luxuriant growth, evinced by complete turbidity and a zoogloea scum on the surface; at the end of forty-eight hours a green ring about 1 mm. deep hung on the surface of the broth. On shaking up the contents of the tube they at once assumed a brilliant emerald green colour. On standing for a few moments this colour faded out from all the liquid except the superficial layer, leaving the deeper part of its former dirty yellow. As the age of the cultures increased, so did the time taken by the colour in this process of fading. Finally, after about a week's incubation the culture fluid remained permanently emerald green, and fading no longer took place. At the same time the originally peculiar odour possessed by the fresh culture became more intense, and less comparable to anything met with in ordinary experience. A respected practitioner from an agricultural district, to whom I showed an old culture, described its odour as resembling that of a badly kept pigstye—with what accuracy I cannot say. Broth cultures are strongly alkaline, the original alkalinity being very greatly increased by the growth of the organism. When once the permanent green state is arrived at the alkalinity seems in many cases to diminish, and in some specimens the colour changes *pari passu* with the decrease of alkalinity, and gradually passes over into a brownish or reddish hue. When this stage arrives the reaction is found to be acid. The change can be at once induced by rendering the broth acid, when the colour becomes reddish, and by adding alkali it becomes green once more. Another peculiarity of the broth culture is that it rapidly assumes a somewhat viscid consistence, and ultimately somewhat resembles white of egg darkly stained with methyl green.

Until the broth is exhausted it is covered with a viscid pellicle, and contains large viscid suspended flocculi, which consist of masses of the organisms. The sediment of an old broth culture is a slimy greyish material, which turns brilliant green on exposure to air, and contains shining granules visible to the naked eye. The microscope reveals masses of crystals of two sorts—one larger and not unlike coffin-lid triple phosphates in shape; the other smaller and consisting of slender needles in double conical bundles, the apices of the cones being joined not unlike one of the forms of tyrosine. I cannot as yet give data as to the chemistry of these crystals.

This organism liquefies gelatine with very great rapidity in all parts to which oxygen has free access. In the depth of the substratum no liquefaction takes place. The superficial layer of the liquefied gelatine assumes a brilliant green colour, and plate cultures are soon reduced to a pool of turbid green or greyish-green fluid with a peculiar odour. The colour after about ten or twelve days turns to yellowish-brown, and ultimately becomes almost blood-red. At the same time the

originally strong alkaline reaction becomes strongly acid. Thrust cultures assume varied appearances, according to the number of germs introduced. There is usually a funnel-shaped liquefaction at the top, tapering into a chain of whitish granules below. Sometimes these granules develop fine lateral outgrowths, so that part of the thrust canal exhibits a curious fluffy appearance. Bubbles of gas are sometimes developed in the deeper part of the thrust, but this gas production can best be demonstrated by diffusing a moderate number of germs through a Liborin's tube of gelatine, and allowing them to develop forty-eight hours at 25° C. The top layer for about ½ inch or less is then green and liquid, whilst the granular colonies in the depth of the substratum are colourless, and surrounded by bubbles of gas. It is thus apparent that this organism is a facultative anaërobe and gas producer. The gas is evolved independently of the addition of grape sugar or sodium formates. I made an experiment with a view to collecting this gas. A fermentation tube was charged with broth, to which 1 per cent. of glucose had been added, inoculated, and placed at 37° C. The organism grew well, and produced its pigment in the open part of the tube; but though extremely mobile, as we shall see, it refused to grow up into the closed end of the tube, and, though incubated for a week, the fluid in that part remained quite clear and sterile. I have not repeated the experiment.

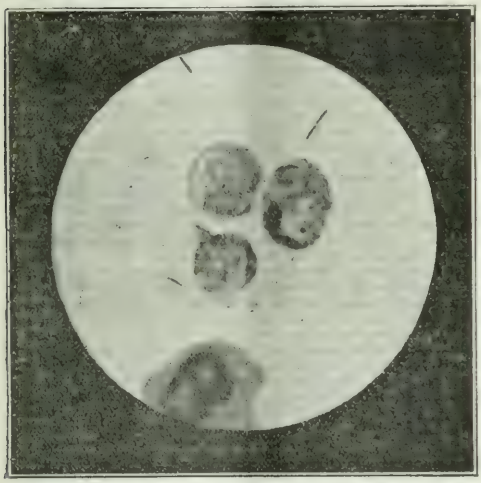


Fig. 1.—Peritoneal exudation of guinea-pig, dead twenty-four hours after subcutaneous inoculation with the bacillus.

On agar, especially glycerine agar obliquely solidified, it grows luxuriantly at 37° C., forming in twenty-four hours a thick, creamy, dirty-white, semi-transparent layer, not limited to the inoculation track, but gradually spreading, with wavy margins, towards the glass. The agar is at the same time diffusely stained a sort of fluorescent greenish yellow. The condensation water is covered with an exceedingly thick scum of micro-organisms. The layer on the agar is slimy to a degree, and can be drawn out in long threads with the platinum needle like so much pneumonic sputum.

On potato at 37° it forms a brownish, elevated, shining layer, limited for the first week to the inoculation track. Sometimes the potato becomes green throughout—a peculiar dark opaque green, which makes it look, after some drying has taken place, like a piece of rotten wood affected with the *discomycete chlorosplenium æruginosum*. Only small pieces of potato, such as the half-cylinders used for Glaby's potato tube, are quite stained throughout. On half-tubes the green coloration is superficial. The coloration is not always produced on this medium. Thus, the two cultures which I made some ten days ago to replace some old ones that had been accidentally destroyed have failed to stain the potato. This may possibly be due to differences of reaction. And yet the organism is not at all sensitive to such differences, as we shall see directly.

It may now be advisable for me to describe the morphology of this singular bacterium. It is a bacillus showing great variation in the length of the individuals, and extremely motile. A suspension in tap water of a young agar culture looked at as a hanging drop with a $\frac{1}{12}$ oil immersion looks just like a swarm of midges. The individuals dart in and out of the field with amazing velocity. By using a modification of Loeffler's procedure suggested by Nicols and Morax, I have succeeded in demonstrating the presence of a single long curved flagellum at one pole of the bacillus. In this respect it thus resembles the vibrio of cholera. The individuals vary from 1.5 to 7.5 or 8 μ long, and are occasionally filamentous. When short they frequently exhibit a sort of light unstained spot in the middle of the rod, but often not extending through its entire width, interrupting the continuity of one long side of the rod, but not of the other. I have not ascertained any definite conditions under which the longer or shorter conditions are assumed; in both, double forms are common. As regards staining reactions, I have practically used no other dye save fuchsin, which answers admirably both as carbol fuchsin and as an aqueous solution made by adding to a suitable quantity of distilled water 1 mm. drops of the saturated alcoholic solution. Gram's method does not give any results.

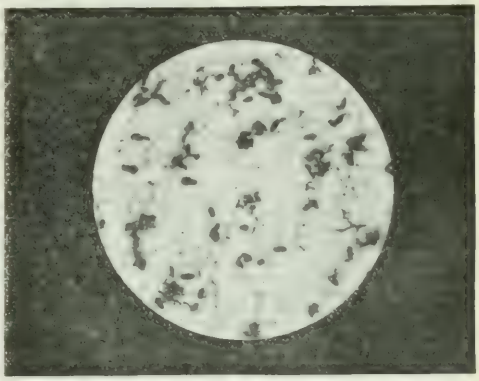


Fig. 2.—Organism × 1,000, showing cilia.

The organism grows slowly at room temperature (under 20° C.), very well at 25° C., and best of all at 37° C. It is decidedly pathogenic for rabbits and guinea-pigs. I began experimenting on the former animal, introducing 1 c.c. of broth culture generally twenty-four or forty-eight hours old into the peritoneal cavity, when death usually ensued in twenty-four hours, or forty-eight at latest. *Post mortem*, peritonitis with abundant clear, slightly viscid exudations and scattered flocculi of whitish lymph: the coils of intestine greatly ingested but not adherent; lymph often adherent to upper surface of liver: bacilli abundant in exudation. I found, however, that in addition to its direct effect on the serous membranes, this organism causes septicæmia also, for the heart's blood from the auricles contained it in enormous numbers, as was found both microscopically and by cultivation.

I afterwards found that subcutaneous inoculation of 1.2 c.c. produced in an ordinary rabbit both septicæmia and peritonitis with death in twenty-four hours. A very large old buck rabbit, to whom I administered this amount subcutaneously, was very sick for a couple of days and then recovered. His companion, a smaller animal, operated on at the same time, died with the condition I have mentioned. I believe that the large rabbit did not actually receive the

full quantity of culture owing to a defect in the syringe piston. About three weeks afterwards I determined to test whether his survival had conferred upon him any degree of immunity, and therefore I injected him beneath the skin of the back with the full of a new sterilisable and reliable syringe of a two days' old broth culture. I gave about half the amount to a small young wild rabbit at the same time in the same situation. The old rabbit appeared to suffer no inconvenience. Next day the young one died, but the experiment lost much of its value from the fact that I could not demonstrate the bacilli in its body either microscopically or culturally, and no lesion could be seen, not even at the seat of inoculation. Not wishing to lose the value of the experiment, I inoculated a vigorous guinea-pig from the same culture tube a few days afterwards. The injection was subcutaneous in the back, the quantity 1·2 c.cm. In twenty-three hours it was dead with singularly acute peritonitis, and the exudation as well as the heart's blood swarming with bacilli. The preparation made from the former have been photographed for me with his usual skill and success by Mr. Andrew Pringle. There was nothing to be made out at the point of inoculation. In a rabbit, however, that succumbed to the subcutaneous introduction of the bacillus, I have seen a diffuse greenish discoloration of the subcutaneous tissue with a certain amount of emphysematous swelling.

Pressure of other business has prevented me from working out, or even collecting, the rich material provided by these successful experiments on animals. The only organs I have as yet sectioned are the liver, spleen, and kidneys of one of the septicæmic rabbits. The liver contained myriads of them in its superficial region over which lay the inflamed peritoneum; they had thus spread by continuity of tissue. In other parts of the section the blood vessels of the interlobular septa appeared to contain them. For staining in this situation, Gram's method not being available, I used Sapli's borax methylene blue with good results.

It will thus be seen that this organism produces pigment, gas, odour, and is pathogenic for rabbits and guinea-pigs: and, let me add, judging by the situation in which it was found, its relation to the human subject would appear to be of a highly suspicious character.

The study of its metabolic products has not yet been begun as regards their pathogenesis. Nothing is easier, owing to the vigorous saprophytic growth of the bacillus, than to produce one or more litres of the green culture fluid, filter off the microbes, and experiment with the filtrate; but I have not as yet had leisure to enter upon this interesting investigation. It is needless for me to say that I intend to work the matter out so far as the means at my disposal will allow.

I have, however, some details as regards the pigment, details which I owe to the kindness of my friend, Professor W. N. Hartley, F.R.S., to whom I submitted a quantity of the culture fluid—meat decoction, 1 per cent. peptone and ½ per cent. of common salt. Professor Hartley at once pointed out that the disappearance of the colour on standing was due to the reduction of the chromogenous substance by the bacteria in the depth of the fluid. On the surface this reducing effect is counterbalanced by the presence of the air. Professor Hartley blew oxygen into one of the culture liquids, whereupon the yellow colour at once changed to a fine green. When the activity of the organism has ceased, owing to complete exhaustion of the culture fluid, the green combination is no longer induced in any part of the fluid, hence the permanent green of the old cultivations. The pigment is insoluble in alcohol, ether, and benzene; slightly soluble in chloroform, decolorised by caustic soda, turned into a dull red by acids. Professor Hartley goes on to say:

"The liquid was considered as possibly containing a colouring matter allied to chlorophyll: it was therefore tested for fluorescence. The chlorophyll group of colouring matters showed very powerful red fluorescence in sunlight. This substance showed a magnificent bright blue fluorescence similar to, but more powerful than, quinine sulphate dissolved in sulphuric acid. By transmitted light the alcoholic solution appeared clear, and of a yellow colour like a solution of picric acid. There was no absorption band visible, but a continuous absorption commencing in the blue. What appears therefore to be a green pigment is something totally different from the chlorophyll class of colouring matters.

"The liquid is coloured yellow by a yellow soluble pigment which possesses a very powerful blue fluorescence, so that in even the thinnest layers it looks green. The liquid is more decidedly yellow after being boiled, and although the fluorescence and the colours are not destroyed, there can be no doubt that they are impaired and rendered susceptible of change, for in a few days after exposure to light the fluorescence disappears. By blowing oxygen into the liquid the colour is not restored. As regards the spectrum of the colouring matter, all rays are transmitted from the red to about λ 5170 or b^3 in the green. In thick layers of liquid the red rays appear decidedly dimmed. The spectrum of the fluorescence is confined to rays about F., λ 4861, or bright blue. The liquid holds a good deal of nitrogenous matter in suspension, and this cannot be separated so as to submit the colouring matter in an isolated and purified condition to the action of the ultra-violet spectrum. There can be no doubt that the absorption must be very powerful in this region."

I now exhibit a small bottleful of the blue pigment extracted with chloroform, kindly prepared for me by Professor Hartley.

From the above details it will be seen that this microorganism is sharply characterised from all other well-known species, and the next procedure would naturally be to give it a name. But here a difficulty arises. In the *Comptes Rendus de l'Académie de Sciences* for 1888, vol. i, p. 1368, there is a note by M. V. Galtier, presented by Chauveau, "Sur un microbe pathogène chromo-aromatique." On December 22nd, 1887, says M. Galtier, the carcass of a young pig, killed for food, was seized, and found to present conditions of bronchopneumonia, pleurisy, peritonitis, enteritis, and, above all, a very marked congested and hæmorrhagic condition of the entire lymphatic system. The glands contained a peculiar bacillus in large numbers. On December 23rd a mixture of pulmonary and gland juice was injected into the veins of a rabbit. This rabbit soon fell sick, and died on January 19th with a typical fibrinous pneumonia accompanied by pleurisy and pericarditis. Fibrinous exudation on pleura and pericardium. Bacilli in lungs, serous membranes, and blood. Those in the blood were shorter. Out of 11 rabbits who lived with this one, 4 took the disease and died from January 20th to 25th with the same lesions and microbes.

Broth cultures show at the end of twenty-four, thirty-six, or forty-eight hours' incubation a bright greenish-yellow colour in the superficial layers; this colour affects the deeper layers subsequently, but remains best marked on the surface. It becomes deeper and greener, resembling that of a weak solution of copper sulphate after a few days, and later on grows weaker and brownish, passing through a tile-brown and dead-leaf tinge. Cellular and whitish masses are formed which sink to the bottom. On agar, whitish colonies in a thin layer, a green tinge more and more pronounced invades this substratum, which ultimately leaves deep green, and then the colour of dead leaves, when the tubes are sealed; whilst those that are left open assume the colour of sulphate of copper. Gelatine is liquefied and becomes bright-greenish yellow, the green more pronounced in the superficial layer. On potato a somewhat thin layer rapidly invades the whole surface, and just assumes a slightly iridescent bronzy tinge; the surrounding potato becomes slightly green before being invaded: as the colony extends and becomes thicker the bronze colour gets deeper and ceases to be iridescent. The cultures of this microbe are aromatic; the odour which they exhale—very marked in broth cultures—is *sui generis*, strong but rather agreeable and comparable, according to M. Chauveau and M. Kaufmann, to that of the fats extracted from the blood of the horse.

This odour is persistent. Cultures in open test tubes allowed to evaporate slowly have preserved it as well as the green colour for eight weeks without getting putrid. The solid residue continues to evolve the same odour, slightly attenuated and more agreeable.

M. Galtier concludes by promising soon to communicate the results of his researches already in progress on the biological characters, pathogenesis, colouring, and aromatic substances of this microbe. I have sought in the later volumes of *Comptes Rendus*, but have failed to find a subsequent paper on this subject by M. Galtier.

It is my intention to send some of these cultures

to M Galtier, and should that gentleman confirm the identity of the organisms so well named by him B. chromo-aromaticus with that which I now submit, my organism shall have found a very appropriate designation, and the most important advance I shall have made will be to have introduced it into the domain of human pathology. Should they, however, prove distinct, the organism which I now lay before you can, I think, hardly fail to be looked upon as an interesting addition to the known species of pathogenic bacteria.

One word as to the sequel of the case. An exploratory operation on the kidney was proposed to the patient, but he experienced so much relief from medical treatment that he elected to wait. Cystitis developed, with passage of alkaline urine, from which quantities of muco-pus were deposited on standing. This muco-pus was extremely slimy, and had a distinct tendency to turn green on exposure to air. It contained the bacillus, mixed, however, with two or three other micro-organisms. Ultimately the cystitis subsided under antiseptic injections. After having spent some four months in hospital the man left completely cured towards the beginning of May, 1894.

A FURTHER REPORT ON THE SUPRARENAL GLAND, AND THE CAUSATION OF ADDISON'S DISEASE.

Read in the Section of Pathology at the Annual Meeting of the British Medical Association held at Bristol, August, 1894.

By A. G. AULD, M.D.,
Assistant Physician to the Glasgow Royal Infirmary, etc.

In a former paper[1] I related and figured a few of the microscopical appearances found in the normal suprarenal with reference chiefly to a blood-destroying function of the organ. The present report by no means pretends to be a completion of the investigation, but the inquiry will be advanced a stage further by detailing some of the results of an examination of the medullary portion of the gland. It must forcibly appeal to any student of Addison's disease that until some definite facts are obtained respecting the function of the suprarenal, it is useless to go on constructing theories. And here I may add that I believe but few pathologists of the present day would accept the view that the disease in question can find its solution in an ascending lesion affecting chiefly certain of the great abdominal sympathetic ganglia and nerves.

It is a mistake to suppose that the interest and importance attaching to the suprarenal capsule are solely because of its association with Addison's disease. This gland is one of a class the exercise of whose functions constitutes one of the most vital proceedings in the animal economy, and whose interactions are adjusted in the most sensitive manner in bodily states either of health or of disease. The constant presence, size, and intricate construction of the suprarenal gland in all vertebrates sufficiently prove its great importance, a consideration which is heightened rather than diminished by estimating the effects of its ablation or of its destruction by disease.

Comparative Development of the Gland.

The study of the evolution of the thyroid and pituitary bodies and the light which has thus been thrown on their function would lead to the expectation that in like manner some clue to the function of the adrenal might be so derived. Unfortunately the matter stands sorely in need of further investigation, the work already accomplished having left many important points ripe for further research, which would be amply rewarded. I purpose, however, to note some of the gleanings I have made on this point, with occasional comments, necessarily very brief owing to the space at my disposal.

Bergmann in 1839, and following him Remak, Leydig, and Kolliker, observed the close relationship which subsisted between the suprarenal and the sympathetic nervous system. The latter observer regarded the medullary portion as purely nervous, while the cortical was distinct both in origin and function, being a derivative of the mesoblast. Leydig, and subsequently Balfour, in researches on elasmobranch fishes regarded the segmentally arranged paired bodies in connection with the sympathetic ganglia as homologous with the suprarenal of reptiles and higher vertebrates. Balfour afterwards regarded these bodies as homologous only with the medullary portion of the gland, another structure, the "interrenal body," corresponding to the cortical portion. The paired bodies are situated on the branches of the aorta dorsal to the cardinal veins, while the interrenal body lies between the dorsal aorta and caudal vein in the region of the posterior end of the kidney, and is of mesoblastic origin.[2] It only remained for these bodies to be united, and so form the compound organ of higher animals. In *reptilia* and *aves*, Braun[3] found that the elements corresponding to the medullary part, or those presenting the characteristic brown stain with bichromate of potash were derived from the sympathetic ganglia, while the cortical portion he traced from the mesoblast. Finally, Mitsukuri[4] arrived at the same conclusions from an examination of mammalian suprarenals; in particular he endeavours to trace in the rabbit, apparently in a very careful manner, the entire medullary portion of the organ from the peripheral part of the sympathetic system.

But further investigation has thrown doubt on these statements. In particular, the work of Weldon[5] is deserving of special consideration on account of the care in details and clear conceptions which characterise it. He claims to have examined younger embryos than either Braun or Mitsukuri, and justly complains that they give no account of the origin of the blastema which goes to form the cortical portion. Weldon, in point of fact, traces the suprarenal body to the most anterior part of the primitive kidney.

In like manner Gottschau[6] and Janosik[7] deny that the medullary portion arises from the ganglionic fundaments of the sympathetic nerve trunk. These observers maintain that only certain ganglionic cells and nerve fibres grow in from the sympathetic, but that the real medullary nerve cells arise by a metamorphosis of the cortical cells. A good many facts seem to lend support to this view.

Carefully examining the embryo of *lacerta muralis*, Weldon found that as the glomeruli of that region of the mesonephros which is coextensive with the generative ridge are being formed, a localised proliferation of the cells composing the wall occurs opposite to the point of attachment of the segmental tubule. This mass, which is and remains distinct from the endothelium of the vena cava outside, divides into two portions—the suprarenal rudiment which goes upward, and the connecting tubules between testis and epididymis which go downward, a severance by the interpolation of blood vessels afterwards occurring. After a time the medullary ganglion cells enter the mass. The same results followed an investigation of *pristiurus*.

Testimony is borne to this view in the "accessory" suprarenal bodies which Marchand, Gibbes, Pilliet, and others have described as occurring in the vicinity of the sexual organs, wherein it is conceivable that some of the cells of the suprarenal rudiment might be carried down with those destined for the sexual gland. Janosik and Mihalkovics,[8] also, though tracing the development from the epithelium of the body cavity somewhat differently, nevertheless admit the connection with the sexual cords.

In a comparative study of the adult organ, so far as known, indications are afforded not only of the origin but also of the function of the gland. We must have regard to a process of development and a process of suppression.

Amongst myxinoids, the pronephros, or head kidney of *Bdellostoma*, has been carefully studied by Weldon. This structure is peculiarly modified so as to form a lobulated glandular body lying in front of the kidney proper, and functionally analogous to the adrenals. It consists of a lobulated arrangement of branched, intercommunicating tubes which open (some of them singly) on one side into the pericardium, and their cubical or columnar epithelial cells are continuous with the flat pericardial epithelium. Anastomosing with

[1] To Jamieson: British Medical Journal, May 12th, 1894.

[2] *On the Development of Elasmobranch Fishes*, 1878.
[3] *Arbeiten a. d. Zool-zoot. Inst. Würzburg*, Bd. v., 1879.
[4] *Quarterly Journ. of Micros. Sci.*, vol. xxii, 1882.
[5] *Quart. Journ. of Micros. Sci...* vol. xxiv, 1884, and vol. xxv, 1885.
[6] *Archiv f. Anat. u. Physiol.*, Anat. Abth., 1886.
[7] *Archiv f. Micro. Anat.*, Band xxii, 1883.
[8] *Internationale Monatsh. f. Anat. u. Histol.*, Bd. ii, 1885.

each other, these tubes pass without change in their diameter to a large central duct branched anteriorly. The latter is lined with a single row of columnar cells having large nuclei. A remarkable peculiarity of these cells is that they are crowded with granules, and their free extremities are produced into a number of pseudopodia, round which numerous granules are collected. The lumen of the duct is occupied by blood clot. Posteriorly the duct ends in a mass of tissue resembling that of a lymphatic gland, the epithelium of which forms the capsule of a large glomerulus which lies close to it. Blood vessels pass from this glomerulus into the lymphatic tissue, and thence into the duct. Weldon considers the appearances to indicate that the pseudopodous duct cells are actively amœboid, and eject secretion granules into the blood.

Balfour,[9] in his researches on adult ascidians and ganoids, finds that the head kidney is not, as Rosenberg supposed, the persisting larval excretory pronephros. The latter undergoes atrophy, and the so-called pronephros is, in point of fact, a mass of "lymphatic" tissue richly supplied with blood vessels. Emery[10] afterwards showed that this lymphatic tissue was developed from the embryonic kidney by modifications affecting both the pro- and mesonephros. Now in teleosteans and teleosteoid ganoids possessing this tissue, no suprarenal organs are found, and hence it is to be concluded, with Balfour, that they are represented by this tissue. According to Balfour, also, this tissue must be engaged in the production of some of the elements of the blood.

Ascending higher in the scale, the suprarenal bodies give evidence of their development from the mesonephros, as is judged from their anatomical position in amphibians, and the derivation of their blood from the renal-portal vein. Thus we find evidence of successive modifications of portions of the primitive kidney, from the pronephros in myxinoids to the mesonephros in higher vertebrates; the same causes operating throughout, namely, specialisation of organs (pericardium, etc.) causing suppression of original renal pronephros, and gradual limitation of the seat of renal secretion, with coadvancing change of origin of the suprarenal.

Structure of Adult Mammalian Suprarenal.

In the connective tissue capsule are blood and lymph vessels, nerve ganglia, and nerves. I have observed large masses of ganglion cells immediately outside the capsule both in embryo and adult animals, and in man. In the embryo and newly born kitten I have seen masses of cells taking on the deep brown stain with bichromate of potash, whose rich vascular supply was in striking contrast with that of the ganglion masses. Sometimes in this situation accessory suprarenals are found—the so-called "rests." Of the parenchyma itself the outer or marginal zone (zona glomerulosa) is in great measure a reserve tissue. In rabbits and guinea-pigs it is composed of an almost solid mass of cells, with but few developed acini. In the human subject I have seen an unusual development of the acini in cases of senile atrophy of the organ (see former paper). The cells of the closed columns forming the greater portion of the cortex stain readily with eosin, and are usually quite filled with an oleaginous substance, which disappears after mounting in the usual way with Canada balsam. Each cell has a separate investment of connective tissue, and occasional small loculi may be seen between the cells. Their staining reactions and contents would assign to them but a subsidiary place. A single layer of capillary blood vessels passes down between the columns, forming frequent anastomoses. Reaching the inner or pigmentary zone these vessels break up into numerous large tortuous channels in which the blood pressure, as I have formerly shown, must be considerable. This zone is of great breadth in the guinea-pig, and pigment abounds. Some authors have erroneously described this layer in the guinea-pig as pertaining to the medulla.

In its most essential characters, the medulla stands in marked contrast to the cortex. In all vertebrates it forms a more or less distinctly alveolated or tubulo-alveolar gland. Referring more particularly to man, its framework is reticular or splenic in character, and composed of a delicate supporting connective tissue, which encloses in meshes of a variable size and contour delicate glandular epithelial cells, many of which are highly branched and possessed of peculiar staining reactions. Large gangliated nerve trunks and groups of ganglia traverse this tissue in abundance (Fig. 1). Isolated ganglion cells are

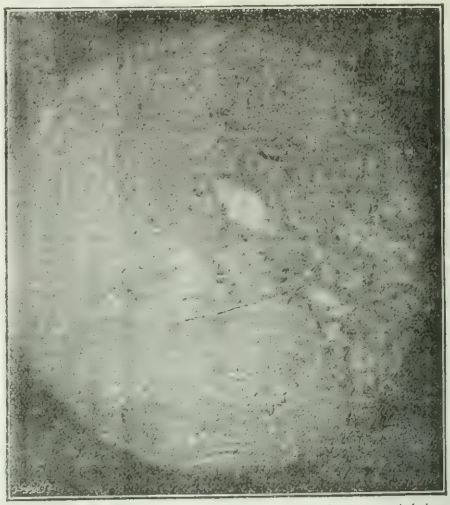


Fig. 1.—Section from medulla showing a central area containing a number of ganglion cells, their large size contrasting with the gland cells proper in the circumference. × 50.

occasionally found occupying one of the smaller meshes, while branching nerve fibres course throughout its whole extent, lying underneath and in connection with the aforesaid epithelial cells which clothe the alveoli. The blood



Fig. 2.—General view of a portion of the medulla. × 100.

vessels consist of a rich plexus of narrower and broader sinuses and capillaries; the principal branches have muscular walls but the walls of all the rest consist of a

[9] *Quart. Journ. of Micros. Sci.*, vol. xxii, p. 12.
[10] *Atti dell' Accademia dei Lincei*, 1882.

delicate nucleated intima on which the glandular epithelial cells are immediately placed and into the substance of which their fork-like processes may occasionally be seen extending. The sinuses are collected into a large central vein whose wall is of extraordinary thickness and muscularity.

Isolated groups and processes of oil and pigment-containing cortical cells are to be found in the medulla while the central vein is immediately surrounded in part of its course by a reflection of the cortex.

In sections prepared from alcohol the epithelial cells in the medulla are (in unstained specimens) of a lustrous whiteness as compared with the yellowish opaque cortical cells. Hæmotoxylin staining reveals the large and active character of their nuclei (some of which are of enormous dimensions) and their richness in chromatin. The protoplasm is finely granular and resists the action of eosin.

The branched cells or chromatophores whose chemical reactions are so well known (for example, coloured brown by bichromate of potash, red by solutions of iodine, blue by ferric chloride, etc.) have been the theme of much discussion. Whatever their origin, I have now no doubt whatever that they are glandular in character. Both nucleus and protoplasm stain brown by the chrome salt, but as time goes on they may lose this characteristic reaction, and then appear as ordinary gland cells. Moreover many of the cells of the cortex can be shown (especially in guinea-pigs) by the same reagent to be branched, and it is not unlikely that all the cells of the medullary meshes partake more or less of this character, the extremely delicate nature of the bichromate stain serving

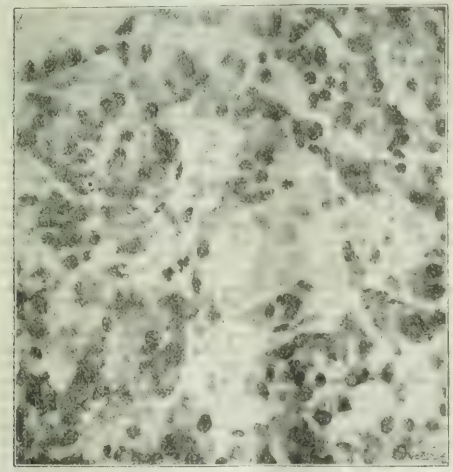


Fig. 3.—From a case of a man, aged 30, referred to in the text: hæmatoxylin staining only: in the centre a dilated acinus is seen (the lining cells of which are flattened) containing a number of colloid spheres, immediately outside and to the left is a blood vessel whose nucleated intima is visible; remaining portion of gland tissue healthy. × 400.

to distinguish some more than others. The branching processes of the chromatophores may often be seen embracing the nerve ganglia. Considerations of space forbid any further discussion of the subject here.

Function of the Medulla.

In view of what has been said, and bearing further in mind the circumstance that throughout a large portion of the gland the medulla is, in man at least, from three to four times the thickness of the cortex, it is clear that a function of the highest importance is exercised therein. Some have supposed this to be destructive in character, in particular McMunn,[1] as the result of spectroscopic examination, concluded that its function was excretory. He found the spectrum of hæmochromogen in solutions from the medulla, even after washing out the blood vessels, and on this somewhat slender basis formed such a deduction. The same might be said of the liver, which also gives the spectrum of hæmochromogen. No doubt products of excretion may be found in the medulla of the suprarenal, as in other organs; the occurrence of small quantities of pigment in many of the cells may even be sufficient to account for the phenomenon, or excretory products may be imbibed. In like manner, in a paper recently sent me by Dr. Ewald, of Berlin, a somewhat similar view is propounded. Now, I am far from denying that the medulla does not profoundly influence substances which, if left to themselves, would cause a poisoning of the blood. Such a neutralising or reducing power may no doubt be a province of the medulla. But the question remains as to how this power is exercised: and on the first view it is hardly conceivable that that portion of the gland which immediately guards the exit of the blood should be excretory in character.

In making systematic examinations of the suprarenal in as many cases as practicable, a specimen presented itself which, though in all other respects perfectly natural, nevertheless showed a very striking phenomenon in connection with the medulla. In several places the glandular cells were arranged so as to form acini of unusual dimensions in the interior of which were larger or smaller spherical or oval masses of colloidal substance, or else the acinus was occupied by a single large mass (Figs. 3 and 4). The gland



Fig. 4.—From same case as preceding: towards the left of the figure colloidal masses are seen in the midst of the protoplasm; hæmatoxylin only. × 400.

cells lining such acini were changed to a more or less flat epithelium. As regards their essential characters these masses did not differ, so far as I could find, from colloid elsewhere. They were perfectly homogeneous, and in unstained specimens of a faint yellow or greenish yellow colour. They were readily tinted by eosin. In sections stained with carmalum and counterstained with acidulated picric alcohol they presented a brownish-yellow coloration. A similar colour is imparted by this stain to colloidal substance elsewhere, for example, the thyroid. The colloidal substance was also present in many of the blood vessels of the medulla and these latter presented generally an unusual dilatation and frequency. This circumstance is all the more significant, seeing that the cortical vessels presented no such deviation. In all other respects, as already mentioned, both cortex and medulla were perfectly normal. The specimen

[1] British Medical Journal, February 4th, 1888, and December 15, 1883

occurred in a man, aged 30, who died from the effects of injuries.

In another case, that of a man, aged 36, who died of stonemason's phthisis, a great formation of colloid was present in the medulla of a gland otherwise quite normal. It almost looked like a goitrous condition in places. Here also the blood vessels were markedly dilated (Fig. 5). In other fatal

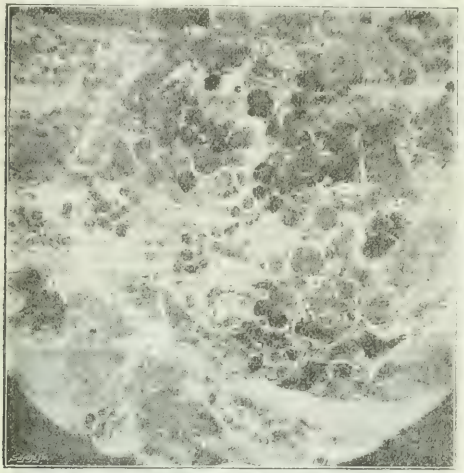


Fig. 5.—From the case of a man, aged 36, referred to in the text; hæmatoxylin and eosin; the latter stains deeply the colloid masses which are seen in abundance; dilated blood sinuses containing red corpuscles are seen traversing the gland. × 400.

cases of tuberculous disease I failed to find a similar condition.

Regarding, as I did, these appearances as indicative of a peculiar degeneration affecting the cells of the medulla, I next proceeded to examine with special care other cases in which the organs were unquestionably normal. In some of these I found small colloidal masses within the acini at rare intervals and sometimes the colloid just projected from the cells (Figs. 6 and 7). The appearance strikingly resembled

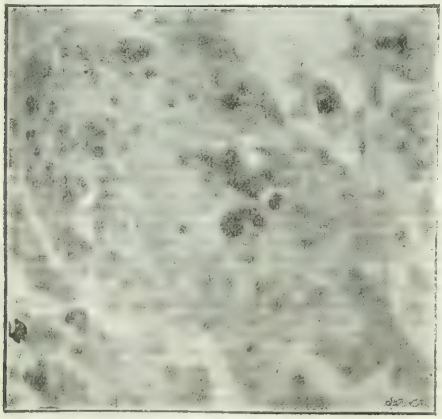


Fig. 6.—From normal gland; formalum and acidulated picric alcohol; in the centre a deeply stained mass of colloid is seen lying free and surrounded on one side by nuclei. × 400.

that seen in certain acini of the pituitary gland. Moreover, the colloid was also present in what appeared to be dilated lymphatics. No colloid was ever present in the cortex.

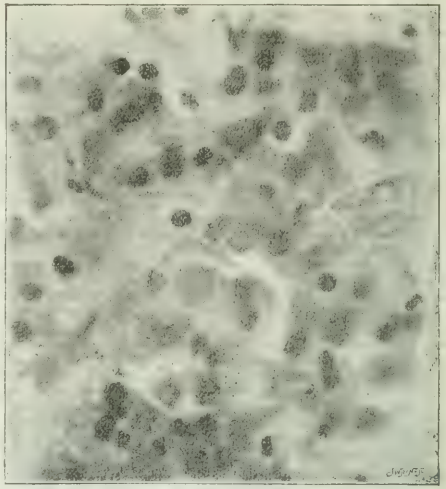


Fig. 7.—From normal gland; hæmatoxylin staining; near the centre a large homogeneous mass of colloid is seen lying in the centre of an alveolus. × 600.

It thus seems likely that while under certain circumstances, the secretion produced by the medulla passes either into the blood vessels direct or by the medium of the lymphatics, it nevertheless occasionally reveals itself outside the gland cells, while the cases presenting the great formation of colloid, referred to above, were instances of abnormal functionating on the part of the gland. Other considerations support this view. It is highly improbable that a gland otherwise healthy would exhibit in one portion of its structure alone what could be otherwise interpreted, while the abnormal dilatation of the blood vessels, to whatever cause due, is evidence of abnormal activity.

An examination also of cases of (1) incipient, and (2) advanced cirrhosis of the organ showed an opposite condition of affairs. In this form of disease large numbers of leucocytes are deposited in the interstitial tissues of the gland. New connective tissue forms which radiates into the cortex from the connective tissue boundary between cortex and medulla causing atrophy and necrosis of many of the cells. The deposition of leucocytes in the medulla is represented in Fig. 8. In these cases I did not meet with colloid, on the other hand the secreting cells seemed unusually small and inactive.

Some interesting results were obtained in making certain experiments with guinea-pigs. In the normal animal I failed (in two cases examined) to detect any colloid in the medulla. In guinea-pigs slowly poisoned with arsenic no colloid could be found, but in guinea-pigs which had been subjected to the action of a spinal poison and in whom concurrent peritonitis and hypersecretion of bile into the intestines had been set up, death occurring within forty-eight hours, masses of colloid were frequently present in the medullary portion of the suprarenal, which reacted characteristically to staining agents. In this case also a great dilatation of the vessels throughout the medulla was present, but no other change was noticeable in the gland with the exception of there being considerably less pigment than normal. These results, however, are only fragmentary and are adduced here meanwhile merely as a side issue.

The facts narrated seem strongly to point to the conclusion that in the medulla of the gland at least, a substance

is elaborated which is transmitted to the blood. And here we are reminded of certain appearances formerly alluded to occurring in lower forms, notably the case of the myxine in which secretion particles seemed to be passed into the blood. In the case of the human subject, should this observation be justified, it can hardly be a matter of speculation as to the importance of the secretion so formed to the animal economy; more especially, it would minister to the blood and have a far reaching effect on the composition of that fluid, imparting to it essential qualities and so enabling it possibly to neutralise and render inert poisonous substances, a conclusion which the examination of the blood of the adrenal vein would seem to indicate. That this substance has also, directly or indirectly, the control of normal colour within certain limits is likewise a legitimate consideration. And, finally, its arrest would no doubt form one of the principal etiological factors in Addison's disease, in which the blood clots with difficulty and the red corpuscles refuse to form rouleaux.

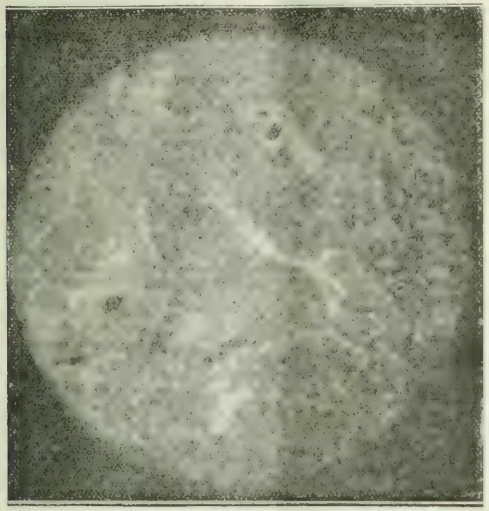


Fig. 8.—Commencing cirrhosis of medulla: hæmatoxylin and eosin; shows infiltration of leucocytes in clusters and branches; gland tissue undergoing atrophy. × 120.

Experimental Results: Conclusions.

Stilling[12] has found that extirpation of one adrenal is followed by compensatory hypertrophy of the other. He also found that extirpation of the adult organs was followed by a hypertrophy of "accessory" suprarenals situated in the neighbourhood of the sympathetic ganglia. The possibility of such a compensatory action must be considered in cases of Addison's disease.

Tizzoni's[13] well known experiments on the effects of extirpation of the gland go to show that a morbid alteration in the blood is at the bottom of the cachexia. Bronzing of skin occurs in rabbits, and vascular lesions of great intensity occur in the central nervous system, consisting in injection and hæmorrhage into the grey matter of the cord and exudation into the ventricles of the brain. Branched villous outgrowths with great leucocytal infiltration are likewise found in the latter situation. Latterly areas of softening occur throughout both the brain and cord. Tizzoni regards these lesions as due primarily to a morbid alteration in the blood, affecting the composition of the cerebro-spinal fluid. An analogy is found in the vessels of the cutis, in many branches of which thrombi have been found by Riehl and other observers in cases of morbus Addisonii.

The thyroid gland is an appendage of the respiratory system, and the study of its evolution shows that its original function is essentially concerned in the gaseous interchanges of the blood and tissues, "the phenomena following its destruction by disease or experiment being at bottom a disturbance of the gaseous metabolism and mal-assimilation of oxygen by the bodily tissues" (Andriezen). The pituitary gland is an appendage of the central nervous system, and, as the same observer points out,[14] it is originally engaged in providing a secretion carried by oxygen-bearing water, which passes through its duct to the central nervous system, while its destruction is followed by a nutritional failure in the nerve centres. Of the suprarenal gland it may in like manner be said that it is an appendage of the renal-vascular system, being at the same time also in intimate connection with portions of the nervous system. Its functions, so far as the present investigation indicates, are (1) the destruction of certain effete products of metabolism which are of the nature of ptomaines, and (2) the elaboration of a secretion which is absolutely essential to the blood (hæmopoietic). Its destruction is followed by an auto-intoxication and a profound alteration in the chemistry of the blood, which entails, amongst other things, degenerative or nutritional changes in the nervous and digestive systems, and derangement of the the colour-regulating metabolism.

[I have again to express my best thanks to Dr. Thos. Reid, who has executed some of the photographs.]

[12] *Revue de Médecine*, Paris, October, 1891.
[13] *Arch. Ital. de Biol.*, Turin, 1884, vol. vi and 1888 x

[14] British Medical Journal, January 13th, 1894.

THE BEAT-TRANSFER: AN EASY TEST FOR TRUE AND SPURIOUS PULSE TENSION.

By William Ewart, M.D.Cantab., F.R.C.P.,
Physician to St. George's Hospital, and to the Belgrave Hospital for Children.

In cases where free communication is kept up between the radial and the ulnar pulses through the palmar arch, the strong pulsation which continues to be felt even when heavy pressure is made on the radial artery by the finger, is apt to convey an erroneous impression that the vessel still resists compression at a time when its channel has already suffered complete obliteration. The usual means for avoiding this mistake is to stop the anastomotic wave by the pressure of a finger of the other hand applied at a point nearer the wrist. A much simpler method is the one which I have recently described, and which is carried out with a single finger applied to the pulse in the ordinary way.



Illustrating the two positions of the finger applied to the pulse: I, pointing to the hand: II, pointing to the elbow of the subject; R, the head of the radius.

The method will be best understood by trying the experiments indicated in the figure. This mode of demonstration first occurred to me a few days ago (too late for insertion in my book on *The Pulse Sensations and Tactile Sphygmology*). It was so successful in making matters plain to others that its publication may be of use.

1. If the forefinger (the nail of which must be short) be firmly applied to any radial pulse with the position I, a strong beat will be felt by the pulp of the finger, which faces towards the subject's elbow, whilst no pulsation will be perceived by the

extreme finger tip immediately below the nail, this portion of the finger facing towards the palm.

2. The position of the finger is then reversed to II, heavy pressure being this time avoided. The beat will be found to have changed sides, and to have migrated from the proximal to the distal side of the finger. Free pulsation is still felt by the finger pad in its new position, and very little or no pulsation is experienced by the finger tip.

3. As soon, however, as pressure is increased, a fresh change occurs—the distal beat disappears, and the tip of the finger (pointing towards the elbow) becomes conscious of a strong pulsation on its proximal side. This shifting or transfer of the beat is the sign which can be used as a reliable test that the artery has been successfully obliterated. The method, of which this is merely a practical demonstration, consists in keeping a single finger applied to the pulse in the usual position, and in gradually increasing its pressure till the change in question is brought about. The mechanism of this striking phenomenon, which is quite independent of the anastomotic pulsation properly so-called, is fully described elsewhere, and cannot be discussed in this brief communication.

OPENING OF THE MEDICAL SCHOOLS:

INTRODUCTORY ADDRESSES.

ST. GEORGE'S HOSPITAL.

MENTAL TRAINING IN MEDICAL STUDY.

By ISAMBARD OWEN, M.D.,
Dean of the Medical School.

GENTLEMEN,—The honour of greeting you at the opening of a new academic year has fallen this time to me, and custom demands that I should begin with some brief reference to the changes that have taken place among us during the year that is past.

[After a review of the leading events of the year in connection with the hospital and medical school, Dr. Owen proceeded:—

To some of you who are here, to-day will mark an epoch in your educational career. You will for the first time find yourselves working not merely to win academic renown, but to fit yourselves for the discharge of serious and responsible duties. It may even be that for the first time you will find yourselves turning from the study of abstractions to the consideration of material things. To you in particular tradition assigns me the flattering but puzzling task of addressing a few words of counsel on the subject of your future duties and the qualifications needed for performing them. A puzzling task, because the subject is so vast and all its parts so closely connected that it is difficult to select any one for separate treatment. But time being short and occasion urgent, I will pass without comment over the moral qualities—earnestness, steadfastness, courtesy, and probity—which medical life demands, and over the physical discipline required to fit yourselves for the marvellous handiwork of modern operative surgery, and endeavour to speak of some matters within my more immediate cognisance connected with the mental training that goes to the making of a physician.

I speak advisedly of the physician's training, because, above all, I wish you to bear in mind that training as well as learning is a necessary part of medical education. You are not preparing yourselves only to pass examinations or in prospect of a life of lettered ease. You have to do as well as to know; and medical doing, like all other doing, requires a special cultivation of the faculties by which it must needs be exercised. Mere learning, however profound, can no more enable you to practise medicine than to command an army in the field.

I will ask you in passing to accept the word "physician" in a wider sense than that to which ordinary English custom restricts it. The line that once separated physicians and surgeons has now no existence in law, and is limited to the special sphere of consulting practice. The two professions have been united in one, and every candidate is required to possess the qualifications of both. But Parliament, in consolidating the profession of medicine, unaccountably omitted to accord its members any common title by which they may be generally known. The law knows us under the cumbrous style of "registered medical practitioners"; in the services we are "surgeons"; to the newspapers "medical men," or, sometimes, "medical gentlemen"; and the general public, taking refuge in a piece of time-honoured slang, persistently calls us "doctors." In the United States common consent has extended a more general term to cover a more special one; and the sensible American habit of calling medical practitioners generically "physicians" is one I think we should do well to borrow.

The practice of physic, in the eyes of the public, consists in the application of remedies to the cure or relief of disease. Though this is indeed our ultimate aim, the actual application of the remedies bears some such relation to the entirety of the physician's work as the visible part of a modern battleship does to the mass of metal floating under water. You will not proceed far in your studies before you discover that nine-tenths of his task is most often done before he utters a word of advice or writes the first line of a prescription; and that the power of discriminating diseased conditions, to the casual eye a simple and easy matter, is in reality the aim of the greater part of the lengthy course of study you have to go through.

Diseases are disturbances of organs of the body. The organs of the body are many, the modes and causes of disturbance at least equally numerous. There are parasites from without and new growths from within, inflammations and structural changes, and countless derangements of function of less tangible origin, but not always of less serious import. Few of these disordered conditions can be the subject of direct observation. The organs they affect are for the most part concealed from actual view, and direct exploration is a measure that can be used only in the gravest emergencies. We have for the most part to form our judgment from a combination of observations of a difficult and delicate character, observations of subjective phenomena made through the medium of the patient's mind and our own skill in questioning, observations of minute changes in the condition of the visible surface, observations of involutions of the surface by means of optical apparatus, observations of the results of physical, chemical, and physiological tests; microscopic observations of disrupted fragments, and observations of a series of fine acoustic and tactile phenomena and reactions elicited and appreciated by means of the trained fingers or various artificial appliances.

To but few observed phenomena, subjective or objective, does a single value attach. It is only by a consideration of their varying combinations that we can arrive at an opinion as to their cause, or tell with certainty if the patient's state be grave or trivial, one of temporary disturbance, specific infection, or incurable organic change. But until such a judgment is formed, to apply a remedy is to cast a stone at a venture. Rational treatment can only be based upon the exact "diagnosis," as our esoteric term has it, of disease. His observations made, the physician has therefore to frame such a theory of the case, or theories, if more than one be possible, as, in the light of his accumulated knowledge, shall accord with and explain the entire body of the facts. He must verify his theory, or discriminate between them, if there be more than one, by such further present or subsequent observations as may be feasible, and his final conclusion he ultimately brings to a practical test, by laying down a plan of treatment and abiding the result. Such, in broad outline, is the physician's method. It is not peculiar to medicine; it is essentially the ordinary method of physical investigation. Between the science and the art of medicine there is no hard and fast line, for the art mainly consists in the application of scientific method to a particular set of problems, and the science is but a wider application of the art.

I am anxious that you should attach some definite meaning to the words "science" and "scientific," which will encounter you like haunting spirits at every stage of your career; spirits of good, if rationally understood; if not, will-o'-the-wisps to lure you astray. Around these words has gathered in our day a certain halo of intellectual grandeur, so much that the mere use of them in an argument creates in

many minds a presumption in favour of the side on which such reverend symbols are invoked, without too curious inquiry as to the legitimacy of the invocation. There is a loose popular notion which has misled many students, and from which even some professed authorities on medical education seem not able wholly to extricate themselves, that "scientific" means something done with a test tube or a microscope or a scalpel, and that pursuits which cannot be brought within the compass of a laboratory are not legitimately entitled to the name. I recall a time (it was, perhaps, an extreme case) when some of our best students were induced systematically to neglect their clinical opportunities in order to spend long hours over a mechanical occupation which is now ordinarily performed by a boy and a machine, because, forsooth, some pedant had persuaded them that cutting microscopic sections was "scientific" work, and recording medical cases was not. Dismiss such a trivial use of these words altogether from your minds. In their rational sense, "science" and "scientific" are terms definitive of a method, not of a subject or a place of study. Be it in the laboratory or the hospital ward, or among the most ordinary surroundings of your future daily work, wherever soundly drawn conclusions are based upon observations accurately made, there and there only is science. If there be a distinction between clinical and laboratory work, it is that the problems presented by the former are the more complex, and the training required to meet them a longer and severer one.

When, therefore, you are exhorted to make your study of medicine a scientific one, do not, as some unhappily do, take it as an intimation that devotion to some branch of physical science or experimental research may atone for neglect of clinical training, but rather as an injunction to pursue your studies of whatever kind with increased attention to precision and to method; to aim at rendering your observations always more trustworthy, your reasoning more logical and more complete.

Do not understand me as wishing to decry in the least degree the importance of laboratory science. Nothing is further from my intention; to neglect laboratory studies is to condemn yourselves to walk in fetters to the end of your days. I am only warning you not to let a trivial use of a word persuade you that intellectual dignity and value attach to the one field of your studies any more than to the other.

Accurate observation is the foundation of all medical work, and the power of accurate observation is one which everybody thinks he possesses, but which in reality is seldom found except as the result of some special training. What ordinarily passes for observation is a combination of observation and assumption, with the latter at times the predominant element. Take for example the common-place instance of reading. The matter consists of words, and words of letters; but we read down a page of ordinary printed matter at a rate at which it would be physically impossible to form a distinct visual impression of even half the letters of which it is composed. If you analyse the process I think you will find that you form such an impression of but few. For the most part we do not identify letters at all. We note the length and general shape of the words and their most prominent points and lines, and fill in the rest from the stored-up impressions of previous experience with a facility that long habit has given. For ordinary matter the method serves well enough. We read and transcribe it with at least practical precision. But where the matter to be read or transcribed is full of strange words, unaccustomed forms, and unusual or archaic spelling, the weakness of the process shows itself in a significant manner. A passing experience of archæological work revealed to me how surprisingly rare is the power, even with the best of intentions, to give an accurate transcript or correctly revise a proof of a passage from an ancient manuscript or a page from an early printed book, and how few people seem even conscious of their liability to error. The old habit of assumption is too strong; familiar forms and familiar letters will intrude themselves in unauthorised places. One of the greatest scholars of the time once told me that in editing a text for philological purposes he was accustomed to read every proof six times over, fixing his attention by naming each separate syllable aloud and touching it as he went with his pen, that after this rigid exercise he laid the text by for a year and then read it in a similar manner again; and that thus only was he able to ensure complete fidelity of reproduction.

If such scrupulous care is needed in reference to matters so well defined and so simple as ordinary printer's type, I need not excuse myself for urging the necessity of similar care in dealing with that more varied and more difficult alphabet from which we have to draw the elements of a medical diagnosis. Our task is indeed a trebly hard one, for the letters we have to read are often blurred and not easy to distinguish, while the bent to assumption is doubly strong, inasmuch as our minds are nearly always filled with preoccupations of theory as well as preoccupations of habit. To accurate medical observation there is no royal road. The habit cannot be acquired from books, or by the most diligent listening to the lectures of the most highly endowed professors. There is no way but the old-fashioned way still followed in the London schools, the constant close personal observation of case after case under skilled supervision, and the systematic reduction to written or graphic records of what is observed. "Writing," says Bacon, "makes the exact man." I will presume to place on a level with writing the older art of record from which it sprang. I have never understood the neglect with which the teaching of drawing has been regarded in school education. It may be due to the fortuitous connection of the art with pursuits which the mass of mankind have always treated with a degree of contempt, however fashion may for the time have prescribed the worship of their leading professors. But drawing has no necessary connection with the fine arts, and for educational purposes should not be treated as though it had. It is not the making of a picture, but the accurate representation of visible phenomena that the educational drawing master should aim at. As an art of practical utility drawing hardly yields even to the "three R's"; as a training in exact observation it has no superior. I trust the day will come when the man who cannot draw will be as rare as the man who is unable to write.

The hand of the reformer is on school education, and revolutions far deeper than this are thought to be impending. I will not assume to pronounce upon the most debated educational question of the day, or to prejudge the merits of systems as yet untried, but I cannot help feeling that whatever advantage an earlier introduction to natural knowledge may claim, the old-fashioned classical training, with its enforced accuracy of observation and its minute punctiliousness of detail, is by no means the worst introduction that could be devised to a life of scientific work.

As a special part of the art of observation, I must not pass over without notice what, for want of a better term, I may call the cultivation of the arithmetic sense. Arithmetic perception, the power of discriminating numbers, appears to be a faculty of late development in the history of the human mind. The most philosophic language of the ancient or modern world long retained a relic of the time when mankind had no definite perception of any numbers but one, two, and three. Such, at least, is one explanation given of the persistence of a dual number by the side of a plural in classic Greek. There are still, we are told, savage races who have developed in their languages no numerals above the third, for the reason that all numbers beyond three are to their minds indistinguishable "multitude." Civilised man has progressed beyond this. We have learned to count from one to infinity, and to divide unity into infinitely small fractions, and, thanks to certain handy symbols given us by the Arabians, to perform with ease complex arithmetical calculations which an Alexandrian mathematician would have thought impossible even for the gods. It needs an effort to realise that all this is mere machinery, and that in point of arithmetic sense we are but little in advance of our savage forefathers. If this seems strange to you, you may easily test it by a simple experiment. Display in irregular order a series of cards marked with dots ranging in number from one to fifty, and see how many you or your friends can distinguish without the artificial aid of counting. But one in twenty, I venture to say, apart from chance, will succeed in distinguishing more than ten or twelve. Or try a similar experiment with lengths or areas or measures of capacity, and see if you get more satisfactory results.

Or take the evidence of language (it is a practical point) and mark how vagueness of arithmetic conception reflects and even exaggerates itself in vagueness of arithmetic diction. Our grammars contain an ample list of numerals; the State supplies a set of standard measures; but in speech and writing, even the most careful, numerals and terms of measurement have to give place to a host of words, such as "many," "few," "large," "small," "often," "seldom," to which it is difficult to attach any definite meaning. We are fain, however, to use them, not precisely because our conceptions are equally vague, but because they are still not definite enough to find arithmetical expression.

Such words as these have, of course, properly speaking, no positive meaning at all; they are really comparatives, implying comparison with some standard existing in the speaker's mind. If the standard in the hearer's mind happen to be the same, the speaker's meaning is so far correctly conveyed; but as often as the standard differs misunderstanding of necessity results.

You may think I am pursuing a trivial theme; I am really but touching the fringe of a profoundly important matter. If science be not measurement, as has been said, measurement is at least an important element of science; and in work such as ours, in which we deal with so many things in their nature incapable of artificial mensuration, a highly developed natural sense of number, quantity, and degree is doubly desirable. I think I am not exaggerating in attributing at least a tenth of error in clinical theory and clinical practice to defective measurement or to misconceptions arising from inexact expressions of quantity and the like.

If our school reformers would turn their attention to this elementary matter, if our school children could be trained in numerical perception till forty, let us say, could be as easily distinguished from fifty as four from five, and line, surface, and area estimated with similar exactness, and if they were systematically disciplined to eschew vague terms wherever precise arithmetical conceptions could be formed and expressed, more, I think, would be done to render the rising generation scientific than the suppression of Latin in favour of biology can possibly effect.

To analyse the processes of reasoning by which your observations will be rendered fruitful is a task I will not even pretend to enter upon. I will give you but one caution, a practical one, though at first blush you may think it the reverse. If you would reason correctly in medicine you must cultivate the habit of thinking in concrete terms, or, I should more precisely say, in impressions of sense rather than in words. Medical questions are never questions of words, always of things; never, properly speaking, of abstractions, but always of material objects comporting themselves in accordance with physical law. As such every medical fact you acquire should be clearly conceived in your mind. The purpose of medical diagnosis is not to find a name for a disease, but to form a mental picture of a patient's condition, to the end that your plan of treatment may be regulated accordingly. No two cases are ever precisely alike; under the same names are included conditions differing in respect of treatment as far as pole from pole, and the name of your patient's disease is no more a picture of your patient's case than the word "city" is a picture of London or York.

I have twice already bid you beware of certain classes of words. Let me now repeat the warning in more general terms. Words are implements we cannot do without, but implements that need always to be cautiously handled. They are good servants, but, like other servants, by long familiarity they tend to become the masters of those they serve. In medicine, as in other modes of thought, it is easy to fall into the indolent habit of reasoning about words instead of the things or ideas they are supposed to represent. Words are not ideas, and have only a general and often imperfect correspondence with ideas. They are symbols of human device to which social convention, and nothing else, accords a significance that is not always precisely defined—a sort of paper currency to which a credit for ideas is given, deceptive in so far as the credit is often fluctuating and uncertain, doubly deceptive if they are uttered, as at times they are, without adequate effects in the utterer's mind to redeem them. Speech, according to Talleyrand, was given for the concealment of thoughts; indolence perverts it to the baser use of hiding the lack of them.

If you think the warning I am giving a fanciful one, reflect only, outside the domain of medicine, on the reams of paper and hours of talk which have been wasted upon such questions as "what is true art?" or "what constitutes true poetry?" a kind of question to which in the nature of things there can be no satisfactory answer. Let it be but realised that "art" or "poetry" is a word, that words are symbols and their significance matter of convention, let the question be phrased in its rational form: "What ideas do men use this word to convey?" and the essence of the answer becomes as obvious as noon—that some use it to represent this group of ideas, others that group of ideas, that the one use has as much authority as the other, and that, in fine, no precise convention has ever been established on the subject.

The same careless habit of taking the paper note without inquiry into its value reappears again and again in medical history. More than once has medical counsel been darkened by wrangles over the nature of an assumed entity of disease which was really but a word summing up a certain set of unexplained external manifestations. But it is less of medical theory than of medical practice that I am speaking to-day. The advance of medical theory is the work of the comparatively few; the soundness of medical practice is a matter in which all are concerned. I am warning you mainly lest in the work of practice you should find yourselves directing your treatment, like the uninstructed amateur, to the name of a disease instead of the patient's case, and selecting your remedies in virtue of some classificatory title that they bear, rather than from a rational conception of what you desire them to do.

Caution is the more necessary because the technical language of medicine, the accumulation of countless schools of workers scattered over twenty-five centuries of time, is not, like the vocabularies of more recent and simpler sciences, framed upon definite principles and developed on a logical plan. It abounds in words of parallel form appropriated to different orders of conceptions, in terms which different authorities have used in different senses, and in terms which linger on from habit or convenience, though expressing obsolete conceptions or grouping ideas which more recent thought has dissociated and thrown into fresh combinations. Especially is this the case in the department of medical theory which was the last to be brought under scientific method—that, I mean, which concerns the operation of remedial agents.

Such as it is, our language has grown up with us, we cannot now alter it, and must make the best of it. You will find no real difficulty as long as you make up your mind to remain the masters instead of the servants of your vocabulary, and to admit no term into it to which you cannot attach some definite meaning, realisable as a visual image or at least in terms of some material sense. A chain of verbal reasoning, remember, though correct in form may be erroneous in result, unless you are careful to see that each link of language corresponds to a link of fact. Wade boldly, if you will, into the sea of medical diction, but never let your feet be carried from the ground. There is no surer criterion between the trained physician and the man who has been merely taught than the manner in which the obscurer terms of medicine drop from his lips. In the one case they are as obviously instruments for the conveyance of clearly conceived ideas, as in the other they are exoreisms in which the speaker has learnt to trust.

The idea of training as a necessary element of medical study has to a marked degree moulded the system of education pursued in the London schools, where, thanks to the abundance of clinical material and of practised clinical teachers that the resources of the profession in the capital supply, it has at the same time been possible to carry it into practical effect. We wish our pupils' minds to take an active rather than a passive part in the work of their own development. We do not content ourselves with asking you to sit at your teachers' feet and be docile recipients of dogma and precept; we invite you from the first to use your own eyes, your own ears, and your own powers of criticism and judgment. Our aim is to see you not only learned scholars, but self-reliant and capable men, on whom dependence may be placed by others.

There is in prospect the possibility of a great change in the

position of our schools. In common fairness we have felt bound to demand that the distinction of a university degree in medicine, hitherto in London the premium of a certain special course, shall be accessible to our students on terms more nearly approaching those obtaining elsewhere. To meet this requirement, and similar claims made on the part of other branches of study, a scheme for the reconstitution of the University of London on a wider basis has lately been presented to the Crown by a Royal Commission, for whose painstaking performance of a difficult task a tribute of sincere gratitude is due. The merits of the scheme itself are matter of controversy, into which it is not my present place to enter. I have never concealed my personal sense of the danger to soundness of medical education with which certain parts of the scheme are charged; but I gladly quit the ungrateful office of criticism for the pleasanter duty of bidding all here a cordial welcome to the scene of their past, their present, or their future labours.

LONDON SCHOOL OF MEDICINE FOR WOMEN.

GENERAL CULTURE AND THE SCIENTIFIC HABIT.

By Mary D. Sturge, M.B.

After welcoming the new students, the address went on to allude to the need of cultivating from the first the scientific habit of mind, seeing that its possession was invaluable to the medical practitioner. Lord Bacon's words—"We must be content to stand before Nature and ask questions;" "Nature can only be subdued by submission"—were quoted as the clue to the method of work of all great physicians: and the late Dr. Baxter (Physician to the Royal Free Hospital) was mentioned as the type of one who combined together with the scientific habit of mind a deep reverence for Nature and natural laws.

The importance of general culture and experience as an aid to the right understanding of others, and as a help in the individualisation of treatment, was pointed out, and it was urged that for most students the age of 18 was not an ideal one at which to take up exclusively medical studies. The wisdom of devoting time to learning something of the natures and abundant vitality of healthy children was dwelt upon as the only means of fully understanding their needs when ill; and the suggestion was thrown out that probably in the future the medical profession would regard with surprise the fact that we in the nineteenth century largely tended our sick in wards adjacent to main thoroughfares, instead of carrying the patients into the fresh air and sunshine outside our cities.

Much stress was laid on the importance of devoting an adequate time—that is, fully three months—to mastering the details of practical midwifery; and the address closed with an allusion to the rewards awaiting the earnest student of medical science, for whom "every morning brought with it new horizons, every night new stars."

ST. MARY'S HOSPITAL MEDICAL SCHOOL.

ON MEDICINE AS A PROFESSION.

By Scanes Spicer, M.D.Lond.,

Surgeon in Charge of the Throat Department, St. Mary's Hospital.

It seems to me both profitable and appropriate to discuss some of the different objects, aims, or motives which actuate men to join the profession of medicine—as opposed to the object of medicine itself—and to examine to some extent how far the vocation of medicine is calculated to fulfil those objects they individually set before themselves.

If we were to believe much that is said and written, especially on these occasions, we should be led to infer that the ordinary man entered, or ought to have entered, the profession of medicine chiefly because it afforded an extensive field for philanthropy, and with a sublime indifference to his own worldly prospects. Undoubtedly the medical profession does provide the means of gratifying the humanitarian instincts of relieving suffering, of saving life, and of doing good; but there has been an excessive amount of "high falutin'" about disinterestedness, unselfishness, and devotion to humanity in connection with medicine as if we doctors had a monopoly, or at all events a hypertrophy, of these virtues. We must brush away the cobwebs, divest our minds of cant, and get down to facts. There is no reason for concealment; there is no ground for shame. We must recognise that medicine is a business in which we sell our knowledge and skill for remuneration, and that much as we may find pleasure in relieving suffering, in saving life, and in doing good to our fellow-men and earning their gratitude, we adopt medicine mainly as a means of making a living, and enabling us to perform our duties as worthy men and citizens. What reason is there to be ashamed of the business aspect of our profession if we are true and just in all our dealing; if we practise the same common honesty necessary to success and to self-respect in all callings; and if we avoid all knavish tricks? I cannot see that such a view in any way detracts from the nobility of our profession.

Beware of regarding medicine as a means of hoarding of wealth. Though the honourable and skilful practitioner gains the gratitude, affection, and respect of his patients and fellow men, the profession is but rarely the means of social distinction. In this respect it differs from the bar, the church, and the army. Undoubtedly a large number of men enter these latter professions for the social status it confers upon them. The mere fact of a man being a doctor does not open all doors to him. He stands or falls in social estimation on other grounds. Still, there can be no doubt that medicine is "getting on in the world;" its triumphs during the last half century have secured this. Then the profession is being more largely recruited by a better class of men, both intellectually and socially, than formerly. It cannot be doubted that during the last twenty-five years the large number of men poured into the profession from Cambridge and Oxford has introduced a leaven of general culture and tone now widely spread, but in the past conspicuous by its absence. The more our profession shows these qualities, with broadness of sympathies and of interests, and a sense that we are something else besides prescribers of physic, the higher will be our esteem, and the more shall we be welcomed in the realms of refinement and culture. This general levelling up of the profession is being recognised by thinking persons everywhere, the medical men are more and more finding their way, not only into the best social circles, but into Parliament, into the Privy Council, and into the Government of the nation.

Inherited connection with the profession through father or a relative, with the chance of a partnership or succession in a general practice, is often the determining cause of a man throwing in his lot with the doctors: and, naturally, a good opening, a good start in life, is a great inducement in the absence of any special disqualification or distaste. But perhaps more than any other reason for the hereditary adoption of medicine as a profession is that the medical father—and that more especially in country practice inculcates and stimulates in his son that observation and inquisitiveness as to Nature's wonders, that desire to fathom her workings, which is the leading feature alike of the naturalist and the medical mind. Gentlemen, it is those men who go into medicine "for the love of the thing" that make the best students and the best doctors—those men whose "whole heart" is in their work. Nevertheless, do not despair, even if you feel not that "call." Perhaps more than in any other profession does a liking for your work grow upon you, so that the province of medicine, originally entered upon with indifference or from expediency, in time becomes a land of pure delight.

It is much to be regretted that the University of London, in its present form, has not that controlling influence over medical education and graduation which a great university in this metropolis ought to have: and in the face of the vested interests of the corporations and the antagonism of a large section of the teachers, as at present constituted, it never will have. It is therefore with some hope that all those who wish to see every London student take the degrees of M.B. and B.S. (and in due time proceed to the M.D.) are looking forward to the appointment of the Statutory Commission to effect the reorganisation of the University in such a way as to adjust the conflicting interests and co-ordinate medical teaching and graduation in London. When this is

done it is to be hoped some effectual means will be devised to diffuse a knowledge of the conditions of matriculation at the reformed University so that students intended for medicine may be directed right in good time. The action of Convocation in resisting the reform of the University appears to me very regrettable, for the M.D. degree need not be made easier than it is at present. Increased facilities for obtaining it may be offered, but as modified its scope might be increased in the direction of further practical and clinical work: so adding to the difficulty in another but more useful direction and guarding the vested interests of the present graduates in the Faculty of Medicine by keeping up a high standard.

All practitioners educated in London of a certain seniority of standing should be able to become M.D.'s with the same facility as those at other medical centres get theirs at home. Indeed, the nomenclature of the different classes of the profession wants in some respects a thorough revision. It is quite absurd calling a general practitioner, a gynæcologist or laryngologist, a surgeon rather than a physician, or *vice versâ*, whereas all might with equal propriety be called Doctors of Medicine. To signalise special skill, prolonged research, or eminence as a teacher, the new university might grant a title corresponding to that of *Privatdocent* in the German university towns, such as "Specialist" or "University Teacher," and, to mark still greater experience and distinction, the title of "Professor," such titles not to be used unless conferred by the university.

Before settling down in general practice, it is always expedient to take an assistancy, to get an idea of its general routine, and in order that you may make the mistakes which every man must make at first in some centre remote from that in which you finally pitch your camp.

When in practice you will find that, whereas a thorough knowledge of your profession is an indispensable condition of success, it takes something over and above this to make the successful practitioner. Among the most important of these essentials of the successful doctor is sympathy—of which the great factors are to realise the mental condition of the patient, to embrace all his surroundings and circumstances, to imagine yourself in his place, and to appreciate instinctively what his wants are. You should always treat the patient first, and afterwards the disease—if the latter, indeed, does not yield to the treatment of the patient.

With reference to consultations, do not shun them or be offended at a patient's suggesting them. Consultations are an advantage both to the patient and to the practitioner. The patient gains confidence as to the management of his case, and the practitioner talks the matter over with a man who is sure to throw some fresh light on the subject. There is one thing that one often hears alleged against consultations, and that is that through them you sometimes lose your patient. Now there is one bit of advice that I would give you on this matter, and that is, make it clear to the specialist whether you send your patient for his opinion only or for treatment. No reputable consultant would appropriate a case introduced to him with a request for his opinion.

There are three things you ought to do directly you start in practice: (1) Join the British Medical Association; (2) join a medical defence union; (3) insure against accidents and assure your life.

Most of you must necessarily go in for general practice, and be scattered all over the world. Do not consider general practice an inferior branch of the profession. Not so at all. No only do many of the best men go in for it, but it has many advantages which consultants envy—rapid success, healthy country life, strength and robustness of children, and the early attainment of a respected position among your fellow men. A man who has an opening in a good general practice is indeed a lucky man.

Many of you will take up sanitary science, which is undoubtedly one of the branches of the profession which is destined soon to take a much more prominent position. Some of you may enter the Poor-law service, and you will never regret the unparalleled opportunities for gaining experience afforded by a year or so in one of the palatial infirmaries in large towns, and which are really State hospitals.

A few of you, perhaps, will enter the Army, Navy, Indian, or Colonial Medical Services, fields in which the name of St. Mary's is a shining light. A few may become consultants, though many more perhaps will aim at some branch of special practice. Specialism is no new thing in medicine; our art has long been split into the branches of surgery and physic; but the increase and development of specialism is one of the most striking facts in the medical history of the latter half of the present century. Among the advantages of specialism are these:

1. Constant examination of a large number of cases of disease of any given area must and does lead to an increased knowledge of its appearance in health and disease, and enables the frequent and systematic observer of that area to detect abnormalities overlooked by, invisible to, or unappreciated by an occasional observer.

2. Constant concentration of thought on one branch of knowledge, and pondering over it from all points of view and in all its bearings, leads slowly but surely to scientific advance. Few specialities have reached in less than forty years the remarkable development attained by laryngology and rhinology since the invention of the laryngoscope by Señor Manuel Garcia. This is chiefly due to the truly remarkable result of local treatment. When we consider the far-reaching effects of post-nasal adenoid growths on the organism, and the benefits following their adequate removal, the progress that has been made in the treatment of diseases of the nasal accessory sinuses, and the demonstration of the significance of obstruction of the nose, and the methods of dealing with it—in fact, the nose is now treated with the same consideration as a blocked windpipe, gullet, gut, Eustachian tube, lachrymal duct, or any other stenosed channel—we cannot wonder that on the Continent there is hardly a university without one or more professors of this speciality and well-appointed clinics: while its professors attain to the highest rank and position (only recently Professor von Schrötter has been ennobled and transferred from the Chair of Laryngology to that of Clinical Medicine at the University of Vienna). Moreover, in all countries there are special laryngological societies, at least six different special monthly journals in different languages, a teeming supply of manuals, textbooks, and atlases, and crowds of practitioners.

3. A high degree of operative skill is developed by constant practice and repetition of similar operations.

4. Another advantage of specialism is, that it is possible for its practiser to keep well abreast of the knowledge in his branch.

5. A further advantage of a speciality is that it gives the specialist opportunities for leisure and for cultivating other interests than medical.

In the early days of specialism it cannot be doubted there was a bitter spirit of antagonism which it is difficult to account for, except as the outcome of the conservatism of the profession. By the establishment of special hospitals, whole classes of cases were attracted away from the general hospitals, seriously diminishing their value as medical educational centres. Moreover, the funds derived from the charitable public for their support were diverted from the channels we should think more desirable. To this day we still suffer these results, and although now nearly all the large general hospitals have remedied their mistake by establishing separate departments for each of the specialities, it is too late ever to regain the ground that has been lost.

Among the latter-day outcries against specialities is, that they are too comprehensive, a charge which may be well opposed to the old charge of narrowness. Thus, the oculist is blamed for attacking a suppurating frontal sinus, the aurist for opening a mastoid cell, and the laryngologist for casting his vision beyond the limits of the thyroid cartilage.

However, specialism has emerged into the light of day, and now enjoys the honourable recognition of the thinking members of the profession and the public: but there is need for still further sympathy between specialists and the general body of the profession in the interests of both. Each is necessary to the other, for no one can be an all-round specialist, and all-sufficiency is as great a snare and delusion, and a dishonesty to our patients, as self-sufficiency.

BEQUEST.—Miss Ann Wells, a Lincolnshire lady, who died recently at Lensingham, near Sleaford, has bequeathed the residue of her property, estimated at about £12,000, to the Lincoln County Hospital.

MIDDLESEX HOSPITAL.

THE PUBLIC, THE MEDICAL PROFESSION, AND MEDICAL CHARITIES.

By Robert Boxall, M.D.Cantab., M.R.C.P.Lond.,
Assistant Physician to the Middlesex Hospital, and Lecturer on Practical Midwifery at the Middlesex Hospital Medical School.

After some words of exhortation and advice to the students, the lecturer proceeded to discuss the relations subsisting between the public, the medical profession as a whole, and medical charities. His remarks were illustrated by means of a series of statistical tables and diagrams. The first point touched upon is of interest alike to the public and to the profession—the steady increase in the number of doctors which has taken place of recent years. The lecturer showed that the ranks of the profession in England and Wales have been gradually swelling out of proportion to increase in population. Beginning with the year 1878, at which time there was one doctor to every 1,645 people, the number gradually rose, and in 1882 reached 1,703. Since that year, however, the proportion of inhabitants to doctors has steadily diminished, having declined last year to 1,451. This diminution indicates a falling off of very nearly 250 people to each practitioner now as compared with twelve years ago. This fact, associated with a period of general financial depression, has seriously curtailed the average earnings of the doctor.

The lecturer then passed on to discuss the alleged depletion of the pockets of the medical profession by hospitals and other charitable institutions which provide medical attendance gratis, or for a mere nominal charge. He produced evidence that the number of hospitals and dispensaries now in existence in England and Wales has during the last sixteen years increased slightly out of proportion to population, though not out of proportion to the number of members in the medical profession. He also showed that though the number of institutions has evinced but little proportional increase, the number of patients receiving medical attendance in each has increased considerably, and has been accompanied by a slight, though scarcely proportional, increase in the acting medical staff. He stated that the annual number of patients receiving treatment at hospitals and dispensaries in England and Wales has increased by over one million during the last sixteen years. He then passed on to consider whether the increase has been brought out entirely or in great part by the overgrowth of the out-patient department, and also whether this has taken place as has been alleged, particularly in the large metropolitan hospitals with medical schools attached. A comparison between the years 1878 and 1893 is drawn from all the hospitals and dispensaries in respect of which the number of in- and out-patients is separately stated, with the result that the relative proportion of in- and out-patients is found to remain precisely as it was not only when England and Wales as a whole, but also when London and the provinces are separately considered.

Incidentally it may be noted as a point of some interest that the proportion of out-patients to in-patients in London is nearly double what it is in the provinces. As regards the large metropolitan hospitals with medical schools compared with other institutions in London, an exactly corresponding relation has been preserved in the proportion of in- to out-patients, and the number of out patients is, in point of fact, rather less in proportion to in-patients now than it was sixteen years ago. But in the case of the more recently founded hospitals and dispensaries in London, it is evident that the proportion of out-patients to in-patients is very largely in excess in comparison with the older institutions—in fact, nearly double. In the provinces, the more recently established preserve the same relation between the in- and out-patients as the older institutions. From all which it is manifest that the outcry which has been raised against the out-patient departments of the large general hospitals is unwarranted, at least in comparison with what might be said of more recently established institutions, most of which have no teaching functions to fulfil. It is an undoubted fact that in all the hospitals the number of out-patients has increased, but so, also, has the number of in-patients; and an outcry against the one is no more justified than an outcry against the other. But, inasmuch as medicine is in itself a progressive science, it would be a wonder indeed if those institutions—the medical charities of Great Britain—which have long been the admiration and wonder of the whole civilised world, fail as years roll on to enlarge their walls and to increase the scope of their utility. The Middlesex Hospital certainly does not intend to be behindhand in that respect.

ST. THOMAS'S HOSPITAL.

THE MEDICAL PROFESSION AND PUBLIC OPINION.

By The Rev. William Walter Merry, D.D.,
Rector of Lincoln College, and Public Orator in the University of Oxford.

After distributing the prizes gained by students during last year Dr. Merry gave an address, in which he in the first place discussed some of the criticisms which Plato in a tone of delicate irony had passed upon the practice of medicine and surgery in Homeric times. The philosopher had taken this means of expressing his own views by contrasting the simple methods of treatmeat applied to the wounded heroes under the walls of Troy with the system of his own day, which involved, as he contended, too much coddling. Plato allowed no place to invalids in his ideal commonwealth. The artisan might seek an immediate remedy, but advice as to diet and warm wraps he could not follow, but must return to his work to get well there or, as Socrates said, "die, and have no more trouble. When citizens grow indolent and intemperate then courts of law and hospitals are established, and the arts of the lawyer and physician give themselves airs, and new names are invented for the diseases of those careless livers, who fill themselves with winds and waters like a marsh."

The speaker then quoted Plato's somewhat mysterious statement, "The physician had better not be of robust health; and he should have known what illness is in his own person." This meant that the physician must not only give his professional services, but must have sympathy with his patient, and be able to feel with and for him. His interest in the case, his vigilance in noting symptoms must be exalted into a higher sphere by the *magica sympathica*—the device which Lord Herbert of Cherbury bore on his shield, and which every practitioner of medicine ought to adopt. This sympathy, this reverence for the mental and bodily troubles of the patient was the real sanctification of the physician's work, and was the unfailing antidote to that degradation of science which tempted narrow natures to look on the men and women entrusted to their care as so many living organisms in which pathology might be studied.

Turning then to the subject of examinations, Dr. Merry observed that a well-conducted examination was intended to discover if the student had a grasp of principles and the power of applying them. Book work must have actuality given to it by observation and experiment. In the present day, when early specialisation found so many adherents, it was necessary to remember that professional study was only one side of the preparation for the battle of life. A certain width of interests, a certain *savoir faire* were indispensable to the man who was to be a power among his fellows. The cultivation of some taste outside the routine of professional work well repaid the hours devoted to it, in increased flexibility of mind and breadth of view.

Dr. Merry then proceeded to comment on the growing interest which the general public was taking in the science of medicine. The superstitious credulity with which thousands of men and women looked confidently for instant cure for chronic diseases by means of a few well-puffed pills or a spoonful of patent syrup, or expected rejuvenescence at four score years from the presence of a zinc and copper button in the waistband, was really a proof of this increased interest. So also were the semi-scientific articles in the magazines and reviews. The "man in the street" would talk glibly of bacilli and leucocytes, and occasionally go so far as to boil his milk or strain his drinking water through a neglected filter as a tribute to the laws of hygiene, about which he prattled. Through all this nonsense might be seen the fact that the world was keenly alive to the progress of medicine and full of great hopes for its future development. The medical profession as it grew grander every year became more and more arduous to its worthy disciples. It had no fixed horizon,

but must keep pace with the whole study of Nature. Yet "the doctor" must not lose himself in the physiologist or chemist, nor sink the practical man in the metaphysician or moral philosopher.

After drawing an agreeable comparison and contrast between the medical student of to-day and the medical student of sixty years ago, as described in the *Pickwick Papers*, Dr. Merry alluded to the enrolment of that noble army of trained nurses, whose skill and tenderness had doubled the physician's power and lightened the burden of human suffering.

UNIVERSITY COLLEGE, LONDON.

MEDICINE AS A CAREER.

By H. R. Spencer, M.D.,

Professor of Midwifery in University College and Obstetric Physician to the Hospital.

The lecturer said that the usefulness of an introductory address had been questioned, and University College was one of the few medical schools which remained conservative in this respect. An introductory address for the purpose for which it was formerly given was now quite obsolete. Teachers and textbooks would give full instruction to students in the matters and methods of study. Perhaps it would have been more useful to their parents and at an earlier stage of their careers. He would advise parents to give their sons destined for the medical profession an education in which science and modern languages played a considerable part. He thought that the standard of the preliminary examination in general education should be raised. The medical student, of all others, required a sound body and a cultivated mind, and if to these he added industry and high character he might be confident of success.

To all his hearers he extended a hearty welcome, and congratulated them on entering the medical profession at the end of the nineteenth century, during which such great progress had been made in the sciences, and in none more than in medicine. Among other instances, he alluded to the application of the antiseptic principle to the treatment of wounds, which had revolutionised surgery and obstetrics, and which he believed history would record as the grandest achievement of the century. For this the world was mainly indebted to the genius of one man, a former student of University College Hospital. In medicine, too, great advances had been made in diagnosis and treatment, as a result of the employment of the experimental method of research, which only the ignorant condemned.

Perhaps medicine was a little neglected by the State; but the eloquent and generous tributes recently paid to the medical profession by Lord Salisbury and Mr. Gladstone showed that it was appreciated by the chief men of the State. There were some directions in which legislation was urgently required for the benefit of the public as well as of the profession. Necropsies in cases of unnatural or suspicious deaths should be performed only by expert medical jurists and pathologists. If coroners were always drawn from the ranks of medical men there would no longer be returned such verdicts as that given in the recent Blue Book on Certification of Death: "That the man died of stone in the kidney which he had swallowed when lying drunk on a gravel path." Practice by unqualified persons and by medical men whose names had been removed from the *Register* should be absolutely prohibited. The law should be made to bear severely upon those unprincipled persons who risked the lives of the ignorant poor by circulating among them the cruel slander that patients were experimented upon in hospitals. He congratulated his hearers upon having joined University College, an institution which had always been in the front rank of medical education in this country. Its students had eight times in the last ten years taken the gold medal at the M.D. examination of the University of London, and the number of its pupils who had obtained appointments upon the staff of other London medical schools was twice as large as that of any other institution.

Adverting to the question of abuse of hospitals by well-to-do patients, he thought hospitals should be able to recover fees from persons who obtained gratuitous treatment by fraudulently representing themselves to be poor. It was something to the credit of the medical profession that physicians and surgeons not only gave their services gratuitously to the hospitals—a matter concerning which there was much misunderstanding in the public mind—but also in the case of private patients who were poor, or represented themselves to be so, they often received no recompense beyond the gratitude of their patients.

In giving advice to the students concerning their studies he recommended regular attendance upon the practical classes and upon the lectures, which had many advantages over textbooks. They should assiduously cultivate the art as well as the science of medicine. They could not spend too much time in the out-patient department and the wards of the hospital. Nor could they examine too many cases, for there was not one from which something could not be learnt. Especially should they endeavour to obtain one of the resident posts at the hospital which gave a training with which no other could compare.

After they had obtained their qualification he thought it would repay them in increased health and knowledge of the world to take a voyage to one of our colonies as surgeon to a steamship. Many University College men had in doing so found excellent openings for practice, and had risen to positions of high influence.

Their art was a long one, and they should not be in a hurry to settle in practice, and when they did so let the aim of each of them be to add to the dignity of his profession. No amount of advice could make up for the want of proper feeling on their own part. By lectures they might be made learned, but not honest, sympathetic, and kind—qualities essential to successful practice. The profession they had chosen was an arduous one, and yet it was the most fascinating of all. Their position in the world would depend upon themselves. No social class could look down upon those to whom such sacred interests as reputation and life were entrusted. Greater trust had no man than this—that he trusted his life to his friend. Might they all prove worthy of that trust, of their profession, and of their school.

WESTMINSTER HOSPITAL.

MEDICAL EDUCATION IN LONDON.

By Gustavus Hartridge, F.R.C.S.,

Lecturer on Ophthalmic Surgery to the Hospital.

Mr. Hartridge congratulated his hearers on having selected as their place of study the Westminster Hospital, which was, he said, one of the oldest in existence. It was first opened under the title "Public Infirmary for the Sick and Needy" in 1715, when the only other hospitals in London were St. Bartholomew's and St. Thomas's. Nine years later in-patients were admitted to a hospital in Chapel Street containing sixty beds. In that hospital Cheselden acted as surgeon, for it was not until 1834 that the present building was opened and a medical school established. The medical school was small in numbers, but this was rather to the advantage of the students, who became personally known to all the members of the staff, which equalled in number that of the larger hospitals; clinical material was ample, and examination passlists showed that the teaching was second to none. Further, there were numerous house appointments open to a greater proportion of students than could be the case in most hospitals, and the value and importance of such appointments could not be over-estimated.

Turning, then, to consider the student's career, he expressed the opinion that much benefit would arise from raising the standard of the preliminary examinations or the entrance examinations; such a change might have the effect of diminishing the numbers entering the profession, but this disadvantage might easily be endured. He thought that in these examinations Latin and Greek might be replaced by modern languages and scientific subjects equally effectual as a mental training and far more useful. The number of subjects to be studied during the five years' curriculum was enormous, and it behoved the student to make a judicious distribution of his time, to regulate his working hours, but

to be careful to look after his general health by spending a certain time each day in the open air and taking an intelligent interest in sports.

Every student must find out for himself the way in which he could best acquire knowledge; the value of systematic courses of lectures had been questioned, and Mr. Hartridge was of opinion that they were only of use when the student was reading up the same subject at the time. But as to practical work there could be no doubt. It must be learnt in the wards and out-patient rooms, reading being a secondary means, assisting in the arrangement of ideas and stimulating observation, for the basis of a true study of medicine was a scientific habit of mind, trained to the habit of observing facts accurately.

To those who had obtained their diplomas the lecturer said: Be charitable to the members of your own profession and do not be too ready to believe all you hear to the detriment of your professional brother who may live in the same town as yourself, that ancient medico whose diploma may be ten years older than your own. All gossip is contemptible, and when it concerns a member of your own profession it is base indeed.

On entering upon practice one of the first things which was learnt was that it was very easy to make mistakes, but mistakes properly recognised were the surest way to knowledge: the danger was in those men whose self-confidence was only equalled by their ignorance and who are unable to recognise their own mistakes. It was well to be sceptical of those wonderful tales of cures effected after many physicians and surgeons of high repute had failed. No medical "yarn" was too improbable for the public to swallow, in fact the more improbable it was the more easily did they seem to digest it. Hence the success of quacks who advertised so freely in the press.

"These advertisements," Mr. Hartridge continued, "are hardly a credit to journalism; they are usually of the most flagrant description, many of them without a vestige of truth, out of which the papers make a rich harvest, for they charge special rates for these insertions. The mere fact that it is worth while paying these very heavy rates proves that they are not inserted in vain. The so-called religious papers, which might be supposed to be published in the interests of truth are the worst offenders. I hope the day may not be far distant when every respectable paper will be able to follow the lead of the *Times* and refuse all such advertisements."

After referring to the belief of the public in heaven-born gifts of bone-setters, Mr. Hartridge observed that there were men holding regular diplomas who acted the part of advertising quacks protected by their diplomas. Such men were a disgrace to the profession and to the colleges from which their diplomas were derived. Such men, if the colleges did their duty, would be struck off the lists and relegated to the rank of the advertising, unqualified quack whose existence was a disgrace to the legislation of a civilised country. The General Medical Council had lately shown increased activity in looking after black sheep but in the present state of the law even when the name of any notorious offender had been removed from the *Register* he might still practise and use his diploma, the only disadvantage being that he might not sign a death certificate and could not recover fees in a court of law.

Turning next to the university question in London, he said that the ordinary student was debarred from obtaining the degree of M.D. The University of London was merely an examination board, and London students possessed no advantage over competitors from other parts of the country. The proposal of the last Royal Commission was not for a new university, but for an extension of the existing one. It involved the formation of six faculties—Arts, Science, Medicine, Law, Theology, and Music, for teaching and examining purposes. The colleges and schools of London were to be affiliated to the University wherever found worthy. "A central and imposing building," Mr. Hartridge continued, "worthy of this great city, must serve as the outward and visible sign of its mental life, for, if London is to have a university at all, it should appeal to the eye as well as to the mind, and should serve as a focus of all the different interests of our intellect and culture: for all this, money will be required. What a chance is here for some millionaire to escape oblivion, and write his name large on the future history of London."

In conclusion, Mr. Hartridge dwelt on the relations of ophthalmology to general medicine and surgery, and recommended students to pay attention to this important speciality, for not only was the knowledge thus acquired of the greatest value, but the study itself afforded an excellent training.

SHEFFIELD MEDICAL SCHOOL.

MEDICAL EDUCATION AND MEDICAL ETHICS.

By J. W. Martin, M.D.,
Joint Lecturer on Midwifery, and Honorary Medical Officer to the Jessop Hospital for Women.

In his opening remarks Dr. Martin alluded to the loss the profession had sustained in the death of Sir Andrew Clark, and gratefully recognised his services to the school in coming down to Sheffield to plead its cause when an effort was being made to raise the money for the erection of the present school buildings. A tribute was also paid to those who had preceded him in performing the duty of delivering the introductory address, special mention being made of Sir J. Crichton Browne.

Having warned the students of the importance of the choice they were making of a life's work, and having expressed the hope that they were devoting themselves to the profession in a proper spirit, he welcomed them on behalf of his colleagues and himself. The lecturer next dealt largely with the practical side of the student's education as carried out in the dissecting room, the laboratories, and at the bedside. The necessity for the cultivation of careful and accurate observation was strongly urged, and allusion was made to the power the older physicians had of reading aright the outward signs of disease, which enabled them to form very accurate diagnoses in the absence of the many instruments of precision which were at the disposal of the medical men of the present day. The necessity for a proper amount of relaxation in the life of the student was touched upon, but the lecturer urged that it should be kept within reasonable limits, and that indulgence in games, and other pleasurable pursuits, must always be subordinated to the real work of a student's life. Avoidance of habits opposed to steady work was strongly urged. The temptations of student life were pointed out, and moderation in all things was recommended.

In addressing himself to the advanced students, whose course was drawing to a close, the lecturer insisted strongly that they should study the ethics of the profession, as ignorance of its canons was only too frequently a source of annoyance and irritation, especially to those who were commencing practice. In this connection he laid stress upon the observance of the good old rule, "As ye would that men should do unto you, do ye also to them likewise." He maintained that the more broadly and generously this rule was interpreted, the happier would be the lives of those whose dealings with others was guided by it. The lecturer strongly condemned the practice of those who descended to methods of making an income which, though they might be lucrative to the individual, were disgraceful to the profession at large. He expressed the hope that such practices might soon come within the scope of the General Medical Council, and that they should be put down with a strong hand. He strongly condemned those medical aid and insurance societies which tempted young medical men to allow themselves to be farmed out for the profit of their employers, though, in doing so, they were giving their services to those who were quite in a position to pay for medical services, and were thus degrading themselves, and striking a very serious blow at the welfare of the profession at large.

Dr. Martin, in concluding his address, pointed out that it was not given to everyone to attain eminence as well-known physicians or brilliant operators, but held that those who were engaged in the humbler sphere of general practice were, in their efforts to relieve suffering, doing as much good as those who won fame and fortune by the performance of some brilliant major operation: such men could look back in after-years with satisfaction to the good work they had done.

ROYAL VETERINARY COLLEGE, LONDON.

THE SUPPRESSION OF THE CONTAGIOUS DISEASES OF ANIMALS.

By John McFadyean, M.B. and C.M.Edin.,
Professor of Comparative Pathology and Bacteriology, Royal Veterinary College.

Professor McFadyean said that the session which they had met to inaugurate that day marked an important step in the evolution of veterinary education in this country. Veterinary students had now to furnish evidence of having received a general education equivalent to that required for the study of law or medicine, and they had to undergo a professional training extending over a period of four years. That could not fail to enhance the social and scientific status of British veterinary surgeons, and it would warrant them in claiming that they belonged to one of the learned professions.

Proceeding to deal with the suppression of contagious diseases of the domesticated animals, which he had selected as the main subject of his address, the lecturer said that the system of "stamping out" which had already proved so successful in the case of cattle plague, pleuropneumonia, and foot-and-mouth disease, had been characterised as barbarous and unscientific. At the present time some people seemed to think that in the future there would be a great development and extension of protective inoculation as a means of dealing with animal plagues. No doubt that would, for a time at least, be a great source of gain to veterinary surgeons, but it would just as certainly be a great source of loss to stockowners. The stamping-out policy was now being put into force against swine fever, and that, it was to be feared, would be the hands of the Board of Agriculture for some time to come. Meanwhile, it was worth considering whether any of the other contagious diseases of farm animals could be successfully attacked by veterinary surgeons without the organised direction of the central authority. He thought that this could be done in the case of two diseases that were at the present time the cause of immense loss. The first of these was glanders. A few years since it seemed as if glanders could not be successfully dealt with by any other method than wholesale slaughter of infected studs, with compensation from imperial funds. But the discovery of mallein had given an entirely new complexion to the question. As a means of diagnosis, the use of mallein was so marvellously accurate, that a veterinary surgeon could now within twenty-four hours point out to any horse owner every glandered animal in his stud. Glanders could therefore now be stamped out without destroying a single horse beyond those actually infected. This information had been before the reading members of the veterinary profession for nearly two years, and yet, except in a few isolated instances, full advantage of the new discovery had not been taken in dealing with outbreaks. No compulsion ought to be necessary, but if horse owners did not soon make a more serious effort to free their stables from glanders, the law would have to be altered. The law as at present administered was certainly defective, for horses that had been exposed to the contagion of glanders were sold openly in London almost every day. This scandal ought to be put a stop to by giving the purchaser of any horse found (by the mallein test) to be glandered within a few days of the sale the right to recover the price paid.

Tuberculosis was another disease against which stamping-out measures might now be hopefully employed. As a first step, they ought to diffuse among agriculturists correct notions regarding the causation of the disease. It was still almost generally held that tuberculosis of cattle was frequently congenital, but there was overwhelming evidence to prove that that opinion was erroneous. Even when one of the parents was tuberculous, not one calf in a thousand was born tuberculous. In cattle under a year old, the proportion of tuberculous individuals was less than 1 per cent., but it rose steadily with age until in adult cows it was seldom less than 20 per cent., and frequently 40 or 50 per cent. Every known fact regarding the incidence of the disease as regards age, breed, and locality was in complete accord with the view that bovine tuberculosis was a disease that spread with great certainty when diseased and healthy animals were housed together, but which had only feebly contagious properties among cattle kept in the open air.

The discovery of tuberculin had put in their hands the weapon that was needed to wage war with tuberculosis of cattle, and veterinary surgeons should lose no opportunity to urge its employment upon those who had the disease in their herds. By that means anyone might free his stock from tuberculosis at a cost that would be small compared with the steady loss entailed by the present neglect of every reasonable precaution against the spread of the disease. The eradication of animal tuberculosis would be a great national gain, and, although it probably would not sensibly lessen the prevalence of human consumption, it would have a powerful effect in convincing the public that contagion is the main factor in the dissemination of phthisis.

REVIEWS.

1. Diseases of the Throat and Nose. By F. De Havilland Hall, M.D., F.R.C.P.Lond. London: H. K. Lewis. 1894. Lewis's Practical Series. (Crown 8vo, pp. 536. 10s. 6d.)
2. Clinical Manual for the Study of Diseases of the Throat. By James Walker Downie, M.B. Glasgow: James Maclehose and Sons. 1894. (Crown 8vo, pp. 268. 6s.)
3. Diseases of the Throat, Nose, and Ear. A Clinical Manual for Students and Practitioners. By P. McBride, M.D., F.R.C.P.Ed. Edinburgh and London: Young J. Pentland. Pentland's Medical Series. (8vo, pp. xvi, 640. 25s.)

If the student of the present day is not thoroughly well equipped for the treatment of the diseases of the throat and nose, assuredly it will not be for the want of textbooks on the subject. The only difficulty he can have is in the choice of the guide most likely to suit his peculiar needs. To help him in this selection is, we take it, the chief function of the reviewer. In the following notice, accordingly, an attempt is made to indicate the characteristic features of the several works mentioned at the head of the article, without professing to give an exhaustive analysis of their contents.

Dr. De Havilland Hall has succeeded in giving a fairly complete account of the diseases of the throat and nose in a moderate compass. No superfluous details are given, but no essential points are omitted. The book is well arranged, the descriptions of diseased conditions concise but adequate, the rules for treatment clear and practical. As regards the latter, it may be added that they are generally of such a nature as to be within the resources of the general practitioner, a feature which is not so common as it might be in works of this class. The author shows a thorough acquaintance with the literature of his subject, and gives full references; indeed, his scrupulous care to give honour to whom honour is due—though it be but for the observation of an obvious fact—though highly honourable to the author from the point of view of literary ethics, appears to us a little out of place in a work like the one before us. A manual which forms part of what professes to be a "practical series" should be written in as dogmatic a tone as the state of knowledge at the time of its appearance will warrant. Though the work is evidently the outcome of a ripe experience, Dr. Hall seems to us inclined to give somewhat too much prominence to the views of other writers, so as in a certain measure to overshadow his own.

The book is fairly well, though not profusely, illustrated: a point which we think worth mention in this connection is that, while all instruments required for the recognition and treatment of the diseases described are figured, the pages are not overloaded with such material, as is the case in many works on the nose and throat which have more the appearance of instrument makers' catalogues than of scientific treatises. A feature of Dr. Hall's book which is likely to find special favour in the eyes of busy practitioners is the collection of useful formulæ which is given at the end. On the whole the book is well got up and carefully printed, but a little more attention might with advantage have been bestowed on the revision of the proofs, especially in the matter of names. Thus, without making any particular

search for errors of the press, we have alighted on such slips as the following: "Pharnygitis" for pharyngitis (p. 175); "trochisi" for trochisci (p. 178); "Ingal" for Ingals (p. 329); "Montard-Martin" for Moutard-Martin (p. 304, and repeated in the index, p. 510); "Leffert" for Lefferts (p. 426); "Trendelenberg" for Trendelenburg (p. 511); "Fournié" (p. 29, though correctly given elsewhere as Fournier). The name of Dr. Gouguenheim, of Paris, is given as "Gougenbeim" throughout the book and in the index. These errors are of little importance in themselves, but they might be avoided with a very little care, and as a matter of courtesy to fellow workers such care should always be taken. Altogether, however, Dr. Hall's manual is one of the best which has appeared in the series of which it forms part, and we have no hesitation in strongly recommending it. The student will find in it just what he wants to supplement the knowledge gained from his textbooks of general medicine and surgery, and the practitioner the guidance which he requires in the treatment of the diseases of the throat and nose which he is likely to meet.

Dr. Walker Downie's manual is stated in his preface to be "dictated in great part by personal experience." It is divided into two sections, in the first of which the systematic examination of the parts, and the various manifestations of disease of which they may be the seat, are described, while in the second individual diseases are considered in detail and the treatment fully set forth. The first section is particularly valuable, though the directions for the examination of the mouth, gums, cheeks, tongue, etc., strike us as being needlessly elaborate. If this be a fault, however, it is a fault in the right direction, and if such a thorough inspection of every corner of the buccal and pharyngeal cavities as Dr. Walker Downie insists on were the rule rather than the exception, as it is even among specialists, the evidence of disease in these regions would be much less frequently overlooked. The descriptions of diseases are lucid and accurate, and a specially commendable feature of the work is the stress which is throughout laid on the necessity of constitutional treatment in all disorders which are the result of systemic disease. All the essential points in the therapeutics of the throat are given in a final chapter.

The work is well and not excessively illustrated, largely from original drawings made by the author, and it is printed and got up in a manner which reflects credit on the publishers. We have noted very few misprints; "paraphymosis" occurs at page 44, and "Lancraux" for Lancereaux at page 159. The author or his printer seems to abhor diphthongs; there is, as far as we know, no particular objection to this, but it has the disadvantage—from the publisher's point of view—that it makes such misspellings as "ozoena" (page 2) more obvious to the eye than they otherwise would be.

On the whole, Dr. Walker Downie may be congratulated on having produced an excellent introductory manual, not pretending to completeness in detail, but giving an exposition of the principles of the subject which will form a sound foundation for the building up of fuller knowledge. It has the great, and in these days too rare, merit that it is evidently written direct from Nature rather than made up of gleanings from books. This first-hand quality of its matter and the readable manner in which it is conveyed are, we think, likely to make the book a favourite with students.

Dr. McBride's work is more extensive in its scope than either of the others just referred to, inasmuch as it includes the ear as well as the throat and nose. It has been some time before the profession and has earned for itself a very favourable reputation both as a scientific exposition of the subjects of which it treats and as a trustworthy guide in practice. The author appears to us to have fully carried out his expressed aim of conveying within a volume of reasonable dimensions the main facts of modern laryngology, rhinology, and otology. A specially admirable feature of Dr. McBride's book is that he looks at all questions in the domain of practice which he has chosen, not through the narrow eyehole of the specialist but with the wide outlook of the philosophic physician. This characteristic pervades the book, but becomes especially conspicuous when he has to treat of points where there is a tendency to over-refinement among specialists. Thus in discussing "the remote effects of nasal disease with special reference to nasal neuroses," he condemns the excesses into which the scientific imagination has allowed itself to run on this subject. Yet even here he is fain to admit that some exuberance of belief is better than "stolid immovable scepticism." Dr. McBride's work is a solid addition to scientific literature; it bears on every page the personal impression of the author, and is as far as possible removed from the type of compilation which is the modern representative of the "big drum" of a ruder age. Dr. McBride has a judicial mind, well fitted for the weighing of evidence, but while never allowing himself to be carried away into any excess of enthusiasm, he is equally removed from the opposite defect of an unprogressive conservatism. For the information and guidance of the general practitioner in the special departments of the healing art with which it deals, we know of no work in the English language which can be compared with it. It only remains to add that the book is illustrated with numerous beautifully executed coloured plates, and printed and "got up" with the finished workmanship which distinguishes the productions of its publishers.

Clinical Medicine: A Manual for the Use of Students and Junior Practitioners. By Judson S. Bury. London; Charles Griffin and Co. 1894. (Roy. 8vo, pp. 488. 21s.)

This manual of *Clinical Medicine* will add to the growing reputation of the Manchester Medical School. From the same school, and in the same series of manuals, Professor Stirling, in his issue of Landois's *Physiology*, has sought to bring the most advanced physiology into relationship with clinical work—departments which of late years had seemed to be drifting away from each other. Various clinical works, likewise, have been aiming at bridging over the same gulf from their side, seeking to utilise at the bedside the most recent researches of the physiologist, the chemist, and the bacteriologist. The very valuable treatise of v. Jaksch, on *Clinical Diagnosis* (also issued by Messrs. Griffin) has supplied the student and the physician with important data on many of these chemical and bacteriological questions; but his treatise scarcely comes into competition with Dr. Judson Bury's new volume which, although less detailed in its chapters on these matters, covers a much wider area in clinical work.

After a preliminary chapter on Symptoms for the Most Part Subjective in Character, the author goes on to deal with the examination of the surface of the patient, and to take up the various physiological systems in detail. In discussing these he has availed himself of the aid of Dr. Wild, who writes the section on Skin Eruptions, and of Dr. Harris, who writes the section on the Examination of the Larynx. Other colleagues and friends have given help which is also acknowledged.

This work is sure at once to take a foremost place as a guide in clinical work. The number and value of the works on this subject, which have been issued in this country during the last fifteen years, show the growing importance attached to systematic study at the bedside, and to the practical methods of teaching and learning which alone can give the student a grasp of his subject. The most striking feature of this new volume is the great profusion of illustrations. These enable the reader to understand much more readily the matters described in the text. They are in many cases from photographs or diagrams derived from the author's practice, or from that of his colleagues, Drs. Dreschfeld, Leech, and Steell, and also from that of his lamented friend, the late Dr. Ross. A coloured diagram of Mr. Thorburn's on the sensory distribution of spinal nerve roots is reproduced, and is sure to prove useful for reference. A few illustrations are borrowed from v. Jaksch and Landois.

With such a wide range of subjects as are taken up here, it is vain in a short review to attempt to criticise details. A word or two may be said on some points in the general plan of the book. Occasionally it seems as if methods were insufficiently explained. Four lines only are given to the method of applying the clinical thermometer, although much confusion of ideas still exists amongst nurses, students, and medical men on this fundamental point; the stories of thermometers giving the temperature in a minute or half a minute show that the principles underlying the application of a thermometer to ascertain the body heat are often unknown. A somewhat similar deficiency in clear explanation

occurs at page 394, where electrical formulæ are given; the letter "S" is explained as meaning "closure or making of the current," which does not seem very intelligible, as it is the initial of neither of these words, but of the German "Schliessung," in the original German formulæ of electrical reactions. Why German and English are used in the same formula is not explained.

In the section on Skin Eruptions, it is not very helpful from the clinical standpoint to have eruptions classified as due to "general diseases with cutaneous lesions;" "diseases of the skin due to parasites"—including micrococci, bacilli, etc.; and "local diseases of the skin not due to cutaneous parasites;" the last class, curiously enough, is made to include purpura, although the clause in the text about purpura hæmorrhagica makes one wonder why it is not classed by the writer in the group headed General Diseases. An eruption is said to be occasionally seen in relapsing fever, but this is not placed under the very comprehensive group due to "parasites," although elsewhere in the volume the spirilla of this fever are referred to.

By the plan of the book, apparently, rather than from any error or accidental omission, the disorders of menstruation and the disturbances of pregnancy are almost ignored. Menstruation does not occur in the index, although it is mentioned in the scheme of examining patients on page 8. Pregnancy is almost equally ignored, although the index refers to p. 317, where it is mentioned as a cause of albuminuria. Surely in a guide to clinical medicine the disturbances of menstruation should have some place; and no hospital regulations can be trusted to direct to a gynæcological department a case of vomiting from pregnancy. Even if this were possible in hospitals, the student should have the subject placed before him for his guidance in future practice. In the same manner, in the section on Abdominal Tumours or Swellings, the author seems purposely to ignore the commonest cause of such, namely, pregnancy; unless this be included under the term "great enlargement of the uterus" (p. 257). In all discussions of abdominal tumours in women, the idea of a possible pregnancy should be brought prominently before the mind at the outset. These criticisms refer merely to trifling defects, arising from the difficulties of arranging the multitude of subjects and fixing the limits of the work.

The book is excellently printed and illustrated, and reflects credit on the author and publisher alike.

Quain's Elements of Anatomy. Edited by E. A. Schäfer, F.R.S., and G. D. Thane. In three volumes. Vol. III, Part III. Organs of the Senses. By Professor Schäfer. Tenth edition. London: Longmans, Green and Co. 1894. (Royal 8vo, pp. 165, 178 Engravings. 9s.)

The tenth edition of this great English classic is approaching completion, and the part before us treats of the organs of sight, hearing, smell, and taste. Professor Schäfer is responsible for this section of the book.

The same high standard of excellence is maintained that is seen in the previous sections, both as regards text and illustrations, and it need hardly be added that the work has been brought fully up to date. Full justice is done to the work of Ramon y Cajal on the retina, and of Retzius on the internal ear. It illustrates the enormous impetus given to histological research by the use of Golgi's method.

The publishers have evidently spared no expense in the production of the book, and the editors are to be congratulated on the successful completion of another step of their monumental labours.

Textbook of Abdominal Surgery. A Clinical Manual for Practitioners and Students. By Skene Keith, F.R.C.S. Edin., assisted by George E. Keith, M.B., C.M. With Illustrations. Edinburgh and London: Young J. Pentland. 1894. (8vo, pp. 500. 16s.)

The name of the authors will suffice to give this work a good reception. The result of the labours of Dr. Keith and his sons, their practice, and their views are familiar enough to the profession. A summary of their teaching is therefore all the more desirable. Since that teaching as to theory and treatment is well known, it does not call for criticism in detail. A review of this work as a summary will be more to our present purpose.

The *Textbook* forms a fine volume, printed in large type. There are but thirty-four illustrations; perhaps too few. On the other hand, the text is not weighted by innumerable references, a satisfactory feature for the reader. The handling of clinical reports throughout the *Textbook* is particularly skilful. Their literary and scientific excellence are equally high.

All who look into the *Textbook* will seek for the authors' observations on electricity as a therapeutic agent in the treatment of the diseases of women. Out of a total of 500 pages of text, not quite eighteen are devoted to that subject. Hence the authors are not extreme advocates of a system with which their name is so often associated. In relation to extrauterine pregnancy they observe: "Of the less heroic methods of treatment, electricity is the only one which has been at all successful. But as the abdominal operation must be invariably preferred, it is unnecessary to describe any of the other methods which have been used." In respect to inflammatory diseases of the appendages, they say that, "as electricity for such conditions is in an early stage of development, it is impossible to say if cases can be permanently cured by its means. Some are cured, at least for a time, but our experience is not sufficiently old to allow us to say that there will not be a return of the disease." Two clinical reports follow; in the first it is doubtful whether rest cannot claim at least a great share in the cure. The authors' opinion on the electrical treatment of fibroids deserves respectful consideration. The advantages and disadvantages of the system are duly balanced.

The passages on ovariotomy and allied operations have been carefully prepared; of course they contain much debatable matter. The comparison between treatment of the pedicle by the ligature and by the cautery is hardly fair to the former. The surgeon closely following the directions at page 358 will find that the pedicle will occasionally bleed from slipping of the vessels in the outer border, for the great precaution of tying those vessels separately is not mentioned.

The authors do not believe strongly in elevation of the pelvis on Trendelenburg's principle, considering that the touch is more important than the sight in operations performed in the recesses of the pelvis. Most British operators will agree with them.

The above subjects form the larger part of the *Textbook*, the remainder including operations for abdominal diseases not confined to the female. The authors speak cautiously, as might be expected, of many of the important new procedures of foreign operators. This caution is not only exercised in respect to enterostomy and operations on the stomach: the authors are most justifiably reticent about removal of the spleen. Even in cases of cysts "the risk of hæmorrhage from the pedicle is so great that it is advisable to avoid total extirpation if a cure can be otherwise obtained." Any case of hypertrophy where there is an increase in the number of white blood corpuscles "must be handed over to the care of a physician." Such opinions show that the authors are surgeons rather than purely mechanical operators.

A Textbook of the Diseases of Women. By Henry J. Garrigues, A.M., M.D. Philadelphia: Saunders. 1894. (8vo, pp. 700, 310 Illustrations. 21s.)

This textbook of gynæcology is divided into two sections, the first treating of the anatomy of the female generative organs, together with the methods and means of examining women; the second dealing more especially with their diseases. A very excellent account is given of the anatomy: indeed, there are few books in which the description is so full and clear and profusely illustrated. The author has the common American prejudice against Fergusson's speculum, and states that it cannot be used for the inspection of the vaginal fornix. This, however, is a mistake. A good deal of space is devoted to gynæcological instruments, and they are illustrated by a number of figures. A second section is, on the whole, a very good account of the diseases of women

and their treatment. The matter is somewhat condensed, but the writing is clear and precise. The illustrations are excellent, with the exception of a few indistinct photogravures of tubal disease. In the next edition—which we doubt not will be shortly called for—we hope the author will replace these by woodcuts.

Lehrbuch der Geburtshülfe. [Textbook of Midwifery.] Von Dr. Max Runge. Zweite Auflage. Berlin: Springer, 1894. (Royal 8vo, pp. 560, 101 illustrations. M. 9.)

The second edition of Professor Runge's *Textbook of Midwifery* has numerous additions and corrections, and it can be highly recommended to the student who wishes to obtain within a moderate compass an account of the present state of obstetric knowledge. The author has also in this edition given such references to the literature of the subjects as will enable the reader to extend his researches.

The work gives an accurate and fairly complete account of the science and practice of midwifery. The style is somewhat dogmatic, but the author's judgment is so sound that this cannot be regarded as a fault in a textbook. In order to get this extensive subject into 560 pages, something has to be sacrificed to concisenesss, and polemics have therefore been avoided.

Symphysiotomy, one of the most burning questions of the present day, has been dismissed in three quarters of a page. It would have been well to have given more particulars concerning the birth and death and the revival and mode of performance of this important operation, which is being performed with increasing frequency throughout the world. In describing the Cæsarean section, the author states that the uterus is taken out of the abdomen, and an elastic ligature applied around the cervix to check hæmorrhage. Both of these precautions are attended with well-known disadvantages, and have been shown to be unnecessary.

In the treatment of severe asphyxia of the newborn child, insufflation of the lungs by means of the catheter is not prominently mentioned, while a long description, accompanied by illustrations, is given of the resuscitation of the child by Schultze's swinging movements, a method which is very likely to injure the lungs of newborn children. The author states that the swinging should be done with care when the clavicle or arm is broken. But Schultze's method should be entirely condemned in presence of such injuries. A broken clavicle is not always easy to detect immediately after birth, and it has been known to penetrate the chest and lung under the influence of Schultze's movements.

The cephalotribe has not been displaced by the cranioclast so entirely as the author seems to think; in this country it is much more frequently used. We have indicated a few of the shortcomings in this otherwise excellent work. They are to be explained partly by the author's straining after conciseness, and partly by his having somewhat limited his allusion to other than German researches. The work is one of the best of the German textbooks, being less philosophic than Winckel, and less learned than Spiegelberg, but more methodical and compact than either. With judicious editing it might well follow those excellent textbooks into an English dress. The printing and the illustrations are of high quality.

NOTES ON BOOKS.

Income Tax: How to get it Refunded. By Alfred Chapman. 10th Edition. (London: Effingham, Wilson, and Co. 1894-5. Small 8vo, pp. 60. 1s. 6d.)—This handbook contains instructions as to assessment, appeal, abatement, and repayment, by a gentleman who has for many years given special attention to the interpretation and administration of the Income Tax Acts. He asserts that, as a rule, medical men are much over-assessed, and gives advice as to the nature of deductions which may properly be made from gross income in returning the net income. The need for such a handbook is sufficiently shown by the following extract from an official circular, which Mr. Chapman puts upon his title page: The Board do not consider it necessary *to offer* such deductions; it will be sufficient to allow them *when claimed*." As to the morality of this attitude we shall not pretend to express any opinion: but Mr. Chapman has done good service by calling public attention to the curious standard adopted at Somerset House.

The Harrogate Mineral Waters: New Analyses with Observations. By Arthur Roberts, M.D., D.P.H. (Harrogate: R. Ackrill. 1894. Cr. 8vo, pp. 48. 6d.)—The "new analyses" to which this pamphlet refers have been made by Mr. Fairley, F.R.S.E., of Leeds, and Mr. Singer, F.C.S., of Calverley, and they are especially interesting as showing to what a degree the quantitative composition of mineral springs may vary from time to time. Even in the same year the quantity of solid ingredients in the same spring was found to vary to the extent of 35 grains per gallon. In the "Strong Sulphur" spring, since Professor Attfield's analysis in 1879, the saline constituents have decreased from 1003 000 to 724.794. In the same spring the quantity of barium has increased from 0.240 to 3.173 grains. Moreover, Mr. Fairley found an appreciable quantity of bromine present, and Professor Attfield found none. In another spring ("Mild Sulphur") the magnesia had increased from 1 grain (Professor W. A. Miller, 1869) to 9.4 grains. In another there is an increase of 61 grains of chloride of sodium per gallon. In another ("Starbeck") the potassium has increased from 0.368 grain to 11.157 grains, and the lime has decreased by one half. The "Kissingen" water has lost 219.706 grains of saline constituents. In "Muspratt's Well," the so-called chloride of iron water, the quantity of iron, according to this recent analysis, is 3.603 grains of carbonate of iron and 3.941 of chloride of iron, against 11.622 grains of carbonate of iron and 13.898 of chloride of iron in the analysis of 1881. These extracts from this useful pamphlet show how very important it is that mineral springs should be frequently analysed, and how delusive often the published analyses may be when they have remained uncorrected for a long series of years.

Examen et Sémétiotique du Cœur. [Examination and Semeiology of the Heart.] Par Dr. Pierre Merklen. (Paris: G. Masson et Gauthier Villars et Fils. 1894. Cr. 8vo, pp. 250. 2 fr. 50 c.)—This book on physical examination is divided into two parts, the first dealing with inspection, palpation, and percussion, and the second with auscultation. As regards the first part, it need only be said that the facts to be observed are clearly and succinctly given, together with the significance which the abnormal physical signs carry with them. In the second part, the first chapter is occupied by a description of the normal heart sounds, their mode of production, and the site of their maximum intensity. In the second chapter an unusually full and interesting account is given of tachycardia, both physiological and pathological. The intermittent and continued forms are discussed, with the causes which produce them and the significance which they bear. A useful account of bradycardia is given in the same way in Chapter IV. It is pointed out that irregularity of the pulse in valvular disease is usually associated with some alteration in the cardiac muscle itself. In this book much more frequent mention is made of diseases of the myocardium than is usual; their importance is very obvious although they are difficult to recognise. The subject of murmurs is well discussed in all its aspects, and the physical signs of valvular lesions and of pericarditis are also given. There is much more in this book than the mere detailing of physical signs, as it contains in addition information of a clinical character likely to be of considerable service. It can be thoroughly recommended.

The Graphic Temperance Reader. By Sir Benjamin Ward Richardson, M.D., LL.D., F.R.S. (London and Glasgow: William Collins, Sons, and Co., Limited. 1894. Cr. 8vo, pp. 150. 1s.)—In this volume, one of Collins's School Series, the author gives a lucid description of the composition and effects of the various forms of [illegible]. In early life an accurate kn[illegible] alcoholic beverages would be of [illegible]. Hence the value of such instructive teaching [illegible] in the work which is now before us.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

AN IMPROVED CONSULTING-ROOM COUCH.

DR. J. R. WHAIT (South Hampstead, N.W.) writes: There are probably many general practitioners who for want of space in their consulting rooms are unable to accommodate a full sized gynæcological or surgical couch and yet would be glad to possess one if only it could be made to occupy half the usual amount of space when not in actual use. The figures illustrate a couch I have devised for this purpose and which I have found to answer admirably. When closed (Fig. 1) it

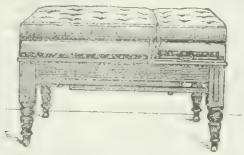


Fig. 1.

measures 36 inches by 23 inches, and forms a useful ottoman seat, unlikely to be an inconvenience in the smallest consulting room. When required for use it can in a very few seconds, by a mechanism somewhat similar to that of an ordinary sliding dining table, be extended to form a couch 72 inches by 23 inches and 21 inches high, a much more useful height for the manipulator than the usual height of 18 inches or 19 inches (Fig. 2). The head is capable of being raised to any

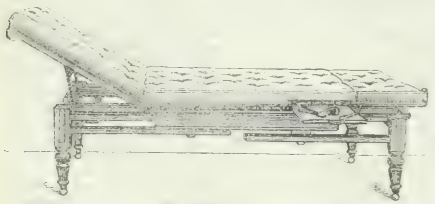


Fig. 2.

angle, and near the foot on the right hand side of the couch a draw tray is provided which will be found useful for instruments, etc., during an examination or dressing. The couch is further capable of being converted into a gynæcological or operating table (Fig. 3) by lowering the long legs

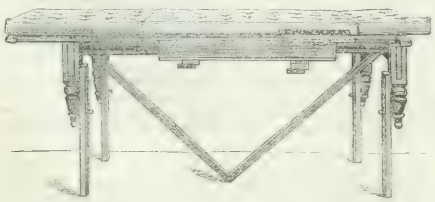


Fig. 3.

which are hinged and fixing them to the short legs by means of thumbscrews. The table being rendered perfectly rigid by the struts.

It has been excellently made in mahogany for me at the cost of £8 10s. by Messrs. T. Syer and Co., 45, Wilson Street, Finsbury, E.C.

TEA FOR INVALIDS AND PERSONS OF WEAK DIGESTION.

THE United Kingdom Tea Company, 21, Mincing Lane, have submitted to us a tea suitable for this purpose, and the results of our examination of an infusion of the tea made in the way adopted by tea tasters show that it contains less tannin in a cup of tea than is met with in an infusion made in the same manner with ordinary tea, whilst the stimulating alkaloid, theine, has not been diminished.

GRANULAR EFFERVESCENT BITARTRATE OF LITHIA.

WE have received from Messrs. Alfred Bishop and Sons, Limited, 48, Spelman Street, Mile End New Town, E., a sample of a new preparation of lithia in a granular effervescent form. Messrs. Bishop and Sons have carried to a high state of perfection the manufacture of effervescent granular preparations. We can say of this specimen that its appearance, granulation, and sustained effervescence when mixed with water indicate most careful preparation. The salt is perfectly soluble in water, and is a most agreeable way of administering lithia.

"FRAME FOOD" PREPARATIONS.

THE principle upon which these articles are manufactured is that of extracting from the bran of wheat its nutritious constituents, and separating them from the woody particles which render ordinary brown bread indigestible and apt to cause irritation of the intestinal canal, etc. The product of the operations carried out with that object is termed "Frame Food" extract, and it is used in the making of bread by mixing a certain proportion with wheat flour, by which means the amount of phosphatic constituents in the bread is increased, and the bread rendered proportionately more nutritious. Liebig's views as to the importance of the phosphates in food appear to have suggested the method adopted for preparing and applying "Frame Food" extract on the assumption that the phosphates required to sustain animal life must be derived from an organic source. This preparation is a brown powder of somewhat empyreumatic odour, only partially soluble in water. In addition to albuminous constituents and carbohydrates, it contains mineral constituents corresponding to 7.35 per cent. of ash, consisting chiefly of phosphates, proportions which agree tolerably well with the published analysis. The characters of the extract appear to be, however, somewhat inconsistent with the suggestion in Professor Attfield's report that it is prepared from bran by a process of solution, and they are more in accordance with a product of torrefication.

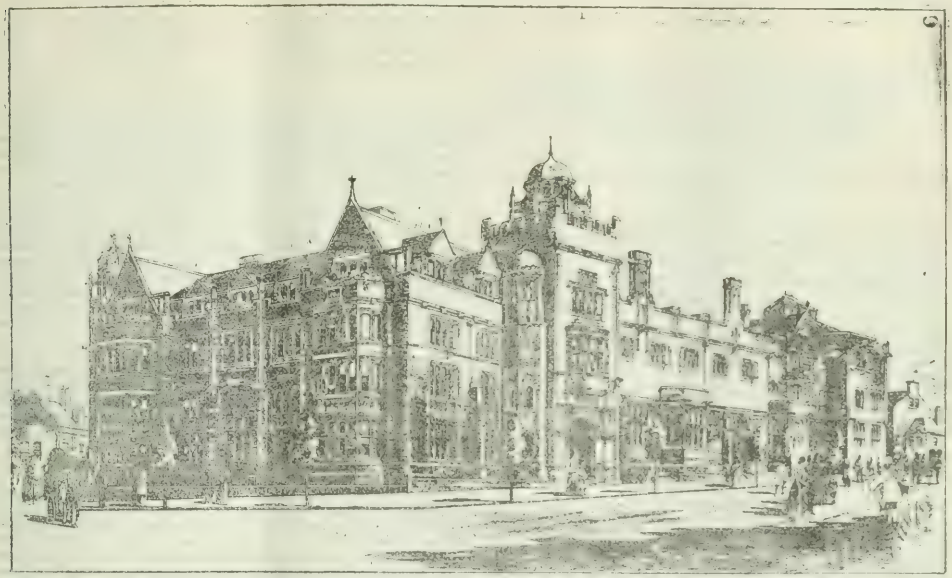
"Frame Food" diet described as "a cooked food strengthened with the 'Frame Food' extract of wheat phosphates," is a mixture of the extract with baked flour.

"Frame Food" jelly is a saccharine preparation of the extract intended for use as jam. Biscuits, lozenges, and other preparations of a similar nature are also made with the extract.

The manufacturers are the Frame Food Company, Limited, Lombard Road, Battersea.

VACCINATION SCARIFIER.

DR. H. G. MACLAGAN (Stoke Newington), writes: The description in the BRITISH MEDICAL JOURNAL, September 22nd, of Surgeon-Lieut.-Colonel King's vaccination scarifier, reminds me of an instrument somewhat similar in principle, which I made for myself at a time when I had much vaccination work to perform. It consisted of five or six ordinary sewing needles, gripped in the slit end of a flat piece of wood. There was an interval of about one-twelfth of an inch between each of the needles, and less than a quarter of an inch of the points were exposed. While lying loosely in the slit wooden handle, they were forced into it to the required depth by pressing the points of the needles vertically against the skin covering the fleshy part of my forearm. They were then fixed by cement, or a silver band might be soldered round the wood. When adjusted in this way it will be found that the points are not in a straight line, but form a curve, convex outwards, the two side needles being the shortest. The object to be attained by this arrangement is that when the instrument is pressed into the skin in performing the sacrification, the scratches shall be all of equal depth. Any scarifier having the scratching points in a straight line will necessarily make the two outermost scratches much deeper than those between.



New Buildings of the Leeds School of Medicine adjoining the General Infirmary.

YORKSHIRE COLLEGE, LEEDS.

The New Medical School.

The new buildings of the Medical School of Yorkshire College will be opened this day (Friday) by their Royal Highnesses the Duke and Duchess of York. The College will now be able to boast one of the finest and best equipped schools of medicine in the kingdom. Although it was only in 1884 that the School became amalgamated with the Yorkshire College, its history dates back for a period of more than sixty years. Established in 1831 in North Street, the School carried on its work there for three years and then removed to East Parade. In 1865 the institution removed to Park Street, and there until now it has remained.

The amalgamation of the School of Medicine with the Yorkshire College was anticipated by the supporters of both institutions long before it became an accomplished fact. As far back as 1875 special arrangements were made with the Medical School for the admission of students to courses of chemistry and laboratory practice in the College, and subsequently to those of comparative anatomy and botany. The complete incorporation of the School with the College took place in 1884. One of the first effects of the union was an improved provision for the teaching of physiology. By the zealous efforts of the medical staff an endowment fund was raised and a professor appointed, the Council of the Medical School giving £1,000 towards the fund, which now amounts to £6,000.

The year that witnessed the amalgamation saw also the number of students nearly doubled, the roll showing an increase from 87 in 1884 to 161 in the following year. This number has steadily increased, until now, on the eve of a new era, the school has 209 students, the largest number on record.

The need for increased accommodation, long recognised, had now become absolutely urgent, and in 1890 the Council instructed Mr. W. H. Thorpe, architect, to prepare plans for a new building on the Mount Pleasant site, which they had obtained from the General Infirmary. It has taken three years to erect and fit up the school, which is not only a splendid structure architecturally, but contains complete accommodation for the training of medical students on the most approved modern methods. Among its most striking features may be mentioned one of the finest dissecting rooms in the kingdom, extensive laboratories for physiology and pathology, ample lecture room arrangements, a large and valuable library, and separate museums for anatomy and pathology. The accommodation for students is also worthy of special note.

The teaching staff includes, besides the professor of physiology, many of the leading medical men in Leeds, who have not only exhibited much zeal in promoting the general interests of the school, but have, by their skill and knowledge, helped to raise the standard of instruction in every department of medicine and surgery to its present high level.

The affiliation with the Yorkshire College has been of exceptional advantage, as students have now special facilities for taking their degrees in the Victoria University.

Dr. Heinrich Lippert left by his will a legacy amounting to nearly £1,000 to the Medical Faculty of Berlin for the foundation of a triennial prize for the best essay on a subject of practical therapeutics.

The Serum Treatment of Diphtheria.—The supply of diphtheria antitoxin manufactured in the Pasteur Institute being insufficient to supply more than two children's hospitals in Paris (Enfants Malades and Sainte Eugénie), and a larger production being at present impossible owing to want of funds, a subscription has been opened by the *Figaro* for the purpose of meeting this want. A sum of 81,000 francs (£3,240) has already been collected. A similar fund has been started in Vienna, and already 16,000 florins has been received by the *Neue Freie Presse* alone.

In consequence of the resignation of Mr. Henry Power, Mr. Bowater Vernon has become Senior Ophthalmic Surgeon to St. Bartholomew's Hospital and Lecturer on Ophthalmological Medicine and Surgery in the Medical School. Mr. Walter Jessop, the newly-elected Ophthalmic Surgeon, has been appointed Demonstrator of Ophthalmology in succession to Mr. Vernon.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XIX.—STOCKPORT.

A visit to this workhouse takes us to one of the busy centres of industry. Tall chimneys pouring their smoke into the air and the whirring sound of machinery testify to the activity of the town.

The Workhouse

stands in the midst of all this hum, overshadowed by the chimney of a neighbouring mill, and the traffic of the streets passes its gates. The building wears an aspect of venerable antiquity, which, as we found, is by no means belied by its internal arrangements; indeed, we were introduced to a pair of boilers which have quite as much right to a place among the relics of a bygone age as Stevenson's "Rocket." Any millowner among the guardians would be ashamed to make use of such ancient machinery in his works. We were surprised to find the house so full at this time of year; 724 was the record for the day in a house licensed for 690. The master informed us that the depression of trade had pressed very heavily on the operatives of the town, and he was at his wits' end how to bestow the inmates. Every available inch of space was utilised, as we saw; the inmates were packed like sardines in a tin. As we went round we thought with a shudder of the almost certain fate of these paupers in the event of a fire.

The Hospital

claimed our attention first. It is an almost impossible task to present a clear idea of a place so completely without plan or method. There were over 300 patients in the male and female blocks; these stand facing each other, with an open space of ground between them, to which either sex seems to have access. The female block is the older: some of its wards are no better than barns.

The Female Wards.

On the first floor was a ward holding 40 beds, divided lengthwise by a low partition, 20 beds on either side. The walls were roughly plastered, showing the lines of the bricks through: the roof was pitched, with beams stretching across. There was a stove in the middle of the room. The windows were set high in the wall, and had small panes, four in the middle of each being swung on a pivot for ventilation, and there were also ventilators at the gable ends of the walls. In this ward quite half the patients were in bed. There was a woman with typhoid fever, with cases of paralysis, rheumatism, bad legs, phthisis, old age; the "dirty" cases being mixed up with the other patients in the wards. There was practically no classification: we saw here two children in one bed with ophthalmia. This ward was overcrowded, the beds being close together. The wards vary in size, some having only six beds, and are distributed on the ground and first floors in groups, with a separate steep staircase, stone or wood, to each group, so that the unhappy nurses have to go up and down innumerable steps in their round of duties. There was one convenience for this group of wards, placed on the first landing on the staircase: it was in such an unwholesome condition that the stench was perceptible at the ward door, some half dozen steps above it. It was supposed to be flushed by a trickle of water, but even that streamlet was dry; the pan was quite foul.

The Lock Patients

on both male and female sides are in separate wards on the second floor; but on the female side the eight beds were, on the occasion of our visit, full: and there were other patients who could not be accommodated in the special ward: these were of necessity placed in the general wards. The wards for the lock patients are part of the hospital, but they have separate offices.

The Lying-in Ward

has 9 beds, including the labour bed; there is no means of privacy for the poor woman in labour except such as can be secured by the use of screens, and any inmate of the ward who is awaiting her own time of trial must hear all that takes place behind the screens. This ward has no separate offices: it is placed close to the sleeping quarters of the nurse.

The Children's Ward

is on the ground floor, it has eight cots and four beds for adults, the latter being the result of the overcrowding. Most of the infants had marasmus, and the ward was far too small to be healthy with the addition of four adults. In a room opening immediately out of it were some fixed basins and a small movable bath: no separate closet. An old pauper woman and a younger one, mother of some of the children in the house, were the attendants in this ward. The nurse on the female side has the supervision of the ward, but she must of necessity leave all details to these inmates, and these critical cases, which require the most careful feeding and cleanliness, are thus left mainly to the haphazard care of irresponsible paupers, and at night receive such attention as a sleepy inmate or an overworked night nurse could bestow. The poor little things looked sorry objects.

The General Impression

of the female wards was that they were dangerously overcrowded; we saw a door labelled "to be used only in case of fire," so crowded with beds in its access that in such an emergency it would have taken some time to render it practicable; also that they were comfortless and barnlike in aspect, that the patients required more nursing and hospital treatment than the nurses were able to give them, owing to the number that they had to attend to, and that the little children showed the signs of the ignorant handling of their pauper attendants.

The Male Infirmary

is a more modern building; the wards are arranged somewhat on hospital lines, holding from 10 to 12 beds each; there is some attempt at classification; for instance, we found all the phthisical patients in one ward, cases of ulcerated legs in another, and the lock patients in a third. There is a bath room and a lavatory to each division, the latter with a flush, though in one instance (from neglect on the part of the wardsman) there was no water supply, and the pan was foul. The block is built in divisions, to accommodate 150 beds. Each has a separate staircase, and they do not communicate on each floor, so that the officers have to pass up and down the stairs continually—a very heavy addition to the fatigues of the insufficient staff. In the ward set apart for the phthisical patients we saw a man very ill, cheeks flushed, eyes half closed, lips dry, breathing shallow, attitude prone. He was unwatched, nor did we see any feeder or cup near suggestive of ministration; the matron called a pauper wardsman to see after him. A large proportion of the patients were in bed suffering from every class of ailment; there was no separation of the offensive cases, except the lock patients above mentioned. There was not the same overcrowding as on the female side. The heating pipes which are in every ward are carried about 18 inches from the ceiling. Their diameter is about an inch and a half. Whether they are placed at that height for the sake of safety or from motives of economy, it is at least certain that their heat-giving powers must be thereby rendered practically *nil*.

The Old and Infirm

are lodged in the house in rooms formerly used as school rooms, but now filled with beds, eight to fifteen in a room. Here we found chronic patients, rheumatic gout, slight paralysis, heart disease, old age; many of the patients were up. The beds were close together on one side of the ward leaving an aisle on the other for benches, a table, an arm chair or so. The patients lived in these rooms night and day.

THERE ARE NO DAY ROOMS

either in the hospital or in this quarter, the only outlet being the airing courts asphalted yards, having in some cases a grass plot or a flower bed in the middle. The men smoke in the wards, and of course in the winter they must often be kept in the one ward for days together.

THE IMBECILES

and fit cases are lodged in separate buildings, that for the women being more airy and cheerful than the men's. They are looked after by attendants. We noted with surprise that there was no protection to the windows in the women's ground floor sleeping rooms; the windows are between four and five feet from the ground. The men's quarters are dreary and cheerless, the ground floor sleeping rooms off the corridor have only a skylight in a pitched roof and a small window; one such room, holding three beds, was pestilential, so much so that we thought that some offensive matter must have been left in a commode, but these proved to be empty. There is a padded room on both male and female sides.

THE NURSING

of all these patients scattered up and down these buildings is complicated. There are a husband and wife who have their quarters in the hospital; the man assists the nurse of the male block, with the dressings, and looks after the male infirm and aged and the male imbeciles; he has no assistants but the pauper inmates. The wife nurses in the female hospital, and has two assistant nurses, and with these looks after the aged and infirm. This nurse is the midwife; she has had no hospital training, but has had long experience in the work. The nurse in the male block, who is assisted by the man above mentioned, is responsible only for the patients in the male hospital.

AT NIGHT

there was until quite lately one nurse for all these patients, those in the hospital, the aged, the infirm, and imbeciles; but the guardians have recently appointed two more nurses, one of whom is to be on night duty. The night nurse by her rules is supposed to visit every ward once an hour, and she has a clock to peg. We can only say that if she has done so it is a wonder that she is alive to tell the tale, and that the round must have been the merest routine, for she could have had no time to look at individual cases, and feeding or prolonged attention to any one patient would be out of the question. We wish we had had time to count the number of stairs that the poor woman would have to ascend and descend hourly. The whole thing is a grim farce in which human lives are jeopardised. There are also two inmates up at night in each block.

A DISUSED LAUNDRY

has been adapted to isolation purposes, making two small wards wherein suspicious cases are detained for inspection or until removal.

THE NURSERY

is quite a large department: at the time of our visit there were 36 infants and young children. The babies are on the first floor, and the older children on the ground floor. The labour mistress is the responsible officer; she has in addition the supervision of the laundry. We found the nursery well supplied with pauper nurses, old and young; everything looked clean and healthy, but there was no sign of play or merriment (do pauper children never play?), nor did we see any toys. The infants are all slung in hammocks, made of coarse ticking—a temporary contrivance of the matron's until she can be supplied with cradles, which we hope are ordered. We asked the matron what guarantee she had that the milk issued for the infants was really given to them; she informed us that now all the infants' food was prepared in the kitchen, as she had found that the paupers either skimmed the milk or drank it. The older children sleep with their mothers in another part of the house, the mother and child sharing a bed.

THE MEDICAL OFFICER,

Dr. Bale, who lives in the next street to the workhouse, visits twice and at times three times a day. He has a small surgery in the hospital, where he performs such minor operations as may be necessary; there being a large infirmary in Stockport, the patients treated in the workhouse are those that are destitute.

RECOMMENDATIONS.

There is only one possible course to recommend: the building of a new infirmary, and we understand that the Local Government Board is urging this course on the guardians, but that local opposition stands in the way. We can only say that any attempt to improve the existing buildings would be waste of money. We were much impressed with the energy of the officers, who were doing their utmost for the patients under most discouraging circumstances.

A COURAGEOUS NURSE.

NURSE HINTON was the recipient a short time ago of a testimonial that had been raised in the West of England by a few friends who had witnessed the brave stand that she had made in the cause of the sick poor under the care of the guardians of Newton Abbot. The testimonial was a watch with a suitable inscription and a sum of money, part of which met the legal expenses which she had incurred, and the rest would recoup her for the loss of time involved during the protracted inquiry in which she was the principal witness. Only those who are engaged in this work of beating down the prejudices and combating the ignorance that surrounds the Poor-law question in some parts of the country can estimate the courage that was shown by Nurse Hinton, first in daring to state that all was not as it should be in the Newton Abbot Workhouse, and then in facing the searching cross-examination lasting four hours or more when the counsel for the defence endeavoured to bring discredit on the witness. There are many nurses found quite ready to grumble about the condition of things in their infirmaries; but when it comes to submitting these grumbles to the search light of the witness box, they too readily "climb down," and their remarks are dismissed as the inevitable discontent of the "new broom" or the trained nurse.

DEATHS UNDER ANÆSTHETICS.

CHLOROFORM.

AN inquest was held at Driffield, on September 14th, on the body of Mrs. Lamplough, who died under the influence of chloroform, which had been administered for the purpose of performing a dental operation. Dr. Brand, in his evidence, said the deceased had told him that she had had some teeth removed while he was on his holiday, and, as she thought of having more out, she said she would have chloroform, which had been administered four or five times before. He examined her heart, chest, and lungs, and found no sign of disease. He then administered the anæsthetic on a napkin, using 5 drachms, which the patient took very well, there being very little struggling. After Mr. Bradford, the dentist, had completed the first operation, a few teeth still being left, the patient became conscious and asked him to give her more chloroform. He gave her a few more drops, as the operation was nearly completed. The breathing and pulse remained good up to the removal of the last tooth: she flinched, evidently feeling the pain, and suddenly, without any warning, she became pale and the pulse and breathing stopped. Artificial respiration was resorted to, but without avail. After hearing the further evidence, the jury returned the following verdict: "That the deceased died whilst under the influence of chloroform, and that no fault is to be found with anyone concerned in its administration."

DR. R. W. CARTER (Weymouth) writes with reference to the letters from Dr. Freeland Fergus and Dr. Kirk in the BRITISH MEDICAL JOURNAL of September 29th: I have often thought that there must be something in the so-called "open method" of giving chloroform as the Scotch do, or they would not so persistently carry it out; for almost every Scotchman carries this plan with him wherever he goes, and so impressed in its favour are they, being educated up to it especially from the days of dear old Syme, whom they loyally rejoice in quoting, that they thoroughly believe in it. I have been greatly interested in this communication, and with the exception of the concluding paragraph of Dr. Kirk's letter, which is not altogether charitable, I have read it with much satisfaction, although the plan advocated is entirely opposed to what I and those of my ilk follow. The deaths under anæsthetics are truly lamentable, and, as I read everyone of these mishaps, I am more thoroughly convinced that the true cause of the deaths is an overdose. I can congratulate Drs. Fergus and Kirk on their especial immunity from anything approaching danger, but it does appear astounding to publish such a record as a sample

Cases of Anæsthesia (Dr. Carter).

No. of Case.	Date and Hour.	Sex and Age	Nature of Operation.	Anæsthetic and How Given.	Duration and Quantity used.	Sickness.	Remarks.
5	1894. Jan. 21, 9.55 A.M.	M., [illegible]	Removing diseased cervical glands adjacent to sheath of carotid artery and other important structures, the dissection requiring great care	Chloroform; Krohne's modified Junker	8" getting under; 50" altogether; 5j and mx	Duration and Flocktail	Very slight sickness. I aimed at keeping him under the effects with the least possible amount, and, when anæsthesia was complete, maintained it with the least possible quantity.
21	March 16, 11.20 A.M.	M., 9 years	Cauterising nævus in left upper lid	Ditto	6" getting under; 10" altogether; mi	Ditto	Profound narcosis, which lasted 20 minutes after withdrawal of anæsthetic; great pallor of features whilst under the influence; pupils small. In this case 1.15 per cent. of chloroform was given more than needed. I was demonstrating the method before a party of medical men who came to examine it.
24	March 22, 12.10 P.M.	F., 10 months.	Opening abscess at side of nose; diseased bone	Ditto	4" getting under; 10" altogether; mxxx	Ditto	Anæsthesia was very profound for several minutes after withdrawal of inhaler.
26	April [illegible], 9.50 A.M.	[illegible], 19 years	Abdominal section; removal of ovaries and tubes and portions of tuberculous deposit in the abdomen	Ditto	10" getting under; 115' altogether; 5vij	Ditto	No sickness; no ill effects.
32	April 15, 9.50 A.M.	F., 16 years	Removal of large suppurating glands in the neck	Ditto with [illegible] tube	7' getting under 40' altogether; 3iij	Ditto	Assumed a deep cyanotic colour, like in etherisation; a large vessel was divided during the operation; her pulse became small, but not from loss of blood; sickness also interfered with the operation.
33	April 15, 11.40 A.M.	[illegible], 18 years	Opening out sinuses in gu[illegible] and removing caries of alveoli	[illegible] tube	12' getting under. 23' altogether; 5ij ss.	Ditto	An extremely nervous woman; breathing stopped altogether at times when less pressure was made on the bellows; good deal of bleeding in the mouth; completely narcotised; rallied well.
34	May [illegible], 12.15 P.M.	F., 2 y. 4 m.	Needling lamellar cataract	Ditto, without tube	4" getting under; 6" altogether; mxx	Ditto	Struggled and screamed violently when mask was put on; had to be kept down; narcotism deep.

of what they do, namely, "2 ounces of chloroform for enucleation of the eye." It takes me eight minutes from the beginning of the anæsthetic to its completion to perform this operation, and, then I administer the anæsthetic, with an expenditure of not more than 1 drachm of chloroform. It seems to me so irrational to say a patient dies from an overdose. If Drs. Fergus and Kirk would kindly turn to some tables I published in the British Medical Journal of December 16th, 1893, they would see what can be done with a minimum of this drug. Since which I have had many others of a like kind. I cannot claim such complete exemption from accidents as the writers of the article do. Although I have never had a fatality, yet I have had occasion for anxiety, and in such cases I came to no other conclusion than the dose was too concentrated.

I maintain that whatever may be said against the plan which I adopt, which is fully set forth in the communication I have alluded to, it is based on a scientific plan, which the wholesale baling out of chloroform on a well-folded towel is not. I append (see Table) an extract from my register of a few cases. In Case 5 I tried my utmost to give the least amount of anæsthetic, and it is probably the smallest quantity of chloroform ever used, namely, 0.32 per cent. of vapour.

THE BRITISH MEDICAL JOURNAL INQUIRY INTO PROVINCIAL WORKHOUSES.

Reforms at Barton Regis, Bristol.

The recent meeting of the British Medical Association at Bristol has incidentally had one admirable result towards the alleviation of suffering and conferring a permanent local benefit on the sick poor of the city. During the course of the meeting Mr. Ernest Hart took the opportunity of visiting the Barton Regis Workhouse Infirmary. This is one of the infirmaries on which we reported very unfavourably in the British Medical Journal in 1867. A considerable dispute arose, but as the result great improvements were made in the accommodation and in the general treatment of the sick, and a special infirmary establishment was created. Moreover, the guardians have had the benefit of the services of a chairman, well known to be animated by the most benevolent and intelligent regard for the interests of those within the walls of the sick bay, and more than one lady has given the benefit of devoted service as visitor and guardian. Among them will always be remembered with honour the names of Miss Clifford and Miss Woollam. They were, we have reason to believe, conscious of many of the shortcomings in the buildings structurally, in the airing courts, and, above all, in the nursing, and were desirous of removing.

Much has been done to make the lives of the unhappy inmates as comfortable as possible, and to cheer their dreary existence by constant acts of kindness and human fellowship and sympathy. Nevertheless, and in spite, we believe, of representations made by one or other when Mr. Hart visited the infirmary, he found the nursing arrangements shockingly defective, and such as no personal devotion of visitors can remedy. The board happened to be sitting during the time of Mr. Hart's visit, and he had their permission to inspect. We had prepared his report on this infirmary, which is in print, and would have been published in its turn, but we are able to record to-day, with no small pleasure, that the guardians have been so far influenced by the fact of that inspection and by the knowledge and the light of our recent reports on the neighbouring workhouse at Bath and elsewhere that they have at the last moment taken of their own accord steps towards the remedying of some of the worst defects in the nursing department. Reversing decisions made some time ago, they have resolved to introduce a more adequate and humane provision for this first essential of the hospital treatment of the sick poor. When our report is therefore printed we shall be able to delete from it some of its most pointed criticisms, and instead of them to substitute passages of respectful praise and commendation. We read in the *Bristol Times and Mirror* of September 29th, the following statement:

"Barton Regis guardians of the poor are to be congratulated on their decision yesterday to spend £200 a year on more efficient nursing of the sick paupers in the workhouse. In many workhouses hitherto the nursing has been of the most casual and inefficient character, much of it being entrusted to fellow paupers. Of late, thanks largely to the increased number of lady guardians and to the efforts of the British Medical Journal, there has been a general awakening in regard to this important matter. Among the first to take action have been Major Rumsey (Chairman of the Barton Regis Board), Miss Woollam, and the other lady members of that board,

though it is only fair to say that the majority of the board have been in full sympathy with the desire to improve the nursing, even if some of the members hesitated to incur the large expenditure sanctioned yesterday. On this point, however, Mrs. Trebilco claimed a right to speak for the poor of St. Philip's, who, she said, would not begrudge the extra cost for the great additional comfort which the new nursing arrangements would ensure for the inmates of the sick wards. When it is stated that, though the Barton Regis Workhouse has been in advance of others, it had no female nurses in the male wards and no night nurses at all, it will be conceded that the guardians were amply justified in adopting an improved system."

EPIDEMIC IN A DUBLIN LUNATIC ASYLUM.

Supposed Outbreak of Beri-Beri.

We have to report a very remarkable outbreak of disease at the Richmond District Lunatic Asylum at Dublin which presents very unusual features, and which, at this stage in the observation of it, appears to be identical with what is known as beri-beri in Eastern countries.

The first case was observed some weeks ago, but it was only when two or three followed in rapid succession that Dr. Conolly Norman, the resident superintendent, recognised that the affection was of a serious character. At the present moment there are 110 cases under treatment, and there have been 13 deaths. Dealing with a number of lunatics it is, of course, not always possible to obtain a consecutive history of symptoms, but the following are the chief characters which have been noted:—

The disease begins with œdema of the legs, and this rapidly spreads until in many cases it becomes universal. There is no fever. In the early cases the urine was carefully examined for albumen, but it was present in a very small number. The heart becomes very weak, and at an early stage difficulty of breathing due to œdema of the lungs sets in. If the case goes on a distinct peripheral neuritis appears, and this is coincident with a diminution of the œdema. A few make complaint of great pain in the extremities, but hyperæsthesia is evidently present in the majority when the skin is touched. In cases which are of any standing ataxic symptoms supervene, there is loss of knee-jerk, and wasting of the muscles of the calf follows. The mental condition is one of great dulness, and there is decided tendency to sleepiness.

Several cases have become paralytic, but they have recovered from the œdema. The *post-mortem* examinations have thus far shown hydropericardium, œdema of the lungs, some ascites, and fatty degenerations of the heart and kidneys.

The treatment is mainly tonic and stimulating, with special attention to the lung condition. We have had an opportunity of seeing many of the patients. The œdema was the most remarkable condition, often extending, as it did, from head to foot. The abdominal walls were hard and resisting. At the lower part of the neck and the upper end of the sternum the finger sank into the infiltrated tissues for about three-quarters of an inch. Some of the patients had improved, but were suffering from pains in the lower limbs. Several were labouring from dyspnœa, owing to œdomatous lungs.

Dr. Walter Smith, President of the College of Physicians, and Mr. Thornley Stoker, President of the College of Surgeons, have inspected the cases, and have made a report to the governors. They state that the disease bears no clear analogy to any form of disease which occurs in these countries or in temperate climates. The epidemic character of the disorder points to causes existing within the boundaries of the asylum, but whether these are dietetic, or telluric, or personal, there is at present no evidence to show. One fact, however, is obvious—the large number of patients in crowded and badly-ventilated rooms. They recommend isolation, so far as that is possible.

It may be stated that the asylum can properly accommodate 1,100 patients. At present there are about 1,500 in the institution. The governors are about to build a new asylum for 800 patients, at a cost of over £200,000.

The disease has a resemblance to beri-beri, which, however, belongs to tropical and subtropical climates. Bad ventilation and bad blood appear to be promoters, but the bacillary origin does not appear to be yet established. The œdema, paralytic symptoms, hyperæsthesia, dyspnœa, the mode of death, and the *post-mortem* appearances which belong to beri-beri also mark the present outbreak in Dublin. The further history of the cases will be full of interest. Dr. Conolly Norman is so well known as a close observer that we shall await his official report with confidence. He has an able staff of assistants, and the clinical and pathological characters of the disease will be fully recorded.

SANITARY INSTITUTE CONGRESS.

The Congress continued its sittings on September 26th. In the Section of Sanitary Science and Preventive Medicine Dr. Klein, the Sectional President gave an address in which he dealt with the Etiology of Typhoid Fever and described the process of investigation by which he had established that the typhoid bacillus was distinct from the bacillus coli communis, with which some pathologists had contended that it was identical.

A paper by Professor Roche, of Dublin, on the danger of the spread of typhoid fever by the discharge into the sewers of the dejecta in an insufficiently disinfected condition led to a long discussion.

Dr. Reid, Medical Officer of Health for Staffordshire, read a paper on Infant Mortality and Female Labour in Relation to Factory Legislation, with the object of showing the influence which the practice of young mothers engaging in factory work had in maintaining excessively high infant mortality rates.

Among other subjects ably dealt with in the Section were the Study of Industrial Disease, by Dr. J. T. Arlidge; and the Theory and Practice of Disinfection by Heat, by Mr. W. Defries.

In the evening the members of the Congress attended a *conversazione* given by the Lord Mayor of Liverpool in the Walker Art Gallery.

On Thursday the Congress sat in three sections. Among the subjects discussed in the Section of Engineering and Architecture were river pollution and the housing of the working classes. In the Section of Sanitary Science and Preventive Medicine a paper by Sir Douglas Galton on the Teaching of Hygiene in Schools was read and discussed. Alderman Burt, of Richmond, read a paper making suggestions for the amendment and extension of the laws relating to the acquisition of land for isolation hospitals, workmen's dwellings, and public improvements. His recommendations were unanimously endorsed, and referred to the council of the Institute for action. The Cholera in Hull in 1893 and the Preventive Measures for Stamping out Tuberculosis were among the other subjects dealt with by the section. The medical officers of health held a conference in the afternoon, when the classification and notification of infectious diseases, the conditions of appointment of medical officers of health and inspectors of nuisances, and the conditions justifying the condemnation of meat for tuberculosis were the subjects of discussion.

On Friday Dr. Stevenson, Scientific Analyst to the Home Office, presided over the Section of Chemistry, Meteorology, and Geology, and delivered an address on the Self-Purification of Water and the Processes by which it is Effected. In summing up his conclusions, Dr. Stevenson spoke strongly of the necessity of preserving the Thames from excremental pollution, especially during the summer season, when the floating population on the river was enormous. Other subjects on which papers were read were the application of electrolysis in the detection of mineral poisons, the health of the workpeople in chemical factories, the effect of cold storage on food supply, and the question of town smoke.

In the evening Sir J. Crichton Browne delivered a lecture, illustrated by lantern views, on The Prevention of Tuberculous Disease, in which he gave an interesting sketch of the results of Professor Koch's researches in the discovery and identification of the bacillus of tuberculosis, and of his endeavours to find a protective vaccine. As a therapeutic agent, Koch's tuberculin had not fulfilled the expectations formed of it, but there were reasonable grounds for antici-

pating that unless folly, fanaticism, and ignorance were allowed to put a stop to experiments on living animals, some agent would yet be discovered that would control tuberculous disease. In the meantime it was necessary to consider other means of preventing the disease and restricting its ravages, of which the most important were good ventilation, pure water, the boiling of all milk used for human consumption, and plenty of light, as it has been demonstrated that sunlight is very deadly to tuberculous disease.

THE ARMY VETERINARY DEPARTMENT.

THE Annual Statistical and General Report of the Army Veterinary Department for the year ending March 31st, 1894, indicates a highly-satisfactory state of health of the horses of our Imperial Army in Great Britain, South Africa, and Egypt. A matter for special remark is the entire freedom from glanders during the year under review. At no very distant date this disease was responsible for extensive losses at home and abroad. We learn that the last case occurred in 1888. This is the more interesting as the horses of the Egyptian army and police are said to have suffered severely. To the circumstances that remounts are mostly drawn from country districts and that army horses are rarely billeted with other than army horses this immunity from the affection may be in a great measure attributed, but its previous existence shows the possibility of contamination and spread, and the Director-General and the officers of his department must be credited with no small share in bringing about this satisfactory state of things.

From the report, we gather that the average period of efficiency of the army horse is increased by two months, being eight years and eleven months, while the period of inefficiency from disease is decreased by 1.45 per cent. The reduction of inefficiency from 71.02 per cent. in 1891, to 63.44 per cent in 1892, and to 61.99 in 1893, speaks very highly for the working of the department since the accession of the present Director-General. These and other matters, including the operations of the Army Vaccine Institute, in which calf lymph for the vaccination of 43 064 persons has been prepared at a small cost, afford information of a favourable nature, and much matter for congratulation of this active and useful department. Though the present officers are not responsible for origination of the arrangement of the form of statistics and the nomenclature of diseases, the aspect of future reports would be more consistent with ordinarily accepted views and in accord with present day veterinary teaching if there were a revision. Such terms as "tussis (cough)," "tussis chronica," "incontinentia urinæ," etc., used for the classification of diseases, are scarcely consistent with the position the report is otherwise entitled to occupy.

FAILING WATER SUPPLIES.

LEICESTER AND EAST LONDON.

LEICESTER seems desirous of setting an example to England, but that is an object requiring much care. Leicester was the birthplace of the Cook's tourist system; Leicester has been prominent for its fight against the vaccination laws; and now, after a summer wherein the farmers were anticipating a failure in their crops, owing to dull and rainy weather, we suddenly hear that Leicester is the only town in the country threatened with a water famine. The authorities attribute their failure to a drought, but the very object of constructing waterworks is to provide for times of drought; and we have seen nothing yet to prove that there has been a drought; it takes more than a dry September to constitute a drought which should put any strain upon a waterworks. We have not seen any details of the depth of rain on the ground whence the supply is drawn for Leicester, but we have seen the records from another part of the same county and from Derby, and so we copy the totals for the first nine months of each of the last six years.

	1889.	1890.	1891.	1892.	1893.	1894.
Leicester	22.13 in.	14.02 in.	17.51 in.	15.50 in.	14.43 in.	14.01 in.
Derby	20.35 in.	14.38 in.	19.59 in.	17.98 in.	14.46 in.	14.28 in.

Hence we see that there has been very little difference between 1894, 1893, and 1890; and, further, that there is practical identity at the two stations. To us this seems to show that the storage at Leicester has not been increased proportionally with the increase in population and trade—that is, the town has outgrown its resources, and, as far as we can judge (but no one can prophesy) has a bad look out.

A good commentary to the report of the Royal Commission on Water Supply is furnished by the Clerk of the East London Waterworks Company. He tells the Hackney Vestry that it is necessary to curtail the supply of certain districts of North and East London "as the storage in the reservoirs has fallen far below the usual quantity." He proposes to conserve no fewer than 10 millions of gallons per day. Without for a moment questioning the facts, we are led to ask whether there will be a proportionate decrease in the water-rate. The inhabitants of the districts alluded to will have so much less water for flushing their drains and closets, and in common fairness it would seem that for the lower supply they should pay a lower rate. Irrespective of this, in the present season, which has not been exceptional with regard to rainfall, it appears quite evident that the company have not constructed sufficient reservoir storage accommodation, and the sooner they set about this useful work the better. A mild water famine in the East of London both on the score of health and comfort is not a pleasant thing to contemplate.

LITERARY NOTES.

THE following passage from Mr. James Payn's delightful "Gleams of Memory," now appearing in the *Cornhill Magazine*, will be interesting to members of the medical profession:—

Upon the whole, and for a "scratch" companion, I prefer a doctor to a man of any other calling. He may not be very good as a conversationalist, but he is rarely very bad, like a cheroot. He has had a genuine experience of life, and has seen down to the depths of it; a sick man does not attempt to deceive his doctor, or put the best face on his character, as he does with a priest. Moreover, what is very unusual, your doctor knows more about you, professionally at all events, than you know about yourself. He does not tell you about it, it is true; not a word of that aneurysm you carry about with you, and which will some day kill you in half a minute, but your consciousness that he may possess such knowledge makes him interesting. The best suggestions I have had made to me for plots for my novels have come to me from doctors, to whom I have also had cause to be grateful for many things.

According to an article in the *Atlanta Medical and Surgical Journal*, forty-five years ago the leading medical journals published in the United States were the *Boston Medical and Surgical Journal*, the *American Journal of the Medical Sciences*, the *Southern Medical and Surgical Journal* (Augusta, Georgia), the *New Orleans Medical and Surgical Journal*, and the *St. Louis Medical and Surgical Journal*. There were about a dozen other journals besides. One of these was published in Philadelphia, one in New York, one in Buffalo, one in Columbus, Ohio, one in Cincinnati, one in Chicago, one in Louisville, one in Lexington, Kentucky, and one in Charleston, South Carolina. There was not a medical journal west of St. Louis. The organisation of a medical journal in those days seems to have been an undertaking requiring considerable enterprise. The autobiography of one of those mentioned in the list just given states that it was "conceived in poverty, and poverty finally brought it forth." It is pleasing to be able to state that it still survives, and is now in very prosperous case. At present no fewer than 234 medical journals are published in the United States. Of these, New York State has 52, Philadelphia alone 20, Ohio 14, and St. Louis 12. West of St. Louis there are now 25. For this increase specialism is mainly answerable. All the fourteen journals published before 1850 were devoted to general medicine and surgery. Now, in addition to the large number of journals which take all medicine to be their province, there are three or four devoted to surgery as a special branch of the healing art; five to the eye, ear, nose, and throat; six to midwifery and diseases of women and children; two to the skin and venereal diseases; and ten to dietetics, hygiene, and sanitation. The rectum boasts of a journal all to itself, and the last birth of specialism, "orificial surgery," speaks to mankind through an organ wholly devoted to the exposition of what our contemporary calls the "new *fundamental* philosophy." Medical journalism on the other side of the Atlantic would certainly seem to be in some danger of "dying of its own too much," as Shakespeare has it.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, OCTOBER 6th, 1894.

"ILLITERACY" OF MEDICAL STUDENTS.

During the past summer we have learned from certain paragraphs in contemporary lay journals that "medical men are being a good deal exercised at the manner in which candidates for the M.B. degree are being rejected at the Universities of Oxford and Cambridge for general illiteracy." The system is censured which "allows a low standard of entrance and then suddenly becomes severe with regard to the rudiments of education." It is finally alleged that whatever be the defects of the public schools nowadays, grammar and spelling are taught better than they were a generation ago.

We have made some inquiries, and especially into the allegation that a candidate who has gone through a course of medical education at Oxford or Cambridge may be deprived of the fruits of the long and expensive course of education, and, we may add also, of the reward due to technical proficiency, because he cannot write scholarly English. It would be a hardship that candidates, if admitted to the university at all, should be rejected finally on the subjects of entrance and first year's examinations.

We are glad to be able to report that, dissatisfied as the university authorities are with the results of public school education in respect of ordinary boys, this particular danger or injustice does not exist. We are assured that, although it is probable that a candidate whose work in the final examinations for the medical and surgical degrees would bring him only so far as the borderland between acceptance and rejection might secure acceptance by a good style of writing or, if illiterate, might meet with rejection: yet it is open to these borderland candidates to try again, and to secure acceptance by a larger margin of marks. We think no substantial injustice is done in such a case as this.

We are also assured that no candidate obtaining marks of undoubtedly pass value is ever rejected on his literary defects, conspicuous as these not infrequently are; or, in other words, no deduction is deliberately made from the total marks of a candidate on the ground of illiteracy, although a bad style of putting things and a looseness and inaccuracy of language must tend to diminish such totals.

In candidates who go into the world with the stamp of the older universities we all expect to find something more of general culture than in candidates whose education is necessarily shorter and narrower in its range. And there is no more prevalent error than to suppose that "literary style is a mere ornament. Indeed, an ornamental style, we believe, is discouraged at the universities; on the other hand, accurate thought makes accurate expression, and slovenly language means slovenly logic. As regards spelling, we are informed that where bad spelling is part of a bad style, and suggests an idle disregard of private reading, it may well injure the chances of a candidate who probably has not much chance of success in any case, but that merely careless or peculiar spelling in good papers is disregarded.

Is it not, after all, the duty of the College tutors to look more narrowly to the literary equipment of their men, and to detain those who, either by idleness or misfortune, are illiterate, for a longer time in the arts classes before "specialising" in medicine? In our editorial capacity we suffer much from diffuse and inelegant writers who may by very nature be incorrigible; but we also find among our contributors many who needed more schooling, and who are much indebted to the press for correction.

Some one said of a bad writer that he might produce as much illegible manuscript as he pleased for his own consumption, but that he had no business to consume the time of others which did not belong to him; an orderly and lucid style not only indicates clear and orderly thought, but also shows a due consideration for the time and labour of the reader.

After all, we come back to the old story that our public schools have the honourable and useful ambition to impress a high stamp of character upon their scholars, and in this great aim they succeed. But if character stand first learning must not lag far behind, and this our schoolmasters appear to forget. A few clever boys who would succeed anywhere take away from their schools a good education; the ordinary boy leaves school knowing nothing. Nor is this to be wondered at, seeing that any graduate who has taken a tolerable degree in some special subject, and is also a good cricketer, may be pitchforked into the teaching profession, always without any preparation, and often without any natural aptitude for it.

For any profession except that of teaching some previous preparation is necessary; many of our headmasters seem to be even unaware that any science of teaching exists. Consequently the bulk of their boys come to the universities to be taught school subjects, or are sent to crammers, who do not know how to teach, to be bustled in six months through six years' subjects. And then the British parent exclaims against "overwork!"

THE HOSPITALS OF THE STATE.

One of the most interesting of the contributions read at the North-Western Poor-law Conference at Southport was that by Dr. Milson Rhodes on Nursing in Workhouses. He pointed out, truly enough, that workhouses, as such, had almost ceased to exist, and had become converted from something not very far removed from prisons into hospitals, almshouses, and schools. Fifty years ago the able-bodied adults far outnumbered the sick, the numbers being among the indoor no fewer than 8 able-bodied to 1 sick; whereas now the opposite was the case, the proportion being about 1 able-bodied to 4 sick. In fact, there were more beds in the

workhouse infirmaries in London alone than in all the voluntary and endowed hospitals of the United Kingdom.

While, however, the character of these institutions has so greatly altered, their government has in many cases remained the same; and there is great need for a complete reform in the relations between those responsible for the tending of the sick and those whose duty it is to manage that portion of the workhouse which is intended to be repressive of able-bodied pauperism. Dr. Downes, speaking in 1891, said that "in the larger workhouses the best system was to have the infirmaries under separate administration. In Scotland the Board of Supervision, which, as you know, corresponds to our Local Government Board, pays one-half the actual salary of each trained nurse of whom they approve. Among their conditions were that in every workhouse where the average number of sick amounted to twenty there should be one trained nurse, and this proportion should be maintained where the number did not exceed sixty. When the number of patients exceeded sixty they ruled that there should be one lady superintendent in addition, and in these cases the workhouse matron had no jurisdiction, and no authority or responsibility."

This is the important thing, the real essential to which we have often drawn attention, namely, that the superintendent of nurses should not be under the control of the matron. Dr. Rhodes says: "Cases have been known where .....the lives of the nurses were made miserable through the stupidity of the master, but far more frequently the matron. Not very long ago a very experienced union clerk remarked that in his opinion the greatest impediment to proper nursing in union infirmaries is the ignorant opposition of the paid officials. No doubt the persons who occupy these positions are thoroughly respectable, but as to the proper nursing of the sick, the vast majority of them are woefully ignorant, and unconscious of the fact that they are so. The fact is not surprising. I can call to mind four workhouse porters and their wives who have been promoted to the position of workhouse masters and matrons. They were all excellent officials at the gate, but not one of them had the slightest knowledge of skilled nursing, and yet I should not be surprised if they are of the same opinion as one matron who considered herself thoroughly competent because she had been employed in a workhouse before, and proved how far competent she was by objecting to the counterpanes of the lying-in ward being washed after three months' use, as she did not consider them dirty enough!"

The idea of a hospital matron being under the control of the housekeeper in a voluntary hospital would be looked upon as the very height of the ridiculous, and yet this monstrous absurdity is to be found in the great majority of workhouses.

Dr. Rhodes speaks strongly of the folly of placing the lives of sick people in the care of paupers, who in the majority of cases have proved themselves incompetent to earn their own living. The vast majority of pauper nurses are, he says, comprised in two classes. They either belong to the old and infirm, and therefore incompetent; or, if young, they are there because they have led drunken or dissolute lives. Now, as all nurses absolutely require a good allowance of fresh air, and as it is notorious that many of these pauper women cannot be trusted to come in sober if allowed outside the workhouse walls, it does not require very much consideration to arrive at the conclusion that they are not the proper class for this work. He also draws special attention to a point which does not seem to have received the consideration which it deserves, namely, the great influx of young women to the towns. The townward movement does not affect men alone; there is an active migration of young women from the rural to the manufacturing districts. These girls when they become ill have no resource but to go into a workhouse infirmary; and if they then have pauper nurses, and come under unrestrained pauper influences, the tendency is to demoralise, instead of to civilise as it should be. The first sickness away from home may often be the turning point in a girl's life. The workhouse infirmaries are truly, as was pointed out by Mr. Ernest Hart in 1866, "the hospitals of the State." To them great masses of respectable people must resort in their temporary difficulties, and, even on simply economic grounds, it is wrong that they should be so organised that these unfortunates, standing at the parting of the ways, should receive a push towards pauperism.

The Harveian Oration before the Royal College of Physicians will be delivered by Dr. T. Lauder Brunton on Thursday, October 18th. The Bradshaw Lecture will be delivered in November by Dr. Thomas Barlow, who will take for his subject "The Relation of Scurvy to Rickets."

THE VACCINATION REPORT.

At the recent meeting of the Mile End Guardians a letter was read from the Royal Commission on Vaccination, in reply to an inquiry made by the guardians, in which they stated that they hoped to be able to present their final report in the course of the early months of the new year.

THE FRUIT FAD.

Dr. Johnson said almost everyone took as much fruit as he could get, but a sect has now arisen which holds that we should eat fruit and nothing else. This, however, is now proposed to us as the latest preservative against all bodily ills. The prophet of this new hygienic system is a Herr Boeter, an ex-lieutenant in the German army. Vegetarianism, according to him, is altogether too wide: we must be "fruitarians" if we wish to find sanitary salvation. His disciples live altogether on fruit, which they take *au naturel* or cooked. Already some of the more ardent spirits are eager to simplify their mode of life still further by going naked and living in huts. As, however, the exigencies of climate and a too artificial civilisation stand somewhat in the way of the realisation of this Arcadian ideal, Herr Boeter has, it is stated, gone to Hawaii in the hope of finding an island where he can establish a colony of "fruitarians" who will be able to enjoy the sweet simplicity of their system without fear of bronchitis or the "beak."

THE WINTER SESSION OF THE MEDICAL SOCIETIES.

The arrangements for the opening of the winter sessions of the principal medical societies in London are now so far complete that we are able to announce that the Clinical Society will meet for the first time on October 12th, the Pathological Society on October 16th, and the Royal Medical and Chirurgical Society on October 23d. The first meeting of the Obstetrical Society was held on October 3rd. On October 10th, at 8.30 P.M., Mr. Bryant will deliver the first "Hunterian Society Lecture" on Some Subjects of Public and Professional Interest. The first meeting of the Medical Society of London, which now meets once a fortnight, will be held on Monday next, October 8th, when the President, Sir William Dalby, will deliver an address on The Pleasures

of Medicine and Surgery. The Lettsomian Lectures will be delivered before this Society by Dr. Frederick Roberts, who has chosen for his subject The Combinations of Morbid Conditions of the Chest. The lectures will be given on January 21st and February 4th and 18th, 1895. The annual oration of the Medical Society will be delivered by Mr. Pearce Gould on May 20th, 1895. The Society will hold three clinical meetings during the session (November 12th, January 28th, and April 22nd). The Clinical Society will have the same number of clinical evenings.

THE CHELSEA HOSPITAL FOR WOMEN.

We understand that owing to the absence of many members of the Committee of this hospital from London no further steps have been taken with regard to the questions which have arisen as to the mode and conditions of appointment of the medical staff. It is felt by many that the recent nominations did an injustice to some of the members of the old staff, and it is probable that no motion will be made to confirm these nominations, but that a medical committee will be appointed to advise in the matter. It is very much to be desired in the interests of all parties, and not least of the patients of the hospital, that such a medical board of reference should exist to investigate the claims of candidates for appointment to the medical staff of the hospital. We do not doubt that the lay Managing Committee will appreciate fully the advantages which they would derive from the assistance of skilled professional advisers. In reply to the letter addressed to him some time ago by the Chelsea Vestry, the Home Secretary has forwarded a letter, in which he states that the members of the Independent Committee of Inquiry were persons in whose judgment and impartiality he could place full reliance. The newspapers state that "he finds that they appear to have made an exhaustive inquiry, and that their report reveals a state of things most discreditable to the management of the hospital and especially to the medical staff.' He does not, however, think that a further inquiry would serve any useful purpose. We are informed that thirteen members of the Ladies' Committee of the hospital, including Mrs. R. P. Ebden (Vice-President), the Hon. Flora Macdonald, and Mrs. Webb-Peploe, have tendered their resignations.

THE NEW ANTITOXIN TREATMENT OF DIPHTHERIA.

We continue, it will be observed, to receive reports from correspondents in various parts of this country of the employment of the antitoxin serum in the treatment of diphtheria. In a very large proportion of cases complete success has happily attended the method. Dr. Watkin Hughes, for instance, reports that during the present severe epidemic of diphtheria at Barnham Broom, Norfolk, he has attended 40 cases; of the first 30 treated by ordinary methods, 10 died; in the next following 10 cases, which were very severe, the serum treatment was used, and every patient recovered after a single injection. To obtain the best results experience already accumulated proves that the treatment must be adopted at an early stage of the disease; but at the present time, unfortunately, there is considerable difficulty in obtaining a sufficient supply of the serum. In France its preparation on a large scale has been undertaken by the Pasteur Institute, and it is hoped that in a couple of months' time the supply will be sufficient for the needs of France. The British Institute of Preventive Medicine expects shortly to be in a position to supply a considerable quantity. The treatment however is rapidly passing out of the experimental stage, and in the case of a disease so murderous as diphtheria, which produces annually so fearful a mortality, especially among children, the public may well look to the State to take steps to ensure a constant and adequate supply of the remedy at a reasonable cost. Professor Behring, in an address before the German Naturalists' Society at Vienna, stated that in Germany and Austria alone the mortality from diphtheria might be estimated to be about 2,000,000 in every ten years. The serum treatment would reduce this high mortality, amounting to over 50 per cent. of the persons attacked, to 10 per cent., and if employed in the early stage to 5 per cent. "In other words," he added, "about 1,500,000 lives may be saved every ten years, but of course the serum must be obtainable in large quantities. This is not now the case, and will not be the case until the State takes the matter in hand and prepares it at the public cost." The mode in which the serum is obtained at the Pasteur Institute is as follows: The animals which are to furnish the antitoxic serum are rendered immune by the injection under certain precautions of the toxin of diphtheria. This toxin is formed when the virulent bacillus is grown in broth, and in practice the rate at which it is produced is increased by drawing a current of air through the culture liquid. After three or four weeks the culture is sufficiently rich in toxin to be used. The animals employed are horses in good health, and previously tested by the injection of mallein to prove that they are free from glanders. The culture, filtered through a porcelain filter, yields a clear liquid, with which the horse is inoculated by injection under the skin. Gradually, by repeated injections over a period of two or three months, the horse is brought into a condition in which its serum possesses very high antitoxic properties. The animal does not suffer in health at all, or only to a very slight degree. The efficacy of its serum having been ascertained by a test experiment on a guinea-pig, the animal is bled. It suffers little from this operation, and it is possible, if necessary, to bleed it again in two or three weeks, but it is advisable in the interval to strengthen its immunity by some further injections of the toxin. The animals used are cab horses, sound in constitution but broken down in limb, who after inoculation live a life of ease and luxury, varied by a periodical phlebotomy, such as our grandfathers submitted to voluntarily two or three times a year.

STONE BROTH.

The old recipe for stone broth has gone out of fashion, but the principle involved in it is at the root of many inventions of modern times. We were told to boil a smooth pebble from the brook, a little salt and pepper, together with an onion and divers vegetables being added as a relish, while the flavour was improved by the addition of a mutton bone. No doubt the broth was good, and equally no doubt the modern suggestion that ladies and gentlemen suffering from insomnia should go "hopping" in Kent is good also, notwithstanding the feeble hypnotic influence of the hop. The well-to-do hop-pickers give their labour for nothing, and the farmer in return provides them with bed and board of a simple character. It is quite idyllic, and if one considers the causes of nine-tenths of the insomnia from which people suffer nowadays "hopping" ought to be a cure. The fresh air, the long hours of not too laborious work, the simple diet, the absence of responsibility, and the probably hard bed give as complete a change as possible from the habits of mental worry and bodily indulgence so often at the root of the malady. We have the greatest possible respect for the therapeutic virtues of the hop, but when prescribed in this form we are reminded of the pebble in the stone broth, and attribute the excellence of the prescription to its other ingredients.

PAY WARDS AT THE GREAT NORTHERN CENTRAL HOSPITAL.

In the British Medical Journal for September 22nd, we made some observations on the above subject, and said that we should be glad of complete details of the plan. We have now to acknowledge the courtesy of the House Committee in forwarding to us a copy of the regulations to which we hasten to call our readers' attention. It seems that "the treatment of patients in the pay wards is undertaken by the honorary medical staff gratuitously, under the same conditions as the treatment of patients in the free

wards," so that the patients merely "contribute towards the cost of their maintenance." The guarantees intended to assure the fitness of the patient for the receipt of gratuitous medical treatment are twofold: (1) That he must be recommended by a medical practitioner; and (2) that he must be accepted by the House Committee—except in case of urgency—and the form of application involves a statement of "the means" of the patient, his occupation and number of children. The payment must be guaranteed by a householder, who is also responsible for the removal of the patient when called upon by the House Committee. In the printed form the amount of the weekly payment is left blank, but in the copy supplied to us the blank has been filled in by the words £2 2s. in ink. We assume therefore that the £2 2s. is the maximum charge. We confess that we look on this scheme with much suspicion, considered as a development of "charity." Our readers will notice that the charity is altogether at the expense of the medical attendants. The hospital is paid what we presume is in the Committee's judgment a fair equivalent for its expenditure on the patient, but the medical attendant gives his services for nothing, though the patient is confessedly able to pay something. This does not seem to us the proper arrangement for a "pay hospital," in which we think the first thing paid for should be the medical treatment. Of course, it may be said *volenti non fit injuria*. If the staff of the hospital choose to assent to the arrangement they are the best judges of their own affairs, and so far as the individual case goes that is so. But we are speaking of the general question, and are thinking how the plan would work if it becomes more general in this country. We believe that some such plan prevails rather extensively in the United States. It is clear, we think, that gratuitous treatment should be given only to persons *bona fide* unable to pay. The Great Northern regulations endeavour, we are sure honestly, to ascertain this inability, but their success must depend almost entirely on the vigilance of the House Committee in resisting the attempts which are sure to be made by persons perfectly able, but imperfectly willing, to pay their doctors. We should prefer that a pay hospital should have no admixture of the gratuitous element, and should not be officered by a gratuitous staff.

THE SICK POOR IN PROVINCIAL WORKHOUSES: STOCKPORT.

At the Stockport Workhouse Infirmary our Commissioner found 300 patients, without counting the infirm old people lodged in the other part of the house or the imbeciles. This large number of sick people—twice as many as the patients in many county hospitals—is crowded into two blocks designed for a smaller number of inmates, and clearly not adapted for the treatment of the sick. These larger infirmaries must be compared with other general hospitals. The greater proportion of chronic cases does not affect the question here, as these are in the house proper; such a comparison shows a startling contrast in their relative efficiency. In this instance we have not merely the utter absence of trained nursing and the reliance on pauper help which we have noted in almost all the infirmaries visited by the Commissioner, but we find a building divided from ground floor to roof by partitions which allow of no communication from the one side to the other, an arrangement which adds immensely to the nurse's work and responsibility. We cite this as one instance out of many which will be found in the report that the majority of those responsible for the care of these sick people do not understand the requirements of a hospital. Boards of guardians are not elected on the ground of special knowledge of these matters, but it is to be hoped that the time is not far distant when the ratepayers will insist on something not so very far short of the standard of a hospital in such essentials as a sufficiency of air space, convenience of access, skilled nursing, and the like. When that time comes, experts will be consulted on the subject of the buildings, and such glaring defects will be avoided, defects which it would tax the energies of an adequate staff to overcome, and which are of course more sensibly felt when the resources of the very small number of officers are strained to the utmost by an exceptionally large number of inmates.

THE LONDON POST-GRADUATE COURSE.

The winter term of the London Post-Graduate Course will commence on Monday next. This is the fifth year of these courses, and so much success has attended them in the past that the Committee are anxious now to obtain some home of their own in a central situation where certain parts of the course may, it is thought, be conducted with greater advantage. During the present term lectures and demonstrations will be given at the Hospital for Consumption, Brompton; the Hospital for Sick Children, Great Ormond Street; the National Hospital for the Paralysed and the Epileptic, Queen Square; the Royal London Ophthalmic Hospital, Moorfields; Bethlem Royal Hospital for Lunatics, the London Throat Hospital, the Bacteriological Laboratory, King's College, and at Cleveland Street Sick Asylum. The fees are £1 1s. and £2 2s. for the single and double courses. Full particulars may be obtained from Dr. Fletcher Little, 32, Harley Street, London, W.

SIR GEORGE MURRAY HUMPHRY.

The Michaelmas Court of Governors of Addenbrooke's Hospital, Cambridge, held on Monday last, was rendered memorable in the annals of the institution and of the Cambridge Medical School by the resignation of the senior surgeon, Sir George Humphry. For fifty-two years he has held this appointment, and in that time he has established for the hospital, and for himself as its greatest surgeon, a world-wide reputation. In a touching letter addressed to the Chairman of the Court, he said: "My election, when I was very young for such an honour, determined my residence in this place, so full of privileges and opportunities: and my connection with the hospital has been the main source of such success in life as I have had, and has contributed largely to the pleasure I have enjoyed in the prosecution of my profession. During nearly the whole of this time I have been in the habit of seeing the out-patients, and of utilising the excellent means they afford for the clinical instruction of the students. It has long been felt that the arrangements for this part of the hospital work are open to much objection, and that they ought as soon as possible to be altered. I have pleasure therefore in enclosing a cheque for £500, to be used for the purpose of improving the accommodation for seeing the surgical out-patients, as well as for providing suitable accommodation for the students who may be attending this part of the hospital practice." The resignation obviously came upon the governors as a great surprise, for though it was well known that during the summer Sir George had suffered much from an enfeebling illness, he had so far recovered that it was hoped he might still feel able to continue his clinical labours at Addenbrooke's. None can, however, gainsay that he has nobly earned the right to comparative repose and lightened responsibility, and amid many expressions of sincere regret Dr. MacAlister moved, the Mayor of the Borough seconding, a resolution accepting Sir George's resignation, in the following terms: "That the governors resolve to place on record their grateful sense of the invaluable services he has during half a century rendered to the institution, both as a place for the relief of the suffering poor, and as an important centre of medical education; that, subject to his acceptance of the office, he be, and hereby is, appointed consulting surgeon to the hospital, and that the chairman be requested to convey this resolution to Sir George Humphry, and to express the hope of the governors that he may long be spared to give them the benefit of his counsel and assistance." Sir George's munificent donation was cordially accepted for the purpose he had indicated, and a

committee was thereupon appointed to obtain plans and estimates for improved out-patient rooms on the surgical side of the hospital. Sir George has received many tokens of the esteem and affection with which he is regarded by his colleagues in the profession and in the University. His bust, with that of his great co-worker, Sir George Paget, adorns the hospital corridor; his portrait, presented by his pupils, is one of the University art treasures, and his knighthood in 1891 was celebrated by an enthusiastic banquet offered him by the entire profession in the Eastern Counties. But even these tributes to his eminence as surgeon and teacher were not more striking than the frank and undisguised emotion with which his letter of resignation was listened to by this assembly of busy practical men, who have long been in daily contact with him in the administration of the hospital. As one of them said, "Addenbrooke's will never seem the same place again if Humphry is away." We understand that Sir George hopes to continue his professorial lectures on Systematic Surgery, and that as consulting surgeon he may be able still to manifest an active interest in the surgical work of the hospital. Mr. Frederick Deighton, elected assistant-surgeon in 1891, will probably be elected without opposition to the full surgeoncy. For the post of assistant-surgeon Dr. Joseph Griffiths, F.R.C.S., pathologist to the hospital, assistant to the Professor of Surgery and Hunterian Professor in the Royal College of Surgeons, has already announced himself as a candidate.

THE CAUSES OF EPIDEMICS.

In a lecture given recently to the Halifax Scientific Society Dr. Solomon Smith drew attention to the fact that to produce an epidemic prevalence of any disease the co-operation of many causes was necessary. However true it was that certain maladies were infectious from man to man, certain other conditions besides infection were in most cases necessary to produce an epidemic—in typhus fever, overcrowding; in relapsing fever famine; in yellow fever, a certain temperature; in diarrhœa, a certain temperature of soil; and, applying these facts to the etiology of cholera, he endeavoured to show that, however true it was that the infection of that disease was taken in at the mouth, mostly in the water that was drunk, other factors were necessary for the production or, at any rate, for the continuance of an epidemic. These factors might be grouped as (1) those which increased the susceptibility of individuals, about which we knew but little; (2) those which favoured the outside growth and development of the infection—heat, moisture, organic impurity of soil and water, aëration of soil, etc.; (3) those which favoured the fouling of the water, floods or droughts according to circumstances, varying level of subsoil water, construction of wells, tanks, and water supplies, their relation to cesspools, and surface pollutions, and social habits of the people by which such pollution was encouraged and carelessness as to drinking foul water induced; (4) those by which the infection was transmitted from place to place, especially movements of large masses of people, as in pilgrimages and wars, and the rapid distribution of cholera-infected people over large areas in some part or other of which a suitable nidus for fresh growth of the infection would be likely to be found. Cholera was no doubt continually being exported from its home in India, but it only occasionally became epidemic in those places where it was an exotic, and when this happened we must look for an explanation not merely to water carriage, which was the mere mechanism of its spread, but to a coincidence of those varied and complex causes which assisted in the intensification of the disease. To some extent the production of an epidemic was analogous to the opening of a "word" lock. As all the letters must be placed in position before the lock could be opened, so many factors must combine before an epidemic of cholera could be caused. The converse of this, however, was also true, and on this was founded our protection from cholera, for however little we might know with precision about some of the multiplex causes of a cholera epidemic, we did know that one essential cause, one letter to the lock, was the swallowing of the poison, and thus, by a provision of pure water, we were able to break up the combination by which alone an epidemic could be produced.

MEDICAL OFFICERS AND MILITARY TITLES.

Prejudice and personal feeling against the titles conferred on army medical officers have rarely attained the point to which a General Officer Commanding abroad has permitted them to reach. The facts, however, have been furnished to us from a most reliable quarter, but we forbear naming the station and officer concerned. This General Officer Commanding, hearing some person speak of a Surgeon Major as "Major" So-and-So, wrote to the Principal Medical Officer, directing that medical officers should discourage the public from calling them by their purely military titles, or that he (the General Officer Commanding) would peremptorily issue an order giving effect to his feeling on this subject. The Principal Medical Officer simply replied that medical officers never spoke of themselves by any but their official titles, and that he (the Principal Medical Officer) had no power to prohibit the public, if they so wished it, from speaking of army surgeons as "Majors" or "Captains," etc. After this correspondence the General Officer (we think very judiciously) dropped the subject. While all this bias was displayed against medical officers, the General Officer Commanding and his staff showed no objection whatever to address officers of the army veterinary department as "Major" or "Captain," or to these veterinary officers placing on their visiting cards the prefix "Major" or "Captain" alone to their names. The reports we receive from all quarters at home and abroad on the feeling displayed towards medical officers by the so-called combatant branches point very distinctly to the fact that until the medical staff is amalgamated with the Medical Staff Corps into a "Royal" Corps with combatant titles for the officers, there can never be peace and harmony.

THE MEDICAL STUDENT.

A sketch of the medical student by a nurse, Miss Agnes E Jackson, has recently come under our notice. Miss Jackson, observing that the idea of the medical student generally cherished by the public much resembles the yet more general view of the "Monsieur Anglais" of the French stage, generously set herself to give a truer picture of him. Miss Jackson, to her surprise, did not find the wards overrun by noisy cubs of the type of Sawyer and Allen, nor even of the worthy Mr. Samuel Huxter. Miss Jackson, who "personally knew hundreds of students during her hospital career," tells us, on the contrary, she "never once heard a word or saw an act that might not have been said and done in any home," and "many a day .... I should never have got through my work without their help so kindly and courteously given;" and instead of discourtesy or rudeness she "received all sorts of thoughtful little attentions." So far, indeed, from fearing the intimate association of students and nurses under the circumstances of hospital life, Miss Jackson learned that these relations "elevated and purified" both men and women. We have never thought it worth our while to try to deprive the comic journals of their precious conception of "the embryo doctor," but we think Miss Jackson's generous protest on behalf of our students deserves our gratitude and will make them more anxious than ever to maintain the high standard of manners and industry by which they are animated. Nothing has more contributed to the elevation of our students as a body than the collegiate system so long existing at St. Bartholomew's and so actively and successfully initiated more recently in other large schools, both

London and provincial. We cannot too strongly impress upon parents and guardians at this season the importance of placing young men in these halls of residence. We do not say that men scattered in lodgings become loose in habits or bearish in manners, but all experience tells us that associated in colleges young men gain a stimulus and support in union with others. Such communities, to alter but slightly the eloquent words of Cardinal Newman, not only administer a code of conduct but embody a specific idea and furnish principles of thought and action. They give birth to a living teaching which in course of time takes the shape of a self-perpetuating tradition, or a *genius loci* as it is called, which haunts the home where it has been born and which imbues and forms more or less and one by one every individual who is brought under its shadow. Thus in college life there is a sort of self-education independent of direct instruction by the teachers.

THE PRIVATE ASYLUM AGAIN.

The *Westminster Review* contains another onslaught upon that stronghold many times attacked—the private lunatic asylum. The weapons used are old; the bolts cast have been used before; there is an air of antiquity, if not of pot-boiling, about the whole performance, and yet the attack has in it an air of reasonableness acceptable to those who believe in the depravity of man, especially of doctors. The sting of the attack lies in the assumption, by various judges, writers, and philanthropists, that man is vile, and cannot be trusted to deal honestly in monetary concerns, or to discharge a patient who pays well even when he has been cured. "It is," says the writer in the *Westminster*, "the original sin of the system under which, for pecuniary considerations, not only the unsound, but frequently the sane, are shut up and kept in the custody of speculators, who carry on a trade in lunatics, that excites my aversion and deadly hostility." The fact that this deadly hostility depends on a number of assumptions by no means lessens one belief that is shared in by many people, and will be accepted as a creed by many more. It is odd that at the time when outcries are rising on every side against bumbledom, and against the hardships inflicted on the weak by those now armed with brief authority, it should be gravely suggested that the evils of the private asylum, which are imagined to continue even under a system which punishes a proprietor by absolute ruin for any wrong he does, would be removed by placing it under officials answerable only to each other, punishable only by reprimand or dismissal, and under boards of management pledged to carry on their asylums as self-supporting institutions, and dependent for so doing on their rich patients, just as much as are the present private asylum keepers. An attack which is based on the assumed depravity of man cannot, on turning from destruction to reconstruction, be allowed to assume that official man is above reproach; and it must be remembered by those whose faith in officialism is so great that the public asylum system in which they trust has never yet been tried by the ordeal to which it is assumed man must succumb. Motives must not be imputed on one side without considering how things would work if they existed on the other.

POISONING BY CARBOLIC ACID.

Judging from the very frequent occurrence of fatal cases of poisoning by carbolic acid, both accidental and suicidal, it might be expected that the dangerous nature of this article would be sufficiently well known to impress vendors of it with some sense of the responsibility they incur by supplying it with as much freedom as some ordinary article of household consumption. That such is not the case must, however, be inferred from the fact that the number of deaths caused by carbolic acid continues to increase rather than diminish, notwithstanding the constant warnings afforded by coroners' inquests. The only reasonable interpretation of this lamentable state of affairs is to be sought for in the inappropriate association of this deadly poison with the articles of domestic use which form the stock-in-trade of provision dealers, grocers, and oilmen. So long as that practice is tolerated, and as a commodity carbolic acid continues to be classed with tea and sugar and sweet oil, etc., the disastrous consequences of negligent supply and use of it may be expected to continue, and to afford cause for remonstrance by coroners and their juries. Repeated experience has sufficiently demonstrated the propriety of restricting the sale of carbolic acid to the hands of persons whose special function it is to exercise caution in the supply of poisonous articles. The Pharmaceutical Society, as the body charged with the public duty of pointing out the articles requiring to be so dealt with and restricted in their sale, has repeatedly recommended that carbolic acid should be added to the schedule of poisons within the meaning of the Pharmacy Act, and the Parliamentary Bills Committee of the British Medical Association has made the like representations to the Government. That recommendation has been endorsed by the opinion of the medical profession, and is being almost daily supported by the occurrence of fatal accidents resulting from its neglect, and of suicides which are, at least, facilitated by the ease with which this poisonous article can be obtained. The plea that carbolic acid is a necessity as a means of disinfection is insufficient to justify the omission of measures for preventing such fatalities, in accordance with the recommendation of the Pharmaceutical Society. Articles available as disinfectants are now numerous, and even the application of carbolic acid in that way can be made compatible, with due regard for public safety, by proper regulation of its supply, and there is no valid reason why that should not be enforced. As the result of a recent inquest, Mr. Braxton Hicks has forwarded to the Privy Council a rider to the verdict of the jury suggesting that carbolic acid should be sold only in fluted bottles and with a "Poison" label. So far as it goes, that suggestion is appropriate and commendable, but if it be carried out in such a way that carbolic acid can be sold by grocers, oilmen, and general dealers side-by-side with articles of food and ordinary domestic commodities, its association with such familiar necessities would materially reduce the effect such precautions might otherwise have and leave the probability of accident or misuse but little altered. Everything points to the necessity of treating carbolic acid as a poison within the meaning of the law, because in the whole category of poisons it is the one which is the most frequent cause of fatal accidents.

THE ROYAL COMMISSION ON TUBERCULOSIS IN CATTLE.

Considering the importance of the subject of tuberculosis, not only in regard to those suffering from the disease, but in reference to the large trade interests involved and the possible drift of legislation on the subject, it is not to be wondered at that the report of the Royal Commission on Tuberculosis is awaited with considerable impatience. In the meantime the opinion of a considerable section of medical officers of health upon the subject is fairly expressed by a resolution passed at the Sanitary Congress lately held in Liverpool, which says: "the presence of tubercle at any stage in more than one part or organ of a carcass, or the presence of tubercle in any other than the primary stage (crude tubercle) in any single part or organ of a carcass, is sufficient and proper ground for the condemnation of the carcass as unfit for food." The phraseology is perhaps unfortunate, but the meaning is clear. Tuberculous degeneration of some accidental lesion, or of the result of some bygone inflammation, is not of itself to be considered enough to condemn the carcass; but if it shows any signs of generalisation, as by its occurrence in more than one organ, or if it ulcerates or becomes diffused, even in one organ, then the carcass must be condemned. If we accept the possibility

of infection by food, as we must do unless the report of the Commission disproves it, this seems a common-sense conclusion, although some health officers would like to go much further. No doubt a rule of this sort would involve occasional hardships to individual butchers or farmers, but one has to remember that it is not a question of the meat alone but of the milk, and that anything which will make tuberculous meat unsaleable will tend rapidly to eradicate tuberculosis from the byres, and so lessen enormously the chances of the milch cows becoming affected. Nor can we forget that the farmers are to a large extent responsible for the occurrence of tuberculosis among their herds. It is not in the open fields that the disease is caught. There can hardly be a doubt that the condition of the cowsheds is largely responsible for the spread of the disease, and that the promulgation of a rule that beasts suffering from any but a purely localised tuberculosis shall be destroyed will not only tend to the immediate amelioration of the conditions of these creatures' indoor life, but will lead to the immediate slaughter of every beast about whose health there is the slightest doubt. It may seem hard on a few farmers just at first, but few things could contribute more to improve the breed of cattle, and the safety of the trade in them, than the routine slaughter of every beast that is not perfect.

ANTICHOLERA INOCULATION IN INDIA.

Dr. W. J. Simpson, Medical Officer of Health for Calcutta, has submitted a further memorandum to the municipality. In this he details the experience gained during the last three months in Calcutta as well as the observations made during recent epidemics of cholera at Cawnpore and Dinapore. Dr. Simpson, according to a telegram from the *Times* correspondent, states that this recent experience has afforded strong additional evidence of the protective value of Haffkine's system of preventive inoculation. He discusses the recent occurrences at Lucknow, and arrives at the conclusion that the failure of the method there has been greatly exaggerated and that the results of that epidemic only teach the necessity of using virus of a higher protective power and of having a special laboratory for its preparation, a condition which did not exist there.

NEWLY-ERECTED BUILDINGS.

At the Congress held by the Sanitary Institute at Liverpool, Dr. Longstaff read an address on "The Overcrowding of Houses on Land." He very rightly commented on the tendency of health officers to attach a disproportionate importance to zymotic diseases, and to overlook those continuous slow influences adverse to health produced or enhanced by the original vice of bad site or construction of the dwelling house. Diseases of the lungs and phthisis caused a third of the total mortality in Liverpool; these diseases were directly produced by want of light and ventilation. He was inclined to put ventilation on a higher level than good drainage, and he animadverted on the repeated erection, under the eyes of the Metropolitan Board of Works and of the County Council, of blocks of dwellings which they had no power to prevent, but which so flagrantly outraged the most modern requirements as respects light and air, as to lead to the closing, under magistrates orders, as unfit for human habitation, of large portions of the newly erected buildings, showing the further necessity for additional legal powers. In all this we thoroughly agree; our metropolis is being built over and over again. With an efficient code of building laws—laws not only on paper, but carried out with strictness—we have only to wait, and slums, rookeries, and narrow streets will in time disappear, and be replaced by healthy constructions. Health officers in the metropolis, as, indeed, elsewhere, have never had proper facilities of studying small areas under their jurisdiction; each census an enumeration takes place, and each district is mapped out for the purpose of the enumerators into a number of very small areas; and if these figures, in full detail of sex, of age, and number were at the disposal of health officers, it would be possible to obtain accurate information, of a statistical character, of the local incidence of disease and death, but the red tape of Somerset House stretches barrier-like across; and, if the health officer wants to get out the mortality of a single block of dwellings, he obtains no assistance—he has to get the census of that particular block himself. It is therefore little wonder that, as zymotic returns are so accessible, he lays the greater stress upon such maladies as are "notifiable," and is not so impressed as he ought to be with diseases equally preventable and more fatal.

QUARANTINE FARMING AS A SPECULATION.

Our pages have from time to time testified to the usefulness of the annual series of diplomatic and consular reports issued by the Foreign Office, but it has seldom, if ever, been our lot to read a report of the kind which has recently been presented by Mr. Consul Hearn, on the trade of Rio Grande do Sul during 1893. We refer to the two pages devoted to a description of the South American quarantine stations. That quarantine stations should anywhere be worked ostensibly for the purpose of making money in the present age, when the whole subject as to the need of such establishments is, and has been for some time now, well to the front, will, we venture to think, come as a genuine surprise to our readers. It has done so to us; and the perusal of Mr. Hearn's plain statement has more than ever impressed us, if that be possible, with the utter foolishness of quarantine, except in so far, of course, as it enables the Brazilian Government to add to their exchequer. Mr. Hearn tells us that these South-American stations are, as a rule, nothing but wretched hotels placed in desolate and almost inaccessible spots, far from the haunts of men, and filled with compulsory guests. "They are either carried on by the Government or farmed out, and in either case the primary object is to make them paying concerns." Not only are all conditions of humanity huddled together for weary days and nights, but they have to pay famine prices for the poor fare and accommodation given. Whether there be an epidemic or not in existence these hotels have to be kept up, and their staffs paid, so that it becomes a necessity for the country to send shiploads of people to these dens in order that the expenses may be met by the exorbitant charges levied on the unfortunate individuals who have thus been trapped into durance vile on the pretence that the public health demands such a procedure, even "when they have come from ports perfectly clean, or where only a few cases of diseases have been reported." So great is the horror of these places that we are told that persons desirous of going to the River Plate, a distance of thirty hours' steaming, prefer to take a five days' journey inland in a rough diligence, since the sea-passage can never be made without having to be supplemented by a quarantine of from two to ten days' duration. Our own country has not been without experience of these iniquitous proceedings, as last year all our ports were considered as infected by the Brazilian authorities for some time, and sailing vessels which had taken from forty-six to eighty days on the way out to Rio Grande were compelled to go to Rio Grande, in latitude 23 degrees south, to perform quarantine, or to go there after trying to call straight away at Rio Grande in 32 degrees south, even being forced to return to the station from Pernambuco in 8 degrees south. This, too, be it remarked, in the case of vessels having a clean bill of health given by Brazilian consuls. The cost to a vessel is estimated at from £100 to £200. We can quite imagine that this method of treating the shipping of other countries does much to harm the trade of the Republic. It could hardly do otherwise. It is in contemplation to establish a regular quarantine station to which the passengers may be removed and detained for a certain period. What is wanted is that a station should be erected at Rio, so that the annoyance and expense of having to proceed a long distance may be obviated. So says Mr. Hearn, but would it not be a great deal

better still to do away with all such childishness as quarantine, and proceed to rely on sanitary defences combined with a strict medical inspection of shipping; for we are told that even when yellow fever has been introduced into Brazil it has shown no disposition to spread. During the present year we have seen South America placing restrictions on the maritime commerce of neighbouring countries, and if it be merely a matter of business with the Republic, of so much coin for the national exchequer, it is high time that Europe demanded the why and wherefore of the procedure. Even if infected vessels be placed in quarantine, surely ships having a clean record may be permitted to enter the harbours, seeing how long it is since they have had a chance of becoming infected. Whatever may be said of European quarantine systems—and that many are bad there is no gainsaying—it is to be at least hoped that none of them are open to the charge of being commercial speculations. Quarantine is in itself sufficiently discreditable to a country without this added horror of fleecing.

BACTERIOLOGY OF HOSPITAL BED CARDS.

DR. TROUSHOLIAVSKI, in an inaugural dissertation recently presented to the University of St. Petersburg, gives the results of some curious researches made by him on the bacteriology of hospital casebooks and papers. Before use these are almost free from microbes. Old casebooks which have been used at the bedside, and have afterwards been shut up in drawers from eighteen months to two years, also contain very few microbes. On the other hand, papers which have been close to, or in contact with, patients, yield a large number of micro-organisms. In forty-six bed cards and admission cards examined for the purpose, the average number of micro-organisms found was 43 per square centimetre of paper. By the side of indifferent micro-organisms, pathogenic microbes such as B. pyocyaneus, the bacillus of tubercle, and streptococci were found. Virulent micro-organisms placed on dry sterilised paper preserved their virulence for a considerable time; the comma bacillus from 5 to 14 days, the typhoid bacillus for 63 days, the diphtheria bacillus for 38 days, the streptococcus for 98 days.

BERI-BERI IN DUBLIN.

THE report which we publish in another column of a strange epidemic outbreak at the Richmond Lunatic Asylum, Dublin, shows that the symptoms of the disease—general œdema, followed by peripheral neuritis and paralysis—bear a close resemblance to those of beri-beri, which occurs in epidemics in certain parts of India, in China, and in Japan, where it is known as kakké. It has been met with also in the French and Dutch possessions in the East and at Aden, Zanzibar, Mauritius, Madagascar, and on the Congo. In comparatively recent times it has been recognised in South America and the southern parts of North America, as well as in some of the South Sea Islands. Many epidemics have from time to time broken out on board ship, and the disease has been carried to San Francisco by Japanese and Brazilian men-of-war, and cases have from time to time been landed at English ports from vessels trading from the East. In a similar way a few cases have been seen at New York and other northern ports of the United States. The disease, however, is one which has not previously, so far as we are aware, spread as an epidemic form in a temperate climate, although it has frequently prevailed in subtropical countries.

THE NEW YORK PASTEUR INSTITUTE.

DR. PAUL GIBIER, Director of the New York Pasteur Institute, has published in the last number (September) of the *New York Therapeutic Review* the statistics of the cases subjected to Pasteur's preventive treatment against hydrophobia during the first four years of the Institute's existence (1890-93). The total number of persons was 479. In most of the cases the animals which inflicted the bites displayed unmistakable symptoms of rabies, or were examined after death by veterinary surgeons, or were proved by inoculation of part of their nervous substance to have had the disease. In 24 cases treated successfully the animals which inflicted the bites bit another person or other persons also, who, except in one case, were not treated at the Institute. In one of these cases 4 men, in another 3 men and a child, in a third a woman and a child, and in the remainder 1 person, all subsequently died of hydrophobia. In the case of 41 persons treated successfully in which one or more animals had been bitten at the same time, these animals subsequently succumbed to rabies. The statistics for 1893 are given in a table, which is drawn up in the same form as that adopted at the Paris Institute. The total number treated was 85, and of these 26 were persons bitten by animals proved to be suffering from rabies, either by experiment or by the death of some other person or animal bitten. In 11 cases the animals by whom the bites were inflicted were recognised as rabid by clinical or veterinary examination. In the remainder the disease could only be suspected, as the animals had either disappeared, or had been killed and their bodies thrown away. No death has been reported among any of these 85 cases.

THE CZAR OF RUSSIA.

A WELL-INFORMED medical correspondent at St. Petersburg, whose position entitles him to confidence, writes to the BRITISH MEDICAL JOURNAL: "The deepest interest and the warmest sympathies are aroused in medical circles here by the change for the worse in the condition of H.I.M. the Czar. It has for some time been known that the Emperor has been suffering from a form of Bright's disease of the kidney. It is that form which is known best as the granular contracted kidney, the gravity of which is well known. The recent exacerbations, which assumed a critical and threatening aspect, have been due to intercurrent acute nephritis, due, it is said, to two successive chills. The symptoms have been alarming, and have included continuous and distressing vomiting and some effusion, with consequent and concurrent cardiac weakness and oppression of breathing. Great good has resulted from the institution of a strict and almost exclusive milk diet, and rest from business. Rest, however, it has been found very difficult to enforce while the Czar is called upon to perform any of the multifarious and heavy duties of active government. Under these circumstances, and with the approval of Professor Leyden, of Berlin, a strict continuance of the present treatment and milk diet, abstinence from head work, and removal to a warm climate, have been absolutely enjoined as essential conditions of possible recovery. It is doubtful whether any Russian health resort will afford a sufficiently mild climate, and the Empress of Austria has offered the use of her beautiful palace at Corfu, recently completed. It has the advantage of seclusion, lovely views, and an admirable winter climate. Corfu has long been favourably known here, and is a resort of many wealthy Russians. Although the condition of His Imperial Majesty is undoubtedly serious, strong hopes are entertained of his recovery under these favourable circumstances and with suitable treatment. Many instances are known in which when once the acute symptoms of kidney inflammation have been subdued, long and enduring convalescence has resulted, and the patient has been able, after an interval, to resume with precaution active business pursuits. It is everywhere strongly and devoutly hoped that it may be so with this illustrious sufferer."

CALENDAR OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Calendar for 1894 has just been issued by the Council of the College. From it we ascertain the following facts:—It appears that there are 1,144 Fellows on the roll of the College, an increase of 22 over last year, of whom 907 obtained the Fellowship by examination; 17 were elected as Members of twenty years' standing, under Section 5 of Chapter 15. Vict.; and 2 are *ad eundem* Fellows. There are 16,733 Members, and 659 Licentiates in Midwifery. The Licentiated in Dental Surgery are stated to number 927. Holders of the diploma of Public Health (granted by the Royal Colleges of Physicians and Surgeons) number 189.

During the past collegiate year 648 candidates presented themselves for examination in Elementary Anatomy, of whom 511 passed and 137 were referred; 149 candidates presented themselves in Elementary Physiology, 124 of whom passed and 25 were referred; 486 candidates presented themselves in Elementary Biology, 327 of whom passed and 159 were referred. The examiners are appointed in conjunction with the Royal College of Physicians of London, under the scheme for an Examining Board in England. The fees paid by candidates for this examination amounted to £8 395 8s. 6d., the examiners receiving in fees £483 15s. Of 748 who presented themselves in Chemistry, 416 passed and 322 were referred; in Materia Medica, of 492 candidates, 335 passed and 157 were referred; in Practical Pharmacy, of 197 candidates, 139 passed and 58 were referred. The examiners in Chemistry, Materia Medica, and Practical Pharmacy are elected by the Royal College of Physicians of London.

The examiners in Anatomy and Physiology for the Second Examination are appointed in conjunction with the Royal College of Physicians; they have conducted the Primary Examination under the old regulations as well as the Second Examination of the Examining Board; 822 candidates presented themselves for examination in Anatomy, of whom 504 passed and 318 were referred; 861 candidates presented themselves in Physiology, 503 of whom passed and 358 were referred. The fees paid by candidates for these examinations amounted to £3,922 5s. 6d., the examiners receiving £1,383 8s. 8d.

The Board of Examiners in Anatomy and Physiology for the Diploma of Fellow, elected annually by the Council, held during the past year two examinations: 160 candidates presented themselves, of whom only 62 passed, whilst 98 were referred. The fees amounted to £1,018 10s., of which the Board received £6 6.

The Court of Examiners, ten in number (six of whom are also on the Council) are elected by the Council from the Fellows of the College for a period of five years. They conduct the Third or Final Examination in Surgery of the Examining Board as well as the Pass or Final Examination under the old regulations, and the Pass or Final Examination for the Fellowship. During the year the Court has held two examinations for the Fellowship and four for the Membership; at the former there were 99 candidates, 54 of whom passed and 45 were referred. For the Membership 893 candidates presented themselves for examination in surgery, of whom 512 passed and 381 were referred. The fees paid by the candidates for these examinations amounted to £10,159, and the fees to the Court of Examiners and the Examiners in Midwifery amounted to £5 651 16s. The Examiners in Medicine under the scheme are elected by the Royal College of Physicians. Of 869 candidates who presented themselves for this examination during the year, 491 passed and 378 were referred. The Examiners in Midwifery are appointed in conjunction with the Royal College of Physicians, and have examined 859 candidates, 578 of whom passed and 281 were referred.

The Board of Examiners in Dental Surgery have held two meetings for the examination of 129 candidates, 88 of whom received their diplomas and 41 were referred. The fees paid by the candidates amounted to £924, the Board receiving £541 16s.

The Examiners in Public Health, appointed in conjunction with the Royal College of Physicians, have examined 46 candidates in Part I, 28 of whom passed and 18 were referred; for Part II 48 candidates presented themselves, 26 of whom received the diploma and 22 were referred. The fees received from both parts amounted to £224 14s., the examiners receiving £195 6s.

With regard to the finances of the College, it appears that the income from all sources amounted to £28,605 5s. 3d., the largest receipt being derived from fees paid by candidates for the diplomas of the College, namely, £19,623 13s., the next largest item being from dividends on the Erasmus Wilson bequest, £4 723 18s. 11d. Rents from chambers adjoining the College produce £750; investments, £695 2s. 10d.; hire of rooms, sale of questions, etc., at Examination Hall (half expenses), £515 12s. 3d.; fees retained for referred candidates, £500 5s.; from trust funds, £251 1s. 9d.; incidental receipts, that is, fees from Fellows by election, sale of *Calendars*, etc.), £55 15s. 3d.; from sinking fund, 7s. 10d.; balance at bankers, 1893, £1,480 8s. 5d.

The expenses for the year amount to £27,027 5s. 1d., leaving a balance of £1,578 0s. 2d., the largest item being for fees to examiners, £8 892 1s. 8d.; expenses of examinations, Fellowship and Dental only, £349 14s. 9d.; half expenses Examination Hall, £4 281; half expenses research laboratories, £697 13s. 3d.; extraordinary expenses, that is, *conversazione*, bust of Sir R. Owen, etc., £494 6s. 3d.; rates, taxes, and insurance absorb the sum of £1,154 16s. 6d.; alterations and repairs, £547 4s. 9d.; fees to Council, £262 10s.; salaries, wages, and pensions in the three departments, Museum, Library, and College, £5,055 6s. 3d.; lectures, catalogues, specimens, etc., for Museum, £601 7s. 1d.; purchase of books, etc., for Library, £662 16s. 1d.; fees returned to candidates, £462 10s.; purchase of stock for various purposes, £2,074 7s. 10d; trust funds and Morton Lecture, £225 16s. 11d.; under miscellaneous items, that is, fuel, light, printing, stationery, etc., £1,265 13s. 9d. has been expended.

During the past year, in addition to the ordinary work, consisting of repairs and remounting spirit preparations and skeletons, the Museum has been enriched by upwards of 400 specimens, by donation, purchase, or from College stores. The amount of material sent for pathological investigation and report continues to increase, and now constitutes an important section of the routine work. Further development has taken place with regard to the use of the photographic camera and studio for obtaining illustrations of normal and morbid anatomy. These photographs have been employed for the purpose of illustrating lectures, by means of a lantern, or for the construction of diagrams, woodcuts, prints, etc. There is every reason to believe that the advantages thus afforded by the College have been duly appreciated, and that in the future there will be a greater demand for them.

From the Librarian's report, it appears that the supply of new books has been well kept up. A very interesting collection of papers and drawings was presented to the College by the executors of the late Sir Richard Owen. This collection contains some of the notes from which Sir Richard delivered his earliest Hunterian Lectures, as well as notes taken by him at the lectures of Joseph Henry Green, Bell, and others. There is also a series of drawings by W. H. Clift, of the heads of murderers who were sent to the College for dissection. Including journals and *Transactions*, the total number of volumes in the library is about 47,000, against about 46,000 last year.

In the Secretary's report will be found an abstract of the work done by the Council, the Committee of Management at the Examination Hall, the Laboratories on the Embankment, the Finance Committee, statement of elections, etc. During the year two Members have been removed for misconduct.

THE CHOLERA.

The latest official weekly bulletin reports 2,861 cases and 1,757 deaths in the whole of Russia, the Government of Warsaw alone excepted. The figures, as compared with those of the previous week, show a decrease of 3,249 in the total number of cases, and 1,164 in the mortality. The epidemic has now invaded the Government of Kherson, and during the week there were 48 cases and 28 deaths. The city of Odessa is reported to remain free from cholera.

A Reuter's telegram from Athens, dated October 2nd, states that trustworthy advices from Constantinople announce that cholera has broken out in that city, and that several deaths from the disease have already occurred.

The official cholera bulletin issued October 3rd by the German Imperial

Board of Health shows that between September 24th and October 1st 24 cases of cholera and 6 deaths altogether occurred in East Prussia and the Vistula, Netze, and Warthe and Elbe districts. From September 23rd to 29th there were 35 cases and 11 deaths in Upper Silesia.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

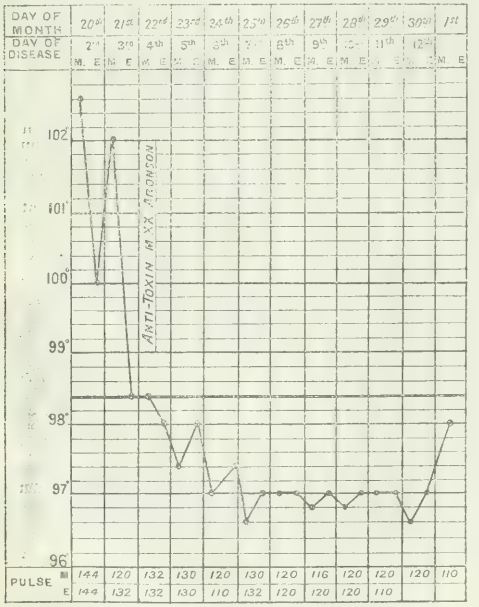
We have received the following further reports of cases in which this mode of treatment has been employed:

X.—Mr. J. Townsend Barker, L.R.C.P.Lond., M.R.C.S. Eng., L.S.A., D.P.H.Camb., medical officer for Streatham, reports two cases:

Case I.—A. T., aged 2, a female; taken ill September 19th, 1894, with sickness, feverishness, and dulness. First seen in the evening, when a patch of membrane was discovered on the right tonsil the size of a threepenny piece. Treatment consisted of a mixture of perchloride of iron and glycerine given every two hours and the painting of the throat with sulphurous acid and glycerine.

September 20th. Temperature: morning, 102.6° F. Pulse, 144. Child dull and heavy. Both tonsils and soft palate covered with membrane and several patches on pharynx. In the evening the membrane was extending and paraffin was substituted for the sulphurous acid paint. The urine contained no albumen. Temperature: evening, 100°. Pulse, 144.

September 21st. The throat appearances as before, but membrane is thinner. A croupy cough has surpervened and some laryngeal stridor. Temperature: morning, 102.2°. Pulse, 120. Urine: no albumen. In the evening the temperature had fallen to 98.4°; pulse, 132; the laryngeal symptoms continued though the child had been tent-bedded and steamed all day.



Case I.

September 22nd. The throat somewhat cleaner and less membrane on the pharynx; tonsils still covered; laryngeal stridor and cough continued, though ameliorated. Temperature: morning, 98.4°; child still dull and apathetic; pulse, 132. By the kindness of Mr. Zimmerman I was furnished with ℥xx of Aronson's antitoxin, and in the afternoon I saw the child again in consultation with Dr. Wilberforce Smith and injected ℥xx into the outer side of the thigh. The previous treatment was continued. The child got brighter shortly after the injection. Temperature: evening, 98°. Pulse, 132.

September 23rd. Temperature: morning, 97.4°; evening, 98°. Pulse: morning, 130; evening, 130. Urine: no albumen. Throat cleaning; laryngeal symptoms gone; child feeding well and much brighter.

September 24th. Tonsils and pharynx clean. No membrane visible; no laryngeal symptoms. No albumen. Temperature subnormal.

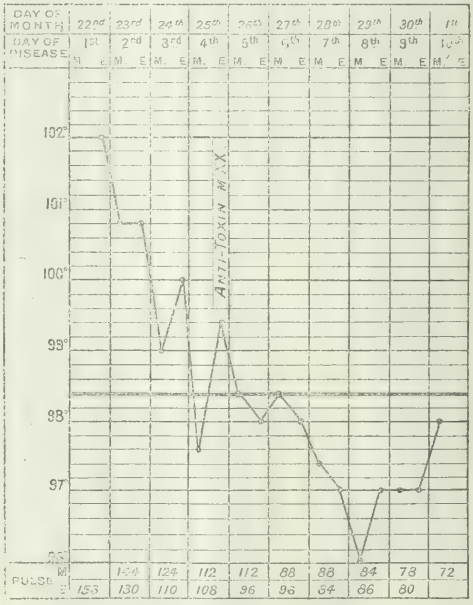
September 25th. A trace of albumen in urine, which disappeared the following day.

Henceforward the child rapidly regained strength, and no further complications have so far ensued.

Case II.—M. T., aged 27, mother of the above. Taken ill on September 22nd. Felt chilly and prostrate all day. At night pains in back and limbs came on, with severe frontal headache and slight sore throat. A small patch of membrane was visible on the lower part of the right tonsil. Urine: no albumen. Temperature: evening, 102°. Pulse, 156. Treatment a mixture of perchloride of iron and glycerine every two hours, and paraffin as a throat paint every four hours.

September 23rd. Temperature: morning, 100.8°; evening, 100.8°. Pulse: morning, 144; evening, 130. Thick membrane covered both tonsils. Urine: no albumen. Patient took plenty of nourishment, chiefly Benger's food and beef-tea, and did not object to the paraffin. The throat was ordered to be sprayed with a solution of lactic acid ℥ij in ℥viij of lime water alternately with the paraffin painting.

September 24th. Temperature: morning, 99°; evening,



Case II

100°. Pulse: morning, 124; evening, 110. General and local conditions same as yesterday.

September 25th. Temperature: morning, 97.6°; evening, 99.4°. Pulse: morning, 112; evening, 96. Urine contained a trace of albumen. In the evening the tonsils were cleaner than on the previous day, but coincident with a slight rise in temperature there was an increased feeling of illness and a

slight formation of membrane on the anterior pillars of the fauces on each side. I injected ♏xx of Aronson's antitoxin (all we could obtain), which had been kindly supplied that afternoon by Mr. Martindale. The patient voluntarily described the effect of the injection as that of a powerful stimulant. The feeling of depression from which she suffered passed away in about half an hour, and never returned.

September 26th. Temperature: morning, 98.4°; evening, 98°. Pulse: morning, 112; evening, 96. Urine contained a trace of albumen, which has persisted till the present (October 1st). Patient very cheerful. Appetite good. Tonsils nearly clean; a little thin membrane on both fauces.

September 27th. Temperature: morning, 98.4°; evening, 98°. Pulse: morning, 88; evening, 96. Little membrane on fauces strongly adherent. Tonsils quite clean. Throat raw and sore, bleeding when swabbed. Patient bright and cheerful.

September 30th. Throat quite clean to-day for first time. Temperature subnormal. Still a trace of albumen in urine. Patient very bright and hungry, though she has taken plenty of nourishment throughout.

Remarks.—The source of infection in these cases was undoubtedly a previous fatal case which had occurred in the same house five weeks before. Case 1 sickened only five days after the family returned home from the country, and I discovered that a screen which had been used to form part of a tent bed for the earlier case had been removed to the drawing room without disinfection, for fear the sulphur should blacken the gilt. The sanitary arrangements of the house were very good, and, with the single exception enumerated, disinfection had been very thoroughly carried out. The cause of the earlier fatal case, I was told, could not be discovered. There were no animals kept in the house, but I do not know that the milk supply and laundry were investigated.

With regard to the effect of the antitoxin, these cases cannot be considered conclusive, as in both improvement had set in before its administration, and the same remedies were continued afterwards; but the mother had no doubt as to the feeling of relief and *bien-être* which followed the injection, and she seemed that the child seemed brighter almost immediately. No local reaction took place in either case at the site of injection.

No conclusions as to dose can be deduced, as in each case I injected all I could obtain, namely, ♏xx. The paraffin paint seemed to directly affect the membrane, and the nurses told me that the patient used to ask for it before it was due, on account of the relief afforded. No cultures were made from the throats, but cover-glass preparations from the membrane showed abundant bacilli, with streptococci, staphylococci, and micrococci.

XI.—Mr. Henry G. Biddle (Broadstairs) writes: In accordance with the suggestions contained in Dr. E. W. Goodall's letter in the British Medical Journal of September 29th, I send the report of a severe case of diphtheria which was successfully treated by injections of antitoxin. On July 23rd I was called to see G. A., aged 34. He had complained of sore throat, and had felt very ill since July 15th, and had kept to his bed since July 20th. He appeared very ill. Temperature, 101°; pulse, 130. Tongue very foul; glands much enlarged; tonsils greatly swollen, nearly meeting in middle line, and partly covered by characteristic grey membrane. There was severe headache, and the urine contained albumen. Iron and chlorate of potash was given, and the fauces frequently dusted with sublimed sulphur. The following day, July 24th, the patient's condition was unchanged.

On July 25th I injected 2½ c.c. of Aronson's antitoxin solution. Temperature rose to 103, and patient became very delirious and violent towards evening.

On the 26th he was still very delirious. Temperature fell to 99° in morning, 101 in evening; 2½ c.c. of the solution injected.

On the 27th the throat was decidedly better, the membrane was beginning to get loose. He was still very delirious.

On the 28th he slept for six hours, and woke up quite conscious. Temperature 100°. Membrane coming away.

From this date the patient made an uninterrupted recovery. He got up on August 2nd. Urine was then free from albumen. I have had him under my observation until the present time, and he has never had any sequelæ, no loss of knee-jerk or symptoms of nerve degeneration.

XII.—Dr. J. Grant Bride (Albemarle Street, W.), late Medical Officer of Health, Runcorn Rural Entire District, writes: Dr. Trevor Fowler's suggestion that the dose of antitoxin, and also that the indications for its repetition should be definitely stated, is deserving of much attention; at the same time there would be much difficulty, I think, in finding the range and laying down rules for the employment of this recent addition to our therapeutic arsenal. It is comforting to the mind that no ill-effects have been recorded against the free use of antitoxin: therefore I would inject ♏v in the case of a child aged 1 year, and increase it by ♏j for each year above that age up to 16; the dose for it and up to 20 would be ♏xx. In severe attacks the dose might be increased, and repeated after an interval of 8 to 10 hours; on the other hand good results are obtained from small doses in mild cases, but they require to be repeated, whereas a large dose (from 15 to 20 minims) did its work thoroughly, without need of repetition. The following cases will support this conclusion.

Case I.—M. H., aged 64, who enjoys robust health, stout, and with a florid complexion, was first seen on August 13th. She was then sallow, and felt ill and exhausted; the throat was congested and painful, with a small patch of membrane on each tonsil: there was cough and difficulty in breathing: the temperature was 99.2°, the pulse 78. I ordered a mixture of perchloride of iron and chlorate of potassium, and locally used salicylate of sodium.

August 14th. She had not slept much during the night; a dense membrane had covered the pharynx and fauces; the temperature at 10 A.M. was 104.2° F., at 4 P.M. 104.5°, the pulse 122. I had obtained a supply of Schering's antitoxin from Messrs. Allen and Hanburys, and injected ♏xj. A lactic acid spray was used to the throat. She slept ten minutes after this was done and did not awake till 10 30 P.M., when her temperature was 102.8°; the pulse was 112. She had perspired very freely and now took food well, again slept until 5 A.M., took food, and slept until 11 A.M.; the temperature 102.3°, the pulse 100.

At 9 P.M. on August 15th the temperature was 103.2°, the pulse 126: some fragments of membrane had been coughed up; the patient did not feel so well. Antitoxin ♏xvj was injected. She again slept soundly, and perspired freely during the greater part of the night.

At 9 A.M. on August 16th her temperature was 99.2° and at 4 P.M. 97.8°; the throat was clearing rapidly, and her strength was, she declared, as good as it ever had been. Recovery went on rapidly: the urine was free from albumen.

Case II.—D. G., aged 6 years, a delicate girl with mitral stenosis, was first seen on August 31st. The fauces and soft palate were inflamed, and the tonsils and pharynx were covered with membrane. She complained of pain in swallowing. There was difficult breathing and stridor. The temperature was 104.8° F., the pulse 126 at 9 P.M., when I injected ♏xj of antitoxin. During the night she slept restlessly, but her breathing had become easier as the morning advanced.

September 1st. There was less stridor, the temperature was 102.4°, the pulse 114. She had taken food freely. The membrane on the palate was now curled under at its margins, and had a shrivelled appearance, but a firm central attachment still. At 2 P.M. the temperature was 103.2°, the pulse 116. Antitoxin ♏xv was injected, after which she slept several hours, but was still restless.

On September 2nd the temperature was 100.3° at 10 A.M., the pulse 84. Breathing was easier, stridor absent, the skin was acting freely. The membrane came away in large pieces during the day.

On September 3rd the breathing again became difficult, stridor returned, and the temperature rose to 102.5°. Antitoxin ♏xviij was injected. In ten hours the temperature had fallen to 98°, the pulse was 74. Membrane still continued to come away from the pharynx, naso-pharynx, etc., and the child continued to improve without further incident.

except the presence in the urine of a small quantity of albumen.

XIII.—Dr. D. Watkin Hughes (Wymondham) writes: During the present severe epidemic of diphtheria at Barnham Broom, Norfolk, I have attended 40 cases. I treated the first 30 with the usual remedies, namely, tinct. ferri sesquichl., and inhalations of sulphurous acid, iodine, carbolic acid, etc. With well trained nurses, who most carefully attended to the patients, I lost 10 out of the 30.

For the last 10 cases, some of which were very severe, I used Aronson's "Heilserum Diphtheria Antitoxin" (E. Schering) with marked success, injecting from mxij to xxij; the improvement was rapid and in most cases similar. On the second day after the injection the temperature rose to 103°F. or 104°, on the third day it suddenly dropped to subnormal. The membrane shrivelled up and peeled off in masses, leaving a raw surface, and from that time all these patients made rapid recoveries. In no case had I to repeat the injection.

EPIDEMIC MUSCULAR RHEUMATISM.

III.

Dr. William Donovan (Erdington, Birmingham) writes: With regard to the notes appearing in the British Medical Journal on "Epidemic Rheumatism," may I say that during the very dry weather last summer I had quite a number of these cases? At the same time the roads were very dry and dusty; the dust was saturated with organic matter, and smelt and tasted of ordure. Believing that the inhalation of this fœtid dust had some connection with the prevalence of the peculiar form of disease, I proposed and carried a resolution at the meeting of the sanitary authority that in "the interest of public health it was advisable that the main roads in the district should be watered." The result was all I had hoped for, as after the dust was laid I had no further case of "the disease" in question. Perhaps these facts may be of interest to the profession.

Dr. T. MacHardy, (Cullen, N.B.) writes: In a recent issue of the British Medical Journal I notice a contribution under the above heading, which corresponds in many particulars with notes I took during an epidemic we had here last spring. It was distributed over a large district, and during the month of March I saw 48 cases, mostly young adults. I could find no satisfactory evidence of it being infectious, and only on one occasion did I find more than one patient in the same house. Fully a fifth of the cases gave a history of a previous attack of some form of rheumatism. Many of the complications which so frequently accompany influenza were here conspicuously absent. I noted erythematous rashes over the body and limbs in 4 cases, but although carefully looked for I failed to find any affection of the heart which did not previously exist.

The attack came on suddenly, the temperature rising in a few hours to 104° F. The pulse was comparatively slow, never exceeding 106 beats per minute. The skin was covered with a profuse acid sweat, giving off the peculiar sour smell of acute rheumatism, and the tongue thickly coated with a white moist fur. Headache was rarely present, but the neck was often the seat of a sharp stinging pain, which descended over the back and shoulders. The regions most frequently and most severely attacked were the lower dorsal and lumbar. From these regions the pain radiated into the lower intercostal and abdominal muscles. When the intercostals were involved the breathing became quick and shallow, and inspiration was accompanied with a deep pain in the diaphragm. The pain was purely muscular; it was increased by the slightest pressure or movement, and it was no uncommon experience to find it change from one side of the body to the other in the course of twenty-four hours.

In many cases micturition was attended with severe pain. Hot, highly coloured, and strongly acid urine was passed every few minutes in quantities varying from ʒj to ʒij. After application of hot fomentations to the lumbar region this almost incessant desire to micturate passed away, and in two to three hours urine, almost colourless and with a specific gravity varying from 1005 to 1012, was voided in large quantities. I found the disease in its acute stages readily amenable to treatment, for it seldom continued beyond the third day, but recovery was slow, and many suffered from lumbago, depression, and weakness for weeks afterwards.

THE EPIDEMIC OF DIPHTHERIA IN LONDON.

There are as yet no signs that the epidemic of diphtheria in the metropolis is declining. The number of deaths in London last week was 67, more than two-thirds of the total number of deaths in the principal towns of England and Wales. The accommodation of the Metropolitan Asylums Board is still inadequate for the admission of all the cases notified, in spite of the fact that steps have been taken recently to increase the available accommodation. We are enabled to state, from official returns kindly furnished to us, that the number of cases admitted to the hospitals of the Board during the last quarter (July, August, September) has been in excess of the number admitted in any previous Michaelmas quarter. In 1893 the number was 849, while this year it has been 1,143. Part of this increase must, however, be attributed to the increased efforts which are now made by the Board's officers to admit all patients on whose behalf application is made. This view is confirmed by a comparison of the number of notifications; last year in the Michaelmas quarter they numbered 2,848, while this year the number in the Michaelmas quarter was 2,593.

The figures for the last four years are contained in the following table:

Return of the Number of Diphtheria Patients admitted into the Metropolitan Asylums Board Hospitals during the Michaelmas Quarters in the Four Years ended 1894; also the Number of Cases notified in the Metropolis during those Quarters.

	Michaelmas Quarter.			
	1891	1892	1893	1894
Admissions	411	719	849	1,143
Notifications	1,224	1,798	2,848	2,593

The number of beds at present at the disposal of the Metropolitan Asylums Board for cases of diphtheria has been raised recently, by the appropriation of scarlet fever wards, to 470, and for the present this appears to be the utmost which can be provided; but the new Shooter's Hill Hospital will contain about 100 beds for diphtheria, and additional wards are about to be built at the Western Hospital on land which has recently been purchased.

MEDICAL DEFENCE UNION.

An adjourned special general meeting of the members of the Medical Defence Union was held on Wednesday, October 3rd, at 20, Hanover Square, Professor Victor Horsley, the President, in the chair. The object of the meeting was to further consider the recent action of the Council of the Union in connection with the litigation between Dr. Collie and Mr. Bloxham, and to consider and, if thought fit, to repeal the present Articles of Association of the Union, or some of them, and to substitute others therefor by special resolution, with the object of preventing the Council or governing body of the Union in future intervening in disputes of a purely private or domestic nature between members of the Union or between a member of the Union and any other member of the medical profession not being a member of the Union.

The Chairman, having briefly opened the meeting, called on Dr. Bateman, who read a lengthy statement, issued by the Council of the Union, defending the course they had adopted in the above litigation. In this statement the Council stated that they were confident that when the members of the Union had fully grasped the salient points involved in the case they would recognise the artificial and misleading nature of the agitation which had been recently raised thereon. Legal agreements between part-

ners and principals and assistant were not to be treated lightly by those who entered into them, and it was not only to the interest of the actual parties concerned but also to the interests of medical practitioners generally that such agreements should be sacredly observed and in their entirety. Fortunately it was only in very exceptional cases that they found such bonds dishonoured, and it was just those exceptional cases in which the assistance of the Union was desired by the member injured. The Council felt that it was its duty to support the honour and dignity of the profession and to help a member of the Union whose rights in the case were made perfectly clear by the terms of the written and signed agreement submitted to it. The Council concluded its statement by pointing out that the action of Bloxham *v.* Collie had not cost the Union anything, each side paying their own costs. The only expenditure to which the Union had been put was that involved in defending it from the attacks made upon it by Mr. Bloxham and his supporters, and that had cost them £284.

The Chairman then invited discussion, and called upon Dr. Bennett, who moved the adjournment at the last meeting.

Dr. Bennett said he thought that members would agree that the revelations they had just heard in the statement of the Council were a complete justification for his proposing the adjournment of the question at the previous meeting on the ground that they had not then sufficient information to give a decisive vote. After having listened to the statement of the Council, he thought it would be an insult to their common sense to suppose that the members would not approve of the action taken in the matter. He, therefore, proposed the following resolution, which he trusted would be carried unanimously:

That this meeting of members of the Medical Defence Union, after hearing the full statement of facts concerning the recent litigation between the Union and Mr. Bloxham and Mr. Bloxham and Dr. Collie, is of opinion that no further discussion in the matter is required; and, further, that the Council in so fulfilling its duty in accordance with the Memorandum of Articles of Association, was acting in the best interests of the Union and of the profession, and for the maintenance of honourable practice.

Dr. Harper seconded the motion, and said he had the more pleasure in so doing because he was one of those who in the early stages of the discussion was inclined to think that the Council had overstepped its duties. Now, however, he was of opinion that if they had not taken the steps they had the Council would have been very remiss in its duties.

A long discussion then ensued of a purely personal nature, dealing with the recent actions.

Mr. Bloxham traversed the Council's statement in many particulars so far as it referred to himself, and said that, if he had been guilty of such conduct as had been imputed to him, the Union ought not to take his subscription as a member, but ought rather to strike his name off the books and bring his conduct before the General Medical Council.

Dr. Collie complained that although he had spent hundreds of pounds in getting the full clear light of a court of justice on the case, he had at the last moment unfortunately been prevented from going into the witness box.

Dr. Norman Kerr supported the Council, and said that the best thing was to pass the resolution, and so end the matter amicably.

Dr. Bousfield and Dr. Leslie Phillips could not support the Council, because in their opinion the rules of the Union precluded the Council from defending any such cases as the one in question.

After some further discussion, the resolution was adopted by 46 votes to 13.

The Chairman said that with regard to the proposal to alter the Articles of Association, of course he could not allow any alterations to be proposed without all the members having had due notice. It was the opinion of the Council, however, that many of the articles did want revising, and it was thought this could best be done by the appointment of a numerically strong committee, who could draw up the proposed amendments to the articles, and submit them to the annual meeting next February, and if then approved they could be finally adopted at a confirmatory meeting which would have to be held later. The committee would be elected from that meeting, and at the meetings of the Union on Thursday, Friday, and Saturday next, to be held at Manchester, Bristol, and Birmingham respectively.

OPENING OF THE WINTER SESSION IN LONDON.

St. Bartholomew's Hospital.

The annual *réunion* of old St. Bartholomew's men was this year one of the most successful on record. Over 120 "old students" and guests were present at the dinner in the great hall of the hospital on October 1st. The arrangements, thanks to the energetic secretary, Dr. Hensley, were admirably carried out. Dr. Thorne Thorne, C.B., F.R.S., was in the chair, and was supported by most of the hospital staff and several guests, amongst whom were Sir Richard Quain, Bart., F.R.S.; Sir William Flower, F.R.S.; Professor Allbutt, Regius Professor of Physic at Cambridge: Professor Roy; Sir Frederick Abel, F.R.S.; Professor Charles Stewart: Dr. F. W. Barry and Mr. C. N. Dalton, of the Local Government Board: and Mr. Trimmer. After dinner the Chairman proposed "The Queen," and "The Prince of Wales, Princess of Wales, and Royal Family," both of which having been duly honoured, Sir Frederick Abel gave "The Army, Navy, and Reserve Forces," to which Sir William Flower responded, and referred to the debated question of the status and rank of army surgeons, hoping that they would not forget that they are medical men first and military second. Dr. Thorne then proposed the toast of the evening, "Prosperity to St. Bartholomew's Hospital and School and Health of all old Students." He referred to the progressiveness of medicine, and to the extensive additions to the hospital and educational machinery which have been made during the past few years. Amongst these improvements is the construction of a new operating theatre, which has just been completed, the addition of laboratories for bacteriology, pathology, biology, and public health. He alluded to the richness of St. Bartholomew's School in scholarships and prizes, and congratulated the students on the encouragement to research in pathology afforded by the generous gift by Sir Trevor Lawrence, the treasurer to the hospital, of a research studentship of the value of £100 a year. Nor, he said, had the physical culture of the students been neglected, for over £7,000 had been spent on a recreation park at Winchmore Hill. Mr. Barrow, who entered the hospital that day sixty-two years ago, responded in an admirable speech, and recalled many incidents of his student's career. Mr. Henry Power, consulting ophthalmic surgeon to the hospital, then proposed the health of Mr. W. H. Jessop, the newly-elected ophthalmic surgeon, who replied. Dr. Church proposed "The Guests," and Sir Richard Quain and Professor Allbutt responded. Sir James Paget, Bart., whom all St. Bartholomew's men delight to hear, then proposed the health of the Chairman, and alluded to Dr. Thorne's admirable work at the Local Government Board. Dr. Thorne replied, and then proposed the health of Dr. Hensley, the Hon. Secretary. Dr. Hensley having replied, the party adjoured to the handsome library of the school, where an hour or more was spent in a most pleasant *réunion* of old friends.

Charing Cross Hospital.

At Charing Cross the session was inaugurated with a *conversazione* in the Medical School, when about 700 persons were present. The proceedings commenced with the prize giving in the Anatomical Theatre, at which Professor A. Macalister, F.R.S., presided. The Dean made a report showing that the medical school was continuing to make satisfactory progress; and after the prizes had been duly distributed the Chairman briefly addressed the audience, winding up by reciting the well-known Hippocratic oath. In the dissecting room, converted for the nonce into a concert room, a concert was given, followed by musical dialogue by Mr. George Hawtrey and Mr. E. Solomon, in which the former acted with Miss Frances Maas. In the Physiological Theatre Dr. Abercrombie gave a lantern-slide demonstration of a series of views in Greece, whilst in other parts of the building Dr. Mott and Mr. Fricke gave demonstrations of physiological apparatus: whilst Dr. Forster Morley and Mr. Percy Richards did the same with physical and chemical apparatus. Pictures, photographs, drawings, arms and armour, etc., were

lent by various members of the staff, and a selection of music was played in the museum by the Queen's Westminster Band.

St. George's Hospital.

The past and present students of the St. George's Medical School dined together as usual in the Whitehall Rooms of the Hôtel Métropole, on the evening of October 1st, Sir William Dalby occupying the chair. Upwards of a hundred guests sat down. The toast of the evening, proposed by the Chairman, was responded to by Mr. Pickering Pick, Treasurer of the School. Dr. Duka replied to the toast of "The Governors of the Hospital," proposed by Mr. Haward. Dr. Bowles proposed the chairman's health, and Mr. Holmes that of the orator of the day (Dr. Isambard Owen). Mr. Edgcumbe Venning and Mr. Arthur Evans, Senior House-Physician, responded to the toast of the past and present students, proposed by Mr. Rouse. The services of the Honorary Secretaries, Mr. Dent, Mr. Frost, and Dr. Gerald Harper, were enthusiastically acknowledged.

Guy's Hospital.

At Guy's Hospital the session was as usual opened by a meeting of the Pupils' Physical Society, at which, after a few words of welcome spoken by the Honorary President (Dr. Wilks) to the newcomers, a paper was read by Mr. Lockhart Stephens on the relation of medical education to general practice. Mr. Stephens succeeded in the difficult task of framing an address which was at once interesting to old Guy's men and not beyond the range of appreciation of the younger members of his audience; and his remarks were received with merited and prolonged applause. Before the meeting of the Society the Students' Club gave a house dinner in the College Hall, with Mr. A. E. Durham in the chair; and after the proceedings in the Anatomical Theatre were concluded, a large number of past and present students returned to the College, where in the rooms of the clubs was displayed an attractive collection of photographs, drawings, microscopical preparations, and surgical instruments.

King's College Hospital.

The annual dinner of old students of King's College Hospital marked the commencement of the medical session, and, with Professor Watson Cheyne, F.R.S., in the chair, attracted a large number of old friends from all parts of the country. In proposing the toast of the evening, "King's College Hospital and its Medical School," Professor Watson Cheyne spoke of the various changes in the staff that had taken place since his first connection with the school, and, after appreciative reference to the work of Ferguson, Wood, Smith, and others, he mentioned the recent retirement of Sir Joseph Lister from active hospital work, and in glowing terms referred to the researches by which he had made King's College Hospital famous as the home of antiseptic surgery. Amongst other speakers were the Rev. Dr. Wace, Chairman of the Hospital Committee; Dr. Lionel Beale, Dr. Shuttleworth, Surgeon-Captain Bond, Mr. T. H. Cheatle, Dr. Burney Yeo, Dr. Duffin, Dr. G. E. Moore, Dr. Tirard, and Dr. John Phillips. Mr. Percy L. Webster and Mr. A. Schartau contributed an excellent selection of songs and musical sketches during the evening.

London Hospital.

The annual dinner and *réunion* of old London Hospital students was held in the College Library on October 1st, Dr. Hughlings Jackson in the chair. After dinner Dr. Jackson, in an admirable speech, proposed "The London Hospital and Medical College." This was replied to by Dr. Stephen Mackenzie and Mr. Treves on behalf of the College, and by Mr. Murray Ind, late Chairman of Committee, on behalf of the hospital. "The Health of the Chairman" was then proposed in eulogistic terms by Mr. Carr Gomm, also an old chairman of the Hospital Committee: and Dr. Jackson briefly replied. An adjournment then took place to the museum, where coffee and cigars were provided. Old reminiscences were talked over by the numerous *alumni* of the hospital who had gathered together for the occasion.

St. Mary's Hospital.

The dinner of the Past and Present Students of St. Mary's Hospital took place on Monday, October 1st, at the Café Royal, Dr. Danford Thomas in the chair. Covers were laid for 150. Among those present were Sir William Broadbent, Bart.; Sir James Crichton Browne, F.R.S.; Dr. Braxton Hicks, F.R.S.; Surgeon-Major A. T. Norton, Dr. Cheadle, Mr. Edmund Owen, Mr. Malcolm Morris, Dr. Lees, Mr. George P. Field, Dean; Dr. Sidney Phillips, Dr. Waller, F.R.S.; and Dr. Luff. The usual loyal toasts having been proposed by the Chairman, that of "The Army, Navy, and Reserve Forces" followed. This was responded to by Surgeon-Captain Julian Hayes for the Army, Staff-Surgeon T. J. Preston, R.N., for the Navy, and Surgeon-Major A. T. Norton, for the Reserve Forces. The Chairman then in a lengthy speech proposed the toast of the evening, "The Past and Present Students," showing how great was the *esprit de corps* prevalent at St. Mary's and how much the rapid development of the school was due to the feeling of brotherhood existing between students of the past and present. This was responded to respectively by Dr. Handfield-Jones and Mr. H. Gwynne Lawrence. "The Staff" was next submitted by Mr. J. Coleman Barr, and responded to in a humorous vein by Mr. Edmund Owen. Sir James Crichton Browne in an eloquent speech then proposed "The Dean," especially pointing out the growth of the school during the ten years of Mr. Field's tenure of office from one of the smallest to one of the largest medical schools in London, and also reminding his hearers that the "Praed Street scheme" with its contemplated lying-in wards—a unique feature in general hospitals—its new out-patient department, and residential college was entirely due to the initiative of Mr. Field, who had devoted an enormous amount of time and work to this. Finally, he expressed the hope that it might be long ere St. Mary's would have to seek "fresh fields and pastures new." Mr. Field having returned thanks, Sir W. Broadbent proposed "The Health of the Chairman," to which Dr. Danford Thomas briefly replied. The proceedings terminated with the singing of "Auld Lang Syne." A feature of the evening was the presence of the "London Ladies' Orchestra" and the "Celia Quartette."

St. Thomas's Hospital.

The session at St. Thomas's Hospital was opened on October 1st, by a distribution of prizes by the Rev. William Walter Merry, D.D., Rector of Lincoln College, and Public Orator in the University of Oxford. The successful students were introduced by the Dean, Mr. Makins; by Dr. Ord, the Senior Physician; by Mr. MacKellar, the Senior Surgeon; by Mr. Pitts and Dr. Sherrington. Mr. George carried off the Mead Medal for Practical Medicine, and the Treasurer's Gold Medal for general proficiency; Mr. Thurston, the Cheselden Medal for Surgery and Surgical Anatomy; Mr. Grünbaum, the Grainger Testimonial Prize; and Mr. Teale, the Solly Medal. After the prizes had been distributed, Dr. Merry delivered an address, which is reported in another column. Dr. Payne moved a vote of thanks to Dr. Merry for his address, which was seconded by Sir Henry Doulton. The Treasurer of the hospital, who presided, in declaring the session open, welcomed the new students, and referred to the recent extensions which had been made to the school in the shape of laboratories and class rooms on the one hand, and of a complete clubhouse, with restaurant, reading room, and gymnasium on the other, making it second to none among the medical schools of the metropolis as regards equipment. In the evening the old students dined in the new club rooms, Dr. Clapton occupying the chair. There were 160 present. Dr. Merry, in a witty speech, proposed "The Prosperity of the Medical School," which was responded to by the Treasurer and the Dean. The toast of "The Old Students," was proposed by the Chairman, and was responded to by Dr. Bott and Dr. Ritchie. "The Health of the Chairman," was proposed by Dr. Gervis, and duly acknowledged by Dr. Clapton. The proceedings were brought to a close with the toast of "The Secretaries," Dr. Toller and Mr. Stabb, which was proposed by Dr. Sandwith.

University College, London.

The annual dinner of old and present students of the Faculty of Medicine of University College, London, was held at the Hôtel Métropole on October 1st, when 140 gentlemen sat down. Sir John Williams, Bart., who was in the chair,

in proposing the toast of "Success to University College," referred to the scheme for rebuilding the hospital, and stated that it was proposed to erect a new hospital of three pavilions, running east and west, with an administrative block. The whole of the site had now been secured, though the leases of the houses on certain parts of it would not fall in for fourteen years. The northern part of the site was, however, already in the hands of the hospital, and it was hoped that during the course of 1895 the work of building the northern pavilion would be commenced. This work would be carried out without interfering with the work of the hospital. The acquisition of the additional ground had cost £19 000, and a sum of £25,000 was required immediately for building purposes. He made an appeal to the old students of the College to use their influence in assisting the hospital authorities to obtain the funds necessary for the erection of a clinical hospital embodying the most approved hygienic principles. Subsequently, on the suggestion of Dr. Griffiths, of Swansea, a subscription among old students was started, and a sum of nearly £500 was immediately promised, including £250 from Sir John Williams, £100 each from Dr. Hancocke Wathen and Dr. Wm. Price, and £50 from Dr. Griffiths.

Westminster Hospital.

The prize-giving at the Westminster Hospital Medical School took place on October 1st, in the Anatomical Theatre, with the Right Hon. Lord Knutsford, G.C.M.G., in the chair. After the introductory address, delivered by Mr. Gustavus Hartridge, F.R.C.S., an abstract of which is published in another column, the Dean (Mr. Walter Spencer) read his report, in which he congratulated the school on the high percentage of passes at this year's examinations, and referred to the rising tide of its prosperity. After distributing the prizes the Chairman closed the meeting by a dignified and telling speech, expressive of the interest which he and his illustrious father, Sir Henry Holland, had ever felt in the career of the Westminster Hospital Medical School. The annual dinner took place the same evening at the Café Monico, and was exceptionally well attended. Mr. Macnamara, F.R.C.S., occupied the chair, and his genial influence infused a warmth into the proceedings, which were characterised throughout by a cordiality bordering on enthusiasm.

University of Durham College of Medicine, Newcastle-on-Tyne.

The Earl of Durham distributed the prizes to the successful students at the University of Durham College of Medicine, Newcastle-on-Tyne, on October 2nd, and subsequently gave an address, in which he observed that the medical profession was one in which each member could do an immense amount of good, but that, on the other hand, it was one in which reckless and wicked people could do an immense amount of mischief. He protested against sensational announcements by the lay press of discoveries, and particularly against the announcement, which reappeared as regularly as the sea serpent, of the discovery of a cure for consumption. The announcement was cruel, as it was calculated to cause bitter disappointment. Subsequently Professor Philipson, President of the College, referred to the retirement of Dean Lake, and spoke of the valuable services which he had rendered to the College.

Edinburgh.

The Dissecting Rooms and Laboratories of the University and Extra-Academical Schools were opened on Monday, October 1st, for the winter session.

Mason College, Birmingham.

The fifteenth session of Mason College, Birmingham, was opened on October 1st, when the President, Mr. Oliver Pemberton, F.R.C.S., announced that during the past year the College had received further munificent endowments from Birmingham citizens, among the chief of which had been £5,000 from an anonymous donor for the endowment of a physical laboratory, and a similar gift from another anonymous benefactor to the Birmingham Day Training College for Elementary Teachers, which had been amalgamated with Mason College during the year. Mr. Pemberton referred to the death of Professor John Clay and to the visit of the Duke of York to lay the foundation stone of the new General Hospital. Principal Heath then made a report on the work of the College, and the President distributed the prizes to the successful students of 1893-94. Professor Dixon delivered an address, in which he reviewed the relations of science and literature and congratulated his hearers on the disappearance of the old antagonism. In Mason College the English feeling was represented, and in it science and literature were sworn allies and had buried deep the weapons of their former warfare. A vote of thanks to Professor Dixon, seconded by Professor Windle, and carried with enthusiasm.

In the evening a *conversazione* was given in the College buildings by the Principal, the professors, and other members of the teaching staff. It was attended by some 1,500 guests, who, in addition to entertainments given by Mr. W. Wallis, Miss Kirby, and Mr. and Mrs. Edgar Pemberton, and others, had the opportunity of inspecting a series of exhibitions arranged in the geological, the physiological, chemical, zoological, physical, and botanical laboratories and museums.

Sheffield School of Medicine.

The introductory address by Dr. Martin, an abstract of which is published in another column, was delivered before a large audience, including many ladies and most of the officers of the school. The chair was taken by Mr. W. F. Favell, who in a brief speech gave an account of the work of the school, which, he said, was in a flourishing condition. He announced the successes of the students during the past year at the Conjoint Boards in England and in Scotland, at the Durham University, and at the Society of Apothecaries. He stated that the Entrance Scholarship, of the value of £110, had been awarded to Mr. Inman.

IMPROVEMENTS AT THE METROPOLITAN MEDICAL SCHOOLS.

After the very extensive alterations and improvements in the medical schools of London which we have chronicled during recent years, it was not to be expected that the tale of their development and enlargement would continue to flow on in undiminished volume. Nevertheless, a good deal has been done.

St. Bartholomew's.

The chief addition to the buildings at St. Bartholomew's is the construction of a supplementary operating theatre at the top of the east surgical block of wards. The hospital now possesses four operating theatres—two for general surgical cases, one for ophthalmic cases, and one, the "Martha" Theatre, for gynæcological operations. Alterations have been made in the school buildings, giving increased facilities for work both in the physiological and pathological laboratories.

St. George's Hospital.

Alterations have been made at this hospital in the fittings of the chemical laboratory and the chemistry lecture theatre, and the approaches to the laboratories of physiology and bacteriology have been improved.

The London Hospital.

The college connected with this hospital having been almost entirely rebuilt only six or seven years ago there are no structural alterations to report. The latest new feature in connection with the course of study is the appointment of a physiologist and a biologist, who will devote their whole time to the teaching of their respective subjects. The museum has received considerable additions during the past year, and an excellent series of comparative anatomy specimens has just been completed. A considerable sum of money has lately been bequeathed by an old student for the purpose of improving the museum of this college.

London School of Medicine for Women.

Although no additions have been made to the actual school buildings during the past year, increased accommodation for the students is provided by the erection of the new front at the Royal Free Hospital, where there will be found a large

reading room and lavatory for their use. The enlarged and improved departments for casualties, dispensary, etc., will also tend to facilitate the work of clinical instruction. The school authorities have also arranged to have a branch of the students' library at the hospital, which, it is hoped, will be found a great convenience to them.

St. Thomas's Hospital.

Two new blocks have been added to the school buildings, one of which now contains the students' club and the other various laboratories. Various improvements have been made in the chemical laboratory and lecture theatre, and a special laboratory has been arranged for organic chemistry and for the use of those who are studing for the higher chemical examinations. The old Materia Medica Museum will be converted into a physical laboratory, and the new buildings have provided a laboratory for the lecturer on biology, and a dissecting room for the use of the class. The large new laboratory in the west block has been fitted up for bacteriological work. It is provided with working benches for 100 men, each of whom will have separate locker and drawer accommodation. Arrangements are made to enable the lantern to be used for demonstrations. This laboratory, as is the case with the whole of the new buildings, is lighted by electricity and heated by hot water. The students' club has also been much improved.

THE INDIAN MEDICAL CONGRESS.

A warm invitation is extended by the executive of the Indian Medical Congress to members of the medical profession in all countries to attend the meeting which begins at Calcutta on December 24th next. The invitation has already been accepted by many representative men, but it is hoped that a wider publicity will lead to many more adhesions. Brigade-Surgeon-Lieutenant-Colonel Kenneth McLeod (39, Clanricarde Gardens, Bayswater Road, London, W.) is acting as Local Secretary of the Congress in this country, and will supply a detailed programme of the arrangements made for the convenience of intending European visitors. A special committee has been formed in Calcutta, with Surgeon-Captain H. W. Pilgrim, of the General Hospital, and Dr. Prandhan Bose, of the Calcutta Medical School, as Secretaries, to make local provision for the accommodation of visitors. The cost of a member's ticket is 10 rupees, and the *Transactions* will be supplied to members on a further payment of 10 rupees.

The work of the Congress will be conducted in six sections:

1. Medicine and Pathology. *President:* Surgeon-Lieutenant-Colonel A. Crombie, M.D., *Bengal.*
2. Surgery and Ophthalmology. *President:* Surgeon-Lieutenant-Colonel E. Lawrie, M.B., *Hyderabad.*
3. Obstetrics and Diseases of Women and Children. *President:* Surgeon-Major H. P. Dimmock, *Bombay.*
4. Public Health. *President:* Surgeon-Major W. G. King, M.B., *Madras.*
5. Medico Legal Medicine.
6. Pharmacology, with special reference to Indigenous Drugs.

Strychnine in Snakebite.—According to the *Indian Medical Gazette* the Government of India is of opinion that the reports received as to the experiments with strychnine injections as an antidote for snakebite are not sufficient to warrant any conclusions regarding the efficacy of Dr. Mueller's method. The Government has therefore sanctioned further experiments during the next two years.

University of Innsbruck.—During the last summer semester the number of students in the Medical Faculty of the University of Innsbruck was 281 (229 ordinary and 52 extraordinary students). During the ensuing winter semester 47 courses of lectures and practical instruction will be given by 17 professors and 3 *docenten*.

An official notification has been conveyed to the Council of the University of Dorpat (henceforth to be known as Jurjeff) that from the beginning of 1895 all the professors in the University, with the exception of those of the theological Faculty, must give their lectures in the Russian language.

Secret Societies among Turkish Students.—The Turkish police not long ago discovered a secret society among the students of medicine and law in Constantinople. All the members were Mussulmans. Twenty-two of the fraternity were arrested and three succeeded is escaping to Switzerland.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 24th day of October next, at 2 o'clock in the afternoon.

September, 1894. Francis Fowke, *General Secretary.*

NOTICE OF QUARTERLY MEETING FOR 1894. ELECTION OF MEMBERS.

A meeting of the Council will be held on October 24th, 1894.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election. Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

South Eastern Branch: West Kent District.—A meeting of the above District will be held at St. Bartholomew's Hospital, Rochester, on Friday, October 26th, at 4 P.M. Mr. Prideaux Selby in the chair. The dinner will take place at the "Bull" Hotel, at 6.30 P.M. Charge 6s. 6d., exclusive of wine. To facilitate the arrangements, gentlemen who intend to dine are particularly requested to signify their intention to the chairman, Mr. Prideaux Selby, Teynham, Sittingbourne, not later than Tuesday, October 23rd. All members of the South Eastern Branch are entitled to attend this meeting, and to introduce professional friends. Communications: Mr. St. G. C. Reid: Tinnitus Aurium. Dr. J. Dundas Grant: Disease of Antrum and Sinuses in relation to Purulent Nasal Catarrh. Mr. Ludford Cooper: Excision of the Tongue after Ligature of the Linguals in the Neck. Mr. Prideaux Selby: Notes on a Case of Abdominal Section for Peritoneal Pregnancy.—Edward Ground, Honorary Secretary, of the District, 1, Ashford Road, Maidstone.

South Eastern Branch: East Surrey District.—A meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 11th, at 4 P.M.; Mr. H. S. Stone, M.B., of Reigate, in the chair. Agenda:—Minutes of Croydon meeting. To decide where the next meeting shall be held, and to nominate a member to take the chair thereat. The following papers, etc., have been promised: Mr. Watson Cheyne: Appendicitis. Dr. W. Hunter: The Blood, with special relation to Anæmia. Members desirous of exhibiting or reading notes of cases are invited to communicate at once with the Honorary Secretary. Dinner at 6 P.M.; charge 7s., exclusive of wine. All members of the South Eastern Branch are entitled to attend, and to introduce professional friends. The Honorary Secretary would be much obliged if members would kindly inform him by post-card whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner.—Henry J. Prangley, Honorary Secretary, Tudor House, Anerley.

Dorset and West Hants Branch.—The next meeting will be held at Dorchester, on Wednesday, October 10th, 1894. The business meeting will be held at the County Hospital, at 2 P.M. Agenda: Election of new members of the Branch. Election of officers for 1895, namely: President, Vice-Presidents, Honorary Treasurers and Secretaries. Place of May meeting. Communication from members of the East Kent District, South-Eastern Branch. Dr. Lush, to move: That a donation of five guineas be granted to the British Medical Benevolent Fund. Discussion: Some Cases of Abnormal Pregnancy and Parturition. Communications: Mr. Flower: A Case of Dislocation of the Femur on to the Pubes, and Fracture of the Neck in a man suffering from Locomotor Ataxy; removal of the head of the bone by operation; patient to be shown. Dr. Childs: Notes on the International Congress at Buda-Pesth. Dr. Lawrie: (1) Patient from whom the Upper Jaw was removed for Sarcoma. (2) A Case of Splenic Leucocythæmia treated with Bone Marrow. Dr. Evans: (1) Specimens of Biliary Calculi. (2) A Question respecting our responsibility in the Prevention of Disease, for example, Phthisis, Lead Poison-

ing, Strabismus. Dinner at the King's Arms Hotel at 5 P.M. Charge, 6s. each, without wine. Members intending to be present are requested to notify to Mr. Good, on or before Monday, October 8th. Luncheon will be provided at the King's Arms from 1 to 2 o'clock, to which the members and their friends are invited.—William Vawdrey Lush, Weymouth; C. H. Watts Parkinson, Wimborne, Honorary Secretaries.

Lancashire and Cheshire Branch.—The adjourned annual meeting of this Branch will be held in the Memorial Hall, Albert Square, Manchester, on Wednesday, October 10th, 1894, at 4 P.M. Agenda:—Election of two representatives on the Parliamentary Bills Committee.—Election of auditors. Protest against, and reasons for dissent from, the report of the Committee on the question of midwives' registration by a number of the members of the Branch. Dr. W. Macfie Campbell and Dr. A. C. E. Harris will move and second: "That the following addendum to Rule 10 be adopted: 'I. And no new member shall take part in the business of the Branch, unless he has paid his first subscription.' That the following 'note' be added to Rules 13, 14, and 15: 'II. That no grant of money for any purpose shall be valid unless passed by a majority of two-thirds of those present.'" Dr. Woodcock will move, and Dr. Jas. Brassey Brierley will second: "That the position on the Lancashire and Cheshire Branch Council of gentlemen who continue to grant 'diplomas' or 'certificates' to pupil midwives—a practice condemned by the General Medical Council and by the Branch—is anomalous." Dr. Sinclair will move "That in the opinion of this Branch of the British Medical Association the legislature should take in hand and settle the midwives question by enactments regulating the education, examination, and registration of Midwives, and providing for the supervision and control of their practice." Dr. J. B. Brierley will move and Dr. A. H. Rident will second: "That in the opinion of this meeting it is not desirable to give undue prominence in our proceedings of the Branch to the Registration of Midwives' Association, and that a copy of this resolution be sent to the Council of the Association." Medical and Surgical Communications: Dr. Wm. Armstrong: The Electric Bath as a Therapeutic Agent. Mr. Thomas Jones: Two Cases of Traumatic Stricture of the Urethra treated by Excision (Urethrectomy). Dr. Berry: On Contract, Club, and Dispensary Practice. G. G. Stopford Taylor, M.D., will show Watercoloured Drawings and Photographs of Rare Skin Diseases.—James Barr, M.D., Honorary Secretary, 72, Rodney Street, Liverpool.

West Somerset Branch.—The autumnal meeting of this Branch will be held in the Council Chamber at the Municipal Buildings, Taunton, on Friday, October 26th, at 4.30 P.M. Professor W. Cheyne, F.R.S., of King's College, London, will deliver an address at 5 o'clock on The Development of Modern Methods of Wound Treatment, upon which an interesting discussion may be expected. Members of the Bath and Bristol and the South Western Branches are invited to be present to form a conjoint meeting. Gentlemen wishing to bring forward communications and those intending to be at the dinner are requested to send early notice to the Honorary Secretary that he may make the necessary arrangements. Dinner (5s. a head exclusive of wine) will be served at the Castle Hotel at 7 o'clock, and tickets may be got at the bar of the hotel.—W. M. Kelly, Honorary Secretary, Taunton.

North of England and Border Counties Branches.—It has been decided to hold a conjoint meeting of the above Branches at Gilsland on Tuesday, October 30th, 1894. The meeting will commence at 3 P.M., and will be followed by a dinner. Members desirous of reading papers are requested to communicate with either of the Honorary Secretaries: G. E. Williamson, F.R.C.S., 8, Eldon Square, Newcastle-on-Tyne, North of England Branch; J. Altham, M.B., Penrith, Border Counties Branch.

South Wales and Monmouthshire Branch.—The autumn meeting will be held at Pontypool on Thursday, October 25th. Members desirous of reading papers, etc., are requested to send titles to one of us not later than October 10th.—A. Sheen, M.D., Cardiff; D. Arthur Davies, M.B., Swansea.

Northern Counties Branch.—The autumn meeting of this Branch will be held within the Literary Institute, Nairn, on Wednesday, October 17th, at 11.30 A.M. Members wishing to make any communication are requested to inform the Secretary as soon as possible. Luncheon at King's Royal Hotel at 2 o'clock.—J. W. Norris Mackay, Honorary Secretary, Elgin.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A meeting of the members of this District was held at the Station Hotel, Hayward's Heath, on September 27th, Dr. Malcolm Smith, of Hurstpierpoint, in the chair.

The Wants of the General Practitioner.—A discussion on the wants of the general practitioner and how best to obtain them was opened by Dr. Withers Moore, and ended in the following resolution, which was carried unanimously:

That, in view of the prevalent and widespread feeling that the executive of the Association are not alive to the wants and misfortunes of the general practitioner, and do not, therefore, render them such assistance as they, being members, have a right to expect, this meeting respectfully requests the Council to appoint a committee to (1) inquire into the grievances, wants, and requirements of the general practitioners, as they exist in the Branches of the Association; (2) to ascertain in what ways, if any, the influence and organisation of the Association can be most usefully employed for the amelioration of these grievances and for promoting the welfare of the general practitioner generally; (3) to report to the Council.

DECCAN BRANCH.

The first meeting of the Deccan Branch of the British Medical Association was held at Surgeon-Colonel Blenkinsop's house, Secunderabad, on September 3rd, 1894. The members present were Surgeon-Colonel Blenkinsop, I.M.S., Principal Medical Officer Secunderabad District, in the chair; Brigade-Surgeon-Lieutenant-Colonels North, I.M.S., and Anderson, A.M.S.; Surgeon-Majors Kellie, I.M.S.; Moran, I.M.S.; Bennett, I.M.S.; Nichols, A.M.S.; Surgeon-Captains Kelly, A.M.S.; Palk, I.M.S.; Hole, D.S.O., A.M.S.; Connor, A.M.S.; Thurston, A.M.S., and Way, A.M.S. A letter from Mr. E. J. Lawder was read expressing his inability to be present.

Minutes.—The Provisional Secretary read the minutes of the last meeting.

Formal Recognition of the Branch.—The Provisional Secretary read a letter from the General Secretary of the British Medical Association enclosing a copy of the resolution recognising the Branch.

Election of Officers.—The officers and council were then elected as follows:—*President:* Surgeon-Colonel Blenkinsop, I.M.S., P.M.O. *Vice-President:* Surgeon-Lieutenant-Colonel Lawrie, I.M.S. *Editorial Secretary:* Surgeon-Captain Hehir, I.M.S. *General Secretary and Treasurer:* Surgeon-Captain Palk, M.B., I.M.S. *Members of Council* (elected by ballot): Brigade-Surgeon-Lieutenant Colonels North, I.M.S., and Anderson, A.M.S.; Surgeon-Major Scott, I.M.S.; Surgeon-Captain Thurston, A.M.S.

Place of Meeting.—On the proposition of Surgeon-Major Nichols, seconded by Surgeon-Captain Palk, it was unanimously resolved to accept the kind offer of the Principal Medical Officer to lend his office for the monthly meetings.

Vote of Thanks to Principal Medical Officer.—On the proposition of Surgeon-Major Nichols, seconded by Surgeon-Major Moran, a vote of thanks was passed to the Principal Medical Officer for taking the chair and lending his house for the meeting.

SPECIAL CORRESPONDENCE.

PARIS.

Petition in Favour of Dr. Lafitte.—Charges for Disinfection.—The Treatment of Idiots.—The Feeding of Infants.—Dr. Yersin on the Plague at Hong Kong.

The Association of the French Medical Press is organising a round robin petition to be sent to the President of the Republic asking for the remission of the sentence on Dr. Lafitte, who was recently condemned to three years' imprisonment under circumstances which have excited the greatest indignation of the medical profession in France.

By a decree of the Prefect of the Seine the tariff for disinfecting is as follows: For a rent from £32 to £40, 4s. 8d.; from £40 to £80, 8s.; from £80 to £120, 12s. 8d.; from £120 to £160, 15s.; from £160 to £200, £1 4s. 8d.; from £200 to £240, £1 10s.; from £240 to £280, £2; from £280 to £320, £3 5s.; from £320 to £360, £3 10s.; from £400 to £600, £4; from £600 to £800, £6; from £800 and upwards, £8. These charges include disinfecting the localities and the different articles which had been contaminated, by superheated vapour. No extra fees are charged if disinfection is necessary several times during an illness.

The General Council of the Gironde has authorised wards to be organised in connection with the Bordeaux Lunatic Asylum for the purpose of teaching idiot children. An asylum for adult idiots and epileptic patients is also to be established.

The direction of Public Health attached to the Home Department has directed the prefects to forbid bringing up children by hand; not only are metallic bottles forbidden, but other kinds authorised by medical men. It is also forbidden to give children solid food under 1 year of age, unless formally prescribed.

The Hong Kong authorities have asked Dr. Yersin, for-

merly of the Pasteur Institute, to examine the soil in the Faiping neighbourhood where the pest epidemic prevails. M. Yersin, in earth taken from a depth of eight or ten centimetres cultivated after the Pasteur method, discovered, after an interval of twenty-four hours, colonies presenting the aspect of the pest microbe. The experiment was repeated with earth taken from other contaminated houses; four times in six the microbe was found. The pest bacillus exists at Hong Kong in an attenuated form; animals inoculated with these cultivations do not succumb. At Canton the epidemic broke out among the rats. The population living on the river have scarcely suffered. Apparently the microbe cannot live in water. At Hong Kong the epidemic broke out among the human population before attacking the rats. It was brought by a commercial traveller, and quickly spread. At Canton the mortality was 15,000 from the pest, at Hong Kong 2,500; from 5 to 6 per cent. at Canton, 1 to 2 per cent. at Hong Kong; but it must be remembered that a number of Chinese left Hong-Kong for Canton, where they died. The Hong Kong hospital is on a river; it can contain 1,200 patients; each patient has a spacious airy room. Dr. Yersin has sent samples of the contaminated soil to the Pasteur Institute. He says the only prophylactic measure is to find a vaccine.

HONG KONG.

Disappearance of the Plague: An Unlucky Order.—Influenza.

The plague is well nigh at an end. The port will be declared free of infection on September 9th. A few cases—one or two—crop up after a two or three days' interval and harass the authorities. The type of the disease has considerably changed, and resort has to be had to the microscope before a diagnosis is confirmed, otherwise the disease symptoms might be mistaken for one of the ordinary seven-day fevers which are endemic here. The Chinese are returning in thousands and the city is reassuming its usually busy aspect. A house-to-house visitation by night, planned without warning, caused great consternation amongst the better class of Chinese. They resented their abodes being forcibly opened and inspected whilst the families were in bed. So keenly did the Chinese feel the inroad that those who can afford it are selling their property in Hong Kong and transferring their wives and children to permanently reside on the mainland. The authorities wisely rescinded the unfortunate order within twenty-four hours, but the irreparable damage was already done.

Influenza, chiefly of the nature of a nasal and bronchial catarrh, is prevalent here. It is of a much milder type than any of the three previous attacks of influenza and is peculiar in that the symptoms are mainly confined to the respiratory tract. In a certain proportion of cases the temperature is below the normal. Throughout the illness, so far, only very young Chinese children have succumbed, the cause of death being capillary bronchitis. The general health of the European community, apart from "influenza colds" is excellent.

CORRESPONDENCE.

TESTIMONIAL TO SIR JOSEPH LISTER.

Sir,—Sir Joseph Lister having retired from active hospital and teaching work, it is proposed to present him with a testimonial of the regard and esteem in which he is held by his former colleagues and pupils.

As there are probably many surgeons who may wish to join in the movement, but whose exact names and addresses it is almost impossible for us to ascertain, I have been directed by the committee to state that I shall be pleased to furnish anyone with further information; and that subscriptions (limited to two guineas) may be sent to one or other of the following gentlemen who have kindly consented act as treasurers for their respective localities—namely, Dr. James Finlayson, 2, Woodside Place, Glasgow; Professor Chiene, 26, Charlotte Square, Edinburgh; Professor William Rose, 17, Harley Street, London, W.—I am, etc.,

J. Fredk. W. Silk,
Hon. Secretary, Lister Testmonial Fund.

Weymouth Street, W., Sept. 28th.

THE DURATION OF CONTAGION IN DIPHTHERIA.

Sir,—Some uncertainty seems to prevail as to the duration of the period of contagiousness after diphtheria, and this uncertainty is enhanced by the statement, made by competent observers, that the micro-organism associated with this disease may be, and indeed has been, found long after apparent recovery. A series of cases which recently came under my personal observation seem to point to the accuracy of the latter statement. On April 27th of the present year I was called to a child, aged 3, a prey to violent convulsions, which lasted for some hours in spite of treatment. This proved to be the prelude of an attack of diphtheria which I was enabled to diagnose two days later. It was a typical and severe attack, but the child ultimately recovered, though he suffered from extensive and well-marked paralyses. On June 25th, that is to say, close upon two months after the commencement of the attack, and four or five weeks after the throat symptoms had quite subsided, the child was sent for a change of air to one of the northern suburbs. He was then paralysed in both lower limbs, but was otherwise in good health. He was looked after by a young lady, aged 23, with whom he slept. Within four days this young lady complained of a sore throat, which soon became markedly diphtheritic. He returned to his home in the first week in July, the house having in the meantime been thoroughly disinfected and the drains overhauled. He was then allowed to play with his little sister, aged about 18 months, but they did not sleep together or even in the same room. Three weeks later the younger child developed diphtheria, to which it succumbed. The boy was once again transferred to the house of a relative at a distance, and there, too, during the first week of August, the servant with whom he slept developed a severe form of sore throat, which, though not diagnosed as diphtheria, was characterised by white sloughing patches in the throat, and kept her in bed for a fortnight.

While it is possible, of course, that the sequential relationship was more apparent than real, it is difficult to withstand the conclusion that the lad first attacked was the carrier of the infection; and, if so, it would seem that greater caution should be shown than is at present enjoined or insisted upon in allowing children convalescent from diphtheria from mixing with other persons, especially other children. Personally I should hesitate to allow a child of mine knowingly to associate with a convalescent until six months had elapsed. This may appear excessive, but, in view of the terrible and implacable nature of the malady, it is certainly better to err on the safe side.—I am, etc.,

September 25th. Alfred S. Gubb, M.D.(Paris).

CHOLERA AND BREAD.

Sir,—Now that people are dying of cholera by hundreds in many parts of the Continent, it may be well to call attention to the following statements.

At the Bristol meeting of the British Medical Association, Dr. Waldo and I read a paper stating the results of an inquiry into the sterilisation or otherwise of bread in the baker's oven. We showed that cultures of thirteen different micro-organisms were obtained from bread taken out of the centre of newly-baked loaves; hence we concluded that baking does not necessarily destroy the germs in a loaf. If that proposition be true of non-pathogenic bacteria or their spores, we saw no reason why pathogenic forms should not also survive the process of baking. A number of experiments with specifically infected dough showed that the vitality of pathogenic organisms was not destroyed by passing through the ordeal of the baker's oven. Thus cultures of comma bacilli were obtainable from loaves made of dough previously mixed with a pure culture of the comma or cholera bacillus. However, these and other experiments with pathogenic bacteria are not yet ready for publication. For one thing, owing to the absurd state of the English law, we have been hindered from obtaining the indispensable evidence afforded by the inoculation of lower animals. At the same time, we think it now right to state that, in our opinion, the specific germs of cholera may be distributed in a living condition in bread. Cholera is essentially a waterborne disease. In towns tap water is invariably used for making dough; baking does not destroy all germs in the loaf, therefore bread made in a town

that has a cholera-infected water supply is likely to become an active agent in the spread of the disease. Two obvious preventive measures can be taken (1) the water used in the bakeries should be sterilised, (2) the bread can be effectually sterilised in the form of toast.

Unfortunately, Dr. Waldo is away on the Continent, so that I have been unable to consult him on these points, but the foregoing may be taken as an exact expression of his views.—I am, etc.,

Welbeck Street, W., Sep. 23rd. DAVID WALSH, M.B.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ADULTERATED DRUGS AND SPURIOUS PHARMACEUTICAL PREPARATIONS.

THOUGH prosecutions under the Food and Drugs Act for the sale of adulterated drugs or sophisticated pharmaceutical preparations are not very numerous, the proportion of cases in which there are convictions is sufficiently large to justify the inference that this fraudulent practice is very general. Apparently it is in country districts that the sale of inferior articles of this description is chiefly carried on, and it is some satisfaction to find that the reports of prosecutions instituted under the Act are frequently accompanied by the statement that the individuals prosecuted are not registered chemists and druggists. But if the trade in defective medicinal articles is confined to the small general shops met with in country places, a question of some importance arises as to the sources from which these articles are supplied to the small dealers? These latter cannot be expected to have any capacity of judging as to the quality of pharmaceutical preparations or drugs, and their defence when prosecuted is generally a plea of ignorance and the statement that the articles were sold as received from the makers, who would therefore appear to be in reality the chief offenders, although under existing conditions they cannot be touched by the administrators of the law. The fact that articles such as laudanum and paregoric are being manufactured "without opium" for sale by persons who cannot legally sell the preparations properly bearing those names, is sufficient to show that there is a systematic evasion of the Pharmacy Act as well as the Food and Drugs Act to which public attention requires to be directed. At the Skipton Petty Sessions several persons have recently been heavily fined for selling adulterated drugs, and a contemporary raises the question whether the Skipton adulteration officials are specially active or the drugs sold elsewhere specially pure? Under the circumstances above referred to there is much reason for believing that the last mentioned condition does not obtain.

CHARGE AGAINST A MIDWIFE.

AT Edmonton, on September 27th, Margaret Croome, midwife, was charged on remand with the murder of Eliza Smith, a widow, who kept a general shop at Stamford Hill, by performing an illegal operation. and Augustus Fielder, a chee-emonger's traveller, was charged with being an accessory after the fact. Mr. Horace Avery, who prosecuted on behalf of the Treasury, reviewed the evidence given before the coroner with regard to the alleged relations existing between Fielder and Mrs. Smith, and the attendance of Croome upon the woman for several days prior to her death. He pointed out that not till the afternoon preceding Smith's death, which was attributed to peritonitis—did Croome call in a medical practitioner. So far as the evidence went, he thought it was insufficient to support the finding of the coroner's jury; but the police inquiries were not yet completed, and a remand was asked. This was granted after several witnesses for the prosecution had been called.

SODA WATER.

MR. RUDOLPH GAUNT, wholesale chemist and druggist, of 221, Union Street, Borough, appeared before Mr. Slade, at the South London Police Court, to answer a summons, taken out at the instance of Inspector Grist, the appointed officer to the St. Saviour's District Board of Works, under the provisions of the Sale of Food and Drugs Act, for selling an article, the same not being of the nature, substance, or quality of that demanded. The Inspector sent his assistant into the defendant's shop, and under his instructions he purchased a siphon of soda water. The bottle containing the liquid was handed to him, and was analysed, and was found to be practically aërated water, there being no trace of bicarbonate of soda, whereas according to the formula of the Pharmaceutical Society it should have contained 30 grains. The officer pointed out that the real article was often required for medicinal purposes, and on that ground alone care should be taken to supply what might be required. The defendant said his firm had been carrying on business uninterruptedly for over sixty years, and this was the first time complaint had been made against them. As a matter of fact, soda water supplied as required by the *Pharmacopœia* instructions was unpalatable, but if required for medicinal purposes it should be asked for as "*B.P.*" Mr. Slade said it was clear that the article sold to the inspector contained no bicarbonate of soda, and was not therefore soda water. He fined the defendant £3, and 12s. 6d. costs.

A CARD.

WE have published from time to time so many examples of the professionally degrading advertisements which are issued as circulars or cards by so many practitioners seeking to establish themselves in public favour that it seems hardly worth while to reproduce documents the general character of which is too well known. One such advertisement however, which we have received recently contains a feature which we believe to be novel inasmuch as the practitioner drags into it the name of an honourable office in an important London hospital The following is the card we refer to, which, we are informed, has been left upon the residents in houses inhabited by persons in the enjoyment of incomes which may be judged from the fact that the rents, without rates and taxes, amount to £45 a year:

LAMBETH WALK SURGERY.
101, LAMBETH WALK, S.E.

Resident Physician ... Dr. E. J. SMITH,
(Late House-Surgeon to Charing Cross Hospital).

DR. E. J. SMITH (late House-Surgeon to Charing Cross Hospital) resides on the Premises, and personally attends to all cases.

Table of Fees:

Advice and Medicine ... ... 6d.
Midwifery. Vaccination.
Patients attended in their own homes.

Hours of Consultation:

Mornings	9 till 12	Mornings	11 till 12
Afternoons	at 4	Sundays	
Evenings	6 till 10	Evenings	7 till 9

ATTENDANCE ON FAMILIES OF MEDICAL MEN

MEDICUS writes: The family of a medical man resident abroad, but themselves resident at home, go to the country for a holiday. One of the members of the family suffers a dislocation of the elbow, which is reduced, under chloroform, by a medical man living near, and who is called in to the case. He is informed that the father is a medical man, but, notwithstanding, charges for attendance. Was he entitled to do so, or did he commit a breach of recognised professional etiquette in accepting a fee?

E. A. S. makes a similar enquiry

*** Although it is contrary to traditional custom and ordinary practice to charge for professional attendance on the family of a medical man, our correspondent will perceive from the rule appended that it is optional with the attendant practitioner: "All legitimate practitioners of medicine, their wives, and children while under the paternal care, are entitled (not as a matter of right, but) by professional courtesy, to the reasonable and gratuitous services—railway and like expenses excepted—of the faculty resident in their immediate neighbourhood whose assistance may be desired. In the case, also, of near relatives who are more or less dependent upon a professional brother (other than wealthy) it will likewise be well, at his request, to forego or to modify the usual fee. On the other hand, a son or a daughter altogether independent of the father—or the widow and children of a practitioner left in affluent or well-to-do circumstances—should be charged as ordinary patients, unless feelings of friendship, or other special reasons, render the attendant practitioner averse to profess... remuneration: in such case the rule need not apply. Moreover, if a wealthy member of the faculty seeks professional advice and courteously urges the acceptance of a fee, it should not be declined—*for no pecuniary obligation ought to be imposed on the debtor which the debtee himself would not wish to incur.*" (*Ord.*, chap. ii, sect. 2, rule, 1.)

RECEPTION OF LUNATICS AS PRIVATE PATIENTS

A MEMBER wishes for information as to the proper method of procedure for obtaining a licence for the reception of persons of unsound mind.

*** No new licences can be issued. Application must be made to the Commissioners for leave for more than one patient.

CERTIFICATION OF PAUPER LUNATICS

UNION writes: I am deputy medical officer to the union. My father, not a medical man, is a justice of the peace, and is generally the one called upon to see pauper lunatics, either for permanent detention in the workhouse, or before removal to the asylum. In either case he signs the certificate as the magistrate. Is it contrary to the spirit of the law, or in any way open to objection for him to do the same, when in the absence of the regular medical officer I am on duty?

*** It is not contrary to the law, and does not appear to be open to objection.

USE AND PROPERTY IN PRESCRIPTIONS

MEMBER.—Where the prescriptions are sent to the chemist by arrangement to be dispensed at the cost of the practitioner, the former has no right to supply patients with medicines without the order of the latter. The chemist has no claim to the prescription other than as a record justifying his dispensing it, and we think that, if he persists in such conduct, an injunction could be obtained in a court of law restraining him from so doing.

RECOVERY OF MIDWIFERY FEE.

R. H.—If our correspondent really thought it worth his time and trouble to institute legal proceedings, he would probably recover the agreed fee or some part of it.

THE QUEEN has given directions for the appointment of David Gentle, M.D., to be an unofficial member of the Legislative Council of the Colony of British Honduras.

NAVAL AND MILITARY MEDICAL SERVICES.

AGE EXTENSION.

The Queen has approved of the Royal Warrant concerning officers of the Medical Staff being amended by the substitution of the following for Article 347:—

"The appointment of Director-General of our Army Medical Department shall be for seven years, and the retirement of the other officers of our Army Medical Staff shall be compulsory at the following ages; except that, if it should in any particular case be considered desirable in the interests of the public service, the age for the retirement of a surgeon-major-general may be extended for a period not exceeding two years: Surgeon-major-general and surgeon-colonel, 60; brigade-surgeon-lieutenant-colonel, surgeon-lieutenant-colonel, surgeon-major, and surgeon-captain or surgeon-lieutenant, 55."

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 8s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A Surgeon-Major, with three years to complete tour, serving in a good district in India, desires to exchange home; any reasonable offer accepted. Address "Bona Fide," British Medical Journal.

THE NAVY.

Staff-Surgeon H. A. W. Richardson has been promoted to be Fleet-Surgeon, September 21st. He was appointed Surgeon, March 31st, 1874, and Staff Surgeon twelve years thereafter. He was Surgeon of the *Tamar* during the Egyptian war of 1882, and received the medal for that campaign and the Khedive's bronze star.

The following appointments have been made at the Admiralty: Montague H. Knapp, Surgeon, to the *Australia*, September 27th; James L. Smith, M.B., Surgeon, to Haslar Hospital, September 27th; Frederick D. Lumley, Surgeon, to the *Jackal*, September 27th; Horace Elliott, M.D., Surgeon, to the *Wildfire*, September 27th; Cecil Orpin, M.D., to be Surgeon and Agent at Youghal, September 27th; George G. Borrett, Surgeon, to the *President*, additional, October 9th; Alexander G. Andrews, Surgeon to the *Pylades*, October 16th; Hamilton E. L. Earle, Surgeon to the *Victory*, additional, October 16th; Edgar F. Mortimer, Surgeon to the *Pheasant*, October 1st; W. R. Knightley, Surgeon to the *Albacore*, October 1st.

ARMY MEDICAL STAFF.

The undermentioned officers, whose tour of foreign service will expire during the trooping season of 1894-95, will proceed to England by the troopships leaving Bombay on or about the dates specified, and report their arrival to the Director-General, Army Medical Department, War Office, London: Surgeon-Lieutenant-Colonel W. B. Slaghter, October 1sth; Surgeon-Captain G. E. Harrison, M.B., November 8th; Surgeon-Captain G. E. Hale, D.S.O., November 8th; Surgeon-Captain J. S. Green, M.B., December 8th; Surgeon-Lieutenant-Colonel R. H. Robinson, January 5th, 1895; Surgeon-Captain B. J. Inniss, February 6th, 1895; Surgeon-Captain C. A. Young, March 6th, 1895; Surgeon-Major F. B. Maclean, March 30th, 1895.

Deputy-Inspector-General George Eleazar Blenkins, late of the Grenadier Guards, died at Worthing on September 26th. He entered the service as Assistant-Surgeon, April 13th, 1838; became Surgeon, October 1st, 1854; Surgeon-Major, January 24th, 1859; and Honorary-Deputy-Inspector-General on retirement, December 12th, 1868. He was with the Grenadier Guards in the Crimean campaign from December 20th, 1854, including the siege and fall of Sebastopol. He received the medal, with clasp, the fifth class of the Order of the Medjidie, and the Turkish medal.

Surgeon-Captain H. A. de Lisle is placed on temporary half-pay on account of ill-health, September 28th. He was appointed to the Department, August 4th, 1883, and served with the Nile Expedition in 1884-5, receiving the Egyptian medal with clasp and the Khedive's star.

Surgeon-Captain J. F. McMillan is also placed on temporary half-pay for the same reason, September 22nd. His commission dates from August 1st, 1885.

INDIAN MEDICAL SERVICE.

Surgeon-Lieutenant Robert St. Andrew Yeates, of the Madras Establishment, died of fever at Madras on September 17th, on his way to England, aged 28. He was a son of the Rev. G Yeates, rector of Lissan, Moneymore, co. Derry, Ireland. His commission dated from January 29th, 1892.

Inspector-General Mark Style, retired, died at Cheltenham on September 30th, at the age of 77.

THE VOLUNTEERS.

Mr. Samuel McNair is appointed Surgeon-Lieutenant to the 3rd Volunteer Battalion the Lancashire Fusiliers (late the 17th Lancashire), October 3rd.

Surgeon-Lieutenant-Colonel A. Gilmour, 8th Volunteer Battalion the Royal Scots (formerly the 1st Linlithgowshire), has retired from the service, retaining his rank and uniform, October 3rd.

Honorary Assistant-Surgeon J. Lawrence, M.D., 2nd Volunteer Battalion the Royal Scots Fusiliers (late the 2nd Ayrshire) has also retired October 3rd.

MILITIA MEDICAL STAFF.

Surgeon-Lieutenant-Colonel W. Taylor, M.D., 3rd Battalion the Welsh Regiment (Glamorgan Militia), has retired from the service, with permission to retain his rank and uniform, October 3rd.

AMBULANCE CLASS IN INDIA.

The Ambulance Class Poona Volunteers was inspected by the Commander-in-Chief of the Bombay Army, accompanied by his staff, on August 30th. A class of thirty-two men, divided into eight squads of four men each, had undergone instruction by Surgeon-Major Addison and Assistant-Surgeon Rodrigues. The usual movements necessary for giving aid to slightly and severely wounded were executed with regularity, uniformity, and precision, exciting unqualified praise from his Excellency. Lieutenant-General Nairne, who complimented the class highly on its success. Surgeon-Major Addison has done much in India for the ambulance movement, and we can bear witness to instances of the saving of life by efficient first aid to seriously injured cases that have resulted to soldiers from the numerous courses of instruction to soldiers given by him during his Indian service.

VOLUNTEER OFFICERS' DECORATION.

We have received a further communication from "A Retired Surgeon," enclosing a note received from his commanding officer, in which the latter says: "After careful consideration of the directions received from the Secretary of State for War, regarding the recommendation of non-combatant officers for the Volunteer Officers' Decoration, I am unable to forward your application for the same." We can only conclude that some personal element in the case has deprived the retired surgeon of the decoration, for we constantly see notices of its having been conferred on Volunteer medical officers. At the same time we should much like to know—if any of our correspondents can give us the information—what are the "directions" of the Secretary of State for War "regarding the recommendation of non-combatant officers of Volunteers" for the decoration. We do not see why, in this matter, any distinction whatever should be or can be drawn between one class of officers and another. We hope it may be long before the Volunteers are called upon to fight: so that meanwhile, at all events, their division into combatants and non-combatants is a distinction without a difference. We presume the decoration is given as a recognition by the State of the sacrifices which private citizens make of their time, energies, and means as Volunteer officers. If so, are not the sacrifices of medical men equal, if not greater, than most so-called combatant Volunteer officers? Perhaps the Secretary of State for War will be able to clear this up when Parliament meets.

WIDOWS' PENSIONS.

Liable to Recall begs us to call the attention of the Parliamentary Bills Committee to the regulations in the Pay Warrant regarding widows' pensions and children's allowances, as they affect medical officers who may marry after voluntary retirement. He says the conditions of service have greatly changed since the clauses of the said warrant were originally drafted, and do not now meet the equity of the case. As matters stand, a medical officer entering at 22 cannot marry after 42, if he wishes to retire at twenty years' service, but remains liable to recall up to 55.

*** Widows' pensions and compassionate allowances to children, although defined in the regulations according to certain conditions and limitations, are not matters of absolute right, but may be given or withheld according to circumstances. At the same time, the regulations concerning them should be framed in a broad and liberal spirit. We believe that, as matters stand, the widow or orphans of an officer who marries after retirement are not entitled to pensions or allowances. This seems rather hard on those who are liable to recall, and may be so recalled, to the sacrifice of health and life. We think it is a question well deserving the attention of the Secretary of State for War, whether those liable to recall are exactly in the same position as those who retire without such liability.

VOLUNTEER MEDICAL ORGANISATION.

An "Experienced Volunteer Medical Officer" writes: The suggestions of your correspondent "Ubique" are fairly liberal, but far short of what is actually required. The sixteen (not fifteen) regimental stretcher bearers are far better as integral parts of the regiment, and should never be detailed for stretcher drill until they individually know squad and company drill; only zealous and willing men should be chosen: their uniform should be that of the regiment to which they belong. Bearer companies are quite distinct, and, speaking from experience, torturing them of regimental stretcher bearers is an absolute fraud. Base hospitals are at present outside the cognisance of volunteer medical officers. I think the proficiency examination should include ability to drill a section of stretcher bearers.

As it is impossible for a principal medical officer to inspect individually the bearer companies in each district, I think a volunteer brigade-surgeon should be detailed in each to visit and report on the bearer companies. Only in this way can assurance be had that such volunteers are in readiness for mobilisation. I have never had the least ric ion either with commanding officers or adjutants connected with stretcher work, and where such occurs it is invariably the result of want tact; it is another reason for making volunteer ambulances part and parcel of the combatant force.

As regards honours, these were promised to medical officers, and scrupulous faith should be kept towards them. Of course there efficient as well as inefficient medical officers.

OBITUARY.

DEPUTY INSPECTOR-GENERAL G. E. BLENKINS, F.R.C.S.

We have to announce with regret the death of Deputy Inspector-General G. E. Blenkins, F.R.C.S., late Grenadier Guards. He entered the regiment in April, 1838, and served in the Crimean campaign including the fall of Sebastopol, receiving the gold medal with clasp, the 5th Class of Medjidie, and the Turkish medal. After serving more than thirty years in the regiment he retired, in December, 1868. Mr. Blenkins has so long retired from active work that the younger generation will hardly recognise his name as one of the most active and valued workers in the metropolis some thirty years ago. He was one of that distinguished class of army surgeons, then by no means too numerous, who to a thorough knowledge of his profession and departmental duties, added a great love of scientific research in the active study of its most difficult departments. He was a practical and skilful histologist, when to be so was a rare distinction even in the schools in civil life.

We incline to believe that he was the first amongst the teachers of histology in the metropolitan medical schools who instituted classes of practical microscopic work and demonstration. He lectured and taught at Lane's School of Anatomy and Medicine adjoining St. George's Hospital, and as far back as 1851 he carried on there a class of practical histology, in which every student was provided with a microscope, and was taught himself to make, prepare, and put up the specimens. This class Mr. Blenkins conducted while a surgeon in the Guards, and it had, at that time at least, few if any parallels in this country, for what is now an every day rule of teaching was then a rare and brilliant exception.

This brief tribute is due to the memory of one of the most lovable and accomplished surgeons of his day, for to a handsome presence, great dignity and refinement of manner, of which the only fault perhaps was a somewhat marked reserve, Mr. Blenkins joined singular modesty, unfailing kindness of heart, and an interest in the personal welfare of his pupils which lasted throughout his and their lives.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. J. Podrazky, some time Extraordinary Professor of Surgery in the University of Vienna; Dr. Theophilus Patterson, of Salem, New Jersey, where he had practised his profession forty-six years and where he was largely instrumental in raising the standard of the public schools when he was City Superintendent, aged 67; Dr. W. C. Dabney, Professor of Obstetrics and Practice of Medicine in the University of Virginia, aged 45; Dr. F. Fleckles, a well known publicist of Vienna, formerly in practice at Carlsbad, aged 58; Dr. Moriz Bastyr, Lecturer on Dental Surgery in the Czech University of Prague; Dr. Ludwig Israel, of Copenhagen, State Councillor and one of the foremost practitioners in Denmark; and Dr. Michele Giuliani, Extraordinary Professor of Anatomy in the University of Rome.

Dr. Horace Ingersoll, who died recently at Salem, Massachusetts, at the age of 83, had a varied career, having at one time or another tried each of the three learned professions. He was probably the last survivor of the *coterie* of which Nathaniel Hawthorne was the leading spirit. It was Ingersoll who suggested to Hawthorne the idea which found embodiment in *The Scarlet Letter*. It was from his lips also that Longfellow heard the story which the poet wove into "Evangeline." Ingersoll had previously told it to Hawthorne, who, however, dallied so long over a novel founded on the incidents that the doctor gave it to Longfellow. Hawthorne was greatly annoyed at being forestalled, but Ingersoll used to add, when speaking of the matter, "I can't help that; I gave him six years."

Blindness in France.—According to the *Progrès Medical* the total number of blind persons in France is about 40,000. Of these, 18,000 are said to owe their affliction to the results of ophthalmia neonatorum.

UNIVERSITIES AND COLLEGES.

ROYAL UNIVERSITY OF IRELAND.

Third Examination in Medicine, Autumn, 1894.—The following candidates have passed the above examination:

Upper Pass Division.—T. J. Kenny, B.A., Queen's College, Belfast, and Catholic University School of Medicine; A. A. F. McArdle, Queen's College, Cork; F. J. L. P. McKenna, Queen's College, Cork, and Catholic University School of Medicine; W. J. Mackrown, B.A., Queen's College, Belfast; A. Magner, Catholic University School of Medicine; W. A. Osborne, Queen's College, Belfast; H. Turkington, Queen's College, Belfast.

The above may present themselves for the Further Examination for Honours.

Pass Division.—M. Burke, Queen's College, Cork; R. W. Clarke, Queen's College, Belfast; J. Crean, Catholic University School of Medicine; S. L. Cummins, Queen's College, Cork; T. Downard, B.A., Queen's College, Galway; G. Elliott, Queen's College, Belfast; G. K. Finlay, Catholic University School of Medicine; D. P. FitzGerald, B.A., Queen's College, Cork; E. S. Gorman, Queen's College, Belfast; D. Henry, Queen's College, Belfast; D. W. Hewitt, Queen's College, Galway; M. Hynes, Queen's College, Galway; R. J. Johnstone, B.A., Queen's College, Belfast; E. J. Liddle, Queen's College, Belfast; G. Liddle, M.B., Queen's College, Belfast; J. McArdle, Catholic University School of Medicine; W. W. Moore, B.A., Queen's College, Belfast; M. I. O'Kane, Catholic University School of Medicine; H. I. Ritchie, Queen's College, Belfast; G. Scott, Queen's College, Belfast; B. H. Shaw, Queen's College, Cork; R. J. Smith, Queen's College, Cork; J. M. J. Tighe, B.A., Catholic University School of Medicine; J. V. G. Tighe, Catholic University School of Medicine; G. C. Welkly, Queen's College, Cork; Clara L. Williams, B.A., Royal College of Surgeons, Dublin.

HOSPITAL AND DISPENSARY MANAGEMENT.

LUNACY IN IRELAND.

The forty-third report of the Inspectors of Lunatic Asylums in Ireland states that on January last there were 642 maintained out of private funds, 16,478 in district asylums and workhouses, and 158 in the Criminal Asylum at Dundrum, making a total of 17,276. As regards the alleged increase of insanity in Ireland, the inspectors are of opinion that the great increase is mainly due to accumulation, and is so far an apparent and not a real increase. Further, that the yearly increase of admissions is drawn, in a considerable proportion of the cases, from the reserve of the unregistered insane existing throughout the country; and that the annual increase, in the face of a shrinking population, of the number of first admissions, points to some increase in particular districts. They consider that the chief causes which contribute to the development of recurring insanity are the want of sufficient nutrition in the dietary of the poor classes, the excessive use of alcohol, the agricultural depression, and consanguineous marriages among those who have a tendency to nervous disease. The inspectors are of opinion that the condition of the insane in workhouses is unsatisfactory, and in many instances the lunatic wards of workhouses have not sufficient accommodation for their inmates.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 5,883 births and 3,223 deaths were registered during the week ending Saturday, September 29th. The annual rate of mortality in these towns, which had been 15.9 and 15.7 per 1,000 in the preceding two weeks, rose again to 16.1 last week. The rates in the several towns ranged from 8.0 in Leicester and 10.7 in Croydon to 20.9 in Newcastle-upon-Tyne, 22.5 in Preston, and 22.8 in Liverpool. In the thirty-two provincial towns the mean death-rate was 16.6 per 1,000, and was 1.3 above the rate recorded in London, which was 15.3 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London the rate was equal to 1.9, while it averaged 2.2 per 1,000 in the thirty-two provincial towns, and was highest in Wolverhampton, Preston, and Bolton. Measles caused a death-rate of 2.2 in Hull; scarlet fever of 1.1 in Huddersfield and 1.8 in Wolverhampton; whooping-cough of 1.3 in Bolton; and diarrhœa of 2.5 in Blackburn, 3.5 in Bolton, and 4.2 in Preston. The mortality from "fever" showed no marked excess in any of the large towns. The 98 deaths from diphtheria in the thirty-three towns included 67 in London, 5 in Liverpool, 3 in Bristol, and 3 in Manchester. Two fatal cases of small-pox were registered in Birmingham, 2 in Liverpool, and 1 in London, but not one in any other of the thirty-three large towns. There were 98 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, September 29th, against 129, 109, and 100 at the end of the preceding three weeks; 14 new cases were admitted during the week, against 13, 19, and 23 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,084, against 2,026, 2,080, and 2,060 at the end of the preceding three weeks; 252 new cases were admitted during the week, against 269 and 253 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, September 29th, 791 births and 432 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined in the preceding three weeks from 15.6 to 14.9 per 1,000, rose again to 15.1 last week, but was 1.0 per 1,000 below the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 10.7 in Aberdeen to 17.9 in Glasgow. The zymotic death-rate in these towns averaged 2.0 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 237 deaths registered in Glasgow included 12 from diphtheria, 9 from whooping cough, and 2 from scarlet fever.

HEALTH OF EDINBURGH.

AT the weekly meeting of the Edinburgh Town Council on Tuesday last, it was reported that the death-rate of last week (10 per 1,000) was the lowest on record. It was also reported that there were 235 patients in the City Hospital for infectious diseases, and that 142 were suffering from scarlet fever and 2 from typhus fever. Six cases of small-pox were reported. Edinburgh is threatened with an epidemic of scarlet fever, which is already exercising the minds of the authorities responsible for the public health.

RESIGNATION OF THE LEITH SANITARY INSPECTOR.

MR. FISHER, the Leith sanitary inspector, in face of the adverse report of the Board of Supervision, has now resigned his appointment as from October 1st. He has been allowed his salary till October 13th and an honorarium of £50. A new sanitary inspector, at a salary of £130 per annum, is now wanted.

IRISH DISPENSARY DOCTORS—THE PAYMENT OF A *LOCUM TENENS*.

DR. T. J. O'CONNELL, of Castlemartyr, Cork, was recently granted leave by his dispensary committee for the purpose of change of air after an attack of blood poisoning. A further term of three months was allowed on the condition that he should pay his substitute. The Local Government Board have informed the guardians and the committee that when a medical officer is incapacitated through illness from discharging his duties it is the duty of the dispensary committee to appoint in his stead a duly qualified medical practitioner as *locum tenens*, and afterwards to recommend the guardians to pay a reasonable remuneration to the appointed substitute. In the opinion of the Local Government Board this question of remuneration was one altogether for the consideration of the guardians subject to the approval of that Board.

RESIDENTIAL FLATS AND ARTISANS' DWELLINGS.

SIR FRANCIS SHARP POWELL, in his recent address at Liverpool, in his capacity as President of the Congress of the Sanitary Institute, referred to metropolitan legislation, regretting that "domestic buildings in London may still be erected to the height of 80 feet, inclusive of two storeys in the roof, power unfortunately being reserved to the London County Council to sanction the construction of buildings even of more gigantic proportions. Air and light cannot perform their life-giving functions at the base of these structures, still less within courts enclosed therein."

Loose statements as to the influence on health of a particular style of building or habitation are easily made; but when instead of oratorical statement we come to plain fact, it has been abundantly shown that barrack-like, often unsightly, and the reverse of æsthetic as artisans' dwellings undoubtedly are, yet the rate of sickness and mortality is satisfactory, and contrasts very favourably with the mortality of the same class living in streets in which the houses are no more than three storeys high; and as for the light at the basement, that is usually superior to the light of the basements of tenement streets. No other form of construction will house one hundred persons, as is proposed, that is to be. Platform speakers may lift their voices against the system as much as they please, the London of the future will have in the central parts nothing but huge flats for the wealthy, and blocks of many-storeyed dwellings for the artisan. There have been no statistics published of a reliable character as to the death-rate of residential flats, but since it has been proved that the poorer block dweller has a low death- and sickness-rate, it is reasonable to infer that the richer flat dweller has equally a low rate of sickness and mortality.

PASTEURISM AND AGRICULTURE.

A DEPARTMENT for the experimental study of our means of defence against noxious animals, and especially against insects, has been established in the Pasteur Institute, Paris. The special work of the department will be to prepare and keep up cultures of all the pathogenic microbes of noxious insects and animals; to study the conditions of the development of these microbes in animals and in artificial nutrient media; to direct experiments to be made in rural districts; and, lastly, to superintend and control the practical applications of the results of the researches. The methods of applying these results in practice will be discussed by a Committee of Researches consisting of naturalists and agriculturists, together with experts in mycology and bacteriology. The new department is to be under the direction of Professor Metchnikoff.

SMALLPOX AND VACCINATION IN SWITZERLAND.

DR. SCHMID, Director of the Swiss Federal Sanitary Bureau, has published statistics showing the number of cases of small-pox and the mortality caused by that disease together with the number of vaccinations in Switzerland in the period 1876-1893. The figures given show that at no time since 1885 and 1886, when small-pox prevailed epidemically in Switzerland, has there been anything like the amount of sickness from small-pox which there was in that country during the first six months of the present year. Dr. Schmid further shows that in the cantons, which in 1883 or 1885 abolished compulsory vaccination, the small-pox sickness and death-rates have almost doubled. On the other hand, in the cantons where vaccination has remained compulsory the number of vaccinations has not appreciably fallen off, and both the number of cases of small-pox and the deaths from that disease show a considerable decrease.

NOTIFICATION AND SCHOOL ATTENDANCE.

MEMBER writes: A person in my district had a child suffering from scarlet fever, but failed to notify the disease though he was well aware of its nature. He kept the child at home a fortnight and then sent him to school. In consequence of this upwards of fifty cases have occurred in connection with the school. I wish to prosecute the offender for exposing his child in a public place, but am informed that a school is not a "public place," even when it is, as in this case, the public elementary school of the township. If this be true, I can only reach the person who is the cause of so much mischief by prosecuting him for failing to notify, in which case probably a trifling penalty will be inflicted. Can you give me any assistance by advice as to the best way to proceed?

*** On what authority is it contended that a public elementary school is not a "public place" within the meaning of the Public Health Act? The proper course would seem to be to institute proceedings under that Act as well as the Notification Act. Probably t would not be difficult to bring direct evidence of transit along public highways to and from school, in addition to the fact of presence in the school itself.

INSUCTION AT LEAKY JOINTS.

M. O. H. writes: The principal main conveying the water supply of a town passes through a compensation reservoir which contains water polluted by sewage. In the event of the joints in the main becoming defective is there a possibility of the water in the main being polluted?

*** Certainly. The current of water passing along the main will cause an indraught at any point of leakage.

THE Rainford Local Board have at last decided to adopt the Infectious Diseases Notification Act. Although this course was suggested by the chairman of the board, it has been strenously opposed by the board.

INDIA AND THE COLONIES.

INDIA.

WATERBORNE TYPHOID IN INDIA.—Referring to the prevalence of enteric fever in India, with a high rate of mortality which makes it a matter of pressing importance, an Indian contemporary writes thus: "The climatic theory of causation is a splendid pivot for inaction. From a preventive point of view, to treat the climatic theory seriously would be giving it too much importance, for it is not based on observed facts, and is inconsistent with those which have been observed. The *rôle* of water in the production of typhoid fever in towns, villages, and barracks is a fact on too sure a basis to be affected by any statement that such is not the case in Northern India. In the French army the mortality from typhoid was reduced more than half by the introduction of the Pasteur-Chamberland filter. It would be interesting to study the subject from this point of view in the European army of India. It is not sufficient to supply a barrack with pure water if other supplies of a doubtful purity are at hand and equally easy of access. Wells which have been condemned should certainly be filled up, a procedure which is not always adopted. Infection of soil by typhoid germs must be taken into calculation, as pointed out by Dr. Ranking."

"BLACK DEATH."—According to the Indian papers, Surgeon-Major Giles recently returned from a short tour in Gharwal, where he had been investigating the cause of the *Mahi Mari*, or "black death," the hill population. The disease, which is invariably fatal, is said to bear a close affinity to the "plague" which in past ages devastated England. The causes are believed to be overcrowding and filthy habits, together with the too close proximity of cattle standings to human dwellings. The *Indian Medical Gazette* for July, however, states that the outbreak proved on investigation by Dr. Giles to be a false alarm, as the deaths were found to be due to the result of the *Mahi Mari*, or "black death," in the hill Gharwal, two young children and an old woman having died in consequence of eating decomposed grain. The report that the deaths were due to *Mahe Mari* originated in a local belief that that disease may be brought on by the consumption of such food.

THE Government Medical Stores Depôt of Mian Meer was lately destroyed by fire, which is believed to have been the act of incendiaries. The loss is estimated at several lakhs of rupees.

FEMALE PRACTITIONERS IN INDIA.—In their last annual report the Central Committee of the Dufferin Fund drew attention to the fact that a limited number of scholarships had been set aside at home by the United Kingdom Branch of the Association for award to ladies who, having passed their preliminary examination in India, were desirous of finishing their medical education in Europe. At the same time it was decided that preference should be given to those who had passed out creditably from their Medical College, and who had as assistant surgeons done good work in India and proved themselves capable in the posts they had held. For some reasons this system seems to be preferable to that of engaging ladies direct from the schools of medicine at home for service under the Fund, as students educated primarily in India possess the advantage of having a certain knowledge of the country and its customs, and are generally able to speak the language fluently. The new system, however, seems to have found favour among ladies who have qualified in India. Applications for the scholarships referred to considerably outnumber the few awards available. Thanks, however, to the generosity of the trustees of the Gilchrist Fund, who only recently gave the sum of £150 a year to found scholarships for students in India, the Central Committee of the Dufferin Fund are occasionally enabled to obtain for deserving candidates a grant in aid to help them through their studies. Among ladies who have already succeeded in proceeding to Europe and gaining the higher degrees in medicine are several who now

hold important posts in India. We may mention Miss Terbury, now in charge of the Lady Lyall Hospital at Agra; Mrs. Van Ingen, until recently under special agreement to the Ceylon Government; Miss Niebel, in charge of Her Highness the Begum's Hospital at Bhopal; Miss Chamney, at Patiala; Miss Wells, the superintendent of the Victoria Hospital at Madras. Among the names of other ladies who have lately proceeded home are Miss Sykes, who recently held charge of the Maharani of Bulrampur's Hospital in Oudh; Miss Dissent, from Allahabad; and Miss Bowie, from Madras.

THE INDIAN FACTORIES ACT.—The Bombay Government has issued a series of resolutions on the annual provincial report on the working of the Indian Factories Acts for the year 1893. The number of factories in the presidency was 267, an increase of 14. Of these 119 were in the town and island of Bombay. Of the total number 108 were cotton and ginning factories and presses outside of Bombay, which did not work all the year round. The cotton industry was the most important, employing 98,958 persons in 208 factories. While the general sanitary condition of the factories continued to be satisfactory no steps had been taken to improve the dust-laden atmosphere of the Bombay cotton presses, and steps are to be taken with the view of ascertaining whether a recent rule cannot be applied. There are no signs that mill work has any bad effect on the general health of mill hands, which is reported to be satisfactory. The result is ascribed, so far as up-country factories are concerned, to the frequent change of occupation from mill work to agricultural labour which workmen are in a position to enjoy. It is observed that while the total factory population has increased by nearly 8,000 the number of children employed is less. The Chief Inspector of Bombay and Mr. Campbell are of opinion that the restrictions now placed on the employment of children are leading to the substitution of adult for child labour. The proportion of female hands employed has slightly increased. In some cases women are worked from 6 A.M. to 6 P.M., with only half an hour's interval in the middle of the day. Steps are to be taken to enforce the law which requires a longer interval. Only two prosecutions were instituted during the year, and in both cases convictions were obtained, but in one was reserved on appeal.

SANITARY PROGRESS IN ASSAM.—Under the above heading *The Englishman* of Calcutta, of August 14th, remarks: "It is satisfactory to learn that the ravages of kala azar, the mysterious disease concerning which doctors have disputed for many years past, are becoming less serious in some parts of Assam. . . . . Surgeon-Colonel Wharton, in consultation with Drs. Ruddock and Price, of the lowcong district, and Mr. McNaught, Civil Medical Officer, has come to the conclusion that the origin of the disease is malarial, and that the presence of the *anchylostomum duodenale*, of which we have heard so much during the past few years, is an accidental and not necessary or by any means constant complication. Nevertheless, the history and symptoms of the disease indicate, in the opinion of these authorities, something more than malarial cachexia, but what that something is they have not been unable to ascertain. On humanitarian as well as on scientific grounds, it is a matter for regret that the Assam Government should be unable to sanction the proposal of Dr. Costello, the late Sanitary Commissioner, that a specialist be commissioned to investigate the disease." And it is stated that the grounds for not acting on Dr. Costello's recommendation are that the revenues of Assam "are not in a position to bear the extra expenditure that would be involved." Surely there are many men in the ranks of the medical services in India perfectly competent to undertake such an investigation; plenty of men who would eagerly jump at the opportunity. The six months' pay of such a man—the cost of the gunpowder blown away in a useless salute—is surely not beyond the resources of the Assam Government, impoverished though it may be. Or shall we have to wait till the enlightened Government of Japan send us a commission after they have finished working out for us the bacteriology of the plague in Hong Kong?

MAHOMEDAN MUNIFICENCE.—His Highness Mir Faizmahom ed Khan, Talpur Khairpur State, with a view to encouragement of higher education amongst the Mahomedan community in Sind, has placed in the hands of the Commissioner in Sind the munificent endowment of 60,000 rupees for scholarships tenable to Mahomedan undergraduates in Sind at any of the courses prescribed by the Bombay University.

A CONSIDERABLE difficulty, it seems, is still experienced in inducing native ladies of the higher classes in India to enter upon a medical career; students of the hospital assistant class who possess a sufficiently high primary education have been readily obtained in fair numbers in most Provinces except in the North-West and the Punjab. With regard to medical tuition, besides training students at the Medical College and schools at Bombay, Calcutta, Madras, Lahore, and Agra, classes have been formed at Cuttack, Lucknow, Allahabad, Rangoon, Nagpur, and Benares.

BOMBAY.

A SPECIAL ward in connection with the Matonga Leper Asylum at Bombay was opened on June 11th. The total cost of the building has been borne by Bai Dinbai, widow of the late Mr. Nusserwanjee Manockjee Patel. In declaring the ward open Mr. L. Forrest stated that the asylum had been described by a high authority as probably the best leper asylum of its kind in the world. It at present sheltered about 300 patients, who, with the exception of 50 Christians and 25 Mohammedans, were all Hindus. Up to the present time lepers suffering from other diseases had to be treated in the common ward, while the dying were separated from the living only by a screen. Thanks to the liberality of Bai Dinbai, the sick could now be treated in a separate building.

NEW SOUTH WALES.

THE new buildings of the Sydney Hospital were opened on June 20th.

THE first annual dinner of the combined medical societies of New South Wales was held at Aaron's Exchange Hotel, Sydney, on May 29th. Dr. Crago, President of the New South Wales Branch of the British Medical Association, was in the chair, and about 90 gentlemen were present.

ANNUAL REPORT ON INSANITY.—The report of Dr. F. N. Manning, Inspector-General of the Insane for the Colony, for 1893 shows that on December 31st last the number of insane persons was 3,425 (2,092 males and 1,333 females), being an increase of 113 on the previous year. The increase for 1892 was 178, so that the two years, 1892 and 1893, have added 291 patients to the registers. Dr. Manning attributes this large increase almost entirely to the general commercial depression. The proportion of insane to population has risen from 1 in 361, or 2.77 per 1,000, at the end of 1892 to 1 in 357, or 2.80 per 1,000, at the end of 1893, which is the highest proportion in any year since 1882. The total number of patients under care during 1893 was 4,185 (2,545 males and 1,620 females); of these, 286 recovered, 42 were relieved, 1 escaped, and 246 died. The average number resident during the year was 3,312. The percentage of recoveries on admissions and readmissions during the year was 41.63, and the percentage of deaths on average numbers resident was 7.42, or males 8.37, and females 5.88. The principal causes of insanity in the admissions and readmissions (688 patients) were: adverse circumstances, 53; domestic troubles, 33; intemperance, 84; epilepsy, 34; old age, 36; religious excitement, 13; parturition, 28; ill health, 46; hereditary influence, 61, etc. The total expenditure was £101,077 15s. The average weekly cost per head was 11s. 2½d., a sum lower than during any preceding year.

CAPE COLONY.

REPORT OF THE PUBLIC HEALTH DEPARTMENT.—The annual report of Dr. A. J. Gregory on the health of the Colony of the Cape of Good Hope contains several points of considerable interest.

Epidemic Syphilis.—First among which we would place the spread of syphilis among the population, apparently in the form of an ordinary contagious disease. In eight districts that portion of the Contagious Diseases Act which applies only to women openly practising prostitution is in operation, and among the 400 women admitted to hospital under the Act 68 were suffering from syphilis, and 304 from gonorrhœa. Of the total of 2,115 cases of so-called venereal disease treated under Part II of the Contagious Diseases Prevention Act during the year 1893, 1,950 were cases of syphilis, and of the 155 cases of "other venereal disease" 131 occurred in Kimberley, leaving so small a proportion of cases other than syphilis, treated under this Act in the rest of the Colony as to be inappreciable, which points strongly to the non-venereal origin of the syphilis. In fact, from the reports of the district surgeons, it would appear that the widespread prevalence of this disease among the natives is becoming a serious danger to the white population, the native nurse girls conveying the infection to the children whom they tend, through whom it spreads to the rest of the family. In a communication from Dr. Key, of Worcester, the following remarks occur: "A dozen adjoining farms is nothing unusual to meet with where coloured and white have suffered as an epidemic. The worst consequences of the secondary and tertiary stages are to be seen. I have known fourteen little graves in one family. Time after time a healthy household of seven to fifteen members have become infected. In such cases the beginning is always with the baby, and this points to the coloured nurse or playmates." Other surgeons write in the same strain; evidently it is looked upon as a serious matter, and one difficult to cope with, when people are in intimate relationship with a migratory native population in constant communication with native territories which are beyond the jurisdiction of the authorities.

Leprosy.—In regard to leprosy, an interesting table is given from which Dr. Gregory draws the following conclusions: (1) That leprosy is between five and six times more prevalent among coloured persons than among whites; (2) that the Europeans appear to be less affected, less relatively to the coloured, in those districts in which are more purely native in the character of their coloured population, that is, in those districts in which the native element is less likely to be intimately associated with the European; (3) that contiguity has some relation to its spread, there being several areas, consisting of groups of contiguous districts, which appear to be its chief *habitats*; (4) that the disease increases with density of population. It is to be observed, however, that these conclusions might require modification if we had more complete data regarding the proportion of white and coloured immigrants in the different districts, and also as to the comparative wealth of the areas involved.

Epidemic Small-pox.—A full account is given of the introduction of small-pox into the colony after a period of more than ten years' absolute immunity from the disease; and, however much one may admire the energy with which quarantine was enforced on the ships by which the disease was imported, one cannot but deduce the conclusion, from the account given of the spread of the disease, that mere quarantine—useful as it may be against an individual ship known to be infected—is of but small efficacy as a means of preventing the introduction of small-pox when it is prevalent in surrounding countries. It has now evidently obtained firm foothold in the colony, 429 cases having occurred during the first six months of 1894, distributed over seventeen districts. Altogether the report is very creditable to the Health Department, considering how recently this has been in operation and the small powers with which it is furnished.

JAMAICA.

WE read in the *Colonies and India* that Dr. Izett Anderson, who left Jamaica recently, was presented with a farewell testimonial and a well-filled purse, by way of recognition of the useful work he had done in Jamaica. Dr. Anderson has unfortunately been compelled to leave Jamaica owing to ill health. He has for many years occupied a leading position in his profession in Jamaica, and his retirement is a distinct loss.

PRESENTATIONS.—Mr. Frederic H. Ward has been presented with a handsome silver tea service by the officers and servants of the Middlesex County Asylum, Wandsworth, on his retirement from the office of assistant medical officer, which he had held for over twenty-six years.—The successful pupils of the Stillington ambulance classes have presented their surgeon instructor, Dr. F. Sidney Gramshaw, with a handsome silver-mounted and inscribed hunting-crop, as a token of their good feeling and appreciation of his services as lecturer.

MEDICAL NEWS.

THE Queen has commanded her gardener to send some of the Royal fruit exhibited at the Crystal Palace to the patients in St. George's and University College Hospitals.

DR. AHMED MIRZA, M.B., C.M., B.Sc., a graduate of Edinburgh University, has been appointed Officer of Public Health for the City of Hyderabad, India.

THE annual dinner of the past and present students of Charing Cross Hospital will be held at the Criterion Restaurant (Victoria Hall), on Thursday, October 25th, 1894, at 7 P.M.; J. G. MacKinlay, Esq., F.R.C.S., in the chair.

THE Minister of Labour has introduced into the New Zealand House of Representatives a Bill to exclude from the colony undesirable emigrants, within which category it is proposed to include persons suffering from consumption.

THE German Society Against the Abuse of Alcohol held its annual meeting on September 18th and 19th, at Cassel. Among the subjects discussed were Sunday afternoon closing and the influence of women in the temperance movement.

THE Gresham lectures on medicine will be delivered at Gresham College at 6 P.M. on October 9th, 10th, 11th, and 12th, by Dr. E. Symes Thompson, Gresham Professor of Medicine, who has taken for his subject Life Assurance and its Medical Aspects.

THE DISCOVERY OF ANÆSTHESIA.—Arrangements are in progress for the public celebration of the fiftieth anniversary of Dr. Horace Wells's publication of the results obtained by him in the search for a surgical anæsthetic. A bronze tablet is to be placed on the building in which, fifty years ago, Dr. Wells conducted his practice as a dentist.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The following are the officers of this Society for the ensuing year:—*President:* Dr. Pye-Smith. *Vice-Presidents:* Dr. Liveing, Dr. Wilks, Dr. Jamieson, Dr. McCall Anderson. *Treasurer:* Mr. Alfred Cooper. *Honorary Secretaries:* Dr. Stowers and Mr. Marmaduke Sheild.

MIDWIVES' REGISTRATION.—A meeting of medical men of Chester and the neighbourhood was held at the Queen's Hotel on September 28th, when seventeen gentlemen were present, and Mr. J. E. Moreton, F.R.C.S., was called to the chair. Resolutions were adopted, with one dissentient, condemning the proposal to legalise the practice of midwifery, of the same character as those adopted at a recent meeting in Lancaster (see BRITISH MEDICAL JOURNAL, September 29th, page 736).

PRESENTATION.—Dr. J. Johnston, of Bolton, has been presented by the ambulance class of the Lancashire and Yorkshire Railway, which he instructed, with a handsome pair of equestrian figures in bronze. The presentation was made by the mayor. This is the third railway class which Dr. Johnston has instructed at Bolton, and we are informed that five of the railway officials hold the bronze medallion of the St. John Ambulance Association.

THE MARION SIMS STATUE.—The statue of the late Dr. Marion Sims will be unveiled at New York on November 13th, the anniversary of the distinguished gynæcologist's death in 1883. It is to be placed on the north side of Bryant Square, where the dark granite pedestal has already been completed. The funds have principally been subscribed by members of the medical profession. The delay in carrying this scheme into execution has been due to litigation by American sculptors, whose designs were not approved by the committee. The statue, which is from the chisel of Herr Müller, of Munich, is said to be a very satisfactory work of art.

UNIVERSITY OF VIENNA.—The total number of students in the Medical Faculty of the University of Vienna during the last summer semester was 2,427, of whom only 1,584 were ordinary students. Of the foreign students 77 came from the United States, 104 from Russia, 43 from Roumania, 29 from Servia, 27 from Bulgaria. Asia sent 13 and Australia 3. During the winter semester just beginning 260 courses of lectures and practical instruction will be given by 63 professors and 84 *docenten* and assistants.

THE following is the result of the Entrance Scholarships Examinations in Arts and Science at Guy's Hospital:—Science: First scholarship of £150, Thomas Francis Rutter, B.Sc., University College; second scholarship of £60, John Thomas Dunston, Farnham, Guy's Hospital; certificate of honour, Francis William Brook, Guy's Hospital; Ernest William Floyd, Owens College. Arts: First scholarship of £100, Arthur Pearson, Berkhamsted School; second scholarship of £50, George William Hare, Blenheim House School; certificate of honour, George Lewin, Clapham, City of London School; P. W. L. Camps, East Anglian School, Bury St. Edmunds; Charles Burrage Penny, Blackheath; Guy Theodore Wrench, Repton School. Dental: scholarship in Arts of £30, Guy Chatterton, St. Peter's College, Brockley.

SCHOOL OPHTHALMIA.—The fifth annual report of Mr. Sydney Stephenson to the Central London School District gives a summary of the excellent work which has been done in preventing the spread of diseases of the eye among the children of London. In 1889, soon after the school was opened, the numbers under treatment formed 33 per cent. of the total school population, while in June, 1893, the numbers had sunk to 7 per cent. The benefits of such an institution to the children themselves are very great; instead of remaining idle inhabitants of the infirmaries they undergo a course of instruction differing little from the ordinary educational code of the Poor-law schools. Mr. Stephenson expresses his conviction based on experience, that there is no danger of increase in the intensity of the ophthalmia by the congregation of the patients together if the wards are properly constructed and not overcrowded.

MEDICAL VACANCIES.

The following vacancies are announced:

ANCOATS HOSPITAL, Manchester.—Resident House-Surgeon, with charge of In-patients. Salary, £40 per annum, with board and washing. Applications to Alex. Forrest, Honorary Secretary, by October 17th.

ANCOATS HOSPITAL, Manchester.—Resident Junior House-Surgeon. Salary, £80 per annum, with board and washing. Must be duly qualified and on the *Medical Register*. Applications and testimonials to A. Forrest, Honorary Secretary, before October 10th.

CHILDREN'S HOSPITAL AND DISPENSARY, Manchester.—Medical Officer, must be doubly qualified and on the *Medical Register*. Salary, £180 per annum. Applications and testimonials, stating age, to the Chairman of the Medical Board, Children's Dispensary, Gartside Street, Manchester, before October 12th.

CITY OF BIRMINGHAM FEVER HOSPITAL.—Assistant Medical Officer. Salary, £120 per annum, all found. Applications and testimonials to the Medical Superintendent, City Hospital, Lodge Road, Birmingham.

CORPORATION OF CROYDON.—Resident Medical Officer for the Borough Isolation Hospital for Infectious Diseases, must be fully qualified. Salary, £120 per annum, with board and lodging, increasing by £20 at the end of the first year. Applications and testimonials endorsed "Resident Medical Officer," to be sent to the Medical Officer, 7, Kathrine Street, Croydon, before October 17th.

CROYDON UNION.—Assistant Medical Superintendent and Dispenser at the Infirmary, Mayday Road, Croydon, doubly qualified. Salary, £125, increasing £5 per annum up to £150 per annum with furnished apartments, rations, and washing; and an allowance of £3 10s. per annum in lieu of beer. Applications on forms supplied to Harry List, Clerk to the Guardians, Union Offices, Mayday Road, Croydon, by October 8th.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House-Surgeon. Salary, £40 per annum, with board, lodging, and washing. Appointment for one year. Applications to the Secretary by October 9th.

DENTAL HOSPITAL OF LONDON, Leicester Square.—Assistant Dental Surgeon. Must be Licentiate of Dental Surgery of one of the licensing bodies recognised by the General Medical Council. Applications and testimonials to J. Francis Pink, Secretary, by October 8th.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis Road, Shadwell, E.—House-Physician. Board, lodging, etc., provided, but there is no salary attached to the post. Applications to the Secretary by October 6th.

GENERAL HOSPITAL, Birmingham.—Resident Surgical Officer and House-Physician. Salary, £130 and £70 per annum respectively, with residence, board, and washing. Appointments for one year, but candidates will be eligible for re-election for two subsequent years. Also two Assistant House-Surgeons, appointment for six months, but eligible for re-election for another six months. No salary. Residence, board, and washing provided. Applications to Howard J. Collins, House Governor, by October 6th.

GENERAL INFIRMARY AND DISPENSARY, Doncaster.—Indoor Dispenser and Assistant to House-Surgeon. No salary, but board, lodging, and washing provided. Applications and testimonials to J. Clark, Honorary Secretary, before October 8th.

GENERAL INFIRMARY AT GLOUCESTER AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Surgeon; must be F.R.C.S. or M.R.C.S.Eng., or F.R.C.S. or L.R.C.S. of Ireland or Edinburgh, or graduate of University recognised by the General Medical Council. Applications and testimonials to Henry T. Pike, Secretary, by October 10th.

HOSPITAL AND DISPENSARY, Newark-upon-Trent.—House-Surgeon. Salary, £80 per annum. Will be required to do the dispensing, for which a further salary of £40 is paid. Applications and testimonials to W. Easterfield, secretary, by October 6th.

HUDDERSFIELD INFIRMARY.—Junior House-Surgeon. Salary, £40 per annum, with board, lodging, and washing. Applications to Mr. J. Bate, Secretary, by October 15th.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant Resident Medical Officer. Salary, £120 per annum. Applications to the Secretary by October 8th.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, Soho Square.—Resident Medical Officer; must be doubly qualified. Appointment for six months; residence in the Hospital and an honorarium of £10 10s. Applications and testimonials to Capt. F. Hanaley, secretary, before October 13th.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. No salary, but board, lodging, and washing provided. Appointment for six months. Applications and testimonials to the House-Surgeon before October 15th.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House-Surgeon for six months. Board, lodging, and washing provided. No salary. Applications to Chairman of Medical Committee by October 10th.

ST. OLAVE BOARD OF WORKS.—Medical Officer of Health for the District; not less than 25 or more than 45 years of age; must reside in or within one mile of the district. Salary, £200 per annum. Applications to Edric Bailey, Clerk, Vine Street, Tooley Street, S.E., by October 15th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W.—Resident Medical Officer, doubly qualified. Salary, £105 per annum, with residence and attendance; and a Physician Accoucheur. Applications to H. Peter Bodkin, Honorary Secretary, 23, Gordon Street, Gordon Square, by October 22nd.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House-Surgeon. No salary, board and residence provided. Applications and testimonials to J. Walter Wilson, Honorary Secretary, before October 20th.

STIRLING DISTRICT ASYLUM, Larbert.—Second Medical Officer. Salary, £80 per annum, with board and lodging. Applications and testimonials to the Medical Superintendent before October 17th.

WALSALL AND DISTRICT HOSPITAL.—Resident House-Surgeon, doubly qualified. Salary, £100 per annum, with board, lodging, and washing. Applications to the Chairman of the Hospital by October 6th.

WANDSWORTH BOARD OF WORKS.—Medical Officer of Health for the Parish of Wandsworth; must reside within the parish. Salary, £150 per annum, rising, subject to the order of the Board, by annual increments of £10 to £200 per annum. Applications, endorsed "Medical Officer," on forms to be obtained of the Clerk, to be sent to the Board's Offices, East Hill, Wandsworth, by October 8th.

WEST RIDING ASYLUM, Wakefield.—Two Resident Clinical Assistants. Appointments tenable for six months. No salary, board and furnished apartments provided. Applications to the Medical Superintendent at once.

MEDICAL APPOINTMENTS.

BODY, Hy. Marten, M.R.C.S.Eng., reappointed Medical Officer of Health to the Crediton Rural Sanitary Authority.

BOURKE, Dr., appointed Medical Officer for the East Flegg District of the Rollesby Union, *vice* Robert Woodman, M.D.Aberd., resigned.

BROWN, J. T., M.B., C.M. Glasg., reappointed Medical Officer for the Trelleck District of the Monmouth Union.

BRUNSKILL, R. R., B.A., M.D., B.Ch.(Dub.), appointed Head Surgeon to the North Dispensary, Liverpool.

FERNIE, E., M.D.St.And., reappointed Medical Officer of Health to the Stone Local Board.

FULLERTON, F. W., M.B., B.S., M.R.C.S., L.R.C.P., appointed Medical Officer to the District of West Scalcoates, Hull.

GALBRAITH, Thomas H., M.B., C.M.Aberd., appointed Medical Officer to the Wolverhampton Union Workhouse.

METCALF, Geo. E. G., L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer for the Capel District of the Tonbridge Union.

PAWLETT, E. Lawson, M.R.C.S., L.R.C.P., appointed Junior Assistant Medical Officer, Cornwall County Asylum, Bodmin.

PROSSER, T. G. M.R.C.S.Eng., reappointed Medical Officer for the Rockfield District of the Monmouth Union.

ROYDON, Dr., appointed Medical Officer of the Workhouse of the Rollesby Union, *vice* Robert Woodman, M.D.Aberd., resigned.

SMYTH, Ernest J., M.B.Lond., B.S., appointed Resident Clinical Assistant to the St. Marylebone Infirmary, North Kensington, *vice* L. Bathurst, M.B.Lond., resigned.

TAYLOR, J. Francis, M.R.C.S., L.S.A., appointed Medical Officer of the Wanstead Slip Division of the West Ham Union.

VINCENT, Henry Bird, M.R.C.S.Eng., appointed Medical Officer of Health to the Corpingham Rural Sanitary Authority, *vice* G. T. Taylor, M.B., resigned.

WILD, H. Sydney, M.R.C.S.Eng., L.R.C.P., appointed House-Physician to Addenbrooke's Hospital, Cambridge.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Address by the President, Sir William B. Dalby, on The Pleasures of Medicine and Surgery. Dr. J. Althaus: Nosophobia and Hypochondriasis.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

WEDNESDAY.

HUNTERIAN SOCIETY, 8.30 P.M.—Mr. Thomas Bryant: On Some Subjects of Public and Professional Interest.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, 3 P.M.—Lecture by Dr. Gowers.

WEST LONDON HOSPITAL, Hammersmith Road, W., 5 P.M.—Dr. Hood: Dyspepsia. (Post-graduate Lecture.)

LARYNGOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, 5 P.M.—Cases will be shown by Mr. Cresswell Baber and Mr. R. Lake, and Drs. Bennett, Bond, Brouner, De Havilland Hall, and Scanes Spicer.

THURSDAY.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND, 20, Hanover Square, 5 P.M.—Dr. G. G. Stopford Taylor: A Comparison of the Various Methods of Treating Lupus Vulgaris adopted by the Author during the past Twenty Years. Cases of interest on exhibition from 4.30 P.M.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Specimens. Paper by Mr. Bowreman Jessett: Myoma of the Uterus complicating Pregnancy, illustrated by a case successfully operated on.

FRIDAY.

CLINICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Rose Bradford: A Case of Intracranial Aneurysm. Dr. Hale White: Two Cases of Intracranial Aneurysm. Dr. J. E. Paul: A Case of Acute Pancreatitis. Dr. Soltau Fenwick: A Fatal Form of Tetany associated with Chronic Dilatation of the Stomach. Mr. Eve: A Case of Tuberculous Lymphangitis following Inoculation of Finger.

BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION, 11, Chandos Street, W., 8 P.M.—Election of Officers. Cases will be presented by Dr. Milligan, Dr. Dundas Grant, Mr. Lennox Browne, Mr. John Bark, Mr. Wyatt Wingrave, and others.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

BANES.—On September 28th, at "The Hollies," Aberdare, the wife of Dr. Isaac Banks, of a son.

BRAIDWOOD.—On the 13th ult., at Coleshill, Amersham, Bucks, the wife of P. Murray Braidwood, M.D., of a son.

HARVEY.—On September 27th, at Bay Villa, Padstow, Cornwall, the wife of F. Harvey, M.R.C.S.Eng., L.S.A.Lond., of a daughter.

MARRIAGES.

CROSS—JOHNSON.—On September 27th, at St. Mary's, Hornsey Rise, by the Rev. W. Sunder and Lewis, M.A., vicar, assisted by the Rev. R. T. Gardner, B.A., Edward John Cross, D.P.H.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., of St. Neots, Hunts, youngest son of the late J. Cross, Esq., of Overstrand, Norfolk, to Beatrice Emily, eldest daughter of H. W. Johnson, Esq., of The Homestead, Hornsey Lane, London, N.

EMERSON—LAMBERT.—On September 26th, at the Parish Church, Bradford, by the Rev. H. J. Lockett, M.A., John Emerson, L.R.C.S., L.R.C.P.E., Saltaire, to Mary Eliza, youngest daughter of James Lambert, Eccleshill.

GIBSON—COLLINS.—On September 27th, at St. Mark's, Hamilton Terrace, by the Rev. Canon Duckworth, D.D., James Hill Gibson, M.D., M.Ch., M.A.O.R.U.I., D.P.H.R.C.P.Lond., 56, Maida Vale, W., younger son of George Gibson, Esq., Belfast, to Alice, elder daughter of John Collins, Esq., of 60, Maida Vale, W.

NEWTON—JACK.—On the 26th inst., at St. Mary's, South Kensington, by the Rev. Chas. Irwin, assisted by the Rev. W. Du Boulay, Isaac Newton, L.R.C.P.Lond., M.R.C.S.Eng., of Tonbridge, eldest son of Surgeon-Major Isaac Newton, I.M.S.(retired), of Paignton, to Kathleen Mabel, second daughter of Dr. Richard Jack, of Chatheard Road, South Kensington.

PUTNAM—FLETCHER.—At Upper Londonderry, Nova Scotia, on September 12th, by the Rev. William McNicholl, M.A., W. G. Putnam, B.A., M.B., C.M.Edin., of Yarmouth, eldest son of Alfred Putnam, M.P., of Maitland, Hants Co., to Florence Lillian, only daughter of the late T. D. Fletcher.

SQUIRE—GIRLING.—On September 26th, at Thorington Church, by the Rev. Canon Mayor, assisted by the Rev. J. H. Poole, M.A., Frank H. Squire, M.R.C.S., L.R.C.P., L.S.A., of Pudsey, Yorks., son of Dr. S. Squire, of Wyvenhoe, to Jessie, second daughter of Mr. John Girling, of Thorington Hall, Essex.

DEATHS.

GOBAT.—On October 1st, at Overton Lodge, Ruabon, James Timotheus Gobat, L.R.C.P.Edin., M.R.C.S.Eng., second son of the late Anglican Bishop in Jerusalem, aged 48.

MADGE.—On October 3rd, at Ivy House, St. Albans, Herts, Henry Madge, M.D., formerly of 4, Upper Wimpole Street, W., aged 70.

PRITCHETT.—On September 29th, at West Town, near Bristol, Henry Pritchett, Esq., M.R.C.S., late of Rastrick, Brighouse, aged 62.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

DR. VALENTINE MATTHEWS, Surgeon-Captain V.M.S.C. (22, Suffolk Street, Pall Mall, S.W.), writes to ask all old King's men holding commissions in the Volunteers to kindly send their names, rank, etc., to him at the above address.

LOSS OF TASTE.

VARIOLA asks for advice in the treatment of a robust man, aged 52, without any trace of hysteria, who, since an attack of influenza three years ago, cannot taste certain foods—fish, potatoes, tea, and whisky—while other articles—meat and eggs—have a "sulphury" taste. Smell is preserved, and the ordinary tests for bitters, acids, and salines appear to show that tactile sensation and taste are preserved in both the anterior and posterior portions of the tongue.

THE MARRIAGE OF SYPHILITICS.

DR. BURNSIDE FOSTER (Lowry Buildings, St. Paul, Minn., U.S.A.), writes: For the purpose of securing reliable statistics on the subject of the marriage of syphilitics, I desire to enlist the assistance of those of your readers who have had experience which will be of value in determining the period when this disease ceases to be communicable and inheritable. I shall therefore esteem it a great favour on the part of any physician who will send me answers to the following questions, and due credit will be given in a future publication to those who desire to aid me in this work:

1. What is the latest period from the date of the initial lesion that you have known the disease to be communicated by a patient who has been from the first under your observation?

2. What is the latest period from the date of the initial lesion that you have known: (*a*) a syphilitic man, or (*b*) a syphilitic woman to become the parent of a syphilitic child?

3. Have you ever known syphilis to be either communicated or handed down at a later period than four years from the date of initial lesion by an individual who has been constantly under your observation during that time?

In answering these questions I should like a brief but complete history of each case, and an account of the treatment that has been pursued. I hope by this means to obtain the experience of a large number of observers, and to reach a fairly reliable conclusion as to the time when we may safely permit our syphilitic patients to marry.

INCOME TAX ASSESSMENT.

M.D. writes: I have lately been before the Special Commissioners of Income Tax. To my great surprise, they told me they they would only allow me, for the working of a very responsible and troublesome practice: £90 for a horse, man, etc.; £20 for sundries; £20 for consulting rooms, etc., which I occupy, in a house which, with rates, etc., costs me £81 a year, exclusive of £13 a year for stable. The allowances I claimed were: £105 for horse and man, £3 extra for trains and cars, £20 for wear and tear, £10 for consulting rooms, and £15 for a substitute. I must provide my substitute on all occasions except during illness. I would be glad to know if these are the usual just and legitimate claims. If so, I will be thankful if you will inform me what steps I should take to obtain a fair settlement of an important public question. When I pointed out that the printed forms allowed a claim of two-thirds of the rent for an office, they remarked that this applied to business premises only.

*** There is, we fear, no appeal against the decision given on the present occasion. We do not understand, however, how the Commissioners can equitably say to a medical practitioner who has spent £100 on stable expenses, "We will only allow £90." The point appears to be well worthy of consideration and discussion with a view to future action.

ANSWERS.

G.S. should consult a general practitioner in his neighbourhood, who will advise him as to the necessity of consulting a surgical specialist. We cannot recommend individual practitioners.

QUERIST.—Our correspondent will find the information he requires as to the deductions medical men are allowed in estimating their net income for the purpose of assessment either in *Income Tax: How to Get it Refunded*, ninth edition, or in the special balance-sheets for professional men. These, as well as the book, are published by the Income Tax Repayment Agency, whose new offices are 6, Chichester Road, Paddington.

VENEREAL DISEASE IN DOGS.

C. E. S. F.—There is no reason to believe that dogs can suffer from syphilis. If material taken from the syphilitic lesion of the human subject be inoculated into the skin of the dog, a comparatively slight lesion follows, which quickly and spontaneously heals, leaving no appreciable local or constitutional effect on the dog. We know of no circumstances which suggest that syphilis is a venereal disease natural to the dog. With regard to the dose of mercury for a dog, about 1 grain of hydrargyrum c. creta for every 10 pounds of body weight may be given daily to dogs for weeks, usually without harm, but it is necessary to observe as to idiosyncrasy as in man. In the particular case described the clinical experience of a veterinary surgeon may prove of some value.

THE HAMILTON ASSOCIATION FOR PROVIDING TRAINED MALE NURSES.

THIS Association employs men who have served as orderlies in military or naval hospitals, who have formed part of the Army Service Corps, or men who have had training in a civil hospital: of these latter there are very few. We learn from the ninth annual report that the earnings have increased by about £600 this last year, showing that the demand for the male nurse is not on the wane. The address of the Association is 57, Park Street, Grosvenor Square, W.

TREATMENT OF SWEATING FEET.

H. L. D. recommends the sufferer to wring his socks daily nearly dry out of a 1 to 40 solution of carbolic acid, and so wear them for a few days.

MR GEORGE FISHER, M.R.C.S.E. (Guildford) recommends that the feet should be washed and carefully dried, and well rubbed each night with castor oil. Wool socks should be worn.

S. W. S. sends the following suggestions, which he has collected: Sweating feet, chromic acid, 5 per cent. solution. Stinking feet, bromoiodine, iodol, aristol, liq. plumb. diacet., pilocarpin, and boracic acid or borax. As tight-fitting cuffs cause wrists to perspire, presumably tight-fitting boots would do so too. They should be roomy and airy, and deep enough for the toes. I have no doubt, he adds, the ancients were wise in warm climates in using sandals.

MR. EDGAR DUKE (St. Leonards) writes in reply to "A. M. S.": From extracts from the BRITISH MEDICAL JOURNAL, which I have kept, I quote the following suggestions: 1. Wear low shoes, and dust the feet over twice a day with iodol. 2. Wash the feet at night with very hot water, put on white cotton socks, and immerse the feet thus covered in methylated spirit poured into a basin, wear the socks all night, they will soon dry in bed. During the evening wear cotton socks and common felt slippers, and keep the feet constantly saturated with spirit. In a week the cure (the writer states) will be complete. The best ventilated shoes are made of stout canvas. 3. A lead-spirit lotion is recommended for use night and morning, after washing with soap and water and drying. Plumbi acetatis 5j; sp. vin. menth. 5ij; acet. destill. 5j; aq. ad 5xvi.

NOTES, LETTERS, Etc.

THE HISTOLOGY OF THE VACCINE VESICLE.

ERRATUM.—An obvious printer's error occurs in the description by Mr. Stanley Kent of the bacillus found in vaccine lymph, in the JOURNAL of September 22nd, page 633. The length of this organ should have been given as 1 μ.

A VACCINATION INSTRUMENT.

H. L. D. writes: I have been in the habit of using common pins for this purpose for some years. The pins are made aseptic by heating to redness, and when cold are used by dipping the pin into the lymph and working it into the skin, after which the pin is thrown away; 360 pins cost one penny.

THE BRITISH MEDICAL JOURNAL COMMISSION ON THE PROVINCIAL WORKHOUSE INFIRMARIES—NOTES OF PROGRESS.

THE workhouse critics on the staff of the BRITISH MEDICAL JOURNAL have been taken to task, says the *Local Government Journal*, by no less a personage than Mr. Kennedy, the Local Government Board Inspector. Speaking at Wakefield on Wednesday, September 19th, to the guardians, Mr. Kennedy indignantly denied the allegations of our contemporary with respect to Wakefield, and submitted that the Commissioner appointed was an incompetent person. It is not for us to say yea or nay to Mr. Kennedy's remarks, but we do not lose sight of the fact that in nearly every workhouse infirmary which had been reported upon by our contemporary, changes for the better have been made.

HOSPITALS OF THE STATE.

IN the evidence given at the inquest relative to the death of William Lavers, aged 59, a pauper, who committed suicide in the Convalescent Ward of the Plymouth Workhouse by cutting his throat with a table knife, the nurse stated that she was called to see this man at 1.30 A.M., when he was bleeding, and by her own admission she did not summon medical or any other aid, and the man died. Such conduct on the part of the nurse stamps her at once as being quite unfit for the profession

that she has assumed; any fully-qualified nurse would take steps to fetch the doctor, even though he were not under the same roof. We are sorry to see such incompetent women engaged in Poor-law work; they bring discredit on the trained nurse, whom we are urging on boards of guardians, and retard the movement which aims at the efficient nursing of the sick pauper. This is another instance of the need of trained nurses on duty at night in sufficient numbers to secure the adequate supervision of the wards by night as well as by day. Reference to our Commissioner's report shows that there is no night nurse, and that there are no bells from the wards to the administration block or nurses' room. This is the third case of suicide in a workhouse infirmary we have recently had to report, and the immediate cause of all of them is the lack of a proper staff for nursing; in other words, these deaths lie at the door of the guardians. Nor is it possible to acquit the Local Government Board and its inspectors of either want of knowledge or failure in their duty in insisting on a proper staff at all these hospitals or the Stafe.

Prize.

The Colorado State Medical Society offers a prize of 100 dollars (£20) for the best essay on The Diagnosis of Tuberculosis by Microscopic Examination of the Blood. Preference will be given to new evidence and the detection of the pretuberculous stage; all stages must, however, be included and microscopically differentiated. Papers must not be longer than can be read in thirty minutes, and must be type-written. They are to be written in English, and should be as free from purely technical expressions as possible. All essays must be in the hands of the Chairman of the Committee, Dr. Charles Denison, Denver, Colorado, by April 1st, 1895.

Murder by Microbes.

The pathologically-minded newspaper reporter threatens to become as great a nuisance as the psychological novel writer and certainly seems no less gifted with imagination. Such at least are the first impressions raised by the extraordinary story now going the round of the papers about the Brazilian Professor who is said to have murdered his guests by means of pathogenic microbes ingeniously served in ice and flavoured with *crème de menthe*. However minute the details the story cannot throw off the savour of romance, which, moreover, is not lessened by the Professor's dramatic exit, for it would appear that he not only ingeniously plotted the death of others but arranged also for his own, carrying constantly in a hollow tooth a diminutive golden capsule charged with the intensest poison, which eluded the search of the searchers but enabled him at the proper moment by a snap of the jaw to snap the thread of life. It is really a good story, and there is this about it that after all it is so constructed as to be within the range of possibility. The public, however, who like to believe these things should understand that it is by no means likely that any evil-minded person who wished to commit such crimes would go out of his way to cultivate the microbes. The microbes of cholera are of great interest, but as they occur in laboratory specimens have seemed from such experiments as have been performed to be of but doubtful fatality when taken by the mouth. Not so, however, the *contagium vivum*, whatever it may be, as emitted from the patient. We have ample enough proof that this is contained in the dejecta, that one of its most common modes of transference is by water, and that its virulence is not destroyed by a freezing temperature. The whole story then is possible, but it was quite unnecessary to make a "Professor" the hero of it. Perhaps our suggestion only adds to the horror of the crime. The young lady who protested against being built up in the wall because it was "such a stuffy death," might well protest against being poisoned by cholera dejecta on account of the nastiness of the proceeding. Nevertheless, however sceptical we may be in this particular case, this is a mode of poisoning which is common enough on the larger scale, not professors, however, but water companies being the criminals.

Deaths from Chloroform.

Dr. J. McNamara (West Kensington) writes: The records of death by chloroform are monotonous in their frequency. Few weeks pass by without an account of several of these tragedies. Vast amounts of time and energy have been spent in discussing the relative merits of ether and chloroform. It seems to me that the whole question is a simple one of theory *versus* fact. Theorists are preaching their theories with the result that chloroform is widely adopted, and the patients are frequently dying, whereas where ether is adopted, as in the principal hospitals of Dublin, death under anæsthesia is almost as rare as the dodo. The fact then is that death from ether is extremely rare, while death from chloroform is extremely common. Is it not time then, at least in the case of adults, to discard the lethal chloroform, and thus put an end to the human sacrifice that is weekly offered on the altar of theory?

A Mechanical Aid to Expectoration.

A. M. writes: A few years ago, when suffering from a cold with the accompanying tracheal catarrh I found that I could greatly facilitate expectoration on coughing by compressing the trachea by the thumb placed in the suprasternal notch. By this means the expulsive force of the air on coughing is very much increased and any mucus in the trachea above the point of pressure is readily blown through the glottis. The pressure, though requiring to be firm, is not painful. I have never recommended this procedure to any patient advanced in years when the possibility of the rings of the trachea being ossified would render it dangerous.

Medical Co-education.

Dr. William Osler, who was strongly in favour of the education of male and female medical students in the same school, has changed his mind. He told the Association of the Alumni of the Harvard Medical School that it has proved an absolute failure at the Johns Hopkins University. "When I tell you," he said, "that 33·3 per cent. of the lady students admitted to the Johns Hopkins Hospital at the end of one short session are to be married, then I tell you that coeducation is a failure. If 33.3 per cent. fall victims at the end of one session, what will happen at the end of the fourth?"

The Suicide Epidemic.

Dr. S. A. K. Strahan (Berry Wood, Northampton) writes, with reference to the article on this subject published in the British Medical Journal of September 15th, to point out that statistics prove clearly that suicide and attempts thereat increase as spring advances into summer, reaching their maxima, in the vast majority of cases, in May, June, or July, and in every case between April and August. As an example he quotes the following statistics, published by Dr. W. Ogle, for the twenty years 1855-84. The suicides occurring in London were distributed as follows in months of equal length, per 10,000 suicides:

January ...	... 732	May ...	... 1,003	September ...	... 765
February ...	... 714	June ...	... 1,022	October ...	... 772
March ...	... 840	July ...	... 905	November ...	... 726
April ...	... 933	August ...	891	December ...	... 697

Dr. Strahan adds that "judicial statistics" show that attempts at suicide in England and Wales are thus distributed:

Quarters of the Year.	Average Percentage occurring in the ten years 1878-87.
January, February, and March ...	19·3
April, May, and June ...	28·8
July, August, and September ...	31·8
October, November, December ...	20·3

Dr. Strahan adds that, in his work *Suicide and Insanity*, he has shown that poverty, disappointed love, financial losses, etc., are in most cases but the exciting causes of self-destruction.

Dr. Strahan is inclined to find fault with an expression in our article to the effect that we hear of more suicides in the dull season because more are reported in the newspapers. His interesting statistics, however, serve to emphasise the point which we desired to bring out: namely, that the proportion of suicides at various seasons of the year varied according to a known statistical law. The period of the year upon which we are now entering is one during which the proportion of suicides is actually lowest; nevertheless, owing to the comparative quietness of the political world, we may expect to find a relatively large number of suicides reported in the daily press. This accidental circumstance is apt to cause uneasiness in the public mind by producing the false impression that there is a suicide epidemic. The suicide epidemic in the autumn newspapers is, in fact, only another example of the "gigantic gooseberry" type.

Cold Burns.

In the accidents which have attended the manipulation of liquid air and other substances in his laboratory, M. Raoul Pictet has distinguished two degrees of burns from the intense cold. In the first the skin is reddened, turning blue the next day. The spot doubles in area on the following days; there is intense itching, and five or six weeks are usually required for healing. In the more severe burns, those of the second degree, the skin is rapidly detached. A long and stubborn suppuration sets in, and healing is very slow, and altogether different from that of burns from fire. On one occasion M. Pictet, while suffering from a burn due to a drop of liquid air, seriously scorched the same hand. The scorched portion was healed in ten or twelve days, whereas the cold burn was still open six months afterwards.

The Therapeutic Value of Ice in Opthalmic Surgery.

Dr. Henry Greenway (Plymouth) writes: Having seen in the British Medical Journal of September 15th the report of Dr. Angus McGillivray's paper on the above subject, read at the late annual meeting of the British Medical Association, and finding an allusion to my introduction of ice to the profession many years since, I would beg to draw the attention of your readers to my paper On the Treatment of Glaucoma by the Application of Ice, read at the annual meeting of the Association in 1879, and reported in the Journal of January 31st, 1880; also, to my paper on the Use of Ice and Carbolic Acid in the Treatment of Injuries and Inflammation of the Eyes, and Eyelids, read at the annual meeting of the Association in 1886, and reported in the Journal of September 18th of that year.

New System of Medical Book-keeping.

Dr. W. W. Hardwick (East Moulsey) writes: Permit me to draw the attention of the profession to a very convenient system of medical book-keeping devised by me, and published by Mr. H. Silverlock, of 92, Blackfriars Road. The book is of convenient size (12 by 9 inches), and combines in one list, day book, ledger, cash, and expenses books, annual income, and obstetric register. Each book is arranged to last six years, by which limitation a great deal of time generally wasted in repeatedly looking over old accounts is saved. It is a generally recognised fact with all those experienced in medical book-keeping that in books lasting over a long period of time innumerable accounts gradually accumulate, each of which requires a glance and a certain amount of consideration, however slight, which tires the eye and wearies the brain. It is partly this that renders the old system so harassing. The entry spaces in both list and day book pages and in the ledger pages are arranged alphabetically, the former in daily and the latter in monthly and quarterly columns. The names and addresses are entered once a month only in the former, and once in three years in the latter. The total fees due each month are entered into their proper spaces in ledger pages at the end of each month, so that an account may be rendered at any time with comparative ease. A special feature is the entry of cash. In the old methods it was usual when an account was paid to enter the amount in a separate cash book; at the end of the month, quarter, or half year, as the case might be, these payments were transferred to the ledger, and placed against the particular account. But these amounts were, owing to various accidental circumstances, frequently omitted, as many of us—to our cost, I fear—have known at one time or another, with the result that accounts that had been paid were rendered again with most disastrous consequences. In this system the cash paid is placed at once in its proper place against the account, and at the end of each year the total of all payments made during that year are carried to a column at the side, of which there are seven (one for

each year, and one for the year following the closure of the book), so that by no chance, except absolute neglect, can any mistake occur. The totals each year, under each alphabetical letter, are carried to a special page assigned to them, on which is also seen annual petty cash, expenses, and income. The profits each year are easily made out and clearly seen, and income-tax returns can be made out in a few minutes. Special pages are provided each month for petty cash (or fees paid at time) and for expenses. The whole book-keeping proper is thus kept for six years in one book with the least possible expenditure of time and trouble; old accounts are kept well in sight, and room is provided in day-book pages for the entry of different members of a family. The signs and abbreviations in use are not arranged at haphazard as in some list books, but the former are designed upon a system easily learned and remembered, the latter being all abbreviated from the Latin, and not an indiscriminate mixture of Latin and English. The book is neatly bound in morocco, and its moderate price (25s.) places it within the reach of all, and only represents an annual cost of 5s. 6d. The No. 1 Edition is arranged for private practices of under £1,000 a year; the No. 2 Edition (not yet published) for private practices of from £1,000 to £1,500 a year. The book is sent on approval by application to the publisher.

THE ADVANTAGE OF NON POISONOUS DISINFECTANTS.

DR. THOMAS SANCTUARY, Physician to the London Skin Hospital (Kentish Town) writes: I was called on August 10th to see a poor woman, aged 35, who was stated to have taken a teacupful of carbolic acid an hour and a-half previously. On arrival I discovered the so-called carbolic acid to be Jeyes' fluid, which is a slightly alkaline solution of coaltar oils, consisting principally of creasote, carbolic acid being entirely absent from the preparation. The woman was partly insensible, and her mouth and lips were swollen, but not excoriated, and she could swallow, though with some difficulty. After administering dilute acids, I induced free emesis by putting my finger down her throat, when she vomited a quantity of milky-looking liquid, smelling strongly of Jeyes' fluid. Subsequently the treatment consisted of olive oil and demulcents. The patient progressed gradually towards recovery, so that in twenty-four hours from the time of my first visit, although her mouth, lips, and throat were still somewhat swollen and tender, yet there was no apparent exfoliation of mucous membrane; she could speak, and was out of danger.

The happy result of this case furnishes the motive for my communication—a result which probably would have been otherwise had the liquid been carbolic acid, and so long an interval elapsed (one hour and a-half) before medical assistance was obtained. Carbolic acid possesses absolutely no advantage over Jeyes' fluid, and it has many disadvantages, being distinctly poisonous and irritating to the skin, whilst it is, moreover, less efficient as a germicide, deodorant, and preventer of decay, and I consider the Legislature should prohibit its sale to poor ignorant people when there is a cheap and reliable substitute.

Scarcely a day passes that does not contain a case of carbolic acid poisoning (in one week lately, as tabulated by the *Chemist and Druggist*, the number of deaths from this cause was eight).

AN ETRUSCAN RELIC.

AN interesting relic of antiquity was recently presented to the Piacenza Museum by Count Francesco Caracciolo. It is an Etruscan bronze representing a liver divided by lines and ridges into areas on which are inscriptions. The liver was in greater repute with the Etruscan soothsayers than the other entrails (lungs, spleen, kidneys, heart) for the obtaining of answers to anxious inquirers as to future events. The specimen, which is considered to be unique, was found in September, 1887, in a field near Settima, forming part of the family estate of the Counts Arcelli, from whom it was purchased by Count Caracciolo. The specimen has been made the subject of learned lucubrations by specialists in Etruscan archæology, such as Colonel Poggi, of Savona, and Professor Decke, of Strassburg.

DISINFECTION BY SULPHUR DIOXIDE.

MR. C. T. KINGZETT, F.I.C. (Chislehurst, Kent), writes: In the BRITISH MEDICAL JOURNAL of September 8th, under the title of "Disinfection," on p. 550, it is stated that the evolution of sulphur dioxide from sulphur itself is not to be commended, for the simple reason that the supply of gas is limited by the amount of air gaining access to the flame, and that such a method constitutes a feeble manner of fumigation, as may be gathered from the fact that cats accidentally shut up in a room have frequently survived. Perhaps I may be permitted to point out that cats might similarly survive an atmosphere impregnated with sulphur dioxide as liberated from the liquefied gas. It is all a question of quantity. Then, again, writing as a chemist, I cannot agree with the statement that one process is more feeble than the other, for so long as sulphur continues to burn, it of necessity gives rise to the formation of sulphurous anhydride. A pound of sulphur yields 333 litres of sulphurous anhydride gas, whereas a tin of liquefied sulphurous anhydride, holding 20 ounces, will only yield 208 litres at normal temperature and pressure, so that there is a distinct advantage in burning a pound of sulphur as against the use of 20 ounces of the liquefied substance. Sulphurous anhydride does not exhibit anything like the same germicidal effect as is obtained when the gas is generated in association with aqueous vapour. Now, in using liquefied sulphurous acid, it is not practicable to generate aqueous vapour at the same time, whereas a block of sulphur or a sulphur candle, if contained in a metal vessel, may be placed in a basin of water, and the heat generated by the burning sulphur serves to evaporate the water, the vapour of which condenses on all articles requiring disinfection, and thus brings the sulphurous gas into absolute contact therewith. A dry gas is to a large extent devoid of disinfecting property; disinfection by means of burning sulphur, as practised years ago, was a dangerous and inefficient method, but with the sulphur candles that are now commercially obtainable it is quite a different thing, and, as a chemist, I contend that there is no more effectual way of disinfecting a room by means of sulphurous anhydride than is secured by their use.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) Mr. T. R. Atkinson, Sherborne; Mr. F. W. Aitkey, London. **(B)** Dr. R. R. Brunskill, Liverpool; Mr. S. I. Baker, Abingdon; Mr. F. Bunch, London; J. W. Batterham, M.B., St. Leonard's; Dr. J. G. Blackman, Portsmouth; J. Beattie, M.B., Newcastle-on-Tyne; Dr. M. Benson, Wigan; Mr. J. G. Bride, London; A. T. Brown, M.B., Horbury; Mr. H. G. Biddle, Broadstairs; Dr. A. T. Brand, Great Driffield; Mr. J. T. Baker, London; Mr. E. T. Burton, Birmingham; Mr. B. Brooks, Hull; Mr. R. Ballard, Ashton-under-Lyne; Mr. I. Banks, Aberdare; Mr. W. L'H. Blenkarne, Leicester. **(C)** Dr. J. E. Crook, Margate; Dr. R. W. Carter, Weymouth; Mr. M. R. Cotes, Bournemouth; Messrs. Cassell and Co., London; Mr. J. Chapman, London. **(D)** T. L. K. Davies, M.B., Llandudno; Devon; Dr. W. Donovan, Erdington; Dr. T. Deville, Harrogate. **(E)** H. L. Evans, M.B., Goring-on-Thames; J. W. Edwards, M.B., Middlesbrough; Dr. G. Evans, London. **(F)** Mr. G. Fisher, Guildford; Dr. R. H. Fox, London; F. R.; F. W. Fullerton, M.B., Hull. **(G)** T. H. Galbraith, M.B., Wolverhampton; Dr. E. Ground, Maidstone; G. S.; Dr. F. Goldman, Elberfeld; Dr. E. Gwynn, London; Mr. T. A. Guinness, Bampton; Mr. F. G. Gardner, Upton-on-Severn. **(H)** H. L. D.; Mr. R. Hartley, Thirsk; Mr. F. Harvey, Padstow; Mr. J. Hawkins, London; Mr. R. J. Hill, Worthing; W. H. Hewlett, M.B., Wivenhoe; W. A. Hatton, M.B., Bolton; Mr. W. Holton, Wellingborough; Mr. D. W. Hughes, Wymondham; Happy Doctor; Mr. H. Higgins, Cambridge; D. Hooper, M.B., London. **(J)** J. B; J. K. L.; Jeyes' Sanitary Compound Co., London. **(K)** Mr. L. H. G. Kerr, London. **(L)** Mr. J. Lawrence-Hamilton, Brighton; Mr. T. H. Lymms, London; Lancastrian; Mr. G. H. Lane, London; L. S. K.; Lax. **(M)** M.B., M.A.; Member; Mr. F. W. D. McGachan, Southsea; Mr. F. C. McNatty, Winchester; M. T.; Dr. J. W. Moore, Dublin; T. McHardy, M.B., Cullen; Mr. W. F. Mason, Manchester; Mr. V. Matthews, London; Mr. J. E. Moreton, Chester; Mr. J. G. Macnaughton, Swansea; Mr. T. Marshall, Bingham; Professor J. McFadyean, London; Dr. J. McNamara, London. **(N)** T. North, M.B., Stapleton; Mr. A. Napper, Guildford. **(O)** One Who Knows. **(P)** Dr. J. Parker, London; Podagra; Mr. W. Philipson, Newcastle-on-Tyne; Progress; Mr. E. Pink, London; Mr. R. C. Pritchett, Bristol. **(Q)** Querens. **(R)** Dr. J. Reeve, London; R. J.; Remedy; R. W. J.; Mr. T. P. Roberts, Eastleigh; Retired Surgeon; Mr. A. Reid, Perth. **(S)** Mr. C. Siewers, London; Semper Paratus; Mr. N. Smith, London; Dr. J. Smyth, Naas; Dr. F. J. Smith, London; Mr. M. Scott, London; Dr. A. Sheen, Cardiff; Mr. J. Startin, London; Mr. T. J. Savage, London; Suffolk; Mr. C. R. Salisbury, Leeds; Mr. D. R. Schofield, London; Dr. J. F. W. Silk, London; Mr. R. R. Sleman, London; E. J. Smyth, M.B., London; Mr. N. Coates, Bloemfontein; E. M. Smith, M.B., York. **(T)** A. Taylor, M.B., Bolton; Mr. T. F. Taylor, Leyton; Mr. J. Taylor, Bristol. **(V)** Mr. H. B. Vincent, East Dereham; V. S.; Variola. **(W)** Dr. P. E. Waxham, Denver; Mr. J. R. Whait, London; Mr. A. Wheeler, Darlington; Mr. C. E. Wilmot, London; Dr. C. Wells, London; Mr. V. H. W. Wingrave, London; Dr. P. W. Williams, Clifton; Mr. H. S. Wild, Cambridge; Mr. C. Wiggins, Bexhill; Dr. T. Wilson, Birmingham; N. P. Watt, M.B., Edinburgh; Mr. E. Wilson, Exeter. **(Y)** Mr. E. Young Hounslow; etc.

BOOKS, ETC., RECEIVED.

Handbuch der speciellen Therapie innerer Krankheiten. Herausgegeben von Dr. F. Penzoldt und Dr. R. Stintzing. Neunte und Zehnte Lieferung. Jena: Gustav Fischer. 1894.

Opera pia de Ferrari Brignole Sale in Genova. Resoconto Clinico-Statistico dell' Ospedale S. Andrea Apostolo nell' anno 1893. Genova: Gio. Batta Carlini. 1894.

Diseases of the Skin. By Dr. W. A. Jamieson. Fourth Edition. Edinburgh and London: Young J. Pentland. 1894.

Practical Manual of Diseases of Women and Uterine Therapeutics. By Dr. H. Macnaughton-Jones. Sixth Edition. London: Baillière, Tindall, and Cox. 1894.

Rainmaking and Sunshine. By John Collinson. London: Swan Sonnenschein and Co. 1894.

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Statistik der infectiösen Erkrankungen in den Jahren 1881-91 und Untersuchung des Einflusses der Witterung. Von Josef Körösi. Berlin: Puttkammer und Mühlbrecht. 1894. M. 4.50.

The Orient Line Guide. Edited by W. J. Loftie, B.A. London: Sampson Low, Marston, and Co. 1894. 3s. 6d.

Alpine Climates for Consumption. By Dr. H. J. Hardwicke. London: J. and A. Churchill. 1894. 2s. 6d.

Health and Condition in the Active and the Sedentary. By N. E. Yorke-Davies. London: Sampson Low, Marston, and Co. 1894. 3s. 6d.

*** In forwarding books the publishers are requested to state the selling prices.

AN ADDRESS
ON
THE ETIOLOGY OF TYPHOID FEVER.

Delivered to Section I of the Fourteenth Congress of the Sanitary Institute held at Liverpool, September 26th, 1894.

By E. KLEIN, M.D., F.R.S.,
Lecturer on General Anatomy and Physiology at St. Bartholomew's Hospital, London.

Before I enter upon the subject which I have chosen for this address, I wish to offer my thanks to the Council of the Sanitary Institute for the honour they have conferred upon me by their invitation to preside over this section. The subject on which I propose to offer some remarks, and for which I must ask your indulgence, is the etiology of typhoid fever. There are several reasons which guided me in the choice of this subject. In the first place, there can be no fitter occasion than the present one for the discussion of such a subject. This Congress, embracing every department of sanitary science, is constituted of workers who are constantly called upon to pay attention to this widespread and, in places, endemic infectious disease. Be they medical officers of health or sanitary inspectors, be they engaged in any of the numerous branches of sanitary engineering, they are frequently called upon to devise means against the spread, and for the prevention of this dire malady.

In the second place, I have for some years been engaged in a close study of the pathology and bacteriology of this disease, and, therefore, am able to make a few observations thereon. It is admitted that typhoid or enteric fever possesses as well-marked clinical and pathological characters as any communicable disease. Since the writings of Budd and Simon on the subject of the mode of spread and prevention of typhoid fever, it has become an axiom in sanitary science, and has in several well-known instances received direct and conspicuous confirmation, namely: That typhoid or enteric fever is a well-defined communicable disease, spreading by specific contagium.

Rodet, G. Roux, Vallet, and Arloing,[1] Kellog[2] and others have put forward the view that the bacillus known as the Eberth-Gaffky bacillus of typhoid fever, now admitted to be almost constantly present in the alimentary canal, in the mesenteric glands, and in the spleen of cases of typhoid fever, is no other than the bacillus coli communis, which is a constant and normal inhabitant of the bowels of man and animals under perfectly healthy conditions; and, further, they have contended that the bacillus coli passed with the normal dejecta is capable of acquiring in sewage specific and and virulent properties, so that when reintroduced by water, milk, or other articles of food into a normal individual, it has become endowed with the power of setting up in him the specific and communicable disease—typhoid fever.

In this view typhoid fever may—in so far as it is referred not to a microbe directly derived from antecedent typhoid fever or other disease, but to a saprophyte that has become altered in its physiological effect by sojourn for a while in sewage—arise, so to speak, *de novo*. But this contention is the outcome solely of bacteriological study, not of epidemiological observation and experience on the part of those advancing it. These authors base their views as to the origin of typhoid fever from bacillus coli, and as to the identity of the two microbes, solely on this, that they are unable to distinguish in their laboratory experiments the bacillus coli from the bacillus of typhoid fever. I propose to show you that this distinction is not at all difficult, and that the two microbes—as far as our present exact methods enable us to draw inferences—are two well characterised and different species. It must, however, be added that they belong to a family of species which have certain characters in common, though members of the family differ from one another by some well-marked features.

[1] *Transactions of the International Congress on Hygiene*, London, 1891, Section Bacteriology, vol. ii, p. 272.
[2] *Mod. Med. and Bacter. Review*, No. 2, 1891, p. 20.

The bacillus coli is normally copiously present in the large intestine of man and animals; in the lower part of the small intestine it is also constant, but grows here less copiously. All matters such as dust, earth, solids and fluids, and particularly sewage, which have been contaminated or been in contact with intestinal discharges of man or animals, contain the bacillus coli. Next to the proteus bacillus—which is one of the special microbes of putrid decomposition of dead albuminous matter—the bacillus coli is one of the most widely distributed organisms. When growing in proteid matter it decomposes it and forms indol. The putrefactive changes occurring in the intestines and in organic matters polluted with intestinal discharges that are associated with the formation of indol may with justice be attributed in a great extent to the growth and activity of the bacillus coli; and for these reasons it is likely that the bacillus coli next to the proteus, is an important instrument in the decomposition of dead proteid matter. But unlike the proteus, the bacillus coli does not produce proteolysis and does not peptonise.

In shape the bacillus coli is an oval rod rounded at its ends, measuring about 0.5μ to 2μ; comparatively few attain the length of cylindrical rods. When examined from recent cultures some examples are seen to be of active motility, this being due to the presence at one end of one, two, or rarely three flagella. In cultures on the surface of nutrient gelatine particularly well shown in colonies growing on the surface of the gelatine—there are, amongst a great majority of short rods, some few that are distinctly cylindrical in shape, or even short threads; the latter, as a rule, are comparatively few and far between.

Of particular interest is the growth of bacillus coli in a gelatine shake culture, and in milk. In the former a conspicuous formation of gas bubbles takes place, which is pronounced as early as after twenty-four to thirty-six hours' incubation at 20° C.; in the latter a total curdling of the milk occurs in one, two, or more days when incubated at 37° C. A curious and constant character is observed of bacillus coli when it grows in 25 per cent. nutrient gelatine, for while it is growing rapidly therein at 37° C., and forming a characteristic pellicle on the surface in two to three days, the gelatine, which of course becomes fluid at that temperature, remains perfectly limpid, except for a precipitate at the bottom of the fluid.

In broth at 37° C. copious growth takes place, the broth becoming strongly turbid with the formation in two or three days of a pellicle, which later still becomes very pronounced. Such broth, on the addition of nitrites and nitric or sulphuric acid, gives a characteristic rose-pink colour, due to the presence of indol. The above characters are constantly met with in cultures of the bacillus coli taken from the intestine.

To sum up:—(*a*) Short oval rods in the majority, only relatively few long forms. (*b*) Relatively few actively motile. (*c*) Rapid growth on gelatine, in the shape of translucent filmy patches, irregular in outline, thin in the marginal, thick in the central part, but without liquefaction of the gelatine. (*d*) Copious and rapid formation of gas bubbles in gelatine shake culture. (*e*) More or less rapid curdling of milk at 37° C. (*f*) Pronounced indol reaction in broth after several days' growth at 37° C. (*g*) Twenty-five per cent. gelatine remains limpid for several days with the formation of distinct pellicle.

These characters are possessed by the bacillus coli taken direct from the normal intestine, and persist constancy through however many generations this bacillus is grown in subcultures. They persist, too, if bacillus coli is kept in water, and they are invariable attributes of the bacillus coli in sewage, however long it be kept therein. Bacillus coli present in water polluted with normal intestinal discharges is by the above characters easily recognised, and I have not failed to so identify it, if present in such polluted waters.[3]

[3] Although the term "bacillus coli" does not cover one single botanical species, but is applicable to several varieties, differing slightly in their morphological characters and in their growth on the surface of gelatine, nevertheless it can be stated from a wide experience that the characters mentioned above (*d*), (*e*), (*f*) (namely, formation of gas bubbles in gelatine shake culture, the power to curdle milk, and the production of indol in broth) are attributes or all the varieties of bacilli coli that can be isolated from the intestinal discharges of man and animals.

Now, contrast with this the bacillus of Eberth-Gaffky, or the typhoid bacillus. This bacillus is present in the contents and in the mucous membrane (Peyer's glands) of the alimentary canal, and in the evacuations of persons affected with typhoid fever.[4] There is no difficulty in demonstrating by cultivation its presence in the bowel discharges of a typhoid patient from the second week of illness, and by separating it from the bacillus coli which has been mentioned as a constant inhabitant of the intestine in health and in disease. I repeat, there exists no difficulty in separating the two species by means of the culture test, as for instance in a gelatine plate made originally with typhoid dejecta; and

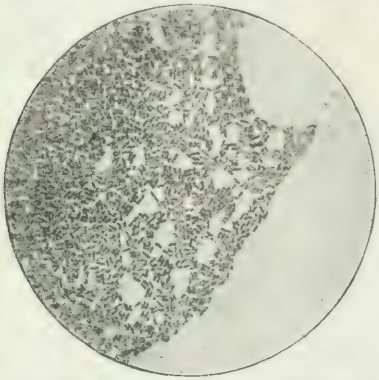


Fig. 1.—Reproduced from a photograph of an "impression preparation" of part of a colony of bacillus coli (× 1,000).

this fact alone proves, to my mind, that the two microbes are distinct and separate from one another.

The point I would here insist on is: That on the one hand,

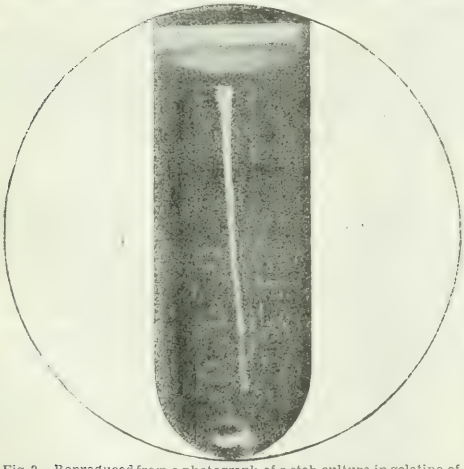


Fig. 3.—Reproduced from a photograph of a stab culture in gelatine of the "typhoid bacillus" (× 2).

from the normal dejecta, or from the contents of the normal intestine, the bacillus coli is the microbe readily isolable, whereas, on the other hand, from the typhoid dejecta, and the contents of the ileum of a typhoid case during the first four weeks' illness, not only is the bacillus coli isolable, but another species, namely, the bacillus of typhoid fever, is, in addition, readily demonstrable by cultures. During the last three years I have had an opportunity of examining the mesenteric glands and the spleen of a considerable number of patients that died in the course of typhoid fever between the twelfth and the twenty-eighth day, and I have never failed to obtain by microscopic examination, and better still by culture, the bacillus of typhoid fever in considerable num-

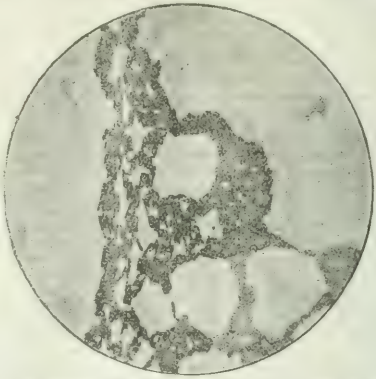


Fig. 2.—Reproduced from a photograph of an "impression preparation" of a young colony of the "typhoid bacillus" on gelatine (× 1,000).

bers. The spleen particularly contained this microbe in very large numbers, and on cultivation yielded crowds of colonies of this bacillus in pure cultivation.

Now, what are the morphological characters of this bacillus, and what are the essential differences between it and the bacillus coli?

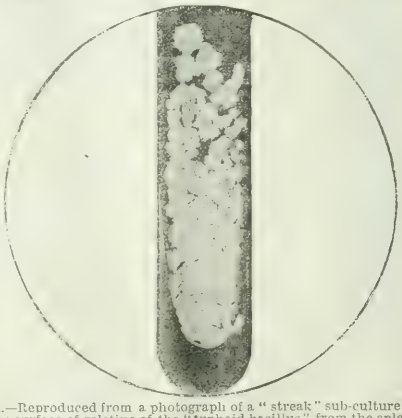


Fig. 4.—Reproduced from a photograph of a "streak" sub-culture on the surface of gelatine of the "typhoid bacillus" from the spleen of a case of enteric fever (natural size).

(a) The typhoid bacillus is distinctly more cylindrical than the bacillus coli, its average length being 2 to 4μ; it forms in cultures cylinders and filaments.

(b) Its motility is decidedly greater, each bacillus being surrounded by numerous flagella.

(c) It grows less quickly than the bacillus coli on the

[4] It is quite unintelligible how Sanarelli (*Annales de l'Institut Pasteur*, 1894) can support the statement that this is not the case. Rodet and Roux have already made a similar, to me, incomprehensible statement. (See the *Transactions of the London Congress on Hygiene*, vol. ii, p. 273.) Dr. F. W. Andrewes has, moreover, succeeded in isolating the typhoid bacillus from the sewage passing out of a London fever hospital.

surface and in the depths of nutrient gelatine, as also in gelatine plates.

(d) When growing on the surface of gelatine, either in tubes or in plates, it forms a peculiar iridescence which is not observed on similar culture of the bacillus coli.

(e) It does not form gas bubbles in gelatine shake cultures.

(f) It does not curdle milk.

(g) It grows well in broth, but does not form indol.

(h) It grows well in 25 per cent. gelatine, but, unlike bacillus coli, makes the gelatine uniformly turbid in as short a time as after twenty-four hours.

The three principal cultural characters, however, by which the two organisms can be distinguished best and easiest are: Shake cultures in gelatine, milk cultures, and broth cultures. While the bacillus coli rapidly forms gas bubbles in gelatine shake cultures, the typhoid bacillus does not do so; while the bacillus coli curdles milk, the typhoid bacillus does not do so; and while the bacillus coli produces indol in broth cultures, the typhoid bacillus does not do so. There is nothing easier than to demonstrate these facts in a simple way.

A plate cultivation in gelatine is made from a typhoid stool, or from sterile water or other fluid to which previously a trace in each instance from a culture of bacillus coli, and from a culture of typhoid bacillus has been added. After several

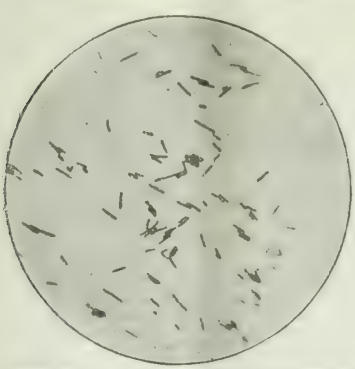


Fig. 5.—Reproduced from a photograph of a cover-glass specimen of "typhoid bacilli" (× 1,000).

days' incubation at 20° C. such a plate presents numerous colonies, apparently of the same kind; those that are growing on the surface of the gelatine possess the same kind of translucent filmy appearance with irregular outline, thin at the margin, thick and less translucent at the centre. Those that are growing in the depth of the gelatine appear as dots, whitish in reflected, brownish in transmitted light. From a superficial examination it would be difficult to say whether these colonies are those of bacillus coli or typhoid bacillus, or of both; but on more careful examination it is seen that some of the surface colonies are less translucent and considerably larger than others, and that they possess a more irregular outline than others. Now, on making microscopic specimens of these large colonies, it will be seen that they are mostly short oval rods, amongst which few only show active motility; whereas preparations made of the small translucent surface colonies show longer cylindrical bacilli and filaments possessed of vigorous and brisk motility. By making of the two kinds of colonies the sub-cultures just mentioned—namely, in gelatine shake cultures, in milk and in broth—it becomes soon apparent that they represent two definite species, and if from such sub-cultures further sub-cultures in those media are made, through however many generations, the differences just enumerated of the two species will appear to be constant and permanent. More than that, I have in two instances by the above means been able to ascertain and to identify the simultaneous presence in water of the bacillus coli and the bacillus of typhoid fever.

It will be in the recollection of many here present that a serious epidemic of typhoid fever occurred in Worthing during the spring and summer of 1893, and it is no doubt known to you that Dr. Theodore Thomson with Dr. Kelly, the able health officer of Worthing, investigated this outbreak. Dr. Thomson's report has been recently issued by the Medical Department of the Local Government Board. He clearly shows that the then existing water supply of the town—the town of Worthing is now, and has been for some time past, supplied from a fresh and good well—had become polluted, that a percolation into the old well had taken place from some old disused sewer. Now, in this, as in most cases of water pollution, it is always a question of great dilution of filth by a large bulk of water. To search, then, for the particular microbe of typhoid fever in such water can be attended with success only if a large volume of the water be subjected to bacterioscopic analysis. I have shown that when large volumes (1,000, 1,500 and more cubic centimetres) of this water were thus analysed they were found to contain an abundance of the bacillus coli and a limited number of the typhoid bacillus. The two species were easily isolated, and they presented the well-marked differences stated above. Sub-cultures of these two species

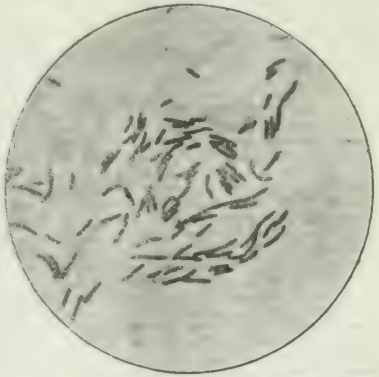


Fig. 6.—Reproduced from a photograph of a very young colony of the "typhoid bacillus" (× 1,000).

taken from the Worthing water were carried on for many generations, and there was no indication of a change in their character, or of a change of the one into the other. A similar positive success was obtained from a polluted well, which yielded a part of the water supply of Rotherham in Yorkshire.[5] Here, also, on the above lines of examination, an abundance of bacillus coli and a limited number of the typhoid bacillus were demonstrated.

So that in these instances the two species coexisted in the water, and by the above-mentioned characters were readily distinguishable one from the other.

"In the examination by MM. Rodet, Roux, and Vallet, of the suspected water of Lyons, small quantities only were used for bacterioscopic examination, and it is not to be wondered at that they failed to find the typhoid bacillus; they isolated the bacillus coli only, and at once arrived at the conclusion that it is this bacillus coli which had caused typhoid fever in the consumers."[6]

A similar criticism may be applied to a paper by Sir Charles Cameron and Dr. McWeeney,[7] in which these authors describe, in water, which was under suspicion of having conveyed typhoid fever, a species of bacillus which, from their

[5] The Town Council of Rotherham, much to their credit, immediately on learning of this result, made it public.

[6] *Transactions of the Seventh International Congress on Hygiene, London*, 1891, vol. ii, p. 372.

[7] *Journal of State Medicine*, vol. ii, No. 3, p. 89.

description, I submit, was clearly a variety of bacillus coli.[8] They state that their bacillus was intermediate between bacillus coli and the bacillus of typhoid fever. They did not test its behaviour in milk, but from the facts stated by them that it formed abundance of gas bubbles and that it gave indol reaction, I am prepared to assert that this organism was neither the typhoid bacillus nor any bacillus allied to it, but that it was simply bacillus coli.

Now it must clearly be understood that I do not mean to deny the possibility of the existence of intermediate forms, both morphological and cultural, between bacillus coli and the bacillus of typhoid, but what I do maintain is that as far as direct observation at present goes, the bacillus coli and the bacillus of typhoid fever are two well-defined species, and that there has not appeared under the many and diverse conditions of laboratory experiments any evidence of transitional or intermediate forms between the one and the other species.[9]

I come now to the important evidence of the animal experiment. In the statements made by various authors as to the alleged intimate relation between the bacillus coli and the typhoid bacillus, great stress is laid on the fact that the cultures of both these microbes when injected intraperitoneally into guinea-pigs produce the same acute disease and death. I have shown[10] that a variety of the most different microbes, such as the bacillus prodigiosus, the proteus vulgaris, the staphylococcus aureus, the vibrio of Finkler and of Koch, all produce under like conditions (that is, when injected intraperitoneally into guinea-pigs in sufficient doses) one and the same disease, and death from acute peritonitis between sixteen and twenty-four hours. The peritoneal cavity contains fluid exudation in which the microbes have multiplied to a very large extent (see illustrations), and the blood also as a rule contains the microbes. From the fact that the bacillus coli and the bacillus of typhoid act under these conditions alike pathogenically on guinea-pigs, no conclusion can be drawn as to their identity or non-identity, seeing that in these respects they stand in exactly the same position as the other species enumerated. It has been stated by Kellog[11] that the bacillus coli when passed through the animal body—that is, in the above intraperitoneal injections of guinea-pigs—assumes virulent properties and changes into the bacillus of typhoid. My experience on this point, extending over a considerable number of experiments, does not support such an assumption. I have passed cultures of the bacillus coli and bacillus of typhoid separately through a number of successive generations of guinea-pigs, that is to say, a definite fatal dose of a culture of bacillus coli or of bacillus of typhoid respectively was injected into guinea-pigs. These were found dead within twenty hours; the peritoneal exudation was crowded with the bacillus coli or bacillus of typhoid respectively. Of this peritoneal exudation a fatal dose was transferred to the peritoneal cavity of fresh guinea-pigs with the same result. The peritoneal exudation of this last generation was again transferred to further guinea-pigs, and so on through a considerable number of generations.

In these series of experiments no difference was noticed between the two microbes from the outset as regards virulence and the general result on the guinea-pig, nor did cultures made from the peritoneal exudation of all the successive generations of guinea-pigs show alteration, either in morphological or cultural respects, of the bacillus coli and the bacillus of typhoid respectively. The two microbes obtained from the peritoneal exudation of the last generation of guinea-pigs in the series showed exactly the same morphological and cultural differences as those obtained from the peritoneal exudation of the first generation of the series. All authors who maintain the change of the bacillus coli into the bacillus of typhoid fever assume that this change is accomplished in sewage. As far as direct experiments can be made in this direction they lend no support to this view, for it can be shown that the two microbes while sojourning in sewage maintain their biological characters unaltered. Moreover, direct observation proves that the two organisms when planted into sewage behave in a strikingly different manner. While the bacillus coli retains its vitality there and undergoes multiplication, the bacillus of typhoid fever, on the contrary, shows considerably less vitality, and, unlike the bacillus coli, soon diminishes in numbers till ultimately it altogether disappears, in some cases within a fortnight, and long before the nutritive material is exhausted.[12] But as long as the typhoid bacillus is present in such sewage it retains the same cultural characters as mentioned above, and the same applies also to the bacillus coli. In a large number of experiments made in this direction I have not noticed the slightest deviation of character in either of these microbes. Bacillus coli was sown into sewage, and from day to day and from week to week the cultural characters of this microbe were tested—by plate cultivation, in gelatine shake cultures as to gas production, in milk as to curdling, and in broth as to indol production. But no alteration was noticed; the microbe remained the typical bacillus coli. A like series of experiments was also made with the typhoid bacillus; but, as mentioned just now, this latter is of more limited duration of vitality in sewage than the bacillus coli. It soon shows diminution in numbers and ultimately disappears, but as long as it is present it possesses, when tested by cultures, the same characters as the typical typhoid bacillus.

An important fact that has resulted from these experiments in sewage is that the typhoid bacillus when planted in sewage to which potassium nitrate is added (1 per cent.) retained its vitality for a considerable period and underwent rapid and conspicuous multiplication.[13] But here also, when tested by culture at various periods, it is found to retain its characters unimpaired. It does not form gas bubbles in gelatine shake cultures, it does not curdle milk, and does not form indol in broth. From all these considerations it follows, then, that the belief that the non-specific bacillus coli is capable of changing into the specific bacillus of typhoid fever or *vice versâ* has no sufficient basis in observed fact—that it is, indeed, contradicted by direct experiment. As far, then, as bacteriological evidence goes, there is no valid reason why sanitarians should not continue to regard typhoid fever as a specific disease derived from an antecedent case or cases of the same disease, and not, as has been suggested, on bacteriological evidence alone, as being capable of originating *de novo*, that is to say, through the bacillus coli. While holding this view, our duty of preventing pollution with sewage of drinking water, milk, etc., is not less incumbent. For, although without the typhoid germ the bacillus coli, we maintain, is not capable of causing typhoid fever, the presence of bacillus coli in water nevertheless indicates a probable pollution with excremental matters, and amongst them possibly with specific—that is, typhoid—excremental matter.

[8] These authors, be it noted, used for the detection of this bacillus very minute quantities of the water, not more than ten drops (*loc. cit.*, p. 90). The same remark applies to Rodet, Roux, and Vallet. (*Loc. cit.*)

[9] When the bacillus coli and the bacillus of typhoid fever are placed in water they coexist well together, as stated above, but it is observed that the bacillus coli is capable of preserving its vitality for a conspicuously longer period than the typhoid bacillus. In this connection it ought to be stated that the various assertions by different observers as to the rapid devitalisation of the typhoid bacillus are not to be accepted without comment, and are very much exaggerated. I have recently conducted an extensive series of experiments for the Medical Department of the Local Government Board on this subject, and I find both as regards the typhoid bacillus as also the cholera vibrio, that considerable differences exist between various waters (as for instance the various waters supplied by the London water companies—also rain water, lake water, deep well water) as to the vitality of these microbes in these different waters, and that the statements put forward as to the rapid devitalisation of these microbes in water are certainly exaggerated.

[10] Report of the Medical Officer of the Local Government Board for 1892-93, p. 374.

[11] *Loc. cit.*

[12] A series of observations in this direction is being conducted by Dr. F. W. Andrewes and Mr. Parry Laws.

[13] This seems capable of explaining the observations often made, namely, that the typhoid bacillus in sewage percolating through the soil into water is capable of preserving for long periods its vitality. Sewage percolating through the soil takes up nitrates from the soil, hence in such a medium the typhoid bacillus is capable of growing and of retaining its vitality.

The Congress at Buda-Pesth.—The total expenses of the Congress of Hygiene and Demography recently held at Buda-Pesth are officially stated to be 93,000 florins, while the receipts from members' subscriptions and other contributions amounted to 24,530 florins. Only a part of the sum of 105,000 florins voted by the city of Buda-Pesth will therefore be required.

THE SPREAD OF CHOLERA BY WATER.

Communicated to the Eighth International Congress of Hygiene and Demography, Buda-Pesth, 1894.

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The present paper proposes to deal with one point only in the natural history of cholera—the spread of the disease by water. When the Committee of the Tropical Section of this Congress honoured me with a request to read a communication upon cholera I had intended to devote the paper to a discussion of the extent to which in recent years water has shared with other means in the diffusion of cholera, of the volume of water or degree of dilution in which the cholera poison might be spread, and of the distance to which it could be carried by water without losing its virulence. But such considerations obviously begged the question that cholera can be and is spread by water. I had, I confess, thought that this question was settled beyond the need of further proof. But this cannot be regarded as so, since there are still observers who deny to water any part whatever in the diffusion of cholera, who do not believe that the poison of cholera lies in the dejecta of the patient, and who are prepared to assert that the guarding of water supplies from contamination by dejecta and the use of boiled water during an epidemic may with safety be neglected, except in so far as these are measures that make for general hygiene. The clearest exposition of such views that has recently appeared may be found in the monograph on cholera by Professor Erisman, of Moscow,[1] whose high reputation, together with the wealth of references and fertility of illustration which distinguish the monograph in question, lends great weight and importance to the opinions therein expressed. To one, however, who feels compelled to differ from those opinions, and to believe that water plays no small part in the diffusion of cholera, the fear cannot but arise that such views, if logically acted upon, would lead to disaster in practice. In any case, attention to the source of drinking water is a measure so generally adopted in times of cholera that fresh evidence, tending to show that such attention is not only rational but necessary, may be welcome. I may therefore be allowed to quote the following instances of recent occurrence, which appear to prove at least the possibility of cholera being spread by water, before passing to the question whether it is often so spread.

The first instance occurred in a village in the Caucasus. It is recorded in the report of the First Conference of Caucasian Physicians in the following words: "One of a number of Persian labourers, fleeing in panic from the infected Governments (Baku and others), and passing through this district, died of cholera during the night's halt close to the village of Dashkesan. His companions, thinking that if the local authorities knew of the cause of their comrade's death they would not be allowed to enter Persia, decided to throw the corpse into one of the wells which provided the whole population of Dashkesan with drinking water. On the following day cholera broke out in the village."[2] There were 17 deaths from cholera on the first day of the epidemic, and the village suffered incomparably more severely from cholera than any other village in the province.

Fortunately an occurrence such as here narrated must be extremely rare[3]; and the insertion of the corpse of a person who has died from cholera into the source of a water supply cannot be regarded as an explanation generally applicable to the spread of cholera epidemics. The more usual course of events is for a portion of the dejecta, whether stools or vomit, of a cholera patient to reach and contaminate a water supply. The second instance is of this nature. It also occurred in the Caucasus. On July 4th (16th), 1892, a peasant came from a neighbouring village to the town of Lencoran, where on the following day he died from cholera in the house of a woman named V. On the same day that he died (July 5th) two daughters of V., living in the same house, sickened and died from cholera. Next to this house were the barracks of a Cossack regiment, whose sole water supply was derived from a well belonging to V. On July 6th and 7th thirteen of the Cossacks were admitted to hospital suffering from cholera, and in all eighteen cases of cholera occurred among persons who drank water from the well. The contamination of water by cholera dejecta was proved, not only by the fact that after the death of the first three patients (the peasant and V.'s two daughters) V. had washed all their linen close to the well, the framework of which was quite rotten, but also by the fact that one of the two daughters in her illness, tortured by thirst, had crept to the well to obtain water, and had actually vomited into the well.[4]

The third instance occurred in the Government of Tambof. The village of K—— lies upon two sides of a valley, which encloses a pond, containing slowly flowing water. After the death of the first cholera patient in this village, all his body linen and his bed linen were washed in the pond. The peasants living on one side of the valley took their drinking water solely from the pond, and in this group of peasants eight cases of cholera occurred on the day after the linen was washed in the pond, and twelve fresh cases occurred on the following day. Meanwhile there were no cases at all among the peasants living on the other side of the valley, who took their water, not from the pond, but solely from wells; and it was only after some of the peasants of this second group had visited the sick and attended the funerals among those of the first group that cholera began to occur upon their side of the valley.[5]

There is nothing more fatal to the attainment of scientific truth than dogmatism. Until conclusive evidence has been brought forward upon any debated question the only mental attitude that can be logically held towards it is one of suspended judgment. But with the advance of knowledge there fortunately comes a time in most scientific questions when a position of suspended judgment is no longer tenable; when the slowly accumulating mass of evidence bows down the balance on one side or the other, and compels the acceptance of a positive or negative conclusion. If the three histories just related stood alone, they might be held to be insufficient to prove that cholera can be spread by water; but when added to the evidence already collected upon this point in the past, they appear to me to afford conclusive proof of such a possibility, and to leave no more room for suspended judgment in this question than is left in the question of the circulation of the blood or the infectiousness of scarlet fever.

I have not ventured here to recite again the well known historical testimony which bears on this subject. It appeared to me to be a more useful task to gather evidence from the recent behaviour of cholera than to discuss the *pros* and *cons* of the evidence so carefully collected and discussed in the past by Snow, Ernest Hart, and Radcliffe in England, by Ballot in Holland, and by many other observers in India and other countries. That their labours are passed over here with this brief tribute will not, I trust, lay me open to the charge of underrating the immense value of their work. But over two years' prevalence of cholera in Russia has brought forth such a mass of literature in the shape of local reports and magazine articles, and these contain so much interesting material illustrating the spread of cholera by water, that I have felt myself not only justified, but almost bound to limit the present paper to evidence derived from these sources and from personal observation.

Accepting it as an established fact that cholera can be spread by water, I pass to the more important question of the frequency with which it is so spread. Were the question at issue the exact relation which the number of cases of cholera due to infection by water bore to the number of cases caused in other ways it would not be easy to answer. After reading some scores of Russian reports and pamphlets and many articles in Russian medical journals, the impression left on my mind is that, so far as the recent epidemic in Russia is concerned, there were numerically more persons

[1] *Cholera, its Epidemiology and Prophylaxis*, by F. F. Erisman, Moscow, 1893.

[2] *Report of the First Conference of Caucasian Physicians.* The Cholera Epidemic of 1892 in the Caucasus. Tiflis, 1893. Vol. ii, Part I, p. 59.

[3] A parallel instance is recorded in the same report. A stream supplying the village of Dargo was contaminated by the corpse of a cholera patient being thrown into it, and the stream distributed cholera to the other inhabitants. Vol. i, Part II, p. 242.

[4] *Ibid.*, vol. ii, Part I, p. 6.

[5] *Protocols of the Tambof Medical Society.* 1892. Meeting of October 2nd. Dr. Skvortzof.

who contracted cholera by direct and unguarded intercourse with the sick than by means of drinking water, that the poison of cholera was less often introduced into a new locality, and less often spread in that locality by means of water than by persons suffering from the disease, by careless contact of the healthy with the sick, or by articles that had been soiled by the dejecta of the sick. But that this impression corresponds with the truth I should be loth to assert. For it may safely be stated that for every case where it was possible to ascertain the source of infection there were scores, and in country districts hundreds, where it was impossible to ascertain it with anything like certainty. And it is obvious that, while the fact of contact with persons sick or dead from cholera could be determined with the greatest ease and by the most superficial questioning, it would often require the acumen, the perseverance, and, it may be added, the leisure of a John Snow to discover that water was actually, though unsuspected by most, distributing the cholera poison.

Fortunately, however, the question at issue is more easily answered than the purely academic one of the proportion which these two groups of cases bore to each other. For there can be no hesitation in asserting that during the past two years in Russia water has so many times been proved, and so many times been suspected, of spreading the virus of cholera, that it must be looked upon as a most important medium of infection. The following are but a few of the more striking instances.

In St. Petersburg in 1892, in 1893, and in the present summer the majority of cases of cholera have been thought to be due to the drinking of contaminated water.

In the present outbreak at Cronstadt water is more than suspected to be the source of infection in most of the cases.

In the *uyezd* or district of St. Petersburg in 1892 water is stated to have played an overwhelming *rôle* in the distribution of cholera.

In the town and government of Kherson there were the strongest grounds for believing that water contained and distributed the cholera poison.

In the Caucasus a multitude of instances occurred of cholera being spread by water.

In the towns of Warsaw, Rostof-on-Don and Askhabad water was the main source of infection.

In the governments of Kazan, Kursk, Samara, Kharkof, Viatka, Perm, Yaroslavl; in a word, in every part of the country whence detailed information is forthcoming, instances more or less numerous occurred, and have been reported in detail, in which water was clearly the means of diffusing cholera.

Time will not permit here of a circumstantial narration of more than a small fraction of these instances, but it may not be without interest to discuss some of the more important ones in connection with the questions: First, as to the degree of dilution in which the cholera poison can be spread by water, and, secondly, as to the distance to which it may be so spread. The two questions are obviously closely connected, the one with the other, but it will be useful to consider them separately, so far as that is practicable.

First, as to the degree of dilution in which the virus of cholera may be spread by water. The question is of considerable etiological interest. In the numberless instances in which small streams, standing lakes, and ponds were the source of localised epidemics it is conceivable that the quantity of poison which reached and contaminated the water was sufficient to cause all the resulting cases of cholera without any multiplication of the poison taking place in the water. For the amount of contamination was often extraordinarily great. In the Caucasus and elsewhere it was no unusual occurrence for the dead body to be washed in a stream or pond from which many people took their drinking water. In Askhabad, in Transcaspia, it was the custom of the Mohammedan inhabitants to carry anyone sick with cholera to the banks of the "aryks" or artificial irrigation channels, which form a network throughout the town, to put a cup into his hand, and to leave him there to die or recover. Whatever he passed by the bowel or by vomiting fell into the channel, and it was from these channels that Askhabad took its drinking water.[6]

[6] "The Cholera Epidemic of 1892 in Askhabad" (Dr. Poliakof), *Army Medical Journal*, 1893, p. 43.

In instances such as these it is clear that an immense quantity of the cholera poison would reach the water, and the degree of dilution in which it would be spread, even if it underwent no further multiplication, would not be extreme. Even in the more numerous instances in which wells and streams and ponds were contaminated by the washing of linen and clothes soiled by cholera dejecta,[7] the quantity of the poison so introduced into the water would be very considerable, for the linen and clothes of a cholera patient are frequently quite saturated with the discharges.

But in those instances, less numerous but more important, in which large bodies of moving water have appeared to distribute the virus of cholera, it could only rarely happen that the quantity of cholera dejecta originally introduced was sufficient to render so large a mass of water infectious, and in most of these instances it is necessary to suppose that the poison multiplied itself in the water.

In Russia, in 1892, many large rivers appear to have contained and distributed the poison. The Volga, the largest river in Europe, was no exception. In Tzaritzyn the epidemic was said to be mainly due to persons drinking raw Volga water.[8] Further up the river, in the Government of Kazan, large numbers of people were attacked solely from drinking the water of the Volga.[9] Still nearer its source, in the Government of Yaroslavl, it is stated: "In July and August, the Volga water possessed in the highest degree the power of causing cholera.[10] Even in this great river, however, the degree of dilution of the original dose of virus, though great, may not have been extreme. The large fleet of Volga steamers carried an endless flow of fugitives from the cholera-stricken districts of the Caucasus and Astrakhan; and cholera patients were constantly landed from them. In every town and village along the banks cholera was epidemic. The quantity of cholera dejecta that reached the river from the steamers and from the towns and villages must have been by no means inconsiderable.

The great branches of the Volga also distributed cholera. The Samarka, which joins the main stream at Samara, spread the disease by its waters in the town and Government of Samara.[11] The Viatka,[12] in the government of that name; the Kama, in the Government of Perm;[13] and the Oka, in the Government of Vladimir,[14] are all stated to have played a similar part.

In Warsaw cholera appears to have been spread by the waters of the Vistula. Dr. Troitski states that the first case occurred in Warsaw on September 12th, 1892. The second occurred on the 14th, in a house close to the landing stage where the first case was landed. On the 17th and 18th there were six fresh cases: on the 19th, ten; the majority of these occurred in people living on the banks of the river, and every one had drunk unboiled water taken directly from the river.[15] When the practice of taking water from the river was put a stop to, and boiled water was generally provided, cases of cholera ceased.[16]

In Kherson the earliest cases occurred among labourers at work on the steamers and landing stages on the rivers Dnieper and Koshevaia. The patients had all drunk water directly from the rivers. Energetic measures were taken to provide boiled water, and to urge the labourers not to drink water from the rivers, and in a few days the cases among them ceased entirely. Further, a glance at the map which displays the distribution of cholera in Kherson shows that the great majority of cases of the disease occurred in those parts of the town lying close to the rivers, and in which the inhabitants take their water directly from the rivers, while the central part of the town, which is supplied with filtered water from the town waterworks, escaped almost altogether.

[7] Such instances may be found in large numbers in the Russian reports.
[8] *Report of the Cholera Conference in St. Petersburg*, Dr. Pavloski.
[9] *Report of the Cholera Epidemic of 1892 in the Government of Kazan*. Kazan, 1893.
[10] *Medico-Topographical description of the Government of Yaroslavl in connection with the Cholera Epidemic of 1892*. Yaroslavl. 1893.
[11] Drs. Grebentschikof and Pavlovski, at the St. Petersburg Cholera Conference.
[12] *Supplement to Protocols of the 6th Conference of Physicians in the Government of Viatka*. Viatka. 1893.
[13] *Sanitary Report of the Perm Town Council*, Perm, 1893.
[14] *Journal of the Vladimir Government Zemstvo*, April, 1893.
[15] Russian Medical Society in Warsaw University, *Vrâtch*, 1892, No. 50.
[16] *Report of St. Petersburg Cholera Conference*, page 83.

That this difference was not due to a difference in topical conditions, but to a difference in water supply, was proved by the fact that in the cholera epidemic of 1872, when Kherson had no waterworks, and when the whole town was supplied with water taken directly from the rivers Dnieper and Koshevaia, the cases of cholera were equally distributed through all parts of the town, and there was no tendency to a greater prevalence of the disease in those parts of the town which border the rivers.[17]

In St. Petersburg the great Nevka, a large branch of the Neva, was strongly suspected in 1892 of causing the early cases of cholera. It is certain that all the first cases occurred among labourers who drank raw water from the river, and when this practice was forbidden and the men were provided with boiled water, there were no further cases of cholera among them. Last year and this year the large canals in St. Petersburg are believed to have contained the cholera poison, and to have occasioned the disease in many men labouring upon barges and drinking water from the canals.

The Don and its branches also distributed the cholera virus. In Rostof-on-Don the epidemic was mainly caused by the use of unboiled water from the river.[18] The Donetz, a branch of the Don, diffused cholera in more than one village.[19] In the village of Mayaki a picket of soldiers was placed to guard the river banks to prevent people washing linen in it and drinking water from it, and as soon as this was done the cases of cholera, which had occurred only among those who drank the river water, ceased. In Kozlof and Voronezh[21] the river Voronezh, another branch of the Don, played an exactly similar part.

The rivers Dniester[22] and Bug[23] became seriously contaminated with the cholera poison in 1892, and in many villages along their banks the greater number of cases of cholera could be traced to the drinking of water from the rivers. There is abundance of evidence, in the case of all the rivers I have named, that the dejecta of cholera patients did pass into them, and not infrequently in large quantities. In most of them the sources of pollution were as numerous and of the same character as those already described in connection with the Volga. Steamers landing cholera patients at the various landing stages, and towns and villages in which cholera was epidemic, and from which cholera dejecta passed into the rivers, either directly or through the washing of soiled linen and clothes, all contributed to the sum of contamination. With scarcely an exception, there was not the least difficulty, in the case of these rivers, in establishing the fact of the entrance of cholera dejecta into their waters.

The same objection may be made to these instances of the spread of cholera by water that has been made to other instances in the past. It may be urged that a difference in water supply in two towns or villages, or in different parts of the same town or village, implies a difference in local conditions, and that it is this that determines the difference in cholera distribution. It is impossible to deny that local conditions are of considerable importance in the etiology of cholera, that some appear to favour the prevalence of cholera, and others to be opposed to it. But in the instances here brought forward there is strong evidence that local conditions played a minor part, and that the cholera poison was contained in, and distributed by, the water of the rivers. How otherwise explain the immediate cessation of cholera when water ceased to be taken from the rivers, and boiled water was drunk instead? How otherwise explain the difference in distribution of cholera in Kherson in 1872 and 1892? In that town the local conditions had not changed, but the water supply had, and with the change in water supply came the change in cholera distribution. How otherwise explain the many cases of cholera among the labourers on barges and boats on the canals in St. Petersburg, on the rivers in Warsaw and Kherson, and in the harbour in Cronstadt? How on a theory of local conditions alone could a circumstance like the following be explained? On July 18th, 1892, a religious procession took place in a Cossack village in the Caucasus, and the procession ended in the blessing by the priest of the water of the river Malka flowing through the village. As soon as the ceremony was over numbers of people rushed to the river and drank some of the water. Cholera had already prevailed for some time in the village, but the epidemic had passed its maximum, and had already so far declined that on the day of the ceremony only eight fresh cases occurred. But on the day after the blessing of the river there were twenty-nine fresh cases of cholera, and on the day after that twenty-four.[24]

Finally, how on a theory that local conditions alone determine an epidemic, can those numerous instances be explained in which only those persons who drank raw water sickened with cholera, while those who drank boiled water escaped? A striking instance, which has recently come under my own observation, could not possibly be explained on any theory of local conditions only, but yields readily to explanation if the water carriage of cholera be admitted. The following were the circumstances:

The steamship *Acme*, of London, arrived off Cronstadt on Wednesday evening, June 22nd (old style) of the present year. On the following morning (June 23rd) one of her tanks was filled up with water taken from the roads at the spot where she had lain anchored for the night. This spot was about a quarter of a mile below the entrance to the Cronstadt harbour. The tank filled was capable of holding 1,200 gallons; about 500 gallons of English water remained in it before it was filled up, so that about 700 gallons were taken in at Cronstadt, and the mixture contained rather more than half of Cronstadt water. All the officers and crew of the steamer without exception drank of this mixed water, and no other, from June 23rd to June 27th. On the 27th the tank was emptied, and refilled with filtered water from the town waterworks, and on and after that day the water was boiled before being drunk. On the evening of June 23rd (the same day on which the tank was first filled up) the ship's carpenter complained of diarrhœa, which lasted until the 27th, when he was admitted to hospital, pulseless and collapsed. Comma bacilli were found in the dejecta. On June 26th (the third day after the water was taken in) a sailor was seized with diarrhœa and cramps. On the 27th (the fourth day) a sailor and a fireman were seized with diarrhœa, which lasted until their admission to hospital on the 30th. The fireman died ten hours after admission. In both comma bacilli were present in the dejecta. On June 28th three men, on the 29th one, and on the 30th one, complained of more or less severe diarrhœa. They were all, save one, admitted to hospital on the 30th, and all recovered in a day or two. The dejecta of one of them were examined for comma bacilli, but these could not be detected. The dejecta of the other four were not examined bacteriologically. There were thus in all nine cases, with diarrhœic symptoms out of a crew of twenty-two men. Of these, three were undoubted cases of cholera: a fourth was suspicious, but as comma bacilli could not be found in the dejecta, the case was returned as one of diarrhœa. The grounds for believing that the water was in this instance the source of infection are the following: The *Acme* is the only English ship which in the present summer has taken in water directly from the roads. All other ships that have had to take in water at Cronstadt have taken it from the town waterworks. Further, as far as I can ascertain the *Acme* is the only ship that has neglected the precaution to boil all water before drinking it. At the moment of writing, the cholera epidemic in Cronstadt has almost ceased. During the seven weeks of cholera prevalence the *Acme* has been the only English ship (with one exception) upon which cases of cholera have occurred. The exception tends to confirm the belief that the water was to blame in the case of the *Acme*. It consisted of a single case of cholera on board another steamer, the *Fountain's Abbey*. On this steamer nothing but English water was drunk, and this was boiled before being drunk. One sailor had a severe attack of cholera, from which he recovered, but there was not even a case of diarrhœa among the other members of the crew. The source

[17] *The Epidemic of Asiatic Cholera in the Town of Kherson in 1892.* By Dr. Goshkevitch. Kherson. 1893.

[18] Society of Russian Physicians. Dr. Slitcherbakof. *Vratch*, 1892. No. 41.

[19] *St. Petersburg Cholera Conference*. Dr. Turanski; also *Report of the Fifth Conference of Medical Officers to the Zemstvos of the Kursk Government*. Kursk. 1893.

[20] *Protocols of the Tambof Medical Society, 1892*. Dr. Khovrin.

[21] *Statistics of the Cholera Epidemic of 1892 in Voronezh and Neighbourhood*. By A. Sabinin. Voronezh. 1892.

[22] *The Cholera Epidemic in the Tiraspol District*, by Dr. Kazanski. Kherson. 1893.

[23] *Cholera in the Elizavetgrad District* Kherson. 1893.

[24] *Op. cit.*, vol. i, Part II, p. 196.

of infection in the single case of cholera I was unable to discover, but it was evidently not the water from the ship's tanks.

It may be urged that, if the cases of cholera upon the *Acme* were in fact due to the water, every member of the crew should have suffered, since they all drank the same water. I can only reply that there is abundance of proof that many people are insusceptible to cholera, however much they may be exposed to the infection. I have elsewhere related some extreme instances proving this, which may here be briefly referred to again. In one, in a Cossack village in the Caucasus[25] a family of nine occupied two small rooms; in another, in a village in the Government of Kursk[26], a family of fifteen lived in one small, stuffy, dirty room. In each case the earthen floor of the room was saturated with the stools of a single cholera patient. The children played about upon the saturated floor, and they and the other members of the family ate and lived in the same room as the patient, yet not one of them contracted the disease. In the districts where cholera was most prevalent in the summer of 1892, the highest proportion of the population attacked (in the Caucasian province of Daghestan) did not exceed 4 per cent. In the towns most severely stricken, Astrakhan, Lublin, Orenburg, Rostof-on-Don, not more than 4.8 per cent. of the inhabitants suffered from cholera, and in only one town was a higher percentage recorded. In Erivan 6.6 per cent. of the population were attacked. One can only speculate as to what proportion of the population was exposed to infection, but it must have exceeded these figures enormously, possibly tenfold. On board the *Acme* three men out of twenty-two, or over 13 per cent., had undoubted cholera, and nine men out of twenty-two, or 41 per cent., had diarrhœic symptoms. It is quite possible that in the stress of a severe epidemic all these cases would have been returned as cholera. That the water of the harbour in Cronstadt contained the poison of cholera in the present summer there can be little doubt. The large majority of cases of cholera in the island have occurred among labourers in the harbour. Nearly all of them have confessed to drinking water directly from the harbour, and have themselves attributed their illness to this cause. The *Acme* filled her tank from the roads about a quarter of a mile below the entrance to the harbour. There is always a strong downward current here, and on the day she took in the water the wind blew from the north-east. A wind from that quarter would undoubtedly blow water from the harbour out into the roads. That the degree of dilution of the cholera poison in this instance must have been great must be admitted, but it may also be conceived that the poison grew and multiplied after it was taken into the ship's tank.

This instance introduces the second point for consideration—the distance to which the cholera virus may be carried by water and yet retain its activity. The question is not free from difficulties, for in most cases it is impossible to determine the exact point at which the contamination occurred. In most of the instances already quoted there was no reason to suppose that the poison had been carried very far; in many it had not spread beyond the limits of the town or village where it entered the water. In the case of the large rivers there is no positive evidence that the poison had travelled far from the shores of the river, the water in most instances being taken by persons living on the banks. In the villages in the government of Kazan it is expressly stated that the water was taken from the Volga close to the landing stages where the cholera patients were landed from the steamers. Instances where water was the means of bringing cholera virus to a town or village from another town or village lying further up the stream were less frequent, but were also met with. Unfortunately it is rare to find in the reports any mention of the distances lying between the villages. Thus, for instance, in three villages in the government of Viatka,[27] lying in one and the same shallow stream, and in two villages lying on another stream, there were grounds for believing that the water carried the cholera virus from the higher to the lower villages, but it is not stated how far the villages were apart.

From the same Government the following facts were reported.[27] Cholera broke out in the village of Levashovo, lying on the small river K——. Ten other villages lay along the banks of this same stream. Of these, nine usually took their water from the stream below Levashovo and one above. The last escaped cholera altogether; but of the other nine villages, seven, which continued to take their water from the stream, suffered more or less from the disease, and two only escaped, and these were the only two villages in which the inhabitants had ceased to take water from the stream. They had refused to use it, not only for drinking, but even for laundry purposes. Here again, unfortunately, the distance between the villages is not named.

The following instance is of greater interest, as the distance is defined. It occurred in Geok Tepé, in the Province of Transcaspia. On the banks of the same rivulet were three *auuls*, or Turkoman villages, an upper, a middle, and a lower. The distance between the upper and lower villages was 20 versts, or 13 miles. The position of the middle village is not stated. A case of cholera occurred in the uppermost village in a person who had come from a district where cholera was prevalent. He died, and all his clothes, soiled with dejecta, were not only washed in the stream, but were left to soak in it all one night. This occurred in the upper part of the uppermost village, and in a day or two there were many cases of cholera in this village. A few days later (unfortunately the number of days is not stated) there suddenly occurred many cases of cholera in the middle village; and still a few days later cholera appeared, equally suddenly, in many people in the lowest village. Introduction of the cholera infection by persons from the outside is stated to have been impossible in the middle and lower villages, as the inhabitants had voluntarily put themselves in quarantine and cut off all communication with the outside world.[28] If in this case the water was the means of conveying the infection it must, if the middle village was half-way between the upper and lower, have carried the virus on two occasions for a distance of 10 versts, or 6⅔ miles; while if the middle village was not midway between the others the water must have carried the virus on one occasion for a greater distance than this.

It has to be noted that in every instance of the spread of cholera by water that has been brought forward in this paper the water was taken directly from a river, stream, pond, or well, and was not filtered before being used. The extremely important question whether the ordinary methods employed for filtering water before distribution are efficient in removing the cholera poison from a contaminated water has not been illustrated, and I do not venture to do more than briefly allude to it. It is a matter requiring such close and detailed investigation that ordinary observations not specially directed to this point are of no assistance. So that it may or may not be of significance that in recent Russian cholera literature there is no hint of water, filtered in waterworks in the ordinary way, and distributed through pipes to a community, having been the means of diffusing cholera. But it would be rash to aver that on that account that it never did so. The difficulty of establishing a negative is proverbial. And in the present connection the difficulty of establishing a positive conclusion, even in a single instance, is so great, the task requires so much time and labour, that this may perhaps account for the fact that the point is not even touched upon in any of the reports that I have seen.

Before closing this paper I would repeat that it has only dealt with one point in the natural history of cholera. It has brought forward evidence that water not only can but frequently does spread the cholera poison, that the poison may contaminate, and be distributed by, even the largest bodies of water, and that it may be carried by water to a considerable distance without losing its activity. I have not ventured to claim more than this for the spread of cholera by water, or to assert that it will explain all that is obscure in connection with the disease. It will not explain why cholera is one year confined to India, and another year spreads to half the civilised globe. It cannot account for every outbreak in every village or town in which cholera occurs. But

[25] *Op. cit.*, Vol. i, Part ii, p. 184.

[26] *Report of the Fifth Conference of Medical Officers to the Zemstvos of the Kursk Government.* Kursk, 1893, p. 85.

[27] *Op. cit.*, p. 56.

[28] *Ibid.*, p. 111.

[29] The Cholera Epidemic of 1892 in Askhabad, by Dr. Poliakof, *Army Medical Journal*, 1893, p. 43.

it can account for many, and other circumstances, of which direct and careless contact with the sick is the most important, will account for many others. It does not exclude the influence of local conditions upon the prevalence of cholera. The epidemic in Russia has indeed furnished strong evidence that local conditions, such as elevation and dampness of the soil, are important factors in the cholera problem. But to discuss this evidence here would be to enter upon the whole question of the etiology of cholera, and would far exceed the limits of the present paper.

A CASE OF CONGENITAL XANTHOMA MULTIPLEX.

By W. DALE JAMES, M.R.C.S.Eng.,
Dermatologist Sheffield General Infirmary.

I have recently seen a child who first came under my notice when it was eighteen months old. It is worthy of notice, in that it exhibits an undoubtedly congenital xanthoma. The mother says that she "had a good cry so soon as ever the nurse put baby into bed with me; it was so much disfigured."

S. T., aged 3½, female. The plaques are distributed as follows: On the right upper eyelid, right side of nose, over the mesian line of the upper lip, the lower end of breast bone, right subclavian region; at the back, on the right side of the dorsal vertebræ, and on the left lumbar region. Besides these there were five on the hairy scalp. The mother declares that at birth they were plum colour, and that this gradually disappeared, so that at the time I first saw them (August, 1892) there was nothing characteristic in their appearance. They were sharply elevated masses of a pale flesh colour, and having a few vessels running over their surface. One had then been removed by the surgeon in attendance, but I failed to get any account of its histology. I removed that from the side of the spinal column; but it unfortunately came to grief in the laboratory. The mother objects to further incision, so that no microscopical examination has been made. There is, however, now no doubt as to its character, as the plaques are perfectly typical.

There are some further points of interest to be mentioned. The mother says that the places grew during two years, but have not increased since. During the time the child was under my care at the Children's Hospital, Sheffield, the plaques in the scalp certainly varied in fulness from time to time. Sometimes they were nearly level with the scalp, apparently undergoing atrophy; at others standing well above the level of the skin. Now, these seem to have undergone a real involution. They are never raised at all; they look like yellow hairless scars, and to the finger the skin feels thin and atrophic. The plaques upon the eyelid, nose, and lip are certainly less prominent, both as to elevation and colour, than they were a year ago. Those in the right subclavian and left lumbar regions seem to me to be just as when I saw them formerly, save in colour, which is now typical. There was at no time any jaundice, heart disease, or any other organic lesion discoverable; but the child was ill-nourished and difficult to feed. It is now bonnie enough, and is described by its mother as "quite hearty."

ON INTRATYMPANIC INJECTIONS IN THE TREATMENT OF CHRONIC DRY CATARRH OF THE MIDDLE EAR.

By ADOLPH BRONNER, M.D.,
Surgeon to Bradford Eye and Ear Hospital; Laryngologist to Bradford Royal Usefu[illegible] Infirmary.

In speaking of chronic dry catarrh of the middle ear I mean that typical affection which is accompanied by atrophy of the mucous membrane of the middle ear and ankylosis of the ossicula, more especially of the stapes and fenestra ovalis. I know perfectly well that intratympanic injections through the Eustachian tube have been recommended and used for a very long time, but of late years they have been abandoned and even denounced as useless and dangerous. They certainly cannot cure the disease and restore the hearing, but they can, and do to some extent, arrest the progress of the disease, and, in some cases, improve the hearing. We know that chronic dry catarrh of the middle ear is a most erratic disease, that it will remain quiescent for months or years, and then suddenly begin to grow worse without any apparent reason. It is therefore, in my opinion, of no practical or scientific value to record the history of cases treated by this method, as these, if not very large in number, would prove nothing whatever. Nor are those cases of any value in which the injections have been used for one ear only, as we know that the progress of the disease may be more marked in the one ear than in the other. It is a most remarkable fact that in most cases (in men more especially) the left ear is affected first, and that eventually the right ear becomes more deaf than the left.

Most of the patients which I have treated by injections who have had the patience to come frequently, affirm most distinctly that the hearing has been much clearer after the injections for periods varying from a few days to as many months. I have tried most of the solutions recommended: Nitrate of silver, sublimate (Wilde, Toynbee), chloral hydrate (Lucae), lactic acid, sulphate of copper (Roosa), iodide of potassium, liquid vaseline (Delstanche), bicarbonate of soda and glycerine (Politzer). I now use only bicarbonate of soda 3 per cent., with equal parts of glycerine and water; or paroleine, as prepared by Burroughs and Wellcome. The latter can be used pure or with a little bicarbonate of soda or iodoform. I have used these two remedies, I may say, hundreds of times, and never once seen any violent reaction. Before use, the solutions are sterilised and always applied warm. They are injected with an enlarged Pravaz's syringe (which is made of metal and glass, and can be sterilised[1]), either direct through the Eustachian catheter, in which case 3ij or 3iij are injected, or preferably through Weber-Liel's intratympanic catheter, when ♏xx or ♏xxx are used. After the injection, air is blown through the catheter. At first four to six injections are made at intervals of a few days, and then every few weeks or months, or whenever the patient thinks that the deafness or feeling of discomfort has increased.

ON A PECULIAR CRACKLING (EMPHYSEMATOUS) SENSATION IN THE VAGINAL CANAL.

By JAMES OLIVER, M.D., F.R.S.Edin.

During the last ten years I have seen three cases in which a peculiar crackling sensation in the upper half of the vaginal canal was the chief physical sign noted on examining the pelvis, when the symptoms complained of pointed to disturbance of the genital organs. In all the cessation of the child-bearing epoch had been reached, and two of the patients, although married many years, had never been pregnant, whilst the third had borne two children. Since the cessation of menstruation—over a varying period of from six to twenty-four months—the patients had complained constantly of a more or less profuse watery discharge, which was usually offensive. There was soreness of the external genitals in consequence of the discharge, but no pruritis.

The cervix was soft and the mucous membrane covering it was velvety, whilst the mucous membrane entering into the formation, more especially of the upper half of the vaginal canal, presented a sensation which must have been due to an accumulation of gas in the lacunæ of the connective tissue.

Symptoms attributable to vaso-motor disturbance are frequently complained of at or about the time of the cessation of menstruation, and I am of opinion that in many cases the vaginal discharge which proves troublesome about this time is of a nervous origin and is of the nature of a paralytic secretion. In a few rare cases it is quite possible that the metabolic actions going on in the tissues may be so deranged that a gas, which is probably carbonic acid, may be set free and may so accumulate in the connective tissue as to produce the peculiar crackling sensation which in three different cases I have detected in the vagina.

[1] Down Brothers, of London, make the syringes.

ANEURYSMAL VARIX OF THE LEFT INTERNAL CAROTID ARTERY AND THE CAVERNOUS SINUS.

By G. E. WILLIAMSON, M.A., F.R.C.S.,
President of the Ophthalmological Section of the Annual Meeting of the British Medical Association at Newcastle, 1893; Surgeon and Ophthalmic Surgeon Royal Infirmary, Newcastle-upon-Tyne.

M. B., aged 53, overman in a coal mine, was brought to me early this year by his nephew with a view to having some disfiguring lumps removed from his face.

The history of the case was that in the year 1870 his head was crushed in a coal mine between a pit-tub and the roof. As soon as he recovered himself after the accident he noticed a beating between the nose and his left eye and he heard a loud noise in his head which has gone on ever since. He hears it, however, in the left ear only, as the hearing of the right was lost from the accident. A few weeks later a swelling over the left eye gradually formed and then increased towards the nose and the eye slowly protruded, but excluding the first few months after the accident, the size of the swelling and the beating noise in his head have remained practically unaltered. He has enjoyed good health since the accident and has gone on regularly with his ordinary work in the mine.

His present condition is well shown in the accompanying photograph. The prominent swellings above and below the left eye, and to its inner side are deeply grooved across the middle by the tendo oculi. The eyeball is displaced downwards and onwards, and the superficial veins of the face are much distended. There is well marked soft pulsation in both parts of the swelling, and the skin covering feels very thin. A distinct thrill can be readily made out, but it is stronger below, probably from the constriction caused by the tendo oculi. The thrill can be traced along the course of the facial vein to the edge of the lower jaw, where it is lost. A loud *bruit*, like the distant beat of a large steam engine, is heard all over the head, as well as on the swellings and along the facial vein. Pressure on the left common carotid causes a considerable diminution in the pulsation, but does not arrest it.



On raising the upper eyelid to gain a better view, the eye suddenly shot out in front of the lids, like the forward dislocation that takes place when the speculum is pressed back after division of the tendons in the operation of excision. This caused some distress, until the eye was replaced by pressing it backwards. The patient told me that once before this had happened to him, and he had considerable difficulty in putting it right. There is postneuritic atrophy of the left optic nerve, with great impairment of sight.

I take the case to be one of a small communication between the internal carotid artery and the cavernous sinus, caused by a laceration of the artery from a fracture of the base of the skull. I mentioned ligature of the left common carotid artery to the patient, but without any enthusiasm, and considering that he has been able to follow his occupation during the past twenty-three years, and that the local conditions have remained unaltered, I was not surprised at his decision to leave matters as they are.

The interest of the case lies in the well-marked nature of the disease, in its comparative rarity, and in the fact that it has remained unaltered for twenty-three years.

ALCOHOLISM IN SWITZERLAND. — The official report of the Swiss Statistical Bureau, which was issued on May 8th, shows that during 1893 there died in the fifteen largest town in Switzerland 7,536 persons over 20 years of age. Of these 488, or 6.5 per cent. died of diseases caused by alcohol. Of this number 414 were men. In 43 townships with from 5,000 to 10,000 inhabitants, of 4,215 deaths 245 were attributed to alcoholic causes. Professor Speyer, Director of the Lunatic Asylum in Waldau, says that on the lowest computation the eighth part of the lunatics in Switzerland are victims of drink. Professor Forel states that of the patients treated in the Zurich Lunatic Asylum during the year 1890, no fewer than 27 per cent. were cases of alcoholic insanity.

DONATIONS AND BEQUESTS.—By her will, dated April 10th, 1884, Miss Mary Ann Beck, of Netley Villa, 10, Favart Road, Poole Park, Fulham, who died in July last, leaving personal estate valued at £17,868, bequeathed £250 to the University College Hospital, Gower Street.

THE treasurer of the Victoria Hospital for Children, Chelsea, has received a cheque for £99 2s., as the result (less expenses) of a recent Local Trade and Friendly Societies demonstration and church parade, held in aid of the funds of the institution.

SOME POPULAR SUPERSTITIONS.

By JOHN ROBERT WILLIAMS, M.B.,
Assistant Surgeon, Penmaenmawr Quarries.

It is surprising and deplorable in this age of civilisation to find what a vast amount of superstition prevails regarding the nature and treatment of different maladies, not only amongst the poor but, incredible as it may seem, amongst some of the comparatively well educated classes. Far from saying anything disparagingly of my countrymen, I am only pointing out what exists to a great extent in many districts throughout the kingdom; but I shall confine myself to giving two or three instances of what may daily be seen in North Wales.

Take shingles for example. This in Welsh is termed "Yr Eryr" which interpreted, means "The Eagle." It was held in ages gone by, that a person partaking of the flesh of eagles, derived immunity from shingles, which was then looked upon with awe as a dreaded affection. It was likewise believed that the direct descendants of such a person, down to the ninth generation, could not contract it, and furthermore had the power transmitted to them of curing others so afflicted, by blowing on the eruption. There are at present, scattered over the principality, many old women who claim to be the ninth descendants, and therefore the last of the race endowed with this fanciful virus. They trade upon the gullibility of nervous superstitious individuals.

A short time ago I had a patient with herpes zoster, who was daily pestered by several persons persuading him to submit to this ridiculous treatment, or otherwise it would prove fatal by encircling the body. I know the case of a wealthy person who, getting impatient of the rational treatment of a well-known practitioner, went to one of these shingle healers, and attributes his recovery to this blowing process for which doubtless the old woman was well paid.

In some parts of Ireland I am told the treatment consists in enveloping the patient with a kind of clay, which is removed when all traces of the eruption has disappeared. Why the supposed power should go no further than the ninth generation I cannot tell, but it reminds me that in most febrile affections the ninth day is thought to be the climax or crisis, and if there is no improvement after this, the prognosis is considered very grave.

If the locality is near the sea, one frequently hears a midwife ask at a confinement, "How is the tide now?" for they imagine that the state of the tides has a great influence upon the progress of the pains. As soon as the child is washed after birth, it is given sometimes a little gruel, but more frequently two or three teaspoonfuls of sugared water, or, if thought to be griped, a dose of castor oil—indeed, the midwife will not hesitate to give a few drops of gin. It is useless to argue that such a procedure is atrocious at so early a stage of the child's existence. There is amongst the poor a strong aversion to immersing a child in a hot bath if seized with a convulsive attack from whatever cause, and I feel certain many infants would thus have been saved were it not for the interference of some foolish persons who considered it a most formidable measure to adopt. Take, again, their belief in the efficacy of red flannel. Whether it is a cough, swollen joint, or a sore throat, the part affected is generally covered with red flannel, in which they think there is some virtue not possessed by any other colour. These are only a few instances, which are as common as the proverbial belief that a gold wedding ring is a universal cure for sore eyes. It is a difficult matter, and, indeed, often impossible to convince people of the utter absurdity of such ideas. Although a medical man may try his best to do so, the result will be that he himself is looked upon as the ignorant one, and may often lose a patient in consequence. I mention these facts in order to show how important it is to try to educate the people to abandon such beliefs which in many cases would prove dangerous to the patient.

Donations.—Messrs. Coutts and Co. have contributed £25 towards the sum of £2,000 required by the Royal Chest Hospital, City Road.

DEATH FOLLOWING VACCINATION.

By REGINALD FARRAR, M.D.Oxon.,
Public Vaccinator, Barnack and Ryhall Districts, Stamford Union.

E. C. was one of a family of delicate though not specifically diseased children, the mother being a feeble woman who has had a large family very rapidly. I have no reason to suspect either syphilis or tubercle in the parents, nor do any of the children bear marks of constitutional syphilis.

This child was brought to me on October 10th, 1893, for vaccination. She struck me as being rather small and thin for her age—5 months—but otherwise had nothing obviously amiss. I did not, therefore, at the time see sufficient cause to postpone the vaccination, though in view of the poor development of the child I should have done so had the mother desired it. I vaccinated in four places, using a carefully cleaned lancet, and Dr. Renner's calf lymph. Other children vaccinated at the same time, and from the same supply of lymph, did perfectly well in all respects.

On inspecting the arm a week later I found three vesicles of perfectly normal aspect: neither at this, nor at any subsequent date, was there any inflammatory area round the vesicles; nor did the ulceration at any time spread beyond their limits. Instead, however, of the scabs drying up and separating in the usual time they persisted unduly, and from the intermixture of clotted blood, presented a "limpet shell" aspect, resembling rupial scabs. When at last they separated the ulceration was found to have penetrated the whole skin, exposing the muscles beneath, and leaving holes which looked as if they had been punched out. There was no œdema of the arm, and the skin round the vesicles appeared perfectly healthy throughout.

The child "dwindled, peaked, and pined," and finally died, from no very obvious cause, on November 29th, 1893, six months old, seven weeks after the vaccination, and about a week after the separation of the scabs.

I consider her death to have been due to a constitutional *malaise*, induced by vaccinia in a poorly nourished child: for vaccinia is, after all, a specific constitutional fever, though most children take it very mildly; and I publish the case, partly as a warning to vaccinators to avoid weakly children even though presenting no obvious disease, for I cannot but think that I should have acted more wisely in postponing the vaccination in this instance, and partly because I hold it to be our duty to place on record any untoward effects of vaccination (and they are fortunately extremely rare, considering the universal prevalence of the custom), even at the risk of causing the enemy to blaspheme.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

A CASE OF OPIUM POISONING.

I was asked to see W. J. at 11 A.M. on June 26th, as he was supposed to be dead. On my arrival a few minutes later I found the patient in bed and to all appearances dead, but the heart was beating vigorously, although the breathing appeared to have ceased. Artificial respiration was immediately commenced, and in a few minutes the patient began to breathe deeply and stertorously. This enabled me to observe the other symptoms. He was profoundly unconscious, the whole body was bathed in a profuse perspiration, the pupils of both eyes were strongly contracted, and the cornea were quite insensible to touch. I had the patient partially dressed and carried from the close room in which he was lying into the passage or hall of the house, and a little later on, the day being fine and warm, into the open air. Every attempt to produce emesis having failed, including the hypodermic injection of apomorphine, the contents of his stomach were emptied by means of a stomach pump: they smelt slightly of tincture of opium. In the meanwhile everything was done to rouse the patient: he was flicked and flipped with wet towels, and was continually moved about from chair to chair. Half a pint of strong black coffee was put into the

stomach through the stomach pump, and at intervals of two hours about two-thirds of a pint of milk and egg were administered in the same way. The respiration repeatedly failed, and was only effectually dealt with by artificial respiration. Hypodermic injections of sulphate of atropine one-tenth of a grain were administered every quarter of an hour for four doses, but no appreciable result was observed from its use either on the pupils, the pulse, or the respiration. The only method of treatment that produced any result was artificial respiration, which I maintained during one portion of the day for over three consecutive hours. In spite of all that was done the patient died rather suddenly from heart failure at 9 P.M. On searching the room I found one half-ounce and two two-drachm bottles marked "Laudanum—Poison," two having been purchased at one chemist's and the other at another chemist's. In the evidence given at the inquest it transpired that deceased had been in the habit of taking laudanum for sleeplessness, and a verdict of death from misadventure was returned.

H. W. MCCAULLY HAYES, M.R.C.P.E.

Ilchester Gardens, W.

ECONOMY IN VACCINE LYMPH.

IT does not appear to be generally known that it is possible to vaccinate several persons from a single small tube of calf lymph. On several occasions I have vaccinated four and five children with the contents of one tube, and in each case every insertion produced a good vesicle. Recently I employed one tube for seven children, 27 good vesicles resulting from 28 insertions. The method adopted was to blow four minute drops of lymph directly on to the arm, to make a few light scratches with an ordinary sewing needle, and use the eye of the needle to rub the lymph in. It is advisable to use a new needle for each case. The calf lymph used was that supplied by Dr. Renner in small tubes. The advantages of this plan are self-evident, especially during an epidemic of small-pox, or when a good supply of lymph is difficult to obtain.

Berkhamsted. R. L. BATTERBURY, M.D.

CASE OF STRYCHNINE POISONING.

ON August 14th, we were sent for to see N., aged about 35, who was said to be very ill. We found her lying on a couch breathing rapidly, muttering to herself in a semi-delirious state and complaining of pain in her legs. We gathered from her wanderings, and from her friends' information that she had been much upset by a love affair, and had refused food for four or five days, and only had a cup of tea on the day in question, about 5 o'clock. Knowing her to be an hysterical subject we raised her, and tried to rouse her, when the limbs at once began twitching rhythmically. The spasm was intermittent, and rapidly became worse, and she exclaimed "I am dying, I have taken poison." On being asked what poison, she said she did not know, and her niece found a packet of Battle's vermin killer, which had been opened and part of which was missing. The spasms now rapidly became more frequent and severe, and she cried out "Oh! hold my legs." When they came on opisthotonos and trismus were well marked, and blowing on the patient produced a spasm. An injection of gr. $\frac{1}{15}$ apomorphine was given, followed by another of gr. $\frac{1}{10}$ in ten minutes, but neither produced vomiting. The pulse was feeble, 160, and the breathing laboured and rapid. Chloroform was now given, a gag introduced, and the stomach pump passed, but the stomach proved to be nearly empty, and only a little fluid and mucus was removed. A good deal of chloroform was found necessary to overcome the trismus, and much difficulty was found in fixing the gag after removing the upper set of false teeth. Recovery from anæsthesia was slow and the spasms became less and less frequent, and at 10 P.M. had ceased. The pulse was now 118, and full and bounding. A quarter of a grain of morphine was given at 10.30 P.M. Vomiting began at 11 o'clock, and continued at intervals through the night, the vomit consisting of bile-stained mucus. Very little sleep was obtained in spite of a sedative draught. On weighing the remains of the powder and the contents of a similar packet it was found that there was a difference of 4 grains. As it was a freshly opened packet, and each packet contains 3 grains of strychnine (with starch and blue colouring matter), about $\frac{3}{4}$ gr. of the alkaloid had to be accounted for. No doubt some must have been wasted, as it seems almost impossible that so large a dose could be recovered from.

The case appears interesting from the mitigation of the convulsions following the apomorphine and chloroform; perhaps the depressant effect of the former acted beneficially, though without inducing vomiting at once, and the latter continued the good effect. The patient was more or less under the influence of chloroform for half an hour.

G. BLAKE MASSON, M.D.

Ramsgate. R. C. WORSLEY, M.R.C.S., L.R.C.P.

A DETAIL IN THE TREATMENT OF HARE-LIP AND OTHER OPERATIONS ABOUT THE FACE IN YOUNG CHILDREN.

IN young children it is often a difficult matter to control the hands after operations for hare-lip, and others of a similar nature about the mouth and face, and what would otherwise have been a successful operation is sometimes spoiled by the patients tearing open the wounds. Some time ago I was discussing this matter with Mr. Secker Walker, and he told me of a plan he had adopted some years ago for the treatment of a case of nævus on the chest wall. It was this—to fix up the elbow-joints in the extended position with a few turns of a plaster-of-paris bandage. I thought the idea an excellent one and determined to try it at the first opportunity; this arose about six weeks ago—a case of double hare-lip in a child six months old. The method answered admirably, and so pleased am I with its success, that I feel every surgeon who is not already acquainted with this method should know of it.

H. LITTLEWOOD, F.R.C.S.Eng.,
Honorary Assistant Surgeon to the Leeds General Infirmary.

INEFFICIENT RESULTS OF INFANTILE VACCINATION.

IN reference to your article upon this subject, I may say that for the last fourteen years I have, when a child shows only one resulting scar, whether it be good and typical or not, always revaccinated the child from itself in two or three places. The result has invariably been that the revaccination was perfectly successful. At the sixteenth day the secondary scars present exactly the same appearance as the primary one, and in all the cases that I have inspected at a later period the "pitting" is as perfect in the second as in the first. From this it seems fair to conclude that if a child were revaccinated from itself until the receptivity was exhausted (probably only two or three times), we should get as a result an absolute immunity from small-pox instead of the partial protection that we obtain by the present system.

Although I have to contend continually with the strong popular objection to vaccination *in toto*, I have never had any difficulty in persuading the mother to allow this secondary inoculation, after explaining that the new vaccination keeps pace with the primary one, and so does not involve any lengthening of the process. MARK WARDLE,

Public Vaccinator, Bishop Auckland District.

CONJOINT TRUE AND MOLAR PREGNANCY.

ON August 7th of this year I delivered Mrs. M., aged 39, of a healthy full time child. The labour was a long and tedious one, but otherwise normal. The placenta and membranes came away easily and in their entirety. Her temperature went up after labour and remained up for a few days, during which the vagina was well douched with perchloride of mercury solution (1-3,500). She was out of bed on the ninth day, and enjoyed good health till September 12th, when she sent for me. On my arrival I found that she was flooding severely. On examination by the vagina I found a large fleshy mass which, with my assistance, she expelled. It proved to be a carneous mole, weighing 20 ounces. The subsequent hæmorrhage was severe, but soon yielded to the hot douche. I communicate this case as I believe that delivery of a mole within such a short period—five weeks—of true delivery is, to say the least, unusual.

Belper. M. G. MCELLIGOTT, L.R.C.S.I.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GRIMSBY AND DISTRICT HOSPITAL.

AN AFFECTION OF THE KNEE-JOINT SIMULATING DISLOCATION OF THE SEMILUNAR CARTILAGE.

(By C. Byron Turner, M.R.C.S.Eng., L.R.C.P.Lond., Honorary Surgeon.)

W. G., aged 25, came to me on March 1st complaining of pain in the left knee-joint and inability to walk, said to have been caused by a twist of the knee while working as a porter on the dockside. The joint was partly flexed, swollen, and extremely tender just below the internal condyle of the femur, where a well-marked movable swelling could be felt. Any attempt at extension caused intense pain.

When firm pressure was made on the swelling, and the knee-joint fully flexed, it disappeared, and extension could then be made without causing any pain. The knee was then firmly strapped, and after a week's rest the man returned to work.

On March 10th, he returned with the same symptoms, and I applied the same method with a good result. As the condition recurred several times, I advised removal.

On April 6th, I opened the knee-joint by a longitudinal incision 3 inches in length over the swelling. Immediately on opening the capsule the body presented itself; seizing it with forceps, and passing my finger into the opening, I was able to make out a pedicle which was attached to the synovial membrane lining the capsule; this I cut through with scissors.

The body measured 1 inch in length, ½ inch in width, and varied from ⅛ to ¼ inch in thickness. It was tongue-shaped as a whole, but divided into three main lobes, and each of these into smaller lobes. In texture it was soft and elastic.

There was not any pain after the operation or rise of temperature, and the wound healed by first intention. The man is now quite well.

Dr. G. Sims Woodhead, Director of the Research Laboratories of the Royal Colleges of Physicians and Surgeons, who has been good enough to make a microscopical examination of the specimen, reports as follows:—

"The small portion of growth sent for microscopical examination consists of a somewhat flattened, almost button-shaped pedunculated growth with the following structure. The outer layer, forming a kind of 'cortex,' is composed of a series of markedly flattened connective tissue cells with a comparatively small amount of intercellular or formed fibrous tissue; this layer is pierced by a considerable number of blood channels, most of them empty, but a few of them containing red blood corpuscles; there are also a considerable number of lymph spaces. Beneath this layer in irregular patches are a few reticulated areas which at first sight appear like degenerated coagulated fibrin; but a more careful examination leads one to the opinion that we have to do here with degenerated reticular tissue. At other parts beneath this flattened cellular layer are patches of fibrous tissue with swollen and hyaline-looking fibrils and a very few flattened cells, giving the tissue the appearance of a tendinous structure. The central portion of the mass—or what may for convenience sake be termed the 'medullary' portion—is made up almost entirely of a somewhat open tissue, here and there very open—indeed, reticular. In this may be seen a few imperfectly-stained nuclei, but most of the cells and nuclei, like the surrounding tissue, take on the picric acid stain, indicating that they are no longer active, that they have, in fact, undergone degeneration. That some such degenerative change is going on is also made evident by the fact that the numerous blood channels which still persist no longer contain red blood corpuscles, but merely considerable quantities of golden-brown degenerated blood pigment.

"From the nature of this growth, it would appear that it is derived from the synovial fringes, gradually increasing in size at the surface, where the growth is most active and where the blood vessels are still patent. As the growth increases in size, the part away from the surface has its blood supply cut off—usually very suddenly, as the pigment remains—and when this takes place the tissues undergo degeneration; the only part in which really active cell changes are going on is the superficial layer corresponding to the synovial membrane which is supplied with blood vessels."

VICTORIA HOSPITAL FOR CHILDREN.

PERFORATION OF A TYPHOID ULCER IN A YOUNG CHILD.

(Under the care of F. Dawtrey Drewitt, M.D., F.R.C.P.)

[Reported by S. R. Schofield, M.R.C.S., L.R.C.P., House-Physician.]

As perforation of a typhoid ulcer in a child is such a rare occurrence, the following case, being possibly the earliest on record, is worthy of notice. The patient, a boy aged 1 year and 9 months, was admitted on April 12th, 1894.

Three weeks before admission the child's appetite began to fail; previously to this he is said to have had good health. Vomiting soon set in, and he rapidly lost flesh. Three days before admission the vomiting increased, the abdomen became distended, and there was considerable diarrhœa, the motions being slimy but free from blood. He had also a slight cough. A month previously a patient suffering from typhoid fever had been removed from the same house to a fever hospital.

On admission the child was noticed to be very wasted. The abdomen was distended and evidently tender, and the tongue was furred. No enlargement of the spleen could be made out and no typhoid spots seen. Moist *râles* were heard at the bases of the lungs: the pulse was rapid and feeble.

The following day there was increased distension of the abdomen and more frequent sickness, the vomited matter being green and offensive; the bowels were constipated.

On April 14th the child was very restless. These symptoms gradually increased in severity up to the time of death, April 16th.

A necropsy was made twelve hours after death by Dr. Walter Carr, from whose notes the following account is derived. The peritoneal cavity contained no fluid, but there were a few flakes of lymph between the coils of the intestine and about the liver and spleen. One of the lower coils of the small intestine was adherent to the front of the cæcum, and between the two was a small cavity, its walls completed by lymph. This cavity contained some fæcal matter. On further examination the cavity was found to open into the ileum about 10 inches from its lower end by a clean cut perforation, one-third of an inch in diameter, in a Peyer's patch. In the same Peyer's patch was seen another small ulcer, and below this there were a dozen similar ulcers extending as low as the cæcum, in which two ulcers were found. All these ulcers were more or less circular; they had sharp edges and smooth floors. There was no notable enlargement of the mesenteric glands; the spleen was soft and slightly enlarged; the other organs were fairly healthy.

A nurse in the Bethnal Green Union Infirmary, in her evidence at an inquest on the death of an inmate, stated that she had sixty patients under her care disposed in seven wards. These obsolete structures add to the difficulties of nursing the sick, and must hamper any board in its endeavours to improve the nursing of the sick under its care.

The German Naturalists' Society.—The Society of German Naturalists and Physicians will hold its next annual meeting at Lübeck, in 1895, under the presidency of Professor Wislecenus, of Leipzig. The vice-presidents will be Professor von Ziemssen, of Munich, and Dr. Viktor von Lang, of Vienna. The places of meeting in 1896, 1897, 1898, and 1899 respectively are to be Darmstadt, Brunswick, Würzburg, and Leipzig.

Death under Cocaine.—The *Revista Estomatologica* of Madrid states that a death under cocaine recently occurred in a dentist's consulting-room in Madrid. The patient was a military officer named Vendrell, who was about to have a tooth extracted. The dose used is said to have been large, but no further details are given.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

G. E. HERMAN, M.B.Lond., F.R.C.P., President, in the Chair.

Wednesday, October 3rd, 1894.

SPECIMENS.

THE following specimens were shown:—Dr. REMFRY: (1) Tubal Abortion; (2) Pregnancy in a Rudimentary Uterine Horn.—Dr. W. DUNCAN: (1) Cystic Sarcoma of Omentum; (2) Sarcomatous Ovaries; (3) Malignant (?) Disease of Omentum; (4) Dermoid of Right Ovary, pedicle twisted from left to right.—Dr. CULLINGWORTH: Myoma of Uterus becoming gangrenous, removed by abdominal hysterectomy.—Dr. LEWERS: Fibro-cystic Tumour of Uterus.—Mr. TARGETT: Two Cases of Spurious Hermaphroditism (photographs).

THREE CASES OF PELVIC INFLAMMATION ATTENDED WITH ABSCESS OF THE OVARY, WITH CLINICAL REMARKS.

Dr. CULLINGWORTH read this paper. He pointed out that the form of pelvic inflammation with which small suppurating cysts of the ovary and ovarian abscesses were usually associated was not pelvic cellulitis, but salpingitis, the ovarian suppuration being due to secondary infection. He briefly described the course of events when salpingitis was attended with profuse suppuration, showing how the pus might either be confined in the Fallopian tube (by occlusion of the abdominal ostium) or, if the abdominal opening remained patulous, be discharged through that opening and form an intraperitoneal abscess. Although the usual seat of such an intraperitoneal abscess was the pouch of Douglas, it might, in cases where the tube had been lifted out of the pelvis by the development of the pregnant uterus, form in a different situation—for example, at the upper and lateral part of the pelvis, near the brim. Wherever the intraperitoneal abscess was formed it was usual to find the ovary constituting part of its wall. In this way the ovary was specially liable to secondary infection, the more so, probably, if it were already the seat of incipient cystic disease. Three cases were related of abscess in the ovary secondary infection of this kind. In the first case two separate abscesses were found in the ovary, one at its outer end close to the intraperitoneal abscess, and one at its inner end some distance away. In the second case there were also two abscesses, but the mischief was more advanced, a communication having been opened up between the two abscesses by a process of ulceration. In the third case a still more advanced stage was seen, the ovary having ruptured and the contents of the abscess having escaped. The first two were puerperal cases, and in them the intraperitoneal abscess, formed by the discharge of the contents of a suppurating Fallopian tube, was situated high up in the pelvis, close to the edge of the psoas muscle where it overhangs the pelvic brim. In each case the suppurating ovary formed part of the wall of the abscess. These two cases recovered, the third died. The narration of the cases was followed by a few remarks on some of the modes of termination of ovarian abscess, and on the illusory character of a temporary subsidence of symptoms, with apparent restoration to health, in some of these cases of severe pelvic inflammation. The paper concluded with a reference to eighty-three cases in which the author had performed abdominal section for non-cellulitic pelvic suppuration. An analysis of these cases showed that ovarian suppuration occurred in a large percentage, and that, next to purulent salpingitis, it was the most frequent form of non-cellulitic suppuration occurring within the female pelvis. Dr. Cullingworth demonstrated the anatomical points bearing on his paper.

Dr. HAYES could not think that Dr. Cullingworth's idea that cases of ovarian abscesses and pelvic cellular abscesses, such as those related in his paper, were dependent upon a prior purulent accumulation in a Fallopian tube, was at all proven. In the first two cases septic infection was the first step in the morbid phenomena, and surely this was often the cause or precursor of inflammation terminating in pelvic abscess in the cellular tissue, ovary, or tube—in any two, or in all three. Why assign the tube as the infecting source of the ovary or cellular tissue? Dr. Hayes was in full accord with Dr. Cullingworth's method of treatment.

Dr. GALABIN had met with several cases similar to those recorded by Dr. Cullingworth, and he agreed with him that the usual sequence of events was that the suppurative inflammation was communicated from the tube to the ovary. He considered that the liability of the ovary to suppuration in these cases afforded a strong argument in favour of removing the ovaries in instances of double pyosalpinx, since there might be small foci of commencing suppuration which might escape recognition at the operation. In the case of one patient he had reason to regret that this had not been done. He had found at operation on her a peritoneal abscess and pyosalpinx on the right side, and pyosalpinx on the left. The tubes were lined with cheesy material, apparently tuberculous. The left ovary was removed with the tube, the right ovary could not be found. The patient continued to menstruate, and a sinus remained, and there was occasional retention of pus. About a year after a swelling appeared on the right side, and on operation it proved to be ovary enlarged to more than 2 inches in diameter, and containing several abscess cavities, one discharging by a sinus. In another case he operated for double pyosalpinx, and found the ovaries enlarged and inflamed, and adherent to the fimbriated ends of the tube. He removed them both, and found on section several small abscess cavities, apparently suppurating follicles. Puncture during he operation had failed to reveal these. He thought that if the ovaries had been left, in this case the sequel might have been similar to that in the former one.

Dr. GRIFFITH remarked that Dr. Cullingworth had not attempted to prove that ovarian abscess was the result of tubal inflammation. The explanation of this, if the fact were proved, would not be easy. It did not seem probable that an inflammation extending from the tube to the surface of the ovary would readily cause suppuration of the substance of the ovary. Dr. Griffith believed that suppuration of the ovaries was usually the result of septic inflammation of the broad ligament occurring after childbirth, abortion, or surgical operations, the stroma, with its lymphatics and blood vessels being in direct continuity with the same tissues in the broad ligament. Inflammation of the tubes was commonly present, in different degrees, in these cases.

Dr. LEWERS said Dr. Griffith had spoken of the connection between inflammatory affections occurring during the puerperium and abscess of the ovary. Some years ago Dr. Lewers described a phlegmon of the broad ligament in a patient who had died shortly after her confinement. In that case, while the inflammatory process between the layers of the broad ligament was only in the stage of phlegmon, yet in the adjoining ovary there was found on section a small abscess containing about a drachm of pus.

The PRESIDENT had seen two cases of ovarian abscesses different from those related by Dr. Cullingworth. In each of those two cases there was a small cyst, full of pus, which he had enucleated from its bed in the ovary quite easily, without rupture and without hæmorrhage. The history of one case was as follows: She was married in 1871. Six weeks after marriage she had a severe illness, attended with great pain, for which she was in the London Hospital under the care of the late Dr. Head. She was delivered in 1873, and afterwards had an illness described as "inflammation and fever." In 1874 she had a relapse of this illness, and was in the hospital under the care of the late Dr. Palfrey; the diagnosis then made was "pelvic cellulitis." In 1876 and subsequent years she was under the care of Dr. Herman as an out-patient; but she got no better, occasionally having acute attacks of pain and fever. She got tired of treatment, and ceased attendance. Dyspareunia had been severe since the first illness. In 1891 she again came under treatment; her abdomen was opened, and the suppurated cyst described was removed. The patient now considered herself well. This case showed the chronicity of the morbid process, and also the advance of our power to cure; for doubtless this patient might have, with our present knowledge, been saved twenty years of pain.

Dr. CULLINGWORTH, in reply, said he had realised all along the difficulty of explaining how the infection travelled from tube to ovary. It did not seem necessary to invoke pyæmia as the cause when there was such strong evidence of a local infection. Dr. Hayes had inquired where the enormous quantity of pus had come from that was found on opening the abdomen in the third case. The answer was that when perforation or rupture of a suppurating ovary or tube had occurred and the contents escaped amongst the surrounding peritonitic adhesions a very active suppurative process was often set up, the resulting abscess rapidly assuming a large size. He was grateful to Dr. Galabin for his estimate of the importance of the evidence he had brought forward as to the large proportion of cases in which suppuration of the ovary was associated with tubal disease, and for having called attention to the desirability of removing even apparently normal ovaries in operations for pyosalpinx. In reply to Dr. Griffith, he believed that the infection passed from tube to ovary directly through their respective walls or from an intervening intraperitoneal abscess. He considered the case analogous to the infection of certain dermoid tumours of the ovary from the adjacent rectum, when the tumours had been bruised during parturition, and thus rendered susceptible to infection.

MEDICAL SOCIETY OF LONDON.

Sir WILLIAM DALBY, M.B., F.R.C.S., President, in the Chair.

Monday, October 8th, 1894.

PRESIDENT'S ADDRESS.

THE PRESIDENT chose for the subject of his address "The Pleasures of Medicine and Surgery." He began by saying it would be his endeavour to show how it was quite possible for the followers of medicine and surgery to so occupy themselves with all the sciences which made up the entirety of medicine and surgery that their pursuits became raised to an art in its highest sense, and so would give to them in return all the pleasures and delights which Art could and did give in profusion to her votaries. Such pleasures would be found to embrace whatever delights might be the rewards of the spirit of enterprise, the exercise of determination, courage and skill. Thus the remembrance of all labour and difficulty would become dimmed to the memory, whilst the recollection of the success would remain as a source of permanent satisfaction. Illustrations were drawn from the last Lettsomian Lecture on Peritonitis and recent operations in surgery which had now become possible. Enthusiasm was not alone the property of the operator, but belonged to, and was justly appropriated by, all who had an interest in surgery. Anything approaching to the monotony of an occupation or life was a thing unknown to the followers of their profession. It was shown how clearly the exercise of the imagination was the province of the physician and surgeon, and what an enormous influence it had had in the history of medicine and surgery, especially in abdominal surgery. The President went on to say: "Is not the activity of the imagination the mark of genius in poets, artists, and the writers of brilliant romance? If the mental processes are the same with the surgeon who establishes a marked advance in the history of medicine and surgery, can we deny him the attribute of genius? Whilst I draw attention to the intellectual side of surgery, I wish, if I can, to place it before your minds in such an attitude that it will be side-by-side and compare not unfavourably with literature and the arts. I wish to show that it is in very truth an art, and thus something worth cultivating, not only for its usefulness, but for the pleasure which it is able to afford to those engaged in it."

NOSOPHOBIA AND HYPOCHONDRIASIS.

Dr. JULIUS ALTHAUS read a paper on this subject. He stated that while hysteria, epilepsy, chorea, and other neuroses had been eagerly studied of late years, hypochondriasis had been neglected by modern writers, although a copious literature existed on it in earlier times. This was to some extent due to its having recently been confounded partly with nosophobia, which was one of the manifestations of encephalasthenia, and partly with hypochondriacal insanity, from both of which, however, it was essentially different. The characteristic feature of hypochondriasis as a neurosis was that the patient habitually experienced a variety of distressing and harrassing sensations, which were referred to one or several of the viscera, and which engrossed his attention to such an extent that he was led to brood over their significance and

eventual issue, and connected them with one or several imaginary illnesses from which he believed himself to be suffering. The sensations were real, but the construction put upon them was false. The author described the peculiar feelings which the hypochondriac was apt to perceive in the head, digestive tract, heart and lungs, and the pelvic organs, laying stress upon the fact that they were not imaginary, as was often assumed, but that the patients were really ill, and could not possibly get rid of their disease by simply "pulling themselves together," as they were generally recommended to do. He then described the moral and physical consequences which were apt to follow where the primary condition persisted, and spoke of the principal causes and the eventual issue of the complaint. He considered the seat of the disease to be in some special centre of the brain which regulates the sensibility of the viscera of the body, just as the Rolandic convolutions constitute the sensory-motor area for the voluntary muscles. The seat of this centre was as yet undetermined, and might be in the gyrus fornicatus, or in the occipital lobes, or some other portion of the "latent zone" of the cortex. Disturbance of the visceral centre would explain the immense variety of morbid sensations experienced by hypochondriacs. A similar opinion had been held by Sydenham, who, in the language of his day, ascribed hypochondriasis to an unequal distribution and rushing about or ataxy of the animal spirits. The author then entered into the difference of nosophobia from hypochondriasis, stating that in the former there were no distressing visceral sensations, but that the suffering was purely mental, being the fear entertained by the patient that some malady would overtake him. It was essentially temporary, the individual attack of it being always owing to some definite exciting cause, such as an epidemic of cholera or influenza, or some case of disease occurring in a prominent person, which was discussed in the newspaper press. He gave as an instance of this the case of the late Emperor of the French, when operated upon by Sir Henry Thompson, which caused at that time large numbers of persons to fear that they had stone in the bladder. Similar occurrences had come under the author's notice in connection with the cases of the late Crown Prince of Germany and the present Czar of Russia. Where such predisposition once existed, the least unusual sign which might show itself in any part of the body might suffice to see the nosophobic machinery in motion. The case of nosophobia was a morbid fear of death, or thanatophobia, which had likewise nothing to do with hypochondriasis. Suggestion had little or no influence in hypochondriasis, but was highly effective in nosophobia, where a favourable or unfavourable prognosis given had often a truly wonderful influence on the patient's condition. The nosophobist had as a rule absolute faith in his medical attendant and his prescriptions, while the hypochondriac was often averse to medicine, and convinced of the incurability of his illness. The author concluded his paper with remarks on therapeutics, giving the preference to moral and hygienic treatment over that by drugs.

The PRESIDENT recalled that the late Sir William Gull used to hold very strongly that hypochondriasis never occurred except in people with a family history of insanity.

KIDDERMINSTER MEDICAL SOCIETY.

S. STRETTON, M.R.C.S., President, in the Chair.

Friday, September 28th, 1894.

INTUSSUSCEPTION.

MR. J. LIONEL STRETTON read notes on a case of intussusception in a man, aged 20. Whilst lifting a 64-gallon barrel of beer from a cart, he suddenly felt a severe pain in the "stomach," which made him drop the barrel. He walked home, about half a mile, and went to bed, when the pain increased, and he began vomiting. He was admitted to the Kidderminster Hospital next day. On the evening of the following day, as the symptoms appeared to be increasing, it was decided to explore the abdomen. On opening the abdominal cavity nothing abnormal was seen. A loop of bowel was withdrawn and traced to the ileum, where an intussusception about 4 inches long was discovered. There were flakes of lymph in the neighbourhood, and considerable difficulty was experienced in reducing the invaginated bowel, which was found to be œdematous and considerably congested. The whole was returned to the abdomen, and the wound closed, a drainage tube leading down to the damaged bowel being inserted. In less than three weeks he was up and about. The case emphasised the advisability of an exploratory operation in doubtful cases.

ABSCESS OF THE LIVER.

Mr. J. L. STRETTON also read notes of a case of abscess of the liver, in which a gallon of pus was evacuated in a patient who a fortnight previously had undertaken a journey from the Gold Coast.

CASE AND SPECIMENS.

Mr. W. HODGSON MOORE showed a case of Lupus; also specimens of Biliary Calculi removed by operation.

PAPERS.

Mr. P. E. DAVIES read a report of a case of Death under Chloroform in the Kidderminster Infirmary.—Mr. P. E. Davies also read a paper on the Diagnosis of Hysteria.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

SAMUEL JOHNSTON, M.D., President, in the Chair.

Tuesday, October 2nd, 1894.

PRESIDENT'S ADDRESS.

THE PRESIDENT delivered an address on Medical and Surgical Progress. The germ theory of disease and Sir Joseph Lister's antiseptic method of treating wounds were briefly alluded to, and advances in the surgical treatment of cerebral, thoracic, and abdominal diseases were noted. With regard to medicine such progress could not be recorded. The tendency of the age was to ascribe all ailments to the presence of bacilli, but yet no remedies had been found for cancer or for tubercle. The fondness of the public for drugs was dwelt upon, the expectant method of treatment finding little favour in popular estimation. In conclusion, the PRESIDENT compared preventive with curative medicine, and alluded to the possibility of the medical men of the future being state-paid officials.

PAPERS.

Dr. MAJOR read a paper on the Clinical Significance of Jaundice with Ascites, insisting on their importance in obscure cases when the ascites was slight, and helping in the diagnosis of cases of cirrhosis and of cancer of the liver. The differential diagnosis and the question of surgical interference were discussed.—Mr. MERCER, Dr. RABAGLIATI, and Mr. HEBBLETHWAITE made remarks, and Dr MAJOR replied.—Dr. RABAGLIATI read notes on a case of Pyosalpinx of Eleven Years' Standing on which he had operated; the patient recovered.—Dr. H. BRONNER and Mr. HORROCKS read notes on a case of Gastro-Enterostomy. Dr. H. BRONNER gave the medical history—a man with loss of flesh, dilatation of the stomach, and a pyloric tumour, which was freely movable. For a time lavage of the stomach improved the general condition. Mr. HORROCKS, finding on abdominal section that the growth could not be removed, performed gastro-enterostomy, using Littlewood's plates. The patient died on the third day from asthenia. At the *post-mortem* examination no leakage had taken place at the seat of operation. Dr. MAJOR, Dr. GOYDER, and Dr. S. JOHNSTON discussed the papers.

SPECIMENS.

Mr. CHAPMAN showed a Large Aneurysm of the Ascending and Transverse parts of the Thoracic Aorta which he had obtained from a woman who died shortly after coming under observation. The symptoms noted during life were violent dyspnœa and stridor, to relieve which tracheotomy was performed just before death. The left recurrent laryngeal nerve on dissection was not stretched, but the anterior wall of the trachea was softened by the pressure of the tumour, and this was probably the cause of the dyspnœa. Microscopical and other specimens were shown by Dr. MAJOR and by Dr. RABAGLIATI.

REVIEWS.

TWO MONOGRAPHS ON MALARIA AND THE PARASITES OF MALARIAL FEVERS. I. MARCHIAFAVA AND BIGNAMI; translated by J. HARRY THOMPSON, M.D. II. MANNABERG; translated by R. W. FELKIN, M.D., F.R.S.E. London: The New Sydenham Society.[1] 1894. (Demy 8vo, pp. 454.)

THE scientific and practical value of modern pathological research is in no instance better exemplified than in Laveran's great discovery and its application to the explanation of the clinical phenomena and diagnosis of malarial fevers. Although the clinical acumen of our predecessors and their employment of the touchstones of periodicity and cinchona had done not a little to separate the malarial from the other fevers, and the sustained labours of such observers as Sydenham and Torti had done something to classify and arrange these malarial fevers in fairly well marked groups, still, until lately, in this department of medicine, Sternberg's and Dutroulau's remark that "all is chaos," was in a great measure only too true. At one bound Laveran's discovery has put us in possession of the means of bringing order out of this chaos, and at the same time it has opened to our view fields for research the limits of which are very far-reaching. It is a matter for regret that our countrymen have done so little work in this department; it cannot be said that they have made any very original contribution to the literature of the micro-biology of malaria. Indeed, until the wisdom of the New Sydenham Society gave us the recently-issued translation of Laveran's last work and the translations under notice, we had to rely almost entirely on foreign works for detailed information on this most important subject.

Of the two works under notice, that by MARCHIAFAVA and BIGNAMI treats more especially of the summer-autumn malarial fevers as met with at Rome, that by MANNABERG on the malarial parasites generally. While the former deals very thoroughly—perhaps somewhat diffusely—with the special and more restricted subject to which it is particularly devoted, it, at the same time, summarises all the more important facts and conclusions as to the non-malignant winter and spring tertian and quartan fevers. Mannaberg's work appears, however, to be the more useful for the student new to this subject, and certainly ought to be mastered before the more special and intricate work of the Italian authors is grappled with. In both treatises there is much new and original matter, and necessarily, a considerable amount of hypothesis—Mannaberg's explanation of the formation of the crescent forms of the malaria organism for example. This writer details very clearly his reasons for re-

[1] The annual subscription to the New Sydenham Society is £1 1s. Agent: Mr. H. K. Lewis, 136, Gower-street, London, W.C.

garding these puzzling bodies as syzygia, the result of conjugation and subsequently encystment of pairs of malarial amœbæ, a process similar to what occurs in many of the protozoa. Mannaberg's work is of especial value as conclusively demonstrating that the malarial parasite is possessed of a nucleus and nucleolus; by showing this he definitively settles that it is a specific organism and not merely, as some sceptics have maintained, and do maintain, a degeneration of the blood corpuscles. A knowledge of the facts these works describe is indispensable for teachers of medicine and pathology everywhere, and for all practitioners in malarial countries. In parts the translations are excellent; in other places they may be somewhat obscure or not quite idiomatic. In a great many places in the translation of Mannaberg there are, we are sorry to have to remark, such evidences of haste or carelessness as mistranslations (for example, p. 372, substitution of the word "quotidian" for "quartan" in an important table), and, very frequently, wrong references to the figures in the beautiful and valuable plates. These are minor matters, however, which, though blemishes, do not seriously detract from the value of this last contribution to medical literature for which we are indebted to the New Sydenham Society.

The Making of the Body: A Children's Book on Physiology and Anatomy. By Mrs. S. A. Barnett. London: Longmans, Green, and Co. (Small 8vo. 1s. 9d.)

This admirable little book should be in the hands of every English-speaking child, and also of every person engaged in teaching children. Entering with a sympathy which is unique in such a book into the minds of children, the author makes plain to them in a peculiarly picturesque manner the abstruse facts of physiology and anatomy. Nothing is shirked: all that is necessary to know is clearly explained, and also pictorially represented by numerous and well-selected illustrations. Hard names are avoided, and descriptive synonyms are substituted for the Latin nomenclature, which is printed in brackets.

When the subject is unusually difficult to the comprehension of a childish mind, as, for instance, the part played by the cerebro-spinal and sympathetic nervous systems, it is taught by means of an allegory suggested by daily life. Thus the brain is represented as the father of the household, who thinks, directs, and wills for the good of all; the spinal cord as the devoted mother, who takes upon herself the work which need not be referred to the head of the house for decision; and the sympathetic system by the willing daughter, who manages simple affairs without troubling either father or mother, though in matters of difficulty she has free access to both.

In this way the writer tells her story, not minimising the scientific side, nor the difficulties of any of the subjects, but making the reader feel all the time that the story is one of deep interest and importance to himself. Thus the journey of the food, of the air, of the blood, through the body, the journey of a sensation, of an odour, of a word, of light, are all graphically described.

As we read this little book we recall the unintentionally comic answers frequently given by national and school board children to examination questions set them in physiology and anatomy, answers which serve to show the deplorable depths of ignorance and the confusion of mind in which clumsy attempts to teach difficult subjects has left them. And we are disposed to hope that if Mrs. Barnett's *Making of the Body* be used as the standard textbook of physiology and anatomy in future in national and board schools, such answers will become a thing of the past, and a clear understanding of facts will take the place of a blundering memory of meaningless words. We trust that it will be so adopted. It is, in our opinion, of great importance that in these days of true science and pseudo-science, and of popular agitation on scientific subjects misunderstood and misrepresented, that children in their earliest years should be correctly instructed in biological principles and facts. Of all subjects important to the human race there are few more so than a correct knowledge of the structure and functions of the human body. In writing this lucid explanation for children as to how the body is made and how it works, Mrs. Barnett has added one more service to those already rendered by her to the community.

An American Textbook of the Diseases of Children. By American Teachers. Edited by Louis Starr, M.D.; assisted by Thompson S. Westcott, M.D. Philadelphia: W. B. Saunders. 1894. London: F. J. Rebman. (Roy. 8vo, pp. 2004. 7 dollars.)

The literature of disease in children is growing with great rapidity, and the want is more and more felt of compendious summaries of the new observations, new theories, and new or improved methods of treatment, which are constantly being made public in periodical literature. Dr. Starr, in editing the large volume before us, took a comprehensive view of his duties, and worked upon a well-considered plan. He obtained the assistance of a large staff of collaborators from the most important medical centres in America, and he succeeded in getting the work through the press sufficiently quickly to ensure that the several articles retained the freshness of recent writing. In his aim to make the textbook fresh, comprehensive, and authoritative, he has succeeded, we think it may fairly be said; but he can hardly be congratulated on achieving another object which he states in his preface he had in view—namely, to accomplish his task within the covers of one readily-handled volume. The book is big, and weighs, we find, nearly half a stone. Still any objection which may be felt to the book on the ground of bulk is of but secondary importance if the reader finds within its covers information upon all the points upon which he is likely to consult it.

The book is arranged logically, and is provided with an excellent index, so that it is easy to consult, and so far as we have hitherto been able to test it we have not failed to find an adequate note upon the various subjects which ought to find a place in such a volume. The articles are amply illustrated by coloured and tinted drawings, woodcuts, and photographic reproductions, which are, as a rule, really illustrative of the various subjects, and in many cases of a high order of artistic excellence. In particular, we may mention many of the woodcuts and photographs introduced into the articles on diseases of the nervous system, and some of the coloured plates showing diseases of the skin. There is also an excellent, if somewhat highly coloured, lithograph of the so-called "geographical tongue" of mucous disease, and very excellent reproductions of photographs of rhagades and of Hutchinson's teeth apparently from the same case. The lithographs of micro-organisms are excellent and instructive, but the ordinary reproductions of photomicrographs are, as seems to be almost always the case, failures.

It would be impossible within the limits of our space to discuss in detail the various articles, from numerous hands, which go to make up the volume: but we may notice that those on nervous disease and on insanity and idiocy in children have been prepared with great care, and present some points of novelty. We may instance articles on Tumours of the Brain and Meninges, and on Infantile Cerebral Palsies, by Dr. Frederick Peterson: Dr. J. H. Lloyd's article on Hysteria, and a series of articles by Dr. Charles K. Mills on Nervous Conditions, commonly lumped together as Functional. Dr. Casselberry contributes the articles on Diseases of the Nose, Pharynx, and Naso-Pharynx, in which the importance of many of the common disorders of these regions in their bearing on general health is fully recognised. The article on Tuberculosis, from the pen of Dr. William Osler, is a model in its conciseness and methodical arrangement. Dr. Lewis Smith writes the article on Rickets, which contains a very complete study of the subject in the light of the more recent clinical observations. The classification of the Diseases of the Digestive Organs is not altogether satisfactory, as it has been found necessary to retain a group of "Diarrhœal Diseases," which do not really form a distinct pathological class. The selection of the terms "acute milk infection" and "subacute milk infection," which we believe are novelties of nomenclature in a systematic work, does not seem to have much to recommend it. While saying so much, we admit freely that since at the present day neither morbid anatomy nor bacteriology affords satisfactory bases for a classification, the matter is one of very considerable difficulty.

On the whole, the book may be highly commended, its special excellence lying in the fact that the majority of the

writers have frankly embodied in their articles the most recent clinical and pathological observations.

Die Beriberi-Krankheit: eine geographisch-medicinische Studie. Von Dr. B. Scheube. Jena: Gustav Fischer. 1894. (Royal 8vo; pp. 228: 2 lithographic plates. M. 9.)

We have had quite a number of books and papers lately on the subject of beri-beri. Unfortunately, with all this literary activity, although it may serve the good purpose of making this important disease better known, there has been no material advance in the knowledge of its pathology and treatment since the date—now some twelve years ago—when the writer of this book and his countryman, Bälz, first proved by clinical, histological, and electrical investigation that beri-beri is really in its nature an endemic form of multiple peripheral neuritis, and to this extent pathologically in the same category as diphtheritic, alcoholic, and other and better known forms of neuritis. Later, Pekelharing and Winkler, to whose excellent work we have frequently alluded, confirmed and extended the findings of Scheube and Bälz, and made a vigorous, but not altogether successful, effort to establish the bacterial origin of the disease. They even went the length of assigning it to a certain micrococcus. In the present work Scheube gives a careful, exhaustive, and well-balanced description of beri-beri, prefacing his description of the disease by a learned and highly interesting chapter on the history of our knowledge of the subject. The symptoms are very well described, but the main value of the work is in the careful analysis of these symptoms, and in their association with the histology of the lesions of the nervous and muscular systems. Naturally, and with reason, in view of his earlier publications, Scheube resents the claim made by Pekelharing and Winkler, that it was they who established the true pathology of this disease. We quite agree with Scheube that it is to him and to Bälz that the merit of this important discovery belongs, and that any merit Pekelharing and Winkler have in the matter is entirely secondary; they confirmed, and, perhaps, in the matter of the electrical reactions of the muscles slightly extended the investigations of Scheube and Bälz—nothing more. Scheube further points out the very unsatisfactory nature of Pekelharing and Winkler's, as well as many other investigators', bacteriological work, and the fallacy of the conclusions they and others have founded on their cultivations and experiments.

The chapters on the conditions under which beri-beri originates and thrives, and on the epidemiology of the disease, are somewhat meagre and the weakest part of an otherwise most admirable treatise. The work has the merit of having been founded on a large and carefully-recorded personal experience of the disease in Japan and Java. It has not been written in a hurry. The opinions expressed have been arrived at only after twelve years' reflection and much study of all the best contemporary literature. We have no hesitation, therefore, in saying that this is not only one of the most original works on beri-beri which have yet appeared, but that it is, perhaps, in many respects the best.

Elementary Treatise on Natural Philosophy. By A. Privat Deschanel. Thirteenth English Edition. Edited by J. D. Everett, M.A. London: Blackie and Son. 1894. (Demy 8vo, pp. 324. 18s.)

We welcome the thirteenth edition of this standard work as a very substantial addition to current scientific literature. The work itself is too well known to need detailed description at our hands; we will confine ourselves to mentioning some of the principal additions to this edition, which bring the work well up to date and reinstate it in its position among the first rank of general physical textbooks. The *Treatise* has been entirely recast with the exception of the portions relating to the comparatively stationary subjects of mechanics, hydrostatics, and acoustics. Much of the matter has been rearranged for greater lucidity, new matter has been largely introduced into old chapters, and some entirely new chapters on special modern subjects have been added.

In Part I will be found the latest information respecting weather prediction and weather charts. In Part II a new chapter on thermodynamics has been added, in which free use is made of the differential calculus. Entropy is explained and several examples are given of the deduction of physical relations by changing the order of differentiation. Among the more important additions to this part will be found a description of Dewar's experiments on liquid oxygen and a statement of Van der Waal's theory. In Part III, as might be expected, the rapid progress of electrical science in recent years has made sweeping changes necessary, necessitating the addition of two complete chapters. In Part IV, again, almost equally extensive changes have been made. The chapter on the wave theory has been greatly enlarged, and among other attractions a new chapter has been added dealing with the modern subject of systems of coaxial lenses.

We congratulate the editor, who now is joint author, on the excellent and reliable textbook he has produced.

Handbuch der praktischen Gewerbehygiene. [Handbook of the Practical Hygiene of Trades.] Herausgegeben von Dr. H. Albrecht. Berlin: Gustav Schmidt. 1894. (Roy. 8vo, pp. 192. M. 4.50.)[1]

The first division of this work on the hygiene of trades is now before us, and gives promise of becoming one of the most important and valuable treatises on the subject. It is less prolix than Hirt's great work, and has the further merit of being up to date. This first part addresses itself more particularly to medical men than the three divisions yet to follow. It deals with the incidents of manufacturing processes and of labour concerned in producing disease among the employed, and is written by Dr. A. Villaret, of Spandau. In a subsection by Dr. Albrecht, the accidental and contributory causes of injuries among artisans are taken in hand; whilst in yet another, by Dr. W. Oppermann, the construction and arrangements of factories are the topics discussed.

Statistics figure only to a small extent in these several sections: in that on accidents they are the most prominent.

The prospectus of the entire work shows that it is not specially addressed to the medical profession, but that it aims at being a handbook for practical sanitarians in the matter of the sanitation of factories, and also for architects and engineers concerned with the construction and fittings of those establishments. Even in the first section on the diseases of trades, the purpose of the work to suit unprofessional as well as professional readers is apparent; for the writer has deemed it necessary to give elementary information respecting the composition of the atmosphere and the physiology of the circulation and respiration, and has laid particular stress upon the effects of breathing vitiated air.

The subject of dust next engages his attention, and is well elucidated. He establishes three classes of dusts, with reference to their modification—namely, (1) those harmless in themselves, but damaging when inhaled in large quantity: (2) those possessing some noxious qualities, but not energetic as a cause of disease, unless in quantity: (3) those acting injuriously upon lung tissue by reason of the angularity or pointed and ragged state of the particles. For dust acts not only directly by the shape of its atoms, but likewise by diminishing the area and freedom of respiration; or else by uniting with the moisture of the mucous membrane in tenacious masses, and so blocking the respiratory passages. Having shown that dust makes its way into the finer bronchial tubes and into the actual cells of the lungs, he gives an excellent sketch of the minute changes caused thereby, which result in the production of dense fibrosis. Another topic enlarged upon is the relation of dust-made lung disease to lung tuberculosis. He distinguishes between the two lesions, and holds that dust, *per se*, is never a cause of tuberculous phthisis, although the one lesion is often enough coincident with the other. An explanation of this fact is to be found in the tuberculous and family history surroundings of patients.

Considered with regard to their nature and origin, dusts are divided into three varieties—animal, vegetable, and mineral. This done, each kind of dust is next examined in detail

[1] To be completed in four divisions, subscription price 20 marks.

in connection with the trade wherein it is developed, but the nature of the processes most concerned in setting it free is not described. As a matter of course, this portion of the treatise is one of detail, and is commendable by its completeness and accuracy.

In conclusion, viewing the treatise as a whole, it is succinct and clear, and presents an excellent outline of the subject. We conclude with this parting observation, that its writers, as too often happens with foreign works, exhibit very scant knowledge of what has been published outside their own country.

NOTES ON BOOKS.

The Frog: an Introduction to Anatomy, Histology, and Embryology. By A. Milnes Marshall, M.D., F.R.S., late Fellow of St. John's College, Cambridge. Fifth edition. (Manchester: J. E. Cornish. London: Smith, Elder, and Co. 1894. Crown 8vo, pp. 172. 4s.)—We congratulate Mr. C. Herbert Hurst on the able and expeditious manner in which he is editing and publishing the late Professor Milnes Marshall's literary works. In this the fifth edition of Professor Marshall's well-known manual, the editor states that he has made no change of importance. The principal changes made by the author are confined to the chapter on embryology, in which some new figures have been introduced and some mistakes corrected. This little manual is too well known to need description or praise at our hands.

Bibliographie der klinischen Helminthologie [Bibliography of Clinical Helminthology]. Heft 7 and 8. Von Dr. J. Ch. Huber. (Munchen: J. F. Lehmann. 1894. Roy. 8vo, pp. 247-305. M. 3.60.)—The publication of two new fasciculi of this valuable work gives us the opportunity of again calling the attention of pathologists and helminthologists to it. The present issue deals with the bibliography of dracunculus, filaria sanguinis, and of the trematodes. It is wonderfully complete and almost up to date. As an aid to literary research this work is simply invaluable, and an enormous saving in the matter of time and temper. Judging from the "(!)" after the date, 1875, of the publication of that section of Leuckart's *Parasiten* which refers to the nematodes, it is evident that Dr. Huber shares the general impatience of helminthologists at the delay there has been in the appearance of this section of the second edition of what is undoubtedly the most important helminthological work which has yet appeared. We trust that Leuckart may take the hint so delicately expressed.

On Alcohol as a Medicine. By Frederic C. Coley, M.D. (London: National Temperance Publication Depôt. 1894. Fcap. 8vo, pp. 15. 1d.)—In this pamphlet Dr. Coley deals with the therapeutic place of alcohol in an unprejudiced spirit. He begins judiciously with the statement that he is not prepared to maintain that alcohol is entirely valueless as a medicine. He aims at exposing such popular fallacies as that alcohol is useful as a medicine in all diseases. He rightly points out that alcohol is hurtful in many diseased states. He strongly condemns the usual domestic administration of spirits to young women for the relief of neuralgia and dysmenorrhœa.

Ferris and Co.'s Medical Visiting List and Ledger.—These visiting lists or daybooks are made in two forms—one for the list to be made out once a week the other once a month. Both are of the "perpetual" type, that is, they will do for any year, and as many pages as are required may be used for any month or week. They are bound up in thin volumes, easily carried in the pocket, so that one is not burdened on one's rounds with the whole year's accounts. They are clearly, one might even say daintily, ruled, and for any practitioner who eschews the old bad plan of making separate charges for each draught and mixture he dispenses, ample space is afforded for any such code of signs as he may invent to indicate his visits, medicines, and consultations. Of the ledger we cannot speak in such favourable terms. Of its class it is good, but we are inclined to doubt the advantage of the whole tribe of what one may call alphabetical ledgers, nor do we see any special advantage in splitting up accounts into what is here termed a "monthly summary," and the nuisance of having to add money "sideways" must be patent to anyone who has ever done it.

The Use of Antiseptics in Midwifery. By Robert Boxall, M.D. (London: H. K. Lewis. 1894. Pp. 35, with two charts. Demy 8vo, pp. 36. 1s.)—This pamphlet contains two lectures delivered to his class by the author. It is a clear exposition of the value and practical application of antiseptics in midwifery practice. A specially important part of it deals with the chemical incompatibility of antiseptic agents. We notice that the author recommends the disinfection of the forceps by steeping in boiling water. In view of the difficulty of carrying this out, a 1 in 20 solution of carbolic acid is to be preferred. Everyone will agree in the recommendation of 1 in 1,000 sublimate solution for the disinfection of the hands, but many will hesitate to use 1 in 2,000 before and after delivery, as recommended by the author. Attention is not called to the excellent results obtained in Germany without vaginal douching. On the whole, however, we can highly recommend these lectures to those who wish to learn something of the value and scientific use of antiseptics in midwifery.

The Law of District and Parish Councils, being the Local Government Act 1894, etc. By John Lithiby, LL.B., Barrister-at-Law. (London: Effingham Wilson. 1894. Demy 8vo, pp. 515.)—There are already before the public several works, large and small, dealing with the Local Government Act of 1894 from various points of view and with various degrees of lucidity. Mr. Lithiby's is the latest and, in many respects, the best. It gives, not only the text of the Act, with notes and references wherever required, but also a clear and most valuable summary of its provisions as affecting county, district, and parish councils, and parish meetings respectively, point by point. This feature of the work will be especially appreciated by non-legal readers, to whom the Act itself presents many difficulties. A further point of obvious convenience is the reproduction of the principal statutes bearing upon the duties of the new local authorities of each rank, and also the orders and circulars issued by the Local Government Board. Lastly, there is a full and well arranged index. The work is admirably adapted to the needs of medical officers of health and other members of the profession who have to do with local administrative bodies in any capacity.

Pathologie und Therapie der Perityphlitis [Pathology and Treatment of Perityphlitis]. *Appendicitis simplex et perforativa.* Von Professor Dr. Sonnenburg. (Leipzig: F. C. W. Vogel. 1894. Royal 8vo, pp. 147.)—This monograph is based on some 78 cases of the disease treated by operation by the author. It is divided into the following parts: (1) Introduction; (2) Pathological anatomy, by Dr. Finkelstein; (3) Clinical part, including brief details of the cases; and (4) an appendix concerning the vermiform process in the hernial sac by Dr. Sarfert. Professor Sonnenburg is well known as one of the leaders in the question of the early operative treatment of perityphlitis, and how widely his views differed from those of his colleagues was very apparent from a discussion in one of the Berlin medical societies some little time ago. His contention is that in all cases of perforative appendicitis pus is present, and that perforative appendicitis is the real ("eigenliche") perityphlitis (p. 13). Apart from other considerations it may be open to great doubt whether the majority of cases of perityphlitis as usually seen are really of this perforative variety. Of the 78 cases of appendicitis, 5 are classed as simple, 53 as perforative without complications, 8 as perforative with complications, and 12 as perforative and septic (on admission). Of the last group all died, and of the 8 with complications 3 were fatal, while all the others recovered. This classification is certainly not entirely free from objection for statistical purposes. Where the appendix is not removed, as in some of these cases, a patient cannot be said to be free from risk of relapse unless under observation for a long time. Although some patients

made fairly rapid recoveries, the duration of treatment was occasionally much prolonged by a fistula, and in some the scar showed signs of giving. As to the value of operative treatment in some cases, there can be no possible doubt, but there is equally no doubt that discrimination is necessary.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

LUNGILI.

This is a new drug imported from the East Coast of Africa, but of unknown botanical origin. It is recommended as useful in the treatment of diarrhœa and dysentery. The sample of lungili we have examined contains no alkaloid, but an astringent substance analogous to tannin, which is precipitated by gelatine, and gives a blackish precipitate with ferric chloride. The value of the drug for medicinal purposes is no doubt due to this astringent constituent, but whether it has any specific therapeutic value greater than that of ordinary astringents does not appear to have been definitely ascertained. The drug is supplied by the Lungili Company, 35, Ludgate Hill, E.C., in the form of powder, at the price of 4s. 6d. per ounce. The dose is stated to be for adults one teaspoonful three times a day. For children half the quantity.

VIMBOS (BEEF FORCE).

This preparation, made by the Scottish Fluid Beef Company, Limited, Holyrood Square, Edinburgh, claims to be "the nearest approach to a perfect food that has yet been produced." It is a soft paste, highly salted, and of a savoury flavour. When stirred with cold water the sample examined was partially soluble, leaving a considerable proportion of granular residue insoluble in water. The solution did not contain any coagulable albumen. Half a teaspoonful, mixed with 8 ounces of boiling water, gives a slightly turbid liquid, having the flavour of meat extract and very saline taste. The paste contained 22 per cent. water, 16.5 per cent. organic constituents insoluble in alcohol, with 37.5 per cent. soluble in alcohol, and gave on incineration 24 per cent. of ash constituents.

MEAL GERM BREAD.

"Peptic meal germ ideal bread," manufactured by J. T. O'Callaghan, 1, Mayes Road, Wood Green, is stated to be made from a mixture of fine wheat flour with 40 per cent. of a material obtained by steeping wheat and germ of wheat in a solution of lime and sugar and bicarbonate of potash, then heating the wheat until it becomes brittle and has acquired a malty smell. The intention of this special treatment is to obtain an improved flavour, to prevent souring, and to render the bread more nutritious than bread made in the ordinary way from white flour. The sample sent for examination was a brown loaf free from the husky character of ordinary brown bread.

WINE VINEGAR.

Examination of the sample of pure wine vinegar sent by Messrs. Girling Brothers and Co., 53A, City Road, E.C., gave results consistent with the inference that it was a genuine wine vinegar of very good quality. The specific gravity was 1018 and the amount of ash left on incinerating the solid residue (1.84 per cent.) obtained by evaporating the vinegar was 0.37 per cent. The strength was above the ordinary standard corresponding to 7.37 per cent. acetic acid. No sulphuric acid was present, nor were any indications of the presence of preservative agents, such as salicylic or boric acid, obtained.

A "TELL-TALE" MILK JUG.

The jug is intended to be used for domestic purposes to ascertain the correctness of measure and the quality of milk supplied. It is a glass jug graduated to one pint and half pint standard measure; it also serves as a creamometer, as it has three graduated marks at each division to show three qualities of milk indicated by the amount of cream separated on standing. By filling the jug up to the pint or half pint mark and leaving it at rest for some hours, the thickness of the layer of cream will be shown by the graduation, and the quality of the milk as "average," or "good," and "very good." If the milk is of inferior quality the layer of cream will not reach the "average" mark. A very ready and convenient means is thus afforded for testing day by day the quality of the milk supply. This ingenious device has been made the subject of a patent, and the jugs are supplied of various sizes by the patentee, Mr. J. Lawrence, 36, Fulham Road, S.W.

WHALLEY'S DISINFECTANTS.

"Whalley's Disinfecting Fluid" is described as a highly concentrated non-poisonous cleanser and germ destroyer. It is a dark-coloured liquid, evidently prepared from coal tar, and contains a considerable amount of the phenol constituents. When mixed with water, as directed in the proportion of one ounce to the gallon, it forms a milky liquid, having an alkaline reaction, and in this condition would be very efficient for disinfecting purposes.

"Whalley's Sanitary Powder" is claimed to be of "exceptional quality and strength." The sample examined was a pale pink coloured powder impregnated with a small amount of the constituents of coal tar, among which napthalin is prominent. It is recommended for application in stables, kennels, fowl yards, etc., by scattering on the floor, and would no doubt be useful for such purposes, though the results of analysis do not enable us to endorse the statement that it would be a "powerful antiseptic and disinfectant," having an "immediate action in preventing decomposition." These preparations are made by Whalley's Sanitary Fluid Company, Limited, 56 and 57, Aldermanbury, E.C.

TONGUE CLOTHS.

We have received from Messrs. Arthur and Co., 69, Berners Street, Oxford Street, London, specimens of some tongue cloths made of Japanese paper. They afford a good grip upon the tongue, as from their absorbent nature they adhere to the moist surface. Their cost is small, being 3s. per 1,000 (postage, 4½d. extra).

THE "EXPANDUM" PORTFOLIO.

The accompanying woodcuts illustrate a new portfolio recently brought to our notice, and for which a patent has been applied. It has been made to supply a long felt want amongst every class of professional and business men, who so frequently find that the papers and reports, which it is necessary to keep for handy reference, entirely outgrow the capacity of ordinary covers to hold them. The "Expandum"



CLOSED. EXPANDED.

has been invented to overcome this difficulty. The expanding back may, when the case is empty, be entirely hidden from view and out of the way, but as the contents are added to it may be gradually drawn out to accommodate itself to the growing contents of the cover. It will be particularly useful for filing accounts, reports, pamphlets, periodicals, drawings, etc. The portfolio has been supplied to the British Museum and public libraries throughout the country. The covers are made to order in any size. The foolscap folio size cost 2s. 6d., post free 3s. They can be obtained of Mr. J. N. Honeyman, bookbinder, 37, Great Queen Street, London, W.C.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XX.—FALMOUTH.

This house is beautifully situated some two miles from the town, overlooking it and the sea. It can be readily distinguished from the railway by its length of whitewashed walls. The medical officer (Dr. Bullmore) was unable to accompany us on our visit to the infirmary, but the introduction with which he furnished us secured us every attention. The doctor has held the post of medical officer to the workhouse for upwards of fifty years, and has witnessed many changes in the administration of relief to the sick poor.

The Infirmary is a Separate Block,

older than the main body of the house, with which it is connected by a covered passage. The old-fashioned style of the arrangements strikes the observer at once on entering the ward: the bedsteads are mostly placed with one side against the wall; the walls are whitewashed, with pictures pinned upon them; the rooms small, resembling those in old Cornish cottages. This gives a home-like aspect to the infirmary, and doubtless the patients were, as they said, quite comfortable.

The Wards

are distributed on two floors, and are licensed for thirty-four patients; the largest ward holds seven beds, the others have three or four beds in each. On the ground floor we entered a ward with six beds for females. There was a young woman with what appeared to be psoriasis, but there was no bed card to verify the diagnosis; an old woman crippled by an injured toe, a case of senile debility, and a weak-minded woman. The beds are narrow, the bedding straw or flock, with a few feather beds, which are used for the old people. Cocoanut matting is placed over the laths. The patients are well supplied with armchairs. On the next floor were two small wards, each holding three beds: in one was an old woman with a weak mind, brought on, so the matron told us, by her own misconduct; similar cases to that of this poor woman may be found in most infirmaries. Besides her there was a blind woman and a case of old age. In the adjoining ward all three were cases of old age. The matron informed us that at the time of our visit there were no offensive cases on the female side. We wondered where, if there had been such, they could have been placed so as not to offend the other patients.

On the Male Side,

on the ground floor, was a small ward for three beds, used when necessary for the offensive cases; but, when we visited, the beds were occupied by an imbecile patient with a delicate chest, and two old people. On the first floor was a larger ward, in which were seven beds, the occupants of which were all up and in the grounds. There are no day rooms on either side; the men smoke in their wards. At this time of the year the wards are empty, but in winter there are always several acute medical cases, and the infirmary is then quite crowded. There seems to be scarcely any surgical work.

The Labour Ward

is a small room on the first floor, having three beds: of these only two are used, by the patient and the attendant. It is a small inconvenient ward, but quite clean. It was empty at the time of our visit. The matron related that lately a dwarf had been confined in that ward, the child being taken from her by operation; both mother and child had died.

System of Nursing.

There is one nurse, untrained, for the whole infirmary, with paupers as her assistants; this nurse also acts as the midwife, having been instructed by the doctor in the duties of the post. The wardsmen and women that were pointed out to us were all old people, and, as there is no night nurse, the more helpless depend upon the less helpless patients, for aid at night. There are bells from the wards to the nurse's room, which is in the infirmary, and from the nurse's room to the master's quarters. The doctor is fetched if required at night by a messenger on foot—a distance of nearly two miles into Falmouth.

Sanitary Arrangements and Ventilation.

In going round the wards we were struck by their "fustiness." The air was not perhaps very impure, nor were there any bad smells, but it was stagnant. The ventilation is carried on by means of the sash windows, the lowered sash having coarse perforated zinc over the opening; we saw no other ventilators, and the position of the windows did not admit of a cross current of air. As there were commodes in these small wards for use at night the atmosphere must be very foul in the early morning. There is a closet on each floor; they had no flush, and were offensive. There is no hot water but such as can be heated in the small infirmary kitchen, no baths but foot tubs. If the old people require a bath they must go over to the house for it, consequently they are seldom or never bathed. Cold water is laid on to the infirmary, discharging over a small sink on one of the landings.

An Infectious Hospital

stands in the grounds for the reception of intercurrent cases; it is self-contained; it was empty at the time of our visit, and has never yet been used, being quite modern. There is also a small hut, holding two wards, for the isolation of any suspicious case. We saw no provision for the isolation and treatment of lock patients. The imbeciles are all in the house under the matron's care.

The Diets

consist of boiled and roast mutton and beef, stewed meat and broth; extra milk is given out for the night if ordered by the doctor.

The Airing Courts

are in the immediate neighbourhood of the wards; they are enclosed grass and gravelled spaces. The matron informed us that the inmates were also free to roam over the grounds, and that seats were placed for them under the trees.

Recommendations.

The existing infirmary buildings are too old and inconvenient to be suitable for the needs of the sick; a new infirmary is wanted, with all modern appliances for nursing. Considering the size of Falmouth, and the difficulty there must be in providing for the nursing of the sick poor of the town and its neighbourhood, it behoves the guardians to make a complete hospital attached to the workhouse. With the hospital would come the staff of trained nurses for night and day, doing away with the makeshift paupers. There can be no doubt that the patients are kindly treated in the infirmary, and when not acutely ill are fairly comfortable, but they are not nursed, and under existing arrangements there is little scope for treatment.

LITERARY NOTES.

Dr. W. D. Halliburton's *Essentials of Chemical Physiology* has been translated into German, and published by C. Winter, of Heidelberg. The translation has been done by Dr. Kaiser, who also was the translator of his *Textbook of Chemical Physiology and Pathology*.

The University of Pavia has issued a catalogue of its duplicate books on medicine, which are for sale.

Mr. G. Moreton, of Canterbury, announces the publication, in *facsimile*, of Harvey's *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus* (1628). The reproduction is to be accompanied by a memoir of Harvey and an English translation of the treatise. A copy of his portrait, reproduced by photogravure on copperplate, will be prefixed to the book. It is proposed to issue a few large paper copies on hand-made paper with lettered proofs of the portrait.

The *Phonographic Quarterly Review* (Sir I. Pitman and Sons), the first number of which is now before us, is the last addi-

tion to periodical literature, though it can interest only a very small number of our readers, and yet it deserves notice. It is curious and it is significant. An accompanying notice explains that it is an effort to provide those to whom it is an advantage to practise reading shorthand with that which is worth reading in the form of original articles. The attempt has obtained the aid of well-known men whose writings are known to be of value. Professor Bonney discusses the formation of flints, which he believes to have been formed *in situ* in the chalk by the deposition from water of the more soluble colloidal form of silica around some nucleus. Mr. A. S. Murray, of the British Museum, describes some of the strange ways in which precious relics have turned up in unexpected places. Sir Henry Howorth traces the sources of the curious myths of the unicorn of British heraldry and the griffin of our civic bounds. A very interesting article is that in which Dr. Gregory considers the origin of some of the tribes of East Central Africa, who can clearly be traced to an Asiatic source. The editor, the well-known shorthand writer, Mr. T. A. Reed, describes a trip to the Himalayas which he took during a brief pause in the work of reporting the proceedings of the Opium Commission in India. The very beautiful lithographed shorthand in which the *Review* is presented makes it difficult to avoid mentioning the first, an anonymous article. Its title, "What is Shorthand?" seems very superfluous, but the subject becomes less simple when we are told that shorthand is not essentially swift hand, as usually thought, but simple hand. As simple it is quick, but only swift by secondary adaptation. This has, however, only been revealed by Pitman's phonetic shorthand, which is primarily, we are told, the only adequate system of indicating speech by written signs that has ever been even attempted. Realising that by this is meant that simple sounds are indicated by simple signs, most persons, when writing in the common way, will certainly be inclined to admit that this does not correspond with the definition.

In the October number of the *Fortnightly Review* Dr. Thomas Oliver has an article on the Diet and Wages of English Workpeople, in which he expresses the opinion that the recent change in habits, which has led to the replacement of old-fashioned, rougher, and less palatable articles of dietary by white bread and potted delicacies has not on the whole had the effect of increasing the nutritive value of ordinary diet of the working classes in proportion to the increased expenditure on food which has followed higher wages. Dr. Vaughan Harley's recent physiological experiments, which tend to show that sugar is a muscular food, improving muscular work by from 6 to 39 per cent., are quoted, and Dr. Oliver tells us that the fact has long been known empirically to the Northumberland coal miner and the English navvy, who both consume a very large quantity of sugar. One miner, with six children, spent nearly an eighth of his income on sugar alone. On the whole, the impression to be gathered from Dr. Oliver's article is that the influence of diet on work and health depends very largely upon the question whether the women are employed in the general industry of the district. In the Lancashire cotton spinning districts a physical deterioration appears to be taking place, which is due in some part at any rate to an imperfect diet, which is selected because it requires little skill in cooking—skill which the women do not possess, even if they had time to exercise it.

Mr. Herbert Spencer returns to the charge in the *Contemporary Review* for October, and in rather triumphant mood insists that Professor Weissmann has failed to answer any one of the more important objections brought against his theory of heredity by Mr. Spencer. Mr. Spencer attaches special value to Professor Havelock Charles's observations in the *Journal of Anatomy and Physiology*, to which we called attention in this connection at the time of their publication. Professor Charles has pointed out that certain peculiarities in the bones of natives of India appear to be due to the special attitudes assumed by these people in squatting and sitting. It is certainly difficult to explain the existence of these peculiarities except on the hypothesis of the transmission of acquired peculiarities. Mr. Spencer also quotes some recent observations of Grassi on a species of termites, which are, to say the least, very difficult to explain on Weissmann's theory. He also restates his original objections, to which he contends that no reply has as yet been given.

In the *Progrès Médical* of August 18th M. Marcel Baudoin has a page of pleasant gossip about "contemporary medical novelists." To the average Frenchman, of course, France is the world; we are, therefore, not surprised to hear that there are only two "contemporary medical novelists," both Frenchmen. The names of Oliver Wendell Holmes, Conan Doyle, Weir-Mitchell, and Sir Henry Thompson (to quote only the first that come to mind) are apparently not known across the Channel. We venture to invite the attention of M. Baudoin to these "contemporary medical novelists," who (if allowance be made for the natural disadvantage under which they labour in not having been born in France) may, perhaps, be found not altogether unworthy to stand by the side of Dr. Paul Vigné and Dr. P. Corneille, the two writers who form M. Baudoin's whole catalogue of "Les médecins romanciers contemporains." Dr. Paul Vigné, of Octon, is, it seems, the author of *L'Eternelle Blessée*—a realistic work in which, if we remember aright, the central situation is the wedding night of a lady suffering from vaginismus. He is further described as the author of *Dr. Combalas*, *Terre de Mort*, *Fauves Amours*, *Chair Noire*, etc., works which, for aught we know, may be carved out of a living woman's heart (as Goethe said of those of Balzac), and writ with the golden pen of Flaubert. M. Vigné, who is a member of the Chamber of Deputies in the Socialist "line," is, we gather, soothing the fever of politics by the composition of another novel, to be called *Cœur de Savant*. The other "contemporary medical novelist" is Dr. P. Corneille, of La Mothe-Sainte-Heraye (Deux-Sèvres). This gentleman's primiparous production, *L'Envoûtement*, has not yet, it would appear, been followed by a second delivery; but M. Baudoin, like a "Weird Sister," foretells for him a literary issue as long and as brilliant as Banquo's line of kings. *L'Envoûtement* is the story of a seduction by means of "mental suggestion." The book is described as "highly moral," though hardly of the kind that Mr. Podsnap would have thought suitable for the "young person."

In the *Nineteenth Century* of this month Mr. Ernest Hart writes concerning the Cholera and the Sultan, and renews the demonstration that on the purification of the water supply of Mecca, and that of India, the extinction of cholera in its Eastern homes and haunts chiefly depends. He ridicules the "mist" theory, the "epidemic influence" theory, the "ground water" theory, and gives picturesque evidence that pure "water, water everywhere" is the first and last word of cholera prevention. All else is trifling with the question.

In the *Century* of this month Mr. Hart publishes, under the title of the "Eternal Gullible," a series of confessions which he has obtained from the leading professional hypnotists. They find it more profitable, now that the game is partly over, to detail like other jugglers their methods of practising on the gullible "psychical researchers" and the public at large. They constitute a very interesting series of human documents, and are an additional chapter to be added to the exposures of the imposture connected with the performances at the Charité Hospital in Paris, under the auspices of Dr. Luys, which appeared in the pages of the British Medical Journal.

Messrs. Methuen and Co. announce that they will issue early in October an illustrated textbook which has been designed to cover the new schedule for elementary biology issued by the Conjoint Board of the Royal Colleges of Physicians and Surgeons of England. The work is entitled *Outlines of Biology*, and is by Mr. P. Chalmers Mitchell, M.A.Oxon., F.Z.S., Lecturer in Biology at the Charing Cross Hospital Medical College, Examiner in Biology of the Royal College of Physicians of England. It will be fully illustrated and will be published in crown 8vo. form, cloth boards, at 6s.

A Munificent Gift.—Sir Savill Crossley has purchased, at a cost of £3,000, and presented to the Eastern Counties Asylum for Idiots, Colchester, a large house at Clacton-on-Sea, standing on the cliff in its own grounds. The house will be used as a seaside home, and will be a valuable addition to the resources of the asylum.

LIFE-SAVING SURGERY.

III.—OPERATING THEATRES AND ASEPSIS.

IN a large hospital, where surgical work is constantly going on, the centre of the institution, the one point which is touched by all the patients, the one department whose appliances are used in common by the occupants of all the wards, is the operating theatre. Any sanitary deficiency, any septic taint in this room may therefore be widespread and disastrous in its effects, and we need not be surprised that this risk is one to which surgeons who understand the necessity of asepsis are thoroughly awake. In some hospitals it is not at all an uncommon thing for major operations, especially abdominal sections, to be done in the special wards in which the patients are to be nursed. Even in some of the great school hospitals this is the case to some extent, and although no doubt it is done partly from a desire to save the patient the fatigue of removal after operation, we cannot doubt that to some extent surgeons are inclined to favour this course, because while they feel sure of the patient's surroundings so long as they remain in their own wards, they are not quite certain what may befall them in a co-operative theatre.

At the Samaritan Hospital each surgeon has his own operation wards, which are thoroughly cleaned before each operation, and if a death or any suspicion of septic mischief occurs the ward is whitewashed before it is used again. Each ward has two beds, one for the patient the other for the nurse, and here the patient stays after operation till all risk is over—about ten days after ovariotomy and until removal of the clamp after removal of fibroids. Each surgeon also has his own instruments. The difficulty of the co operative theatre is thus got over, and each operator treats his cases in his own way. It is easy to see that in a hospital managed on this system, if any one surgeon chooses not to believe in antiseptics, or accepts a lower standard of asepsis, he at any rate does no serious damage to the results of his colleagues, and it seems probable that under such a system of separation good results may be obtained from a less complete antiseptic routine than would be safe where all degrees of carefulness meet in the same theatre. The following, for example, are the measures taken by Mr. Alban Doran in regard to instruments and dressing:

The instruments and the reels containing ligatures and sutures are placed in carbolic solution (1 in 20) for half an hour, and this solution is diluted to 1 in 40 by the addition of hot water at the time of operation. The sponges, which if necessary have been previously disinfected by sulphurous acid, are dealt with in the same way. The trays used for the instruments are of metal, and are disinfected by carbolic 1 in 20. Dry dressings are used but these are not baked, and the water used at the operations is not boiled.

The recent rearrangement of the women's ward at St. Bartholomew's Hospital is another example of the modern tendency. Martha Ward, which is devoted to diseases of women under the charge of Dr. Champneys, physician to the ward, and consists of one large ward and three separate rooms, containing two beds each, together with operating theatre, nurse's rooms, bath rooms, corridor, etc., all separated by a closed door from the general staircase.

The small rooms are set apart for special cases and in them the majority of the abdominal sections are nursed.

Mr. Harrison Cripps has been appointed operating surgeon for the ovarian cases, etc., acting in association with Dr. Champneys, and from his description in the *St. Bartholomew's Hospital Reports*, we partly take our account of the theatre.

The floor is of teak, very clean and bright, although probably not so good as if it had been made of mosaic laid in cement. The walls are painted, and although Mr. Cripps laments that they were not lined with Minton's tiles, we are inclined to think they are better as they are, the joints between tiles being always apt to hold dust. Hot and cold water are laid on to a marble washbasin, the waste pipes of which are unenclosed, and discharge directly into the open air. Above the washbasin is a glass shelf, which supports two glass barrels holding three gallons each, one for carbolic lotion the other for corrosive sublimate solution.

The operating table (Fig. 1) consists of a framework of polished brass supporting a shallow copper tray, 3 inches deep, forming a hot water reservoir over which is a slab of plate glass 1 inch thick. This glass top can be lifted off, but by means of a tap and funnel the water can be changed without removing it if required. When the patient has been placed on the table a small glass topped table is placed over her knees, which can be slid up and down, and is found very convenient for supporting the sponge bowl, or any instrument which requires to be laid down for a moment.

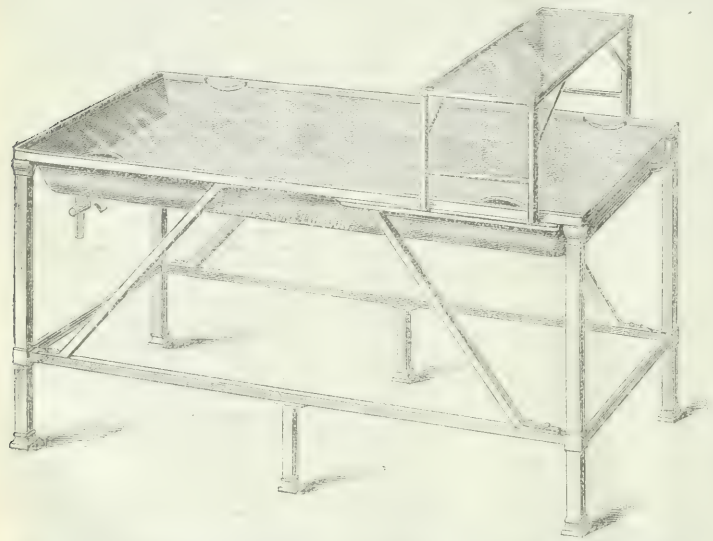


Fig. 1.—Plate glass operating table with hot water tray. The small glass shelf goes over the patient's knees, and can be slid backwards and forwards at pleasure. It is most useful for placing the sponge bowl and instrument in actual use whilst operating.

The tables for dressings and instruments (Fig. 2) are also of brass, with glass tops, and are so shaped as to form a semicircle behind the operator—"a polite method of preventing spectators crowding over the operator's shoulder." The irrigator (Fig. 3) is of glass, and holds three gallons, and is slung by a rope and pulley.

There are three sterilisers—for the water, the instruments, and the dressings respectively. All water used at the operation is boiled; the dressing steriliser is heated to 400° F., and then allowed to cool, the dressings not being removed until the moment of using. The instruments are boiled before being put away, but not as it would seem before being used. They are kept in an airtight glass-fronted case.

All the arrangements of the theatre—the glass, the brass, the brightness of the instruments, and the perfection of cleanliness

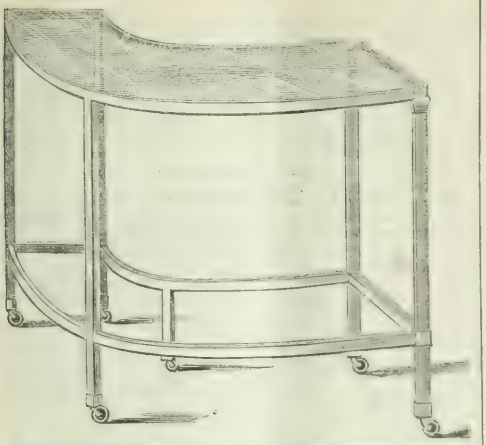


Fig. 2.—Narrow semicircular glass table for the instruments, which fits round the operator.

which one sees all round—are very pleasant to look upon, and must conduce greatly to the success of operative work, even though they may give rise to the distressing reflection in the mind of the ordinary practitioner that, if these be the essentials of aseptic surgery, its joys, alas! are not for him.

At the Royal Ophthalmic Hospital, recently erected at St. George's Circus, Southwark, there is a very perfect little operating room, the details of which have been most carefully thought out. At first sight its most striking feature is its emptiness. No table, no chair, no fireplace, no hot water pipes, no ledge anywhere on which one can even put one's hat. The floor is a marble tesselated mosaic; the walls are of large slabs of alabaster, the corners being worked to a curve so that there are no angles anywhere; the windows are set in gun metal frames, the washbasin (designed by Mr. McHardy) is a single piece of pottery ware having no hidden overflow, the waste being plugged by a brass funnel which rises to the top of the water and down which the overflow escapes.

Warmth is supplied by a metal skirting board below the window, having behind it hot water pipes, over which the entering air is made to pass.

The patients are wheeled in upon their beds, and are not removed from them for operation. The bed head can be removed and the upper end of each hollow leg so laid bare is made to furnish support for a small circular wooden table, on one of which the instruments are placed, lying between the folds of a boiled towel, and on the others are the dressings. Everything about the room is hard and non-absorbent, and as far as we could see the whole place could be washed down with hose and jet with no harm to anything except the electric light. The instruments are boiled immediately before being used, care is taken that the cocaine solution is sterile, the patient's face is bathed with boracic acid solution "to lay the dust," as Mr. McHardy remarked, but otherwise no chemical antiseptics are used.

Several other hospitals have reorganised their operating rooms among which we may mention St. Thomas's, where marble mosaic pavement has been introduced, and the walls have been lined with enamelled slate to a height of 10 feet; above this they have been painted. Thus the whole can be readily and frequently flushed and washed down. Large porcelain sinks also have been fixed, and a Berkfeld filter. An unlimited supply of sterilised hot water at any temperature is available.

Antiseptic solutions are kept in glass jars arranged on marble slabs, and complete sterilising apparatus for the surgical instruments and sponges has been placed in each. Each theatre has also been provided with a complete set of nickel-plated instruments in a glass case suited to aseptic surgery, which are never removed from the theatre for use elsewhere. New hot water coils have also been provided, capable of being kept thoroughly free from dust and dirt.



Fig. 3.—Bell glass irrigator.

The logical outcome of recent surgical experience is that the highest possibilities of surgery will only be attained when the surgeon is entirely relieved of all anxiety as to septic infection, when, in fact, surgery becomes a completely aseptic proceeding. The tendency in the practice of many surgeons is to attain this end by an elaborate system of cleanliness rather than by the use of chemical germicides at the time of operation, and it is sufficiently obvious that by the exercise of constant care and endless attention to small details an apparent independence of antiseptics can be attained. Unless, however, we are prepared to admit that all surgery is to fall into the hands of those who can surround their patients with this elaborate *cordon* of precautions, we cannot avoid the question whether after all the certainty of antisepticism attainable by anyone amid any surroundings by the use of chemical antiseptics is not a more practical aim than an asepticism attained by the practice of so complicated a system of cleanliness, failure in any branch of which may lead straight to disaster.

Even for the specialist in his own hospital, who can organise his own surroundings, this is a matter of no small interest, but as a question of teaching, of demonstrating a safe system of surgery which can be practised by all sorts and conditions of men amid all kinds of surroundings, we see no escape from the conclusion that antiseptic surgery in its broadest sense is likely to be the most successful. Boiled instruments, boiled towels, chemically purified hands and sponges, chemical disinfection of the patient's skin, surrounding the area of operations by materials which not only are clean but whose asepticity is secured by recent immersion in antiseptic solutions, and dressing the wound with substances which not only are themselves, if possible, aseptic, but contain within their fibres a reservoir of antiseptics—these are measures by which a surgeon may not only make himself independent of the idiosyncracies of his colleagues in a hospital, but may safely do operations amid strange surroundings. While offering our fullest tribute of praise to the efforts being made to introduce aseptic conditions into our hospital operating theatres, we must not hide from ourselves the fact that the most useful surgery to teach to students, who in a few years' time will be scattered over the surface of the globe, is a system which can be practised anywhere, and which will give good results even when the surroundings are far from satisfactory.

A FASHIONABLE PHYSICIAN OF ANCIENT ROME.

In the days of the Republic the practice of the healing art was almost entirely in the hands of Greeks. The Romans probably looked upon it and its professors with the contempt which seems natural to the semicivilised mind in which the military instinct is predominant. In time medicine became as closely associated in the public mind with the *Græculus esuriens* as dancing used to be in this country with Frenchmen and as dentistry is now in certain sections of "Society" with Americans. So little belief, indeed, had the Romans in native medical talent that when one of their own countrymen, like Julius Bassus or Sextus Niger, adopted the profession, he found it advantageous to disguise himself as far as possible as a Greek, much as a British tenor whose patronymic is Muggins calls himself Signor Muggini. Of all the Greeks who physicked, bled, and sweated the masters of the world, the most famous was Asclepiades, of Bithynia. Pliny represents him as a mere quack, but he probably confounded him with another Asclepiades; and, indeed, as the name seems to have been assumed for professional purposes, almost like the title of doctor, and as some fourteen or fifteen bearers of it practised at one time or another in Rome, a mistake of the kind would be difficult to avoid.

Asclepiades learnt his profession at Alexandria under the best teachers of the day, and after practising for a time in Greece and Asia Minor, he settled in Rome in the early part of the first century B.C., and soon took a leading position. His success was greatly helped by a winning manner and unfailing tact, but his reputation was based on a solid groundwork of knowledge and skill. He was the physician and the friend of Cicero, who often refers to him, and he appears to have been the instructor of Lucretius in the Epicurean philosophy, of which he was a strenuous professor. His pathology seems to have been based on the Epicurean doctrine. He looked upon the body as made of atoms or molecules with intervening spaces or pores. Through these pores, as through a sieve, other atoms of different shapes—round, square, or triangular—were continually passing in and out of the body. As long as the atoms passed in and out freely, health was maintained, but if the harmonious relation between the atoms and the pores was disturbed, illness ensued. If the atoms were too large or too numerous, or if the pores were too contracted, compression and laceration occur which express themselves pathologically as spasms, paralysis, fluxion, fever. If, on the other hand, the atoms were too small or the pores too wide, wasting and failure of the vital processes take place.

In practice the guiding principle of Asclepiades was to cure with as little discomfort to the patient as possible. He set his face against violent remedies, and in particular condemned the excessive use of emetics and purgatives, preferring clysters, on which he wrote a treatise. If he did not, like Graves, "feed fevers," he opposed the rigorous starvation treatment which was fashionable in his day. He anticipated the St. Cecilia Guild by habitually having recourse to music as a sedative, and he was a great advocate of baths, both hot and cold; in fact, he may be regarded as the founder of hydrotherapeutics. He seems to have been the introducer of massage into the medical practice of Rome. Of internal remedies he seems to have looked upon wine almost as a panacea, and in his use of it in fevers particularly he anticipated Anthony Todd Thomson. It is hinted that his liberality in the prescription of this therapeutic agent added greatly to his popularity with the Roman ladies. With all his dislike of drastic medication, Asclepiades was no mere waiter on the *vis medicatrix naturæ*: he might have said with Gull (as quoted by Huxley): "Stuff! Nine times out of ten Nature does not want to cure the man; she wants to put him in his coffin." He called the old Greek system of watching the course of disease without interfering (a species of masterly inactivity rather affected by the superior person of a later day) a "meditation on death." So great was the reputation of Asclepiades, that Mithridates, the celebrated King of Pontus, tried hard to induce him to take up his abode at his court. The physician sent a complete set of his works instead; they were afterwards brought back to Rome by Pompey after the overthrow of Mithridates. Though numerous, nothing of them remains except in quotations in the writings of Celsus, Galen, and other authors.

In addition to his intellectual gifts, Asclepiades was fortunate in possessing a constitution which seemed to defy disease. He used to say to his patients, with a rashness which recalls Napoleon's confidence in his "star," that if ever they saw him ill they should cease to believe in him. As a matter of fact he lived to a very advanced age, and died of the effects of a fall.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

We have received the following further reports of cases in which this mode of treatment has been employed:

XIV.—Dr. J. P. Williams-Freeman (Andover) writes: K.W., aged 21 months, a strong healthy child, on September 25th had a cold in the head. The glands of the neck were somewhat swollen and tender, and she was fretful and troublesome as to food, but nothing was to be seen in the throat. On September 28th she was decidedly hoarse and pale. On September 29th she was very fretful and pale, vomited, and refused food and medicine. On September 30th a small patch of membrane was visible on the left tonsil in the morning. The temperature was 98.4°; pulse, 108; the respiration 24, and slightly croupy.

I obtained from Dr. Armand Ruffer, of the British Institute of Preventive Medicine, some antitoxin serum prepared in Dr. Roux's laboratory, in Paris, of proved "immunising power of 1 in 60,000 or thereabouts," and at 10.30 P.M. injected 20 c.c. into the subcutaneous tissue of the side of the abdomen. The resulting swelling rapidly softened, but was perceptible twelve hours afterwards, and the tenderness persisted for twenty-four hours. The child was crouping decidedly, was fed with great difficulty, and was extremely restless. An elder sister, aged 5½ years, which had been tracheotomised three days before, died during the night from heart failure. On October 1st, when seen at noon, the child was very decidedly worse. The membrane covered the left side of the uvula and both tonsils, which met and obstructed further view. The temperature was 99.2°; the pulse 130, and almost imperceptible; the respirations were 40, and very croupy; there was marked retraction of the chest, and great pallor and weakness, and the child had only slept a hour and a-half during the twenty-four hours. About 6 P.M. it showed signs of improvement, took nourishment better, and slept peacefully through the night. At 9 P.M. the temperature was 97.8°; the pulse 104; and the respirations 20.

On October 2nd there was great improvement in every way. The child took nourishment freely and without pain; was playful, but slept much. Its colour was much improved. A little dirty-looking membrane remained on the right tonsil only. I injected 10 c.c. more serum at 2 P.M.; the swelling disappeared in half an hour, but tenderness persisted till the evening; it was gone next morning. The temperature was 98°, pulse 104, respirations 24. On October 3rd the membrane was gone, and on October 4th the child had a little cough, but otherwise appeared quite well.

On October 7th, the child had a diffused raised erythema widely spread over the face, body, and limbs, with great itching. The temperature was 99°, due probably to overfeeding.

On October 8th the rash was nearly gone. The child had half a teaspoonful of brandy every two hours during October 1st and 2nd, otherwise no treatment, general or local, after September 29th.

DEATHS UNDER ANÆSTHETICS.

Chloroform.

Mr. T. Beattie, M.B., Senior House-Physician to the Royal Infirmary, Newcastle-on-Tyne, has favoured us with the following case of death under chloroform: J. R. G., aged 16, an out-patient who had been treated since June 20th, 1894, for rheumatic pains, presented himself on Friday, August 17th, stating that he was quite recovered from his pains, but complaining of toothache, a sore mouth, and gum boils. He was referred to the dental department, and was

seen at 4 P.M., when, on examining his mouth, many alveolar abscesses were found, due to numerous carious stumps. An effort was made by the dental surgeon to extract the stumps, but the boy, being unable to bear the pain, at his own and his mother's request, it was decided to give an anæsthetic, chloroform being decided upon. Before beginning the administration his chest was carefully examined, and no cardiac affection or other contra-indication being found he was put under chloroform (Duncan and Flockhart's). The boy took the anæsthetic well, and, the right side of the lower jaw having been cleared of stumps, he began to show signs of coming out. A little more chloroform was given and the left side of the jaw proceeded with. As the fourth stump was being drawn from this side the boy began showing signs of coming round; he suddenly became exceedingly pale, and respiration stopped. His head was at once lowered and artificial respiration commenced. After continuing this for about two minutes he took about twenty voluntary respirations, but even during this time neither pulse nor heart impulse could be felt. Artificial respiration was continued, oxygen gas administered, ether and brandy given hypodermically, friction, the battery, and suspension, but, in spite of these efforts being maintained for an hour, he showed no further sign of life. On the following day, August 18th, a coroner's inquest was held and the following verdict returned, "Death whilst under chloroform, which was properly and rightly administered."

Mr. P. E. Davies read, at the last meeting of the Kidderminster Medical Society, notes on a fatal case of chloroform anæsthesia which occurred in the Kidderminster Infirmary on September 9th. The patient was a man aged 54, who at one time kept a public-house, and was well known to be of intemperate habits. He had suffered from an inguinal hernia for some years. During a "drinking bout" the hernia became strangulated, and when Mr. J. Lionel Stretton was called in he was in great pain, and vomiting fæcal matter. On arrival at the infirmary he was in a very depressed condition and seemed to have an unusual dread of the operation, remarking several times to the nurse that "he would not get through it."

The heart was auscultated, and nothing abnormal discovered. Ether was first administered with Clover's inhaler, the usual amount (℥ij) being used. Owing to the violent and persistent struggling it was found impossible to get him under with ether. After about four minutes' trial the anæsthetic was changed to chloroform, which was administered on a double fold of lint. He took the vapour well, and at this time his pulse was fairly good; unconsciousness followed in about three or four minutes, the pupils being contracted and the conjunctival reflex absent. The anæsthetic was then changed back to ether with the intention of keeping him "under" with it. Whilst Mr. Stretton and Dr. Evans were shaving the patient prior to the operation, and without the least warning, he suddenly ceased breathing (just before the respiration had been regular). Along with the failure of respiration it was noticed that the patient became ashy pale, particularly about the lips. The tongue was immediately pulled forward with an artery forceps, and artificial respiration resorted to; all the other usual restoratives were tried. After artificial respiration had been kept up for about four or five minutes, the patient gave three voluntary inspirations and expired. Duncan, Flockhart and Co.'s chloroform (sp. gr. 1490) was used to the total amount of 3 to 4 drachms. No necropsy was ordered by the coroner, and unfortunately the friends' consent could not be obtained afterwards. A verdict in accordance with the medical evidence was returned.

YOUNGEST ENGLAND:

Some Facts not Sufficiently Recognised relating to the Population under 5 years of Age in England, and especially in London.

By D. BIDDLE, M.R.C.S.Eng.,
Fellow of the Royal Statistical Society.

From the mine of information annually afforded by the Registrar-General I have drawn up several supplementary tables, setting forth the condition in some important respects of the younger portion of the community. In the present paper I propose to bring forward some of the most noteworthy results of the investigation, and to show amongst other things that the age group referred to (0 to 5), is not only diminished in proportionate numbers, but is also lowered in comparative power of resistance to disease and death. The matter is worthy of serious consideration.

It is commonly admitted that the qualities which go to make up social efficiency are possessed to no inconsiderable degree by the Anglo-Saxon race. If such be the case, the cultivation of the units which compose this foremost race of mankind and the careful preservation, not to say augmentation, of their numbers is of paramount importance.

By reference to the Annual Report of the Registrar-General for 1892, we find that since 1876 there has been a continuous decline in the birth-rate per 1,000 living in England. Thus, the mean birth-rates for the four quinquennia extending from 1871 to 1890 are as follows: 35.5, 35.4, 33.5, 31.4. There has also been a decline in the marriage-rate, the corresponding means of which are 17.1, 15.3, 15.1, 14.7. The latter partially, but not wholly, explains the former.

As the Registrar-General points out, there has been a diminished fecundity. "The annual fertility of married life appears to have been gradually diminishing, having fallen successively from a mean of 292 (in 1870-72) to 286 (in 1880-82), and then to 264 (in 1890-92) per 1,000 wives." The decline during the last decennium is very marked. Into the causes of this decline I cannot now enter, but a larger question is opened out—namely, whether large families tend to pauperism and as a rule bring misery in their train. I believe that if a census of the inmates of our workhouses were taken having special regard to this point, it would be found that the pauper class is not drawn from large families, but from small ones. It is true that poverty seems to encourage the reproductive faculty; in fact, the tendency has long been known in plant as well as animal life. And Mr. Shirley Murphy, Medical Officer of Health to the London County Council, in his admirable annual report for 1892, clearly shows that the largest birth-rates are in the poorest districts. When, however, we take in conjunction the two facts that the rural birth-rate is far below the urban, and yet, as the Registrar-General says, that "the proportion of paupers—that is, of persons relieved at the expense of the rates—to the total population is habitually much higher in rural than in urban districts," we must conclude that the connection between large families and pauperism is very slight indeed.

It may here be remarked that, whilst the population of the United Kingdom as a whole increased 38 per cent. between 1851 and 1891, its several portions progressed at very different rates. Thus, England advanced from 17,982,849 to 29,082,585, or 61.7 per cent.; Scotland advanced from 2,893,015 to 4,033,180, or 39.3 per cent.: but Ireland declined from 6,514,473 to 4,681,248, or 28.1 per cent.

But our chief concern at present is with the population under 5 years of age in England. In 1851, out of 1,000,000 persons living, 130,977 belonged to this age group (0 to 5), and the proportion steadily increased until 1881, when it reached 135,551. But between 1881 and 1891 a sudden drop occurred, and the proportion of children under 5 years of age per million persons living was only 122,523 in the latter year. In London the proportion was always less than in England as a whole, but it had risen from 124,273 in 1851 to 130,236 in 1881, and fell to 119,101 in 1891. We thus see that in England at large, and in London, its metropolis, more especially, the resources for maintaining the supply to the world of members of the Anglo-Saxon race of English birth has not been at so low an ebb as it is at present for more than forty years. At the same time it is somewhat reassuring to learn that, although the proportion is smaller, as shown above, the actual number of children under 5 years of age is slightly larger than in 1881, namely, 3,553,490 (in England at large) as against 3,520,864. But the excess (32,626) does not equal an average fortnight's births, and may vanish at any moment.

It may further be observed that for many years past, except when some epidemic (like influenza) whose nature it is to attack older people most has been present, death has removed from this age group (0 to 5) 2 for every 3 removed from all the other age groups put together. This fact should

impress sanitarians with the importance of paying special attention to the group under consideration. For if they can reduce the deaths of children under 5 years of age by half, they at once reduce the general death-rate of the country by 20 per cent.

In 1892, children under 5 years of age were dying more than three times as fast as indicated by the general death-rate of the country. The coefficient belonging to this group in England as a whole was then 3.034. In London, in the same year, the coefficient of the same group was as high as 3.338. Yet for the decennium 1871-80 the coefficient of the group in England was 2.967, and in London 3.252. For the three quinquennia extending from 1876 to 1890, the coefficients of mortality from all causes upon the group in question (0 to 5) in London were in succession 3.279, 3.297, 3.355. Whilst, therefore, until recently, the general death-rate has been declining, the incidence upon the group under 5 years of age has been steadily advancing; its variation has been in the wrong direction continually, though moving most insidiously. The incidence upon the group beyond (5 to 20) has, on the contrary, steadily declined, the coefficients for the three quinquennia having been in London (and those of England are in close agreement), 0.228, 0.222, 0.196, and for 1891-93, 0.194. The incidence upon the adult group (20 and upwards) has steadily increased, the means for the three quinquennia (1876-90) and for the triennial period (1891-93) having been 0.887, 0.898, 0.925, and 0.967, the last mentioned rise being largely due to influenza.

But, as will have been observed, the incidence upon the two latter groups is slight indeed compared with that upon the earliest group (0 to 5), and this group is always of main importance to the future of the Anglo-Saxon race. One hopeful circumstance in the matter is that a considerable portion of the heavy incidence on the group in question is due to the zymotic class of diseases.

By aid of the Registrar-General's annual summaries I have calculated the age incidence of mortality from each of the seven principal zymotic diseases upon each of the three age groups in London, from 1876 to 1893 inclusive—that is, for eighteen years. But at present I will give only the mean coefficients of incidence of mortality from each disease upon our chief group (0 to 5).

Zymotic Diseases.	Coefficients of Incidence of Mortality upon Age Group (0 to 5).			
	1876-80	1881-85	1886-90	1891-93
Small-pox	2.141	1.936	1.122	2.831
Scarlet Fever	5.044	5.279	5.644	5.680
Diphtheria	4.618	5.102	5.385	5.723
Fever (chiefly Enteric) ...	1.391	0.825	0.722	0.534
Measles	7.186	7.269	7.597	7.952
Whooping Cough	7.401	7.526	7.874	8.148
Diarrhœa	6.849	6.880	7.292	7.505

These are the coefficients by which to multiply the death-rates at all ages from the several specified diseases in order to obtain the death-rates (from those diseases) of the group we are considering. It will be observed that, excepting small-pox and "fever" (chiefly enteric), the incidence of mortality from each zymotic disease on the group in question has steadily increased from 1876 onwards. This seems to indicate that diminishing the proportionate numbers of the group does not give it greater resistive power against disease and death, but the contrary.

In conclusion, I think I have proved the propositions with which I set out. For I have shown that, whilst the general condition of England as a place to live in has improved, leading to a diminution in the death-rates at all ages, that is, in the average death-rates, the comparative incidence of mortality upon the group under 5 years of age has continuously increased. Whether due to loss of stamina or not, the comparative power of resistance of this group to disease and death grows less year by year. Though greatly diminished in numbers, the group can scarcely be said to have become more select. There is reason to fear that the diminution takes place at the wrong end of the group, whilst the least fit multiply pretty much as heretofore. However, considerably more than one-fourth of the deaths occurring in this group are due to zymotic diseases, and these and a multitude of others belong to the class called "preventable." Is this a misnomer?

VACCINATION AND SMALL-POX IN MARYLEBONE.

The active minority who have taken a decided opposition to the vaccination laws, continue with considerable persistence to quote the recent outbreak in Marylebone as evidence of the futility of vaccination. We have obtained from Mr. Wynter Blyth the actual facts of the case, which are as follows: First, with regard to the proportion of the vaccinated to the unvaccinated population, 2,328 school children in the Lisson Grove district were inspected as to vaccination; of these, 597, or 25.6 per cent., were unvaccinated; the percentage of vaccinated to unvaccinated children varied much in the seven schools examined, the extreme limits being from 10 to 42 per cent. There are no means of ascertaining accurately the proportion of vaccinated to unvaccinated adults, but there is no reason to believe that the proportion is different, and it may be assumed that three-fourths of the Marylebone population, speaking generally, had been vaccinated in infancy. This being the case, presuming exposure to infection, the forecast might be made that very few children properly vaccinated would become infected, and that among the vaccinated the disease would mainly attack adults, it being matter of common knowledge that absolute immunity is not conferred by vaccination or even by an attack of small-pox. The greater the distance of time from the vaccination or the variolation, other things being equal, the greater the liability to attack.

Of 238 cases (214 of which belong to Marylebone), the distribution of age and condition as to vaccination was as follows:

	Vaccinated.	Unvaccinated.
Under 5 years of age ...	1	24
5 to 10 ,, ...	4	23
10 to 15 ,, ...	16	14
15 to 25 ,, ...	62	9
25 and above ...	82	3
	165	73 (*i.e.*, 30 per cent.)

When with regard to children of all ages up to 10 the unvaccinated were attacked in the proportion of 47 to 5, it is idle to cite the Marylebone outbreak as an instance of the inutility of vaccination: if the figures mean anything, they mean that vaccination in infancy conferred a high degree of immunity for ten years of life, and that a given infection selected "unprotected" subjects in preference to "protected." The mortality of the Marylebone cases show the same thing; 26 out of a total of 260 died; all these were "unprotected;" 14 never had been vaccinated; the remainder had been vaccinated in infancy the lowest age at death being 18, the mortality of the vaccinated was only 6.5 per cent., the unvaccinated 17.9 per cent. Now a vaccination eighteen years ago, to say nothing of later ages, cannot fall under the denomination of "protection." Whilst it is universally agreed by all except a few semilunatics on the matter, that vaccination confers a high degree of immunity, no one contends that the immunity is lifelong or absolute. In the vast majority of cases the effect lasts from seven to ten years, but after that time the effect weakens; we therefore require some other term than simply "vaccinated." To give statistics to the public without specifying either age or the time that has elapsed since the vaccination or revaccination is in the highest degree misleading. Second attacks of small-pox are not unknown, but such a circumstance never for a moment shakes our faith, based on a vast amount of evidence, that small-pox as a rule only occurs in the same individual once. Hence it would be better to use the term "vaccinated in infancy" where this, as is usually the case, expresses the fact. The results, showing the high immunity conferred from the disease itself or from severity of the attack, would in every case be striking. It is by juggling with the word "vaccinated" as though it meant recently vaccinated that false deductions are fabricated.

One can understand, and in a sense appreciate, the arguments of those who acknowledge the protective character of vaccination, and yet desire the abolition of compulsory vaccination. This is, however, not the reasonable line that the opposition take: their main desire appears to prove that vac-

cination is useless—an assertion which may again and again be proved to be groundless, but which they never tire of repeating.

YORKSHIRE COLLEGE, LEEDS.

Opening of the New Medical School: Visit of the Duke and Duchess of York.

For the Royal visit to Leeds on October 5th the city was literally transformed, and several miles of its too grimy and unattractive thoroughfares had for the nonce assumed an aspect that almost hid their identity, so gay were they with bunting, with flowers, and with plants. Enormous crowds lined the route of the procession, and everywhere the greatest enthusiasm and interest were excited.

At the Town Hall their Royal Highnesses were presented with an address of welcome by the Mayor of the City (Mr. T. R. Lenty). His Royal Highness having replied, the procession was reformed and proceeded to the College, where the Marquis of Ripon (the President of the College) invited their Royal Highnesses to declare the new hall and library open.

Principal Bodington, having presented an address of welcome, His Royal Highness declared the new buildings open, and the party proceeded to the Medical School. The actual function of opening the new medical department was as brief as it was replete with interest for all who were glad to see Royalty lending its sanction to one of the most important of the many enterprises that have marked the progress of medical science in the city.

Some 300 or 400 ladies and gentlemen accepted the invitation of the Dean and Medical Board to the library, and these included many prominent members of the medical profession and a numerous sprinkling of lay supporters of the work of the school.

On the arrival of the Royal party from the Yorkshire College they were met at the main entrance by the Dean and Board of Medicine, who presented an artistic gold key to the Duke, with which he opened the front door of the school. The Royal party ascended the principal staircase and walked through the large museum, the anatomy museum, the dissecting room, and the anatomy theatre; thence through the physiology department along the main corridor to the library, where the Marquis of Ripon requested the Duke to declare the school open. His Royal Highness acceded to the request with much pleasure, and wished the institution every success. The school remained open for public inspection for a few hours after the Royal party left.

The guard of honour at the school was furnished by the Medical Staff Corps.

From the Medical School the Royal party proceeded to the Town Hall, where a luncheon had been laid in the large Victoria Hall. There were about 450 guests, the chair being taken by the Marquis of Ripon, K.G., who proposed the toast of "The Prince and Princess of Wales and the Royal Family," coupling with it the names of the Duke and Duchess of York. The Duke having replied, their Royal Highnesses shortly afterwards left the hall.

On Monday, a *conversazione* was given by the Dean, Mr. Scattergood, and the staff of the Medical School, in the new buildings. It was largely attended by the medical profession of Leeds and the surrounding districts, and by a large number of old Leeds students. Various entertainments were given for the amusement of the guests, and Dr. Trevelyan and Professor de Burgh Birch showed a number of microscopical preparations. The electric light was used for the first time.

EPIDEMIC MUSCULAR RHEUMATISM.

IV.

Mr. J. Oliphant Goldie, M.B., C.M. (Forest Gate, E.) writes: I was much interested in the accounts in the British Medical Journal of epidemic muscular rheumatism, as I lately suffered from a malady the symptoms of which closely corresponded to those described by Mr. Grindon and Dr. Newton. My brother, who attended me, and I were at a loss to assign my complaint to a definite malady, as it at first closely resembled influenza and afterwards acute rheumatism. On September 3rd I was troubled with slight pain and tenderness in the epigastrium. Towards the evening of the following day I was seized with a rigor which lasted about five minutes. My temperature rose to 101.2° F. I was placed in warm blankets, and with the aid of hot water bottles and a Dover's powder I soon perspired freely. On the third day I was attacked by a stabbing pain in the left thoracic parietes on a level with the diaphragm. I had a severe headache, which was relieved by antipyrin. In spite of this my temperature rose to 102.7°. The pain spread upwards to the level of the clavicle, and turpentine cloths were applied. It then radiated to the right side, and there spread similarly. For about ten hours I was unable to move without suffering very acutely. I was now given sodium salicylate (grs. x every four hours), and the pain quickly subsided. The odour of the perspiration was characteristic of acute rheumatism. I heard of no other case in the district, and my brother, who was in the same room, was entirely free.

WHAT DROWNING FEELS LIKE.

A woman, who was among those saved in the recent deplorable accident in Morecambe Bay, is reported in the papers to have said that she remembered sinking twice and thinking she had "only to go down once more and all would be over." Everyone knows the description given by "false, fleeting, perjured Clarence," of his dream:

> Lord, Lord, methought what pain it was to drown!
> What dreadful noise of waters in mine ears!
> What ugly sights of death within mine eyes!
> . . . . . and often did I strive
> To yield the ghost, but still the envious flood
> Kept in my soul and would not let it forth.

This is poetical rather than scientifically accurate, but it is remarkable that Shakespeare, when he represents the drowning man as retaining consciousness and having "leisure in the time of death to gaze upon the secrets of the deep," comes very near what has been the actual experience of some who have been snatched from a watery grave when life was all but extinct. There are several authentic records of such experiences. One of the most interesting is that of Admiral Beaufort, as described by himself in a letter to Dr. Wollaston.[1] When a youngster he fell overboard in Portsmouth Harbour and before relief reached him had sunk below the surface. All hope had fled, all exertion ceased, and he felt that he was drowning. We give his account of his sensations in his own words:

> From the moment that all exertion had ceased, a calm feeling of the most perfect tranquility superseded the previous tumultuous sensations—it might be called apathy, certainly not resignation, for drowning no longer appeared to me an evil. I no longer thought of being rescued, nor was I in any bodily pain. On the contrary, my sensations were now of a pleasurable cast, partaking of that dull but contented sort of feeling which precedes the sleep produced by fatigue. Though the senses were thus deadened, not so the mind; its activity seemed to be invigorated in a ratio which defies all description, for thought rose after thought with a rapidity of succession that is not only indescribable, but probably inconceivable by anyone who has not himself been in a similar situation. The course of these thoughts I can even now in a great measure retrace—the event which had just taken place, the awkwardness that had produced it, the bustle it must have occasioned, the effect it would have on a most affectionate father, and a thousand other circumstances minutely associated with home were the first series of reflections that occurred. They then took a wider range—our last cruise, a former voyage and shipwreck, my school, the progress I had made there and the time I had misspent, and even all my boyish pursuits and adventures. Thus travelling backwards, every past incident of my life seemed to glance across my recollection in retrograde succession; not, however, in mere outline as here stated, but the picture filled up with every minute and collateral feature; in short, the whole period of my existence seemed to be placed before me in a kind of panoramic review, and each act of it seemed to be accompanied by a consciousness of right and wrong or by some reflection on its cause or its consequences; indeed, many trifling events which had been long forgotten then crowded into my imagination and with the character of recent familiarity.

Two minutes did not elapse before he was hauled up: and he found the return to life much less pleasant than drowning. Admiral Beaufort adds that he had heard from two or three persons who had had a similar experience that their sensations had closely resembled his own. Sir Benjamin Brodie[2] relates the case of a sailor who had been snatched from the waves and lain for some time on the deck of his ship insensible, who on his recovery declared that he had been in Heaven, and complained of his restoration to life as a great

[1] *Autobiographical Memoir of Sir John Barrow, Bart.* London: 1847, p. 398. (Quoted by Dr. W. Munk, in his *Euthanasia*. London: 1887, p. 12.)

[2] Works, Vol. i, p. 184.

hardship. In a well-known passage of the *Confessions of an English Opium Eater*, De Quincey relates that he was once told by a near relative that "having in her childhood (aged 9) fallen into a river, and being on the very verge of death but for the assistance which reached her at the last critical moment, she saw in a moment her whole life, clothed in its forgotten incidents, arrayed before her as in a mirror, not successively but simultaneously, and she had a faculty developed as suddenly, for comprehending the whole and every part." An American gentleman, Mr. C. A. Hartley,[3] has recently given an interesting account of his sensations when drowning. He lay at the bottom of a river in a state of semiconsciousness, in which he saw his relatives and friends all about them with their eyes full of tears. All the events of his life, from infancy upwards, passed slowly before his mental vision; he felt that he was drowning, and he remembers thinking, unlike Clarence, that it was not pain to drown. He was able even to speculate whether his body would be found, and he pictured his own funeral, and fancied he could hear the earth thrown on his coffin. He had sensations of the nature of tinnitus (ringing of bells, etc.) in his ears, and he had visual perceptions of the most marvellous combinations of colours. Next all was peace around him; he had a peculiar feeling of well-being in a medium of a temperature neither too hot nor too cold. Then he felt himself as if raised from the earth, and floating in space, and looking down on the world spread out at his feet. Lastly came mere darkness and oblivion till he found himself stretched on the river bank and being subjected to the disagreeable process of restoration to life. It will be noted that all these accounts agree in two points, namely, the apocalypse of the past life even in its minute details, and the absence of any unpleasant sensation. On the whole, the popular idea (which in such matters is never wholly wrong) that drowning is a pleasant form of death is confirmed by the testimony of the few who have practically reached the bourne of the undiscovered country and yet returned to tell the tale.

[3] Reproduced, from some source unnamed, in the *Revue Scientifique*, June 2nd, 1894.

HOSPITALS IN FACT AND FICTION.

It is sometimes useful, though perhaps not always agreeable, to see ourselves as others see us, and although imaginative writers may claim some licence in dealing with their facts, and may urge that they should not be too closely criticised as to their accuracy, yet on the other hand it must not be forgotten that a large portion of the public are apt, in the absence of the opportunity for more reliable information upon a point, to take their impressions from what they read, and are very prone to forget the source of the idea which they retain.

Hence it is not always a trifling matter that an authoress so popular as Mme. Sarah Grand should dilate upon the manner in which unnecessary suffering is inflicted upon the poor who are treated in our hospitals, and it seems, therefore, quite worth while to quote in these pages what is said in a recent collection of short stories entitled "Our Manifold Life," one of which is devoted to an account of a girl in many ways admirable, one Janey, who is a sufferer from hysterical loss of power in her lower limbs, brought on, it is said, by a fall downstairs, in which she injured her back.

Here is an account of her experience in hospital: "I was gettin' on well enough, until one night when there was a great storm; and me bed was under a window, an' it blowed in, an' I called an' called, but the nurse didn't come: an' I could not move myself, nor not another in the ward could move me, for we was all on us 'elpless. And the rain blew in on me all night, and no nurse came till seven next morning, an' then one come for something, an' I ses to her, 'O, nurse, it's bin rainin' on me, an' I'm all cold an' wet!' 'You just wait till your betters 'as breakfasted,' she ses, 'an' off she goes; an' it was 'alf-past eight an' more before she comed to move me, an' me teeth chatterin' that 'ard you could 'ear 'em. An' one of the women in the ward, she said it was shameful neglec,' an' she'd tell the doctor; an' the nurse said, threatenin' like, 'You'd better!' But she did, an,' oh my, 'e did go on that nurse awful, he *was* vexed! An' she did treat that poor woman cruel afterwards. She'd do nothing for 'er; I've 'eard her call an' call, for she was 'elpless too: an' nurse 'ud come back an' look at 'er, an' laugh, an' she in that pain; an' the nurse would say, 'You tell tales of me again, will you?' They isn't lady nurses they 'as 'ere, you know," and so on for another page, in which we are told that her mother used to slip in regularly to make her comfortable, her visits being winked at by the nurses to save themselves trouble.

A few pages further on we are treated to a glimpse of a dental hospital. "It's a kind of charity. You don't pay. I think young gents goes there to learn the dentistry business, an' my! they do torture you. I didn't know it was, else I'd not 'ave gone; not was it ever so. 'Im as did my teeth used to get my 'ead fast in a chair, an' put a thing in me mouth to 'old it open, an' then 'e'd leave me like that an' go an' laugh with the other young gents; an' when 'e 'urt me an' I'd make a noise 'e used to say 'Now then, jest you shut up; you know you are a pauper an' gets all this 'tendance for nothin'; an' good dentistry too."

"This casual glimpse of the price the unfortunates who have to rely upon 'charity' pay for the same is the kind of thing which makes one long to visit such young 'gents' with a big stick while one's blood is boiling:" but Janey was not by way of complaining. However, Janey had had enough of hospitals, and begged for some creasote, which, by some occult process, destroyed all her remaining teeth.

All this would be beneath criticism were it not that the talented authoress has won for herself a wide public, and therefore, surely, has incurred an obligation that her writings should not be such as to do mischief.

In the days of Sarah Gamp such things may, perhaps, have been, but at what hospital would a nurse who had been found out in gross neglect have been left for a day to wreak her vengence upon her patients? And does the writer suppose that at any dental hospital the dressers are allowed to deal with the patients as they choose, without supervision, putting aside for the moment the improbability of their inhumanity?

Of course it can never be that the hospital patient can have all the comforts of a well-to-do patient in his own house; the exigencies of hospital work both in respect of expense, the number of patients to be treated, and the like difficulties, must prevent this; but on the other hand the hospital patient has his material well being cared for in a degree little, and often not at all, short of the care secured by the richest in the land, and in so far as essentials go, the hour of sickness brings to the poor hospital patient an amount of kindly care and consideration, and in many particulars almost of luxury, such as he can never attain to at any other period of his life. Indeed the most advanced socialist, whose programme involves the despoiling of the wealthier classes to increase the comforts of the poorer, would probably not propose to amend in any material respect the administration of our hospitals, of which we may already be proud.

It seems, therefore, a matter for much regret that any writer of position should, for the purpose of literary effect, put forth statements which are misleading, which bear upon the face of them internal evidence that the writer knows nothing of the administration of these great charities, and which, if believed, as they are sure to be by some at all events of her readers, tend to stop the flow of donations which are at all times sorely needed, and which bear such useful fruit in providing for the poor the benefits of such medical skill as they could by no other means attain.

Of all this the writer probably never thought; local colour and literary effect were her aim, and she perhaps attained it, though we do not think this particular story by any means one of her best; and we have little doubt that, if it be pointed out, no one will regret more than its author the tendency of such writing.

Congresses at Bordeaux.—An international exhibition is to be held at Bordeaux in 1895. This event is to be made the occasion of a Congress of Pædiatrics and Gynæcology, under the presidency of Professors Tarnier and Lannelongue, and of a Congress of Hygiene, to be held under the auspices of the Society of Hygiene. In addition to these gatherings, the surgeons of Bordeaux are making strenuous efforts to secure the acceptance of their city as the place of meeting for the French Surgical Congress in 1895.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, OCTOBER 13TH, 1894.

THE BITTER CRY OF LONDON AS A TEACHING MEDICAL CENTRE.

The failure of London to attract foreign medical students is at the present day conspicuous and growing. When we read that the 20 medical faculties in Germany numbered among their students no fewer than 3,507 foreigners out of a total of 8,012, during the last summer session there is surely room for inquiry why London—with a clinical field so enormous—should number its foreign students by units, while the German universities count them by hundreds. In fact, at some German universities foreigners are in excess of the natives. Thus at Wurzburg there are 566 foreigners to 154 Bavarians: at Munich, 716 against 459; at Freiburg, 383 against 182. We have not before us the exact definition of a "foreigner," but even assuming that a large proportion come from other German-speaking countries, the fact must still remain that the number of foreign students attracted by the German universities is very greatly in excess of the numbers in London.

There are no doubt many reasons for this state of things, and it is difficult to appreciate precisely the weight which should be given to each. Something is due, no doubt, to the bare manner in which the teaching in the London schools is directed to meet the requirements of examining boards. Everything is subordinated to getting the average man through his pass examination, and not a little to cramming the laggards up to a point which will enable them to "satisfy the examiners." There are no endowments; there is no University teaching: the voice of the researcher in London is as of one crying in the wilderness, and overpowered by the howls of the halfpenny newspapers, whose phenomenal ignorance is made poisonous with calumny. Another but related reason is the want of facilities and opportunities for clinical research, using that term in the widest sense. Where are we to look for well-organised clinical departments, with adequately fitted clinical laboratories, for the chemical and bacteriological study of cases? The examination of cases at the bedside, which was the watchword of the great school of medicine in England in the middle of this century, needs now to be supplemented by careful laboratory investigations, and facilities for these must be provided if this country is to continue to hold a leading place as a medical centre. A medical centre is not merely a place where so many hundred students are turned out to a pattern every year, but a centre where the higher, so-called "post-graduate," instruction is given by men of wide experience or special training, thoroughly acquainted with every advance, and where the advanced student can receive the guidance and direction which he requires. The medical journals published in America contain about this time of the year many letters from American visitors to Europe relating their impressions of the medical schools. The criticisms on London are all more or less to the same effect. "There are too many medical subcentres, with no inclination towards centralisation," writes a correspondent to the *Occidental Medical Times*. "The distances between the educational institutions are so great, that the post-graduate courses in medicine are very poorly attended." He agrees with others of his compatriots that the American student who wants advanced courses will do better in New York. In New York, indeed, the post-graduate classes have reached a high pitch of organisation, and possess an immense building, which is college and hospital in one. In Vienna, in Berlin, and in other German centres the foreign student is able to attend courses in special clinical departments conducted by junior members of the teaching staff of the university; and it must be remembered, that any graduate who can show reasonable credentials can obtain the status of *Privatdocent*, and as such can claim certain facilities for the use of laboratories and museums for teaching purposes. Teaching is there a profession. The university and the institutes of biology, pathology, and pharmacology are furnished by the State. The professors are chosen almost without exception from the ranks of these young men, who have won their spurs as *Privatdocenten*. There is a greater freedom of inter-university communication, the student and the teacher can, and does, pass from one to the other, and the universities vie with each other in providing the most complete laboratory accommodation. It is, indeed, an astonishing thing to see the magnificent institutes for pathology, for hygiene, for clinical medicine, which exists in even the minor German centres, and to turn to London, which in these respects is a by-word among the nations. There is no great medical school in London which has anything to compare with them, and of any great central institution London has nothing to show beyond the laboratories of the Conjoint Board on the Embankment—an institution well enough in its way, but not available for education, and one which, when compared to the immensity of London and its wealth, rather evidences a want than fills it.

The movement for a real university in and for London had its origin, and draws most of its strength, from the schools engaged in what we may call "primary" medical education. The grievous disadvantages which London students labour under, owing to the want of reasonable facilities for obtaining a university degree, is the most glaring defect, due to our want of centralisation and the play allowed to conflicting individualism.

The State which gives nothing can, of course, exercise no control, for it has no control, and so Royal Commissions come and go and leave not a wrack behind. The elements of a university exist, but not the university. The establishment of a true University of London would probably result, not merely in removing the difficulty about university degrees, but also in a consolidation and extension of higher university education and research, not only in medicine, but in

biology and other departments of science. But even then large endowment and liberal aid from the State and from the munificence of individuals are necessary. The practical teaching of the average medical student has been carried to a high pitch in many metropolitan schools and colleges, although clinical teaching is often irregular and perfunctory—sometimes childish and antiquated—everywhere there is plenty of room without trenching in any way on existing interests, for a great development of that higher education and stimulation of knowledge and research which a central university could afford. When shall we have it?

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

In recent leading articles and notes on the antitoxic serum treatment of diphtheria we have given an account of the method of preparation of the antitoxic serum and have stated the general method of employing this new remedy; but we have been compelled to indicate that the number of cases available for analysis, and on which to base any argument as to the efficacy of the treatment could be fairly founded, was as yet too small. Roux and Martin[1] in France and Heubner[2] and Aronson[3] in Germany have, however, quite recently contributed most valuable statistics of a series of cases which, added to those already published by Behring and by various other clinical observers in these columns and elsewhere, form a fairly large basis of cases on which to found a comparison of the serum method of treatment with other methods that have previously been adopted in this treacherous disease. Before considering these cases, however, it may be well to accentuate what has previously been noted: that in the treatment of no disease have so many specific remedies been advertised as in that of diphtheria; whilst it must also be borne in mind that the epidemics of this disease vary so much in course, history, and general characteristics—which appear to be modified from time to time even in the same epidemic and in different though closely related areas—that the most enthusiastic supporters of the antitoxic serum treatment are always careful to throw out a warning against accepting statistics in which due note has not been taken of these important factors.

It should be pointed out that any statistics on the serum treatment hitherto collected can only cover a comparatively short period: whilst the statistics referring to "the ante-serum" period with which these are compared are usually taken as extending over at least four years. Taking Roux and Martin's statistics, for example, it is found that the cases to which they refer were treated during a period extending from February 1st to July 24th, 1894; 448 patients were admitted to the Hôpital des Enfants Malades, and there were 109 deaths, giving a mortality of 24.5 per cent. The cases with which these were compared were recorded during a period of four years, and the mean death-rate was 51.71 per cent. Here the contrast is sufficiently striking, but the figures would have been accepted much more readily had the "case mortality" for each of the four years and for each of the four periods corresponding to the serum period been also given; whilst they would have been still more valuable had the ages of the patients attacked during the different outbreaks and the type of the disease of these different outbreaks also been given.

The importance of this is seen when the statistics of the Trousseau Hospital, in which the patients did not receive any serum treatment, are compared with those of the above hospital. Here there were 520 children admitted during the "serum period," but none of them received any serum treatment. The mortality was 60 per cent., showing that here the disease gives rise to a higher rate of mortality than the mean mortality in the Hôpital des Enfants Malades. In this case, too, the statistics for the previous four years are not given, so that most important facts are wanting for any accurate comparison between the "serum" and the "ante-serum" periods. In making these criticisms we wish in no way to minimise the importance of the results obtained by recent workers; we wish merely to draw attention to the necessity for a careful analysis of facts and figures before they are presented for purposes of comparison.

There can be no doubt that the results obtained in the protection of animals against the action, not only of powerful diphtheritic toxines, but also against the action of virulent diphtheria bacilli introduced experimentally into the subcutaneous tissues and into the abraded mucous membrane of the trachea by the injection of the antitoxic serum, are most striking. There is also little doubt that vigorous bacilli treated with the antitoxic serum lose much of their virulence, and are rendered incapable of setting up any active local or constitutional changes when injected into an animal. Further, in the cases that have been recorded by clinical observers—and this after all, from our point of view is the most important factor of all—the softening and clearing away of the false membrane, and the general improvement of the local condition, take place so rapidly and in such a marked degree that the acute general symptoms are rapidly modified, especially in those cases in which there appears to be no mixed infection. It is claimed by most of those who have had a large experience in this method of treatment, that the general condition of the patient improves very rapidly in those cases that are brought under treatment in the earlier stages of the disease; the process appears to be cut short, the temperature falls suddenly on the first, or at the latest on the second, day, except in the grave forms of the disease when the fall takes place at the later period, and goes on more gradually. The rapidity of the pulse is not affected to the same extent, nor at so early a period. The false membrane appears to be affected by a single injection; it ceases to be formed at the end of twenty-four hours, and on the second or third day after the commencement of the treatment the membrane becomes detached, and along with it the diphtheria bacillus disappears, and it is sometimes impossible to make cultivations of the diphtheria bacillus as early as the third and on the fifth day.

It is also claimed that the ordinary sequelæ even of comparatively slight attacks of diphtheria do not make their appearance nearly so frequently when this method of treatment is adopted, though Roux and Martin observed a few cases of temporary paralysis of the soft palate; transient albuminuria was also met with. Paralysis of a more extensive and prolonged character, and several cases of syncope are also

[1] *Annales de l'Institut Pasteur*, No. 9, 1894.
[2] Schmidt's *Jahrb.*, Bd. 242, p. 113.
[3] British Medical Journal, September 15th, 1894, p. 611.

recorded, usually, however, in cases which were in an advanced stage of the disease before they came under treatment. O. Heubner, who has analysed his cases somewhat carefully, at Buda-Pesth gave it as his opinion that although the whole improvement as regards case mortality cannot be attributed to the serum treatment, undeniably beneficial effects had been obtained by the use of Behring's serum in the children's department of the Charité Hospital in Berlin. He agrees with Roux and Martin that the main indications of the favourable action of the antitoxic serum is the rapid effect on the false membrane and the sudden and early defervescence, whilst he also points out that the effect on the swollen glands, and the condition of the urine and the character of the pulse, should all be carefully watched.

The general results obtained in Berlin appear to have been even more striking than those already recorded as in Aronson's cases, 192 in number, in all of which a diagnostic bacteriological examination was made, the mortality was only 14 per cent., or, eliminating those cases which were moribund when admitted, only 11.2 per cent. This must be compared with a lowest mortality of the previous three years of 32.5 per cent., and a highest of 41.7 per cent. If to these cases are added 82 other cases treated by the serum method in the other hospitals in Berlin, the general mortality of the whole series was only 15.3 per cent. In comparing these figures obtained in the different hospitals, it must be borne in mind that diphtheria is frequently complicated with broncho-pneumonia, apparently the result of the action of some of the pyogenic organisms. It is distinctly stated by almost all observers that in these cases of mixed infection the antitoxic serum appears to act beneficially only on such lesions and symptoms as are due to the presence of the diphtheria bacillus, the pyogenic organisms being practically unaffected, so that the type of the disease—that is, whether frequently complicated with broncho-pneumonia and similar conditions—must be carefully considered when results are being tabulated. Then, too, Behring insists (and in this he is corroborated by Heubner, Aronson, Roux, and others) that the strength of the antitoxic serum that has been supplied at different times must have varied very considerably, and consequently, as the dosage had not been exactly calculated for the different strengths, the results must have varied greatly in different cases.

It is maintained by Heubner and Roux that antitoxic serum contains no toxic products, and that it may be administered with impunity even in those cases in which the presence of diphtheria bacilli has not actually been demonstrated, that is, in suspected cases. It is pointed out, however, by almost all those who have worked at the subject, that urticaria is a comparatively frequent sequela, though Roux and Heubner hold that this invariably disappears and leaves no evil result. Curschmann,[1] on the other hand—and in this we think he will be supported by those who have watched the action of foreign animal fluids on the walls of the blood-vessels—is convinced that urticaria must be looked upon as a phenomenon indicative of a slight toxic action of the serum when injected in considerable quantities into specially susceptible individuals.

A consideration of the facts observed in this method of treatment, combined with bacteriological examination of the disease, appears to lead us to the following conclusions: (*a*) that the best results are obtained by the injection of the antitoxic serum at an early stage of the disease; (*b*) that only by careful bacteriological examination can the disease be pronounced to be diphtheritic at this early stage; (*c*) that the remedial agent has so little effect on the healthy tissues that it may be injected even in suspected cases of diphtheria before the medical attendant has fully made up his mind as to the nature of the disease, or before he has obtained bacteriological evidence on the point; (*d*) that the action of the serum on the local lesion ensues so rapidly on the first injection, that Roux anticipates that intubation will ultimately take the place of tracheotomy in a large number of cases in which the disease is advanced, and in which the obstruction is sufficiently high to be relieved by tracheotomy, the reason for this being that the tube may be sufficiently carefully watched during the short period that is requisite before the membrane be cleared away by the action of the antitoxic serum.

Antitoxin serum will, no doubt, before long be brought into more general use. The proposal of the German Imperial Board of Health, that the preparation of Behring's serum should be made a State monopoly, has not been approved, but it is thought that a Bill will be introduced into the German Legislature to provide hospitals and clinics under State control, with special funds for its purchase. Meanwhile a special appeal, as will be seen by the letter of our Berlin Correspondent in another column, has been issued on behalf of the Children's Hospital in Berlin, for special subscriptions to defray the cost of the serum. In the course of this appeal it is stated that the mortality from diphtheria has declined since the introduction of the antitoxic treatment from 42 per cent. to 17 per cent. Those who have had long experience in the treatment of diphtheria must be relied upon to indicate the nature and amount of the beneficial action on the local lesions and on the general condition, more especially as regards the sequelæ; and all those who utilise this serum method will, we hope, keep careful record of the condition of their patients, especially as regards the points laid stress upon by Heubner.

[1] Schmidt's *Jahrb.*, Bd. 242, p. 114.

There are at present 98 members of the medical profession in the French Legislature, 61 of whom are deputies, and 37 senators.

Dr. W. R. Gowers, F.R.S., delivered the inaugural address of the present session of the Manchester Medical Society on October 3rd. The subject of the address was The Nature and Treatment of Epilepsy in relation to the Dynamics of Life.

The opening meeting of the North London Medical and Chirurgical Society will be held on Thursday next, October 18th, at 8.30 P.M., when Dr. Sims Woodhead will give an address, illustrated by the lantern, on The Methods of Invasion of Tuberculosis.

The first meeting of the Harveian Society of London will be held at the Stafford Rooms, Tichborne Street, Edgware Road, on Thursday next, October 18th, at 8.30 P.M. The meeting will be devoted to the exhibition and discussion of clinical cases, and all members of the profession are invited to attend.

In reference to the reported outbreak of small-pox at the Hendon Workhouse, we are informed that the report was completely erroneous, no case having occurred during the past year and eight months.

It is officially announced that the Royal Commission on Vaccination are awaiting a report of an inquiry which they directed to be made with reference to an outbreak of small-pox at Leicester, and that they hope to have their final report ready for presentation early next year.

THE LATE PROFESSOR BILLROTH.

The letters of the late Professor Billroth, of Vienna, are about to be published, with the sanction of his widow, under the editorship of Dr. Georg Fischer, surgeon to the Hanover City Hospital. Dr. Fischer asks any English correspondents who may have preserved letters of Billroth's to send them to him, at 22, Warmbuchenstrasse, Hanover. Any letters forwarded in response to this request will be copied and returned without delay.

THE SUPPLY OF NURSES.

To judge by the paragraphs in the newspapers, the supply of raw material out of which to manufacture the trained nurse of the present day is much in excess of the demand. At a large London hospital, 5,000 applications to enter the training school were received last year. In view of the increasing demand for trained nurses in the workhouse infirmaries this is good news, but we would urge upon the boards of guardians that it is incumbent on them to make use of their own infirmaries as training schools to a much larger extent than they do at present.

THE MONUMENT TO VILLEMIN.

On Sunday, September 30th, the monument erected to the memory of Villemin, the discoverer of the infectivity of tuberculosis, was unveiled at Bruyère-en-Vosges, in the presence of a distinguished assembly. Dr. Viger, the Minister of Agriculture, who is a member of the medical profession, represented the Government, and delivered an oration. Among the other speakers were Dr. Kelsch, on behalf of the Académie de Médecine, Dr. Matthieu, Director of the Val-de-Grâce School, where Villemin was for many years professor, and Dr. Liétard, President of the Monument Committee. The Minister of War was represented by Dr. Dujardin-Beaumetz, Director of the Sanitary Department of the Ministry of War. The monument represents a poor phthisical woman clinging to the pedestal, on which stands a bust of Villemin.

VAGRANCY AND INFECTIOUS DISEASE.

A correspondent, writing to the *Times*, tells the story of a small northern union arranging for the daily medical inspection of all vagrants leaving its workhouse, and states that the medical officer found it necessary to detain three out of 70 vagrants visiting the poorhouse in the first fortnight, and four out of 103 in the second fortnight, because they were suffering from a contagious disease. The Local Government Board acknowledged the receipt of a letter informing the Board of the course which had been adopted, and expressed satisfaction with what had been done, but said nothing about moving other unions to follow the same example. It must not, however, be assumed that the Local Government Board are negligent of the matter because as yet no step has been taken in addressing a letter to all other unions. The subject is one which requires much consideration, and the interval which has elapsed is not so great as to lead to the conclusion that the Board are disinclined to make a general recommendation. The suggestion seems to us a good one, and likely to lead to useful results, especially in times when epidemic disease is likely to become prevalent. But the question of dealing with vagrants has been brought to the notice of the Board by the Conference of Sanitary Authorities held at the London County Council, and the resolutions of the conference will have to be considered with other possibilities of controlling the spread of disease by vagrants. In connection with this subject it is interesting to know that after November 1st the duty of supervision of common lodging houses in London will devolve on the London County Council.

THE CHELSEA HOSPITAL FOR WOMEN.

A special meeting of the Governors of the Chelsea Hospital for Women was held on October 10th for the purpose of considering the recommendations of the Commission of Inquiry, and of receiving the resignations of the Chairman, Treasurer, and other members of the Board of Management. The Vice-Chairman, Mr. T. W. Brookes, who presided, read a long statement of the events which had led to the calling of the present meeting, and announced that it was proposed to appoint as consulting physicians men eminent in the speciality of the hospital, who were in actual consulting practice, and who occupied similar positions at other hospitals, so that the medical staff might have their active help in case of difficulty. The governors would also be asked to confer upon the Board of Management powers to suspend or dismiss any member of the medical staff, after full inquiry, if he had acted in a manner detrimental to the interests of the hospital. It was further intended that the medical staff should retire annually, but should be eligible for reappointment. The medical staff had already been appointed as a Medical Committee, to confer with and advise the Board in all professional matters. The beds in the hospital had been reduced from 60 to 42, in order to allow the increased cubic space suggested by the Commission. The meeting, which was of a somewhat stormy character, resolved itself chiefly into a discussion of the action of the Board of Management in regard to the election of the new medical officers. It was strongly maintained that the Board was as much blamed by the report of the Commission as were the members of the staff, and should, therefore, have retired, one speaker indignantly drawing attention to "the fact of the Board of Management complacently proceeding to the election of a new staff as if they also were not involved in the same censure." The Rev. A. J. Myers stated "that the Board stood condemned by the Commission and by the public out-of-doors," and also, he added, by the letter of the Home Secretary. Many inquiries were made as to the reason for the resignation of the consulting staff, but nothing was elicited, the Chairman going so far as to say that "he could give no reason for the resignation of the consultants, unless it was that their particular friends had not been elected on the medical staff." The fact of a chairman allowing himself to make a remark like this is an illustration of the temper of the officials, and perhaps gives the clue to a good deal of the unpleasantness of the meeting. In the end the resignation of the Board was not accepted, and thus the institution is left to the old management and the staff they have appointed.

THE ANTITOXIN TREATMENT OF DIPHTHERIA IN FRANCE.

The Conseil Général of the Bouches-du-Rhône has commissioned Dr. d'Astros, jun., chief physician to the Children's Hospital of Marseilles, to proceed to Paris and obtain from MM. Pasteur and Roux all the information necessary for the establishment of a laboratory where the diphtheria antitoxin could be manufactured at Marseilles. A grant of 10,000 francs (£400) has been made for the purpose. The administrative council of the hospitals of Lyons has voted a sum sufficient to allow of the serum treatment being available in that city at an early date. The municipality of Bordeaux has placed horses and other necessary

material, together with suitable premises, at the disposal of Dr. Gabriel Féré, Professor of Experimental Medicine in the Bordeaux Medical Faculty, for the preparation of the anti-toxin.

THE MIRACLES OF ST. WINIFRED'S WELL.

We are informed by a medical correspondent that a devout patient, suffering from ulceration of the stomach, not progressing as rapidly as she desired, paid a visit to the Holy Well of St. Winifred, now in much repute. On her return a few days ago she told her friends that she felt so well that she could eat anything, mentioning pig's feet amongst the luxuries in which she felt able to indulge. On Saturday she rose hurriedly from the tea-table, and was found in an adjoining room in great agony. A doctor saw her and diagnosed perforation of the stomach. She died on Sunday night.

ICE CREAM AND TYPHOID.

Dr. Campbell Munro, the health officer of Renfrewshire, has, in an appendix to his annual report on the county for 1893, furnished an additional instance of the spread of enteric fever by means of ice creams. This is by no means the only example of the mischief of this unregulated trade in the matter of the dissemination of infection which has been brought to light, but it serves very well to accentuate the necessity for some legislative measure which shall bring such businesses under the immediate control of the health authority. Dr. Munro was brought face to face with an alarming outbreak of fever in a small population of under 8,000 persons in one portion of the county in the early weeks of the second half of last year, an outbreak of considerable dimensions having regard to the people in question; and, in his efforts to elucidate the mystery surrounding the occurrence, he discovered that adjacent towns outside his jurisdiction were also suffering under the disease. It was in the fourth week of July that the epidemicity of the fever first attracted his attention, and inquiry led to his finding that an unreported case of typhoid had been on the premises of an ice-cream vendor in Paisley since June 4th, in the person of a girl who had been in intimate contact with the business during most of the period of her illness. This initial case remained unknown until another patient sickened on the same premises, this second case being notified on July 18th, over six weeks after the previous one. Both cases were removed to hospital two days later, and the parents to the reception house; and when the dealer tried afterwards to recommence his trade he was prevented from so doing by a popular outcry, his place being mobbed by the public, who had got wind of the occurrences just described. It thus comes about that any mischief from the infected business premises ceased to have fresh potency from July 20th. But at this time certificates of persons previously ill began to pour in, and it was ascertained by careful inquiry that of the first six successive series of 31 cases each, there were respectively 22, 16, 12, 7, 5, and 1 among partakers of the implicated ice cream; 63 of the first 186 cases being in consumers of the cream. No further cases in Paisley could by any means be traced to the cream, although every pains were taken to connect occurrences with the business. But beyond his shop in Paisley, the vendor had a pony cart, which he used in selling his wares in adjacent places; thus he frequently visited Inkermann, where, of the first 15 cases, no fewer than 11 were in consumers of his creams. Again, he is known to have served Johnstone on at least one occasion—namely, on the "fair" day of July 15th—and there 10 cases could be reasonably traced to ingestion of his ice cream. In all, 86 cases can be set down as related to consumption of this man's wares, manufacted under such disease-provoking conditions. Such, then, are the broad facts of the case in so far as regards the part played in the epidemic by the consumption of ice cream. But this part was only a small one when compared with the whole prevalence; and which, quite apart from the incidence on the customers of the cream vendor, was related to the water supply of Paisley. We reserve for another article a consideration of the epidemic as it was brought about by polluted water; but what we desire to state further at this juncture is that it is far from satisfactory that there should have been the means of concealing the existence for six weeks of a case of dangerous infectious illness on the premises of the manufacturer of such a widely used commodity as ice cream; and, secondly, that there should be in our midst a business capable of being carried on in the very teeth of such a disease. The interference of the State seems clearly to be called for. Dr. Alfred Harris, medical officer of health for St. Mary's, Islington, recently caused samples of ice cream sold in the north of London to be taken, and also personally inspected the premises at which Italians manufactured the article. In his report presented to the Public Health Committee of the Islington Vestry on October 8th, he stated that the commodity was manufactured in close yards, and the articles used in the manufacture were flour, milk, eggs, sugar, and flavouring essences, which were for the most part stored in evil-smelling sleeping rooms. In no instance were the shells of the eggs used broken. They were pierced at each end, and blown by the mouth, the perfect shells being sold to the proprietors of shooting galleries. Three samples of water taken from barrows and three samples of ice cream were submitted to Dr. E. Klein, of St. Bartholomew's Hospital, on September 18th. Dr. Klein reported that the first three samples were rendered turbid by small flocculi in suspension, and in each case there was a floccular white precipitate. A microscopic examination revealed in each of the samples of water and ice cream an abundance of microbes. Both these reports were discussed, and it was suggested that representations should be made to the Local Government Board, urging them to introduce legislation to empower local authorities to register the vendors of these articles, as there was nothing in the Public Health Act to prevent such sale.

THE HEALTH OF THE CZAR.

Our despatches from Berlin and St. Petersburg are this week somewhat conflicting. Our Berlin correspondent telegraphs, "From a most authoritative source I learn that the Czar's illness is a nephritis, not of the lightest type, but that the newspaper accounts are much exaggerated. I am assured that there has been no stroke and no uræmic attack." From St. Petersburg we hear that "the Czar has rallied from the severe results of intercurrent nephritis acting on a kidney already contracted, but that his mental despondency and anxiety have greatly retarded the improvement which might otherwise have been hoped far. His Russian attendants being slightly discounted, he will be accompanied and probably continuously attended for some time by Dr. Leyden, of Berlin, whose judicious methods and calm yet hopeful view of the situation have done much to tranquillise the immediate fears, and have inspired the Czar and his *entourage* with great confidence." From Corfu we hear "that two houses of the King of Greece are being got ready with all haste. Both of them are of somewhat restricted dimensions. The Palace, which was formerly a house of the English Governor, is situated in the town, and is in many respects not a very desirable residence; the little villa Mon Repos is just outside the town, and overlooks the bay, and has the advantage of delightful grounds, but they are on a declivity, and the use of them involves the constant mounting and descent of somewhat steep grades and steps, not by any means, therefore, the most suitable for a person in the condition of the illustrious patient, who suffers not only from weakness, but from effusion and consequent difficulty of breathing, and needs to be able to take exercise on the flat. Efforts will be made to overcome this difficulty." The beautiful palace of the Empress of Austria,

far more spacious than either of the others and much more beautifully and healthfully situated is still available as a a country resort. It is about twelve miles from the town and overlooking a large bay. Another St. Petersburg correspondent writes to us: "The altered appearance of the Czar attracts general remark and sympathy. The striking pallor and unmistakable look of illness gave rise to the unfounded rumour of cancer of the stomach, but there is, of course, not the slightest foundation for this. The latest reports which reach us are that a decided improvement has taken place in the Emperor's health, but it is feared that it is not likely to be permanent."

ENTRIES AT THE MEDICAL SCHOOLS.

THE returns at present available are not yet sufficiently complete to warrant any conclusion as to the number of new students who have entered at the medical schools in England since last year; but, so far as can be judged, it does not appear probable that, in London at least, there will be any considerable falling off, though there are no indications of any notable increase. St. George's Hospital and Charing Cross Hospital have already a larger number of new students than at the corresponding period last year; but some of the other schools show a slight falling off. Experience of former years shows that the total number of entries will probably be materially increased during the next few days. In Scotland and Ireland the lists will not be made up until a later period.

THE LONDON POST-GRADUATE COURSE.

WE are glad to learn that the first winter courses arranged by the London Post-Graduate Committee have filled up in a satisfactory manner, and that all the sets of lectures and demonstrations arranged for will be given. The Secretary of the Committee is Dr. J. Fletcher Little, 32, Harley Street, Cavendish Square, W., by whom further information will be supplied. The vacation courses were brought to a termination last week. Among those who attended the bacteriological course at King's College were qualified practitioners from Canada, New Zealand, the United States, and France. At the conclusion of the course a vote of thanks to Professor Crookshank and Dr. Hewlett, who had so conducted the course as to render it instructive and interesting to practitioners, was proposed by Dr. Campbell, of Calne, Wilts, seconded by Dr. Mackie, a past-President of the Medical Society of New Zealand, and carried by acclamation.

THE EXPERIMENT OF TEMPERANCE.

THE Temperance Hospital has attained its majority, and has celebrated the event with justifiable satisfaction. The newspapers describing the proceedings speak of the treatment adopted at this hospital as an experiment, and perhaps one may be allowed to smile at the want of perception which has led certain people to attack various general hospitals on the vague charge of performing experiments on patients, and missing a case apparently made on purpose for them, a very text for their homilies, a hospital whose very reason for existence is the trying of a great experiment on its patients—the treatment of their ailments without the use of alcohol. The fact is, however, that the mere experiment whether it is possible to treat disease without alcohol, is a needless one, for we all know it can be done; and if the supporters of this hospital wish their experiment to show that disease can be better treated without alcohol, it is equally useless, for in regard to that its results are absolutely inconclusive. The Temperance Hospital's apology for its existence, however, if it needs any apology, stands on quite different grounds. It is a place where teetotallers may go without feeling that, in accepting the benefits of hospital treatment, they are running the risk of having to break their vow, and to which they may give recommendations without the consciousness that they are exposing their recipients to temptation to what they regard as actual sin. To those persons who look upon alcohol as a most useful medicine, and certain alcoholic liquors as most pleasant drinks, this may seem narrow and absurd, but considering the strength of the conviction of so many teetotallers, the fervent missionary spirit that possesses them, and the vehemence with which they urge their favourite dogmas, the wonder is not that there is one temperance hospital, but that there are not dozens. As an experiment, then, we would say that the Temperance Hospital is useless. Not only are its own results inconclusive, but the non-alcoholic treatment of disease—the experiment, if one likes to call it so—is carried out upon a far larger scale in the general hospitals of London than it is within the walls of the Temperance Hospital. But as a resort for teetotallers, a refuge from temptation, this hospital is unique, and the fact that it is so, and that it still finds difficulties in obtaining enough money to keep its wards open, raises somewhat sad reflections regarding many of the loud professions of the total abstinence party. One hospital for so great a cause! In a wealthy country like England, people are expected to back their beliefs with cash. This is the modern form of martyrdom, and of those who will not do so it is said, perhaps unkindly, that after all they had "rather turn than burn."

PREVENTION OF THE SPREAD OF DIPHTHERIA IN SCHOOLS.

THE report of Dr. Wellington Lake, Medical Officer of Health of the Guildford Rural Sanitary District, on the arrest of diphtheria contains an account of the systematic personal examination of the throats of school children instituted by Dr. Lake during a time of diphtheria prevalence. On the reassembly of the scholars for the Michaelmas term Dr. Lake examined the throats of all the children, armed with a couple of nickel plated tongue depressors, a few clean towels, a laryngeal mirror, and a basin containing hot water, which was frequently changed. While examining the throat with one tongue depressor, the other was allowed to remain in the hot water. All children presenting the least suspicion of sore throat were rigidly excluded from attendance at school, and in the majority of cases were kept from school till the throat became normal. Dr. Lake observes: "It must be obvious that if the schools are attended only by children with normal throats the risk of infection by diphtheria is minimised, and given that the medical officer of health only has the time, an inspection of the school on first assembling after holidays and further inspection at intervals during term time must be an invaluable preventive method." Dr. Lake adds that this system plays havoc with the school attendance, and suggests that cases excluded from attendance by the medical officer of health should count as though they were actually attending during the whole of the absence actually prescribed by him.

THE SICK POOR IN PROVINCIAL WORKHOUSES: FALMOUTH.

AT Falmouth our Commissioner found the old type of infirmary; the sick are lodged, it is true, in a separate building, a distinct improvement on the system, which prevails in many places, of having the sick under the same roof with the tramps and the able-bodied. But the infirmary is the oldest part of the buildings, and consists of small wards resembling the rooms in Cornish cottages, holding at most seven beds, and usually only three or four. It requires no imagination to realise how such an arrangement must add to the difficulty of nursing, especially with an inadequate staff. The patients, our Commissioner reports, seemed fairly comfortable, were most kindly treated, and there were no acute cases at the time of the visit. Is there then no need of reform? The question will hardly be answered in the affirmative by anyone who really understands the requirements of the sick, but it is extremely difficult to

arouse public opinion on these matters where there is no crying abuse, no neglect or cruelty. Yet at Falmouth Infirmary there is no trained nurse, and only one of any kind, her efforts being supplemented as usual by pauper help; no one is in attendance at night. We would ask the ratepayers to endeavour to realise what this pauper help means. The wardsmen and wardswomen are people who are incapacitated by age or other disability from obtaining work outside the house, there is no reward if they do well, they cannot be punished if they neglect their duties, the great majority of them are not only extremely ignorant but altogether incapable of acquiring any sense of responsibility; indeed, we remember to have heard an infirmary nurse, who was compelled to rely upon pauper help, say that her best aids were the imbeciles. Surely the remark, made in all seriousness and without any intentional irony, is the severest condemnation of the system. There is no general hospital in Falmouth; therefore the infirmary gets its proportion of acute cases, and in the winter it is crowded. Nor must it ever be forgotten that the so-called chronic cases, paralysis, old age, and debility, are precisely those which require constant attention from a skilled nurse, and here there is not even the untrained attendant at night. We hope in time to see the old and unsuitable buildings condemned, and new infirmaries with all modern appliances constructed, but these reforms, however necessary, are less urgent than the removal of the abuse of pauper nursing, and the provision of an adequate staff of night and day nurses.

MEDICAL AID ASSOCIATIONS.

The following advertisement from the *Portsmouth Evening News* is worthy of some comment:—"Agents wanted to push a first class medical aid, with insurance combined; special terms; security required." From the appearance of such advertisements in the public press, it is to be feared that the wretched system of cheap medical practice through the agency of joint stock companies is on the increase in this country, and is largely assisted by the impecunious condition of many members of the profession, who are glad to seize upon any means, however derogatory, of gaining a livelihood. Looking at the numbers crowding every year into the profession of medicine, and to the fact that for the last twelve years the ratio of medical practitioners per 1,000 of the population has steadily increased; that at the same time the charitable medical relief supplied in our large towns has continued to assume larger and larger proportions, is it surprising that the struggle for existence generally within the ranks of the profession has become annually more and more keen? Speculators of a certain class have shown themselves fully alive to these facts, and hence the rapidity with which medical aid associations have sprung up during the last few years. It will be seen in the above advertisement that "insurance" is mentioned as being one of the objects of the company in need of agents, but from its wording it seems probable that the insurance is probably quite subordinate to the medical aid, and is only used to disguise the real objects; the tendency now seems to be nearly always "medical aid with insurance combined," instead of the old "insurance with medical aid combined:" a difference which, although to some it may appear trivial, is by no means unimportant, for it must not be forgotten that for many years past the latter has been regularly furnished by nearly every club and benefit society in the country, but the former is quite a recent creation. How this growing evil is to be combated it is difficult to say; the General Medical Council will not interfere, and indeed it is difficult to see how it could do so when it is remembered that in many cases it is the extreme poverty of the medical practitioner which induces him to accept such an appointment. In the case of trades unions evils of this kind have been put down by systems of boycotting, but that is a double-edged weapon, subject to great abuse, and one which will hardly be able to adapt itself to the needs of a learned profession. Probably the only true remedy will be a lessening in the number of the candidates annually seeking to enter the profession, coupled with a diminution of the enormous amount of gratuitous medical relief given annually throughout the country.

WORKHOUSE INFIRMARY NURSING.

A paper on indoor medical relief, especially as it refers to nursing, was read by Dr. Sheen at the South Wales and Monmouthshire Conference in 1892. Dr. Sheen is well qualified to speak with authority on this subject, as he has been struggling for many years to introduce trained nursing in the Cardiff Workhouse Hospital, and at last he has succeeded. The workhouse hospital in Cardiff has its staff of trained nurses under a superintendent: it is also a training school for probationers, and has a resident medical officer; the work is carried on in a building that contrasts most favourably with many other houses dealing with as large a number of sick paupers. The arguments advanced by Dr. Sheen in favour of trained nurses for workhouse nursing are such as must be familiar to the readers of the British Medical Journal. There is nothing new to be said on the matter, but the saying of it must be repeated over and over again until it reaches the deafest ears. Dr. Sheen quotes from the admirable suggestions issued by the Local Government Board in 1864; these suggestions appear over the signatures of some of the leading medical authorities of the day, and they are incorporated in the documents issued by the Board. They advise the sick nursing of the poor on the same lines as in a voluntary hospital, the separate building, the trained nurses, the resident medical officer, the classification of the sick, and he sums up with the pertinent remark, "How far are these suggestions carried out—or, rather, how far are they not carried out?" We think that the reports that have been appearing in our columns will furnish the answer that, with a few notable exceptions, as far as the country houses are in question, those suggestions might have never been made. But another question seems to arise out of this first question, and that is, what are the powers of the Local Government Board? Take the Education Department. A school is reported by the inspector as insanitary, or overcrowded, or understaffed. The Department says, Put your house in order or the grant shall be stopped; and that this is no empty threat some school managers have found to their cost. Again, the Lunacy Commissioners are dissatisfied with the condition of an asylum. They have means at their disposal of bringing that place into harmony with their requirements. The same may be said of the management of the prisons. But come to the workhouses; and, in spite of suggestions, regulations, and an elaborate system of inspection, all the evils of fifty years ago are to be found in very many provincial workhouses. Again we ask, why is it?

TENURE OF OFFICE OF CLUB SURGEONS.

An answer was given in the pages of the British Medical Journal a short time ago to the effect that, where the rules of a Foresters' court stated that the "surgeon should hold office during the pleasure of the court," a reasonable notice might still be claimed on either side. It would appear that our correspondent brought his case before the Medical Defence Union, who took the opinion of their solicitors, and also consulted counsel on the strict legal force of the words "during the pleasure of the court." The decision given by the legal advisers of the Medical Defence Union was that, where the tenure of the surgeon was "during the pleasure of the court," no notice need be given on either side. This is a very important subject, as many club surgeons hold their appointments on such a tenure; but there can be little doubt that few of them are aware of the precarious nature of their position; nay, more, it is equally certain that the clubs themselves are unaware of the legal force of the words they have placed in their rules, for it is nearly always customary for these societies to give a notice—usually three months—before terminating their agreement with

the surgeon. Indeed, it is not improbable that these bodies would be the first to alter the wording of their rules if this is the true legal rendering of the words above quoted, for the sudden throwing up of his appointment by a club surgeon would be more disastrous to a sick benefit club than any sudden dismissal would be likely to be to the surgeon himself. It is difficult to conceive the position such a club would be in, if their surgeon were suddenly, without notice, to vacate his post, leaving numerous sick patients to shift for themselves, and find as they best might another medical attendant; and it is very hard to believe that under such circumstances a court of law would allow the club surgeon to recover the fraction of his salary due since his last payment; yet, if the above be the law, he could most certainly recover it, for it is not to be supposed for a moment that he would be bound to give a notice before vacating his appointment, if the club could dismiss him from it without notice. It is to be regretted that the opinion given by the legal advisers of the Medical Defence Union evidently refers to a case in which the surgeon was only elected for a year, that is, he had to be re-elected annually, although this re-election had always been a matter of form. It is obvious, if the surgeon's appointment naturally expired at the end of the year, the question of notice would not arise in the event of his not being re-elected to his office; so that this opinion cannot be considered entirely to settle the question. In the answer given in these columns the force of the words, "during the pleasure of the court," where there was no annual election, was alone considered, and it is on this point that an authoritative legal opinion is highly desirable.

THE NOTIFICATION OF TUBERCULOSIS.

IN a paper contributed to the Congress of Hygiene at Buda-Pesth, Dr. Cooper Pattin restates the desire often expressed by medical officers of health to have the tuberculoses included among the notifiable diseases. Apparently Dr. Pattin would use the notification as an introduction to the homes of consumptives, which he would enter as a missionary and teacher. "In brief, by coming into direct contact with the victim of one or other of the tuberculoses in his home, and by seeing the actual condition by which the said victim was surrounded, and with which he had to contend, the medical officer of health could be helpful at once to the victim of the tubercle bacillus and to the community around him." Dr. Pattin would "look forward to the provision of special hospitals for the treatment of cases occurring among the poor." The medical officer would "prevent the indiscriminate admixture of tuberculous with healthy children in the schools, and of tuberculous with healthy adults in factories and workshops. Observe I say 'indiscriminate admixture.' I am also assuming that this power of compelling, or at any rate advising, exclusion would be exercised with mellowed wisdom." The fact is that the occurrence of tuberculosis is so much influenced by the conditions of life that it is hardly fair to speak of it as a "preventable" disease, unless we are prepared to admit that all the misery which leads up to it is preventable also. Doubtless it is, and we may hope that sometime in the far future we shall all be happy and prosperous, and that tuberculosis will cease to trouble. The analogy with the ordinary infectious fevers is strained. We shut up sufferers from fever, but only for a time; if, however, sufferers from tuberculosis are to be isolated, it must in many cases be for life, and it is a very different matter excluding from his work a man who is quite able to earn his living and giving hospital treatment to one who is already prostrated with fever. In dealing with the question of tuberculosis we have to recognise the two great factors in its production, and we have to bear in mind that, however far we might get by rigorous personal isolation in the suppression of the disease, nothing but the continued and permanent enforcement of isolation could prevent its rising again so long as the misery, the want, the overcrowding, and the bad sanitation which encourage it remained; whereas every step taken to improve the sanitary conditions amid which the people live tends permanently to lessen the danger of tuberculosis.

RETREATS FOR INEBRIATES.

THE fourth annual report of the Inspector of Retreats for 1893 gives increasing encouragement to all who have at heart the curative treatment of diseased inebriates. The total number of patients admitted during the past three years has been 115 in 1891, 124 in 1892, and 129 in 1893. Dr. Hoffman presents a favourable account of the patients, whose general health had been satisfactory, no death having taken place. The opinions of the superintendents of three of the eight retreats under the Inebriates Act are quoted pretty fully. The head of the Fallowfield Home for Females at Manchester views inebriety as a physical disease, for which moral and spiritual influences are as needful as medical treatment; points out the urgent call for power to commit and compulsorily detain; and dwells on the deterrent effect of the present procedure with applicants for admission, on the number of women so applying, few of whom have followed up their application for reception. It is further stated that there are 6,000 women inebriates in prison who ought to be in a hospital undergoing therapeutic treatment. Rickmansworth (Dalrymple House) and Twickenham (High Shott House), both for gentlemen only, re-echo the cry for compulsion. The Fallowfield Retreat claims the reformation of nearly 50 per cent. of the female inmates, and the Dalrymple Home of nearly as many, while High Shott House's record discloses that one-half of the patients had been the subjects of some other disease besides alcoholism. The testimony of all is thus unanimous as to the wisdom of sending inebriates involuntarily into a genuine home, an opinion which has met with a remarkable affirmative response from the clergy and the great body of magistrates, metropolitan and provincial. The report proves that the quarter-of-a-century work of the Association's Inebriates Legislation Committee has borne good fruit.

FEMALE MEDICAL PRACTITIONERS IN TURKEY.

IN a recent number of the *Revue Bleue*, M. C. Chryssafides discusses the probable influence of female medical practitioners in Turkey with what appears to be a very full knowledge of the subject. He believes that the *iradé* of the Sultan, granting women permission to practise the healing art in the Ottoman Empire, will have a very far-reaching effect not only on the health of Turkish women, but on the political future of Turkey. Hitherto the doctor has been admitted to the harem only in cases of urgent necessity, and even then only on sufferance. Thus the medical treatment of Turkish women has been to a very large extent in the hands of what M. Chryssafides politely calls "female empirics." The recent *iradé* will, in all probability lead to a change amounting to a revolution in the medical government of the harem. The doctor has always been held in peculiar honour in the East, and in Turkey the Court physicians have always been, and still are, as M. Chryssafides shows by numerous "modern instances," persons of great political influence. Female practitioners are pretty sure, therefore, to play an important part in shaping the future of Turkey. Here, then, is an opening for our professional sisters, of which we hope they will take advantage. If she succeeds in curing the "Sick Man," and finally settling the Eastern Question, the medical woman will have more than justified her existence.

WILLS AND BEQUESTS.—The late Mr. T. C. Edwards Moss, M.P. for the Widnes Division of Lancashire, left by his will £1,000 for the charities of Widnes. The trustees have now resolved to invest the capital and employ the interest (aided by local charities) to the nursing of the sick of the district.

OLIVER WENDELL HOLMES.

Note of a Conversation with him, September 13th, 1893.

By ERNEST HART.

It was on a warm and brilliant morning of September of last year that I found myself standing under the pleasant garden verandah of Dr. Holmes's residence at Beverley Farms, near Boston. I had arrived on the previous day at the hub of the American universe, one of a party of visitors to the Pan-American Medical Congress at Washington. Congress had, at considerable outlay, with characteristic but fitful generosity, proffered to us the courtesy of a special "palace" train, provided with all the luxuries of munificent hospitality for a three weeks' tour, which included the principal cities of America, much of its finest scenery, and ended at the World's Fair at Chicago. On hearing through a mutual friend of my arrival at Boston, Dr. Holmes sent to me most graciously a message to the effect that "he should be glad to renew our old acquaintance, and to take his part in the reception which America was giving to the medical delegates of that Continent and of Great Britain, and he hoped I should not think an hour wasted in visiting an octogenarian in his quiet retreat." Such an invitation was more precious than the public receptions which were awaiting our party. As the well-remembered, gentle, and smiling face beamed a welcome when I stepped from the garden walk, I was keenly sensible of the privilege accorded to me, and rejoiced at the alertness, gaiety, and effusive kindness which bespoke the almost perpetual youth of his beloved personality. I saw with concern that his face bore severe marks of a recent bruise. "Yes," he said gaily, "like a true son of Adam, I have had a fall, but I am not yet driven out of my little paradise. My sight is dim; I was tempted to walk out alone, and I took insufficient heed unto my footsteps."

His Early Medical Friends.

And then he led me into his pleasant sanctum, a bright library filled with pictures and books, and bade me give him news of his friends in England, who, he said, were, alas, "growing year by year greater in distinction but fewer in number." Especially he spoke of Paget; of Gairdner, of Glasgow; and of Henry Thompson, who had been his host when he was last in England. And so we fell to talking of his visit to London in 1886, and of our meetings together and our mutual friends. He recalled a brilliant dinner party at the Reform Club on the night of his arrival, and spoke sympathetically of his host, Sir Morell Mackenzie, and some others of the party who were now no more, and of his daughter who had charge of him, whom also he had lost.

A Lesson in English.

Laughingly he reminded me of the "lesson in English" he had received in the hall. During dinner the talk had turned on provincial and American slang. Speaking of one of his latest poems, of which he recited a passage, he had said in banter that he did not think it his worst, adding: "I tried it on a dog, and the dog didn't die." He confessed that the "American language," about which there was some discussion, was not always identical with the English, but "it was none the worse for that." At any rate, he prided himself on talking pure English. As we came away and were taking leave, he said to me, *apropos* of an engagement for the next day, when he was coming to lunch with me: "But you must give me your ticket." In handing it to him I could not help saying: "We English call it a card." He answered: "I don't know that it is a better word." "I did not quite relish then," he said to me, "being taught English by a cockney on the first day of my arrival, and I have not forgotten it; but you see I bear no malice."

Robert Browning.

Then he spoke of Browning, who was of the party, and whom he compared to "Ben Jonson come back," but who did not always "take enough pains to make his meaning clear." Of his personality and of his pleasure in meeting him he spoke with warm appreciation, but he added that "There was a little tinge of resulting disillusion if not disappointment; there was something of the *bourgeois* in his talk—nothing aristocratic; a grand specimen of a middle-class Englishman, whose inspiration was loftier than his bearing."

I quote these precise phrases from my tablet, for early in our talk he had said "we may never meet again, and you are to carry my greetings to English friends, and if you like to make a note it will not disturb me." Following my notes I find that next he spoke again of his early medical studies in Europe.

A Student in Paris.

"It was in the days of Louis Philippe," he said, "in 1833-35, that I followed the classes of Louis, who was the loadstone of all the young American students, and there I first met Gairdner, of Glasgow, with whom I still sometimes correspond." "Bigelow," he said, "used to go over once a week to London to hear a lecture, but that was uniquely enterprising." He claimed for Bigelow, afterwards a medical professor in Boston, that he was one of the greatest of modern physicians, and that "a single lecture which he had published on 'Self-limited Disease' made 'a revolution in medicine.' It anticipated Gull's doctrine of 'Expectant Medicine,' and laid bare the secret of the temporary success but the self-evident folly and failure of homœopathy." When a practitioner boasted to him that he had "cured a disease," he would say: "Young man, take care; are you sure that you cured? if so, perhaps to-morrow you may kill, but then you will only say the patient died."

Walshe, Watson, and Paget.

Dr. Walshe, of University College, an early contemporary, he thought "the most philosophic of the physicians of our day," Watson "the most eloquent," but Paget "the most persuasive." "Persuasive," he added, "but not always convincing. He is truly the Gladstone of Medicine, and left often in my mind a doubt whether his reservations and distinctions might not to-morrow lead him to a variation from the conviction to which almost he persuaded you to-day. . . . . But that is the infirmity perhaps of my dim perception rather than of his circumspect intellect."

A Meeting with Gladstone: the Eve of the Home Rule Bill.

And then he fell to talking of Gladstone and of a memorable dinner at which we were both present at the house of a celebrated London Amphitryon of our profession—Sir Henry Thompson. It happened to fall on the day after the rejection by the House of Commons of the Home Rule Bill, about which there was much political excitement. The

guests were Mr. Gladstone, Mr. Morley, Sir James Paget, Robert Browning, David Masson (who had come expressly from Edinburgh), the judges Hannen and Butt, James Knowles, Alma Tadema, Holmes, and myself. "Yes," he said, "Gladstone was in great form that day—enormous form, notwithstanding all his cares of empire and troubles of State, and I was not myself. I had been sleepless all night with asthma and never lay down, and he at the very moment of that great crisis was gay and sprightly, impressive and full of exuberant energy, able to throw off all the cares of State."

De Senectute.

"You know, Gladstone and Tennyson, Darwin, Lincoln, and my humble self came into the world in the same year, for I am 84. I remember our talk *De Senectute*, and how we agreed, from our individual experience, and Paget confirmed it, that one of the signs of old age was inability to work in the evening. I reminded Gladstone of his nightly Parliamentary efforts, and I think he said 'that, Mr. Holmes, I most often feel as the recreation which sweetens work.' I am not sure those were the exact words, for my memory sometimes fails me, but that is my recollection of it."

"It was a great night. You remember I tried him all round; on trees he was *facile princeps*, although tree lore is one of my hobbies; of horses he professed to know little, except of Homeric horses, but he knew more than any of us, and corrected me as to the speed of Eclipse; he described to me the method of Cumberland jumping." Presently Holmes said, with a blush and a smile, "You are good not to remind me of my *faux pas*. I grow hot when I think of it. I made bold to ask him, *more Americano*, 'Are you not sorry at the rejection of the Home Rule Bill?' He threw his head back as if in thought, and answered in stately fashion: 'As a politician I am grieved; as a statesman I can hardly regret that this country will think yet again before it takes this great onward step; but I have no ultimate fear.' And then I pressed him indiscreetly. 'What do you intend? Shall you dissolve?' He bent his brow as if in reproof, and then his face lighted up with fun, and, with an almost boyish enjoyment of the position, he laughed. 'I can only answer to you as to an ambassadress who asked me the same question to-day, that, "Under similar circumstances, such things have been done."' And so the position was saved, and I have never been sure whether I ought to have been ashamed of or pleased with myself. But when I asked the question, I saw a look of concern on the faces of those around the table, as though I were skating on too thin ice."

And so with much and varied chat, and many reminiscences and criticisms of men and things, chiefly literary, and which would hardly be in place here—talk of Emerson ("pure transcendental") and Longfellow ("sweet and loving") and Whittier ("grand and stately") and Russell Lowell ("our most learned scholar on *belles lettres*") and Governor Andrews, and his other friends and contemporaries of the famous Saturday Club—the day wore on.

A Farewell.

Before I took my leave, with spontaneous and characteristic kindness he said: "I must try and give you something to remind you of to-day's pleasant talk, which made me feel younger again;" and, writing his name on his favourite edition of *The Autocrat of the Breakfast Table*: "That is for your dear wife, with my love; and tell her to come and see me on her way home from her Irish Village at Chicago." "And that," putting his autograph to a recently-composed Congregational hymn, "you must give to your sister-in-law, Mrs. Barnett, of Toynbee Hall, of whose good work I have heard." "And these," signing for me an engraved portrait of himself, taken in earlier days, and a recent photograph which is reproduced on this page, "these are for your Editor's room in the British Medical Journal office; and let it hang facing your desk. One day, when we are both gone, they may perhaps find a place on the walls of the house of the British Medical Association. Give my love to our English friends, and especially to our doctor friends, for I have passed the best years of my life as a doctor, and I hope they are not ashamed of me, and do not reproach me for choosing to tread the flowery path of very light literature," laughing, and repeating the phrase, "rather than chain myself for ever to the heavy tasks of medicine."

Of many other things that he said I may hope to give some note elsewhere, but especially I should like to record our talk on telepathy and psychological research, on which he made merry with quaint and gentle humour, telling me one of the most surprising stories of his experience concerning "the long arm of coincidence" which many might have called "thought transference." But this I must defer for another time if not another place.

And so I passed away from the presence of one of the most lovable and notable figures of modern medicine, a personality pregnant with the perfume of ripe and sweet old age, and leaving recollections of a rarely perspicuous and sympathetic insight, a playful and pungent but not caustic humour, and a pervasive benevolence which was far reaching but discriminating.

SMALL-POX AND VACCINATION IN ITALY.

Under the Law of 1888, the chief Public Health Act of Italy, special arrangements were made for the prevention of small-pox and the extension of vaccination. The kingdom was at that time suffering from a severe epidemic of the disease, the number of reported cases in 1888 being 64,070, and of deaths, 18,110.

The Law of 1888, which is that now in force, made vaccination compulsory; and required the local authorities to provide themselves with a continuous supply of suitable lymph. Children are required to be vaccinated before attaining the age of 6 months, unless they have already suffered from the disease or are in a state of health which renders vaccination unadvisable. In the latter case vaccination is made obligatory during the second year of life. It is further provided that no child shall be admitted to a public or private school, or to a charitable institution, or to a workshop, unless a certificate of vaccination can be produced. Further, at any time when a sanitary authority, in view of a threatened epidemic prevalence, makes a special order, no person can refuse to be vaccinated.

Owing to the difficulties and uncertainties attending the supply of lymph from private sources, a State Vaccine Institution was established at the end of 1888 in Rome. The arrangements are of a very complete kind, and the greatest care is exercised to prevent any contamination of the lymph, which is obtained from calves kept in the stables of the institute under the supervision of a special veterinary officer.

The calves are obtained through a contractor, and each animal is examined by the veterinary inspector of the Roman slaughter houses. After the lymph has been collected the calf is returned to the slaughter house, where it is killed and the organs submitted to careful examination. If any pathological conditions are found the vaccine is destroyed. As showing the care exercised in the first selection of the animals, it appears that of the 940 calves vaccinated, during the first five years, 1 only showed evidence of tuberculosis *post mortem*.

The first supply of lymph was obtained from the Vaccine Bureau in Brussels. In inoculating the animals great care is taken to clean and disinfect the skin, and after the incisions have been made the surface is again washed with sterilised water, and the vaccine applied with small ivory spatulæ. The lymph is taken between the fifth and sixth days. The pock is picked up by a long-bladed forceps, fixed on each side, and scraped away. The scrapings are placed in a sterilised glass capsule, from which they are transferred to a sterilised porcelain mortar, and rubbed up with sterilised glycerine. The emulsion thus obtained is strained through a metal sieve, and the filtrate preserved in yellow, glass-stoppered bottles, sealed with paraffin. The bottles are preserved in a room which is kept cool to a constant temperature of about 55° F. The lymph is not, as a rule, sent out for two or three weeks, as observations on man and animals, and bacteriological experiments have shown that fresh vaccine is constantly mixed with different organisms which are not all harmless, but are capable of producing the inflammatory complications sometimes observed after vaccination. After three or four weeks these microbes disappear, or become so much reduced in number and virulence that the inoculation with the lymph does not produce any of the complications mentioned. The lymph is sent out in tubes or between glass slides, to which it is transferred as required from the yellow glass bottles.

The total annual expenditure on the institute is 36,000 lire, this sum is raised *pro ratâ* by the provinces. During the first five years of its existence the institute furnished vaccine sufficient for the vaccination of 9,094,602 persons, or nearly a third of the total population of the kingdom. The general results as to efficiency of vaccination have been good. Primary vaccinations have given 97.30 per cent. of successes, and secondary vaccination 72.06 per cent. It is a striking testimony to the efficacy of the antiseptic precautions taken that of this immense number of persons vaccinated not one has suffered from any complications referable to the vaccination.

The diminution in the number of cases of small-pox in Italy since the enforcement of compulsory vaccination has been very remarkable, as is shown by the following table:

Number of Cases and of Deaths caused by Small-pox notified from 1888 to 1892.

Year.	Number of Cases Notified.	Number of Deaths.	Percentage.
1888	64,070	18,110	28.26
1889	39,730	13,416	33.76
1890	22,207	7,120	32.06
1891	13,840	2,728	19.71
1892	9,206	1,453	15.78

It will be seen that not only has there been a remarkable diminution in the number of cases of small-pox, but that the proportion of deaths among persons attacked has decreased to an even greater extent.

It is true that the general death-rate of the kingdom has fallen from 27.5 in 1888 to 25.6 in 1889, and 26.2 in 1892; and it is true, also, that the number of deaths from the principal zymotic diseases has shown a general tendency to diminish since the enforcement of the sanitary law of 1888, but the decline has been much more marked with small-pox than with any other zymotic disease. In the following table a number of deaths from certain diseases in 1887 and 1891 is contrasted.

Number of Deaths due to the Infectious Diseases Indicated.

Diseases.	1887.	1891.	Number in 1891 to 1887.
Small-pox	16,249	2,915	17.94
Measles	23,768	13,345	56.15
Scarlet fever	14,631	7,291	49.82
Diphtheria	24,677	11,691	47.37
Typhoid fever	27,373	18,833	68.80
Malarial fever	21,033	18,372	87.34
Puerperal fever	2,304	1,612	69.97
Total	130,095	74,057	—

Satisfactory as is the decline in the mortality from scarlet fever and diphtheria, which may be put down to improved methods of ordinary sanitation (isolation, disinfection, etc.), it will be seen that the diminution in the small-pox mortality is very much greater, and can only be attributed to the systematic enforcement of efficient vaccination throughout the kingdom of Italy.

PAY PATIENTS AT ST. THOMAS'S HOSPITAL.

An interesting question has been raised on the above subject by an English correspondent in Yokohama, who sends us the following advertisement extracted from the *Overland Mail* of June 8th:

ST. THOMAS'S HOSPITAL.

Paying Patients' Department.

Persons of Both Sexes are Admissible.

For full particulars apply to the Resident Medical Officer, either personally, at 12 o'clock, or by letter, at St. Thomas's Home, Palace Road, Lambeth.

Terms, including medical treatment, nursing, and board, 8s. a day.

Special cases excepted.

This he contrasts with the "business card" of a certain so-called "dispensary," where advice and medicine are offered for 4d., on which we had occasion to comment with some severity at the same date.[1] Our correspondent asks whether the action of the corporate body, in advertising the services of their hospital at 8s. a day, is not the same in kind, and still worse in degree, as compared with the action of the individual in advertising his services at 4d. the visit. We are informed by one who knows all the circumstances of the transaction at St. Thomas's that the system of paying wards was instituted by the late Treasurer and the governors without any co-operation of the staff or medical school, and that "the home" is not in any way connected with the latter; nor do the patients receive the services of any members of the staff, but are looked after by a resident officer, who is a kind of house-physician and house-surgeon, superintended by the patient's own private medical man, if there be one. We are assured that the advertisement is not issued by the authorities of the hospital, so that they hold themselves free from responsibility for it; but we must say that, if so, its heading "St. Thomas's Hospital" is somewhat misleading, and also that the clause, "Terms, including medical treatment," is possibly also misleading, since, if we understand right, the patient has in most cases to pay his own medical attendant.

We submit that this matter is one well worth the mature consideration of the authorities of the hospital, and that it emphasises the opinion we expressed in the British Medical Journal of September 22nd, when commenting on the scheme for pay wards at the Great Northern Hospital, that it is inexpedient to mix up such pay departments with a "charity." But in the present instance a still graver question is involved, namely, the honesty and truth of the advertisement itself. Everyone reading it would infer that it is issued by, and on the responsibility of, the authorities of the hospital; that the department to which it refers is part of the hospital; that the terms mentioned cover, in all

[1] See a paragraph headed "The Petty Tradesmen," British Medical Journal, June 9th, 1894, p. 1281.

ordinary cases, the total expense; and we are sure that all non-professional persons would expect to be attended by members of the hospital staff. If all these inferences are the reverse of the fact the advertisement should certainly be altered, allowing that the institution is one which ought to be advertised at all; but that, again, is a very serious question. The rules of both of our great Colleges are stringent against all medical advertising for profit. This institution is certainly a commercial undertaking, intended to bring in a profit. The profit, we believe, is taken by the governors of St. Thomas's Hospital. Does that fact justify them in a system of advertising which would imperil the diploma of the resident medical officer if he issued the advertisements and took the profit? We had rather pronounce no opinion of our own on this question, but it is one on which the judgment of one or both of the combined Colleges might be asked.

In any case the system, as we said in the article above referred to, is one much to be deprecated, and one which cannot too soon be brought to an end. Such a mixture of charity and commerce is unnatural, and sure to lead to difficulty.

We need hardly add that in saying so much we have no wish whatever to reflect on the motives of any of the persons concerned in the system. It was no doubt devised in good faith, with a view of at once relieving the finances of the hospital, and providing for the want of pay hospitals, which was then much felt in London. But it would be much better to collect the money which the hospital may need by the usual public appeals: and pay hospitals, if they are wanted, will be sure to spring up in response to the demand in the usual way of commerce.

THE BERI-BERI OUTBREAK AT DUBLIN.

THERE have been further cases of beri-beri and additional deaths from the disease prevailing at the Richmond Lunatic Asylum in Dublin. The total cases now number 149, and the deaths 17. Dr. Conolly Norman observes that the attack comes on so insidiously, and some of the cases are so slight and easily overlooked, that it is possible others may have escaped notice. The cases have been visited by several medical men who have lived in Eastern countries. Among these are Surgeon-Lieutenant-Colonel Adye Curran and Deputy-Surgeon General C. Joynt. The principal medical officer for Ireland, Surgeon-General Colohan, has sent Surgeon-Lieutenant-Colonel Barry, and Surgeon-Major Rhodes to see the cases. They have treated the disease in the East, and they have pointed out certain clinical particulars in which these cases differ from Oriental beri-beri. Dr. Norman thinks that these may be due to different climatic conditions, or to the different incidence of the disease in the sane and the insane.

The Board of Governors met on October 9th, and Dr. Norman then reported that the micro-pathological and bacteriological aspects of the disease were being investigated by Dr. O. Sullivan and Professor J. A. Scott. No cases of the affection appear to have previously occurred in these islands save in the persons of foreign sailors arriving from Oriental ports. Such cases have occurred at Greenwich and Newcastle, but the disease did not establish itself in those places. Beri-beri does not appear to be personally contagious, as in the case of small-pox or scarlatina, and Dr. Patrick Manson says that he has never known a medical man to be attacked. In Japan beri-beri abates with the onset of cold weather in October, and we are glad to learn that already the new cases at Dublin are less numerous than they were.

Dr. Norman called attention to the fact that he thought the site bad, and he pointed to the existence of endemic dysentery as an indication in this direction. He urged the erection of temporary buildings to relieve overcrowding and to isolate the cases.

The report of Dr. W. G. Smith and Mr. Thornley Stoker, to which we have already adverted, was also read. A suggestion that the cases should be sent to some of the general hospitals was negatived, and it was finally resolved to put up temporary buildings at a cost of £5,000 or £6,000.

In the account of this outbreak which appeared last week, "bad blood" should have been printed "bad food."

OPENING OF THE MEDICAL SCHOOLS:
INTRODUCTORY ADDRESSES.

MEATH HOSPITAL, DUBLIN.

THE ETHICS OF OPERATIVE SURGERY.

By Sir WILLIAM STOKES, Ch.M., F.R.C.S.I.,
Surgeon in Ordinary to Her Majesty the Queen in Ireland; Surgeon to the Hospital, etc.

AFTER some preliminary observations, Sir WILLIAM STOKES said:

The student—a severe, but, on the whole, just critic—is well aware of the truth embodied in the old German adage, *Raste ich, roste ich*, "If I rest, I rust," and soon appreciates at their true value those who, wrapped in a threadbare cloak of self-sufficiency, foolishly isolate themselves from their fellow labourers and refuse to read the signs of the times or to be influenced by the progressive spirit of the age. As fellow students, teacher and student should work together and give and receive from each other both impulse and inspiration. A peculiar responsibility devolves on a teacher in these countries. Belonging, as he does, to a great, widespread, and ever-extending empire, that embraces nationalities in every part of the habitable globe, he has a duty that belongs to the teacher of no other country; and, as our illustrious Graves observed, "he exercises an influence without parallel or extent, having opportunities of benefiting or injuring his fellow men that are incalculably great."

It has been my lot on various occasions to point out the giant strides in operative surgery that have been the outcome of the great revolution in the treatment of wounds initiated by Pasteur and Lister, and it will always be among the happiest recollections of my life that I was among those who first systematically and formally adopted Listerian antiseptic practice in Dublin. If anything depreciatory of antisepsis could be said, it might be that in the minds of some zealous operators it may have had a tendency to beget an overweening confidence in the powers of our art. The result has been that the ethical principles which should always guide us in our operative work have at times, I think, been neglected, and operations undertaken that, in the present state of our knowledge, have, I fear, overleaped the pale of legitimate surgery. I allude more particularly to such procedures as pulmonary resection in cases of tuberculosis of the lung, transplantation of bones and periosteum from the lower animals for osteogenetic purposes, chiselling away projections of the bodies of the vertebræ for the relief of anterior pressure on the cord in cases of fracture with displacement of those bones. Such procedures are fraught with dangers which are so insuperable and over which antisepsis can exercise such little influence in their final results as to render them, at present at all events, unjustifiable.

Among other cases, too, in which I think of late years the *nimia diligentia chirurgiæ* has been unduly developed, I would mention some forms of intestinal obstruction for which laparotomy has, with some surgeons, become almost the routine practice. Of course, if there is clear evidence of mechanical obstruction, as, for example, in volvulus, intussusception, or obstructions from adhesions and adventitious formations resulting from peritoneal inflammation or new growths, the indications for laparotomy are comparatively clear and distinct. But the case is different when the obstruction is due to other causes, for example, to defective nerve power, more particularly when it depends on senile debility, or a paralytic condition depending on certain local inflammations such as ileus and appendicitis. I do not deny that there has been a very large proportion of recoveries from operations performed under these conditions, but I have a very strong suspicion, one almost approaching conviction, that a very considerable number of them would have had an equally good, or perhaps better, chance of recovery without the operation at all. On this subject Mr. Jonathan Hutchinson, one of the most thoughtful and philosophical of existing surgeons, expresses his opinion that "if ever it should become the common practice in intestinal obstruction cases to operate early and with-

out attempting relief by other means, the fatality of this class of cases as a whole would be greatly increased."

Another instance I would adduce, in which the ethical principles that should guide us in our operative work have been overlooked—I allude to the operative treatment of microcephalic idiocy. The deficiency of brain power in many of these cases is believed to be due to a premature closing of the sutures and fontanelles, and, as a result of this, space is not given for a sufficient development and growth of the brain. To relieve this condition and give room for the brain to develop, it has been proposed by Lannelongue to perform either a linear or a circular craniotomy, or a *craniotomie à lambeaux*. Lannelongue, in 1891, published a series of 25 cases of craniotomy performed on children from 8 months to 12 years of age, when only one death intervened. The results, immediate as well as remote, were alleged to be most favourable, especially as regards improvement in intelligence. In consequence of this very surprising result, the operation was promptly repeated by various surgeons in Europe and America, but, alas, with very different results, and the suspicion soon became unavoidable that the continuance of such success was not to be counted on; in fact, that the colours in the original picture were of somewhat too roseate a tint. Professor Jacobi, in the able address he delivered at the last International Medical Congress in Rome, sounded a warning note in reference to this procedure. He pointed out how many-sided is the etiology of the sad condition of microcephalic idiocy, and that although insufficient cranial development may sometimes be a determining factor in arresting healthy brain growth, yet that such a condition is but one out of many others that predispose to mental deficiency. This is not the place to discuss the etiology of idiocy, but I may mention that in the address I have already alluded to, no fewer than eighteen different pathological conditions associated with it were enumerated, in not one of which could any form of craniotomy or craniectomy have possibly proved of the slightest advantage.

At the meeting of the German Surgical Society in Berlin last April Tillmanns of Leipzig read a communication on craniectomy in microcephalus. He is unfavourably disposed to the operation, chiefly on the ground that in microcephalic heads there is almost always a congenital malformation of the brain which is uninfluenced by any abnormality in the calvaria. These changes, as Professor Fraser and other observers have pointed out, are not confined to the brain alone, but are found affecting the whole of the central nervous system—in truth, the developmental changes are so profound in the microcephalic condition that no closure of sutures or opening of sutures could influence them in any way. The sutures and fontenelles are, in Tillmanns's experience, normally developed in this condition. It is only then, in the very rare cases of microcephalus, with premature closure of them, that craniectomy could have any possible standpoint, and on two such cases Tillmanns operated. The results were not encouraging. In the first case, that of a child aged 1 year and 9 months, no improvement was observed; and in the second case, also of a child aged 2½ years, convulsions supervened some weeks after the operation and the patient died. Again, have there been no cases of microcephalus with premature ossification of the sutures and fontanelles in which there was the reverse of mental deficiency? Sir Walter Scott afforded, it is said, an example of this condition; and one trembles on thinking what the world might have lost had some enterprising and too zealous operator performed a *craniotomie à lambeaux* on him in his early childhood.

But let it not be considered that I take too pessimistic a view of the situation—far from it. What I do think is that a sufficient discrimination of the suitable cases is not made, and cannot be made until our power of discriminating more accurately the various etiological factors connected with mental deficiency is increased.

The question as to what constitutes justification in dealing with cancerous growths in an operative way is ever present and surrounded with difficulty. Excision may, on the one hand, bring relief from suffering, prolongation or even saving of life; but, on the other hand, it may mean a fatal and disastrous stimulus to the morbid process. Success or failure very largely depends on the period at which operative interference is undertaken, and excisions for cancer made during the early stages of its development are far more likely to be attended with subsequent immunity than at a later period. It has, therefore, been held, and I think rightly held, that a more severe operation is justified in the earlier than in the later stages—that is to say, that for the smaller developments of cancer the larger operations should be performed, and *vice versâ*; the surgeon in the latter case limiting his actions to the narrowest bounds, as, for example, in fungating tumours of the breast, and extensive cancer of the tongue, palate, and jaws.

In the latter the ethical problem has to be solved as to whether we are ever justified in performing an operation when the chances of a permanently good result are not possible. In our attempts to solve this we should allow ourselves to be influenced by two considerations only, as my late colleague in the Richmond Hospital, Mr. Robert Adams, used to say, the first and foremost being the welfare of the patient, the other the credit of surgery. Our principal object, and one of our highest aspirations should be that these two, which ought to be indissolubly united, should never be separated in our practice.

I have already spoken of those cases of cancer in which operations for their supposed cure at times are, in my opinion, wrongly undertaken, and hopes held out of recovery which only too often prove delusive. In such cases the disease is no longer a local one. It has crossed the frontier, so to speak, and taken up an impregnable position, from which, like a upas tree, it diffuses its malign influence far and wide. But if the fatal progress be checked in time a different result may be anticipated. This is not the occasion to enter into any clinical details, but I could adduce many instances of cancer of the tongue, jaws, breast, rectum, and other organs, where free excision done at an early stage has been attended with distinct and permanent relief.

If in the case of certain forms of bowel obstruction, of cancer, of appendicitis, of microcephalus, and of other conditions I might indicate, there has been of late too great a readiness to resort to operative measures, let us consider for a moment the conditions in which surgeons at times do not resort to them with sufficient alacrity. First among these I would mention membranous croup and diphtheria. On the subject of the therapeutic value of tracheotomy in such cases there is, as many here are aware, very great divergence of opinion among surgical authorities; some maintaining that tracheotomy is distinctly contraindicated, while others have swung the pendulum as far as it can go the other side, and hold that "the surgeon who would stand by and see a child die of suffocation in diphtheria without intubating or opening the trachea is unfit to practise his art." Without going so far as to endorse this somewhat exaggerated statement, I cannot but be of the opinion that those who oppose the operation in these cases are unmindful of the causes of death, which are exhaustion, sepsis, and imperfect oxygenation, and that an opening into the trachea not only in most cases promptly relieves the first and third of these, but enables one to remove the false membrane, teeming with bacilli and steeped with toxin. The fact that the mortality of the operation is very great should not deter one from performing it. It rather furnishes an argument to me, at all events, in favour of operating, if possible, at an earlier period than is usually done: before, namely, exhaustion becomes extreme, and the system hopelessly saturated with septic agencies.

Another instance in which early operative interference is imperatively called for is that of strangulated hernia. Now, there is little difference of opinion on this subject, but in the earlier periods of my professional career it was different, and I have on more than one occasion, yielding to the advice of those more experienced than myself at the time, had to regret having postponed operative interference in these cases; whereas, especially since the introduction of antiseptic surgery, that "brilliant victory," as the noble President of the British Association (the Marquis of Salisbury, K.G.) recently termed it at Oxford, I cannot call to mind a single instance of failure I have had, or witnessed, when the strangulation was recent and the operator capable of performing this delicate exercise of our art with ordinary dexterity. When these conditions were not fulfilled, and especially the latter, a very different and calamitous record might be given.

Another instance in which surgical procrastination is, in

my opinion, much to be deprecated is in the case of purulent pleural effusions. My belief is that the routine treatment by simple paracentesis is, in the majority of instances, unlikely to be attended with any permanent good result, and that if this treatment alone be adopted or followed, not only will there be, as a rule, a rapid reaccumulation of fluid, but time will be given by the delay for changes to occur which will militate strongly against success being obtained after any more radical method of treatment is adopted, such as free drainage and thorough irrigation, or excision of ribs, as recommended by Esthlander.

It was extremely interesting as well as gratifying to me to learn that recently, in the Medical Section of the International Medical Congress in Rome, the performance of multiple costal resection in cases of purulent pleural effusions was strongly advocated as a primary operation. Many present here to-day are aware that this practice has been for several years advocated and practised in numerous instances, and with gratifying results, by Sir Philip C. Smyly and myself.

These are a few out of many instances I might mention in which a too precipitate or too tardy surgical operative interference is equally to be deprecated; under such circumstances, leading to results which are often as disheartening as they are calamitous and damaging to the reputation of surgery as a science and art. One of the chief objects and advantages of clinical study is to learn not only the best time to operate, but also how to discriminate the cases in which by operation reasonable hopes of permanent recovery may be entertained; those in which temporary relief may be obtained; and, lastly, those in which the surgeon should distinctly decline to undertake any active operative measure. To do this with success, and to acquire even a limited knowledge of a science which so frequently presents problems to solve, than which none are more complex, more difficult, or of greater import, involving, as they do, the stupendous issues of life or death, requires not only great natural aptitude, but also a lifetime of constant, unremitting, and bitter toil.

For our professional education I should like to see a system adopted analogous to that of the Arts course at the universities, namely, that of keeping terms either by examination or by lectures. Two by examination should only be required as obligatory on all—one at the end of the second, and the other (the final) at the termination of the fourth year. By this method those who felt they could make more rapid and genuine progress by reading and clinical observation would not have to complain of having to attend so many systematic courses of lectures. On the other hand, those who considered they would derive more advantage from lectures would be freed from the necessity of passing more than the moderation and final examinations.

I should be the last person to say anything in disparagement of the General Medical Council and its work. It has, without doubt, effected a vast amount of good, and deservedly earned the esteem and respect of the profession and the public, but in making the preliminary training the last instead of their first consideration a great error was committed. Had that mistake not been made the present curriculum would not have been so crowded, and students not have been brought into the unhappy condition which Mr. Greig Smith, speaking recently at Bristol, aptly compared to that of a Strassburg goose, fattened and crammed until not a healthy but a diseased condition is produced. The excess of the number of topics examined on, which number is increased every year, has the disastrous effect of causing a neglect of subjects which, having regard to the modern developments of surgery, are more than ever essential—I mean anatomy, physiology, and practical operative surgery. Nothing could be more deplorable than the arrangement that the study of the two former subjects should practically cease at the end of the second year of professional study. Our predecessors, who required a high standard of knowledge of these subjects at the final examination, were wiser in their generation than their successors. What I have termed the modern developments of surgery loudly demand a reconsideration of the present position in this respect, for there are none of the recent advances in cerebral, thoracic, or abdominal surgery that have not been the direct outcome of improvement in our knowledge of these sciences.

To appreciate the merits of these operations, therefore, and still more to perform them with hope of success, it is not merely desirable but essential that a much greater weight should be given to the study of anatomy, physiology, and practical operative surgery than at present is the case. But under existing circumstances this is impossible. By a recent unwise ordinance of the General Medical Council the period of pupilage has been extended to five years, and in my opinion a greater blunder was never made. The main argument that has been brought forward in favour of lengthening the period of pupilage is that an extended period is the rule or custom in many other countries, and that, as we should not be behind our neighbours, the same arrangement should hold good here. But, in answer to such rubbish, it may be asked, Do the sick poor in these countries get better, more skilful, or more cheerfully offered medical and surgical aid than they have hitherto got here, or are the duties that devolve on the local medical officers discharged more conscientiously? I speak not from mere hearsay, but from considerable personal knowledge, and I say unhesitatingly that the Poor-law medical officers of Ireland and the practitioners generally throughout the United Kingdom are not merely equal, but in the great majority of instances are more highly qualified and have higher professional attainments, than the corresponding members of our profession in France, Spain, Italy, and Scandinavia.

It seems to me that the outcome of most modern changes in medical education is in the direction of making students read not few books well, but many books badly. I can speak with some confidence on this subject after a long experience as an examiner both here and in Oxford, and I have satisfied myself over and over again that the failure of a large proportion of candidates to answer up to the required standard was due not to want of diligence and honest conscientious work on their part, but simply to brain exhaustion from attempting to overload it with facts which were believed to be essential.

But the chief objection that might reasonably be urged against such a system is that it promotes inaccuracy and superficiality, two things than which nothing could be more injurious, in truth fatal, to the best interests not alone of the individual, but to the science which is the work of our lives and our daily toil. What I should like to see and hope to see is a lightening of the curriculum by assigning some of the topics I have mentioned to ante-professional education, and having others (such as ophthalmology, aural surgery, mental disease, and hygiene) made the subjects of post-graduate study. Such changes would admit of a curtailment of the period of pupilage, and afford a longer time for the study of anatomy, physiology, and practical operative surgery; opportunity also would be afforded for a more efficient study of sanitary science or public medicine.

OPENING OF THE WINTER SESSION AT EDINBURGH.

The University and extra-academical classes in medicine were resumed for the winter session on October 9th. For the most part the various teachers proceeded at once to the work of their course. A few gave a more general introductory lecture. Thus Professor Rutherford discoursed on the methods of physiological study, referring to lectures, tutorial teaching (which he believed often degenerated to what was called "grinding"), and practical work. Professor T. R. Fraser gave a brief outline of the history of medicine, and discussed some points of the present day medical curriculum. Sir Thomas Grainger Stewart referred to the progress of medical science as seen in a decreasing mortality (Edinburgh was as low as 10 per 1,000 the other week), lower death-rate from phthisis and better modes of treating it, the diminution of typhoid, the disappearance of certain diseases, the diminished severity of epidemics, the growing value of the antitoxin treatment of diphtheria.

Wills and Bequests.—The late Mrs. Stephens of Rochampton, Norfolk, and Paris, has by her will bequeathed £1,000 to the Norwich Hospital, and £1,000 to the Hospital for Women, Soho Square.

OBITUARY.

OLIVER WENDELL HOLMES, M.D.,

Emeritus Professor of Anatomy and Physiology, University of Harvard.

His Career as a Physician.

By the death of Oliver Wendell Holmes, which occurred at Boston, U.S., on October 7th, the Muses and Hygieia, the austerer goddess of the healing art, are placed in mourning. The end came so peacefully that death, in sending the inevitable message to the genial old man, might seem to have remembered the prayer of Mrs. Barbauld:

Say not Good Night, but in some brighter clime
Bid me Good Morning.



The praise of Wendell Holmes, the writer, the charming poet, the inimitable *causeur*, the delightful humorist whose wit *circum præcordia ludit*, is in the mouths of all men; his niche in the Temple of Letters needs no stone of our fashion ing to complete it. The splendour of his literary fame, however, has somewhat dazzled the eyes of his more recent contemporaries to the excellence of the work which in his earlier days he did for his profession and for medical science. Any work done by Wendell Holmes was sure to be brilliant, but it is a striking proof of the versatility of his powers that his scientific work was as solid as if he had been the dullest Dryasdust that ever dissected the muscles of the back or counted the markings on the different members of the pediculus family. In a medical journal it is fitting that this aspect of Wendell Holmes's many-sided genius—which has, as was natural, received only imperfect recognition from most of our contemporaries—should be chiefly dwelt upon.

Oliver Wendell Holmes was born at Cambridge, Massachusetts, on August 29th, 1809. His father was the Rev. Abiel Holmes, pastor of the "First Church" in Cambridge, and author of the *Annals of America*, himself the son of Dr. David Holmes, who had served as captain in the French and Indian wars, and afterwards as a surgeon in the Revolutionary Army. Wendell Holmes traced his descent on his father's side to Thomas Holmes, a lawyer of Gray's Inn, London; and on the mother's side to Evart Jansen Wendell, who emigrated from East Friesland in 1645. In a poem addressed to his cousin Wendell Phillips, Holmes alludes to their common Dutch ancestry in the following lines:

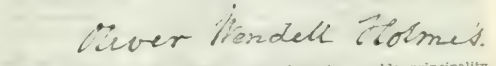
> Our ancestors were dwellers beside the Zuyder Zee;
> Both Grotius and Erasmus were countrymen of we,
> And Vondel was our namesake, though he spelt it with a V.

In short Wendell Holmes, as might be guessed from more than one passage of his writings, came of just the kind of stock which he describes in the *Autocrat of the Breakfast Table:*

> What do I mean by a man of family? Four or five generations of gentlemen and gentlewomen. Among them a Member of His Majesty's Council for the Province, a Governor or so, one or two Doctors of Divinity, a Member of Congress not later than the time of top boots with tassels. ..... I go—always other things being equal—for the man that inherits family traditions and the cumulative humanities of at least three or four generations. Above all things, as a child, he should have tumbled about in a library. All men are afraid of books that have not handled them from infancy.

It may be added that he was born in just such a gambrel-roofed house—(for a definition of "gambrel-roofed" the reader should refer to the *Parson Turell's Legacy* rather than to the dictionary) — as he speaks of in the *Poet at the Breakfast Table:*

> It was a great happiness to have been born in an old house haunted by such recollections, with harmless ghosts walking its corridors, with fields of waving grass and trees and singing birds, and that vast territory of four or five acres around it, to give a child the sense that he was born to a noble principality



Oliver's first teacher was "Ma'am Prentiss," a motherly old dame who ruled her little flock with a long willow rod that reached quite across the schoolroom, "reminding rather than chastening," to quote the words of her distinguished pupil. At another school at Cambridgeford, where he spent

five years, he had Richard Henry Dana and Margaret Fuller among his schoolmates. In this particular phase in his evolution, he seems to have been very much as other boys. He says: "I was moderately studious and very fond of reading stories, which I sometimes did in school hours. I was fond also of whispering, and my desk bore sad witness to my passion for whittling. For these misdemeanours I sometimes had a visitation from the ferule." After a further year of schooling at Andover, he entered Harvard, where, after a distinguished career, he graduated in Arts in 1829. Among his contemporaries at Harvard were Charles Sumner, Wendell Phillips, John Lothrop Motley, George Ticknor, and several others who afterwards rose to distinction in literature or politics.

It was while at College that the future "Autocrat," in his own words, "first tasted the intoxicating pleasures of authorship."

> A college periodical, conducted by friends of mine, still undergraduates, tempted me into print, and there is no form of lead poisoning which more rapidly and thoroughly pervades the blood and bones and marrow than that which reaches the young author through mental contact with type metal. *Qui a bu, boira*—he who has once been a drinker will drink again—says the French proverb. So the man or woman who has tasted type is sure to return to his old indulgence sooner or later. In that fatal year I had my first attack of author's lead poisoning, and I have never got quite rid of it from that day to this.

Holmes's contributions to the periodical in question were chiefly in verse, and he was recognised as the poet of his class.

After taking his degree in Arts he studied law for a year; but not finding Coke upon Littleton to his taste, he took up medicine. Speaking of this change of plan, he says: "What decided me to give up law and apply myself to medicine I can hardly say; but I had from the first looked upon my law studies as an experiment. At any rate, I made the change, and soon found myself introduced to new scenes and new companionships. I can scarcely credit my memory when I recall the first impressions produced upon me by sights afterwards became so familiar that they could no more disturb a pulse beat than the commonest of everyday experiences. The skeleton, hung aloft like a gibbeted criminal, looked grimly at me as I entered the room devoted to the students of the school I had joined; just as the fleshless figure of Time, with the hour-glass and scythe, used to glare upon me in my childhood from the *New England Primer*. The white faces at the hospital soon found their reflection in my own cheeks, which lost their colour as I looked at them. All this had to pass away in a little time. I had chosen my profession, and must meet it in all its aspects, until they lost their power over my sensibility."

After a long visit to Europe, during which he worked hard in the hospitals of Paris and Edinburgh, he returned to Harvard and received the degree of M.D. from his Alma Mater in 1836. In 1839 he was appointed Professor of Anatomy and Physiology in Dartmouth College, a post which he resigned soon after his marriage in 1840. He then settled in practice in Boston, lecturing, however, during the summer months in the Berkshire Medical School at Pittsfield, Massachusetts. In 1847 he succeeded Dr. Warren in the Chair of Anatomy and Physiology at Harvard, still continuing to practise his profession, and withal finding time not only for the wooing of the Muse but for lecturing to "lyceum assemblies."

In 1857, on the foundation of the *Atlantic Monthly*, with Russell Lowell as editor, Holmes began the series of "Breakfast Table" papers on which his literary fame mainly rests. At the "Breakfast" given in honour of his seventieth birthday, at which nearly all the most distinguished men of letters in the United States were present, Mr. W. D. Howells stated that "it was Oliver Wendell Holmes who not only named but who made the *Atlantic*." Many of the essays from his pen which appeared in that periodical were afterwards republished in book form under the title of *Soundings from the Atlantic*.

Of his poems (*Songs in Many Keys, The Iron Gate, Before the Curfew, etc.*) and of his novels (*Elsie Venner, The Guardian Angel*, and *A Mortal Antipathy*) we have not space to say more than that they all display the graceful felicity and distinction of style, agility of thought, and playfulness of fancy which are his most striking characteristics as a writer. It is his medical rather than his "belletristic"—if we may use a word with which Mr. Andrew Lang has enriched our language—writings which concern us here.

In 1838 he gained the Boylston Prize by a dissertation on intermittent fever, and he subsequently won two more of these rewards. In 1842 he made a vigorous attack on the Hahnemannian heresy in *Homœopathy and its Kindred Delusions*, which is still well worth reading. In 1843 he wrote an essay entitled *Puerperal Fever a Private Pestilence*, which is his most valuable contribution to medical science. This paper was read before the Boston Society for Medical Improvement on February 13th, 1843, and was published by request of the Society in the *New England Journal of Medicine and Surgery* for April of the same year. In this essay Wendell Holmes formulated the following conclusions, based on his own experience in obstetrical practice:

1. A physician holding himself in readiness to attend cases of midwifery should never take any active part in the *post-mortem* examination of cases of puerperal fever.
2. If a physician is present at such autopsies, he should use thorough ablution, change every article of dress, and allow twenty-four hours or more to elapse before attending to any case of midwifery. It may be well to extend the same caution to cases of simple peritonitis.
3. Similar precautions should be taken after the autopsy or surgical treatment of cases of erysipelas, if the physician is obliged to unite such offices with his obstetrical duties, which is in the highest degree inexpedient.
4. On the occurrence of a single case of puerperal fever in his practice, the physician is bound to consider the next female he attends in labour, unless some weeks at least have elapsed, as in danger of being infected by him, and it is his duty to take every precaution to diminish her risk of disease and death.
5. If within a short period two cases of puerperal fever happen close to each other, in the practice of the same physician, the disease not existing or prevailing in the neighbourhood, he would do wisely to relinquish his obstetrical practice for at least one month, and endeavour to free himself by every available means from any noxious influence he may carry about with him.
6. The occurrence of three or more closely connected cases, in the practice of one individual, no others existing in the neighbourhood, and no other sufficient cause being alleged for the coincidence, is *prima facie* evidence that he is the vehicle of contagion.
7. It is the duty of the physician to take every precaution that the disease shall not be introduced by nurses or other assistants, by making proper inquiries concerning them, and giving timely warning of every suspected source of danger.
8. Whatever indulgence may be granted to those who have heretofore been the ignorant causes of so much misery, the time has come when the existence of a *private pestilence* in the sphere of a single physician should be looked upon not as a misfortune but a crime; and in the knowledge of such occurrences, the duties of the practitioner to his profession should give way to his paramount obligations to society.

It may, therefore, with justice be claimed for Holmes that he was the pioneer in the field of antiseptic midwifery in which Semmelweis afterwards did such splendid work. It may be added that Holmes came in for his full share of the ridicule and abuse with which the medical profession has so often rewarded the preacher of a new truth. More fortunate than Semmelweis, however, Holmes could afford to despise the outcry which followed the publication of his paper. It was reprinted with some additions in 1855 and again in 1883 and 1892. Among his other medico-scientific writings may be mentioned *Currents and Counter-Current in Medical Science* (1861), *Border Lines of Knowledge* (1862), *Mechanism in Thought and Morals* (1871), *Physiology of Versification and the Harmonies of Organic Life*,[1] and several scattered lectures and addresses. He was specially interested in optics and microscopy, and in vol. iv of the *Proceedings* of the American Academy there is a very interesting paper by him on Reflex Vision. He also suggested some practical improvements in the microscope.

What Holmes was as a professor cannot be told better than in the words of President Eliot, of Harvard, at the congratulatory "Breakfast" already referred to. He said:

> It seems to me that it is my duty to remind all these poets, essayists, and storytellers who are gathered here, that the main work of our friend's life has been of an altogether different nature. I know him as the Professor of Anatomy and Physiology in the Medical School of Harvard University for the last thirty-two years, and I know him to-day as one of the most active and hardworking of our lecturers. Some of you, gentlemen, I observe, are lecturers by profession, at least, during the winter months. Dr. Holmes delivers four lectures every week for eight months of the year. I am sure the lecturers by profession will understand that this task requires an extraordinary amount of physical and mental vigour. And I congratulate our friend on the weekly demonstration of that vigour which he gives in our medical school. Most of you, perhaps, have the notion that Dr. Holmes chiefly enjoys a pretty couplet, a beautiful verse, an elegant sentence. It has fallen to me to observe that he has other great enjoyments. I never heard any other mortal exhibit such enthusiasm over an ele-

[1] *Boston Medical and Surgical Journal* of January 7th, 1875.

gant dissection. And, perhaps, you think it is with the pen that Dr. Holmes is chiefly skilful. I assure you that he is equally skilful with scalpel and microscope. And I think that none of us can understand the meaning and scope of Dr. Holmes's writing unless we have observed that the daily work of his life has been to study and teach a natural science—the noble science of anatomy. It is his to know with absolute exactness the form of every bone in this wonderful body of ours, the course of every artery and vein and nerve, the form and function of every muscle; and not only to know it, but to describe it with a fascinating precision and enthusiasm. When I read his writings I find the traces of this life-work of his in every page. There are three thousand men scattered through New England at this moment who will remember Dr. Holmes through their lives, and transmit to their children the memory of him as student and teacher of exact science. And let us honour him to-day, not forgetting—they can never be forgotten—his poems and essays, as a noble representative of the profession of the scientific student and teacher.

Holmes resigned his chair in 1882, in order that he might give himself up entirely to literature. His last lecture, in which he reviewed his thirty-five years' connection with the school, was delivered on November 28th, 1882, and was the occasion of an affecting leave-taking between the master and his pupils. He gave a delightful address, full of happy sketches of the luminaries of medicine whom he had known. This address was published in full in the *Boston Medical and Surgical Journal*, December 7th, 1882.

He paid a visit of "a hundred days" to Europe in 1886, revisiting scenes seen half a century before, and reviving old impressions, petted by everybody but always unspoiled, with the keen wit of the humourist and the fresh enjoyment of a child. He continued writing to the end, and neither age, nor infirmity, nor bereavement could dim the brightness of his spiritual outlook, or stiffen his literary joints. His last work was an autobiography which, though incomplete, cannot fail to be most interesting. He retained his cheery optimism to the last, and obeyed the summons for which he had long held himself in readiness, writing *Finis* in his book of life, probably with a sigh of relief. He had long been suffering from asthma, and had been growing weaker for some time, but his death seems to have been quite unexpected by those about him. He died where he had spent the happiest hours of his life, and where he would doubtless have wished to die—in his study.

To few men can it have been given to lead a life so completely in accordance with his tastes as was the lot of Oliver Wendell Holmes. He never felt the bitterness of the struggle for bread; he was most happy in his family relations; he had troops of friends among the most distinguished of their time: he was beloved by thousands who had never seen his face or heard his voice. To him more perhaps than to any other writer the fairy godmother of literature of Macaulay's exquisite lines might have said:

> And if for some I keep a nobler place,
> I keep for none a happier than for thee.

FRANK VIGERS BUNCH, F.R.C.S.,

Surgical Registrar to University College Hospital.

We regret to have to record the death of Mr. Frank Vigers Bunch, Surgical Registrar to University College Hospital, who has fallen a victim to an attack of diphtheria contracted during the discharge of his duties. Mr. Bunch examined a child admitted to the hospital in the last stage of diphtheria, and very shortly afterwards developed the disease. His attack was of a very virulent type, tracheotomy was performed, but pneumonia supervened, and death occurred in the early morning of October 5th. This is the second officer which the hospital has lost within recent years from diphtheria, Dr. Cyril Jecks, Resident Medical Officer, having succumbed to the disease in 1890.

Mr. Bunch, who was born in 1869, was the second son of Dr. J. J. Bunch, of Wolverhampton. He received his early education at the Royal Naval College, Gosport, and at Charterhouse, and entered the Medical Faculty of University College in May, 1887. He became Assistant Demonstrator of Anatomy in 1889, and subsequently showed very marked aptitude as a student of clinical medicine and surgery. He won numerous College prizes, including the Filliter Exhibition in Pathology and the Atchison Scholarship in Surgery and Medicine. After holding the posts of House-Surgeon, of Ophthalmic Assistant, and Obstetric Assistant, he was at the beginning of the present year appointed Surgical Registrar. In November, 1893, he had passed the final examination for the F.R.C.S.Eng., although then too young to receive the diploma.

Although only 25 years of age at the time of his death, he had already shown himself to be the possessor of remarkable clinical acumen, and seemed, a correspondent who knew him personally writes, "to arrive at an appreciation of the nature of the case before him so rapidly and truly that it appeared to lookers on almost like an intuition rather than a reasoned weighing of *pros* and *cons*."

He was greatly beloved by his friends, and esteemed by all with whom his professional duties brought him into contact. He was buried at Finchley Cemetery on October 8th, and the funeral was attended by representatives of the hospital staff, numerous old fellow students, and many nurses.

WILLIAM JOSEPH LUNN, M.D.Munich, F.R.C.S.Eng.

We regret to have to report the death of Dr. W. J. Lunn, of Hull, which took place on October 5th, in his 80th year. He was educated at the old Kingston-upon-Hull College, and afterwards at Bishopton, Ripon. Having served his apprenticeship with his father, he entered the University of Edinburgh in 1835, and subsequently went to University College, London. He took the diplomas of M.R.C.S.Eng. and L.S.A. in 1837. He afterwards went to Munich, where in 1839 he took the M.D. degree, and in 1882 he was elected a Fellow of the Royal College of Surgeons. Dr. Lunn was Consulting Surgeon to the Hull General Infirmary, Honorary Local Secretary to the Royal Medical Benevolent College, and formerly was Surgeon to the Hull Borough Gaol.

HENRY M. MADGE, M.D.St.And., M.R.C.S.Eng.

We regret to have to record the death of Dr. H. M. Madge, which took place at St. Albans on October 3rd, in his 71st year. The deceased took the degree of M.D.St.And. in 1850, and also became a Member of the Royal College of Surgeons of England in the same year. He was a former Vice-President of the Medical Society of London and of the Obstetrical Society.

ENTRANCE SCHOLARSHIPS.

Charing Cross Hospital Medical School.—The Scholarships of 60 guineas, open to students of the Universities of Oxford and Cambridge, has been awarded to Mr. William Cecil Bosanquet, of New College, Oxford. The Entrance Scholarship of 120 guineas has been awarded to Mr. A. K. Taylor, and that of 60 guineas to Mr. Ernest Lewis Lilley.

St. Bartholomew's Hospital and College.—Award of Entrance Scholarships: The open scholarships, which were competed for on September 26th and following days, have been awarded as follows:—1. Senior Open Scholarship in Chemistry and Physics, value £75, Arthur L. Ormerod, B.A., New College, Oxford. 2. Senior Open Scholarship in Biology and Physiology, value £75, W. Langdon Brown, B.A., St. John's College, Cambridge. 3. Junior Open Scholarship in Biology, Chemistry, and Physics, value £150, F. C. Barrow and S. R. Scott (equal). 4. Preliminary Scientific Exhibition in Chemistry, Physics, and Biology, value £50, L. A. Walker. 5. Jeaffreson Exhibition in Classics and Mathematics, value £20, C. Ridout.

St. Mary's Hospital Medical School.—The Entrance Scholarships for 1894 have been awarded as follows:—Natural Science: J. J. Pierce, £105; C. W. Buckley, £52 10s.; W. A. Trumper, £52 10s.; H. J. Van Praagh, £26 5s. University: A. A. Bathe, M.A., £52 10s.; A. Graham Butler, B.A., £52 10s.

St. Thomas's Hospital Medical School.—The Entrance Scholarships for 1894 have been awarded as follows:—Science: J. Gaff, £150; H. R. Beale, £60. University: W. McDougall, £50.

The London Hospital Medical College.—The following are the results of the recent Examinations for Entrance Scholarships at this College: First Price Scholarship in Science, value £120, Mr. W. R. Dunstan; Second Price Scholarship in Human Anatomy and Physiology, open to students of Oxford and Cambridge Universities only, value £60, Mr. H. W. L. Barlow; Entrance Scholarship in Science, value £60, Mr. H. D. Pollard; Entrance Scholarship in Science, value £35, Mr. R. Howard.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 24th day of October next, at 2 o'clock in the afternoon.

September, 1894. FRANCIS FOWKE, *General Secretary*.

NOTICE OF QUARTERLY MEETING FOR 1894. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 24th, 1894.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election. FRANCIS FOWKE, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The opening meeting of the session of this District will be held at the Hackney Town Hall, Mare Street, on Thursday, October 18th, at 8.30 P.M. The chair will be taken by Dr. Leonard Sedgwick, President of the Branch. Mr. Frederick Treves will read a paper on "Some of the Present Aspects of Intestinal Disease." Visitors will be cordially welcomed.—H. E. POWELL, Honorary Secretary, Glenarm House, Upper Clapton.

NORTH OF IRELAND BRANCH.—The autumn meeting of this Branch will be held in the Museum, College Square North, Belfast, on Thursday, October 25th, at 4 P.M. Gentlemen who wish to read papers or bring any other business before the meeting, will kindly communicate as early as convenient with the Honorary Secretary, JOHN CAMPBELL, M.D., F.R.C.S., 21, Great Victoria Street, Belfast.

OXFORD AND DISTRICT BRANCH.—The next meeting of this Branch will be held at the Radcliffe Infirmary, on Friday, October 26th, at 3.15 P.M. Notice of papers, etc., should be sent to the Honorary Secretary, F. W. LEWIS MORGAN, 37, Broad Street, Oxford, as soon as possible.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.—The quarterly meeting of this District will be held at the Royal National Hospital for Consumption, Ventnor, Isle of Wight, on Thursday, October 25th, at 4 P.M., the President, Mr. Charles Meeres, in the Chair. Agenda: Papers. Exhibition of patients or of specimens. Adjourned discussion on Mr. Bullar's resolution. Consideration of letters, pamphlets, etc., from the Civil Rights Defence Committee, the Midwives' Registration Association, etc. The Honorary Secretary would be glad to receive immediate notice of papers to be read, or of other communications which it is intended to bring before the meeting.—ROBERT ROBERTSON, M.D., Honorary Secretary, Ventnor, I. W.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting of this District will be held at the County Hospital, Guildford, on Thursday, October 18th, at 4 P.M. The President of the South-Eastern Branch, Mr. J. Sidney Turner, will preside. Agenda:—(1) Minutes of Godalming meeting. (2) To decide where the next meeting shall be held, and to nominate a member to take the chair thereat. The following papers, etc., have been promised:—Dr. Mitchell Bruce: The Gouty Heart. Drs. Armand Ruffer and Plimmer: An Exhibition of Pathogenic and Chromogenic Micro-organisms. Dinner at the "White Lion" Hotel, Guildford, at 6 P.M.; charge 6s., exclusive of wine. All members of the South-Eastern Branch are entitled to attend, and introduce professional friends. Members desirous of exhibiting or reading notes of cases are invited to communicate at once with the Honorary Secretary, ALEX. HOPE WALKER, The Common, Cranleigh.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT.—A meeting of the above District will be held at St. Bartholomew's Hospital, Rochester, on Friday, October 26th, at 4 P.M. Mr. Prideaux Selby in the chair. The dinner will take place at the "Bull" Hotel, at 6.30 P.M. Charge 6s. 6d., exclusive of wine. To facilitate the arrangements, gentlemen who intend to dine are particularly requested to signify their intention to the chairman, Mr. Prideaux Selby, Teynham, Sittingbourne, not later than Tuesday, October 23rd. All members of the South-Eastern Branch are entitled to attend this meeting, and to introduce professional friends. Communications: Mr. St. G. C. Reid: Tinnitus Aurium. Dr. J. Dundas Grant: Disease of Antrum and Sinuses in relation to Purulent Nasal Catarrh. Mr. Ludford Cooper: Excision of the Tongue after Ligature of the Linguals in the Neck. Mr. Prideaux Selby: Notes on a Case of Abdominal Section for Peritoneal Pregnancy.—EDWARD GROUND, Honorary Secretary, of the District, 1, Ashford Road, Maidstone.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The autumn meeting of this Branch will be held in the Station Hotel, Stirling, on Tuesday, October 23rd, at 3 P.M. Members who may be willing to show cases or specimens are requested to inform the Secretary as soon as possible. Further notice will be sent to each member by circular.—C. J. LEWIS, Honorary Secretary, Sutherland House, Stirling.

STAFFORDSHIRE BRANCH.—The twenty-first annual general meeting of this Branch will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, October 25th, at 3.30 P.M. An address will be delivered by the President-elect, Dr. Charlesworth.—GEORGE REID, Honorary Secretary, Stafford.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—The annual meeting of this Branch will be held in Marischal College, Aberdeen, on Saturday, October 27th, at 1 P.M. Business:—Minutes, etc. Nominations. Ballot for the admission of Dr. G. G. Macdonald, 26, King Street, Aberdeen. Council's report for 1893-94. Treasurer's balance sheet. Election of President. Election of President elect. Election of two Honorary Secretaries. Election of Honorary Treasurer. Election of six members of Council (see Rule 8). Selection of place of next summer meeting. The annual dinner will be served in the Imperial Hotel, Stirling Street, Aberdeen, at 3 P.M., when the chair will be taken by the new President, Professor Stephenson. Tickets for dinner (exclusive of wine) 5s. each. There will be a hospital visit in the forenoon for such members as can attend at 11.30 A.M.—J. MACKENZIE BOOTH and C. THISELTON URQUHART, Honorary Secretaries, Union Street, Aberdeen.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held in the Council Chamber at the Municipal Buildings, Taunton, on Friday, October 26th, at 4.30 P.M. Professor Watson Cheyne, F.R.S., of King's College, London, will deliver an address at 5 o'clock on The Development of Modern Methods of Wound Treatment, upon which an interesting discussion may be expected. Members of the Bath and Bristol and the South Western Branches are invited to be present to form a conjoint meeting. Gentlemen wishing to bring forward communications and those intending to be at the dinner are requested to send early notice to the Honorary Secretary that he may make the necessary arrangements. Dinner (5s. a head exclusive of wine) will be served at the Castle Hotel at 7 o'clock, and tickets may be got at the bar of the hotel.—W. M. KELLY, Honorary Secretary, Taunton.

NORTH OF ENGLAND AND BORDER COUNTIES BRANCHES.—It has been decided to hold a conjoint meeting of the above Branches at Gilsland on Tuesday, October 30th, 1894. The meeting will commence at 3 P.M., and will be followed by a dinner. Members desirous of reading papers are requested to communicate with either of the Honorary Secretaries: G. E. WILLIAMSON, F.R.C.S., 8, Eldon Square, Newcastle-on-Tyne, North of England Branch; J. ALTHAM, M.B., Penrith, Border Counties Branch.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The autumn meeting will be held at Pontypool on Thursday, October 25th. Members desirous of reading papers, etc., are requested to send titles to one of us not later than October 10th.—A. SHEEN, M.D., Cardiff; D. ARTHUR DAVIES, M.B., Swansea.

NORTHERN COUNTIES BRANCH.—The autumn meeting of this Branch will be held within the Literary Institute, Nairn, on Wednesday, October 17th, at 11.30 A.M. Members wishing to make any communication are requested to inform the Secretary as soon as possible. Luncheon at King's Royal Hotel at 2 o'clock.—J. W. NORRIS MACKAY, Honorary Secretary, Elgin.

SOUTH MIDLAND BRANCH.

THE autumnal meeting of this Branch was held on October 4th, at Peterborough, ROWLAND H. COOMBS, M.D., Bedford, President of the Branch, in the chair.

Luncheon.—Twenty-four members and visitors were present, and, previously to the meeting, were entertained at luncheon by Dr. Thomas J. Walker at his private house.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—Mr. Leslie Winter Dryland, Northampton Infirmary, and Mr. Harry T. Wickham, Newport Pagnell, were elected new members of the Association and Branch.

Alteration of Rule.—In accordance with notice given at the

annual meeting, the Honorary Secretary proposed an alteration of Rule 3, by which the fresh members of the Committee of Management would be elected by the votes of the members present at the annual meeting, and not by the whole body of members.—Mr. Hemming (Kimbolton) supported the proposition; and Mr. Kinsey (Bedford) made some remarks considering that the Bedfordshire district of the Branch was not sufficiently represented on the Committee.—Dr. A. H. Jones (Northampton) pointed out that, if the election of fresh members took place every two years, the result would be that it would necessarily occur either always at Northampton, or never at Northampton, as the annual meeting is by the rules held there every alternate year.—Mr. W. H. Bull (Stony Stratford) proposed as an amendment that the whole subject be referred to the Committee at its next meeting, and that they report to the annual meeting.—The amendment was seconded by Mr. R. A. Milligan (Northampton).—The Hon. Secretary and Mr. Hemming then withdrew the original proposition, and Mr. Bull's amendment was carried as a substantive motion.

Abuses, etc., in the Profession.—Mr. R. A. Farrar (Stamford), in the absence of Dr. Wm. Newman, remarked on existing grievances in the profession, and on the best means of redressing them, concluding with the following resolution:—

That it is desirable that powers of discipline and internal control over the medical profession be obtained by the British Medical Association.

He referred to the action of the General Medical Council, and was seconded by Mr. Kinsey (Bedford) as a matter of form.—Dr. Jones (Northampton) considered this proposal was beyond the scope of the British Medical Association, but thought that somebody should undertake it, and suggested the Medical Defence Union. Mr. Hemming (Kimbolton) read a by-law of the Association relating to its powers, and stated that for this purpose a new Charter of Association would be required.—Dr. Walker (Peterborough) was of opinion that the British Medical Association was not the proper body to undertake such a duty, and proposed as an amendment:

That the subject be postponed indefinitely.

After some remarks by Mr. Kinsey, the amendment was seconded by Mr. Watkins (Lowcester), put to the meeting and carried, Mr. Farrar's resolution being lost.

Anderson Appeal Case.—A circular was read from Lord Stamford (with pamphlets) inviting subscriptions towards the Civil Rights Defence Committee in connection with the Anderson Appeal Case.—Mr. Kinsey explained the matter to the meeting. The circular was laid upon the table, and a few of the members attached their signatures and subscribed to the same, but great doubt was felt as to the probability of the desired result being obtained.

Penal Clauses of Medical Act.—A circular was also received from the Chairman of the Parliamentary Bills Committee, with report on the Amendment of the Penal Clauses of the Medical Acts. They were ordered to be acknowledged and to lie on the table, no further action being taken.

Cases.—Dr. Abel, house-surgeon of the Peterborough Infirmary, read for Dr. T. J. Walker a case of Injury to the Brain from Impaction of the Spout of an Oilcan, followed by recovery. Dr. Walter Colman, of the Hospital for Epileptics, Queen Square, London, then gave a minute and interesting description of the mental and physical condition of the patient at the present time, twelve months after the injury, and explained, by the aid of a skull, sections of brain, and diagrams the exact nature of the cerebral lesion. The patient was also shown to the members, and much interest was taken in the case.—Dr. A. C. Hartley (Bedford) read notes of a case of Double Abscess of the Mastoid Cells.—Dr. A. H. Jones (Northampton) read an account of a Fatal Case of Poisoning by Ammonia, with the result of the *post-mortem* examination.

Visit to Cathedral.—After the meeting the company was conducted over the Cathedral by Canon Clayton, and partook of tea and refreshments at his residence.

Votes of Thanks.—Cordial votes of thanks were passed to the governors and staff of the infirmary for the accommodation provided, to Dr. Walker and Canon Clayton for their kindness and hospitality, to the President for his conduct in the chair, and to the readers of cases, especially Dr. Walter Colman, for his elaborate and interesting exposition.

SPECIAL CORRESPONDENCE.

PARIS.

Anthropometry as the Criminal's Safeguard.—Cigarette Cramp.—A Doctor Punished for a False Certificate.—General News.

Anthropometry is not only useful in furnishing evidence against criminals, but also in their favour. A Frenchman arrested in London as an accomplice in a crime wrote to M. Bertillon, to ask him to furnish an *alibi* to the English authorities. This was done, the prisoner at the time the alleged offence was committed in London having been in Poissy Prison. At Berne the Anthropometrical Service is now in working order. M. Schertz, director of the Berne police force, arrested a woman for theft, who stated she had been several times condemned by the French courts. On M. Bertillon being applied to, he ascertained the truth of the statement, and received the photograph of the criminal, and anthropometrical data, with a complete physical description.

Cigarette cramp, so common in Spain, is making its appearance in France. It attacks those who roll the cigarette. After a few months of this kind of work the hands are obliged to give it up; the joints are painful, and it is with difficulty that the thumb is brought to touch the first finger.

Dr. Planet has paid dearly for being too good-natured. He has been sentenced to three months' imprisonment, and to pay a fine of £12, for giving a certificate to a naval officer under the following circumstances. In order to obtain leave of absence the latter told his commanding officer that he wished to go to Paris to see his dying father. He asked for an extension of leave on the ground that his father was still between life and death. Eight days more were granted, but the commanding officer's suspicions were aroused. An inquiry proved that the father had died two years before. The mother, ignorant of the inquiry that was instituted, but fearing that the son would be punished if the truth were known, asked Dr. Planet to write a certificate stating the dangerous condition of the truant's father. Dr. Planet's good nature overcame his honesty with the result already stated.

The Council of the Seine has authorised the organisation of a new *crèche*, which is to be named the Sadi Carnot Crèche; its inmates will vary from 8 days old to 3 years. It is in the midst of a poor densely populated neighbourhood, and is much needed.

In accordance with the advice of the Superior Health Council, the Minister of the Navy has decreed that the superior officers and army surgeons be called upon to notify epidemics when existing among their men.

In France the men refused in the army for not reaching the regulation height have increased from 6 to 13 per cent. from 1872 to 1889.

BERLIN.

Antitoxin Treatment of Diphtheria: a Public Appeal.—A Primer of Hygiene.—Workmen's Dinners.

The antitoxin treatment of diphtheria is the topic of the day. The children's hospital (Kaiser u. Kaiserin Friedrich-Kinder-Krankenhaus is its *short* and euphonious name) has published in the daily papers an appeal for subscriptions—signed, amongst others, by Rudolph Virchow, Skrzecska, and Siegmund—in which it is stated that, of 169 diphtheria patients treated in the hospital with antitoxin, all recovered, except those that came under treatment at an advanced stage of the disease; that in fact, the percentage of deaths had been reduced from 42 to 17, and that the results of protective inoculation performed on the sisters and brothers of the diphtheria patients had also been most satisfactory. It must be said, however, that here and there voices are heard warning against too enthusiastic hopes. It is said that a much longer period of observation must elapse before a final judgment on the treatment can be given, and that possibly the present cases of diphtheria are none of them of the severest type, and that it remains to be seen whether antitoxin will stand the test of one of the severe epidemics—the *foudroyant* cases, that carry off their victims in a few days.

The Imperial Institute of Public Health has just published a little book for the use of Government schools, etc., which, under the modest title of *Gesundheitsbüchlein*, or health booklet," gives in a popular form most valuable instruction on the all-important subject of hygiene. The book, in fact, is an admirably-illustrated science primer of a very useful kind.

Altogether there are various signs at present that the wish for hygienic surroundings and conditions of life is filtering through to the poorer classes in Germany. For instance, there may now be seen every midday in certain Berlin streets a tightly-closed vehicle, that calls at door after door of the workmen's houses to take in the workman's dinner and bring it fresh and hot to his place of work. The dish—a twin jar, hermetically closed—is provided for a trifling sum per year. What an improvement on the old plan!—the dinner brought half cold in a basin, tied up in a more or less dirty cloth by the wife (obliged thus to leave home and children); or where the distance from home was too great for this to be feasible, the unwholesome cheap dinner at the corner gin-shop, or "Destillation," as the Germans call it.

HONG KONG.

Opening of the Port.—Influenza or Dengue.—A Chinese Bacteriologist.

THE bubonic plague is declared officially to be over, and yesterday, September 3rd, 1894, the port was announced to be free from infection. No new cases have occurred for a week.

Influenza is daily becoming more prevalent, and the type is changing from that of respiratory catarrh to that of dengue.

The question of what to do with the most crowded part of Hong Kong is still under the discussion of the Legislative Council. The Government advisers recommend and insist upon total demolition by burning, and refuse to listen to the advice of the old residents and those capable of judging of the matter both scientifically and commercially. The fact is, both sides have lost their temper, and the bone of contention is to be sacrificed to satisfy local feeling. The bacillus is said to be 20 inches in the ground. This, though contradicted by all European medical men and foreign experts, is said to be the case by a Chinaman, who got a smattering of medicine at the local college, and who observed some of the medical men mounting specimens of plague blood. He put up a few himself, says he was the first to find it in the blood, and now the public, if not the Government here, are being informed by the local press that the district must be destroyed because the same individual makes this statement as to penetration for 20 inches. His specimens have been submitted to competent judges here, and proved to be what was expected, namely, not the plague bacillus, but small masses of micrococci, which have probably developed in the staining fluid he has been using. Still, any "port in a storm," and the Chinaman holds on, supported by the Chinese, who declare he is just as good a "doctor" as the Japanese, towards whom great jealousy exists at present. It is sad to see the press and Government led into such errors under such guidance.

MANCHESTER.

Opening of the Medical Session.—New Medical Buildings.—Annual Medical Dinner.

THE medical department of Owens College was opened on Wednesday, October 3rd. From the Principal's statement we learn that the number of students attending this department during the session 1893-94 was 405, and of these 195 have been preparing for the degree examinations of the Victoria University, and 36 for those of the University of London. As to the changes in the staff, Dr. Arthur Ransome has been appointed Professor of Public Health, and Dr. Paget Lecturer in Practical Hygiene, while the Chair of Zoology, vacant by the death of Professor Marshall, has been filled by Dr. J. Sydney Hickson.

The new medical buildings, now far towards completion, will be opened on November 6th next by his Grace the Duke of Devonshire, who is President of the College. Even at that period it is hardly expected that the buildings will be quite finished. This addition to the medical school will cost about £40,000, but only something over the half of this sum has so far been received. The Schorlemmer Laboratory of Organic Chemistry will, it is hoped, be opened for work at the beginning of next term.

At the opening of the class of physiology Professor Stirling gave an address on the life work of Professor Helmholtz, and showed not only what important contributions he had made to practical medicine, but also how the bent of his physiological studies ultimately led him to those studies in physics and mathematics which placed him at the head of the physicists and mathematicians of the century.

The annual medical dinner of the Owens College and Manchester Royal Infirmary was held in the Queen's Hotel on Friday, October 5th, Professor Young in the chair. There was a particularly large attendance of students, past and present, of practitioners, and members of the teaching staff.

LIVERPOOL.

Opening of the Session of the Medical Institution.—Presidential Address on the Arrest of Arterial Hæmorrhage.

THE opening meeting of the present session of the Liverpool Medical Institution took place on October 4th, when the President, Mr. Chauncy Puzey, F.R.C.S., delivered the customary inaugural address, which he prefaced by a few appropriate remarks with regard to the serious injury which lately befel Dr. Joseph Wiglesworth, and from which he has now happily all but recovered. The address was a retrospect dealing with a question that profoundly interested the surgical world during the ten years that preceded the year 1869, namely, the determination of the best method of controlling arterial hæmorrhage. The controversy was first between acupressure and the old-fashioned ligature, then between torsion and acupressure, and finally between the catgut ligature and torsion. Mr. Puzey traced the successive steps in a most interesting narrative, beginning with Professor Simpson's paper on the compression of arteries by needles, read before the Edinburgh Medical Society in December, 1859. One of the earliest operations in which the method was employed was performed by Mr. E. R. Bickersteth in the Liverpool Royal Infirmary two months later. The method, after enjoying considerable popularity for a time, was found to possess serious disadvantages: the needles were often difficult to apply, their presence interfered with the dressings, and occlusion was not always complete. Consequently it was already being dropped in favour of torsion, when the catgut ligature came into view.

Amongst other workers on the subject, the President said he was glad to have the opportunity of mentioning the fact that Dr. Rawdon, of Liverpool, took up the question of a soluble wire ligature. He experimented with magnesium wire, and demonstrated its absorption by animal tissues so conclusively that it was used by Mr. Bickersteth to secure the spermatic artery with success. In 1869 Professor Lister published his account of the antiseptic animal ligature, which up to that date had been tried only on the calf. Mr. Bickersteth had at that time two cases of aneurysm in his wards and he decided to employ the new ligature on them. This he did on April 6th, and had thus the honour of putting the capping stone to Professor Lister's experiments, and had the satisfaction of recording a few weeks later that both patients had left the infirmary well. Mr. Puzey said that he considered the animal ligature was the most important surgical invention of our time, for it had to be considered not only as a ligature but also as a buried suture.

The address was listened to by a large gathering of the members, and a cordial vote of thanks was moved and seconded by Mr. W. Mitchell Banks and Mr. C. B. Wilson, the former contributing some amusing personal recollections of the controversy between Simpson and Syme. The members were subsequently entertained at a smoking concert by the President, an excellent musical programme being rendered by several of the guests.

CORRESPONDENCE.

PROVINCIAL WORKHOUSE INFIRMARIES.

WAKEFIELD.

SIR,—It appears that your Commissioner has been described by Mr. Kennedy as an incompetent and untruthful person. I have not the faintest guess who your Commissioner may be, but I know perhaps as much even as Mr. Kennedy of his subject, and I beg to express my contrary opinion that the work you have taken up was grievously needed, and that the reports of your Commissioner are temperate in manner and reasonable in statement.

Speaking generally, the large workhouse infirmaries are fairly up to modern standards, yet even among these there are some which are defective, and many which need much improvement; on the other hand, many of them, such as the large workhouses of the Lancashire and Birmingham districts, are in excellent order. But to speak generally of the country unions, the very reverse is true, and the strictures of your Commissioner but mildly describe the state of many of them.

Where, as in a few fortunate instances, the ladies in a district visit the workhouse, the wards are brightened and the comforts of the inmates increased by their intervention, but such visitations are not usual, and too often are discouraged or positively forbidden by the master or guardians.

The masters, as a rule, are, I think, kindly men, often very kindly, but they have the ordinary failings of officials, and they are used to a certain routine and have never seen anything better; nor, for that matter, have the country guardians themselves. Hence guardians and master are satisfied if the floors are washed, the steps pipeclayed, and the regiments of books of entry in order for the inspector. It has always been my impression that a Poor-law inspector does not feel called upon to go beyond these books and the like redtapery of the office; if he do go beyond this and investigate the ward management and the infirmaries his reports must be systematically disregarded. I say this because I often have visited a workhouse soon after a Poor-law inspector, and have seen things which he must have loudly condemned: for instance, I saw two years ago in a country workhouse a woman in the third stage of general paralysis lying in a frowsy tumbled bed jammed in the corner of a gloomy, dreary, little room, and presenting four or five large open bedsores upon her body and limbs. She had no skilled nursing whatever. The medical officer, I suppose, was powerless to improve matters, but he ought to have insisted on the removal of the patient to the county asylum. This woman had been in the house for a long time. My visit happened soon after the visit of a Local Government Board inspector. This is but one out of many instances of the apparent uselessness of inspection as at present carried on.

Will the Local Government Board consent to the publication of the reports of the Commissioners in Lunacy, say, for the past ten years on the rural workhouses?—I am, etc.,

October 9th. EX-OFFICIAL.

P.S.—You are at liberty to communicate my name privately to any responsible person who desires to know it.

CYCLING AND ITS DANGERS.

SIR,—The abstract of the discussion on cycling in the French Academy will, no doubt, be interesting to a great number of practitioners in this country, and it would be of considerable practical utility to hear the opinions of those who, either as cyclists themselves, or as coming across accidents as described, have had opportunities of judging of these untoward consequences, especially as the pastime appears to be on the increase.

All cyclists will, I think, agree with M. Marey that bicycle riding has the advantage of requiring a minimum of muscular exertion over most gymnastics. This is certainly the case on good and level roads without a "head" wind, and when one does not indulge in "scorching." The tendency to produce a forward stoop of the body is an evil not so much due to the exercise as to the individual cyclist, there being no necessity for stooping, except when riding against a strong wind, if the height of the handles is properly regulated to that of the saddle.

Of much more importance than the stooping posture, but going with it to a certain extent, is the habit that some cyclists have, and especially beginners, of taking a deep inspiration and then holding the breath when ascending hills. This necessarily gives rise to a great increase in the intrathoracic blood pressure. The abuse described, for it can easily be avoided by practice, easily explains the danger of syncope in those suffering from diseases of the heart and of hæmoptysis in phthisical patients.

These accidents should not be any more liable to occur in cycling at moderate speed than in horse-riding, if the above-described habit was not indulged in. It would be interesting to learn if anyone had met with a case of right-sided valvular disease or dilatation occurring in a cyclist, as this is what would naturally be expected if the above theory is correct.—I am, etc.,

Stapleton, Brampton, Cumberland, Oct. 1st. THOMAS NORTH.

BERI-BERI IN THE PORT OF LONDON.

SIR,—With reference to the epidemic of beri-beri in a Dublin lunatic asylum, reported in the BRITISH MEDICAL JOURNAL of October 6th, it may be of interest to know that there was an outbreak of this disease amongst the Indian and African sailors on board the vessels in the London Docks towards the close of 1892. Several of these men on different ships were affected while the vessels were in dock. No English sailors had the disease. The weather was cold at the time—ordinary English winter weather—which shows that beri-beri is not a purely tropical or subtropical disease.

The native sailors are more crowded in their sleeping quarters than the Englishmen, and their diet is very different, being almost entirely vegetable, both of which differences may account for the native sailors alone being attacked by this disease.—I am, etc.,

C. STUART VINES,

Rochester, Sept. 9th. Late Surgeon, steamship *Oriental*.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A SURGEON-CAPTAIN, who expects to go abroad early next year, is desirous of exchanging with an officer having two years longer at home. Address—"Surgeon-Captain," care of Sir Charles McGrigor, Bart., and Co., 25, Charles Street, St. James's Square, London, S.W.

A SURGEON-MAJOR, with three years to complete tour, serving in a good district in India, desires to exchange home; any reasonable offer accepted. Address "Bona Fide," BRITISH MEDICAL JOURNAL Office.

THE NAVY.

FLEET-SURGEON ROBERT WALLER BIDDULPH, B.A., M.B., has been placed on the Retired List at his own request, October 4th. He was appointed Surgeon November 12th, 1870; Staff-Surgeon, October 8th, 1880; and Fleet-Surgeon, October 19th, 1893; Staff-Surgeon ALEXANDER GRIPPS has been appointed to Plymouth Hospital, October 22nd.

A Greenwich Hospital pension of £50 a year, for Fleet-Surgeons and Staff-Surgeons, is vacant by the death of Fleet-Surgeon R. C. Nutt.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN W. A. MORRIS is appointed to be Surgeon-Major, July 29th. He was appointed Surgeon-Captain, February 4th, 1882; served with the Burmese Expedition in 1886-87, was mentioned in despatches, and received the Frontier medal, with clasp.

INDIAN MEDICAL SERVICE.

IT is stated that Sir JOSEPH FAYRER has resigned the office of President of the Medical Board of the India Office. The appointment is worth £600 a year, and only officers of the Indian Medical Service are eligible.

Surgeon-Major JOSEPH HUNTER, M.B., Madras Establishment, has retired from the service, which he entered March 31st, 1876, attaining the rank of Surgeon-Major twelve years thereafter. He was in the Afghan war in 1880 with the Khyber Line Force, and has the medal for that campaign.

Surgeon-Lieutenant-Colonel W. H. GREGG, M.B., Bengal Establishment, is promoted to be Brigade-Surgeon-Lieutenant-Colonel from June 20th. His first commission dates from October 1st, 1869; that of Surgeon-Lieutenant-Colonel from October 1st, 1889. He served with the Lushai Expedition in 1871-72, and has the Frontier medal, with clasp.

Surgeon-Major PULTENEY WILLIAM DALZELL, M.B., Bengal Establishment, died at Sanday, Orkney, on September 29th, aged 37. He was appointed Surgeon March 31st, 1879, and Surgeon-Major twelve years therefrom.

MEDICO-LEGAL AND MEDICO-ETHICAL.

UNQUALIFIED PRACTICE IN SOUTH AFRICA.

FROM a report in the *Friend of the Free State and Bloemfontein Gazette* we learn that an action for libel, brought by a person who for some years had held himself out at Jagersfontein as a qualified practitioner, against a local apothecary for libel, has resulted in a verdict for the plaintiff; £1,000 damages were claimed, but the jury awarded £25 and costs, and the facts brought out in evidence were extremely damaging to the plaintiff. He was unable to produce a diploma, but in its place put in an old certificate that someone of his name (Bruce) had attended the necessary time at the Aberdeen Infirmary. The word "Doctor" had evidently been inserted over some erasure, and a few ink smudges and pieces of paper stuck about gave it a venerable appearance. Evidence was given by officials to the effect that the plaintiff had been repeatedly asked to take out his licence, but had not done so, and was not on the *Medical Register*. He had been convicted in February, 1894, and had promised to leave the town in a few weeks, and not to practise again. Letters were handed in, from which it appeared that the plaintiff had made some claim to be a graduate of the University of Edinburgh, but that the University authorities had stated that no one of the name had graduated in medicine at that university. This was in 1888, and the plaintiff seems to have been engaged in practising medicine ever since. The report concludes by stating that the plaintiff had left Jagersfontein. The case is a curious example of the need of an international and intercolonial understanding as to the validity and mutual recognition of medical diplomas and degrees.

SUBSTITUTE MIDWIFERY FEES.

WE have with much regret noted in the *Dundee Advertiser* of September 25th the report of an action instituted in the "small debt court" by Dr. Robert Miller, of Dundee, against Dr. Charles Moon, for the recovery of an alleged debt of one guinea, being the moieties of two fees, as the customary share of the amount for attendance as accoucheur in the absence of the family doctor. We note also with like regret the exceptionally strange course pursued by the plaintiff in objecting to the defendant being legally represented by his solicitor, on which the defendant at once determined to conduct his own case, and pleaded non-engagement by himself of the plaintiff in the cases in question. During the trial it was elicited that the patient had, in the absence of her usual attendant (the defendant), sent for the plaintiff, and subsequently tendered payment to him, which however, for some unexplained reason, he refused to accept. The court, therefore, consisting of three justices, unanimously absolved the defendant from all pecuniary liabilities in the case. Need we add that, in our opinion, a more ill-judged and indefensible proceeding against a professional brother could not well be.

THE COVENTRY PROVIDENT DISPENSARY.

WE have received the following communication:—

SIR,—We beg to call your attention to a matter which we believe to be of some importance to general practitioners, and to enter a protest against the insertion in the BRITISH MEDICAL JOURNAL of the enclosed advertisement. It is possible that you are not aware of the serious grounds of our complaint against the Coventry Dispensary. This institution was originally started by voluntary subscriptions to provide medical attendance for the poorer classes. As a charity it enjoyed the privilege of self-advertisement, and though by its overgrowth it inflicted serious loss on the medical men of the town, no protest was raised for many years, it being understood that well-to-do persons were not eligible for dispensary treatment. Two years ago, however, when the dispensary had more than half the population on its books, certain facts came to the knowledge of the profession in Coventry, the most important being, first, that well-to-do persons were being treated at the dispensary; secondly, that the dispensary staff had caused a rule to be made prohibiting them from meeting outside practitioners in consultation on dispensary cases. It was accordingly decided to approach the dispensary committee and to ask them to withdraw the obnoxious rule and to adopt the wage-limit system. The answer we received was a direct refusal, which was followed by a public announcement that the dispensary was open to all comers. The dispensary staff did not assist us in our effort at reform, but stated that they were in sympathy with the movement. They continue to hold their appointments, notwithstanding the fact that a leading medical organ has pronounced their position to be untenable.

Now, Sir, we feel that we may well despair of reform if an institution which is avowedly indifferent to the professional rights of medical men is allowed to make use of the BRITISH MEDICAL JOURNAL. We think the JOURNAL should refuse such advertisements, lest it appear to sanction what the bulk of the profession undoubtedly disapprove.—We are, Sir, yours truly,

MILNER MOORE.	WM. RICHARDSON RICE.
CHARLES WEBB ILIFFE.	THOMAS A. B. SODEN.
EDWARD PHILLIPS.	F. L. HARMAN BROWN.
F. FAULDER WHITE.	A. HAWLEY.

*** We have on previous occasions commented on the manner in which the dispensary is conducted, and have expressed the opinion that persons able to pay adequate fees should be kept out of the dispensary. Writing on the subject on April 15th, 1893, we added: "We are happy to see that assurances were given at the meeting that this end is really kept in view, and that as far as the managers could ascertain no such ineligible members had been admitted."

A "provident dispensary" which admits all comers without question of income at ordinary club fees, in this case we believe 4s. 4d. a year, is sailing under false colours, and is not an undertaking the advertisement of which would knowingly be admitted to the columns of the BRITISH MEDICAL JOURNAL.

CONSULTING AND GENERAL PRACTITIONERS.

M.B.—If, as affirmed by Mr. F., Dr. M. was informed that "M.B." was his wife's medical adviser, he (Dr. M.), in ignoring the family doctor, wittingly or otherwise disregarded a more or less important duty devolving upon him as consultant, and so far may, as suggested by our correspondent, be held to have "unduly strained (by omission of a special obligation) the relation of consultant to general medical practioner."

A LOCAL DIRECTORY.

BOURNEMOUTH.—With reference to our correspondent's remarks on the weekly insertion of the names, qualifications, and addresses of the various medical practitioners in the local newspaper, we would observe that they form part of a list which is practically a local directory, and as it apparently includes all the practitioners in the district, it can hardly conduce to unprofessional competition. The sectarian designation attached to one of the names should be brought to the notice of the Royal College of Physicians. In view of the provisions of the Medical Act, the General Medical Council would probably deem itself debarred from disciplinary action in this case.

LIABILITY FOR MEDICAL TREATMENT OF AN ILLEGITIMATE CHILD.

A. T. B.—The mother is bound to maintain her illegitimate child. She alone is liable for the medical account, and she cannot legally reclaim the amount from the putative father.

"CHANGING THE DR."

K. S.—The ill-judged note of Mr. H. needs no comment. With reference to the line of conduct pursued by our correspondent in the case, it was, under the circumstances related, in accord with the true ethical principle; it is, however, in such cases, judicious, and medico-ethically essential, that the superseding practitioner, ere determining to assume charge of the patient, should assure himself that the necessary intimation that his professional services were no longer required, has, *de facto*, been made to the superseded medical attendant (*vide Code*, chap. ii, sec. 5, rule 9.)

SHERBORNE.—In answer to T. R. A.'s lengthy communication, it may be well to note that while we hold him to be fully justified in assuming charge of the case, he was in our opinion, and especially under the exceptional circumstances related by the lady, too exacting in enjoining her to first obtain Dr. E.'s "permission." A simple intimation, in person or by note, that his services were no longer needed would have conformed to the rule of professional etiquette.

A DISSATISFIED PATIENT.

J. K. L. writes: A. and B. are two medical practitioners, residing in the same town. Some twelve months ago A. requested B. to attend a few of his cases whilst away for a holiday, among these being a patient, C. Since then B. has not heard or seen C. till a few days ago, when C. called at his surgery and requested him to take sole charge of her case, as she had not been attended by A. for more than three weeks, and did not intend consulting him again. Was B. acting rightly in taking over this case, C. stating at the time that if B. refused to treat her she would have to go elsewhere?

*** Before taking charge of the patient in question, B. should have ascertained from A. that C. had intimated to A., by note or otherwise, her intention to dispense with his professional services. Further, C.'s expressed intention to consult some other local practitioner in the event of B.'s refusal should not in any degree have influenced him to deviate from the well-known medico-ethical rule in such cases.

A CLUE MAP.

A MEMBER B.M.A. writes to us on notepaper which has printed on it near the address a small clue map of the neighbourhood, showing the position of his house in which he receives patients. He states that a medical practitioner in the same town has objected to the map as "advertising."

*** Although the appended sketch of the local street plan does not constitute medical advertising, its adoption by practitioners would nevertheless be an exceptional and, to our mind, a questionable proceeding—simulating, as it does, a well-known expedient which, though perfectly legitimate for traders, is contrary to the traditional custom and practice of the medical professfon, and is, moreover, under ordinary circumstances, unnecessary.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

EXAMINATION IN SANITARY SCIENCE.—The following candidates have satisfied the examiners in both parts of the examination for the Diploma in Public Health:

J. M. Atkinson, S. Bodger, J. G. E. Colby, J. H. C. Dalton, A. A. Fergusson, J. G. Gornall, J. C. Holderness, S. K. Nariman, S. J. Parker, W. E. Rielly, G. C. Stephen, J. McD. Tudge.

PHARMACOLOGY.—The Downing Professor (Dr. Bradbury) will give his inaugural lecture in the large Anatomy Theatre on Wednesday, October 24th, at 2.30 P.M. Demonstrations in materia medica and pharmacology will be given this term in the Downing Laboratory by Mr. Marshall, the assistant to the Professor.

ROYAL UNIVERSITY OF IRELAND.

SECOND EXAMINATION IN MEDICINE. Autumn, 1894.—The examiners have recommended that the following candidates be adjudged to have passed the above-mentioned examination:

Upper Pass.—J. J. Kinsella, Catholic University School of Medicine; O. E. McCutcheon, B.A., Queen's College, Belfast; R. R. McLean, Queen's College, Belfast; A. Montgomery, Queen's College, Belfast; L. Robinson, Catholic University School of Medicine, School of Physic, T.C.D., and Royal College of Science; G. Ross, Queen's College, Cork.

All the above candidates may present themselves for the further examination.

Pass.—A. Birmingham, Catholic University Medical School; W. J. Cousins, Queen's College, Belfast; T. F. Dillon, Queen's College, Cork; R. V. Donnellon, Catholic University School of Medicine; F. E. Dowling, Queen's College, Cork; P. J. England, Queen's College, Cork; D. Finnegan, Queen's College, Belfast; P. C. Geraghty, Queen's College, Galway; J. R. Gillespie, B.A., Queen's College, Belfast; J. Harvey, Queen's College, Belfast; B. P. Healy, B.A., Catholic University School of Medicine; T. F. Heas, Queen's College, Cork; M. Henry, Queen's College, Galway; G. A. Hicks, Queen's College, Belfast; A. Johnston, Queen's College, Belfast; W. G. Jordan, Queen's College, Belfast; J. Keogh, Catholic University School of Medicine; J. Lennon, Queen's College, Belfast; S. McCann, Catholic University School of Medicine; J. H. McComb, Queen's College, Belfast; C. E. McDade, B.A., Queen's College, Belfast; P. C. McKeee, Queen's College, Belfast; T. McKeogh, Queen's College, Galway; M. McSherry, Queen's College, Belfast; J. H. Moag, Queen's College, Belfast; H. J. Monypeny, Queen's College, Belfast; C. J. Moore, Catholic University School of Medicine; R. Officer, Queen's College, Belfast; P. E. O'Flaherty, Queen's College, Galway; W. Porter, Queen's College, Belfast; J. Ritchie, Queen's College, Belfast; Frances O. Sirr, B.A., Medical College for Women and Surgeons' Hall, Edinburgh; J. Sloan, Queen's College, Galway; Lucy E. Smith, Queen's College, Cork; J. H. Stewart, Queen's College, Belfast; R. W. G. Stewart, Queen's College, Belfast; R. B. Threlfall, Queen's College, Belfast.

FIRST EXAMINATION IN MEDICINE. Autumn, 1894.—The examiners have recommended that the following candidates be adjudged to have passed the above-mentioned examination:

H. Anderson, B.A., Queen's College, Galway; J. H. Barbour, Queen's College, Belfast; W. R. Beatty, Queen's College, Belfast; E. V. Cantillon, Queen's College, Cork; A. W. Crawford, Queen's College, Belfast; J. J. Cronin, Queen's College, Cork; H. Donnelly, Queen's College, Belfast; J. C. Franklin, Queen's College, Cork; G. H. Grills, Queen's College, Belfast; W. B. Heagerty, Queen's College, Cork; G. M. Keating, University College, Dublin; T. J. Little, University College, Dublin; J. J. Lynch, Queen's College, Cork; M. Lyons, Queen's College, Cork; D. McCay, Queen's College, Cork; H. McMaster, Queen's College, Belfast; J. Martin, Queen's College, Belfast; A. Murphy, Queen's College, Cork; T. Nyhan, Queen's College, Cork; T. F. O'Keefe, Queen's College, Cork; J. F. O'Mahony, Queen's College, Cork; J. J. O'Mahony, Queen's College, Cork; J. J. O'Sullivan, Queen's College, Cork; W. A. Rice, Queen's College, Belfast; J. Richardson, Queen's College, Cork; H. Ryan, Queen's College, Galway; J. Shea, Queen's College, Cork; J. Twohig, Queen's College, Cork; W. F. Waugh, Queen's College, Cork; S. H. Woods, University College, Dublin.

The following candidates may present themselves for honours in the subjects mentioned after their names:

A. W. Crawford, Experimental Physics; G. H. Grills, Botany, Zoology, Experimental Physics; G. M. Keating, Botany, Zoology, Chemistry, Experimental Physics; T. J. Little, Botany, Zoology, Chemistry; J. J. Lynch, Experimental Physics; D. McCay, Botany, Chemistry, Experimental Physics; W. A. Rice, Botany, Zoology, Experimental Physics; H. Ryan, Zoology, Chemistry, Experimental Physics; J. Twohig, Chemistry, Zoology; W. F. Waugh, Botany; S. H. Woods, Botany, Zoology, Chemistry, and Experimental Physics.

EXAMINATION FOR DEGREES OF M.B., B.Ch., B.A.O. Autumn, 1894. The examiners have recommended that the following candidates be adjudged to have passed the above-mentioned examination:

Upper Pass.—W. J. Dargan, Catholic University School of Medicine; *J. Dundon, Queen's College, Cork; G. J. Johnston, M.A., Trinity College, Dublin; P. N. O'G. Lalor, Catholic University School of Medicine; W. J. Niblock, Queen's College, Belfast; C. J. O'Meara, B.A., Queen's College, Cork; *R. Watt, Queen's College, Belfast.

Candidates marked thus (*) may present themselves for the further examination for Honours.

Pass.—D. Barry, Queen's College, Cork; A. G. Caldwell, Queen's College, Belfast; D. E. Cantillon, Queen's College, Cork; J. G. Clokey, Queen's College, Belfast; J. Cunningham, Queen's College, Belfast; Emily E. Eberle, M.A., Royal College of Surgeons, Dublin; Jane S. Galletly, London School of Medicine for Women and Royal Free Hospital; J. Graham, Queen's College, Belfast; Edith B. Joel, Durham University College of Medicine; T. D. Luke, Queen's College, Belfast; S. H. R. Montgomery, Queen's College, Belfast; J. O'Callaghan, Queen's College, Cork; D. O'Donnell, Queen's College, Cork; M. Sisk, Queen's College, Cork; J. R. Thompson, B.A., Queen's College, Belfast.

SOCIETY OF APOTHECARIES OF LONDON.

PRIMARY EXAMINATION. Part II. October, 1894.—The following candidates passed in:

Anatomy and Physiology.—P. Bayley, Birmingham; J. B. Cautley, St. Bartholomew's Hospital; H. S. Dobie, Manchester; A. W. H. Edgelow, Charing Cross Hospital; J. M. Edwards, Charing Cross Hospital; W. R. Flint, St. Mary's Hospital; E. M. Jennings, Edinburgh; J. G. Owen, Charing Cross Hospital; J. F. Porter, London Hospital; J. H. Powell, King's College; J. A. Preston, Belfast; H. T. L. Roberts, St. Mary's Hospital; R. C. Rumbelow, Middlesex Hospital, R. J. Stilwell, Westminster Hospital; C. H. St. M. W. Toke, St. George's Hospital; J. H. Wilson, Middlesex Hospital; C. C. Worts, Guy's Hospital.

Anatomy.—G. F. M. Clarke, Charing Cross Hospital; J. Freeman, Bristol; S. H. Greene, Charing Cross Hospital; O. Hall, Durham; J. R. McKinlay, Westminster; H. M. Waller, St. Bartholomew's Hospital.

Physiology.—W. Allen, Birmingham; W. J. Bebb, Charing Cross Hospital; H. Charles, Middlesex Hospital; F. M. Cooper, Royal Free Hospital; E. E. Evans, Royal Free Hospital; F. R. Greenwood, St. Bartholomew's Hospital; H. Greenwood, London Hospital; P. A. Pierre, Westminster Hospital; E. A. Quirke, Birmingham; T. E. Saxby, Edinburgh.

Biology.—V. G. S. Adams, Royal Free Hospital.

Chemistry.—V. G. S. Adams, Royal Free Hospital; J. G. Gowland, St. George's Hospital; E. S. Milestone, Royal Free Hospital; T. E. Saxby, Edinburgh; T. W. Wakeman, Charing Cross Hospital.

Materia Medica and Pharmacy.—G. W. J. Baker, Birmingham; W. A. Bibby, Manchester; H. S. Dobie, Manchester; W. W. Forbes, Aberdeen; E. M. Jennings, Edinburgh; P. C. Maitland, Middlesex Hospital; C. E. Moore, St. Thomas's Hospital; J. F. Porter, London Hospital.

Pharmacy.—S. Mullick, Edinburgh.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,043 births and 3,201 deaths were registered during the week ending Saturday, October 6th. The annual rate of mortality in these towns, which had been 15.7 and 16.1 per 1,000 in the preceding two weeks, declined again to 16.0 last week. The rates in the several towns ranged from 10.1 in Plymouth and 10.7 in Croydon to 22.5 in Preston and 23.7 in Liverpool. In the thirty-two provincial towns the mean death-rate was 16.3 per 1,000, and exceeded by 0.9 the rate recorded in London, which was 15.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.8 per 1,000; in London the rate was equal to 1.7, while it averaged 1.9 per 1,000 in the thirty-two provincial towns, and was highest in Portsmouth, Liverpool, and Sunderland. Measles caused a death-rate of 1.5 in Portsmouth and in Sunderland; scarlet fever of 1.1 in Gateshead and 1.2 in Liverpool; whooping-cough of 1.2 in Blackburn; "fever" of 1.0 in Norwich and 1.1 in Sunderland; and diarrhœa of 1.6 in Nottingham and 2.3 in Preston. The 83 deaths from diphtheria in the thirty-three towns included 66 in London, 4 in West Ham, and 3 in Birkenhead. Four fatal cases of small-pox were registered in Liverpool, 2 in Birmingham, and 1 in London, but not one in any other of the thirty-three large towns. There were 81 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, October 6th, against 109, 100, and 98 at the end of the preceding three weeks; 11 new cases were admitted during the week, against 16, 23, and 14 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,144, against 2,080, 2,060, and 2,081 at the end of the preceding three weeks; 258 new cases were admitted during the week, against 253 and 252 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, October 6th, 908 births and 454 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 14.0 and 15.1 per 1,000 in the preceding two weeks, further rose, to 15.9 last week, but was slightly below the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 13.8 in Aberdeen to 25.8 in Perth. The zymotic death-rate in these towns averaged 1.8 per 1,000, the highest rates being recorded in Leith and Perth. The 204 deaths registered in Glasgow included 6 from diphtheria, 3 from measles, and 3 from "fever." Two fatal cases of small-pox were recorded in Edinburgh, and 2 of diphtheria in Perth.

VACCINATION IN TUNIS.

VACCINATION seems to be making good progress in Tunis, where it is to a large extent in the hands of military surgeons. The number of vaccinations in 1893 was 6,482 as against 1,129 in 1892, and a total of 4,783 for the whole period from 1886 to December 31st, 1892.

QUALIFICATIONS FOR APPOINTMENT OF MEDICAL OFFICER.

A MEMBER B.M.A.—By the regulations of the Local Government Board, no person can hold the office of medical officer unless he be duly registered, and be qualified to practise both medicine and surgery. The qualification L.R.C.P.Lond., L.S.A., registered May 5th, 1887, are quite sufficient to meet the reauirements of the Local Government Board.

TYPHOID FEVER AND SCHOOL EXCLUSION.

LANCASTRIAN.—It is not usually considered necessary to exclude children from school on the ground of their home containing a case of typhoid fever. In the present instance there appears to be some uncertainty as to the diagnosis, the case being described as "presumably" mild typhoid. We cannot take the responsibility of saying that it would be right to disregard the directions given by the medical officer of health.

COST OF SMALL-POX.

AT the meeting of the Whittington Local Board, held on October 2nd, a claim of £97 13s. was presented for twenty persons who had been sent to the infectious hospital suffering from small-pox.

MEDICAL NEWS.

It is reported that Lord Armstrong has agreed to provide a new hospital to be used for out-patients in connection with the Hospital for Sick Children, Moor Edge, Newcastle. The site of the new hospital is in City Road, Newcastle, opposite the Jesus Hospital.

Society for the Study of Inebriety.—A quarterly meeting was held on October 4th, in the rooms of the Medical Society of London, the President, Dr. Norman Kerr in the chair. Dr. Thomas Morton read a paper on "The Problem of Heredity in Reference to Inebriety," the purpose of which was to suggest the reconsideration of the accepted evidence for the inheritance of an inebriate constitution, in the light of recent teaching on heredity in general, a short sketch of which was given. Weismann's views now held the field, and, though not proved, had to be reckoned with by those who maintained inebriety to be heritable, and on the other hand, biologists were ready to listen to any evidence of transmission of an acquired character, such as inebriety. He thought existing evidence should be sifted and arranged, with constant reference to standards of comparison furnished by non-alcoholised families, and to the important distinction between general degeneracy and the special inebriate condition. The alleged greater potency of transmission through the mother should also be kept in view, and further observations were wanted, especially of cases of precocious inebriety. He believed the result would be to establish the doctrine of inebriate heredity on a firmer basis, and to compel the attention of thinking men to it. A discussion followed, in which Drs. Henry Rayner, Hazell, A. M. Holmes, of Denver, Colorado, and the President took part; Dr. Morton replied.

Proposed Memorial to Dr. Danielssen.—A movement is on foot with which nearly all the leading dermatologists of Europe have associated themselves for the erection in Bergen of a suitable memorial to Dr. Daniel Danielssen, known to the whole medical world by his lifelong researches on leprosy, and author of the great treatise. *Om Spedalskhed*, who passed away recently at the age of 79. The following gentlemen are members of the Committee: Professor Kaposi, Professor Neumann, *Docent* Dr. Riehl and *Docent* Dr. Schiff, of Vienna; Professor Janovsky, of Prague; Professor Schwimmer, of Buda-Pesth; Dr. E. Besnier, Dr. L. Jullien, Dr. Thibierge, and Professor Hallopeau, of Paris; Professor A. Haslund, of Copenhagen; Dr. Unna, of Hamburg; Dr. R. Campana, of Rome; Professor E. Kromayer, of Halle; Dr. D. van Haren Noman, of Amsterdam; Dr. O von Peterson, of St. Petersburg; Dr. J. Caspary, of Königsberg; Dr. E von Düring, of Constantinople; Professor O. Lassar, of Berlin; Professor A. Neisser, of Breslau; Dr. E. Oedmansson and E. Welander, of Stockholm; Dr. A. Wolff, of Strasburg; Dr. C. Boeck, of Christiania; Dr. G. Armauer Hansen (Dr. Danielssen's son-in-law and the discoverer of the *bacillus leprœ*), of Bergen; and Dr. J. J. Pringle of 23, Lower Seymour Street, W., by whom subscriptions for the purpose will be thankfully received.

The Church Congress.—At the Church Congress a paper was read by Sir W. H. Flower, who attributed much of the existing cruelty to animals to the part of man's nature inherited from his savage ancestors. Mr. Pitkin, who described himself as the representative of two antivivisection societies, desired to put a question; but the Mayor, who occupied the chair, declined to allow it to be put, and said he should leave the chair if there were any discussion on vivisection. A resolution was carried recommending that the fourth Sunday after Trinity should be set apart for reference to kindness to animals in all churches. Dr. Woodward presided over the meeting of the Church Funeral Reform Association. He said the great aim of the Association was the real earth-to-earth burial and the cutting down of expense. Many people would not like to have cremation, but personally he had no objection it. The greatest and best thing, however, was earth to earth and ashes to ashes. There was one great objection to cremation—it would be very expensive to the nation. The following resolution was carried: "That this meeting regards with favour the efforts now being made to bring about the disposal of the dead in accordance with the spirit of the rubric—earth to earth, ashes to ashes, dust to dust; and considers it desirable that on one Sunday, such as the sixth after Trinity, reference should be made to the requirements of Christian burial."

Medical Defence Union.—In accordance with the arrangements made by the Council to ensure convenient discussion by all the members of the matter of Bloxham *v.* Collie and the general question involved therein, special general meetings of the members were held as follows, the President (Mr. Victor Horsley, F.R.S.) and Drs. Bateman and Masters (the Honorary Secretaries) attending each meeting:—At Manchester, at the Victoria Hotel, on Thursday, October 4th, at 8 P.M.; at Bristol University College, October 5th, at 8 P.M.; at Birmingham, Medical Institute, October 6th, at 8 P.M. At each meeting the report of the Council on the whole question was read and discussion invited. Both at Manchester and Bristol the resolution expressing confidence in, and commendation of, the Council carried at the London meeting of October 3rd was put and carried unanimously. At the meeting at Birmingham a similar resolution was carried, also unanimously, which ran as follows: "That, having heard the statement of the Council respecting the case of Bloxham *v.* Collie, this meeting records its unabated confidence in the Council of the Union." As a result of the discussion upon the general questions, it was universally agreed that the ordinary procedure of the Council, namely, that arbitration should be suggested before going into court in cases in which a member of the Union is attacked by another medical man was the best and in thorough accord with the objects and articles of association of the Union.

MEDICAL VACANCIES.

The following vacancies are announced:

ANCOATS HOSPITAL, Manchester.—Resident House-Surgeon, with charge of In-patients. Salary, £80 per annum, with board and washing. Applications to Alex. Forrest, Honorary Secretary, by October 17th.

CARNARVONSHIRE AND ANGLESEY INFIRMARY AND DISPENSARY, Bangor.—House-Surgeon. Must be registered to practise in Medicine and Surgery, and have a knowledge of the Welsh language. Salary, £70 per annum, with board and lodging. Applications to the Secretary, before October 27th.

CORPORATION OF CROYDON.—Resident Medical Officer for the Borough Isolation Hospital for Infectious Diseases, must be fully qualified. Salary, £120 per annum, with board and lodging, increasing by £20 at the end of the first year. Applications and testimonials endorsed "Resident Medical Officer," to be sent to the Medical Officer, 7, Kathrine Street, Croydon, before October 17th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—House-Physician. Salary, £60 per annum, with board, lodging, and washing. Applications to Lewis H. Glenton Kerr, Secretary, by October 23rd.

HALIFAX INFIRMARY AND DISPENSARY.—House-Surgeon. Unmarried. Salary, £80 per annum, advancing £10 per annum up to £100, with residence, board, and washing. Applications to Oates Webster, Secretary, by October 24th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Surgical Registrar and Anæsthetist. Appointment for one year, an honorarium of £40 being voted at the expiration of that term. Candidates must appear before the Joint Committee on October 24th.

KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY.—Vacancy in the Board of the Honorary Medical Staff. Applications to A. V. Short, Secretary, 13, Kilburn Park Road, N.W., by October 17th.

LONDON LOCK HOSPITAL, Harrow Road, W.—House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary before October 23rd.

MASON COLLEGE, Birmingham.—Professorship of Midwifery. Applications to G. H. Morley, Secretary, before October 27th.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, Soho Square.—Resident Medical Officer; must be doubly qualified. Appointment for six months; residence in the Hospital and an honorarium of £10 10s. Applications and testimonials to Capt. F. Hanaley, Secretary, before October 13th.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead.—Assistant Physician. Candidates must be graduated in Medicine of a University of the United Kingdom or Fellows or Members of the Royal College of Physicians of London. Applications to L. F. Hill, M.A., Secretary, at the Office, before November 3rd.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. No salary, but board, lodging, and washing provided. Appointment for six months. Applications and testimonials to the House-Surgeon before October 18th.

THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Assistant Physic an. Candidates must be Fellows or Members of the Royal College of Physicians of London. Applications to J. Harrold, Secretary, before October 24th.

ST. OLAVE BOARD OF WORKS.—Medical Officer of Health for the District; not less than 25 or more than 45 years of age; must reside in or within one mile of the district. Salary, £200 per annum. Applications to Edric Bailey, Clerk, Vine Street, Tooley Street, S.E., by October 15th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W.—Resident Medical Officer, doubly qualified. Salary, £105 per annum, with residence and attendance; and a Physician Accoucheur. Applications to H. Peter Bodkin, Honorary Secretary, 23, Gordon Street, Gordon Square, by October 22nd.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House-Surgeon. No salary, board and residence provided. Applications and testimonials to J. Walter Wilson, Honorary Secretary, before October 20th.

STIRLING DISTRICT ASYLUM, Larbert.—Second Medical Officer. Salary, £80 per annum, with board and lodging. Applications and testimonials to the Medical Superintendent, before October 17th.

STOCKPORT INFIRMARY.—Junior Assistant House-Surgeon. Appointment for six months, with board and residence. Honorarium of £10 will be given after six months' satisfactory service. Applications to Lieutenant-Colonel S. W. Wilkinson, Honorary Secretary, by October 17th.

STOURBRIDGE DISPENSARY.—House-Surgeon and Secretary. Must have a qualification in Medicine and Surgery from one of the Colleges of England, Scotland, or Ireland. Salary, £120 per annum, with furnished rooms, coal, and gas, with an allowance of £25 for travelling expenses. Applications to T. F. Bland, Honorary Secretary, Norton, Stourbridge, before October 24th.

UNIVERSITY COLLEGE, London.—Surgical Registrar. Applications to J. M. Horsburgh, M.A., Secretary, by October 22nd.

MEDICAL APPOINTMENTS.

ALLEN, Dr. R. R., appointed Medical Officer of the Workhouse of the Dartford Union.

BEAUMONT, Mr. J. C. H., appointed Medical Officer of the Infirmary and Workhouse of the Lewisham Union.

BLISS, Mr. E. W., appointed Assistant Medical Officer to the Infirmary of the Parish of St. Marylebone.

BUSFIELD, J., M.R.C.S., L.R.C.P., F.I.C., appointed Medical Officer to Clapham General Dispensary, *vice* C. D. Greenwood, M.R.C.S., resigned.

CHURCHILL, Augustus Henry, M.R.C.S.Eng., L.S.A., appointed Consulting Medical Officer to the Walton-on-the-Hill Local Board.

COLLIER, H., M.D., appointed Medical Officer of the Workhouse of the Great Yarmouth Union.

COPE, A. E., M.B.Lond., B.S., appointed Medical Officer for the Third District of the St. George's Union.

CRAWFORD, Cyril R., M.R.C.S., L.R.C.P., appointed House-Physician to the Sussex County Hospital, *vice* W. A. Mallam, resigned.

CRUTCHLEY, Henry, M.D.Brux., L.R.C.P.Lond., L.F.P.S.Glasg., appointed Medical Officer of Health to the Alsagar Urban Sanitary District.

DUKE, T. A., appointed Medical Officer of the Third District of the Croydon Union.

FLEMING, A. J., M.D.R.U.I., L.R.C.S.I., appointed Medical Officer of the Workhouse of the Church Stretton Union.

GODSON, Mr. J. H., appointed Medical Officer of Health to the Cheadle and Gatley Urban Sanitary District, *vice* Alfred Godson, B.A.Camb., M.B., resigned.

MCLENNAN, Quintin, M.B., Ch.M., appointed one of the Surgeons-in-Chief to the Glasgow Royal Infirmary.

MOIR, J. Munro, M.D.Aberd., M.B., C.M., appointed Honorary Physician to the Northern Counties Institute for the Blind, Inverness, *vice* F. M. Mackenzie, M.A., L.R.C.P.Edin., resigned.

PROBYN, Mr. P. J., appointed Assistant Medical Officer of the Workhouse and Infirmary of the Parish of St. Leonard, Shoreditch.

PROCTOR, Dr. J., appointed Medical Officer for the Effingham District of the Dorking Union.

SHAW, Richard F., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health to the Whitley Upper Urban Sanitary District, *vice* C. J. Lownds, B.A.Camb., L.R.C.P., L.R.C.S.Edin.

SHILLITON, Mr. W. A., appointed Medical Officer for the Sixteenth District of the North Bierley Union.

SIBLEY, W. Knowsley, M.A., M.D., B.C., M.R.C.P., appointed Clinical Assistant at the Chelsea Hospital for Women.

STALLARD, J. Prince, M.B.Edin., appointed Physician to Manchester Southern Hospital for Diseases of Women and Children, *vice* W. Lauder, M.D., deceased.

STUART, Mr. C., appointed Medical Officer for the Tenth District of the North Bierley Union.

WALKER, A. F., L.R.C.P., L.R.C.S.Edin., appointed Senior Assistant Medical Officer at the Infirmary of the Township of Toxteth Park.

WATSON, Henry, M.D.Aberd., reappointed Medical Officer for the Fifth District of the Norwich Union.

WATT, Neish Park, M.A., M.B.Edin., appointed Assistant Resident Medical Officer to the Royal Lunatic Asylum, Dundee.

WILLIAMS, Edward C., M.B., appointed Medical Officer of Health to the Presteigne Urban Sanitary District, *vice* J. M. Balfour, M.B., C.M.Edin., deceased.

WILSON, Charles, M.B., C.M.Glasg., appointed Resident Medical Officer to the Victoria Hospital, *vice* Francis J. H. Coutts, M.B., Ch.B.Vict., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. Lang: Conjunctival Affections.—Bacteriological Laboratory, King's College, W.C., 3 to 5 P.M.—Lecture: Examination of Air, Soil, and Water; Practical Work: Plate Cultivations. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Edward Law: Examination of the Throat and Nose.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Craig: Acute Delirium. Hysterical Mania.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. J. E. Squire: Mediastinal Tumour Invading the Lung. Mr. Stephen Paget: Strangulated Ventral Hernia; Recto-Vesical Fistula (Tuberculous). Dr. H. D. Rolleston: Tumour of the Suprarenal. Mr. J. H. Targett: Polypoid Tumour of Œsophagus. Dr. Jackson Clarke: Sporozoa of Variola and Vaccinia. Dr. Herbert Snow: Myeloid Corpuscles in some Rare Specimens of Cancerous Disease. Card Specimen: Dr. H. D. Rolleston: Traction Diverticulum of the Œsophagus.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M., Dr. Habershon: The Gastric Disorders of Phthisis. Royal London Ophthalmic Hospital, 8 P.M.—Mr. A. Stanford Morton: Retinal Affections.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover Square, 8 P.M.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, 3 P.M.—Lecture by Dr. Beevor.

POST-GRADUATE COURSE, WEST LONDON HOSPITAL, Hammersmith Road, W., 5 P.M.—Mr. Keetley: Diseases of Joints due to Osteo-arthritis and to Tubercle.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for Paralysed and Epileptic, Queen Square, 2 P.M.—Dr. Tooth: Paraplegia. Hospital for Sick Children, Great Ormond Street, 3.30 P.M.—Mr. W. Arbuthnot Lane: Clinical Surgical Lecture. Central London Sick Asylum, Cleveland Street, W., 5.30 P.M.—Mr. Thomas Bryant: Cases in the Wards.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, 4 P.M.—Dr. T. Lauder Brunton: The Harveian Oration.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Clinical evening.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY, Great Northern Central Hospital, 9 P.M.—Dr. G. Sims Woodhead: On the Methods of Invasion of Tuberculosis. Illustrated by the Lantern.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 8.30 P.M. Living and Card Specimens at 8 P.M.—Messrs. Hartridge and Griffith: Microscopical Sections of a Case of Tuberculous Keratitis, which was shown as a living specimen at a previous meeting. Dr. Argyll Robertson: Cases of Pilaria Loa in which the Parasite was removed from under the Conjunctiva. And other papers.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. Hector Mackenzie: Cases of Pulmonary Cavities.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 11 A.M.—Dr. Percy Smith: Acute Mania.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

LYS.—On October 1st, at Bournemouth, the wife of Henry Grabham Lys, M.D., of a son.

PARSONS.—On Monday, October 8th, at The Rowans, Lingfield Road-Wimbledon, the wife of F. W. Parsons, L.R.C.P. London, of a son.

SAMMAN.—On October 8th, at 90, South Circular Road, Portobello, Dublin, the wife of Surgeon-Lieutenant Samman, Army Medical Staff, of a daughter. American papers please copy.

MARRIAGES.

KENWORTHY—MERCER.—On October 3rd, at Broughton Park Congregational Church, Manchester, by the Rev. H. A. Phillips, of Southport, and the Rev. Samuel Pearson, M.A., of Broughton Park, Arthur Backwell Kenworthy, M.B., C.M.Edin., of Ivydene, Bold Street, Southport, elder son of Samuel Kenworthy, Southport, to Agnes Whalley, third daughter of James B. Mercer, Yew Bank, The Cliff, Broughton, Manchester.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not Later than Midday Post on Wednesday. Telegrams can be Received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal and not to his private house.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any Circumstances be Returned.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

Swelling of External Genitals in Pregnancy.

M.B.M.Assoc. writes: A woman, aged 18, 8½ months pregnant, has swelling of both labia majora and minora to the size of a fist. The skin is stretched as by serous fluid. There is no heat or throbbing, but tenderness is present. The uterus and vagina appear normal. She was recovering from influenza at the time the swelling commenced, and has been previously healthy. What is the probable cause, and what the treatment?

ANSWERS.

Young Member.—The treatment of obesity was the subject of a considerable amount of discussion in our columns during the present year.

D. S. W.—Particulars with regard to the preliminary examinations accepted by the General Medical Council will be found in the Educational Number of the British Medical Journal, published on September 1st last.

W. H. B. E. might communicate with the Secretary of the Royal Medical Benevolent College, Epsom (London office, 37, Soho Square, W.), or with Mr. Edward East, 16, Upper Berkeley Street, Portman Square, London, W., Honorary Secretary for Cases of the British Medical Benevolent Fund.

Dr. J. G. McNaughton (Morriston, Glamorganshire) writes: As regards home for inebriates for "Inquirer," Queensberry House, Edinburgh, takes patients at the rate of £1 per week. Here they have each a separate room, and can have meals separate or in the general dining room.

Surgeon A.M.S., Malta.—The last report of the medical officer to the Local Government Board was published at the price of 9s. 7d., and can be obtained from Eyre and Spottiswoode, East Harding Street, E.C.; John Menzies and Co., Edinburgh and Glasgow; and Hodges, Figgis, and Co., 104, Grafton Street, Dublin.

J. C.—The name of Daniel Sutherland was removed from the *Medical Register* by the General Medical Council on May 20th, 1885. We understand that the question of the continued use in advertisements and otherwise of professional titles which have been withdrawn by the body which granted them will probably be considered by the General Medical Council at its next meeting. If it is found that the Council has any legal power to deal with the matter, it will probably be taken in hand.

A Scottish Paradise.

F.R.C.P. writes to recommend from personal experience Edzell, a small village in Forfarshire about six miles from Brechin, and twelve hours by rail from London, as a suitable place for insomnia, nervous exhaustion, anæmia, and general debility. The water is good, the hotel reasonable, the scenery "romantic," and fishing and shooting are to be had.

Loss of Taste.

Dr. C. M. Jessop (Redhill) writes: The following prescription may suit the case "Variola" has under his care. Some weeks ago a young woman complained of loss of taste and smell, which had come on somewhat suddenly—I forget whether after influenza or not. I gave her the solutions of the perchlorides of mercury and iron. About a fortnight since, I saw her again, when she said she was "nearly all right."

The Title of Physician.

"John Jones."—If our correspondent will again read our remarks on this subject under the heading "Queries," in the British Medical Journal of September 8th and 22nd, he will see that what we say is that it is unusual to put "Physician" on a doorplate, but there is nothing unprofessional or incorrect in doing so.

Piperazin.

V. L. will find in recent volumes of the British Medical Journal numerous references to the action of piperazin; for example, Epitome, Vol. i, 1893, No. 401; Vol. ii, 1893, Nos. 94, 361, 521; Vol. i, 1894, No. 263. A paper on the drug by Dr. John Gordon, of Aberdeen, was published in the Journal on June 16th last, p. 1291.

Homes for Feeble-Minded Girls.

In reply to "A Member," we cannot do better than reprint the following list, which we owe to the kindness of Mr. C. S. Loch, who has extracted it from a recent report of the Charity Organisation Society. It is a list of homes for feeble-minded girls already in existence. The charges made vary. The Aubert Park Home, (certified Act 25 and 26 Vict., cap. 43), Hon. Sec.—Mrs. Tait, 48, Highbury Park, London, N. The Laundry and Homes of Industry, Arrowfield Top, Barnt Green, near Birmingham, Hon. Sec.—Miss Stacey, 30, Calthorpe Road, Edgbaston Chasefield, Fishponds, Bristol, Hon. Sec.—Miss A. M. Lavington, 107 Pembroke Road, Clifton, Bristol. St. Mary's Home, Painswick, Hon Sec.—Miss Wemyss, Washwell House, Painswick. Adcote, Pitch Lane Knotty Ash, Liverpool, Matron—Miss Foster. £10 per annum.

Family Attendance by Contract.

A Member.—It is impossible to lay down any fixed rule for calculating the fee to be paid annually for all attendance on a wealthy family with many servants. The member himself would probably be a far better judge as to what might reasonably be asked. If any suggestion might be offered, it would be that "A Member" should estimate for himself what would be the annual amount of his bill to such a household, taking an average of one year with another: this would perhaps be as good a way as any to estimate the amount of an annual retaining fee.

Examination for Life Insurance.

Insurance.—No doubt to examine a proposer carefully for a small policy is as arduous for a medical practitioner as to examine for a larger one, but it can hardly be therefore argued that the medical fee ought to be the same in the two cases. If this were so it might equally be argued that a rich patient ought to pay no more for medical services than a poor one, the services being the same in the two cases. The amount paid for the medical examination must bear some ratio to the value of the policy, and there can be no doubt it ought often to be higher than it is. The proposal form sent to us is certainly a very searching one, and includes matters frequently not to be found in the ordinary insurance form; it is, moreover, to be regretted that not more than 10s. is offered for policies of £100; the usual fee for policies of £100 and over is one guinea.

Bacteriological Studies.

Country Physician.—Any of the following makers would supply illustrated catalogues of apparatus required for bacteriological investigation: Baird and Tattock, 14, Cross Street, Hatton Garden, E.C.; A. Kanthack, Golden Square, W.; Alexander Frazer, 22, Teviot Place, Edinburgh. Perhaps the best of the smaller textbooks with which to commence would be either the *Manual of Bacteriology for Practitioners and Students with special reference to Practical Methods*, by Professor S. L. Schenk, translated by W. R. Dawson, B.A., M.D., London and New York, Longmans, Green, and Co., 1893, 10s.; or *An Introduction to Practical Bacteriology for Physicians, Chemists, and Students*, by Dr W. Migula, translated by M. Campbell and edited by H. J. Campbell, M.D., M.R.C.P., London; Swan Sonnenschein and Co., New York, Macmillan and Co., 1893, 6s.

Friendly Societies Medical Associations.

W. J. C.—The position of medical officer to such an association is not one to be regarded with much satisfaction when the pecuniary advantage of the practitioner is considered, especially when the by no means unlikely professional degradation is also contemplated. Associations of this kind usually compel the medical officers they elect to give a bond, by which they bind themselves not to practise for a certain number of years within the district on resigning their post; the rate of pay they offer is of the most meagre character when compared with the work expected from their medical officer; and the latter is almost at the mercy of the committee of the association, and often is obliged, if he would keep his post, to bow to the whims and caprices of individual members of the same—a position most unenviable for a man of liberal education and a member of a learned profession. The position of assistant to a respectable practitioner is to be preferred to that of medical officer to such societies.

Treatment of Sweating Feet.

Dr. Slade J. Baker (Abingdon) recommends "A. M. S." to try the following method suggested in the British Medical Journal for September 18th, 1880, by Dr. George Thin in a very interesting article. Since that date I have used it in a very large number of cases, both male and female, and have never known it fail: A saturated solution of boracic acid. The stockings to be changed twice daily, placed in the lotion for some hours, dried, and worn again. Three pairs of cork soles, a pair to be worn one day, then placed in the lotion for some hours, and dried. The skin of the feet may be sponged with the lotion, and washed every night with soap and water. Treatment to be continued for two or three weeks.

The prescription given by "Medicus" in the British Medical Journal of September 29th, p. 738, should have read: R. Glycerini acidi tannici 5vij, glycerini acidi carbolici 5j.

NOTES, LETTERS, Etc.

The British Medical Journal's Reports on Nursing in Workhouse Infirmaries.

We are glad to notice that the *Western Morning News* of October 2nd has reprinted the report of our Commissioner on the Truro Workhouse Infirmary. The publication of these reports in the local papers, which come immediately under the eyes of those who are interested in local opinion, has, we are glad to find, had most valuable influence in bringing about the desired reforms.

What is, says the *Devon Weekly Times*, the meaning of all these revelations of the methods of workhouse mismanagement just now? Newton Abbot, though a very bad sinner, is by no means the only one in Devon, and every week seems inclined to add new examples to the list. Odd that just as the boards of guardians are going out of existence many of them should seem bent on proving how very worthy they are of extinction. It reminds me somehow of the demon that old Aubrey tells about, who, being spoken to, disappeared with a "curious perfume and a melodious twang." I am speaking metaphorically, and I can account for the "melodious twang" in their case by the return of harmony on the exit of discord.

A Commissioner of the British Medical Journal has, says the *Bradford Weekly Telegraph*, been going over the hospital department of the Keighley Workhouse, and finds it very unsatisfactory. There is overcrowding and lack of proper classification. Additional accommodation is being provided, but the Journal points out that there is a serious drawback in there being no ward for the separate accommodation of children. With this provision and a carefully trained nursing staff, the British Medical Journal thinks all will be well.

The work of the British Medical Journal in relation to the sick poor in provincial workouses, says the *Local Government Chronicle*, is bearing fruit well. This week the Local Government Board has sent a number of commands to the Bath Guardians. The staff of the infirmary must be considerably increased. At present there is only one night nurse, one trained day nurse, two partially trained assistant nurses, and a probationer. The Local Government Board have laid it down that there must be a superintendent nurse, and a staff of eight nurses at least, one of whom must be a certificated midwife, and two must act as night nurses. This is reform with a vengeance. Evidently our contemporary's articles have put the inspectors on the *qui vive*, for not only in Bath, but in Chester, Hatfield, Haverfordwest, and Stockport infirmaries big changes are being wrought.

There is a highly paid Local Government Board inspector whose duty, says the *Cornwall Gazette*, is to see that our workhouses are properly administered. We have never heard that Lord Courtenay is an enthusiast for workhouse reform, but if he was he has hitherto had freedom and means to publicity which lie within the power of a duly qualified "commissioner" of a newspaper. A Commissioner of the British Medical Journal has, however, now visited Truro Workhouse, and although many of her requirements may be upon a high level, and her "facts" may not always be reliable, it is impossible to deny that her report indicates many points of necessary reform, and there is every hope that good will result from her visit, but the public must bears witness to the open and courteous manner in which she was received by the Chairman and the Board. This showed at once that they had nothing whatever to conceal, and would welcome any help in the conduct of the workhouse, at all events so far as the sick poor were concerned, upon true and benevolent lines. No doubt the House Committee will consider it desirable to bring up a report on the Commissioner's recommendations, although, of course, they are under no obligation to do so. We feel sure, however, that there is but one desire on the part of the Truro Board, and that is to do the best they can for the sick poor of whom they are guardians. The Editor of the British Medical Journal recognises, as everyone must, the possibilities of the case. Commenting on the report, which appears in another page, he says: "The provincial infirmaries are generally old buildings, which were never designed for the purpose to which they are now applied, and boards of guardians who seek to do their best for the sick are constantly checked in their desire for reform by the stubborn facts of unsuitable structure; but while they hesitate to incur the expense of bringing the building and the sanitary appliances up to the standard of modern hospital requirements, there is one reform which takes no time and comparatively little money; it is almost always possible to increase the nursing staff. When the doctor's skill and care are supplemented by an adequate number of trained nurses the unfortunate pauper has a fair chance of recovery, or at least of ending his days amid such alleviations of sickness as modern science affords. We would urge Truro, in the name of humanity and common sense, to turn their attention to this matter." There is a Ladies' Visiting Committee who might also well consider what they can do to improve matters.

Our able contemporary the *Provincial Medical Journal*, which has repeatedly treated the subject of workhouse infirmaries with great ability and much originality, writes on this subject: "We are very much astonished to know that there are so many workhouse infirmaries still managed on the old lines, not only as regards pauper nursing, but in other essentials. It is evident that all over the country the Poor law infirmaries are doing hospital work, treating acute cases of disease, affording shelter to surgical cases. The medical officer is paid by salary, the amount of which varies. There is no basis as there ought to be, the honorarium depending on the liberality of the guardians. The Union infirmary may contain from 100 to 200 beds. The salary may be £50, £70, or £100. In some cases out of this salary the medical officer has to find all medicines, with the exception of quinine and cod-liver oil. Homœopathy at once suggests itself as the form of medication suitable for a remuneration of this kind. The medical officer must spend, if he be conscientious, very nearly all his salary in medicines, acquiring, of course, experience of many kinds. The guardians look at this matter in the light of contract, they advertise at a fixed rate; applications are received, and at the time of election not a word is said about the inadequacy of the salary, or the injustice of having to find medicines out of a small salary. We will not labour the argument for or against; we think it is for the Local Government Board to summarily decide for the future that the medical officer must be paid for his services, and the drugs must be always found by the guardians. The medical inspectors of the Local Government Board are fully alive to the defects of the present system, and we hope their opinion will ultimately have weight with the heads of the department to bring about the desired change. The interests of the sick demand this. It is an anomaly to find in the same county Poor-law infirmaries established on a proper hospital fitting, and infirmaries outside the pale of hospitalism. Local option is very good in its way; it requires, however, behind it a central authority to direct it. There is one argument used against the finding of the drugs which cannot be overlooked—namely, it is said that drugs supplied to poor-houses are shamefully adulterated. If true, this need not be; it might occur if the Local Government Board in London bought all the drugs and distributed them, but it ought not to occur when each board of guardians buys its own drugs, either locally or otherwise. Of course the old idea was that anything was good enough for such paupers. The medical officer ought not to accept any but the best medicines. He should know the reputation of the houses that supply the medicines: in fact, at the present day there are so many excellent houses in the trade that one would have a difficulty in going wrong."

Bedford.—The atmosphere of Bedford workhouse seems anything but calm, to judge from the report of the last meeting of the Board. The master and the nurse met in mutual recrimination before the guardians, and, to quote from the newspaper, "here followed such a hubbub that, perhaps, never occurred in the Board room before, and the Chairman had to call the guardians to order." It will be remembered that it was with this Board we had the controversy, because of their treatment of the nurse sent to them by the Workhouse Infirmary Nursing Association. We had then a shrewd suspicion that very much of the friction was due to the action of the master, who did not understand that a trained nurse should be left entirely in hand in her own department, and, in confirmation of this suspicion, we read that the cause of this discreditable scene is a letter from the nurse complaining of the interference of the master in her department. The Board cannot expect harmony among their staff until the nurse's position is defined and until her duties are confined to the nursing of the sick.

Croydon.—The Croydon Board of Guardians has a difficult matter to arrange, the infirmary is insufficient for the number of cases to be treated, and though there appear to be wards which might be opened at once, there is no accommodation for the nursing staff necessary, the plans are at present under consideration; but whatever may be the final plan adopted, the Board seems to be determined to provide suitable quarters for the nurses.

Chester-le-Street.—The medical officer of Chester-le-Street has laid a serious report of overcrowding and of sanitary defects before his Board; the matter has been referred to the Visiting Committee for investigation.

Newton Abbot.—The Newton Abbot Board has presented their late master Mr. Cawse with a purse containing £55, being a testimonial raised among themselves and others outside the Board as a mark of their appreciation of his services.

Stockport.—We are glad to see that the Stockport guardians are setting themselves in earnest to meet the overcrowding in their house; it was decided at the last meeting to take immediate steps to provide temporary wards for the inmates. There is nothing in the report to lead us to think that the question of the sick nursing is under consideration; they seem to have fallen foul of our Commissioner's report, which was only to be expected; but if it arouses public opinion to demand reform in that particular, it will have accomplished a good work.

The Opium Report of the "British Medical Journal."

The *Provincial Medical Journal* for October, in reviewing this report, says: "These pages comprise a summary of upwards of 100 replies received to a schedule of queries addressed to medical officers and civilians resident in various Indian districts. Those who are interested in the opium question will find here much valuable information and food for thought. The agitators for the suppression of the opium traffic will also find many reasons for pausing in their efforts if they are still open to reason. This evidence collected by Mr. Hart shows that there is no call for interference with the opium traffic in India, for it not only does not injure the native population as alcohol injures our population, but is almost a necessity in many districts where malaria, diarrhœa, etc., are prevalent, and where the heat is intense. Opium smoking is quite different from the ordinary use of opium as nipping neat brandy is from the ordinary use of table beer. One of the correspondents says of smoking opium: 'It ruins the smoker physically and morally; the practice is held in reprobation; no person with a particle of self-respect will admit he smokes "madah," though he will freely admit he takes opium.' There is no evidence of a direct or indirect effect of opium in the causation of crime in the sense that alcohol causes crime in England. Our space is too limited to do more than notice a few of the points which this valuable evidence proves."

Better Late than Never.

A recent number of the *Boston Medical and Surgical Journal* contains a rather pretty story of the grateful recognition of services rendered gratuitously by a physician. Last year the children of a well-known physician in Boston, dead these thirty years, received a communication to the effect that an English general officer had died in London, leaving in his will "to the heirs of the late Dr. —— of Boston, for attendance on my sister when I was too poor to pay him, the sum of ——." The bequest was devoted by the heirs to the purchase each of a piece of silver plate as a memorial of the incident.

JOURNALISTS AND QUACKS.

AFTER the *Review of Reviews*, the *Daily News*, after Mattei, Gatchkowsky. If the irresponsible, unblushing, and most mischievous patronage of the wildest and most senseless form of quackery were not nowadays so frequent in British journalism, the insertion of such an editorial paragraph as the subjoined in a journal of weight and standing, and enjoying a well-deserved political and literary reputation, would be incredible and impossible. But no excess of fatuous absurdity and no extremity of self-evident ignorance are beyond the credulity of the political journalist of to-day. Nevertheless, it was not with regret that we read in the *Daily News* of this week the subjoined editorial paragraph, which embodies, perhaps, as much impudent and misleading and extravagant pretension as any in the annals even of mediæval darkness. The italics are ours.

"'*Vitaline*,' *a Cure for Consumption*.—About eight years ago M. Gatchkowsky, a Polish *amateur chemist*, struck, in the course of his *medical studies*, with *the remarkable cures effected by the Chinese doctors*, determined to turn his energies in that direction, and, after a long series of *experiments, succeeded* in obtaining, as a result of an admixture of borax and glycerine (!), a compound for which the most extraordinary virtues are claimed. After *elaborate analyses* on the part of *numerous celebrated* (*!*) *French doctors*, 'Vitaline'—such being the name given by M. Gatchkowsky to his invention—obtained *the necessary patent* (*!*), and for some considerable time past the Polish doctor has employed it, in the form of subcutaneous injections, in drops and by inhalation, with the most astonishing results. It is claimed for 'Vitaline' that it is capable of effecting *a complete cure of consumption* in a *fortnight* or *three weeks*. Inhalation is said to be the most successful means of administration. The patient is first inhaled for a period of half an hour; then the dose is gradually increased, and finally the sufferer is *remained in a room filled with the vapours of 'Vitaline.'* While consumption, or phthisis, is the chief malady against which M. Gatchkowsky's invention is directed, it is also described as being extremely efficacious as a *stimulant* and *nerve tonic*, proving most beneficial also in cases of *paralysis* and certain diseases of the *stomach*. Among M. Gatchkowsky's many cures, one of the most satisfactory is that of Comtesse Lydie Rostoptchine, who, since benefiting by the inventor's treatment, has been assiduous in making known the virtues of his 'Vitaline.' M. Gatchkowsky, who *contemplates* the establishment of a dispensary for extending his treatment, receives his patients in Paris at No. 34, Rue de Turin. Those desirous of consulting him are required first to obtain a certificate to the effect that they really need treatment from Dr. Ivanichévitch, 13, rue du Poteau, Paris."

This would be hard to beat.

CORRECTIONS.

BY a clerical error in the BRITISH MEDICAL JOURNAL of October 6th we were made to say that "crammers" do *not* know how to teach. We intended to say just the reverse, namely, that "crammers" *do* know how to teach, for they are "naturally selected" for this purpose. That their method is a "stuffing" rather than an education of the mind is not their fault: their aid is sought not for the latter but for the former purpose, and their results are judged by this immediate test only.

DR. R. W. CARTER (Weymouth) writes: Allow me to correct two errors in my communication published in the BRITISH MEDICAL JOURNAL of October 6th. Page 766, line 4, read "and *when* I administer," and line 6, "dies from an *underdose*."

ST. THOMAS'S HOSPITAL.—The name of the winner of the Mead Medal for Practical Medicine and the Treasurer's Gold Medal should have been given as Mr. G. G. Genge, and not as printed in the BRITISH MEDICAL JOURNAL of October 6th.

THE BEAT-TRANSFER: A VERBAL CORRECTION.

DR. WILLIAM EWART (Curzon Street, W.) writes: A friendly critic points out in my contribution in the BRITISH MEDICAL JOURNAL of October 6th a verbal inaccuracy which, inasmuch as it might lead to confusion, I trust you will permit me to correct. On page 750, line 5, instead of "the beat migrated from the proximal to the distal side of the finger" the following would have been a clearer and a more accurate statement: "The beat migrated from the proximal to the distal portion of the artery." And, again, at line 12, "strong pulsation on its proximal side" should be read as meaning "strong pulsation in the proximal portion of the vessel."

INCOME TAX ASSESSMENT.

A GENERAL PRACTITIONER writes: My experience is as follows: Several years ago I appealed to the Special Commissioners against excessive assessment for income tax. I sent in my balance sheets for the past three years, and, at the surveyor of taxes' request, had an interview with him at his office. He went through the particulars of expenditure *seriatim*; said the Commissioners would not allow me anything at all for carriage expenses, which figured at £170, because, he said, no medical man ever used his brougham solely for professional purposes, but would use it for private shopping, taking him out to dinner, or theatre, etc.; also for similar reasons he disallowed £18, the expenses of the boy I am obliged to keep to take my medicines out (I do my own dispensing), because he would naturally do odd jobs as well, such as clean knives and boots. From my rent, which was £105, without taxes, I deducted a fair proportion—£40—which he cut down to £30. He would not allow me more than about one-half the amount I had estimated my bad debts, which were not excessive, and, with one or two other minor matters of dispute, I had a most unsatisfactory half-hour with him.

It ended in his offering to recommend the Commissioners to reduce my assessment by £50 only, and, if I would not agree to that, the appeal must go on, and I must take my chance, but he would be present at the appeal, and should object to all the items mentioned above, and advise the Commissioners to disallow them all.

To save further inconvenience, loss of time, loss of temper, etc., I accepted his offer, but came away with the feeling that he might be acting under the strict letter of the law, but it was not being administered with even a small amount of justice.

LETTERS, COMMUNICATIONS, ETC., have been received from:

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BOOKS, ETC., RECEIVED.

A Textbook of Inorganic Chemistry. By G. S. Newth. London: Longmans, Green, and Co. 1894. 6s. 6d.

A Manual of Human Physiology prepared with special reference to Students of Medicine. By Dr. J. H. Raymond. Philadelphia: W. B. Saunders. 1894. 1.25 dollars.

Essentials of the Diseases of the Ear. By Dr. E. B. Gleason. Philadelphia: W. B. Saunders. 1894. 1 dollar.

The Complete Poetical Works of Constance Naden; with an Explanatory Foreword. By Dr. R. Lewis. London: Bickers and Son. 1894.

Our Secret Friends and Foes. Expanded from Lectures delivered before popular audiences in London, Edinburgh, and elsewhere. By Professor Percy F. Frankland. New Edition. London: Society for Promoting Christian Knowledge. 1894.

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A Treatise on the Diseases of the Ear, including the Anatomy and Physiology of the Organ. By T. Mark Hovell. London: J. and A. Churchill. 1894. 18s.

Asthma and Chronic Bronchitis. By Dr. J. C. Thorowgood. New Edition. London: Bailliere, Tindall, and Cox. 1894. 4s.

Dissections Illustrated; A Graphic Handbook for Students of Practical Anatomy. Part III. By C. G. Brodie, F.R.C.S. London: Whittaker and Co. 10s.

Atlas of the Diseases of the Skin. By Dr. H. Radcliffe Crocker. Fasciculus VI. London: Young J. Pentland. 1894. 21s.

*** In forwarding books the publishers are requested to state the selling prices.

THE HARVEIAN ORATION
ON
MODERN DEVELOPMENTS OF HARVEY'S WORK.

Delivered at the Royal College of Physicians.

By T. LAUDER BRUNTON, M.D., D.Sc.Edin., LL.D.(Hon.) Aberd., F.R.S., F.R.C.P.,
Assistant Physician at St. Bartholomew's Hospital.

[After some introductory remarks, and a touching reference to the death of Sir Andrew Clark, the Orator proceeded]:

But while we are saddened to-day by the death of our late President, we are gladdened by the presence amongst us again of one whom we all reverence, not only as a former President of this College, but as one of the great leaders of clinical medicine in this century, Sir William Jenner. Like Harvey, Sir William Jenner is honoured by his College, by his country, by his Sovereign, and by the world at large. In times of trial and danger the lives of the Royal children were committed to the keeping of Harvey by his King, and to-day the care not only of her own life, but of that of her nearest and dearest is committed to Sir William Jenner by his Sovereign, in the full and well grounded assurance that in no other hands could they be more safe. The great clinician, Stokes, wished to have as his epitaph: "He fed fevers;" but Jenner has advanced much beyond Stokes, and, by showing us how to feed the different kinds of fevers, has saved thousands of valuable lives. To-day this College is acknowledging his right to rank with Sydenham, Heberden, Bright, and Garrod, by bestowing upon him the Moxon medal for clinical research. In numbering Sir William amongst its medallists the College honours itself as well as him, and in acknowledging the great services he has rendered, it is on this occasion acting as the mouthpiece of the medical profession not only in this country but in the world at large.

I purpose to consider to-day some of the modern developments of Harvey's work, more especially in relation to the treatment of diseases of the heart and circulation. There is, I think, a certain advantage in this also, inasmuch as one is apt by considering Harvey's work only as he left it, to overlook the enormous extent to which it now influences our thoughts and actions, and thus to comprehend its value very imperfectly. As he himself says:

> From a small seed springs a mighty tree; from the minute gemmule or apex of the acorn how wide does the gnarled oak at length extend his arms, how loftily does he lift his branches to the sky, how deeply do his roots strike down into the ground![1]

How very minute is the gemmule from which has sprung everything that is definite in medical science, for this gemmule is no other than the idea which Harvey records in these simple words: "I began to think whether there might not be motion, as it were, in a circle."

Out of this idea has grown all our knowledge of the processes of human life in health and disease, of the signs and symptoms which indicate disease, of the mode of action of the drugs and appliances which we use, and the proper means of employing them in the cure of disease. In the works that have come down to us we find that Harvey developed his idea physiologically in several directions. He discussed its application to the absorption and distribution of nourishment through the body, the mixing of blood from various parts, the maintenance and distribution of animal heat, and excretion through the kidneys. How far he developed it in the direction of pathology and therapeutics we do not know, as the results of his labours on these subjects have unfortunately been lost to us by the destruction of his manuscripts during the Civil War.

We are proud to reckon Harvey as an Englishman by birth, but he is far too great to belong exclusively to any country; men of various nations, and scattered all over the face of the earth, acknowledge him as their teacher, and have played, or are playing, a part in developing his discovery in its various branches of physiology, pathology, pharmacology, semeiology, and therapeutics. Americans, Austrians, Danes, Dutchmen, French, Germans, Italians, Norwegians, Russians, and Swedes have all shared in the work, and so numerous are they that it would be impossible for me to name them all. Stephen Hales, however, deserves special mention, for he was the first to measure the pressure of blood in the arteries, and the resistance offered to the circulation of the blood by the capillaries was investigated by Thomas Young, a Fellow of this College, who ranks with Harvey, Newton, and Darwin as one of the greatest scientific men that England has ever produced.

Harvey's desire that those who had done good work should not be forgotten was founded upon his knowledge of mankind, and of the tendency there is to forget what has already been done by those who have gone before us. The opposite condition often prevails, and the past is glorified at the expense of the present. But sometimes the present is wrongly glorified at the expense of the past, and past work or past benefits are forgotten.

The Sounds of the Heart.

Good examples of this are afforded by physiological views regarding the action of the vena cava and pulmonary veins and the causation of the cardiac sounds. Harvey appears to have thought that the vena cava and pulmonary veins were simply dilated passively by the passage of blood into them; but the fact that they possess a power of independent pulsation was known to Haller[2], and was brought prominently forward by Senac[3], who regards the vena cava as the starting point of the whole circulation. He says:

> The vena cava is therefore the first motor cause which dilates the cavities of the heart; it fills the auricles and extends their walls in every direction.

These observations appear to have been almost forgotten until they were again made independently a few years ago[4], and in one of the latest and most accurate physiological treatises which now exist, the description of the cardiac cycle is nearly the same as that given by Senac:

> A complete beat of the whole heart, or cardiac cycle, may be observed to take place as follows:—The great veins, inferior and superior venæ cavæ and pulmonary veins are seen, while full of blood, to contract in the neighbourhood of the heart; the contraction runs in a peristaltic wave toward the auricles, increasing in intensity as it goes.[5]

The pulsation of these veins, however, cannot be a constant phenomenon, or it would have been noticed by such a keen observer as Harvey.

The sounds of the heart were discovered by Harvey, or at least were known to him, for he speaks of the sound caused in the œsophagus of the horse by drinking, and says:

> In the same way it is with each motion of the heart, when there is a delivery of blood from the veins to the arteries that a pulse takes place and can be heard within the chest.

This observation remained, so far as we know, without any further development until the time of Laennec, who introduced the practice of auscultation; but it was a Fellow of this College, Dr. Wollaston,[6] who first discovered that the muscles during contraction give out a sound, and although many observations were made regarding cardiac murmurs by Corrigan, Bouillaud, and Piorry, it was chiefly by a Committee of Fellows of this College—Dr. Clendinning, Dr. C. J. B. Williams, and Dr. Todd—that the question was finally settled, and the conclusions at which they arrived are those now accepted as correct.[7] Yet in recent discussions regarding the origin of cardiac sounds little mention has been made of the work of this Committee, and indeed I first learned of the value of the work from a German source, Wagner's *Handwörterbuch der Physiologie*.

The Circulation and the Action of Drugs.

The importance of these observations in the diagnosis of heart disease it would be hard to overestimate. But diagnosis alone is not the aim of the physician, whose objects must be to prevent, to cure, or to control disease. A knowledge of physiology may greatly help us to prevent disease, not only of the heart and vessels, but of every member of the body. The control and cure of disease may also be effected by diet

[1] *The Works of W. Harvey*, Sydenham Society's Edition, p. 320.

[2] *Elemente die Physiologie*, 1757, Tom. I, pp. 410 and 399.

[3] *De la Structure du Cœur*, Livre IV, ch. iii, p. 24.

[4] *Proc. Roy. Soc.*, 1876, No. 172.

[5] M. Foster, *Textbook of Physiology*, 6th edition, Part I, ch. iv, p. 231.

[6] Wollaston, *Phil. Trans.*, 1810, p. 2.

[7] Report of Committee, consisting of C. J. B. Williams, R. B. Todd, and John Clendinning, *Brit. Ass. Rep. for 1839*, p. 155.

and regimen, but it is undoubtedly in many cases greatly assisted by the use of drugs, and is sometimes impossible without them. Harvey knew that drugs applied externally are absorbed and act on the body, so that colocynth thus applied will purge, and cantharides will excite the urine;[8] but the action of drugs when injected into the blood appears to have been tried first by Christopher Wren, better known as the architect of St. Paul's than as a pharmacologist. Bishop Spratt says:

He was the first Author of the Noble Anatomical Experiment of injecting liquors into the Veins of Animals; An Experiment now vulgarly known; but long since exhibited to the Meetings at Oxford, and thence carried by some Germans, and published abroad. By this Operation divers Creatures were immediately purg'd, vomited, intoxicated, kill'd, or reviv'd, according to the quality of the Liquor injected. Hence arose many new Experiments, and chiefly that of Transfusing Blood, which the Society has prosecuted in sundry Instances, that will probably end in extraordinary success.[9]

The method originated by Wren of injecting drugs into the circulation was skilfully utilised by Magendie for the purpose of localising the particular part of the body upon which the drugs exerted their action, and he thus conclusively proved that the symptoms produced by strychnine were due to its effect on the spinal cord. His experiments showed that the rate of absorption from various parts of the body varied enormously, and, through the teaching of Christison, led to the introduction into practice by Dr. Alexander Wood of that most useful aid to modern therapeutics—the hypodermic syringe.

The first quantitative experiments on the effect of drugs upon the circulation were made, to the best of my knowledge, by James Blake, in 1844, in the laboratory of University College, at the suggestion of the late Professor Sharpey, with the hæmodynamometer of Poiseuille, which had then been recently introduced. [After a graceful reference to the vast knowledge and utter unselfishness of Professor Sharpey, and to his great influence in physiological progress in this country through the work of his pupils, Burdon Sanderson and Michael Foster, under the auspices of Acland and Humphry, the Orator proceeded]: Yet more than to anyone else since the time of Harvey do we owe our present knowledge of the circulation to Carl Ludwig. He it is who first enabled the pressure of blood in the arteries to record its own variations automatically, so that alterations could be noticed and measured which were too rapid or too slight to be detected by the eye. To him, also, we owe the plan of artificial circulation by which the changes in the functions of the organs and in the vessels which supply them can be observed, quite apart from the heart, lungs, or from the nervous system.

Like Sharpey, Ludwig is a great teacher, and like the great architects of the Middle Ages, who built the wonderful cathedrals which all admire, and whose builders' name no man knows, Ludwig has been content to sink his own name in his anxiety for the progress of his work and in his desire to aid his pupils. The researches which have appeared under these pupils' names have been in many instances, I believe in most, not only suggested by Ludwig, but carried out experimentally with his own hands, and the paper which recorded the results finally written by himself.

The Mechanism of the Circulation.

The graphic method introduced by Ludwig for the purpose of measuring the blood pressure was adapted by Volkmann to the registration of the pulse in man, and the same method has been modified and rendered more easily applicable at the bedside by Marey and Chauveau, to whom we chiefly owe our knowledge of the modifications in the form of the apex beat, and of the pulse curve. It is to Ludwig and his pupils, however, that we owe the greater part of our knowledge of the mechanism of the circulation, and of the varying distribution of the blood in various parts of the body.

The effect of emotion upon the heart was carefully noted by Harvey, who says:

For every affection of the mind which is attended with pain or pleasure, hope or fear is the cause of an agitation whose influence extends to the heart.[10]

Not only was Harvey well acquainted with the fact that the beats of the heart vary very much in strength and force, but he also knew that the circulation in various parts of the body may be very different at one and the same time. He says:

It is manifest that the blood in its course does not everywhere pass with the same celerity, neither with the same force in all places and at all times, but that it varies greatly according to age, sex, temperament, habit of body, and other contingent circumstances, external as well as internal, natural or non-natural. For it does not course through intricate and obstructed passages with the same readiness that it does through straight, unimpeded, and pervious channels. Neither does it run through close, hard, and crowded parts with the same velocity as through spongy, soft, and permeable tissues. Neither does it flow and penetrate with such swiftness when the impulse (of the heart) is slow and weak, as when this is forcible and frequent, in which case the blood is driven onwards with vigour and in large quantity. And what indeed is more deserving of attention than the fact that in almost every affection, appetite, hope, or fear, our body suffers, the countenance changes, and the blood appears to course hither and thither. In anger the eyes are fiery and the pupils contracted; in modesty the cheeks are suffused with blushes: in fear, and under a sense of infamy and of shame, the face is pale, but the ears burn as if for the evil they heard or were to hear; in lust how quickly is the member distended with blood and erected.[11]

But although these facts were known to Harvey so long ago, it is only in comparatively recent years that the mechanism by which they are brought about has been investigated; and it is only within the last decade that physiologists have begun regularly to believe that the cardiac muscle has a power of rhythmic pulsation independent of its nerves, although Harvey had noted that when the heart was cut into small pieces the fragments would still continue to pulsate. We may fairly, indeed, compare the movements of the heart, as regarded by physiologists of the present day, to those of a horse, which is capable of going independently although its pace may be slowed or accelerated by the reins or spur of the rider. The power of the vagus to act as a rein to the heart and slow its movements or stop them altogether was first noted by Edward and Ernest Heinrich Weber, while the effect that it sometimes has of accelerating instead of slowing, like the effect of shaking the reins of the horse, was observed by Schiff, Moleschott, and Lister.

The accelerating nerves of the heart were more thoroughly investigated by von Bezold, while the power of the vagus to weaken as well as slow the heart was observed by Gaskell. The position of the cardiac centre, which, like the rider, regulates the movements of the heart, was located in the medulla oblongata chiefly by Ludwig and his pupils.

The Vasomotor Apparatus.

Like the heart, the vessels also are regulated in diameter by the nervous system in accordance with the wants of the body generally, and the effect upon the vasomotor nerves—which when cut allow them to dilate and when stimulated cause them to contract—was discovered by Bernard, Brown-Séquard, and by our countryman, Waller; while the power of other nerves to cause immediate dilatation was discovered by Bernard, Eckhardt, and Ludwig in the submaxillary glands, penis, and peripheral vessels respectively.

Researches carried on under Ludwig's direction by various of his pupils in succession, Alexander Schmidt, Dogiel, Sadler, myself, Hafiz, Lépine, A. Mosso, von Frey, and Gaskell, as well as the observations of Cohnheim and Gunning, have shown that the muscular fibres of the arterioles, not only in the muscles but throughout the body generally, have a power of independent and sometimes rhythmical contraction and relaxation. Their contractility is, however, controlled by the central nervous system in accordance with the wants of the body generally. For the amount of blood contained in the body is insufficient to fill the whole of the vascular system at once, and when the vessels are fully dilated as they are after death, we find that nearly the whole of the blood of the body may be contained in the veins alone. It is, therefore, necessary that when one part of the body is receiving a larger supply of blood, another should be receiving a smaller supply; and the functions of the vasomotor centres have been well compared by Ludwig to the turncocks in a great city, who cut off the water supply from one district, at the same time they turn it on to another. Thus it is that when the brain is active the feet may get cold, and Mosso has shown this in an exceedingly neat manner by placing a man on a large board delicately balanced at its centre, and demonstrating that whenever the man began to

[8] *The Works of William Harvey*, Sydenham Society's Edition, p. 72.
[9] *The History of the Royal Society of London for the Improving of Natural Knowledge*. By Thos. Spratt, D.D., late Lord Bishop of Rochester.
[10] *The Works of William Harvey*, Sydenham Society's Edition, p. 70.
[11] *Ibid.*, pp. [illegible]

think, the increased supply of blood to his brain caused the head to go down and the heels to rise up.

Ubi stimulus ibi affluxus was an old doctrine, and expressed a great truth. Wherever the need for increased nourishment or increased supply of oxygen exists in the healthy body, thither does the blood flow in larger quantities than usual. If the glands are active their blood supply is greatly increased, as was shown by Bernard, and a similar occurrence takes place in the contracting muscle, as has been shown by Ludwig and his pupils. The vessels of the intestines and of the skin, with their numerous glands, have their calibre regulated by the vasomotor nerves, which proceed from the centre in the medulla oblongata. This centre acts most readily upon the vessels of the intestines, and rather less readily on those of the skin. In consequence of this, when the centre is irritated the vessels of the intestine contract and drive the blood through the skin so that it is warmer than before, and it is only when the stimulation is very great that the vessels of both contract so that the skin receives less blood than normal and becomes colder than before. But if the vessels of the skin and intestine are both contracted, where does the blood go? This question was put by Ludwig, and answered by the experiments which he made with Hafiz. It is evident that if the heart be stopped while the blood pressure is being measured in the artery of an animal, the pressure will fall regularly and steadily, because the blood is flowing out all the time through the arterioles and capillaries into the veins. One would naturally expect that if the arterioles were contracted by irritation of the vasomotor centres in the medulla, the fall of blood pressure would either not take place at all or would be very much slower than before, but on trying the experiment Ludwig and Hafiz found, to their surprise, that the blood pressure fell almost as quickly as when the vasomotor centre was left alone and the vessels of the skin and intestine therefore remained uncontracted. In other words, the vessels which supply the muscles of the body and limbs are capable of such extension that when fully dilated they will allow the arterial blood to pour through them alone nearly as quickly as it usually does through the vessels of the skin, intestine, and muscles together. This observation, it seems to me, is one of the greatest importance, and one that has hardly received the attention which it merits. It is obvious that contraction of the cutaneous vessels, such as occurs upon exposure to cold, will drive more blood through the muscles, and as oxidation goes on more rapidly in them the result will be increased production of heat.

The Circulation and the Muscular System.

The experiments I have just mentioned show that the vessels of the muscles are not controlled by the vasomotor centre in the medulla oblongata in the same way as those of the intestine and skin. How far their vascular centres may be associated with those for voluntary movements, which have been so admirably localised by Ferrier in the cerebral cortex, still remains to be made out. The circulation through the muscles is, indeed, a complex phenomenon, and it was shown by Ludwig and Sadler to depend upon at least two factors having an antagonistic action. When a muscle is thrown into action it mechanically compresses the blood vessels within it, and thus tends to lessen the circulation through it, but at the same time the stimulus which is sent down through the motor nerve, and which calls it into action, brings about a dilatation of the muscular walls, and thus increases the circulation through the muscle.

When the amount of blood is measured before, during, and after stimulation of its motor nerves, it is sometimes found that the flow is diminished, at others that it is increased, the alteration depending upon the comparative effect of the mechanical compression of the vessels of the muscles just mentioned, and upon the increase of their lumen by the dilatation of their walls. It invariably happens, however, that after the muscle has ceased to act the flow of blood through the muscle has increased. This increase is quite independent of any alteration in the general pressure of blood in the arteries, and it occurs when an artificial stream of blood, under constant pressure, is sent through the muscle. The dilatation in the muscular vessels, as indicated by the increased flow of blood, and consequent change of colour in the frog's tongue, was observed by Lépine after stimulation of the peripheral ends of the hypoglossal and glossopharyngeal nerves, and the actual changes in the vessels themselves were observed microscopically by von Frey and Gaskell.

The dilatation of muscular vessels on irritation of peripheral nerves was thus brought into a line with the dilatation noticed in the vessels of the submaxillary gland by Bernard, and in the corpora cavernosa by Eckhardt. It is evident that alteration in the size of such a huge vascular tract as the muscular arteries must influence, to a great extent, the blood pressure in the arteries generally; and it is equally evident that the changes induced in the condition of the blood pressure by muscular action may be of two kinds—either a rise or a fall. If the arterioles are compressed by the muscles, so that the flow through them is impeded, the general blood pressure will rise. When this effect is more than counteracted by the dilatation of the arterioles themselves under nervous influence, the general blood pressure will fall, for the blood will find an easy passage through the vessels from the arteries into the veins. We can thus see how readily a rise or fall in the general blood pressure may be induced by exercise of the muscles. If they contract suddenly or violently they will tend to compress the arterioles, and raise the blood pressure, while quite easy contraction will have little effect in compressing the arteries, and these, becoming dilated, will allow the blood pressure to fall.

But there is still another factor which may tend to increase the blood pressure during severe muscular exertion, and this is the fact that stimulation of the nerve fibres extending from the muscles to the central nervous system greatly accelerates the beats of the heart. In this respect stimulation of the muscular nerves differs from that of the cutaneous and visceral nerves, inasmuch as the latter tend rather to slow than to quicken the pulse. The peculiar effect of the muscular nerves upon the heart would indeed appear to be a provision of Nature for the purpose of maintaining an exceedingly active circulation during the active calls upon nutrition which violent exertions entail. Muscular exercise, therefore, has a special tendency to raise the blood pressure in the arterial system, and consequently to increase the resistance which the left ventricle has to overcome. Moreover, in the case of the intestinal vessels there is a special provision made for preventing their contraction from causing too great a rise of arterial pressure. This consists in the depressor nerve, which passes from the heart and tends to produce dilatation of the abdominal vessels, and thus prevent any undue pressure occurring within the heart from their excessive contraction. In the case of the muscles we have no such nerve; its place seems to be taken by the dilating fibres which occur in the motor nerves. As I have already said, however, this effect of dilatation in the muscular vessels may be at first more than counteracted by mechanical compression at the commencement of exertion, and thus the blood pressure in the arteries and the resistance which it opposes to the contraction and emptying of the ventricle may be unduly increased.

As a general rule, the distension of any hollow muscular organ is attended with great pain. The heart is no exception to this rule, and distension of its cavities brings on most acute physical suffering. Its inability to empty itself is a question of relative, and not of absolute, power; for a strong heart may be unable to work against enormously increased resistance in the peripheral arterioles, while the heart, weakened by degeneration, may be unable to empty itself in face of pressure little, if at all, above the normal.

When the contractile power of the heart is not as it is in health, considerably in excess of the resistance opposed to it in vessels, but is nearly equal to it, a slight increase in the resistance may greatly interfere with the power of the heart to empty itself, and bring on pain varying in amount from slight uneasiness to the most intense agony in angina pectoris. This is, indeed, what we find; for a heart whose nutrition has been weakened by disease of the arteries and consequent imperfect supply of blood to the cardiac muscle is unable to meet any increased resistance if this should be offered to it, and pain is at once felt. In such cases unless they be far advanced we find, precisely as we might expect, that walking on the level usually causes no pain, but the attempt to ascend even a slight rise by which the muscles

are brought into more active exertion brings on pain at once. Yet here again we find, as we should expect, that if the patient is able to continue walking, the pain passes off and does not return. These phenomena would be inexplicable were it not for Ludwig's observations on circulation through the muscles, but in the light of these observations everything is made perfectly intelligible. Walking on the flat, by causing no violent exertion of the muscles, produces no mechanical constriction of the vessels and thus does not increase the blood pressure. The greater exertion of walking up a hill has this effect, but if the patient is able to continue his exertions, the increased dilatation of the vessels—a consequence of muscular activity—allows the pressure again to fall and relieves the pain.

Effect of Muscular Overwork on the Heart.

As muscular exertion continues and the vessels of the muscles become dilated, the flow of blood from the arteries into the veins will tend to become much more rapid than usual. The pressure in the arterial system will fall consequently, but that in the veins will become increased, and, unless a corresponding dilatation occurs in the pulmonary circulation, blood will tend to accumulate in the right side of the heart, the right ventricle will be unable to empty itself completely, shortness of breath will arise, and even death may occur. At first the right side of the heart is affected, and the apex beat disappears from the normal place, and is felt in the epigastrium, but the left ventricle also becomes dilated, though whether this is simply through nervous influence tending to make it act concordantly with the right, or for some other reason, it is at present impossible to say. Severe exertion, even for a few minutes, may produce this condition in healthy persons,[12] and when the exertion is overcontinued it may lead to permanent mischief. More especially is this the case in young growing boys; and it is not merely foolish, it is wicked, to insist upon boys engaging in games or contests which demand a long-continued overexertion of the heart, such as enforced races, and paper chases extending over several miles. Intermittent exertion, either of a single muscle or of a group of muscles, or of the whole body, appears to lead to better nutrition and increased strength and hypertrophy, but overexertion, especially if it continues, leads to impaired nutrition, weakness, and atrophy. If we watch the movements of young animals, we find that they are often rapid, but fitful and irregular, and varied in character, instead of being steady, regular, and uniform. They are the movements of the butterfly, and not of the bee. The varied plays of childhood, the gambols of the lamb, and the frisking of the colt are all well adapted to increase the strength of the body without doing it any injury; but if the colt, instead of being allowed to frisk at its own free will, is put in harness or ridden in races, the energy which ought to have gone to growth is used up by the work, its nutrition is affected, its powers diminished, and its life is shortened. The rules which have been arrived at by the breeders of horses ought to be carefully considered by the teachers of schools, and by the medical advisers who superintend the pupils.

Angina Pectoris.

In youth and middle age every organ of the body is adapted for doing more work than it is usually called upon to do. Every organ can, as it is usually termed, "make a spurt" if required, but as old age comes on this capacity disappears, the tissues become less elastic, the arteries become more rigid, and less capable of dilating and allowing freer flow of blood to any part, whether it be the intestine, the skin, the brain, the muscles, or the heart itself. Mere rigidity of the arteries supplying the muscles of the heart will lessen the power of extra exertion, but if the vessels be not only rigid but diminished in calibre, the muscles of the limbs and the heart itself will be unfit even for their ordinary work, and will tend to fail on the slightest over-exertion. This fact was noticed by Sir Benjamin Brodie, who, when speaking of patients with degenerating and contracted arteries, such as lead to senile gangrene, said:

> Such patients walk a short distance very well, but when they attempt more than this the muscles seem to be unequal to the task, and they can walk no further. The muscles are not absolutely paralysed, but in a state approaching to it. The cause of all this is sufficiently obvious. The lower limbs require sometimes a larger and sometimes a smaller supply of blood. During exercise a larger supply is wanted on account of the increased action of the muscles; but the arteries being ossified or obliterated, and thus incapable of dilatation, the increased supply cannot be obtained. This state of things is not peculiar to the lower limbs. Wherever muscular structures exist the same cause will produce the same effect. Dr. Jenner first, and Dr. Parry, of Bath, afterwards, published observations which were supposed to prove that the disease which is usually called angina pectoris depends on ossification of the coronary arteries.....When the coronary arteries are in this condition they may be capable of admitting a moderate supply of blood to the muscular structure of the heart; and as long as the patient makes no abnormal exertion the circulation goes on well enough. When, however, the heart is excited to increased action, whether it be during a fit of passion, or in running, or walking upstairs, or lifting weights, then, the ossified arteries being incapable of expanding so as to let in the additional quantity of blood which under these circumstances is required, its action stops and syncope ensues; and I say that this exactly corresponds to the sense of weakness and want of muscular power which exists in persons who have the arteries of the legs obstructed or ossified.[13]

But the syncope and stoppage of the heart mentioned by Brodie are not the only consequences of impaired cardiac nutrition. The heart may be still able to carry on the circulation, but the patient may suffer intense pain in the process. The outside of the heart was found by Harvey to be insensible to light touches, but the inside of the heart appears to be much more sensitive either to touch or pressure.

Principles of Treatment of Heart Disease.

A knowledge of the mode of circulation of blood through the muscles enables us to understand not only the pathology of angina pectoris but the *rationale* of various methods of treating patients suffering from angina pectoris or other forms of heart disease. In most cases our object is a twofold one—to increase the power of the heart and to lessen the resistance it has to overcome. In some cases we require also to aid the elimination of water which has accumulated so as to give rise to œdema of the cellular tissues or dropsy of the serous cavities. In our endeavours to produce these beneficial changes in our patients, we employ regimen, diet, and drugs, and it is evident that in cases where the condition of one patient's heart may be very different indeed from that in another, the regimen which may be useful to one may be fatal to the other. We have already seen that sudden and violent exertion may raise the blood pressure, and so lead to intense cardiac pain or to stoppage of the heart and instant death; while more gentle exercises, by increasing the circulation through the muscles, may lessen the pressure and give relief to the heart.

The methods of increasing the muscular circulation may be roughly divided into three, according as the patient lies, stands, or walks. First, absolute rest in bed with massage; secondly, graduated movements of the muscles of the limbs and body while the patient stands still; thirdly, graduated exercises in walking and climbing.

The second of these methods has been specially worked out by the brothers Schott, of Nauheim, and the third is generally connected with the name of Oertel.[14]

Absolute Rest.

It is obvious that in cases of heart disease where the failure is great and the patient is unable even to stand, much less to walk, where breathlessness is extreme, and dropsy is beginning or has even advanced, the second and third methods of treatment are inapplicable. It is in such cases that the method of absolute rest in bed, not allowing the patient to rise for any purpose whatever, hardly allowing him to feed himself or turn himself in bed, proves advantageous. The appetite is usually small, the digestion imperfect, and flatulence troublesome, and here an absolute milk diet, like that usually employed in typhoid fever, is often most serviceable, being easily taken and easily digested, while the milk sugar itself has a diuretic action and tends to reduce dropsy.

Massage.

But while simple rest prevents the risk of increased arterial tension and consequent opposition to the cardiac contractions which might arise from muscular exertion, such benefit as would accrue from muscular exertions and increased circulation would be lost were it not that

[12] Schott's *Verhandl.*, d. ix Congresses in Med. zu Wien, 1890.

[13] *Lectures on Pathology and Surgery.* By Sir Benjamin Brodie. London, 1846, p. 360.

[14] *Practitioner*, vol. li, p. 190.

they can be supplied artificially by massage. This plan of treatment, although it has only recently been revived, was known to Harvey, who narrates the case of a man who, in consequence of an injury, of an affront which he could not revenge, "was so overcome with hatred, spite, and passion, that he fell into a strange disorder, suffering from extreme compression and pain in the heart and breast, from which he only received some little relief at last when the whole of his chest was pummelled by a strong man, as the baker kneads dough."[15]

This was a very rough form of massage, but the same kneading movements which he described have been elaborated into a complete system, more especially by Ling, in Sweden, and made widely known in America and this country by Weir Mitchell and Playfair. One might naturally expect that kneading the muscles would increase the circulation through them in somewhat the same way as active exercise, but, to the best of my knowledge, no actual experiments existed to prove this, and I accordingly requested my friend and assistant, Dr. Tunnicliffe, to test the matter experimentally. The method employed was, in the main, the same as that devised by Ludwig, and employed by Sadler and Gaskell under his direction. The results were that during the kneading of a muscle the amount of venous blood which issued from it was sometimes diminished and sometimes increased; that just after the kneading was over the flow was diminished, apparently due to accumulation of blood in the muscle, and again succeeded by a greatly increased flow exactly corresponding with that observed by Ludwig and his pupils.

The clinical results are precisely what one would expect from increased circulation in the muscles, and cases apparently hopeless sometimes recover most wonderfully under this treatment.

Graduated Muscular Exercise.

For patients who are stronger, so that confinement to bed is unnecessary, and who yet are unable to take walking exercise, Schott's treatment is most useful, and it may be used as an adjunct to the later stages of the treatment just described, or as a sequel to it. Here the patient is made to go through various exercises of the arms, legs, and trunk, with a certain amount of resistance which is applied either by the patient himself setting in action the opposing muscles, or by an attendant, who gently resists every movement made by the patient, but graduates his resistance so as not to cause the least hurry in breathing, or the least oppression of the heart. Perhaps the easiest way of employing graduated resistance is by the ergostat of Gärtner, which is simply an adaptation of the labour crank of prisons, where the number of turns of a wheel can be regulated in each minute, and the resistance applied by a brake, and may be graduated to an ounce. The objection to it is the uniformity of movement and its wearisome monotony. Oertel's plan of gradually walking day by day up a steeper and steeper incline, and thus training the muscles of the heart, is well adapted for stronger persons; but, when applied injudiciously, may lead—just like hasty or excessive exertion—to serious or fatal results. In all these plans the essence of treatment is the derivation of blood through a new channel, that of the muscular vessels, and the results in relieving cardiac distress and pain may be described in the same words which Harvey employs in reference to diseases of the circulation:

> How speedily some of these diseases that are even reputed incurable are remedied and dispelled as if by enchantment.[16]

Chemistry of the Circulation.

There is yet another consequence of the circulation to which Harvey has called attention, although only very briefly, which has now become of the utmost importance, and this is the admixture of blood from various parts of the body. After describing the intestinal veins, Harvey says:

> The blood returning by these veins, and bringing the cruder juices along with it—on the one hand from the stomach, where they are thin, watery, and not yet perfectly chylified; on the other, thick and more earthy, as derived from the fæces, but all pouring into this splenic branch—are duly tempered by the admixture of contraries.[17]

Harvey's chemical expressions are crude, for chemistry as a science only began to exist about a century and a-half after Harvey's death, yet the general idea which he expresses in the words which I have just quoted is wonderfully near the truth.

The most important constituents of the blood are chloride of sodium and water. Chloride of sodium is a neutral salt, but during digestion both it and water are decomposed in the gastric glands and hydrochloric acid is poured into the stomach while a corresponding amount of soda is returned into the blood, and its alkalinity increases *pari passu* with the acidity of the stomach. Part of this alkali is excreted in the urine so that the urine during digestion is often neutral or alkaline, and possibly some of it passes out through the liver with the bile of the pancreas and intestinal juice, where, again mixing with the chyle from the stomach, neutralisation takes place, so that neutral and combined inactive chloride of sodium is again formed from the union of active alkali and acid. But it is most probable that what occurs in the stomach occurs also in the other glands, and that it is not merely excess of alkali resulting from gastric digestion which is poured out by the liver, pancreas, and intestine, but that these glands also decompose salts, pour the alkali out through the ducts and return the acid into the blood.

We are now leaving the region of definite fact and passing into that of fancy, but the fancies are not entirely baseless, and may show in what direction we may search out and study the secrets of Nature by way of experiment; for what is apparently certain in regard to the decomposition of chloride of sodium in the stomach and probably in the case of neutral salts in the pancreas and intestine, is also probable in that important, though as yet very imperfectly known, class of bodies which are known as zymogens. Just as we have in the stomach an inactive salt, so we have also an inactive pepsinogen which, like the salt, is split up in the gastric glands and active pepsine is poured into the stomach. But is the pepsine the only active substance produced? Has no other body, resulting from decomposition of the pepsinogen, been poured into the blood while the pepsine passed into the stomach? Has the inactive pepsinogen not been split up into two bodies active when apart, inactive when combined? May it not be fitly compared, as I have said elsewhere, to a cup or glass, harmless while whole, but yielding sharp and even dangerous splinters when broken, although these may again be united into a harmless whole?

This question at present we cannot answer, but in the pancreas there is an indication that something of the kind takes place, for Lépine has discovered that while this gland pours into the intestine a ferment which converts starch into sugar, it pours through the lymphatics into the blood another ferment which destroys sugar. Whether a similar occurrence takes place in regard to its other ferments in the pancreas or in the glands of the intestine we do not know, nor do we yet know whether the same process goes on in the skin and whether the secretion of sweat, which is usually looked upon as its sole function, bears really the relationship to cutaneous activity which the secretion of bile bears to the functions of the liver. There are indications that such is the case, for when the skin is varnished not only does the temperature of the animal rapidly sink, but congestion occurs in internal organs, and dropsy takes place in serous cavities, while in extensive burns of the skin rapid disintegration of the blood corpuscles occurs.

Therapeutical Deductions.

It is obvious that if this idea be at all correct a complete revolution will be required in the views we have been accustomed to entertain regarding the action of many medicines. In the case of purgatives and diaphoretics, for example, we have looked mainly at the secretions poured out after their administration, whereas it may be that the main part of the benefit that they produce is not by the substances liberated through the secretions they cause, but returned from the intestine and skin into the circulating blood.

Medication by Organic Juices.

How important an effect the excessive admixture of the juices from one part of the animal body with the circulating blood might have was shown in the most striking way by Wooldridge. He found that the juice of the thyroid gland,

[15] *The Works of William Harvey*, Sydenham Society's Edition, p. 128.
[16] *Ibid.*, p. 141.
[17] *Ibid.*, p. 75.

injected into the blood, would cause it to coagulate almost instantaneously, and kill the animal as quickly as a rifle bullet. What is powerful for harm is, likewise, powerful for good in these cases, and the administration of thyroid juice in cases of myxœdema is one of the most remarkable therapeutic discoveries of modern times. Since the introduction by Corvisart of pepsine as a remedy in dyspepsia, digestive ferments have been largely employed to assist the stomach and intestine in the performance of their functions, but very little has been done until lately in the way of modifying tissue changes in the body by the introduction of ferments derived from solid organs. For ages back savages have eaten the raw hearts and other organs of the animals which they have killed, or the enemies they have conquered, under the belief that they would thereby obtain increased vigour or courage; but the first definite attempt to cure a disease by supplying a ferment from a known glandular organ of the body was, I believe, made in Harvey's own hospital by the use of raw meat in diabetes.[15] It was not, however, until Brown-Séquard recommended the use of testicular extract that the attention of the profession became attracted to the use of extracts of solid organs. Since then extract of thyroid, extract of kidney, extract of suprarenal capsule have been employed, but even yet they are only upon their trial, and the limits of their utility have not yet been definitely ascertained.

Medication by Antitoxins.

But yet another therapeutic method has recently been introduced which bids fair to be of the utmost importance, the treatment of disease by antitoxins. The discovery by Pasteur of the dependence of many diseases upon the presence of minute organisms may be ranked with that of Harvey, both in regard to the far-reaching benefits which it has conferred upon mankind and for the simplicity of its origin. "Why does a crystal of tartaric acid sometimes crystallise in one form and sometimes in another?" These minute organisms, far removed from man as they are in their structure and place in Nature, appear in some respects to resemble him in the processes of their growth and nutrition. They seem, indeed, to have the power of splitting up inactive bodies into substances having a great physiological or chemical activity. From grape sugar, which is comparatively inert, they produce carbonic acid and alcohol, both of which have a powerful physiological action. From inert albumen they produce albumoses having a most powerful toxic action, and to the poisonous properties of these substances attention was for a while alone directed; but it would appear that at the same time that they produce poisons they also form antidotes, and when cultivated without the body and introduced into the living organism they give rise to the production of these antidotes in still greater quantity, and by the use of antitoxin tetanus and diphtheria appear to be deprived of much of their terrible power.

The plan of protection from infective diseases which was first employed by Jenner in small-pox is now being extended to many other diseases, and the protective substances which are formed in the body and the mode of action is being carefully investigated. The introduction of either the pathogenic microbe or of toxic products appears to excite in the body a process of tissue change by which antitoxins are produced, and these may be employed either for the purpose of protection or cure. It was shown by Wooldridge that thyroid juice has a power of destroying anthrax poison, and it seems probable that increase of the circulation of certain organs will increase their tissue activity, and thus influence the invasion or progress of disease. As I have already mentioned, we are able to influence the circulation in muscles both by voluntary exertion and by passive massage, and we should expect that both of these measures would influence the constituents of the blood generally, and such, indeed, appears to be the case; for J. K. Mitchell has found that after massage the number of blood corpuscles in the circulation is very considerably increased.

Had time allowed it I had intended to discuss the modifications of the heart and vessels by the introduction of remedies into the circulation, the power of drugs to slow or strengthen, to quicken or weaken the power of the heart, to contract or relax the arterioles, to raise or lower the blood pressure, to relieve pain or to remove dropsy, but to do this would require time far exceeding that of a single lecture. Moreover, the methods and results were admirably expounded to the College by Dr. Leech in his Croonian Lectures; and I have therefore thought I should be better fulfilling the wish of Harvey that the Orator of the year should exhort the Fellows and Members of the College to search out the secrets of Nature by way of experiment by directing their attention to fields of research which have received at present little attention, but promise results of great practical value.

[15] BRITISH MEDICAL JOURNAL, February 21st, 1874, p. 221, *et seq.*

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF SURGERY.

At the Annual Meeting of the British Medical Association at Bristol, August, 1894.

BY W. MITCHELL BANKS, M.D., F.R.C.S.,

Surgeon to the Liverpool Royal Infirmary.

ON THE LOVE OF NOVELTY.

GENTLEMEN,—It is not my duty to deliver to you to-day any elaborated or formal address. The Address in Surgery, to which we are all looking forward with pleasurable anticipation, does away with any such necessity. But I may be allowed to offer to you a very hearty welcome, and to express the hope that the important surgical questions which we purpose discussing in this room during the next three days will have much light thrown upon them by the several experiences which you will bring to bear upon them. To have been chosen as your President I regard as one of the highest distinctions that has fallen to my lot, and I trust that when our sitting has ended we shall all carry away with us happy remembrances, not only of pleasant holiday and hospitality, but of useful and serious work.

Advancing years, while they rob us of many delights and somewhat cruelly sweep away many of the happy expectations of youth, leave to some of us the great advantage of being able to look behind us along the path by which we have travelled, while still seeing before us a goodly stretch of that high road to the mountains of perfection which we may never reach, but upon which the eyes of every true man are fixed from the very day on which he commences life's journey.

A few months ago, in a recent number of the *Medical Magazine* I read a review of Mr. Jacobson's lives of two famous Guy's surgeons—John Hilton and Edward Cock. The reviewer commenced his notice with these sentences:

"It is too much the fashion among the younger generation of professional men to associate eminence in surgery with some new method of procedure or some brilliant achievement in the way of an operation never thought possible. It is not remembered that the day after to-morrow the method will be supplanted by another, the operation will be discarded as useless or unjustifiable. In surgery, as in medicine, true greatness consists rather in the power of applying a wide and accurate knowledge to the elucidation of the numberless problems suggested by an extended clinical experience, in maintaining that balance of judgment which can withstand the temptations to adventurous brilliancy without becoming stagnated in the slough of servile adherence to tradition. If we look back at the history of surgery it will be found that the men who have left their mark are not the brilliant operators or learned investigators, but rather men who continually devoted great ability to the work of their profession, to the solution of the questions which daily presented themselves for interpretation. They were men who spared no pains in their work, who shirked no difficulties, but they were men who ever placed the patient in the first place, and looked upon operative brilliancy as a means to an end."

As my thoughts went back along the seven-and-twenty years during which I have been engaged in active surgical work, I began to recall the many surgeons whom I have known during that not inconsiderable period, and I came to the conclusion that there was a great deal of truth in these

sentences. At this period of the world's history it would almost seem as if we had made an appreciable inroad upon what we used to conceive of as time and space. Some of us live three lives in one. I often feel a vague dread lest our own art be not hurrying along at too breakneck speed, lest we should be forgetting the surgeon's time-honoured motto, *Festina lente*. We constantly say that printing and gunpowder and steam and electricity have upturned the life of man and altered the very face of the earth. Such have anæsthetics and antiseptics been to us in our corner of the world's work, while, moreover, their wonderful results have all been made manifest in the lifetime of living men. But we know in ordinary life that the greater the speed the greater the danger. I sometimes think that the field of surgical investigation resembles one of those enclosures or reservations which the Government of the United States occasionally throws open to the first occupants who shall seize upon it. The struggle for possession becomes painful in its intensity. At all our societies and meetings the cry of the old Athenians seems ever to ring in our ears, "Show us some new thing." They were very clever, those Athenians. They had the acutest intellects that ever men were gifted with. Impatience and instability were their ruin. They fell beneath the stern and steady Roman, and were but women in the eyes of Alaric's savage Goths. I would we were not so impatient. It would be better if we pondered for a while before offering what is new, so that we might be sure it was also true

I heard an able politician say that it would be a good thing if Parliament were prorogued for five years, so that no more new laws might be made. There would then be a chance for men to comprehend those that are in existence. On the same principle I think it would not be a bad thing if for five years there were no new drugs invented, nor any new instruments nor any new operations. We should have time to eliminate what is bad, and to bring to the highest pitch of perfection what is really good. Why is it that, under new names, we are continually reviving methods of treatment which but recently fell into disuse? Because we did not give them a sufficiently thorough trial.

Another point I will venture to notice. From this overwhelming desire to be the first in the field with a new plan of treatment or a new operation of the so-called "brilliant" type comes a growing and a very demoralising evil. It consists in this, that men are tempted to bring forward their successful cases only, and to say nothing concerning those that have failed. It thus comes about that the profession at large conceives a false impression about the value of many surgical procedures, and many men are induced to imitate them, often to their sore discomfiture. To tell of your successes and withhold your failures may not be a *suggestio falsi*, but it is certainly a *suppressio veri*.

I feel sure, however, that that crowning glory of British surgery—its innate honesty—will never allow any serious evils permanently to take root amongst us. I have a profound admiration for many of the splendid qualities of our Continental neighbours. I respect their intense powers of laborious work. I am astonished at much that seems with them the inspiration of genius alone. But, nevertheless, I unhesitatingly say that the Englishman is the best doctor in the world, and this arises from one fact that, when brought face to face with his patient, he sees in him a sick man, to whose relief or cure his whole energies are to be devoted. He sees nothing else.

I regret to say that in this country there is a considerable number of persons who are afflicted with a sentimental and spurious humanitarianism. It is they who, in the sacred name of liberty, hinder the forcible reclamation of the children of the criminal classes. They are the persons who pity the sorrows of the poor murderer, to whom a perverse nature has granted a mental condition which compels him to commit the most savage crimes. For the murdered policeman, for his widow and orphans, they have no sympathy whatever. It is they who erect homes for decayed cats and asylums for epileptic parrots, while the poor are rotting within a hundred yards of them. It is they who would see the most deadly disease go unchecked, rather than hurt the finer feelings of the frog or the guinea-pig. It is of such stuff that they make antivaccinators and antivivisectionists, and, when their views are a little more obscure and exalted, Anarchists. Now, these people have of late been trying to get up an agitation against what they call experiments in hospitals. It is characteristic of their utter want of honesty that they completely pervert the true meaning of the word experiment or trial, and make it appear to the credulous public that it means wanton and unnecessary cruelty. I am glad to think that their miserable attempts are doomed to failure, for it is the glory of the hospitals of this country that they are open to the inspection of the public, and that they are managed by competent and enthusiastic laymen jealous of the fair fame of the institutions to which they give so much labour and time. Here, too, in this great British Medical Association all that we do and say is done and said *coram publico*. The man who wishes to keep his remedy a secret can never pollute our ranks. We even desire that the public shall take a share with us in our attacks upon filth, and ignorance, and disease. And of this I am sure, that when the week's work of this Association shall be finished it will be found that not a single operation, not a single plan of treatment will have been suggested which any one of us, should the sad necessity arise, would refuse to extend to his own mother, his own wife, his own children.

SIXTY-SECOND ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF SURGERY.

W. Mitchell Banks, M.D., F.R.C.S., President.

A DISCUSSION ON THE OPERATIVE TREATMENT OF PERFORATIVE ULCER OF THE STOMACH AND INTESTINES.

I.—A. Pearce Gould, M.S., F.R.C.S.,

Senior Assistant Surgeon to Middlesex Hospital; Teacher of Practical and Operative Surgery in Middlesex Hospital Medical School.

Thirteen years ago a great American surgeon, Marion Sims, in a discussion on a case of perforation of the intestine, used these prophetic words: "Rest assured that the day will come—and it is not far off—when an accurate diagnosis in such cases, followed by prompt action, will save life that must otherwise quickly ebb away." Eleven years ago a distinguished Bristol surgeon, whom we are all glad to honour as Vice-President of this Section, Mr. Nelson C. Dobson, published a paper in the *Bristol Medico-Chirurgical Journal*, in which he related a case of perforation of a gastric ulcer and death from peritonitis, and suggested that an attempt should be made to rescue such cases by timely laparotomy and cleansing of the peritoneum, with suture of the ulcer where that was possible, and the formation of a gastric fistula where it was found impracticable to close the perforation. I congratulate Mr. Dobson that the first session of this Section should be devoted to a discussion of the practical conduct of his suggestion, which has already borne fruit in the saving of life, and I regret that an unhappy fate has placed the introduction of this discussion in my hands when it might have been committed to him, not only with justice to his parental claims, but with a better consideration of your interests.

The operative treatment of perforative ulcer of the stomach and intestines opens before us a wide field for discussion, and if I venture to narrow it down to a few points only, it is not because I regard the subjects excluded as unworthy of your consideration, but only that the limit of time at our disposal enforces selection, lest by too wide diffusion our discussion shall prove valueless. I think we may well exclude the consideration of all cases of perforative malignant ulcers of the stomach and intestines, and of perforation of the vermiform appendix, which already possesses an ample

literature of its own. This will leave to us the surgical treatment of round ulcer of the stomach and duodenum and typhoid ulceration of the ileum and colon.

As my duty is limited to introducing this discussion, to piecing together a skeleton which you will have to clothe and vitalise, I shall avoid both the historical and the encyclopædic method, and I hope I shall be pardoned for not making full and detailed reference to the work and writings of many of the surgeons who have been the pioneers in this field. I desire rather to present to you the main facts which should guide us, and to indicate those lines of practice which appear to me to be brightest with promise of success.

A.—Perforative Ulcer of the Stomach and Duodenum.

The simple, round, and so-called perforating ulcer of the stomach and duodenum is a somewhat common affection, whose true pathology is still wrapped in mystery. Not one of the suggestions as to its origin is satisfactory. But this much we know: it is particularly frequent in young anæmic women, especially of the servant class, and in middle-aged men. It is nearly always single, although occasionally two, and even three, ulcers have been met with.

The favourite seat is at or near the lesser curvature, especially on the posterior surface of the stomach, and near the pylorus; it is rarest of all near the greater curvature. The size is usually between that of a sixpence and a shilling, but may be much larger. In depth these ulcers vary, the floor may be only a thin layer of peritoneum, or the edge of the ulcer if chronic may be so hard and nodular as to be mistaken for a malignant infiltration; such an induration may extend over an area the size even of the palm of the hand.

The symptoms to which these ulcers give rise may be of the most marked character-agonising pain after food, exquisite tenderness, frequent vomiting, and occasional hæmatemesis and melæna. They may, however, be merely slight uneasiness after food, flatulence, and occasional vomiting; while, more terrible still, these ulcers may be so latent, so insidious, that the patient makes no complaint whatever, and is unaware of any departure from health. But the still more important fact for us to remember is that the symptoms form no sure guide either to the seat of the ulcer or to its liability to perforate the stomach wall.

In the great majority of instances the ulcers cicatrise. Welch tells us that recovery thus occurs in about 85 per cent. of all cases; in 6.5 per cent. death results from perforation; in 3 to 5 per cent. it is the direct result of hæmorrhage, and in the remaining 4 or 5 per cent. exhaustion or pylephlebitis, or some other complication proves fatal.

Only 2 per cent. of the ulcers on the posterior surface of the stomach perforate, and only very rarely is this perforation into the general peritoneal cavity; more commonly the ulceration extends into the pancreas, and gives rise to abscess beneath the diaphragm, and often, also, to suppuration in the pleura and base of the lung, especially on the left side.

Of the less frequent ulcers on the anterior wall of the stomach as many as 85 per cent. perforate, and most often into the general peritoneal cavity, but as the most frequent seat of such anterior ulcers is that part of the stomach which is covered by the liver, it sometimes happens that the perforation is shut off by gastro-hepatic adhesions, and no escape of stomach contents occurs, or else a subphrenic abscess forms. It appears that young servant girls are particularly liable to ulceration of the anterior gastric wall. It is stated that ulcer of the duodenum is most frequent in men.

The operative treatment of these ulcers is threefold, and each division of our subject must be considered separately.

I. *Prophylactic*.—It is to Billroth, whose name will always be honourably associated with the surgery of the stomach, that we owe the suggestion to anticipate and prevent perforation and fouling of the peritoneum by a timely laparotomy, excision of the ulcer, and suture of the resulting wound. This suggestion has been put into practice by von Kleef and others abroad, and the operation has been attempted in this country. I cannot help thinking that with our present knowledge such a procedure has little, if indeed anything, to recommend it. At first sight it would seem that such a suggestion most necessarily follows Brinton's statement that 85 per cent. of ulcers on the anterior wall of the stomach end in perforation, for it is just these ulcers that are easily accessible to the surgeon, and the mortality of perforation is terribly great. But one link in the chain is wanting. The best observers are agreed that at present we are without any means of determining before operation or dissection the exact position of a gastric ulcer. Neither the seat of pain and tenderness, the time when vomiting occurs, nor the influence upon the pain of posture—neither one nor all of these signs combined—is sufficient to indicate exactly whether the ulcer is on the front or the back of the stomach, at the cardia or the pylorus. Nor is this all. In a very large proportion of the cases of ulcer which end in perforation there are either no symptoms before this accident occurs, or the symptoms are so slight and indefinite as not to warrant the diagnosis of ulcer at all. There is also much reason to think that the occurrence of perforation is very often due to some acute process, and not to the slow disintegration of the tissues of the floor of the ulcer; that almost as soon as the ulceration is serious at all it has perforated, and that there is no time for a carefully-planned operation to intervene between the threat of perforation and its occurrence.

I would submit that the selection of cases—the exact adaptation of means to end, in a word true science—is to successful surgery what the keystone is to the arch, or the pediment to the pillar; and that as we are unable to make this true selection of cases we must postpone a little longer the adaptation of Billroth's suggestion. I say "postpone," not negative. Physicians have not yet said their final word: we have not reached the limits of knowledge. And those of us who have lived to see the mapping out of lesions in the brain with an almost astronomical precision, may well believe that the time will surely come when the seat of a gastric ulcer will be precisely known, and when surgeons may with confidence remove, by a timely and not very dangerous operation, a grave source of peril.

I ought just to allude to the proposal to deal with gastric ulcers in any situation by prophylactic excision. Those on the posterior surface are to be reached through a free incision in the anterior wall of the stomach. With every desire to be catholic, it is difficult to treat such a suggestion seriously: and anyone making it may be reminded not only of certain anatomical facts enough to make the boldest operator pause, but of the great clinical fact that fully 85 per cent. of all gastric ulcers make a perfect recovery, and that the physician's means of dealing with this disease are being almost daily improved and added to.

II. *Operation for Perforation into the General Peritoneal Cavity.*—The perforation of a gastric ulcer into the general peritoneal cavity is nearly always—some have said invariably—fatal. Without staying just now to determine this point, let us notice that death in such cases is occasionally due to the shock produced by the sudden escape of the stomach contents into the peritoneal sac, and as an excellent example of this I may mention a case that occurred in the practice of Mr. Maurice, of Reading, where a young maidservant was found dead on the stairs, having apparently died almost instantly after the rupture of a gastric ulcer. More commonly, however, the shock is more or less completely recovered from, and death results from the peritonitis which ensues, the fatal issue being brought about partly by sapræmia partly by nerve irritation, which together result in the well-known collapse of abdominal inflammation with the cold extremities, pinched features, failing heart, progressive cyanosis, and apparently (not really) unclouded senses.

Mr. Taylor, of Birmingham, has pointed out that the acute symptoms usually last only twenty-four hours, if so long: but there are many exceptions to this statement. That the course of the case is rapidly downward and death speedy admits of no contradiction.

For the shock which in some cases is so marked a feature, surgical measures are of little avail; the external application of heat and the administration of opium by the mouth and morphine under the skin are probably the best means to employ. It is important to remember that this primary shock varies greatly in severity: in a case of my colleague's, Mr. Morris's, it was absent altogether, and all grades of severity up to that immediately fatal are met with. This primary shock must be carefully distinguished from the collapse, the result of peritonitis.

It is to the prevention or arrest of peritonitis that the surgeon must direct his efforts. The cause of this inflammation is the fouling of the peritoneum by the stomach contents, and our only hope of doing good lies in complete cleansing of this cavity. At the outset I would emphasise this and say that too much stress has been laid upon closing the ulcer and too little stress upon cleansing the peritoneum. Success or failure of the operations undertaken has depended not upon skilful suture of the rent stomach, but upon the thoroughness of what is called the peritoneal toilette. But I am anticipating a little.

The measures that have been proposed and carried out for this condition are, first of all, simple washing out of the peritoneal sac and drainage (Taylor) without any attempt to find or close the perforation. Secondly, suture of the ulcer, with or without excision of its edges, and thorough cleansing of the peritoneum. Thirdly, where suture of the ulcer is impossible, suture of the stomach to the parietal incision (the formation of a gastric fistula) or drainage of the stomach, combined with cleansing of the peritoneum.

I would submit, Sir, that the key to the position lies in the perfect cleansing of the peritoneum. Nearly every case of failure of the operation has been due to failure to arrest the peritonitis, and as an illustration I cannot do better than take a case of my own.

In September of last year I was asked by my colleague, Dr. Cayley, to see with him a servant girl, aged 20 years, who gave the following history. She had for some time suffered from chronic constipation, but there were no other signs of indigestion. On September 26th she ate largely of damsons, stones and all. Next day she took a dose of Epsom salts, which produced an action of the bowels, and several stones were passed. After that she experienced a sense of distension after food but otherwise felt well. On September 29th, at 7 P.M., she was suddenly seized with severe pain in the right hypochondrium, which passed over to the left side, and then became general over the belly. Next day, September 30th, she was admitted to Middlesex Hospital, and when I saw her in the evening of that day with Dr. Cayley she was somewhat collapsed, with an anxious flushed face, embarrassed thoracic respiration, and frequent vomiting of thin yellow fluid. The belly was uniformly tense and tympanitic, everywhere tender; the liver dulness was not obliterated.

Twenty-six hours after the onset of acute symptoms I operated, and as there was nothing to indicate the seat of the perforation, opened the belly below the umbilicus. Gas and acid fluid escaped, so having rapidly explored the generative organs and vermiform appendix, I cut down on to the stomach above the umbilicus, and immediately exposed a small perforation in the duodenum. This I excised, carefully sutured the wound so made, and having flushed out the peritoneal cavity, closed the laparatomy wounds, leaving a glass drain in the lower incision. At the close of this operation the patient was in profound collapse, very nearly pulseless at the wrist. So I injected 32 ounces of saline solution into one of her veins, and had the satisfaction of seeing this collapse pass off to a considerable extent. Nevertheless, nine hours later she died, and at the *post-mortem* examination we found that the duodenal suture was firm, that no water escaped from the bowel under even considerable pressure, but there was general peritonitis. It was no satisfaction to me, no benefit to my patient, that the suture was firm while her peritoneum had been left foul. It was only a surgical illustration of the vulgar proverb which cautions us against closing the stable door when the steed was stolen. I could quote to you many similar cases.

While this has been unquestionably the chief cause of failure in these operations, it is not the only one. Thus, in one or two instances, the operation itself has produced a condition of shock and collapse from which the patient has not rallied. Again, in a case of Mr. Page's,[1] the ulcer was found close to the cardiac orifice of the stomach, and by no raising of the ribs or traction on the stomach could it be brought nearer to the surface; its suture was a matter of the greatest difficulty. Death occurred fourteen hours after; and the examination showed that there was no general peritonitis, but that there was peritonitis around the upper part of the stomach with some green fluid between the stomach and the liver, which appeared to have leaked out of the imperfectly-closed ulcer. So far as the cleansing of the general peritoneal cavity was concerned, it had been perfect, but renewed fouling had occurred.

I should like to refer here to a case of Mr. Pepper's, which he has kindly allowed me to mention. He operated about thirty-six hours after the occurrence of perforation, which he found on the anterior wall of the stomach, close to the lesser curvature. He pared the edges of the ulcer and closed the wound, and then thoroughly flushed out the peritoneum with boric acid solution. For three days his patient did well, and convalescence seemed assured, when she suddenly became collapsed and speedily died. The subsequent examination showed that the perforation Mr. Pepper had closed was in the front part of an ulcer the size of a crown piece, that his line of suture was perfect and watertight under pressure, but that a second perforation in the same ulcer had occurred at its posterior part, and the sudden renewed escape of stomach contents had caused fatal shock in an already sorely handicapped patient.

To sum up, I would submit that success depends primarily upon the perfect cleansing of the fouled peritoneum, and that failure has been due most often to imperfect cleansing of the serous sac and continuance of the peritonitis, while other causes of failure are the shock of the operation in patients already suffering from sapræmia and abdominal shock, and recurrence of the escape of stomach contents.

Coming to particulars, there are several details of the operation that are worthy of discussion. The first is:

1. *The Time at which the operation should be performed.* This is an element of highest importance; but I would suggest that to say simply "operate early" does not express the whole truth. Certainly the operation should not be done while the patient is suffering from the first shock of the perforation, but as soon as reaction has set in the surgeon should interfere. While every hour now is of great importance, the element of time is, I believe, less important than the thorough cleansing of the peritoneum; better wait an hour or two to obtain assistance and perfect preparations than operate in a hurry and under such adverse circumstances that success is almost impossible. Perhaps a little too much stress has been laid on the injunction "operate early," and not enough on the more important dictum "operate well." Such a case as Mr. Pepper's, to which I have already referred, shows that success is attainable when even thirty-six hours have elapsed between the perforation and the operation. A more difficult question to answer is, How late is the operation admissible? In Mr. Taylor's case the patient appeared to be moribund when he operated and yet she rallied. It is a point which only experience and the most careful consideration can solve, and I should hesitate to formulate any rule to guide us save the most general one—not to operate in manifestly hopeless cases.

The way that time affects the operation and its results is worthy of a moment's consideration. By lapse of time the peritonitis becomes generalised and intensified, the sapræmia increases, the collapse resulting from this and the nerve irritation deepens, and the patient is thus rendered less fit to undergo any surgical ordeal. But, in addition, masses of lymph are secreted with startling rapidity, which perhaps conceal the perforation, which certainly glue together adjacent parts, and thereby shut in infective organisms, and seriously interfere with the perfect cleansing of the sac. Under any circumstances the cleansing of the peritoneal cavity presents the gravest difficulties, but these are greatly enhanced when infective lymph is causing imperfect adhesions, and shutting off pools of fluid swarming with microbes.

2. *The incision* I think should always be made in the middle line: the seat of pain is no sure guide to the position of the ulcer; nowhere else can so much room be obtained, and with so little difficulty and hæmorrhage and the central incision gives the best access to the whole abdomen. If more room is needed the incision can be enlarged on either side by a cut extending across the rectus muscle.

3. *The Cleansing of the Peritoneum* is the important step of the operation, and upon it the surgeon should concentrate all his efforts. In Germany it has been done by wiping over

[1] *Lancet*, March 24th, 1894.

the surface with aseptic gauze: in this country flushing it out is preferred. Various fluids have been used—boiled water, boric solution, weak carbolic solution, and creolin emulsion; if it can be got, normal saline solution or common salt in boiled water 5j to the pint would, I believe, prove best, and next to that boiled water. I should not use an acid solution nor a toxic one. Its temperature is important; if used hot, say, at 110° to 112° F., it generally acts as a powerful restorative to the patient, and thus serves a double purpose; one case in which flushing with hot water seemed to produce shock has occurred. The method of the flushing is still more important; it should be systematic,—not here a little and there a little,—and with full recognition of the possibility of disseminating the poison in our efforts to remove it. I think Mr. Morse's suggestion of a large glass tube passed alongside of the delivery tube is of great value. No time or care must be spared to make this flushing absolutely thorough; it is the essential vital step in the whole operation, the one upon which success or failure chiefly hangs.

4. *The Treatment of the Ulcer.*—Where practicable, the hole in the stomach should be sewn up. Lembert's sutures being so passed as to invert the floor of the ulcer and a part of the surrounding walls. There appears to be no advantage in excising the ulcer or paring its edges—none to counterbalance the expenditure of time and labour. If the stomach is still full of food, it may be washed out through the wound if this is not contraindicated by the state of the patient. Exploration of the interior of the stomach by the finger passed through the perforation has been practised and recommended; hitherto it has not proved of value, and I doubt if it is worth the time it takes.

Should the ulcer be so placed that sutures cannot be introduced efficiently, or if its edges are so widely infiltrated that they cannot be infolded, the surgeon must choose between making a gastric fistula and simple drainage of the stomach. Mr. Hayward succeeded in securing a gastric fistula in a case he had to treat, and if the ulcer is placed close beneath the abdominal wound this plan may be best; but in all other circumstances I should prefer to pass one end of a tube into the ulcer, and bring its other end out of the wound, and then pack it well round with iodoform gauze. Such a tamponade has succeeded so well in other but analogous conditions, that I believe it would answer here.

5. *Drainage.*—Drainage of the peritoneum should be practised in all cases in which peritonitis is well marked at the time of operating, and the tube may best be placed in a separate wound above the pubes. In any case where the operator is in doubt as to the security of his gastric sutures, a large drain should also be placed with one end close to the ulcer. In every case, "when in doubt, drain."

6. *Collapse.*—If the hot irrigation does not remove the collapse, intravenous injection of a saline solution may be practised.

I must not weary you by any remarks upon the difficulties that may be met with in the diagnosis of intra-abdominal perforation of gastric ulcer, nor upon the prognosis of such cases if left to Nature and the physician, though upon both heads there is much of interest that may be said. I must only pause to say that up to the present 6 cases of successful operation for perforation of gastric ulcer have been recorded[2]; and I am permitted by Mr. Henry Morris to record a seventh successful case in his practice at the Middlesex Hospital. The patient was a young woman, aged 24 who had suffered for six months from pain at the epigastrium after food. Two hours after a dinner of haddock, bread, and tea, and while running upstairs, a sudden pain "caught her round her heart," and before she could get to the hospital—a distance of a few hundred yards—the pain spread all over the chest and abdomen, and "drew her up double." When first seen, about an hour after the onset of the pain, there was no evidence of shock: her colour was good; her pulse was 80, full and regular; and she answered questions readily. She complained of pain all over the abdomen, which was somewhat full, but moved freely with respiration. There was great tenderness above the umbilicus, none below; the percussion note was everywhere tympanitic, the liver dulness was lost, but no bell-sound could be elicited. She had not been sick. Three hours later, when Mr. Morris operated, her general aspect was worse, her face was pale, and expressed pain; she was tender below as well as above the umbilicus, and careful measurements showed that the belly had considerably increased in circumference. The pulse was 96, respirations 44, and temperature 98.2°. Mr. Morris opened the belly above the umbilicus, and at once found a perforation in the anterior wall of the stomach close to the pylorus; the stomach was drawn out, the ulcer sutured, and the peritoneum was very thoroughly washed out with carbolic acid solution, 1 in 400, at a temperature of 105° F., and a good deal of lymph was sponged from the surface of the liver. During the washing out the patient stopped breathing once or twice, and the pupils dilated widely, while the pulse became weak, dicrotic, and intermittent. The patient made an excellent and complete recovery.

III. *Operation for Subphrenic Abscess.*—So much has been written on this subject, and the material to guide us is so ample (Maydl's lately published work contains a detailed record of 179 cases), that I will only stay to make two comments. The first is that operation should be postponed until the abscess can be distinctly localised. These abscesses sometimes run a chronic course with no distinct indication of their exact position. It is better to wait until the position of the abscess is defined by swelling, or altered percussion note, or other definite sign, than to operate with a view of searching for it.

My second comment is this. Many of these abscesses point and are opened anteriorly, but in all such cases a free posterior opening should be made if it is at all practicable. A successful case in which I operated, recorded by Dr. Coupland at a former meeting of this Association, illustrated this point. Mr. Pepper has communicated to me a case in which he liberated 3 pints of purulent fluid from between the diaphragm and the right lobe of the liver by an anterior incision. It was not, however, until he opened this large cavity and drained it from behind that convalescence occurred. Of course these cases want most careful cleansing and drainage, and their great liability to spread through the diaphragm and cause suppuration in the pleura and lung must not be lost sight of.

B.—Perforation of Typhoid Ulceration of the Intestine.

Operation is stated to have been performed in 20 cases for this condition; for Mr. Sutton's case must be added to the 19 collected by Dr. Van Hook in his article in the *Medical News*, November 21st, 1891. At least two of these cases should be excluded as of doubtful nature, and objection may possibly be taken to Mr. Taylor's successful case for the same reason. If so, it leaves us with 17 cases and 1 recovery; but if the doubtful cases are included, we have 20 cases with 4 recoveries.

The details of the operation are closely like those for perforated gastric ulcer. The belly being open, the peritoneal sac is thoroughly cleansed, and then the ulcer is sutured, or it may be affixed to the skin incision. Rather than occupy your time with entering into details, to which I have already referred at some length, I would enumerate certain facts and considerations which may help to lead us to a correct appreciation of this treatment for the most dreaded complication of typhoid fever.

Statistics show that perforation of the bowel occurs in from 2.5 to 3 per cent. of all cases of typhoid fever, and that it is the cause of nearly 20 per cent. of the deaths in this disease. The perforation is most often situated in the ileum, but it may be found in the vermiform appendix or the colon, and even in the jejunum, and "there are often more than one"

[2] These cases have been recorded by Taylor, Barling, Kriege, Morse, Maclaren, and Gifford. The last four were cases of suture of the ulcer and cleansing of the peritoneum: in Kriege's case the serous membrane was wiped clean, not flushed. In Mr. Taylor's case the peritoneal cavity was washed out and drained below the umbilicus; subsequently a subphrenic abscess was opened, and the patient died from intestinal obstruction from kinking of the bowel. Mr. Barling's case ought to be placed in another category, as it consisted simply in cutting into and draining deep abscesses in the left hypochondrium, which formed as a result of perforation of the stomach. Evidently the ulcer had not perforated into the general peritoneal cavity in this case. Including Mr. Morris's case, there are five instances in which a perforated gastric ulcer has been deliberately cut down upon and sutured, and the peritoneum cleansed, and recovery has ensued.

(Cayley). The perforation may be so small as not to allow of escape of the intestinal contents, or so large that pints of matter may flow from the bowel into the peritoneal sac, occurring most often about the third week of the disease. Dr. Cayley states that he has known perforation to occur in several instances after the patient had got up and was doing well; he mentions two cases of this accident about the sixty-sixth day of the disease, and that Morin had cases in the seventy-second, seventy-sixth, and one hundred and tenth day. Thus Dr. Cayley had under his care a labouring man in whom acute peritonitis came on while he was at work, and proved fatal in a few hours. At the examination cicatrising ulcers were found in the ileum, and one of these had perforated. It was subsequently proved that the man had had a mild attack of typhoid fever six weeks before, but had been quite convalescent for a fortnight.

Perforation may occur in cases of the mildest description, but it is a mistake to say that it is chiefly met with in cases of "latent typhoid"—such cases are more striking, not more numerous.

The symptoms of the perforation may be very marked; sudden pain and distension of the abdomen, vomiting, rise of temperature and pulse, and all the signs of peritonitis. But they may be quite latent; only an increase in the prostration, with a distended motionless belly, so that the condition is not even suspected. Death may close the scene in ten minutes, as recently recorded in the *Lancet*, and life is rarely prolonged beyond 2 days. Bristowe relates one case of death in 12 days, and other deaths on the 15th and 21st days are on record.

Rare cases of recovery after this accident are to be found in medical literature, recorded by Tweedie, Todd, Dr. Long Fox, and others. Cayley's words are: "Recovery does, in rare cases, follow perforation of the bowel in enteric fever;" he has himself known it happen in 6 cases, and in 3 of these an abscess formed.

Dr. Mears, of Philadelphia, concludes that surgical interference is not justifiable if the fever is at its height, but that if convalescence is pronounced, or if the case has been a mild one without high range of temperature, laparotomy is justifiable.

Dr. Cayley and Mr. Bland Sutton also express a very guarded opinion as to the range of the operation.

Dr. Van Hook, of Chicago, takes a more decided and a bolder line, and at the close of an article in which he records a successful case, sums up his position thus:

1. There is no rational treatment for perforation in the course of typhoid fever, except laparotomy.
2. The indication for laparotomy when perforation occurs in typhoid fever is imperative.
3. The only contraindication is a moribund condition of the patient.
4. Collapse is often at least temporarily relievable by hot peritoneal flushing.
5. The stage of the fever is not to be considered as an indication or as a contraindication for laparotomy.
6. The severity of the typhoid fever is alone not a contraindication.
7. Early laparotomy offers the most hope.
8. The symptoms of peritonitis should not be awaited before operating.
9. In taking charge of all typhoid fever patients, it is the physician's duty to be ready, in case of perforation, to perform laparotomy.
10. The published statistics of laparotomy for this condition are strongly in favour of operation.
11. The technique, though not complicated, demands much thoughtfulness, acquired dexterity, great rapidity, and thoroughness.

Brave words these! But those who have seen the flickering flame of life in typhoid fever ruthlessly extinguished by a sudden perforation may, nay must, doubt the power of surgery to save. Here, as elsewhere, a wise selection is the truest wisdom.

II.—Roderick Maclaren, M.D.,

Senior Surgeon to the Cumberland Infirmary, Carlisle.

Dr. Maclaren related three cases of perforation of the stomach treated by operation.

Case I.—In October, 1891, I was asked by my colleague, Dr. Lockie, to see J. H., female, aged 23, and to operate on her if it seemed advisable. The story pointed to a rupture of a stomach ulcer. The operation was done as soon as we could make arrangements, and about nine hours after the rupture. I had also the help of my then assistant, Dr. Bell, of Lowestoft. The girl was very collapsed, and our proceedings throughout were hampered by this, repeated stoppages being required. The collapse was specially marked each time an attempt was made to flush out the peritoneum, which in the end had to be left rather imperfectly cleansed. The patient lived for three days, and died with symptoms of peritonitis. Nothing made it likely that fresh rupture occurred. Owing to surrounding circumstances there was no *post-mortem* examination.

Case II.—A girl, aged 14, was sent into the Cumberland Infirmary by my friend, Dr. Helm, on February 4th, 1894. The girl was small for her age. She had the usual story of pain following food for some time, and then a sudden, severe attack, with marked collapse. The operation was done nine hours after perforation, which had occurred two hours after dinner. The intestines were not distended. She bore operation well, and the peritoneal flushing was very thorough. She was admirably looked after by our present house-surgeon, Dr. Finlay, and her recovery has been absolute. No food was given by the mouth for a week, then beef-tea alone for two days, next arrowroot, and so on. Nutritive enemata were well retained, and the patient suffered little inconvenience and no visible detriment from thus putting her stomach at rest.

Case III.—M. N., aged 29, single, was also sent to the Cumberland Infirmary by Dr. Helm. The symptoms were characteristic, collapse considerable. She was operated on four hours after perforation, which took place an hour and a half after breakfast. The intestines were distended and difficult to manage. I supposed at the time that the abdominal cavity was well washed out, but the cleansing was really incomplete. The patient had a comfortable afternoon and night after the operation, but next day vomiting commenced, then the abdomen became distended, and she died fifty-eight hours after the operation. The abdomen was examined on the following day; the stomach was soundly closed. There was suppurative peritonitis, and some stomach contents still in the abdominal cavity.

The incisions I employed in all these cases were through the left linea semilunaris. They were at least 4 inches long. This position certainly gives good access to the whole stomach, and allows every part of it, back and front to be examined. No doubt bleeding is more active there than in the middle line, but there is no great difficulty in controlling it.

The perforations were all on the anterior surface of the stomach. The first was near the greater curvature, and about midway between the cardiac and pyloric ends; the other two were in positions almost identical, about 2 inches from the cardiac end, and on a line extending directly down from it. In each case, a little pulling was required to get the openings sufficiently into the wound to allow suturing. In the first case, the stomach was brought entirely outside the abdomen; in the other two, not. I was longest in finding the first perforation, though it was in a more conspicuous place than the other two. I noticed, however, that in the neighbourhood of this perforation the peritoneal coat of the stomach was red, and covered with lymph-like deposit: and in the subsequent cases, by using these appearances as guides, I soon saw the apertures. Instead of searching first for the opening, I looked for the surrounding disturbance, and saved much time and trouble. The opening is so small and so apt to be hidden by a crease or fold of the viscus, that it is a great help to the operator to know what appearances will lead him to it easily. At this stage of the operation the question arises what should be done with the stomach contents. In my first case no attempt was made to empty or wash out the stomach; in the second case, the contents were gently squeezed out through the rupture; in the third case, the stomach was washed out, a tube being passed through the perforation. The second water came out quite clear; yet meat was vomited after the operation. I do not think it worth while spending much time over this washing. If it can be speedily done, well and good; but if the patient is much collapsed, I believe the time necessary for a good cleansing of the stomach might be much better spent on other stages of the operation.

The closure of the aperture was done practically in the same way in each case. Three or four sutures were used to close the opening, then a second row of stitches was placed outside these. The tightening of these latter buried the first row by inverting the serous coat. In one case a few sutures were added as a third row to take tension off the second. The outside sutures extended over a line of about 1½ inch. The material used was ophthalmic silk, at first; afterwards, a slightly thicker thread, the ophthalmic silk being rather fidgety to work with, from its want of substance. The sutures were applied in the Lembert method, which gives all that can be desired in speed and security. The *post-mortem* examination of my last case was very instructive; the

stitches were all covered up; union was firm and perfect; a lot of separation of adhesion was required before the opening could be reached; the stomach had stood the strain of much vomiting, and yet its closure was right in every way. This is not where the weak point of the operation comes; less suturing than I used would have made all quite secure.

The next stage in the *technique* is the all-important one, namely, the cleansing of the abdominal cavity. Success depends almost entirely on the thoroughness with which this can be done. No amount of skill in rapidly exposing and carefully closing a rupture can be followed by recovery, unless effused food is completely removed from inside the peritoneal cavity. I used a Higginson's syringe, or a douche with a round-ended glass nozzle. The necessary work can be done with either. The douche, however, has the advantage of a continuous stream, and of leaving the operator's hands free to manipulate the nozzle and the abdominal contents. System, perseverance, and a patient who is not on the very verge of death from collapse are all required. The abdominal cavity should be gone over in a regular method. The plan I like is to begin with the neighbourhood of the rupture, wash it well; then starting from this as a centre to make the nozzle follow the course of the colon, first towards the cæcum, specially cleansing out below the liver; secondly, starting again from the stomach, to follow the great bowel to the rectum. In this latter course, the lumbar and pelvic hollows should receive special care. Finally, the douche is directed among the folds of the mesenteric attachments of the small intestines. I have repeatedly noticed here, when all seemed clear, that a fresh turn of the instrument would empty some unsuspected pocket. The abdomen should, finally, be dried with sponges in the usual way. The closure of the external wound was made with deep sutures, through the whole thickness, and superficial skin sutures. The objection to suturing in tiers is to my mind the time necessarily occupied.

The after-treatment adopted was abstaining from stomach feeding, and giving food *per rectum*. In the successful case, this was the sole feeding for a week; then gradually more and more was given by the mouth, and less and less by the anus, till finally all was given by the mouth. The patient was advised to live on spoon meat for six months.

I would describe the operation throughout as troublesome, rather than difficult. Much depends on the condition of the intestines; if they are distended they very much impede manipulation and washing out; if empty, all parts of the abdomen are readily washed. Perforation of the stomach may be expected to have always a large mortality. In many instances, no doubt, the stomach contents possess infective and irritating qualities in a high degree, and death not infrequently occurs from the shock of the contact of these with the peritoneum. In the great majority of cases, however, death occurs after a few days, from peritonitis. A very small minority recover. I have seen one such; rupture occurred in the morning before food had been taken, and mouth feeding was absolutely stopped for many days. As a result, the effusion was small and localised; a long and dangerous illness followed. Four months after, a fœtid abscess opened through the lung, and then the patient got well.

I venture, however, to assert that early operation and complete washing away of the effused stomach contents have in them a treatment founded on a rational basis, and hold out a prospect of rescue from almost certain death in a considerable proportion of cases. With all operations of this class, mortality has steadily decreased with increasing experience.

III.—RUTHERFORD MORISON, F.R.C.S.Eng. and Edin.,
Assistant Surgeon Newcastle-on-Tyne Royal Infirmary.

MR. MORISON related a case in which he helped Dr. Aitchison, of Newcastle, to operate on an ulcer of the stomach, which had perforated. The operation was done early (two hours after perforation), and unless the condition of the patient was evidently hopeless it could scarcely, he thought, be done too early, for peritonitis was what was dreaded, and a few hours' delay might give that time to develop. Collapse was relieved by the administration of the anæsthetic and flushing in addition to the ordinary measures used for shock. The ulcer in this case was found with a little difficulty on the posterior wall of the stomach by tearing through the thin mesomentum, and inverting the stomach through the hole made in this. It was important to stick to an ulcer when it was once seen, for in one case he had seen an ulcer near the cardiac end found, then lost, and only again found *post mortem*. The ulcer in Dr. Aitchinson's case was sutured without paring the edges. The additional time required, the danger of bleeding, and the small apparent gain from this would seem, as Mr. Gould had suggested, to make it unnecessary. The flushing was done effectually by a long flushing tube passed up towards the diaphragm and a large tube, 2 inches in diameter, inserted above the pubes by a separate opening. This patient died on the ninth day of peritonitis limited to the pelvis. The ulcer was watertight.

IV.—GILBERT BARLING, M.B.Lond., F.R.C.S.,
Professor of Surgery, Mason College, Birmingham; and Surgeon to the Birmingham General Hospital.

MR. BARLING expressed himself as in general agreement with Mr. Pearce Gould's paper. His own experience consisted of five cases of perforation of gastric ulcer; in three only had he operated. One of these was an entirely latent case, and the patient died twenty-four hours after simple drainage. In the second case the ulcer was sutured and the abdomen drained, but the patient died of septic peritonitis, the result being attributable, at all events in part, to want of a second drain over the pubes to empty a collection of septic fluid in the pelvis. The third case was operated on three weeks after perforation for a circumscribed collection of pus in the left hypochondrium; and though the patient was intensely septic and almost moribund, she made a good recovery after struggling through double femoral phlebitis. It was of importance at the present time to learn what percentage of gastric ulcers perforated and what proportion of perforations recovered spontaneously. It seemed clear that a very small percentage of ulcers on the posterior wall of the stomach perforated, and when they did so the extravasation was localised, and gave rise to subphrenic abscess, empyema, and death perhaps days or weeks later from septicæmia. Such cases as these should be treated by direct incision and as little disturbance of the belly cavity as possible, no attempt being made to find and close the leakage. Ulcers on the anterior wall, though few, perforated with some frequency, and as they were not limited by adhesions, they gave rise either to widespread extravasation of stomach contents and peritonitis, or happily in some cases to an extravasation localised for a time between the stomach and liver. The treatment of this class of case was very urgent. In one case of his own six hours after the perforation there was a general and very severe peritonitis. The early recognition of perforation was therefore of the utmost importance. The treatment consisted in median section above the umbilicus, suture of the ulcer where that was possible, infolding the edge as widely as might be required rather than excising it. After very thorough flushing with normal saline solution, the abdomen should be drained by a drain at the portal fissure and another above the pubes. The knowledge we at present possessed did not appear to justify prophylactic treatment of gastric ulcer by excision. As to the treatment of perforated typhoid ulcers, the local and general conditions were so bad that success could only rarely be attained. The most important point in operation would probably prove to be that as little as possible beyond drainage and packing with gauze should be done.

V.—J. WARD COUSINS, M.D Lond., F.R.C.S.,
President of the Council of the British Medical Association, and Senior Surgeon to the Royal Portsmouth Hospital, and Portsmouth and South Hants Eye and Ear Infirmary.

DR. WARD COUSINS remarked that the hope of success depended upon the absence of septic peritonitis and the size and position of the perforation. Posterior perforations were sometimes so situated that closure was absolutely impossible. Surgical treatment in some cases must be limited to incision and drainage of the abdominal cavity. He had successfully practised this simple procedure in two cases. Chronic cases attended by indistinct symptoms of perforation, localised peritonitis, and intestinal paresis certainly warranted interfering, with careful cleansing and drainage carried down to

the very centre of the mischief. He had often seen perforation confounded with intestinal obstruction, but accurate diagnosis was extremely difficult. Intestinal paresis must be regarded as a positive advantage, because it prevented the escape of the contents of the bowel into the peritoneal cavity. It should be remembered by the surgeon that plastic peritonitis was also protective. By this process the opening might be closed sometimes. He considered it dangerous practice to break down recent and complex adhesions, or to prolong the operation by searching for the seat of lesion. Of course the cavity must be cleansed at all risk, but prolonged irrigation must be avoided. Sometimes careful sponging was sufficient and the free local use of iodoform and drainage. Irrigation occupied valuable time, and often prolonged the dangerous condition of collapse.

VI.—William F. Haslam, F.R.C.S.,

Surgeon Birmingham General Hospital.

Mr. Haslam drew attention to the importance of recognising the differences, both pathologically and clinically, between ulcers situated on the posterior surface of the stomach and those on its anterior surface; the former being usually accompanied by symptoms indicating their presence, and being associated with localised abscess if they perforated, whereas the latter often existed without any symptoms, and only revealed their presence by breaking suddenly into an unprotected peritoneum. From the almost certainly fatal result of such an accident, when the case was left without operation, it was natural to look to this measure as offering some chance of success. The records showed that some success might be obtained when an operation was performed in suitable cases. The early recognition of perforation was a most important matter, as only by this means could prompt treatment be carried out within the first few hours. The symptoms due to perforation were first those of shock, then, added to these, those of commencing peritonitis; and it was well to remember that the earliest symptoms were not such as we might expect to find, as it was only in the later stages that the "classical" symptoms of perforative peritonitis were met with; if these were waited for to confirm a diagnosis, operation would be of little use. It was therefore incumbent on all having cases of perforation under their treatment to note carefully what were the symptoms in the early stage. The relation of an ulcer on the anterior surface of the stomach to the abdominal wall varied considerably with the state of distension of the organ, as it might, when this was great, be found at a considerable distance from the incision, and be extremely difficult to suture. Simple suture of the stomach by the Lembert method would probably give the best result, the matter of suture being of secondary importance to that of flushing and drainage of the peritoneum, which should be most thoroughly carried out.

VII.—Nelson C. Dobson, F.R.C.S.,

Lecturer of Surgery, Bristol Medical School; and Consulting Surgeon to the Bristol General Hospital.

Mr. Dobson was much flattered by the reference made by Mr. Gould to his paper published eleven years ago in the *Bristol Medico-Chirurgical Journal*, which suggested for the first time in writing the possibility of operation in perforating ulcer of the stomach. He was glad to find that the method of dealing with the ulcer and the peritoneum was that which was now generally adopted by those who had had actual experience of operations in these cases.

VIII.—Damer Harrisson, F.R.C.S.Edin.,

Hon. Surgeon Liverpool Northern Hospital.

Mr. Damer Harrisson, after expressing his general agreement with Mr. Dobson's suggestion for the treatment of perforative ulcer of the stomach, passed on to the subject of the perforation of typhoid ulcer. Mr. Gould appeared to hold that cases recovered through formation of adhesions. Mr. Harrisson felt very doubtful as to many of these cases. The difficulties of diagnosis in acute cases were often very great. This was shown by two cases in his own experience. The first case in the third week was one in which there was very much doubt, the symptoms not being distinctive until after thirty-six hours. The patient was in a bad state; the incision was made in the right iliac region, and two perforations found without difficulty were sutured. The abdomen was flushed out with hot boracic lotion throughout the operation. The patient improved very much in his condition during the operation from the relief of distension and hot water flushing. On this point he differed from Dr. Ward Cousins, and considered it the best treatment for collapse after the initial shock had passed off. The patient died seventeen hours after the operation, and this result did not lead him to be optimistic with regard to this treatment, although he believed it to be perfectly justifiable considering the desperate character of these cases. The second case was one in which there were present all the symptoms of perforation, including complete absence of liver dulness. Upon incision it was found not to be a case of perforation, but a kink was found in the small intestine. The case recovered, although operated upon in the acute stage of typhoid. It was, in Mr. Harrisson's opinion, a further illustration of the difficulties in diagnosis. With regard to Messrs. Barling and Cousins's suggestion to limit the operation in these cases to incision and drainage, in Mr. Harrisson's case it would not have been applicable, as the contents of the bowel were widely distributed in the peritoneal cavity, and he for the present considered suture with extensive flushing the treatment to be adopted.

IX.—Kendal Franks, M.D., F.R.C.S.I.,

Surgeon, Adelaide Hospital, Dublin.

Mr. Kendal Franks said the discussion would have been short if it had been confined to the record of successful cases. But much was to be learned from failures. As to the time of operation, he considered that there were two periods of collapse. The first occurred as an immediate result of the perforation, during which the patient might possibly die, but from which recovery generally took place after a shorter or a longer time. In a case he recently operated on, a shop girl, aged 28, walking in the street was suddenly seized with severe abdominal pain, and was brought into a confectioner's shop in a condition of collapse so profound that for three hours she lay between life and death. He did not think that any surgeon would dream of opening the abdomen under such circumstances. All efforts must be devoted to combat the collapse. After the patient rallied from this condition a secondary collapse might set in. The most favourable period for operation was between these two stages of collapse. The second period of collapse was often benefited by opening the abdomen. The douching out of the abdomen with hot water might assist, but in the case referred to he observed that the moment the peritoneum was opened and egress given to the fluid in the abdomen, consisting of beef tea, milk, bile, peritoneal fluid, etc., the patient at once began to rally, and left the theatre in a much better condition than when she entered it. He advocated the excision of the ulcer, as he believed the broad principle which was recognised in intestinal surgery held in the case of the stomach, that the most important point in suturing was to suture always in healthy tissue. The excision of the ulcer enabled this to be done, and if the continuous Lembert suture were employed the time it took was very small. He thought it unnecessary, as a rule, to clean out the cavity of the stomach, but he entirely agreed as to the importance of thoroughly cleaning out the cavity of the abdomen. It was most important to remove all possible sources of infection, but it was frequently a matter of extreme difficulty, especially to clean out such a space as the cavity of the lesser omentum.

X.—Robert O'Callaghan, F.R.C.S.I.,

Late Surgeon to the Carlow County Infirmary.

Mr. O'Callaghan said that the only hope in the operative treatment of perforating ulcer of the stomach was early operation, and thorough flushing of the soiled peritoneum with gallons of hot water at a temperature of 112° F. If these cases were recognised early, and operation sought for, the future treatment of this fatal complication would be as successful as any other in the range of abdominal surgery. With regard to prophylactic excision, patients liable to perforation of the stomach were not fit sub-

ects for plastic operations on that organ. His experience in these cases was limited to two cases in which he had operated. Perforation had existed for twenty-four hours, and collapse was so great that, after prolonged douching of the peritoneum, Mr. O'Callaghan simply stitched the ulcer to the parietes. Both patients died within six hours without any sign of improvement. He exhibited the stomach removed from one of the cases. It showed extensive erosion, and a large ulcer, which from the symptoms during life could never have been diagnosed. In conclusion, he advised that unless in the earliest stage of perforation opium should be avoided.

MR. GOULD'S REPLY.

MR. PEARCE GOULD, in reply, said he need refer to three points only. He was afraid he had been misunderstood in what he had said as to the appropriate time for the operation in cases of perforating ulcer of the stomach. If there was shock from the direct immediate effect of the perforation, the operation must be postponed until that shock had passed off. As soon as reaction took place the operation should be undertaken, and if no shock occurred then operate at once. He was in no sense an advocate of delay, but there was never such hurry as to prevent proper preparations for the most thorough operation to be made. He did not think we could argue from the intestine to the stomach as Mr. Franks had done; the conditions were totally different. The sacrifice of inches, or even perhaps feet, of the bowel was known to be unattended with grave risk, but clinical evidence showed that much deformity of the stomach was liable to be attended by grave interference with its function. Then, the mere length of bowel excised made but little difference to the difficulty and danger of the bowel; but the area of stomach excised added enormously to both. It must also be remembered that the coats of the stomach were much thicker than the intestine, and sutures could be passed, and would hold better. While, therefore, he fully agreed with Mr. Franks as to the great importance in intestinal surgery generally of the free excision of gangrenous or diseased parts, so as to get well clear of the lesion, he thought that this was no argument to employ in favour of excising perforated gastric ulcers. As to the doubt suggested as to recovery ever taking place spontaneously after perforation in typhoid fever, he could only say that his statements were taken from the highest authority on the point—Dr. Cayley—who was most decided in his opinion and clear on the facts.

LOWER MOLAR ABSCESS.[1]

BY RODERICK MACLAREN, M.D.,
Senior Surgeon to the Cumberland Infirmary.

I PURPOSE in the following remarks to call attention to a condition little recognised and ill understood, namely, a special form of abscess which results from dead molar teeth. I have seen it perhaps a score of times. It has always been a serious condition, often a dangerous one, and in three instances it has been fatal. In one of these cases death was from blood poisoning, in another there was impending suffocation and death occurred during anæsthesia, and in the third the pus burrowed down the neck, and a rapidly fatal pneumonia occurred. I have only seen it in connection with second lower molars and wisdom teeth. The usual story is a tooth or teeth badly decayed, often only the putrid stump left. Then an inflammatory attack, perhaps rigors, much constitutional disturbance, and temperatures taking high ranges. Locally there is closure of the jaw, considerable swelling of the sides of the neck and face, often dysphagia, and sometimes dyspnœa; the swelling is diffuse, involving the cheek, the parotid, and submaxillary regions; it often extends considerably down the neck, and is sometimes most prominent under the chin, at other times at the angle of the jaw. It feels hard and brawny, and no fluctuation can be detected in it. It may be impossible to say which side is most swollen.

Some years ago I saw, in consultation with my friend Dr. Hair, the first of the above-mentioned fatal cases. A young solicitor's clerk, aged 23, had one fang of a lower second molar extracted about a fortnight before he came under Dr. Hair's care. The removal of the other was attempted, unsuccessfully, as we found out at the *post-mortem* examination. The swelling of the tissues prevented us from seeing it during life. Shortly after this inflammation started in the socket. Then the patient shivered, his temperature rose, and his face and neck became swollen, red, and brawny. Pus was let out by incisions in the mouth. The shivering recurred, putrid infarcts gave rise to numerous abscesses of the face and head. These were incised, and fresh endeavours were made to drain the original abscess, but in spite of this he got worse. The eyelids swelled, symptoms of sinus thrombosis supervened, and he died. No doubt infection of a fatal kind had occurred before he came under medical treatment. Leave was obtained to make a *post-mortem* examination, and the following condition was found. The fang of the second molar was loose in its socket; it was surrounded by pus. The neck of the fang was tightly embraced by the gum, which prevented the escape of matter. As a consequence, pus had welled over the inner alveolar edge; it then separated the periosteum, and burrowed along the internal pterygoid, and among the muscles and cellular tissue on the inside of the lower jaw. The reason why it took this course was the simple mechanical one that the inner alveolus was lower than the outer, and the discharge flowed over the first edge which it encountered. The position of the collection of pus among the muscular planes round the hyoid bone accounted for the swelling being so diffuse and so prominent under the jaw. The pus was horribly putrid, just as might be expected from the exciting cause being a decayed fang.

I have constantly had the opportunity of observing in other cases that the above is the usual mechanism of the condition. The pus fills the socket; it is stopped by the gum embracing the neck of the tooth or fang; it drops over the lowest edge of the bone, separates the periosteum and then burrows. When the abscess is opened, a surface on the inside of the lower jaw, just at the angle, is found bare to the extent of about a square inch, and this sometimes dies and separates, as in the case of a child of 4, who was in the Cumberland Infirmary last July. The second lower temporary molars, in a state of decay, had been extracted a few days previously on account of swelling and pain on both sides of the lower jaw; pus was escaping freely from both sockets; the child was very ill. A probe was passed down inside the jaw to each angle, and two incisions were made from the outside. The child improved rapidly, and was presently sent out with two discharging sinuses. She was readmitted at the end of October. A considerable portion of the left angle of the jaw had separated and was removed.

Dr. Finley (House-Surgeon, Cumberland Infirmary) has kindly, at my request, gone over a number of lower jaws in the museum of the Royal College of Surgeons, with the object of ascertaining the relative heights of the inner and outer alveolus of the second lower molar; 227 jaws were examined: of these 86 had the inner alveolus lower than the outer, 78 the outer lower than the inner, and in 63 they seemed equal in height. This is apparently the reason why abscess is sometimes on the inner side of the jaw, sometimes on the outer. The latter is a comparatively trivial ailment.

Under the somewhat fantastic name of angina Ludovici (Dr. Ludwig, of Stuttgart) a condition is described which closely corresponds in clinical characters to the subject of this paper. But it has not been distinctly associated, so far as I can ascertain, with an origin from decayed lower molars. Now, though I cannot of course assert that it is always due to this cause, it certainly has been my individual experience to have encountered it only in this connection. Sometimes the source was not stated by the patient; complaint was not always made of tooth trouble, but always when the condition was investigated, the decayed tooth with suppurating socket was found.

The treatment should be prompt and as thorough as it can be made. The tooth fang or fangs should be extracted at once; then a free incision should be made from without on the angle of the jaw. If wished, a probe can be used as a guide: it can generally be passed down beside the socket, made to enter the abscess cavity, and then be felt just below the angle. As a rule, however, I cut without such a guide, just feeling for the angle of the bone, and cutting directly on it. Finally, the cavity should be well washed out and drained. If this be done before constitutional infection to any great degree has occurred, improvement is rapid and satisfactory.

[1] Read before the Border Counties Branch at St. Boswell's.

PRESENTATION.—Dr. Waters, the late resident medical officer to the Fir Vale Workhouse, has been presented by the officers and nurses of that institution with a travelling clock and a reading lamp as a token of their esteem and regard on the occasion of his leaving Fir Vale to take up his residence in London to prepare for the Indian Medical Service.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

MENTAL DISTURBANCE AS A CAUSE OF HERPES ZOSTER.

Looking over my notebook I have been struck with the frequency of the apparent origin of herpes zoster from causes producing mental depression or anger. I find this has been noticed by others. Bateman says: "Like erysipelas, it has been ascribed by some authors to paroxysms of anger." Schwartz saw three cases which followed violent fits of anger. The following cases I have recorded:

1. A lady suddenly received the news that her husband had been ordered to India. The next morning the herpes was noticed on her left side.

2. An old gentleman learned that a firm in which he was interested had failed. The same evening the spots had appeared on his left side.

3. A lady was much distressed at the sudden illness of her son. The following morning the spots were marked.

4. A child, aged 6, of remarkably equable temperament, was for once disobedient, and sent to bed as a punishment. She cried much during the night, and the next morning the herpes was apparent.

5. A lady, whose only son was shortly to be married, consulted me about a rash on her left side—well-marked herpes zoster. She herself ascribed this to her grief at the loss of her son.

In the last case there were pains in the side for several days before the appearance of the spots—not in the other cases.

I do not know whether in all these cases it was *post hoc ergo propter hoc*, but I consider it is not unreasonable. We have many recorded examples of mental disturbance producing sudden trophic changes.

Dublin. Antony Roche, M.R.C.P.I.

CARBOLIC ACID POISONING.

On July 29th about 8 A.M., a strong young man took a dose of what he supposed to be cough medicine. Almost immediately afterwards he felt a burning sensation in his mouth and throat. An examination of the bottle showed that it contained crude concentrated carbolic acid, used for disinfecting purposes, out of which he had taken about a tablespoonful. I saw him about a quarter of an hour after, when he appeared very flushed and excited, and complained of burning in his mouth, throat, and epigastrium. A woman had given him some sweet oil, and he had tried to vomit, but without success.

I immediately administered a large cupful of warm water with two heaped teaspoonfuls of mustard, soon followed by another cupful of the same, vomiting being encouraged by tickling the throat with a long feather, which he did very effectively himself.

He soon vomited freely, the vomit smelling strongly of carbolic acid, and this was kept up until clear water came back colourless, thus proving that the stomach had been completely emptied, for, of course, as long as any of the coloured mixture remained the vomit was yellow.

Symptoms proper of carbolic acid poisoning were thus practically prevented. The inside of the gums, the throat, etc., were white and dead looking, and he complained much of pain in swallowing, which extended down to the epigastrium. At 8 P.M. he was going on well, but had vomited twice. In about fourteen days he had completely recovered.

Carbolic acid is an exceedingly active and dangerous poison. Death has sometimes been almost immediate, and in several cases a matter of only minutes, and that even when the greater part of the poison has been almost immediately vomited. In one case, even, where the best medical assistance was immediately obtainable, and the stomach emptied and washed out in a very few minutes, death has nevertheless occurred under an hour, and on a *post-mortem* examination the blood, brain, and tissues have smelt strongly of the acid. Unconsciousness and collapse usually quickly develop, and there seems to be no actual antidote. Much less than my patient took has killed, and it is therefore a matter of gratification to have attained such complete success by such homely measures.

Blackpool. William Hardman.

REMOVAL OF AN AURAL EXOSTOSIS BY THE CHISEL AFTER DETACHMENT OF THE AURICLE.

Mr. Mark Hovell's case in the British Medical Journal of June 16th induces me to place this on record.

H. A., 16, consulted me on April 20th, 1894, about his right ear, which has discharged with attacks of pain for three or four years. Since August, 1893, there has been constant aching and discharge. He had measles when quite a child, but never scarlatina. On examination there could be seen without a speculum in the meatus a large, rounded-looking, smooth, pale pink body, which proved very hard and fixed on being tried with a probe; pus was exuding between its anterior part and the meatal wall, but so small was this chink that, even after cocaine and repeated attempts, I failed to get a wire noose past it.

Thinking from its extremely hard feeling and very slightly vascular condition that it was probably an ivory exostosis, I, two days later, under an anæsthetic, detached the auricle posteriorly, when a tap with a chisel applied to its base at once set free a curiously elongated and irregularly shaped bony exostosis, exactly ¾ inch long, and weighing 14 grains. (See figure).



Aural exostosis (*fac simile* drawing). ¾ inch long, weight 14 grs. Apex growing into tympanic cavity. Base presenting externally.

The thicker base—the site of attachment to the posterior meatal wall—was the part which presented externally whilst the longer limb was growing loosely into the tympanic cavity, the membrana tympani being quite destroyed. Since then his progress has been very satisfactory and the hearing much improved. Unfortunately the growth was somewhat spoilt as a museum specimen, as I understand a small piece of bone had previously been removed by another surgeon from its presenting part.

Of course the chisel must be used with the greatest care in this region; the complete detachment of the auricle gives much more room to work in, whilst by getting rid of the cartilaginous part of the meatus, one gets a third of an inch nearer the part to be operated on. This method is also very useful where foreign bodies are impacted in the meatus, and where the symptoms demand immediate removal thereof.

Norwich. S. Johnson Taylor, M.B.

ENEMATA RASHES.

As corroborating Dr. Suckling's note on enemata rashes in the British Medical Journal of June 5th, I have at the present time a marked example under observation.

The patient, a housemaid, was suddenly attacked with violent hæmatemesis, which, being thrice repeated, rendered her condition very critical. She was extremely constipated at the time, and this was somewhat increased by the necessary treatment. It was not considered advisable to attempt to move her bowels before the third day, and success was only obtained by repeated injections of various substances. Some six hours after I found her covered by a scarlatiniform rash, spreading rapidly from above downwards. This shortly gave place to typical small wheal urticaria, accompanied by great irritation, which was for the time at once relieved by the application of the cut surface of a lemon. This condition persisted for over a week, and enemata being used every second day, an exacerbation of the irritation uniformly occurred about three hours after each injection. After the rash had been out for some three days desquamation occurred, thus allying the condition to the Erythema scarlatiniforme

mentioned by Morris. No sore throat or rise of temperature was observed at any time. The chief points of persistence were the ears and eyelids, on which Dr. Suckling remarks.

Judging by my own hospital and private experience, such attacks of erythema must be very rare after enemata, as I have no personal recollection of any previous case. In a case of supposed enterica in the practice of a friend, a rash of pure scarlatinal character appeared six hours after a simple enema; it faded quickly, and no further signs have arisen. Neither of these patients has ever been subject to these rashes, nor has ever had enemata before. Where urticarial symptoms are absent these rashes are very suggestive of scarlatina, especially in private practice, where contagion is so easy.

W. H. COUPLAND, L.R.C.P.Edin.,
Resident Medical Officer, Stoke-on-Trent Workhouse Infirmary.

SCARLATINA AND MEASLES COEXISTING IN THE SAME PERSON.

ON June 29th last I saw a boy of 9 who had sickened and complained of sore throat that morning; next day a scarlatinal rash was undoubted. By July 6th desquamation was distinct on neck, breast, abdomen, and thighs. On the 5th he had severe coryza and a constant irritating cough. On the 10th I found him covered over with a most intense eruption of measles. Desquamation, as if accelerated by the second skin attack, proceeded with unusual rapidity. I was not able to trace the source of infection, but it is noteworthy that the two poisons must have found a lodgment in the child at much the same time. The boy made an excellent recovery.

Perth. JAS. FERGUSON, M.B., C.M.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

COVENTRY AND WARWICKSHIRE HOSPITAL.

INTRAPERITONEAL RUPTURE OF URINARY BLADDER: LAPAROTOMY: SUTURE OF BLADDER.

(By C. HAMILTON WHITEFORD, M.R.C.S., L.R.C.P., late House-Surgeon.)

I AM indebted to Dr. Iliffe for permission to report the following case: On May 5th a man, aged 36, was admitted to the Coventry and Warwickshire Hospital complaining of severe pain in the lower abdomen. An hour previously while riding a bicycle he had collided with a horse and trap coming in the opposite direction. He had last passed water five hours before the accident, and had passed none since.

The patient was greatly distressed and sat in bed bent forwards to relax the abdominal muscles. There was considerable bruising of the right thigh and iliac region with great tenderness above the pubes where the percussion note was resonant. Palpation revealed nothing. A soft black olive-headed catheter would not pass the perineum where the urethra appeared tortuous; about 1½ ounce of bright red fluid, blood and urine, was withdrawn. A silver catheter was then passed without using any force right up to the handle, on depressing which the point of the catheter could be plainly felt half an inch below the umbilicus. Nothing was revealed by rectal examination. While assistance was being procured a black olive-headed catheter was tied in, the end probably being outside the bladder, that is in the peritoneal cavity, and through this prior to operation a considerable quantity of blood-stained urine was passed into the bed.

Chloroform was administered and a silver catheter was passed through the rent in the bladder. The abdomen was opened by a vertical incision 4½ inches long 1 inch to the left of the middle line extending from the pubes to within 1 inch of the umbilicus. This incision was afterwards enlarged upwards to 5½ inches to give more room in introducing sutures. The left side was chosen to avoid the contused muscles on the right side. There was some extravasation of blood into the substance of the left rectus. On opening the peritoneum a coil of small intestine presented and was kept up by the fingers of an assistant. The point of the catheter was then seen protruding through a rent in the posterior wall of the bladder. The bladder was ruptured 2 inches from the apex horizontally across its entire posterior surface for 3 inches. The rent on the right side extended for 1½ inch into the lateral reflexion of the peritoneum. On gently lifting the apical flap the whole interior of the bladder was exposed. There was only about an ounce of blood-stained fluid in the pelvis. The lower portion of the posterior wall, which lay very deeply in the pelvis, was drawn up and held by two pairs of catch artery forceps. Twelve fine silk Lembert sutures were passed by means of a needle in a handle and tied. The suture at each end was beyond the actual rent, as suggested by Sir William Mac Cormac. A small tag of lacerated bladder muscle was removed. The rent in the lateral reflexion of the peritoneum was closed by a continuous suture of fine silk. Injection of warm boracic lotion proved the bladder to be watertight. Sponges on holders were passed into the pelvis till they returned dry. The abdominal incision was closed with silkworm gut sutures passed through the peritoneum and all the layers of the abdominal wall and tied with a double twist, as suggested by Mr. Treves. Bearing in mind the difficulty in getting a catheter past the perineum I thought it advisable to tie in a catheter.

The operation lasted two and a-half hours, owing to the difficulty of access of the rent. The patient never rallied, and died thirty-six hours after the operation. During this time a quantity of urine, at first bloodstained and afterwards clear, was passed through the catheter and tube into the vessel below the bed.

On *post-mortem* examination the bladder was found still water-tight, and the other viscera, with the exception of slight injection of one coil of intestine, probably that which was seen at the operation, normal.

REMARKS.—The case demonstrates the futility of any measures short of laparotomy and suture in a case of ruptured bladder definitely diagnosed. The tying in of a catheter while preparing for operation, through which a large amount of bloodstained urine and probably some peritoneal fluid also was voided, shows the possibility of not only checking further effusion of urine into the peritoneum, but of even largely evacuating the fluid already effused. The direction of the rent, transverse instead of oblique or vertical, appears from recorded cases to be unusual, and from its position, low down on the posterior wall, considerably increased the difficulty of applying sutures.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

F. W. PAVY, M.D., F.R.S., President, in the Chair.

Tuesday, October 16th, 1894.

STRANGULATED VENTRAL HERNIA.

MR. STEPHEN PAGET recounted the case of a woman, 50 years of age, who had been subject to attacks of pain in the left iliac region, these recurring latterly once a week; they began suddenly without known cause, and were followed by some obstruction and vomiting; a swelling existed in the region mentioned. The patient was admitted into the West London Hospital with acute obstruction, which was succeeded by fæcal vomiting. On operation the tumour was found to be a strangulated hernia, of which the neck lay 2½ inches above Poupart's ligament, the sac being outside the rectus muscle. The hernia dated from a severe labour. The intestine was easily reduced, but as it was gangrenous an artificial anus was made, though without a successful issue.

RECTO-VESICAL TUBERCULOUS FISTULA.

MR. STEPHEN PAGET exhibited a second specimen, showing a fistula due to tuberculous ulceration. The patient was an intemperate man, suffering from hæmoptysis. Nine months before death he was treated for chronic cystitis, and previously to that for an affection of the bowels. Fæces had been noticed in the urine for some time. After death extensive tuberculosis was found in various organs, and in the bladder an aperture large enough to admit a No. 10 catheter, through which there opened a tortuous fistula leading to the rectum. Mr. Cripps's statistics showed that tuberculosis was a rare cause of recto-vesical fistula. The exhibitor thought that the disease commenced in the bladder rather than in the rectum, as the testicle was extensively diseased.

MR. HURRY FENWICK could cite four similar cases; he thought that in the example recorded by Mr. Paget the disease more probably commenced in the intestine. In only 8 out of 1,000 cases were the urinary organs secondarily affected from the lungs; and in only 4 per cent. were

the lungs affected secondarily to the bladder or urinary tract. Of the four cases of which he knew, one commenced in the vesiculæ seminales.

Mr. A. A. Bowlby observed that if tuberculous disease commenced in the bladder it usually involved the trigone and prostate, which was not the case in Mr. Paget's specimen; he thought that the disease most probably started in the vesiculæ, and inquired what the condition of these was.

Mr. Edgar Willett favoured the view that the rectum was the starting point, as there were three ulcers in this, whilst there was only one in the bladder.

Mr. Stephen Paget, in reply, stated that there was a mass of caseous glands by the side of the rectum in which the sinus might have had its origin; the state of the vesiculæ he had not yet carefully examined.

Fibro-adenoma of Suprarenal Capsule.

Dr. H. D. Rolleston described what he considered best designated as a fibro-adenoma. The specimen was obtained from a man, aged 54, who presented no symptoms pointing to disease of the suprarenal capsules. From the anterior aspect of the left capsule there projected a new formation of brown colour on section, the organ being otherwise healthy. Histologically the swelling was composed of fibrous tissue, in which lay suprarenal cells and columns. There was nothing indicative of tuberculosis or syphilis.

Mr. J. H. Targett had seen adenomata as large, though not so fibrous, as that exhibited. He agreed with the author as to the designation of the condition.

Polypoid Tumour of the Œsophagus.

Mr. J. H. Targett described the œsophagus from a man who died from dysphagia and inanition. After death malignant ulceration was found affecting the lower end of the œsophagus and leading to stricture. Four inches above this was an almost sessile tumour, which the exhibitor would name from its histology a fibroma. The interesting point, however, was that the growth was infiltrated with squamous-celled carcinoma.

Mr. S. G. Shattock inquired whether any method of treatment by catheterisation had been adopted. Had the polypus been below the ulcerating carcinoma it would have been legitimate to have considered it infected by a process of auto-inoculation; but being above, such an auto-inoculation might have been brought about by catheterisation.

Mr. J. H. Targett, on referring to the clinical notes, was able to state that attempts had been made to pass catheters, but had failed.

Variola and Vaccinia.

Mr. J. Jackson Clarke said the leisure of a summer holiday had enabled him to give in some detail his observations [illegible] vaccinia referred to last session. For eight hours [illegible] rabbit's cornea in and about the seat of inoculation [illegible] epithelial cells to contain dense highly-refracting [illegible] close to the nuclei. They stained with acid-hæmatoxylin, but showed preference for such stains as eosin, carmine, and fuchsin. These intracellular bodies, even at this early period, afforded evidence of organic processes. Some were dividing into two similar parts, others were enlarged and showed a central dense spot. Others again showed a mixed reticulated zone. On the third day, some of the intracellular bodies divided into a number of segments, and many of them had escaped from the host cells. Some of these free bodies showed a distinct "peripheral granule layer," such as the author had demonstrated in the cell-inclusions of cancer; others were large and of a round, oval, or pyriform shape; still others had subdivided into segments, some of which contained nuclear matter, either in the shape of small masses or suggesting radiating bars. Thus, these organisms—for their structure enabled them to be recognised as such—presented a series of forms which afforded an exact homology with the bodies described by the author as sporozoa in the so-called "psorospermosis" of the urinary tract, squamous epithelioma, cancer of the breast, uterus, etc., and various sarcomas. Vanderloeff and L. Pfeiffer had described motile flagellate bodies in the blood in the early fever of variola and in vaccinia. Histological examination of variola—for material for which the author was indebted to Dr. T. F. Ricketts—showed parasites indistinguishable from those of the vaccinated cornea, where the parasites were easily distinguishable from leucocytes, degenerated epithelial cells, etc.

Dr. S. M. Copeman had understood that Vanderloeff found the bodies alluded to by Mr. Clarke in cases of a vesicular nature; and if so, they could not be regarded as specific. As to the results of experiments on the cornea of the rabbit and guinea-pig, he had found that neither of these animals was susceptible of vaccination—at least, no vesicle could be raised in them. Dr. Rutter, who had also used the same animal, and with similar results to Mr. Clarke, had stated that he had made vaccinia take on mucous surfaces, and among these, perhaps, he would include the cornea. The experiment should be repeated on the dog or monkey, both of which were susceptible. He asked, also, whether the author had checked the results by using other irritants; and he observed that no similar bodies had been seen in vaccine or variolous lymph. Dr. Klein and the speaker had independently found a bacillus in the earlier, not the mature, lymph. This was spore-bearing, and to the persistence of the spores might be ascribed the potency of the lymph after the bacillus itself had disappeared.

Mr. Jackson Clarke, in reply, remarked that Vanderloeff had not described flagellates in the blood. He (the speaker) had found similar bodies to those described in the rabbit's cornea in the skin of the rabbit's ear after vaccination, and in the vaccine lesions of children. The result of common irritants was leucocytic invasion of epithelium, but not the peculiar appearances seen in vaccine inoculation. In vaccine lymph he had observed amœboid oval bodies of considerable size, which he held to be free forms of the protozoon. Sporozoa might live without moisture, though this did not appear to be always the case.

Card Specimen.

Dr. H. D. Rolleston: Traction Diverticula of the Œsophagus.

Mr. Haycroft, of Bow, Devon, has received the Government vaccination grant for the fourth time in succession.

CLINICAL SOCIETY OF LONDON.

J. W. Hulke, F.R.C.S., F.R.S., President, in the Chair.

Friday, October 12th, 1894.

Aneurysm of the Basilar Artery.

Dr. J. R. Bradford described an example of this condition in a hospital porter, aged 29, who was admitted to University College Hospital on February 3rd, 1894. During the last six months he had suffered from giddiness and noises in the head, and for the last fortnight had complained of occipital headache and stiffness of the muscles of the neck. On the morning of February 2nd he was seized with vomiting after eating some bacon that was thought by him to be rancid, and during the day his wife thought he had a fit, but no convulsions were seen. His pulse was intermittent. The next day he was better; the vomiting had ceased, the pulse was still intermittent, headache still present, patient conscious and perfectly rational. He was removed to hospital at 7 P.M., owing to his having retention of urine. On admission he was partially unconscious; axillary temperature, 98° F.; pulse, 70, irregular and intermittent. No paralysis. Respiration regular. Abdomen not retracted. Pupils equal and medium sized; deep reflexes increased. Patient rather restless. At 9 P.M. he became comatose, and the respirations became infrequent, ceasing at 10 P.M. Artificial respiration was kept up for four hours, but the pulse then failed, and on the cessation of artificial respiration patient died at 2 A.M. Temperature at midnight, 97° F. No convulsions occurred. *Post-mortem* examination showed numerous gummata in the liver, and a fusiform aneurysm of the basilar artery, which had ruptured, the extravasation forming a blood clot a quarter of an inch thick on the under surface of the pons and medulla, and extending round the sides of the medulla into the fourth ventricle.

Intracranial Aneurysm in Young Subjects Unaffected with

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Dr. Kesteven asked if there was any history of alcohol in either case.

Mr. A. P. Gould asked if there was any cause assigned for the aneurysm: for instance, was there any malformation of the skull close to the [illegible]

Mr. Barker had seen specimens of basilar and carotid aneurysms [illegible]

Mr. A [illegible] specim [illegible] gilbert.

Dr. Bradford, in reply, said that in his case there was a very definite history of syphilis, but not of alcohol. The prodromal symptoms were trivial—occipital headache and giddiness.

Dr. Hale White, in reply, said there were no prodromal symptoms in his cases. The first lived a long time after the aneurysm was leaking. He had no idea what produced either aneurysm. He asked if subretinal hæmorrhages had been seen in such cases by other observers.

Acute Pancreatitis.

Dr. J. E. Paul read notes of this case, which was that of a man, aged 43, who was suddenly seized with colicky pain in the abdomen, which lasted a few minutes. Next day he had a recurrence of the pain. During the two following days he vomited three times, and his bowels were confined. No history of any similar attack or of any abdominal trouble. On examination his abdomen was slightly distended, but not very tender. Nothing abnormal could be detected by manipulation. Rectum loaded with faces. Pulse, 82 per minute, fairly full. Temperature, 100·6°. Tongue slightly furred. Was ordered an enema, which evacuated a large constipated, but otherwise normal, stool. An hour and a-half later he was noticed to be collapsed with cold, clammy extremities, and radial pulse scarcely perceptible. He died eight hours after admission. Temperature rose to 104° just before death. Urine: Two drachms passed just before death, containing about a quarter albumen, granular and hyaline casts, a few red blood corpuscles, no sugar. On *post-mortem*

examination the peritoneum covering the pancreas was found to be glued with recent lymph to posterior surface of stomach. The pancreas was much swollen, and hæmorrhages were to be seen most numerous in the tail. Stomach and duodenum healthy. The rest of the organs healthy, except cloudy swelling of kidneys. No fat necrosis. Microscopic examination of the pancreas showed considerable disintegration, with total destruction in parts of the structure of the organ. Numerous hæmorrhages were to be seen, and clumps of crystals of hæmatoidin.

Dr. T. D. Savill had had a young patient in the Paddington Infirmary with symptoms of vomiting and peritonitis supposed to be due to obstruction of the bowels. An enema only aggravated the symptoms. Mr. F. Treves did an exploratory operation, but the patient soon died. At the necropsy a large quantity of recent lymph was found behind the peritoneum, but the pancreas was not examined microscopically.

Mr. Barker asked if there was any thickened infiltration behind the peritoneum in Dr. Paul's case. The leading symptoms of acute pancreatitis were those of acute intestinal obstruction, though no obstruction was found on operation.

Dr. Bradford saw the case before death and at the necropsy. It was a case of acute hæmorrhagic pancreatitis, not one of hæmorrhage into the pancreas, nor of simple inflammation of the organ. He had thought it a case of perforation, as the symptoms were aggravated directly after the enema.

Dr. Paul, in reply, said there was no effusion of lymph behind the peritoneum.

Fatal Form of Tetany associated with Chronic Dilatation of the Stomach.

Dr. Soltau Fenwick described two cases. 1. A carpenter, aged 34, was admitted into hospital for severe vomiting and cramps in the arms and legs. He stated that for six months he had suffered from pain in the stomach after meals and attacks of vomiting. Two days before admission he was suddenly seized with cramps in the muscles of the thighs, legs, arms, and hands immediately after vomiting a large quantity of fluid. On examination, he presented all the symptoms of tetany in the arms, fingers, and lower extremities. The superficial and deep reflexes were exaggerated, and the urine retained. The temperature was normal, but the respiration was somewhat hurried, and face and limbs were rather cyanosed. The stomach was dilated to the navel, and the bowels were confined. The tonic spasm disappeared suddenly on the fourth day, but reappeared three days later, and lasted fourteen hours. The urine contained a trace of albumen and sugar. Five further attacks of tetany occurred, and death supervened from respiratory failure within twelve hours of the commencement of the seventh. At the necropsy, the stomach was found to be considerably dilated, owing to the contraction of a chronic ulcer in the pyloric end of the organ. The other organs were healthy. 2. A man, aged 46, who had suffered from ulceration of the stomach for four years, was suddenly seized with tonic spasms of the extremities after an unusually severe attack of vomiting. The condition closely resembled true tetany, and the seizures were repeated several times. The stomach was found to be considerably dilated, and it was accordingly washed out with warm water, and the patient was instructed how to perform the operation for himself. Two years later there had been no recurrence of the spasms, and the general health had improved considerably under the use of lavage twice a week. The stomach was still dilated but the pain and vomiting were much less severe. Tetany complicating chronic dilatation of the stomach was first recorded by Tuesmani in 1869, and since that time 26 cases of the affection had been published. In 92 per cent. of the cases which came to a necropsy a chronic ulcer near the pylorus was found. In every case the tetany followed severe vomiting. All varieties of the disease were extremely fatal, and of the 26 no fewer than 18, or about 70 per cent., terminated in death. Probably an organic poison was manufactured in the stomach which, by its absorption into the general circulation, acted upon the central nervous system as a convulsant. The rational treatment which had met with considerable success was the regular employment of lavage, either warm water or a weak solution of resorcin being used.

Dr. C. Holman said that Dr. Ogle, of Reigate, had had a patient admitted into hospital for serious vomiting, with a much dilated stomach. This was washed out, and the patient improved. The patient then had two attacks of tetany, and died in the second attack. At the necropsy there was no sign of ulceration, but the stomach was greatly dilated.

Dr. S. Fenwick, in reply, said that the Germans said that ulceration was always present. The stomach must not only be washed out but kept in an aseptic condition in order to produce actual benefit.

Tuberculous Lymphangitis following Inoculation of Finger.

Mr. Eve read notes of this case, of which he exhibited several sketches.

The President referred to the case of a surgeon described in *Langenbeck's Archiv*, who accidentally inoculated his own hand, and subsequently died of it.

The Society's New Volume of "Transactions."

The President exhibited a copy to the Society, remarking that it was as valuable as any former copy of the *Transactions*.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

R. J. Banning, M.D., President, in the Chair.

Friday, October 5th, 1894.

President's Address.

The President chose for his subject the Question of Medical Titles, and treated it from the standpoint of a general practitioner. He urged that all general practitioners should be called "Dr.," but that the affix of the letters M.D. should be reserved for consulting physicians. The old title of surgeon, which was extinct except in Ireland, appeared to be the most appropriate for one who was either a hospital surgeon, or whose practice consisted chiefly of surgery. He also compared the medical with the legal profession, and considered the question of senior consultants "taking silk"; he thought that thereby not only would the busy consultant obtain more leisure but also increase of income. With reference to the Midwives Registration Bill, he considered that it would be harmful to the medical profession, and that the registered midwife would endeavour to assume a position little inferior to that of a medical man.

The Difficulties of Prognosis in Insanity.

Dr. H. Sutherland read a paper on this subject. The chief difficulty consisted in the deception practised by the patient in describing subjective symptoms of diseases from which he was not suffering. The most important points in forming a prognosis were (1) the patient's age, (2) the duration of the attack, and (3) whether it was the first attack. He calculated that from 25 to 50 per cent. of cases admitted into an asylum recovered, and that six times as many recoveries occurred within the first year of the attack as occurred after that time. The diagnosis of recovery was also described. Numerous illustrative cases were referred to.

In the discussion which followed, Dr. Alderson urged the necessity of some mental sanatorium, distinct from an asylum, where cases of temporary insanity could be retained without incurring the stigma of having been in an asylum.

Dr. Tuke referred to the difficulty in the diagnosis between general paralysis and chronic mania, and remarked upon the proneness of syphilophobics to suicide.

Drs. Starling and Travers also made remarks; and Dr. Sutherland replied.

REVIEWS.

Syphilis in the Innocent (Syphilis Insontium); Clinically and Historically Considered, with a Plan for the Legal Control of the Disease. By L. Duncan Bulkley, A.M., M.D., Physician to the New York Skin and Cancer Hospital, etc. New York: Bailey and Fairchild. 1894. (Pp. 416, 8vo. 3.50 dollars.)

This essay, to which the College of Physicians of Philadelphia awarded the Alvarenga Prize in 1891, deals with the subject of syphilis acquired "by means wholly unconnected with the venereal act." The modes of infection are considered under three heads: 1, in connection with household and industrial life; 2, in the care of children; 3, in professional pursuits. The book opens with some remarks on the history and present distribution of syphilis, and these are followed by a classification of the various ways in which syphilis may be spread, both venereal and non-venereal. The author then proceeds to consider the disease from the more restricted point of view indicated in the title of his book, and gives an account of no fewer than "one hundred and sixteen original personal cases of extragenital chancres." There is also a table of over 7,000 cases reported by various observers "to show the relative proportion of extragenital to genital chancres," and another table "exhibiting the location" of over 9,000 extragenital chancres, which has been compiled from the details contained in an analytical bibliography, which itself occupies over 140 pages of the present volume. Still another table refers to the various epidemics of syphilis which have occurred from the year 1577 to the present time. The foregoing remarks will be sufficient to give some idea of the large amount of labour which has been bestowed by Dr. Bulkley on this part of his book, which to those interested in the subject will prove a veritable mine of information.

Turning now to the medico-legal aspect of the question: Although "a plan for the legal control of the disease" forms part of the title of the book, we find, on reference to the chapter indicated, that "it would be out of place here to present any detailed plan of operation.....even if the writer were prepared to formulate such a scheme." Dr. Bulkley suggests, however, that the first step to be taken is to place syphilis among the other contagious diseases subject to law, and he thinks that, if this were done, the details necessary to enforce such a law would naturally follow. "The force of the argument rests," according to Dr. Bulkley, "on the necessity of examining the men instead of the women: for any proposition looking to the latter has always met with resistance at the hands of many classes in every community who urge the degrading character of police inspection." This examination of men Dr. Bulkley proposes should be undertaken by "those connected with the nefarious business," by which he apparently means those connected with the keeping of

brothels; for he goes on to say that "many would hesitate against going to houses of ill-fame if they knew that they were to be thus examined; and those that were syphilitic would exclude themselves."

Whatever may be thought of the practicableness of Dr. Bulkley's medico-legal suggestions, there can be no doubt about the value of the rest of the work, which embodies an amount of information on syphilis in one of its aspects far beyond anything that has hitherto been compiled. We more especially commend this book to the notice of those who may feel a difficulty in dissociating syphilis from immorality in the subject of it.

Micro-organisms in Water: their Significance, Identification, and Removal. By Professor Percy Frankland, Ph.D., B.Sc.Lond., F.R.S., and Mrs. Percy Frankland. London and New York: Longmans, Green and Co. 1894. (Demy 8vo, pp. 532. 16s.)

Professor and Mrs. Percy Frankland have done good service to medical officers of health, to chemists, water engineers, and others in bringing together in such accessible form the large amount of information that they have collected in their interesting volume. The reader rises from the study of this work with the feeling that, although much may have been written that is not here put down, at any rate the gist of the argument and the basis of good water sanitation has been given. The chapters on the detection of pathogenic bacteria in water, on pathogenic bacteria in different waters, and on the action of light on micro-organisms in water are well worth most careful study; whilst the more practical parts of the work, dealing with the examination of water for micro-organisms and the purification of water for drinking purposes, are evidently the outcome of long observation and a thorough acquaintance with the literature of the subject.

That the book is complete and without flaws we do not pretend to say; the authors are inclined to accept as proved a number of statements made by different observers, of the accuracy of which sufficient evidence has not yet been advanced; but it must be acknowledged that it is at any rate an honest and in the main successful attempt to lay before the English reading public a fair and unbiassed account of what has been published in a remarkably large number of papers and treatises. As such, and as a statement of the opinions and experiments of the authors, and as forming an important contribution to the literature dealing with our water supplies, it will be cordially welcomed.

It is only after reading a work of this character that the enormous amount of the accurate information which has been obtained concerning micro-organisms in water can be recognised, and, on the other hand, how many points still remain on which more light is needed. The first step, however, has been made when the necessity is proved, and were Professor Frankland's book to do nothing else than indicate the work that still remains to be done, its publication would be opportune. In its more positive character, however, the value of the book is still greater, and no one interested in the subject of a pure water supply can afford to ignore its existence.

Œuvres Ophtalmologiques de Thomas Young, Traduites et Annotées [The Ophthalmological Works of Thomas Young; translated and annotated]. Par M. Tscherning. Directeur Adjoint du Laboratoire d'Ophtalmologique à la Sorbonne. Copenhagen: Andr. Fred. Hört and Son. 1894. (Demy 8vo, pp. 256. 10s.)

This is the first time that the works of Thomas Young have been published in a collective form. Not the least interesting part of the volume is the "Eloge de Young," a beautifully written panegyric by Francois Arago, which is, we fancy, not quite so well known to English students as it deserves to be. The title page gives a fine photogravure of the great master's face. The papers collected are: Observations on Vision (*Phil. Trans.*, 1793), On the Mechanism of the Eye (*Phil. Trans.*, 1801), Theory of Light and Colours; the Bakerian Lecture for 1801 (*Phil. Trans.*, 1802), and the rest of the short papers on colour vision which appeared about the same time. We in England have certainly much to learn in the matter of republishing work of this description. The present publication is not only a convenience to students and investigators, but is a delicate compliment to our distinguished countryman, and a fitting memorial of his work and discoveries. The translation has been accomplished in an admirable manner, and the difficult task of rendering idiomatic English has been perfectly done. At the end of the volume three plates illustrating the work are inserted. We can but congratulate the editors on the way in which they have carried out their work.

Lunatic Asylums, their Organisation and Management. By Charles Mercier, M.B. London: Charles Griffin and Co. 1894. (Demy 8vo, pp. 316. 16s.)

This is a book for those interested in asylum management, and is a clear detailed statement of what the author considers the chief matters concerned in the successful administration of institutions provided for the care and treatment of the insane. One closes the book with the feeling that a man, to be a successful medical superintendent of an asylum as portrayed by the author, must indeed be a man of many parts: that his knowledge of innumerable details in a large number of departments must be great and accurate: that he must be endowed with more than ordinary skill as a medical man: that he must be possessed of a special knowledge of psychological medicine: and that, as regards tact and temper, he must be far above the level of ordinary mortals. Thirty-four pages are devoted to the enumeration and description of his statutory duties alone, and the author, who has not himself been medical superintendent of a public asylum, deals with the question of the supremacy of the chief medical officer, his duties, and how he ought to perform them, and his character, and how to order his conduct. "He should remember," says Dr. Mercier, "that his first duty is the care and treatment of his patients:" and, above all, he is warned to avoid certain pitfalls, which the author enumerates—namely, brick-and-mortar fever, the danger of sinking into a mechanical routine, the danger of "assuming the asylum is founded and maintained for the benefit, not of the patients, but of the medical superintendent:" and "the last pitfall that a medical superintendent needs to be warned against is that of jealousy of his assistants." We hope this lecture on conduct, character, and duty, so forcibly penned by a late assistant medical officer, will not escape the notice of medical superintendents generally; it will, doubtless, afford them some food for reflection and amusement. We should regret if the too dogmatic expressions of opinion above alluded to should mar the success of what is an admirable book in other respects, full of valuable information, cleverly written, and easy to read.

Atlas of Cystophotography. By Dr. Max Nitze, of Berlin. Ten plates, containing 60 photogravures. Translated by Dr. Michels. Wiesbaden: J. F. Bergmann. 1893. (Fcp. 8vo, 10 plates with letterpress. M. 12.60.)

Dr. Max Nitze, who introduced the subject of electric cystoscopy to the profession, has published an Atlas of Photographs of the living bladder taken by means of a camera attached to the ocular end of an ordinary cystoscope. The illustrations which are given show beautiful and exact reproductions of various normal and pathological conditions of the viscus.

The method he employs is as follows. The image which is seen when looking through a cystoscope is a virtual one, and therefore incapable of photographic reproduction; but a real image can be obtained by running the ocular piece to a point about 15 centimetres distant from the external end of the optical apparatus. By taking a photograph of this small real image, an enlargement can be subsequently carried out and all the details of the object sharply delineated.

The camera consists of a flat round box which is fixed to the edge of the external end of the large cystoscope. Inside the camera is a rotating disc carrying ten circular openings, each of which is exactly the same size as the eye piece, and each coincides with it. On rotating the disc the openings

pass in rotation over the eye piece. A sensitive gelatine-bromide plate is placed within the revolving disc, so that by merely rotating the disc ten negatives can be taken. The exposure is from three to ten seconds, and the camera is held steadily in the hand. Neither the movements of the bladder nor the pulsation of the vessels in its neighbourhood, nor even the manipulative motion of the hand, if carefully done, blurs the picture under the favourable circumstances of a bright light and very clear medium.

The results satisfy the most sanguine expectations. The photographs, says Dr. Nitze, "represent most distinctly the delicate vessels, tiny miliary tubercles, stones, tumours, etc., and also the details of the healthy bladder, the mouth of the ureter, the air bubble entered with the catheter, etc. Calculi within the bladder appear as solid as if photographed lying on a table. Good exposures at the same time reproduce the peculiar sheen and brightness which is characteristic of cystoscopic pictures."

While recognising fully the beauty and faithfulness of the photographs, it cannot but be admitted that many of them need explanation before they are recognised. This is especially the case as regards the tumours, and it is on this account that this advance in exact cystoscopy, great though it is, cannot have the extreme value in teaching purposes which the author claims for it. It is clear that the bladder can be accurately photographed, hence even those sceptical of the value of the cystoscope must admit that the interior of the bladder can be viewed, provided that skill is exercised and attention is paid to the clearness of the medium and to the brilliancy of the electric light. Again, photography of the bladder amply justifies those who have contended that an accurate diagnosis and prognosis can be obtained by means of the cystoscope in a large proportion of obscure cases; at the same time, it is questionable whether good photographs will, under all circumstances, "prevent those mistakes and incorrect interpretations" which are often made by those who will not take the trouble to practise with the cystoscope in the same manner that they work with the ophthalmoscope or the laryngoscope. The advance which Dr. Nitze has thus made and the atlas which he has published add, if this were needed, to the reputation which he has already gained in urinary surgery.

THE RECTUM AND ANUS; THEIR DISEASES AND TREATMENT. By CHARLES B. BALL, M.Ch. Univ.Dub., F.R.C.S.I. With 61 Illustrations and 4 Coloured Plates. Second Edition. London: Cassell and Co. 1894. (Cr. 8vo, p. 452. 9s.)

THIS work deserved to be successful, and that it has been so seems evident from the appearance of a new edition, which, moreover, has been thoroughly revised, and to a large extent rewritten. The chief alterations and additions relate to painful fissure and its treatment, the excision of internal piles, and the treatment of simple stricture, prolapse, and cancer by various operations. Some new illustrations have also been introduced. Perhaps the most noteworthy feature of the new edition has reference to what Mr. BALL believes to be a more accurate pathology of painful fissure of the anus with a simplified mode of treatment based thereon. Mr. Ball states that he is satisfied that the vast majority of painful fissures, if not all, are due to accidental tearing of one of the anal valves by some projection from the fæcal mass in its passage along the bowel. For the cure of such cases, the author believes both forcible dilatation and division of the sphincter to be quite unnecessary, the removal of the "tag" or "sentinel pile" formed by the torn-down valve being all that is really required.

We are glad to find that Mr. Ball devotes a chapter, though not a very long one, to what we think has not always received sufficient attention in works on diseases of the rectum, namely, the palliative treatment of internal piles; but we have looked in vain for some mention of that very useful drug, hamamelis, one or other preparation of which is, in our experience, often of great value in the treatment both of external and internal piles. We can confidently recommend this new edition to the profession; indeed, for the general practitioner we know of no better book on the subject.

NOTES ON BOOKS.

Aids to the Mathematics of Hygiene. By R. BRUCE FERGUSON, M.A., M.B.Cantab. (London: Baillière, Tindall, and Cox. Foolscap 8vo, pp. 90. 2s. 6d.)—This small book has been prepared to meet the wants of students of hygiene, who find that in the standard textbooks "too much is taken for granted, and too much knowledge on the part of the reader is assumed." Alas, that it should be so! Had every medical student that sound knowledge of the elementary facts of physics and mathematics which might reasonably be expected from him, such books as these could not justify their existence. It must be admitted that at present many students for the D.P.H. examinations will find here within a reasonable compass the special formulæ, familiarity with which is expected from them, and a number of examples based on these formulæ. The "scraps of information" thus collected appear to be accurately stated. They are however too "scrappy," and the number of examples is very meagre. A set of examples at the end of each chapter would have increased greatly the value of a work teeming with formulæ—formulæ which are not particularly well set out in the text.

Eaux Bonnes et Eaux Chaudes, et leurs Environs (Guides Joannes). With illustrations, maps, and plan. (Paris: Librarie Hachette and Cie. 1894. Cr. 8vo, pp. 42. 50 centimes.)—This is a good specimen of the small and convenient issues of the *Guides Joannes*, published by Messrs. Hachette and Co. It gives a sufficient and well-arranged description, with illustrations and useful maps, of the popular Pyrenean spa, Les Eaux Bonnes, and its somewhat less frequented neighbour, Les Eaux Chaudes. Full and complete information is, in the first place, given of the means of access to these health resorts from Paris, the expense of the journey, and so on; then follows an equally full account of the hotels, lodging houses, charges, and all those small matters so essential to the visitor to a foreign spa. Next, there is an estimate of Eaux Bonnes from a medical and climatological point of view by Dr. Cazaux. An account of the various promenades, excursions, and ascents to be made in the neighbourhood concludes the description of Eaux Bonnes. A much briefer account is given of Eaux Chaudes, but several pages are devoted to an account of the very beautiful excursions to be made in its environs. It is from the picturesquely situated village of Gabas, distant only eight kilometres from Eaux Chaudes, that the ascent of the remarkable Pic du Midi d'Ossau is usually made.

The Pharmacopœia of the London Hospital. Compiled under the direction of a Committee appointed by the London Hospital Medical Council. (London: S. F. Hodsoll, Free School Press. 1894. 8vo, pp. 262. 2s.)—The pharmacopœias of large hospitals to which medical schools are attached are intended to serve as guides to the students in the art of prescribing, and also to give information upon matters of special interest. The revised edition of the *London Hospital Pharmacopœia* is in this respect a very complete work. It comprises a materia medica, formulæ suitable for adults and for children, also instructions for casetaking in the medical wards, urine analysis, the preservation and staining of animal substances, and notes on poisons and their antidotes. The book is well up to date, and includes many of the recent additions to the materia medica; among these we notice pulvis glandulæ thyroideæ, which is the thyroid gland of the sheep dried in a current of air at 90° F. and reduced to powder.

Report on the Social Condition of the People. By T. NYLAND. (London: Davy and Son. Royal 8vo, pp. 8. 6d.)—Mr. Nyland's map showing the distribution of insanity in England is most interesting, and suggests many inquiries. Why is the North so much more sane than the South? Why is there so much insanity in Wales and Wiltshire? The pamphlet which accompanies the map hardly answers these questions. The author tells us, indeed, that wages are higher in the North, but he leaves us in doubt whether this be a cause or result of the greater sanity. He is content with showing that insanity is not hereditary nor produced by drunkenness.

He traces it to selfishness, and his one contribution to the solution of the social problem is the reiteration of the text, "Righteousness exalteth a nation." It may be hoped that his map may set others on the same inquiry. It would be interesting to know how far statistics of lunacy depend on differences of administration. In some districts the admission to asylums is common; in others the insane are more often retained in the home. If it be the fact that insanity accompanies low wages, there is another great argument for more State interference to prevent a result which is so costly to the State.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

WATER-PRESSURE ACCUMULATORS.

We have received from Mr. Ch. Franks, 25, Aldermanbury, London, E.C., an extremely convenient and ingenious apparatus for producing sprays and pulverisation of medicinal and antiseptic fluids. The apparatus consists of a metal globe, which is made in various sizes. An aperture in the globe is closed by a tap with a rubber top for charging. This is done by applying the rubber-topped neck firmly to an ordinary water tap. The tap of the vessel is then turned, and also the water tap from the main. As the india-rubber washer prevents leakage the water from the main enters the vessel, the water in which finally has the same pressure as that in the main. When the sound of inflowing water ceases, the vessel being filled, the vessel tap is turned off, and then the water tap, and the vessel removed. The charging tap is now removed, and a nozzle of the desired form is screwed on in its place. The bottom of the globe has an aperture, closed by a screw, through which disinfectant or other medicament can be introduced before charging the globe. The nozzles supplied with the apparatus produce a very fine pulverisation. The length of time for which the spray will continue depends upon the pressure in the mains and the size of the nozzle, but a small size, about 4 inches in diameter, gave in London a fine throat pulverisation for about a quarter of an hour. As the apparatus is quickly and easily charged it is likely to be found extremely convenient. A globe of similar construction but larger size, and fitted with a nozzle which gives a vertical spray, is supplied for diffusing odours through a room.





We have also received from Mr. Franks a syringe with an atomising nozzle, which should be found a convenient apparatus for distributing a deodorant through the air.

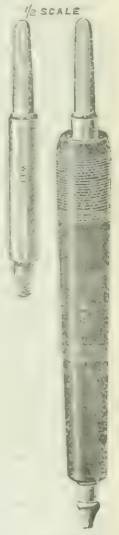
IMPROVED THERMO-CAUTERY.

Mr. Robert O'Callaghan (Harley Street, W.) writes: The improvements in this most useful instrument, which have been carried out at my request by Messrs. Weiss, of Oxford Street, will, I am sure, be appreciated by all who are in the habit of using it. They are as follows:

1. A new bottle for the benzoline which makes it impossible to spill this highly inflammable fluid, no matter how often the bottle is upset.

2. A new bayonet catch over the rubber cork which prevents the latter from coming out while pumping the benzoline vapour, which formerly was a constant occurrence.

3. A new arrangement of the handle makes the instrument an artist's tool, and enables the surgeon to hold it quite close to the point, as he would a pencil, so that the touch can be exquisitely delicate when required, which was not possible with the old handle.





I trust these improvements—the outcome of practical discomfort in an otherwise most valuable instrument—may be found useful by my fellow-workers.

IRON JELLOIDS.

Messrs. Warwick Brothers, manufacturing chemists, 18, Old Swan Lane, E.C., appear to have overcome the difficulty which exists in preserving ferrous carbonate from oxidation, by incorporating the freshly precipitated salt with a jujube mass. We have examined a specimen of iron jelloids prepared by the above firm, and find that the carbonate is unoxidised. The jelloids are in shape like compressed pellets: they are very soluble in water, can be easily swallowed, and are certainly an excellent method of administering ferrous carbonate.

ANTISEPTIC DRESSINGS.

We have had submitted to us some excellent specimens of double cyanide gauze, boracic lint, and carbolised catgut ligatures, prepared according to the methods of Lister, by John Milne, of Ladywell, London, E. The ligatures are especially good, and kept in a convenient tube. These dressings, from their good quality and moderate price, are well worthy of the attention of surgeons.

Midwives Registration Bill.—We are informed that a meeting of the medical profession of Leigh and district, which was attended by eleven gentlemen, was held at the Conservative Club, Leigh, on October 4th, when Drs. Brierley and G. H. Broadbent attended. The chair was taken by Dr. Sephton, of Culcheth, and after considerable discussion resolutions similar to those adopted at a meeting at Lancaster on September 17th, and reported in the British Medical Journal on September 29th, p. 736, were carried unanimously on the motion of Dr. Jones, seconded by Dr. Hardesty.

ADDRESS BY SIR JAMES PAGET AT THE OPENING MEETING OF THE ABERNETHIAN SOCIETY.

On Thursday evening, October 11th, 1894, Sir James Paget, F.R.S., delivered the inaugural address at the opening of the 100th session of the Abernethian Society of St. Bartholomew's Hospital.

Mr. Crosse, one of the house surgeons and son of the well-known clerk of the hospital, occupied the chair as President of the year. The meeting was held in the Anatomical Theatre, which was filled by a large audience, and consisting of many students and the greater part of the nursing staff of the hospital.

Sir James Paget said:—When I was asked by the Committee some short time ago to give the opening address at this meeting of the Abernethian Society I hesitated, but then I remembered that it was just sixty years ago since I became a member of the Society; I remembered that, and it brought forth a grateful feeling for all the happiness and advantage I have enjoyed from my membership, and I felt at once that I should at least present to you a very rare case, I believe a unique case. There may be some, and perhaps many, who were members of the Society even before I was, who are still living, yet I do not think there ever has been an instance here where anyone has given addresses within so long a period as that of sixty years—therefore I assented. If, however, I had known that this was the centenary of the Society I would have endeavoured to give some account of it which I might have learnt from its original annals, and of the great man whose name it took, and who, I believe, was its initiator. I should like to have told you what we really might have learnt of him, not only as the greatest surgeon of his time, but as being a most remarkable writer, the most admirable user of plain English in its best forms at that time existing, and one who, in that respect, may even still be a model at this time. Not knowing that, however, it seemed to me that I might speak of what I remembered of the Society sixty years ago, and of the hospital and of the school; but I felt at once that that would be a great temptation to become merely talkative, and I therefore resolved not to enter upon that, the more because some nine or ten years ago, in an address given before the same Society, I had spoken of that, and I think it has been published. So I thought I should choose a very good subject which might be discussed—namely, that of the exercise of scientific study in medical and surgical practice, especially it might be even in private practice. It is commonly said, and has been said as long as I can remember and much longer, that science and practice are for the most part incompatible, that a man must decide that he will be either a practitioner or a scientific man, that he cannot in any instance be both at the same time, but must devote himself entirely to one or other, and each must work on his own ground. This has been said for a long time, but it is sheer nonsense. There always have been men actively engaged in practice who have at the same time been doing admirable scientific work, and constantly, by that work, adding to the knowledge of pathology and of practice, and even of physiology in close connection with them, and never at any time that I can speak of have there been so many of that class as there are now. Look around and see the publications made by them, and everywhere you will find some prominent man or men engaged in both works of the kind, and making their practice contribute to their science as thoroughly as their science contributes to their practice. I think we may now reasonably hope that the number of these in the profession will increase when every student has to pass through the course of careful practical study of the sciences most immediately bearing upon medicine. With those sciences and with the instruction which every student can now receive, he will not only obtain considerable knowledge of the greatest use to him in after-life, and a knowledge of the instruments and methods of research which may serve him best, but he will gain, more than used to be possible, what may be called the scientific temper; he will in the laboratory see more clearly and at once than he can see in the wards the way in which direct scientific inquiry leads to the deduction of new truths; inquiry conducted with care and repeated tests, with constant doubt, and constant discovery of things previously unknown, and by his association with teachers whose lives are spent almost entirely in science, he can see how constantly they are engaged not only in teaching and in repeating experiments already made but trying by all means to ascertain facts entirely new. This scientific temper will be in after-life of more importance in most cases than any knowledge he can acquire.

This, therefore, shall be my subject, and the question may be asked at once, What is to be the pursuit of any man who will thus wish to lead a scientific life with the scientific temper in his practice? I would reply that he will be content if he is constant in the pursuit of new matters of fact. It may be said, Can he not go beyond mere facts and form deductions and general conclusions which may be of much use to him? Doubtless some may, a few may, and all may try; but the more certain thing is that in the present state of medical science what we want is the accumulation of more distinct plain facts, facts investigated again and again and made quite sure. I suppose it would be true generally that in all natural sciences the difficulty of arriving at certain conclusions is in the number of conditions, which may be variable in the object of those studies. The number of variables, as I believe they may now be called, is, I think, in no natural science so great as it is in that of human pathology. Everything there varies. Practitioners commonly say, and say quite truly, that no two cases are alike, no two men are alike, no two heads are alike, no two faces or features of any kind, no two men have the ends of their thumbs, their ears, or their fingers exactly of the same shape. Detectives, whom we ought to imitate in many things more than we at present do, are making good use of this knowledge, that nothing in two persons is exactly alike. In the same manner we may surely say that no two men have kidneys, livers, or stomachs alike, and if they are unlike in health so much more will they be unlike in disease, and so much more still when they are under the influence of medicine. We may, therefore, fairly say that the number of variables in the study of human pathology and therapeutics is greater than that in any other branch of natural science, and, therefore, that the number of facts to be collected must be constantly larger. Without such facts we had better very rarely indulge in any deductions or general conclusions: we had better always follow that great motto of John Hunter, "Don't think, try: be patient, be accurate." It conveys as much wisdom as I think can be conveyed in any sentence as short and as simple as that. All we have to do is to try whether things we believe are true, try whether things that we think we see before us should certainly be held as true, and not think, or, if we begin to think, then be patient and try again, be accurate and try again and again, and never be ready to accept any general conclusion as true unless it answers to all these repeated tests.

Now, when I try to urge this, not upon you especially, but upon myself and all practitioners, the question may at once be put, What is there to be inquired into? Where are we to look for new facts or facts of any importance? I should be disposed to answer, Anywhere, for all around us there are facts undiscerned, all around us there are things which none hitherto have seen, or at least none have observed. This is shown by the fact, which anyone may see, that not a year passes but someone detects some new disease or some new character of disease which all his contemporaries and his predecessors have seen for years and years but had not observed. They did not look deep enough; they did not try enough again and again; they did not follow the precept, "Do not think, try." Not a year passes without some discovery, as it is called, of that kind. Let me adduce one—I could adduce any number—but let me take one which has besides the advantage of showing that facts discerned in practice and pathological in their first bearing, really may bring about some of the most admirable discoveries in physiology, showing plainly that science and practice, so far from being incompatible, as some would say, are really of necessity mutually helpful, and neither can be perfect without the other.

The disease called myxœdema is now well enough known. No one who has seen many patients or has practised for

many years would now venture to say that he has never seen a case of it, and yet it is only twenty years since that disease was first observed and carefully described by Sir William Gull—observed by him I think first in private practice, and clearly enough described by him in *Guy's Hospital Reports*. Then observe what follows: Dr. Ord and Dr. Fagge soon afterwards observed that myxœdema, as described by Sir William Gull, was commonly associated with disease or imperfection of the thyroid gland. The thing seemed strange, but it was ascertained plainly that the one disease was connected with the other. Then there followed in practice again operations for the removal of diseased thyroid glands. Then again it was observed that when the whole thyroid gland was removed, myxœdema almost surely followed. Then followed again what might be called experimental tests. By leaving behind a part of the thyroid gland or by means of small accessory glands close by, or even by transplanting pieces of it, the occurrence of myxœdema was prevented. Then it went on, and by therapeutic inquiries it was found that it was enough to prevent the myxœdema following the total removal of the thyroid gland if patients were fed upon other thyroid glands, or even the juice derived from them, or extracts of them. Then it came to be found that the occasional absence of myxœdema after the removal of the thyroid gland was due to there being small accessory glands of the same structure lying in its neighbourhood. Then followed anatomical inquiry, and those glands were found in much larger number than was ever before supposed, especially extending up to the thyroid gland, or even the hyoid bone at the root of the tongue.

The result of all this is to show that whereas, say, twenty years ago it would have been fairly said by everyone that the thyroid gland was a part of physiology of which we knew absolutely nothing—whether it had any use or any relation to other parts—(really it might be said nothing was known of it), now it might be said that there have been discovered about the thyroid gland facts and general principles of physiology which surpass our knowledge even of many of the other objects with which we are supposed to be best acquainted. It is found that a thyroid gland really forms the material which, passing from it into the blood through the lymphatics, is essential to the proper nutrition of the other organs of the body, especially to those which become the seats of myxœdema; so that we can add now to what was previously known when it might be said that every organ, by its own self-nutrition, was an excretory organ to others by reason of the materials it took from the blood. Now we know about the thyroid, we have to search and observe other organs. In many I think that which they restored to the blood is as essential to the maintenance and proper nutrition of the others as that which is removed from it.

I take this as only one of the many instances showing how careful inquiry into pathological facts observed in practice may be the first step to some of the most remarkable discoveries in the whole range of physiology. It need not therefore be asked by anyone, Where shall I look? The answer may be, Anywhere; and it is worth while, looking into the history of physiology, and of pathology too, to see how frequently the best discoveries have been made by what is called chance. There lie about us in all directions so many things to be ascertained that if we merely take our chances we may find something; but still, if anybody wishes to work on any definite subject, let him choose his own—only it might be suggested that it should be one for which he possesses good opportunities for research, and that he should not go here or there where others have better opportunities than his own, but that he should take his own range of opportunities, and use them to the best advantage. If any or all of us will do this, it will be quite unnecessary to suggest any particular lines of inquiry; but I have thought of one or two which I will mention because I think they may be worked out perhaps best and most easily in private practice, not merely in the clinical work of large hospitals, but even amongst patients living entirely in private life in quiet places.

One of these is what I have often tried to urge—the necessity of studying the characters of mixed diseases. We seem to know diseases by definite names, and medical nomenclature is as strict and exact a nomenclature as even the science of botany or zoology. But constantly we are reminded by what we see in practice that in that which we call a definite disease by one name there may be really some two or three different diseases presenting certain characteristics similar, but yet in many respects differing. Some of these, I think, are really mixed diseases. Of some we can speak almost with certainty. We know very well how different are the effects of tertiary syphilis in gouty and tuberculous subjects. They are plainly two diseases. One disease is derived by infection, and produces different results according to the previous disease or morbid tendency with which it is mingled. But there are many others which we do not yet discern, and those which I will specially mention are diseases derived from inheritance. We are familiar enough with the inheritance of various diseases, such as cancer, tuberculosis, gout, rheumatic arthritis, neurosis, and a great many more. All these we recognise as being diseases derived by inheritance, or at least derived under such conditions by inheritance as may make persons more prone to this or that disease. Now, it has never been studied carefully what may be the result when one parent has one transmissible disease, and another has another; what comes if one parent is a member of a cancerous family, and another a member of a tuberculous family. Do these two diseases in any respect disturb one another; are they mutually exclusive, or do they mingle together? We know that acute tuberculosis and acute cancer never make rapid progress together; they seem, in so far as that, to be antagonistic.

But what comes of it when they are mingled together by inheritance? Of that, I think, we certainly know nothing; and the study, I believe, can best be carried out by those who live in places where they really know the family histories of those whom they see year after year, and who are their own patients. Nothing can be more fallacious than that which is commonly told by friends or relatives of the inheritance of disease, or the degree of health and disease in families. Those who will make them out, if any, will be those who with a scientific temper, such as they may have acquired in their previous studies, are constantly watching, carefully testing, and looking for facts which may illustrate this. This may be done, as I say, by carefully watching and by studying inheritance; and so it may be in many cases which they observe in their ordinary practice. There are many other things which might be studied by inheritance which really are not—as, for example, the proportion of cases in which a disease is inherited, the proportion in which it totally fails, the manner in which they mingle, and many other things of the same kind. These must be for practitioners to determine. They will never be determined aright by any general principles of pathology; they will rarely, I should think, if ever, be determined practically right by one race being made the subject of experiment in matters appertaining to any other race.

There is one other subject I should like to mention which especially belongs to practice, and which men in private practice more than any may investigate, and that is the influence of medicines—the tests to be applied to medicine. This is really more and more necessary because every year there are presented to us substances for food or for medicine which, upon what are stated to be scientific grounds, will certainly produce definite effects. No doubt whatever is expressed by those who recommend them that because this and that is true in physiology, therefore it must be true with regard to what will be the influence of that medicine. I think it will be safer for us to hold in regard to the whole of them, and all statements of that kind, that not one of them should be accepted as true unless it has been determined to be so by repeated tests; and these tests should be applied by practitioners with scientific minds, men careful to look and to repeat their tests over and over again, and with that which belongs to the best kind of scientific mind, much more readiness to doubt than to believe that which is stated upon general principles. That, surely, must be done with regard to all medicines which are represented as being of necessity effective in this or that direction because there is some physiological reason for it. A thing to be constantly observed is that people speak of what they call the fallacies of medicine. In the large majority of cases, however, these are not fallacies of medicine, but fallacies of diagnosis. We

confuse together two, three, or more diseases which have all apparently the same symptoms, and which seem to us, therefore, to be surely one, but they are really many.

Let me illustrate this by an example which struck me very much many years ago. About fifty years ago it was commonly believed that most cases of paraplegia could be cured with mercury. Certain of them certainly were, but a considerable number, I believe the majority, were not: and I think that mercury for paraplegia was on the point of passing into the list of medicines disused as being useless had it not been detected that a considerable number of cases of paraplegia were due to syphilitic disease of the spinal cord. These cases were cured by mercury; others were supposed, but erroneously, to be the same disease, but they were not. This, I remember rightly, was among the very first, if not the first, of the cases in which syphilitic disease was known as affecting the internal organs. There was no fallacy of medicine, there was strictly fallacy of diagnosis, and it may suggest to many practitioners that when they are giving anyone medicine for the cure of what is supposed to be any one disease, if they find that it does distinctly cure one or one part of one and does not cure or does not in any way affect another part, they should immediately proceed to study the true diagnosis between the one set of cases and the other. Here, as in many other instances, medicines are not what are commonly called cures, but definite tests for pathological cases—say the mercury test in one set, the iodide of [illegible] in another, and quinine in another. Everyone in must have seen many cases requiring this kind of investigation when certainly under one name we are classing two or three distinct diseases. Let me mention an instance I used to observe when I used to see more ordinary cases than I do now. Everyone knows the disease when the patient becomes subject to a succession of boils one after another. No one can tell why; the patient has no definite disease but he has boils, and so it goes on for weeks and months. Among the cure for boils there were three which were held in good repute—liquor potassæ, quinine, and yeast. I think I can say with certainty that in my own practice I have seen cases in which each of these three was successful, or certainly seemed to be so, in curing the boils, whilst the others had no influence whatever upon them.

It is a problem which I never solved myself, although you may say, and justly so, that is the very subject you ought to have detected yourself. I did not, however, detect it, and there it is.

Let us determine now what are the conditions in which each of these remedies is effective. Quinine, I think, was known to be chiefly effective upon those in whom disease had its origin in some distant affection of malaria; liquor potassæ, I think, was chiefly effective in those who were gouty or had eczema; while of yeast I could say nothing, but of its being a cure in some cases I had no doubt whatever. That is only one example of many cases of the kind—to look upon it always that if medicines seem to be fallacious, they are the fallacies of our diagnosis; and the fallacy can only be removed by the most earnest and keen study on the part of those whom I have repeatedly named as men of scientific mind, men full of doubt, men certain that we have no new knowledge which does not require to be tested in every possible direction.

These, then, are only two of many things that I will suggest, but they are only a very small part of those which can be well made objects of study by those who are just coming into practice and those already in practice.

It may seem to you that what I have called a scientific study takes only a low and imperfect view of what should be the scientific work of men in practice, when I put it at nothing but the collection of facts; but depend upon it the whole history of medicine will show that there has been no greater hindrance to the progress of real knowledge than that of the premature deductions or too ready generalisations which have set up things as certain and completely established long before they have been so. I spoke of the inheritance of diseases. Let me say again that those diseases should be carefully studied. I also spoke of chances. Let me mention one very striking instance of a discovery made by chance. I suppose if anything in the world, any set of statements, be fallacious, they are those commonly called popular beliefs—a mass of people believing this or that, or a set of country people or stupid town people believing that or this to be certainly true. Very rarely indeed are they worth asking a question about; but even things such as those had better not be altogether neglected by practitioners living in those places as insignificant. It was out of a mere popular belief that Jenner discovered vaccination.

There was a public belief in Gloucestershire that people in the habit of milking cows, who got what was called the cow-pox, could not catch small pox. Nobody in the profession thought it worth inquiring into. Jenner, who was by nature a thorough naturalist, studied it, and thence came the discovery of vaccination, thence came the first discovery of those facts which are now of so much importance—the fact of the modification of virus by transmission from one people to another, or by cultivation and reduction in its virulence. But we must not boast of ourselves when we remember that it took more than fifty years before Jenner's knowledge of vaccination was supposed to have shown more than a curious fact in pathology and medicine; it took all that time before the scientific mind of Pasteur came to work it out through chemistry into that which we know as the propagation of disease. There, again, physiology and practice meeting have brought about the most marvellous increase of knowledge, and the most useful that one could refer to.

You may say that in speaking thus about what practition[illegible] can do I put too low an estimate upon what should be called scientific study by saying it should be the study only of matters of fact. Well, it would be very difficult to give a definition of scientific study, seeing that it would have to include what has been done in political economy, in systematic zoology, and in pure mathematics—very hard to make a definition. I only repeat, for practitioners and for all of us, let us be content with the opportunities of using the means of observation which are immediately around us. By those will be discovered new diseases, if they may deserve that name, or, if not new diseases, new signs of disease—new combinations and new facts which will all bear directly upon the enlargement of medical knowledge. But do not let me seem by all that I have said to depreciate in the least degree the advantage which our knowledge is to gain by the cultivation of all the sciences allied to medicine. So far from this, I would rather maintain, rather hold as certainly established, that chemistry, physics, and the other sciences allied to medicine have been essential to every step of the progress that has been made within the century. They have helped everything.

All that I would hold is that no science allied to medicine in its [illegible] can be [illegible] for [illegible] in pathology; neither [illegible] physiology, pathology; let them work together as rivals, not as enemies, all trying their very best to advance that which may come from all. There is more good than harm done when those who pursue any one branch of science say that their branch, their field of inquiry, and their method are the best existing. It will be very useful if they first try to prove that by their own work. But the thing to be held is, no one is self-sufficient; all must work together as partners. Each in his own range of inquiry must be what is called a dominant partner. A physiologist may not believe anything coming to him from medicine until he has tested it with his own hands. By the same right, no one engaged in strictly medical science should accept from physiology or from chemistry anything he has not submitted to tests which belong to his own inquiries.

Let me add only this: What I have been saying concerning the scientific temper in medical and surgical practice is really not valuable in itself alone, nor for the promotion of the general mass of knowledge. It is a condition of mind which is essential to the greatest success that any man can have in practice; essential to it, for the scientific mind being cultivated in the practice of medicine makes that practice itself much more secure. The very same temper which a man may use for the investigation of new facts will make him more shrewd, more observant, more clear in the facts which it is part of his necessary duty to ascertain. He will be more exact in his diagnosis, more exact in his use of medicine, more continually watchful.

I spoke about detectives just now. There are many things in which we might do well to imitate detectives. They are always on the watch, always looking for things that others overlook, always observing things that others consider trivial. Many things in them might well be copied, and I think we may make it as a boast that he who has written of and studied best the whole art of the detective is a member of our own profession. Let us, within the proper range of our work and consistent with our duty, become as far as we can possibly be, detectives. It is a common word of praise for a man: He detected something which others overlooked. Let us be, so far, detectives. There are, as I have said, crowds of facts all round us undiscerned, and why should we let others discover them more than ourselves?

After a vote of thanks to Sir James Paget for his interesting address had been carried by acclamation the company adjourned to the library, where tea and coffee were served.

DEATHS UNDER ANÆSTHETICS.

Chloroform.

Mr. John Freeman, F.R.C.S.E. (Anæsthetist to the Bristol General Hospital) writes: With all the advice given by different authorities as to the best method of administering chloroform, the number of fatalities under that agent appears to increase rather than diminish. Some maintain the danger lies in giving too much of the anæsthetic, others that the patients die because they had too little. In the administration of chloroform it is essential that the patient be well under its influence before the operation is commenced, and that the anæsthesia be properly maintained throughout it. The amount of chloroform necessary for these requirements depends to a great extent upon the patient. I always use a Skinner's mask, and I find I can keep some patients under as thoroughly and for as long a period with half an ounce as I can others with two ounces; hence it is almost impossible to say what is too large or what is too small a dose in any particular case.

The dangers of doing painful operations before the reflexes have been abolished has been well shown in some of the cases reported lately. But with the greatest care in its administration there is always a risk with chloroform. Some patients appear to be particularly susceptible to its toxic effects; otherwise how can we explain those deaths that occurred in its administration before there was any operative interference and in which there were no alarming symptoms until the circulation or respiration suddenly ceased? Such cases have happened when the chloroform was given by skilled anæsthetists, so there could be no question of improper administration.

It has been suggested that these patients died from fright, but that there must have been something more than mental excitement is, I think, proved by the fact that such deaths have never been recorded under ether.

As there is no greater surgical calamity than to have a patient die under an anæsthetic, especially if it happen to be a small operation, which could, perhaps, have been performed without general anæsthesia, too much attention cannot be paid to the selection of the anæsthetic. Personally, I always give ether whenever possible. There can be no doubt of its greater safety, and I think its disadvantages are often exaggerated. Patients frequently take it better than they do chloroform; they go under more quickly, struggle less, and, in my experience, the after-effects are no worse than those of chloroform. A little practice is necessary with the Clover's apparatus before ether can be administered satisfactorily, but there is no real difficulty about it. At this hospital senior students are taught its administration; and I think it would be a good plan if all students received instruction in this most important subject. Perhaps one of the reasons why chloroform is still so largely given is because a good many medical men have had little experience of ether. Until ether takes the place of chloroform as the anæsthetic for general surgical purposes we shall continue to read the weekly reports of "deaths under anæsthetics."

Dr. Robert Kirk (Partick, Glasgow) writes: In the British Medical Journal of October 6th Dr. Carter continues the discussion on the dosage of chloroform raised by Dr. Fergus a week previously. In treating this subject we must draw a sharp distinction between (1) the percentage of vapour employed, and (2) the length of time of the inhalation. I quite agree with the London Committee of 1864, and with the late Dr. Snow, that it would be positively dangerous to make any patient breathe 5 per cent. of vapour. Nay, more, I would draw the line of safety a good way below this, as I have found that such an atmosphere will kill the strongest rat or mouse in from ten to fifteen seconds. But within this safety line I would further distinguish two different degrees of strength: (1) one, varying from 3½ to 2 or 1¾ per cent., which I regard as safe provided the inhalation be carried to deep anæsthesia, but one which is liable to give rise to a dangerous reaction if it be stopped at a superficial stage; and (2) a still weaker atmosphere, which may possibly be free from any danger of reaction. It would appear that Dr. Carter seeks safety in an atmosphere of the latter kind; and I am aware that a good many others do the same, and I think it yet remains to be determined whether an atmosphere so weak as to confer complete immunity from reactionary danger may yet be sufficient for all surgical purposes.

I never meant to convey the impression that a weak atmosphere is more dangerous than a stronger one; but, with respect to the middle zone above indicated (and I take it to represent the maximum amount of vapour given off when a drachm of chloroform is poured on a towel or lint, as is very generally done), my contention is that an inhalation of one or two minutes, or, indeed, short of five minutes, is positively dangerous; while nothing can be safer than the same atmosphere if it be pushed to deep anæsthesia. This opinion, I submit, is supported both by clinical evidence and experiments on animals. We have undeniable proof that fatal cases have happened in the early stages, and in these it is expressly mentioned that the inhalation was stopped before the fatality occurred. No doubt the same thing happened in many other cases although it is not mentioned.

Now, I regard it as beyond question that when the administration is stopped the vapour escapes from the lungs in ten seconds or so, and that at this time elimination of the absorbed chloroform must commence. This occurs under such circumstances [illegible] but the reaction which ensues [illegible] the vapour. Can an equal number of fatal cases be pointed to in which there is proof that the inhalation was continued without a break till the moment when death occurred? Dr. Carter is astounded that I should publish the large quantity of chloroform I administer for a trifling operation. Is it surprising that I should publish what I learned from the example of the [illegible] for nearly thirty [illegible] I have seen arti[illegible] what, moreover, I believe can now be [illegible] periments on animals, to rest on a truly [illegible] One drachm of chloroform may kill a man, [illegible] anæsthesia cannot be induced, even in a [illegible] years old, with less than 5 or 6 drachms. Further, [illegible] my patients remain unconscious for twenty minutes after withdrawal of the anæsthetic, as in the [illegible] lated by Dr. Carter. Indeed, both the [illegible] were, in my opinion, genuine and dan[illegible]

Take a cat out of an ordinary atmosphere of chloroform (3½ per cent.), at the end of two, three, four or more minutes, and it will invariably be found that the pupil is widely dilated. Watch it, and it will be found that it contracts to a fine line in ten seconds, and after another minute or two again suddenly dilates. Coincidentally with this dilatation the heart may remain regular, in which case the animal at once recovers. In other cases, however, the heart's action stops at this stage, and is resumed with great irregularities, during which the circulation is entirely in abeyance, and the cat as deeply unconscious as if there were an overdose of chloroform in its blood, although every drop has already escaped. The explanation is easy. In ten seconds the vapour in the lungs escapes; the arterioles and pupils contract and the blood pressure rises, and the result is in many cases a sudden

stoppage of the heart, with a fall of pressure to zero. These observations are, in fact, complementary to those made by the Glasgow Committee, with which they harmonise perfectly. The evidence that this reaction is the cause of syncope in the human subject I consider as conclusive and overwhelming.

MEDICAL OFFICERS OF HEALTH AND PUBLIC ELEMENTARY SCHOOLS.

OF late years there has been a growing conviction, amounting to certainty as regards some of the common infectious diseases of childhood, that school conditions are of paramount importance in the diffusion or prevention of many of the diseases of the zymotic group. For diphtheria, in particular, this relation has been established, first by Dr. Thorne Thorne and his colleagues on the medical staff of the Local Government Board, subsequently by other writers, and notably by Mr. Shirley Murphy. Scarlet fever, measles, and whooping-cough are other familiar examples, and in areas which suffer from the antivaccination craze small-pox also has shown a tendency to attach itself to schools. That the danger is a real one cannot now be questioned, but it is of a kind which may in a very large measure be controlled by stringent supervision, and every year brings about increased efficiency in that respect. The general acceptance of the Notification Act and the rapid advances that are being made all over the country in the means of hospital isolation, have greatly strengthened the hands of sanitary authorities in dealing with several of these diseases, but there remain certain points which need further adjustment. One of these is the vague and unsatisfactory definition of the respective functions of the officers of sanitary authorities and those of school boards with regard to the exclusion from school of children living in infected houses.

The Education Department are responsible for a Code of Regulations for Day Schools, and Article 88 of the 1894 Code runs as follows:

> The managers must at once comply with any notice of the sanitary authority of the district in which the school is situated, or any two members thereof acting on the advice of the medical officer of health, requiring them for a specified time, with a view to preventing the spread of disease, *or any danger to health likely to arise from the condition of the school*, either to close the school or to exclude any scholars from attendance, but, after complying, they may appeal to the Department if they consider the notice to be unreasonable.

The words in italics were newly introduced in this year's Code. Article 101* states that

> Where the Department are satisfied that by reason of a notice of the sanitary authority under Article 88 or any provision of an Act of Parliament requiring the exclusion of certain children, the average attendance has been seriously diminished and that consequently a loss of annual grant would, but for this Article, be incurred, the Department have power to make a special grant not exceeding the amount of such loss in addition to the ordinary grant.

Upon receiving a claim of this kind the Department send down a blank form, known as Form 101*, wherein someone (whose identity is not prescribed) has to insert certain details, including the name and age of each child excluded, together with the first and last dates of exclusion; and the medical officer of health is expected to sign a declaration that all these items are correct. What is to happen in case of inability or refusal on his part does not appear. It is nowhere specified as part of his official duty to sign any such certificate, nor can he be supposed to have, necessarily, any knowledge as to the children individually when he has been dealing with the school or division as a whole. What, then, is the duty of the medical officer of health with regard to Schedule 101*, and under what statute, regulation, or order does it arise? The Local Government Board and the Education Department should come to some common understanding as to this, and then make their intentions clear to their respective officers.

This, however, is only a minor instance of the practical inconvenience which results from the indefinitenesss of the frontier between the two Departments. Another and much wider question remains to be considered, namely, the duty of the medical officer of health with regard to children attending school from an infected house. The risk of infection being carried in this way is obvious, and it is usual for the health officer, as well as the doctor in attendance, to warn the parents not to let the children go to school until the period of danger is over. This prohibition is generally extended to all the more important infectious diseases, with the exception of enteric fever, but it has no legal force or sanction, and may be disregarded by either parents or school authorities, if they are reckless enough to do so, without fear of other consequences than the spread of infection. As a rule—to which occasional exceptions are not unknown—school authorities are more than ready to assist in keeping up the informal quarantine so imposed; and it has become the practice in many towns for the medical officer of health to send word to the respective schools wherever he finds occasion to keep scholars away. In London this has now become a part of his statutory duty, under the Public Health Act of 1891, but elsewhere it remains a matter of discretion. It is true that in a Local Government Board Memorandum, issued in December, 1890, by the then medical officer, it is advised that:

> The medical officer of health, on becoming aware of the presence of dangerous infectious disease in his district, should, under the Board's General Orders prescribing the duties of medical officers of health, send immediate notice to the teacher of the school or schools which the children of the infected households may be attending, requesting that such children may be excluded from school for such time as he (the medical officer of health) may specify as being necessary.

But the revised version of the General Orders in question, issued in March, 1891, merely requires that:

> In case he is not satisfied that all due precautions are being taken, he shall advise the persons competent to act as to the measures which may appear to him to be required to prevent the extension of the disease, and to take such measures for the prevention of disease as he is legally authorised to take under any statute in force in the district, or by any resolution of the sanitary authority.

It is evident that nothing but good can result from supplying the information to the school officials, and it may be taken for granted that the practice will become more and more general among medical officers of health, even before the not distant date when it will be made obligatory in the provinces, as it already is in the metropolis. This is one of the many new additions to the ever-increasing duties of health officers which will have to be taken into account in adjusting their remuneration and the staff and offices to be placed at their disposal. For the present it is not obligatory—a fact which has apparently been overlooked by certain champions of school interests, who are disposed to represent the officers of the sanitary authority as being in default if they omit to furnish full information to them as a matter of routine. The default is often on the other side. When examination time comes round, and a full attendance is a consideration of importance on financial grounds, there is a tendency to excess of zeal on the part of the School Board officers, and children from infected houses, or even convalescents, are sometimes hurried back to school without waiting for any clean bill of health. If school authorities insist, as many of them very properly do, on the importance of due warning being given to them, they can scarcely claim a right to disregard the warning when given. The logical corollary to "compulsory notification" on the part of the medical officer of health is compulsory acceptance of quarantine on the part of the school managers. As matters stand, the only way of securing the latter is for the sanitary authority to put into force Article 88, a procedure which, if repeated afresh for every infected household, would be cumbrous, to say the least of it.

During the recent prevalence of small-pox and other epidemic diseases at Willenhall the attendance at the public elementary schools was seriously affected, and some of the questions to which we have referred came under consideration. There seems to have been a disposition on the part of those interested in the schools to claim as a matter of right that the medical officer of health, Mr. Hartill, should send notice of all infected households from which children attended school, and, further, to call upon him to perform, with regard to this informal system of quarantine, the doubtful duty of certification which Schedule 101* implies in cases where the sanitary authority have closed a school under Article 88. The Local Government Board and the Education Department having failed, as well they might in the present state of affairs, to throw much light upon the question, the sanitary authority have come to a decision which is in every way to be commended—namely, to request the medical officer of health to supply the school officers with the information desired, and to compensate him for the additional work and responsibility thus thrown upon him.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XXI.—BARTON REGIS.

We visited this workhouse one lovely morning when sunshine and balmy air made even unattractive places pleasant. We found all the buildings low pitched, and most of the wards separated from each other by yards. As these are made bright by flowers and creepers, they serve a good use as gardens and outdoor sitting places for the infirm, convalescent, imbecile, etc., who can step out of doors whenever they wish to do so without contravening rules or causing disorganisation. This habit of running out of doors at any moment without preparation is one that the poor have been accustomed to all their lives, and to obtain it for them in the workhouse infirmaries is no slight gain, and should be taken into consideration in weighing the disadvantages of the divided ward or hut system. We learnt that it was now some years since the Barton Regis guardians have done any building, as they were waiting for the amalgamation of the three unions, which in its turn awaits the decision of the question of the extension of the city boundaries, the latest addition in 1879 being wooden buildings designated "pavilion wards." These have thorough ventilation, lofty roofs, and are well supplied with large windows. All the sick wards, notably those on the women's side, are hung with bright curtains, contain pictures, flowers, etc.; and we have seen few more satisfactory sights than the day room for infirm women, where they sat, sewed, looked at periodicals, tended the growing plants, and were made happy by the possession of a sofa and the boiling of the kettle for the making of "their own" afternoon tea. The lady guardians and the matron unite in wishing that the compulsory last home of those who are driven into the "House" by their infirmities should be as homelike as possible, and the absence of quarrelling and the kindly ways of the old dames showed they had succeeded.

In some of the other wards for aged and infirm, where there were many patients confined to bed, we were not, however, so satisfied. Though we were pleased with the bright energy and good spirit shown by the nurse we saw, we yet think that the number employed is inadequate for the patients under attention.

To serve 120 infirm women located in seven wards there is but one nurse by day and no night nurse, the day nurse being called out of her sleep should occasion arise. Including the infirm there are about 586 sick but no night nurses. When there are cases of grave illness or when death is imminent, someone is told off from the body of the house to tend the sufferer; but as this person is untrained, and is but one of the paupers who has undertaken the duty from kindness, or to obtain the extra food or slight privileges accorded to those who do such duties, the patient is at the best left but to chance and unskilled care. As in all such institutions the death-rate is rather over 3 a week, and many of these deaths, as is also usual, take place in the night, when the nurse is off duty; but we were informed that the nurses became so much interested in their cases, that they frequently forewent their well-earned rest to tend them to the end. This sacrifice should not be required of them. A good day nurse earns her night's sleep, and cannot forego it without a tendency to irritability on the following day, which acts injuriously on her patients. The lunatic wards are supplied with a night nurse, but the others depend on the sleeping deputy (an untrained pauper, hard worked through the day) who has first to be aroused, and then sent across the yard to fetch the sleeping day nurse; this obviously is undesirable.

Sick Comforts.

Of these the best is a good tray, invented by the present master, Mr. Dodge, in which, by the aid of hot water, the food is kept both warm and moist. There are no bed-rests nor self-lifters, and the beds being flock, are in our opinion, not those which conduce either to the cleanliness or the comfort of the sick, though no doubt suitable for the infirm, lunatic, and imbecile. The number of confinement cases is also large —50 to 60 per annum. The women are delivered by the certified midwife, the doctor being paid 10s. 6d. per case: here, again, there is no night nurse. The children's ward, containing 18 beds, is nursed during the day by a capable nurse, who has besides five wards—including the lock—under her care, in all about 36 patients, but is left untended at night.

Men's Side.

Of the pavilion wards in which the men are housed we heard complaints, as being hot in summer and cold in winter. Here, again, we found the nursing inadequate, and done entirely by men. The inmates are often of so rough and villainous a character that an excuse on that account has been made for the non-employment of women, but of course the patients are of the same class as those filling the infirmaries and hospitals of our cities who are nursed by women. To obtain trained men-nurses is a difficulty, and we would recommend that the guardians should consider the advisability of classifying the sick inmates with some regard to their characters when possible, and supplying some of the wards with women nurses. While we are on the subject of classification, we would suggest that the plan of allowing the boys to mix with the men is a bad one. Boys come in with such disorders as itch, ringworm, early phthisis, or other diseases, which, while needing attention, do not compel the patient to remain in bed. To permit young lads to mix with elder patients, especially if, as we learnt, many of them are of more than questionable character, is likely to result in moral harm, which will ultimately affect the rates.

Insane Wards.

Here again in the women's ward we found the brightness that is made by flowers and decorations, influences which affect for cheerfulness the poor imbecile women that are its inmates. They are nursed by one nurse and two assistants and one night nurse—an inadequate staff to deal with 102 cases, some of them apt to be fidgety, interfering, and occasionally violent, and all liable to excitement should a disturbance arise. We recommend that the staff should here be increased certainly by two—an extra day and night nurse and no pauper deputy allowed.

On the men's side there are but 70 patients, and for them the same number of nurses is provided as for the 102 women, but here again we should consider the staff to be below the requirements. The place is well cared for, and books and periodicals are plentiful. The violent cases are sent to the asylum, but the authorities there object to receive general paralytic persons who at night are apt to cause difficulty.

On general matters we find cause for satisfaction. The laundry is worked by steam: the drinking and cooking water supplied by the company and periodically analysed; the fumigating apparatus is in good working order; the kitchen small, but good, and worked on the principles most generally approved, but not on those which the army has recently adopted, by which the food is Warrenised and 30 per cent. saved in cost, because all the nutritive qualities are preserved from waste. The waterclosets are sufficient and well flushed; the drains recently overhauled and ventilated; the infectious wards modern, suitable and well nursed.

Recommendations.

We should advise that night nurses be provided for the sick and infirm wards, and that at least one probationer should be in attendance on each night nurse during her hours of duty. That the old, infirm, and paralysed men should be tended by women nurses. That additional nurses be engaged for the lunatic wards in order to insure none but professional attention to the sick paupers being only allowed to do the scrubbing, etc. That the men employed as nurses should have some training other than that learned by experience through the patients. That the boys be

divided from the men. That better bath accommodation be provided in the pavilion wards. That the nursing staff should be under a head nurse, who should take the instructions direct from the doctor. That bed cards should be more extensively used. That the flock beds should be changed to wire and hair mattresses for the sick, and that the guardians should consider the Warren method of cooking.

Since our Commissioner's visit we are pleased to learn from the newspapers that the Barton Regis guardians have decided to spend £200 a year on the "more efficient nursing of their sick poor,"[1] which action the *Bristol Times and Mirror* of September 29th. states to be "largely due to the increased number of lady guardians and the efforts of the BRITISH MEDICAL JOURNAL.

CANTERBURY.

WE gather from the report of an inquest on a pauper who died suddenly in Canterbury Workhouse that the man did not die from any neglect or carelessness, but that there was no trained nurse on duty at night in the infirmary. As the matter is under the consideration of the Board, it is not for us to discuss at present; but we would urge them with the utmost earnestness to lose no time in appointing such an officer.

STOCKPORT.

THE Stockport *Evening Echo* has a short leader commenting on the report on that workhouse that appeared in these columns. On the truth or otherwise of the statements made by our Commissioner they offer no opinion, but they note that the subsequent action taken by the board shows that some of the allegations at least are correct. One remark is very significant, namely, that the crowded condition of the workhouse makes the proper treatment of the sick impossible.

SOUTH SHIELDS.

A LOCAL GOVERNMENT BOARD inquiry has just been held at the South Shields Workhouse to investigate into the truth of certain statements made by the trained nurse supplied to the guardians by the Northern Workhouse Infirmary Nursing Association. The complaints made refer to the insufficiency of the food, the unsatisfactory provision for the keeping of the same; want of cleanliness in the infirmary and in the laundry arrangements; insufficient water supply, and want of decency in the care of the dead. We shall watch for the result of this inquiry with great interest. It is another instance of the advent of the trained nurse being followed by the discovery of abuses, and if the immediate result is only the ventilation of these questions, good is sure to follow in the end.

HAVERFORDWEST.

WE see by a report in a local newspaper that the Local Government Board inspector has visited Haverfordwest, and that the result of that visitation has taken the form of a recommendation to the Board to put the house in a state of cleanliness, and to correct many sanitary abuses pointed out at the time by our Commissioner. We see that some of the board are clinging to the dreary whitewashed walls in the wards, Mr. Bircham suggests plastering and painting, and in the interests of the sick and infirm we urge the same. The walls painted in two pleasing colours would at once relieve the cheerless appearance of these rooms, and conduce to cleanliness. But the nursing must be taken in hand, and a more humane and skilful system adopted. The comfort and well-being of the sick is sadly neglected in this workhouse.

NEWTON.

WE are glad to see that there is a great awakening taking place in the provincial workhouse infirmaries throughout the country since our special Commissioner has been at work. The following is an extract from the report of the medical officer to the Newton Board of Guardians: Wards 17 and 46 were defective. The heating of the wards was defective, and more coal was required. Baths were insufficiently supplied, and no official had been appointed to bathe the able-bodied. The nurses could not do the work, except to bathe the sick. A number of beds were vermin-infested. There was no proper recreation ground for females; the accommodation for nurses inadequate; the adventury small and badly ventilated, and the method of conveyance out of the wards of a body after death might be improved; the receiving wards were unfit for their purpose; there was no classification; there was no separate ward for parturient cases; no wards for the isolation of contagious cases; no provision for dealing with the insane; the sick wards were scattered, shut in, and enclosed; the nursing was efficient, but a night nurse was required. In conclusion, he made several recommendations for the improvement of the present state of things. The report was referred to the Visiting Committee. We are very glad to see that these things at last are beginning to attract attention, and that, too, in a manner which will not allow them to be treated with neglect, which has been the rule of other dates with so many boards of guardians.

THE AGED POOR IN WORHOUSES.

MISS LOUISA TWINING, in a letter published in the *Times* of October 15th, says: "It must be very encouraging to those who have recently been writing on this subject in your columns, as well as to all those who have for many years been urging its importance, to hear the expression of opinion conveyed to the Poor-law Conference, recently held at Southport, by no less influential a person than Sir Walter Foster, of the Local Government Board. I may, I trust, be allowed to quote some of his words, in confirmation of what I earnestly desire once more to urge upon your readers. Thirty-six years ago the *Times* allowed me the privilege of stating the hardships and grievances suffered by the sick poor in our State asylums, and I thankfully own the vast improvements that have been made since that time, owing, I believe, to the publicity given to statements of facts then known only to a few. But the task is not yet complete. What has been accomplished for the large and important area comprised in the 'metropolitan district' may, we hope, before long be extended to the provincial unions also, aided by the revelations now being brought to light by the weekly articles in the BRITISH MEDICAL JOURNAL by the Commissioner appointed for that purpose. But the subject more especially under consideration is rather that of the aged poor than of the sick, for whom trained nurses are now being sought for in numerous workhouse infirmaries."

[1] BRITISH MEDICAL JOURNAL, October 6th 1894, p. 786.

THE CZAR'S ILLNESS.

[SPECIAL TELEGRAMS FROM OUR OWN CORRESPONDENTS.]

OUR RUSSIAN CORRESPONDENT telegraphs to us from Livadia: The statement which I communicated to you, by semi-official authority, a fortnight since that the Czar was suffering from the serious affection known as "contracted granular kidney," aggravated by intercurrent nephritis, is to-day confirmed by the publication for the first time of an official bulletin to the like effect. I have seen two of the physicians in attendance, and regret to have to state that there is no less cause for apprehension now than there was then. The distressing vomiting and the severe headache which were so ominous are less urgent, and the removal to Livadia has proved beneficial in some ways; but the Czar is still growing weaker. The condition is, of course, such as to hold out little hope of ultimate restoration to health, and until the Czar is removed to a milder climate and ceases altogether from State business little improvement can be anticipated, and intercurrent complications and accidents are to be feared, and may at any moment dash the fairest hopes to the ground. Professor Leyden makes no secret of his anxiety to get the Czar away as soon as possible and while his strength holds out, but he is not at all enamoured of Corfu as a wintering place. At this time of the year, and still more so later, it is damp, liable to heavy rainfall, and very changeable in temperature. It is wanting in sunshine, although fitfully beautiful weather may be enjoyed there. Either Teneriffe, Orotava, or Canary Islands would be, I am told, in his opinion, far more suitable, and by reason of their perpetual sunshine and remarkable equality of temperature, more likely to promote conditions favourable to convalescence. But by reason of distance and difficulties of communication and the weakness of the patient, they are hardly possible to the Emperor, who is in many respects less favourably situated than ordinary invalids. The example of a great English living statesman, who is stated to have recovered from a similar attack of hardly less severity by rest and climatic treatment, is referred to here as of good omen, and has been quoted to the Emperor as of good omen, and has had excellent effect in relieving the despondency which was a depressing feature in his case.

Our St. Petersburg Correspondent writes: Highly-coloured sensational statements concerning Professor Zakharin have appeared in the foreign press. It may, perhaps, be not out of place here to mention that, though eccentric, the Professor is distinguished by something more than eccentricity. He has the most extensive and lucrative consulting practice in Moscow, he fills with distinction the Chair of Medicine in the University of Moscow, he is the author of *Clinical Lectures*, which is a classic in this country; and he has done more, I am assured on the best authority, to raise the status of the medical profession in Russia than any other man living.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 189.

Subscriptions to the Association for 1894 became due on January 1st; and notice is hereby given in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, OCTOBER 20TH, 1894.

BERI-BERI IN IRELAND.

The occurrence of an epidemic of beri-beri, or of a disease closely resembling if not identical with beri-beri, in the Richmond Lunatic Asylum, Dublin, is a fact, not only of great pathological interest, but also of the highest practical importance.

As will have been seen from the reports published in the British Medical Journal on October 6th and 13th, some doubt appears to exist about the identity of the disease, notwithstanding that medical men with experience of beri-beri in its Eastern haunts have been consulted. It would seem that, although these authorities incline to the view that the disease is beri-beri, they have not quite made up their minds. Drs. Barry and Rhodes have pointed out certain peculiarities wherein, apparently, the Richmond Asylum cases differ from Oriental beri-beri. Doubt on so important and radical a matter as the diagnosis of a deadly disease should at once be cleared up, if possible. It is to be regretted that, so far, the profession has not been favoured with a detailed account of the clinical histories of some of the cases, and that Dr. Norman does not specify the points Drs. Barry and Rhodes appear to hesitate about.

Dr. Norman very truly points out that beri-beri is by no means a purely tropical disease, that it is common in Japan—a country which, though warm in summer, is very cold in winter—and that it is of frequent occurrence in ships in cold latitudes. Experience has shown that the conditions necessary for its development are heat, moisture, unknown forms of organic matter, and a specific germ. In the tropics heat, moisture, and organic matter are in most places constant conditions, and in many warm countries it only requires the introduction of the specific germ to set up an epidemic. In temperate and cold climates, heat, moisture, and organic matter may be supplied artificially. It would seem that such conditions as are to be found in the forecastles of certain ships are highly favourable for the propagation of the beri-beri germ, the existence of which, by the way, is still hypothetical. In ships carrying large native crews, as soon as the colder latitudes are reached, the imperfectly clothed Lascars, Seedie boys, and Chinamen huddle together in the forecastle, every ventilator of which they close; very possibly they light a fire and keep the lamps burning. In this way they soon get up a tropical temperature, and what with the sweat and exhalations from their bodies, and the steam from the wet clothes which they dry before the fire, the air quickly becomes and is kept saturated with vapour, which condenses and runs down the sides of the ship, keeping everything damp and sodden. In this dirty vapour bath they live, eat, and sleep for weeks. Virtually they convert their sleeping quarters into an incubator complying with all the conditions demanded by the beri-beri germ. In its demand for special extracorporeal conditions this germ, be it noted, in this as in many other respects, appears to resemble in its requirements the germ of malaria and that of yellow fever. It further resembles the latter in the pertinacity with which it clings to ships and similar structures. Introduced from without, carried in clothes perhaps, into such conditions as we describe, the beri-beri germ quickly multiplies, and the crew is cut down one after another by beri-beri.

It is greatly to be feared that a similar state of matters—a similar artificial incubator—has been manufactured by the unjustifiable overcrowding of the Richmond Asylum. Notwithstanding Dr. Norman's frequent representations, it is evident that this overcrowding has gone on for some time, particularly, judging from the figures, on the male side of the asylum, where, into accommodation planned for 500 patients, no fewer than 725 were crammed. Although males are said to be more susceptible than females to beri-beri, it is more than likely that the larger proportion of the former sex attacked in this instance is owing to the greater crowding they were subjected to. What the source of the germ was, how and when it was introduced, are apparently quite unknown: to trace this would be an interesting task for the sanitary detective.

Possibly the rigid application of sanitary rules, free ventilation, and the advent of winter will stay the epidemic for the time; but it is also quite possible, nay, likely, that on the return of the warm weather the disease will recur unless this scandalous overcrowding be obviated. Such is the history of beri-beri in ships, in schools, in prisons, in barracks. Worse than this, it is not at all improbable that now the disease has been introduced into Ireland it may spread to similar institutions throughout the country. It is very evident that the situation is a grave one, and that it demands vigorous and wisely-directed measures. We understand that the demolition of the asylum has been contemplated. Such extreme measures are not necessary. The Japanese freed their fleet from beri-beri by much less expensive means, even though for years more than a fourth part of the *personnel* had been attacked annually by the disease and the ships must have been saturated with the poison.

It is manifest, not only from the occurrence of this epidemic, but also from the persistence of endemic dysentery in the Richmond Asylum, that there must be grave sanitary defects about the institution. It is the duty of the sanitary authorities, in conjunction with the medical superintendent and his staff, to inquire into, and at all costs to remedy, the existing state of matters.

The occurrence of this epidemic in a civilised country, and so near to a centre of science, affords a unique opportunity for studying many points in the etiology and pathology of beri-beri which should not be let to slip. Many of Pekelharing and Winkler's statements about the bacteriology of the disease can now be revised by independent and competent experts. Thus their assertion that the

blood in beri-beri contains cocci and bacilli can be thoroughly tested; and it would also be possible, by the examination of the blood of the other residents in the asylum, to establish or confute their statement that in beri-beri districts the blood of all the inhabitants is so infested, although it may be only a small proportion of them that suffer from beri-beri. In this connection the existence of evidences of a mild degree of peripheral neuritis such as puffiness of the shins and ankles, diminished sensibility of the pretibial skin area, palpitation of the heart, weariness of the limbs, tenderness of the calf muscles, and impaired knee-jerk, which Pekelharing and Winkler found so common in Atchin, and which they sought to connect with universal but mild beri-beric intoxication, should be inquired into. Their cultivation and inoculation experiments should be repeated, and their results confirmed or confuted. Careful histological examination of the nervous system, particularly of the vasomotor system which has hitherto been almost neglected, should also be made. A statement recently put forward by Glogner, to the effect that certain of the red blood corpuscles in beri-beri contain a hæmamœba resembling that of malaria, is worth attention; some one familiar with the malaria parasite might undertake suitable investigations. It would also be of great interest to know the exact conditions under which the patients who first contracted the disease were living at the time of and before its appearance: conditions such as the temperature and cubic space per head in their sleeping quarters, their habits as regards outdoor exercise, the exact position of their beds, whether on the ground floor or otherwise, the provisions for ventilation, the length of time they passed in the dormitories, the presence of rice in their food, and so forth. Such particulars could easily be ascertained from the records of a well ordered asylum and would prove of much scientific and practical interest as bearing on the etiology of beri-beri. We trust that full information on these and all other important points in connection with this epidemic will be given to the profession at an early date.

THE BITTER CRY OF LONDON AS A TEACHING CENTRE.

II.—The Decay of Surgery as a Science.

The address by Sir James Paget, at the centenary meeting of the Abernethian Society, a report of which we print in another column, affords much material for thought. He very wisely pointed out that original scientific investigation is not incompatible with but is rather conducive to excellence in every kind of medical practice. The fact should be self-evident, and in every country except England it is unquestioned. Here, and especially in London, there is, perhaps, the greatest danger of its being actually denied. Our surgery has improved as an art, though hardly, perhaps, in this country, as we have more than once regretfully pointed out, as a science; for, with a few splendid exceptions, comparatively few of our hospital surgeons are scientific men in the higher acceptation of the term, nor would it be easy to find many surgeons of this generation who can lay claim to a single discovery outside the limited round of their purely professional duty. Specialism has, perhaps, something to answer for here, for it has a great tendency to narrow the sympathies and to render its adherents intolerant. But, whatever be the reason, science and ulture have, in this country, chiefly gravitated towards the practice of medicine.

Our defective preliminary education is in part to blame, for only rarely does breadth of sympathy coexist with an imperfect cultur. Our standard of living is very high, and income becoms early in life of prime importance. At present it is easie for one who practises surgery alone to gain a competence, and to gain it at an earlier period by a speciality than by adopting a broader sphere of action. For this the public is to blame. The great principle of the division of labour is still being tested, for we have yet to ascertain whether it promotes the best interests of mankind. In surgery it appears to be causing us to sacrifice breadth of knowledge for a doubtful increase in depth. It seems to be leading in many cases to a divorce between the science and the art of surgery, so that we are in danger of returning to empirical knowledge. Surgery would thus cease to be a liberal education capable of producing a Pott or an Abernethy, a Hunter or a Paget, but giving us in place one who has repeated a thousand times a single operation, and who knows and cares for little else. Year by year, surgery will become more and more indebted to what are as yet the ancillary sciences. Even now the best and most original minds among our younger men are attracted to pathology and biology rather than to the practice of surgery in a limited field. The increase in the number of examinations and the alteration in their character are perhaps in part to blame for the deficiency amongst the younger generation of surgeons, especially in London. The assistant surgeons to our hospitals are now chosen after a probation by teaching, or rather by "grinding," for their different schools with monotonous iteration, for small pay and with the main idea of "holding on" till there is a vacancy in the surgical hospital staff, when their sacrifice of years will be rewarded by the establishment of "a claim to appointment" in turn. There is perhaps no single occupation which is more destructive to originality of work, or which is less likely to produce a truly scientific surgeon, than that of the dull routine of a schoolmaster. When his disposition to original thought has thus been held down for years the requirements of office in a large school come in to continue the process. The exigencies of committees, the wearing routine of the out-patient room, and the exactions of many students leave him but little time for reflection, until upon the attainment, often late in life, of the full surgeoncy too many—even the most energetic—find the capacity and the desire for fruitful work so much diminished that they are often well content to plod on in the dull routine of practice. Surely it is for these among other reasons that we are being left behind; that foreigners neglect our schools. They complain that our surgery betrays a poverty of thought, and too often a littleness of action which has for them no attractions, and they prefer to pass on to smaller schools in smaller towns, and other countries, to other places than our metropolitan centre, where the conditions of life leave more time for better work.

We learn that a case of small-pox was reported nineteen days ago at the Leicester Workhouse, and, as a consequence, thirty-three inmates of the same ward, etc., *were vaccinated at once.*

THE HABITUAL DRUNKARDS COMMISSION (SCOTLAND).

We regret to hear that, through the ill-health of the Chairman of the Commission on Habitual Offenders (Scottish), the first meeting in Glasgow has been postponed till November 13th. Though there has been an improvement in the health of Sir Charles Cameron (the Chairman) his medical adviser has recommended abstention from arduous public duties for five weeks.

LEPROSY IN INDIA.

Regarding the reports received from the Local Governments on the question of leprosy, the Bengal Government favour legislation for segregating pauper lepers, while the Madras and North-West Provinces Government do not favour such a course. In Bombay segregation has been in force for a considerable time past.

ISOLATION AND BOARDING OUT.

The clerk of the Stourport Local Board reports that in future the Board will not be able to isolate cases of infectious disease by boarding out the healthy members of an infected family, as the Local Government Auditor would not in future sanction such payments. The Board were, he said, bound to provide hospital accommodation, but could not board out healthy people. The clerk was directed to inform the medical officer to that effect.

RESULT OF OUR WORKHOUSE INFIRMARY COMMISSION.

It is gratifying to learn that the Plymouth Board of Guardians has decided to remodel the system of nursing in their infirmary in accordance with our suggestions. The staff is to consist of five trained nurses, working under a superintendent nurse, and we understand that negotiations have been entered into with the Workhouse Infirmary Nursing Association to supply the staff. The question of housing the nurses will have to be met by some temporary expedient, pending the building of permanent quarters.

TEMPERANCE OF RAILWAY EMPLOYEES.

Though only a few years have elapsed since the railway companies in the United States began to interest themselves in the sobriety of their servants, no fewer than 377 companies in America forbid the use of intoxicating liquors by all in their employ when on duty. On several lines the superintendents are personal abstainers, and abstaining railway officials, *cæteris paribus*, are in that country always the first to be promoted. The Grand Trunk of Canada has done much in this direction by the example of some of its chief officers, and the protection to the comfort and safety of the passengers therefrom has been freely recognised. To no class in the community is the strictest sobriety more advantageous, alike in their own interests and in the interests of the travellers by the trains. There is one short line in the north of England on which no intoxicants are sold, and that line has had a remarkable immunity from accident.

DR. BEAVEN RAKE.

The Colonial papers arriving by the last mail contain sympathetic notices of the late Dr. Beaven Rake, whose untimely death has already been recorded in these columns. It appears that he had been devotedly attending a case of virulent yellow fever in the person of his friend, Mr. H. Tate, the island chemist, who died on August 17th, and with whom he had sat up for five nights. Immediately after the funeral, and while he was in the act of writing an obituary notice of his friend, he suddenly collapsed, and himself succumbed to the terrible scourge in about five days. The *Port of Spain Gazette* echoes the feeling of the whole colony, and of many others, in stating that besides being a gentleman who had won the esteem of all classes, Dr. Rake was a scientist of great ability, whose services have been invaluable, and whose place it will be difficult to fill. "Locally he will be missed on account of the zeal he threw into his work at the Leper Asylum, and the kindness he always showed to the unfortunate lepers; while his thoughtful consideration at all times for the devoted sisters—whose care for the lepers is the admiration of the entire community—will long be remembered by them." We understand that Dr. Rake's friends are proposing to establish a memorial of some kind of him, and all who appreciate his work will be invited to co-operate.

MEDICAL DEGREES FOR WOMEN IN EDINBURGH.

The Edinburgh University Court has decided to recognise the lecturers of the Edinburgh School of Medicine for Women and of the Medical College for Women, Edinburgh, as "lecturers specially appointed by the University" for the instruction of women in medicine. In future students of these two institutions will be admitted to matriculation and to examination for the medical degrees of the University. The decision to recognise these two schools was come to after careful consideration and after an inspection of the building by a Committee of the Medical Faculty last July. The Scottish Association for the Medical Education of Women, which carries on the Medical College for Women and the Edinburgh School of Medicine for Women, of which Miss Jex Blake is the energetic Dean, have both had a part in inducing the University of Edinburgh to take a step which throws open to women one of the most highly-honoured medical degrees.

DR. JAMESON, C.B

Dr. L. S. Jameson, Administrator for the British South Africa Company in Mashonaland and Matabeleland, on whom the Queen has conferred the Companionship of the Order of the Bath, was born in the Lowlands of Scotland, received the greater part of his education in London, and entered the Medical Faculty of University College, London, in 1870. He obtained the degree of M.B. in the University of London in 1875, and was subsequently appointed resident medical officer at University College Hospital. It was while incumbent of this office in 1878 that he accepted an offer to proceed to Kimberley, where he quickly obtained a leading position. While in practice in Kimberley he made the acquaintance of Mr. Cecil Rhodes, who recognised and put to great public service his energetic character and great administrative abilities.

SECOND-HAND WATER FOR LONDON.

The opening of the great waterworks by which Manchester has tapped the watershed of Thirlmere, and by the construction of a large dam has turned the lake of that name into an enormous storage reservoir, is an event on which that city deserves the most hearty congratulation. It has been a large undertaking, even for so important a municipality as that of Manchester, but the object has been thoroughly good, and well within the proper function of the corporation; for in no one point is the duty of the governors of a great city so plain as in the provision of a good and pure supply of water for the use of its inhabitants. The cost has been great, but so will certainly be the benefit. It is impossible on such an occasion to avoid contrasting the unsatisfactory condition of London and the hesitating action of its authorities with the far-seeing energy of the great provincial corporations in regard to water supply. Glasgow has appropriated Loch Katrine; Manchester has now brought water from Lake Thirlmere, a distance of ninety miles; Liverpool has gone to Wales, and by immense engineering works has impounded the waters of the Vyrnwy, creating an artificial reservoir 4¾ miles in length, and conveying the water a distance of 68 miles; Birmingham is expending

millions in bringing water from the valley of the Wye, and every town of any importance is actively engaged in the game of water grabbing. In this it is a matter of first come first served. The eligible areas are being picked up by more enterprising towns, while London, misled by the fact that a fair supply of river water is still obtainable, puts off the evil day. In view of the energy displayed by these provincial corporations in going far afield in search of pure water, it is ignominious to have to confess that London is still content to get water second hand. Only the poorest of the poor will accept broken victuals, even from the rich man's table, but, as regards water, the proudest Londoner must take a second-hand article or go without. Banbury, Oxford, Reading, Maidenhead, Eton, Staines, Henley—all have used it, and so have the multitudinous little towns and villages which dot the gathering grounds of the Thames and Lee. They have used it and poured it back, and now, to our disgrace, we pump up this second-hand stuff and drink it over again.

CHILDREN'S EYESIGHT.

It is satisfactory to find that the necessity for testing the eyesight of school children is becoming everywhere better recognised. Two valuable contributions to the question have recently been made in America. Dr. Southard[1] found 68 per cent. of errors of refraction among the eyes of the students of the University of California. The majority were hypermetropic or astigmatic; only 6 per cent. were myopic. He insists strongly that all children should have their sight tested early in their school life; hypermetropia should be corrected, as it is this error in refraction which leads to so much headache, pain in the eyes, and inability to continue work. Dr. Pischl comes to a similar conclusion from his examination of the eyesight in the grammar schools in San Francisco.[2] During the recent discussion on this subject at the Ophthalmological Society of the United Kingdom it was shown that there was an equal, if not greater, amount of visual defect in some of our own schools, and a system of examination was suggested which could be carried out by the teachers themselves, in order to discover the most gross cases of defect. Teachers in the elementary schools of the country are awakening to the possibility that an apparently dull or stupid boy may in reality be only suffering from a defect which can be easily remedied by having his eyes properly tested by an ophthalmic surgeon.

THE HOME SECRETARY AND THE CHELSEA HOSPITAL FOR WOMEN.

In what purports to be an abstract of a letter from Mr. Asquith, which has been widely circulated, the Home Secretary, after expressing a general concurrence with the report of the Committee of Inquiry at this hospital, is made to give utterance to the astonishing and to our mind quite unjustifiable observation that he was advised that there was no prospect of instituting with success criminal proceedings against any of the late staff of the hospital. So far as our knowledge goes, nobody has ever even dared to hint at anything having occurred at this hospital which could justify any thought of the criminal prosecution of anybody. As we have not before us the actual text of the letter, but only a newspaper statement of its purport we hesitate to express the strong opinion, which we should otherwise not be disposed to withhold, as to the impropriety of a Minister of the Crown publishing an innuendo of this kind. It must lead many people to suppose that things have gone on at this hospital which might justify the institution of a criminal prosecution, although the evidence may not be adequate to lead to a successful issue of any such proceedings. We again say that we are quite unaware of anything which could in the faintest degree justify so tremendous a proposition coming from a responsible Minister of the Crown, nor are we aware of any instance in which any Minister has ventured to speak of a criminal prosecution unless he was satisfied that the circumstances were such as to justify its institution apart from "its success." With this preliminary observation, we may go on to add that the whole business has to our mind been a discreditable muddle. Dr. Parkes, in the first instance, gave support to accusations which had no reasonable basis. The statistics of the year had not been good, but it was very unfair to submit those of one year only (a small number of cases only) to the Commission. It was unfortunate that there were so few medical men on the Commission, and that one of the two held strong views adverse to operative proceedings. Things were made to appear much worse than they were. At the same time, it is to be admitted that the staff was both too large and not strong enough. It had no leading experts, and several leading family physicians. There was room for improvement. When the acting staff resigned, the Committee ought to have resigned also, for both were blamed in the Commission's report. The nomination of the new staff was done in the most precipitate manner, and resulted greatly to the advantage of certain individuals and in great injustice to some who were not elected. Mr. Jonathan Hutchinson, F.R.S., resigned on the general principle that the selection was not made with due consideration. If the mode of nominations recently followed is confirmed, the chance of the hospital taking a good position in the opinion of the profession is seriously endangered. The Governors had a good chance if they had been equal to the occasion, but the affairs have now passed into the hands of a lay clique, and will probably so remain. It should be understood that the resignations of the other eminent consultants, Sir T. Spencer Wells and Dr. Barnes, were without concert.

THE BARRACK SCHOOL COMMISSION.

The Committee of Inquiry into the education of pauper children, to which has been referred the consideration of their condition in barrack schools and other methods of education, will commence its sittings early in November. Until its deliberations result in some sort of report it were surely unwise for the Local Government Board to sanction or allow the guardians to proceed with any scheme that involves a large outlay of the rate-payers' money. And yet we learn that since Mr. Shaw Lefevre agreed to appoint such a committee of inquiry the following actions have been taken by guardians and sanctioned by the Local Government Board: (1) Two additional cottages added to the children's village at Hornchurch, each cottage to be built to contain thirty children. (2) The decision taken that cottage homes be built by the Aston Board of Guardians to accommodate 500 children, thirty inmates in sixteen homes. (3) The seal put to conclude the purchase of land at North Weald, Essex, by the Mile End guardians, upon which to erect cottage homes for children. (4) The contracts given out and accepted for a children's village of twelve cottages connected with the Dewsbury Poor-law Union. It seems almost incredible that the Local Government Board should sanction such important steps as these, when a Committee has been appointed by their President to ascertain the best method of education for pauper children. Is it yet settled whether twelve or thirty is the most suitable number of children in one cottage? Is it yet decided whether village communities of scattered homes, such as those that are managed by the Sheffield guardians, are most beneficial to the children? Does not the latter allow for the better classification of the "ins and outs" and of those of different religious creeds? Do these village communities tend to merging the children into the existing working population, as is done by natural methods when the chil-

[1] School Children's Eyes: A Plea for the Examination of every Child's Eyes when commencing to attend School. By W. F. Southard, M.D. (*Journ. Amer. Med. Assoc.*, September, 1894).

[2] Report of an Examination of the Eyes of 1 900 School Children of the Public Schools of San Francisco. By Kasper Pischl, M.D. (*Journ. Amer. Med. Assoc.*, September, 1894.)

dren are boarded out? Are the after-careers of children trained in village communities satisfactory? Have they been trained in thrift, in affection, by opportunities of seeing evil and choosing good? All these are questions not for us to answer, but for the Committee to inquire into and report upon, and we contend that it is folly for the Local Government Board to continue to act as if that Committee were not in existence or as if its labours and conclusions were matters of indifference to them. Until it reports, the sanctioning of schemes that involve building and expenditure and unalterable action should, we venture to think, be withheld by the Local Government Board.

OLIVER WENDELL HOLMES AND THE CONTAGIOUSNESS OF PUERPERAL FEVER.

In the sketch of Oliver Wendell Holmes's career as a physician which was given in the British Medical Journal of October 13th mention was made of the opposition which his views as to the contagiousness of puerperal fever encountered when they were first promulgated in 1843. This opposition, be it observed, came, as usual, mainly from the "leaders" of the profession. This is how the discussion on the subject was summed up by Professor Hodge, of Philadelphia—a burning light of the obstetrical firmament at that time, whose name now chiefly lives in his pessary:

> The result of the whole discussion will, I trust, serve, not only to exalt your views of the value and dignity of our profession, but to divest your minds of the overpowering dread that you can ever become, especially to women under the extremely interesting circumstances of gestation and parturition, the ministers of evil; that you can ever convey, in any possible manner, a horrible virus, so destructive in its effects and so mysterious in its operations as that attributed to puerperal f[ever].

In connection with this subject the following [letter] from Dr. Holmes addressed to Dr. John Shaw, of Ha[rrogate], acknowledging the receipt of a copy of that gentleman's book, *Antiseptics in Obstetric Nursing*, will be read with interest:

Boston, April 7th, 1891.

My Dear Sir,—I received your book a fortnight ago, and should have answered your note and thanked you for the essay had I not chosen to wait till I had read the book. Of course it interests me very much, and I feel deeply indebted to you for your reference to my early labours. I am so much better known as a literary worker than as a medical author, that it is an especial pleasure to be reminded that I have done something for the profession in my younger days. If I should tell the truth I should own that I was utterly ashamed of my Philadelphia *confrères* for their want of sense in arguing against such overwhelming evidence as I had brought against them. Both my antagonists were eminent professors in the leading schools of the country. I am afraid I had hard work to keep my temper with them. I was younger then than I am now. You will excuse a little something of the Sophomore in the early papers, the first dating nearly fifty years ago.

I have written to my publishers to send you a volume of *Medical Essays*, forming a part of the series of my published works.—Believe me, my dear Sir, very truly yours,

(Signed) Oliver Wendell Holmes.

P.S.—I do not know whether you have seen the volume which contains the essay on "The Contagiousness of Puerperal Fever." If not you may possibly find some other paper in it worth looking over. I am much pleased with your own treatise and its illustrations.—O. W. H.

THE SICK POOR IN PROVINCIAL WORKHOUSES: BARTON REGIS.

In many ways the Barton Regis Workhouse is a contrast to some that we have reported on. The flowers and creepers with which the yards separating the wards are made bright; the free access the old people have to the gardens; the curtains, pictures, flowers, etc., with which the women's wards are decorated; the old women happy in the possession of a sofa, and able to make "their own" afternoon tea—all tended to give the visitor an idea of comfort, and to suggest that the inmates were well cared for. The more truly hospital wards, however—those in which more patients were confined to bed—were not so satisfactory. A sick man requires nursing, and no amount of pictures, curtains, and flowers will make up for the want of the skilled nursing which his case demands. Scattered through seven wards we found 120 infirm women, to attend to whom there was one nurse by day, and at night none, the day nurse being roused from her sleep should occasion arise. One may fairly wonder under what sort of circumstances it is considered that occasion does arise. It would seem that about three deaths a-week take place, which certainly would indicate the presence of a large amount of severe illness in the wards, and it is absolutely impossible to believe that these people, so near to death or actually dying, require no skilled attention through the night. The system either involves cruelty to the patients or the infliction of such an amount of broken sleep and overwork upon the nurse as seriously to interfere with her efficiency. Why the men in Barton Regis should be of so much more villainous a character than in other parts of the kingdom that it is not thought safe to send women to nurse them is not very clear; but [if] such is the case, it is most improper that the boy[s] allowed to mix with them, as is done. No one [will] it right that the lying-in ward shou[ld] have no night nurse, considering the number of confinements—50 to 60 per annum. Nor do the many signs of care and kindness which are visible about the place reconcile us to the fact that the children's ward, containing eighteen beds, has no night nurse, and only shares a day nurse with five other wards. There are right [and] good may be the [case] admit that they are [not] taking them into their wards [when] got them they do so little to [relieve] them.

MEMORIAL TO THE LATE DR. ARTHUR HILL HASSALL.

On October 15th a memorial portrait of the late [Dr.] Hill [Hassall] was unveiled in the [Royal] Hospital [for Diseases of the Chest], founder. There were a number of [other] gentlemen, present [including] Chairman of the [Governors], the [Treasurer], one [of the Physicians], done by [Mr. Lance Calkin]. a foremost witness in condemning the contaminated supply of London, which a few years ago was spreading disease and death among tens of thousands. Convinced of the health-giving qualities of the atmosphere of the locality, Dr. Hassall devoted much of the latter part of his life to the establishment of a hospital where the patients could be treated on the separate principle, each having a bedroom to himself, and no house to contain more than six patients. Sir Richard pointed out that the annual cost of the establishment greatly exceeded the income from endowments and ordinary subscriptions, leaving the deficit to be made up by extraordinary efforts. The picture, which is a handsome portrait of Dr. Hassall from the easel of Mr. Lance Calkin, was unveiled by Miss Webster, to whom a vote of thanks was given on the motion of Dr. Sinclair Coghill, seconded by Mr. Neal Horne, deputy chairman of the governing board.

NEW BRANCHES OF THE BRITISH MEDICAL ASSOCIATION.

We have had the pleasure of reporting this month the inaugural meetings of two new Branches of the British Medical Association. On September 3rd the first meeting of the newly-formed Deccan Branch was held at Secunderabad, under the presidency of Surgeon-Colonel Blenkinsop, principal medical officer of the district. A letter from the General Secretary of the Association was read, enclosing a copy of the resolution of the Council recognising the Branch, and officers and Council were elected; Surgeon-Colonel Blenkinsop was chosen President, and Surgeon-Captain Palk

General Secretary and Treasurer. Both these officers are members of the Indian Medical Service, but the Branch includes also several officers of the Army Medical Staff. It is intended to hold monthly meetings, and the principal medical officer has promised to place his office at the disposal of the Branch for this purpose.—The first meeting of the Gibraltar Branch—founded as the outcome of Mr. Ernest Hart's visit there—was held in the Colonial Hospital, under the presidency of Surgeon-Major-General Lewer, principal medical officer of the district, on October 4th. The Branch includes not only officers of the Army Medical Staff and of the Medical Service R.N., but also civil practitioners in Gibraltar. Dr. William Turner, surgeon to the Colonial Hospital, who has had a large share in the organisation of the Branch, was elected Secretary. The President delivered an inaugural address, in which he enumerated some of the practical advantages which might be expected to accrue from the institution of a Branch of the British Medical Association in Gibraltar. In the first line he put the promotion of social intercourse between the various members of the medical profession—naval, military, and civil—resident on the Rock, and then pointed out certain medical questions to which the Branch might with advantage more particularly direct its attention. He instanced the form of continued fever known as "Rock fever," by some supposed to be peculiar to Gibraltar. The subject was one of great complexity, but it was of great importance to the Government and the War Department, as well as to the civil population, that its nature, cause, and prophylaxis should be elucidated by the combined studies of the whole body of the medical profession in Gibraltar. He pointed out that, owing to its almost insular character, Gibraltar afforded an exceptional opportunity for studying the march of contagious and infectious diseases. The material afforded by the naval, military, and colonial hospitals might be utilised for all these purposes, and it was possible that useful discoveries might be made by testing the action of local remedies in common use in the south of Spain, but unknown to the *British Pharmacopœia*.

THE KILLED AND WOUNDED AT FOOTBALL.

We believe that it was Mr. Jorrocks who said that hunting possessed all the glories of war, and only five-and-twenty per cent. of its danger. The football percentage must be considerably higher, for though the season is yet only a few weeks old, we have already before us a list of casualties which would do credit to a little war. Since we referred to the matter last, in connection with a sudden death from injuries received by a player, we have received reports of the death of a man at Windhill, neer Leeds, who, during a game, fell "in the ordinary way," a number of other players fell over him, and he died on the following day. Mr. J. T. Smith an assistant master at a private school at Southport while playing for the school against Hesketh Park came into violent collision; he was taken ill an hour and a half afterwards, and died of peritonitis two days later. A Preston player named Hall, fell and broke his arm; the general symptoms became serious, and this young man of eighteen died shortly of tetanus. In an engagement between the Blackburn Rovers and Burnley, after five minutes play one man broke his leg in a collision, and during the second half another man was carried off the field with an injured leg. On the same day, near Burton-on-Trent, a player "fell with his leg under him in such a way that it was fractured." At Llanelly, in a match between that place and Neath, two men were injured, but their injuries were slight when compared with the average. So the list grows steadily from week to week, and last Monday's papers told us how on Saturday the head master of Appuldurcombe College, Ventnor, sustained a compound fracture of the right leg during a football match, and how the captain of the Maidstone team, playing at Dover, playing at Dover, "collided with a goal post and split his collar-bone; he was removed to the hospital." The hunting casualty list this year contains, we believe, the name of only one lady badly wounded, but recovering. On the whole, football as at present played appears to be about as dangerous as an amusement as a South American revolution.

HARVEY'S DAY AT THE ROYAL COLLEGE OF PHYSICIANS.

The Harveian celebration at the Royal College of Physicians on Thursday, October 18th, was rendered doubly memorable by the admirable oration of Dr. Lauder Brunton, and by the presentation to Sir William Jenner of the Moxon Medal for clinical research. This graceful recognition, by the College over which he presided with so much success for a long term of years, of the pre-eminent merits of Sir William Jenner as a clinical teacher is a well-merited honour, and recalls the memory of a time when he was the foremost among the distinguished men who made London a great teaching medical centre. Dr. Lauder Brunton's oration, which we reproduce in another column, dealt especially with the great extent to which Harvey's labours still influence medical thought and action. It is indeed true that until this influence is recognised we can comprehend but imperfectly the immense value of Harvey's life-work. Dr. Brunton gave a most interesting sketch of the growth of our knowledge of the physiology of the heart and of the pathology and treatment of its diseases. All have their roots back in the epoch-making observations of the English physician who first presented to medicine a clear view of the main functions of the heart. Dr. Brunton's oration will be read with interest for its historical sketch, and with instruction also, because he did not neglect to deal with some of the most recent methods of the treatment of heart disease, such as those by massage and graduated muscular exercise; and had some observations to make on the general subject of medication by organic juices and by antitoxins.

THE ROYAL COLLEGE OF SURGEONS.

The annual meeting of the Fellows and Members of the Royal College of Surgeons will be held on Thursday, November 1st, at 3 P.M., when the Council will present a report recording the work done by the College in its various departments in the collegiate year. The report submits certain proposed alterations in the by-laws for which it is intended to obtain the sanction of the Home Secretary. One of these has reference to the election of members of Council, and will give effect to the decision to issue voting papers to every Fellow whose address is known, and not to those only who make special application. The other change has reference to the by-laws dealing with the power of the Council to deal with misconduct of Fellows or Members. The report states that during the past year the attention of the Council has been called to the conduct of two Fellows and of seventeen Members. In the case of the two Fellows and of ten Members, the Council having investigated the charges and heard the replies, resolved to take no action under the by-laws. Two Members have been removed from the College lists, and in two other cases Members have been required to show cause why they should not be removed from being Members of the College. In the case of three other Members the Council found itself unable to take action under the present by-laws, although the General Medical Council, having adjudged the conduct of these members disgraceful, had removed their names from the *Medical Register*. Under the by-law as amended the Council takes power, should any Fellow or Member "have his name removed from the *Medical Register* by the General Medical Council under Section 29 of the Medical Act of 1858," to remove him by resolution to that effect from being a Fellow and Member or a Member if it "should consider the offence . . . . . for which his name shall have been so removed, to be of such a nature as to render him unfit to remain a Fellow and Mem-

ber or a Member of the College." On this subject we publish elsewhere a letter from a correspondent which deserves careful consideration. With regard to the laboratories on the Embankment it is reported that twelve workers were engaged there last June, and a long list of the subjects under investigation is given; the majority appear to have reference to bacteriology and the pathology of cancer. Among the reports published we note Dr. Pavy's work on *The Physiology of the Carbohydrates*, and a report by Dr. Woodhead to the Royal Commission on Tuberculosis "As to How Far Cooking Processes Destroy the Infectivity of Tubercle," which it is stated is in the press. In the Museum the department of pathology has been enriched by numerous specimens, and the use of the photographic studio has been extended; a descriptive catalogue has been compiled on the lines of its predecessors, and with very few exceptions all the preparations added have a clinical history appended. The Library has received a very interesting collection of papers and drawings, formerly in the possession of the late Sir Richard Owen. The report contains also short notes of the courses of lectures, returns of the results of the several examinations to which we refer elsewhere, and an obituary list which contains the names of 31 Fellows and 313 Members.

"L'ÂNE DE VIQUERAT."

At the annual meeting of the Société Médicale de la Suisse Romande, held at Vevey on October 11th, Dr. Viquerat made a long communication with regard to the treatment of tuberculosis by asses' serum, as to which we have already indicated the advisability of a present attitude of scepticism. Apparently Dr. Viquerat added very little that was new to what he had already said in his address at Geneva, noticed in the British Medical Journal of September 29th. He discoursed mainly on the general question of immunity, and his audience, we gather, became extremely impatient. Dr. Viquerat insisted that the toxic principle resides in the body of the bacillus itself and is not excreted by it. Only after the death of the bacillus does the soluble toxin find its way into the fluid in which the bacillus is grown. He supposes that as the tubercle bacilli are constantly entering the body in small quantities they are destroyed and the toxic principle liberated. In this way a condition of greater or less immunity is gradually produced. The theory would account, he thinks, for the greater susceptibility of children, not only to tuberculosis but also to certain other infectious diseases. Entrance into the body of a larger quantity than can be destroyed permits the bacilli to multiply and tuberculosis is thus set up. As the bacilli, after attaining their full development, die, the toxic bodies are liberated; they produce congestion around the tuberculous foci, and favour the extension of the infection. The serum of the ass has the property of neutralising the toxic principles, whence its use in the tuberculosis of man. Dr. Viquerat, who formerly used the serum of the untreated ass, now inoculates these animals beforehand by injecting into a vein cultures of the tubercle bacillus—in this way, as he believes, increasing the immunising power of the serum. "Full of enthusiasm for his discovery," says a report in the *Journal de Genève*, which we owe to the courtesy of Dr. Cordes, of Geneva, "the lecturer ended with this picturesque exclamation: 'Viquerat's ass has killed the learned Koch.'" Dr. Viquerat produced at the meeting two patients, the one a girl, the subject of lupus of the hand, who, however, was not cured; and the other a young man who had undergone the operation of resection of three ribs for a suppurating pleurisy. In this case a fistula remained, which closed after the patient had been treated by injection of serum for a month. No opportunity appears to have been afforded for examining this case, and there was nothing to show that it was in reality a case of tuberculosis. Dr. Bourget, of Lausanne, stated that another patient, treated by Dr. Viquerat, was well known to him, and had suffered from chronic bronchitis and emphysema, without any trace of tuberculosis. Dr. Burnier stated that an experiment on a tuberculous guinea-pig, subjected to intensive treatment with serum forwarded by Dr. Viquerat, had died with its organs stuffed with tubercle. Professor Leon Revilliod, after expressing the fear that the injection of tuberculous material into the ass was not free from the danger of rendering its serum infective, said that the serum supplied by Dr. Viquerat had been tried in three cases under his care in hospital at Geneva. In two of these cases no result at all appeared to be produced; while in the other, a robust young Italian with a tuberculous lesion in its very earliest stage, the result of five injections in nine days was greatly to deteriorate his general condition and to light up fever which had not existed before. He criticised the premature publication of Dr. Viquerat's hopes, and especially the channels which had been chosen for publicity, and concluded by challenging Dr. Viquerat to submit to some properly constituted medical body his patients, and the experimental facts upon which a reasonable expectation of the efficacy of his treatment could be founded. Eventually the Society adopted unanimously the following resolution:

> That in the absence of proofs the Société Médicale de la Suisse Romande is unable to express any opinion with reference to the treatment of tuberculosis by the method suggested by Dr. Viquerat.

It is clear, therefore, that the real value of Dr. Viquerat's treatment as yet remains quite undecided, though the presumption, founded on independent observation, appears to be distinctly unfavourable to it. It is necessary to say so much, as it appears that somebody, not, we are told, Dr. Viquerat, has sent circulars to every resident of at least one Swiss sanatorium, inviting them to place themselves at once under Dr. Viquerat's treatment at his new institute. Dr. Viquerat is probably an enthusiast, but somebody else connected with the institute appears to be "a man of business" not unacquainted with the noble art of advertisement.

EMOTIONAL EXPRESSION.

The inaugural address of the season was delivered to the York Medical Society on October 10th by Sir J. Crichton-Browne. The address was on "Emotional Expression," a subject which has long engaged the attention of the speaker, who, indeed, contributed materials of no little value to Darwin's work. No man of science has more power of putting the newest facts and speculations in the field of his special knowledge more skilfully and effectively than Sir James Crichton-Browne. Two or three questions of much interest were dealt with at some length; he urged, for example, that expression and gesture were more dependent upon the structure and action of the nervous system than Darwin supposed, although Darwin explained them, in some measure, by its mechanism and connections. Still Darwin was disposed, no doubt, to lay more stress upon the dynamics of associated serviceable movements and the remnants and reflections of these in more subtle degrees as modes of expression. At the present stage of biological argument we must avoid any assertion that by the repetition of such movements these underlying nervous forms would be gradually established, and become innate by inheritance. At the same time, if this turn out to be the case, we should come to regard the continuance of serviceable habits of muscular movements and the underlying forms of nervo-muscular structure as different aspects of the same thing. Indeed, if we give up perpetuation of structure by inheritance, and for lack of a better phrase attribute it to "variation and natural selection," the change is more one of reason than of fact. The speaker's remarks on the classic ideals of beauty, and their bearing upon the evolution of modern facial expression and of modern beauty and charm, were interesting, but scarcely sufficient allowance was made for the modes of the several arts. It is probable that the art of painting was in a very immature stage in the fifth and fourth

centuries B.C.; and this supposition is strengthened by the kind of the contemporary admiration of the painter's work of that age, for admiration was then bestowed upon mere imitation, which is characteristic of infantine art. However this may be, the paintings are gone, and the sculptures, or some of them, remain; sculpture is an art with strict limitations, however great its power of conveying certain impressions within such limits. Sir James Crichton-Browne would do much harm if he were to lead modern sculptors to try to give that range of expression to their marbles which has been attained in modern developments—to introduce, that is, into sculpture the romantic characters.

THE QUEEN'S JUBILEE HOSPITAL.

VARIOUS charges have of late been made against the management of this hospital, and insinuations have been cast even upon the integrity of its finances. We do not wish to judge in this matter, but we may express the opinion that some of the attacks made in the press would have been more fittingly brought forward in a court of law, where evidence could have been taken and a defence been heard. As to the institution itself, we may say at once that there must be something sadly lacking in the organisation of charity in the metropolis if this is to be admitted to the roll of the London hospitals—a little house, the ground floor of which is chiefly occupied by out-patient rooms and office or board room, and the cellars by kitchen, scullery, and dispensary, while upstairs are two bedrooms for patients, each containing five beds, and one little dressing room with one bed, besides which there are a matron's room and a bedroom for two nurses, and a lavatory. We do not know the cubic space allowed per patient; it is, however, very small indeed. In times of war, pestilence, or catastrophe, such a hospital might be excusable, but that it should exist in a part of London, which, although teeming with poor, also contains a large proportion, probably more than its share, of rich, is certainly most unsatisfactory. Whether the men who set on foot a hospital which can only be kept up on this meagre scale are to blame for their enterprise (which no doubt has its personal side) or the charitable public are to blame for supporting it without adequate inquiry and supervision may be a question. If there were any reasonable scheme in operation for organising the hospital system of London we should express nothing but the severest censure on the men who have, on their own initiative, started such a scheme as this. But, as things exist, the matter is not quite so simple. Poor as are the appliances, and small as is the accommodation, a fair amount of work appears to be done there; and although it cannot be pretended that it is carried out on the same scale or with the same safegards as at the larger hospitals, we are not prepared to condemn the treatment because of the defects and poorness of the machinery. We do, however, very distinctly condemn the system, or rather the want of system, which leaves a loophole for the founding of so imperfect and so badly-controlled an institution, and which it is admitted, allows it to be carried on in such a meagre and unsatisfactory fashion, supported by funds which they supply without supervising their application.

THE FIFTH YEAR.

THE address delivered by Sir W. Stokes at the Meath Hospital on October 8th, an extended abstract of which was published in the BRITISH MEDICAL JOURNAL of October 13th, is worthy of the attention of all who are interested in medical education as being the first protest entered by a man holding a distinguished position in our profession against the recent extension of the period of the medical curriculum. Many, perhaps most, of our readers will agree with the orator when he says that the excessive number of topics examined on, which number is increased every year, has the disastrous effect of causing a neglect of subjects which, having regard to the modern development of surgery, are more than ever essential—anatomy, physiology, and practical operative surgery: but a subsequent utterance, in which he describes a recent ordinance of the General Medical Council, extending the period of pupilage to five years, as a great blunder, will provoke more disagreement. What remedy does Sir W. Stokes propose; or what is his objection to the extension of the curriculum? All that he says on the first head is that he should like to see "some of the topics mentioned' assigned to ante-professional education and others such as ophthalmology, aural surgery, mental disease, and hygiene made the subjects of post-graduate study. But the former recommendation is already carried out as far as practicable, for there is little in Sir W. Stokes's long list (which by the way is made longer than necessary by enumerating parts of subjects as if they were things independent of the whole), except botany and chemistry, which can be studied before the commencement of professional education. And as to his latter proposal we must earnestly protest against it. To relegate a subject to post-graduate study means to exclude it altogether except in the case of a small minority of the graduates. The list of subjects then being necessarily so formidable, and knowledge of them being so necessary, even down to the end of student life as Sir W. Stokes contends, what is the objection to the five years curriculum? He must be a "strong man" indeed who finds five years too long a time to master such a mass of knowledge. We heartily agree with Sir W. Stokes that the arrangement by which the study of anatomy and physiology ceases at the end of the second year of study is most deplorable. But if these topics are (as they surely should be) examined on at the close of as well as during the curriculum, should not the student be allowed a length of time which will enable him to bestow some deliberate study on the great sciences which are the base of all practice? We fully endorse all he has said in deprecation of cramming of superficial knowledge of great subjects, and of heaping up artificial difficulties in the student's way—as is done by the Preliminary Science examinations for instance; but we must differ from him in holding that the extension of the period of study was not only wise but absolutely necessary.

THE NOTIFICATION OF PHTHISIS.

DR. W. N. THURSFIELD, in his annual report for 1893 as Medical Officer of Health for the Borough of Wenlock, expresses his cordial appreciation of the action of that authority in endeavouring to include consumption among notifiable disease. He says although consumption is more prevalent in the district than in any other country districts, it was, during the year now under consideration, the certified cause of death in six times as many instances as scarlet fever, typhoid fever, and diphtheria combined, and such has been the case in previous years. Not infrequently, he observes, this disease is contracted in large towns, and sometimes the sufferers return to the parental home in the country to die. Thus it happens that at least one room in the cottage becomes greatly in need of efficient disinfection. Consumption might, in his opinion, with advantage be made to take the place of the very diverse morbid conditions sometimes included under the term erysipelas, which is a notifiable disease. If, however, consumption became notifiable, the official action of a sanitary authority could not well go beyond obtaining the disinfection of rooms which had long been occupied by a consumptive patient, and the distribution of handbills to notified cases, calling attention to certain simple and readily applicable precautions. On the whole, he thinks, perhaps the chief advantage would be, as it is in most other points of sanitary progress, an affair of education, and the very fact of notification would do most good by teaching the public that, under suitable conditions, and with susceptible subjects, consumption is a truly infectious disease, and one that certainly calls for, and readily admits of, precautions to obviate the special ways in which the infection is believed to spread.

THE NEW SERUM TREATMENT OF DIPHTHERIA.

The Situation in England.

Mr. Ernest Hart makes the following announcement:

"I have during the last week received numerous letters, some of them from persons of eminence and consideration, urging me to open a public subscription, such as those which have been successfully opened on so large a scale during the last few weeks in Paris (£10 000), Berlin, Vienna, and many of the great Continental cities, with the object of supplying funds for the public charity for the purchase for the benefit of the sick children of the poor in the hospitals and infirmaries of London of the serum antitoxin which has been reported to have proved of such great efficacy in the cure of so large a proportion of cases of diphtheria hitherto fatal. The examination of the figures thus far furnished from abroad shows remarkable results. Thus it should be noted that whereas the ordinary mortality of true diphtheria of a serious type has been about 60 per cent. of the attacks of this class and type of disease, the results of the application of the treatment by this fluid was, in 30 cases of Behring 30 per cent.; in 153 cases reported in the columns of the British Medical Journal, from the clinic of Ehrlich, it was 23 per cent. In 128 cases reported by Katz the mortality was reduced to 13 per cent. In 192 cases reported by Aronson the mortality was reduced to 14 per cent., and in 448 cases which have been reported by Roux, the mortality was 24.33 per cent. It may further be noted that while Roux thus reduced the mortality to 24 per cent., it remained at the Hôpital Trousseau in the same city of Paris, but where the serum treatment was not used, at 63.20 per cent. This is extremely important as indicating that the type of cases treated was not of any specially light character, or showing any modification of the type of disease, seeing that the Hôpital Trousseau was treating cases of a similar kind in the same specific area. Nor are these results, which show a striking correspondence with those of France, Germany, and Austria, peculiar to Continental countries. There have already been recorded in the British Medical Journal a series of 36 English cases treated within the last three months by the serum antitoxin obtained by the well known process from inoculated horses; this serum being in fact a vaccine obtained by the inoculation of horses with an attenuated virus, and corresponding in its degree to, although not precisely identical with, the attenuated vaccine of smallpox obtained from the child after the original virus of smallpox has been passed through the cow. This diphtheria vaccine or serum has happily the power of being curative after the disease has commenced, as well as preventive. The first of the English cases published in the British Medical Journal was one reported on June 31st by Dr. Eastes, the second on July 28th by Dr. Goodhart; on August 11th by Dr. Bloomfield; on August 18th by Dr. Walker. In the same week 2 cases were reported by Dr. Waylen and Dr. Caudwell; 7 further cases were reported on August 25th by Dr. Thomas Eastes; 5 cases on September 8th by Dr. Henton White, Dr. Trevor Fowler, Dr. Henry W. King, and Mr. George Morgan; 1 on September 22nd by Mr. Frank Godfrey; and a number of cases since, amounting altogether to a record of 36 English cases treated by a considerable number of British practitioners within the last three months, with only 2 deaths, equal to a mortality of only 5.5 per cent. It is very desirable that caution be exercised in arriving at anything like an absolute conclusion as to its life-saving power, even in the face of this now considerable record. But it is quite evident that in a large proportion of the cases the type has been severe, and no small number of them of a gravity which seldom admits of recovery. So that we are fully entitled to conclude that where it has been used the immunised serum has produced a marked impression on the progress of the disease, and has reduced the previously heavy mortality of diphtheria by at least one-half.

"With all this evidence before me, and in view of the fact that a sum of upwards of £8,000 has been subscribed by public donations in Paris for the supply of this antitoxin to the Paris hospitals, and towards the saving of the life of the children attacked with diphtheria; that large sums approximating to the Paris subscriptions have been subscribed in Vienna, Berlin, Marseilles, and other cities; and that foreign Governments and municipalities have made official grants in further aid of this object, I should not have hesitated to take the initiative, as requested, and applied for funds for which the administrative organisation of this Journal as the journal of the British Medical Association offers facilities, but for the fact that after consultation and conference with Sir Joseph Lister, President of the British Institute of Preventive Medicine, I am led to believe that that institute will be able to fulfil the public needs of the case without having recourse to a special subscription, and for that sole object. Sir Joseph Lister informs me that by the steps already taken at that Institute it is already capable of supplying, and is supplying, the immunised serum to no inconsiderable extent, one horse being already available for the purpose of furnishing the necessary liquid; and another horse is so far advanced that it will also shortly be available, and yet further supplies will be forthcoming at no distant dates. So successful have been the proceedings thus far, that this serum is found to be of a higher degree of efficiency than any that is available from foreign sources. Moreover, the serum obtainable from the Institute will be furnished under circumstances which will satisfy certain important *desiderata*, not always obtainable where this fluid is obtained, through commercial sources. In the first place, it will be supplied at the bare cost of production, and not with any eye to profit. Under these circumstances, it is believed that a dose sufficient for use in any ordinary case can be furnished at a cost which shall not exceed from 6d. to 9d., whereas the material hitherto sold here from abroad has varied from 5s. to 10s. for the requisite dose. Inasmuch as one injection is usually sufficient, and rarely, if ever, two are required, the total cost of the therapeutic material for each case will not exceed 9d. or 1s. 6d., so that as a drug it will not be more expensive than the usual medicaments hitherto employed. The burden upon the hospitals, therefore, will by no means be in excess of the present cost for the treatment of such cases.

"Moreover, the serum thus obtained will be produced under conditions of accurate and careful supervision by Dr. Ruffer, the Superintendent of the Institute, and Professor MacFadyan, its veterinary expert. And it will be scientifically tested, so as to ensure its efficiency and its purity in all cases. This has not always been the case, it is believed, with the material which is commercially produced, some of which has seemed to be inefficacious. It must be remembered that in the production of an active but complex organic substance such as this, skill, conscientious control, and the observance of minute precaution are highly requisite; while the disturbing element of commercial competition is likely to be prejudicial.

"In view of these circumstances, and of the fact that many of the foreign sources of supply are either for the moment exhausted or fully used up by local requirements, I have arrived at the conclusion that in lieu of opening any such subscriptions at present it will be desirable to direct those of my correspondents who are so deeply interested in this matter to the British Institute of Preventive Medicine for any further information, only advising them that they may have to exercise some patience, and to wait yet awhile until the supply is equal to the demand. It may be well further to add that the horses suffer no pain from the inoculation or from the extraction of the immunising serum, and that they are at the present moment fatter, sleeker, and in better condition in every way than they were at the outset."

The results which have followed the so-called antitoxin treatment of diphtheria (in other words, the injection of the serum of animals immunised by repeated inoculations) have been so remarkable, as shown in the leading article we published in the British Medical Journal of October 13th on the subject, that it is worth while to review the information regarding this mode of treatment which has from time to time appeared in the Journal.

Of course, it will be remembered that at the International Congress of Hygiene and Demography held in London in 1891, Mr. Hankin pointed out that the bactericidal action of the serum of immune animals was due to the presence of certain "defensive proteids," and that while some of these

acted by killing the microbes, others acted by destroying or neutralising microbic products.

At the same meeting Dr. Kitasato, the Japanese expert who has recently discovered the bacillus of plague, stated that, in conjunction with Dr. Behring, he had shown that an injection of the blood of rabbits which had been made immune to tetanus not only rendered mice refractory to the disease, but cured the disease when it was already in progress.

In the report of the Medical Officer to the Local Government Board for 1891 Dr. Martin demonstrated the nature of these microbic products as regards diphtheria.

In the Epitome, April 9th, 1892, F. Klemperer stated that the possibility of curing infective disease in animals, which had just been demonstrated in regard to tetanus and diphtheria, had also been proved in other diseases.

This point had thus been reached, that the symptoms of diphtheria were due to the absorption of a chemical product of microbic life, and that the injection of the serum of immune animals was able in some way to neutralise its activity.

In the British Medical Journal of March 25th, 1893, there was an account of the investigations of Klemensiewicz and Escherich, who found that guinea-pigs could be rendered immune to inoculation with diphtheria by a preliminary inoculation with the blood serum of patients just convalescent from that disease. On May 27th, 1893, an account was given of the observations of Behring and Kossel regarding thirty cases of diphtheria in the human subject treated by immunised serum.

On May 5th, 1894, the Epitome contained a record of the experiences of Ehrlich, Kossel, and Wassermann, the serum being obtained from goats artificially made immune, and on June 2nd there was an account of the dosage and relative strength of the different preparations. On June 22nd there appeared a leading article, giving a full account of the researches up to that date.

On July 31st, Dr. Thomas Eastes related the case of a child, aged 10½ years, suffering from severe diphtheria, in which the injection of Aronson's antitoxin was rapidly followed by improvement, and ultimately by complete recovery.

On July 28th a case was reported by Dr. George F. Still, which was under the care of Dr. Goodhart at Guy's Hospital, in which, after two injections, recovery took place. The case was a severe one, in which the necessity for performing tracheotomy seemed imminent, but improvement followed soon after each injection. The diagnosis was confirmed by cultivations. The antitoxin used was Schering's.

On August 11th we published a brief note of a case of severe naso pharyngeal diphtheria by Dr. Blomfield, in which convalescence began within twenty-four hours of the injection.

On August 18th Dr. Urquhart Walker reported a case of diphtheria, which was evidently progressive up to the time of the injection, and very severe, the temperature being 103°, and the pulse 140. Within four hours there was much improvement, which continued. Within a few hours of the injection the temperature fell four degrees, and after that remained normal; the constitutional disturbance was at once checked, and the next day much of the membrane came away, the patch that had formed last having already disappeared.

The same week Dr. Waylen reported a case of a boy aged 5, suffering from diphtheria in the throat and larynx, in which tracheotomy had to be performed. After the operation the wound became red and angry and covered with diphtheritic membrane, the neck swelled, the temperature rose, and the respirations became more rapid—a most discouraging combination of symptoms. An injection of 4½ c.c. of Aronson's antitoxin was then made, and, although it did not appear to have the marked effect that had been noted in some of the cases, the injection was followed by a rapid loosening of the membrane, and Dr. Waylen was of opinion that the antitoxin largely assisted in the child's recovery by softening the membrane and allowing it to be coughed up with more facility.

Dr. Caulwell, on the same date, reported a case of very severe diphtheria, in which, with a temperature of 104°, profuse perspirations, and a tongue dry and covered with sordes, the child was sinking into lethargy. Schering's antitoxin was twice used, improvement occurring after each injection; and the patient recovered.

On August 25th Dr. Thomas Eastes reported seven cases in which he had used antitoxin. All of them speedily recovered, three being noted as "severe" cases, the rest being "average." In three the presence of the Klebs-Loeffler bacillus was ascertained.

On September 8th five cases were reported. Dr. Hinton White's case was one of severe diphtheria implicating the larynx in a child aged 3, who was evidently getting worse when the injection was given, but recovered rapidly after it.

Of Dr. Trevor Fowler's two cases, one was *in extremis* at the time of injection, and no good resulted; but the other, although severe, made a rapid recovery after a single injection.

Dr. Henry W. King's case died. At first it did not seem to be of more than average severity, and after an injection there seemed to be a little improvement. Two days afterwards, however, the temperature rose again. A second injection was therefore given, again with a slight improvement, but the patient got worse during the night, and died next morning.

Mr. George Morgan's case was one of diphtheria with laryngeal obstruction, for which tracheotomy was performed and antitoxin was injected. Recovery took place.

On September 8th and September 15th reports were given of the Hygienic Congress at Buda-Pesth, and of papers on diphtheria read there by Professor Roux, Dr. Edward Seaton, Professor Loeffler, and Dr. Billings. The three latter did not touch upon the antitoxin treatment, but Professor Roux strongly advocated its employment, stating that the mortality in one of the Paris hospitals had been reduced from 50 per cent. to 25 per cent. by its use.

On September 22nd, Mr. Frank Godfrey reported a case in which improvement was decided within ten hours of injecting Aronson's antitoxin, and recovery took place.

On September 29th, Dr. Goodall drew attention to the desirability of recording the source of the antitoxin used in every case, and also of taking note whether antitoxin has any effect in preventing the later changes (nerve degeneration, etc.) which are due to the diphtheria poison.

On October 6th several cases were reported. Mr. Townsend Barker gave two cases which did well: Mr. Henry G. Biddle a case which recovered: Dr. J. Grant Bride, two cases which did well; and Dr. D. Watkin Hughes, ten consecutive cases, all of which did well, in marked contrast to the thirty preceding cases, ten of which had died.

On October 13th Dr. Williams-Freeman reported a case of severe diphtheria, which was injected with serum prepared in Dr. Roux's laboratory, and recovered. This week Mr. Richard Rice reports two cases treated with Aronson's antitoxin. Both were marked cases of diphtheria, one very severe; they both recovered.

We have, then, a fairly complete record of thirty-six English cases within the last three months, with two deaths, or a mortality of 5.5 per cent. If, however, we turn to the foreign cases recorded from time to time in the British Medical Journal, we may summarise them as follows:

Authority.	Number of Cases.	Mortality per cent.	Previous Mortality per cent.
Behring and Kossel	30	20.00	—
Ehrlich, Kossel, and Wasserman	67	44.80	Tracheotomised.
	153	23.60	Not requiring tracheotomy.
	7	57.00	Requiring tracheotomy.
	66	28.00	Not requiring tracheotomy.
Weibgen			
Katz	128	13.20	41.00
Weilger	63	28.00	53.00
Roux*	448	24.33	51.71
Aronson	192	14.00	32.50 to 41.70

* At the same time that Roux's mortality fell to 24.33 it remained at 63.20 at the Hôpital Trousseau, where the serum treatment was not used.

It is impossible to run over this short sketch of what has been done with the diphtheria antitoxin without being strongly impressed with the fact that we have in it a substance which has a marked influence on a most serious and fatal disease. Nothing is more difficult than a comparison of statistics, the very bases of which—that is, the individual

cases—may differ largely in severity, but if anyone will take the trouble to read over the histories of those cases which have been detailed in the Journal, the dates of which are given above, he will see that they have by no means been instances of mild attacks; many of them have been very severe, and some of a gravity which is but rarely recovered from.

On the other hand, it must be admitted that in some of the larger groups of cases reported from abroad the mortality still remains high, but here again, in those instances in which previous mortality is given for comparison, the improvement noted is very great, so that on the whole we must conclude that where it has been used the immunised serum has produced a marked impression on the progress of the disease.

What the profession now wants is a standard preparation. It would appear, so far, as if the exact dose was not a matter of extreme nicety, but it is difficult to believe that a substance capable of so modifying the susceptibility of the body to the diphtheria toxin will not also have considerable effect in other ways. Both for the sake of economy and safety no more should be used than is necessary, and a standard preparation ought to be available. This is typically a matter for a Government to take up, but as we fear that Government will hesitate to touch a thing which might alienate the votes of the faddists, we are glad to learn that it is to be taken in hand by a public body, such as the British Institute of Preventive Medicine. So far, the supply of the material is in a few hands; no harm has happened; and, in fact, both the public and the profession are much indebted to the energy of private individuals who have made access to it possible; but it would be a great scandal were the market to be flooded with competing brands of such a substance, produced by different firms at "cutting" prices, and if the public, when in peril from diphtheria, were to be exposed to the added danger of being injected with bad antitoxins.

XV.—Mr. Richard Rice, M.R.C.S. and L.S.A. (Harwell, Steventon, Berks), sends us the following report of two cases of diphtheria treated by antitoxin:

Case I.—B. L., aged 34, female, taken ill in the afternoon of September 18th, 1894, with sore throat and *malaise*. First seen midday on September 19th, when membrane was seen on the adjacent sides of both tonsils. Temperature, 101.8°; pulse, 116. In the evening temperature was 102.8°. A mixture of ferri perchlor., ac. hydroch. dil., and pot. chlor. was given in small doses, freely diluted, every half hour. A gargle of boric acid to be used freely.

September 20th. Morning temperature, 99.5°; pulse, 108. ♏viii of Aronson's antitoxin were antiseptically injected. In the evening the temperature had risen to 100.2°. ♏viij antitoxin were again injected. The glands externally were enormously enlarged, and there had been an increase in the amount of membrane, both tonsils and soft palate being covered.

September 21st. Temperature 98.8°; pulse, 96. ♏iv antitoxin injected. In the evening the temperature was 99.2°, and pulse 100. ♏vj antitoxin injected. The membrane was beginning to peel off right tonsil.

September 22nd. Temperature normal morning and evening. Membrane darker in colour. Injected antitoxin ♏vij at 9 A.M. Pulse: morning, 96; evening, 108. Injected antitoxin ♏viij at 8 P.M. In the evening the membrane was becoming ragged at the edges and the glandular enlargement less.

September 23rd. Temperature subnormal morning and evening. Half albumen in urine. Some membrane peeled off last night. Injected antitoxin ♏viij.

September 24th. Temperature subnormal. Pulse 96°. Remainder of membrane peeled off. Tonsils exceedingly tender, causing much difficulty in swallowing.

From this time the patient improved, but very slowly, tonsils remaining very swollen and tender. Soft palate paralysed, causing regurgitation of food through nose. Even now (October 9th) the tonsils are still slightly bigger than normal, the voice nasal. The urine, which has been very scanty all through, is now quite free from albumen. The situation of the injections became covered with an urticarial eruption, and later on this spread to the face and back, but was only troublesome for a short time.

Case II.—H. L., aged 30, female, was taken ill with shivers on the evening of September 29th, followed by a sleepless night. I saw her early the following morning, when her temperature was 102.8°, her pulse 100, and the adjacent sides of the tonsils were covered by the characteristic membrane; the left one particularly. The glands at angle of jaw were not enlarged. I at once injected ♏xviij of Aronson's antitoxin. On October 1st, at 9 A.M., her temperature had fallen to 99.2° and her pulse to 92. The membrane, however, had spread, the left side of soft palate being quite covered. I injected ♏ix of antitoxin. At 7.30 P.M. her temperature had risen to 100° and her pulse to 100. I injected ♏ix antitoxin. The following morning the temperature had fallen to 98° and the pulse to 84; the greater part of the membrane had peeled off, leaving tonsils very tender. The following day (October 4th) the remainder of the membrane came away, and since then she has made an uninterrupted recovery, being now (October 9th) practically well. She never at any time had any albumen in the urine.

Remarks.—Both these cases, as also another, which was not under my care, and which succumbed, were contracted from a child who fell ill with sore throat two days after coming from London. The first case was much the more severe of the two, possibly because the antitoxin, not being at hand, was not injected as early as it should have been. In both cases the temperature and pulse fell decidedly after the first injection. In any future case I shall feel inclined to inject a much larger quantity at first, as in the second case the larger dose was followed by more rapid and lasting improvement, the membrane peeling off more quickly, the tonsils and glands not swelling to anything like the extent that they did in the first case.

The French Minister of the Interior having addressed an official letter to the Paris Academy of Medicine, asking for the opinion of that body on the antitoxin treatment of diphtheria, the Academy referred the question to a Committee, consisting of MM. Bergeron, Cadet de Gassicourt, and Straus. This Committee has reported favourably as to the prophylactic value of the treatment. MM. Arsène Lupin and Louis Lucipia, Members of the Paris Municipal Council, have given notice that at the next meeting of the Council they will ask that a grant of 50,000 francs (£2 000) be made in furtherance of M. Roux's efforts to provide an adequate supply of diphtheria antitoxin.

The Superior Sanitary Council of Vienna has decided that the preparation of diphtheria antitoxin shall be undertaken at the cost of the State. A provisional laboratory for the purpose has been established in the Pharmacological Institute of the Veterinary Department of the Army. The Government will be asked to grant a considerable sum towards the erection of a suitable building.

Our Berlin Correspondent writes: Prof. Virchow has been interviewed on the antitoxin treatment, and has given his opinion with characteristic caution. He said that he had been inclined to be sceptical as to the good results obtained in diphtheria last summer in the Kaiser and Kaiserin Friedrich Hospital, as he thought none of the cases were of the severest type. In August, however, the supply of antitoxin fell short, and since then the mortality from diphtheria in the hospital had risen remarkably, showing that the epidemic was severe in character. He summed up his opinion as follows: The serum exercises a strong protective influence for weeks, perhaps for months, say three or four months. Whether this influence be lasting can be shown only by further experience. Moreover, this alone can furnish the answer to the cardinal question, Is it a specific for diphtheria? But much has already been gained when, for instance, it is possible in a family where three or four children are down with diphtheria to immunise even one child and this, in all probability, can be done by the serum. Virchow added that the appeal for funds published by the hospital had already brought in 17,000 marks (£850).

Professor Ehrlich and Dr. Wassermann, both of the Koch Institute, are beginning a course of evening lectures on the serum treatment in the Charité Lecture Hall, which the medical officers for the poor have been officially invited to attend.

The municipality of Berlin has voted £200 to each of the three municipal hospitals for the continuation of the serum

treatment. One of the principal Berlin theatres has announced a performance for the benefit of the Kaiser and Kaiserin Friedrich Hospital, for the same purpose. Less pleasant is the fact that the "touters" are utilising the general interest in the serum treatment for their own purposes. Thus a Berlin daily newspaper announces in large type that its subscribers can obtain the antitoxin gratis at a certain chemist's, an advertisement in which newspaper and chemist apparently go shares.

Dr. Casper, who until now has held a post at the Pathological Institute of the Berlin Veterinary College, has been selected by Professor Behring for the superintendence of the antitoxin preparation in Hoechst.

Messrs. Schering are obliged to suspend the sale of their (Aronson's) antitoxin for some time, as some of the animals from which the serum has until now been taken have died, and the animals at present under treatment are not yet sufficiently immunised.

In a paper contributed to the *Zeitschrift für Hygiene und Infectionskrankheiten*, Ehrlich and Wassermann give an account of experiments made on a certain species of goat, which seem to prove that not only the blood, but also the milk, of artificially immunised animals has an immunised power.

M. LÉON LAMBERT, one of the founders of the Institute of Bacteriology now being built in the Parc Léopold, at Brussels, has given a sum of 5,000 francs (£200), in aid of further applications of the new serum treatment of diphtheria. This example of generosity has already had several imitators. M. Bischoffheim, formerly Senator of Brussels, has given 5,000 francs; M. le Comte d'Oultremont, Grand Marshal of the Court; M. de Saint Paul de Sinçay and M. le Chevalier de Bauër, have each given 200 francs. These donations will enable the staff of the institute to perform numerous vaccinations against diphtheria, and to distribute vaccine gratuitously to hospital physicians in Belgium when it is wanted.

THE BERI-BERI OUTBREAK AT DUBLIN.

THERE is still evidence of the dying out of the outbreak of supposed beri-beri at the Richmond Lunatic Asylum, Dublin. There has been only one new case this week. Two patients have died, bringing the numbers of deaths to nineteen, but one of these was suffering also from advanced aortic disease. One thing evident is that there is great overcrowding at the asylum. Buildings intended to house 1,000 people are used to accommodate about 1,500, and for this the governors are primarily responsible. They have set about making such temporary arrangements as can be effected quickly.

A wooden hospital to receive 150 patients is to be erected immediately, and a number of patients who can be moved will be placed in different places in the country. The drainage was perfected some years ago at a cost of several thousand pounds, but Dr. Norman is of opinion that the soil had been already saturated. The food supply is abundant, and of excellent quality.

Drs. O'Sullivan and J. A. Scott hope to have their report on the pathology of the disease ready in a short time. Meanwhile Dr. Norman and his assistants, of whom there are now five, including two who have been appointed temporarily, are ceaseless in their attention to the cases.

ENTRANCE SCHOLARSHIPS.—Mr. A. Graham Butler and Mr. W. McDougall, who, as announced in the BRITISH MEDICAL JOURNAL of October 13th (p. 841) have gained the University Entrance Scholarships at St. Mary's and St. Thomas's respectively, should have been described as B.A.'s of St. John's College, Cambridge. These gentlemen, with Mr. W. L. Brown, the Senior Entrance Scholar at St. Bartholomew's, are Foundation Scholars of St. John's, and were placed in the first class of the Natural Sciences Tripos.

DR. NEILSON, of Bulwell, Nottingham, has been presented with a gold pencil by the ladies of his ambulance class, in recognition of his voluntary services as their instructor.

THE Archbishop of York has become President of the Church Sanitary Association.

OPENING OF THE MEDICAL SCHOOLS.

NEW SCHOOL OF MEDICINE, EDINBURGH.

THE beginning of the winter session in Edinburgh has witnessed the inauguration of an extensive and important addition to the teaching accommodation of the Extra-Academical School in the opening of what is to be known as the New School of Medicine.

As readers of the BRITISH MEDICAL JOURNAL are aware, medical teaching in Edinburgh is provided for by two distinct bodies of teachers, namely, the Medical Faculty of the University and the teachers of the School of Medicine, Edinburgh, commonly called the Extra-mural or Extra-academical School. The Medical Faculty is constituted by the medical professors, who are holders of the endowed chairs, and whose teaching accommodation and appliances are mainly provided by University funds. The members of the School of Medicine are recognised as qualifying lecturers by the University and by the Royal Colleges of Physicians and Surgeons, but each must provide his own lecture room, museums, and appliances. Groups of these lecturers conduct their classes in various places, generally in the vicinity of the University and Infirmary, at Surgeons' Hall, Minto House, Nicolson Square, etc.

The necessity of having to provide suitable premises has led certain of the lecturers, who occupied the Park Place Rooms (which have been acquired by the University), and others who joined them, to secure a large range of buildings situated behind the south side of Lothian Street, and extending from Bristol Street on the west to Potterrow on the east, from both of which streets access is obtained. The buildings, which had been vacant for some years, were admirably situated for the purpose, the Bristol Street entrance being within a few yards of the University Union, which may now be regarded as the centre round which students tend most to congregate. The whole buildings have been reconstructed with much care and at great expense with the view of adapting them thoroughly to the requirements of modern medical teaching.

The main building, which is upwards of 200 feet in length, gives space for three excellently lit and well furnished lecture rooms, capable of seating about 60, 120, and 170 students respectively. There are, further, two large tutorial rooms, and also large rooms adapted for teaching practical zoology, botany, materia medica, etc. On the top floor of the same building there are fifteen smaller rooms fitted as museums for the various teachers.

Separated from the main building by an open corridor stands the anatomical department. Being of one storey it is lit from the roof, which slopes on the north side, and the lighting certainly leaves nothing to be desired. The walls are lined with cream-coloured glazed tiles to about 5 feet from the floor, and the rest of the wall and the ceiling are painted white. This mode of treatment with the ample flood of light gives an impression of brightness and airiness which is highly desirable in such a room. The furnishings are in excellent keeping. The dissecting tables are formed of polished white marble slabs set on varnished pine tables, and the walls are lined by sloping ebonised desk cases for the display of dissections and other preparations. The bone room adjoining is furnished in a most liberal manner, and ample store and preparation accommodation is provided. Altogether, this department is thoroughly adapted to meet all the demands of modern anatomical teaching.

The whole of the buildings are heated by means of a hot water system, and they are being wired for the installation of the electric light, which is expected will be in operation during the session. Special attention has been bestowed on the painting of the class rooms, etc., bright and cheerful colours having been effectively used.

Since the beginning of the session last week the ventilation and acoustic properties of the rooms have been thoroughly tested, for at some of the lectures they have been full to overflowing. Everything has been found satisfactory, and there is but one opinion as to the general comfort of the rooms, and the convenience of the arrangements.

St. Vincent's Hospital, Dublin.

On Tuesday, October 16th, Mr. S. J. McArdle delivered an introductory address, in the course of which he said: Those who have not gone carefully into the subject can hardly realise the falling off in the numbers of Irish students, and fewer still will be prepared for the mention of the remarkable increase in the Scotch and English schools. In Ireland, in 1872, 352 students were registered, while in 1892 the numbers had fallen to 175. Contrast this with the increase in Scotland in the same period from 324 to 573, and in England from 676 to 1,007: and we find a condition of things not easily accounted for. In seeking the causes of decline, I would divide them into "general," or those over which we have no control, and "local," which we can modify. Amongst the former may be mentioned: the decline of prosperity of this country; the employment of so many educated men in the Civil (various) Service departments; the extension of time of study to five years; the abolition of night lectures. All these things, certainly, influenced the members attending our schools in some degree; but most of these influences must have been at work in England and Scotland as well as in Ireland. The local causes may be summed up as follows: Frequent change of regulations; constant addition of new subjects; uncertainty of examinations. As periods of unrest interfere with the advancement of states and peoples, so with us the constant changes of the curriculum, the frequent unnecessary addition of subjects, produces a condition of instability which must deter students from joining our schools, or, what is more frequently brought home to us, will force men to seek elsewhere that settled and regulated procedure which is denied them at home. If change and turmoil retard the progress of the arts, which are only in a degree dependent on science, what must be the influence of perpetual change on the study of a profession which we all know rests on a basis in which art and science so intimately combine that separation means destruction? Let us look up the history of our licensing bodies here, and we find that hardly a year passes without some material change being made in the regulations. Students resent this, teachers resent it still more, and after the obnoxious rule has deranged as far as possible the quiescence of the classes, it is allowed to drop into abeyance or it is expunged. These efforts at medical statesmanship would be amusing were they not so disastrous. The regulations which allow men—nay, more, encourage them—to look upon hospital work as so much time lost cannot be conducive to their well-being. I am glad that some little is being done to in a slight degree remedy this defect in our scheme of education, and that the light of truth is at last dawning on those who legislate for us. On the subject of vivisection Mr. McArdle said: Before carrying out a new operation for some grave intestinal lesion how many men in this country work out the details of that procedure on living animals? No doubt we do not put our conceptions into practice without some preliminary trial, but this is on the cadaver. We know nothing of how our appliances or methods will affect living tissue. Experiments on the internal organs after death are worse than useless, since all these conditions which render such operations difficult in the living are totally absent. We read or hear of a new operation. How are we to determine its value? Former experience may guide us, but in the absence of that necessary equivalent what provision have we made to put these procedures to the test? None whatever! Now I ask you, How can we hold our own with those who, from their studentship, assist and ultimately carry out themselves these methods of research, who watch the influence of every suture material and every surgical appliance in living tissue, and who know, therefore, of their own knowledge why to discard one as useless or dangerous and why to retain another for its ease of application, its innocuous character, or its perfection of form? Those who oppose this method of research have little sense of the ridiculous, otherwise they would see that there is infinitely less suffering occasioned in the carefully-conducted experiments referred to than they themselves inflict for their amusement. A wounded bird left the prey for vermin, a startled hare running for dear life, a cunning fox at last brought to bay—all of these suffer terribly, and for little good. And, forsooth, we must not after the most merciful anæsthesia—we must not, when the animal is profoundly unconscious, do to it a thousand times less than these tender and delicately-constituted beings do every day in cold blood. They do not object to pig-sticking or pole-axing; but with the "cussedness" of those whose minds are warped they must needs interfere with our progress—they must barricade the gate to the garden of knowledge. When will this great nation aid our examining and teaching bodies to do for its children what every petty Continental State does for its subjects? All sorts of education are lavishly paid for: schemes which benefit little or not at all are generously supported; while these invaluable educational methods are discountenanced when they should be fostered. Instead of continuing the cramming system of the intermediate into our schools, let us make our examinations practical, let us insist that our students should know of their own knowledge the value of those things which are hereafter (in their hands) to alleviate human suffering, to prolong human life.

ENTRIES OF THE MEDICAL SCHOOLS AND COLLEGES.

By the courtesy of the officers of the Medical Schools and Colleges in England, we have received returns as to the number of students entering at the various institutions, from which the subjoined table is compiled:

[illegible]'s Hospital	...	119	...	48†	..	2	...	24	...	169
[illegible]ospital	...	24	..	33	..	39	..	2	..	98
[illegible]ital	...	31	..	2	..	—	..	6	..	39
[illegible]	...	89	...	36	...	41	...	28	...	195
[illegible]	...	28	..	87	..	—	..	8	..	115
[illegible]	...	51	..	92	..	1	..	10	...	111
[illegible]al	...	76	...	68	..	—	..	12	..	144
[illegible]al	...	26	..	17	..	12	..	7	...	55
[illegible]pital	...	49	..	15	..	—	..	8	..	64
[illegible]re	...	41	..	40	..	—	..	78	..	99
Westminster Hospital	...	15	..	11	..	—	..	6	..	26
London School of Medicine for Women		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]
Cambridge University*		[illegible]		[illegible]		[illegible]		[illegible]		—
Oxford University* ...		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]
University of Durham College of [illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]
[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]
[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]
[illegible]pool		39		[illegible]		[illegible]		17		61
[illegible]rmingham	...	30	...	34	...	14	...	18	...	78
[illegible]effield		6	...	3	...	—	...	4	...	9
University College of South [illegible]		20	...	5	...	—	...	17	...	25
London School of Dental Surgery		—	...	—	...	43	...	—	...	43

* No return. † Including those taking D.P.H. Laboratory Course. ‡ Including Bacteriology. § Enter in Faculty of Arts and Sciences.

A. Number of students who have joined for the full curriculum.
B. Number of students who have joined for special courses.
C. Number of dental students.
D. Number of students who have joined classes for preliminary instruction.
E. Total, excluding students who have joined classes for preliminary scientific instruction.

It would appear from the above figures that the total number of new entries for the full curriculum at the metropolitan medical schools this year is 552, the lowest for many years. Though it is true that the returns with which we are favoured annually are liable to subsequent revision, yet the circumstances do not change materially from year to year. It is, therefore, interesting to bring together the totals for recent years for the purpose of comparison:—

[illegible]	...	[illegible]	...	1889	..	620	
1884	...	[illegible]	...	[illegible]	..	614	
1885	...	[illegible]	...	1891	..	[illegible]	
1886	...	[illegible]	...	[illegible]	..	[illegible]	
1887	...	[illegible]	...	[illegible]	..	[illegible]	
1888	...	[illegible]	...	1893	..	569	

Owing to the postponement of the opening of the new Medical School building at the Yorkshire College, Leeds, the number of new students entering cannot at present be stated. The returns from Oxford and Cambridge are not yet complete.

A Good Example.—An American lady, Mrs. Mary Hemenway, has left the interest of her estate, worth 15 million dollars, for a period of fifteen years, to be applied to the furtherance of scientific and educational work in Boston (U.S.) and its neighbourhood.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street) London, on Wednesday, the 24th day of October next, at 2 o'clock in the afternoon.

The following Committees will also meet:

Tuesday, October 23rd, 1894.—2.30 P.M. Premises Committee.—3.30 P.M. Scientific Grants Committee.—4 P.M. Parliamentary Bills Committee.—5.0 P.M. Arrangement Committee.

Wednesday, October 24th, 1894.—10 30 A.M. Branch Organisation Committee.—11 A.M. Journal and Finance Committee.

October, 1894. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETING FOR 1894. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 24th, 1894.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election. FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of this District will be held on Friday, October 26th, at 4 P.M., at 199, Malda Vale (Dr. Cleveland's residence). Dr. Renner will read a paper on the History and Development of Animal Vaccination. Dr. Cleveland will bring before the meeting a case of Sudden Death from Extreme Cold, and a case of Salivary Calculus. Dr. Sedgwick will take the chair.—HUGH WOODS, Honorary Secretary, 11, Archway Road, Highgate, N.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The autumn meeting will be held at the Crown Hotel, Pontypool, on Thursday, October 25th, at 1 P.M. Council meeting at 12.30 P.M. Dinner at the same place at 4 P.M., tickets 6s. 6d. each. The President will be pleased to see members at breakfast at the hotel on their arrival. Pontypool Park will be open to members between the meeting and dinner. Members intending to be present at the meeting and dinner are requested to intimate the same by postcard to Dr. Sheen, Cardiff, not later than October 20th. Papers, etc.: W. F. Brook: (1) Case of Ovariotomy followed by Intestinal Obstruction, (2) case of Congenital Absence of Lower Two-thirds of Vagina. J. M. Evans: Herniotomy under Difficulties. J. L. Thomas: (1) Gastrostomy without leakage of Gastric Contents, (2) Appendicectomy for Perforative Perityphlitis: Recovery. T. G Horder: "Is it, or is it not, desirable that the B.M.A. should use a portion of its surplus capital in the prosecution of quacks and other unqualified practitioners?" L. D. Gamble: Fatal Obstruction of Bowels due to Gall Stone; specimen shown.—ALFRED SHEEN, M.D., D. ARTHUR DAVIES, M.B., Honorary Secretaries.

NORTH OF IRELAND BRANCH.—The autumn meeting of this Branch will be held in the Museum, College Square North, Belfast, on Thursday, October 25th, at 4 P.M. Gentlemen who wish to read papers or bring any other business before the meeting, will kindly communicate as early as convenient with the Honorary Secretary, JOHN CAMPBELL, M.D., F.R.C.S., 21, Great Victoria Street, Belfast.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.—The quarterly meeting of this District will be held at the Royal National Hospital for Consumption, Ventnor, Isle of Wight, on Thursday, October 25th, at 4 P.M., the President, Mr. Charles Meeres, in the Chair. Agenda: Papers. Exhibition of patients or of specimens. Adjourned discussion on Mr. Butler's resolution. Consideration of letters, pamphlets, etc., from the Civil Rights Defence Committee, the Midwives' Registration Association, etc. The Honorary Secretary would be glad to receive immediate notice of papers to be read, or of other communications which it is intended to bring before the meeting.—ROBERT ROBERTSON, M.D., Honorary Secretary, Ventnor, I. W.

OXFORD AND DISTRICT BRANCH.—The next meeting of this Branch will be held at the Radcliffe Infirmary, on Friday, October 26th, at 3.15 P.M. Notice of papers, etc., should be sent to the Honorary Secretary, F. W. LEWIS MORGAN, 37, Broad Street, Oxford, as soon as possible.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT.—A meeting of the above District will be held at St. Bartholomew's Hospital, Rochester, on Friday, October 26th, at 4 P.M. Mr. Prideaux Selby in the chair. The dinner will take place at the Bull Hotel, at 6.30 P.M. Charge 6s. 6d., exclusive of wine. To facilitate the arrangements, gentlemen who intend to dine are particularly requested to signify their intention to the chairman, Mr. Prideaux Selby, Teynham, sittingbourne, not later than Tuesday, October 23rd. All members of the South-Eastern Branch are entitled to attend this meeting, and to introduce professional friends. Communications: Mr. St. G. C. Reid: Tinnitus Aurium. Dr. J. Dundas Grant: Disease of Antrum and Sinuses in relation to Purulent Nasal Catarrh. Mr. Ludford Cooper: Excision of the Tongue after Ligature of the Linguals in the Neck. Mr. Prideaux Selby: Notes on a Case of Abdominal Section for Peritoneal Pregnancy.—EDWARD GROUND, Honorary Secretary, of the District, 1, Ashford Road, Maidstone.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The autumn meeting of this Branch will be held in the Station Hotel, Stirling, on Tuesday, October 23rd, at 3 P.M. Members who may be willing to show cases or specimens are requested to inform the Secretary as soon as possible. Further notice will be sent to each member by circular.—C. J. LEWIS, Honorary Secretary, Sutherland House, Stirling.

STAFFORDSHIRE BRANCH.—The twenty-first annual general meeting of this Branch will be held at the North Stafford Hotel Stoke-on-Trent, on Thursday, October 25th, at 3 30 P.M. An address will be delivered by the President-elect, Dr. Charlesworth.—GEORGE REID, Honorary Secretary, Stafford.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—The annual meeting of this Branch will be held in Marischal College, Aberdeen, on Saturday, October 27th, at 1 P.M. Business:—Minutes, etc. Nominations. Ballot for the admission of Dr. G. G. Macdonald, 26, King Street, Aberdeen. Council's report for 1893-94. Treasurer's balance sheet. Election of President. Election of President-elect. Election of two Honorary Secretaries. Election of Honorary Treasurer. Election of six members of Council (see Rule 8). Selection of place of next summer meeting. The annual dinner will be served in the Imperial Hotel, Stirling Street, Aberdeen, at 3 P.M., when the chair will be taken by the new President, Professor Stephenson. Tickets for dinner (exclusive of wine) 5s. each. There will be a hospital visit in the forenoon for such members as can attend at 11.30 A.M.—J. MACKENZIE BOOTH and C. THISELTON URQUHART, Honorary Secretaries, Union Street, Aberdeen.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held in the Council Chamber at the Municipal Buildings, Taunton, on Friday, October 26th, at 4.30 P.M. Professor Watson Cheyne, F.R.S., of King's College, London, will deliver an address at 5 o'clock on The Development of Modern Methods of Wound Treatment, upon which an interesting discussion may be expected. Members of the Bath and Bristol and the South Western Branches are invited to be present to form a conjoint meeting. Gentlemen wishing to bring forward communications and those intending to be at the dinner are requested to send early notice to the Honorary Secretary that he may make the necessary arrangements. Dinner (5s. a head exclusive of wine) will be served at the Castle Hotel at 7 o'clock, and tickets may be got at the bar of the hotel.—W. M. KELLY, Honorary Secretary, Taunton.

NORTH OF ENGLAND AND BORDER COUNTIES BRANCHES.—It has been decided to hold a conjoint meeting of the above Branches at Gilsland on Tuesday, October 30th, 1894. The meeting will commence at 3 P.M., and will be followed by a dinner. Dr. Maclaren, of Carlisle, will read Notes of a Case of Prostatectomy, with specimen. Members desirous of reading papers are requested to communicate with either of the Honorary Secretaries: G. E. WILLIAMSON, F.R.C.S., 8, Eldon Square, Newcastle-on-Tyne, North of England Branch; J. ALTHAM, M.B., Penrith, Border Counties Branch.

DORSET AND WEST HANTS BRANCH.

THE autumn meeting of this Branch was held at Dorchester on October 10th, Mr. WALTER WYKE SMITH, President, in the chair. Thirty members and visitors were present.

Election of Officers.—The following were elected office-bearers for the ensuing year:—*President:* Mr. Charles Henry Watts Parkinson, of Wimborne. *Vice-Presidents:* Mr. Thomas Wiliam Blake, of Bournemouth, and Mr. Thomas Palmer Daniel, of Beaminster. *Honorary Secretaries and Treasurers:* Dr. William Vawdrey Lush, of Weymouth, and Mr. Charles H. W. Parkinson, of Wimborne.

New Members.—Dr. Sidney James Allden, of Bridport, and Dr. James Andrew, of Bournemouth, were elected members of the Branch.

Next Meeting.—It was resolved that the May meeting should be held at Blandford.

British Medical Benevolent Fund.—A donation of five guineas was granted to the British Medical Benevolent Fund.

Abnormal Pregnancy and Parturition.—A discussion on this subject was opened by Mr. Marsh, Vice-President, and taken part in by Mr. Parkinson, Dr. Whittingdale, Dr. Bacot, Dr. Masters, Dr. Lush, Dr. Carter, Dr. Evans, Dr. Griffin, Dr. Simpson, and the President.

Communications.—The following communications were presented:—Mr. Flower: A Case of Dislocation of the Femur on to the Pubes, and Fracture of the Neck in a man suffering from Locomotor Ataxy; removal of the head of the bone by operation. The patient was shown.—Dr. Childs: Notes on the International Congress at Buda-Pesth.—Dr. Lawrie: (1) Patient from whom the upper jaw had been removed for Sarcoma; (2) a case of Splenic Leucocythæmia treated with Bone Marrow; the patient, an infant was shown.—Dr. Evans: (1) Specimens of Biliary Calculi; (2) a Question respecting our Responsibility in the Prevention of Disease—for example, Phthisis, Lead Poisoning, Strabismus.

Dinner.—The members and friends, who had previously been hospitably entertained at luncheon by the local members, dined together at the King's Arms Hotel.

GIBRALTAR BRANCH: INAUGURAL MEETING.

The inaugural meeting of this Branch was held in the board room of the Colonial Hospital on October 4th under the presidency of Surgeon-Major-General Lewer, Principal Medical Officer of the garrison. There were present besides the President, Surgeon-Captain Perry Marsh, Staff-Surgeon May, R.N.; Surgeon-Captain Cottell, Dr. Neil Oman, Staff-Surgeon Kirker, H.M.S. *Amphion;* Dr. Baggeto, Dr. Baca, Dr. Verano, Dr. Lyons, Surgeon-Major Irwin, Surgeon-Major Sawyer, and Dr. Turner. Letters of apology for absence were read from Brigade-Surgeon-Lieutenant-Colonel Rooney and Surgeon-Major Franklin.

President's Address.—After the Secretary (Dr. William Turner) had read minutes of a preliminary meeting relative to the formation of the Branch, the President delivered his inaugural address, briefly sketching the more important practical advantages likely to accrue from the institution of a Branch of the Association in Gibraltar, especially pointing to the advantages of combined action on the part of the local medical men—naval, military, and civil practitioners—which such a society would tend to foster.

Communications.—The following papers were read: On Trephining of the Skull for Traumatic Epilepsy and Hemiplegia, with some general remarks on the Operative Treatment of Fractures of the Skull, by William Turner, M.A., M.D., Surgeon to the Colonial Hospital; and Notes on a Case of Compression of the Brain, accompanied with Hemiplegia and Mental Impairment, by Staff-Surgeon Arthur W. May, Royal Naval Hospital. These papers were freely discussed by the President, Dr. Kirker, Dr. Perry Marsh, Dr. Irwin, Dr. Sawyer, etc.

Votes of Thanks.—Votes of thanks were passed to the President for his inaugural address, and to the Honorary Secretary for the trouble he has taken in organising the Branch.

ADELAIDE AND SOUTH AUSTRALIA BRANCH.

The 15th annual meeting of the Branch was held at the Adelaide Hospital on June 28th, 1894, the President (Dr. Poulton) in the chair.

Specimens.—Professor Watson showed some interesting Pathological Specimens.—Dr. Lendon showed a Multilocular Cystic Adenoma of Left Ovary, and a Dermoid (? Parovarian) Right Ovary removed from a patient aged 52.—Dr. W. A. Verco showed: (1) Tuberculous Disease of the Epididymis, which commenced in the globus minor and gradually spread upwards. (2) Monster, female, full time, born dead, skin peeling off. The head was placed almost at right angles to the body. The back of the head reached to about half way down the dorsal region, the hairy scalp merging into the skin of the dorsal region a little below. The scapula and shoulders were pushed forwards and the front of the neck was very extended, being convex instead of concave. The head seemed perfect in every way except for its position. The child had also talipes varus. The labour was tedious.—Dr. Swift showed a man with Paralysis of certain Muscles of Arm and Leg after a fall, and read notes of the case.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Mr. Trott's Letter.—The Council brought up again their original report on this subject.—Dr. Way proposed and Dr. Todd seconded: "That the report be adopted."—Dr. Hayward proposed and Dr. Lendon seconded an amendment: "That the report be received."—After Drs. Verco, Way, Ewbank, Teichelmann, Bickle, A. A. Hamilton, and Giles had addressed the meeting, the amendment was put and lost. The original motion was carried.

Report of Council.—The report of the Council, which was taken as read, stated that both in its financial and its numerical position the Branch gave evidence of being in a satisfactory position. Twelve new members had been elected during the year; three had resigned, two of these having left the colony. One member had ceased to enjoy the privileges of the Branch, having allowed his subscription to fall into arrear; one member's name had been removed on account of unprofessional conduct, and one member had died. There were now 120 names on the roll as against 114 last year. The interest in the Society had been well maintained. Ten ordinary meetings had been held, the average attendance at which had been twenty-four. There had been one special meeting for the decision of an ethical matter. The Council had held thirteen meetings. The report was adopted.

Treasurer's Report.—The Treasurer brought up and moved the adoption of his report. Carried.

Election of Officers.—*Vice-President:* Dr. T. K. Hamilton. *Treasurer:* Dr. Corbin. *Secretary:* Dr. Swift. *Members of Council:* Drs. Lendon, Giles, and Borthwick.

President's Address.—The retiring President (Dr. B. Poulton) then delivered an address. He said as the Branch was now terminating the fifteenth year of its existence, it might not be inappropriate to take some retrospective view of its progress and the work it had so far accomplished. Of the thirty-seven gentlemen who founded or joined the Branch in its first year only sixteen remained on the roll. The general interest in the welfare of the Association had been continuously maintained. The treatment of hydatid disease had from time to time claimed close attention, and the valuable papers read there by several present and past members, notably the late Dr. Davies Thomas, had done much to enlarge knowledge and improve methods of treatment. The Branch had from time to time advised the Government on matters touching the health of the people and the common good of the State. One of its earliest public duties was to advise compulsory vaccination, and the action thus taken helped to facilitate new legislation. More than once strenuous endeavours had been made to secure legislation with regard to the better regulation of medical practice, but so far without any result. Fourteen years ago the project of an intercolonial medical journal was discussed with medical societies in Sydney and Melbourne, but no concerted action followed. The idea had, however, never been abandoned, and was now again engaging general attention with a good prospect of leading to the establishment of a periodical publication, the joint property of the combined Branches of the Association in Australia. A potent influence in the medical life of these colonies, the Triennial Medical Congress, was originated in the Branch. The membership had, in spite of many severe losses by death and emigration, steadily enlarged. In the near future it might be desirable in the interests of Australian medicine to effect a closer union between the various Branches in the various colonies, and it seemed wise that a federation of the societies in Australia should be accomplished, especially if it were a federation working under the ægis of that great Association to which they belonged, from which they derived constant counsel, support, and encouragement. The President concluded with some remarks as to the desirability of a better regulation of medical practice in the colonies.

Installation of New President.—Professor Watson was installed as the new President of the Branch.

Vote of Thanks.—A cordial vote of thanks was passed to the retiring President for his address.

LANCASHIRE AND CHESHIRE BRANCH.

THE adjourned annual meeting of this Branch was held at Manchester on Wednesday, October 10th, Dr. EDWIN RAYNER, President, in the chair. About 270 members from all districts of the Branch were present.

New Officers.—Dr. Rentoul sent in his resignation of his seat on the Parliamentary Bills Committee, and the following two additional representatives on that Committee were elected: Mr. James Taylor (Chester) and Dr. Samuel Woodcock (Manchester). Dr. O'Sullivan (Southport) and Dr. Thornley (Bolton) were elected auditors. The following Local Secretaries were appointed: J. Barr, M.D., Liverpool; C. E. Glascott, M.D., Manchester; J. E. Garner, M.B., Preston; J. M. H. Martin, M.D., Blackburn; W. Hall, Lancaster; W. H. Dobie, M.B., Chester.

Registration of Midwives.—The protest against and reasons for dissent from the report of the Committee on the question of midwives' registration by a number of the members of the Branch was read by the SECRETARY.—Dr. W. MACFIE CAMPBELL moved and Dr. VACHER seconded:

That the protest be received and entered on the minutes.

After a short discussion for and against the admission of the protest, the previous question was moved by Dr. WOODCOCK, seconded by Dr. W. H. HUGHES, and carried by a considerable majority.

Proposed Additions to Rules.—Dr. W. MACFIE CAMPBELL and Dr. A. C. E. HARRIS moved and seconded:

That the following addendum to Rule 10 be adopted:

I. "And no new member shall take part in the business of the Branch unless he has paid his first subscription."

—Dr. WOODCOCK said that those with whom he was associated would offer no opposition to this resolution, and it was adopted unanimously without discussion.—Dr. MACFIE CAMPBELL also moved and Dr. HARRIS seconded:

That the following "Note" be added to Rules 13, 14, and 15:

II. "That no grant of money for any purpose shall be valid unless passed by a majority of two-thirds of those present."

A very animated discussion took place on this motion, which was generally considered as tantamount to a vote of censure on the action of the Committee of the Branch appointed to watch the progress of, and to oppose, any proposed legislation for the registration of midwives. As the proposed alteration in the rules was likely to be closely contested, the PRESIDENT requested the appointment of four scrutineers, and the following gentlemen were selected: Dr. A. C. E. Harris, Dr. Leslie Jones, Dr. J. Brassey Brierley, and Dr. W. H. Hughes.—Dr. J. BRASSEY BRIERLEY moved as an amendment:

That all the words after the word "that" be deleted.

This was seconded by Dr. THORNLEY, and carried by 148 against 115 votes.—Mr. JAMES HARDIE moved as an amendment the addition of the following words after the word "that":

No grant of money exceeding £50 for any purpose shall be valid unless passed by a majority of two-thirds of those present.

This was seconded by Dr. W. CARTER, but, on a division, it was lost by 125 against 120 votes. As there was no further amendment proposed, Dr. J. Brassey Brierley's amendment became the substantive motion, and was carried.

Proposed Adjournment of Meeting—Dr. LLOYD ROBERTS moved, and Dr. JOHN SCOTT seconded:

That the meeting stand adjourned to Liverpool.

This motion, on being put to the meeting, was declared lost by the PRESIDENT.

Councillors and the Training of Midwives.—Dr. WOODCOCK moved and Dr. J. BRASSEY BRIERLEY seconded:

That the position on the Lancashire and Cheshire Branch Council of gentlemen who continue to train and grant "diplomas" or "certificates" to pupil midwives (a practice condemned by the General Medical Council and this Branch) is anomalous.

The mover and seconder made long speeches in support of the motion, and a very heated discussion followed, in which the following members took part—Dr. SINCLAIR, Dr. WALTER, Dr. WINGATE SAUL, Dr. THORNLEY, Dr. JOHN SCOTT, Dr. JOHN KERSHAW, and Dr. CARTER.—After a protracted debate Mr. GREENHALGH (Bury) and Dr. MCNAUGHT (Waterfoot) moved and seconded:

That the question be now put.

The meeting adopted the closure, and then Dr. Woodcock's original motion was carried by a large majority.

Withdrawal of Motions.—Dr. SINCLAIR did not submit the motion of which he had given notice, and Dr. BRIERLEY withdrew his notice of motion respecting the prominence given in the BRITISH MEDICAL JOURNAL to the proceedings of the Registration of Midwives Association.

Anderson Appeal Fund.—The SECRETARY (Dr. James Barr), Liverpool, drew attention to the Anderson Appeal Fund, on behalf of which he would be very happy to receive subscriptions.

SPECIAL CORRESPONDENCE.

PARIS.

Consanguinity of Parents and Disease in the Offspring.—Punishment for Unqualified Practice.—Medical Students and Military Service.—The Saint-Paul Prize for a Cure for Diphtheria.—Athletic Sports at the International Exhibition of 1900.—General News.

DR. LAGNEAU maintains that consanguinity in marriage does not exercise a bad hereditary influence unless there be pathological antecedents such as should, in any case, be avoided when marriage is contracted between families who are not related. Dr. Trousseau, ophthalmic surgeon at the Quinze-Vingts, who has given attention to this question, does not believe that the relationship of parents is a factor in eye lesions. Pigmentary retinitis, especially attributed to this cause, results, in Dr. Trousseau's opinion, from a morbid condition existing among the parents, and independent of consanguinity, though that may be present.

The Lisieux Tribunal has sentenced an unqualified practitioner at Caen to pay £160 indemnity to a patient whom he had injured by applying a pessary. The patient suffered from a uterine affection. The unqualified practitioner furthermore paid £12 fine, and has been sentenced to two months' imprisonment. This is the second time he has been fined and imprisoned. The first sentence condemned him to pay £48 to the next-of-kin of the patient, who died, to two months' imprisonment, and £4 fine.

In accordance with the proposition of M. Chevillon, the General Council of the Bouches du Rhône have voted a measure which embodies the conclusions of a report sent to the War Minister by the Commission of the Association of the Medical Press. The Council General urge that the medical students now yearly called upon to serve in regiments be not thus summoned until they have their doctor's degree, and then be told off for service in a military hospital. When the student has not attained his M.D. degree at the age fixed he should be called upon to serve his time like an ordinary person.

The new treatment for diphtheria has drawn attention to the Saint Paul prize of £2,000 offered for a means of curing this disease by M. and Mme. Saint-Paul, who lost their only son by diphtheria. The prize has never been awarded in its entirety. M. Leloir's essay on diphtheria was awarded £20 by the Commission; this is the nearest approach to an award that has yet been reached. Dr. Leloir is one of the most distinguished professors of the Lille Medical Faculty.

The Commission appointed to draw up the programme of the athletic games and matches to take place at Vincennes during the season of the International Exhibition of 1900 numbers 75 members. Only one of them is a medical man, namely, Dr. Minart, honorary vice-president of the "Union Vélocipédique de France."

The Minister of the Interior has commissioned Dr. Ledé to study the organisation and working order of the wet nurses agencies, especially those of Paris.

The Gironde General Council has voted £40 for the benefit of the International Congress for the Protection of Infant Life, which will be held at Bordeaux, 1895.

The Seine Council has granted £20 to the Bordeaux City Ambulances, and £20 to the Bordeaux Medical and Surgical Society.

MANCHESTER.

Munificent Gift for New Hospitals.—Water Supply.

Two events of considerable importance have happened during the past week. At the annual meeting of the subscribers to St. Mary's Hospital it was reported that the trustees of the late Mr. David Lewis had made a grant of £70,000 in connection with the scheme for the amalgamation of St. Mary's and the Manchester Southern Hospital. There will be erected a new building in Gloucester Street and a second hospital on the College Hospital estate in Stanley Grove. Gloucester Street hospital will be devoted to the treatment of midwifery cases and for the reception of out-patients, while that in Stanley Grove will be reserved for the treatment of diseases of women and children. The title of the hospitals shortly to be erected will be "St. Mary's Hospitals." The details for the working of the two hospitals has received the sanction of the united committees, but building operations cannot be commenced until the sanction of the Charity Commissioners is obtained.

Last Saturday saw the completion of the scheme projected seventeen years ago, by which Manchester secures its additional supply of water of 10,000,000 gallons daily. The Thirlmere water, as it is called, is collected on nearly the whole of the Helvellyn mountain range. The ultimate water supplying capacity of Thirlmere is 50,000,000 gallons per day for 150 days, even if no rain falls in that time; its water area is 795 acres, and its storage 8,135,000,000 gallons. The storage of Loch Katrine, which supplies Glasgow, is 5,687,000,000 gallons only. At present only 10,000,000 gallons per day will be used, at a cost of £2,500,000, while the 50,000,005 gallon supply will cost £5,400,000. The water is conveyed a distance of 100 miles, the longest distance traversed by water for the supply of any city in the world.

CORRESPONDENCE.

THE DISCIPLINARY POWERS OF THE ROYAL COLLEGE OF SURGEONS.

Sir,—The alteration of the by-laws of the College of Surgeons, for which the governing body is determined to ask the sanction of the Home Secretary, is one of those matters in which much may turn for good or evil upon a term of words. It is not altogether easy to apprehend the precise effect of some of the delicate alterations which the legal advisers of the Council seek to procure in the by-law relating to misconduct. The present by-law is directed in the first place against the advertisement by a Member of any secret method, or the publication of any indecent advertisements "relating to his practice as a surgeon." This it is proposed to amend very properly by enlarging the words as to practice, and substituting a wider formula relating to his professional practice. The present by-law next declares that "no Fellow or Member shall advertise, or publish any matter or thing prejudicial to the interest or derogatory to the honour of the College, or disgraceful to the profession of surgery."

So far as I understand the altered wording of the proposed by-law, its chief effect will be to make it an offence for a Member to publish anything "the publication whereof is discreditable to himself," as a Member of the College or of the profession. In addition, however, the proposed by-law contains a further, wider, and introductory clause declaring that "No Member shall be guilty of disgraceful conduct in any professional capacity, relation, or respect;" and the third subsection of the proposed formula makes it, in terms, dependent upon the "opinion of the Council," whether a Member shall be deemed to have offended in any of these respects or no. A further subsection deals with convictions for criminal offences, and includes along with them the cases where any person shall "have his name removed from the *Medical Register* by the General Medical Council under Section xxix."

There can be no objection to the last-mentioned of these alterations, nor to the enlargement of the limitation involved in the substitution of "professional practice" for the practice of "surgery;" but the Members of the College and of the profession generally may reasonably be jealous of the introduction into by-laws, which are to be administered by a governing body—not wholly popular in its constitution—of words which leave any person who has the misfortune to disagree with his governors on a point of conduct, almost completely at their mercy. A final judgment upon these proposals must be reserved until whatever detailed explanations may be made at the meeting on November 1st can be considered: but as at present advised, it is not quite clear why the alterations should not be limited to the two points which would be of clear importance, and could not possibly do harm.—I am, etc.,

Lex.

ADDISON'S DISEASE.

Sir,—In Dr. Auld's first communication to the British Medical Journal, of May 12th, 1894, he states: "I have no hesitation therefore in formulating the opinion that *one at least of the functions of the suprarenal glands is the destruction of a certain class of effete red blood corpuscles.*" But in his next communication, British Medical Journal, October 6th, 1894, he avers that the functions of the gland "are (1) the destruction of certain effete products of metabolism which are of the nature of ptomaines, and (2) the elaboration of a secretion which is absolutely essential to the blood (hæmopoietic)." The latter doubtless is a safe assertion, as modern physiology teaches that several organs perform such a *rôle*. Dr. Auld states that I have found hæmochromogen in "solutions" (*sic*) from the medulla soon after washing out the blood vessels. I never said so. I detected hæmochromogen in sections of the adrenals after such treatment; pointing to the indisputable fact that effete hæmoglobin undergoes katabolism in these glands. His reference to the liver is peculiarly unfortunate, because that is the only other organ in which hæmochromogen can be similarly detected, and in that organ we know that a downward metabolism of effete hæmoglobin does take place.

It is indeed difficult to find a confirmation of Dr. Auld's views from the illustrations accompanying his papers, as some might pass as reproductions of imperfectly focussed photographs of lunar scenery; still there can be little doubt that the inference he drew in his first paper is correct. It would have been as well, however, had Dr. Auld made himself acquainted with Professor Schäfer's recent communication to the Physiological Society and to the British Association, before publishing his second paper.—I am, etc.,

Wolverhampton, October 9th. C. A. MacMunn, M.D.

AERIAL DIFFUSION OF SMALL-POX.

Sir,—I was pleased to see the letter from Mr. Ackworth calling attention to the practice of hospital authorities in other countries. The question of hospital accommodation for small-pox has become so serious for local authorities—owing to what I, for one, consider the excessively restrictive and unnecessary regulations as regards isolation from other buildings insisted upon by the Local Government Board—that, if the area is to be anything like mentioned by Mr. Ackworth, no local authority, or even group of authorities, will face it, or ought to be asked to do so. A site alone in most counties near where large centres of population exist would cost, at the moderate sum of £100 per acre, £300,000, while buildings situated in a waste of 3,000 acres would be shut off from all sanitary arrangements and water supplies, and lead to considerable difficulties as regards their sewage disposal.

The experience of our local authority upon this question during a period of seventeen years past is: Our hospital for infectious cases is a tumble-down old farmhouse, built quite two hundred years ago on a damp site and without damp course. Its rooms are low and badly constructed, and most unsuitable for its purpose. Here under the same roof have been treated both small-pox and scarlet fever cases, the latter on the ground floor and right wing upstairs, the former the left wing upstairs, there being accommodation for 3 cases, admission being by a separate door and staircase, and separated only by the landing and doors pasted up with brown paper. Yet, notwithstanding this primitive division, in no

instance during the past has small-pox spread to or attacked the fever cases, or *vice versâ*.

For some years, as a member of the Local Board and Chairman of its Sanitary Committee, I have urged the necessity for a new hospital without avail. The lay mind sees, or won't see, danger, thinks only of the ratepayers' pocket, and shelves the question with the usual result. The fever epidemics of the past two years found us unprepared, and the Board had hastily to take action, and has already spent about £2 000 on temporary measures, one-quarter the estimated cost of a good permanent hospital.

Last year application was made to the Local Government Board for powers to borrow for building the much needed hospital, and after the usual four to six months' delay of that slow-moving body an inquiry was held, plans approved and adopted; another three months' delay and notice is received that sanction would be given, but that no part of the hospital is to be used for small-pox cases. In the meantime, through admission of a child suffering from scarlet fever, four days afterwards developing small-pox, we had several cases, and, the place being crowded with scarlet fever cases, the Board hastily erected an iron building to remove these cases to. This building would have been distant 140 to 150 feet from the proposed new buildings, and it was proposed to retain it for small-pox cases. Now, an opponent of the hospital scheme called the attention of the Local Government Board to this fact, with the result that they withdrew their sanction to the loan for the much needed hospital for fever, diphtheria, etc.

I quite agree with Mr. Ackworth as to the seriousness of accepting Mr. Power's position, and cannot myself accept his principle of aërial convection, until it can be conclusively shown that there was no possibility of outside or inside communication with the hospitals. I think that in no case should friends be permitted to visit, or patients to send communications outside. In all cases clothing worn by patients should be destroyed. With stricter isolation I believe we should hear less of aërial convection. One source of the spread of small-pox appears to me to be ignored, namely, the influence of flies. These pests of the sick room persistently attack the sufferers, and may be frequent carriers of the infection.

It is time the Local Government Board had made up its mind upon this important question, and issued some clear and definite directions about the provision of hospital accommodation. The absurdity of their present position may be shown by a few figures. The total number of cases admitted to our hospital during 17 years is 72, an average of 4.2 per annum. Are the board to seek an unattainable site of 3,000 acres, and spend some £300 000 to £400 000, for what? the treatment of an average of 4.2 cases of small-pox yearly. —I am, etc.,

EDWARD LITTLE, M.D.,
Medical Officer to the Wimbledon Hospital for Infectious Diseases.

Wimbledon, Oct. 14th.

MEDICAL CERTIFICATES AND JURORS' EXCUSES.

SIR,—A hospital patient of mine, suffering from partial paralysis, recently returned to his home in an out-of-the-way part of the country. Very shortly after he received a summons to serve as a juryman at quarter sessions some thirty-five miles from where he lived, and he applied by letter to me asking what he should do. I at once sent a certificate of his inability to attend the sessions to the official named in the summons he had received, stating also that he had been a patient under my care at the — General Infirmary, and the fact that he was partially paralysed. He was informed by return of post that no medical certificate could be accepted unless in the form of an affidavit. The patient is some miles away from either a doctor or a lawyer, and being a small farmer was little able to afford the necessary fees for a special examination and affidavit at his own home. I have therefore had to see a lawyer and swear the necessary affidavit myself on his behalf. If he had been an important witness in a case I could have understood the authorities insisting upon the affidavit, but as he was merely summoned to serve as an ordinary juror—one, no doubt, of a considerable number—I think the certificate of a hospital physician ought to have sufficed. It is only comparatively recently, I believe, that this course has been taken, in consequence of a very sweeping expression of opinion from the judicial bench as to the unreliability of medical certificates; but it appears to me to involve a reflection on the credit of the whole medical profession which is unwarranted and which we ought to resent. —I am, etc.,

October 13th. A HOSPITAL PHYSICIAN.

NO PROMOTION FOR THE GENERAL PRACTITIONER.

SIR,—"Perplexed's" letter contains truths which many men in the profession have thought about, but have not stated in such blunt honesty as he has done. "The practice of medicine," according to Samuel Johnson, "is a melancholy attendance on misery, a mean submission to peevishness, and a continual interruption to joy and pleasure." The study of medicine at a good school is a continual delight and surprise. The lecturers have everything so cut and dry, the hospital cases are so beautifully typical (specially selected), that embryo medicos are allured on to the stormy seas of practice with a light heart to find in many cases a lifelong disappointment over the humdrum routine of general practice. Yet a man having once got there should not allow his environment to extinguish the soul within him. If, like Mr. Gladstone, he can take up some hobby, even a change of work it may be, he will return to his daily routine refreshed and interested. The profession, as a rule, are not cultured enough; they stink too much of the shop. Old-time sons of Æsculapius were both scholars and scientists. We cannot all be specialists or change our profession, and few can afford to change their surroundings.

In conclusion, rise above the environment of "sickness, poverty, and ignorance" being in it, but not of it. Take up a good physical and intellectual hobby, and the cure is complete.—I am, etc.,

ONE WHO KNOWS.

MEDICAL DEGREES FOR WOMEN IN EDINBURGH.

SIR,—Some considerable time ago the Scottish Association for the Medical Education of Women applied to the Edinburgh University Court, craving that its medical degrees should be thrown open to women. After a great deal of correspondence, extending over many months, the Court has agreed to recognise the lecturers of the extra-mural teachers in the Medical College for Women and in the School of Medicine for Women as "lecturers specially appointed by the University" for the instruction of women in medicine, and to admit the students of these two schools to matriculation and examination for medical degrees. This is, of course, a forward step of the greatest importance, and very great credit is due to the Scottish Association for the Medical Education of Women for not merely taking the initiative in this matter, but pushing it to a satisfactory end; and one cannot but feel regret that at this early stage of the medical education of women there should already exist two rival schools. It is inconceivable to ordinary rational beings why these schools should not at once at once be united on a broad basis. The ends in view would be better accomplished by union.—I am, etc.,

EDINENSIS.

THE ORIGIN OF THE TERM "ANÆSTHESTICS."

SIR,—Having read with much interest the account of Mr. Ernest Hart's interview with the late Dr. Oliver Wendell Holmes, it may be worth while to put on record the details of a conversation I had with Dr. Holmes when he was in England in 1886. The discussion had turned on the subject of anæsthetics, when he said "Do you know the origin of the term?" On receiving a negative answer he replied "Then I will tell you. I believe it was I who invented it, and this is how it occurred. Many years ago, when ether and chloroform were only just coming into use, Morton, the dentist at Boston, who was largely responsible for the introduction of ether, came to me and asked me if I could suggest for him a word which could be used for both drugs, and also a word which would describe the effect produced by their inhalation. After trying two or three words, *æsthetic* occurred to me as meaning *sensitive*, and in consequence *anæsthetic* as being *insensitive* easily followed, with *anæsthesia* for the condition produced. That," he concluded, "was, I believe, the origin of the term."—I am, etc.,

Welbeck Street, W., Oct. 15th. EDGAR WILLETT.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A SURGEON-MAJOR, who will have to proceed abroad in the beginning of the year, is desirous of exchanging with an officer having a good position on the roster. Address Alpha, c.o. Sir C. McGrigor and Co., 25, Charles Street, St James Square, S.W.

A SURGEON-MAJOR, with three years to complete tour, serving in a good district in India, desires to exchange home; any reasonable offer accepted. Address "Bona Fide," BRITISH MEDICAL JOURNAL Office.

THE NAVY.

THE following appointments have been made at the Admiralty: WILLIAM THOMPSON, Staff-Surgeon to the *Vernon*, October 10th; THOMAS E. HONEY, Surgeon, to the *Hebe*, October 9th; LANCELOT KILBEY, Surgeon, to the *Jason*, October 9th; GEORGE F. COLLINS, Surgeon, to the *Pembroke*, October 10th; BERNARD RENSHAW, Fleet-Surgeon, and JOHNSTON H. ACHESON and CHARLES J. FYFE, Surgeons, to the *St. George*, October 25th; CHARLES E. GEOGHEGAN, Staff-Surgeon, to the *Defiance*, October 25th; ARTHUR A. J. M'NABB, M.B., Surgeon, to the *Ganges*, leut, October 25th; FRANCIS A. JEANS, Staff-Surgeon, to the *Cambrian*, October 16th; JOSEPH A. MOON, Surgeon, to the *Cambrian*, October 19th.

ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL W. J. S. CAMPBELL retires on retired pay, October 17th. He entered the service as Assistant-Surgeon, March 31st, 1868; became Surgeon, March 1st, 1878; Surgeon-Major, March 21st, 1880; and Surgeon-Lieutenant-Colonel, March 31st, 1888. He served with the Perak Expedition in 1875-76, receiving the Frontier medal with clasp, and with the Burmese Expedition in 1885-87, for which he was awarded two additional clasps to the same medal.

Surgeon-Lieutenant-Colonel A. W. DUKE, M.D., is promoted to be Brigade Surgeon-Lieutenant-Colonel, *vice* J. Macartney, M.D., placed on temporary half pay, December 8th. Brigade Surgeon-Lieutenant-Colonel Duke's previous commissions are dated as follow: Assistant-Surgeon, October 1st, 1868; Surgeon, March 1st, 1874; Surgeon-Major, October 1st, 1880; and Surgeon-Lieutenant-Colonel, October 1st, 1888. He has no war record in the Army Lists.

The promotion to the rank of Surgeon-Major of Surgeon Captain R. C. K. LAFFAN is antedated to February 4th, 1894.

ARMY MEDICAL RESERVE.

SURGEON-CAPTAIN E. J. LAWLESS, 4th Volunteer Battalion the East Surrey Regiment, is appointed Surgeon-Major, October 17th.

THE VOLUNTEERS.

SURGEON-LIEUTENANT A. S. PURVES, 2nd Northumberland (Percy) Artillery, Western Division Royal Artillery, has resigned his commission, which was dated June 18th, 1887.

Surgeon-Lieutenant JOHN RUSSELL, M.B., 1st Volunteer Battalion the Prince of Wales's North Staffordshire Regiment, is appointed Captain in the same corps, October 17th.

Surgeon-Captain M. H. TAYLOR, 2nd (Renfrewshire) Volunteer Battalion the Princess Louise's Argyll and Sutherland Highlanders, is promoted to be Surgeon-Major, October 17th.

Surgeon-Lieutenant W. T. BURRIE, M.B., 1st Roxburgh and Selkirk (the Border) Rifles, is promoted to be Surgeon-Captain, October 3rd.

Mr ERNEST PAUL ALPHONSE MARIETTE, M.B., is appointed Surgeon-Lieutenant to the 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment, October 10th.

Surgeon-Lieutenant A. W. BARNLEY, 1st Volunteer Battalion the Leicestershire Regiment, has resigned his commission, which was dated September 5th, 1888.

Surgeon-Lieutenant H. T. WIGHTMAN, 1st (Hallamshire) Volunteer Battalion the York and Lancashire Regiment, has also resigned his commission, which bore date October 8th, 1892.

Surgeon-Captains W. MORTIMER, V.D., and J. REID, 2nd Volunteer Battalion the Gordon Highlanders (late the 2nd Aberdeenshire), are promoted to be Surgeon-Captains, October 10th.

The War Office has approved of the extension of the service of Brigade-Surgeon-Lieutenant-Colonel JAMES DUNLOP, M.D., V.D., 3rd Lanark Rifle Volunteer Corps, until he reaches the age of 67 years.

THE MEDICAL BOARD INDIA OFFICE.

THE officers in the field for appointment to this office in January next, *viz* Sir Joseph Fayrer, are Sir John Tyler, Surgeon-Colonel Cleghorn, and Brigade-Surgeon Lieutenant-Colonel Kenneth Macleod. The appointment carries with it £600 a year.

ENLISTMENT OF EURASIANS.

IT is believed that Government sanction will shortly be given for the enlistment of Eurasians into British regiments, on the conditions that they are: (1) Unmarried; (2) physically fit, and (3) that they be accepted for short service only.

MEDICAL RESERVES FOR THE EAST.

UP PROSIM writes: The want of experienced medical officers was much felt in the late Afghan wars; the same thing will occur again. I would suggest that the military authorities approach retired medical officers of the Home and Indian establishments, to ascertain whether any of them would volunteer to go to India again in the case of great emergency. Of course such officers employed would draw their pension as usual at home, plus the full pay and allowances of their rank while abroad.

MILITARY MEDICAL TITLES.

M.D. asks which is correct: Lieutenant-Surgeon or Surgeon-Lieutenant; Colonel-Surgeon or Surgeon-Colonel? The answer is: the Warrant governing these titles puts the professional designation as a prefix throughout; hence the correct title is Surgeon-Lieutenant, etc.

A QUESTION FOR DISCUSSION.

INQUIRER writes: There are 118 retired officers of the Medical Staff liable to recall to service who do not hold appointments, and there are 49 no longer liable to recall who do. Would it not be desirable that those liable to recall should hold appointments if they desire to do so? It would keep them in touch with orders and regulations which they are apt to lose.

"*" Retired medical officers may hold appointments until 65 years of age—a limit, we think, also in other departments of the State, civil and military. Our correspondent would seek, apparently, to draw the line at 55 years of age—a limit which we think, would be bad for the State and hard on individuals. As the majority of brigade-surgeon-lieutenant-colonels are not far from 55 on retirement, he would practically debar them from retired appointments. Many do not desire such employment on retirement, and we have lately heard of more than one appointment gone a-begging.

ARTICLE 347, ROYAL WARRANT, A.M.S.

FOR facility of reference, we quote in opposite columns the original and the substituted phrases of this Article:

Original.	*Substituted.*
The appointment of Director-General of our Army Medical Department shall be for seven years, and the retirement of the other officers of our Army Medical Staff shall be compulsory at the following ages, except that if it should in any particular case be considered that the interest of the public service would be materially advanced by the further retention of a surgeon-major-general in the active list, the age for retirement of such surgeon-major-general shall be extended to 62. Surgeon-major general } 60 Surgeon-colonel } Brigade-surgeon-lieutenant-colonel } Surgeon-lieutenant-colonel } Surgeon-major } 55 Surgeon-captain or surgeon-lieutenant }	Article 347:—"The appointment of Director-General of our Army Medical Department shall be for seven years, and the retirement of the other officers of our Army Medical Staff shall be compulsory at the following ages, except that if it should in any [illegible] be considered desirable in the interests of the public service, the age of the retirement of a surgeon-major general may be extended for a period not exceeding two years: Surgeon-major-general and surgeon-colonel, 60; brigade-surgeon-lieutenant-colonel, surgeon-lieutenant-colonel, surgeon-major, and surgeon-captain or surgeon-lieutenant, 55."

APPOINTMENTS TO STATIONS.

PROGRESS writes: He can see no good reason why the home procedure in this matter should not be followed in India, unless it be that the surgeon-major-generals there wish to retain patronage in their own hands. At home the Director-General appoints officers to charge of the larger stations and to female hospitals, but otherwise leaves the distribution of medical officers in districts in the hands of principal medical officers. Manifestly this is an advantage to all concerned. The desire to manipulate patronage can be the only reason for concealing the presidency in which a medical officer is to serve until he arrives in India: the hardships attending this system to officers, their wives and families, is obvious. The Secretary of State for War promised to consider the subject; has he done so?

A CONTRAST.

OBSERVER writes: It is satisfactory to the profession that Dr. Thorne Thorne has been thanked by the Sovereign for his successful efforts to keep out cholera in this country. But why only thanks? Why not make him a peer? In Germany he would probably be made a Privy Councillor, in France a senator.

"*" The profession would be glad of the bestowal of any acceptable honour on Dr. Thorne Thorne, but we hardly think a peerage is to be desired.

MEDICAL OFFICERS AND SANITARY QUESTIONS.

MEDICUS writes: Some time ago this question was discussed in the BRITISH MEDICAL JOURNAL in connection with sanitary work at Bellast barracks. No apparent action was taken at the time, but discussion in your columns has apparently borne fruit, and led to the following change in the newly issued Queen's Regulations, Section xxi, para. 15 a: "All sanitary questions in a district which are submitted for the consideration of the General Officer Commanding should be referred to the principal medical officer, who will submit them to him, and receive his instructions. If the matter affects his staff duties, etc., he will, if so desired by the general officer, deal with the case and issue the necessary instructions."

So for the first time the position of the medical department to sanitary affairs is clearly defined. It will, of course, involve more work and responsibility, but it is a duty the department is bound to undertake and rise to the importance of. The order, too, seems to place the

administrative medical officer in a similar position to other officers on the general's staff, which hitherto he has not been, and has never signed "by order." It is to be hoped this order will not be whittled away.

*** We fully endorse the latter sentiment. The regulation would have been stronger had the conditional "should" been a "will;" but we believe regulations are drafted according to certain unalterable canons in phraseology.

MILITIA MEDICAL RESERVE.

A CORRESPONDENT is informed that this body was formed, a good many years ago, of a limited number of men of ordinary militia regiments trained in ambulance work, and affiliated for field duties with the reserve of the regular Medical Staff Corps. If he will refer to the mobilisation tables for field hospital and bearer companies in the Medical Regulations of 1890, now transferred to the general field mobilisation book, he will find mention of this reserve, the men being detailed for such duties as batmen, washermen, etc. If called up, the men would of course serve under the medical officers in charge of the units.

NAVAL MEDICAL OFFICERS' VISITING CARDS.

R.N.—We believe that the most approved method of printing the name and title is "Staff-Surgeon A. B., Royal Navy." The fact that the Admiralty addresses letters to "A. B., Esq., Staff-Surgeon, R.N., does not, it is considered, affect the question.

MEDICO-LEGAL AND MEDICO-ETHICAL.

POISON IN "PATENT" (SECRET) MEDICINES.

JUDGE LUSHINGTON had before him on October 10th, at the Wandsworth County Court, two summonses issued by the Pharmaceutical Society of Great Britain against two persons for selling poisons, they not being registered chemists and druggists. In the first case the defendant was named Briggs. Mr. Grey, who appeared as counsel for the Society, said the defendant occupied a drug store at 65, Battersea Park Road, and held himself out as a "chemist" on his labels, and traded under the name of Briggs and Co. On two occasions balsam of aniseed (Powell's) was sold by the defendant, and, as it contained poison, the present proceedings were instituted. Defendant argued that the preparation came under the head of patent medicines, and was not therefore under the Act. Mr. Grey pointed out that in law a patent medicine was a medicine for which letters patent had been taken out. The preparation in question was not a patent medicine but a proprietary medicine, and the Act, which extended to the state of a compound containing a scheduled poison as one of its ingredients, covered the present case. Ernest John Eastes, an analyst, said each bottle contained the fifth of a grain of morphine. The bottles were ounce bottles and a whole bottle given to a child would cause death. For his defence defendant pleaded ignorance of the law. The full penalty of £5 in each case was imposed and costs granted.

In the second case the defendant was Mr. Moore, a nurseryman, of 231, Upper Richmond Road, Putney. Mr. Grey said in July last defendant sold to one of the Society's representatives a gallon of Smith's weed killer, which, upon analysis, was found to contain poison. Mr. Eastes, analyst, said he had analysed the gallon of Smith's weed killer, and found it to contain nearly 2½ lbs. of arsenic. This was sufficient poison to kill from 8 000 to 10,000 persons. Defendant pleaded ignorance of the law on the subject, and asked for a mitigation of the penalty as he was now seeking work. His Honour regretted that he had no discretion in the matter, and inflicted the full penalty of £5 and costs.

LIABILITY OF POLICE FOR FEES.

K. A. B. writes: (1) A boy is knocked down by a cart and his leg broken. He is brought to my surgery by the carman and a policeman. Am I entitled to the usual police fee of 3s. 6d.? (2) A boy is knocked down by a cyclist, and is brought to my surgery by a policeman accompanied by the cyclist. I find the boy to be practically uninjured. The policeman says that if the cyclist pays my fee the matter will go no further. The cyclist professes to be unable to pay. Am I entitled to the 3s. 6d. fee from the police in this case?

*** Our correspondent is clearly entitled to a fee from the police in each of these cases. In the first, if he put up the broken leg in splints, a special fee of 10s. 6d. would probably be allowed by the police authorities if applied for. In the second case it is for the police to satisfy themselves as to the ability or otherwise of the cyclist to pay the doctor's fee, but this in no way lessens their obligation to pay it themselves or see that it is paid.

"A CURIOUS COMPLAINT."

J. L. writes: In the BRITISH MEDICAL JOURNAL of September 22nd, under the heading "A Curious Complaint," "W. T." makes a statement to which, as well as to your remarks thereon, I beg to call your attention, as "W. T." wrote to me after its publication, informing me that I was the "A." referred to, and that the statement was "a faithful record of the facts"—the inference being obvious. I trust, however, you will kindly give insertion in your columns to my emphatic repudiation of the statement of "W. T." as being anything but "a faithful record of the facts."

*** In giving insertion to the above note, it may be well to observe that "A." has been the medical adviser of the family for eight years, and repeatedly in attendance on the patient in question, and not for a few weeks only, as might be inferred from "W. T.'s" statement in the BRITISH MEDICAL JOURNAL of September 22nd, p. 678; in contradiction to which, he ("A.") affirms, on the testimony of the deceased patient's mother, that "W. T.," subsequent to his knowledge that "A." was in attendance, "made a careful examination of her daughter, and, further, requested the husband to collect and take some of the renal excretion to his house for examination, which 'W. T.' tested in his presence, and expressed an opinion as to the prospect of his wife's recovery." If such be the case, it ill accords with the natural inference to be drawn from "W. T.'s" representation in the BRITISH MEDICAL JOURNAL, and needs explanation. It is but right, moreover, to remark that "A." (the senior practitioner by many years), in an explanatory note, stated that in a recent conversation he remonstrated with "W. T." in reference to his habitual unethical conduct towards himself, whenever an opportunity occurred. Be that as it may, it is essential to a right judgment in the case that the name of the sender of the alleged urgent note received by "W. T." should be communicated to us.

"THE LADIES' FRIEND."

A CORRESPONDENT sends us the following advertisement, which, he states, appeared recently in the *Northern Daily Telegraph*:

The Ladies' Friend.
MRS. BAINES, MIDWIFE
(Diploma, St. Mary's Hospital, Manchester),
Can be consulted on all Diseases of Women.
Sample Bottle of Medicine, 2s. 6d.
Address: 93, Larkhill, Blackburn.

*** The advertisement is most objectionable. The existing law, however, provides no disciplinary control for such midwives. Any qualified practitioner who associated himself with the "ladies' friend" would be liable to prosecution for "covering."

ANOTHER CARD.

ETIQUETTE sends us a card, reproduced below, copies of which he states have been delivered at most of the houses in the town of St. Helens. It will be seen that the practitioner responsible for the circulation of this advertisement calls his practice a medical and surgical dispensary, and offers his advice free, while he makes a charge of 6d. for a bottle of medicine. Such a mode of seeking practice is, as we have frequently had occasion to observe before, professionally degrading.

Removal:
From 69 to 83, Tontine Street.

THE MEDICAL AND SURGICAL DISPENSARY.

Dr. WYSE begs to notify change of address as above and Alteration of Hours of Attendance as follows:—

Morning	... ...	9 to 11.
Afternoon	... ...	2.30 to 4.
Evening	... ...	6 to 9.
Sunday afternoon	... ...	2.30 to 4.
" evening	... ...	7.30 to 8.30.

Advice and (bottle of) Medicine ... ... 6d.

Advice Free on All Occasions.

Special Dispensary on Wednesday afternoon for Women and Children.

Vaccination Daily with Genuine Lymph.

Messages for Visits to Patient's home to be put into Letter-box or left at the Surgery, before 11 o'clock in the day.

83, TONTINE STREET, ST. HELENS.

RECOVERY OF MIDWIFERY FEES.

N. asks: A coachman's wife calls on and engages me to attend her in her approaching confinement. I book the case. Three days later a friend of the woman gives me a message from her to the effect that the lady to whom her husband is servant wishes her to be attended by her (the mistress's) own doctor; and that, therefore, my patient is obliged, however reluctantly, to decline my services. Can I claim a fee from the lady, or must I claim from the patient, trusting to the lady's sense of decency to pay for it?

*** We think, under the circumstances mentioned, that it is very doubtful whether our correspondent could recover anything from the patient, even if he thought it worth his time and trouble to sue her. Our correspondent has no legal claim against the lady to whom the patient's husband is servant.

HOLIDAY SUBSTITUTES.

A. AND B. are fellow practitioners in a town. A. sees a patient, C., for B. during annual holiday, in July, 1892. In October, 1894, C. sends for A., saying that she derived benefit from his former treatment, and would like to consult him. B., although having attended C. for some years, has not seen her for some months, but seems aggrieved on receiving A.'s note saying that C. has called him in, and that he does not suppose B. will mind.

*** The following rule is that which appertains to the above case; to which, in view of the repeated references made to us on the subject, we feel impelled to add that an officiating friend cannot be too scrupulous in courteously declining subsequent attendance on all such patients, under other than exceptional circumstances. For better lose a would-be patient than the friendly feeling of a brother practitioner.

"When a practitioner is consulted by a patient (or other member of the family) whom he has previously attended as the officiating friend or *locum tenens* of another during sickness or absence from home, he should act in strict accord with the principle laid down in Rule 9, and decline attendance, except in consultation."—*Code*, Chap. II, Sect. 5, Rule 5.

PARTNERSHIP ACCOUNTS.

RECTUS.—Messrs. Orridge and Co. (32, Ludgate Hill, London) inform us that the ordinary course is for the vendor to receive half the agreed purchase money, at the commencement of the introduction, and the remainder at the end of the introduction. The proceeds of practice during that period being equally divided after paying all expenses. The matter of board and lodging is one which must be arranged for by mutual convenience.

ABSENT FRIENDS.

SEMPER PARATUS writes: A practitioner, A., leaves home for a holiday, entrusting the whole of his practice to a brother practitioner, B., whose work is thereby much increased, so much so that but little spare time is left for B. Is B. justified in accepting an honorarium for his services; and, if so, should the amount be fixed arbitrarily, or on the basis of the amount of work done?

*** The question submitted is an exceptional one, and somewhat difficult to answer, seeing that, so far as our experience extends, it is customary for a practitioner who accepts charge of a professional friend's practice in the same town during a holiday trip to act on the simple principle of a mutual reciprocal duty, unless his absence be protracted and the work exacting and laborious; in which case an honorarium in one form or other may fairly be tendered and excepted; and such, in our opinion, should be the guiding principle in the above case. If, on the other hand, remuneration be determined on, we would suggest that it be based on that generally made to a first-class *locum tenens*.

VERITAS.—As our correspondent states that there is not the slightest foundation for the verbal statement as to his professional conduct, we think there cannot be a doubt that the assertion mentioned is slanderous.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

THE following candidates have passed the Final Examination for the Degrees of M.B. and C.M.:

W. B. Anderson, R. P. Dawson, H. W. Dun, J. A. Featherstone, J. G. Kay, C. H. D. Moore, N. Macviear (with distinction), J. C. Rees, C. Telfer, C. H. H. Cazalet, W. T. B. Fox, T. W. Gee, J. Philip, K. A. Ross, C. R. Sheward, T. Sidebottom, F. V. Thomas, W. H. Williams, W. B. Broster, A. Cowper, J. Cookson, H. T. Elliot, A. G. F. Forster, R. M. Freer, T. A. Glover, J. E. Good, S. H. Hall, J. Mackinnon, J. J. Ross, J. R. Williams, W. S. Anderson, S. P. Hyam, D. A. Farquharson, A. K. Jarratt, H. W. G. Landor, A. Selkirk, W. Bannerman, A. J. Copplestone, T. D. Forbes, H. Forrester, G. E. Gabitez, H. J. Lewis, J. C. Mackenzie, W. H. Mackenzie, J. M. N. Paton, G. B. Pitcairn, and T. E. Watson.

The following candidates have passed the first professional examination in Elementary Zoology:

F. H. Dommesse, T. L. Gilbert, G. Hamilton, E. C. J. Maddock, H. K. Paxton, A. J. Ryle, C. F. T. Scott, W. E. Tillett, and P. A. Leighton.

The following have passed in Botany and Zoology:

D. G. Barkley, and A. K. Traill.

UNIVERSITY OF DURHAM.

FACULTY OF MEDICINE.

At the Convocation holden on Saturday, September 29th, the following degrees were conferred:

Doctor in Meacine for Practitioners of Fifteen Years' Standing.—E. Birt, D. Elcum, J. T. Jones, A. Kinsey-Morgan, C. H. Penny, C. H. Phillips, G. Rice, and R. Samuel.

Doctor in Medicine.—J. V. Blachford, T. Carr, W. J. Durant, G. Elam, W. A. Hatton, G. G. Howitt, and G. J. C. Thomson.

Bachelor in Medicine (M.B.).—Honours (Second Class): T. Horton, W. E. Alderson, J. C. Hoyle, E. J. Brewis, J. W. Summerhayes, R. A. Dunn, and A. E. Merewether.

Pass List.—C. H. Bryant, H. S. Byers, F. A. Cooke, L. Harman, J. O. Hollick, H. G. McAllum, R. A. Morris, E. F. J. Norman, H. Simmons, F. H. Simpson, P. H. Wardell-Johnson, W. M. Whitehouse, F. J. I. Willey, P. Withers, C. R. Wood, and E. E. Woodhouse.

Bachelor in Surgery (B.S.).—W. E. Alderson, E. J. Brewis, C. H. Bryant, R. A. Dunn, T. Horton, J. C. Hoyle, W. D. Johns, H. G. McAllum, A. E. Merewether, R. A. Morris, E. F. J. Norman, H. Simmons, F. H. Simpson, P. H. Wardell-Johnson, W. M. Whitehouse, F. J. I. Willey, P. Withers, C. R. Wood, and E. E. Woodhouse.

Bachelor in Hygiene (B.Hy.).—R. B. Dunman and E. Mitchell.

Diploma in Public Health (D.P.H.).—H. Renney and H. Shore.

ROYAL COLLEGE OF SURGEONS.

A QUARTERLY council was held at the College on October 11th; Mr. J. W. Hulke was in the chair. The minutes of the last Council were read and confirmed.

On the recommendation of the Museum Committee, it was resolved that the sum of £100 should be expended in purchasing the collection of skulls in the possession of the Anthropological Institute.

A report was received from the Committee on the Annual Report of the Council. In accordance with their recommendations, the following rules for the conduct of the meetings of Fellows and Members were adopted, to be added to the regulations of the Council as Section xxv:

1. A meeting of Fellows and Members shall be summoned annually for the Thursday following the ordinary meeting of the Council in November, or for such other time as the Council may determine.

2. Other meetings may be summoned, either with or without a requisition, at such times and for such objects as may by the Council be thought desirable.

3. Such requisition shall be signed by not less than thirty Fellows and Members, or Fellows or Members, and shall contain a statement of the object or objects for which the meeting is requested.

4. At the annual meeting the report of the Council shall be presented.

5. Motions introduced by Fellows or Members
   (*a*) shall have direct reference to the object or objects for which the meeting has been summoned;
   (*b*) shall be signed by the mover, or the mover and other Fellows or Members;
   (*c*) shall be received by the Secretary not less than ten days before the meeting.

6. The President shall determine what motions are in order, and direct the arrangement of the agenda.

7. The quorum of each meeting shall be thirty, and if at the expiration of fifteen minutes from the hour for which the meeting has been summoned a quorum be not present the meeting shall not take place. If, after the commencement of the meeting, it shall be found upon a count that a quorum be not present, the meeting shall be dissolved.

8. The President or one of the Vice Presidents, or in their absence the senior member of the Council present, shall be Chairman of the meeting, and the Chairman's decision shall be final upon all points of order which may arise.

9. Notice of each meeting shall be given by advertisement.

10. The agenda paper shall be prepared three days before the meeting, and shall be issued to any Fellow or Member who shall have applied for it.

11. A record of the proceedings shall be kept by the Secretary.

The Committee further recommended that the title and first clause of Section viii should be altered so that it would read: Section viii. *Annual Report of the Council.*—1. A report to the Fellows and Members shall be made annually by the Council.

Dr. Edward Seaton was appointed an Examiner for Part II of the Examination of Public Health. Mr. Bryant was re-elected to the Committee of Management, and Mr. Bowlby to the Laboratories Committee.

It was referred to the Dental Board to consider and report to the Council upon a recommendation that candidates rejected for the diploma in Dental Surgery should be required to produce certificates of additional study to the satisfaction of their teachers before presenting themselves for re-examination.

The returns of the results of the several examinations during the past year have been issued, and from them the following percentages of passes have been compiled:—

	Number of Candidates.	Percentage of Passes.
First F.R.C.S.	160	38
Final F.R.C.S.	99	54
First Conjoint (Five Years' Regulations):		
Chemistry	497	57
Pharmacy	197	70
Biology	486	67
Elementary Anatomy	467	80
Second Conjoint (Four Years' Regulations):		
Anatomy	722	60
Physiology	702	57
Second Conjoint (Five Years' Regulations):		
Anatomy and Physiology	89	66
Third Conjoint:		
Medicine	589	58
Surgery	543	57
Midwifery	589	77
Dental Surgery	129	68

The following gentleman having previously passed the necessary examinations and conformed to the by-laws and regulations, and having now attained the legal age of 25 years, was, at the quarterly meeting of the Council on Thursday, October 11th, admitted a Fellow of the College:

William Watson Griffin, M.B., B.Ch. Otago, of Dunedin Hospital and Otago University, New Zealand, and London Hospital; diploma of Member dated November 15th, 1893.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

THE following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on Monday, October 8th:

Passed in Anatomy and Physiology.—W. Rains and F. W. E. Courtenay, students of Owens College, Manchester; J. W. Watson, J. E. Long, and R. Willcox, University College, Bristol; C. C. Pratt, St. George's Hospital and University College, Bristol; R. M. Clark and W. J. MacKeown, Queen's College, Belfast, and Royal University of Ireland; T. J. Kenny, Queen's College, Belfast, and the Catholic University, Dublin; J. Battersby, St. Mungo's College, Glasgow; C. Black, Firth College, Sheffield; W. J. H. Williams, St. Mary's Hospital; O. C. Andrews, Mason College, Birmingham; R. T. Bailey,

University College, Liverpool; and A. E. Gladstone, St. Thomas's Hospital.

Passed in Anatomy only.—E. T. McDonnell, Queen's College, Belfast, and the Catholic University, Dublin; and W. E. Fairweather, Owens College, Manchester.

Passed in Physiology only.—T. P. Yates and H. Blackemore, Owens College, Manchester; T. J. Davies, Middlesex Hospital; P. H. Stratton, Mason College, Birmingham.

Fifteen gentlemen were referred in both subjects, 4 in Anatomy only, and 2 in Pupsiology only.

Tuesday, October 9th:

Passed in Anatomy and Physiology.—P. Wood, C. F. Winkfield, E. F. Palgrave, C. W. Mainprise, and G. R. Baker, St. Bartholomew's Hospital; A. E. Weld, Charing Cross Hospital; F. L. A. Greaves, St. Thomas's Hospital; H. J. Chater and J. B. Addison, St. Mary's Hospital; G. C. Owsley and M. H. Way, Guy's Hospital; R. B. Stamford, Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology; R. C. Rumbelow, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology; R. J. Stilwell, Westminster Hospital; and J. H. Morton, London Hospital.

Passed in Anatomy only.—E. W. Woodbridge, St. Bartholomew's Hospital; T. J. Vick, Guy's Hospital; and A. L. H. Smith, University College, London.

Passed in Physiology only.—H. C. Harrison, St. Bartholomew's Hospital; A. C. Bird, St. Thomas's Hospital; S. Wellby, Oxford University and St. Thomas's Hospital; J. H. C. Fagan, Charing Cross Hospital and Mr. Cooke's School of Anatomy and Physiology; H. Markby, Yorkshire College, Leeds; L. A. W. French, University College, London; and M. I. Baker, St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Fifteen gentlemen were referred in both subjects and 4 in Anatomy only.

Wednesday, October 10th:

Passed in Anatomy and Physiology.—D. B. Behramjee, Grant Medical College, Bombay; C. H. R. Provis, St. Bartholomew's Hospital; H. J. Gibbs, Madras Medical College; C. C. Smith, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology; J. G. Owen, Charing Cross Hospital; R. M. Cooper, Western University, Ontario, Canada; and A. Brewer, Freiburg and Munich Universities.

Passed in Anatomy only.—J. B. A. Treusch, Guy's Hospital; F. J. Waldmeir, Protestant College, Beyrout, and London Hospital; R. L. Storrar, St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; J. H. Pegg, Cambridge University and St. Thomas's Hospital; G. L. Thornton, St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology; A. O. Way, H. G. McKinney, and H. E. Lawrance, St. Bartholomew's Hospital; and R. L. Wilcox, University College, London.

Passed in Physiology only.—J. H. Powell, R. D. Dobie, and A. M. Ross, King's College, London; A. E. Street and L. N. Lloyd, Charing Cross Hospital; S. H. Longhurst, J. E. H. Parsons, G. B. Pearson, and J. Pousonby, Guy's Hospital; B. Lewitt, St. Mary's Hospital; H. R. Rice, Mason College, Birmingham, and London Hospital; T. B. Jones, St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; and D. Price, St. Thomas's Hospital.

Twelve gentlemen were referred in both subjects, 8 in Anatomy, and 5 in Physiology.

Thursday, October 11th:

Passed in Anatomy and Physiology.—H. W. Henshaw and A. F. Page, students of St. Bartholomew's Hospital; J. H. Jones, Guy's Hospital; H. C. Whiteside, Middlesex Hospital; T. C. Reece, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology; R. W. Clark, London Hospital; T. Pearson, Charing Cross Hospital; A. Sandner, Rush Medical College, California and St. Mary's Hospital; R. D. Dalal, Grant Medical College, Bombay.

Passed in Anatomy only.—S. G. Butler and E. W. Clapham, London Hospital; G. S. Haynes, W. H. Crossley, W. L. Burn, and S. Roach, St. Bartholomew's Hospital; W. H. Gray, University College, London; A. J. A. Lennane, University College, London, and Mr. Cooke's School of Anatomy and Physiology; A. G. Eastment, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology; R. S. Rowland, Cambridge University and Guy's Hospital; E. T. Longhurst, St. Mary's Hospital; and C. F. Backhouse, King's College, London.

Passed in Physiology only.—L. J. Bartlett, St. George's Hospital; R. T. Richmond, Cambridge University and Mr. Cooke's School of Anatomy and Physiology; H. C. Meacock, St. Thomas's Hospital; B. Holländer, King's College, London; A. E. B. Crosby, Guy's Hospital; and J. J. Haverson, London Hospital.

Six candidates were referred to both subjects.

OBITUARY.

INSPECTOR-GENERAL MARK STYLE.

INSPECTOR-GENERAL MARK STYLE, who died on September 30th, aged 77, at Tivoli House, Cheltenham, entered the Bombay Medical Service in 1842, and early in his career served under the late Sir Charles Napier, in Scinde, being present with the Light Company of H.M.'s 22nd Regiment at the attack by the Ameers on the Residency of Hyderabad in 1843. He afterwards became Vaccinating Officer in Guzerat, and in 1857 was appointed Surgeon in Medical Charge of the 1st Grenadier Regiment of Bombay Native Infantry. He retired from the service with the rank of Surgeon-Major in 1875. Inspector-General Mark Style married in 1856, Marian, daughter of the late Sir Henry Meredyth Jervis-White-Jervis, the second baronet, and aunt of the present baronet. He leaves several sons and daughters, the eldest of whom, Mark Style, M.R.C.S., L.R.C.P., of Moreton-in-Marsh, Gloucestershire, is married to a daughter of the late Major-General Frederick English, C.B.

DR. M. ROSSBACH, some time Professor of Medicine and head of the Medical Clinic of the University of Jena, passed away last week at Munich, after a long illness, at the age of 52. He qualified as *Privat docent* at Würzburg in 1869, and was appointed Extraordinary Professor of Pharmacology in the same University in 1874. In 1882 he accepted a call to Jena, and there he continued to teach till illness compelled him to resign his chair in 1892. Professor Rossbach's name is associated with a number of researches, chiefly in the domain of pharmacology and therapeutics. His most important work is his *Lehrbuch der physikalischen Heilmethoden*, the first edition of which was published in 1881 and the second in 1892. He also collaborated with Professor Nothnagel in the great German textbook of materia medica and therapeutics, *Handbuch der Arzneimittellehre*, of which a seventh edition recently appeared.

DEATH has removed a very faithful officer of the Obstetrical Society of London. On October 11th, Mr. RICHARD WADE SAVAGE, the Librarian, died suddenly at his residence. Mr. Savage had held his appointment over fifteen years, and much hard work fell to his lot, as he had the superintendence of the candidates at the quarterly examination of midwives, and also chanced to be Librarian when the old Berners Street Societies moved to Hanover Square, and much trouble resulted as to legal deeds, new furniture, and the retention of the old bonds between the Societies. Lastly, he prepared an excellent second general *Index* of the Obstetrical Society's *Transactions*, and fortunately lived to see it published this year, as he partially recovered from a grave illness with which he was stricken a few years since. His health, however, though sufficiently good to allow him to complete the important piece of work just noted, was never perfectly restored, and after a short but severe illness a few weeks since he was left extremely weak and subject to syncope, one attack proving fatal. He was aged 49, and leaves a wife and son. His father was a medical man, Mr. J. W. Savage, of West Bromwich.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession who have recently died are Dr. Laureano Perez Arcas, Professor of Zoology, and Dean of the Faculty of Science in the University of Madrid; Dr. B. F. Helper, formerly President of the Kansas State Medical Society and editor of the *Kansas Medical Journal*; Dr. Ferdinand Dinstl, formerly Physician to the General Hospital, Vienna, who was decorated some years ago with the Gold Service Cross with Crown, and with the large Gold Medal of Honour (Civil); Dr. Victor Widal, retired *Médecin-Inspecteur* of the French Army; and Dr. G. Zizold, Professor of Bacteriology in the University of Guatemala.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,860 births and 3,346 deaths were registered during the week ending Saturday, October 13th. The annual rate of mortality in these towns, which had been 16·1 and 16·0 per 1,000 in the preceding two weeks, rose again to 16·7 last week. The rates in the several towns ranged from 9·3 in Croydon and 11·4 in Norwich and in Birkenhead to 23·1 in Liverpool, 23·4 in Bolton, and 26·2 in Preston. In the thirty-two provincial towns the mean death-rate was 17·5 per 1,000, and exceeded by 2·0 the rate recorded in London, which was 15·5 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2·0 per 1,000; in London the rate was equal to 1·7, while it averaged 2·3 per 1,000 in the thirty-two provincial towns, and was highest in Burnley, Bolton, and Sunderland. Measles caused a death-rate of 2·6 per 1,000 in Derby and 3·8 in Sunderland; scarlet fever of 1·2 in Wolverhampton and 1·6 in Burnley; whooping-cough of 1·1 in Oldham; "fever" of 1

in Preston and 1.5 in Sunderland; and diarrhœa of 2.7 in Burnley and 3.5 in Bolton. The 92 deaths from diphtheria in the thirty-three towns included 54 in London, 8 in West Ham, 6 in Manchester, 5 in Liverpool, 3 in Cardiff, and 3 in Leeds. Three fatal cases of small-pox were registered in Liverpool and 2 in Birmingham, but not one in any other of the thirty-three large towns. There were 63 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, October 13th, against 100, 98, and 84 at the end of the preceding three weeks; 8 new cases were admitted during the week, against 23, 14, and 11 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,171, against 2,060, 2,084, and 2,145 at the end of the preceding three weeks; 262 new cases were admitted during the week, against 252 and 258 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, October 13th, 920 births and 501 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had risen from 14.9 to 15.9 per 1,000 in the preceding three weeks, further increased to 17.6 last week, and was 9.9 per 1,000 above the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 8.7 in Leith to 24.1 in Perth. The zymotic death-rate in these towns averaged 2.1 per 1,000, the highest rates being recorded in Glasgow and Perth. The deaths registered in Glasgow included 6 from diphtheria, 7 from scarlet fever, and 5 from "fever." Two fatal cases of diphtheria were recorded in Edinburgh.

FEES FOR VISIT TO SUPPOSED LUNATIC.

District Medical Officer writes to say that he received a medical order marked "Urgent—supposed insanity." He immediately visited the case, but did not find sufficient evidence of mental derangement to enable him to certify for removal to an asylum, and notified this to the relieving officer. He asks is he entitled to the fee usually allowed for certificates of insanity?

*** We are of opinion that in this case our correspondent is not entitled to any fee, as he was not called in by, nor did he make any report to, a magistrate on the case. We are unable to see that he was called upon to notify the result of his visit to the relieving officer; had he not done this it would have been the duty of that official to bring the case under the notice of a magistrate, who would probably have called our correspondent to his assistance, and would then have had the power to order him a fee for his opinion on the case.

REGULATIONS FOR MEDICAL OFFICERS OF WORKHOUSES.

J. C., who is a workhouse medical officer, may assume that if he has Glen's *Consolidated Orders*, 10th edition, Dr. Sheen's book on *The Workhouse Medical Officer*, and Dr. Dolan's articles on Workhouses and Infirmaries, he is in possession of the most important publications on the medical management of workhouses, and ought not to be at a loss for guidance in the performance of his duties. There is a Poor law Medical Officers' Association, and our correspondent should address the Secretary, 3, Bolt Court, Fleet Street, London, E.C.

VENTILATION OF MAIN SEWERS.

Mr. Andrew Reid.—If the sewer is well laid and flushed street-level ventilating openings, at intervals of 50 to 100 yards, usually prove satisfactory in wide streets. In very narrow streets it would be proper to substitute ventilating shafts, of large calibre, opening above the roofs of houses; and the same plan is advisable where particular openings are offensive, if attention to flushing fails to effect a remedy. The fact of the sewers being periodically blocked by the tide in the particular case stated obviously increases the necessity for ventilating them, and, under such conditions, shafts are likely to be required at many points. We are unable to say what has been done at Torquay or Scarborough.

FEES FOR DOUBLE NOTIFICATIONS OF DIPHTHERIA.

Suffolk writes to say that he attended two cases of diphtheria for several days, in conjunction with a brother practitioner, and that both of them notified the two cases. The guardians now refuse to pay the full fee to both practitioners, but offer one-half to each, namely, 1s. 3d. per case. He asks whether he ought to sue for the full fee?

*** It is a statutory duty for each practitioner to notify, and equally so for the sanitary authority to pay to each the prescribed fee. To halve it is absurd. The authority may be unwilling to pay for a second (and to them, perhaps, useless) notification, just as the second practitioner may wish to be spared the trouble of sending it; but until the latter is relieved from his legal obligation to notify, we see no reason why he should not claim the statutory fee for performing a statutory duty. It would be satisfactory to have this principle enforced in a test case for the enlightenment of sanitary authorities generally, but the enforcement is likely to be a troublesome and unprofitable task.

THE NOTIFICATION OF INFECTIOUS DISEASE.

The medical officer of health for Fulham made application to a magistrate recently under the following circumstances:

A case of scarlet fever was notified to him, and he wrote to the medical man who gave the certificate, asking for some information, but received no answer. On calling at the house of the patient he was refused admission. It appears there was reason to suppose the child was not properly isolated, and Mr. Plowden, the magistrate, expressed the opinion it was extraordinary that the medical man should refuse to give information, and directed a constable to accompany the medical officer to the house, to point out to the mother the serious responsibility incurred by refusing to admit him.

MEDICAL NEWS.

Donations.—Messrs. Thomas De la Rue and Co. have given fifty guineas towards the sum of £2,000 required by the Royal Chest Hospital, City Road.

The Royal College of Physicians of Edinburgh have sent in a report to the Public Health Committee of the Town Council indicating opposition to the idea of extension of the City Fever Hospital on its present site.

The National Health Society is now organising a course of lectures, to begin on October 31st, on Home Sanitation. The lectures will be delivered at the offices of the Society, 53, Berners Street, by Mrs. Clare Goslett, an Associate of the Sanitary Institute, and will deal with dangers to health and how to avoid them.

A new infirmary, built by the guardians of the Lewisham Union, was opened with some ceremony on October 10th. The buildings are designed to accommodate 372 patients, and the total cost was £72,000, or £193 per bed, including the land.

The Peninsular and Oriental Steam Navigation Company, on Saturday, October 13th, successfully launched a large new passenger steamer from the yard of Messrs. Caird and Co., of Greenock. This steamer, which is named the *Simla*, is intended for their India, China, and Australia mail services. She has a gross registered tonnage of nearly 6,000 tons, and, besides having accommodation for 145 saloon passengers, has a large cargo capacity.

St. George's Hospital.—The following Entrance Scholarships have been awarded in the St. George's Hospital Medical School: A scholarship of £145, in Arts, open to sons of medical men only, to Mr. Thomas Miller Neatby, late of St. John's College, Cambridge. Scholarships of £85, open to Oxford and Cambridge men only, to Mr. George Trustram Watson, of St. Peter's College, Cambridge, and Mr. John Lamplugh Kirk, of Christ's College, Cambridge.

The Japanese Government and the Health of its Soldiers.—We learn from the *Sei-I-Kwai Medical Journal* of Tokio that every Japanese soldier taking part in the Corean campaign was vaccinated before being sent to the front. Dr. C. Ishiguro, Surgeon-General of the Japanese army, minutely questioned all officers and men invalided home from Corea as to the climate, food supply, and general sanitary conditions of the country, and embodied the answers in a report which he submitted to His Imperial Majesty the Mikado. These facts speak well for the enlightened attention which the Japanese bestow on everything connected with the health of their soldiers.

Torquay Medical Society.—At a special meeting of this Society on October 5th, Dr. Douglas Powell delivered an address on "A Right Perspective in Medical Thought and Practice." The annual dinner was held on the same evening. At the ordinary general meeting the following officers and Council were elected: *President*, Thomas Finch, M.B.; *Vice-President*, Mr. P. H. Gardner; *Honorary Secretary*, Mr. G. Young Eales (re-elected); *Honorary Librarians*, Mr. A. E. Watson and Dr. Wrinch; *Honorary Auditors*, Dr. Humphreys and Mr. G. Todd; *Council*, Drs. Pollard and Stabb, Mr. Odell and Mr. Thistle.

Newport Medical Society.—The inaugural meeting of this society, which was formed on June 20th, was held at the Newport and Monmouthshire Infirmary on October 3rd, Dr. A. G. Thomas in the chair. The following were elected officers of the society for the ensuing session:—*President:* B. Davies, M.D., F.R.C.S. *Vice-President:* A. G. Thomas, M.D. *Honorary Secretary:* W. Basset. *Committee:* Messrs. R. E. W. Brewer, O. E. B. Marsh, G. A. Davies, H. R. Hudson. The house-surgeon of the infirmary, Dr. S. H. Lee, was appointed honorary librarian. The business consisted chiefly in a general consideration of the future of the newly formed Society, and it was decided to adjourn the meeting, to allow time for the Committee to draft rules, etc. Votes of thanks to the directors of the infirmary and to the Chairman brought the meeting to a close.

THE YORK MEDICAL SOCIETY.—After the delivery of Sir J. Crichton-Browne's address, to which we refer elsewhere, a banquet was held in the De Grey's room. The Lord Mayor of York and the city members, Mr. J. C. Butcher and Mr. Frank Lockwood, Q.C., being among the guests. In reply to the toast of his health, Sir J. Crichton-Browne advocated the establishment in York of a Clinical Research Institute, under the management of the Society.

THE LATE DR. WILLIAM RICHARDS.—It has been decided to raise a fund to perpetuate the name of the late Dr. William Richards, of Birmingham, by means of a suitable memorial. The fund will be invested in the name of two trustees, and the interest will be given annually or biennially to found a prize, to be competed for by student members of the Queen's College Medical Society, Birmingham. Students will be required to send in a paper by a fixed date, and the prize paper will be read at a special meeting of the Society. Should the Society cease to exist as the Queen's College Medical Society, or altogether become extinct, the fund will be allocated to form the nucleus for a special prize at the Queen's Hospital. Subscriptions can be sent to Dr. John C. Grinling, honorary secretary, 26, Broad Street, Birmingham: or to the Treasurer, Mr. Arthur Hulme, at the Queen's Hospital, Birmingham.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly Court of the Directors of this Society was held last week under the presidency of Sir James Paget. The deaths of two ordinary and one honorary member were announced, and three new members were elected. Applications for relief were read from 53 widows, 9 orphans, and from 4 orphans on the Copeland Fund; £1,173 10s. was recommended for distribution at the next Court. At Christmas a present of £5 will be made to each widow and to each orphan on the Copeland Fund, and of £2 to each orphan. The death was announced of a widow who had been in receipt of grants since 1865; she had received in all £1,180, the sum subscribed by her husband having been £28. A special grant of £26 was recommended to be made to a widow at the next annual meeting.

THE MIDWIVES' REGISTRATION ASSOCIATION. — The first annual report of this Association states that the number of members is now 339, and includes practitioners residing in all parts of the country and engaged in various departments of practice. The report states that schedules have been circulated for the purposes of obtaining information as to the training and practice of midwives in different parts of the country, and that a considerable number have been returned. The draft scheme for dealing with the question of the registration of midwives, which has been circulated and published, is still under consideration; but a hope is expressed that it will serve to remove most if not all of the serious objections to legislation which have been urged by members of the medical profession. The secretaries of the Association are Dr. Boxall and Dr. F. R. Humphreys, 27, Fellows Road, London, N.W.

THE NIGHTINGALE FUND.—From the report of this fund for 1893 issued on Wednesday, we learn that thirty-three nurses trained by the fund were entered on its register during the year. All the nurses but one were taken on to the staff of St. Thomas's Hospital, the exception being a nurse engaged by the Metropolitan and National Nursing Association to be trained as a district nurse in connection with the Queen Victoria Jubilee Institute for Nurses. At St. Marylebone Infirmary eleven nurses were added to the staff, being all those who had completed their training during the year. A list is given of the numerous appointments obtained by former nurses of the fund during the year. Special thanks are given to Dr. Ord. Dr. Sharkey, and Mr. Lunn for their lectures to the nurses, and to Mr. W. R. Dunstan for instruction in chemistry.

MEDICAL VACANCIES.

The following vacancies are announced:

BOSCOMBE HOSPITAL, Shelley Road, Boscombe, Bournemouth.—House-Surgeon, unmarried. Salary, £80 per annum, with board and residence. Applications to the Honorary Secretary by October 30th.

CARNARVONSHIRE AND ANGLESEY INFIRMARY AND DISPENSARY, Bangor.—House-Surgeon. Must be registered to practise in Medicine and Surgery, and have a knowledge of the Welsh language. Salary, £70 per annum, with board and lodging. Applications to the Secretary, before October 27th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—Two Assistant Surgeons. Applications to the Secretary by November 5th.

CHARING CROSS HOSPITAL.—Surgical Registrar; must be qualified to practise. Salary, £40 per annum. Applications to the Chairman, Medical Committee, by October 29th.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's Buildings, Holborn.—Honorary Physician; must be F. or M.R.C.P.Lond. Applications to W. K. Taunton, Honorary Secretary, by October 27th.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Appointment for six months. No salary, but residence, board, and washing provided. Applications, with certificate of registration and copies of testimonials, on or before October 27th to the House-Governor.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—House-Physician. Salary, £60 per annum, with board, lodging, and washing. Applications to Lewis H. Glenton Kerr, Secretary, by October 23rd.

HALIFAX INFIRMARY AND DISPENSARY.—House-Surgeon. Unmarried. Salary, £50 per annum, advancing £10 per annum up to £100, with residence, board, and washing. Applications to Oates Webster, Secretary, by October 24th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Surgical Registrar and Anæsthetist. Appointment for one year, an honorarium of £40 being voted at the expiration of that term. Candidates must appear before the Joint Committee on October 24th.

HOSPITAL FOR WOMEN AND LYING-IN INSTITUTE, Brighton.—House-Surgeon, unmarried, and under 30 years of age. Salary, £30 per annum, with board and rooms. Applications to the Secretary by November 15th.

LONDON LOCK HOSPITAL, Harrow Road, W.—House-Surgeon. Salary, £30 per annum, with board, lodging, and washing. Applications to the Secretary before October 23rd.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer, doubly qualified. Appointment for six months. No salary, but board, washing, and residence provided, and an honorarium of 5 guineas on satisfactory completion of the term of appointment. Applications to E. Wilson Taylor, Secretary, by November 2nd.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT, Bowdon, Cheshire.—Resident Medical Officer. Salary, £60 per annum, with board, apartments, and washing. Applications to C. W. Hunt, Secretary, by October 29th.

MASON COLLEGE, Birmingham.—Professorship of Midwifery. Applications to G. H. Morley, Secretary, before October 27th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the South-Western and Fountain Hospitals situated in London Road, Stockwell, and Tooting Grove, Lower Tooting, S.W. Salary, £15 per month, with board, lodging, attendance, and washing in each case; must be doubly qualified. Applications, on forms supplied, to be sent to the offices of the Board, Norfolk House, Norfolk Street, Strand, W.C., by October 25th for the former, and October 24th for the latter.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead.—Assistant Physician. Candidates must be graduated in Medicine of a University of the United Kingdom or Fellows or Members of the Royal College of Physicians of London. Applications to L. F. Hill, M.A., Secretary, at the Office, before November 3rd.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road, N.W.—Resident Medical Officer and Assistant Resident Medical Officer. Salary, £50, attached to the senior post. Appointments for six months. Applications to Alfred Craske, Secretary, by October 29th.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow (Dispensary).—Extra Honorary Surgeon. Applications to M. P. Fraser, 91, West Regent Street, Glasgow, by October 26th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Assistant Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Applications to J. Harrold, Secretary, before October 24th.

ROYAL ISLE OF WIGHT INFIRMARY AND COUNTY HOSPITAL, Ryde.—House-Surgeon and Secretary, doubly qualified. Salary, £60 per annum, with board, lodging, etc. Applications to the Secretary by October 20th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand, W.C.—Two Assistant Surgeons. Applications to T. Beattie Campbell, Secretary, by November 3rd.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W.—Resident Medical Officer, doubly qualified. Salary, £105 per annum, with residence and attendance; and a Physician Accoucheur. Applications to H. Peter Bodkin, Honorary Secretary, 23, Gordon Street, Gordon Square, by October 22nd.

SMEDLEY'S HYDROPATHIC ESTABLISHMENT, Matlock. — House-Physician; must be under 30 years of age. Appointment for six months. Honorarium, £40, with extension, if mutually desired, at the rate of £120 per annum. Board, lodging, etc., provided. Applications to the Secretary by October 30th.

STOURBRIDGE DISPENSARY.—House-Surgeon and Secretary. Must have a qualification in Medicine and Surgery from one of the Colleges

of England, Scotland, or Ireland. Salary, £120 per annum, with furnished rooms, coal, and gas, with an allowance of £25 for travelling expenses. Applications to T. F. Bland, Honorary Secretary, Norton, Stourbridge, before October 24th.

SUNDERLAND INFIRMARY.—Honorary Physician. Applications to the Chairman of the Medical Board by November 5th.

UNIVERSITY COLLEGE, London.—Surgical Registrar. Applications to J. M. Horsburgh, M.A., Secretary, by October 22nd.

WEST RIDING ASYLUM, Wakefield.—Two Resident Clinical Assistants. Appointments tenable for six months. Board and furnished apartments provided. No salary. Applications to the Medical Superintendent.

MEDICAL APPOINTMENTS.

ASHBY, T. H., M.B., L.R.C.P.Lond., appointed Medical Officer for the Workhouse of the Shardlow Union, *vice* R. T. Forbes, M.B., C.M.Glasg., resigned.

BARNES, E., M.D.Aberd., appointed Junior House-Surgeon to Ancoats Hospital, Manchester, *vice* J. L. B. Dixon, resigned.

BELLSON, Mr., appointed Medical Officer for the Bampton District of the Tiverton Union, *vice* T. A. Guinness, L.R.C.P.I., M.R.C.S.Eng., resigned.

BIBBY, Mr. James R., appointed Medical Officer for the No. 2 District of the Gloucester Union, *vice* J. J. S. Johnstone, M.D.Edin., resigned.

BRACEY, W. E., L.R.C.S., L.R.C.P.Edin., appointed Assistant House-Surgeon of Birmingham General Hospital.

BRODRICK, C. C., L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer of Health to the Tavistock sanitary Authority.

COLLIER, J. H., M.B., C.M.Aberd., L.R.C.P., L.R.C.S., L.M.Edin., L.F.P. and S.G., etc., appointed Resident Medical Officer Sheffield Union Hospitals.

CRAWFORD, Cyril R., L.R.C.P., M.R.C.S., appointed House-Physician to the Sussex County Hospital, *vice* W. A. Mallam, M.R.C.S., L.R.C.P. Lond., resigned.

CRESSY, George John, L.R.C.P., L.R.C.S.I., reappointed Medical Officer of Health to the Warsop Local Board.

CROSBY, H. M., M.B., C.M.Edin., appointed Assistant House-Surgeon at the Birmingham General Hospital.

DICK, James, M.D.Glasg., reappointed Medical Officer of Health to the Harrington Local Board.

DIXON, James L. B., M.B., Ch.B.Vict., appointed Assistant Medical Officer of the Crumpsall Workhouse, and also to the Workhouse Receiving and Casual Wards, New Bridge Street, Manchester.

FISH, C. E., B.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P., appointed House-Physician to the City of London Hospital for Diseases of the Chest.

GOULD, John Edwin, M.D., L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health for the Borough of Chesterfield.

GRAY, Hampton, M.D.Dub., appointed Medical Officer to the Great Northern Railway, Armagh.

GREEN, C. A. L., F.R.C.S.Eng., M.D.Heid., appointed Resident Surgical Officer of the Birmingham General Hospital.

HICKS, Mr. T. W., appointed Medical Officer for the Sixth District of the Barnet Union.

JONES, Benjamin Evans, L.R.C.P. and S.Edin., reappointed Lecturer on Ambulance and Sick Nursing to the Fylde Rural Districts Technical Committee.

KEMPE, C. M., M.R.C.S.Eng., reappointed Medical Officer of Health to the Shoreham Local Board.

KNAPP, E. M., L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health for Rose.

LOGAN, Thomas, M.D.Aberd., reappointed Medical Officer of Health to the North Bierley Local Board.

MACPHAIL, J. F., M.A., M.B., appointed House-Surgeon to the Carlisle Dispensary.

MEAKIN, Harold B., M.R.C.S., L.R.C.P., appointed Senior House-Surgeon to the Metropolitan Hospital, Kingsland Road, *vice* W. E. Miles, F.R.C.S., resigned.

MIDDLEBROOK, Mr. Edwin, appointed Medical Officer for Warkings and Wistow District of the [illegible] Union.

MOON, E. F. W., L.R.C.P., appointed Assistant Medical Officer to the Derby Borough Asylum.

POWERS, C. H., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health for the District of the Holme Cultram Urban Sanitary Authority.

ROBINSON, H., M.B., C.M., appointed Medical Officer to the Sculcoats Union Workhouse, Hull.

ROSE, John, M.A., M.B., M.D.Aberd., L.R.C.S.Edin., appointed Honorary Consulting Surgeon and Member of the Board of Management of the Chesterfield and North Derbyshire Hospital.

STEED, John, M.B., C.M.Edin., appointed House-Physician of Birmingham General Hospital.

VINTRAS, G. C. Louis, B.Sc.Paris, M.B.Durh., L.R.C.P.Lond., appointed Physician to the French Hospital, Shaftesbury Avenue, *vice* Armand Ruffer, M.D., resigned.

WATERS, Harry G., L.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant House-Surgeon to the Hull Royal Infirmary.

WATSON, Henry, M.D.Aberd., reappointed Medical Officer for the Fifth District of the Norwich Union.

WHITE, J. W., L.R.C.P.I., L.F.P.S.Glasg., M.R.C.S.Eng., appointed Medical Officer for the No. 2 District of the Bedminster Union.

WRIGHT, William Hy., L.R.C.P.I., M.R.C.S.Eng., reappointed Medical Officer of Health to the Alvaston Local Board.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields. 1 P.M.—Mr. R. Marcus Gunn: Clinical Examination of the Eye. Bacteriological Laboratory, King's College, W.C., 3 to 5 P.M.—Lecture: Anthrax and Malignant Œdema. Practical Work: Staining Sections. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. G. Charles Wilkin: Nasal Polypi.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Marmaduke Sheild: Ulcerations of the Duodenum, with an account of Two Cases in which Laparotomy was Performed. Mr. C. B. Lockwood: Additional Cases of Perforative Ulcer of the Duodenum. Mr. Harrison Cripps: Intestinal Anastomosis.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Mr. C. B. Lockwood: The Surgical Treatment of Diffuse Septic Peritonitis, with successful cases.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Hyslop: Delusional Insanity; Paranoia.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. Sidney Martin: Cases of Pleurisy. Royal London Ophthalmic Hospital, 8 P.M.—Mr. A. Quarry Silcock: Myopia, with Illustrative Cases.

HUNTERIAN SOCIETY, 8.30 P.M.—Dr. Fred. J. Smith: The Treatment of Chorea, with especial reference to the Hypodermic Use of Arsenic. Dr. Arnold Chaplin: The Treatment of Fœtid Expectoration by a New Method.

POST-GRADUATE COURSE, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Abraham: Cases of Skin Disease.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, 3 P.M.—Lecture by Dr. Gowers.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Dr. Buzzard: Cases in Hospital. Hospital for Sick Children, Great Ormond Street, 3.30 P.M.—Mr. W. Arbuthnot Lane: Clinical Surgical Lecture. Central London Sick Asylum, Cleveland Street, W., 5.30 P.M.—Dr. Ord: Cases in the Wards.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. Sidney Martin: Cases of Asthma.

CLINICAL SOCIETY OF LONDON, [illegible] P.M.—Dr. Hector Mackenzie and Mr. F. C. Abbott: A Case of Subdiaphragmatic Abscess communicating with the Right Pleura successfully treated by Resection of Rib and Drainage. Dr. K. J. Colenso (introduced by Sir Dyce Duckworth): A case of Poisoning by One Ounce of Chloral Hydrate: Recovery. Dr. T. Churton: A Case of Multiple Neuritis Fatal on the Fifth Day. Mr. Golding Bird: A Case of Pulsatile Congenital Cyst simulating Aneurysm. Dr. Herringham and Mr. Bruce Clarke: A Case of Idiopathic Dilatation of the Sigmoid Flexure.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 11 A.M.—Dr. Craig: Stupor, Catalepsy, Katatonia, Dementia.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

ACHARD.—On Sunday, October 14th, at 9, Blandford Street, W., the wife of A. L. Achard, M.D., of a son.

ALDRIDGE.—On October 13th, at Hamilton House, Southampton, the wife of Norman Elliott Aldridge, M.B., D.P.H., of a son.

MULOCK-BENTLEY.—On September 2nd, at Vrede, O.F.S., South Africa, the wife of T. Mulock-Bentley, L.and L.M.R.C.P., and L.and L.M. R.C.S.I., of a son.

MARRIAGES.

BARRETT—ACKLAND.—On October 13th, at Christchurch, Clifton, Bristol, by the Rev. T. C. Chapman, M.A., Vicar, Walter Russell Barrett, L.R.C.P.Lond., M.R.C.S.Eng., of 6, Chandos Street, Cavendish Square, W., to Lucy Mary, elder daughter of Mrs. Craig Ackland, of 6, Rodney Place, Clifton.

WESTLAKE—ATKINSON.—On October 11th, at Scartho, Lincolnshire, by the Rev. C. F. Thomas, assisted by the Rev. Canon Young, Algernon Westlake, M.B., C.M., of Grimsby, to Sybil Mary Williams, youngest daughter of Mr. J. P. Atkinson, of Scartho House, Scartho, near Grimsby.

DEATHS.

INNES.—At Napier, New Zealand, on July 29th, Francis William Innes, M.B., C.M., aged 39 years.

WAGSTAFFE.—On October 11th, at Purleigh, Sevenoaks, Eliza, widow of Matthew French Wagstaffe, in her 93rd year.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

R.U.I. writes: I am an M.B., B.Ch., B.A.O. R.U.I. In the event of my starting private practice, what would you consider the correct thing for me to put on my doorplate?

*** Strictly our correspondent is not entitled to call himself "Doctor." It might be best to put the letters M.B. after his name until he has obtained the M.D. degree.

X. X. writes to ask for advice in the treatment of a lady, aged 33, who for the last ten years has suffered from severe vesical neuralgia. There is no lesion of the urethra discoverable, and vesical exploration has given negative results. Urine is always acid; at times it has a peculiarly pungent odour, and becomes loaded with epithelial scales (but is otherwise normal); the pain is then aggravated, and accompanied by increased frequency of micturition. The only application that has given relief is a 2 per cent. injection of cocaine into the bladder, but this is merely temporary.

BOOKS ON THE HORSE.

A MEMBER asks to be recommended the most useful book for a member of the medical profession to consult on the management of his horse, as regards diseases and injuries.

*** *Horses and Stables*, by Sir Frederick W. FitzWygram, Bart., F.R.C.V.S.; 4th edition; Longmans, Green and Co.; 2s. 6d.; contains information on medicine and surgery relating to the horse. The more technical works intended for veterinary students deal separately with the subjects of surgery and medicine of the domesticated animals.

ANSWERS.

A.A.M. and A MEMBER—Useful books on insanity are: *A Manual of Psychological Medicine*. By Dr. J. Bucknill and Dr. D. Hack Tuke. London: J. and A. Churchill. 25s. *Insanity and Allied Neuroses: Practical and Clinical*. By Dr. G. H. Savage. London: Cassell and Co. 8s. 6d.

DR. JAMES ARNATT.—The treatment carried out by Dr. Schott at Nauheim consists of the administration of gaseous salt baths and graduated muscular exercise, according to a special method devised by him. Amelioration in certain forms of cardiac debility has undoubtedly been experienced there.

NOTES, LETTERS, Etc.

"JOURNALISTS AND QUACKS."

WE greatly regret that by a clerical error we attributed in a note published in the BRITISH MEDICAL JOURNAL of October 13th, 1894, page 852, under this title an article on "Vitaline, a Cure for Consumption," to the *Daily News*. The article in question appeared in another daily paper, and was quoted extensively in the press. We are glad to be able to state that it has not, as an editorial paragraph or otherwise, found a place in the *Daily News*.

INCOME TAX ASSESSMENT.

THE Income Tax Repayment Agency, 6, Chichester Road, Paddington, write: The letters which you have published from two correspondents prove that we are right when we assert that doctors, as a rule, are most unjustly assessed, and are grossly overtaxed. This generally comes from their making no effort to get their assessments reduced. This was not, however, the case with your two correspondents, who deserved a better fate. Both of them have a remedy. If at the end of the year of assessment their profits have not reached the amount of the assessment, let them appeal, and in so doing we shall be glad to assist them. We consider "Medical Practitioner" was wrong in going to the surveyor at all, the natural born enemy of the taxpayer, and one who has no authority to make or accept a compromise; he should have paid no heed to his threats, but should have gone on with the appeal. The surveyor—the case dating some years back—got a percentage on this assessment, an additional incentive not to reduce it. The arguments used are exactly those that are shown up in Mr. Chapman's *Income Tax Grievances and Their Remedy*. We are glad to see serious papers taking up the matter, and such letters as you have published cannot but do good, calling attention, as they do, to the rottenness in the present system of assessment. "Medical Practitioner" should have appealed twice a year, until he had got justice. It is not yet too late, and income tax at eightpence is an extra inducement. We may mention that in every case we have taken up for medical men we have obtained both a reduction in assessment and a refund of overpaid tax.

"TAKING THE TEMPERATURE."

AN esteemed correspondent is disposed to quarrel with a passage in our review of Dr. Bury's *Clinical Medicine*, in which some incredulity was expressed as to the stories of thermometers giving the temperature in a minute or half a minute, stories for which Dr. Bury was not responsible, but which we suggested he might have set at rest. Our correspondent has a "half-minute thermometer with Kew certificate which never rises after 20—30 seconds, and which therefore saves at least two minutes for each patient."

*** The principles of thermometry referred to in the review in question are not new. They were clearly put by Wunderlich. Our correspondent should consult any standard authority, say Sydenham Society's Translation, 1871, pp. 71, 72, especially the footnote. Long before Wunderlich the same thing was insisted on by Dr. John Davy in his papers on temperature, reprinted in his *Physiological Researches*. Briefly stated, the mouth and axilla are sometimes open and sometimes shut. If open, air (usually colder than the body) may cool them down. As a gauge of the body heat, they require to be closed to overcome this cooling, and to attain their maximum temperature. How long this closing of mouth or axilla must continue depends on various circumstances, for example, the coldness of the air and the state of the surface circulation. *No degree of delicacy of thermometers can affect the time required for this warming up of the part.* If the mouth be cooled by sucking ice, a so-called "half-minute thermometer with Kew certificate" could not give the temperature of the mouth for many minutes till the parts had regained their natural heat. This is too obvious to require mention, one would think, but cold air entering the mouth before the observation began must produce the same kind of cooling, although to a less extent, and time is required to let the mouth (or the axilla if previously unclosed) regain the natural temperature. The time required for this purpose cannot be curtailed by any delicacy of instrument, and it is this inevarying greatly in different cases, which is so important in any observations arriving at the least accuracy.

THE APPLICATION OF DIACHYLON PLASTER.

DR. MACDOUGALL WILSON (Belfast) writes: Would you kindly allow me to explain a simple method of applying the ordinary diachylon plaster, which I think should be more extensively known. Instead of the flame of gas or candle, or the can of boiling water, the method I use (which I learnt from an American fleet-surgeon a decade ago) consists simply in damping the adhesive surface of the plaster with turpentine (which is found in almost every house) applied on a sponge or rag. The plaster is immediately applied to the skin. The turpentine does not irritate the skin; it makes the plaster much more adhesive, and indeed by this method ordinary cheap plaster becomes as effective as dearer qualities; it leaves none of the dirty, black marks on the skin which are seen when plaster is applied in the ordinary way, and in many cases the same piece of plaster may be reapplied several times, if necessary, as it retains its adhesiveness wonderfully. I have shown this method of applying plaster to many doctors and nurses, who were all struck with its superiority over the old-fashioned ways. Although apparently a trifling matter I think it worth knowing, both for the comfort of the surgeon and the patient.

ANOTHER "CURE" FOR INEBRIETY.

AFTER the 200 or more undisclosed "cures" for drunkenness, for all of which immense success has been claimed by their proprietors, it is refreshing to learn that some enthusiasts are agitating for the introduction into England of a method the antithesis of secrecy, which, it is stated, has been adopted by the governor of St. Petersburg. The plan in question is the placarding on an official hoarding of the names of all persons found drunk in the streets. This "publication cure" was tried in a northern city many years ago so far as publishing the names of persons convicted of drunkenness, but, as was to be expected, did not appear to have acted as a deterrent. Diseased narcomaniacal drunkards need treatment, not exposure. If ever such an advertisement of persons found drunk were tried in London, the official hoarding would have to be enormously extended.

INDIFFERENT ACCOMMODATION FOR LUNATICS.

THE following letter from the Local Government Board was received recently by the Okehampton Board of Guardians, being a copy of the report of one of their visiting Commissioners in Lunacy (Mr. Frere), who visited the workhouse on August 20th last: "As did my colleague, who visited in 1891, so I too have to report that I cannot find much to say in praise of the accommodation provided. The dayrooms are very

bare, with stone floors, and no matting on the floor, or cheap prints on the walls to relieve the dull cold appearance of the rooms. The stairs are worn, and both the stone stairs and floors are most dangerous for Henry Short, who is an epileptic. There is no alternative exit from the dormitories. The danger of fire is intensified here, candles being used instead of gas. The bathing is unsatisfactory. The men are only bathed about once a month, the women once a fortnight. Weekly bathing should be the rule... Nearly all the patients are usefully employed. They make no complaint of ill-usage." The report added some suggestions with regard to the bedding of certain patients. As the Local Government Board requested to be placed in possession of the Board's decisions in regard to the report, the matter was referred to the House Committee to report at the next Board meeting.

Thyroid Feeding in Exophthalmic Goître.

Dr. W. B. Ochiltree Ferguson, M.B., C.M.Glasg. (Langworth, Lincoln) writes: At a time like the present, when the medical profession in general is so much interested in the above treatment, I feel certain the following case is worthy of mention in your columns:

M.S., female, aged 29, came to see me in April, 1893. She said that until the preceding January she had been in good health and able for her work. About that time, however, she noticed a swelling in her neck, and found that she was troubled with palpitation and breathlessness. She underwent medical treatment, but without any improvement. Indeed, she was worse then than in January. I examined her neck, and found the thyroid gland equally enlarged on both sides, and about twice the natural size. The pulse beat was 100 per minute, and there was no increase of temperature. Exophthalmos was not very marked. I prescribed a mixture of syr. ferri iod. and liq. strych., and painted the tumour with ung. hyd. ox. rub. This treatment was continued till December, 1893, without any benefit. On the contrary, the patient's condition got gradually worse. In September the menses ceased, and the tumour was now as large as a hen's egg. There was marked protrusion of the eyeballs, and on making the patient raise her eyes and then look down the eyelids followed more slowly than in health. Pulse beat was now 120 per minute, and palpitation so extreme that the patient could only walk a very short distance without resting.

On December 14th I put the girl on sheep's thyroid. This was chopped up with vinegar and pepper, and a quarter or a lobe given raw twice a day. I continued the syr. ferri iod. and liq. strych. There was no sickness on taking the gland, nor was there any rise of temperature. About the eighth day after commencing this treatment the patient said she felt better, and in a minute and precise way perceptible diminution in the size of the tumour, it was considerably softer. At the end of the first week in January, 1894, the tumour was decidedly smaller, and consequently the exophthalmos was less marked. There was also improvement in the general health, and the palpitation was not so excessive.

At the end of January there was an attack of diarrhœa and sickness. No increase of temperature. The gland was stopped for a couple of days, and on recommencing there were no further signs of irritation. During the next three months the improvement steadily continued and at the end of May the patient's throat was nearly normal. By the middle of June the exophthalmos had quite gone on the left side, the right eye still slightly protruding. By July both eyes were normal; there was no palpitation, and the pulse beat was 80 per minute. Indeed, the only thing to be desired is the return of the menstrual period.

Although one cannot draw a conclusion from an isolated case, still I may say that personally, on observing the marked improvement after commencing the thyroid feeding I should be very careful about condemning a mode of treatment which seemed to give such a good result.

The Notification of "Sore Throat" and the Prevention of Diphtheria.

R. T. W. writes: In a considerable number of cases the diagnosis between diphtheria, follicular tonsillitis, and the membranous throat of scarlet fever is exceedingly difficult, and it is now generally admitted that the diagnosis between follicular tonsillitis and diphtheria, in some cases, can only be definitively settled by bacteriological examination. Cases are sometimes met with in which two members of a family appear to be suffering from simple follicular tonsillitis. In a few days one patient will be quite well, and the clinical history and appearance of the throat will indicate follicular tonsillitis, and not diphtheria. The other case may appear to be progressing as favourably for a few days or a week, and then other symptoms may develop—albumen (previously absent) may appear in the urine, the white patches may extend and become more truly diphtheritic in appearance, laryngitis may occur, and after wards diphtherial paralysis. Dr. Seaton, in his interesting paper on Diphtheria in the British Medical Journal, September 15th, quotes the following from Dr. Thorne's book: "There is reason to believe that attacks of so-called sore throat exhibit under certain favouring conditions, a progressive development of the property of infectiousness culminating in a definite specific type which is indistinguishable from true diphtheria."

There are also cases in which the nurse of a patient suffering from follicular tonsillitis has been attacked by a similar throat affection; and yet in each patient these symptoms were those of follicular tonsillitis, and not diphtheria.

Many throat cases in which white patches are present on the tonsils are a source of great perplexity. In many cases, of course, the symptoms and appearance indicate diphtheria quite clearly; but how many cases there are which at first appear, on inspection of the throat and by other symptoms, to be simple follicular tonsillitis, and yet afterwards prove to be true diphtheria. Even should bacteriological examination be found to furnish an infallible means of diagnosis in every case, for a very long time, in England at least, only a minority of cases can be so examined. Often one does not feel justified in certifying a doubtful case as one of diphtheria, because clinical medicine has no certain means of differential diagnosis; and yet, if we wait, and it should prove to be one of true diphtheria, much mischief may have been done, especially in the case of very poor patients or hospital out-patients, because in such cases isolation is generally impossible except by removal to a fever hospital.

It appears to be worthy of consideration whether it would not be advisable to notify and isolate all suspicious cases of sore throat, cases in which white patches are found on the tonsils only, and which do not present t signs and symptoms clearly indicating true diphtheria—that is, a large number of those cases which, at present, are generally diagnosed as follicular tonsillitis. I do not suggest that these cases should be notified as diphtheria, but rather as suspicious cases of sore throat, such cases to be isolated and kept in a room apart from true diphtheria cases. There can be no doubt that the notification and isolation of these doubtful cases would be of considerable service in checking the spread of diphtheria; also attention would be drawn to the prevalence of follicular tonsillitis, which often appears to precede and to accompany an epidemic of diphtheria. Indeed, the two diseases appear to be so closely allied that one gets the impression, clinically, that much of what is termed follicular tonsillitis is really a mild form of diphtheria.

From a consideration of the above facts, it also appears to me to be advisable in private practice, whenever possible, to isolate all cases of follicular tonsillitis.

Hindu Pilgrimages and Cholera.

Dr. G. Hutcheson (Naini Tal, India) writes: Dr. Pringle, in his paper On the Seasons and Sites of Hindu Pilgrimages in Bengal and their Bearing on Epidemic Cholera, read before the Association at Bristol, unwittingly it is presumed, misled professional and public opinion on several important points. He urged that "to credit the exemption (of the Hardwar Kumbh Fair of 1891) from epidemic cholera to the sanitary arrangements of 1,000 sweepers among 1,000,000 pilgrims (for all these remained over April 12th) to those who know Hardwar and its crowds of hungry, ill-provided, and ill-sheltered devotees was to ensure a rude awakening to the disciples of the "germ theory of the days to come." Dr. Pringle has here stated his own premisses and makes it appear that someone made a statement of which he himself is the sole author, and thus begins his argument with a *suggestio falsi*. No one has suggested or asserted that the exemption from epidemic cholera of the Hardwar Kumbh Fair of 1891 was due "to the sanitary arrangements of 1,000 sweepers." His misquotation of figures and suppression of facts can hardly be accidental, as he surely read the passages on that subject regarding which he sought to enlighten the profession in England. Dr. Pringle, when he delivered his address, should have been aware that he was supporting a theory regarding the propagation and dissemination of cholera by an argument based on a *suppressio veri*, and his lack of knowledge of the details of recent practical sanitation of the larger fairs and festivals in India indicates that his experience of Indian sanitary matters is as comparable with the rapid growth and progress as the "Prehistoric Peeps" now being furnished for everybody's amusement in *Punch* are with the existing condition of things in Great Britain. He must be cognisant of the fact that proper conservancy arrangements form only one of the many lines of defence against cholera at Hardwar as elsewhere, and that the most exacting preliminary sanitary precautions with respect to surface cleanliness of site, drainage, and dwellings; the preservation of the sacred pool and tank against undue pollution and contamination by passing constant strong currents of pure fresh Ganges water through them; the careful guarding of the water supply and the examination of food supplies; the systematic organisation of conservancy staff and establishments; the regulation of the crowds in transit, in camp, in procession, and at bathing ghats; the prompt notification of sickness of a choleraic nature, etc., by specially "told" off sanitary police and proper care of the sick in organised hospitals; the immediate clearance and disinfection of infected or supposed infected areas; the rapid removal of sewage filth and rubbish beyond, and attention to drainage in the inhabited area; the full utilisation of sanitary police patrols and *cordons*: the employment of detective agents for sickness; complete supervision and constant inspections by sanitary police and other officers—as described by Dr. Simpson, Mr. Ernest Hart, and others—are among the arrangements now in force at the larger Hardwar fairs to prevent outbreaks of epidemic disease, and to limit its incidence when they occur. Cholera is a preventable disease, and the history of cholera in India points to the great mitigation and almost total disappearance of the disease from among communities where proper sanitation is a law. With experiences as a local sanitary officer confining himself mainly to the duties of a conservancy inspector, and with his very limited conception of the sanitary arrangements and precautions necessary at big Indian fairs, we need scarcely wonder that sanitary results in his day were few and disastrous, and that "nothing will ever obliterate the horrors of the Hardwar Khumb of 1879," and of the Khumb of 1869, from Dr. Pringle's mind. Executive negligence in sanitary affairs is most pronounced in men given to star-gazing (it cannot be called theorising), and the management of our great Indian fairs and festivals is safe in the hands of practical sanitarians to whom "atmospheric influences" and fatalistic apathy mean widespread pestilence, death, and fatal experiences. "horrors" in Dr. Pringle's case, that long years of retirement from service and time even, as he admits, cannot efface from his memory.

Touting Agents.

A correspondent in practice in the South of London sends us a circular letter which he has received from the secretary of a company, drawing his attention to certain residential flats which they have to let. The secretary asks our correspondent to "bring them to the notice of any of your friends or patients in search of or proposing to change their residence." He then describes the advantages as to site, etc., which the flats offer. So far, we presume, no very serious objection could be taken to the communication, which is not more impertinent than nine-tenths of the circulars with which enterprising dealers deluge our letter-boxes. But the secretary appears to consider it necessary to offer a special inducement to interest the person he addresses in pushing the business of the company which has these flats to let: "Following a previously successful course I am instructed to say my company will be most happy to forward a cheque for £1 1s. to any

charitable institution, society, or person you may suggest, should any 'let' result through your recommendation direct." We can hardly suppose the secretary to refer to the medical profession when he writes of being previously successful with this form of touting, and it is rather surprising that a business man should suppose that he could obtain any valuable assistance to his business by means of such an offer.

AERIAL DIFFUSION OF SMALL-POX.

DR. JOHN JOSEPH STACK (New Cross Road, S.E.) writes: In the early part of 1891 I attended a child, aged 7 months, unvaccinated, for small-pox during its whole course. The onset was very indistinct, and I felt slow in making a positive diagnosis for the first three days, as the appearance of the rash was very like that of severe varicella. However, all doubt was dissipated, and the case ran a favourable course to its termination, and the child recovered from its attack. There was a complication of purulent ophthalmia in both eyes, but this was soon arrested by the application of solid nitrate of silver to the conjunctiva of the eye first attacked. The other eye improved nearly as soon as the first one. This little patient was not vaccinated on account of its weakly state of health. There are several children in the family, all of whom have been vaccinated. The case was an isolated one in the neighbourhood, and, as far as I could ascertain, no one caught the complaint from this case. As the parents live within 500 yards from the Metropolitan South London Fever Hospital, I conclude that the child must have been affected from that source—through the air. The patients are very intelligent, and there is no history whatever of contact.

THE TRIALS AND BLESSINGS OF THE "G. P."

HAPPY DOCTOR writes: May I try and help your correspondent "Perplexed" to a happier frame of mind? A general practitioner he is and probably such he will continue to be. How can he become a happy one? I think the root of all his trouble is "the ever-present consciousness" he speaks of. I, too, am a general practitioner, and I know what "Perplexed" means by those words fully. But I am one for whom he inquires. I have "worked out my salvation." I now enjoy a weekly interval of unconsciousness.

When I began my practice here I determined to be strictly professional in my dealings with my medical neighbours. This was a hard course to pursue at first. I of course was generally at home while my more established neighbours were going their rounds. So I often was called to see my neighbours' patients in times of emergency. Be the case that of midwifery or other I attended and gave the case over to the "rightful heir" when he appeared. I never accepted any fee but thanks. Funds were none too grand too. What is the result? Now, after five years, my reward has come. Although I am the youngest practitioner, both as regards my age and my period of residence here, yet I find that there is not one of my neighbours but has done and will do me kindly service in my absence.

For the last two years, too, I have arranged a weekly period of recreative professional unconsciousness. A neighbour is on duty for me every Wednesday from (say) noon till 8 A.M. the following day. I am on duty for him every Friday in the same way. So we can cheerfully anticipate a holiday every week.

Henry Gawen Sutton (who being dead yet speaketh) used to say to us: "Cultivate professional charity. Take courage. Let the light guide you. Set a tabernacle for the sun." This, Sir, remembering Sutton, has been my course. I would, in a spirit of gratitude, say to "Perplexed," "Go thou and do likewise."

PLANTS MISUNDERSTOOD.

THOUGH Emerson suggested that every weed is a plant whose use is not yet understood, the number of plants that have been brought into service by man is very small. Mr. Edson S. Bastin finds authority, according to *Inventions*, for the statement that 1,192 species of plants have been at some time cultivated for food, and that the whole number of species of plants which have been at some time cultivated for food, including those resorted to in famine, is 4,090, but many of these are of little value, and Smith's *Dictionary of Economic Plants* gives only 515 species as those important for any purposes. For medicine some 3,000 plants have been employed, of which the United States Dispensatory enumerates 1,300, while only 244 are regarded as of sufficient value to be given in the *Pharmacopœia*. The plants not yet investigated offer great possibilities of usefulness, which, however, can be developed only by long and extensive Government experimenting. The number of named species of plants may be taken as about 130,000, and possibly as many more are yet to be discovered, while many species are capable of great variation through cultivation. The different varieties of wheat are believed by some to have had their origin in a forage grass of little consequence. On the coast of England and France is to be seen the wild plant from which have been developed the white and red cabbages, cauliflower, and other varieties, and perhaps even the common turnip. A few years ago 1,500 different varieties of the apple were enumerated, and it is very possible that some other species of the genus is as capable of useful development as the one that has become so important to us. From the little explored fields of bacteria and fungi may be expected many products of value as remedies and food.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(**A**) Mr. J. Arnall, Brampton; G. W. Ancrum, M.B., Gloucester; Mr. T. S. Allan, Coventry. (**B**) Mr. A. S. Barling, Lancaster; Mr. W. P. Blumer, Sunderland; W. M. Brown, M.B., Sunderland; Mr. G. Bunter, Sheffield; R. Beveridge, M.B., Leith; Dr. J. Barr, Liverpool; Dr. D. C. Black, Glasgow; S. Barwise, M.B., Derby; Dr. F. T. Bond, Gloucester; Mr. G. Bathgate, Edinburgh; Mr. L. A. Bidwell, London. (**C**) Dr. J. G. S. Coghill, Ventnor; Mr. S. Crawley, Oxford; T. Carr, M.B., Braintree; A. J. H. Closky, M.B., Singapore; Mr. C. Campbell, Saddleworth, Dr. J. Crabb, London; Mr. J. H. Collier, Sheffield; Dr. W. M. Campbell, Liverpool. (**D**) Mr. G. H. De'Ath, Buckingham; Dr. T. Dutton, London; J. Dixon, M.B., London; Dr. C. E. Douglas, Cupar; Mr. W. M. Donald, Glasgow; Mr. A. C. Davis, London; Mr. P. M. Davidson, Congleton. (**E**) Mr. G. Y. Eales, Torquay. (**F**) Dr. A. Findlater, Edgware; Mr. T. Fisher, London; F. F.; Mr. C. Fisher, London; Mr. G. Forden, Ashcott; Fairplay; Dr. R. H. Fox, London. (**G**) Dr. J. Gairdner, Crieff; Mr. C. L. Gott, Leeds. (**H**) Mr. J. T. Hartill, Willenhall; Mr. H. Huxley, London; Mr. W. R. Hilton, Durham; Hospital Physician; Dr. G. E. Halstead, Ramsgate; Mr. C. T. W. Hirsch, Fiji; Mr. T. G. Horder, Cardiff; Messrs. Howard and Collins, Birmingham; Mr. C. W. Hunt, Manchester; W. Hardman, M.B., Blackpool. (**J**) Dr. S. Jex-Blake, Edinburgh; Mr. R. Jeffreys, Bromley; Mr. B. E. Jones, Freckleton; Mr. T. Joyce, Bexhill. (**K**) Dr. G. C. Kingsbury, Blackpool. (**L**) Mr. A. Ledlie, Belfast; Dr. E. Little, London; Lahman Agency, The Manager of, London; Mr. R. Lake, London; J. Limont, M.B., Newcastle-on-Tyne; C. R. Leader, M.B., Worthen. (**M**) Dr. W. Milligan, Manchester; Dr. C. A. MacMunn, Wolverhampton; Messrs. J. Maclehose and Sons, Glasgow; Mr. D. G. McNaughtan, Muasdale; Mr. W. Mawer, London; M.B. Aberd.; Member B.M.A.; Mr. E. F. Maberley, Bournemouth; R. Miller, M.B., Dundee; Mr. J. W. Y. Macalister, London; Member; Dr. S. R. Macphail, Derby. (**N**) Mr. L. K. Nash, Pontypool. (**O**) Omega; One in Doubt. (**P**) J. J. Pringle, M.B., London; Mr. C. H. Powers, Silloth; Mr. E. T. Parry, London; Mr. T. J. Preston, London; Mr. C. R. Polden, London. (**R**) Mr. R. Rice, Steventon; Dr. J. Ramsay, York; Dr. J. Rose, Chesterfield; Mr. A. Reed, Sheffield; F. M. Rowland, M.B., Lichfield; H. Robinson, M.B., Hull. (**S**) Dr. J. Shaw, London; Mr. M. Scott, London; Dr. R. S. Stewart, Bridgend; Mr. J. H. Spitzly, London; Mr. D. M. Scott, Edinburgh; Mr. J. F. Sutherland, Glasgow; Mr. N. Smith, London; Mr. W. J. Spence, Syston; Messrs. Street and Co., London; Mr. J. B. Sutton, London. (**T**) Mr. H. Taylor, London; Mr. A. Todd-White, Lancaster; Mr. R. F. Tomlin, London; Dr. C. L. Tuckey, London; Dr. G. G. S. Taylor, Liverpool. (**W**) Dr. K. R. M. Wilson, Belfast; Mr. W. Wynne, Beckley; Mr. E. Wilson, Exeter; Mr. G. E. Wilson, Liverpool; Mr. G. R. Wilson, Blackpool; Dr. F. J. Waldo, London; Mr. C. J. Wright, Leeds; Mr. F. F. White, Coventry; E. Willett, M.B., London; Mr. H. White, Manchester; Messrs. Woolgar and Roberts, London; Dr. B. Walker, Kirkby Stephen. (**X**) X X.; etc.

BOOKS, ETC., RECEIVED.

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*** In forwarding books the publishers are requested to state the selling prices.

SIXTY-SECOND ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION,

Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF SURGERY.

W. Mitchell Banks, M.D., F.R.C.S., President.

A DISCUSSION ON THE TREATMENT OF INJURIES OF THE SPINE AND SPINAL CORD.

I.—William Thorburn, F.R.C.S.Eng., B.S.Lond.,
Assistant Surgeon Manchester Royal Infirmary, etc.

Classification of Injuries.

In opening the discussion upon the treatment of injuries of the spine and spinal cord, I propose to place before you a general account of the subject rather than to endeavour to develop any absolutely new views of pathology or of treatment; but in so doing I shall content myself with stating, as briefly as I can, the opinions which I myself hold, without extensive reference to those of others, and I trust that I shall thus not fail to evoke criticism sufficient to lead to a discussion from which I hope to learn something of value.

Speaking broadly, we may divide these injuries into various classes, which, for convenience of reference, I have placed under eight headings:

1. Unilateral dislocations.
2. Bilateral dislocations with persistent displacement.
3. Bilateral dislocations with recoil (diastases).
4. Fracture of the bodies with persistent displacement.
5. Fracture of the bodies with recoil.
6. Fractures of the laminæ, spinous processes, etc.
7. Compound fractures.
8. Secondary lesions, as hæmorrhage, meningitis, etc.

Certain of these classes are at once intelligible, but to some of them I must devote a few words of explanation. Thus we may set aside for the moment unilateral dislocations, which are generally, if not invariably, met with in the cervical region: injuries of the laminæ and processes, which are very rare; compound fractures, which are usually the result of gunshot injuries: and the class of secondary lesions. Having eliminated these, we find that the vast majority of the injuries which we are now considering fall into the second, third, fourth, or fifth class, that is, they are bilateral dislocations or fractures of the bodies of the vertebræ. Fractures and dislocations are constantly associated together, but for the present purpose the distinction between these two conditions is one of no importance, and we shall speak of true dislocations, pure fractures, and "fracture-dislocations" collectively, remembering that, in nearly all these cases, the upper segment of the vertebral column is displaced downwards and forwards, and the theca vertebralis is thus crushed between the body of the vertebra below and the arch of that above.

A very important practical distinction is, however, that which exists between cases in which the displacement is followed by recoil of the injured bones and those in which the displacement is a persistent one. In the first class the cord is crushed and then at once released by Nature: in the second it is crushed and continues to be compressed between bony surfaces. As I have repeatedly and quite recently[1] discussed these various pathological conditions, I shall not now dwell upon them further than to say that my experience in the *post-mortem* room and operating theatre leads me to believe that in the cervical region cases of recoil are commoner than those of persistent displacement in a proportion of about two to one. In the lumbar region my pathological material would indicate that persistent displacement is more common, but this material is a fallacious guide inasmuch as only the most severe lesions here lead to a necropsy. In the dorsal region my cases are too few to allow of any statistical deductions, but in every part of the vertebral column I have found both varieties of injury, that is, both recoil and persistent displacement.

Having said so much as to the pathology of these conditions we may now pass to the consideration of their treatment, and here we find four methods open to us: (1) Expectancy: (2) reduction of displacements; (3) laminectomy; (4) fixation by plaster-of-paris or other form of support.

I need say nothing in this place of the symptomatic and expectant method of treatment, except that I wish to call attention to the fact that life may occasionally be indefinitely prolonged, even in cases which appear to be hopeless, as in the celebrated case of Hilton, whose patient lived for fourteen years with total paraplegia due to fracture of the fifth, sixth, and seventh cervical vertebræ: and in the case of a woman with a fracture-dislocation of the third dorsal vertebra and total paralysis and anæsthesia below that level, who has now been under my observation for five years and a-half without material alteration in symptoms. Further, it is not rare to meet with examples of hæmatomyelia, due I believe to slight crushing followed by recoil of the bones, in which, although the early symptoms are severe, these rapidly clear up, leaving us with a small localised lesion and very perfect recovery. Hence it is not safe, in our enthusiasm for operation, to assign occasional good results to our treatment. The future of the patient will depend rather upon his having escaped with a small hæmorrhage or upon the fact that serious secondary troubles have not ensued.

Reduction of Displacements.

I may now pass on to consider the possibility or advisability of reducing the displacement of the vertebræ. It will be at once obvious that no such proceeding is required, or indeed possible, in the commoner cases in which natural recoil has followed the injury. Equally in fractures of the laminæ, compound fractures by direct violence, and in the secondary lesions, reduction in the ordinary sense of the term is not called for. Hence, then, this method of treatment is applicable only to our first, second, and fourth groups of cases. In these it is unquestionably often possible to restore the contour of the bony spine by suitable manipulation, but it is more doubtful whether we can maintain the correct position or whether the more important lesion of the cord will be benefited thereby. In considering this point I must first speak separately of the unilateral dislocations.

In *unilateral dislocations* the conditions are the most favourable for reduction. In the first place we have the undisturbed articulation as a fulcrum from which to work: then again we have a greater probability that displacement will not recur; and, most important of all, the cord lesion is rarely so severe as in the antero-posterior displacements of the entire spine. I have succeeded in collecting from various sources 41 cases in which reduction of such a unilateral luxation was attempted, and in 35 of these the result was apparently successful, but in the majority there were no symptoms of any injury to the cord at all, and in none with which I am acquainted was there evidence of a complete crush. We must also not too hastily assume that when reduction was apparently successful it was really complete. Thus I reported in 1888 the case of a man who was admitted to hospital with a unilateral cervical luxation and serious cord injury, although the interruption of conduction was not complete. "Reduction" was effected with a distinct snap, and the man made a satisfactory recovery; but on his death three years later, from cancer of the liver, I found that the luxated articular process was not replaced, but that the vertebræ were held together by a firm fibrous tissue on the injured side. There can, however, hardly be a doubt that in these unilateral cervical cases the attempt to reduce should be made as soon as possible after the injury; it may succeed; it can do no harm; and the comparatively slight cord lesion renders the prognosis good.

Coming now to the more important cases of *bilateral luxation* I have but five personal observations, the cases having been under the care of several of my colleagues. Two of the injuries were in the cervical region, and attempts at reduction, under an anæsthetic, failed in both. Three were in the lower dorsal region, and in each of them the position of the spine was apparently rectified, but in all the displacement returned in spite of fixation by plaster jackets. Analysis of

[1765]

[1] British Medical Journal, June 23rd, 1894.

published results is beset with difficulties, as many of the records are very meagre, and many leave upon our minds grave doubts both as to the diagnosis and the result of treatment. We must therefore lay no great stress upon the fact that in 50 cases which I have collected reduction was said to have been effected in 42; nor can we trace the ultimate results in these cases. From *a priori* considerations and from personal experience I should be inclined to say that reduction is not as a rule very difficult, but that displacement is almost certain to return. Obviously the perfect reduction of a pure dislocation would not be likely to be followed by subsequent slipping, but such a result is difficult, if not impossible, to obtain. In the commoner fractures, on the other hand, reposition is comparatively easy, but these are precisely the displacements which are liable to return.

Much more important, however, than the replacement of the spine is the relief of the spinal cord, and, from considerations which I shall present immediately, I fear that we cannot hope for any recovery in a cord which is crushed by such a displacement as I am speaking of, and I can find no satisfactory evidence that the reduction has ever cured or materially relieved the medullary symptoms. Hence I fear that we do not gain much positive benefit even by a successful reduction, save, perhaps, in injuries situated so low down that the cauda equina rather than the cord is the seat of constriction.

Lastly, we must not forget that in the cervical region these manipulations are dangerous, and that in injuries of the atlas and axis they are quite unjustifiable; also that in the upper and middle dorsal region the attachment of the ribs not only renders reducible displacements rare, but interferes with our proceedings.

On these grounds I should limit the useful sphere of manipulation to unilateral cervical dislocations and to bilateral displacements in the lower dorsal or lumbar region, and I should regard it not so much in the light of a radical treatment of the cord lesion, as of an advantage at a later date should recovery ensue.

LAMINECTOMY.

We pass next to laminectomy, but here I shall be very brief, as my views upon this point have recently been fully set forth.[2] Save in certain special conditions, to which I must refer directly, I do not believe that laminectomy is likely to be of any service in injuries of the spine and spinal cord. My argument is briefly this:

1. Cases, the common cases, in which crush is followed by recoil clearly do not call for laminectomy. The lumen of the vertebral canal is already restored; the cord is in the most favourable position for repair, and there is no pressure to relieve by operation.

2. But these cases generally die, or at least undergo no recovery of the functions of the cord. Hence in the cases of persistent displacement, in which the medullary injury is at least equally severe, we cannot expect recovery, even if we attain by surgery a result, the removal of pressure, which in the first case was provided by Nature. Especially is this the case as the surgical result must always be obtained at a later period than the natural result.

3. Such evidence as we possess indicates that the human cord is incapable of repair after crushing. Thus a study of wounds of the cord by sharp instruments shows, so far as we can judge, that the region actually cut does not regenerate. Again, after fractures, even if the patient survive, there is no evidence of regeneration of cord tissue. Also experiments on animals show that, at least in the adult mammalia, the cord is incapable of repair. Vicarious conduction may lead to restoration of function in such cases if some cord tissue be left undivided, but vicarious conduction is impossible in a complete crush.

4. I have not found, either in published records of some 200 cases, or in personal experience of 7, any clear evidence of benefit from the operation. Isolated cases of partial recovery after operation do not prove that such recovery was due to operation, as such isolated cases occur also among cases not submitted to treatment, and if such cases are to prove anything, there must be clear evidence that they were not examples of small hæmorrhages, which would have done as well or better without laminectomy.

[2] BRITISH MEDICAL JOURNAL, June 23rd, 1894.

There are, however, certain conditions in which laminectomy is a valuable operation, and these we may summarise as follows:—

I. In compound fractures the ordinary "wound toilet"—removal of foreign bodies and fragments of bone—is clearly indicated.

II. In injuries of the laminæ and spinous processes with lesion of the cord, there is probably no complete crush, but here we have bony fragments driven against the theca, liable to plough it up on every movement, and not liable to natural recoil. Here, then, operation is indicated, and to this group belong the highly successful cases of Péan[3] and Schede.[4]

III. When the symptoms are due mainly or entirely to thecal or perithecal hæmorrhage pressing upon the cord we may relieve by laminectomy, but such cases are extremely rare; a good result is recorded by Wagner,[5] and another by Church and Eisendrath.[6]

IV. Pachymeningitis or peripachymeningitis may follow an injury even after a very long period, one such case having been operated upon by myself in which symptoms commenced twenty years after the accident. In these cases operation is also of value, the condition being here that of slow compression of the cord, and not in any way analogous to a crush.

V. And lastly numerous cases, as well *a priori* consideration of the conditions, indicate that if the cauda equina be compressed recovery will probably follow the relief of pressure by laminectomy.

If now I am right in limiting the value of the operation to these groups of cases, none of which are very common, it becomes a matter of the utmost importance to be able to diagnose the exact condition, but upon this wide and difficult field I cannot enter now.

FIXATION BY JACKETS.

The use of the plaster jacket as a means of fixation of the spine has been earnestly advocated by König,[7] Berkeley Hill,[8] and others, but its value can clearly be secondary only. As an adjunct to laminectomy, to reduction, or to spontaneous recovery, it is of the greatest value, and probably all surgeons will apply it after the first few weeks in a case which is otherwise doing well. Its use at an early stage is, however, more questionable, as it has the disadvantage of possibly causing pressure sores, and in cervical cases of embarrassing the respiration, whereas it can have no positive beneficial effect and can only prevent secondary displacements. Although, therefore, we must not forget that this is the most perfect means which we possess of preventing movement of the spine and thus allowing for consolidation of a case which is recovering, I should hesitate to use Sayre's corset at an early stage, unless the lesion were low down. Sufficient fixation can generally be obtained by the use of sheets, sandbags, and pillows.

In conclusion, I must acknowledge to having taken a conservative, if not a despondent, view of the treatment of injuries of the spinal cord, but I can only plead that I have done so after long consideration, and after having passed through a more enthusiastic and, possibly, more interesting stage, so that I hope the opinions which I have submitted will be accepted as unbiassed by prejudice.

II.—HERBERT L. BURRELL, M.D.,

Surgeon, Boston City Hospital; and Assistant Professor of Clinical Surgery, Harvard University, U.S.A.

A CONSIDERATION OF 168 CASES OF FRACTURE OF THE SPINE.

THE conclusions and analysis of the second largest series of fractures of the spine, 168 cases (Gurlt 178), 8 laminectomies of my own, and 4 in the hands of my colleagues, form the basis for any statements that I may make. The utter hopelessness of the condition of patients with fractures of the spine is clearly expressed when the laity say "his back is broken." No more pitiable condition is presented to a surgeon than a patient in this condition. If a fatal result does not imme-

[3] BRITISH MEDICAL JOURNAL, 1889, vol. i, p. 572.
[4] *Jahrb. Hamb. Staatskrankenhaus*, 1891, *vide* Rieder.
[5] *Wiener Klinik*, September, 1892.
[6] *Amer. Jour. Med. Sci.*, April, 1892.
[7] *Wiener med. Presse*, 1879.
[8] *Clin. Soc. Trans.*, 1881.

diately ensue, the lingering death from paraplegia, cystitis, and bed sores, forms a succession of events that are extremely harassing. Various measures have been advocated from time to time for the relief of this condition. I had the honour to present to the profession a method of treatment which was suggestive in that it apparently afforded relief in a number of instances. The method was as follows:

As soon as possible after the injury the patient was anæsthetised, suspended, and the deformity crushed back by force into a relatively normal condition. A plaster-of-paris jacket was applied in the suspended condition, and in a few instances brilliant results were obtained. At that time I reported 82 cases of fracture of the spine which had occurred at the Boston City Hospital. The results of these cases are included in the tables published.

Since 1887 the operative treatment as advocated by Cline and Cooper has been brought forward again under the improved aseptic methods. The method by operation has been tried. The statistics are not large, and the current of opinion was expressed in 1891 by J. William White as opposed to immediate operation. Lauenstein advocated interference at the end of six or seven weeks if the patient showed no signs of improvement.

The method that I advocated in 1887 has now been on trial seven years, and I frankly confess that personally I had given it up, as I considered it of less value than a carefully-performed operation. I felt that it would be of interest to collect the cases which had occurred at the Boston City Hospital from 1887, to date and analyse them by the same method as was used in the first group. There are 86 cases in the second series, and numerically they are so similar as groups that they will bear close comparison. The ultimate end of a patient with fracture of the spine is the result that we wish to know. In the first series of cases there was a percentage of recovery by the expectant plan of treatment of 22 per cent.; in the second series (86 cases), in which the treatment had, I believe, been largely influenced by my paper, there was a percentage of recovery of 33 per cent. This increase of 11 per cent. is striking, and of great value when it is considered that we have a hopeless condition to deal with. In the first series of cases, 18 patients recovered; 9 recovered "useful," that is, could walk, and 9 recovered "useless," that is, were bedridden. In the second series of cases (86), 28 recovered: 19 were "useful" and 9 were "useless." Not all of the cases were treated by the immediate rectification of the deformity; in fact, it was applied during the year 1887 four times; during the year 1888 twice; during the year 1889 three times; during the years 1890 and 1891 twice; and only once in 1893. This shows that the influence of the paper was waning, and that surgeons were losing confidence in the method; nevertheless, 18 of the 86 cases were treated by immediate suspension, correction of the deformity, and fixation by plaster-of-paris jacket; 8 recovered "useful," a percentage of 44. This is a large percentage of recovery, even in selected cases, and it must be clearly understood that this method of treatment was not applied in cases where there was much shock, for it is a severe measure.

Five operations have been performed in the second series of cases, 4 of them at the end of several weeks or months and 1 of them immediately following the injury. This last patient died almost immediately. The other 4 cases were not benefited by the operation. Three of these operations were performed by the writer, and in two instances they were performed some weeks after the immediate rectification of the deformity had failed.

The consideration of these statistics and tables of operation—and I am a sceptic as to the value of deductions from statistics—forces home to my mind one lesson: that the "do nothing" principle of treating these cases should be abandoned, and that what we are to do in these cases must be done immediately after the injury. In the table of necropsies which I have it is shown clearly in a number of instances that where the bodies of the vertebræ were displaced upon themselves and the cord was not torn the pressure of twenty-four to forty-eight hours upon the cord produced irremediable softening in its substance; so that any relief which we are to give these cases must be at once. The tables of operation, although they are few in number (5), do not hold out any encouragement as to operating long after the injury. I have had personally 8 cases of laminectomy for disease and injury of the spine; 4 others I have assisted in that were in the hands of my colleagues. I will speak only of my own cases. Three of them were performed for spinal caries and paraplegia; 2 of these were brilliant successes, one of them died: the other 4 cases were for fracture of the spine, 1 alone of which was successful, 1 died, and the other 2 recovered "useless." In none of these instances of laminectomy for fracture of the spine have I been able to operate earlier than four days after the injury, and I am strongly convinced that our next step will be to operate within the first twenty-four hours.

What shall be done in the future with these cases? Shall they be treated expectantly, shall they be operated on, or shall they be suspended and the deformity rectified? From this series of statistics it would seem as if immediate rectification gave the best results, but if the application of a form of treatment which at best consists of crushing back into its relatively normal position the complex structures that make up the spine gives an increased percentage of recoveries of 11 per cent., how much greater percentage of recovery may we not obtain from an early, careful, aseptic operation with the removal of the fragments or plates of bone that may be pressing upon the cord by the skilful use of bone forceps rather than the use of a "hit or miss" method of treatment?

It seems to me, therefore, that all fractures of the spine, including those of the cervical region where there is paraplegia or deformity, should be operated on unless contra-indications exist in the way of shock. This operation should be immediate, for irremediable damage occurs to the cord by pressure alone. The end of this subject is not yet. To my mind these statistics are suggestive. We have a complex mechanical problem in the parts of the bone involved, with a delicate nervous structure—the cord—at their centre. The condition of the cord is the key to the problem of whether the patient is to recover or not. If the cord is torn in two, operation is without avail; if it is pressed upon, it may be of great value. Let us not await Nature's solution, but let us look and see.

III.—C. B. Keetley, F.R.C.S.,

Senior Surgeon, West London Hospital.

Mr. Keetley said that he had operated twice in cases of fracture of the cervical spine, in each within a few hours of the accident. Both patients died: in one the cord had been completely divided, in the other fracture of the base of the skull and intracranial hæmorrhage caused death. A third less severe case of fracture-dislocation (cervical) had completely recovered from paraplegia, etc., under rest and extension. The head should not be raised on a pillow, but kept back to release the cord. In dorsal fracture with paraplegia, and even with irremediable deformity, he had seen perfect recovery from paraplegia, under treatment (immediate) with plaster-of-paris jacket. He related briefly his other fatal cases, showing that there could have been no reasonable hope of benefit from operation in any; but as laminectomy for spinal fracture involved no opening of the dura mater, and otherwise ought to be very safe, he always felt prepared to operate though not eager to do so. Though the cases in which operation would do good must be rare, there could be no doubt that they did occur.

IV.—Gilbert Barling, M.B., F.R.C.S.,

Professor of Surgery, Mason College, Birmingham

Mr. Barling said that the injuries in which laminectomy was called for could be subdivided into two groups—(1) those produced by direct and (2) those produced by indirect violence, the latter, practically, always forced flexion. The first group contained the large majority of cases in which operation was likely to do good. After injury by indirect violence, which, as was so often the case, had been very forcibly applied, when the patient had complete anæsthesia, with loss of power and abolition of the deep reflexes, the cord was so damaged that operation was absolutely useless and a blunder. Mr. Barling considered that it was of the utmost importance to discriminate between the cases in which good could be expected from laminectomy and those in which it could not, lest resort to operation in unsuitable cases should bring operative procedures into discredit. The

fact that a certain number of patients with severe injuries to the spine and paralysis recovered under general treatment must be remembered, as also on the other hand the fact that laminectomy was an operation with a considerable mortality. Although dogmatism would be out of place, yet it appeared to make no difference whether evident displacement existed or whether the cord was held between displaced bone or not; at the time of the accident it was irrevocably injured. There was one exception in this class of indirect injuries, and that was when the fracture-dislocation occurred in the lowest dorsal and in the lumbar region, and nerve trunks were injured rather than the cord itself. In these cases operation was capable of doing much good, as the power of repair of damaged nerve trunks was considerable. There should, however, be no hurry to intervene, as spontaneous recovery often followed these injuries to the cauda equina.

V.—W. M. Barclay, F.R.C.S.,
Surgeon Bristol General Hospital.

Mr. Barclay considered that cases of spinal injury might be divided from the point of view of possible surgical interference into (I) those in which operation was contemplated for the immediate effects of such injury; (II) those in which it was undertaken for secondary results of the lesion. Cases of the first class might be classified as follows: (1) Displacement of one vertebra upon another, either with or without recoil; (2) displacement of a vertebral process, compressing or lacerating the cord; (3) hæmorrhage, which might be either central or peripheral. In the first subdivision no surgeon would now interfere where a spontaneous recoil had re-established the lumen of the spinal canal, especially if the symptoms were those of a total transverse lesion. On this point the observations of Bastian and Bowlby were of great practical utility. Where, in an injury above the lumbar centres, there was a total loss of all reflexes, with complete insensibility to touch and pain and motor paralysis below the lesion, there we had, in all probabity, a total transverse disorganisation which no treatment could remedy. But if there were no spontaneous recoil, but a persistent displacement, Mr. Barclay contended that surgeons were not justified, in the light of present imperfect and not very extensive experience, in a policy of uniform expectancy. Where circumstances and means were favourable, and, at least, until riper knowledge forbade, the patient ought to be given the chance of a laminectomy, perhaps combining with this an attempt to remove the anterior projection of the vertebral body, as suggested by one authority. Mr. Barclay then referred to three cases which had come under his own care. Two were of a practically identical injury, occurring on the same day, that of a fracture-dislocation in the cervical region, with the symptoms of a cord lesion below the fifth roots, and with Bastian's symptoms of a total transverse crush. He performed laminectomy in one case. The operation was quite innocuous but, as found *post mortem*, the condition was hopeless—a complete disorganisation of the cord. Had Bastian's views been then published, Mr. Barclay added, he would not have interfered. The third case was that of a young man who was struck upon his bent back by a heavy "shoot." He saw him within nine hours, and found a depression at the level of the twelfth dorsal spine, and on either side a bony projection, with complete paraplegia, and anæsthesia below the middle of each thigh. Mr. Barclay performed a laminectomy at once, hoping it might be a case of depression of lamina; but found a curious dislocation forwards and upwards of the twelfth dorsal from the first lumbar vertebra, with a fracture of the transverse process of the twelfth dorsal vertebra. The dislocation was reduced and the adjacent spines wired together; but after lingering for months, without any improvement, the patient died. The wound healed soundly and well in the usual time. In the second subdivision, probably all surgeons would agree that when a depression or displacement of a vertebral process was apparent, with spinal symptoms, laminectomy should be done, at any rate if the symptoms did not speedily show signs of amendment, or if they increased. It was often very difficult to diagnose such cases, and when such spinal symptoms existed and yet no vertebral irregularity could be made out, Mr. Barclay held, with the like qualification, that an operation should be done. A case of Mr. Golding Bird's very well illustrated this difficulty and the result of treatment. The patient fell 32 feet, and there was a space the size of a thumb between the eleventh and twelfth dorsal spines, the twelfth spine being pushed to the left. The paraplegia, which at first was only partial, speedily increased, and on the third day was almost complete. Mr. Bird performed a laminectomy, and found a depression of a lamina on to the theca, and a firm blood clot. The patient left the hospital quite well in two months. In the third subdivision the surgeon should be guided by the same general considerations. The hæmorrhage was generally central, and no surgical interference was called for or could avail; but cases might occur of a progressive kind in which the hæmorrhage was peripheral and in which an operation might occasionally be of signal benefit. With regard to the second class of cases, which might be termed secondary operations, little need be said. If improvement of spinal symptoms had progressed to a certain point and then ceased, or, possibly, if no improvement ever took place, and there were signs of a progressive ingravescence, laminectomy was perfectly justifiable with the full and intelligent consent of the patient, only remembering that the benefit was quite uncertain, as this depended on whether the paralyses were due to nerve degeneration or pressure of a peripheral pachymeningitis, or other such external source of pressure. The length of time during which the symptoms had persisted was an important element in the prognosis.

VI.—Damer Harrisson, F.R.C.S.Ed.,
Surgeon Liverpool Northern Hospital.

Mr. Damer Harrisson said that these injuries were comparatively common in the practice of some of the Liverpool hospitals; the common causes were falls into ships' holds or from great heights, and the fall of heavy weights upon men's shoulders, giving rise to the "doubling up" kind of fracture dislocation of which Mr. Barling had spoken. In a very large number of cases Mr. Harrisson had only met with two or three in which he was at all tempted to operate, and these recovered without operation. He believed the only treatment (except in an exceedingly small number of cases) was fixation, with careful attention to the bladder. The impossibility of diagnosing the extent of injury to the cord in a large number of these cases, and the fact that many cases which at first appeared hopeless made good recoveries after prolonged periods of from five to seven months, should encourage surgeons to persist in guarding these cases from all secondary causes of death. The literature of injuries of the spine and spinal cord showed that only a small minority of cases of traumatic paraplegia did not succumb to bedsores, septicæmia, or lardaceous disease, in spite of the most careful use of the catheter and washing out the bladder with antiseptic lotions. Mr. Harrisson since 1883 had (when these cases developed cystitis) performed upon them the operation of perineal cystotomy, inserting a lithotomy tube, to the end of which was fixed a length of india-rubber tubing sufficient to convey the discharges of the bladder into a vessel at the side of the bed, the bladder being washed out twice daily. A double set of tubes were used for each case, one set replacing the other every twenty-four hours. The tubes last in use were washed out with hydrochloric acid, and kept in corrosive sublimate solution for the following twenty-four hours until again required. By these means the urine could be kept acid and sweet for any length of time. Further, as the urine was conveyed into a vessel at the outside of the bed, the patient was kept dry, the points of pressure were not rendered sodden by acrid discharges from the bladder, and bedsores might be almost as successfully avoided as in any other affections which involved continual lying on the back. For fixation of the injury Mr. Harrisson recommended a modification of Hamilton's box splint, which consisted of two deep wooden side splints (held together with cross stays) extending on both sides of the patient from the feet to a short distance above the head, interrupted at the axilla by two bent irons. The whole of the head, neck, and trunk rested between the side splints upon a hammock made of separate pieces of strong sheeting, the pieces of sheeting being so arranged

that the separation came exactly at the points of fracture: the surgeon was thus enabled, by tightening up the piece on one side of the fracture more than the one upon the other, to assist in reducing antero-posterior displacements of the bones. To two of the wooden cross-stays were fixed two double inclined planes with hinge joints and foot pieces. These were extremely useful in reducing antero-posterior displacements in the lower dorsal region by relaxing the psoas muscles. They also served to hold the limbs on a level with the sheeting; the foot pieces prevented the malposition of the ankles, which was so apt to take place, and the flexure of the thighs upon the body enabled the nurse to keep the patient cleaner than any other position. The patient might be fixed to this splint by bandages extending from the feet to the head, wax bandages being applied where there was danger of soiling from fæces or urine.

VII.—Sir William Stokes, M.D., F.R.C.S.I.,

Surgeon in Ordinary to the Queen in Ireland, and Surgeon to the Meath Hospital, Dublin.

Sir William Stokes drew attention to the impossibility of relieving by laminectomy the pressure when the displacement of the vertebra was bilateral and without recoil. In these cases there were two points of pressure, one which was accessible by operation and the other inaccessible. Sir William Stokes thought that the proposal to gouge away the portion of the body of the vertebra which pressed the cord in front was an operative *tour de force* which he held was physically impossible without increasing the injury already existing in the cord. He discussed the treatment of fixing the spine by plaster-of-paris jackets, and he dissented from the views of those who advocated them, having found that his patients could not bear them and that they had quickly to be removed. He discussed the bladder treatment and advocated frequent flushing of the bladder with boric solutions. He advised laminectomy in all the cases in which there was fairly good evidence that the lesion was one of the arch and produced by force directly applied, since he believed that in a large proportion of such cases an accurate diagnosis of the nature of the injury could be made.

VIII.—Reginald Harrison, F.R.C.S.,

Surgeon to St. Peter's Hospital, London; formerly Surgeon to the Liverpool Royal Infirmary.

Mr. Harrison narrated the particulars of two cases of spinal fracture-dislocation which had come under his observation. The first was that of a woman who fell from a height, sustaining an injury of this kind in the lower dorsal region, with the usual paralytic symptoms. Twenty-four hours after admission into hospital the patient was placed under ether, and reduction by extension was effected; the symptoms dependent on cord pressure immediately disappeared. A plaster jacket was fitted, and recovery was complete and permanent. The second case was that of a fine healthy young man who in diving struck his head against the tiled bottom of the bath. He survived only a few hours. After death the fifth and sixth cervical vertebræ were found extensively fractured, and the cord was almost completely cut across. The first instance illustrated conditions which could be successfully dealt with, whilst in the second the lesion was perfectly hopeless.

IX.—Surgeon-Major W. H. Hatch,

Indian Medical Service.

Having had a considerable experience of spinal injuries at the Jamsetjee Jejeebhoy Hospital, Bombay, Surgeon-Major Hatch said that he welcomed any hope of improvement by operative measures. He regretted, however, to add that his hopes had been to a certain extent dashed to the ground. He mentioned five cases—one of injury to the cervical region and four to the dorsal; the first was due to a fall, and the others to bales of cotton falling on the back. The following cases were chosen as suitable for operation: (1) laminectomy in the dorsal region for considerable depression of the fragments. There was no improvement, and death ensued in a few days. (2) Injury in the cervical region. The cord was found covered with inflammatory exudation, but no marked pressure on it could be discovered. The operation wound healed up perfectly, and the patient lived for three months afterwards with no real improvement in his condition. At the *post-mortem* examination it was found there was very slight narrowing of the cervical canal by a smooth projection of the body of one of the vertebræ. (3) A negro, who had been paraplegic for more than three months. In addition to depressed lamina the cord was found much wasted. No improvement resulted, and the patient lived a few days only. It was found that a fracture extended across the body of a dorsal vertebra, and that a large abscess in front of the dorsal spine was present, which accounted for hectic symptoms before death and suspicions of abscess, the position of which was not localised. (4) The fourth case was interesting because in addition to a movable fracture of the body of the vertebra, a sharp ridge projected on which the cord lay, and was consequently pinched antero-posteriorly; this ridge was removed by the gouge carefully applied. This patient was placed on his face and a plaster splint applied; he was kept in this position, but died nine days afterwards with no improvement of his symptoms. (5) This case was under the care of Surgeon-Captain Quicke. Here again there was a sharp ridge pressing on the cord; this was removed by a gouge. No improvement followed at once, but later the patient could raise his leg and raise himself slightly. Taking into consideration the facts that prognosis was nearly always bad in these cases, that diagnosis was so difficult, a depressed spinous process, for instance, by no means showing the condition present, and that reduction of dislocation by main force in severe cases seemed unlikely to prove successful, Surgeon-Major Hatch was of opinion that in suitable cases early operation was advisable, and that late operation, as shown by the third case related, and by the case of a relation of his own operated on by a well-known surgeon three months after the accident without any improvement resulting, was not very hopeful.

X.—Jordan Lloyd, M.S., F.R.C.S.,

Surgeon to the Queen's Hospital, Birmingham.

Mr. Lloyd referred to the error of the prevalent belief that fractures of the spine were almost essentially fatal. Their severity entirely depended on the nature of the injury of the cord. A working estimate of its extent could usually be made from a study of the nature of each accident. Fractures by indirect violence were almost always attended by cord crushing, and were unsuitable therefore for the operation of laminectomy, whereas the injuries caused by direct violence more often justified this operation. Fractured spines should be treated on the general principles which guide us in the treatment of fractures elsewhere—the reduction of existing deformity and the maintenance of absolute rest by retentive apparatus of some kind or other. Secondary operations were justified by unimproving lesions.

XI.—Noble Smith, F.R.C.S.Edin.,

Surgeon to Out-Patients City Orthopædic Hospital.

Mr. Noble Smith recommended that an attempt should always be made to reduce the fracture by applying the fulcrum upon the point of projection and bringing back the upper and lower extremities of the spine in an antero-posterior manner rather than by extending the spine longitudinally. He thought that until this treatment had been fully tried no attempts at operation were justifiable. He related a case in which fracture in the dorso-lumbar region was cured in this manner. In respect to cases in which months had elapsed and symptoms of pressure remained, he thought that some operative interference should be offered to the patient. Mr. Noble Smith described a case in which he had operated by laminectomy in such a case with success.

Hospital Extension at Croydon.—On October 13th a new wing, which has been added to the Croydon General Hospital, was opened by the Archbishop of Canterbury in the presence of the municipal authorities and a large gathering of well wishers to the institution. The principal features of the extension are the two new wards, together with the additional accommodation which has been provided for the resident staff.

PATHOLOGICAL CONSIDERATIONS ON SURGICAL INTERFERENCE FOR PERFORATIVE ULCER OF THE STOMACH AND DUODENUM.[1]

By T. N. KELYNACK, M.D.VICT.,
Pathological Registrar, Royal Infirmary, Manchester.

ALMOST the sole hope in cases of intraperitoneal perforation of gastric and duodenal ulcers lies in prompt surgical interference. Impending death can only be avoided by early diagnosis and immediate operation. If we act up to our recognition of pathological facts, free and speedy co-operation of physician and surgeon is essential. But successful surgical treatment must be based on an accurate knowledge of the lesion. The actual pathology, it is true, is still shrouded in considerable mystery, but much valuable information is forthcoming as to the general character of these ulcers.

Having recently had exceptional opportunities for the pathological examination of a number of these cases, I propose very briefly to record a few impressions, limiting myself, however, to a consideration of those points which may prove helpful in indicating the extent and possibilities of surgical interference. I shall restrict myself almost entirely to cases in which actual perforation occurred.

FREQUENCY OF PERFORATION.

In order to obtain some idea of the frequency of acute peritonitis consequent on perforation of gastric and duodenal ulcers, as compared with that due to perforation of other parts of the gastro-intestinal tract, and arising in the course of other diseases, I have examined the records of 3,471 *post-mortem* examitions made in the Manchester Royal Infirmary. The result of the analysis may be briefly tabulated thus:

Class of Cases.	No. of General Cases.	No. of Cases of Acute Peritonitis.
Medical Patients ...	2,764	44
Surgical ,, ...	707	113
Total...	3,471	157

Of these 157 cases of acute peritonitis, the number actually due to perforation of gastric and duodenal ulcers was comparatively small, and I am strongly of opinion that the statistics of hospital cases are liable to give a somewhat erroneous idea as to its frequency. Many anomalous cases of sudden illness with acute abdominal symptoms rapidly terminating fatally, even before the subject can be brought to hospital or receive adequate medical assistance, are undoubtedly due to this condition. In the present series of cases there were 6 in which the acute peritonitis resulted from perforation of a gastric ulcer, and 6 from duodenal ulcer.

Of these 157 cases it is interesting here to note that 9 were due to perforative appendicitis.

SURGICAL GROUPING OF ULCERS.

Although to the pathologist these ulcers usually present somewhat similar characters, wherever they may be situated, still to the surgeon, from the consideration of the possibilities of surgical aid, they may be conveniently divided into three groups: (1) Gastric; (2) pyloric; and (3) duodenal.

GASTRIC ULCER.

Ulcer of the stomach has usually been stated to be most frequently met with on the posterior wall, near the pylorus, and towards the lesser curvature. The position, however, varies considerably: and yet to the surgeon it is the factor which above all others is of the greatest moment. For him there are but three positions: (1) Accessible, where the ulcer may be readily found and easily dealt with: (2) non-accessible, where the ulcer is both out of sight and out of reach: and (3) difficult, where it is more or less get-atable, but possibly only after much search, and where frequently efforts at closure are rendered arduous and perplexing.

The most accessible position is where the ulcer is situated on the anterior wall and near its greater curvature. The following appears to be a case belonging to this class:—

E. K., aged 24. Patient had been treated for gastric ulcer for some time; was brought to hospital in collapsed condition with distended abdomen. She had vomited and complained of abdominal pain before admission. Death occurred in three hours.

Necropsy.—Perforation on anterior wall of stomach 0.75 cm. in diameter, and situated 10 cm. below œsophageal opening, almost midway between greater and lesser curvature, 3.5 cm. from the former. Serous coat thickened and irregular around the perforation. On turning stomach upwards a round perforation was found on the posterior wall almost exactly opposite the perforation on the anterior wall; it was apparently due to *post-mortem* softening. The perforating ulcer was irregularly triangular, its longest diameter being 1.5 cm. It was funnel-shaped, and at one side the mucous membrane was much undermined. The surrounding tissue was indurated; the whole gastric mucous membrane was thickened as from chronic gastric catarrh. The peritoneal cavity was distended with gas, and contained ochre-coloured fluid having a foul, fæcal odour, together with flakes of inflammatory lymph.

Inaccessible positions are those at or close to the œsophagus, and in many instances those near the smaller curvature. The following appears to me to be such a case:—

G. W., aged 32. Patient was admitted to hospital in very collapsed condition, giving history of profuse hæmatemesis. Death occurred in six days, apparently from asthenia.

Necropsy.—Stomach presented chronic ulcer, situated on smaller curvature 1¼ inch to the right of œsophageal aperture. Greatest diameter, 4.5 cm.; shortest, 2.5 cm. A part of the ulcer extended downwards on to posterior wall of stomach, a portion also reaching forward on to anterior surface. Edges sharply defined, clean cut, rounded, and slightly undermined. The floor formed by glandular tissue lying immediately behind the smaller curvature and directly above the upper border of the pancreas. Several glands very distinctly seen on the floor of the ulcer, and a number of reddish points indicate the open mouths of eroded vessels. There was no indication of healing or cicatrisation, but there was no mechanical obstruction to the passage of the gastric contents. Around the œsophageal opening were a number of small hæmorrhages.

Difficulties must often arise where the perforation is high up on the anterior wall near the lesser curvature, and especially when the stomach is small and contracted, or placed high up under cover of the ribs in a long chest, or hidden under an enlarged liver. Special difficulties necessarily are associated with perforation on the posterior wall. Occasionally in these instances perforation into the lesser peritoneal cavity is said to occur. I have however met with no such cases. Fortunately adhesions are usually formed to the pancreas and neighbouring structures. Such was found in the following case, which I here briefly mention, although in this instance no intraperitoneal perforation occurred.

S. L. B., aged 32. Symptoms of gastric ulcer extended back over ten years. Large chronic round ulcer, 1½ in. in diameter, situated 1½ in. to left of pylorus, mainly on posterior wall, but slightly encroaching on smaller curvature and edge of anterior wall. The edges were smooth, indurated, extensively undermined. The floor was formed mainly by the head of the pancreas and peripancreatic tissues.

While position should naturally take the first place in the mind of the surgeon, other factors are not to be forgotten. The size of the ulcer varies much, and the size of the actual perforation gives no correct idea of the extent of the ulcer. Frequently the aperture of perforation is exceedingly small, and even *post mortem* I have occasionally had some difficulty in quickly finding it. Gaseous injection through the œsophagus would prove of service in such cases. In shape the ulcer is by no means always round. Often it is very irregular, not infrequently it is somewhat triangular. Considerable difficulty may thus be experienced in dealing with an extensive ulcer, especially when situated in a position not readily accessible, or where it is in the near neighbourhood of the pylorus.

As regards number, in my experience these ulcers are usually single, and I know of no case where double perforation occurred at the same time. In one instance I met with a second perforation exactly opposite a perforated ulcer, but careful examination clearly indicated its origin in a localised *post-mortem* softening.

The condition of the surrounding tissues, and the shape and general condition of the stomach, must necessarily have very considerable influence on the results of surgical interference. While the edges of the ulcer are almost invariably rounded, thickened, and elevated, the surrounding tissue is often for some little distance extensively infiltrated. Sometimes the mucous membrane is so much undermined at the edges of the ulcer as to produce a distinct cyst-like cavity. In at least one case I have found the whole mucous membrane consider-

[1] Communication to the sixty-second annual meeting of the British Medical Association, July, 1894.

ably thickened, evidently from a long standing chronic diffuse catarrhal gastritis.

Pyloric Ulcers.

The importance of the pylorus as the outlet of the stomach makes ulceration at this point of especial importance, for although perforation may be coped with by the surgeon, yet the possibilities and dangers of subsequent stenosis must ever be borne in mind.

The following are the only two cases of perforative pyloric ulcer that have come under my notice:

T. C., aged 29, labourer. On July 1st, during very hot weather, patient partook of some tinned beef. The following morning he was suddenly seized with severe abdominal pain, chiefly situated in the region of the umbilicus, and of a colicky nature. He vomited once. The bowels were not moved. Pain continued, and there was much abdominal tenderness on pressure, but there was no great rigidity or distinct evidence of peritonitis. The condition suggested irritant poisoning. Purgatives were taken, but without effect. Patient rapidly became collapsed, and died about midday on July 3rd.

Necropsy.—A perforated ulcer was found close to the pylorus, on the anterior wall. The aperture of perforation was 0.5 cm. in diameter. The abdominal cavity contained much gas, and many pints of a yellowish fluid, in which were numerous fat globules. The peritoneum was acutely congested. The other organs were fairly healthy, but suggestive of chronic alcoholism.

W. S., aged 36. Patient came under observation with characteristic symptoms of gastric ulcer. Digestive troubles had existed for nearly two years. The day but one after admission to hospital perforation occurred.

Necropsy.—On the anterior wall of the pylorus perforation through typical ulcer. Ulcer was extending into duodenum and also slightly into stomach. Stomach contracted. Peritoneum: acute diffuse septic peritonitis.

Duodenal Ulcers.

In the *Post-mortem* Reports of the Manchester Royal Infirmary on medical cases examined since the year 1867 I can find only 10 cases of undoubted primary duodenal ulcer. I have, of course, excluded all those associated with burns and those where it appears to have been secondary to other conditions, such, for example, as gall stones. Only 6 of these ended by intraperitoneal perforation, the other 4 dying from hæmorrhage.

These cases suggest so many points of pathological interest and surgical importance that I here venture to append brief abstracts:

F. C., aged 19. Ulcer on posterior surface of duodenum the size of shilling piece, with aperture of perforation the size of a threepenny bit. Acute general peritonitis with much dark grumous fluid in the abdominal cavity.

H. D., a young adult. Just beyond pylorus was situated a triangular-shaped ulcer. Punched out appearance. Edges not at all infiltrated. At base of ulcer small circular aperture into peritoneal cavity. Base of ulcer non-adherent. By its side was a diverticulum, from the duodenum projecting backwards, about one inch broad and a half to three-quarters of an inch deep. No cause apparent for its formation. Acute general peritonitis with liquid fæcal matter in abdominal cavity.

J. S., aged 38. Round ulcer three-eighths of inch in diameter and half inch beyond pylorus. Base formed by peritoneum only, in which was small perforation. Acute peritonitis with fæcal matter in abdominal cavity.

J. H., elderly male. Circular ulcer on posterior surface immediately beyond pylorus, diameter ¾ inch, margins black and indurated. Perforation through base into peritoneal cavity, acute peritonitis.

M. F., aged 58. Ulcer just beyond pylorus on anterior wall, size of threepenny bit, Characteristic punched-out appearance. Liver lying towards posterior wall, and separated by considerable interval from lower ribs. Transverse slit along floor of ulcer, which is formed alone by serous coat. Acute peritonitis. Fæcal material and much inflammatory lymph in abdominal cavity.

The last of these cases of perforative duodenal ulcer is of considerable interest from the interesting clinical history of the manner of onset.

P. M., aged 19. On January 4th he walked from Warrington to Manchester, and on arrival at the latter place suddenly experienced violent pain in the stomach, vomited, and fell down unconscious. Death occurred the following day.

Necropsy.—Immediately beyond the pylorus on the anterior surface was a small round perforation corresponding with the floor of a round ulcer, which presented a characteristic punched-out appearance. The edges were very distinctly indurated. Fæcal matter was seen still oozing through aperture; remainder of duodenum normal; stomach congested; peritoneum, acute diffuse septic peritonitis.

Although the group of cases ending by hæmorrhage consequent on erosion into the vascular structures forming the floor of the ulcer, or due to extension of the ulceration into neighbouring vessels, strictly speaking does not come within the field of our present consideration, yet the measures necessary for the treatment of perforation may possibly, in some modified form, ultimately be found to prove useful in the arrest of fatal hæmorrhage, and hence the brief record of even a few cases may assist in indicating the lines of surgical attack.

C. W., middle aged. At the junction of the first and second portions of the duodenum, on the internal aspect of the gut, was a large ulcer of the size of a florin. The floor was formed by the indurated head of the pancreas. In the centre of the floor there appeared a small aneurysmal dilatation of an artery, which had ruptured into the intestine. The edges of the ulcer were thickened and reddened, but the neighbouring part of the bowel was healthy. The intestines contained a quantity of dark tarry material, consisting apparently of disintegrating blood. The stomach was somewhat dilated; the peritoneum was normal.

I. T., aged 33. A circular ulcer, 1½ in. by 1 in., situated in the first part of the duodenum immediately beyond the pylorus and on the posterior wall; base formed by pancreas; stomach dilated and distended with blood and clot, which had apparently come from ulcer.

J. H., aged 46. Ulcer at commencement of duodenum on posterior wall ⅝ in. by ⅝ in. and nearly ⅝ in. in depth; edges rounded, firm, and clean cut. The base presented small blood clot in orifice of large artery passing through head of pancreas; stomach dilated; duodenum filled with fluid blood.

In the above cases death appears to have been due to an acute hæmorrhage. In other instances repeated hæmorrhages may quite as surely lead to the fatal termination, as in the following case, which I recently had the opportunity of examining *post mortem*:

W. S., aged 29. Patient gave history of hæmatemesis, with other signs of gastric ulcer. Lately the vomit had assumed a brown colour, and the stomach had become dilated.

Necropsy.—Immediately beyond pylorus on the anterior wall was a large chronic ulcer, having a diameter of an inch and a half. Edges were rounded, smooth, indurated, and undermined, so that a large cyst-like cavity existed beneath borders of ulcer. Floor of ulcer adherent to gall bladder, being separated only by a thin membranous layer. Stomach much dilated.

It is somewhat interesting to note that all the cases of duodenal ulcers recorded in our hospital pathological reports occurred in males. In seven the exact age was obtained, giving an average of nearly 33 years.

OPENING OF THE MEDICAL SCHOOLS:

INTRODUCTORY ADDRESSES.

UNIVERSITY OF CAMBRIDGE.

AN INAUGURAL LECTURE ON PHARMACOLOGY AND THERAPEUTICS.

Delivered on October 24th,

By J. B. Bradbury, M.D., F.R.C.P.,

Downing Professor of Medicine in the University of Cambridge, Physician to Addenbrooke's Hospital.

It has been the custom for my two predecessors in this Chair to lecture on materia medica and therapeutics, or on pharmacology and therapeutics, and, as attendance on lectures on the physiological actions and therapeutic uses of remedies is required of all candidates for the M.B. degree of this University, I have decided to keep up the custom.

As, however, pharmacology, or the action of medicinal agents on the body generally and upon its various tissues and organs in health and in disease, has latterly developed into a very important department of medical study, and as the electors to this professorship were of opinion that the teaching of this subject should be increasingly encouraged, I trust in time, with the help of an assistant (whom by the favour of the University I have been allowed to appoint) that an active school of pharmacology, similar to the schools of physiology and pathology, will grow up. With the limited means at present at our disposal we cannot expect a very rapid or immediate growth; but our aim will be to encourage students to work at this subject both before and after taking their medical degrees.

Hitherto in very few of our medical schools has any provision been made for pharmacological study and research: whereas in Germany almost every university possesses a pharmacological laboratory of considerable extent, and pharmacology constitutes an important branch of the higher scientific teaching.

It is impossible for anyone to undertake satisfactorily pharmacological investigations who is not already acquainted with the experimental methods required in chemical, physiological, and pathological research, but a most excellent training in these subjects is now provided in our Cambridge laboratories. Indeed, it may be said that pharmacological investigations are, to a certain extent, carried on in these

schools, but rather with a view to determine some physiological or pathological problem than with the idea of therapeutic application. Our object will be to investigate the physiological actions of drugs with the hope of turning them to account in the treatment of disease. It is only by such investigations that we can expect to establish a basis for rational therapeutics.

With regard to the position of pharmacology in the medical curriculum there can be little difference of opinion. The art of healing—which is the final aim of all medical study—is dependent on a knowledge of pathology and pharmacology, and these, in their turn, necessitate a previous acquaintance with other natural and physical sciences. They thus form a connecting link, as it were, between the earlier studies of physics and chemistry and anatomy and physiology on the one hand, and the more practical subjects of medicine, surgery, and obstetrics on the other. It is obvious, therefore, that pharmacology should be taught directly after physiology, and simultaneously with, or immediately following, pathology. Therapeutics, although as a science inseparable from pharmacology, should be taught practically in connection with clinical medicine at the hospital. I hope in time to see general pathology (including bacteriology) and pharmacology the subjects of the First Part of the Third M.B. Examination, and surgery and midwifery transferred to the Second Part of that examination. But as in logical order teaching should precede examination, it would be premature to make the change until the practical study of pharmacology has been sufficiently provided for.

[After a careful survey of the history of therapeutics from the earliest times, Dr. Bradbury said:]

The course of therapeutics in the nineteenth century is one of the brightest in medical history, and this is due in no small measure to the establishment of the science of experimental pharmacology. The introduction of anæsthetics and antiseptics has revolutionised surgical practice, and the discovery of recent hypnotics and analgesics has given us symptomatic remedies of very considerable value.

Although von Haller, one of the most learned men of the eighteenth century, experimentally investigated the action of drugs, the science of pharmacology may be considered as originating in the present century. It was Bichat, and more especially Majendie and his pupil Claude Bernard, who acted as pioneers in this branch of medicine. Their investigations, more especially those of Majendie upon the action of upas and strychnine, still remain models of acute analytical inquiry.

But it is not my intention to pursue further the chronological order in the development of our science. Its dependence upon the close connection with so many other sciences, and the numerous paths of investigation they have opened out, would render such a task difficult, and, from its complexity, perhaps uninteresting. The development of organic chemistry has, under the influence of the present generation of investigators, especially affected pharmacological progress, and botany has also added its quota. The discovery of bacteria, and the founding of the science of bacteriology, have led of late years to the first principle of medical treatment, namely, the investigation of the cause of disease. This inquiry into the etiology of disease has led to pharmacological research, and to the treatment of infectious diseases by attenuated virus and antitoxic derivatives. The researches of Pasteur on fowl cholera and hydrophobia are of world-wide fame, and have led to the more recent investigations on the preventive treatment of anthrax, tetanus, cholera, and diphtheria. It is now, indeed, not improbable that, in the near future, we shall be able to treat more hopefully that scourge of our land—tuberculous phthisis.

Another department of pharmacology, and one which also borders on pathology, is also being actively investigated at the present time. I refer to the action of gland extracts.

We have now traced, though in a brief manner, the development of therapeutics to the present day. We have seen that medicine, like other arts and sciences, travelled *pari passu* with civilisation, that experience first led to empiricism, and later, to the establishment of empirical laws. These in the majority of instances had only an ephemeral existence, but they left their mark on medical progress; they failed to satisfy the requirements of Nature, but they stimulated physicians to further observation and research, and thus led, indirectly, to the establishment of a better therapeutic. Mere experience can never satisfy the requirements of science, nor supply an ideal system of treatment. The human organism is too complex, and the chances of observation too few to determine either the etiological factors and pathological processes of disease, or the pharmacological action of our remedies, and without this knowledge no rational system of treatment can be established. Under any circumstances a true deduction of causes from effects is difficult, and where the latter cannot be determined with certainty, as is usually the case in medical practice, it is impossible. We are therefore obliged to determine the effects of causes, and experiment thus becomes a necessity. In all sciences this is the only way to arrive at truth. That the results obtained in the different sciences vary cannot be wondered at, seeing that these sciences essentially differ in themselves.

The physicist or chemist, starting with certain known factors, may demonstrate his results with mathematical exactitude. He may, moreover, produce under the same conditions the same result at any future time; and in some cases he may even predict what his result will be, although it may never before have been obtained. But the pharmacologist cannot do this. His methods of reasoning, and even of experiment, may be the same, but the varying vital phenomena inseparable from his operations make his results less constant. By reducing the processes of life to the simplest conditions, he may, however, obtain constant results within certain limits, and by such methods he may satisfactorily elicit the action of any given substance on the living organism. One of the commonest sources of error in this line of research arises from impurities in the drug itself experimented with; and, unfortunately, the difficulties of obtaining substances in a state of sufficient purity for investigation are often great.

Our greatest difficulty, however, lies in the variability of the organism. We are constantly reminded that we are dealing with inconstant quantities. Even such a comparatively simple organ as the muscle of a frog will react differently under slightly different natural conditions, and the muscles of a frog, toad, and tortoise, even under the same conditions, will often give entirely different results. What the determining factors of these differences are we have not yet discovered, but an explanation will no doubt sooner or later be forthcoming. In the organism as a whole the difficulties are further increased. Animals of closely allied, or even of the same, species will often react differently to the same drug under apparently the same conditions, and the peculiar condition termed idiosyncrasy (a name applied to the excessive susceptibility of certain individuals to certain drugs) is not an infrequent cause of fallacious results. Moreover, habit, age, race, and other natural conditions are known to modify drug action. The minute quantities of substances with which we deal, and the complicated conditions to which they are subjected before they act upon the tissues themselves, further increase our difficulties. When we remember that the $\frac{1}{250}$ of a grain of hyoscine given subcutaneously will often act upon the cerebral cells and produce sleep, and that the $\frac{1}{100}$ of a drop of nitro-glycerine (about $\frac{1}{1000\ 000\ 000}$ part of the average weight of an adult man) given by the mouth will affect the vascular system of the whole body,[1] we may more readily understand the difficulties arising from these causes.

I must also allude to a constant source of fallacy in the therapeutic application of our remedies, namely, that of testimony. Some patients, apparently from a desire to please their physician, or it may be to delude their friends or themselves, attribute certain properties to the drugs given them which they do not possess. This tendency is enhanced if the patient knows the drug to be a new one; and thus we often find that the extended application of any new remedy rarely maintains its claim to the valuable properties which have been attributed to it. Possibly patients become fired with the too apparent enthusiasm of their physician, who thus unconsciously introduces a psychical factor, which has invariably a powerful influence on the course of disease. A curious instance in point is related by Dr. Paris in his *Life of*

[1] Leech, Croonian Lectures, BRITISH MEDICAL JOURNAL, vol. ii, p. 57, 1893.

Sir Humphry Davy.[2] "As soon," he says, "as the powers of nitrous oxide were discovered Dr. Beddoes at once concluded it must necessarily be a specific for paralysis; a patient was selected for trial, and the management of it was entrusted to Davy. Previous to the administration of the gas he inserted a small pocket thermometer under the tongue of the patient, as he was accustomed to do upon such occasions, to ascertain the degree of animal temperature with a view to future comparison. The paralytic man, wholly ignorant of the nature of the process to which he was to submit, but deeply impressed from the representations of Dr. Beddoes with the certainty of success, no sooner felt the thermometer under his tongue than he concluded the talisman was in full operation, and in a burst of enthusiasm declared he already experienced the effect of its benign influence throughout his body. Davy cast an intelligent glance at Mr. Coleridge (who communicated the anecdote to Paris), and desired his patient to renew his visit on the following day, when the same ceremony was performed, and repeated every succeeding day for a fortnight. The patient gradually improved during that period, when he was discharged as cured, no other application having been used." In this case the paralysis was due to volitional defect and not to a structural lesion. Dr. Beddoes had excited a hopeful expectation in his patient's mind, which is the most powerful curative agent in this class of affections.

Although these variable and unknown quantities prevent our making pharmacology such an exact science as mathematics or chemistry, it may, nevertheless, be sufficiently developed for all practical purposes. We do not expect the meteorologist to control the formation of the winds, nor the astronomer the motion of the stars, but we do expect them to explain to us the laws which govern and control these phenomena by means of the conditions Nature has placed within their reach. And, though the pharmacologist may not be able to explain the nature of life, yet we may expect him to determine the action and reaction between remedial agents and the living organism, and thus to provide a scientific basis for the application of these remedies in disease. This he has done and is doing. During the last thirty years pharmacology has advanced with rapid strides. Many new drugs have been introduced into practice, and many old ones have been reinvestigated, and their therapeutic application extended. The action of the digitalis and strychnine groups has received special attention, but the greatest advance has, as I have already hinted, resulted from the development of organic chemistry.

With the rise and growth of this science crude materials were separated into their constituent parts; the active ingredients of vegetables were isolated, and later their constitution was determined. *Pari passu* pharmacology and therapeutics advanced. Active principles were investigated, and these, owing to their more definite composition and greater activity, soon to a great extent took the place (in practice) of the crude drugs. With the separation of active principles into their constituent parts, these also were subjected to pharmacological investigation, and thus a department of pharmacology relating to the physiological action of chemical groups was instituted. The stability of radicles and residues, the readiness with which they may be introduced or replaced in a compound and the ease with which new compounds can be formed, led pharmacologists to this line of research. If, they thought, definite physiological actions can be established for these chemical groups, we may also be able to produce compounds capable of exerting any action we require. The value of such knowledge in the treatment of disease would be inestimable. Through the labours of Richardson, Crum Brown and Fraser, Gamgee, Lauder Brunton, Leech, Ringer and Murrell, McKendrick and Dewar, Stockman and Sainsbury in England, and Schmiedeberg, Binz, Kobert, Dujardin-Beaumetz, and others on the Continent, this line of research has already yielded valuable results, and, moreover, gives fair promise for the future. A detailed consideration of this department of pharmacological science would, however, need an extensive acquaintance with chemical technology, and I shall therefore endeavour, in pointing out to you the recent developments in this department of our science, to use the simplest illustrations I can command.

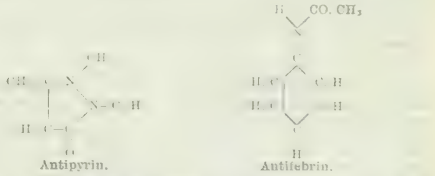
[Dr. Bradbury here entered into an elaborate review of the chemistry of alcohol and certain of its derivatives, showing the great difference in their therapeutic effects according as the hydroxyl or the radicle is replaced by one body or another.]

A large number of these compounds, many of them of a highly complex character, have entered into medicine, but it is not my intention to weary you with their chemical and pharmacological relations.

I may, however, point out to you how easily we can modify by chemical means these highly complex bodies. Strychnine, one of the most powerful alkaloids known, is completely changed by the introduction of a pharmacologically weak methyl radicle. The methyl-strychnine thus formed becomes disproportionately weak, and exhibits, instead of the powerful convulsant action of the strychnine, a paralysing one. In a similar way (by substitution) the action of many other alkaloids (thebaine, brucine, conine, morphine, etc.) may be modified.

I have, however, dwelt sufficiently upon this line of research for my present purpose. I have illustrated the close connection between chemistry and pharmacology, but I do not wish to convey the impression that all chemical groups are pharmacological groups, or *vice versa*; on the contrary, they are not. The most closely allied chemical groups are often widely separated pharmacologically; and, on the other hand, substances with similar pharmacological action have no analogous chemical constitution. We have already had evidence of the former statement in the action of strychnine and its methyl derivative, and we have another illustration from the action of arsenic, according as it appears in the form of arsenious anhydride (As_4O_6) or arsenites, on the one hand, or combined in the form of kakodyl compounds [$As_2(CH_3)_4$], on the other. Thus arsenious acid, even in very small doses, is a deadly poison, whereas as kakodyl many times the quantity of arsenic can be taken into the system with impunity. It is possible that the greater insolubility of the latter may be a factor in producing this variation, but this is not the whole explanation.

As regards the substances with similar pharmacological action, but dissimilar chemical structure, I will instance the action of barium and digitalis on the heart, or the two recently introduced antipyretics—antipyrin and antifebrin—whose action is in many respects identical, though their structure, as exemplified by their formulæ, offers no appearance of chemical similarity.



From this elementary survey of the present tendency of pharmacology you may more readily understand how, in the future, by the combination of these various radicle and residual groups, we may hope to increase the bounds of our therapeutic knowledge and our armament against disease. This method has already enriched medicine with valuable remedies: the introduction of the stimulating amidogen group (NH_2) into the depressing hypnotic chloral has given us a much safer compound, chloralamide, and if time permitted other instances might be quoted in which chemical modification has been associated with therapeutic amelioration.

I do not wish, however, to exalt science to the detriment of experience. I have already said that experience alone will not give us the clue to the complexities of Nature, nor form the basis of a rational system of treatment: neither in medicine will experimental science alone; clinical observation and laboratory research must be combined. The discoveries of the pharmacologist must be ratified by the

[2] *Life of Sir Humphry Davy*, by J. A. Paris, M.D., F.R.S., 1831, p. 50.

mature experience of the physician; but the scientist and the clinician together may be able to raise up a rational system of therapeutics. This is the goal to which we strive, and although some would advocate the study of pharmacology as a purely physiological science, I prefer to regard it in its application to therapeutics.

The province of the pharmacologist, therefore, is to be a forerunner of the physician, to point out the therapeutic indications of new remedies, and an extended or more rational use of old ones. A perfect pathology and pharmacology (if these are attainable) will lead to a perfect therapeutic; but they cannot take its place. They will lay a firm foundation, but the superstructure that we raise must depend upon our own individual tact and experience. It will, therefore, be my endeavour, both in systematic lectures and in laboratory work, to lay this foundation, and thus to give to the students coming under my care, as far as possible, a rational system on which they may rely in their practice in years to come.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

AN UNUSUAL COMPLICATION OF TRACHOMA.

By the courtesy of Dr. H. W. S. Williams, of Holywell, I have recently had an opportunity of examining a case of trachoma, which possesses at least one feature of peculiar interest. The facts are briefly as follows:

M. F., aged 11, states that she has suffered from "weak eyes" since 1889. At first sight, the right eye would seem to be free from disease. A more attentive examination shows, however, that its palpebral conjunctiva is scarred, while the depth of each *cul-de-sac* is considerably reduced (symblepharon posterius). In other words, the eye has at some former time been the subject of trachoma, a malady that has undergone spontaneous cure. The lashes of the upper lid are 6 millimetres in length. The left eye, on the other hand, shows obvious signs of active mischief. Thus, its thickened and distorted upper lid droops so as almost to close the eye; the cornea is hazy from pannus; and an abundance of mucopurulent secretion is present. The conjunctiva, especially of the upper lid, is the seat of active and typical trachomatous changes. But the striking feature of the case lies in the fact that the lashes of the latter structure are of disproportionate length, and measure in fact 12 millimetres.

Sydney Stephenson, M.B., F.R.C.S.Edin.,
Surgeon to the Ophthalmic School, Hanwell, W.
Welbeck Street, W.

HÆMATOMA OF VULVA.

As this is a somewhat rare complication, it may be worth while to record the following case. It occurred in a primipara after an apparently normal labour. There was rather violent straining when the placenta came away, in about a quarter of an hour, and a little bulging of the right labium, but afterwards the patient was easier for about half an hour, when there was a sudden tearing sensation, with violent bearing down pain. I had just left, and was recalled hurriedly to find the bed soaked with blood, the patient blanched, and a tense purple tumour, about the size of the fœtal head, presenting between the thighs. The buttocks were slightly raised, the head kept low, and the space under the buttocks and between the thighs was gently packed with Southall's towels; the knees were, of course, supported in a semi-flexed position. Blood oozed out slowly between the tumour and the left thigh, and in a few hours urine was passed. It was impossible to reach the urethra without disturbing the clots, so the towels were frequently changed, and the parts irrigated with weak carbolic lotion. The temperature rose next day to nearly 100°, but went down in a few hours and did not again exceed 99°.

Very early on the morning of the third day I was called as the clot began to protrude. I removed a large mass of clot from the right labium, which it then appeared had been torn for about 4 inches along the junction of skin and mucous membrane on the occurrence of the hæmorrhage. The resulting cavity, whose floor consisted of firm clot, was washed out with weak perchloride lotion, and stuffed with double cyanide gauze; the vagina was then douched, and a large clot came away. The bowels fortunately remained confined for a few days more. A catheter could now be passed readily. This was done by the nurse every eight hours, and she was also directed to irrigate the vagina and the cavity in the vaginal wall at first every four hours, then less and less frequently. Much clot came away from the vaginal wall; there was no pus, and no offensive smell detectable at any time. The wound was healed, and the patient got up in a fortnight.

The patient's mother "flooded," I am told, after the birth of every one of her children, and she now suffers from extreme varicosity of the veins of the legs. Both mother and daughter suffered from hæmoptysis at the age of 20. The daughter was certainly not tuberculous; she was slightly anæmic. It is almost certain from her subsequent history and present appearances that the mother was not tuberculous either.

South Petherton, Somerset. S. W. MacIlwaine.

A CASE OF CARBOLIC ACID POISONING.

I was called in at 4 P.M. on August 4th to a man aged 34, who had taken some carbolic acid with suicidal intent about twenty minutes before. The quantity taken was exactly 2½ drachms of liquefied carbolic acid, *B.P.* He was in drink at the time he took it, and when I saw him was unconscious, breathing stertorously, and had contracted pupils. The tongue was not marked, and there was only one white patch on the inside of the lower lip, and another on one side of the fauces. I washed the stomach out with warm water by means of a soft rubber tube and funnel. The evacuated material consisted of diluted beer and a little mucus, and smelt strongly of carbolic acid. Afterwards I administered about 4 ounces of oil and some soluble sulphates. He came round quickly, and in about an hour's time seemed quite fit to be left. I ordered him to have nothing but small quantities of milk till I saw him again.

On calling again four hours later I found him in bed, rather noisy, but quite sensible. The temperature was then 98·4°; pulse 85, fairly full and regular. Pupils normal. The bowels had been opened four times since I had seen him previously, but the motions were not dark coloured, and the urine was only slightly so. He had developed a slight cough, and complained of pain over the stomach. I ordered him to have warm applications to the stomach, and a draught containing 15 grains of potassium bromide internally; to take nothing but a little cream.

About 12 30 A.M. he had been up to the chamber, and they were helping him back to bed, when he suddenly complained of intense pain in his stomach, and almost immediately expired, probably from perforation of the stomach and shock, though, as there was no *post-mortem* examination, this was not verified.

I thought the case worth reporting on account of the smallness of the dose, which was exactly known; the length of time which elapsed before the sudden death; and the small escharotic effect on the mouth and lips compared with what was probably the case in the stomach. There was no horniness around the lips after death.

Manchester. J. J. Mooney, L.S.A.Lond.

A NEW TREATMENT OF GUINEA-WORM.

Having read in the British Medical Journal of July 7th, page 23, under the above heading, of Dr. Émily's treatment of guinea-worm, and happening to be in a station where this disease is very common I tried the treatment in the first two cases which came under my observation with good results.

Case I.—Sepoy, K. N., Malwa Bhil Corps, was admitted to hospital on July 30th, 1894, for guinea-worm. He had suffered from general urticaria and fever for a few days. On admission, the bleb had formed on the outer side of the left foot, but the worm had not protruded. A hypodermic injection of a 1 in 1,000 solution of perchloride of mercury was given in four places. This was followed by some œdema of the foot, and on August 4th there was a slight formation of pus near the small toe, which was opened. The wound healed at once, and the patient was fit for duty on August 10th. Cured in twelve days.

Case II.—Sepoy, B. S., of the same corps, was admitted to hospital on August 3rd, 1894. He also had a history of urticaria and slight fever

lasting for two days, and disappearing on the forming of the bleb. On admission, he had a bleb on the outer side of the right leg, which had not yet broken. He was injected hypodermically with the perchloride solution in five places around the bleb, where the worm was supposed to be. This was followed by slight œdema, and a little pus formed near the ankle on the third day after the injection, but, when this was opened, the swelling rapidly disappeared, and he was fit for duty on August 16th. Cured in fourteen days.

Both my cases were rather more advanced than those included in Dr. Emily's first, and would appear to come between his second and third categories. There was very slight suppuration in both cases. It was very different from the intense suppuration which commonly follows rupture of the worm during its extraction, and may keep a patient in hospital for months, and often results in stiffened and impaired joints. Both cases were fit for duty within a fortnight of admission.

VESEY DAVOREN,
Sirdarpore, Central India. Surgeon-Captain, Army Medical Staff.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

STATION HOSPITAL, AHMEDABAD, INDIA.

GUNSHOT INJURIES FROM THE NEW LEE-METFORD RIFLE.

(By KENNETH S. WALLIS, Surgeon-Major Army Medical Staff.)

On the night of February 20th three non-commissioned officers were shot by Private O'H. in the regimental canteen. The first, Lance-corporal D., received two bullets through the right arm, the first taking effect in front of the arm, 4 inches below the shoulder-joint. The wound was ½ inch in length and ¼ inch broad. Passing upwards and backwards through the deltoid muscle, the bullet had made its exit at the posterior part of the shoulder, 3 inches below the acromion process. This wound had a ragged and everted edge, and was slightly larger than the wound of entrance. The second missile had entered the forearm at the inner side of the wrist, just below the lower end of the ulna, and passing upwards and outwards below the superficial flexors in front of the joint, had made its exit 1 inch above the lower end of the radius; the radial artery and deep flexor tendons were injured. The wounds were treated with carbolic oil and iodoform, and a well-adjusted pad stopped the hæmorrhage. The after-treatment of this case was continued for some time owing to the flexor tendons being injured, the movement of both wrist and fingers being interfered with.

The second case was Corporal D., who had received a bullet injury in the left side. In spite of my immediate arrival I found he was already dead. The wound of entrance was between the seventh and eighth ribs, being 2 inches external to the margin of the costal cartilages, 4 inches below and ½ inch external to nipple line. Entering the chest the bullet contused the lower border of the left lung, then passing downwards, inwards, and backwards, perforated the diaphragm close to the attachment of the pericardium; passing close to the posterior surface of the stomach, it pierced the spleen at the outer and lower third, splitting it in a star-shaped manner, and also the kidney in its upper portion. Then leaving the abdomen near the left of the spine, between the eleventh and twelfth dorsal vertebræ, the bullet splintered the spinous processes, and finally made its exit from the body 1 inch to the right of the spine. The wound of entrance was circular, ½ inch in diameter; the wound of exit was slightly jagged, with everted edges, ¾ inch in length, and ½ inch in width. Death was due to hæmorrhage.

The third man was Lance-corporal R., who was also shot in the left side, the bullet entering the abdomen just below the ribs on a line with the nipple. Its course through the abdomen was almost in a straight line backwards and slightly inwards; it severed almost completely a coil of the small intestine, and had also perforated the descending colon, and slightly contused the lower portion of the left kidney, then, leaving the abdomen just above the crest of the ilium, made its exit from the body 2 inches to the left of the spinal column. This man soon rallied from shock after a morphine injection, and the pulse remained fairly good till the morning, when, as he was getting weaker, I made an exploratory incision through the abdominal wall. Upon the removal of blood clots the severed small intestine was found and secured. However, as symptoms of collapse came on, I did not continue the operation, and he shortly afterwards sank, death being due to peritonitis.

REMARKS.—The Lee-Metford new magazine rifle is a bolt-system gun, with a range from 1,600 to 2,900 yards. The bullet is a compound one, consisting of a core containing 98 per cent. of lead and 2 per cent. of antimony, and an envelope 80 per cent. copper and 20 per cent. nickel; weight 215 grains. The muzzle velocity of black powder is 1,850 feet per second, and with cordite 2,000 feet per second, with a penetration in earth parapet of 24 inches. Other cases of injury by this rifle were reported in the BRITISH MEDICAL JOURNAL, vol. ii, 1893.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

WARRINGTON HAWARD, F.R.C.S., Vice-President, in the Chair.

Tuesday, October 25rd, 1894.

THE SURGICAL TREATMENT OF DIFFUSE SEPTIC PERITONITIS, WITH SUCCESSFUL CASES.

MR. C. B. LOCKWOOD read this paper. He began with the remark that the term "diffuse septic peritonitis" probably included several kinds of disease. In the variety referred to by the author the inflammation was acute, and had no definite limits; the serous membrane was smeared with lymph, which was either transparent and oil-like, or collected in ashen-grey fibrinous flakes; adhesions were absent or very slight; the peritoneal cavity contained thin purulent fluid, which often had a fæcal odour, or it might be full of gas; the intestines were distended and paralysed, and the disease ran a rapid and fatal course. Although cases coming within this definition were numerous, surgical literature contained few records of recovery after operative intervention. Authorities were quoted to support this statement, and it was said that there had hitherto been no successful case in St. Bartholomew's or the Great Northern Hospitals. It was proposed to include in an appendix the successful cases which others had recorded. Hitherto the author had operated on cases of diffuse septic peritonitis more because he was afraid of overlooking a mechanical obstruction than in the hope of curing the peritonitis. A case was described to illustrate the importance of intestinal paralysis and distension in causing the fatal ending. Stress was also laid upon exhaustion and collapse as factors. In the author's successful cases a systematic attempt was made to meet exhaustion and collapse by stimulating the patient temporarily before the operation with strychnine and brandy, by the systematic application of warmth during the operation, and by rapid and methodical operating; and by warmth, stimulants, and nutrient enemata afterwards. The organisation of the operation was described, and the treatment of the distended intestines. To empty them the gas was drawn from each coil by puncturing it with a fine trocar and cannula; the fæces were let out by an incision, which was afterwards closed. The abdomen was afterwards irrigated, and closed after the insertion of a drain. Two cases of diffuse septic peritonitis were described in which the treatment was successful. In the first there was a perforation of the ileum. The peritonitis was of not less than forty-eight hours' standing. In the second case the peritonitis had probably been in progress fifty-two hours. The abdomen was full of free gas, with the usual lymph and purulent fluid. The cause was thought to have been a septic inflammation of the left Fallopian tube. The patient was now convalescent, the operation having been done more than five weeks ago. A third case was described, in which the peritonitis was diffuse but different in type. In this the recovery was mainly attributed to an accidental fæcal fistula, which discharged and prevented distension and paralysis after the laparotomy.

MR. HULKE thought that this paper was of very considerable value as regards the surgical treatment of this class of cases, which previously were looked upon as most hopeless. The novelty was in the methodical evacuation of the intestines by the combined use of trocar and incision. In his own experience, and in that of others, puncture had not always been carried out with impunity, as in some cases the gut walls were so soft that the puncture continued to leak, and when an endeavour was made to close it by sutures the opening was only made larger, leaving a ragged aperture of some size. No one would hesitate to enlarge a perforation by incision.

MR. KNOWSLEY THORNTON said that these cases were most encouraging, and furnished hope for the future. Detail was the essence of good surgery, and in this respect the paper was a most valuable one. He could have wished that the author had gone even more minutely into detail, and had shown them the kind of trocar he used, and had mentioned the dose of strychnine he had subcutaneously injected. For many years he had been accustomed to puncture by trocar, and to make incisions into distended gut, but he had not performed these measures in a detailed method. Looking back on his previous work, in none of his cases had he been sufficiently careful to protect the patient from chill, shock, and prolonged exposure. The combination of puncture with incision, with the protection of the patient from shock, were the essential features of the treatment recommended. He had long recog-

nised that the distension of the intestine was the most dangerous feature. Septic material spread over the surface of the gut rendered thorough irrigation absolutely necessary. When free evacuation of the intestine by incision followed puncture, the collapse of the intestine which followed such evacuation would render the puncture non-dangerous, even if the intestinal walls were softened.

Mr. ROBINSON of Leeds said that he would rather have called such cases as had been related simple diffuse peritonitis, and he proceeded to give some illustrations of what he meant by this term. He divided diffuse peritonitis into two great classes: first, the mechanical, such as resulted from a twisted ovarian pedicle; and the second, diffuse septic peritonitis, such as followed childbirth, erysipelas, etc. In the latter class of cases he did not believe that any good could be done by operation, for the cause of death was the actual poison which had been absorbed into the system, and which had gone beyond the reach of surgery. He congratulated the author upon his paper and upon his success with cases which had been the bane of abdominal surgery, and thought that he was conferring a great boon upon the profession and upon humanity.

Mr. ALBAN DOKAN went even further than Mr. Cripps, and divided up cases of diffuse peritonitis into three classes: the first the rapidly fatal; the second those that came on in about three days and were those with which the paper was concerned; and the third the truly pyæmic cases which came on in about the third week. In this third class the excretory viscera were almost always affected with pyæmic deposits, and he would like to ask the author if he thought it justifiable to operate upon such cases, or whether they should be considered hopeless.

Dr. NORMAN MOORE thought that collapse did not always depend on septic absorption, but might be due to the size of the ulcer, etc. He quoted the case of a man whom he had seen collapsed within two hours of the bursting of a gastric ulcer. Death occurred seven hours later, and at the *post-mortem* examination there were very few signs of peritonitis.

Mr. MARMADUKE SHEILD had punctured the gut through the abdominal wall on many occasions for chronic intestinal obstruction, but such punctures frequently leaked and had set up peritonitis. It was of immense importance to use a very fine trocar and cannula, which could be passed obliquely through the muscular coat so as to produce a valve-like opening, and thus render leakage almost impossible. He suggested that the peritoneum should be treated like other foul septic cavities by continuous irrigation or by multiple flushings.

Mr. HULKE added that he was under the impression that Billroth had fifteen years ago advocated continuous drainage.

Mr. BARKER had found by experience that a very convenient method of flushing the abdomen was to use a can with three taps to which tubes of large calibre were attached, and thus the abdomen could be flushed from several points at once, the fluid flowing out through the original incision. He used fluids for flushing at 105° F. He was in favour of free incisions into the intestine rather than punctures, on account of the immediate relief to the distended intestine, and said that it was almost as easy to stitch up an incision three-quarters inch in length as one of only a quarter of an inch. He entirely agreed with Mr. Lockwood that the best way to secure the patients from chill was to wrap them up in cotton wool.

Mr. A. BOWLBY dealt with the best means of washing out the peritoneal cavity. An incision below the umbilicus would not necessarily empty the peritoneal sac. In one case, after incising and flushing out through an incision below the umbilicus, he had found a large quantity of gas as well as fluid remaining in the peritoneal sac above. He considered that when the peritonitis was due to duodenal or stomach mischief, two incisions, one above and one below the umbilicus, were necessary to ensure complete flushing.

Mr. LOCKWOOD, in reply, said that if odour was a test of septicity, then his cases possessed that attribute in a remarkable degree. He agreed that there were almost as many different kinds of peritonitis as there were different kinds of organisms that could get inside the peritoneal cavity. He remarked that all recent researches on this subject had been done by cultures, but this was a fallacious method, as some of the organisms might not grow in the cultivating media used. He had been in the habit of using a trocar of the size of a large Southey's tube with a diameter of 13 to 2 millimetres. He agreed that the bayonet puncture, as suggested by Mr. Sheild, was the best. He flushed out the peritoneum in a methodical manner with a large single tube. He agreed that in cases of perforation high up a second incision lower down should be made. The object of his paper was not to bring forward anything new, but to advocate the methodical use of known methods

MEDICAL SOCIETY OF LONDON.

Sir WILLIAM DALBY, M.B., F.R.C.S., President, in the Chair.

Monday, October 22nd, 1894.

LAPAROTOMY IN ULCERATION OF THE DUODENUM.

MR. MARMADUKE SHEILD read a paper on ulceration of the duodenum with special reference to the latent perforating ulcer of that part of the intestine. He related two cases where he had performed laparotomy for acute abdominal symptoms in young men for this affection. Other cases were referred to, especially those by Mr. Lockwood in last year's *Transactions of the Medical Society of London*. The literature of the subject was reviewed, and the author attempted to show that ulceration of the duodenum after burns was due to septic infarction of the vessels of the duodenum, the gastric juice then acting upon the parts cut off from the vascular supply. He pointed out that duodenal ulcer after burns was rare in the present day on account of the care with which antiseptics and cleanliness were employed. The predisposing causes of ulceration of the duodenum, especially chronic albuminuria, tuberculosis, and malignant disease, were reviewed. Latent ulcer of the duodenum was shown to be more common in men than in women, and generally to be situated on the anterior surface of the first part of the duodenum. No explanation could be offered of this fact beyond the possibility that when ulcers occurred on the back of the duodenum they might heal, but when they occurred on the unsupported front aspect of the gut they usually perforated. Mr. Arthur Latham had added an important mass of information to this paper by reviewing, in conjunction with the author, the cases of perforation of the intestine at St. George's Hospital during the last thirty one years. In 8,192 *post-mortem* examinations there were 116 cases of death from perforation of the intestines, and 12 of these were due to perforation of the duodenum; 10 of these occurred in males and 2 only in females. In 8 out of the 12 cases the ulcer was on the anterior surface of the duodenum. Ulcerations of the duodenum which had not perforated were found as follows: Burns, with slight ulceration or congestion, 7 cases; associated with renal disease, 6 cases; tuberculosis, 2 cases; malignant ulceration, 1 case; in association with scirrhus of the pancreas, 2 cases; and 5 cases without obvious cause. The symptoms and diagnosis were next considered, and cases were quoted to show the similarity of the affection to lead colic and intestinal obstruction, while the sudden collapse and death which had marked some of the cases had led to suspicion of death from poison. Great stress was laid upon the symptoms being previously epigastric, and on the fluid and gas in the peritoneal cavity being devoid of fæcal odour. The reaction to litmus should be acid, but this was not always the case, since the peritoneal exudation might neutralise the contents of the duodenum or stomach. The situation of an exploratory incision was finally considered, and the methods of Senn for finding a perforation were mentioned and criticised. Stress was laid upon a method used by the author in abdominal surgery of passing stout silk loops through the abdominal opening on either side, and holding them asunder. This gave freer access to the cavity of the abdomen than any other method, while traction upon the loops greatly facilitated the return of distended intestine. The following conclusions were arrived at: (1) Perforating ulcer of the duodenum is a rare affection, and far more common in young adult males than in females. (2) In a considerable number of cases the symptoms are primarily epigastric, or referred to the right hypochondrium, or there is a previous history of epigastric troubles. (3) In perforative peritonitis occurring suddenly in a male, if the symptoms are not very typical of implication of the vermiform appendix, the surgeon should turn his attention to the duodenum, where the lesion will most generally be found. The absence of fæcal gas or odour in the abdominal contents pointed to implication of the duodenum or stomach. Acidity of abdominal contents pointed to the same conclusion. A small incision below the umbilicus would clear up the nature of the abdominal contents. (4) The success of the future lies in cleansing the peritoneum by repeated hot-water flushings and drainage of the pelvic *cul-de-sac*.

Mr. C. B. LOCKWOOD remarked that many additions to our knowledge were required before this strange malady could be treated with success. Therefore it was desirable to record every case, especially those in which laparotomy was performed. In the first case there was acute intestinal obstruction due to septic peritonitis, with the accumulation of pus in the pelvis. The symptoms had come on suddenly, and there was nothing whatever pointing to the duodenum or stomach. At the operation all the peritonitis seemed confined to the lower part of the abdomen. So far as could be seen through the incision the upper part of the serous membrane was normal. At the necropsy there was a zone of peritonitis beneath the liver caused by a perforating ulcer of the duodenum, a zone of peritonitis in the pelvis, and a zone of normal peritoneum between them. It could not be discovered how the upper zone had communicated with the lower. An exploratory incision into the upper abdomen would have revealed the ulcer, which could then be sutured. In a second case a perforating ulcer was diagnosed close to the pylorus. Laparotomy was performed, and the ulcer found in the duodenum was sutured. The operation prolonged the patient's life and relieved his pain, but at the end of fifty-seven hours he suddenly vomited bright blood, and died. This patient was 61 years of age. At the necropsy a good deal of purulent fluid was found behind the liver and in the pelvis. A third case was mentioned in which a perforating ulcer of the duodenum had not been discovered. It also might have been closed by sutures. In future cases it would advisable to drain the pelvis, and in doubtful cases of diffuse septic peritonitis to examine the stomach and duodenum. It was not desirable to prolong the incision upwards, this being a formidable proceeding, likely to leave a weak abdominal wall. A small incision some two or three inches long would be sufficient to enable them to ascertain whether or not the lesion was in the upper part of the cavity.

Dr. HECTOR MACKENZIE said he had looked up the cases at St. Thomas's Hospital during the last few years, and in none of them did the symptoms allow of a diagnosis. The very latency of the symptoms in ulcer of the duodenum might serve to indicate the fact of the duodenum being implicated.

Dr. ROUTH suggested the use of a current of positive electricity as a means of diagnosing the exact site of the lesion, the pain being increased when the current passed through the injured part.

Dr. AMAND ROUTH pointed out that even in rupture of a duodenal ulcer fæcal matter might be extravasated as the result of reversed peristalsis forcing fæculent matter high up the intestines.

After some remarks from Mr. HOWARD BARRETT, Mr. SHEILD, in reply, admitted the suggestion of Dr. Amand Routh, but he doubted whether any assistance would be derived from the procedure advocated by Dr. Routh, the patients being too ill and the inflammation being general. He agreed that the incision ought not to be prolonged, but a fresh incision made above the umbilicus.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

D. ARGYLL ROBERTSON, M.D., F.R.S.E., President, in the Chair.

Thursday, October 18th, 1894.

CASE OF FILARIA LOA IN WHICH THE PARASITE WAS REMOVED FROM UNDER THE CONJUNCTIVA.

THE PRESIDENT read notes of this case. The patient, who was a woman aged 32, came to him in September complaining of the presence of a worm in her eye. She had resided in Old Calabar, on the West Coast of Africa, for some years, but had been obliged to return home on account of intermittent fever and dysentery. She had first felt the worm in her eye last February. It gave her a sensation of pricking or quivering, and she was quite conscious of its movements; it wandered over the eye

beneath the conjunctiva, and raised the conjunctiva into a small ridge as it moved; it sometimes left one eye, and could be felt travelling beneath the skin over the bridge of the nose, and reappeared in the other eye; lately it had kept to the left eye. Sometimes the eye was tender and a little bloodshot after the appearance of the worm. The influence of cold on the behaviour of the worm was very curious. In the warm climate of Africa it appeared frequently, and, as after her return to England the patient was confined to the house and to her bed, the worm frequently appeared beneath the conjunctiva; warm rooms increased its activity. As she began to leave her room and went out, the worm disappeared into the deeper parts, and was seen only rarely. During the summer its visits were very few, but in September, as soon as the house was warmed, the worm reappeared. When seen the eye appeared normal, except for a small vesicle at the outer part of the conjunctival *cul-de-sac*. The patient was instructed to come again when the worm was active. On September 12th the worm was felt moving again; she applied hot cloths to the eye and immediately went to the infirmary, where she was seen by Dr. Argyll Robertson. The worm could then be seen moving tortuously beneath the conjunctiva; the finger was applied to it and the worm kept in position while the eye was cocainised. The conjunctiva was gripped, an incision was made, and the worm withdrawn. The worm looked much like a piece of fishing gut; it wriggled at first, but when placed in a weak solution of boracic acid it died at once. It was 25 mm. long, and 0.5 mm. wide, its head tapered slightly but its tail tapered very much. There was a fine filament wound round the worm which appeared to be its alimentary canal, forcibly squeezed out by the grasp of the forceps. From its size it was probably the male animal. It was difficult to determine how the parasite gained entrance to the body; the drinking water had always been boiled, and in washing her face she was always careful to use the boiled water; she had not eaten uncooked vegetables; mosquitoes abounded. No filaria were found in the patient's blood, but the worm was probably a male one. Several other cases were narrated of this filaria being present beneath the conjunctiva; the patients were all members of the Calabar Mission. It was a very common occurrence among the negroes. It was probable that the parasite gained admission to the body through the water in some way; the embryos were sucked up in the blood by mosquitoes, who played the part of intermediate hosts; thence they found their way to water again. They were limited strictly to this small part of Africa.

Dr. Patrick Manson said he had paid great attention to the parasites of Africa, and especially of Old Calabar. The blood of 50 per cent. of the negroes contained embryos of filaria. The filaria diurna was a form which appeared in the blood during the day and disappeared during the night; in his opinion it was identical with filaria loa; it could not be distinguished microscopically. He thought it very improbable that this filaria was the only one in the body in this case; the embryos existing in the body pass out probably by means of mosquitoes. The duration of life of a filaria was 4 years or more; they varied in length from 17 to 70 mm.; the smaller ones were the males. He agreed with the President that the size of the one he had shown indicated that it was probably a male.

Filaria Oculi Humani.

Dr. Drake-Brockman read notes of a case of filaria oculi humani. The patient was a young Madras woman. When first seen there was a patch of redness at the edge of the cornea; soon the whole eye became red, but there was no pain. The cornea was dull, the aqueous muddy, the pupil had been dilated by atropine; the tension was + 1. A small worm could be seen in the anterior chamber, twisting about. The eye was cocainised, an incision made with a keratome; the aqueous flowed away, but the worm could not be found. There was some reaction after, but the eye eventually quieted down.

Card Specimens.

The following were the card specimens: Messrs. Hartridge and Griffith: Microscopic Sections of Tuberculous Keratitis.—Mr. Kenneth Campbell: Equatorial Rupture of the Choroid.—Mr. Marcus Gunn: Case of Lamellar Cataract of Unusual Form.—Dr. R. McIntosh: A Case of Leuticonus Posterior; and a Case of Associated Movements of the Left Levator Palpebræ and Internal Pterygoid Muscles.

BRITISH GYNÆCOLOGICAL SOCIETY.

Professor Thomas Savage, M.D., President, in the Chair.

Thursday, October 11th, 1894.

Specimens.

Dr. Elder (Nottingham) showed: (1) Two Myomata, removed by supravaginal hysterectomy; in one on account of alarming hæmorrhage, in the other because it had become impacted in the pelvis, and gave rise to pressure symptoms; (2) a Papillomatous Ovary.—Dr. Purcell showed a Sarcomatous Ovary removed from a girl of 18, and narrated some further cases of Cancer of the Uterus treated by chloride of zinc, with specimens and casts.

Treatment of Uterine Myomata.

Mr. Bowreman Jessett read a paper on the treatment of myomata of the uterus complicated with pregnancy, illustrated by two cases, in which he pointed out that this complication was of comparatively rare occurrence, owing to the infrequency of women suffering from myomata becoming pregnant. After giving details of the cases, and discussing the literature of the subject, Mr. Jessett came to the following conclusions: (1) That it would be justifiable in these cases of subperitoneal myomata, if growing rapidly and causing great pain, to open the abdomen and enucleate the growths; (2) in cases of subperitoneal and interstitial myomata of considerable size, and surrounding the uterus, it would be wise to remove the whole organ; (3) in cases of interstitial or submucous myomata complicating pregnancy statistics seem to show that the risk to the patient is greater if left to go the full period, than if abortion is produced or the organ removed; (4) cases in which the growths are limited to the cervix may be allowed to go their full term, as the growth, if presenting in the vagina, may be either enucleated or removed *morcellement* at the end of the period.

Dr. Routh disseuted from the opinion held by many that conception was rare when fibroids were present, especially when those fibroids were extrauterine. Miscarriage must occur if fibroids were multiple and scattered throughout the uterus. He commented also on the frequency with which fibroids disappeared after pregnancy.

Dr. Heywood Smith thought the amount of danger was relative to the proportionate development of fibroid and pregnancy. He classified such cases into three groups: (1) where the tumour greatly preponderated so as to prevent growth of the uterus; (2) where the tumour, though large, did not entirely hamper the development of uterus; (3) where the tumour was not of such size or position as to interfere with natural labour. In the first only would operative interference be imperative, while the second would require careful watching.

Dr. Godson believed that small fibroids frequently coexisted with pregnancy and were never discovered. Subperitoneal fibroids, when found occupying the pelvis, even during labour, could sometimes be pushed up so as to allow of the application of forceps. When, however, a fibroid was known to exist and be fixed in the pelvis, he considered the production of an early abortion to be the only right treatment.

Dr. Bantock quite agreed that fibroids did not prevent pregnancy, and laid stress on the fact of the frequency with which fibroids disappeared after pregnancy. He did not consider the matter of the position of the fibroid, as regards the uterus, important.

Remarks were also made by Dr. Macnaughton Jones, Dr. W. Armstrong (Buxton), Dr. T. B. Grimsdale (Liverpool), and Dr. Leith Napier; and Mr. Jessett replied.

LARYNGOLOGICAL SOCIETY OF LONDON.

Felix Semon, M.D., F.R.C.P., President, in the Chair.

Wednesday, October 10th, 1894.

Adenoma of the Tongue.

Mr. Cresswell Baber showed a girl, aged 16, who for nine months previous to July, 1894, had suffered from adenoma of the tongue. The tumour was removed by means of a snare. The tumour had reappeared, but was now an irregular flat growth, only seen on depressing the tongue. The case seemed to resemble those described by Mr. Butlin in the *Transactions of the Clinical Society* for 1890, vol. xxiii, p. 118, under the head of glandular tumours of the tongue. The microscopic examination made by Mr. H. H. Taylor showed that the growth closely resembled thyroid tissue, and might well be connected with some fœtal remains of the lingual ducts. There were no cysts and no tubular structure. The case therefore seemed to support the theory advocated by Bernays and Bland Sutton that these tumours were of the nature of accessory thyroid glands.

Mr. Lake gave details of a somewhat similar case.

Immobility of the Left Vocal Cord.

Dr. Bennett showed a case in a woman, aged 47. Onset about two years. Loss of voice had been progressive, but more rapid since influenza some months ago. First seen three months ago. No congestion, no ulceration, and no symptoms pointing to any other affection. No certain signs of chest mischief either in the lungs or in the vessels. No dysphagia. At first a sensation of aching over the larynx, but this soon disappeared. Iodide of potassium did no good. No suspicion of syphilis.

Dr. Dundas Grant could find no evident cause for the fixation of the cord. He suggested the possibility of a deep-seated gland, exercising pressure.

Dr. Tilley suggested that it might be the first indication of tabes.

The President observed that cases of fixation of one cord were met with, and were quite compatible with perfect health. In twelve cases of tabes he had met with laryngeal paralysis no less than seven times, but in another series of fifty or sixty not another case occurred. Hence the frequent discrepancy in the accounts given as to its frequency.

Cystic Fibroma of the Left Vocal Cord.

Dr. Bronner (Bradford) showed microscopic specimens of a tumour removed from the left vocal cord of a clergyman, aged 76. The veins were very distended and numerous, and there were several large cavities lined with endothelium. Drawings of similar growths were shown, as demonstrated by Professor Chiari in *Archive for Laryngologie*, ii., 1. The growth was situated on the upper surface of the cord, and had been first noticed three years ago. Such cases were rare in old age.

Epithelioma of the Epiglottis.

Dr. Bronner also showed a specimen of a tumour removed from the epiglottis by cutting forceps. The patient could now eat and speak without any difficulty. The growth had been of three years' duration, and there were unmistakable signs of secondary affections of the liver and lungs.

Chronic Tuberculosis of Larynx (?).

Dr. de Havilland Hall showed a patient, aged 51, the subject of syphilis of twenty-six years' standing, who had been troubled with throat symptoms for ten years. These had become more serious during the last three years. First seen in May, 1894. The epiglottis, ary-epiglottic folds, and arytenoids were found to be greatly tumefied, the glottis reduced to a chink, the vocal cords not visible. The posterior pharyngeal wall was cicatrised, the nasal septum completely destroyed. There were physical signs of infiltration at the apex of the left lung. Tracheotomy had to be performed. The patient was now being treated with carbonate of guaiacol, and the galvano-cautery was being applied in the larynx. Marked relief had followed the use of the cautery. Dr. Hall regarded the case as one of chronic tuberculosis, preceded by a syphilitic lesion.

Dr. Beale mentioned a somewhat similar case, previously shown to the Society, which had been under observation for the last year, and had remained quiescent under the use of iodide of potassium. From the history of the case and the general appearance he thought that the condition was one of combined syphilis and tubercle.

Tonsillar Mycosis.

Mr. R. Lake showed two cases. The question which he wished to raise was whether there was any more rapid and successful method of dealing with such cases than the galvano-cautery?

DR. DE HAVILLAND HALL advised continuance with the cautery, as that treatment certainly gave relief.

The PRESIDENT thought that such cases might well be left alone if the condition gave rise to no distress.

Mr. CRESSWELL BABER had seen good results from the local application of absolute alcohol.

Dr. SPICER preferred to destroy the crypts by means of a cutting operation.

Dr. BENNETT advocated forcible syringing with carbolic acid.

Dr. DUNDAS GRANT pointed out the distinction between pharyngomycosis and pharyngitis with accretions. He had used the galvanocautery with success, and also a lotion of iodine and carbonate of soda.

LUPUS TREATED WITH THYROID EXTRACT.

Mr. R. LAKE showed a boy with lupus of the soft palate and posterior pillars of the fauces, of fourteen months' duration. He had been taking 7½ grains of thyroid extract daily since July 14th, and was very much improved. A second case, a girl of 16, had been affected for three years, and was treated at the same time as the previous case. She was much improved, and was now taking 17½ grains daily. The cases would be shown again at a later stage of the treatment.

Dr. DUNDAS GRANT expressed some doubt as to the nature of the disease in the girl's case.

Dr. JESSOP related a case in which marked improvement had followed the use of 300 tablets, in a case of thirty years' duration.

TONSILLAR NEW GROWTH.

Dr. SCANES SPICER showed a man aged 70, who had a vascular tumour the size of a large walnut, spreading from the lower part of the right tonsil on to the base of the tongue. Tonsillar growths had been removed two years previously from both sides. Microscopically the tumour was made up of closely-packed round cells.

Dr. BRONNER referred to the great benefit sometimes afforded by arsenic in large doses.

After some remarks from Dr. TILLEY, Dr. HILL said he would not use the guillotine in such a case, but would prefer to enucleate.

Dr. PEGLER regarded the case as one of lympho-sarcoma, and not of ordinary hypertrophy.

The PRESIDENT observed that after the age of 40 such cases were generally either lympho-sarcoma or lymphadenoma.

Dr. DUNDAS GRANT thought that it would be best to snip round the mucous membrane, and clear the whole growth out behind it with the finger.

Mr. DE SANTI suggested removal by external incision, and mentioned two cases thus dealt with.

Dr. SPICER replied.

LARYNGEAL STENOSIS SUPERVENING ON TYPHOID FEVER.

Dr. SCANES SPICER showed a patient, aged 20, in whom acute stenosis of the larynx had supervened after typhoid fever. The patient could phonate, but a probe could not be got through the stricture after cocainisation. The case was shown preliminary to division of the stricture under a general anæsthetic by Whistler's dilator and the use of O'Dwyer's tubes.

The PRESIDENT agreed that it would be best to try and divide the stricture, and to use tubes, but he was not sanguine as to the result in such a case.

LIVERPOOL MEDICAL INSTITUTION.

CHAUNCY PUZEY, M.R.C.S., President, in the Chair.

Thursday, October 18th, 1894.

CYST OF THYROID.

MR. THELWALL THOMAS showed a woman, aged 30, from whom he had removed a cystic swelling in the isthmus and lateral lobe of the thyroid by a median excision. The cyst contained a brownish fluid, in which large flakes of cholesterin floated about.

Mr. PAUL said that the plan of removing thyroid tumours in their early stage should be generally adopted, as they shelled out so readily.

URETHRAL CALCULI.

MR. THELWALL THOMAS read notes of the case of a man, aged 46, who had suffered from gonorrhœa and stricture twenty years previously. Ten years later internal urethrotomy was performed, but the stricture had returned, accompanied by great difficulty in micturition. Syme's staff sounded calculi behind the stricture. On incising the perineum a dilated membranous urethra was opened, which contained twenty-five calculi, varying in size from a mere speck to a pigeon's egg, and weighing in all 2 ozs. 50 grs. The stricture was divided and the bladder drained, but the patient succumbed to uncontrollable vomiting and diarrhœa on the fourteenth day. *Post-mortem* examination showed both kidneys suppurative, and an abscess surrounded the right one.

Mr. RAWDON suggested that in these advanced cases of chronic dysuria a safety valve might be afforded by ensuring a preliminary suprapubic free drainage of the bladder for a few days, or even weeks, before adopting the operative measures for permanent cure.

CEREBRAL ABSCESS.

Mr. MURRAY showed three children who had been operated upon for cerebral abscess. (1) Due to traumatism, and situated in the upper part of the right Rolandic area. Three and a-half years had elapsed since the operation, and the child was in good health, and showed no signs of mental impairment. (2) Operated on eleven months ago, where there had been a large abscess of the left tempero-sphenoidal lobe following middle ear disease. Here, too, the recovery had been complete. (3) Operated on four months ago for an abscess of the right lateral lobe of the cerebellum, and an extradural abscess over the sigmoid sinus, also due to middle ear disease. The result was entirely satisfactory.

Mr. RUSHTON PARKER pointed out how unnecessary it was, at least in children, to replant the trephined disc of bone. This had not been done in any of Mr. Murray's cases, yet the openings were firmly closed by bony growth.

Mr. HUGH E. JONES, who had been present at the operation on the third of Mr. Murray's cases, referred to the advantage in the method adopted for reaching the cerebellum, namely, to snip away the bone from the mastoid opening, rather than make a separate trephine hole over the cerebellum, which so often resulted in very troublesome bleeding.

REMOVAL OF VERMIFORM APPENDIX.

Mr. MITCHELL BANKS showed a vermiform appendix which he had removed on the previous day. A man, aged 28, had had more or less abdominal pain for five years. Mr. Paul saw the case with Mr. Banks, and neither of them could discover anything by palpation, but the pain had become localised to the region of the cæcum. At the urgent request of the patient an abdominal section was made, and although the parts looked healthy from the outside, the appendix on section was found to be twisted, and to contain hard fæcal concretion.

ADMINISTRATION OF ARSENIC.

Dr. CARTER read a paper entitled "Facts, Legal and Medico-Legal, in the Administration of Arsenic." He referred to an important trial which took place in Liverpool some five years ago. The medical experts for the defence had positively stated that the administration of arsenic in medicinal doses would diminish the secretion of urine, and also that arsenic given medicinally could readily be detected in the urine if it were boiled for a minute or two with a little pure hydrochloric acid and a slip of copper foil introduced into it. Dr. Carter was much struck at the time by these statements, which were so contrary to his own experience and to the statements made by the leading authorities. Since the trial he had made many very careful experiments on these two points, and he now stated positively that in his experience the medicinal administration of arsenic almost invariably increased the secretion of urine, provided that there was no organic disease of the kidneys, and he also affirmed that the rough test with copper foil would fail to detect arsenic in the urine when it was given as a medicine.

Drs WHITFORD and LOWNDES had also had the urine of patients who were taking arsenic carefully examined, and the copper foil test had failed to discover the presence of the metal.

Mr. PAUL and Dr. DAWDSON took part in the discussion.

Card specimens were exhibited by Mr. PAUL.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

F. PAGE, M.D., President, in the Chair.

Thursday, October 11th, 1894.

CASES.

DR. GEORGE MURRAY and Mr. W. G. RICHARDSON showed a man after successful removal of a Sarcoma from the Brain. In February, 1894, he had an attack of Jacksonian epilepsy of the left arm; later there was nausea, vomiting, headache, and double optic neuritis, complete loss of power in the left arm, and considerable loss in the left leg. Operation July 1st; tumour easily separated from the brain substance and removed with part of the dura mater; power began to return within three days. The man could now walk five miles, and had fair power in the arm; headache, etc., had disappeared, and the neuritis was subsiding.—Dr. MURPHY showed: (1) A man seventeen weeks after Gastro-enterostomy for large Sarcoma at cardiac end of Stomach. Vomiting, previously severe, had ceased, and strength and flesh were rapidly being restored. (2) Case after Supra-pubic Cystotomy for Bladder produced by crush by a cab; constant drainage by a catheter was employed. (3) Man after Removal of Ruptured Appendix; patient arrived from sea with intense general peritonitis; median incision showed appendix lying loose, and a concretion; removal of appendix by an iliac incision. (4) Woman after operation for a Hydatid in the region of the Liver.—Dr. HUME: A man after intestinal anastomosis for Malignant Stricture of Colon. There had been absolute constipation and greatly distended abdomen. The growth lay at the splenic flexure, firmly fixed, and accompanied by enlarged glands. A loop of the sigmoid flexure was attached to the ascending colon by Senn's plates and circle of Lembert sutures. The bowels moved naturally two days later, and had done so regularly ever since. The man had recovered weight and strength to a surprising degree.—Dr. BRADLEY showed an infant with large depressed Fracture of the Skull in the frontal region produced during birth. A previous child had been affected in a similar way, but on the opposite side of the frontal region.—Dr. LIMONT showed (1) Boy with Band Morphœa extending from near the coracoid process to tips of thumb and index finger. A patch was present in the axilla, and the two vaccination marks formed two other patches. (2) Woman with Contracting Morphœa following course of one of the intercostals, and accompanied by great pigmentation. In each breast were two early patches, still violet, but beginning to turn white in the centre. (3) By photograph a girl with symmetrical patches of Morphœa behind each knee in which there was considerable loss of sensation. (4) Girl with localised Mycosis Fungoides of one leg.—The PRESIDENT showed a case of aggravated Club-foot in a young child, in which an excellent result had been obtained by Phelps's method of operating.

SPECIMENS.

Specimens were shown by Dr. MURPHY and Mr. RUTHERFORD MORISON.

"RECTO-VESICAL TUBERCULOUS FISTULA": A CORRECTION.

MR. E. HURRY FENWICK calls our attention to the fact that in the report of the discussion at the Pathological Society upon the above subject, published in the BRITISH MEDICAL JOURNAL of October 20th, page 868, certain statistics drawn from records by Dr. Soltau Fenwick at the Brompton Hospital were incorrectly recorded. Only 20 cases out of 1,000 consecutive cases of chronic phthisis which were examined *post mortem* are mentioned as having tuberculous deposits in the lower urinary or genital organs, 13 of these 20 are noticed as having tuberculous disease of the seminal vesicles, and Mr. Hurry Fenwick suggested that Mr. Paget's case fell into this category.

From his experience of 4 other cases, he was led to believe that tuberculous vesico-rectal fistulæ commenced in suppuration of the deposits in the vesiculæ seminales rather than by ulceration of the bladder implicating the bowel.

REVIEWS.

Spinal Caries: Spondylitis or Inflammatory Disease of the Spinal Column. By Noble Smith, F.R.C.S.Edin., L.R.C.P.Lond., Surgeon to the City Orthopædic Hospital; Surgeon to All Saints Children's Hospital; Orthopædic Surgeon to the British Home for Incurables. London: Smith, Elder and Co. 1894. (Demy 8vo, pp. 146; 88 illustrations. 5s.)

The author of this instructive book, like many surgeons who have had much experience of spinal caries and paid much attention to the details of its treatment, is dissatisfied with the appliances generally employed for fixing the diseased spine, and holds that recumbency in bed alone is a very ineffectual method of affording rest to the affected bones. Acting on the principle that, whilst it is necessary to control the column as far as possible above and below the seat of inflammation, the chest should be left absolutely free from pressure, he has modified an instrument invented by Mr. Chance, and reports several instances of its successful application. This apparatus, which is called the "adaptable metal splint," seems to be less cumbersome and complicated than many other instruments used in this branch of orthopædic surgery, but demands, in order to ensure its success and to prevent it from doing harm rather than good, a thorough knowledge of its working, and great care and patience in adapting it to individual cases. Though an enthusiastic advocate of this splint, the author does not rely on it alone, but in his treatment recognises the facts that "general rest of the patient, carefulness in nursing, and assiduous attention to complications are necessary adjuncts" to its successful use. In his remarks on laminectomy, he points out that, though not free from danger and necessitating a removal of sound parts of the spinal columns this operation may in certain cases be imperatively demanded. Such cases, however, would, he thinks, be much reduced in number if spinal caries were treated by suitable splints instead of by recumbency alone or by the jackets.

Die Heilung der chronischen Lungenschwindsucht durch Entwickelung von Kohlensäure im Magen. (The Treatment of Chronic Pulmonary Phthisis by the Liberation of Carbonic Acid in the Stomach.) Von Dr. Med. Hugo Weber (St. Johann-Saarbrücken). Wiesbaden: J. F. Bergmann. 1894. (Roy. 8vo, pp. 54. M. 1.)

The author says that five years ago, when he first made known his method of treating pulmonary tuberculosis by carbonic acid, very little notice was taken of it, because at that time everyone had his attention fixed on Koch's tuberculin treatment. The cure of phthisis, however, whether acute or chronic, by simple dioxide of carbon, seems to be even more astonishing than would have been the wonderful results which were expected from tuberculin.

Dr. Hugo Weber gives his patients a few drops of hydrochloric acid in a glass of water, followed immediately by a teaspoonful of bicarbonate of soda. This he repeats three times a day, half an hour before meal times. Most astonishing in its simplicity and facility does this method for curing phthisis seem.

The author's eleven cases appear numerically insufficient to support his arguments. Moreover, if carbon dioxide be developed in the patient's stomach three times a day, as the author recommends, one may ask, How long does the blood contain any extra quantity of carbonic acid? Surely the excess of CO_2 will be so rapidly lost by the lungs that it can hardly be expected to have any permanent effect on the tuberculous tissue. Admitting that there is a certain one-sided antagonism between pulmonary tuberculosis and disease of the mitral valves of the heart, admitting mitral disease exercises some hindering action upon the development of tubercle in the lungs, is it not more natural to account for this, as others have done, by the pulmonary hyperæmia, a mechanical result of the valvular disease, rather than to suppose it due to excess of carbonic acid in the lungs?

Dr. Hugo Weber fails to convince us that the improvement observed by him in his eleven consecutive cases of pulmonary tuberculosis was due to the carbon dioxide he administered, though it must be allowed that his treatment is more pleasant than treatment by some other gases, such as sulphuretted hydrogen, as to which there was at one time much talk. It must also be mentioned that with his carbonic acid treatment he combines the regular administration of an iron preparation.

Part of the book is devoted to the question of the feeding of consumptives, and the discussion of the proper treatment for their fever and other symptoms.

Die Causale Behandlung der Tuberculose. [The Etiological Treatment of Tuberculosis.] Von Edwin Klebs. Hamburg and Leipzig: Leopold Voss. 1894. (Royal 8vo, pp. 629, with plates. M. 30.)

The work that Professor Klebs has done in former years, although less widely known and recognised than that of many others who have attempted to elucidate the problems of tuberculosis, entitles the present work to claim the most careful attention from all students of the subject. The sudden rise and equally sudden subsidence of the fame of Koch's tuberculin at once raised and dashed the hopes of those who believed in the possibility of destroying tuberculous disease within the body of its host, and led to resumption of the old methods, which had for their aim the strengthening of the organism rather than the destruction of the parasite. For three years Professor Klebs has been at work steadily pursuing the line of action suggested partly by Koch's method and partly by our increased knowledge of the natural processes by which such disease tends to keep itself within bounds. That Koch's fluid was harmful, owing to the other constituents than pure tuberculin, was the standpoint from which Klebs worked, and he set himself to produce a fluid which should be purified of these matters.

The work is divided into two main sections, the one dealing with the experimental side of his work, and the other with its practical application to human beings. His views on the pathology of tubercle and the theories of immunisation are detailed at great length, and the points of his disagreement with Koch definitely laid down. He claims even greater powers of tubercle destruction for Koch's fluid than were ever suggested by Koch himself, and disagrees with the latter's view that the bacilli are not destroyed by the fluid. But at the same time he looks more to the results set up by the bacilli than to the micro organisms themselves as the true cause of the disease. Following out the history and course of tuberculosis, he expresses the belief that the alimentary canal is more often the channel of entrance for tubercle than the respiratory passages. In a succeeding chapter the effect of Koch's tuberculin upon guinea-pigs is closely analysed, and details of experiments are given at great length, all of which go to prove that the virulence of tubercle injected subsequently is delayed but not prevented. As a result of further experiments with purified tuberculin or tuberculocidin, he concludes that resolution of tuberculous tissue takes place, and that the bacilli are destroyed. All his observations are recorded in detail, and illustrated with elaborate charts.

The same thoroughness in the preparation of the case that he presents is manifest in the second part of the work which deals with the treatment of tuberculosis in man by means of injection of bacterial products in the form of purified tuberculin. As a result he claims to prove that a complete reorganisation of tuberculous tissue may take place, and destruction of bacilli be brought about in the living human body without any harm being done to the tissues of the body. It will be noted that it is in the very earliest stages that the best results are obtained, but he safeguards against possible error in diagnosis by the preliminary injection in all doubtful cases of Koch's crude tuberculin. The well-known reaction is asserted as diagnostic of the presence of tubercle. With great care and minuteness Professor Klebs presents in suc-

ceeding chapters the results that he has obtained in various stages of tuberculosis, and demonstrates the fact that rectal injections may sometimes be used in preference to subcutaneous inoculation with equally good results. The mode of preparation of tuberculocidin forms the subject of one of the final chapters, and the work is brought to a close by a long series of observations made by other physicians with tuberculocidin. The whole work presents a splendid record of careful research, and cannot fail to stimulate effort in the direction pointed out years ago by Klebs himself, and more recently by Koch, toward the discovery of a still more certain means of destroying tubercle within the human body.

ATLAS OF THE DISEASES OF THE SKIN. (In a Series of Illustrations from Original Drawings and Descriptive Letterpress.) By H. RADCLIFFE CROCKER, M.D., F.R.C.P. Edinburgh and London: Young J. Pentland. (Fasciculus III and Fasciculus IV. £1 1s. each Fasciculus.)

WE have already noticed the general scope of this excellent atlas. Fasciculus III contains one plate with four figures, illustrating lichen planus, one of bullous iodide eruption, one of arsenical pigmentation and keratosis with four figures, one of verrucæ with two figures, one of lupus erythematosus sebaceus, and one of acne varioliformis with three figures. The plate of acne varioliformis is useful on account of the rarity of the disease. Medical men with deficient opportunities of clinical observation will learn from the plate of lupus erythematosus how to distinguish it from lupus vulgaris. Arsenical pigmentation and keratosis, also not frequently seen, are admirably shown. The four figures illustrating lichen planus, one of them showing the effect on the tongue, give a fairly complete picture of the various forms of that affection.

Fasciculus IV illustrates herpes zoster in three figures, pemphigus, lichen scrofulosus et pilaris in three figures, bromide of potassium eruption, lepra tuberculata in two figures, and lepra non-tuberculata. The plates of herpes figures illustrate conditions with which most men in practice are familiar. The drawing of pemphigus shows an unusually severe condition; that of lichen scrofulosus shows fairly well a condition with which many men are more familiar in books than in life, and that of bromide of potassium eruption, a severe form of the affection well worthy of study. Tubercular leprosy is so unlike anything else, that a plate showing it is only useful to those who have never seen the disease, but nerve leprosy, as to which mistakes in diagnosis are not uncommon, is on a different footing. Dr. CROCKER'S plate of lepra non-tuberculata reproduces one form of that affection faithfully.

We are pleased to observe that the excellence of the work is well maintained.

VORLESUNGEN ÜBER DIE ZELLE UND DIE EINFACHEN GEWEBE. [Treatise on the Cell and the Simple Tissues.] Von Dr. R. S. BERGH. Wiesbaden: C. W. Kreidel. 1894. (Large 8vo, pp. 262, 138 Illustrations. 7 marks.)

THIS work treats of the histology of the cell, and of the epithelial, muscular, nervous, and connective tissues. It concludes with a chapter on histological methods. The subject is treated from the comparative standpoint, and not with special reference to human histology. The book is therefore of scientific interest and is not intended as a practical one for medical students or practitioners.

Dr. BERGH is specially good in his first chapter, which describes the animal cell; the account of cell division is exceedingly clear, and illustrated by excellent woodcuts. The figures indeed throughout are beyond reproach.

In the sections that treat of the tissues, the reader will also find much that is of interest and not to be found in the ordinary textbook of histology; the descriptions are brief and clear, they show as a rule intimate acquaintance with the recent advances of science. Still there are some places where the subject is hardly up to date; for instance, the various theories of muscular contraction are by no means fully discussed; there is no reference to varieties of leucocytes, nor to the essential nature of the fibres of reticular tissue.

We are glad to find a protest against the use of the term endothelium, not so much on etymological grounds as because its introduction has led to great confusion between different writers, and because there is no essential difference between this variety of cellular membrane and others to which this word epithelium is applied.

Dr. Bergh's book appeared two years ago in Danish, and the present translation is very appropriately dedicated to Professor W. Flemming.

PALUDISM. By Dr. A. LAVERAN. Translated by J. W. MARTIN, M.D., F.R.C.P.Lond. London: The New Sydenham Society.[1] 1893. (Demy 8vo, pp. 207.)

IT is interesting to note the different ways in which two of the most important discoveries in pathology of modern times have been received. No sooner had Koch proclaimed the bacillus tuberculosis than it was accepted with acclamation on all hands, immediately stamped as genuine, and passed as good current coin. This was in 1882. Two years before this date, in 1880, LAVERAN described the micro-organism of malaria. The discovery was hardly recognised at the time, and even now, after a lapse of thirteen years, it excites so little interest that many are unaware that it has been made. The pathogenetic character of the schizomycetes as a class had been well established long before Koch made his famous discovery; but no one suspected that an equally if not more important *rôle* is played by the protozoa as disease agents until Laveran made his discovery. If we look at the matter from the practical point of view of sickness and mortality, we find that the bacillus tuberculosis is credited with one-seventh part of the total mortality of mankind; the malarial organism with one-half.

For thirteen years the great discovery has been before the profession, and yet practically nothing, so far as Englishmen are concerned, has been done with it. We should like to know what practical teaching in the matter there is in our medical schools, particularly in our naval and military medical educational establishments. We wonder how many of the men whose principal future life work will lie in combating this organism have been brought face to face with the thing itself, have actually seen their future enemy, or been taught how to search for it. In this matter our medical guides and teachers, both in this country and even in France itself, have a great deal to answer for. But signs of the recognition of the importance of Laveran's work are beginning to be discoverable. Evidence of this we have in the translation recently issued by the New Sydenham Society. We trust that this semi-official stamp of recognition will at last ensure its general acceptance by our countrymen, or at all events its thorough investigation.

Dr. Laveran's work is a very complete, temperate, and judicial statement of all the more important modern views on the subject of the malaria parasite. In the course of the work the parasite in its polymorphic forms is carefully described; its bearing on the pathology of malarial disease and the practical outcome of our knowledge of the existence of such an organism are thoroughly discussed. Interesting chapters call attention to similar forms of parasitism among the lower animals, and detailed clinical evidence is given in abundance in support of many of the statements the author advances. Dr. Laveran expends a good many pages, we think unnecessarily, in defending himself from the repeated attempts which certain Italian investigators have made to filch from him the credit of a certain and important part of his great discovery. Anyone who has read his first large work and his numerous early papers knows very well with whom the entire merit of the discovery rests. Although stating them very fully, Laveran does not see his way to accept Golgi's views of the life cycle of the plasmodium, fascinating and original though they may be.

We regret that the translation of this important work is not quite worthy of the original. There are too many bad renderings, too many actual errors, and, in not a few places, complete inversions of the meaning of the original. The

[1] The annual subscription to the New Sydenham Society is £1 1s. Agent Mr. H. K. Lewis, Gower Street, W.C.

illustrations are numerous, and beautifully reproduced. In this and in other respects, with the exceptions alluded to, this work has been brought out in the New Sydenham Society's best style.

NOTES ON BOOKS.

Handbuch der Arzneimittellehre.—[Handbook of Pharmacology and Therapeutics.] Von Professor H. Nothnagel and Professor M. J. Rossbach. Siebente Auflage. (Berlin: August Hirschwald. 1894. Imp. 8vo, pp. 932. M. 18.)—In issuing a seventh edition of their valuable work Professors Nothnagel and Rossbach have taken the opportunity of incorporating the results of their experience with some of the newer drugs; otherwise the contents of the volume remain much as they were in the two previous editions. The book retains its eminently clinical and practical character; perhaps it is even more clinical than formerly, and the strictly pharmacological aspect of the subject has been allowed to fall a little behind our present knowledge. This is probably attributable to the fact that Professor Rossbach has for the last three or four years been disabled by illness, which, as we announced last week, recently ended in death.

Handbook of Obstetric Nursing. By Francis W. N. Haultain, M.D., F.R.C.P.Edin., and James Haig Ferguson, M.D., F.R.C.P.Edin. Second edition, revised and enlarged. (Edinburgh and London: Young J. Pentland. 1894. Cr. 8vo, pp. 258. 5s.)—The second edition of this little book does not call for detailed comment. It has been enlarged by the addition of a chapter on the management of pregnancy, and the insertion of more detailed instructions as to the feeding of infants. It is a book intended for monthly nurses, district nurses, and midwives; it may be safely recommended to them as a companion on which they may rely. It contains much information which the average student may not find in some of the popular textbooks of the day.

Gout and Its Relations to Diseases of the Liver and Kidneys. By R. Roose, M.D. Seventh Edition. (London: H. K. Lewis. 1894. Cr. 8vo, pp. 242. 4s. 6d.)—Gout is a disease that has a good deal of wealth on its side, and a book on the subject, written by a West End practitioner much in favour among the wealthy classes, and reaching in due order its seventh edition (without having achieved many medical readers) may probably plead *ipso facto* a like apology. That need not prevent us from saying that it is a well written and judicious summary of what is believed about a good old English disease of gentlemanly character, about which as yet not very much is known, but which is more easily prevented than cured. Gout has many remedies, which is only another way of saying that it has no cure; but the patient may, according to his constitution and his rank in life, take his chance of a great many modes of treatment, all more or less palliative and none very effectual. This book is fairly eclectic in putting them all on the market.

Blinding of the Retina by Direct Sunlight: a Study in Prognosis based upon Accidents incurred during the Observation of Solar Eclipses. By George Mackay, M.D.Edin. (London: J. and A. Churchill. Demy 8vo, pp. 52. 1s.)—This pamphlet, reprinted from the *Ophthalmic Review*, is a valuable contribution to our knowledge of the effect of direct sunlight upon the human retina. The account of cases of this nature in the pre-ophthalmoscopic days is of greater historical than scientific interest. Accurate records begin with observations of cases by Edward Jaeger after the eclipse of July, 1851. The list of reported cases from that date up to the present is not very long; abstracts of these are given by Dr. Mackay, who adds notes of seven cases seen by him after the solar eclipses of June, 1890 and 1891. The most important part of the paper to notice here is that which relates to the prognosis in these cases, and upon this point the writer says: "The prognosis for a decided improvement in vision and a practical cessation of discomfort is, on the whole, favourable, but complete recovery ..... is exceptional if investigated by sufficiently refined methods." The most hopeful period is during the first month. The author gives under nine headings the data upon which the prognosis may be based.

Biological Lectures and Addresses delivered by the late Arthur Milnes Marshall, M.D., F.R.S., Professor of Zoology in Owens College. Edited by C. F. Marshall, M.D. (London: David Nutt. 1894. Demy 8vo, pp. 372. 6s.)—The publication of this volume soon after the death of the author will serve to give the public some idea of his work, and to impress on the scientific world one of his most striking characteristics, possessed by him in common with all great teachers—that of treating in clear and terse language difficult points of technical knowledge. Most of the lectures and addresses have been published already in the *Transactions* of several societies; for this reason, and from the fact that many of them were addressed to unscientific audiences, a certain amount of repetition in the subject matter is unavoidable. The editor has, however, in a great measure guarded against this by careful selection of the present collection from the many published essays of the late professor. From a scientific standpoint the most important essay is the well known address to the Biological Section of the British Association at Leeds in 1890 on the recapitulation theory. This is too well known to need comment. We can only congratulate the editor, Dr. C. F. Marshall, on the able and expeditious manner in which he is superintending the publication of matter which, owing to the sad death of the author, would otherwise have been irreparably lost to modern scientific literature. The lectures on the Darwinian theory, which form a distinct course by themselves, are to appear soon in a separate volume.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A NEW CREMATOR.

The following is a short description of a very ingeniously contrived cremating furnace, made by Messrs. W. F. Mason, Limited, sanitary engineers, Manchester. Some few years ago the Laboratories Committee of the Conjoint Board of the Royal Colleges of Physicians (London) and Surgeons (England) were confronted with the somewhat difficult task of disposing of the cultures, refuse, etc., from their laboratories. Dr. Woodhead, the Director, and other gentlemen, were deputed to make inquiries, and to examine any apparatus that appeared suitable for destroying such material. We understand that these gentlemen examined the destructors in use in similar institutions on the Continent, and in one or two of the hospitals in this country. Not feeling satisfied with the results of these investigations, Dr. Woodhead entered into correspondence with Messrs. W. F. Mason, and explained to them his requirements; and, as the result of several interviews, this firm invented a cremating furnace, having the following features. It is a cleanly-looking structure, faced with white glazed bricks. It is about 6 feet wide, 8 feet long, and 8 feet high. At the base of the structure is a coke furnace, which is regularly supplied with a small stream of water, by means of which an intense heat is obtained in the combustion chamber. This is aided by an ingenious arrangement, whereby a given quantity of rarefied air is admitted, which, mixing with the gases from the water and coke, raises the temperature to an intense white heat. In the centre of the combustion chamber is placed the cremating chamber, which is really a large crucible, access to which is obtained through a door placed immediately above the furnace door in the front of the structure. From the cremating chamber a flue runs into the combustion chamber at its base, so that all gases from the cremating chamber pass through the coke, heated to an intense white heat as above mentioned, before they reach the chimney. It may be men-

tioned, too, that these gases are mixed with hot air in the mixing chamber before they gain access to the combustion furnace, so that all gases from the cremator during combustion are thoroughly purified and deodorised before they reach the chimney, and thus emerge into the atmosphere.

The cremator has already been at work for about three years, and continues to give entire satisfaction. The management of the Brompton Hospital for Consumption have now adopted the system, and we understand that several other hospitals are likely to fit up one of these cremators in the near future.

PAYING PATIENTS IN CHARITY HOSPITALS.

[FROM A CORRESPONDENT.]

THE difficulty of doing right without exposing one's self to the reproach of doing wrong is nowhere more markedly exemplified than in hospital administration, so often does it happen that the concrete example stands opposed to the general principle in its teaching. It is hard to refuse a patient admission to hospital merely because he has been a trifle more thrifty than his neighbours, and therefore is slightly better off: on the other hand, it seems absurd for a hospital which has admitted such a patient to refuse to accept the pittance which he can afford to pay, since it may help to succour someone else more unfortunate than he. The teaching of the concrete example, then, is that such cases should be taken in, and should make a payment. On general principles, however, there is a good deal to say on the other side. So far as destruction of habits of thrift and self-reliance are concerned, it is impossible to draw any line of distinction between those who are admitted entirely free and those who make a partial payment; both alike, however unwilling they may be to confess it, receive from the charity what they do not pay for, and, as all experience shows, are led thereby to depend upon the help of charity in emergencies, and, as the phrase goes, to become pauperised.

The injustice to the medical practitioners of the district, who are deprived of their patients, and to the poor, who are deprived of their beds, is obvious enough. To the subscribers to the hospitals, also, there would be injustice, were it not generally true that the average governor, once his subscription is paid, cares not a jot what becomes of it. Supposing, however, that a subscription were given with the honest and conscientious intention of doing good to the poor, it clearly would be an injustice to the donor that his gift should be appropriated for the benefit of those who do not come under that category. The injustice to the medical staff of the hospital we need not say much about; if they choose to attend for nothing people who look on themselves as pay patients, and thus obtain neither thanks nor fees, that is their look out. All these things have been already said again and again. What, however, has not been said, or, at any rate, has not been insisted on in any way as it should be, is that this action of the charity hospitals in opening their doors to people who pay, and do not look upon themselves in any way as recipients of charity, stands in the way of a movement which would be of great help to the mass of general practitioners, and of infinite benefit to the great bulk of the middle classes of this country, namely, the establishment of pay hospitals, institutions in which the unspeakable advantage of hospital treatment would be available, without suspicion of charity or taint of pauperism to that great middle class which at present only obtains them by means of a stretching of rule or a straining of conscience which is derogatory both to the giver and to the receiver.

It is idle to shut one's eyes to patent facts. The days are gone by when a physician could feel that he had done his duty by giving a prescription and ordering a poultice, or a surgeon by plunging his lancet into an abscess. A complete machinery of cure is requisite in many cases if the best is to be done. This the poor already have in the hospitals, the destitute are beginning to have it in workhouse infirmaries, the very rich can have it by dint of the abundance of their wealth, and there can be no doubt that the middle classes could procure it by co-operation if they were once put fairly face to face with the difficulty. But, unfortunately, they are competed with and undersold in their attempts to establish institutions for this purpose by the action of the charity hospitals in opening their doors to pay patients.

The absolute necessity of hospital treatment in severe cases has become so obvious that there can hardly be a doubt that satisfactory co-operative or pay hospitals would quickly be established in our large towns, if all who were not absolutely objects of charity were excluded from our charity hospitals. In self-protection the middle classes would be bound to act; at present they trust to luck, and to an ill-veiled charity poorly thanked, which stands in the way of all self-help. Just as home patients should be divided, as in fact they are, into three classes of paupers, club or provident dispensary cases, and private patients, so should hospital provision be made for paupers in the workhouse infirmaries, for the poor in the charity hospitals, and for all who are able to pay in pay hospitals organised on purely commercial principles, extra comforts in which could be arranged for in accordance with a scale of extra fees.

If such a scheme as this should seem impossible the only alternative would seem to be the frank acceptance of the treatment of pay patients as a legitimate branch of hospital economy, one of the sources of income, in fact, of a charity hospital. There would be no real difficulty about the matter. The scale of payment would vary according to the accommodation, and a certain fixed proportion of all payments received from patients would be pooled for division among the staff. The hospital committees would take care that the payment was made remunerative; the subscribers, especially those of the working classes, mill representatives, etc., would see to it that the hospital was not turned into a middle-class institution; and the principle of pooling the medical fees would not only prevent individuals using the hospital for their own profit, but would help the juniors, and thus save the hospitals the reproach which, in London at any rate, is a growing one, that their appointments are open only to rich men.

We do not say the suggestion is an ideal one. It would no doubt be better to maintain a sharp distinction between charity and commerce, but as a fact there is no actual line between objects of charity and those able to pay, any more than there is between those only just able to pay for their support, and those whose payments should be of great assistance to the finances of the institution. At the present time the charity hospitals hold the field, and it seems impossible to prevent the admission of non-charity patients to charity wards. Would it not then be worth while to arrange such a compromise as should at least prevent the two most crying evils of the existing state of affairs, under which the poor are being ousted from the wards by a crowd of middle-class people, who enter them on false pretence, and a system is growing up of gratis attendance by a poorly paid profession on well-to-do people, who are not only willing, but often would be glad, to pay fees if a machinery were arranged for their so doing?

SMALL-POX AND VACCINATION IN 1893.

XI.—NOTTINGHAM.

DR. BOOBBYER has given in his annual report for 1893 the facts of the prevalence of small-pox from which the borough suffered during the year. There were in all 53 cases removed to hospital in two distinct outbreaks. The first outbreak, consisting of 42 cases, began in the workhouse, and included no fewer than 23 patients of the tramp and pauper class. The second prevalence commenced in December, and occurred in the county lunatic asylum, comprising 11 cases and 2 deaths. Of the total for the year, 4 were revaccinated cases, all discrete attacks; 37 were once vaccinated and 12 unvaccinated. The 2 deaths in the vaccinated patients represent a death-rate of 2.4 per cent., whilst the 4 deaths in those unvaccinated yield a death-rate of 33.3 per cent., or 14 times that of the other class. No case occurred in the hospital staff, all of whom were revaccinated, but one of two workmen who, although working in the small-pox enclosure, refused vaccination, contracted the disease after being employed there for two days in the open air. Dr. Boobbyer promises a further report in detail on an interesting outbreak of small-pox which has occurred among the lace workers in Nottingham, and propagated by contact with infected cotton

material. No fewer than 40 cases were traced within the space of a few days by following the movements of the implicated material and of the persons who manipulated it.

A REPORT SHOWING THE EFFECT OF VACCINATION UPON THE RECENT EPIDEMIC OF SMALL-POX IN MARYLEBONE.

By E. CLIMSON GREENWOOD, L.R.C.P., M.R.C.S.,
Public Vaccinator of Marylebone.

Immediately upon the outbreak of small-pox, temporary vaccination stations were opened by the guardians in the two wards where the outbreak occurred, a house-to-house visitation made in these wards, and those persons found to be unvaccinated were called upon to have the operation performed at once; every inmate of each house where small pox occurred was interviewed, and recommended to be vaccinated or revaccinated then and there. The principal houses of business were written to, recommending that their employees should be revaccinated. All Board and other schools were visited, and those children attending examined, and the unvaccinated sent home and forbidden to return until they had been vaccinated. The result of this was that there were in all 1,725 primary, and 2,306 revaccinations, performed.

From the house-to-house visitation and the inspections at the various schools it is estimated that about 26 per cent. of the inhabitants were, at the time of the outbreak, unvaccinated.

Not a single case of small-pox occurred amongst those successfully vaccinated or revaccinated during the epidemic, with the exception of one or two who were in the incubatory stage of the disease. The importance of this statement is evident when one realises that nearly all those vaccinated or revaccinated were from the actual locality, and in many cases living in the same houses, in which the disease occurred.

Preserved calf lymph was used in every case; this I considered necessary, as vaccination from arm to arm when small-pox is prevalent might be attended with some considerable risk.

There were 225 cases between July 23rd and September 23rd, and of these 92 were unvaccinated, and 133 had been vaccinated in infancy. There were 23 deaths, 17 from the unvaccinated and 6 from the vaccinated. The following table shows the age, character of the disease, etc., of all the 224 cases:

Table I.—*Vaccinated in Infancy.*

Age.	Vaccination Marks.	Hæmorrhagic.	Confluent.	Severe Discrete.	Mild Discrete.	Deaths.	Total.
Under 5 years	1	—	—	—	—	—	—
5 years and under 10 years	1	—	—	—	1	—	1
10 years and over ...	1	1	8	3	12	2	25
Under 5 years	2	—	—	—	—	—	—
5 years and under 10 years	2	—	—	—	1	—	1
10 years and over ...	2	—	3	2	17	1	22
Under 5 years	3	—	—	—	—	—	—
5 years and under 10 years	3	—	—	—	—	—	—
10 years and over ...	3	1	4	2	16	2	23
Under 5 years	4	—	—	—	—	—	—
5 years and under 10 years	4	—	—	—	1	—	1
10 years and over ...	4	1	3	1	18	—	23
Under 5 years	5	—	—	—	—	—	—
5 years and under 10 years	5	—	—	—	2	—	2
10 years and over ...	5	—	1	3	31	1	35
							133
Unvaccinated.							
Under 5 years	—	—	13	3	7	11	23
5 years and under 10 years	—	—	11	10	9	1	30
10 years and over ...	—	1	15	14	9	5	39
							92

The effect of vaccination upon small-pox is clearly shown by the duration of the disease in the vaccinated, as compared with the unvaccinated.

The following table shows the average length of stay on the hospital ships of the first 160 cases discharged:

Table II.—*Average Length of Stay on Hospital Ships.*

Unvaccinated.	1 Mark.	2 Marks.	3 Marks.	4 Marks.	5 Marks.
36.5 days	32.2 days	25.4 days	21.1 days	23 days	22.1 days

Throughout the epidemic there was only 5 cases of small-pox occurring in revaccinated persons, of which the following are the particulars:

When Revaccinated.	Age.	Character of Disease.	Remarks.
Fifteen years ago	43	Moderate discrete	—
Ten ,, ,,	34	,, ,,	—
Twenty ,, ,,	34	,, ,,	—
Nine ,, ,,	34	,, ,,	—
Ten ,, ,,	45	Confluent	Chronic alcoholism and bronchitis; died

The conclusions to be drawn from the foregoing report are as follows:

1. That the protective influence of primary vaccination up to five years of age is perfect.
2. That the modifying effect of vaccination upon small-pox is greatly influenced by the number of vaccination marks.
3. That everyone should be revaccinated at the age of 10 years.
4. That vaccination in less than four places should not be allowed.
5. That in time of epidemics temporary stations should be opened and house-to-house visitations made, so that everyone may be vaccinated immediately a case occurs in their house.
6. That in time of epidemics there would be no occasion to close the schools if the children were examined, and the unvaccinated or the imperfectly vaccinated excluded.

I have to acknowledge with thanks the great assistance that Dr. Firth, of the hospital ships, has rendered me in compiling these statistics.

THE DISCOVERY OF ANÆSTHESIA.

In a recent number of *The Century* Mr. E. L. Snell gives an interesting account of Morton's discovery of anæsthesia. Morton, who was born in 1819, began his career as a dentist, but afterwards took a medical degree. It was customary among dentists at that time to fix false teeth on gold plates placed directly above the fangs of the old teeth. Morton devised a new kind of solder for attaching artificial teeth to the plate, but the application of the new method made removal of the roots of the decayed teeth necessary. As few persons were of sufficiently heroic mould to submit to this procedure, Morton's attention was thus early directed to the search for some means of dulling sensibility to pain. He made experiments with all the anodynes then known, including mesmerism, but without success. In July, 1844, a lady came to him to have a tooth filled. To deaden the pain Morton applied chloric ether to the affected part; the use of that agent for this purpose was at that time no secret among dentists. The result was so successful that Morton, in speaking of the matter, says: "The idea instantly occurred to me that if I could devise some means for bringing the whole system under the influence of ether, it would be a most valuable means of relief in more intense and more diffused pain." He forthwith went to a farm belonging to a relative, and made a series of experiments with chloric ether on birds, insects, and various small quadrupeds. The results of these experiments were entirely negative. Morton, though discouraged, was not

baffled. On December 11th, 1844, Horace Wells, a former partner of his as a dentist, being troubled with an aching tooth inhaled nitrous oxide while another dentist extracted the tooth. "A new era in tooth pulling!" he exclaimed; "it did not hurt me as much as the prick of a pin." Soon after this Wells gave an exhibition at Boston of painless tooth-pulling before a number of medical men and students. Morton assisted him on the occasion, but the "painless tooth pulling" was a painful failure. Wells was so disheartened that he abandoned his experiments, and soon gave up the practice of dentistry. Wells's exhibition, however, suggested to Morton a new line of experiments in the application of ether. It occurred to him that if inhaled by the lungs its benumbing properties might be diffused through the system. His first experiments were made on himself. He placed a mixture of ether and morphine in a retort around which he wrapped a hot towel and inhaled the mixture; in a similar way he inhaled a preparation of ether and opium. Finding that the inhalations were followed by no worse effect than a splitting headache, he gradually prolonged the period of inhalation, and noticed a distinct feeling of numbness pervading his body.

In the spring of 1846 he again went to the farmyard for subjects, and, having etherised a fowl, cut off its comb without any exhibition of pain on the part of the fowl. Still more satisfactory was an experiment made on a favourite water spaniel. Morton then returned to Boston so confident of success that he gave up his dental practice, which had by this time risen to 20,000 dollars (£4,000) a year, intending to devote himself exclusively to the prosecution of his researches. The crucial test of administering ether to the human subject still remained, and after some imperfectly successful experiments on his two assistants, he on September 30th, 1846, shut himself up alone in a room, and tried the effect of inhalation of sulphuric ether on himself. He lost consciousness, and found on awaking that he had been insensible between seven and eight minutes. Then followed a dramatic incident. Morton had just resolved to inhale the ether again, and have a tooth extracted under its influence, when a man with a "dreadful tooth" presented himself, asking to be mesmerised for the operation. Morton told him that he had something better than mesmerism, and with the man's consent, saturating his handkerchief with ether, gave it to him to inhale. He became unconscious almost immediately, and Morton extracted a "firmly-rooted bicuspid" without rousing him in the slightest degree.

The next step was to give a demonstration of his discovery under conditions that would preclude any suspicion of deception, and in the presence of witnesses who would command the confidence of the medical profession. Morton obtained permission from Dr. John C. Warren, senior surgeon to the Massachusetts General Hospital, to make a public trial of his anæsthetic in that institution. The patient chosen for the purpose was Gilbert Abbott, who was suffering from a congenital tumour situated just below the jaw on the left side of the neck. The experiment, which had been looked forward to by most of the spectators with not unnatural incredulity, was a complete success, and when the operation was over, and the patient still lay unconscious on the table, Dr. Warren said with solemn emphasis, "Gentlemen, this is no humbug." It was some time, however, before the discovery was generally accepted, and it is sad, but to the student of the history of scientific discovery hardly surprising, to record that Morton's own reward for the priceless boon he had given to his fellow creatures was a broken heart, a shattered constitution, and bankruptcy. He died suddenly of apoplexy on July 15th, 1868. His widow, whose maiden name was Elizabeth Whitman, is still living. Mr. Snell gives the text of an interesting letter from Dr. Oliver Wendell Holmes, who was a member of the medical staff of the Massachusetts General Hospital at the time of the discovery, and who was the inventor of the word "anæsthesia." The letter, which is dated April 2nd, 1893, contains the following sentences:

> The only question was whether Morton got advice from Dr. Charles T. Jackson, the chemist, which entitled that gentleman to a share, greater or less, in the merit of the discovery. Later it was questioned whether he did not owe his first hint to Dr. Horace Wells, of Hartford, which need not be disputed.
>
> Both these gentlemen deserve honourable mention in connection with the discovery, but I have never a moment hesitated in awarding the essential credit of the great achievement to Dr. Morton.

This priceless gift to humanity went forth from the operating theatre of the Massachusetts General Hospital, and the man to whom the world owes it is Dr. William Thomas Green Morton.

Mr. Snell also cites a letter to Morton from the late Sir James Y. Simpson, dated Edinburgh, November 19th, 1847, in which he says:

> In the *Monthly Journal of Medical Science* for September I have a long article on etherisation, vindicating your claims over those of Jackson. Of course, the great thought is that of producing insensibility; and to that the world is, I think, indebted to you.

On the whole we think Mr. Snell has made out his case, namely, that, whatever hints or assistance Morton may have received from Jackson and from Wells, it is to him that the world is indebted for the complete demonstration of the anæsthetic properties of ether.

THE MANAGEMENT OF IDIOTS IN PARIS.[1]

AT the Bicêtre and the Fondation Vallée, Paris, the patients—all children—are divided into three classes; the first consists of idiots who are uncleanly in their habits, epileptic or not, and who are unable to speak or walk; the second is composed of idiots who are uncleanly in their habits or not, and are of a healthy constitution; the third contains imbeciles, weak-minded, unstable, perverse patients, epileptic, hysterical or not, who are clean in their habits, and healthy. The first class includes idiots who are capable of improvement, and others who are quite incurable and who can only be clothed, fed, and kept clean. The second class, consisting of 213 children, attend school, and are taught to wash and partially dress themselves, to exercise their hands, and are also educated by means of object lessons, the education of the senses and of speech, and take walks during which questions are asked and answers given. The third class contains 203 children who have a higher form of education. Some improvements have been introduced during the year; a class for drawing has been formed, the teaching has been aided by a magic lantern, and the gymnastic exercises have gained greater regularity by the use of a drum by the professor of gymnastics. The children in this class are also taught trades, such as joinery, printing, shoemaking, basket making, brush making, etc.

On January 1st, 1892, there were 434 children in the institution. During the year 138 were received, 67 were discharged, 7 were transferred to other departments of the Bicêtre, 4 escaped, and 21 died, leaving 471 on December 31st, 1892. With regard to the Fondation Vallée, which contains 112 children, it appears that it is overcrowded, and the children who are cleanly in their habits have to be mixed with those who are not. All the children here are taught by female teachers, and the education is in every respect similar to that given at the Bicêtre. This institution on January 1st, 1892, contained 99 children, of whom 22 were epileptics, and 77 idiots and imbeciles; 28 were received, 7 were discharged, 5 died, and 3 were transferred to the adult department of the Bicêtre, leaving 112 on December 31st, 1892. A project is on foot for increasing the size of the Fondation Vallée, so as to accommodate 300 young idiot or backward girls, and two reports on the subject have been made by Dr. Bourneville. A visit by Mrs. Burgwin, superintendent of the classes for abnormal children under the London School Board, to the Bicêtre induces M. Bourneville to bring the subject before the authorities again, so that similar classes may be formed in Paris and the large towns of France.

The report for 1892 contains also a number of essays by Dr. Bourneville and his *internes*, and, as usual, contains much useful information. The essays are exceedingly good, and range over such subjects as idiocy complicated with meningitis, with athetosis, porencephalus, sclerosis, hydrocephalus, microcephalic idiocy, and epilepsy. In each case the family history is given, the condition on admission, the progress of the case, and, when death occurs, a full account of the conditions found after death, especially in the brain, is related. In all cases the presence or absence of the thymus and thyroid glands is noticed, and when they are present the weight of each is given. An interesting essay is one by Dr.

[1] *Recherches Cliniques et Thérapeutiques sur l'Epilepsie, l'Hystérie, et l'Idiotie*: compte rendu du service des enfants idiots, épileptiques et arriérés de Bicêtre, pendant l'année 1892, par Bourneville, Médecin de Bicêtre, avec la collaboration de MM. Dauriac, Ferrier, et Noir, internes du service. vol. xiii, avec 37 figures dans le texte et 15 planches. Paris: Aux bureaux du *Progrès Médical*, et Felix Alcan, 1893. (Demy 8vo, pp. 480.)

Bourneville himself, on the surgical and medico-educational treatment of idiocy. He is of opinion that craniectomy is only useful in cases of injury to the head, or in an abscess or tumour of the brain, and that it is contraindicated in the great majority of cases. M. Lannelongue bases his operation on the supposed premature synostosis of the bones of the cranium, but M. Tacquet, one of Dr. Bourneville's pupils, has shown in his description of twenty-six crania belonging to all forms of idiocy that the sutures of the cranium are not prematurely ossified. M. Bourneville supplements these by a description of twelve crania, in one of which craniectomy was practised, and shows not only that in none of these was there premature ossification of the sutures, but there were conditions of the brain present which could not be ameliorated by craniectomy. He considers that premature ossification of the bones of the cranium is a theory which is not borne out by observation; and, so far as microcephaly is concerned, there is no doubt that Professor Virchow, who first enunciated the view as the cause of the condition, has abandoned it. Dr. Bourneville then relates the histories of eight idiots, two of whom were microcephalic, and shows that the results of training and education in these cases are far better than after craniectomy.

The book is illustrated by plates showing the condition of the brain in six of the cases, the description of which has previously been given. M. Bourneville is doing excellent work, and advancing our knowledge of idiocy and imbecility by his labours at the Bicêtre.

NOTES ON HEALTH RESORTS.

XVII.—THE THERMAL STATIONS OF THE PYRENEES.

Dr. Garrigou, Professor of Hydrology in the Medical Faculty of Toulouse, has sent us an abstract of a lecture delivered by him, at the request of Dr. Robin, at the Hôpital de la Pitié, in Paris, on "The Different Thermal Stations on the Pyrenees." The lecture consists of a detailed description of the chief Pyrenean spas, and indicates the morbid conditions in which they may prove serviceable. Of 41 spas, he classifies 21 as (*a*) sulphur springs, 4 as (*b*) springs containing chlorides, 7 as (*c*) springs containing sulphates, 7 as (*d*) containing alkaline bicarbonates, and 2 as (*e*) arsenical. He regards, however, only 15 of these as important. Eaux Bonnes he thinks one of the most remarkable of the hot sulphur springs: he believes it to be of real value in phthisis, as well as in catarrhal affections of the respiratory organs, and he repeats the caution, often given, that if administered with insufficient care it may lead to congestion and hæmorrhage.

Cauterets he praises as the best-organised of all the thermal stations in the Pyrenees, and he considers it indicated especially in the treatment of granular pharyngitis, laryngeal phthisis, in rheumatism and gout, and in the intestinal troubles of the rheumatic and gouty.

Of Barèges and St. Sauveur he says nothing that is not well known. Luchon, where Dr. Garrigou himself practises, naturally receives a large share of attention, and he speaks strongly of the value of a sort of modification of the Bergeon method of treating phthisis which he carries out there, and for which he claims brilliant results. Vernet is praised rather for its mild winter climate than because of its waters, and the steps that have been taken to establish it as a sanatorium for sufferers from chronic chest affection are commended. Amélie, a station with somewhat similar pretensions, is very briefly dealt with.

A number of less important hot sulphur springs are merely enumerated. Two only of the cold sulphur springs are noticed in detail. Saint Boes, a bituminous as well as sulphur water, which is bottled and exported. Dr. Garrigou regards as highly useful in the treatment of chronic catarrhal affections of the mucous membrane. He mentions that at Argelis Gazoix a hospital for phthisical children has been established, and excellent results obtained from its climate and its cold sulphur waters.

Salies de Bearn possesses springs rich in chlorides and bromides, and may be compared to Kreuznach in Germany, and Woodhall in this country. Dax may be taken as a representative of the sulphated springs. These are hot, and are especially utilised in the treatment of rheumatism, gout, and allied disorders. At Dax and at Bagnères de Bigorre Professor Garrigou appears to think that valvular diseases of the heart may be treated with benefit, and he suggests that the presence of "antimony" in the latter may be influential in this respect—an opinion we cannot share; indeed, we are disposed to doubt altogether the wisdom of bidding for cases of valvular cardiac disease which is now springing up at many spas. Capvern is compared to Contrexéville and Vittel, and is said to be of service in diabetes. The statement that the springs at Ussat "act like a charm in chorea" represents a credulity which will hardly be widely accepted.

Little that is absolutely new to English readers is contained in this abstract, but it is valuable as expressing the opinion of one who has had many years of observance and experience of these resorts.

MADEIRA AND THE CANARY ISLES.

As Madeira and the Canary Islands are visited more and more very year by invalids seeking the benefits of a warm and equable winter climate, such a volume as Mr. Samler Brown's guide book[1] to Madeira and the Canary Islands is exceedingly useful. It is full of information, which is imparted in a concise and practical manner. The methods and means of travelling to and about the islands, their history and commerce, their fauna and natural beauties, are all described in a handy little volume of 250 pages. There is really not a line wasted in the whole book.

Mr. Brown is a bit of a cynic, and despises alike romantic histories of the past and enthusiastic accounts of the present; but in support of the opinion that the climates of Madeira and the Canary Islands are as near perfect as anything so variable as a climate can be, he gives a number of meteorologic tables of great interest and value.

These tables show that the mean of the mean monthly temperature over the eight months from October to May inclusive is: for Santa Cruz, Teneriffe, 67.5°; Las Palmas, 65.4°; Santa Cruz, Palma, 64.4°; Orotava, 63.3°; Funchal, 62.7°; Laguna, 58.5°; Villaflor, 52.3°.

The mean of the mean daily range for eight months is as follows: Las Palmas, 9.3°; Funchal, 9.6°; Orotava, 13.0°; Santa Cruz, Palma, 13.1°; Santa Cruz, Teneriffe, 14.6°; Laguna, 16.6°; Villaflor, 18.8°.

As Laguna (1,840ft. elevation), and Villaflor (4,300ft.) are the accepted summer resorts, the figures for the hottest months have been added in these two cases. Mr. Brown states that the water supply in Las Palmas, Santa Cruz, and Orotava of Teneriffe is good, and the drainage of the large hotels excellent, though the sanitation of the towns still leaves much to be desired.

As there are different climates at different elevations, an invalid may stop in these islands all the year round. In the summer, weeks can be agreeably passed camping out in the mountains, without fear of rain, when the climate is so mild, dry, and equable that even an invalid can sleep in the open air wrapped in a blanket. This is valuable information for those cases of incipient phthisis in which open air life without risk of chill will effect a cure.

The book contains a number of excellent maps. It should certainly be in the hands of all visitors to Madeira and the Canary Islands.

[1] *Madeira and the Canary Islands.* By A. Samler Brown. Third edition. London: Sampson Low, Marston and Co. 1894. (Cr. 8vo, pp. 276, 2s. 6d.)

The Protection of Infancy.—An International Congress of persons interested in the protection of infancy will be held at Florence in 1895, probably in June. The subjects of discussion will embrace the physical, moral, and intellectual "betterment" of children; hospitals in their relation to children; the initiation of "a general propaganda for the benefit of infancy; *crèches* and infants' homes; the care of deaf-mute children before their admission to educational establishments; the care of destitute and neglected children; training schools and ships; paternal correction, etc.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XXII.—SWAFFHAM, NORFOLK.

Our wanderings brought us in due course to this little Norfolk town, the centre of a district mainly agricultural, though part of the land is suited for little but the rearing of the game with which the country abounds; rabbits, hares, and pheasants may be seen in large numbers in an afternoon's drive. Like many another Norfolk union the accommodation provided in the workhouse exceeds the demand; this house once held 300 inmates, and at the time of our visit there were about 40 people under its roof. Norfolk is rich in churches and in workhouses, but the people, who filled both in earlier days, have moved away.

The House

is one of the oldest in the country. The introduction with which we were furnished secured courteous attention to our wishes, and we were at once shown the quarters provided for the sick.

The Infirmary

consists of a ward for female patients holding six beds, and a detached building standing some distance from the house for the male patients, holding 20 beds in two wards. This detached building may be emptied of its ordinary patients and used as an infectious hospital if need occurs.

The Patients in the Female Ward

were all cases of old age, except one poor creature placed in an armchair, and artificially supported by cushions, a case of complete paralysis. The doctor, whom we saw later, explained that he required the attendant to get this poor woman up every day in order to prevent the formation of bedsores. That pathetic figure haunts us now: if the ratepayers could only see and realise the wretched discomfort of this poor creature it would plead more earnestly than any word of ours for the trained nurse, and might stir the public mind to a sense of its responsibility to these helpless human beings.

On the Male Side

was a man suffering from phthisis, wearing an aspect of weariness and suffering, and in the next bed a case of acute bronchitis, treated with frequent poultices and brandy every two hours. This ward was under the care of a pauper inmate and we concluded that he made the poultices and administered the brandy; the matron spoke highly of his care of the acute cases, and we see no reason to doubt her verdict as far as regards kindness and good will, but this is not nursing. The other patients in this ward were up; there were rheumatism, heart disease, local paralysis, and the usual cases of infirmity.

The Nurse,

so called, is a paid officer, and as we were going round the wards we came across her making toast at the kitchen fire: in addition to her duties as nurse she appears to act as assistant to the matron and caretaker of the children; she is moreover required to help with the needlework. We must not blame her for not being in the wards, for it may be that the efficient pauper is more acceptable to the patients than the official who is really their responsible attendant, but it is another instance of the fact that the untrained nurse often fails to realise her position in regard to the sick. The matron informed us that when an addition to the nursing staff is required special inmates are told off for the duty, or a trained nurse is engaged from the home in Swaffham.

The midwifery cases are attended to by the doctor, who resides nearly a mile from the house. The labour ward is quite apart from the house and has separate offices: it holds two beds, one for the patient, and one for the inmate who looks after the case until recovery. The ward was empty at the time of our visit; it was quite clean and ready for use.

Bells of Communication

ring from all the wards, and other parts of the building to the porter's room; we were informed that the nurse did not sleep near her wards, and that there was no bell from the male infirmary out in the garden. The doctor is summoned at night by a messenger.

The Bedding

is long straw, and the beds felt elastic to the touch, and were supplied with ample clothing, but all the bedsteads were too narrow for comfort. The wards are all on the ground floor having a pleasant look out on to the gardens; the ventilation was by means of the raised sash and the block in the window frame. The male ward on entering felt wanting in freshness but it was not foul. The patients are well supplied with armchairs, but they had no day rooms.

Sanitary Appliances.

The closets were either the earth or water system. A bath room was attached to the female ward, with a cold water supply; it was fitted with a heavy wooden cover, which certainly protected it from being a receptacle for odds and ends, but also concealed dirty water, as we saw by lifting the cover. The bath room for the male infirmary is of the same kind, no hot water is laid on. The whole system of drainage is behind the time.

The Imbeciles and Idiots

were kept among the infirm; there were very few in the house at the time of our visit. We were pleased to see that the inmates were allowed to wander all over the gardens; we saw some of the infirm patients walking in the garden, and seats were placed for their use in a delightfully shady spot. We quite agreed with the matron in thinking that the inmates were well off in that particular.

Recommendations.

We almost always find it necessary to end our reports with the same suggestion, namely, that efficient nursing should be provided for the sick: these infirmaries in remote country towns are the only hospitals for the sick poor, and they should be equipped as such. We also recommend the placing of the sick under one roof, with the nurse's quarters in communication, and the labour ward in the same part of the building. Would it not be possible to adapt a part of the house for this purpose? in which case the separate building could be kept entirely for infectious work. An additional nurse should be engaged when the nature of the cases under treatment requires it, the paupers being retained for the service of the wards only. The adaptation of the disused part of the house to infirmary purposes should include the construction of bath rooms and suitable closets.

STOCKPORT.

We have received some corrections from Dr. Bale, the medical officer of the Stockport Union. In the first place he objects to the statement that in the large female ward there was only one fireplace; our Commissioner states that there was only one small stove in each division, quite inadequate for the purposes of warmth. 2. There was not a case of typhoid fever in the ward, the case referred to having recovered; our Commissioner says that the woman looked so ill that their attention was attracted by her appearance, and the matron stated that she had typhoid fever; the nature of the cases quoted in the reports is not for clinical purposes, but as showing the nature of the work required of the nurses. 3 The medical officer states that one of the assistant nurses on the female side is instructed to devote her attention to the children, and Dr. Bale thinks that our Commissioner should have instanced some signs of ignorant handling. In reply, our Commissioner states that taking into consideration the amount of work required of the assistant nurse, and the scattered nature of that work, the children's pauper nurse must have received nothing but mere supervision; the marasmus cases were up, without any warm clothing about the loins or extra wraps about the chest and shoulders, and the anxious wan expression of a marasmus child was very marked in their faces. 4 The male block accommodates 88 beds, and not 130 as stated in our report. Our Commissioner replies that there are few facts more difficult to arrive at than actual figures; the matron in giving the numbers may have included the male beds in the workhouse infirmary, but she certainly gave the figures as quoted. 5. In addition to the heating pipes there are fires in the wards; the criticism refers to the situation of the pipes and their calibre, as being unfit for heating purposes. 6. The nursing on the male side is as follows: A male superintendent nurse who is thoroughly efficient

and of long experience, is entirely responsible for all male hospital patients; he has an assistant nurse under him, and only has temporary charge of the male imbeciles when their regular attendant is on leave or absence. The statement made by the matron to our Commissioner is as follows: "There is a nurse for this block (male block), she is assisted by the male nurse for the dressings, and heavy cases, and he has charge of all the male patients in the house and the imbeciles." The female nurse of the male block was off duty when the visit was made and the assistant female nurse was on duty in that block. 7. Two nurses are on duty at night, and have been for many years. Our Commissioner states that the information given was that there was one night nurse on duty, but that owing to the representations of the officials, more nurses had been appointed; we regret if we have made this statement on imperfect information, and it may be that the discrepancy arose in not distinguishing between the nurse and her assistant.

We give space to these corrections as received from Dr. Bale, but they leave untouched the overcrowding, the imperfect sanitary arrangements, the insufficient and untrained staff of nurses, the absence of classification, the neglect to provide proper furniture in the nursery, or a paid nurse for the infants, and other details. We see that the Guardians at their meeting, when they considered Dr. Bale's answer to our charges, congratulated themselves that the report only told them what they knew before; this may be a satisfactory frame of mind for an official; but we fancy that the report has told the ratepayers something that they did not know before; to them we look to champion the cause of the hapless poor who are left to the tender mercies of the Stockport Guardians.

STOKE-UPON-TRENT.

Stoke-upon-Trent is advertising for a nurse for the union infirmary and offering a salary of £21 10s. for a competent trained nurse who "has had experience in midwifery." We conclude that the Board does not require a certificate in the latter respect as they offer a low salary. Is not this cheeseparing unworthy of the Guardians of such a large and important union? The night nurse is offered £22 10s. We infer from these figures that this night nurse would find a colleague, otherwise the work required, if conscientiously performed, should stand at a higher figure than the above.

CHESTERTON.

The Board of Guardians, advised by the inspector, Mr. Peel, has decided to refuse admission to our Commissioner whenever that individual knocks at its gates. Mr. Peel is pleased to criticise the reports published in the British Medical Journal as inaccurate. Was Hatfield inaccurate? Was Bedford inaccurate? We shall not be surprised to find that Mr. Peel makes similar suggestions all round his district and then we shall know the reason why.

BRAINTREE.

We have been watching the progress of events at Braintree with some interest. The Board admit that the infirmary is overcrowded, and we were informed that the plans were awaiting the approval of the Local Government Board. In the report of the meeting held October 10th, we read that, with certain modifications, all within the limits of practicability, these plans are accepted by the Local Government Board, and the resolution arrived at after the waste of valuable time was against the modifications, thus shunting the whole question. We can only infer that this conduct is suggested as an object lesson to the electoral body not to re-elect this present Board; no doubt it will answer the purpose.

KIDDERMINSTER.

The Kidderminster Board is having a controversy with its medical officer about the nursing question. It seems that on account of a case of measles and another of typhoid fever, extra nurses are required. One of the guardians says that "typhoid fever patients were treated in their own homes, and that it was not considered that they required special nurses," and the case of measles is spoken of as "a paltry case of measles." Would it not be well if the guardians accepted the position that the medical officer holds as skilled adviser to the Board on medical questions, and believe that in asking for trained nurses he gives the sick pauper the best chance of life. We see that the Kidderminster Workhouse deals with over 150 sick without the services of trained nurses; there are three nurses untrained. Perhaps if the permanent staff consisted of trained nurses these extra demands might be avoided.

WORKHOUSE ATTENDANTS.

"Lady Meath's appeal for recruits to her new organisation of workhouse attendants will," says the *Local Government Journal*, "be heartily responded to. Her ladyship's name in connection with any movement for the welfare of the poor and helpless people is sufficient to stamp the movement with the hall mark of genuineness. The British Medical Journal is doing an immense good in pointing out the deficiencies which exist in the proper treatment of the sick poor in our provincial workhouses, and Lady Meath's organisation is one which will help to remedy the evils complained of."

The London and Counties Medical Protection Society.—A West Kent Division of the London and Counties Medical Protection Society, Limited, was founded at a meeting held at St. Bartholomew's Hospital, Chatham, on October 13th, when the Treasurer (Dr. Heron) explained the objects and scope of the Society. Subsequently Dr. G. V. Bell, of Rochester, was elected President, and Mr. William A. Dartnell, L.R.C.P. and S., of Rochester, Honorary Secretary. Vice-Presidents and a Council were also chosen.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

M. ROUX AT THE INSTITUT PASTEUR.

"Antitoxin" and the serum treatment of diphtheria forms a subject so striking as to fill the minds of the French public with keen interest. It has there been fanned by the fantastic journalism of Paris, and made to form the subject of a national self-glorification which has, in this case, absolutely no grounds. It is a purely German invention, and France has done nothing but adopt it with a theatrical display which, under the circumstances, is humiliating for a country which need not strut in borrowed plumes. The microbe of diphtheria is a German discovery, and the antitoxin and its application are German discoveries. It is distressing to find the whole matter boomed by the *Figaro* and the municipality of Paris as another "glory" of France. The public subscription raised is a folly, and the medal struck a fraud, and we have no doubt that M. Roux is heartily ashamed of the whole affair. But with a view of ascertaining what the real facts in France are and what that truthful and accomplished *savant*, M. Roux, says for himself as distinct from what sensational journalism says, we have sent a representative to Paris to take from himself his own views on the matter. It will be seen that he fully admits the correctness of our view. Our correspondent was instructed to note the special circumstances, if there were any, under which the clinical investigations had been made. M. E. Roux, who is "the man of the hour" in Paris, pictures and paintings of whom adorn the walls of the newspaper offices, cordially received our representative, and showed him what material was at disposal in Paris.

Municipal Interest.

M. Roux seemed pleased that the municipal authorities of Paris had manifested some interest in the work which he has brought to such a stage of perfection, and expressed his pleasure that the Government had taken steps to secure that the "materies efficiens" for the abolishment of diphtheria should be prepared in sufficient quantities to supply the provinces as well.

The history of the discovery has been already set forth in the columns of the British Medical Journal. It originated in experimental researches on animals by Behring in Germany and has during three years stood the test. It is now nearly a year since Roux, strictly following Behring in all particulars after testing his experiments by repeating them, demonstrated the results of his investigations at the Hôpital des Enfants in Paris, and he referred with pride to the fact that the town of Paris and the Government had decided to give sufficient subventions so that the whole of the population may be supplied with what is needed.

The Cost of Production.

In reply to inquiries which our Commissioner made upon the subject of the magnitude of the needs of Paris in respect of diphtheria, M. Roux remarked that in Paris at present there were from 8,000 to 10,000 cases of diphtheria. In this estimate he did not include cases of which the diagnosis was as yet uncertain, but upon which the serum would necessarily have to be employed. Roughly speaking the department of the Seine contains a population of two millions and a-half. In order to supply the needs of this vast community the cost of production is estimated in the following manner. It requires twenty horses to be provided; to attend to them three grooms are necessary. Then the serum is prepared by two bacteriologists and two laboratory assistants. M. Roux puts the estimate of the cost of the horses at £40 per horse per annum. "That," he said, "would be quite enough." In other words, the cost of production would imply the purchase of twenty horses costing, say, 1,000 francs per annum each, and for the necessary attendance of the animals and the preparation of the serum half as much again would be required, amounting in all to 40,000 francs or £1,600 yearly. In this estimate M. Roux modestly excluded any reference to his own work, and the great scientific services which he has rendered not only to France but to mankind.

In the course of conversation with some influential Parisians the opinion was expressed that M. Roux ought not to be excluded from State consideration. It is a common observation that the rewards of science in a monetary point of view are rare and small. M. Roux might have become a millionaire if he had traded with his discoveries. But the true scientist is not a trader. The public whom he has benefited should therefore not be unwilling to express their gratefulness in a manner more tangible than the mere personal decorations with which it is rumoured the Municipality of Paris wish to honour the *savant*. And therefore, although the figure is estimated at £2,000, the consideration of other matters should not be left out of account.

In reply to a request for an account of the steps by which the evidence had been arrived at, he said: "It is extremely simple. Loeffler and Klebs discovered the microbe of diphtheria, and studied its life history. Roux and Yersin, studying its clinical aspects, demonstrated that this bacillus was capable of evolving toxic material, and this was the starting point of the discovery of the toxin of tetanus and of several other microbic toxins. Now M. Behring has been able to derive an antitoxin." How Behring came to think of this M. Roux could not undertake to say. The steps of the process were these:

1. The discovery of the microbe. Loeffler and Klebs.
2. The proof that the microbe produces diphtheria.
3. The diphtheria poison isolated. Roux and Yersin.
4. The counterpoison obtained. Behring.

"Behring, therefore," said M. Roux, "has completed and crowned the edifice." When Loeffler discovered the microbe, doubts existed whether it was the real producer of diphtheria because the discoverer had failed to produce diphtheria paralysis with the microbe. This Roux and Yersin afterwards succeeded in doing. Then they proved that its toxin (which they had discovered) gave exactly the same disease as the microbe itself, and that consequently the microbe only acted through its toxin. Behring discovered the antitoxin, which is the serum of animals rendered immune against the action of the toxin.

How the Preparation is Made.

In preparing the serum at the Institut Pasteur the investigators are most careful to select the best animals. The horse is the creature most suited for its preparation, although goats, sheep, and rabbits may also be employed. These animals frequently die at first when inoculated with the toxin, whereas the horse does not. Other animals require habituating to the poison, but the horse takes it more readily; little by little it is made to stand stronger and stronger doses. When the animal can stand without being ill considerable doses of the toxin, its serum then becomes the antidote or cure or remedy for diphtheria, this last being the discovery of M. Behring. "Of course," he continued, "there are many modifications in the application, but that is the broad principle."

The Effect on Mortality.

M. Roux alluded to his paper, read at Buda-Pesth, in which he related his personal experience of more than 200 cases and there are statistics of many hundreds in other countries.

Our representative, inquiring upon this point, was informed that in Paris the mortality had diminished by one-half, and since the Buda-Pesth paper was read the statistics show yet a further reduction. For Paris, he explained the total mortality had scarcely ever been below 50 per cent. previous to the serum treatment. It was now less than 24 per cent.

"But," said our correspondent, "that is just equal to what is stated to be the average mortality from diphtheria in London." "That cannot be true," he replied. "Our cases mean those only which have, by microscopic and bacteriological examination, been proved to be actual diphtheria. The statistics are not based upon vague assertions or mere statements. In these cases there are at least 50 per cent. of deaths in the hospitals of Paris."

The following figures are taken from the paper read at Buda-Pesth:

Everyday visits were made to the ward, and children were treated just as they were found. No selection of cases was made, so that the results of each month and the treatment may fairly be compared with those obtained before. Nothing has been changed in the care given to the sick, and the local treatment has remained the same (glycerine and salicylic acid with boric water). The serum is the only new element introduced. It is therefore to it alone that the results must be attributed. The statistics relating to the treatment of diphtheria were drawn up with the greatest care by the director of the hospital, and by the lady superintendent, and they supply the necessary elements for comparison. Finally the experiments were continued from February 1st, 1894, to July 24th, during the winter months when diphtheria is most frequent and severe, and also during the summer months, when it is rarer and of a milder type. There is another hospital for children in Paris, the Trousseau Hospital, where the serum was not employed, and this will serve as a means of comparison.

Total mortality in the diphtheria wards during the last four years = 51.71 per cent.:

From February 1st to July 24th, 1894, with the serum treatment was employed to 448 children. There were 109 deaths, being a mortality of 24.5 per cent. The other conditions remaining the same, the difference between 51 per cent. and 24.5 per cent. represents the measure of the benefit resulting from the treatment.

At the Trousseau Hospital during the same time there were 520 diphtheria cases, none of which were treated with the serum, and of this number 316 died, being equal to a mortality of 60 per cent.

It will not therefore be said that the epidemic during which the researches were made was a benign one. In simple diphtheria not requiring tracheotomy the mortality for the last four years was 33.94 per cent. During the months of trial at L'Hôpital des Enfants it fell to 12 per cent. During the same time at the Trousseau Hospital the mortality was 32 per cent.

In the "Croup Opérés" cases requiring tracheotomy the four years' mortality was 73.19 per cent.: with the treatment it fell to 49 per cent. During the same time at the Trousseau Hospital the mortality where no serum was employed was 86 per cent. The above figures are absolutely comparable one with the other, and they are full of eloquence. They proclaim the good effects produced by the antidiphtheric serum.

The Supply Abroad.

Nearly similar results had been obtained in other countries, and these, of course, can be provided for according to the means at their disposal. "Any skilful bacteriologist," he added, "well acquainted with diphtheria would be capable of preparing the serum, and therefore there is no reason why it should not be equally well prepared out of France."

The Distribution of the Supply.

Thinking of some of the consequences which might accrue from creating a Government monopoly for the sale of the medicament in France, our representative inquired why they were not willing to make it free to all. The reply was just one. By doing this, absolute waste and useless employment of the serum would be prevented; and M. Roux was of opinion that it would be well that those who could afford to pay should be made to pay a small sum. M. Roux suggested that this requirement of the Government was probably made with the view of preventing abuses, which might so easily be brought about if the preparation and sale of the serum were to be left in the hands of interested vendors. For hospitals and dispensaries, and for the poor, the remedy should, in his opinion, be gratuitous. The object of the payment would be simply to prevent waste, and not to bring in any resources to the Municipality or to the Government. The scientific authorities, however, at the Institute have declined, very properly so, to have anything to do with this aspect of the question. They are asked to manufacture the serum, and they do so. "If the Government," added M. Roux, "chooses to charge wealthy people for it, they do so upon their own responsibility and not upon ours."

The Clinical Treatment.

Having expressed a desire to see the arrangements which

had been made for the application of the treatment, M. Roux expressed the opinion that there was nothing special to be seen in them. Doubtless there were cases of pneumonia and scarlet fever to be found in the diphtheria wards of the Hôpital des Enfants. But they were intercurrent diseases, and had not been introduced into the wards originally. The diphtheria cases were isolated in special pavilions in both the Hôpital des Enfants and the Trousseau. Pneumonias were frequent complications of diphtheria, and, on the other hand, diphtheria was often a complication of scarlet fever. "Of course," M. Roux added, "isolation is not as perfect in Paris as it should be," because the means at disposal were not sufficiently ample. In any case, the specific diseases are only mixed with those particular forms of disease which are apt to become complications.

XVI.—Dr. John T. Malcolm (Dornoch, Sutherland) sends the following case:

A boy, aged 13, with a history of a "weak" throat, was confined to bed on September 17th, 1894, complaining of sore throat, with difficulty of swallowing. I saw him on September 19th, and found the throat, including the tonsils and uvula, covered with diphtheritic membrane. The tonsils were greatly inflamed, the pulse was 80, the temperature 100° F.; the tongue was greatly swollen.

On September 21st, at 8 P.M., the temperature was 100°, the pulse 84, jerky, and of high tension. At 9 P.M. I injected into the back m 40 of Dr. Aronson's antitoxin. At 10 P.M. the temperature was 101°, the pulse 80, soft, and of low tension.

On September 22nd, at 10.30 A.M., the temperature was 99.6° and the pulse 76. He expectorated large masses of membranes like small bits of tripe, one fragment being about an inch and a-half long. After the injection he fell into a gentle slumber, which lasted five hours. At 9.30 P.M. the temperature was 99° F., and the pulse 76. The glands at the angle of the jaw were greatly swollen.

On September 23rd, at 11.30 A.M., the pulse was 88, and the temperature 99.2° F. He had passed a quiet night. He swallowed better, and his throat was greatly cleared, only two small patches remaining on the uvula. At 9 P.M. the temperature was 99.2° F., and the pulse 72, of very low tension, with peculiar rhythm, there being a gradual ascent and a gradual descent in the intensity of the beat, until the latter intermitted for a moment, when the gradual ascent again took place. This alternate rise and fall went on for a few days, and appeared to be related to the injection of the antitoxin.

On September 25th the temperature was 100°, and the pulse 80. The patient was now swallowing well and sleeping well.

On October 18th the patient was going about the house and regaining health and strength.

Remarks.—This was a severe case of diphtheria. The boy could not swallow either food or medicine, nor open his mouth sufficiently to paint or spray the throat. A fatal termination was apprehended. There have been 4 cases of diphtheria within twenty yards of his home, three in one family, of whom all died from extension of the disease to the lungs. In one of the fatal cases tracheotomy was resorted to. The outbreak was apparently related to a ventilating sewer shaft, about 15 yards from the dwelling house of one of the patients. In all there have been eight cases of diphtheria within a radius of a hundred yards, with five recoveries. The good effects of the antitoxin were: (1) The profuse expectoration of membranes; (2) the quiet and ease the patient enjoyed after the injection, being apparently free from all suffering. Dr. Love, who happened to be staying with me, verified the diagnosis, and was convinced with myself that the recovery of the patient could only be ascribed to the timely use of the antitoxin, which was obtained from Messrs. Zimmerman, London.

The report of the Committee (MM. Bergeron, Cadet de Gassicourt, Proust, and Straus) appointed by the Paris Academy of Medicine to consider the value of the serum treatment of diphtheria was presented at the meeting of that body on October 16th, and is published in the *Bulletin de l'Académie de Médecine*, 3rd Série, t. xxxii, No. 42. The priority of Behring is fully acknowledged, but it is pointed out that his work is based on the discoveries of Pasteur and his school. A brief account of the mode of preparing the serum, and a summary of Roux's statistics are given. Two members of the Committee, MM. Bergeron and Cadet de Gassicourt, who are specially interested in infantile pathology, watched the results of the treatment in M. Moizard's service in the Hôpital Trousseau. "The effects obtained seemed to them altogether remarkable, notably the striking improvement in the general condition, the rapid subsidence of the fever after the injection, the absence of pallor, depression, and prostration in the little patients." The Committee says there is every reason to believe that the serum has the like protective influence in man that it has in animals; therefore it can only be advantageous to make preventive inoculations of the serum in healthy persons, especially in children exposed to infection. The Committee concluded that "we are now in possession of a specific treatment of diphtheria as powerful as it is harmless." It is urged that the Pasteur Institute should be placed in a position to keep up an adequate supply of serum.

In France public bodies are vying with each other in voting money for the provision and maintenance of a supply of serum. The Chamber of Deputies has sanctioned a grant of £4,000; the Conseil Général of the Seine Department is invited by its President, M. Bassinet, to make a grant of £400; the Municipal Council of Paris has decided to grant a subvention of £800 a year for the up-keep of stables with twenty horses for the supply of serum for the Department of the Seine. The stables, which will be placed at the disposal of the Pasteur Institute, are annexes of the municipal slaughterhouses at Grenelle and Villejuif. The Council has further decided to organise a *fête* at the Hôtel de Ville in honour of MM. Pasteur and Roux, when a medal will be presented to the latter in the name of the City of Paris. The Comité d'Hygiène de France has passed a resolution urging that a regular subvention should be made by the State to the Pasteur Institute for the preparation and distribution of the

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In the French provinces the enthusiasm for the new treatment is showing itself in a no less practical form. Troyes (Aube) has voted £20 for the provision of a supply of serum for the town; Béziers has voted the same amount to the Pasteur Institute; Marseilles, besides contributing £40 to the public subscription opened in Paris, is taking steps for the establishment of a local "antidiphtherial institute." At Puy (Haute Loire) a public festival for the benefit of the Pasteur Institute was organised under the auspices of the municipality. Orleans, which already makes an [illegible] of £20 to the Pasteur Institute, has voted a fu[illegible] tion of £10 in aid of M. Roux's work. In Main[illegible] public subscription has been opened for th[illegible] serum: a subscription has been opened for t[illegible] pose by the *Petit Courrier* of Angers, and [illegible] M[illegible] D[illegible] to [illegible]

[illegible] in reply to Dr. [illegible] in t[illegible] tion of the effects of the [illegible] M[illegible].

THE ANTITOXIN TREATMENT OF TETANUS.

DR. C. E. DOUGLAS, D.P.H.Camb., Medical Officer of Health, Cupar, Fife, sends the following account of a case:

R. G., aged 63, gardener, was bitten on August 23rd by a dog upon the thumb. He did nothing to the wound, which was slight, and continued working in his garden. On August 28th he began to feel some stiffness about the jaws, with difficulty of swallowing, but paid no attention to it till August 31st, when I was sent for. My assistant saw him at once. The teeth were clenched, and the jaws could only be separated about a quarter of an inch. The original wound was quite healed. Eserine salicylate $\frac{1}{15}$ gr. was injected subcutaneously. That evening I saw him. The symptoms were unaltered; the pulse and temperature normal. Chloral hydrate 20 gr. was ordered to be taken every three hours.

On September 1st he was rather easier, and the trismus was not so evident. On September 2nd he had considerable pain in the back and abdomen. The recti could be felt in relief, and very tense. On September 3rd he had stiffness in the legs and back. On September 4th he had some spasms during the night. Chloral was given every two hours. The temperature was 100°. During the day he had two spasms of opisthotonos. The temperature in the evening was 101.8°. Morphine $\frac{1}{4}$ gr. was ordered to be given alternately with the chloral. He had one bad attack of opisthotonos during the night, and on September 5th the temperature was 101.8°, and the pulse 120. At 10.45 half a tube of Tizzoni's antitoxin dissolved in 22 c.c. sterilised distilled water was injected by seven punctures into the abdomen and thighs, under strictest aseptic precautions. No pain was felt. At noon he had a very bad attack, after which the temperature was 104.2°; he became very collapsed, and the extremities cold. Hot bags were applied, and brandy ʒ ij administered by the rectum. At 4 P.M. he had another tetanic spasm, under which he sank.

In this case hydrophobia suggested itself; but the early appearance of trismus, the absence of delirium, and the fact that the dog is now—six weeks afterwards—quite well put it out of court.

Only three days elapsed between the injury and onset of symptoms. This seems to be a very important factor in prognosis. I have had 3 cases under my care, exclusive of this one; 1, with an incubation period of five days, died; the other 2, with seven and ten days respectively, recovered. All were treated with large doses of chloral hydrate. The shortest incubation period in any case of Tizzoni's that I can find is six days.[1] Owing to unavoidable delay in procuring the antitoxin, it had to be used at a comparatively late stage. It must apparently be used from the beginning and in large doses to be of use.

A point of practical importance is the difficulty in dissolving the dried serum, which with cold water takes nearly half an-hour, a period which affords considerable risk of aërial contamination. The "directions" given with the antitoxin say that it "decomposes under a temperature even a little elevated." But the normal temperature of the horse is not under 101° F. I see no reason, therefore, why fairly hot water—say at 98° to 100°—should not be used, with which it is reasonable to suppose solution would be more readily effected, and one difficulty in the administration obviated.

THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.

THE annual meeting of the above Society was held at the Holborn Restaurant on October 19th. The retiring PRESIDENT (Dr. Woodforde) occupied the chair, and a large number of Fellows and Members were present.

ELECTION OF OFFICERS.

The following officers were elected for the ensuing year:—*President:* Dr. S. R. Lovett, Medical Officer of Health for the St. Giles District and Lincoln's Inn. *Treasurer:* Dr. W. H. Kempster. *Editor:* Dr. Arthur Newsholme: *Hon. Secretaries:* Drs. J. C. Thresh and Reginald Dudfield. *Hon. Solicitor:* Mr. Henry C. Jones. *Auditors:* Dr. E. Gwynne and Mr. T. P. Scrivener. *Council:* Drs. F. J. Allan. Alfred Ashby, G. P. Bate, H. L. Bernays, A. Wynter Blyth, Sir Charles Cameron; Drs. W. Collingridge, G. H. Fosbroke, E. Gwynn, A. Bostock Hill, T. Eustace Hill, C. S. Hall, H. H. Littlejohn, B. H. Mumby, C. E. Paget, H. W. Roberts, E. Seaton, W. R. Smith, W. N. Thursfield, W. Verdon, B. A. Whitelegge, F. P. Wightwick, and G. Wilson.

REPORT OF COUNCIL.

The report of the Council stated that 56 Fellows, 15 Members, and 8 Associates had been added to the roll during the past year. One new Branch, namely, the Home Counties, had been formed, making seven Branches. The subjects discussed during the year included "The Local Government (England and Wales) Bill," "The Tenure of Office of Medical Officers of Health," "Annual Health Reports," "The Dissemination of Disease by Vagrants." "Vaccination and the Laws Relating Thereto," "Death Certification," "The Training and Qualifications of Medical Officers of Health," and "The Etiology of Puerperal Fever." Dr. Wightwick, the senior Honorary Secretary, had tendered his resignation on account of the exigences of his private practice. The Council acknowledged the obligations of the Society to the Editor (Dr. Newsholme), the Honorary Solicitor (Mr. Henry C. Jones), and the other officers of the Society. The Treasurer's balance-sheet showed that the financial position of the Society continued to be satisfactory.

INSTALLATION OF NEW PRESIDENT.

The retiring PRESIDENT (Dr. Woodforde) introduced his successor, Dr. LOVETT, who, on taking the chair, thanked the members for the honour they had conferred upon him, and said he would do his best to show them that their confidence had not been misplaced.

VOTE OF THANKS TO RETIRING PRESIDENT.

A vote of thanks to Dr. Woodforde brought the meeting to a close.

DINNER.

The Fellows of the Society and their friends afterwards dined together.

CYCLING AND ITS DANGERS.

BY NOBLE SMITH, F.R.C.S.Ed.,
Surgeon to the City Orthopædic Hospital.

THE discussion which has recently taken place at the Paris Académie de Médecine, as reported in the BRITISH MEDICAL JOURNAL of September 29th, refers in the first place to sudden deaths occurring to individuals past middle age, or at least considerably beyond the age of youth, the ages being 40, 48, and 65.

It is, perhaps, hardly possible to state a particular age at which the human frame ceases to be able to bear sudden strains upon the heart, because this will depend greatly upon the habits of life and physical condition of the individual. We know full well that many men retain their active habits and apparently to a great extent their elasticity of tissues until quite an advanced age. We should rather separate the more active men from those who have led sedentary lives and who take up cycling as an exercise in middle life or even in later years. The question as to whether cycling is desirable for these latter or not depends, I believe, entirely upon the manner in which it is carried out. It seems almost obvious that, if the rider is contented to progress sufficiently slowly, the exertion must be less than walking, assuming that a good road is available. The danger is that the rider is led to attempt more than is judicious. It will, perhaps, best explain the points to which I allude by stating a case.

A gentleman, aged 45, who had led a tolerably active life, although during recent years he had been much restricted in his opportunities for active exercise, commenced to ride a tricycle five years ago, and has continued with certain intervals to ride one ever since. So long as he selects fairly good roads, avoids wet weather—which, as every cyclist knows, increases the exertion very greatly—takes his hills very quietly, does not much exceed six or seven miles an hour on a level road, he feels very greatly benefited by the exercise. He returns

[1] *Med. Annual*, 1894, p. 538.

home after a ride of from ten to fifteen miles—or from twenty to twenty-five with intervals for rest—manages to get home in a state of considerable perspiration, has a warm bath, complete change of clothes, and feels for the time in perfect health. Upon many occasions he has exceeded these rules, endeavouring to increase his pace, straining up severe hills, or riding hard against wind and in wet weather, and has felt great depression in the region of the heart; has arrived home thoroughly exhausted, and sometimes has not recovered himself for more than an hour afterwards. Upon one occasion his condition was quite critical after riding about eight miles upon a wet day, being in a great hurry to get to the end of his journey to avoid a thunderstorm.

He has now learned to take his exercise with discretion. He looks upon cycling as the most health-giving occupation that he has ever taken, although he hunts regularly and has been in his younger days an amateur athlete and a winner of racing prizes.

For young people the many advantages which cycling possesses have been so often recorded that it is hardly necessary to describe them here.

The point upon which my opinion has been chiefly asked has been with regard to the effect of cycling upon the figure of the rider. The posture which Monsieur Verneuil refers to as "deplorably anti-physiological," is one which is not only undesirable, but which need never be assumed, except perhaps for racing purposes. Upon the contrary, I have recommended tricycling to patients who suffer, or have been suffering, from curvature of the spine. I have also advised its use in cases of weakness of legs in young people, where it has been desirable to give exercise, while taking the weight of the body from the legs. In knock-knee cases particularly I have found this exercise useful, but have always insisted upon the construction of the machine allowing the handles to be brought sufficiently high and sufficiently near to the rider to obviate the tendency to stoop forwards. The want of this arrangement is the fault of most machines, and I have had to get the makers to provide the necessary alterations before I have considered the machines suitable.

To sum up: I would urge that cycling, if used with discretion, is one of the best methods for physical exercise we possess, and I have endeavoured to describe in a few words the points of chief importance with regard to the exercise of that discretion. The pace I have mentioned above (six to seven miles an hour) as suitable for the elder riders, might be safely increased on a bicycle, but in any case the rider must be guided by his own sense of what he can do without strain or undue fatigue. Pneumatic tyres and pneumatic seats will lessen jars, and the recently invented sliding seat seems likely to relieve strain by overcoming the dead points.

HYPNOTISM AND HYSTERIA.

The dull season has so far been unusually dull this year. The rain has spoiled the gigantic gooseberry, the sea-serpent has been unusually shy, Dr. Luys strange performances at La Charité and comical confidences to reporters are now recognised as exploded nonsense and attract little attention, and even the murderer has failed to come up to any decent standard of sensationalism. In the dearth of materials for "copy," able editors have been fain to fall back on hypnotism, which seems to be the last refuge of the destitute "descriptive reporter." At any rate, it is only thus that we can account for the amount of space that has recently been devoted in some of our leading newspapers to the death of a hysterical girl while in a condition of "hypnotic trance," and to the alleged attempt of a young doctor to secure for himself "a lass wi' a tocher" (as the Scotch song has it) by the aid of hypnotic suggestion. Both these cases are reported from Hungary. The young lady who is said to have been killed by hypnotism was a Fräulein Ella von Salomon, of Castell Turecz, near Nyiregyhaza, who, according to the original statement, was hypnotised by a non-medical hypnotist named Neukom, and while under "influence," described the condition of the lungs of a person suffering from advanced phthisis, with full details, expressed in technical language. After this deliverance, she uttered a piercing shriek, and fell down dead. This scene was said to have occurred in the presence of a large number of persons, at least one of whom belonged to the medical profession. Herr Neukom has since, however, denied that the girl was hypnotised by him at all; his version of the facts, as far as we understand, is that the performance was about to begin when the girl, who was in a state of considerable excitement, suddenly died. There is no doubt whatever about the death. The poor girl was duly buried, but the police authorities, feeling some curiosity as to the cause of her death, had the body exhumed. A *post-mortem* examination made by one of the assistants in the department of Pathological Anatomy at Buda-Pesth revealed a high degree of anæmia with consequent malnutrition of the cerebral substance, with signs of serous soakage, but no growth or tubercle in the brain. The girl was hysterical, and apparently anxious to pose as a "telepathic" phenomenon of the order in which Mr. Myers, Mr. Padmore, and Mr. Stead and their friends find so much to amuse what they are pleased to call their minds and form the subject of their farcical investigations.

The "mystery," therefore, resolves itself into the death of an anæmic hysterical girl under circumstances tending to cause unwholesome excitement—a sufficiently sad occurrence, no doubt, but one hardly warranting the absurd fuss that has been made about it. Of the more occult elements in the case we need say nothing more than they are of the stuff hypnotic dreams are made of. That a person knowing nothing of medicine could see as in a vision and describe in technical terminology a diseased lung in a patient hundreds of miles away—*credant* Krafft-Ebing and the editor of *Borderland*. The case is only one more illustration of the danger of such "experiments" on persons whose nervous system is morbidly excitable. The hypnotiser in such cases is like a mischievous child playing with the complex machinery of a modern battleship. The other case to which we have referred, if there be any truth in it, illustrates another side of hypnotism, namely, the possibility of its being used for fraud. Here again there is nothing more mysterious than the "suggestion" of the three card trick and other dainty devices familiar to those whose altruistic feeling extends only to an interest in their neighbour's goods. Hypnotism, we are solemnly assured, is "on its trial." For our part, we have no hesitation in saying that it has been tried and sentenced by all those really competent to form an opinion. At its best it is superstition working on a ground substance of hysteria; at its worst it is a humbug and a fraud of the most ignoble kind.

When hypnotic phenomena are examined by the "dry light" of science—which may sometimes with advantage be reinforced by the "bull's eye" of the policeman—it will be found that they are the offspring of disease or imposture or a mixture of both these ingredients. They can be summed up in the pithy verdict of a medical commission which had to report on some cases of supposed demoniacal possession among a few crazy nuns in a French convent in the seventeenth century, *Nihil a demone: pauca a morbo: multa ficta.* This judgment with the necessary modernisation of the term "demon" may be applied to hypnotism.

OPENING OF THE MEDICAL SCHOOLS.

Glasgow.

University Degree Examinations.—Lady Graduates.—New Professors.—Queen Margaret Hall.—Extra Mural Schools.

The medical degree examinations at the University have just been concluded. For the first professional examination 180 candidates entered, of whom 15 were women candidates. Of these 75 men have passed in one or more subjects, and 12 women. There were besides 19 male and 1 woman candidates under the old regulations. Of these the lady and 7 of the male candidates have passed. For the second examination a total of 59 candidates entered, of whom 3 were women candidates. The latter have all passed; and of the men 27. For the third professional the candidates numbered 142, of whom 7 were women candidates. The passes numbered 93, of whom 3 were women.

In November the University will for the second time confer the degree in Medicine and Surgery upon two ladies, students of Queen Margaret College.

At the University this week as many as three inaugural addresses were delivered. Dr. Joseph Coats is now in name, as well as in fact, Professor of Pathology, a Chair of Pathology having at length been established by ordinance of the Universities Commissioners, and his inaugural address was on "Fundamental Conceptions as to the Characteristics and Embodiments of Life, with Special Reference to Pathology." By mutual and satisfactory arrangements between the University Court and the Western Infirmary, ample facilities will be placed at Professor Coats's disposal, not for teaching only but for investigation and experiment. New pathological laboratories are to be erected, and the study of pathology will soon enter upon a new and wider career in Glasgow than has hitherto been possible. Two other inaugural addresses were given, one by the Professor of History, Professor Edward Richard Lodge, and the other by Professor Jones, the successor to Professor Caird, now Master of Balliol.

A residential hall for women students has been established in Glasgow. It has been promoted by friends of Queen Margaret College, now incorporated with the University, and is called Queen Margaret Hall. The students in residence already number 18, and if the success already assured should lead to the establishment of a similar residential college for men, it would meet a sad want in Scottish University life.

All the medical schools in Glasgow have begun work for the session, but it is yet impossible to say how the entries will compare with former years, as a large proportion of the students will not come to town till next week.

In St. Mungo's College the chief change in the teaching staff was necessitated by the appointment of Professor Prince from the Chair of Zoology to the post of Government Expert on Fisheries in Canada. He is succeded by Mr. Malcolm Laurie, B.A., of Cambridge, a son of Professor Laurie, of Edinburgh University.

ABERDEEN UNIVERSITY.

THE opening of the winter session of the Aberdeen Medical School took place on October 16th. There were about the usual number of beginners. Several of the professors gave introductory lectures. Professors Ogston and Cash considered the possible effects of the new regulations, Professor Cash insisting that a higher standard was now looked for in the subjects of the curriculum.

YORKSHIRE COLLEGE, LEEDS.

PROFESSOR A. W. WARD, Litt. D., LL.D., Vice-Chancellor of the Victoria University, delivered last week the opening address of the College session, and also distributed the prizes to the successful students. The number of students who have entered this session for the full curriculum is 25; the number who have joined classes for preliminary scientific instruction is 22; 9 have joined for other special classes, and there is one dental student.

The opening lecture of the new session of the Yorkshire College Medical Society was delivered in the Library of the New School last week by Mr. C. G. Wheelhouse, F.R.C.S., the subject being "Studentship." Mr. Wheelhouse, who was most cordially greeted, after instancing the growth of the Leeds School and the advancement made in medical science during the past fifty years, urged the students to make their period of studentship the happiest period of their lives. He congratulated them on the possession of an Alma Mater second to none in the world, and offered many purely practical suggestions as to how students might help to make the opening of the twentieth century even more productive than the last. A cordial vote of thanks to Mr. Wheelhouse for his excellent address brought a very pleasant evening to a close.

Although the Yorkshire College Medical Society is a students' society, it has nearly 200 members on its rolls, and the opening was signalled by the attendance, by invitation, of the Dean, Professors Mayo Robson, Wright, Barrs, and Griffith, Drs. Chadwick and Hellier, and Messrs. Robinson, Croft, Smith, and other teachers in the medical department.

NATIONAL DENTAL HOSPITAL, LONDON.—THE number of students who have entered this year for the two years' course of hospital practice is 13. In addition, 6 students have entered for special courses.

LITERARY NOTES.

DR. A. GOLDSCHEIDER has succeeded Professor Vierordt in the editorship of the *Fortschritte der Medicin*.

Dr. Ernest Barrault has resigned the editorship of the *Revue de Thérapeutique Médico-Chirurgicale*, which he has held since 1879.

The libraries of the German universities taken together contain 5,637,168 volumes, exclusive of MSS. inaugural dissertations etc. The total annual expenditure on the purchase of books amounts to some £24,000.

The German Zoological Society is superintending the issue of a reprint of the tenth and standard edition of Linnæus's *Systema Naturæ*. The first volume, dealing with the animal kingdom, has lately been published by Wilhelm Engelmann, of Leipzig.

The New York *Medical Record* puts the number of medical journals published in the United States at 221, adding to this statement a saving clause to the effect that there are 100,000 medical practitioners in the great republic. This works out at an average of one journal to every 450 possible readers—surely a sufficiently liberal provision even for the ravenous intellectual appetite of our go-ahead brethren.

The *Guide Annuaire du Corps Médical pour 1894-95*, just published by Gossé, of Brussels, gives full information concerning the medical practitioners, veterinary surgeons, dentists, and pharmacists of Belgium, Holland, and the Grand Duchy of Luxemburg. The book contains lists of the members of the Belgian Academy of Medicine, and the names of the medical officers of all hospitals, asylums, dispensaries etc.

Dr. Erich Harnack, Professor of Materia Medica at Halle, has published an interesting pamphlet on *The Bible and Alcoholic Drinks*, in which he attempts to prove that the teetotalers are quite wrong in maintaining that the Scriptures are in favour of "total abstinence." He quotes numerous passages in which wine is mentioned as one of the necessary articles of diet, along with corn, bread, oil, milk, and meat.

According to *Nature*, one of the most valuable and extensive botanical libraries in the country, that collected by Professor Lindley, has for many years been deposited in the rooms of the Royal Horticultural Society under the care of trustees. It is now proposed to increase the value of the Lindley library by forming in connection with it a library fund, to be administered by the trustees in connection with the Council of the Royal Horticultural Society. The money would be expended in cataloguing the library and in the purchase of new books, for which the income at present at the command of the trustees does not suffice. Donations of horticultural and botanical works are also desired.

Messrs. Maclehose, of Glasgow, will shortly publish a book entitled *Dr. William Smellie and his Contemporaries: A Contribution to the History of Midwifery in the Eighteenth Century*, written by Dr. John Glaister. The author takes as the basis of his work the life of William Smellie, whose works have been reissued within the last few years by the New Sydenham Society. The work contains numerous phototype reproductions from original sources throughout the volume, and a photogravure portrait of Smellie forms a frontispiece.

Dr. Touchard, of Villé-le-Guillaume, a small town of the Sarthe Department, which witnessed the last struggles of the gallant army of the Loire in the Franco-German war, has just published a book entitled *Autour du Camp de Conlie*, which gives a vivid picture of life in a French country town during the "terrible year." Dr. Touchard was president of the Committee of Defence at Sillé, and in his capacity of chief surgeon of an ambulance he was brought much in contact with the medical officers of the German army, who seem to have spoken pretty freely to him about the war.

The *Zeitschrift für klinische Medicin* has since its foundation been conducted by the heads of the two principal medical clinics in Berlin and Vienna respectively. The heads of the third medical clinic in each of these universities have now been admitted to a share in the direction of that journal. The Editorial Committee will therefore henceforth consist of Professors Leyden, Gerhardt, and Senator for Berlin; and Professors Nothnagel, Neusser, and von Schrötter for Vienna.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1894.

SUBSCRIPTIONS to the Association for 1894 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, OCTOBER 27TH, 1894.

THE PARISH COUNCILS AND SANITARY REFORM.

WE hear much on all hands of the advent of parish councils, and something of the sanitary reforms which are to be among the first fruits of village parliaments, but very little indeed of the adjustment of the machinery by which the desired reforms are to be carried into effect. The direct powers of parish councils in such matters are very limited, but they have the right of suggestion, followed if need be by appeal to higher authority in case of default on the part of the district council. Now the higher authority is in many cases, including appeals of this class, the county council; and it is clear that if the new order of things is to have a fair trial, county councils, as well as parish and district councils, must be prepared to take their share of responsibility. In every county there are villages which under the old *régime* have remained year after year, and decade after decade, in want of the bare essentials of drainage and water supply. Each of these villages, if in a rural district, will have its parish council, able to deal directly with a few minor matters which involve no great cost or difficulty, and authorised to make formal representation to the rural district council with regard to the need of larger works such as those of drainage and water supply. If the Act does not prove a failure in this respect, such complaints ought to be numerous, for there is abundant ground for them. If the rural district council do nothing, after the manner of their predecessors the rural sanitary authority, the parish council may appeal to the county council, who have power to carry out the work themselves or by deputy. Apart from the more democratic basis of representation, the lever which is to do so much to bring about reform in village sanitation is this right of appeal to the county council; and the question arises whether the county councils are prepared for the responsible judicial position in which they will be placed. As regards some ten or fifteen of them, the reply is not doubtful. Without waiting for the graver and more direct responsibilities now cast upon them, they have already done much with the limited powers and implied duties derived from earlier Acts. They have practically compelled apathetic local authorities to set about drainage, water supply, scavenging, abatement of nuisances, and the like, sometimes by appeal to the Local Government Board, sometimes by proceedings under the Rivers Pollution Prevention Act, sometimes by quiet pressure and remonstrance alone. They have brought about the establishment of isolation hospitals for infectious disease, and have held conferences with local sanitary authorities which have been most valuable in their results. They have shown how much it is possible for a strong and earnest county council to effect, even with scanty legal powers, and from this it may be inferred that some share of the blame for neglect of village sanitation in recent years rests with the county authority. As regards the majority of county councils, it can scarcely be said that their record has in this respect been a satisfactory one hitherto, or that they have made any very serious attempt to exercise their authority in the direction of sanitary progress.

Whatever may have been done or left undone in the past, the responsibility of county councils in sanitary matters has now become too plain to be evaded, and the Sanitary Committee must rank among the most important and responsible of all. Their work will be often difficult, requiring knowledge which the county officers will be able to supply, as well as familiarity with local conditions throughout the county. Like so much of the work of public bodies, the duties in question can only be performed by a committee, who, after inquiry and deliberation in private, are in a position to place before the council a well-matured report as the basis for their further procedure. In this way, and in this way only, is it possible to avoid the danger of hasty and ill-considered action, the effect of which would be not only to retard progress in the particular matter under consideration but also to destroy confidence in the council as a judicial body.

In some counties, particularly those in which agriculture is the chief industry, it has been seriously contended that there is no need for interference in sanitary matters, on the ground that the local authorities, under the supervision of the Local Government Board, are the proper and sufficient guardians of the public health, and this notwithstanding the patent fact of failure in only too many villages and hamlets in every county. At first tentatively, and now decisively, Parliament has negatived this untenable view by giving the county authority a statutory share in sanitary government, and those county councils which after 1894 fail to make provision for their duties in this respect must stand self-convicted of indifference to the health and well-being of the population under their charge, and of incompetence to serve as a much-needed link in the chain of local self-government.

OUR FIGHTING MARINE AT HOME AND ABROAD.

A REVIEW of the naval engagements of the past will clearly show that greater loss or inefficiency of men has arisen from illness and casualties, avoidable or otherwise, than by actual conflict with the enemy. The neglect of hygienic principles, which was formerly the rule rather than the exception, has always been productive of evil in exact proportion to the ignorance or culpability of those responsible. Going hand in hand with the progress of hygiene and the advance of the age we find a gradual increase in the effectiveness and a diminution in the mortality of the force.

In the following statistical table the subject is presented

under three heads, namely, 1. the date; 2, the number of men voted; and 3, the number sent to hospital:

TABLE I (1779 to 1813).—*Naval Statistics.*

Date.	Number of Men Voted.	Number Sent to Hospital.
1779	70,000	28,592
1782	100,000	22,909
1795	,, ...	20,579
1797	120,000	20,541
1799	,, ...	14,608
1805	,, ...	8,083
... ...	,, ...	7,652
1813	140,000	13,071

By adding the death-rate to the first and last items of the foregoing table and comparing the two, we find that in 1779, with only 70,000 men voted, the hospital cases were 28,592 and the deaths 1,658. Whereas in 1813, with double the number voted, or 140,000, 13,071 were sent to hospital and 977 died. Further interesting results would be arrived at on comparing the above facts with more recent data.

Scurvy is now of so little importance (with our present knowledge of its exciting cause and means of cure), that it would only be a waste of time to recount the waste of men due to its ravages in bygone days. It is, however, still our duty to trace out the numerous existing sources of waste which, although not of so grave a character, are yet remediable, and, therefore, come properly within the province of hygiene.

To take one instance, it is well known that the effectiveness of a force on the march will largely depend upon the men being properly shod, and what is true of the shoemaker in respect to fighting men is true of the farrier in relation to cavalry horses. Unless the shoeing of a naval brigade is well supervised the men will soon become footsore and incapable of prosecuting the march any farther; or should they succeed in gaining their destination they must meet the enemy at a considerable disadvantage under circumstances of the kind. On the coast of Africa a waste of one-third of the effectiveness of the force was known to have arisen from this cause alone.

Bluejackets habitually run about in bare feet, and their shoes often fit them so badly that, when they are obliged to wear them, the friction or pressure soon becomes intolerable on a march. Marines, on the contrary, are constantly required to wear their boots, and are therefore not so much subject to this inconvenience, though still liable to it, as experience has shown. Lord Wolseley was well aware of this source of waste of effectiveness in the forces under his command, and he counsels the men to see that their toe-nails are properly trimmed.

When statistically considered, the disadvantages of long and unbroken sea voyages in sailing ships, as compared with the more frequent communications with the shore which is usual with steamers, will be seen to be of considerable importance. Dr. Le Roy de Méricourt quotes a very good instance, to the following effect: In November and December, 1859, 13 screw and 5 sailing ships, carrying an army of 12,000 men, set out from France for Chefoo Roads, which they reached in July of the following year. The five sailing vessels, with a total of 3,765, lost 45 men, while the steamers, with a total of 8,117, lost only 64. The steamers called at from three to seven ports on the way, while the sailing ships dropped anchor only once during the voyage. Thus the mortality was one-third less in the steamers than in the sailing ships. There is, however, room to import other arguments into this question, besides the leading one, which is undoubtedly the supply of fresh provisions.

THE suggestion has been mooted in Aberdeen that Dr. Angus Fraser should be asked to permit himself to be nominated for the office of Lord Provost.

THE Bradshaw Lecture, before the Royal College of Physicians, will be delivered by Dr. Thomas Barlow, at the College, on Tuesday, November 6th, at 5 P.M. The title of the lecture is Infantile Scurvy and its relation to Rickets.

A REUTER telegram, dated Rome, October 23rd, announces the death of Signor Francesco Gasco, Professor of Comparative Anatomy in the University of Rome, and Member of the Chamber of Deputies.

AT the opening of his class at Aberdeen, Professor Hamilton gave an interesting address on Antitoxin in the Treatment of Diphtheria. He gave the results of one case which had been treated in the City Hospital with favourable results.

A BILL has been introduced in the Iowa Legislature providing that every proprietary medicine shall have printed upon its wrapper a statement of the ingredients of the preparation. Failure to do this is punished by either a fine of 100 dollars or six months in the penitentiary.

AT the opening meeting of the Midland Medical Society, to be held at the Grand Hotel, Birmingham, on Thursday, November 1st, at 7 P.M., Dr. Theodore Williams will deliver an address on "The Modern Treatment of Pulmonary Consumption." Members of the profession are invited to attend.

THE next meeting of the West London Medico-Chirurgical Society, which will be held on Friday, November 2nd, at 8.30 P.M., in the West London Hospital, will be devoted to a discussion on diphtheria. Drs. Pope, Thomson, Drewitt, Bruce S. Taylor, Austen Sweeting, and Scanes Spicer, have already signified their intention to take part in the debate. All members of the profession are invited to be present and to join in the discussion.

LADY DOCTORS IN IRELAND.

THE governors of the Mullingar Asylum have decided to appoint a female doctor as medical assistant in charge of the women patients in that institution. This will be the second appointment of a lady to the medical staff of a hospital in Ireland, Dr. Winifred Dickson having been selected some time ago to fill the office of gynæcologist to the Richmond Hospital in Dublin.

SCHOOL EPIDEMICS IN GLASGOW.

GLASGOW seems settling down to its usual winter epidemics, following the reopening of the schools. There are now 1,384 cases of infectious disease in the city, and the cases had increased in one week by 199. Of the total, no fewer than 734 are due to scarlet fever, which has gone on spreading so rapidly that the cases have risen from 423 to 808 in six weeks.

GLASGOW MEDICAL SOCIETIES.

THE Glasgow medical societies have resumed the winter's work. The Clinical and Pathological, Medico-Chirurgical, Southern Medical, Obstetrical and Gynæcological Societies have all had their first meeting. A very important discussion on diphtheria is likely to be held at the Medico-Chirurgical Society, and the Obstetrical and

Gynæcological Society will follow an excellent precedent by entertaining to dinner their Honorary President, Dr. Robert Barnes, on November 2nd. The same Society has on previous occasions given the profession in Glasgow the pleasure of meeting other distinguished gynæcologists, notably Sir Spencer Wells.

DUNDEE INFIRMARY AND LADY STUDENTS.

At a meeting of the directors of the Dundee Royal Infirmary held on October 11th a discussion took place in reference to the question of providing facilities for lady students attending at the infirmary. The matter came up in connection with a combined application from two lady students, who desired that this privilege should be extended to them that they might have the same opportunities of pursuing their clinical studies as were now enjoyed by male students. The feeling of the directors appeared to be that, while they were not averse to granting the request, this could not be suitably accorded without much elaborate rearrangement. In Edinburgh the difficulty had been got over by setting aside two wards for the exclusive use of lady students, but in the meantime it would be exceedingly inconvenient to follow a similar course in Dundee.

THE MAYOR OF BRIGHTON.

It is with great pleasure that we have to announce that Mr. G. W. Willett, a member of the Brighton Town Council, has presented the Corporation of Brighton with a portrait of Alderman Dr. Joseph Ewart, J.P., in recognition of the admirable way in which he has discharged the duties of Mayor during the past three years. The portrait is about life size, and three-quarter length. In the picture Dr. Ewart, dressed in the scarlet and fur-trimmed robe of office, set off with the gold chain of the chief magistrate, is represented almost full face, and is shown seated with his hands easily clasped upon his knees. The gift was communicated to the Town Council on Thursday, October 18th, in a gratifying letter from Mr. Willett. In acknowledging the gift at the meeting, Alderman H. Davey said he was convinced that the picture would worthily commemorate the Mayor's three years' service to the town of Brighton.

VON BÜLOW'S BRAIN.

Hans von Bülow, the eminent pianist and conductor who died in Cairo in February last, had for years been a martyr to maddening headaches. In accordance with his often-expressed wish, after his death Professor Kaufmann, of Cairo, who performed the *post-mortem* examination, extracted the brain, and sent it to a German physician for examination. It now appears that the surface origin of two nerves leading to the scalp was imbedded in a scar, left by an attack of meningitis in early youth. Whether this scar can be held responsible for the great artist's many eccentricities must remain an open question.

THE LOCAL GOVERNMENT OF LONDON.

That exceedingly useful and necessary body, "The London Reform Union," has just issued a leaflet containing much information in a concise form concerning the Local Government of London. It is just now particularly welcome as elections are coming on. The three main spheres of London Government are the Parish or Municipal District, the Poor-law Union, and the County. The former comprises 43 separate bodies, the Poor-law Union 30, the County 2, and there are also the School Board, the Technical Education Board, and the Metropolitan Asylums Board. The municipal authorities manage the paving, cleansing, local drains, street lighting, watering, and dust removal. The Poor-law Union with its 30 boards takes care of London's 100,000 paupers. The County Council manages the main drainage, fire brigade, parks, bridges, lunatic asylums, industrial schools, the Embankment, and enforces the Building Acts. On all these bodies the London Reform Union gives information, and forms of membership may be obtained from Granville House, 3, Arundel Street, Strand, W.C.

SCOTCH M.D. DEGREES FOR MEDICAL WOMEN.

The two medical schools for women in Edinburgh are in future to be allowed to send up candidates for the degrees of the University of Edinburgh. The fight, which was begun twenty-five years ago by Miss Jex Blake and her friends, and which has since received the active aid of a large number of leading practitioners in Edinburgh, is thus brought to a successful issue. It is probable that in future medical women will aim at getting the M.D. degree of London, Ireland, or Edinburgh, and that but few will be content with the licence of the Colleges or Halls. The London School of Medicine for Women will have more than ever to adapt its teaching to the requirements of the London University examinations, and the clinical teaching at the Royal Free Hospital will have to stand comparison with that given in the Royal Infirmary of Edinburgh. The next thing the women students both in London and Edinburgh should ask for is the opportunity of competing for hospital posts. In London they are heavily handicapped by none of the posts [at their own hospital being open to them; this is an anomaly which ought no longer to continue.

INSANITARY DWELLINGS IN BIRMINGHAM.

On October 12th application was made at the Birmingham Police Court, on behalf of the Health Committee, for closing orders with respect to forty-two houses stated to be unfit for human habitation. In the majority of instances, after hearing the evidence of the medical officer of health, the orders were made; in the case of six houses in one ownership an adjournment was granted, on the application of the solicitor appearing on behalf of the owner; in the case of six other houses the summonses were withdrawn, as the houses had been pulled down; and finally, in the case of six houses which the owner proposed to put into a state of habitable repair, the hearing was adjourned for fourteen days in order that the magistrates might inspect the property themselves. The plea was preferred by the owner of these houses last referred to that the rent obtained from the premises was small, so that the property would not stand much expense. The same owner, it appears, was the lessee of certain of the houses with respect to which closing orders were made. The Health Committee appears to have made good use of its powers under Part II of the Housing of the Working Classes Act, 1890.

THE SICK POOR IN PROVINCIAL WORKHOUSES: SWAFFHAM.

Once more our Commissioner's report shows the sick pauper attended by the untrained official, whose ministrations are supplemented by those of the inmates of the workhouse. Swaffham Union boasts a pauper attendant who is sufficiently trustworthy to be left in charge of a patient requiring constant poulticing and brandy every two hours, but he must be a *rara avis* indeed. As the untrained nurse is also the matron's assistant in her multifarious duties, has the charge of the children, and a share of the needlework, her duties towards the sick must inevitably be more or less neglected when there is a press of other work, more especially as she is authorised to rely on pauper help. For it is not the least unsatisfactory part of the system which allows the work of the responsible official to be supplemented by the labour of the inmates, that it reacts on the officials, whose own standard of work becomes lowered to that of the assistant. It may be that there is here and there a pauper who is fully worthy of trust, here and there an official who is above the temptation to slovenliness and neglect thus put in her way, but we do maintain most emphatically that the

system is radically bad, and where it does not produce all the evil results that might be expected, its comparative success is due to a combination of favourable circumstances which cannot be warranted to last. The report mentions a poor paralytic woman who was got up and dressed every day by the doctor's orders, "to avert bedsores." With proper nursing such heroic measures would not be required. The sick are lodged partly in the main workhouse building, partly in an outbuilding which can be used for an isolation hospital, and in the event of its being required for that purpose, the male patients would have to be moved elsewhere. There may be reasons for this arrangement which do not appear on the surface, but as space is abundant, the population of the union having greatly dwindled since the workhouse was built, we would venture to suggest to the guardians that the sick should all be under one roof, in some part of the main building adapted to the needs of a hospital; above all we would suggest that a sufficient number of trained nurses should be engaged, the services of the paupers being retained for such duties only as are performed by the ward maids of a hospital.

A HISTORICAL CASE OF DIPHTHERIA.

The influence which epidemic disease has had upon the course of history is a curious subject for speculation, but most of the instances which have been adduced by various writers who have occasionally touched upon the subject have been instances of widespread epidemics, such as the plague at Athens and the "Black Death" in England; but the effect which certain infectious diseases, more or less constantly present in temperate climates, may have had upon historical events is less clearly perceived. A curious instance is afforded by the death of Napoleon Charles, Prince Royal of Holland, the son of Louis, brother of Napoleon Bonaparte, and of Hortense, his stepdaughter. This child died, when not quite 5 years old, of a disease which there can be little doubt, was diphtheria. The boy was a favourite of his Imperial uncle, and was generally taken to St. Cloud when Napoleon stayed there in the summer. Though Napoleon never seems to have expressed himself clearly upon the subject, it was thought by many that he purposed to make this child who was his nearest male relative in the second generation, his heir. Among those who sharedthis opinion was Meneval, who, as private secretary to Napoleon, had special opportunities of forming an opinion as to the Emperor's intentions. If this child had lived Napoleon, Meneval thinks, would not have divorced Josephine, would not therefore have exposed himself to be insulted by the Emperor of Russia's refusal of the hand of a grand duchess, and in all probability would not have gone to Moscow, and might therefore very possibly have founded a lasting dynasty. It is curious to remember that this boy's brother—his uterine brother at least—did actually sit on the throne of France. Napoleon, who was very much moved by the death of his nephew, offered a prize of 12,000 francs to the author of the best work on the means of preventing and curing croup. The boy died on May 5th, 1807, and Meneval remarks that the superstitious looked upon it as a curious coincidence that Napoleon himself died on the same day of the same month fourteen years later.

PAY WARDS AT THE GREAT NORTHERN CENTRAL HOSPITAL.

On October 19th a deputation of medical practitioners in the north of London waited upon the Executive Committee of the Great Northern Central Hospital, and presented a petition, signed by 204 practitioners, against the institution of pay wards in the hospital. Dr. Stokes, speaking on behalf of the deputation, pointed out that the proposal to open pay wards involved a fundamental alteration in the character, conduct, and scope of the hospital, which had been founded for the benefit of the sick poor. It was often difficult, and occasionally impossible, for the medical practitioners in the neighbourhood to obtain the admission of necessitous cases, and the institution of pay wards could not but make the difficulty greater. Dr. Glover, after endorsing the arguments already used by Dr. Stokes, said that the Committee of the hospital had no right to call upon the medical staff to undertake the gratuitous charge of patients who could afford to pay for a medical man. When pay wards were established some years ago at St. Thomas's Hospital Dr. Bristowe, on behalf of the medical staff, pointed out to the governors the many objections to them, and entered a strong protest. The immense amount of gratuitous service given by medical men had had the effect of making people careless in their recognition of medical services and in the payment for them. The institution of pay wards would tend to increase the demoralisation of the public mind on this matter. In conclusion, he said that there was no need for such wards, as there was already a sufficient number of institutions in the neighbourhood to deal with the class of patients likely to be attracted. Dr. Wight observed that the insertion of advertisements in the newspapers as to the pay wards was doing great harm to the medical practitioners of the neighbourhood. Dr. Crabb said that as every pay bed was a bed taken from the poor the deputation was really fighting the battle of genuine poverty, though it was true that they were also fighting for their own interests. The fact that the hospital intended to devote any money obtained from the pay beds for the benefit of the poor did not really alter the fact that the whole scheme was an absurdity, and a piece of false philanthropy. Mr. George Brown suggested that if the scheme, which he condemned, were not abandoned, it might be possible to arrange a compromise under which medical practitioners should be allowed to attend the patients admitted, and charge them their regular fees. After the Committee had deliberated in private, Mr. C. T. Murdoch, who was in the chair, said that the proposal to have pay wards was not a new one, but had been part of the original scheme when the hospital was established on its present site. Provision had been made in the original plans for pay wards, and it should be understood that the highest number of pay patients who could be received was nineteen. Further, a very careful system of registration and inquiry was adopted in order to protect the interests of the medical practitioners in the neighbourhood. Every patient would be required to produce a certificate from his own medical attendant, stating that he was a fit case for admission. The medical staff had not objected to the system, because the admission of that class of patients was not intended to be a source of profit to the hospital. The advertisements to which objection had been taken by Dr. Wight would be discontinued. He thought that there was a distinct class who did not come under the definition of "working people," to whom pay wards would be a great blessing, but if the system was not found to work well it would be discontinued.

THE BERI-BERI OUTBREAK AT DUBLIN.

Only one new case of beri-beri has occurred since our report, but four of those already attacked have succumbed, making twenty-three deaths. Dr. Norman says: "Further clinical observation confirms me in the opinion that the disease is the so-called beri-beri, and this view is supported by the discovery of certain organisms in the blood. With regard to causation and management, there is only one causative element that can be confidently pointed to in this case, and that is the long-continued and dense overcrowding of the institution. This I have endeavoured for seven years past to keep constantly before the authorities, and I have mentioned to the Board on more than one occasion the grave dangers that might be expected in case of a severe epidemic. To meet present emergencies I have employed two temporary assistant medical officers. I think it would be desirable, and even necessary, to increase the permanent

medical staff by the addition of a fourth assistant medical officer." This suggestion the governors have adopted. The new temporary hospital accommodation is being prepared with all expedition; but the guardians of the Dunshaughlin Union have declined to let some unused buildings for the accommodation of some of the Richmond Asylum inmates.

THE SOLICITOR-GENERAL ON MICROBES.

Mr. Frank Lockwood, Q.C., M.P., that "great broad-shouldered, genial Englishman," who has just been appointed Solicitor-General, made a witty speech at the dinner of the York Medical Society on October 10th. In proposing the toast of "Success to the Society," he expressed his admiration for its disinterested labours for the prevention of disease, and remarked that the honourable profession to which he himself belonged had not, as far as he was aware, given birth to any society having for its object the prevention of litigation. If such a society existed, he was not a member of it. The York Medical Society, Mr. Lockwood went on, had a hall of its own in Lower Ousegate, and there, he had no doubt, the microbe was put in the witness box, and severely cross-examined. As far as he could gather, the microbe was having a very bad time of it, and he would not be surprised to hear that there had been established in this country a Society for the Protection of the Microbe. He learned from Sir James Crichton Browne's Liverpool address that there were good and bad microbes. He did not know whether microbes were of different political complexions, but he noticed that some of them were engaged in the production of wine and beer, and he well knew to which political party these microbes belonged.

LEPROSY IN ICELAND.

Dr. Edv. Ehlers, the Danish physician whose inquiry into leprosy in Iceland we mentioned recently, has returned to Copenhagen, and reports that he has discovered no fewer than 141 cases of leprosy in the island, whereas the official report only returns 42. He found the disease on the increase in two provinces. He believes that he has proved the contagious nature of leprosy beyond dispute. The visit of Dr. Ehlers was welcomed by the Icelanders, who are most anxious to have the terrible scourge abated. They showed him freely persons afflicted with the disease. They are in hopes that his researches may result in the establishment of a leper hospital in the island, like the the excellent one doing such beneficial work in Bergen and adjacent districts. This is desired as much for the sake of the sufferers themselves as their surroundings, for with the conditions now prevailing the disease is spreading fast instead of abating, as stated in the official report sent to the Althing and the Danish Government.

DIPHTHERIA AND THE ANTITOXIN TREATMENT AT HOME AND ABROAD.

We understand that the antitoxin treatment of diphtheria by material produced at the British Institute [illegible] Medicine is being employed at one of the h[illegible] Metropolitan Asylums Board at which cases of c[illegible] are under treatment. The results thus far have been sufficiently encouraging to justify the continuance of the treatment, and in the course of a week or two it will be possible to announce full results. We have already expressed the conviction that the results attained by the use of the antitoxic serum in diphtheria are likely considerably to diminish the mortality from diphtheria, although of course it is absurd exaggeration to say that this treatment is a complete cure or is likely to do more than diminish the mortality. Moreover, we have pointed to the fact that the announced mortality of foreign cases under treatment by antitoxin is really not much less than the ordinary mortality of our English hospitals. It is, of course, always desirable to take a careful historical retrospect and wide clinical view of a matter such as this, not with the idea of depreciating any new remedy, but of estimating its true value. In this connection it will be useful to point out that there has been a gradual diminution in the mortality of cases of diphtheria admitted to the hospitals of the Metropolitan Asylums Board from 1888 up to the present date, and the fact that the present mortality there without the serum treatment is not appreciably above many of the figures quoted from Paris with the antitoxin treatment.

Mortality per Cent. of Cases of Diphtheria treated in Asylums Board Hospitals (1888-1893).

Year.	Number of Admissions.	Mortality per cent.
1888	[illegible]	59.35
1889	722	40.74
1890	942	33.55
1891	1,312	30.63
1892	2,009	29.35
1893	2,843	30.42

In 1893 the mortality per cent. at the different hospitals was:

Eastern Hospital	... [illegible]	North Eastern Hospital	... [illegible]
North Western Hospital	... [illegible]	Western Hospital	... [illegible]
South Western Hospital	... [illegible]	Fountain Hospital	... [illegible]
South Eastern Hospital	... [illegible]		

From this it must not, of course, be inferred that a consistent impression will not in the immediate future be produced on these figures, and the mortality per cent. greatly lowered by the use of effective antitoxin. It is useful to point out that our mortality in England is about half the mortality in Paris hospitals, and this is to be attributed to that greater cleanliness, more ample accommodation, and good nursing which contribute so much to diminish our mortality, which is usually 50 per cent. less than Paris and other foreign towns.

WHAT DROWNING FEELS LIKE: BY ONE WHO NARROWLY ESCAPED.

Dr. W. L. Cullen, of St. Boswell's, N.B., writes: "While in attendance on a lady (Mrs. J. B.) the article with the above heading appeared in your columns. As she had had the month previously a very narrow escape from drowning at Innellan on the west coast, I asked her to kindly let me have a short statement of her experience and sensations. She says: 'Accompanied by my husband and sister I went into the sea at 7.15 A.M. for our usual plunge. As the water was very cold and there was a thick mist we agreed to keep near the land; so on entering the water I commenced to swim along the shore. After a few minutes my breath failed me, and I put down my feet expecting to feel solid ground, as I was not more than 50 yards or so f[illegible] prise I felt my feet and legs sucked under by a strong current, and I sank in a fairly deep hole that the swirl of the water at this point had scoo[illegible] bed of the sea. I swallowed [illegible] water, and with difficulty got my [illegible] So strong was the 'swirl' that I found it beyond my strength either to swim out of it or to turn on my back and float. Finding I was in serious trouble I glanced round to see [illegible] e others were, and to my horror saw them quietly [illegible] ding away in the other direction quite unconscious of my distress. Up to this point I had not felt any great fear, as I imagined my husband had seen my difficulty, and I ex[illegible] every moment to feel him grasp me. But when I found that my struggl[illegible] bserved the dread seized me that I should drown [illegible] never know wh[illegible] to me. I expended all my remaining breath in an effort to call my husband's name, but I felt as if my voice had died in my throat, and I was conscious of making no sound. As I sank again I gasped involuntarily, and immediately all other sensations were overpowered by the agonising, scorching pain which followed the rush of salt water into my lungs. From that moment I was conscious only of that burning suffocation and the intense desire that the others might know what had become of me. Except for that one thought my brain was dulled. I had no vision of my past life, such

as I have always believed a drowning person to experience. I was conscious of no fear of death, and no special desire to be saved. I had no thought of my children. There was a roaring in my ears, and a red mist before my eyes; but I neither saw visions nor dreamed dreams—I only suffered. Not more than three minutes elapsed from the moment when I first sank until my husband (who *had* heard my cry) rescued me.' When Mrs. B. was brought ashore she was quite unconscious, and vigorous measures had to be resorted to to restore animation. This lady's experience has quite upset my preconceived ideas as regards the painlessness of drowning, and goes a long way to strengthen and confirm Shakespeare's line in Clarence's dream:

Lord, Lord, methought what pain it was to drown!"

BEER IN ASYLUMS.

WHEN commenting on the expressions of regret, in the last report of the Commissioners in Lunacy, at the absence of beer in some asylums, we suggested that the best judges of the effect of the discontinuance of beer were the medical superintendents. The opinions of two of these gentlemen, each having the care of a large and well-known asylum, are before us. Dr. Claye Shaw, speaking of Banstead Asylum, in his last report continues his formerly expressed favourable opinion of the change, adding that, though this would seem unlikely, a single glass of beer used to prevent some of the patients from eating their dinner; while (in spite of the instructions to the attendants) some patients managed to get several glasses, with a disturbing and injurious effect on their excited and diseased organisations. Among 715 males there were no complaints, and not more than one or two from the 1,294 females. Dr. Alexander, of Hanwell Asylum, expresses, in a letter to the *Medical Pioneer*, unqualified approval of the withdrawal of beer as a beverage. He says the quarrelsomeness and aggressiveness of the patients as a body are much less; that the epileptics and alcoholics have been the greatest gainers, the epileptic fits having become less severe and less frequent, and the alcoholic recoveries more speedy and permanent. In this asylum milk has been substituted for beer.

THE MUSEUM OF ST. BARTHOLOMEW'S HOSPITAL.

THE specimens added to this museum during the medical year ending September 30th, 1894, exhibited recently, are now placed in order in the general collection. Mr. Edgar Willett, the curator, has issued the usual annual *Descriptive List*, after the excellent custom of the College of Surgeons, which publishes a similar yearly *Appendix*. Amongst specimens which deserve special notice for their rarity or interest we may mention the ossified synovial membrane of the left knee-joint already described by Dr. Joseph Griffiths and Mr. R. A. Milligan in the BRITISH MEDICAL JOURNAL of May 5th this year. There is also an excised ruptured adductor longus removed from a cavalry soldier, and a cast of the parts before the operation. The injured muscle formed an unsightly globular mass. Four specimens of excised cæcum are added. Three of the patients recovered from the operation, which was performed for malignant disease in three cases, and in one on account of a fæcal fistula resulting from a former perityphlitic abscess. Two cystic tumours of obscure origin, the one from the sac of an inguinal, the other from the sac of a femoral, hernia deserve further scrutiny. Among the curiosities is a cast-iron ring weighing 6 ounces, with an internal diameter of 1 inch. A man incarcerated his penis in this ring. Owing to rapid swelling of the parts, the ring could not be withdrawn, and it became necessary to file it through in two places. This, the catalogue informs us, took four hours to accomplish. Attention may further be turned to a white glazed porcelain jar impacted in the rectum. It could not be removed through the anus till the abdomen had been opened and the jar pressed down from within by the hand of an assistant. Unfortunately the patient died of peritonitis. He had suffered tortures from pruritus ani. To relieve the irritation he placed a small potato in the orifice of the jar and then sat on it. The jar slipped into the rectum. It is remarkable what very bulky foreign bodies have been forced into the rectum in attempts to relieve pain. The teratological series is enriched by a most remarkable specimen of the organs of a person who was externally a male and married as a male. His wife had children. The testes were undescended. There is a complete uterus and vagina, which communicates with the prostate through the sinus pocularis. The homologies correspond to received notions. The specimen will be figured and described in the coming volume of the *Transactions of the Pathological Society of London*.

SCIENCE AND THE QUEEN'S ENGLISH.

IN the course of his graceful reference from the University pulpit at Oxford last Sunday to the loss which the University had suffered through the death of Professor Froude, Professor Sanday, in speaking of the historian's high power as a writer of English, touched a note and uttered a warning which ought not to be allowed to pass unheeded. "The tendency of the moment is, perhaps," he said, "against this high literary excellence. In proportion as more attention is paid to method and to matter, less is apt to be paid to grace and finish of form. And yet in these the man, as distinct from the student, comes out, and we may be sure that without them neither history nor science will be the moving force that they are capable of being." One of the sources of the weakness of science in this country is the repugnance which persons of ordinary literary capacity cannot but feel for the clumsy and often illiterate form in which scientific theories and results are presented. The medical profession is not the least among the sinners, and though its writings are addressed in the main to the profession, the evil habit of slovenly writing is not easily to be set aside. "True ease in writing," as Pope said long ago, "comes from art, not chance, as they move easiest who have learnt to dance." The performance of the ordinary unpractised medical writer recalls the dancing of a bear on a hot plate. For an article on a medical subject it seems by some to be thought sufficient to shovel together a few quotations from previous writers, and then to give a faithful transcript of bedside notes. The result is repellent to the average medical reader. There are, and have been, many bright exceptions, as those who have read their Graves, their Watson, or have listened to Paget, or can remember the dramatic fervour with which Sir Andrew Clark could relate the facts of a case which had interested him will at once recall. But these are the exceptions which prove the rule. We should be very sorry to appear to commend fine writing at the expense of accuracy, or indeed at all. What we do pray for is clear, succinct statement and exposition, in reasonably good and—we regret to have to add—grammatical, English. Sentences which have no beginning, others which have no end, others, again, which have no verb, paragraphs which meander over pages of crabbed writing, are literary solecisms which ought not to be perpetrated by members of a profession which still professes to be learned.

CHEAP TEA.

IT is well known that the importation of adulterated tea has been largely checked by the system of analytical examination to which that article is subjected by the Customs authorities on its entrance into this country, but it has been too readily assumed that the application of this system has insured the public against the sale of spurious and adulterated tea. The sale of tea "faced" with Prussian blue or plumbago is no doubt practically a thing of the past in this country, and so also must be the sale of mixtures containing any considerable quantities of foreign leaves or of that pleasing article prepared by dipping leaves in gum.

water and rolling them up with sand, which is known to the ingenious and enterprising Chinaman as "lie" tea. Although an extensive and unexpected application of the Sale of Food and Drugs Acts in certain districts which are still the happy hunting grounds of the dealer in adulterated goods would probably result in some curious and disagreeable discoveries, it is no doubt true that the grosser forms of tea adulteration—adulteration with substances entirely foreign to tea—has virtually ceased to exist to any great extent. Even the adulteration of tea by admixture with exhausted and re-dried tea leaves—a form of fraud which undoubtedly exists—is certainly rare in comparison with the amount of sophistication practised with many other articles of food. A case of some interest was heard at the City of London Court recently, in which a City tea merchant claimed payment for "tea dust" supplied to a tradesman in Seven Dials at the rate of 2½d. per pound. It appears that this valuable commodity was purchased, not for the purpose of selling it by itself, but for mixing with "cheap teas," the mixtures being sold at 1s., 1s. 3d. "and so on"—how far "on" does not appear—per pound. The public analyst for the Strand District, who analysed the "tea dust," found it to contain 13½ per cent. of mineral matter, of which about half was silica and sand. The "dust," it seems, was also referred to in court as being of a "nauseous character." As it had been warehoused for two years, and was sold at 2½d. per pound, and "good" tea dust was stated to realise from 6d. to 7d. per pound, the application of the term "nauseous" may not have been altogether undeserved. The amount of mineral matter yielded on the incineration of genuine tea is remarkably constant at about 5 per cent., and a very large percentage of this—not less than 60 per cent. of the mineral matter, or 3 per cent. calculated on the tea—is soluble in water. To apply the name "tea" to the "dust" in question was therefore plainly unjustifiable, and the judge in giving his decision for the defendant was obviously of this opinion. The detection and prevention of the particular form of adulteration disclosed by the case, so long as it is practised within certain limits, is one that presents considerable difficulties, more especially in the present unsatisfactory state of the law.

UNINHABITABLE HOUSES AND THEIR TENANTS.

A very interesting paper was read by Dr. J. B. Russell at the late Sanitary Congress in Glasgow on "Uninhabitable Houses," in which he detailed the method of procedure in shutting up these houses under local Acts, and gave much interesting information regarding the class of people whom he had found dwelling in those places which, after inspection, he had declared to be uninhabitable. These people were in his opinion the *débris* of the city, the chips and dishonoured stones which fell from the social structure and littered its base. There were three characteristics of the uninhabitable house in regard to death-rate which were worth noting: (1) The deaths always exceeded the births—it destroyed more life than it produced; (2) the infantile death-rate was enormous; (3) the general death-rate was mediæval in its dimensions. In these houses, strange to say, he found a small leaven of decent, steady working people, but the great mass were the vicious, immoral, and criminal residuum of the population. As regards rent they did not seem to be very much better off than those occupying more decent dwellings. The reason why such people are ready to pay such rents for apparently uninhabitable dwellings is not far to seek. Partly it arises from the fact that the better landlords will not receive them, as they are found to drive away the more decent tenants, and partly from the landlords of such bad property being forced to allow them the licence which they love. The compact between the landlord and the tenant was an immoral one. The necessity of finding house room made the vicious and criminal person accept any hovel, while the consciousness that he had an unsound article to sell made the landlord accept the criminal and the vicious as his tenants. There is no doubt that all this applies equally to other cities. There is no reason to suppose that landlords of decent property prefer to have vicious and criminal tenants. The enforcement of a sanitary standard which shall make houses as lettable to decent as to vicious tenants is the best way of breaking up areas at present devoted to vice and crime, and this can best be done by the judicious but persistent application of the powers of compulsory closure. Dr. Russell gives a graphic description of the fate of a "closed" house, showing how a closing order not only deprives a recalcitrant landlord of his rent during the time of closure, but practically condemns the house itself to destruction. "If operations are not begun at once for its restoration the structure soon disappears. In twenty-four hours there will not be a pane of glass unbroken; in a week the window frames, doors, and woodwork generally will be on the move; soon the demon boy will make his way through the roof, and so the work of destruction goes on until the very walls are levelled." Landlords may well dread a closing order.

THE FIGHT OF MAN AGAINST DEATH.

The word cholera is a word of dread to us in England; how far more must it be charged with terror in Russia. In Russia, with her vast territories in all stages of insanitation and her boundaries open on all hands to the incursions of the pest, the attitude of the leaders of the army of defence seems almost heroic. The greatest soldier in this army of prevention seems to be Professor Erisman, of Moscow, whose lectures at the Hygiene Congress at Buda-Pesth were welcomed with enthusiastic greetings. The chief causes of death are not those within the man, but those which lie outside of him; and in antiquity, said Professor Erisman, the fight for man against death was recognised as the proper task of the State; in the Middle Ages man was left to fight his own hand-to-hand battle against death, and, we may add, to fight in the dark. Professor Erisman paid to England the high compliment that she was the first to call the attention of the modern State to its sanitary duties, and to see that the means of health are not left to the charity of individuals. Our sanitary "war office" which prepares for our defence against the rising or the invasion of pestilence should not be, however, a mere department of the Local Government Board, but an independent branch of the public service under a responsible Minister. This will doubtless come in time. Meanwhile, we have every reason to be very proud of our generals, under whatsoever regulations they take the field.

WATERBORNE TYPHOID IN MID-RENFREW.

In the British Medical Journal of October 13th we gave the facts concerning the relation of ice-cream to typhoid in the county of Renfrew, citing the report of Dr. Campbell Munro on the matter, and we promised to give the facts of a larger epidemic in its relations to the public water supply of Paisley and the district. Dr. Munro's report has many points of interest, treating as it does of an epidemic of 859 cases, of which 86 were traceable to the ice-cream in question, leaving a number of attacks within what is called the "epidemic area," which yielded a case-rate of 8.9 per 1,000 of population, or a mean of one case in every 113 persons resident in the area. The experience of the county in the matter of typhoid became abnormal only in the fourth week of July, alike for the towns of Paisley and Johnstone and the rural portions. Study of the facts left no doubt in the mind of Dr. Munro that the public water service was at fault, but no action was taken by the Water Commissioners until the outbreak was on the wane. The statistical data inculpating the water are very convincing. In the water area the case-incidence was 1 in every 101 persons against 1 in every 1,610 outside. As further showing dependence of the fever on the Paisley

water, the only cases of typhoid in the town of Renfrew were 7, all in the one small portion served by the Paisley mains. No single section of the county outside the special area showed an attack-rate higher than the area of supply. With reference to the greater incidence of attack on the population outside Paisley, Dr. Munro draws attention to the interesting fact that "dead ends" of water mains may have had to do with the matter, since, in a town like Paisley, there would be more rapid flow of water than in the outside and rural districts with a sluggish flow and a relatively large number of dead ends. Dr. Munro shows that the catchment area cannot be regarded as without danger to the supply, and Dr. Frankland, who made at a late date bacteriological and other examination of the water, though finding no definite trace of the typhoid bacillus, found bacilli closely resembling it and the bacillus coli communis, whilst he states that the condition of the reservoir as seen by him was not hostile to the requirements of the typhoid bacillus.

THE CURE FOR ANARCHISM.

AT the Congress of Hygiene and Demography recently held at Buda-Pesth, Professor Crocq, of Brussels, dealt with the question of anarchism, which he looks upon as a product of current pessimistic theories. His conclusions may be summed up as follows: Active anarchists—the Ravachols, Vaillants, etc.—are the subjects of moral insanity, and must be treated as such. The really guilty persons are the writers and speakers whose wild theories disorder weak and unstable brains. It is only in the application of "the principles of social hygiene" and in the suppression of inflammatory literature that a cure for the evil is to be found. Dr. Crocq's remedies are almost as vague as the "veracities" and "silences" which were Carlyle's panaceas for all social and political ills. The "principles of social hygiene" are all very well; but practical men, from Prime Ministers to policemen, would no doubt like to know a little more definitely what they are. Anarchism, we take it, when it is not a mere cloak for crime or a morbid longing for notoriety, is a kind of mental hysteria which the accident of environment or education diverts into a political channel instead of into some Corybantic form of religion: but to treat militant anarchism as moral insanity would be a disastrous mistake. Society must protect itself against such enemies as the organism protects itself against poison—by their destruction or their elimination. That useful social phagocyte, the hangman, is our most effectual protector against the vibrio of anarchism in its most virulent form. Let him however do his work only in the presence of the necessary official witnesses, and without any adjunct or circumstance that can feed the depraved appetite for sensationalism, which is one of the "notes" of our generation. Above all let there be a combination of silence in the press as to the details of the deeds, and particularly of the deaths, of anarchists. For the less active forms of the disease the best treatment is a judicious use of the prison and the asylum for criminal lunatics, which are the emunctories of the body politic; but after all the real cure for anarchism is to remove the causes which produce it. Let Governments realise that the beginning of political wisdom is to make it possible for those whom they rule to lead cleanly wholesome lives, and they will have gone far to remove the causes of social discontent. Let them, in short, make men healthy, and they will have gone far to make them both happy and wise.

THE CHANNELS OF INFECTION IN TUBERCULOSIS.

AT the opening meeting of the North London Medico-Chirurgical Society on October 18th, Dr. Sims Woodhead delivered an address on this subject. After briefly adverting to the occasional direct inoculation of tuberculosis into the skin or subcutaneous tissues, he proceeded to consider the circumstances under which tuberculosis may find a point of entrance from the throat. In certain animals and in man (dirty or mixed feeders) there was, he said, a ring of lymphoid tissue surrounding the entrance to the larynx, and a similar ring surrounding the entrance to the œsophagus. The pharyngeal tonsil was a great local development of the two poles of the latter ring. So long as all this lymphoid tissue remained healthy, or was not attacked by an extraordinary number of micro-organisms, it was capable, with the assistance of the epithelium, of dealing with even virulent micro-organisms. But, if overstrained, the lymphoid tissue itself might become the seat of tuberculous disease, or be so disorganised that it allowed the tubercle bacillus to pass into the glands surrounding and immediately connected with them. This method of entrance of tuberculous infection, which had first been worked out in the case of the pig, was probably of comparatively frequent occurrence in children living under insanitary conditions. The very cells which in health destroyed the bacilli—the lymphoid cells—were those which, when the function of the lymphoid tissue was lowered, were responsible for conveying the bacilli from the outer surface to the deeper structures. In children the tuberculous process, started in this way, might extend at first entirely through the lymphatics, the lungs escaping until the glands at their root, or in the pleura, had become distinctly affected. In early life also the primary seat of infection was very frequently in the alimentary tract. The importance of this mode of infection was, in Dr. Woodhead's opinion, not yet fully appreciated. Even when the chief stress of the disease fell upon the lungs, it might be that the infection had obtained entrance from the alimentary canal, and had spread upward by the lymphatics to the glands at the root of the lung. In many farms in Denmark, fortnightly inspection of the cattle had revealed facts which had led the Danish Government to make an annual grant of £3,000 for five years to defray the expense of carrying out a systematic inspection of cows, of using tuberculin as a diagnostic agent, of killing off cattle undoubtedly affected, and of keeping under observation any animal in which there was any suspicion. If this scheme were thoroughly carried out, Dr. Woodhead believed that the trifling expenditure involved would prevent a large loss to the farmers, and lead to an incalculable saving of infant life. If Koch's tuberculin had done far more harm than it ever had done, the saving of human life, indirectly, through its efficacy as a diagnostic agent in cattle, would still be so enormous that the account to the credit side would have to be reckoned not as hundreds to units but as thousands. The lecture was illustrated by numerous lantern slides.

"ASSISTANT SURGEONS" IN INDIA.

A MEMORIAL from the Medical Association of India has been sent to Government, praying for a commission of inquiry into the condition of that class of the Indian Medical Service termed "assistant surgeons." Assistant surgeons are usually natives of India, who, after passing as graduates or licentiates of the Indian universities or colleges, are selected for the Government service; some few have also taken British diplomas. Their duties are ordinarily the charge of small civil stations, of dispensaries, employment in the vaccination department, or as assistant teachers in the Indian medical schools. It would be invidious to mention names, but it is well known that not a few of the class have won great reputation in various spheres of professional life. But the complaints of the class are numerous. The pay is Rs.100 a month for the first seven years, Rs.150 for the next seven years' period, and Rs.200 for the third. In some instances there are local allowances, varying from Rs.20 to Rs.50 *per mensem*. Looking to the work performed and the qualifications of the service, it would not be too much to ask for a salary of Rs.200, rising to Rs.400. Their next grievance is that they are denied promotion to the ranks of

the Uncovenanted Medical Service, and it has been proposed that one out of every three vacancies in the latter should be given to selected assistant surgeons. A proportion of the Deputy Sanitary Commissionerships should also be filled by assistant surgeons, thus relieving commissioned medical officers. Now that the military apothecary class have been given the title of assistant surgeons, the latter think they should be styled surgeons, especially as this would not clash with the new nomenclature—surgeon-captain, surgeon lieutenant, etc.—of the military department. Another grievance is that they are not exempt from the operation of the Army Act. Most servants of Government are allowed to carry arms, but the assistant surgeons, who are often in isolated positions, are not permitted to do so. They complain, also, of not being recognised at durbars and official gatherings. This may appear a sentimental matter, but in reality, ignoring the medical element at such times tends to lower their status in the estimation of their patients and of the population generally. Some years back Sir William Moore, then Surgeon-General of the Bombay Presidency, strongly advised redress of the assistant surgeons' grievances, stating that, when commissioned medical officers were sent to Burmah, he had to fill their places temporarily from the assistant surgeon class, the duties of the higher charges being performed by the assistant surgeons to his entire satisfaction. We endorse the letter of an assistant surgeon to a contemporary. He writes: "The assistant surgeons are in the same, if not in a worse, condition to-day as they were in fifty years ago; and, though nominally gazetted officers, are treated more like ministerial officers. Would that some philanthropic gentleman, some broad-minded and independent member of the Legislative Council, or some justice-loving member of Parliament, step in, and help to regenerate this class."

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS, ENGLAND.

A MEETING of the Committee of the Association of Fellows of the Royal College of Surgeons of England was held on October 22nd, Mr. George Pollock, President, in the chair. The question before the Committee was the financial position of the Association. After some discussion it was agreed to raise a special fund independently of the annual subscriptions, some of which are still due. The report of the Council of the College to the Fellows and Members and the annual general meeting fixed for November 1st were then discussed for the purpose of determining whether it would be desirable for the Association to formulate any resolution for submission to the meeting. In view of the expression of opinion at the meeting of Fellows on July 5th last, in respect to the necessity of deciding upon the point in which the charter of the College should be amended, as the preliminary step to the application for a new charter, it was suggested that it might be advisable to move a resolution to the following effect:

That it is desirable that a Conjoint Committee of the Council and body corporate of the College should be formed to consider what alterations in the charter are desirable.

The subject of the election of the President of the College was then considered in connection with the following answer of the Council of the College to the resolution passed by the Fellows:

That the Council be requested to take steps for obtaining the opinion of the Fellows on the mode of election to the office of President.

That the Council are not prepared at the present time to consult the Fellows, or solicit their opinion through other means than the meetings of Fellows which have been lately established. The Council would, however, point out that it any Fellow is anxious to test the opinion of the general body of Fellows as to whether or not it is desirable to make any change in the present mode of election to the office of President, it is open to him to do so by submitting a motion on the question to the meeting of Fellows in January, or to some subsequent meeting.

The attention of the Committee was drawn to the circumstance that at the meeting of Fellows in July there was an almost complete concurrence of views on the part of the Association and the Society of Fellows, and it was suggested that it would be expedient if possible for the two bodies to come to an understanding as to the line of policy which should be pursued in reference to the mode of election of the President, and other matters of collegiate interest. Accordingly the following resolution was proposed and seconded:

That the Society of Fellows be asked to nominate a subcommittee to meet and confer with a subcommittee of the Association of Fellows, to agree upon a joint course of action in reference to the election of the President and other matters.

After a long discussion the resolution was passed, and the Honorary Secretary was requested to call upon Mr. Herbert Page, the President of the Central Executive Committee of the Society of Fellows, and to report the result of the interview to the Committee at their next meeting, which was fixed for October 31st at 5.30 P.M. at 36, Grosvenor Street, W., at which meeting the final decision will be arrived at with respect to the suggested resolution to be brought forward at the annual meeting at the College on November 1st.

MR. GLADSTONE.

WE understand that the eye from which the cataract was extracted has now regained a large proportion of its visual power, and Mr. Gladstone is able to use it freely in reading and writing.

THE CHELSEA HOSPITAL FOR WOMEN.

WE are informed that, in addition to the consulting medical officers—Sir T. Spencer Wells, Bart.; Mr. Jonathan Hutchinson, F.R.S.; and Dr. Robert Barnes, F.R.C.P.—Lord Cadogan, after having received a statement of the injustice done in the recent proceedings of the Chelsea Hospital to some of the medical officers, and of the hasty and inadvisable character of some of the other new appointments, has signified his intention of withdrawing and has resigned his post as President of the hospital. The facts will now, we understand, be laid before the Princess of Wales, the Patroness, and it is anticipated that she will not continue her patronage. We have already pointed out the inadequate and biassed character of the proceedings, both as to the matter of inquiry and the subsequent action of the Board of Management. There is a strong feeling in the profession that some of those gentlemen who have been elected would do well also to resign, and let the whole matter be reopened in a thoroughly satisfactory manner, and put on a proper basis.

AN EPIDEMIC OF YAWS IN ASSAM.

MR. ARTHUR POWELL, M.Ch., describes in the September issue of the *Indian Medical Gazette* a very interesting outbreak of frambœsia which took place among the coolies employed in the tea garden of Degubber, in Assam. Forty-four persons were attacked among 142 residents in seven houses. They belonged to 11 families, 28 males and 16 females, ages from 2 to 50; 33 under and 11 over 16 years. The origin of the outbreak is unknown, but its spread by contagion is undoubted. Wounds, eruptions, ulcers, and scars afforded a place of entry for the virus, the characteristic granuloma first appearing at the site of some such lesion, and then becoming disseminated so as to cause similar spots or patches of a condylomatous kind on other parts of the surface. Mr. Powell considers the disease to be the same as the frambœsia, or yaws, of the West Indies and the "paranghi" disease so prevalent in Ceylon. He is undoubtedly right, as also in his contention that it is not syphilis. He found picric acid to be the most effectual local application, and Donovan's solution the best internal medicine.

DR. JAMES J. HARDING, medical officer and medical officer of health for Ballincollig, has been appointed a magistrate for the county of Cork.

THE CZAR'S ILLNESS.

[SPECIAL TELEGRAM FROM OUR OWN CORRESPONDENT.]

OUR CORRESPONDENT telegraphs from Livadia concerning the health of the Czar: "Some of the most distressing symptoms have been successfully combated by the minor resources of medicine, and the Czar has been much relieved from conditions of great distress. But the main disease pursues its course uninterruptedly and without any such conditions as to hold out hope of arrest, or even of those remarkable rallies which sometimes occur in the course and even in the later stages of the organic affection of the kidneys from which he suffers. The most distressing symptoms were due to dropsical affections of the chest, abdomen, and legs. Acupuncture and drainage had drawn off a great deal of the fluid, which was producing so much oppression of the circulation and the breathing. The arterial and venous circulation being thus temporarily freed from external pressure, all the symptoms, especially those from difficulty of breathing and painful distension, have for the time been considerably lightened. Firm adherence to an exclusively milk diet—a treatment so much advocated by British physicians—has had good effects and will be persevered in. Various diuretics have been tried in succession, but without much good effect, except perhaps to modify the attacks of convulsions, which have been so troublesome, and to assist in eliminating the uræmic poison from the blood. The comatose symptoms have also for the time improved, but are by no means absent. Notwithstanding, however, the therapeutical successes thus obtained in alleviating the distress of the illustrious patient, there are no more hopes of a happy termination of the disease than before, and the prognosis continues to be as grave and as seriously indicative of imminent peril as it was before these expedients were resorted to for the purpose of temporary relief."

WE regret to announce the death of Dr. W. L. EMMERSON, senior, which occurred on October 17th. For some weeks past the deceased has suffered from illness, but had not been confined to the house till within a week prior to his death, which followed a relapse. Dr Emmerson took the degree of M.D.Aberd. in 1853, and in 1856 became L.R.C.S.Edin. He was appointed county analyst to Leicester, in July, 1876, and held that position up to last March. The deceased gentleman was 73 years old.

DR. ANTONIN JEAN DESORMEAUX, of Paris, who died a few days ago, was one of the oldest members of the Société de Chirurgie. He was the son of Professor Desormeaux, one of the leading obstetricians of his day in Paris. Antonin Desormeaux took his doctor's degree in 1844, and was appointed Surgeon to the Hôpital Necker, to which he remained attached till the end of his active career. He was the author of some papers on surgical subjects, and took a large part in the invention of the endoscope.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Filleau, President of the Société Clinique des Praticiens de France, and formerly a devoted ally of Gambetta, aged 54; Dr. W. A. M. Wainwright, of Hartford, Conn., a former president of the Hartford County Medical Association, aged 50; Dr. Leopold Lewin, Medical Officer of Health of Berlin, who was the first to attend the late Emperor William when he was wounded by Nobiling, aged 74; Dr. Francesco Gasco, Professor of Comparative Anatomy in the University of Rome, and a member of the Italian Chamber of Deputies.

THE death is announced at Bodmin of Mary Luxon, a widow, who was born nearly 103 years ago at Mannuchon, near Falmouth, where there is an entry of her birth in the church books. Until recently her mental faculties were almost unimpaired.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

NORTH OF ENGLAND AND BORDER COUNTIES BRANCHES.—A conjoint meeting of the above Branches will be held at the Hotel, Gilsland, on Tuesday, October 30th, at 3 P.M. Business:—Dr. Murphy: Notes of recent cases of Abdominal Surgery. Dr. Maclaren: Notes of a Case of Prostatectomy, with the specimen. Dr. Robertson: Diseased Ossicles from Middle Ear, with instruments used in removing them; also a new Instrument for Excising Tonsils. Dr. George Murray and Mr. George Richardson will show a patient after successful removal of a large Sarcoma of the Brain, with specimens. Dr. George Murray: Sections of a Tumour of the Spinal Cord. Dr. Gowans: Notes on recent cases of Abdominal and Brain Surgery. Mr. Page: Cases of Club foot after Operation. Mr. Williamson: Some Tumours of the Ciliary Body and of the Retina. Dr. Drummond: On some points in Disseminated Sclerosis. The dinner after the meeting will take place at the hotel at 4.45 P.M.; 6s. 6d. each, exclusive of wine. A saloon carriage will be attached to the train leaving the Central Station, Newcastle, at 12.45 P.M., and it will return with the train leaving Gilsland at 7.8 P.M. Members travelling by this train and taking their tickets at the Central Station, Newcastle, can obtain the return ticket for 3s. 6d., namely, the single third class fare.—Honorary Secretaries: G. E. WILLIAMSON, F.R.C.S., 8, Eldon Square, Newcastle-on-Tyne. North of England Branch; J. ALTHAM, M.B., Penrith, Border Counties Branch.

BATH AND BRISTOL BRANCH.—The first ordinary meeting of the session will be held in the Medical Library of University College, Bristol, on Wednesday, October 31st, at 7.30 P.M., Mr. Nelson C. Dobson, F.R.C.S., President. The following communications are expected:—Dr. P. Watson Williams: A case treated with Diphtheria Antitoxin. D. J. Michell Clarke: A case of Gastric Cancer presenting unusual Difficulty of Diagnosis. Dr. H. Waldo: Sequel to a case of Motor Aphasia. Mr. A. G. Cunningham: To call attention to the present Attitude of the Medical Profession towards Antivaccination and Antivivisection Societies and their Teachers. A train leaves Bath at 5.58 P.M. and returns at 11.0 P.M., G.W.R.—E. MARKHAM SKERRITT and W. M. BEAUMONT, Honorary Secretaries.

PERTHSHIRE BRANCH.—The winter meeting of the Perthshire Branch will be held in the Station Hotel, Perth, on Friday, November 2nd, at 4 P.M. (1) Business of annual meeting. (2) Fix place of summer meeting. (3) Dr. Robertson (Murthly) will give a Cantero Demonstration of recent work on Cerebral Histology. (4) Dr. Irvine (Pitlochry) on cases illustrative of Conservative and Radical Surgery. (5) Circular received by the Secretary. (6) Dr. Ferguson will move that the summer meeting of the Branch be not held on a Friday. After the meeting, dinner will be served in the hotel at 3s. 6d. each, in time to permit members leaving for the country by the evening trains.—A. R. URQUHART, Honorary Secretary, James Murray's Royal Asylum, Perth.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE first meeting of the session 1894-95 was held on Thursday, October 11th; Mr. H. LANGLEY BROWNE, F.R.C.S.Edin., President, in the chair. Eighty members were present.

New Members.—The following were elected members of the Branch: W. Harvey Smith, M.B., Meriden; H. Meredith Richards, M.B., City Hospital.

Specimens.—Mr. BARLING showed a specimen of Deep Lipoma, removed from the forearm of a man aged 30. Before operation the diagnosis lay between lipoma and sarcoma.—Mr. C. MARTIN showed a specimen of Cystic Adenoma of the Breast with intracystic growth.—Mr. JORDAN LLOYD showed an Œdematous Uterine Myoma, removed by abdominal hysterectomy from a patient, aged 42, who had noticed a rapidly growing abdominal swelling during the last eight or nine months. The pedicle was treated supraperitoneally with a Koeberle's clamp armed with aluminium wire, which was slackened and removed from the "stump" on the third day, a rapid recovery following. The whole of the body of the uterus was removed along with both uterine appendages.—Mr. LAWSON TAIT showed two specimens belonging to two different cases, which showed between them the Extreme Phases of Pyosalpinx.

Paper.—Mr. LAWSON TAIT read a paper on Modern Developments of the Germ Theory of Disease. Owing to want of time the discussion was adjourned to the next meeting.

SYDNEY AND NEW SOUTH WALES BRANCH.

The 118th general meeting of this Branch was held at Sydney on August 3rd, Dr. Crago, President, in the chair. The following members were present: Drs. Jenkins, Brady, Thring, Fiaschi, Manning, Quaife, Neill, Newmarsh, Pockley, Foreman, James, Bennet, Dick, Mullens, Worrall, E. F. Ross, A. Parker, Cummings, Collins, Jamieson, West, O'Hara, Todd, Gill, Paton, G. A. Marshall, McCulloch, McLeod, Clubb, Roberton (of Auckland), Thomas, Lichfield, Clay, James McLeod, Taylor, Clenhall, Hall, Huxtable. Dr. Musgrove, of England, attended as a visitor.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Resignation of a Member of Council.—Dr. Angel Money's resignation of his membership of the Council was read, and the President announced that the Council had accepted it.

Presentations to Library.—The President announced that Dr. Davenport Parry had presented the library with some volumes of the British Medical Journal and the *Lancet*: also that Dr. Kendal had presented the first volume of Winslow's *Anatomy*, published in 1733, and two photographs.

New Members.—The election of the following new members were announced by the President: Drs. Litchfield, Thane, Stapleton, Florance.

Communications.—Dr. Foreman read notes on the Extirpation of the Uterus, with exhibits. Drs. Worrall, Thring, and Thomas took part in the discussion which ensued.—Dr. Pockley read notes on a case of Amblyopia due to di-nitrobenzol.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.

The autumnal meeting of this District was held on Thursday, October 18th, at the Royal County Hospital, Guildford, Mr. J. Sydney Turner, Anerley, President of the Branch, in the chair. There were eighteen members and visitors present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Spring Meeting.—It was decided to hold the spring meeting at Dorking.

Communications.—Dr. J. Mitchell Bruce read an interesting paper, entitled, The Gouty Heart.—Drs. Plimmer and Blaxall demonstrated a large number of Cultures of Pathogenic and Chromogenic Organisms.—Mr. Frank Boxall (Rudgwick) read a case of Obscure Hæmaturia, the result of an accident.

Dinner.—In the evening twelve members and visitors dined together at the White Lion, Guildford.

SPECIAL CORRESPONDENCE.

PARIS.

Drunkenness in France.—Congress of the French Surgical Association.—Medico-Military Manœuvres.—General News.

The increase of drunkenness is attracting attention among sociologists, legislators, and medical men in France. At the recent Scientific Congress at Caen this question occupied an important place in the discussion. At a special congress of the Ligue Contre l'Immoralité Publique, held at Lyons, the repression of alcoholic intemperance was one of the principal subjects under consideration. Dr. Legraine, chief physician to the Asile de Ville Evrard, read a remarkable report, in which he said that drunkenness is leading France to its ruin. Dr. Pierret, chief physician of the Brou Asylum, and Clinical Professor of Mental Diseases, treated the questions of what he terms "unconscious drunkards," who are never drunk, but daily drink more alcohol than the animal economy can tolerate. Dr. Motet, the well-known *criminaliste*, minutely described the morbid conditions resulting from an abuse of alcohol, in most instances leading to crime. Dr. Rey, chief physician of the Marseilles Lunatic Asylum, stated that Marseilles, which was formerly remarkable for sobriety, is now no longer entitled to this distinction. Formerly one asylum was sufficient for four departments—the Bouches du Rhône, Var, Gard, and Corse; now it scarcely suffices for the needs of the Marseilles population. There are 300 children in the City School feeble in mind and infirm in body, who are unable to derive benefit from the education given them. There are as many more children whom the school cannot take. Dr. Rey concluded by saying that, if the evil is not checked, he fears France will be a prey to cretinism.

The French Surgical Association has recently held its eighth annual congress. The etiology of cancer was the most important question discussed. According to M. Bard, who opened the debate, the differentiation of malignant tumours in a pathogenic sense is an error, whatever may be their origin or their structure. All the tissues of the human organism may engender cancer, and there is no reason for applying this term to epithelial tumours. Each tissue may be the seat of a specific cancer, and this cancer owes its origin to a young cell endowed with an exaggerated power of reproduction. It is superabundant vitality which differentiates the cancer cell from the normal cell. M. Bard rejects the microbic theory as to cancer. Considerable diversity of opinion on this point was expressed by other speakers. It is decided that in future the French Surgical Congress will always meet at Paris in October at the same time as the General Assembly. Many of the *congressistes* who visited the Lyons Hôtel-Dieu were disappointed to find the old white bed curtains (which have been discarded elsewhere), the old hospital smell of bygone days, and the food being prepared in the wards. M. Poncet's wards are being remodelled.

The manœuvres of the Army Health Service at Versailles are over. The wounded were quickly transported to an ambulance, thence removed to a hospital, which was temporarily arranged in the railway of the Petits Matelots. On their arrival at the hospital they were again seen by a medical officer. A sanitary train was improvised in less than seven hours. It was composed of forty carriages, including those for the transport of luggage for the medical staff and for the wounded. These carriages are spacious and airy; wire gauze replaces windows to prevent dust and grits from the machine entering the carriage. The last day of the manœuvres was occupied by the departure from the station of the Petits Matelots of the whole of the ambulance organisation, which was rapidly effected. The order was perfect, orders were correctly executed, the men were quickly classed in the railway carriages, and the luggage quickly stowed away in the carriages allotted to it.

At a recent debate of the Municipal Council on the proposed Paris Metropolitan Railway, M. Paul Brousse stated that if it is voted, he will lay before the Council and the Sanitary Committee a proposition that no spade should be put into the earth until all the precautions necessary against epidemics had been taken. In 1884 a cholera epidemic resulted in the course of carrying out public works by liberating germs buried in the soil.

Dr. Yersin has received the decoration of the Legion of Honour.

BERLIN.

The Antitoxin Treatment of Diphtheria.—General News.

It cannot be denied that a strong element of sensation accompanies modern medical discoveries. The tuberculin "boom" in 1890 is in everybody's recollection, and at present the Berlin newspapers almost every day contain polemical paragraphs on the *pro* and *contra* of the rival antitoxins (Behring's and Aronson's), which, though extremely interesting to the student of human nature, are hardly calculated to promote calm scientific judgment of the new remedy. From this point of view it is to be regretted that Virchow allowed himself to be interviewed by a reporter of a Berlin newspaper, giving his opinion in general terms, particularly liable to be misunderstood by the general public, and speaking of Aronson as the author of the first experiments with antitoxin. A letter of Virchow's to the same newspaper has followed, in which he admits that the publication of the interview has produced on the general public an erroneous impression that he is unfavourable to the new remedy. He explicitly states that this is not the case. His opinion is that present experience does not enable us to judge of the duration of the immunising power and of the doses

required; also that the therapeutic action is not absolutely certain; that it is impossible to say beforehand in which cases it may be expected: that nevertheless he considers it a matter of duty to employ the antitoxin. And now Virchow's mention of Aronson as first in the field has been taken up by Behring in the fiercest manner. This week's number of *Die Zukunft*, a clever, but certainly sensational, general weekly journal, is headed by a paper of Behring's on "Das neue Diphtheriemittel," full of violent attacks on Virchow, whom he accuses of having kept back the development of modern therapeutics, and ending by saying that Virchow must have been mystified by those who made him believe in Aronson's priority. The paper contains a number of quotations from old publications of Virchow. It is understood that Virchow will reply to the attack orally at Wednesday's meeting of the Medicinische Gesellschaft.

The new medical joke is a quotation from Ovid: "Principiis obsta; SERO medicina paratur!"

Supplementary physicians and surgeons have been appointed in the three municipal hospitals of Berlin. The physicians are Drs. Goldscheider, Stadelmann, and Krönig: and the surgeons Drs. Neumann, Hermes, and Brentano.

A new municipal hospital is to be erected in the North of Berlin.

Professor Pfleiderer is Rector of the University, and Professor Hertwig, Dean of the Medical Faculty for this year. During the last year 3,456 students were entered, of whom 2,262 were Prussian subjects.

ST. PETERSBURG.

Ether or Chloroform.—Mortality in Abdominal Sections.—Viburnum Prunifolium in Threatened Abortion.—The 6th Pirogoff Congress.—New Biological Laboratory in St. Petersburg.

A DISCUSSION recently took place at the Russian Chirurgical Society upon the relative merits of ether and chloroform as anæsthetics. Dr. Lezin spoke strongly in favour of ether, saying that deaths under chloroform were four or five times as frequent as deaths under ether. The general opinion of the Society was, however, decidedly in favour of chloroform. Dr. Troianof had administered it more than 10,000 times in the Obukhovski Hospital, and only two deaths had occurred: Professor Subbotin had given it as frequently in the Military Clinic without a single accident. Finally, a committee of the Society was elected to collect statistics and report upon this subject. The committee consists of Professors Skliffasofski (who was this summer tempted from his chair in Moscow University to become the director of the Helena Clinical Institute in St. Petersburg), Subbotin, and Ratimof, and Drs. Troianof, Pototzki, and Lezin.

Professor Ott, of the Helena Clinical Institute, publishes the results of 204 abdominal sections. The general death-rate was 11.7 per cent. In operations performed for disease of the ovaries the percentage of deaths was 7.3, for disease of the tubes 12.8, for disease of the broad ligaments 0, for benign tumours of the uterus (fibromyomata) 17.4. Dr. Phenomenof, in 100 similar operations, had 6 deaths, 3 of which were from septic infection.

Viburnum prunifolium has been strongly recommended as of use in threatened abortion. Dr. Michaelova writes that, in her experience, its use is not without risk. It increases the muscular tone of the uterus, and in three out of four cases its exhibition was followed by a separation of the ovum. It is of use in arresting hæmorrhage.

The next (sixth) Congress of Russian physicians in memory of Pirogoff will be held in Kief from April 21st to April 28th, 1896. The last was held in St. Petersburg, in January of the present year.

A new Biological Laboratory will probably be shortly opened in St. Petersburg. Professor Lesghaft has laid the scheme of the institution before the Ministry of Education, whose approval it will probably receive. A sum of 200 000 roubles has been deposited in the bank, and a building, costing 150,000 roubles, has been found. The laboratories will be open to persons who have passed through the higher educational courses in medicine or natural history.

CORRESPONDENCE.

OLIVER WENDELL HOLMES.

MY DEAR EDITOR,—I have read with full appreciation your notes of an interview last year with dear old Oliver Wendell Holmes, and am at once glad and proud (as any of us may well be) to find myself lovingly remembered as one of his old friends on this side of the Atlantic; but it is only right to make one correction. It is certainly not the case, and could not, possibly, I think, have been intended to be conveyed to you that Dr. Holmes met me in Paris in the days of Louis Philippe, for at the time referred to I was more likely to have been puzzling over the multiplication table and vulgar fractions, or over early Latin lessons in school, than over the statistical method of studying typhoid fever, under Louis at La Pitié. There was a Dr. Jackson, jun., who was a well-known pupil of Louis at that time, and was then and afterwards quite affectionately intimate with Dr. Holmes, I think it not improbable that my name may have slipped into your notes in this relation alongside of his. But, be this as it may, the true origin of my long friendship and correspondence with Oliver Wendell Holmes may possibly interest your readers; and certainly there is nothing in it which can do aught but add to the feelings of affectionate admiration with which he is regarded by the entire medical profession, not to say the whole civilised world.

The real date of my first correspondence with Oliver Wendell Holmes was 1856. In the immediately preceding year Dr. James Jackson, then only known to me by reputation, and the father of the James Jackson, jun., aforesaid, published a small volume entitled *Letters to a Young Physician just Entering upon Practice*. Being at the time a young physician myself, although old enough to have established a connection with the *Edinburgh Medical Journal*, I read this work with a strong feeling of youthful enthusiasm, and was only too happy to find, or make, an opportunity of commending it to the notice of others in a review, which I can read even now without any sense of its being overstrained, although pervaded in every line by the feelings of deep respect and gratitude excited by the perusal of this work of an evidently venerable, but to me little known, author.[1] Certainly the last thing that ever could have entered my mind in penning this anonymous tribute was that it would bring me into friendly, even affectionate, relations with one who, if not quite indisputably first of American humorists, is at all events inferior to none in the unique character and high spiritual quality of his humour.

Oliver Wendell Holmes was at this time a man in middle life, and had become very closely connected by marriage with Dr. Jackson. How it was discovered that I wrote the review in question I do not now remember; but the next post brought me a letter of acknowledgment from Dr. Jackson, and the immediately succeeding one a photograph of the old man, sent to me with his signature and with a delightful letter from Dr. Oliver Wendell Holmes, who revealed to me in it the warm affection and almost unqualified admiration inspired throughout the profession in America by the character of the senior. That portrait of Dr. Jackson is now in my retiring room at the University.

His son, James Jackson, jun., had been previously known to me by reputation as a follower of Louis, and as one who had died too early to have established a fame such as might have been anticipated from his communications to the Society of Medical Observation in Paris. He was, I believe, well known to the late Dr. Walshe.

In 1861 *Another Letter to a Young Physician* was published by Dr. Jackson, senr., with some further medical papers, including an important one on the last illness and death of Washington.

But my intercourse and correspondence with the older man may be said to have been wholly taken up and absorbed by Oliver Wendell Holmes, with whom, to my great satisfaction and advantage, I have ever since continued to correspond from time to time, the last letter received from him being certainly not quite two months before his death.

Even at the above-mentioned date of my first letter from him, the name of Oliver Wendell Holmes was well known

[1] *Edinburgh Medical Journal*, April, 1856, p. 934.

as that of an author of a quite unique charm, who was thoroughly loyal to his profession while cultivating literature with a rare amount of success.

I cannot now remember what it was in his writings that had impressed me, as I suppose the famous "Autocrat" could not possibly have been known to me till some years later.

But I know this, that as the star of Lowell had not yet risen, at least on our side of the Atlantic, the literary quality of the humour displayed in the writings of Holmes, and the large grasp of contemporary thought, combined with medical and physiological illustration, struck me as being a quite new phenomenon alike in literature and in medicine; and having been up to that time accustomed only to bits and scraps in newspapers of Josh Billings, etc., as samples of American humour, I was the more drawn to this unique phenomenon, and my personal relations with the author, as above indicated, were more than maintained by an ever-increasing familiarity with his works, on which, however, I will not at present enlarge, as my opinion on them is simply that of the whole world.

It has been well observed in many quarters that to know Dr. Holmes, even through his works, is to know him and to love him personally; but I venture to think that the relations into which I was thus accidentally drawn with him in correspondence were of a kind which justified his allusions in the interview which you record, quite apart from the apocryphal Paris incident.

For more than a quarter of a century I continued to correspond with Dr. Holmes from time to time without having ever had the chance of seeing him; and when he came to this country in 1886 I was most anxious to have it arranged that he should come to Glasgow and be in the hands of a few friends there for a visit to the Clyde and the land of Burns. The American consul here at this time was Francis H. Underwood, LL.D., a man of fine literary instincts, a personal friend of all the Boston men of eminence, and one of the early contributors to, if not editor of, the *Atlantic Monthly*, a man whose personal popularity in Glasgow would have alone secured the success of such a visit.

But it was not to be. The magnetism of London society and the necessity of coming down to Edinburgh, though but for a single day, in order to receive the degree of LL.D., exhausted all the time that could be devoted to Scotland, and I had to content myself on this occasion with the pleasure of being present at the graduation in Edinburgh, and afterwards meeting Dr. Holmes in the evening at the house of Professor Crum Brown.

In the autumn of 1891, however, I went to the United States for the first time, and was, like you, privileged so far as to spend the greater part of a day with Oliver Wendell Holmes at his beautiful summer residence at Beverley Farms.

I did not make any notes of that interview at the time, and have, therefore, not much in detail to say about it; but it was peculiarly delightful to find the dear old man actually awaiting me at the station, full of gentle kindness and astonishing animation; full, also, of beautiful reminiscences and little revelations of his innermost self, which will remain with me, I trust, to the last.

At this time Mrs. Sargent, his widowed daughter, who accompanied him to this country in 1886, was dead, and he lived with his son, the eminent Judge Holmes, referred to in your memoir, who was with us at lunch at Beverly Farms on that occasion. The conversation naturally had a very wide range, and I cannot make even an attempt to reproduce it; but it left on my mind the same consistent impression which Oliver Wendell Holmes produced upon everyone alike in his works and in his conversation, of a mind rendered cheerful and serene, not to say youthful, even in extreme old age, by a kind of optimism which could only be the result of a well assured and loving trust in the best and highest spiritual things. In him this element of what may be very properly called "faith" was so steadily maintained as to keep him easily at a spiritual level far above the small vexations which disturb inferior natures. Some of the memoirs of him lately published seem to me to assume too easily that this happy temper of his was a result merely of his fortunate surroundings. I will venture to indicate, without going into any detail, that this was by no means so. Oliver Wendell Holmes was a happy man to the last, in spite of some very disturbing domestic circumstances (for which no one was to blame), but which in many high-strung natures might have tended to quite the opposite result.

There was a curious similarity in this respect, as in some others, between him and my equally dear friend Dr. John Brown, the well-known author of *Rab and His Friends*; but the temperament of the two men, alike in one thing—lovableness—was very different, and the effect of calamity upon them differed accordingly. Both of them, however, will remain, to all who have personally known them, and to a multitude of admirers who have not had that privilege, among the noblest, as well as the most lovable men of genius that our age has produced.—I am, etc.,

W. T. Gairdner.

P.S.—One little incident of the conversation that afternoon is perhaps worthy of being recalled and here set down, because it appeared to me at the time so absolutely characteristic: and there is no one else in a position to record it. In the course of a long drive in his little open carriage, in which he took me to see some of the noble elm trees of which he had sung the praises in his works, we found ourselves were not far from Salem, the birthplace of Nathaniel Hawthorne, with its terrible memories of witch persecutions in the seventeenth century. I had just been visiting a very old lady (all but a centenarian) well known to him, whose marvellous vitality and restless mental activity contrasted, in a way that almost seemed "uncanny," with the bodily frame wasted and decayed to the last possible degree consistent with life. I ventured to say to him: "It is fortunate that Mrs. —— did not live in Salem in the middle of the seventeenth century; for some of your ancestors or their friends would certainly have had her burned for a witch." He looked me in the face, half seriously and half in jest, and said at once: "Is she *not* one?" I could not help thinking at the moment of Elsie Venner, with the impossible rattlesnake theory so elaborately worked out through the aid of the "scientific imagination," till it seems to the average reader to be gravely propounded as an outcome of the laws of heredity.—W. T. G.

THE BITTER CRY OF LONDON AS A TEACHING MEDICAL CENTRE.

Sir,—Your leading article of October 13th has called attention to a question that deserves the thoughtful consideration of the profession in London. You have dealt with two aspects of the subject; first, that which refers to the education of the student, and the means already taken to attract him to London; and, secondly, to the fact that under present arrangements the practitioner does not come here, but prefers Vienna, Paris, or Berlin as places for post-graduate study.

With the former aspect of the question I have no intention of dealing. My remarks will only refer to the latter. Having worked during the last eight years at organising classes for practitioners in London, I have come into personal contact with men from all parts of the world, and have made myself acquainted with their wants and wishes. The conclusion I have come to is that what is needed is a central institution, with which all the hospitals unconnected with medical schools could be associated, and to these hospitals should be added our great Poor-law infirmaries. The central institution should contain lecture rooms, laboratories, waiting rooms, and a few beds, in which would be collected by each lecturer the cases needed to illustrate his course of lectures. The lecturers should be chosen from the whole of the professors and teachers in London. The clinical material in London is unparalleled and inexhaustible. We possess all the necessary elements of success, save that of some such organisation as I have roughly and briefly sketched out. For this, money will be needed. When it is clearly understood by the public that by founding such an institution and endowing it generously they would enable the men who have charge of their health and their lives to keep themselves abreast of the latest discoveries of medical science there would be no lack of funds. If no British philanthropist comes forward to emulate Johns Hopkins in founding a similar institution in Baltimore the needful sum could be raised by other means. A detailed scheme explaining the objects in view will soon

be formulated, and we may hope that at no distant date London will take its proper position as the greatest centre for post-graduate study, not only in the empire but in the world.
—I am, etc., J. Fletcher Little, M.B., M.R.C.P.
Harley Street, W., Oct. 22nd.

THE ANNUAL MEETING OF THE ROYAL COLLEGE OF SURGEONS.

Sir,—Will you please allow me to draw the attention of Members of the Royal College of Surgeons of England to the fact that the annual meeting of Fellows and Members takes place at the College on November 1st, at 3 o'clock in the afternoon, when the following resolution will be proposed; and to urge upon all who can to attend on that day and support such resolution?

This meeting is of opinion that the resolution which has so frequently been passed unanimously at annual meetings of Fellows and Members, namely—"That Members of this College should have some voice in the election of members of Council"—be approved, and that the President and Council be respectfully asked to give effect to such resolution.

—I am, etc.,
Chiswick, Oct. 23rd. Joseph Smith.

BERI-BERI.

Sir,—Whilst medical officer at Wyndham, East Kimberley, Western Australia, I had under my care sixty aboriginal native prisoners. These were chained up at night in a galvanised iron one-roomed building 30 feet by 14 by 12. The only ventilation was by means of four small, barred, open windows. The floor was of jarrah wood. Two iron buckets were allotted to every three or four men—one into which the excreta were passed, the other containing drinking water. The gaol was built on piles on the edge of a marsh not twenty yards from the water of Cambridge Gulf. The external night temperature was never below 75°, and frequently up to 90°. During the day they had as food per man 1 lb. of bread, ¾ lb. of meat, generally salted, ½ lb. of rice, with 3 pints of sweetened tea without milk. Occasionally broth was served, and the rice was supposed to act as a substitute for fruit and vegetables, which were not procurable. It must be remembered that the natives had been accustomed to roam unclothed, wild in the bush, free and unrestrained, living on kangaroo, iguana, honey, fish, roots, barks, etc., sleeping on the ground with nothing but the canopy of heaven as a roof.

Under these conditions a number of them—I regret I did not retain the details—developed beri-beri, the principal feature of which was the extensive œdema and liability to sudden death, apparently from syncope. The white inhabitants of the town, none of whom were affected, called the disease scurvy, but scorbutus it was not, for there were none of the classical symptoms of that disease, such as hæmorrhage into joints, from the gums, etc., nor would it prove amenable to the administration of citrate of potash, vinegar, onions, etc. Beri-beri could not have been introduced amongst the niggers from without, for there was no one either entering or leaving the place, a steamer calling but once every two months. It must, therefore, have had a *de novo* origin, and is, so far as I know, the first time beri-beri has ever been seen in the aboriginal natives of Australia.

From what I have read of the epidemic in the Richmond Lunatic Asylum, Dublin, and judging from my experience abroad, I should undoubtedly say the disease in the asylum is beri-beri.—I am, etc.,
Middlesbrough, Oct. 21st. J. A. Wetherell, M.D.

Sir,—In view of the epidemic in Dublin, it may be worth while mentioning that an outbreak of beri-beri occurred amongst the Lascar crew on one of the P. and O. Company's vessels running between Italy and Egypt in November and December, 1893. The native crew felt the cold very much in the Italian ports, so that it was difficult to induce them to keep their sleeping quarters well ventilated. When, however, the character of the epidemic was recognised, a thorough disinfection of their quarters and attention to ventilation stopped the progress of the disease.

The symptoms present were those of a peripheral neuritis, accompanied by general subcutaneous œdema. Mental apathy was a prominent symptom. Two out of the six cases were fatal, and fever (100° F.) was present in three. The diet of the crew was chiefly curry and rice; meat, fish, and fruit occasionally.

The above facts seem to show that bad hygienic conditions may be a predisposing cause in the disease. The Lascars themselves believe it to be contagious. If so, the contagion must have come from the native crews of other ships met at Brindisi, as none of the men had been out of the Mediterranean for six months. No European suffered from the complaint.—I am, etc., F. L. Orr, M.B.Lond.,
Florence, Oct. 18th. late Surgeon ss. *Cathay*.

BARRACK SCHOOLS INQUIRY.

Sir,—The attention of my Board has been directed to the article under the above title in the British Medical Journal of September 1st, in which the Scotch system of boarding-out is discussed, and special reference made to certain cases boarded out by this parish.

My Board regret that in your otherwise fair criticism undue prominence should have been given to the two homes singled out by their visitors as unsatisfactory. It surely must be creditable to the Board, and proof of the care taken in housing their children, when, out of 180 homes visited last year, only four have been reported as unsatisfactory; and the remarks of the visitors regarding the two houses in question were made in order that the domiciles should either be thoroughly repaired or the children removed. The boy to whom you also specially allude as absent from morning till night without food was only acting like many other boys during holidays—going with a number of his companions to assist at a neighbouring farm. At the date of the visit in August last inquiry was made into this boy's conduct, and it was found highly satisfactory, both his guardian and school teacher bearing testimony to his good behaviour.

Our visitation is regular and systematic, and each child seen twice a year. We also get special occasional reports from the local inspectors, the medical officers, and school teachers; we are thus always in touch with our children, their condition, and circumstances.—I am, etc.,
Jas. R. Motion.
Acting Inspector of Poor.
Parochial Board, Barony Parish, Glasgow, Sept. 20th.

*** In answer to this letter, we would say that in the reports of the children under Miss M'Niven's and Mrs. M'Eachran's care, no mention was made of any proposed change. In the case of the former, the visitors say, "the house had every evidence of being damp, and although they had got a new floor in, there was nothing done for removing the damp so far as we could learn," and yet the visitors do not recommend the removal of the children or the cure of the damp, but merely note that "the children had cold," and "that cod-liver oil and flannel were needed for this house." Mr. Motion finds cause for congratulation that out of 180 homes visited only 4 were reported unsatisfactory; but sometimes homes are found satisfactory because too low a standard of requirements is accepted, and too perfunctory or cursory an inspection is made. For instance, on p. 12 of the 1893 report, two girls, aged 11 and 8, are allowed to remain in a home "not so good as we might wish" because "they seem happy with Widow Duncan M'Phail." On p. 10 we learn that the visitors found Miss Smith, the guardian of a girl of 13 and a boy of 5, confessedly drunk in bed, yet the children are not removed, but another three months' grace is allowed. On p. 6 the visitor reports that owing to a ne'er-do-well's return, "one poor rickety, undersized *protégé* is being deprived of her education, being altogether absent from school for some weeks, and her romp in the street, as she assists "granny" at slop finishing because this dutiful son chooses to billet himself with them when out of work." "Were it not," the report continues, "that the case will soon be off the roll, we would strongly recommend boarding out." As this child is, unfortunately, omitted from the list on p. 54 we cannot tell her age, but if she is still fit to be at school we conclude she is not too old to be boarded out among those who would help her. On p. 4 we read of the "untidy habits of a guardian; house dirty and confused" of another household where "a bright little girl" is

boarded out and where "quarrelling" goes on. Page 5 reports of a "house in dirty and confused condition, floor unswept, beds unmade, although the hour was 6 o'clock." On p. 9 we learn of a Mrs. M., who has the care of four children, but who allows "a girl of 13½ to sleep in the same room as the boys" and is only "warned" that this would not be allowed. We could quote other instances of what most people would consider unsatisfactory homes, but we have already exceeded Mr. Motion's four. It should be remembered that the lower the child the greater the need for a superior home, and that the adoption of a standard so low as that which evidently exists in the mind of these inspectors does not offer the children reasonable possibilities of rising in life.

"YOUNGEST ENGLAND."

SIR,—Mr. Biddle, in the BRITISH MEDICAL JOURNAL of October 13th, p. 822, points out that the comparative incidence of mortality upon the age group 0 to 5 years has increased continuously during the last three quinquennia, and he assumes that therefore the comparative power of resistance of that group to disease and death is diminishing year by year. It seems to me that the inference is not justified by the data. The coefficients of mortality are obtained by dividing the death-rate at the age group 0 to 5 years—per 1,000 living at that age group—by the general death-rate. Even if the coefficients so obtained increase, there may be a diminished mortality at the age group under consideration, and rates of mortality are at present the only means of measuring resistance to disease, and all inferences must be based upon them. I give the mortality-rates for quinquennial periods:

Year.	Males.			Females.		
	Death-rate, All Ages.	Per-centage De-crease.	Death-rate, 0 to 5 years.	Per-centage De-crease.	Death-rate, All Ages.	Per-centage De-crease.	Death-rate, 0 to 5 years.	Per-centage De-crease.
1871-75 ...	23.3	—	69.9	—	20.7	—	60.0	—
1876-80 ...	22.1	5	67.0	4	19.5	6	56.8	5
1881-85 ...	20.5	12	61.3	12	18.3	11	51.9	13
1886-90 ...	20.0	14	61.9	11	17.8	14	52.0	13

From the table it is obvious that the mortality 0 to 5 years has diminished considerably during the last twenty years, but not in the same proportion as the general death-rate. But this does not mean that the power of resistance to disease at the 0 to 5 years age period is diminishing. The same criticism applies to Mr. Biddle's coefficients for special diseases.—I am, etc.,

Liverpool, Oct. 17th. HUGH R. JONES.

THE ETIOLOGY OF TYPHOID FEVER.

SIR,—The distinguished position which Dr. Klein holds as a bacteriologist gives great weight to the views on the above subject which he expressed in his recent address to the Sanitary Institute, and makes it the more incumbent on those who are unable to accept them to avail themselves of the opportunity which he thus offers to enter their protest against them.

It is noteworthy that whilst in the discussion which Dr. Klein has invited precision is of the very first importance, he adopts as the designation of the affection which he claims to be specific a name, typhoid, which is as vague as any in the whole range of medical nomenclature. What does Dr. Klein mean by "typhoid," and how does he propose to differentiate it not only bacteriologically but clinically from other forms of fever? In regard to the specific distinction between the so-called typhoid bacillus and the common colon bacterium he not only admits that he is not in agreement with other distinguished authorities on the subject, but he entirely gives himself away in the remarkable admission that "he does not mean to deny the possibility of the existence of intermediate forms, both morphological and cultural between bacillus coli and the bacillus of typhoid," though he somewhat inconsequentially adds that what he does maintain is that, as far as direct observation at present goes, the bacillus coli and the bacillus of typhoid fever are two well-developed species," for the reason that he has not himself yet succeeded in commuting the one into the other. No one probably knows better than Dr. Klein that the whole question of specificity in regard to the relation to it of the functions of time and environment is a most debatable one, even in regard to organisms whose complexity of structure makes modification of type far more difficult than it would be in the case of those of the kind now under consideration. But what is more to the point is that, so far from his statement that the claim for the non-specificity of typhoid fever rests only on bacteriological evidence being correct, there is a large and increasing number of observers, particularly amongst those who have had the widest experience as medical officers of health, who make this claim on clinical grounds especially, quite apart from the overwhelming considerations founded on the general force of the great law of evolution, particularly in regard to the minute organisms with which the bacteriologist has to deal, which every day is helping to strengthen, and which it is simply amazing that Dr. Klein can ignore.—I am, etc.,

Gloucester, Oct. 22nd. FRANCIS T. BOND, M.D.

THE FILTRATION OF AGAR-AGAR.

SIR,—It is well known to practical bacteriologists that much time is spent in filtering agar-agar, and that even with the use of the double-walled hot water funnel, the so-called Plantamour's filter, several hours, even days, are often needed to obtain a satisfactory result. For the last three years I have employed the method used at the Pasteur Institute, Paris, and have never experienced the least difficulty in obtaining a rapid filtration of the agar. The important requisite is the filter paper known as "papier chardin." In using this filter paper the hot agar-agar is found to filter as rapidly as nutrient gelatine does in the ordinary method. A litre may be thus obtained in half an hour, and this result follows without the necessity of using a hot water funnel. All that is required is to heat the agar-agar in an autoclave to 120° C., and as quickly as possible pour it on to the filter paper in a cold funnel.

I usually obtain "papier chardin" from Cogit et Cie., 49, Boulevard St. Michel, Paris. I venture to give these particulars as no mention of this filter paper is found in any of the modern textbooks, and, so far as I am aware, it has never been employed in any English laboratory except by myself.—I am, etc.,

Aberdeen, Oct. 11th. WM. ST. C. SYMMERS, M.B.Aberd.

PLYMOUTH WORKHOUSE AND THE GUARDIANS.

SIR,—Will you allow me to correct the statement which appears in the BRITISH MEDICAL JOURNAL of October 20th that the Plymouth guardians have adopted the recommendations of your Commissioner? I regret to say that the matter is not by any means settled, as there is strong opposition in certain quarters to the employment of trained nurses.

I may, perhaps, be allowed to add that I, as recently-appointed medical officer to the Plymouth workhouse, had applied in April last for a staff of six nurses in place of two, and that though your report (which appeared in September) is a most valuable one, and has, no doubt, had its effect, it is scarcely fair to the guardians or to myself to assume that nothing had been done in the direction of reform. Many of the guardians are anxious to have thoroughly efficient nursing, and have been so for some time.—I am, etc.,

Plymouth, Oct. 20th. CHARLES J. COOKE, M.D.

THE FEEDING OF FEVERS.

SIR,—Dr. Lauder Brunton says in his Harveian lecture, published in the BRITISH MEDICAL JOURNAL for October 20th, "The great clinician Stokes wished to have as his epitaph, 'He fed fevers.'" Permit me to say that it was not Stokes, but another equally great Dublin master—namely, Graves—who wished for this epitaph, having been much more instrumental in bringing about this change in medical practice than Stokes. This is indeed plainly stated by Stokes him-

self in the biographical notice of Graves which precedes his edition of the latter's *Studies in Physiology and Medicine* (London, 1863, p. lix). Stokes says: "Graves was going round the hospital, when, on entering the convalescent ward, he began to expatiate on the healthy appearance of some who had recovered from severe typhus. 'This is all the effect of our good feeding,' he exclaimed; 'and lest, when I am gone, you may be at a loss for an epitaph for me, let me give you one in three words:

"'HE FED FEVERS.'"

Trousseau has alluded to this point in his introduction to the French translation of Graves's Clinical Lectures, where he says: "Graves's maxims relating to the regimen of fever have become the guide of practitioners of all countries; yet when he inculcated the necessity of giving nourishment in long-continued pyrexias, the Dublin physician assailed singlehanded an opinion which appeared to be justified by the practice of all ages. Had he rendered no other service than completely reversing medical practice upon this point, Graves would by that act alone have acquired an indefeasible claim to our gratitude."—I am, etc.,

Harley Street, W., Oct. 21st. JULIUS ALTHAUS, M.D.

MIDWIVES' REGISTRATION AND THE LANCASHIRE AND CHESHIRE BRANCH.

SIR,—A meeting of this Branch (Manchester, October 10th) has, in spite of the opposition of a large minority, affirmed the principle that the presence on the Council of gentlemen who continue to train and certify midwives is anomalous. We supported these gentlemen, as we felt that the attack upon them was unfair and ungenerous in view of the present and only mode of training available for these women. One speaker had the bad taste to object to the word "gentlemen" in the resolution, a slight indication of the unfortunate spirit evoked in this controversy.

Dr. Rentoul's name was not favourably received by the party for whom he has done so much, and his place as leader was ably taken by Mr. Colin Campbell, whose energy and labour was rewarded by the victory of his party.

A protest (signed by 318 members) against the report of Dr. Rentoul's committee was refused admission to the minutes. I was told no discussion would be permitted, and merely moved its adoption. We were prepared with the following short "creed," which, it seems to me, is fair to both parties, and which is the substance of our protest:

1. Midwives are and will be.

2. According to all evidence they are susceptible of improvement.

3. Their education and control is impossible without registration or enumeration, call it what you will.

4. Centralisation will abolish the misleading "diplomas" so much objected to.

5. We, however, cannot call men "infamous" who have hitherto carried out the only method of training known.

6. Lastly, factious opposition may eventuate in a Bill entirely ignoring the rights of the profession.

For these reasons we considered a protest justifiable, and we wish our opponents to say what they object to in any one of them. What is their policy? They say it is to abolish the midwife, and substitute an improved midwifery nurse. How is she to be trained, how certified, how controlled? Will they meet the wants of the poor, and is it certain that the young doctor and his improved nurse will not be successfully opposed by uneducated, untrained, self-styled midwives?

This matter must be faced from a common-sense point of view. We do not wish to deprive any member of our overcrowded profession of work, or the chance of work, but we cannot dispossess an old-established class, and the law would not help us to do so.

Again, had we no right to protest against half of our funds (£250) being disposed of by a small majority—that is, two—after excluding incompetent votes? Had we no cause for protest in the votes of those members of Dr. Rentoul's committee who had bound themselves to payment of the printing expenses of his pamphlet in the event of the Branch not granting the money? Had we no cause for protest in a sum so large being devoted to one object, and that a debatable one?

The meeting carried a new rule making a payment of the first subscription a qualification for voting, so that the experience of Liverpool is not likely to be repeated. The need for such a rule should be a hint to other Branches.

A proposed addition to our laws: That no grant of money should be valid unless passed by a majority of two-thirds of those present, was rejected by a party vote. I saw one wavering member secured by being told he was voting against "bogus diplomas." The connection between a rule to prevent a faddist or a small clique obtaining a snatch vote, and bogus diplomas is not very clear. Other circumstances may arise to show the wisdom of such a safeguard.

Dr. Woodcock's speech was a good one, and made a good impression. I regret that, having nominated another candidate for the Parliamentary Bill's Committee, I was unable to support him. The rhetoric of some other speeches was too strong to be effective.

One word more. It is too bad of those who confess that they feel the opposition of midwives in their pockets to accuse the grantors of nursing certificates as being moved only by pecuniary motives. A little less imputation of unworthy motives, by this speaker and by that, would not weaken their cause.—I am, etc.,

W. MACFIE CAMPBELL, M.D.,
Liverpool, Oct. 15th. Chairman of Protest Committee.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A SURGEON-CAPTAIN under orders for India this trooping season wishes to exchange with an officer having a year or a year and a-half longer at home.—Address "Indian Exchange," care of Messrs. Holt and Co., 17, Whitehall Place, London, S.W.

THE NAVY.

THE following appointments have been made at the Admiralty: ARTHUR W. MAY, Staff Surgeon to Gibraltar Hospital, November 1st; WILLIAM G. STOTT, B.A., M.B., Surgeon to the *Philomel*, October 18th; FRANCIS H. A. CLAYTON, M.B., Surgeon to the *Thrush*, October 18th; SAMUEL W. JOHNSON, Surgeon to the *Melita*, October 17th; CHARLES J. S. KELSALL, Surgeon to the Walmer Depôt, November 15th; HUGH W. MACNAMARA, Surgeon to Gibraltar Hospital, November 1st; NORMAN S. SMITH, Surgeon to the *Benbow*, October 19th; PERCY E. MAITLAND and GEORGE T. BROATCH Surgeons to the *Grafton*, undated.

Fleet-Surgeon RICHARD CLARKE NUTT died at Plymstock, Devon, on October 4th. He was appointed Surgeon May 6th, 1824; Staff Surgeon October 18th, 1839; and Fleet-Surgeon May 13th, 1859; and had retired from the service. He was the oldest naval medical officer and the senior pensioner of Greenwich Hospital.

A Greenwich Hospital pension of £50 a year for Fleet-Surgeons and Staff-Surgeons is vacant by the death of Staff Surgeon H. T. S. BEVERIDGE, M.D.

The Greenwich Hospital pension of £50 a year for Staff-Surgeons and Fleet-Surgeons, vacant by the death of Fleet-Surgeon R. C. Nutt, has been awarded to Deputy-Inspector-General D. FINUCANE.

ARMY MEDICAL STAFF.

SURGEON-MAJOR E. H. FESN, C.I.E., Coldstream Guards, who was seconded for service on the staff of Lord Lansdowne, the late Governor-General of India, will be restored to the establishment of the Brigade of Guards in the vacancy caused by the transfer of Surgeon-Major Cross, Scots Guards, to the 1st Life Guards.

Surgeon-Lieutenant-Colonel H. F. HENSMAN, 1st Life Guards, attained the age of 55 on October 25th, and will consequently be placed on retired pay.

Surgeon-Captain H. E. H. SMITH is seconded for service with the Egyptian Army, October 12th.

INDIAN MEDICAL SERVICE.

SURGEON-MAJOR W. O'HARA, Madras Establishment, is promoted to be Surgeon-Lieutenant-Colonel from September 30th. He joined the department as Assistant Surgeon September 30th, 1874.

The undermentioned Surgeon-Captains, having completed twelve years' full-pay service, are promoted to be Surgeon-Majors from September 30th:—*Bengal:* A. W. D. LEAHY, R. R. WEIR, M.B. *Madras:* R. E. S. DAVIS, M.B.; W. H. NEILSON, M.B. *Bombay:* W. H. BURKE, M.B.; J. CRIMMIN, V.C.

Surgeon-Lieutenant-Colonel HUGH JOHNSTONE, M.D., Bengal Establishment, is promoted to be Brigade-Surgeon-Lieutenant-Colonel, May 19th. His first appointment is dated September 30th, 1867.

Surgeon-Major JOSEPH HUNTER, M.B., Madras Establishment, has retired from the service, which he entered as Assistant-Surgeon, March 21st, 1876. He was in the Afghan war in 1880 with the Khyber Line Force, and has the medal granted for that campaign.

ARMY MEDICAL RESERVE.

Surgeon-Captain B. O. Barnard, M.B., having vacated his appointment in the Royal Alderney Artillery Militia, ceases to be an officer of the Army Medical Reserve of Officers, October 24th.

Surgeon-Captain A. W. Barnley, having resigned his Volunteer appointment, ceases to be an officer of the Army Medical Reserve, October 24th.

THE VOLUNTEERS.

Mr. Allister Grant-Macdonald, M.B., is appointed Surgeon-Lieutenant to the 1st Fife-shire Light Horse, October 24th.

Mr. Edwin Morton, M.D., is appointed Surgeon-Lieutenant to the 2nd Volunteer Battalion the Worcestershire Regiment, October 24th.

Surgeon-Lieutenant A. B. Chambers, M.D., 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment), is promoted to be Surgeon-Captain, October 24th.

Brigade-Surgeon-Lieutenant-Colonel Sir Douglas Maclagan, Knt., M.D., the Queen's Rifle Volunteer Brigade the Royal Scots (Lothian Regiment), retires, retaining his rank and uniform, and at the same time vacating his appointment in the Forth Volunteer Infantry Brigade, November 2nd.

VOLUNTEER MEDICAL STAFF CORPS.

Quartermaster B. R. Howell, the Manchester Companies, is granted the honorary rank of Captain, October 24th.

STAGNATION IN PROMOTION OF THE MEDICAL STAFF.

Remedy submits the following observations: The time rapidly approaches when the Secretary of State for War will have to consider the selection of the next Director-General. Many think the tenure of that office should be five, instead of seven years, as at present. The extension of service in the position is unjust to others. All officers should be permitted to retire voluntarily at 55, and be compulsorarily retired at 60 years of age. The wear and tear of service is severe, and sick leave should carry permission to seek change of climate when recommended by a medical board. The extension of age retirement in the highest rank is strongly opposed, and is a mere stop gap. Something must be done to expedite promotion, in the interest of the State, the credit of the army, and advantage of the soldier. No officer should be promoted unless he has served a full period of foreign service to qualify in the rank. Surgeon-Lieutenant-Colonels should serve seven, and Surgeon-Colonels ten years abroad to qualify for promotion. The "three years in the rank prior to retirement," should be abolished. The rank of Brigade-Surgeon Lieutenant-Colonel should be merged in that of Surgeon-Colonel.

*** The objection to the last proposal is, that the number of Surgeon-Colonels would be so large as to be out of proportion, and thus raise strong objection in the army at large. The seven years' tenure of the position of Director-General has been defended as necessary for sufficient continuity in administration.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE SALE OF POISONS.

On October 17th, in the Bloomsbury County Court, the case of "The Pharmaceutical Society *v.* Mundey" came before his Honour Judge Bacon. The claim was to recover five penalties under the Pharmacy Act for dispensing drugs with opium in them, there being no qualified chemist on the premises, which are called the Empire Drug Company (Limited), Mare Street, Hackney. Mr. Gray, barrister, appeared for the plaintiff, and Mr. H. C. Richards for the defendant. Counsel said the defendant carried on business as a chemist at Mare Street. He was handed two prescriptions which contained opium. The defendant was alone in the shop, and made up the article in the shop. The drugs were analysed, and the medicines contained 20 minims of tincture of opium and the linament half a fluid ounce. Opium was described as a poison in the Pharmacy Act, and the defendant's name did not appear on the *Register*, and he was therefore liable for penalties. Mr. Richards said it was purely a question of the Act. On one occasion they were wrong and paid a penalty of £10, but they were not now liable. Evidence was given of the purchase of bottles of medicine from the defendant by Mrs. Partridge, which he made up from prescriptions. The defendant said he had been sued before, and was very careful. He told the witness he could not put the opium in, but he could put in something which would do as well, and that was done, with Mrs. Partridge's consent, in the medicine, but he put in no tincture of opium in the liniment, leaving to Mrs. Partridge to get it done elsewhere. His books proved it, and the entry was made in her presence. He was refusing poison prescriptions every day. His Honour found a verdict for the plaintiffs for £25.

SURGERY OR DISPENSARY?

Omega writes: Would it be unprofessional conduct to open a surgery for the working classes in a large town where the fees would be is. for advice and medicine and 1s. 6d. for visit and medicine, provided that no circulars or cards were sent out and no intimation of fees outside the surgery; simply the word "Surgery" painted on the darkened window and the medical man's name and hours of attendance on an ordinary brass plate on the door?

*** Anything that would tend to lower a noble profession to the level of a trade cannot be too jealously avoided. A thoughtful consideration, moreover, of "Omega's" suggestive interrogation leads us to apprehend that the word "Surgery," in conjunction with the unusual notifications on the doorplate, may eventually prove to be a mere substitute for the more or less discredited "dispensary." Need we give further expression to our views on the subject?

MIDWIFERY SUBSTITUTES.

D.—Although it would have been a graceful act of courtesy on the part of "D." to have attended the lady in her accouchement as the substitute of "S.," and on his return home to have relinquished the case to him, we nevertheless fail to recognise, under the circumstances related, any medico-ethical obligation to do so. We may note further that it was but natural that the lady should shrink from being attended by an utter stranger—an event which "S." as a practised obstetrician, should have foreseen and provided for by suggesting "D." as his acting *locum tenens* in her special case.

THE TITLE OF "DR."

We have received a letter from a correspondent signing himself "M.D., M.R.C.P., and L.R.C.S.," in reference to our reply to "Enquirer" in the British Medical Journal, of September 8th, on the above subject.

Our correspondent takes exception to the reply, and suggests that we should put our foot down firmly, and say that no one is entitled to put "Dr." before his name unless he holds the degree of M.D.

In the present unsettled state of the law we do not feel ourselves qualified to speak in such definite terms on a subject on which there must necessarily be many opinions.

If we were to adopt our correspondent's suggestion, inquiry would immediately be made on what ground we had given such an unqualified opinion.

It has not been held by the General Medical Council as a point on which they would hold an inquiry, and we are extremely doubtful whether any court would enforce the penalty prescribed by Section 40 of the Medical Act, 1858, against a general medical practitioner who, without holding the degree of M.D., had prefixed the title "Dr." to his name.

It must also be borne in mind that except where our replies in the Medico-Legal column are given with express reference to medical etiquette, they are, as far as possible, based on legal principles.

There is another point raised by our correspondent in reference to the title of physician, and on this we give our correspondent's views *in extenso*, and accordingly we quote his letter as follows:

"This brings me to another point, 'the title of Physician'—a subject upon which you also have a letter, and to which you have replied editorially. 'Dr.' is a title, not a profession. The profession of a medical practitioner is that of a physician, and our American friends have adopted with their usual sagacity this ancient term long ago. Instead of sending for the 'doctor' they send for the 'physician.' The term in this country was formerly confined to Fellows of a College of Physicians, who were prohibited by the by-laws of their College from suing for fees. These also were called 'consultants' when they reserved themselves for consultations with general practitioners, and did not receive patients alone. But both these terms have lost their old significance. Every Licentiate of the above College is now a legally-defined 'physician,' and ninety-nine out of every hundred medical men now registered are physicians and surgeons. The old 'consultant' has ceased to exist as a separate branch of the profession; the newer 'specialist' has taken his place. Therefore it appears to be to be much more sensible, and we ourselves can do a great deal towards this, to educate the public to call us 'physicians' and not 'doctors,' and I cannot see any good reason why your correspondent should not adopt the new mode, and put on his plate 'Mr. So-and-So, Physician.' Why should a physician be ashamed of honestly putting his profession on the doorplate of his professional residence where he is not ashamed to receive his patients and take their fees? To my mind, it is a silly and senseless piece of absurdity to put 'Mr. So-and-So,' and leave it to the public to guess what profession we follow.

"P.S.—A county court judgment was given a few weeks ago against (very unjustly) a claimant L.R.C.P. for debt, because he was a physician and could not sue, which was a legal error. The judge was confusing the county court law with the by-law of the College of Physicians relating to Fellows mentioned above."

We have not published our correspondent's letter in its entirety, because we think it might lead to further correspondence on the subject of the title of "Dr." for which we have not sufficient space. We do not, of course, hold ourselves responsible for our correspondent's views on the subject of the title (or practice) of a physician. We have before commented on the county court judgment to which our correspondent refers, giving practically the same views as he himself has done.

JURORS AND CORONERS' INQUESTS.

Staff-Surgeon R.N. writes to inquire whether a duly qualified medical man can be legally summoned to attend and act as a juror at a coroner's inquest, and he quotes Section 25 of the Medical Act, 1858, as exempting him from such service.

*** This question is an important one to medical practitioners, and we may state that as a rule they are not summoned to attend as jurors either in the coroner's court or in any other of the judicial courts, from which latter they can undoubtedly claim exemption under the

Juries Acts as well as under the special Act to which our correspondent refers. With regard to the coroner's court and the summoning of jurors, there is no special jurors' list from which such may be taken, and in the Juries Act, 1825 (to be read in conjunction with that of 1870), Section 52, it is enacted, after citing the list of exemptions save and except "that the coroners shall take and make all inquests by juries as they have been used and accustomed to do" before the passing of that Act; and on reference to Edward VI it is found in the Act relating to coroners that the persons they can summon for jurors are those "of full age, sound in mind, neither a felon nor an outlaw, and being a British subject." Thus it appears that almost anyone may be liable to this service, and for the reason that inquests being held in or near the locality where the deceased died or was found dead, which may be in a remote village or many miles from a town, it may so happen that the residents are not on the usual jury lists, and the coroner or his officer has to collect the first twelve men he can secure, otherwise he might have to summon from a distance jurors who might be compelled to travel many miles to the place of inquest.

With regard to jurors generally, the Act provides that from six to eight days' notice should be given. This could not apply to coroner's juries, who may be required at a day's, or even a few hours' notice; and in some places (Dublin, for example) the jurors are collected as they pass by the door of the place where the inquest is held. We understand in the metropolis it is not the custom of the coroners or their officers to summon medical men if they are known to be so; and if our correspondent who was summoned as a juror to attend at the St. Pancras Coroner's Court one day this month will signify to the coroner that he is a duly qualified medical man, we can assure him that he will not be so troubled in the future.

FAIR PLAY, in his irate protest, has not only omitted to comply with our essential rule of authenticating his communication, but, in forwarding the alleged professional qualifications of the ethically offending practitioner at Fulham, has failed to enclose his name with the view to publication or transmission to the qualifying authorities.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,105 births and 3,405 deaths were registered during the week ending Saturday, October 20th. The annual rate of mortality in these towns, which had been 16·0 and 16·7 per 1,000 in the preceding two weeks, further increased to 17·0 last week. The rates in the several towns ranged from 11·6 in Plymouth and in Leicester and 12·3 in Norwich, to 22·6 in Sunderland, 22·9 in Liverpool, and 24·3 in Burnley. In the thirty-two provincial towns the mean death-rate was 17·7 per 1,000, and exceeded by 1·8 the rate recorded in London, which was 15·9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1·9 per 1,000; in London the rate was equal to 1·7, while it averaged 2·1 per 1,000 in the thirty-two provincial towns, and was highest in West Ham, Gateshead, Derby, and Sunderland. Measles caused a death-rate of 1·8 per 1,000 in Sunderland, 2·2 in Hull, and 2·8 in Gateshead; scarlet fever of 1·6 in Huddersfield; whooping-cough of 1·4 in Croydon; "fever" of 1·1 in Derby; and diarrhœa of 1·5 in Sunderland and 1·8 in Wolverhampton. The 94 deaths from diphtheria in the thirty-three towns included 61 in London, 9 in West Ham, 6 in Liverpool, and 3 in Bristol. Four fatal cases of small-pox were registered in Birmingham, but not one in London or in any other of the thirty-three large towns. There were 60 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, October 20th, against 98, 84, and 63 at the end of the preceding three weeks; 11 new cases were admitted during the week, against 14, 11, and 8 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,214, against 2,084, 2,145, and 2,171 at the end of the preceding three weeks; 261 new cases were admitted during the week, against 258 and 262 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, October 20th, 932 births and 498 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 14·9 to 17·6 per 1,000 in the preceding four weeks, was 17·5 last week, and exceeded by 0·5 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 12·0 in Perth to 22·9 in Paisley. The zymotic death-rate in these towns averaged 1·5 per 1,000, the highest rates being recorded in Perth, Glasgow, and Leith. The 243 deaths registered in Glasgow included 6 from diphtheria, 5 from whooping-cough, and 4 from scarlet fever. A fatal case of small-pox was recorded in Edinburgh, and 2 of diphtheria in Paisley.

ISOLATION AND BOARDING OUT.

IN our issue of October 20th we stated that the clerk of the Stourport Local Board had advised his authority that they could no longer isolate infectious patients by a system of boarding out the healthy members of the sick person's household, as by so doing they would incur auditorial refusal to sanction the payments made. The refusal would be manifestly right, having regard to the method of procedure. The essential feature of a hospital for the isolation of the infectious sick is the securing of proper treatment in a proper establishment of the early cases of such diseases as are isolable. The adoption of the system to which the legal adviser of the Stourport Local Board referred would seek to establish in a district a number of foci of disease by means of single patients in cottages and the like, with the added danger of boarding in other houses possibly infected persons incubating disease. It is true that in some localities houses in which disease has appeared have been converted into temporary hospitals in times of emergency, and other patients removed thereto: but any expense entailed on account of member of the household dislodged by reason of this action has been illegally incurred, although the cost of maintenance and nursing of the sick in the temporary hospital may have been quite legally undertaken. It will be found in general that districts which have to make such shifts in times of emergency are those of authorities who have shirked the duty of safeguarding their public from a false sense of economy. Obviously the proper method is to remove the sick, and not the healthy. We have had some telling object lessons of the great danger of unisolated infectious sick of late which should drive home this truth as no amount of writing is ever likely to do. But health authorities are slow to learn, many of them, where the rates are likely to be affected.

MEASLES NOTIFICATION IN BIRKENHEAD.

TWELVE YEARS' EXPERIENCE.

THE experience of a town like Birkenhead, with its estimated population of over 100,000, persons, may not be without interest on a matter of such debated importance as the compulsory notification of measles. Dr. Sidney Marsden, the health officer, has in his report for 1893 given some data concerning the matter, and his remarks are worthy of note. In the twelve years 1882-93 the number of notified cases totals to 11,136, and the deaths to 572, affording yearly averages of 928 and 48. The case average has been thrice, the mortality average 5, the per-case mortality average 6, and the average death-rate 5 times exceeded in the period, not a few of these excesses having been of quite recent occurrence. But Dr. Marsden is sadly aware that the benefit derived from the system are more than a compensation for the cost and trouble involved. He inclines to the view that one must have early information of the first cases of the disease if any real good is to be obtained from notification; and that when the malady has gained a hold on a community there is but little to be said for the system. In early outbreaks limited to small areas he thinks that notification is of benefit, inasmuch as it enables a health officer to visit the cases, give warning as to the exposure of the patient, thus preventing chill and fatal issue in many instances, and to isolate in some measure in a way not to be secured where no medical man is called in. But it will be readily seen that this method of procedure would not hold in an epidemic of any dimensions. And after all it is perhaps the action of school attendance officers and the like which has the greatest effect on a measles outbreak. The gain to be derived from a dual system of notification is seldom found in practice to be secured, as the statutory obligation resting on the heads of households seems to be allowed to become and to remain a dead letter.

THE MAINTENANCE OF CHILDREN IN ISOLATION HOSPITALS.

THE *Rhyl Journal* reports the following case, heard in the county court. A woman was taken ill with scarlet fever, and the doctor who was called in wrote on the notification certificate that the parents consented to removal to hospital. He was admitted and remained in hospital for seven weeks. The Improvement Commissioners, as the hospital authority, made a charge of 10s. per week for maintenance; and as the father refused to pay, they sued him for that amount under the Public Health Act. The learned judge decided in favour of the defendant, holding that "the statute cast a liability upon the patient only," and that in the absence of contract there was no liability on the part of the parent. It was not a case in which authority could be implied. He thought, however, that "there was some kind of moral liability on the part of the defendant," and did not allow costs. Except in this last item the decision is a welcome one, and deserves to be noted. The charges were small, but it is impolitic in the last degree to make any charges whatever for the maintenance of patients in isolation hospitals, unless some special privileges are sought. As hospitals provided under the Isolation Hospitals Act of last year such charges cannot be made. The *raison d'être* of these institutions is the public safety rather than the benefit of the individual; and experience shows that attempts to throw any material part of the expense upon the latter are always fatal to the general acceptance of hospital treatment. The sooner local authorities realise this the better, and the legal assurance that parents are not liable under the 1875 Act is satisfactory as tending to that conclusion.

TENURE OF PUBLIC HEALTH APPOINTMENTS.

A MEETING of sanitary inspectors was held in connection with the Congress at Liverpool at the Sanitary Institute, when the following resolution was unanimously adopted: "This meeting is of opinion that in the interest of the public health of the country (1) it is no longer expedient that appointments as medical officers of health, sanitary inspectors, and inspectors of nuisances should be made for definite periods of time; (2) it is desirable that the powers of the Local Government Board with regard to tenure of office should be extended so as to apply equally to all medical officers of health, sanitary inspectors, and inspectors of nuisances, whether they be paid entirely out of local rates or not; (3) It is desirable that county councils should have the power of making representations to the Local Government Board either for or against the dismissal of such medical officers of health, sanitary inspectors, and inspectors of nuisances, as are partly paid by such county council. And that the Council of the Sanitary Institute be recommended to forward the resolution to the proper authorities." The information given to the meeting about the inadequate salaries paid to inspectors in Yorkshire, and which correspond with the amount and

elsewhere, suggests the indifference in which sanitation is held by the majority of local authorities. It was found that in urban districts two received £1 a year, one £5, four £6 to £10, seventeen £20 to £30, twenty £30 to £40, seven £40 to £50, six £50 to £60, six £60 to £60, four £70 to £80, seven £80 to £90, and ten from £100 to £250. Taking the rural authorities' areas, two inspectors received £12 to £20, two £20 to £30, three £30 to £40, five £40 to £50, four £50 to £60, two £60 to £80, and thirteen whose salaries ranged from £80 to £200. To pay officers in that way is to put a premium on dishonesty, for poor men are likely to be tempted if bribes are offered to ignore breaches of the Sanitary Act.

ENGLISH URBAN MORTALITY IN THE THIRD QUARTER OF 1894.

THE vital and mortal statistics of the thirty-three large English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending September last 77,745 births were registered in these thirty-three towns, equal to an annual rate of 29·8 per 1,000 of their aggregate population, estimated at nearly ten and a-half millions of persons in the middle of this year. In the corresponding periods of 1892 and 1893 the birth-rate in these towns was 32·1 and 31·5 per 1,000 respectively. In London the birth-rate last quarter was equal to 29·8 per 1,000, while it averaged 30·2 in the thirty-two provincial towns, among which it ranged from 19·7 in Huddersfield, 22·9 in Halifax, 24·2 in Croydon, and 25·1 in Brighton, to 32·8 in Swansea, 33·6 in Wolverhampton, 33·6 in Cardiff, and 34·4 in Liverpool.

During the quarter under notice 42,681 deaths were registered in the thirty-three large English towns, corresponding to an annual rate of 16·4 per 1,000, against 17·9 and 21·8 in the third quarters of the preceding two years 1892-93. In London the rate of mortality was equal to 15·9 per 1,000, while it averaged 16·7 in the thirty-two provincial towns, among which the death-rates ranged from 12·4 in Croydon, 13·3 in Bristol, 13·4 in Derby and in Huddersfield, and 13·5 in Plymouth, to 18·8 in Manchester, 19·7 in Salford, 21·5 in Sunderland, 22·2 in Preston, and 24·3 in Liverpool. The 42,681 deaths registered in the thirty-three towns last quarter included 7,241 which were referred to the principal zymotic diseases, equal to an annual rate of 2·8 per 1,000; in London the zymotic death-rate was equal to 2·8 per 1,000, and corresponded with the mean rate in the thirty-two provincial towns, among which the rates ranged from 0·9 in Halifax, 1·5 in Huddersfield, 1·6 in Plymouth, and 1·7 in Cardiff, to 3·9 in Salford, 4·3 in Wolverhampton, 5·0 in Liverpool, 5·6 in Sunderland, and 5·7 in Preston. The 7,241 deaths referred to the principal zymotic diseases included 3,441 which resulted from diarrhœa, 1,035 from measles, 916 from diphtheria, 838 from whooping-cough, 501 from scarlet fever, 432 from "fever" (principally enteric), and 38 from small-pox. The 3,441 fatal cases of diarrhœa were equal to an annual rate of 1·32 per 1,000, and were considerably below the average; in London the rate of mortality from this disease was equal to 1·13 per 1,000, while it averaged 1·46 in the thirty-two provincial towns, among which diarrhœa was proportionately most fatal in Wolverhampton, Leicester, Liverpool, Preston, and Sunderland. The deaths referred to measles, which had increased from 773 to 2,722 in the preceding three quarters, declined again to 1,035 during the three months ending September last; in London the measles death-rate was equal to 0·42 per 1,000, while it averaged 0·38 in the thirty-two provincial towns, among which this disease showed the highest proportional prevalence in West Ham, Croydon, Bristol, Salford, and Sunderland. The fatal cases of diphtheria, which had declined from 1,377 to 904 in the preceding three quarters, were 916 during the three months under notice; in London the death-rate from this disease was as high as 0·59 per 1,000, while it averaged only 0·18 in the thirty-two provincial towns, among which diphtheria showed the highest proportional fatality in West Ham, Croydon, Cardiff, Wolverhampton, Birkenhead, and Huddersfield. The 838 deaths referred to whooping-cough were equal to an annual rate of 0·32 per 1,000; in London the death-rate from this disease was equal to 0·32 per 1,000, and corresponded with the average rate in thirty-two provincial towns, among which whooping-cough showed the highest proportional prevalence in Swansea, Wolverhampton, Norwich, Nottingham, Huddersfield, and Sunderland. The fatal cases of scarlet fever, which had declined from 889 to 588 in the preceding three quarters, further fell to 501 during the three months ending June last; in London the scarlet fever death-rate was equal to 0·21 per 1,000, while it averaged 0·18 in the thirty-two provincial towns, and was highest in Wolverhampton, Liverpool, Salford, and Burnley. The deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of fever), which had declined from 999 to 382 in the preceding three quarters, rose again to 432 during the three months under notice, in London the "fever" death-rate did not exceed 0·10 per 1,000, while it averaged 0·21 in the thirty two provincial towns, among which it was highest in Birkenhead, Liverpool, Blackburn, and Sunderland. The fatal cases of small-pox in the thirty-three towns, which had been 172, 161, and 149 in the preceding three quarters, further declined to 38 during the three months ending September last, of which 33 were recorded in London, 2 in Birmingham, 5 in Manchester, 4 in Plymouth, and 3 in Liverpool.

Infant mortality in the thirty-three towns, measured by the proportion of deaths under 1 year of age to registered births, was equal to 169 per 1,000, and was considerably below the average. In London the rate of infant mortality was 164 per 1,000, while it averaged 172 in the thirty-two provincial towns, among which it ranged from 85 in Halifax, 130 in Bristol, 141 in Huddersfield, and 148 in Derby and in Oldham, to 194 in Norwich and in Sunderland, 215 in Leicester, 234 in Liverpool, and 306 in Preston.

The causes of 677, or 1·6 per cent. of the 42,681 deaths in the thirty-three towns during the third quarter of this year were not certified, either by a registered medical practioner or by a coroner. The proportion of uncertified deaths in London did not exceed 0·8 per cent., while it averaged 2·1 in the thirty-two provincial towns. The only towns of all the deaths during the quarter in Croydon and in Derby were duly certified; in the other towns the lowest proportions of uncertified deaths were registered in Portsmouth and Bradford, and the highest in West Ham, Birmingham, Preston, Blackburn, and Halifax.

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the Third Quarter of 1894.

Towns.	Estimated Population middle of 1894.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Deaths from Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one Year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
33 Towns	10,458,142	77,745	42,681	29.8	16.4	2.8	7,241	38	1,035	501	916	838	432	3,441	169	1.6
32 Provincial Towns	9,199,276	68,362	28,441	30.2	16.7	2.8	4,198	40	576	275	250	440	321	2,226	172	2.1
London	4,349,166	31,791	17,240	29.3	15.9	2.8	3,043	33	459	248	641	349	111	1,215	164	0.8
West Ham	238,184	1,889	886	31.5	14.9	3.2	—	51	10	33	30	15	7	53	165	4.5
Croydon	111,921	686	347	24.2	12.4	2.0	—	19	—	9	13	16	1	16	140	—
Brighton	118,715	744	462	25.1	15.6	2.1	—	11	—	7	1	4	3	34	164	1.3
Portsmouth	170,973	1,209	668	28.4	14.3	2.4	1	11	2	11	13	8	3	63	192	0.5
Plymouth	87,981	636	295	23.0	13.5	1.6	4	1	2	—	2	1	2	21	168	1.4
Bristol	226,578	1,578	749	27.9	13.3	2.3	—	45	4	13	10	3	2	28	130	1.3
Cardiff	148,880	1,224	516	33.6	14.4	1.7	—	2	1	13	11	1	1	30	158	1.2
Swansea	95,399	781	344	32.8	14.5	3.4	2	4	3	15	2	1	1	18	148	0.9
Wolverhampton	85,036	709	307	33.6	18.7	4.3	2	1	18	20	11	6	1	13	183	0.5
Birmingham	492,301	3,651	1,854	29.7	15.1	2.2	2	32	14	11	24	27	1	30	143	0.0
Norwich	105,645	757	360	27.5	15.1	2.4	—	4	3	6	14	2	2	9	194	1.6
Leicester	189,138	1,466	665	29.8	14.1	3.3	—	2	5	2	3	12	1	17	215	2.0
Nottingham	223,584	1,687	848	27.0	15.2	2.9	1	28	8	3	21	15	1	17	178	0.8
Derby	98,796	742	329	28.5	13.4	1.4	—	2	5	1	4	3	1	7	118	—
Birkenhead	105,627	845	444	32.1	16.9	2.3	—	2	3	10	11	3	2	14	174	0.7
Liverpool	507,230	4,389	3,068	34.4	24.3	5.0	3	61	33	22	23	67	393	234	234	0.1
Bolton	118,303	879	502	29.8	17.0	2.2	—	1	2	1	3	3	45	184	166	0.6
Manchester	520,211	4,150	2,440	32.0	18.8	2.9	5	65	36	19	16	18	187	179	166	1.6
Salford	205,822	1,680	1,013	32.7	19.7	3.9	2	31	26	15	25	18	87	199	176	2.6
Oldham	138,755	946	547	27.3	15.8	1.7	2	14	5	10	11	3	14	178	148	2.6
Burnley	96,478	762	476	31.7	14.3	2.5	—	—	12	—	1	6	34	139	166	1.6
Blackburn	125,797	824	510	26.3	16.3	2.2	—	3	4	4	6	12	41	141	173	3.3
Preston	111,425	881	618	31.7	22.2	5.6	—	7	8	5	12	7	124	56	306	4.0
Huddersfield	98,511	484	328	19.7	13.4	1.5	—	4	4	3	13	1	6	114	157	2.7
Halifax	92,861	530	326	22.9	14.1	1.0	2	13	—	1	6	2	1	98	85	4.3
Bradford	223,785	1,484	844	26.5	15.1	1.8	3	21	18	2	14	8	54	158	135	0.5
Leeds	388,761	2,905	1,579	30.9	16.3	2.0	1	23	6	15	16	13	122	153	138	1.3
Sheffield	338,316	2,706	1,485	32.1	17.6	3.0	2	17	12	22	33	18	152	180	157	2.7
Hull	212,679	1,578	777	29.8	14.7	1.9	1	22	5	2	10	14	45	204	141	3.1
Sunderland	136,101	1,108	731	32.7	21.5	5.6	1	33	3	2	26	27	58	194	166	0.6
Gateshead	93,372	747	345	32.1	14.8	2.1	—	1	—	3	9	6	28	146	114	0.6
Newcastle-on-Tyne	201,947	1,577	817	31.3	16.7	2.4	1	23	3	6	24	2	60	187	159	0.9

SPREAD OF DISEASE BY INFECTED MILK.

At the last meeting of the Freemantle Local Board the medical officer of health reported that since the previous meeting the epidemic of scarlatina still continued. He had traced the origin of the outbreak at Shirley Warren to an unrecognised case infecting a source of milk supply, the disease appearing in every house supplied from that source. He had taken measures to restrict any further supply.

THE PUBLIC HEALTH OF SCOTLAND.

It was reported at the late annual meeting of the Scotch Sanitary Association that between 1855 and 1891 the death-rate from zymotic diseases was reduced for Scotland from 45 per 10,000 to 24, and for Glasgow from 72 to 33. The death-rate from other causes had improved, but to a less degree, such causes as lung diseases not having yielded to modern sanitation to the same extent as the infectious diseases.

THE CHOLERA SURVEY.

The cholera survey continues with excellent results throughout the country: Dr. Low, one of the medical inspectors of the Local Government Board, attended before the Thanet Rural Sanitary Authority at its last meeting, and stated that during the past two years a survey of the whole country had been instituted in consequence of the outbreak of cholera abroad some time back. Last year forty places were affected in England with cholera, but owing to the precautions taken against its importation by the customs and coastguards, in addition to the sanitary authorities, this year, not a single case had so far been detected. He added that the Local Government Board had instituted the survey, which dealt more particularly with places on or near the coast, because they were held to be responsible for any outbreaks of the epidemic, and so wished to avoid their responsibility and make the different sanitary authorities answerable, and not by way of superseding the advice of the authority's own skilled medical officers.

TREATMENT OF SEWAGE BY PRECIPITATION.

From a return just issued by the Local Government Board showing the number of urban sanitary districts and contributory places in rural sanitary districts in England and Wales in which systems for treating sewage by precipitation are in operation, it appears that 174 urban sanitary districts treat sewage by precipitation, thirty-seven of which find the precipitants of saleable value. The prices paid for the precipitate vary considerably, from 8d. per ton up to 3s. per ton. In some instances farmers are induced to cart the precipitate away if the Board bears part of the cost of carting. Of joint sewerage and drainage districts, there are three which treat sewage by precipitation; of rural sanitary districts fifty-six, and of these twenty-two have a precipitate of saleable value.

PART TIME AND WHOLE TIME.

The St. Luke's Vestry has directed its Public Health Committee to inquire into the conditions of the appointment of its medical officer of health. It appears that that officer was appointed at a salary of £400 per annum; a proposal to fix the salary at £660 per annum, and to require that the whole of the medical officer's time should be devoted to the duties of his office not finding favour with the vestry.

The medical officer has recently accepted a deputy coronership, and this was made the occasion of a detailed discussion in the vestry as to the sources of the medical officer's income and as to the demands which his various duties make upon his time.

Questions of this kind may be expected to arise from time to time in cases where authorities are unwilling to secure the whole time of their officers by the payment of an adequate salary. It seems a pity, however, to deal with them in the manner which has been adopted by the St. Luke's Vestry, for the Committee might with advantage have been permitted to make inquiry into the facts before the institution of a public discussion with regard to them.

HEALTHY HASTINGS.

The health statistics of a popular resort are always of interest, and it is with some satisfaction that we are able to point once again to the favourable mortality data presented by Dr. Scarlyn Wilson, in respect of the borough of Hastings, this time during the third quarter of the current year. Judging the rates for the quarter by the average of the rates for the corresponding quarter of the three preceding years, we find that the general death rate has fallen from 13·55 to 11·22 per 1,000 persons living, though it is also true that the birth-rate has fallen, namely, from 21·46 to 18·13; but the relative falls are by no means the same, the balance being largely in favour of the mortality rate. The deaths of infants have declined from 151 to 113 per 1,000 births, and of children under 5 from 280 to 232; whilst the zymotic death-rate was not one-third of the average for the three years, being only 0·49 against 1·51, the only deaths in the class being 4 from diarrhœa, 2 from whooping-cough, and 1 from enteric fever.

HEALTH AND THE STATE.

In a lecture delivered before the Wordsworth Institute at Cockermouth, and since published, Dr. Highet, medical officer of health for Workington, advocates the establishment of a complete public health service for the whole kingdom: a Medical Minister of Public Health; a State Board of Health, consisting of twelve leading medical sanitarians, county medical officers, and district medical officers, with an efficient staff of trained sanitary inspectors.

In the meantime, as showing how far we are from this ideal, it is worth while to recall the fact that so far only ten county councils have thought well to appoint medical officers of health under the Act of 1888. There is no doubt a logical consistency in an organisation such as that depicted by Dr. Highet, in which the steps would be complete from the lowest to the highest, and in which there would be some guarantee for uniformity of method throughout the country.

It is, however, hardly worth while to discuss whether the establishment of a great sanitary machine to which all local efforts must be subservient is desirable, seeing that the tendency of all recent legislation on the subject of local government is in the direction of decentralisation and the establishment of the county as the unit, for it is not to be expected that sanitary administration will ever be divorced from the other branches of local government. At the present time, with a new and complete system of local government just coming into force, the most urgent matter is to obtain security of tenure for medical officers of health, to make it compulsory instead of optional for county councils to appoint medical officers, and to strengthen the link between the county councils and the local sanitary authorities, so that the latter shall be more easily compelled to put their powers in force, and that the present anomaly shall be done away with, according to which the person on whom is thrown the onus of stirring up the authority to action is their own servant, who is liable to dismissal if such action should happen to be distasteful.

DIPHTHERIA IN POPLAR.

The report to the Sanitary Committee of the Poplar District Board on the cause of diphtheria by Mr. Alexander, the medical officer of health for Poplar and Bromley, has been printed by order of the Committee. The report deals with the probable cause of the disease and with the reasons why it has prevailed to such an extent of late years in the Poplar district, and why this portion of the metropolis suffers more than others. Mr. Alexander at once dismisses school influence as being rather concerned with the spread of the malady when it has appeared in a district than with its selective preference for particular areas, and he pronounces the opinion that diphtheria appears "to have come into existence with the order to drain houses into sewers after the introduction of waterclosets." In support of this contention he alludes to the introduction of waterclosets in 1828-33 and to the subsequent execution of drainage works, while he notes that "diphtheria was first recognised in this kingdom in the year 1845. There appears to be some confusion here between the existence of the disease and its happening to be diagnosed by a particular name. Mr. Alexander explains the greater incidence of diphtheria in later years upon London as compared with the rest of the country by consideration of the fact that since 1877 or thereabout by-laws made under the 1875 Act have been enforced in the provinces which have, therefore, "been in advance of the metropolis" in sanitary work. The report then deals more particularly with Poplar. Mr. Alexander, in commenting upon the notification returns of 1893, remarks: "The disease is at once seen to exist to a greater extent in those divisions of the district which lie farthest from the Thames and docks." This circumstance, he notes, appears to show that dampness of soil alone is not sufficient explanation of diphtheria prevalence. He then turns to the London main drainage system, and refers to the report of Sir Benjamin Baker and Mr. Binnie, prepared in 1891 as evidence of the inadequacy of the main sewers of the County Council, he alludes to flooding (particularly in the Isle of Dogs), and lays stress upon the influence in diphtheria production exerted by "microbic nitrifying earth."

Mr. Alexander fails, however, to deal in detail with evidence supporting his thesis; indeed, he contents himself with the statement—in a footnote—that he has "traced the London County Council's main sewers of the Middlesex portion of the metropolis upon the maps supplied with the 1892 and 1893 reports of the Metropolitan Asylums Board, showing the distribution of diphtheria cases in the metropolis." This haphazard allusion to what would appear to be the point most needing exhaustive and careful inquiry, if it is to be accepted as having the importance Mr. Alexander would attach to it, is unsatisfactory. The report is an interesting one, but its conclusions are not likely to be accepted save on stronger evidence than that adduced.

VAGRANCY AND INFECTIOUS DISEASE.

The following are the resolutions passed by the Conference of Sanitary Authorities lately held at the London County Council.

They have been forwarded to the Local Government Board, but we believe neither they nor the County Council have as yet determined on any action in the matter.

1. That common shelters which are not subject to the law relating to common lodging-houses should be made subject to such law.

2. That there should be power to the local authority to require medical examination of all persons entering common lodging-houses and casual wards, and that each inmate of a common lodging-house or casual ward should on admission have a bath of fresh water.

3. That the local authority should have power to order the keeper of a common lodging-house, in which there has been infectious disease, to refuse fresh admissions for such time as may be required by the authority.

4. That the local authority should be empowered to require the temporary closing of any common lodging-house in which infectious disease has occurred.

5. That the local sanitary authorities should have power to require the detention of any inmate of a common lodging-house or casual ward who may reasonably be suspected of being liable to convey infectious disease.

6. That means should be provided for the detention and isolation of any vagrant found wandering in a public place, if reasonably suspected of being liable to convey infectious disease.

7. That the local authority should have full power to require the disinfection of the person and clothes of any person in a common lodging-house or casual ward, whether infected or exposed to infection.

8. That arrangements should be made by which the occurrence of infectious disease in common lodging-houses or casual wards should be made known by the local authority of the district to the local authorities of other districts.

9. That local authorities should be empowered to require the vaccination or revaccination of persons in common lodging-houses or casual wards who are exposed to the infection of small-pox.

A perusal of these resolutions will show that throughout the whole there runs the phrase "persons in common lodging-houses or casual wards," which involves a new departure in the general law. It is true

that the class of people lodging are to a large extent the same, but before the law they are entirely distinct. The casual not only is for the time a pauper, but, as the recipient of a favour from the State, may in return be fairly asked to submit to something—even a bath—for the public good. The dweller in a "doss-house" is, however, a free and independent citizen, who pays his way. No doubt the powers of police supervision over the keepers of common lodging-houses are pretty stringent; but these are merely instances of the general principle that certain trades are subject to certain regulations, and in this the keeper of the common lodging-house is only like the dealer in meat or milk, or, indeed, the keeper of a big hotel. If he wants to exercise his trade he must submit to regulations. In no case, however, is the purchaser of the accommodation interfered with, and the suggestion that those who pay less than a certain sum per night for their accommodation shall be subjected to rules and regulations which do not apply to others—those who are better off—seems manifestly to meet with general approval, much as it might conduce to the completeness of sanitary administration.

With regard to some of the matters brought forward, however, it is urgently necessary that action should be taken. It is an obvious wrong, and a great danger to the public, that when a certain trade has been subjected to certain rules and regulations, people should be allowed to evade those regulations by conducting precisely the same sort of business under the name of charity. Resolution No. 1 in reference to "shelters" certainly calls for action

Legislation on the basis of Resolutions 3 and 4 would also put a stop to what at present is a very common mode of spreading infection, namely, the admission of lodgers to a house known to be infected; and really the power asked for, to close a lodging-house because it is infected, is quite analogous with that already possessed by the sanitary authorities to stop a milksellers trade when there is infection on the premises. Those resolutions, however, which deal with the person of the vagrant, or the dweller in the common lodging-house, savour too much, we fancy, of the *experimentum crucis in corpore vili* to be generally acceptable.

CERTIFICATES, DIPLOMAS, AND NURSES.

A CORRESPONDENT in a provincial city sends to us a circular letter which he has received from a lady who wishes to enlist his sympathies with a home for invalids which she has just started. "I hold," she writes, "a diploma and certificate for . . . and midwifery." The blank is filled up in the original letter by the word "medicine," which had been crossed out before the letter was sent to our correspondent. It is right to add that the body of the letter is in writing, but in a formal, clerkly hand, only the signature apparently being autograph. Our correspondent asks, "Was it crossed out for me, and will it be left in for others?" The suspicion is, we must confess, a very natural one. The diploma or certificate which the writer has is probably a certificate of competence as a medical nurse. If so, and if the circular letter is issued with the word medicine—and it is difficult to understand how the copyist got it into the letter if it was not meant to be used—then it is clear that an improper use is being made of a nursing certificate. If it is not a nursing certificate, we should very much like to know what it is, for no certificates are issued in this country in medicine except the diploma granted to qualified bodies to medical men, and the illusory document issued to certain would-be medical missionaries. Obviously the lady in question is not the holder of a legal diploma in medicine, as otherwise she would certainly have stated the fact; and in the other alternative the use of a medical missionary certificate in an English city would be highly improper, if not on the face of it illegal. As we have said, the certificate is probably a certificate of medical nursing, and if that be so the incident ought to impress upon the managers of training schools for nurses the importance of wording their certificates with great care, and requiring and undertaking from those to whom they are granted that they shall not be held out to the public as certificates or diplomas in medicine.

LEAD POISONING IN PUBLIC WATER SUPPLIES.

THE report of the Law and Parliamentary Committee of the West Riding County Council states that in reply to communications from the Committee the Local Government Board had stated that they could not undertake to make special inquiry, with experiments, as to the action upon lead of water in the cases of all new schemes of water supply, as had been suggested by the Committee, although they considered that it was a matter which should be carefully considered in connection with new water supplies. The Committee, being of opinion, after conference with the Sanitary Committee, that the evil would be remedied by the substitution of iron pipes for lead, had directed the West Riding solicitor to communicate with the Local Government Board requesting that steps might be taken to confer power on the County Council to prohibit the use of lead pipes in connection with any public supply of water which, when in contact with lead, might cause lead poisoning.

THE DIAGNOSIS OF SMALL-POX.

The following facts formed the subject of a discussion by the Municipal Council of Cradock, which is reported in the Cape Colony *Midland News* of September 12th. Mr. de Wet, Health Officer of the Municipality, submitted a complaint as to the want of courtesy with which he was treated by Dr. H. J. Moolman, an undelegated member of the Council, in not only personally visiting, but taking Dr. G. to the lazaretto (hospital for infectious diseases) without the assent of, or the least intimation to, himself as the responsible medical officer. This lack of courtesy was accentuated not a little by the admitted fact that the visit was made with the view of testing the accuracy of his (Mr. De W.'s) diagnosis of certain reported cases of variola therein, which Dr. M. alleged to be varicella. A careful consideration of the whole case leaves no doubt that in doing so Dr. M. committed a grave breach of professional etiquette, and justly subjected himself to severe criticism and reproof. It appears, moreover, that the opinion of the Council on the point debated was clearly evidenced by the unanimous approval of the following resolution: "That it is not desirable that any persons should be permitted to visit the lazaretto without the consent of the health officer, or unless specially deputed by the Town Council to do so."

HOTEL JOINTS.

THE Berlin authorities have issued an order that all meat sent for by hotels, restaurants, etc., from other parts of the country or from abroad must be subjected to official examination before cooking. The order further forbids the introduction of raw minced meat, or raw meat cut up small in any form.

LEITH.

MR. GILBERT SCOTT, of Leith Public Health Office, has been appointed sanitary inspector of Leith at a salary of £130. There were twenty candidates.

DUTIES OF SANITARY INSPECTOR.

LEX writes: The Borough Council, acting as the "Urban Sanitary Authority," have, I understand, given instructions to the Borough Sanitary Inspector to obtain the permission of owners of property before entering to inspect premises for sanitary defects, when their attention has been drawn thereto. Kindly inform me if this is a usual proceeding? Is it calculated to inspire respect towards the urban sanitary officials?

*** Taken literally the instruction is absurd, and would hamper the inspector in the proper discharge of his duties. But if it means only that before entering private premises he should ask the permission of the occupier, there is less objection to it, though points of this kin are usually and properly left to the discretion of the inspector. If he is a man of ordinary intelligence and tact, it is much better to trust him to carry out his duties with due civility and consideration, under the direction of the medical officer of health.

RURAL WATER SUPPLIES.

DELTA writes: 1. Can the opinion of a committee of the rural sanitary authority override that of their medical officer of health on a question of nuisance? Where the medical officer of health and the guardians disagree as to whether a particular pool is a nuisance, who is to decide?

2. Are the words "dangerous" and "injurious to health" of Section 91 of the Public Health Act, 1875, and in other Acts of Parliament adopted by rural sanitary authorities applicable to the health of cattle? Must a rural sanitary authority provide drinking water for cattle?

3. Must a rural sanitary authority interfere where a pool, used by cattle for drinking and fouled by them whilst drinking, receives by far its largest proportion of water from road washings and surface of cultivated fields, but is not used nor likely to be used for drinking nor domestic purposes by man, is being made additionally foul by soakage from a pit used for the house and dry closet refuse of one cottage near the pool?

4. What diseases can cattle acquire by drinking impure and sewage-contaminated water or by eating grass from fields on which such water flows, and then transmit to man either by their flesh or their milk?

5. Is the presence of abundant animal life—for example, tadpoles, newts, large beetles, and spiders—evidence for or against sewage contamination of a pool?

*** The question of overriding can scarcely arise. The sanitary authority are not legally bound to follow the advice or act upon the opinion of their medical officer of health on matters of nuisance: but neglect on their part may lead to the intervention of the Local Government Board, if the facts are made known at headquarters.

2. Presumably not, in a direct sense. The Dairies Order deals with such questions as regards certain cowsheds.

3. The fouling of the pool by soakage from a closet would probably enable the sanitary authority to interfere on the score of nuisance, and the use of the pool by cattle would strengthen the case, but there are no specific powers for dealing with pools from which cattle drink.

4. Doubtful. There is some evidence to show that typhoid fever can be so transmitted by milk.

5. Such evidence is scarcely admissible at all.

DISTRICT MEDICAL OFFICERS AS PARISH COUNCILLORS.

H. B. O. writes to us stating that our assertion that Poor-law medical officers are eligible for membership of parish councils has been several times contradicted by persons "who have studied the matter," and he asks us for our authority for the statement.

*** We rely on the Parish Councils (the Local Government) Act of 1894 for our authority, Section 46 of which says, *inter alia*:

"(1) A person shall be disqualified for being a member or chairman of a council of a parish *or* of a district other than a borough, *or* of a board of guardians if he

"(*d*) Holds any paid office under the parish council *or* district council *or* board of guardians, *as the case may be*.

"(5) A person disqualified for being a guardian shall also be disqualified for being a *rural district* councillor."

We really must be pardoned if we state that we feel it difficult to read the above passages (which we have ourselves italicised for more easy following) as showing other than that a paid officer of the guardians is *not* debarred from membership of a *parish* council *or* an *urban district* council. Consequently we have nothing to add to or detract from our statement on the matter in the BRITISH MEDICAL JOURNAL of March 3rd.

PUBLIC ABATTOIRS AND THE PUBLIC HEALTH.

DR. HENRY TAYLOR (Guildford) writes: The great prevalence of tuberculosis among horned cattle at the present time points to the necessity of careful and systematic inspection of animals intended for our food supply, as well of cows yielding us milk; and if the opinion now gaining ground be correct—that the flesh and milk of tuberculous cattle are capable of engendering a like disease in those who consume them—the time has surely come for the medical profession to press this opinion on our legislators. The question of establishing public abattoirs to the exclusion of private slaughterhouses has long been under consideration; but the arguments in favour of this reform are weightier and more cogent now than formerly. In addition to the plea of greater cleanliness and more humane methods of despatching animals being practised under the eye of competent officials, we can now claim for the public abattoir the opportunity it will afford of inspecting the carcasses, and of detecting diseases that would render them unfit for human consumption. The report of the inquiry instituted by the Board of Agriculture into the transit of animals by water gives such details of the injuries caused by rough treatment, bad ventilation, and want of proper food during the voyage, as would establish the necessity of an official inspection of the carcasses after the slaughterman has done his work. I have just been reminded of the duty laid upon our profession of preaching the importance of public abattoirs for social as well as sanitary reasons by the reply of a noble lord to a suggestion I offered him for this very object. It concludes with these pertinent words: "Until your profession are in a position to assure the public that their health depends upon the institution of such places, I fear it will be difficult to induce Parliament to accept the proposal."

ANNUAL RE-ELECTION OF DISTRICT MEDICAL OFFICERS.

ONE IN DOUBT writes for information on the following case. A. is a district medical officer non-resident and re-elected annually. B. is doubly qualified, and has lately become resident in A.'s district. Our correspondent asks, Is B. justified in applying for A.'s appointment before his next election in case it is not advertised as vacant, and are the guardians bound to give it to B. if he applies?

*** We consider that B. would not be justified in applying for the appointment if no public notification were given of the vacancy. It has been decided by the Local Government Board that guardians are not compelled to dispense with the services of an old servant, and to make a fresh appointment simply because a resident in the district puts in a claim.

QUALIFICATIONS OF MEDICAL OFFICER OF HEALTH.

PUZZLED is eligible for reappointment as medical officer of health in the circumstances which he mentions. The restrictions imposed by Section 18 of the Local Government Act, 1888, to which he refers, do not apply to his case, the words of the statute being that "no person shall, after January 1st, 1892, be appointed the medical officer of health of any county or of any county district"—that is, at present, any urban or rural sanitary district—"or combination of districts as contained, according to the last published census for the time being, a population of 50,000 or more inhabitants," unless he is legally qualified for the practice of medicine, surgery, and midwifery, and also either is registered as the holder of a diploma in Sanitary Science, Public Health, or State Medicine, under Section 21 of the Medical Act, 1886, or has been during three consecutive years preceding 1892 a medical officer of a district or combination of districts with a population of not less than 20,000, etc. Our correspondent will see that he is not affected by these provisions, having regard to the population of his district.

INFECTIOUS DISEASE IN LODGING HOUSES.

DISTRICT MEDICAL OFFICER writes: A case of scarlet fever occurs in a pauper at a common lodging house. I notify this, and recommend the relieving officer to remove the patient to the infectious ward at the workhouse. The guardians refuse to allow this to be done as the Local Government Board has disapproved of the admission of such cases to the workhouse, and there is no hospital for infectious di-ease in the district. What is a District Medical Officer to do if the guardians cannot, or will not, act in such a case? Can he recover expenses if he provides a suitable place, and on medical certificate and justice's order has the patient removed to it for isolation?

*** We consider that if the guardians refuse to allow such patients to be removed to the workhouse, and the sanitary authority has established no hospital for infectious disease, our correspondent cannot force them to take action such as he would wish; and, further, that he could not recover expenses if he were to take upon himself the removal of infectious cases to any suitable place he might himself select.

INFANT LIFE ASSURANCE.—At the recent meeting of the Society for the Prevention of Cruelty to Children a resolution was carried, on the motion of Mr. Graham, seconded by Dr. Stephenson, commending to the attention of Parliament the Bill to be introduced on behalf of the Society, with the object of preventing children from being insured in more than one society. Sir Richard Temple expressed his belief that the Legislature would lend a sympathetic ear to the prayer to the Society, though he added that he believed that in the poorest districts the great majority of the parents showed an amount of solicitude for their children which it would be impossible to surpass.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

EXAMINERS FOR MEDICAL DEGREES.—The following were on Thursday October 25th, appointed as Examiners for the First and Second M.B. Examinations:—*Physics:* R. T. Glazebrook, F.R.S., and S. Skinner. *Chemistry:* A. Scott and S. Ruhemann. *Biology:* F. Darwin, F.R.S. and J. J. Lister. *Anatomy:* Dr. A. Macalister, F.R.S., and Dr. H. D., Rolleston. *Physiology:* W. B. Hardy and E. A. Schäfer, F.R.S. *Pharmacological Chemistry:* T. H. Easterfield and A. Ivatt.

Professor Bradbury was appointed Assessor to the Regius Professor of Physic in succession to Dr. D. MacAlister.

GENERAL MEDICAL COUNCIL.—The period of five years for which Dr. MacAlister was elected to represent the University on the General Medical Council expires on November 13th. The election of a representative will take place in the Senate House on November 9th. Dr. MacAlister is re-eligible.

ENTRY OF MEDICAL STUDENTS.—From returns kindly furnished by the College Tutors it appears that the number of freshmen intending to study medicine is 139.

UNIVERSITY OF EDINBURGH.

THE statutory half-yearly meeting of the General Council of the University of Edinburgh was held in the Examination Hall on Friday, October 26th, 1894, at 3 o'clock.

The following candidates have passed their Second Professional Examination for the degrees of M.B. and C.M.:

F. W. Aitkin, J. A. T. Bell, J. M. Crawford, T. Grainger, J. S. Norwell (B.Sc.), H. Peck, A. M. Rattray, R. Thornton, J. W. de Vos, T. W. Wilkinson, J. T. Williams.

The following candidates have passed the medical preliminary examination:

B. H. S. Aylward, L. P. Brassey, R. F. C. H. Buchanan, K. Chapel, H. C. Comber, D. Fenton, J. Ferrier, J. Fukuda, J. Fullarton, W. G. Gidwood, T. Graham, J. E. Green, A. M. Holmes, J. G. Jack, W. T. James, M. S. Ketchin, H. F. Longden, G. Lowchier, W. M'Lachlan, P. A. Maclagan, L. A. MacMunn, A. Mann, E. G. D. Menzies, S. H. Morris, T. A. S. Orr, N. Patterson, A. S. M. Peebles, P. C. Rayner, T. E. Richards, R. M. Rowe, G. B. A. Speirs, W. C. Speirs, J. Sullivan, J. M'B. Taylor, J. A. R. Thomson, R. G. Thomson, J. B. Thorburn, J. H. Thornley, R. B. Turnbull, K. H. H. Uffmann, W. Wallace, and E. M'K. Young.

The following have passed in the subjects named:

H. E. Goghlan, Latin; A. A. Finlay, English, Mathematics, and Latin; R. F. Jardim, Euclid and Algebra; T. C. Mackenzie, Mathematics; E. C. O. Nixon, Euclid; H. O. Smith, Mathematics and Latin; B. Stracey, Latin; G. Swanson, Mathematics; H. E. Wareham, Mathematics; J. F. Shorburn, Latin.

UNIVERSITY OF GLASGOW.

THE following have passed the First Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.), under the new regulations, in the subjects indicated (B., Botany; Z., Zoology; P., Physics; C., Chemistry):

J. Aitken (Z., C.), A. J. Ballantyne (Z., C.), R. F. Ballantyne (B., P.), A. A. Barclay (P., C.), J. Barrowman (B., P.), J. N. Baxter (Z., C.), W. Bennett (P.), J. S. Beveridge (P., C.), W. Broad (P.), J. J. Buchan (P., C.), J. R. Chalmers (B., P.), A. Clark (Z.), D. M. Cowan (B., F.), J. Craig (B., P.), W. Crerar (Z., C.), J. R. Currie, M.A. (B., Z., P., C.); W. Dick (Z., C.), R. Douglas, M.A. (Z., C.); K. M'K. Duncan (B., Z., P., C.), B. Dunlop (P., C.), J. B. Dykes (B., P.), H. S. Ferguson (B., P.), J. F. Findlay (Z., C.), R. Fullarton, M.A. (B., C.), A. R. Garrow (B., P.), D. S. Harvey (B., Z., P., C.), H. S. Heap (Z., C.), A. Henderson (B., Z., P.), J. M. Huey (B.), N. Jamieson (B., C.), E. W. R. Jones (B., Z., P., C.), Pierce-Jones (B., Z., P., C.), W. W. Keir (B., Z., P., C.), A. Kerr (B.), A. S. Lang (B., Z., P., C.), A. Lawrie (B., Z.), J. W. Leitch, M.A. (B., Z., P., C.); A. Matheson (B., Z., P., C.), J. B. Miller (B., Z., P., C.), J. A. Mitchell (Z., C.), P. A. Mitchell (B., Z., P., C.), J. W. M'Dougall (P.), A. M'Kinlay (B., C.), A. R. Macfarlane (B., P.), A. D. Macnair (Z., C.), R. R. Macnicol, M.A. (P.), W. G. Neill (Z., C.), R. Niven (B., Z., C.), P. L. Pearce (B., P.), J. Reid, Glasgow (Z., P.), R. Rennie (P., C.), W. A. Riddell (Z., C.), D. Scanlan (B., C.), J. W. Scott (Z., C.), J. Shaw, M.A. (B.); D. A. Simon (P., C.), J. Smith (Z.), J. J. Smith (Z., P.), W. H. Steel. B.A. (B., Z., P., C.); F. Stevenson (B., Z., P., C.), F. E. Stokes (B., Z., P., C.), T. M. Strang, M.A. (B., Z., C.), T. Taylor (P., P.), R. R. Thom (B., P.), A. D. Thompson (B., P.), T. B. Tierney (B., Z.), R. B. A. Watson, (B., Z., P., C.), W. Webster (Z., C.), E. R. Weir (P.), A. S. Wells (B., P.), J. White (B., P.), R. G. White (B., P.), J. P. Wilson (Z., C.), F. Wylie (B., C.).

Women Candidates.—Daisy Annabelle Bennett (B., C.), Sarah Davidson (B., Z.), Jessie Downie Granger (B., Z.), Jane Lorimer (P.), Eva M'Call (B., Z.), Minna Amelia Macfarlane (P., C.), Annie Louise M'Ilroy (Z., P.), Margaret Wallace Howie M'Neil (B., Z.), Mabel Catharine Poulter (B., Z.), Catherine Love Smith (B., P.), Sarah Whitelord (B., P.), Grace Lorrain Young (B., Z.).

The following have passed the First Professional Examination (old regulations) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):

J. Andrew, W. Duncan, J. J. Edgar, R. H. Hunter, T. G. Milligan, W. M'M. Pearson, W. Ure.

Women Candidates.—May M'Mullan Pearson.

The following have passed the Second Professional Examination (old regulations) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):

J. F. Agnew, J. M. Bonah, W. Brown, C. Cairnie, M.A.; H. Calderwood, J. L. Carstairs, M.A.; A. Charlton, T. Cochrane, J. Crawford, J. A. C. Doonan, T. M'G. Fletcher, J. Graham, J. D. Holmes, J. Lunn, J. H. Lyell, W. Martin, M.A.; S. Martyn, A. Mason, W. M'G. Mont-

gomery, A. B. Murray, T. D. Newbigging, J. J. Robertson, J. C. Taylor, J. Taylor, J. Vair, J. Weir, A. C. Wilson.

Women Candidates.—Annie Kirbby Anderson, Roberta H. M. Stewart.

Miss Lucy Buckley, B.Sc., has passed the Second Professional Examination (new regulations) for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects of anatomy and physiology.

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):

A (including Pathology).—J. Adam, W. Alexander, W. Allan, J. Anderson, J. L. Anderson, R. B. Barr, T. Bell, T. Black, H. Broom, R. Buchanan, M.A., B.Sc.; S. Capie, W. Clow, M.A., B.Sc.; F. B. Cormick, S. D. Cowan, M.A.; J. H. Douglas, J. Ferguson, M.A.; J. Forster, J. R. Foulds, A. F. Galloway, T. C. Garrett, J. Gillan, M.A.; J. Gordon, J. D. Graham, J. A. Graham, J. Green, J. Henry, G. Hodge, A. Holt, G. D. Hunter, F. J. Jayne, D. Kerr, D. C. Kirkhope, W. Lawson, R. K. Miller, J. M. W. Morison, A. C. Muir, J. A. D. Mulholland, D. Munro, E. Mackay, L. MacLachlan, W. Macleod, G. M'Pherson, W. A. Pride, S. Prior, J. B. Rae, J. N. Robertson, W. Scobie, B.D.; A. Scott, J. Smith, T. O. Speirs, J. Sproull, A. Stevenson, A. Stewart, A. H. Stewart, J. Stewart, J. E. F. Stewart, J. Stirling, J. M. Thornley, C. K. Toland, A. Vost, E. A. Walker, F. M.A.; H. K. Wallace, B.Sc; H. A. Watson, M.A.; F. Wolverson, A. S. Worton, H. Yearnshaw, A. Young, B.Sc.; J. Young (Glasgow).

Women Candidates.—Ursula Chaplin, Edith Ellen Goodrich, Emmeline Marie Stuart.

B (not including Pathology).—F. J. Barker, M.A.; T. Baxter, G. A. Brown, J. S. Christie, P. S. Clark, R. M. Fraser, M.A.; R. H. Gemmell, W. Graham, G. Hobbs, J. Kirkland, J. W. O. Van Millingen, F. Mort, J. M'Clure, J. C. M'Clure, A. M'P. M'Intosh, W. J. Mackinnon, Samuel M'Lean, R. M'Naught, W. J. Orr, E. J. Primrose, M.A.; J. Rankin, H. M. Watson.

UNIVERSITY OF DURHAM.

Examination for the Degree of Doctor in Medicine.—The Gold Medal for Best Essay, 1894, has been awarded to G. J. C. Thomson.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

The following gentlemen passed the First Examination of the Board in the subjects indicated at a quarterly meeting of the Examiners, under the "Four Years' Regulations":

Part I. *Chemistry and Physics.*—R. B. Ainsworth, St. George's Hospital; W. F. Allen, London Hospital; E. H. Barrett, St. Mary's Hospital; P. A. Cornish, Middlesex Hospital; W. E. H. Hancock, University College, Bristol; H. W. Illius, St. Bartholomew's Hospital; G. H. Irvine, University College, Bristol; A. R. Kay, St. Bartholomew's Hospital; C. J. Mayhew, King's College, London; W. B. Mayne, University College, Liverpool; C. G. Meade, St. Bartholomew's Hospital; N. Milner, Firth College, Sheffield; J. M. A. Olivey, Cambridge University, and St. Thomas's Hospital; T. D. Paddock, University College, Liverpool; A. R. C. Parsons, King's College, London; R. W. Rees, Surgeons' Hall, Edinburgh; M. Sheehan, Queen's College, Cork; A. I. Sheldon, St. Paul's School, West Kensington; J. L. S. Shortland, King's College, London; W. G. B. Smith, St. Bartholomew's Hospital; C. S. Stoitzerforth, University College, Liverpool; P. R. Tarbet, University College, London; D. J. Thomas, London Hospital; G. W. S. Williams, St. Bartholomew's Hospital; G. D. Winston, St. Mary's Hospital.

Part II. *Materia Medica and Pharmacy.*—E. C. Bailey, King's College, London; C. J. Baker, Middlesex Hospital; J. L. Baskin, Queen's College, Cork; J. Battersby, St. Mungo's College, Glasgow; J. L. Beath, St. Bartholomew's Hospital; J. Blackwood, University College, London; T. Boulton, Owens College, Manchester; J. Boyan, St. Bartholomew's Hospital; P. Burton, Middlesex Hospital; L. D. B. Cogan, Guy's Hospital; H. N. Coltart, St. George's Hospital; W. A. Davidson, Mason College, Birmingham; T. Davies, Guy's Hospital; E. B. Eames, St. George's Hospital; A. H. Finch, Guy's Hospital; A. E. Freer, St. Mary's Hospital; P. R. Grange, University College, London; J. Gott, King's College, London; J. J. C. Hamilton, King's College, London; C. Homer, St. Mary's Hospital; H. J. Hunter, St. Bartholomew's Hospital; W. R. Kemp, St. Mary's Hospital; C. A. Ljunggren, St. George's Hospital; L. J. Lock, London Hospital and Trinity College, Dublin; J. F. McClean, St. Thomas's Hospital; P. C. Maitland, Middlesex Hospital; D. K. L. Nasuyth, Charing Cross Hospital; H. C. Nicholls, Charing Cross Hospital; J. L. Payne, Guy's Hospital; H. R. Power, Melbourne University and St. Mary's Hospital; G. H. Ransome, St. George's Hospital; A. M. Ross, King's College, London; E. H. Scott, St. Thomas's Hospital; R. Sykes, Yorkshire College, Leeds; T. L. Weir, Middlesex Hospital; H. A. L. Willis, St. Mary's Hospital; J. M. Wilson, Middlesex Hospital; J. Wood, Owens College, Manchester.

Part III. *Elementary Anatomy and Elementary Physiology.*—P. R. L. Atal, Lahore Medical College; J. L. Baskin, Queen's College, Cork; J. Battersby, St. Mungo's College, Glasgow; L. D. B. Cogan, Guy's Hospital; H. J. Farhi, Protestant College, Beyrout, and London Hospital; A. E. Gladstone, St. Thomas's Hospital; E. Hyde, Cambridge University; S. A. Mahmood, University College, London; M. B. Oliver, University College, London; J. Wood, Owens College, Manchester.

Elementary Physiology only.—U. M. Asplen, Cambridge University and King's College, London; and O. S. Nellett, Cambridge University.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Schools of Surgery.—The school prizes for the session 1894 will be distributed by the President of the College, Mr. Thornley Stoker, on November 1st, at 12 o'clock, in the Board Room of the College. The school buildings have been recently reconstructed at a cost of £8,000.

Fellowship Examination.—Mr. Francis Saunderson Morrison (Dundalk), having passed the necessary examination, has been admitted a Fellow of the College.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

At the annual stated meeting of the Royal College of Physicians of Ireland, held on St. Luke's Day, October 18th, the following officers were elected for the collegiate year 1894-5:

President: Walter G. Smith, M.D. *Vice-President:* A. J. Horne, F.R.C.P.I. *Censors:* J. M. Redmond, M.D., Andrew J. Horne, F.R.C.P.I., H. C. Tweedie, M.D., and H. C. Earl, M.B.

The following members of the College were elected to the Fellowship: John Murphy, M.R.C.P.I., and Alfred J. Parsons, M.B. University of Dublin.

SOCIETY OF APOTHECARIES OF LONDON.

The following candidates passed in:

Surgery.—E. A. Dodson, Royal Free Hospital; W. A. Higgins, Birmingham; A. J. Hopper, Durham; W. H. Peake, Guy's Hospital; A. S. Robinson, Leeds; W. S. Webb, London Hospital.

Medicine, Forensic Medicine, and Midwifery.—M. Carter, Charing Cross Hospital; E. A. Dodson, Royal Free Hospital; A. W. Hales, King's College; G. M. MacDonald, King's College; A. S. Robinson, Leeds.

Medicine and Forensic Medicine.—R. B. Allen, St. Mary's Hospital; G. C. Stamper, Guy's Hospital.

Medicine and Midwifery.—T. Morris, Liverpool; H. A. Walker, Manchester.

Medicine.—J. K. Birdseye, St. Bartholomew's Hospital; C. E. R. Bucknill, St. Mary's Hospital; C. A. Newbold, St. Bartholomew's Hospital.

Forensic Medicine and Midwifery.—W. A. Higgins, Birmingham; W. Pell, St. Thomas's Hospital.

Forensic Medicine.—R. B. Rees, Middlesex Hospital.

Midwifery.—P. H. Court, Middlesex Hospital; J. Friend, Leeds; E. C. B. Ibotson, Guy's; J. H. P. Vivian, St. Thomas's Hospital; H. J. L. Wales, Guy's Hospital.

To Messrs. Bucknill, Court, Friend, Hayles, Ibotson, MacDonald, Robinson, Wales, and Miss Dodson was granted the diploma of the Society entitling them to practise Medicine, Surgery, and Midwifery.

OBITUARY.

DR. BENJAMIN WILLIAM HALL.

The death of Dr. Benjamin William Hall, of Johannesburg (son of the late Sir Benjamin Hall, President of the first Board of Health of England), is the subject of a notice in the obituary columns of the September number of the *South African Medical Journal*. Dr. Hall's first week, after taking his diplomas, was in the army, and in that capacity he was sent out to the Cape to an appointment in a proposed military sanatorium for soldiers from India. But the sanatorium having been abandoned, he was offered the district surgeoncy of Somerset East, which carried with it a good private practice. Here he remained about ten years, after which he filled with honour various appointments both in the Colony and the Transvaal. Dr. Hall was obliged to travel much on account of ill-health, but he was never idle, even when his health entirely gave way. His advice in all sanitary matters was of great benefit to the community amongst whom he resided. He died at the age of 61, deeply regretted by all who knew him.

STAFF-SURGEON HUGH T. S. BEVERIDGE, M.D.

The death has occurred at Paignton of Staff-Surgeon Hugh T. S. Beveridge, M.D., who entered the navy in June, 1839, and in the following year served as assistant-surgeon on board the *Hastings* in the operations on the coast of Syria, receiving two medals with clasp. He was sole medical officer of the squadron on the occasion of the return to the Continent of Nicholas, Emperor of Russia, in 1844, when he was specially promoted to staff-surgeon, and was surgeon of the *Mutine* when that vessel was employed in the suppression of the slave trade on the East Coast of Africa during the years 1845-6. For upwards of three years he was senior medical officer of the *Imaum* (the commodore's broad pennant) at Port Royal, and was specially thanked by the authorities of Jamaica for his splendid services during the fatal epidemic of Asiatic cholera, to which 5,000 people, out of a population of 40,000, at Kingston and one-third of the inhabitants of Port Royal succumbed. This was in 1850-1, and three years later he took part in the Crimean campaign, and it was for his services here that he received the medal and clasp at the hands of the Queen. In 1855, while acting as surgeon in the *Hawke*, he was so severely wounded in an engagement with the forts and batteries of Riga that he had to undergo amputation. Dr. Beveridge retired from the service in 1863, and was in receipt of the Greenwich Hospital pension. He was the author of a book entitled *Results of Practical Observation of Asiatic Cholera in Various Parts of the World*.

MEDICAL NEWS.

FOR libelling a doctor Miss Mary Grey was last week ordered by the Liverpool magistrates to pay 7 guineas costs on withdrawing all imputations.

THE recent Longton Hospital Saturday has resulted in the paying over to the North Staffordshire Infirmary the sum of £181 7s. 1d.

ETHER DRINKING IN FRANCE.—According to the *Lyon Médical*, ether drinking is becoming increasingly prevalent in France, and the police reports show that in a large number of cases of arrest for drunkenness in public places, the intoxicating agent has been ether.

THE first meeting of the Zoological Society of London will be held on November 6th, at 8 P.M., when Mr. Boulenger, F.R.S., will make a report on additions to the Batrachian Collection in the Natural History Museum, and papers will be read by Mr. Martin Jacoby and Mr. Ridewood.

POISONED BY MUSSELS.—At an inquest held on October 1st at Kirkham, a verdict of "Death from the effects of mussel poisoning" was returned in the case of a barber, aged 27. After partaking heartily of beefsteaks at tea, the deceased ate the greater part of two quarts of mussels, and he was in the act of eating some tripe for his supper, when he suddenly became ill, and died in a few minutes.

TOOTH BRUSHES FOR WORKHOUSE CHILDREN.—The guardians at Sheffield, at a recent meeting, decided to provide 144 tooth brushes for the use of the children. There were two dissentients to the proposal, and their objections were amusing and illustrative of the habits of some guardians. One objected that "he had never bought one in his life," and another "never had one when he was a boy."

PATIENTS FOR PASTEUR.—Six persons, a married woman and five boys, bitten by a mad dog, have left Accrington for the Pasteur Institute. One of the boys had two fingers bitten off, another had his nose almost severed, and a third his thigh badly lacerated. They are being sent to Paris by public subscription. The rabies order has been put in force in the Accrington district.

A BACTERIOLOGICAL BURGLAR.—An enterprising burglar recently made a professional visit to the laboratory of the Chemical Examiner at Agra, but the only portable property he succeeded in annexing seems to have been some bottles containing samples of "microbe water." Whether these were samples from the Holy Well of Mecca, or some of Mr. Hankin's cultures of the cholera vibrio, does not appear. In either case it would be interesting to know how the burglar disposed of his "loot."

SOCIETY OF ANÆSTHETISTS.—The second annual meeting of this Society was held on October 18th, when the following officers were elected for the ensuing year:—*President:* Mr. F. Woodhouse Braine, F.R.C.S. *Treasurer:* Dr. Dudley W. Buxton. *Members of Council:* Mr. H. Davis, Mr. W. Fingland (Liverpool), and Dr. Richard Gill. *Secretaries:* Dr. Frederick W. Silk and Mr. Walter Tyrrell. The members and their friends subsequently dined together at Limmer's Hotel.

BEQUESTS AND DONATIONS.—The *Illustrated London News* says that Mrs. Matilda Sarah Cooke, of 46, Maida Vale, who died on July 7th, bequeathed £300 each to the Cancer Hospital (Brompton) and University College Hospital; £100 each to the Hertford Infirmary and the Elizabethan Stift, Barmherzigen Schwestern, the Alice Hospital, and the Armen Verein, all of Darmstadt; £50 each to the Hospital for Sick Children (Great Ormond Street), the Hospital for Consumption (Ventnor), the British Home for Incurables (Clapham), the Royal Sea Bathing Infirmary (Margate), and the Samaritan Free Hospital for Women and Children.

MR. WALTER RIVINGTON.—The old students of the London Hospital intend to entertain Mr. Walter Rivington at dinner at the Criterion on Thursday, November 15th, when some permanent token of the esteem in which he is held by his old pupils and friends will be presented to him. The chair on this occasion will be taken by Mr. Jonathan Hutchinson, F.R.S.; and gentlemen wishing to attend the dinner or to take part in the presentation are requested to communicate with Dr. George Wright, Medical Department, General Post Office, London, who is acting as Honorary Secretary to the Committee which has been formed.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—The annual meeting of this Society was held in the Royal Infirmary, Newcastle, on October 11th, Dr. Adamson, retiring president, in the chair. The report showed a membership of 206. The following were elected officers for the session 1894-95: *President:* F. Page. *Vice-Presidents:* J. Adamson, M.D.; J. Drummond, M.D.; G. H. Hume, M.D.; G. H. Philipson, M.D. *Honorary Secretaries and Editors of Journal:* J. Limont, Rutherford Morison. *Committee:* R. Beveridge, M.B.; Mr. J. Crisp, Dr. D. Drummond, Dr. W. Gowans, G. Murray, M.B.; Dr. J. Murphy, Dr. T. Oliver, G. W. Ridley, F.R.C.S.; G. E. Williamson, F.R.C.S.

AN ANTI-OPIATE SOCIETY.—An Anti-opiate Society has been formed in New York, with the object of combating the growing evil of the abuse of opium, chloral, cocaine, and other narcotics. The Society, in its prospectus, estimates that there are now a million and a-half men and women in the United States who are addicted to the use of opium in some form or other. Twenty years ago there were fewer than three hundred thousand in the same territory. In New York itself it is alleged that there are more than 50,000 persons who indulge in narcotics; there are said to be 25,000 slaves of the same habit in Chicago, and 20,000 in St. Louis. The New York *Medical Record* asserts that these figures are grossly exaggerated.

CREMATION IN PADDINGTON.—The Home Secretary has sanctioned the letting of an unappropriated portion of land belonging to the Paddington Cemetery for the erection of a crematorium. The Cremation Society of England are prepared to pay the Burial Board a yearly rent of £10, and to give them the option of purchasing the plant should the Legislature at any time empower them to acquire it. The Society's initial outlay is estimated at £1,000, and they take all the risk. If they succeed in establishing as a means of disposing of the dead in Paddington, the Society claim that they will be the means of saving the pockets of the ratepayers, as their cemetery will not fill up so quickly. The projects of the Society, approved by the Burial Board, only await the sanction of the local vestry.

THE delightful old German town of Halle-a-S. has added yet another hospital and convalescent home to the number of magnificent hospital buildings already possessed by it. This latest addition, the Bergmannstrost, has been erected by the Fourth Section of the Workman's Company (Knappschafts-Berufsgenossenschaft). It has been especially designed for the reception of cases of accidents. The main building is flanked by two wings projecting at right angles from the ends, and consists throughout of two storeys. There is accommodation here for some 120 patients, with resident quarters for assistant officers, operating theatres, and laboratories. There are, in addition, several out-buildings, including kitchens, a medico-mechanical institute, the principal resident officer's house, disinfecting chambers, and mortuary. The hospital is lighted throughout by electricity. The building has cost some 750,000 marks (£37,500).

AT the annual meeting of the Reading Pathological Society, under the presidency of Mr. O. C. Maurice, Mr. Bryant delivered an address in the course of which he touched on the evil effect of the apparent Government sanction given to quack remedies by the Medical Stamp Act. He spoke in favour of public provident dispensaries if limited to the wage-earning and poorer classes, the admission charges being calculated in the case of single persons on their wages, and in families upon the aggregate wages. He thought their rules should be such as "to allow of any of the 'well-to-do poor classes' being able to obtain speedy help and relief upon well-defined terms from any one of the medical men of the district in the event of any sudden illness or accident." In conclusion he spoke strongly in favour of midwives undergoing stringent examination before being allowed to follow their calling.

A Deaconess's Hospital.—A small hospital of some twenty or more beds has just been opened in Edinburgh to provide means of medical instruction and training in nursing for those who are to become deaconesses in connection with the Church of Scotland. The addition of one more to the already far too numerous medical charities of Edinburgh ought to have been made only for the very strongest of reasons, and it is doubtful if such reasons can be advanced in this case.

Bristol Medico-Chirurgical Society.—The annual meeting was held on October 10th, when Mr. Greig Smith resigned the chair to his successor, Dr. A. J. Harrison. The new President delivered an inaugural address describing his experiences as physician to the animals at the Zoological Gardens, mentioning many "interesting cases." Amongst these were a case of strychnine poisoning in a brown bear; removal of an ingrowing claw from a lion's paw: Cæsarean section performed on a gazelle for obstructed labour: and the case of a Cape ostrich who died from indiscretion in diet. The contents of the stomach included handkerchiefs, a pocketbook, stones, pencils, and a prayerbook. The following officers were elected: *President-elect:* Mr. A. W. Prichard. *Honorary Librarian:* Mr. L. M. Griffiths. *Honorary Secretary:* Mr. J. Paul Bush. *Committee:* Drs. Michell Clarke, Aust Lawrence, J. E. Shaw; Messrs. J. Dacre, W. H. Harsant, and Munro Smith.

British Laryngological and Rhinological Association.—The nineteenth general meeting was held on October 12th; Dr. W. M. Whistler, the President, in the chair. The following officers were elected for the ensuing year: *President:* Dr. W. M. Whistler (London). *Vice-Presidents:* Dr. Ed. Woakes, Dr. Richard A. Hayes (Dublin), Mr. Mayo Collier. *Council (Metropolitan):* Dr. Ed. Law, Dr. Dundas Grant, Dr. Farquhar Matheson Dr. N. Wolfenden, Dr. J. Macintyre (*ex-officio*); *Extra-Metropolitan:* Dr. Barclay Baron (Bristol), Mr. F. Marsh (Birmingham). *Honorary Secretary:* Dr. Hemington Pegler. In accordance with a resolution passed at the previous meeting, a report was read of a memorial to the Local Government Board drawing attention to the advisability of establishing stations in different parts of the country and metropolis for the regular examination by skilled bacteriologists of the exudations from suspicious cases of diseases of the throat. Cases were shown by Mr. Lennox Browne, Mr. Mayo Collier, Dr. Dundas Grant, and Mr. Wyatt Wingrave. Papers were read by Dr. Dundas Grant, Mr. Bark (Liverpool), and Dr. Milligan (Manchester).

American Jottings.—Chicago has 22 general and 16 special hospitals, with a total of 3,409 beds.—Under the will of a wealthy citizen, Santa Cruz is to have a hospital, costing a million dollars, for the deaf, dumb, and blind.—The medical practitioners of Mount Vernon, New York, have gone on strike. They have announced that they will not examine persons supposed to be lunatics because the Board of Supervision of Westchester has cut down the charge from 10 to 5 dollars for each case.—The Chicago Health Board has adopted the New York plan (described by Dr. H. Biggs at the annual meeting of the British Medical Association at Bristol) of supplying culture tubes and making microscopic examinations in cases of suspected diphtheria.—A Bill (known as Bill No. 4,732) has been introduced into the House of Representatives, the object of which is to suppress obscene and quack advertisements in newspapers. The Medical Society of the District of Columbia recently, through a Committee presided over by Dr. Charles H. Stowell, reported upon this subject, approved of the Bill, and urged upon Congress the advisability of passing it.—There appears to be a distinct need for negro practitioners in the large cities of the Southern States. The average length of life of the New Orleans negro is said to be only 24.2 years. This frightful mortality is ascribed in large measure to the lack of medical attendance and to the wretched sanitary condition of the negro population in these cities. It is asserted that probably not one-half of the negroes receive any medical attention at all during illness. The Philadelphia *Medical News* points out that, although forty million dollars have been given since the war towards the literary education of the coloured race, it is doubtful whether forty cents have been given towards the education of negro practitioners of medicine.

The Health of Quetta.—Much fever has been prevalent in the garrison during the last three months. The indifferent barrack accommodation of mud buildings is said to have exercised an unfavourable influence on health. The superficial area for each European soldier does not exceed some 50 feet, an amount totally insufficient in India. While this indifferent barrack accommodation is provided for our European forces, it is reported that some three lakhs of rupees have been expended on a church in Quetta. While referring to this matter the case of Aldershot is recalled to memory where, while soldiers were housed in miserable and unhealthy huts, a church costing a good round sum was erected.

MEDICAL VACANCIES.

The following vacancies are announced:

BARONY PARISH.—Medical Officer for the Springburn and Possilpark District. Salary, £75, in full of all duties performed; must reside in the district. Applications to James R. Motion, Acting Inspector of the Poor, Barony Parish Chambers, 38, Cochrane Street, Glasgow, by November 8th.

BOSCOMBE HOSPITAL, Shelley Road, Boscombe, Bournemouth.—House-Surgeon, unmarried. Salary, £60 per annum, with board and residence. Applications to the Honorary Secretary by October 30th.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon: doubly qualified. Salary, £70 per annum, with board, residence, and washing. Applications to C. V. Woodcock, Secretary, by November 1st.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—Two Assistant Surgeons. Applications to the Secretary by November 5th.

CHARING CROSS HOSPITAL.—Surgical Registrar; must be qualified to practise. Salary, £40 per annum. Applications to the Chairman, Medical Committee, by October 29th.

COUNTY OF LANARK.—Medical Officer; applicants must be under 50 years of age and registered medical practitioners; must hold diploma in Sanitary Science, Public Health, or State Medicine. Salary, £700 per annum, with travelling expenses and allowance for clerk and office. Applications and testimonials to W. Alston Dykes, County Clerk, before November 5th.

GLASGOW MATERNITY HOSPITAL.—Indoor and Outdoor Surgeons, an Assistant Physician, and one District Physician. Applications to Arthur Forbes, Secretary, 146, Buchanan Street, Glasgow, for the former appointments by November 7th, and for the two latter appointments by November 1st.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis Road, Shadwell, E.—House-Surgeon. No salary. Board, lodging, and washing provided. Applications and testimonials to Thomas Hayes, Secretary, before November 10th.

EDMONTON UNION.—Medical Officers for the Districts of High Cross and Lower Tottenham. Salaries, £10 per annum for the former and £60 for the latter, and 20 per cent. thereon in lieu of payment for expensive medicines, with extra fees prescribed by the Local Government Board. Each District Medical Officer will also be appointed Public Vaccinator at a remuneration of 1s. 6d. for each case of successful primary vaccination. Applications, on forms to be obtained at the Clerk's Office, to Francis Shelton, Solicitor and Clerk, The Grange, White Hart Lane, T[illegible]

HOSPITAL FOR WOMEN AND LYING-IN INSTITUTE, Brighton.—House-Surgeon, unmarried, and under 30 years of age. Salary, £80 per annum, with board and rooms. Applications to the Secretary by November 15th.

HULME DISPENSARY, Manchester.—Honorary Surgeon. Applications to C. C. Heywood, Esq., F.R.C.S., Honorary Secretary, Medical Committee, by November 5th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road. [illegible] tant Resident Medical Officer [illegible] r six months. No salary, but bo[illegible] and an honorarium of 5 guine[illegible] c term of appointment. Applications to E. Wilson Taylor, Secretary, by November 2nd.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT, Bowdon, Cheshire.—Resident Medical Officer. Salary, £60 per annum, with board, apartments, and washing. Applications to C. W. Hunt, Secretary, by October 30th.

NORTH BIERLEY UNION.—Medical Officer for the No. 13 District. Salary, £20 per annum, and prescribed fees for midwifery and surgical operations. Applications, endorsed "Medical Officer No. 13 District," to J. E. Helmsley, Union Clerk, 4, Town Hall Street, Bradford, by October 30th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, Shoreditch, N.E.—Physician; must be F. or M.R.C.P.Lond. Applications to T. Glenton-Kerr, Secretary, 27, Clement's Lane, E.C., by November 15th.

NORTH LONDON HOSPITAL [illegible] CONSUMPTION, [illegible] Assistant Physician. [illegible] University of the Uni[illegible] Royal College of Physi[illegible] M.A., Secretary, at the Office, before November 3rd.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road, N.W.—Resident Medical Officer and Assistant Resident Medical Officer. Salary, £50, attached to the senior post. Appointments for six months. Applications to Alfred Craske, Secretary, by October 28th.

PARISH OF BIRMINGHAM.—Resident Medical Officer for the Workhouse. Salary, £150 for the first year, rising £10 annually to £200, with apartments, board, and washing. Applications and testimonials to W. Bower, Clerk to the Guardians, before November 2nd.

RADCLIFFE INFIRMARY, Oxford.—House-Physician and House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Tenable for six months. Applications and testimonials to A. C. Virgo, Secretary, by November 16th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand, W.C.—Two Assistant Surgeons. Applications to T. Beattie-Campbell, Secretary, by November 3rd.

SMEDLEY'S HYDROPATHIC ESTABLISHMENT, Matlock.—House-Physician; must be under 30 years of age. Appointment for six months. Honorarium, £40, with extension, if mutually desired, at the rate of £120 per annum. Board, lodging, etc., provided. Applications to the Secretary by October 30th.

SUNDERLAND INFIRMARY.—Honorary Physician. Applications to the Chairman of the Medical Board by November 8th.

MEDICAL APPOINTMENTS.

BATHURST, Lullum Wood, M.B.Lond., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer at the London County Asylum, Hanwell.

BROWN, John, M.D.Vict., D.San.Sci., etc., reappointed Medical Officer of Health for the Borough of Bacup, and Physician to the Southall Fever Hospital.

BUXTON, Edward, M.R.C.P.E., F.R.C.S.E., D.P.H., reappointed Lecturer upon Ambulance Work, by the Committee, under the County Council on Technical Education for the Urban District of Great Crosby.

CHEVES, J. T., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Third District of the St. Germans Union.

COLDSTREAM, Mr. G. P., appointed Medical Officer for the West District and the Workhouse of the Belford Union.

COLLIER, H. Stansfield, F.R.C.S., appointed a Demonstrator of Anatomy at St. Mary's Hospital Medical School.

DAWSON, W. R., M.D., etc., Dub., appointed Assistant Medical Superintendent to Farnham House and Mary Ville Private Asylums, Finglas, Dublin.

EVES, P. S., M.B., B.S., appointed House-Surgeon to the Cumberland Infirmary, Carlisle, *vice* H. Finley, M.D., resigned.

FOTHERGILL, William E., M.A., B.Sc., M.B., C.M., appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

GODSON, Mr. J. H., appointed Medical Officer for the Cheadle District of the Stockport Union.

GODSON, Leonard J., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Royal United Hospital, Bath.

HIND, Albert, L.R.C.S.Edin., L.M., reappointed Medical Officer for the Exmoor District of the South Molton Union.

ISAACS, E. Percival, M.R.C.S., L.R.C.P., appointed House-Surgeon to the Dreadnought Hospital, Greenwich, *vice* Arthur Jervis, M.B., B.S., L.R.C.P., M.R.C.S., resigned.

JONES, S. Edwards, L.R.C.P., L.R.C.S.Edin., etc., appointed Medical Officer for the No. 5 District and Public Vaccinator for the No. 1 District of the Wrexham Union.

LAWRIE, W. Duncan, M.B., C.M., appointed Junior House-Surgeon to the Branch of the Seamen's Hospital, Royal Albert Dock, E.

MCDOUGALL, A. H., M.R.C.S., L.R.C.P.Lond., appointed Assistant Medical Officer to the Crumpsall Workhouse of the Township of Manchester.

MARTLAND, E. W., M.R.C.S., L.R.C.P.Edin., L.S.A., appointed Honorary Surgeon to the Oldham Infirmary.

MORGAN, Harry de Riemer, M.A., M.R.C.S., L.R.C.P., appointed Medical Officer of Health to the Cockington Local Board.

NICHOLSON, William, M.B. C.M.Glasg., appointed Superintendent and Resident Medical Officer to the Victoria Infirmary of Glasgow.

NITCH SMITH, Reginald, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the *Warwick Castle* under Government transport orders.

PRITCHARD, Ernest J., M.B., C.M.Glasg., reappointed Medical Officer for the Stoke Golding District of the Hinckley Union.

RUTHERFORD, J. M., M.B., C.M.Edin., appointed Assistant House-Surgeon to the Cumberland Infirmary, Carlisle.

SANDERS, Thomas, F.R.C.S.Eng., reappointed Medical Officer for the Fourth District of the South Molton Union.

SIMPSON, G. A. Garry, M.R.C.S., L.S.A., appointed Medical Officer of Health to the Acton Local Board.

SMITH, R. Bradshaw, L.R.C.P.Edin., L.R.C.S.I., reappointed Medical Officer for the Wolvey District of the Hinckley Union.

SPICER, Robert H. S., M.D.St.And., L.R.C.P.Edin., reappointed Medical Officer for the Fifth District of the South Molton Union.

STEPHEN, William A., M.A., M.B., C.M., appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

STOTT, W. A., M.R.C.S., L.R.C.P., late Resident Obstetric Officer, appointed Pathological Curator to the Leeds General Infirmary.

TILL, G. W., L.R.C.P.Edin., L.F.P.S.Glasg., appointed Medical Officer of the Cottage Homes of the Worcester Union.

WHICHER, A. H., M.R.C.S.Eng., appointed Medical Officer for the Clutton District of the Clutton Union.

WINDSOR, Charles W., M.R.C.S., M.A., M.B., B.S., appointed House-Physician to the Dreadnought Hospital, Greenwich, *vice* Matthew Henry Spencer, M.A., M.D., M.R.C.S., L.R.C.P., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. A. Stanford Morton: Affections of Eyelids. Bacteriological Laboratory, King's College, W.C., 3 to 5 P.M.—Lecture: Tuberculosis and Leprosy. Practical Work: Staining Sputum and Sections. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. George Stoker: Chronic Glandular Diseases of the Naso-pharynx.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Percy Smith: Developmental Insanity; Circular Insanity.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. T. D. Acland: Cases of Empyema and its results. Royal London Ophthalmic Hospital, 8 P.M.—Mr. A. Quarry Silcock: Glaucoma, with Illustrative Cases.

POST-GRADUATE COURSE, WEST LONDON HOSPITAL, Hammersmith Road, W., 5 P.M.—Mr. Edwards: Cases of Urinary Surgery.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, 3 P.M.—Lecture by Dr. Beevor.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Dr. Charlton Bastian, F.R.S.: Selected Cases. Hospital for Sick Children, Great Ormond Street, 3.30 P.M.—Mr. Leopold Hudson: Otorrhœa in Children. Central London Sick Asylum, Cleveland Street, W., 5.30 P.M.—Mr. Jonathan Hutchinson, F.R.S.: Cases in the Wards.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Dr. N. T. Hewlett, M.R.C.P.: Bacteriology in its Practical Aspects.

ROYAL COLLEGE OF SURGEONS, 3 P.M.—Annual meeting.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. Hector Mackenzie: Cases of Phthisis in Children.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, 8.30 P.M.—Discussion on Diptheria opened by Dr. Pope and Dr. Thomson.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 11 A.M.—Dr. Hyslop: Climacteric and Senile Insanity.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BLOXAM.—On October 16th, at Lower Weston, Bath, the wife of G. E. Bloxam, M.R.C.S., L.R.C.P., of a daughter.

BONAR.—On October 17th, at his residence, 114, Via del Babuino, Piazza di Spagna, Rome, the wife of Thomson Bonar, M.D.Edin., of a daughter.

CARRUTHERS.—On October 22nd, at Halton, Cheshire, the wife of W. Hodgson Carruthers, M.D., of a daughter.

DATE.—On October 21st, at Culmstock, Devon, the wife of W. Horton Date, M.R.C.S., L.S.A.Lond., of a son.

LANE.—On October 18th, at Berrington House, St. Nicholas Square, Hereford, the wife of J. Oswald Lane, M.D.Cantab., M.R.C.S., etc., of a son.

STILES.—On October 21st, at Sherwood House, Hornsey Rise, London, the wife of Charles Butler Stiles, M.B.Ed., C.M., of a daughter.

MARRIAGES.

COOTE—TASCHEREAU.—On July 10th, at the private chapel of His Eminence Cardinal Taschereau, Quebec, by Monsignor Paquet, D.D., P. Coote, M.D., to Caroline Claire, daughter of the late Hon. J. T. Taschereau, of the Supreme Court of Canada.

GREENLEES—WHITE.—On October 17th, at St. Mary's Church, Stone, Kent, by the Rev. Canon Murray, assisted by the Rev. Oscar Hewitt, M.A., Dr. T. Duncan Greenlees, Medical Superintendent, Grahamstown Asylum, South Africa, to Edith, daughter of the late Richard White, Esq., of Norwich. No cards.

JESSOP—FURLONGER.—On October 15th, at St. Andrew's, Ashley Place, by the Rev. A. B. Buckland, M.A., Walter Hamilton Hylton Jessop, M.A., M.B., F.R.C.S., of 73, Harley Street, W., to Florence, youngest daughter of the late Charles J. Furlonger, of 62, Cornwall Gardens, S.W.

DEATHS.

CLARKE.—On October 13th, at Port Said, Basil Roberton Clarke, M.R.C.S., L.R.C.P., Surgeon R.N., H.M.S. *Melita*, aged 27 years, only son of Francis Clarke, 63, Gladsmuir Road, Whitehall Park, N.

HICKS.—On October 13th, at 7, Brock Street, Bath, Charles Cyril Hicks, M.D., of Wokingham, Berks, formerly of Dunstable, Beds, aged 62.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A. B. would be glad to hear of some home or institution where a case of hypochondriasis (female) can be admitted, and charges or by ticket from subscriber.

S. writes: I wish to make a present of a popular medical work to an asylum attendant now in charge of a case of general paralysis of the insane, who has expressed a desire for such a book. Can you recommend me a reliable work of this character, not too technical, and that would likely to be of service to such a man?

*** The most useful work would probably be one of the numerous books on nursing, which in many cases contain a general sketch of physiology and of the symptoms of the more common diseases. We may mention *A Manual of Nursing, Medical and Surgical*, by Laurence Humphry, M.A., M.B. (London: Charles Griffin and Co. 3s. 6d.)

DISINFECTORS.

M.B.M.A. asks what is the best and cheapest disinfector for a small country town with a hospital. He should have regard to the great advantages of saturated steam as compared with hot-air or superheated steam as a means of disinfection. The most widely-used stove with purely saturated steam is Geneste and Herscher's, of Paris. Lyon's stove, employing some degree of superheat, is used considerably in this country.

HOT WHISKY PACK.

MR. A. TEEVAN (Ballarat, Victoria) writes: Can any of your readers inform me of the therapeutic value, if any, of applying hot whisky packs in the treatment of bronchitis, pneumonia, and summer diarrhœa in infants? As this is a novel mode of treatment—apparently unknown to Professor Ringer himself—I do not think it can be of any value and am at a loss to perceive in what way it can be, but it is a favourite method with some medical men here.

ANSWERS.

J. W. C.—*The After-Treatment of Cases of Abdominal Section*, by Christopher Martin, M.B. London: Simpkin, Marshall, Hamilton, Kent, and Co. Birmingham: Cornish Brothers. 2s.

LEAD WORKS AND LEAD POISONING.

DR. D MACMILLAN.—(1) We are not aware that any special information exists as to any peculiar danger in the manufacture of chloride of lead from litharge through the acetate. There is a process of making carbonate of lead from the acetate, but we believe that it is not much employed, as the result is not approved of by the painting trade. (2) It has now been pretty clearly proved that fumes of molten chloride of lead may produce plumbism, but there is no reason to believe that they are—as our correspondent would appear to suggest—specially active. (3) We are unable to suggest any special precautions in the case of chloride of lead not applicable to lead compounds generally. Dr. Arlidge's book on *The Diseases of Occupations* (London, 1892, Rivington, Percival, and Co.) is the best general work on topics of this nature, but varieties in the process of manufacture are so numerous that it may be necessary to make a special study, not only of the manipulations in use, but also of the chemistry of the process before a thoroughly reliable opinion can be formed as to the improvement which should be recommended in any particular factory.

THE COST OF COMPULSORY NOTIFICATION.

R. R. R.—There is no return showing the cost of the compulsory notification system so far as we know. But estimates based on 86 per cent. of the population under the system in England and Wales in 1892 show that the amount expended that year must have amounted to £24,718 18s. For the whole country the cost would have been an additional £5,000 (See Mr. Ernest Hart's paper on Compulsory Notification in England and Wales in 1892, published in the BRITISH MEDICAL JOURNALS of December 16th, 23rd, and 30th, 1893, pages 1332, 1383, and 1430, and re-published by the British Medical Association in pamphlet form, price one shilling.)

NOTES, LETTERS, Etc.

Punch suggests the following motto for the Aërated Bread Company:—

" . . . . . His sleep
Was aëry light, from pure digestion bred."
Paradise Lost. B.V., line 4.

"MIGRAININ."

ACCORDING to the *Münchener medicinische Wochenschrift* of October 2nd the police authorities of Hamburg have issued a notice warning the public against using "migrainin" (extensively advertised as a remedy for headache), except with the sanction of a medical practitioner. The preparation, it is stated in the notice referred to, contains no new remedial agent, but is a mixture of antipyrin and caffein, both powerful substances, which may be injurious if improperly used. The free sale of "migrainin" is forbidden in the pharmacies of Hamburg.

TAKING A TELEPHONE TO BED.

THE New York *Medical Record* states that a Pittsburgh practitioner has devised a way of taking his telephone to bed, so that he can answer calls without rising. He has the telephone hung on hooks in his office, the connections being made by the telephone coming in contact with an electric board which he has had constructed. He also has wires run to his bedroom, where another electric board has been placed. When the day's work is done, he takes the telephone from the hooks in his office, carries it under his arm to his bedroom, and places it upon the hooks there. Should any calls come during the night, he can answer them without leaving his room.

THE NOTIFICATION OF SORE THROAT AND THE PREVENTION OF DIPHTHERIA.

MR. LENNOX BROWNE (Portland Place, W.), writes: Agreeing in the main with all that has been written by R. T. W. on this subject, I think it may be interesting to record that this matter was especially considered at the meeting of the British Laryngological and Rhinological Association in July last. As a result of a paper read by Dr. Norris Wolfenden, a resolution, moved by myself, was unanimously carried, that a memorial (a copy of which is enclosed) should be addressed to the Local Government Board on the subject. At the next meeting of the Association, held on October 12th, on the motion of Dr. Macintyre, it was decided that the same memorial should be sent to the newly-appointed President of the Scotch Local Government Board, and on that of Dr. Sandford, of Cork, that a similar one should be presented to the Chief Secretary, who *ex-officio* is President of the Local Government Board in Ireland.

On only one point do I venture to differ slightly from your correspondent. It is quite true, as he says, that by the time a case is judged to be true diphtheria much mischief may be done; but, on the other hand, many cases diagnosed at the bedside to be diphtheria are not so, and most of these are without danger by infection to others. I would appear that only in bacteriological examination shall we find safety, and the report of Dr. Hermann Biggs, of the first year's work in New York City, encourages us in this belief.

*** The memorial sets out the necessity for greater facility being afforded for bacteriological examination in these cases by the establishment of stations for the purpose, such as is done in the city of New York. The memorial further states "that while it is evident that the average family attendant, who is the first to see these cases during the initial, and therefore the most important, epoch, is not in possession of either the requisite special knowledge or the facilities for pursuing such investigations, it must also be at once apparent that an accurate diagnosis at the commencement of these cases is of vital importance, not only to the individual attacked, but also for the protection of the community in general. Moreover, it need hardly be pointed out that many diseases in this region, which may be regarded as infectious, are not limited to diphtheria, though many of them, clinically, so closely resemble this disorder as to be only capable of differentiation by bacteriological methods. No true progress can be made in the proper classification of their relative virulence except by scientific research, and only by such a system can efficient notification be effected with a corresponding relief from the onerous responsibility which now presses on the medical profession in cases of doubtful diagnosis. It is confidently to be hoped that the early detection of such disorders by the means indicated would eventually lead to the diminution of diphtheria and allied disorders now so alarmingly on the increase. It may, therefore, it is urged, "well be brought within the scope and duties of the medical officers of health and other officials under the control of" the Local Government Board.

HEREDITARY INSANITY IN MODERN HISTORY.

MRS. BODINGTON (Hatzic, British Columbia) points out that Dr. W. Lloyd Andriezen and Dr. Conolly Norman, in their speeches in the Section of Psychology, published in the BRITISH MEDICAL JOURNAL for September 8th, 1894, appeared to differ considerably in their views as to the evils likely to occur from hereditary insanity. Mrs. Bodington suggests that the sovereign families of Europe, notably the Spanish and Austrian Hapsburgs and the Romanoffs, form an invaluable study in the effects of hereditary insanity. She enforces, which is not altogether a novel one, by reference to certain points in the well-known history of these families. The evidence, she concludes, so far as it has been collected, seems to prove that the evil effects of hereditary tendency to insanity, as well as of other constitutional taints, may be much mitigated, perhaps altogether averted, by judicious marriages and change of race environment.

NEW COMPANIES REGISTERED.

MEDICAL ELECTRICAL INSTITUTE, LIMITED.—Registered October 16th by Jerome and Co., 33, Basinghall Street, E.C. Capital £75,000, divided into 25,000 £7 per cent. preference shares of £1 each, and 20,000 ordinary shares of £2 10s. each. Objects: To purchase or otherwise acquire all the business, goodwill, assets, property, etc., of the Medical Battery Company, Limited; to enter into and carry into effect an agreement dated October 16th, 1894, between the Medical Battery Company, Limited (in liquidation), of the one part, and Herbert Banyard (for this company) of the other part, to provide for and carry out, under the control and superintendence of a duly qualified medical man, the treatment of diseases by means of galvanic, electric, and magnetic appliances, batteries, baths, medical, and other apparatus, and by massage, hydrotherapic inhalation, mechanical exercise (Dr. Zander's and any other system), chemical, dental, and other processes; and to carry on the business of manufacturers of, and dealers in all kinds of galvanic, electric, magnetic, mechanico, therapeutic, gymnastic, and other appliances, chemists and druggists, dentists, chiropodists, Turkish and other bath proprietors, etc. Signatories:

	Shares.
Alfred Cowen, 12, Charter Buildings, Goswell Road ...	1
Thomas S. Smith, 80, Mallinson Road, Battersea Rise ...	1
Chas. L. Quin, 64, Basinghall Street, E.C. ...	1
Wm. Brittain, 136, Windsor Road, Forest Gate, E. ...	1
P. Jerome, 9, Boutflower Road, Wandsworth ...	1
F. J. Horrocks, 17, Goldhurst Terrace West, N.W. ...	1
Aubrey Lienard, Newport Villa, Muswell Hill ...	1

There shall be six first directors. The first are Charles G. Elers and John Oliver (nominated by ordinary shareholders), Arthur L. Poulter and Leopold J. Greenberg (nominated by preference shareholders), and William B. Jones and Augustus Fleet (nominated by second mortgage holders). Qualification, 100 ordinary or 50 preference shares, or £100 second mortgage debentures. Remuneration, £600 per annum, or 5 per cent. of the net divided profits divisible. Registered Office, 52, Oxford Street, W.

CASE OF DOUBLE PENIS.

MR. D. MACLACHLAN, L.F.P.S.Glasg. (Bruichladdich, Islay), writes: In my practice here I recently delivered at full term a male child with the following extraordinary conditions of the genitals: The scrotum is represented by two separate labial pouches, each containing a testicle. From a common swelling posteriorly two rudimentary but distinct penises arise, behind them the integument of the perineum is deficient in the middle line for some distance, and here a urinary fistula is present.

CONCURRENT VACCINATION AND MEASLES.

DR. J. H. R. GARSON, D.P.H.Cantab. (Durham) writes: S.A.H, 12 weeks old, a well-nourished female child, was vaccinated with tube lymph taken from a healthy male child residing half a mile away, upon the left arm, upon September 15th, 1894. Two typical vesicles were well developed upon September 26th, I saw the child upon September 30th, when there was a very slight mulberry rash upon the opposite shoulder. On September 21st the rash of measles was conspicuous over the whole face, trunk, and limbs, while vaccine vesicles stood clear among the rash. On September 23rd the rash was fading, and by September 24th was gone and the child well. It was very lively the whole time, and showed no other characteristic symptoms of measles. The temperature never rose more than 1°. There was no nasal catarrh, etc. The source of infection was the visits of a neighbour in whose family was a little girl suffering from measles, which is very prevalent here—in fact, an epidemic.

Whitelegge mentions vaccinia and variola, but I can find no case of vaccinia and morbilli in Whitelegge, L. Parke, and *Quain's Dictionary*. I place the facts entirely at your disposal.

MEDICAL STUDENTS AND THEIR TAILORS.

FALSTAFF speaks of his tailor as a "rascally yea-forsooth knave," who stands upon security in dealing with a gentleman. How would he have described the tailors of Graz, who have, it is reported, had the audacity to petition the Rector Magnificus of the University that for the future no student should have the degree of Doctor of Medicine conferred upon him unless he is able to show proof of having paid his tailor in full? The unfortunate medical students of the present day is already burdened almost beyond his strength; teachers and examiners weigh heavily upon him, and at every step certificates of one kind or another are demanded of him. If he is to be further called on to produce a receipt from his tailor before he is admitted into the medical fold, he may be excused if he chooses a profession with less rigidly guarded portals. If the tailor is to have a right of veto, why not the laundress and the often long-suffering landlady? If the Rector Magnificus is to help conflicting tradesmen in collecting their "little accounts," we presume they will not object to have these interesting documents taxed by the same exalted authority. The German Universities have, we believe, a charitable arrangement, whereby a man can receive his education on credit, the cost being treated as a debt to the State, which he refunds when his academic honours begin to yield a material profit. Could not the tailors adopt a similar plan? In any case we should have thought their best policy would have been to hasten rather than hinder the acquisition by their clients of the power of earning fees.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) Mrs. Garrett Anderson, M.D., London; Dr. J. T. Arlidge, Stoke-on-Trent; Mr. F. W. Alexander, London; Another Perplexed G. P.; Messrs. Arnold and Sons, London; Dr. J. Althaus, London. (B) Mrs. A. Bodington, Hatzic, B.C.; Dr. G. F. Bodington, Hatzic, B.C.; Mr. E. C. Barnes, London; Mr. L. Browne, London; E. C. Beale, M.B., London; Mr. J. Brown, London; Dr. F. T. Bond, Gloucester; Messrs. Baillière, Tindall and Cox, London; Mr. J. P. Bush, Clifton; Mr. J. C. Brown, Manchester; Dr. J. Brown, Bacup; Dr. R. E. Burges, Chester; Mr. L. A. Bidwell, London; Mr. P. T. B. Beale, London; Mr. E. Buxton, Liverpool; L. W. Bathurst, M.B., London: Mr. G. Brown, London; B. J. Baron, M.B., Clifton. (C) Mr. E. G. Clarke, Clifton; Dr. J. W. Cook, Colchester; Messrs. T. Christy and Co., London; Mr. A. Cutfield, Ross; Dr. C. J. Cooke, Plymouth; Dr. J. Crabb, London; Dr. D. Campbell, Calne; W. L. Cullen, M.B., St. Boswells; Mr. H. S. Collier, London; Mr. R. W. Carter, Weymouth; Dr. J. Coats, Glasgow. (D) Mr. H. Drennan, Helensburgh; S. S. Dunn, M.B., Sheffield; Mr. P. C. de Wet, Cradock, S.A.; Dr. J. Dulberg, Manchester: Mr. W. A. Dartnell, Rochester; Dr. W. R. Dawson, Dublin. (E) Dr. J. Ewart, Brighton; Mr. G. A. Edsell, Thame. (F) Mr. W. Fairbank, Windsor; Mr. W. W. Fyffe, Perth; Dr. T. H. Fagge, Monte Carlo; Mr. E. H. Fenwick, London; Mr. A. Firth, Wakefield; Mr. H. Fox, Newcastle-on-Tyne; Mr. J. F. Fry, Shepton-Mallet: Mr. E. L. Freer, Birmingham. (G) F. E. Gahagan, M.B., Stanningley; Mr. L. J. Godson, Bath; H. Gott, M.B., Leeds; General Practitioner; J. C. Grinling, M.B., Birmingham; Mr. J. W. Gill, St. Germans. (H) Mr. T. C. Hepworth, London; Dr. A. Hill, Birmingham; Mr. T. D. Hancock, Nottingham; H. L. D.; Mr. J. J. Harding, Ballincollig; Mr. E. H. Hellison, London; Mr. W. Hunt, London; Hibernicus; Dr. J. Haddon, Hawick; Messrs. Holt, Webb and Co., London; Mr. J. Halcrow, London. (J) Dr. H. R. Jones, Liverpool; Mr. S. E. Jones, Wrexham; Dr. J. Johnston, Bolton; J. E.; Mr. F. W. Jordan, Stockport; Mr. R. Jones, Liverpool. (K) Mr. S. Karger, Berlin; Mr. N. Kathe, Friedrichroda; Mr. T. Kendle, Sydney. (L) J. F. Little, M.B., London; Mr. A. Lucas, Birmingham; Mr. E. M. Lefray, Limerick; Mr. T. P. Lowe, Bath; J. M. Lawrie, M.B., Weymouth; Mr. R. R. Leeper, Rathdrum; Mr. R. Lake, London; Mr. S. R. Lovett, London; Lex. (M) R. C. Macdonald, M.B., Ollaberry; J. T. MacLachlan, M.B., Dornoch; Mr. H. de R. Morgan, Torquay; M.D.; B. R. Martin, M.B., London; Dr. N. Macleod, London; Mr. P. Michelli, London; Dr. D. McKeown, Manchester; Mr. E. M. Martland, Oldham; Mr. S. B. Mason, Pontypool; B. R. Martin, M.B., London; Mr. G. Massie, London; Mr. D. J. McVeagh, Coventry. (N) Mr. R. Nitch-Smith, London. (O) Dr. T. Oliver, Newcastle-on-Tyne; Dr. A. Ogston, Aberdeen: Dr. J. Oliver, London; Mr. H. B. Osburn, Bagshot; F. L. Orr, M.B., Florence; Mr. J. G. G. Ord, London; One of his Victims. (P) Mr. F. J. Pearse, London; Mr. H. W. Pooler, Birmingham; Mr. J. H. Potter, Cullumpton; Mr. J. R. Phillips, Aughnacloy; Mr. C. S. Payne, London; Dr. L. W. H. Pegler, London; F. A. Pope, M.B., Dublin; Dr. W. R. Parker, Kendal; Mr. F. R. H. Potts, Amersham. (R) Mr. W. H. Radford, Manchester; Mr. A. H. Reinhardt, London; A. H. Rideal, M.B., Manchester; Dr. B. M. H. Rogers, Clifton. (S) W. Smith, M.B., Rhyl; Dr. T. W. Shore, London; Mr. T. H. Smith, Leeds; Mr. S. Stretton, Kidderminster; Dr. S. T. Smyth, Southampton; Messrs. F. Sterns and Co., London; S. U. M.; Dr. C. E. Stokes, Chard; Mr. C. H. B. Shears, Liverpool; Soldier Doctor; Sanitas; Dr. F. F. Schacht, London; Mr. W. G. Stevens, Renfrew; Mr. P. L. Slater, London; Dr. J. F. W. Silk, London: Mr. G. A. G. Simpson, London; Dr. E. M. Skerritt, Clifton; Mr. E. W. Sage, London; Mr. T. S. Sutton, Whetstone. (T) Mr. L. Tracey, London; Mr. J. W. Taylor, Bristol; Mr. A. Teevan, Ballarat; Mr. W. T. Thomas, Liverpool. (V) Mr. F. Verney, London; Dr. H. E. Vincent, Croydon; S. Vincent, M.B., Birmingham. (W) Dr. H. Worthington, Bradford; Dr. L. Wilde, London; Mr. W. Wynne, Beckley: Mr. C. V. Woodcock, Bradford; J. L. Wilson, M.B., Duns; Messrs. A. and J. Warner, Bristol: Mr. W. R. Williams, Preston; Mr. R. Wilkinson, London; Wigs; B. Walker, M.B., Kirkby Stephen; Dr. J. A. Wetherall, Middlesbrough; Dr. F. R. Walters, London: G. E. Williamson, M.B., Newcastle-on-Tyne; Mr. A. H. Walker, Cranleigh; Mr. T. G. Wakeling, Clacton-on-Sea; Dr. W. W. White, Birmingham; etc.

BOOKS, ETC., RECEIVED.

The Uric Acid Diathesis—Gout, Sand, and Gravel. By Dr. F. Levison. Translated from the German and edited by Dr. L. Scott. London: Cassell and Co. 1894. 3s. 6d.

A Textbook of Organic Chemistry. By A. Bernthsen. Translated by George M'Gowan. Second English edition. London: Blackie and Son. 1894. 7s. 6d.

Thoughts, Observations, and Experiments on the Action of Snake Venom on the Blood. By Dr. G. B. Halford. Melbourne: Stillwell and Co. 1894.

Hygiene in the Schoolroom: a Paper read by Dr. E. Magenris at the Congress of the British Institute of Public Health held in London, July, 1894. Bristol: John Wright and Co.

Zeitschrift für physiologische Chemie. Herausgegeben von Professor F. Hoppe-Seyler. Band. xx. Heft. I und II. Strassburg: Karl J. Trübner. 1894.

National Health. By Conway Scott. Belfast: William Mullan and Son. 1894. 6d.

*** In forwarding books the publishers are requested to state the selling prices.

SIXTY-SECOND ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION,
Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF SURGERY.

W. Mitchell Banks, M.D., F.R.C.S., President.

THE TREATMENT OF INJURIES OF THE LOWER END OF THE HUMERUS.

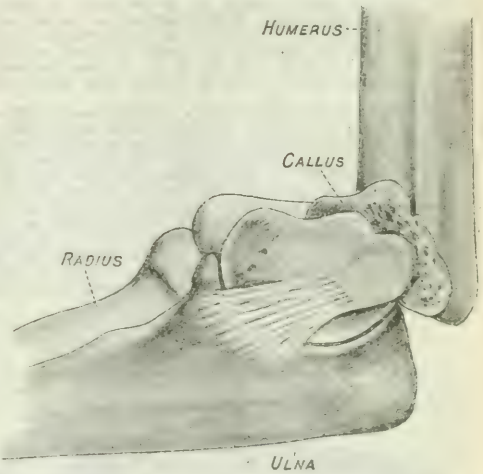
By J. Hutchinson, Jun., F.R.C.S.,
Assistant Surgeon London Hospital.

Without discussing in detail all the forms of fracture through the lower end of the humerus we must briefly note the chief varieties. The commonest is certainly a more or less transverse fracture at or about the olecranon and coronoid fossæ. In subjects under 10 years this will probably be a detachment of the lower epiphysis, at any rate in part. In adults it will tend to have a more oblique direction, owing to the curve of the lower fourth of the humerus, which is here convex backwards, and to the direction of the force in a fall upon the elbow. The line of fracture in these cases is often upwards and backwards. The displacement in both is usually this—the lower fragment is tilted or wholly displaced backwards, and the upper one (which in the case of the oblique fracture in adults may be quite sharp at its lower edge) projects downwards and forwards. The addition of a vertical split in the lower fragment produces the well-known T-fracture into the joint, and the special displacement we have then to guard against is a lateral one of the two portions of the articular end. Examples of union with one or both of these portions pushed inwards and outwards are easily found in the various museum collections.

Sometimes the chief feature about a fracture into the elbow-joint is the complete detachment of the capitellum or articular surface for the radius, the special risk of which is the failure to unite by bone. The same remark applies to fracture of the epitrochlea or internal epicondyle which is so common in children, and which I have proved is in them almost always a clean separation of the epiphysis of this projection.

Looking at the rapid supervention of swelling about the elbow that comes on after these fractures, and the fact that a large proportion are met with in children or young subjects, it will probably be agreed that for the surgeon to effect a proper diagnosis and reduction he must give an anæsthetic as soon as possible after the accident, and put up the fracture whilst all muscular spasm is in abeyance. Granting that some cases can be satisfactorily diagnosed and treated without the aid of ether, it is quite certain that many disastrous mistakes would have been prevented by the observance in complicated cases of the rule just laid down. I could adduce examples of separation of the lower epiphysis mistaken for dislocation and of dislocation mistaken for a fracture owing to the imperfect examination whilst spasm and swelling were present. How is it possible to apply the best treatment to a complicated injury to the elbow-joint unless a correct diagnosis is first formed, and what objection can be raised to the absolutely safe administration of ether? The plan advocated by some, of simply applying cold to the part and waiting until the swelling subsides before a full diagnosis is made, is an unsatisfactory one in many cases, and it is probable that an early reduction of the displaced fragment and its fixation in a well-fitting splint tends to prevent effusion around the fracture.

We will now imagine a case of transverse fracture a little above the elbow-joint, or of separation of the lower epiphysis with backward tilting or displacement of the articular end. Is it necessary or advisable to apply a splint at all? Some teach that a good result will be obtained by flexing the elbow to less than a right angle, pronating the forearm, and bandaging the whole arm to the chest, the hand resting on or near the opposite shoulder. This method seems to run the risk of over-reduction of the backward displacement, and does not give the fixation that may be obtained with a well-applied splint. This over-reduction is well illustrated by



this drawing taken from a specimen in Sir Astley Cooper's collection, and now in the College of Surgeons Museum. The lower epiphysis has been tilted forwards some 90 degrees, and has firmly united at a right angle with the shaft. The result has necessarily followed that, whilst a good amount of flexion of the elbow has been allowed, extension beyond the right angle is impossible. Rotation of the radius was evidently quite normal in this case, and it is a striking fact that this holds good in many, probably the large majority of, cases of fracture into or just above the elbow-joint, however imperfectly they may have been "set." It is only when destructive arthritis has followed the injury, or when a dislocation of the radius has complicated the fracture and has remained unreduced, that the all-important pronation and supination movements are much impaired.

The tendency of late years has been with some surgeons to discard the use of splints (making this term cover the various forms of immovable apparatus) in the treatment of several fractures in which they were formerly regarded as indispensable. However, I much doubt if they can wisely be omitted in the cases now under consideration. Mr. C. Heath's opinion deserves quotation. "I like to bring the forearm thoroughly up so as to put the hand to the opposite shoulder, and then I feel confident that the fragments will fall into the best position."[1]

There is no question that a splint is too often regarded as a sort of fetish in the treatment of fractures: that so long as some sort of splint, however ill-fitting and ill-adapted, is applied, everything is expected to go well. The ingenuity of surgeons' inventions in the direction of an infallible splint for the treatment of these fractures has been severely tasked in the past, and will probably continue to be so in the future. It is not too much to say that the claims in favour of some particular form by its inventor are sometimes wholly absurd. Of this a recent example will suffice. An eminent New York surgeon, in putting forward the merits of a special splint for use in fractures of the condyles, etc., into the elbow-joint, makes the following modest demands on our credulity by

[1] Mr. C. Heath, *Lancet*, i, 1889, p. 107.

asserting that his splint (1) holds the fragments firmly in apposition; (2) allows full flexion and extension, pronation, and supination whilst the splint is on; (3) leaves the entire elbow exposed so that local applications can be applied. A moment's thought will convince one that these conditions are completely incompatible with each other, and not to be obtained by any number of ball-and-socket-joints or other contrivances.

In using a splint jointed so as to allow of forced pronation and supination, if these motions are carried out before good union has occurred at the site of fracture, the tendency will be to twist the lower fragment of the humerus on a vertical axis, or, if the fracture be more or less longitudinal, to delay or prevent firm union occurring.

With regard to the jointed splints, that is, those that allow an alteration in the angle of forearm and arm without being removed, the form allowing rotation of the radius by means of a screw is, I think, quite valueless. Nothing strikes one more in examining old cases of elbow fracture than the almost invariably complete preservation of the rotatory movements; hence there can be no need of a special device to secure this. In fourteen cases of old separation of the lower epiphysis of the humerus that I followed up, in only one was the power of rotation in the least affected, and in that one to no material extent. It is flexion, and to a much less degree extension, that is liable to be interfered with—an important and cardinal point.



Fig. 2.—The left humerus (seen from in front), showing separation of the lower epiphysis united with lateral displacement. The specimen was obtained three weeks after the accident.

Rejecting, then, these special splints which are devised to allow of rotation of the forearm, we have to notice those which permit of the angle of flexion being altered from time to time. Some of these are undoubtedly good, but they have the drawback of often being unduly heavy and complicated. How is it possible for the practitioner to be provided with elaborate splints to fit all sizes of elbows when he may not require one in a twelvemonth? With stout prepared felt or with flexible metal he may mould a light splint having sufficient strength and of the exact size required in a very short time. For complicated or compound cases an admirable splint is a wooden interrupted one secured to the inner side or preferably to the extensor surface of arm and forearm, the interruption being occupied by a light iron bar, which leaves the elbow exposed. Some prefer a plaster-of-paris splint, and as long as it is applied to one surface only of the arm (by choice the posterior or extensor one) it may be satisfactory. Whatever splint be decided on, the best position of the forearm as regards rotation is that of moderate pronation, so that the thumb is uppermost. Experiments show that either extreme pronation or supination tends to laterally displace the lower fragment of the humerus. The advocates of flexion and the strongest extensionists agree in recommending moderate pronation of the forearm. The very commonly used internal rectangular splint provides for this position, but it is not an ideal one, as there is certainly a tendency with its use to have more or less lateral displacement of the lower fragment (especially inwards). The result of this is to alter the angle formed by the axes of arm and forearm in full extension, the angle which Allis has named the "carrying angle," suggesting that its purpose is to bring the hand slightly away from the thigh—an advantage in carrying weights. The use of the internal angular splint does not necessarily involve alteration of this "carrying angle," but there is a tendency in this direction.



Fig. 3.—This figure shows the alteration of the "carrying" angle due to slight lateral displacement of the lower fragment (and with it of the forearm bones). The elbow is fully extended, and the natural angle is indicated by the dotted line.

Should the treatment by full extension be adopted in elbow fractures in preference to flexion? The literature on this controversy is already voluminous, indeed the question, though it has specially attracted attention in America as well as here of late, is a very old one. For example, M. Coulon, in 1861, discussed it, and was inclined to advocate extension in perfectly simple cases, that is, those in which there was no tendency to displacement. Amongst those who have more warmly recommended extension for all or nearly all cases we must enumerate Nunn, Bardenheuer, Berthomier, Illingworth, and Frere. On the opposite side we have Heath, my father, Hamilton, and Sir Astley Cooper; and I think it may be added the great majority of surgeons at the present time.

Without bias in the matter, I venture to adduce the results of a certain number of cases of separation of the lower epiphysis treated by various splints, but all in the position of flexion. The cases are unselected, except that in every one the diagnosis of transverse fracture just above the elbow-joint was clearly made out, and in every one the case was followed up for some little time after the splints had been abandoned. It will be admitted that separation of the lower epiphysis of the humerus is a good test, since in these cases there is an especial tendency to excessive callus, owing to the stripping of periosteum (which does not obtain to nearly the same extent in fractures in adults).

Out of these 14 cases the result in 6 as regards absence of deformity and the elbow movements was practically perfect; in the remaining 8 a certain amount of limitation of extension and flexion—usually about 20° in either direction—with thickening of the lower third of the humerus, remained when the patient was last seen. In only one was the power of rotation in the least affected, and it need hardly be said that a range of flexion amounting to 80° or 90° is, whilst not ideal, of extreme value to the patient.

Now if better results can be obtained by the extension plan one would be only too willing to adopt it, but my own limited trial of this in a few cases has been the reverse of encouraging. Bardenheuer's weight extension method involves keeping the patient in bed for several weeks, and it is impracticable to do this as a rule. There is no doubt that the range of active flexion would, in the cases I have adduced, considerably improve in the course of another six months.

It will be admitted that in some cases we cannot avoid a considerable amount of effusion occurring in and around the elbow-joint, and in some a certain amount of ultimate limitation of power of flexion. In the former case the fully extended position of the elbow is irksome and prejudicial, especially if the patient goes about with the arm hanging down. In the latter, provided the elbow can be extended to 160° and flexed to 70° or 80°, the arm will, for practical purposes, be nearly as useful as before.

Those who advocate extension state that the backward displacement of the lower fragment will be best overcome in this position. But there is another risk to this plan in transverse fracture just above the joint, namely, of producing an angular bend at the line of fracture owing to the lower fragment being tilted forwards. Experiments on the dead subject are not of great value, but the few I have performed convinced me that the best apposition was obtained by vertical traction on the forearm bent to a right angle, in opposition to Berthomier's experiments. The analogy of fractures just above the condyles of the femur with the marked tendency to tilting of the lower fragment in full extension is worth noting.

In considering the important part which muscular action undoubtedly plays in producing and perpetuating displacement of fractured bones, it is not contended that any muscles remain in a state of constant spasm for weeks after the accident, for we have ample evidence to the contrary. Probably the most important effect of muscles in keeping up a displacement is due to their action, so to speak, as long elastic ligaments. For instance, when the forearm is fully extended, although its anterior muscles are not voluntarily contracted, yet they can be felt to be tense. Such muscles as the flexor sublimis and the flexor carpi radialis, for example, in a case of transverse fracture of the lower humeral end, will act probably entirely on the lower fragment, and it is impossible to keep them in a relaxed condition in full extension. It is surely not safe to trust to direct pressure by an anterior splint to overcome forward tilting of the upper fragment or an angular bend of the lower one, since the brachial artery and the large veins will be liable to be compressed between the splint and the bones.

After certain fractures of the lower end of the humerus, it may be laid down as a rule that bony union is not to be expected, although it may occur as an exception. These are mainly (1) fracture or separation of the epiphysis of the internal epicondyle or epitrochlea; and (2) intra-articular fracture of the capitellum. The first is by far the most frequent, and an experience of very many cases has convinced me that the little fragment almost invariably, whatever the treatment employed, is drawn downwards towards the ulna, and unites only by fibrous tissue. Fortunately this displacement rarely gives rise to much trouble, but I have collected several cases in which its pressure on the ulnar nerve caused paralysis of the interossei, etc., with pain on attempts at flexion and limitation of movement. In two cases the paralysis was so marked and persistent that I excised the fragment of bone (the entire epicondyle epiphysis), with the result of almost complete recovery. Mr. Granger and others have recorded similar cases of pressure on the ulnar nerve from this cause. With regard to the articular part of the capitellum, if broken off it is very liable to remain as a loose body in the joint, producing sometimes much trouble in movement. I assisted at an operation on one case of this kind (performed by my senior colleague, Mr. Treves, several months after the accident), in which the capitellum was found to be completely turned round so that its normal lower surface faced upwards, and in which considerable improvement followed its removal.

In neither of these fractures is any special splint certain to be effectual. The only plan which promises bony union in good position is to fix the detached fragment by a needle or peg to the surface of the humerus from which it has been broken off. This minor operation may be recognised as legitimate, but I have had no personal experience of it. Should it be performed, the best method is no doubt to use a steel needle, which should be removed at the end of three or four weeks.

It might be expected that, should the capitellum or other considerable portion of the humerus be broken off inside the joint and remain ununited, great impairment of movement would remain or the fragment might necrose. Neither of these results is inevitable, and this is illustrated by a case, in which I show the specimen, the capitellum remaining slightly held in place by fibrous tissue, and there being also a complete T-fracture of the humerus and one of the olecranon, both united by bone, where the rotatory movement of the forearm was very fair, and even a moderate amount of flexion and extension was allowed. A similar case is figured and recorded by M. Walther,[2] who dissected the elbow-joint of a man, aged 60, in whom a T-fracture sustained long previously had resulted in union of the inner fragment (the trochlear surface), but a false joint lined with fibro-cartilage had formed between the capitellum and its normal attachment to the humerus. The capitellar fragment was united by fibrous tissue to the head of the radius, and followed this bone in rotation, which was hardly at all limited. Extension was possible nearly to the full amount, flexion to 80° only. It is right to add that osteo-arthritis had supervened in the joint. Hamilton quotes five cases of this fracture in which the detached capitellum seemed firmly united to the radius without interfering greatly with its movements. Smith, of Dublin, Malgaigne, and others, have recorded dissections of pseudarthrosis after fracture of the capitellum.

When should passive motion be commenced? In cases of fracture of the epicondyle as a rule only fibrous union is to be expected, and we may therefore begin movement of the elbow fairly early, but probably it is best in all cases to wait until about three weeks have elapsed. By this time most fractures will be firm enough to stand very gentle manipulation, the amount being increased from time to time as the process becomes less painful. I cannot see the reason for the course advocated by Hamilton of commencing the movements at the end of a week, when there is considerable risk of leading to a false joint and a certainty of producing more effusion. As to the plan advocated lately of employing passive motion from the first day, one hesitates to term it barbarous, but what other epithet is appropriate? Surely it must be a revival of prehistoric surgery, and certainly is much worse than leaving the fracture entirely to Nature.

In the treatment of compound fractures into the elbow-joint, the teaching of thirty years ago that primary excision is called for in all cases, will no longer meet with acceptance. The removal of wholly detached fragments, cleansing the joint, and appropriate drainage, with irrigation should any suppuration occur, will give a much better result than a formal excision. Of this I could adduce several striking examples, where a strong and movable elbow-joint has been obtained after a fracture into it, with extensive wound. Still less is excision of the whole joint warranted in cases of compound separation of the lower epiphysis. Here the protruding end of the diaphysis should be sawn off, so as to enable complete reduction to be effected within the periosteal sheath. Of seven cases treated in this way, six recovered with an extremely useful, and in most cases fairly movable, elbow. In one recently under my care the diaphysis worked through the soft tissues in front of the elbow between the brachial artery and the biceps tendon. It was impossible to effect perfect reduction without cutting off 1 inch of the shaft. There was very little suppuration, and no necrosis, although the periosteum had been completely stripped up to the deltoid insertion. In this case a careful trial was given to extension, but it had to be abandoned after a day or two.

To excise the elbow-joint for this injury (as has been done with moderate success) is surely not a reasonable proceeding. What, for instance, has the radius done to deserve decapitation?

Of the many complications in the way of injuries to nerves and vessels, time will only allow of a word or two. If a hard anterior splint is employed there is risk of thrombosis of the brachial artery[3] and of gangrene, as well as of injurious pressure on the median nerve. It seems that nearly always, if the protruding diaphysis (in compound cases) be forced back and retained with difficulty in more or less of its normal position, much trouble from suppuration and much deformity ultimately result; hence the rule to cut off sufficient bone to ensure easy reduction, as it will be readily reproduced in children.

In an old case of fracture involving the elbow-joint, where persistent limitation of movement remains, the cause is probably to be sought in one of the following conditions:

1. Pressure on the ulnar nerve by projecting bone or new-formed callus, leading to pain and inability to flex the elbow. This may be overcome by time and massage, etc., but if it persists, an operation is certainly indicated, especially if the

[2] *Bull. de la Soc. Anatomique*, April, 1886.
[3] Mr. Wright, of Manchester.

interossei, etc., are wasting, and there is decided anæsthesia.

2. Thickening of the capsule in front or behind with abnormal adhesions of the muscles around it, to be avoided or relieved by commencing passive motion and massage from the end of about three weeks, and continuing it if possible daily until mobility is well restored.

3. Intra-articular fibrous adhesions, or alterations in the cartilaginous surface of trochlea, etc. The loss of mobility may improve with time, but not much can be expected, and the supervention of osteo-arthritis (if the patient be an adult) may still further impair the condition.

4. Actual bony impediment to flexion produced by the ulna coming in contact with the displaced upper fragment or a ridge of new bone. This is to be avoided only by accurate adjustment at the time of fracture.

In conclusion, it may be stated that the chief essential to success in the treatment of these elbow fractures would seem to lie rather in the correct and early diagnosis of their exact nature than in the employment of any special apparatus, and that there does not appear to be sufficient ground for abandoning the treatment by splints in the flexed position, and of persevering active and passive motion after three weeks have elapsed, provided that the manipulations are done gently and without causing much pain.

Dr. Ward Cousins expressed the thanks of the Section for the valuable paper they had heard. He thought, however, that the common fractures of the epiphysis in children were well treated in the old-fashioned way by angular splints. Fractures involving the joint in the adult were often caused by direct violence, and were far more serious injuries. The joint was often acutely inflamed, the fragments loose, and replacement of them impossible. After two or three weeks the real distortion of the joint became visible, aggravated by the development of a large amount of callus. He advocated in many cases the straight position, and had by this treatment obtained excellent results, but sometimes he had been compelled to practise excision from the hopeless position of the fragments, the imperfect mobility, the general distortion and painful condition of the joint. In the present day this was a very simple and satisfactory operation, and was always followed by very perfect movement and very little posterior scar.

Mr. Robert Jones (Liverpool) drew attention to the value of acute flexion in the treatment of injuries about the elbow. He had discarded the use of splints for many years, as he was convinced of the fallacy of tight constriction above the elbow, as it hindered the normal reparative actions. He always advised as a routine method supination, extension, and acute flexion. If the case were dislocation of elbow this acute flexion could not be brought about without reduction; if separation of epiphysis it was the best method of clearing the way for full flexion, so frequently interfered with subsequently; if the condyles were separated despite lateral widening, experience had proved to him the advantages of acute flexion.

TREATMENT OF INJURIES OF THE LOWER END OF THE HUMERUS.

By Albert Landerer, M.D.,
Professor of Surgery, Stuttgart (formerly Leipzig).

In 1891 I published an essay on "The Treatment of Fractures of the Bones."[1] I described the method I had used since 1885, and had announced on May 25th, 1890, to the Medical Society of Leipzig to abbreviate and to improve the treatment of fractures by early massage and early use.

This method is based on theoretical conclusions and practical experience. Histological research shows that ossification of the callus begins a few days after the injury and that the temporary callus in small bones has a notable solidity in the second week.

The principles of my method are, in short, these: As soon as there is no more fear of bending of the callus, the dressing is adjusted in a manner to permit massage to be begun. *Effleurage, pétrissage*, and *tapotement* of the muscles are performed. Treatment is thus shortened to a half or a third of its former duration; stiffness of the tendons and joints, atrophy of muscles, and œdema are avoided. In half the usual time the patient is able to use the limb and earn his livelihood. I have never seen evil results such as delayed union or non-union.

My treatment of injuries at the lower end of the humerus consists in the combination of fixation or extension with early massage, use, and gymnastics. I content myself with fixation in cases in which dislocation is not to be feared. In more difficult cases, with inclination to dislocation, I make extension, and use Hamilton's bandage, the patient walking about. In difficult cases I make use of extension in bed for a week or a fortnight. It is indispensable to inspect often and carefully the place of fracture, and to set in order immediately the slightest dislocation.

[1] Volkmann's *Klinische Vorträge*, No. 19.

THE ANATOMY OF THE RIGHT HYPOCHONDRIUM RELATING ESPECIALLY TO OPERATIONS FOR GALL STONES.

By Rutherford Morison, M.B., F.R.C.S.,
Senior Assistant Surgeon, Royal Infirmary, Newcastle-on-Tyne.

The purposes of my paper are: 1. To draw attention briefly to the anatomy of the parts concerned in the surgical treatment of gall stones, with the object of demonstrating that a pouch exists behind the right lobe of the liver which has natural barricades separating it from the general peritoneal cavity. 2. To suggest that efficient drainage of this pouch is likely to serve a useful purpose in gall stone operations.

If the abdomen be opened in the right linea semilunaris, the sharp lower border of the right lobe of the liver, with frequently the fundus of the gall bladder, will be seen resting against the transverse colon. If the edge of the liver be drawn upwards and the colon downwards, a space, previously potential, is exposed (Fig. 1). The *roof or anterior wall* which

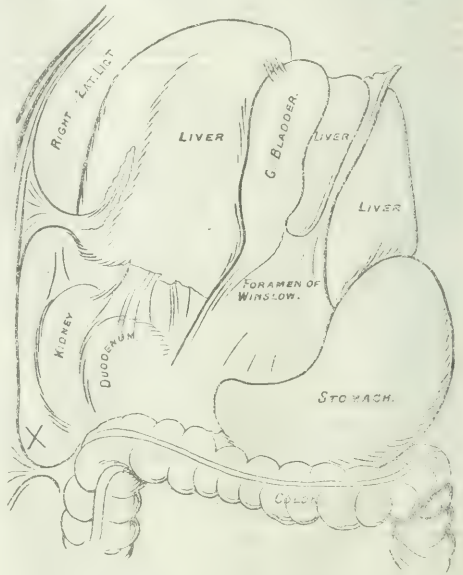


Fig. 1.—The pouch described shown by drawing liver upwards. × in all the figures marks points for drainage.

has just been opened up is not sealed. It looks forwards and to the right. From right to left it is formed by the peritoneum covering the diaphragm, the under surface of the right lobe

of the liver, and the gall bladder, and not unusually is completed internally by a fold of the gastro-hepatic omentum continued to that viscus.

The *floor* is formed by the ascending mesocolon covering the kidney, duodenum, and other structures lying on the posterior abdominal parietes (Fig. 1). *Superiorly* the space is bounded by the right lobe of the liver. *Inferiorly* by the ascending layer of the transverse mesocolon (Fig. 2), covering



Fig. 2.—Vertical mesial section.

the duodenum internally. *Externally* by the peritoneum lining the lumbar parietes as far down as the iliac crest. *Internally* by the peritoneum covering the spine behind, the free edge of the gastro-hepatic omentum in front, and the foramen of Winslow between the two (Fig. 3).

This pouch can be effectually drained by an opening made through the posterior parietes immediately below the lower end of the kidney, for the remaining dependent part is occupied by the right end of the right lobe of the liver. A varying quantity of fluid, roughly a pint, may be introduced into the pouch from below before any overflow into the general peritoneal cavity can take place. The following are the natural barriers: Internally the fluid introduced as described must mount the thickness of the spine, at this part considerable, before the foramen of Winslow is reached (Fig. 3). Above and externally the lateral ligament of the liver bars the way (Fig. 1). Below and internally the ascending mesocolon forms an effectual hindrance (Fig. 2); but below and externally, that portion between the ascending colon and the parietes, is not so well guarded. Here the rise from the loin to the pelvic brim in all bodies (Fig. 4), and in some a peritoneal band in addition passing from the ascending colon to the parietes opposite the crest of the ilium, are the resisting forces.

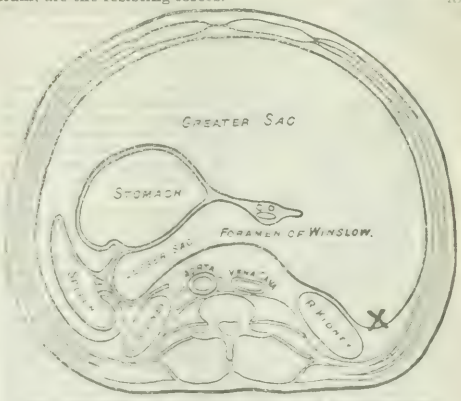


Fig. 3.—Transverse section through entrance of pouch described.



Fig. 4.—A vertical abdominal section between ascending colon and parietes on line marked A. B. in Fig. 5, showing rise from × over pelvic brim.

In operations for gall stone I believe that a tranverse incision is the best. The incision commences over the rectus muscle, an inch below the tip of the ninth rib, and extends back into the loin midway between the lower costal margin and the iliac crest. Thorough drainage of the space previously described is ensured by a tube in the lower angle of this wound. Over the vertical incision in the linea semilunaris, ordinarily employed, the transverse has the immediate advantages of permitting free access, especially to the common duct, and of allowing complete and accurate closure of the anterior portion of the abdominal wound, if the gall bladder is not opened. The remote advantage of the transverse over the vertical incision is a less chance of ventral hernia following the former.

Permanent fistula is a frequent result of operations for gall stones; and, so far as I know, only occurs when the gall bladder has been sutured to the abdominal wall.

The relation of three of my own cases will best indicate my grounds for suspecting th at this result may follow more than one cause, and that the ordinarily accepted one, of stone impacted in the cystic duct, may not be the most usual.

CASE I.—MRS. P., aged 41. Her illness was of three years' duration and her history left little room for doubtful diagnosis. Periodic attacks of severe abdominal pain in the liver region, accompanied by vomiting and shivering and followed by jaundice, completely incapacitated her, for latterly exercise of any sort brought on an attack. The distended gall bladder could be distinctly felt. The operation was performed in March, 1891, and thirty gall stones, five the size of a cobnut, the remainder varying from a horsebean to a small pea, with a quantity of thick treacly bile, were taken out of the gall bladder. A small stone in the end of the cystic duct resisted all efforts that I considered then reasonable to dislodge it, and was left sticking there. The edges of the gall bladder were attached to the skin of the abdominal wound. The patient, though in excellent health and free from any of her old symptoms, still has a fistula.

In this case it is possibly fair to say that the fistula is due to the stone blocking the cystic duct, though bile escaped freely for the first six months after the operation.

CASE II.—Miss D., aged 28, suffered from severe attacks of paroxysmal abdominal pain. The gall bladder could be felt as a pear-shaped elastic swelling. The operation was performed in May, 1892, and 8 ounces of mucous fluid were found in the gall bladder, but no stones. Examination of the ducts discovered a stone about the size of a pea fixed in the cystic duct. With considerable difficulty I crushed it in this situation between my finger end and a lithotomy scoop, leaving the fragments. The parietal peritoneum was sutured to the skin, and then the gall bladder was attached to this conjoined structure. During the first month after the operation fragments of stone, in amount fully accounting for the whole, with quantities of bile, were passed by the opening in the gall bladder, and the wound healed. Shortly after some pain was experienced, and the wound reopened, giving relief. From time to time this trouble has recurred, and, though her health otherwise is excellent and her condition very different to what it was before the operation, she still has a fistula.

In this case the possible explanation is stricture of the cystic duct following ulceration and bruising of it.

CASE III.—Mrs. S., aged 39, gave a history of attacks of biliary colic for nine years, after each of which she had passed a gall stone. She brought for inspection a box of these gall stones, varying in size from a pea to a marble. The attacks had latterly become so frequent and so severe that she lived in dread of them. There was no palpable distension of the gall bladder. The operation was performed in July, 1893. The contracted gall bladder was opened, and six gall stones similar to those passed were found in it, and taken away. The ducts were explored, and no stones discovered there. The opened gall bladder was sutured to the parietal peritoneum only. The wound quickly healed, and for five months the patient continued well. At this time after a few days of discomfort in the neighbourhood of the wound an opening formed, and a quantity of mucus was discharged. The same story has been repeated at intervals since.

In Case III, as the ducts were patulous enough to allow large stones to pass, there cannot have been any ordinary obstruction, as is possible in Cases I and II, to account for the fistula.

As an explanation applicable to the greater number of cases of fistula, I would suggest the suturing of the gall bladder to the abdominal wall, with consequent interference, by traction on it, with the flow through the cystic duct. The arrangement of the lining membrane of the cystic duct with its valves of Heister may be mentioned as making such obstruction probable, though it is only fair to state that I have failed to satisfy myself by rough experiments in the *post-mortem* room that any interference with the freedom of flow from the gall bladder can be brought about by making tension on its duct.

The existence of fistula cannot be regarded as other than a serious drawback after operations for gall stone; and if my statement that it occurs only when the gall bladder is attached to the abdominal wall be true, its prevention is possible. Statistics prove that the smallest mortality has

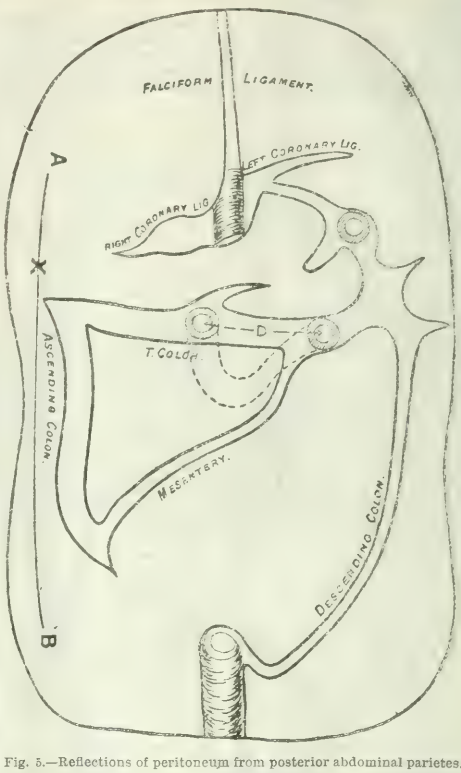


Fig. 5.—Reflections of peritoneum from posterior abdominal parietes.

followed opening, suture, and drainage of the gall bladder, and this is the strongest recommendation of any operation. It requires little consideration, however, to show that the added risk of other operations, such as excision or closure of the gall bladder by suture, arises from the increased danger of extravasation of the contents of bile ducts or gall bladder into the peritoneum.

Abundant evidence has been brought forward to prove that natural bile is an aseptic fluid, and is readily absorbed from the peritoneal cavity without causing damage. Even bile from a diseased gall bladder and ducts usually contains few elements dangerous to the peritoneum, and none of an actively infective character, for in two cases, one of malignant disease of the head of the pancreas and one of gall stone impacted in the common duct, with in each distended gall bladder and jaundice, which I had the opportunity of watching, bile escaped in large quantities into the general peritoneal cavity after operation. In both cases signs of ascites followed the operation after some days; in each an incision was made above the pubes, allowing several quarts of fluid, deeply bile-stained, to escape, and a drainage tube to be inserted. Both patients recovered. In a third case the patient came into my consulting room at Christmas, 1885, with a distended gall bladder. To verify the diagnosis I tapped the tumour with a hypodermic needle, and drew off a syringeful of the characteristic mucous fluid. In a few minutes he complained of abdominal pain and faintness. On examining him to my dismay I found that the gall bladder tumour had

disappeared. It had emptied into the peritoneal cavity. The following day he had quite recovered.

Such experience suggests that the chief problem in operations for gall stone is the purely mechanical one of effectual drainage. If this be admitted, consideration of the anatomy of the parts points to a solution of the difficulty. The gall bladder can be opened on its under surface and allowed to drain into this pouch, and an opening may be made into the common bile duct on its outer or under surface for the extraction of a stone and left to take care of itself in confident anticipation of a successful result if effectual drainage be secured by the aid of gauze packing and a tube.

Conclusive clinical evidence of my position will take some time to accumulate, and I can only offer the results of 9 cases in which I have assisted colleagues and friends and had in my own practice, as bearing directly upon it. In all 9 cases the common duct was freely opened, in 2 the gall bladder also, to remove a large impacted stone. In 3 of them an attempt was made to close the opening in the duct by sutures; without success, however, as in all 3 a free escape of bile occurred through the drainage tube. Of the 9 cases, 2 died: one death was due to hæmorrhage, chiefly from the abdominal parietes, a few hours after the operation; in the second case no satisfactory explanation could be given or found *post mortem* of nervous symptoms of a peculiar sort ending in death on the third day. In neither was there peritonitis or any bile in the peritoneal cavity. The remaining 7 cases made excellent and complete recoveries.

Conclusions.

A pouch exists below the right lobe of the liver and gall bladder separated from the general peritoneal cavity by natural barriers. This pouch can be efficiently drained through an opening in the parietes near the lower end of the kidney. A transverse is better than a vertical incision in operating for gall stones; less likely to be followed by ventral hernia and giving free access. Biliary fistula results from operations for gall stones in a considerable percentage of cases in which the gall bladder has been attached by sutures to the parietes. The method of attachment has little to do with this result and it may follow when the ducts are patent. The gall bladder and ducts may safely be allowed to empty into the pouch described, if it is properly drained. The gall bladder should never, except when suppurating, be stitched to the abdominal wall. If the pouch is properly drained (*a*) when the gall bladder is distended, the opening in it should be closed by sutures and the viscus returned into the abdominal cavity and the drain left until the certainty of its successful closing is complete. *b*. When the gall bladder is shrunken and there is difficulty in closing the opening made in it, it may be returned unclosed. *c*. When a stone is impacted in the cystic duct and evades all ordinary efforts to remove it the gall bladder should be excised and the duct ligatured after removing the stone in it. *d*. When a stone is impacted in the common duct, the duct is incised and after the stone or stones are removed the opening may be left unclosed if there is any difficulty in applying a satisfactory suture.

Dr. Roddick (Montreal) asked the reader of the paper whether, instead of the very long incision proposed (some eight or nine inches perhaps) a shorter antero-lateral incision and a simple incision for drainage in the loin would not answer the same purpose.

In reply, Mr. Rutherford Morison said that the drainage tube posteriorly was introduced at the lower angle of the wound behind, and its internal end was in apposition with the opening in the gall bladder or bile duct. The main objection to the ordinary incision with drainage behind was that two incisions were required. His chief contention was that fistula followed in a certain percentage of cases any method of suturing the gall bladder to the parietes, and that drainage through the pouch he had described would safely avert this.

There are eight Bulgarian women studying medicine at Nancy. A young lady belonging to a great Russian family has recently entered as a medical student in the same school.

RADICAL CURE DURING OPERATION FOR STRANGULATED HERNIA IN THE AGED, WITH SOME PRACTICAL REMARKS THEREON.

By Robert O'Callaghan, F.R.C.S.I.,
Surgeon to Out-Patients Chelsea Hospital for Women; Late Surgeon Carlow Infirmary.

The question of operating with hope of success upon aged patients has been occasionally brought forward, and discussed with diffidence and diversity of opinion, the consensus of which has been against operation. My experience is that any patients whose only infirmity is their old age will bear a critical operation better than most middle-aged people, more especially if women, the explanation being that old people are living in an exquisite state of mental and physical repose: in most cases they have run their race in life, and have no nervous susceptibilities. Physically every organ is in a state of quiescence, with no tendency to inflammation further than is necessary for repair, and no waste tissues to favour suppuration. The three following cases are conclusive that the most critical operation is as justifiable and useful in the aged as in the young.

Case I.—M. G., aged 74, weighing 16 stone, of short and rotund proportions, was sent into Carlow Infirmary by Dr. Wm. O'Meara, with a strangulated umbilical hernia as large as a dessert plate, with contracted opening and resembling a large pink mushroom. The hernia had given trouble occasionally for years, but rest with a large dose of oil had always relieved symptoms until this occasion, when the usual signs of acute strangulation became very urgent. The skin was so very tense and shining over the hernia that it seemed as if Nature would give relief by bursting the covering. I felt that if I cut down direct on the hernia I would run great risk of wounding intestine, so I opened the abdomen in the mesial line below the constriction, and divided this from below upwards, and using my finger as director divided the very thin skin right across the hernia, which was the only covering the intestine had in several places. Here I might mention that instead of one distinct hernial opening there were three. I treated the adhesions of omentum by ligation and excision. I denuded the peritoneum from round the edges of the ring, and got enough to bring it altogether in the centre by means of a purse-string suture. I then split the ring where possible, and pared the edges of the rest and brought it together with silkworm gut. She made an uneventful recovery, and lived for three years after.

Case II.—Mr. L. S., aged 78, was sent into a private ward by Dr. Colgan, of Carlow, in July, 1887, suffering from strangulated right inguinal hernia. Up to forty-eight hours previous he had no hernia, though at times he had noticed a slight fulness in the groin, which passed away after a dose of castor oil. Hernia evidently became strangulated soon after its development. All the usual methods for reduction had been tried, and failed. On examination there was exquisite tenderness over the hernia, and with this stercoraceous vomiting. The patient was at once put under ether by Dr. William O'Meara, and the hernia cut down upon in the usual way; on opening the sac it was found full of a brown septic fluid, the intestine was black, with very little lustre. After thoroughly douching with hot water, temperature 112 to 115°, for a few minutes, the constriction was easily freed; an inch of each side of intestinal loop was drawn out, which showed a graduated line of strangulation not the distinct demarcation (a point I will refer to in my concluding remarks); after further douching with hot water at the same temperature, the intestine (ileum) was returned. The sac was then cleared to the internal ring, twisted tightly, and transfixed by a pedicle needle threaded with the same Chinese twist that I use for ovariotomy, and tied in the same manner as an ovarian pedicle with a Staffordshire knot; the redundant portion being cut off. I then passed one end of the same ligature through the external oblique, and the other end through a portion of fascia transversalis, and tied them firmly across the pedicle stump. The superficial wound was united with silkworm gut, thoroughly douched and dressed with dry gauze and wood wool. The temperature never rose above normal. The wound healed by first intention. Mr. S. returned home in twenty-eight days, and in another month continued his usual employment, that of cattle dealer, and is now alive and well with no relapse of his hernia.

Case III.—Mr. F., aged 84, was admitted to a private ward in the infirmary, sent by Dr. William O'Meara, of Carlow, in August, 1889, suffering from a strangulated right inguinal hernia of forty-eight hours' duration. Hernia first gave trouble about forty years previous; it was easily reduced, and retained by a well-fitting truss; any further trouble was coincident with a worn-out truss, but was easily put right until this occasion, when it was in considerable pain, but had only vomited once. He was put under ether immediately by Dr. O'Meara, the hernia cut down upon, and the sac opened; it was full of a fœtid brown fluid, the intestine (ileum) being very black and gangrenous in appearance with no lustre. They were thoroughly douched with hot water, temperature 112° to 115°, for a few minutes, then, after breaking down the adhesions and constriction of the neck with my finger, I drew out the ileum for 1 inch on each side of the loop, and found the line of demarcation was not defined, but not as graduated as in Case I. After douching for 5 minutes with hot water at the same temperature, I returned the intestine with some diffidence as to its future behaviour. The sac was treated and tested in the same manner as in Case I, but as the external opening was enlarged and somewhat damaged, I put in two deep stitches of lighter silk. The superficial wound was closed with silkworm gut after thorough douching, dressed with wood-wool pad. There was a stitch abscess formed, for which I blame the deep, light silk stitches, as they were not boiled; notwithstanding this the temperature never rose above normal. Mr. F. returned home after thirty-six

days, a useful member of society, living for three years, when he was carried off by that dreadful scourge misnamed "influenza." His hernia never relapsed, and I had an opportunity of examining the cicatrix just before he died.

The points worthy of attention in the treatment of these cases seem to me to be the following:

First, the very suspicious state of the intestine, which leads to the query, What justifies a surgeon in returning an apparently gangrenous intestine? My cases of operation for strangulated herniæ (14) have proved to me that, no matter how black and gangrenous a portion of intestine may appear, if at the point of constriction you find a graduated line of blackness extending into the healthy intestine, you are safe in returning it; but if you have a distinct straight line between the healthy and unhealthy, "such as you would meet in a limb," it is unsafe. Then comes a query, How is this important point to be settled? I douche the sac and intestine for a few minutes with hot water, temperature 112 to 115°; this renders them aseptic, causes relaxation of the constriction and of the intestine, and if there is any vitality at all in the latter eventually stimulates it. Then, after freeing the constriction, you draw out the healthy portion of intestine on each side of the loop, and continue your douching for at least five minutes, when, if the line of demarcation is not distinct, you can visibly observe the vitality returning in the damaged portion. The only patient of mine that died proved conclusively to me the truth of these facts. It was a case of femoral hernia in a female, aged 54, strangulated sixty hours. I felt it was wrong to return the intestine, as this distinct line of demarcation was present, and douching brought no reaction. The only consolation from this bad surgery, which I will always regret, was the valuable practical experience it gave as to when not to return the intestine.

Secondly, when you have made up your mind that the intestine is not in a condition to be returned, How should it be treated? There are only two methods worth considering—namely, creating an artificial anus, or resection with suturing and immediate return of the intestine. Some writing men would think that this query alone was worth a long and impressive paper with innumerable statistics, mostly of German manufacture, but I am content to deal with it practically, if somewhat tersely.

Enterotomy, or forming an artificial anus, is a very simple and quick procedure, which I consider is its only advantage, and ought only to be practised when collapse is great and celerity in treatment urgent. Of the disadvantages, I may mention thickening or phlegmon of the intestinal walls, peritonitis from fæcal infection; and, if the patient survives all this (the mortality, I believe, being 65 per cent.), he has a most unpleasant infirmity, and the only way out of it means another very serious operation. Resection with suturing and return of the intestine is, in my opinion, the true surgical method of dealing with this complication; and to those familiar with abdominal surgery it is not much more difficult to perform, though requiring more time, the important points essential to success being early operation, which nowadays there is no excuse for not having; although I see from *St. Bartholomew's Hospital Reports*, 1893, there are two cases of inguinal hernia (strangulated) reported as deaths without operation. Empty the upper portion of intestine as high as possible, and get well away from infected or unhealthy intestine, so that your sutures have good ground for holding, and, finally, if doubtful, anchor the sutured portion near the parietal incision, so as to give Nature a chance to form a fistula in case of perforation or further gangrene of the intestine.

Finally, a patient should never be allowed to die from unrelieved strangulated hernia, no matter how collapsed; in the most hopeless looking cases recovery may take place.

In the above cases, as in all my work, I used no carbolic, mercury, or other antiseptics; simply relying upon boiling the silk ligatures, scalding the instruments, hot water douching throughout the operation at a temperature of 112°, and strict personal cleanliness on the part of myself and nurses. I had no assistance except that of the lady superintendent, who was solely responsible for a state of exquisite cleanliness in everything connected with the operation, which in connection with plain dry dressing gives such excellent results in young and old.

THE "DISPERSIBLE" TUMOURS OF THE MAMMA.

By Herbert Snow, M.D.Lond.,
Surgeon to the Cancer Hospital.

Dr. Snow said that one of the most common questions asked by women who appear with a "lump" in the breast was whether it could not be "dispersed." The object of the paper was to point out that a considerable number of cases exist in which this could actually be done and in which resort to operative interference was greatly to be deprecated. The foremost example was afforded by the fibroma of adolescence, the familiar adenoid of young girls aged from 14 to 25, the evolutionary period of the mamma. The connective tissue new growths found during the devolution stage—that is, from about the age of 34 onwards—presented a wholly different set of phenomena, and were best known as "cystic fibroma;" they grew slowly to a large size, were always blended with cysts, were single, wholly incapable of evolution, and sooner or later invariably merged into some form of malignant disease, sarcoma or carcinoma; whereas the fibroma of the developing breast was usually small, often multiple, showed no tendency to cyst formation, never passed into cancer, and could readily be "dispersed."

Its subjects were tight stays, were conspicuously neurotic, with impeded uterine functions and often marked anæmia. Frequently both breasts were attacked simultaneously or successively, and when one had been subjected to operation it was no uncommon thing to find nodules subsequently in the other. The writer had not encountered a case demanding surgical excision for more than five years. The procedures indicated were the frequent inunction of lead-iodide ointment, with belladonna and lanolin, attention to the neurotic condition, and removal of all undue pressure on the breasts or pelvic organs. The ointment Dr. Snow generally prescribed was ℞ Pulv. plumbi iodidi, ʒj; lanolini, ʒvj; adipis ad ʒj. To be well rubbed in four times a day. Occasionally he had varied this with an ointment of green iodide of mercury (gr. xx to ʒj) or had substituted ʒij of the red iodide *B.P.* for the same quantity of unguentum plumbi iodidi. Bromide of potassium gr. xv was given internally at bedtime.

Other classes of tumour resolvable on similar principles were constituted by local indurations of the parenchyma, outwardly similar to the preceding, but found after the full development of the mamma, and probably inflammatory in origin; by cystic distension of or inflammatory effusion about the milk ducts; and by small cysts of the areola, usually sebaceous. The youthful male breast was sometimes the site of hyperplasia, yielding to like treatment. Twenty-five cases were cited.

THE TREATMENT OF SENILE RHEUMATIC ARTHRITIS BY FORCIBLE MOVEMENTS.

By T. Pagan Lowe, M.R.C.S.,
Honorary Medical Officer, Bath Eastern Dispensary.

The surgical treatment of chronic articular rheumatism, as suggested in the following short notice, is based upon several consecutive cases, and has been applied to all the large articulations and most of the smaller ones; but, for want of space, the hip-joint only will be considered.

Malum coxæ senile is selected for two reasons. First, because the disease in this locality is typically suitable for surgical interference; and secondly, because, so far as I am aware, no notice of such treatment is to be found in current surgical literature.

Chronic rheumatic arthritis may, and often does, appear in the hip-joint, as part of a general disease attacking many articulations, notably the shoulders and knees; but in old people who have not previously suffered from chronic rheumatism it usually has its starting point in the hip-joint, and only very slowly spreads to other articulations. Indeed, the length of time that it may remain limited to one joint is a matter of common observation, and serves to distinguish it from rheumatoid arthritis.

In the early stages of this disease the symptoms closely simulate those of sciatica, a fact which suggests a very

careful examination of the hip-joint when pain down the sciatic nerve is complained of. Even in the later stages they may be mistaken for that disease. Last May a man aged 63, who had suffered for some years from lameness and pain, which his doctor ascribed to sciatica, fell downstairs, and was surprised and delighted to find that his lameness and pain were both greatly relieved by the accident.

Flexion of the joint is present almost from the first, and increases steadily with the progress of the disease. Secondary symptoms, if they may be so described—symptoms really due to the altered position of the limb and the irregular muscular action required to accommodate for this position—are often more severe than those primarily due to the disease itself. These symptoms rapidly disappear with appropriate treatment. Periarticular adhesions develop early, and can be made out by a careful examination. The symptoms of the disease are due to these adhesions, and disappear when they are broken down. In every case, then, of malum coxæ senile, whatever the stage of the disease, the adhesions in and around the joint should be forcibly broken down, and the joint placed in the fully extended position.

In the early stages chloroform is not usually necessary, and the patient should be encouraged to walk immediately after the operation. In the later stages it cannot be effectually accomplished without an anæsthetic.

I desire to emphasise the importance of thoroughly extending the limb, because without it recovery is not possible. To do this it will be found convenient to place the patient on his face, and to steady the pelvis by pressing on the sacrum with the left hand, whilst with the right the limb is extended. In mild cases recovery is instantaneous, that is to say the patients can walk at once without pain; but in the more advanced stage of the disease the joint will require complete rest on a Thomas's splint for a longer or shorter period. It is especially claimed for this treatment that it is both simple and efficacious; and that also in a large proportion of cases it is curative.

A word about the vexed question of synovial fluid. Is it possible to restore synovial fluid to a joint which is dry? Without hesitation I would answer this question in the affirmative. I have frequently seen joints, which to all appearances seemed disorganised by rheumatism, completely regain their function under surgical treatment.

In the after-treatment of all these cases well directed exercises are all-important, and must be practised regularly and perseveringly.

ON A CASE OF SIMPLE STENOSIS OF THE ŒSOPHAGUS, TREATED BY ŒSOPHAGECTOMY.

By Kendal Franks, F.R.C.S.I.,
Senior Surgeon to the Adelaide Hospital, Dublin.

Stricture of the œsophagus is usually divided into three classes: 1. Spasmodic stricture, or œsophagismus; 2. Fibrous or cicatricial stricture; and 3. Stricture due to malignant disease. Another variety has been described under the name of simple stenosis of the œsophagus, which is, however, so rare, and its etiology so wrapped in mystery, that it has received but scant notice in the textbooks, and in many of them is not referred to at all. The case which I report is, however, an interesting example of this peculiar form of stricture.

The patient was a lady, aged 46, who was brought to me by my friend Dr. Arthur Benson on November 5th, 1893. Three years previously she began to experience difficulty in swallowing, but prior even to this she had complained for some time of intermittent sore throat. She consulted a medical man in the Isle of Wight, who advised her to visit Sir Morell Mackenzie, but this advice was never followed. The symptoms gradually increased until towards the end of 1892 they began to be very severe. During the year previous to her first visit to me she found swallowing was not only difficult, but was extremely painful. The severity of the symptoms was not always uniform. Sometimes she could get down very finely minced meat if it had previously been passed several times through a mincing machine. She could also occasionally swallow bread soaked in milk, cocoa, or tea, but her usual diet consisted of soup, egg, cream, milk, or cocoa. On one occasion she was sufficiently curious to time herself, and she found that it took her two hours and a-half to get down a cup of tea. Sometimes, however, she could not swallow even fluids. When I first saw her she was very thin, but she had not the cachectic appearance of malignancy. She felt very weak, but was able to walk about the room.

Dr. Arthur Benson, when he brought her to me, told me she had a growth in the throat which he wished me to examine. I found with the laryngoscope what he had described. There was a papillomatous-looking growth apparently involving the whole of the left aryteno-epiglottic fold, and completely hiding the left arytenoid cartilage. It was of a patchy pale crimson colour, with mucus covering it in places. On December 14th we again saw her in consultation. The appearances were practically the same, and the growth had not increased in size. I removed two small pieces with forceps, and the microscope proved it to be papillomatous. Two days later the growth had entirely disappeared from view when a laryngoscopic examination was made, but an effort on the part of the patient again brought it back to its former position. It was evident, then, that the growth sprang from the œsophagus, or lower part of the pharynx, and the opinion I formed was that it was probably an epithelioma with a papillomatous covering growing from the posterior surface of the cricoid cartilage, and that occasionally it was forced upwards, so that the upper portion of it lay over the left arytenoepiglottic fold. The increasing dysphagia and the pain at every attempt to get food down quite alarmed the patient. Having had no previous experience of a similar case I considered that this hypothesis fitted in best with the symptoms and history; but, as the sequel will show, the diagnosis was incorrect.

I advised operation as offering the best chances of relief, especially as it was evident that she could not last very long in the condition she was then in. She consented to operation, fully understanding that it was more or less of a palliative kind. My intention was to perform œsophagotomy high up in the neck, and if the tumour proved to be pedunculated, as its mobility seemed to indicate, to remove it if possible through the œsophageal wound.

She was admitted to the Adelaide Hospital on December 17th, 1893, and two days later the operation was undertaken. An incision 3 inches long was made along the anterior border of the left sterno-mastoid muscle, its centre corresponding to the cricoid cartilage. The œsophagus was easily reached, and then the larynx was drawn over to the right side. A small œsophageal bougie was now passed down through the mouth to the upper part of the œsophagus to act as a guide in opening the tube. This opening was made about an inch and a-half long, and a finger was introduced in order to explore this region. To my surprise I could feel no growth obstructing the lumen. Passing my finger upwards to the back of the larynx just below the aryteno-epiglottic fold, I could detect a soft velvety spot, slightly projecting, which was evidently a flat warty growth. On the inside of the œsophagus, opposite the incision, several similar small flat papillomata could be seen, but there was no tumour. I now tried to pass my finger downwards, but here I encountered my first difficulty. The upper part of the œsophagus apparently terminated in a *cul-de-sac* just below the incision made through its walls. I searched carefully with my finger, and with a probe, but I could find no opening; nothing but a smooth floor; and yet an opening must have existed, as she had been able to swallow fluids.

I then proceeded to enlarge the wound downwards, and about an inch below this *cul-de-sac* I opened the œsophagus again. The finger introduced could pass readily downwards, but in the upward direction it was again arrested by a *cul-de-sac*. Again I searched for the opening, this time from below. Mr. Heuston, who was assisting me, observed a dimple, and found that he could just pass the top of a blunt knife through it. This opening was a mere slit about a quarter of an inch in length, and was the only means of communication between the upper and lower portions of the œsophagus. I slit this small opening up. The stenosis was formed of healthy mucous membrane; there was no cicatricial tissue at all. The appearances were as if a string had been passed beneath the mucous membrane, completely round the tube, and had been tied tight; but on the other hand there was no wrinkling of the mucous membrane, it was perfectly smooth. The only rational course of dealing with such a condition was in my opinion to excise the stricture portion. Accordingly I divided the mucous membrane transversely above and below, round the whole circumference of the tube, and excised the middle portion completely, so that between the mucous membrane above and the mucous membrane below there was a ring of raw muscular tissue about an inch and a-half wide. I now drew the edge of the mucous membrane above down to the edge of the mucous membrane below and sutured them together for about three-quarters of the circumference. A medium sized œsophageal tube with a cup-shaped top was now passed through one of the nostrils down the œsophagus, until the end of it met the wound. It was then [illegible] past the wound into the lower portion of the œsophagus [illegible] stomach. Over this tube the remaining portion of the [illegible] brane was sutured, the longitudinal incision in the œsophagus brought together with stitches, and the external wound closed.

For the first few days the patient was fed with oatmeal gruel strained and hydrochloric acid pepsin juice, alternately, those being administered through the tube projecting from the right nostril. On the fourth day, December 23rd, there was some tension in the wound, two of the lower stitches in the skin wound were removed, and a little pus escaped. This purulent discharge only lasted for a few days, but a fistulous opening formed. On the eleventh day the nasal tube was removed, and a soft rubber tube was passed through the fistulous opening down into the œsophagus, and the patient was fed through this. On the seventeenth day, January 5th, the tube could be passed with ease through the mouth into the stomach; on January 11th, the twenty-third day, the patient could drink without any fluid coming from the wound; and on January 15th, the twenty-seventh day, the fistula in the neck had completed closed. On January 18th I began to pass bougies of increasing size, and when she left hospital on February 24th I could pass the largest sized œsophageal bougie without any pain or hitch of any kind. She comes up to town to see me about once a month, when I pass the full sized bougie. The patient is steadily regaining her weight, and is in perfect health, and experiences no difficulty whatever in swallowing her meals, which are of the usual varied description.

This case presents many points of interest, but it seems to me that three stand forward prominently: (1) The etiology of such stenosis; (2) the diagnosis; and (3) the treatment. I

confess to being misled by the warty growth which generally lies on the aryteno-epiglottic fold on the left side. Taken together with the symptoms of obstruction of the gullet, I think the error was excusable. Certainly the appearance of this growth, suggesting a malignant tumour below, prevented me thinking of using a probang, which would have been my first thought had the symptoms been what they were, and the growth been absent. At the same time I do not think that the patient lost anything by the error. It must be obvious to all that bougies passed through the mouth would have had little chance of finding the opening in the obstructing stenosis, when we failed to find it when the parts were exposed to view, and, aided by the eye, the probe could not detect it.

As to the treatment, let me say that before the condition of affairs in this case was made clear to me during the operation the idea of treating an impermeable—or, to all intents and purposes, an impermeable—stricture of the œsophagus by excision had not occurred to me. Nor is it probable that cases in which this method of treatment may be adopted are likely to occur very frequently. I have had a somewhat extensive experience in the treatment of œsophageal stricture, and I may incidentally observe that I think the prognosis in non-malignant cases is more favourable than is generally supposed, but this is the only case of simple stenosis of the gullet which has come under my observation, and I think I am justified in saying that it is scarcely conceivable that any treatment short of removal of the stenosed portion would have been of any avail in this case.

As far as I have been able to ascertain, œsophagectomy has been performed hitherto for malignant disease exclusively. The operation has been performed six times, and differs from that performed in this case chiefly in this, that malignant disease requires the removal of all the coats of the œsophagus—in Czerny's case to the extent of 6 centimetres. Moreover, it has been found impracticable when so much has been removed to approximate the upper and lower ends of the gullet, so as to restore the continuity of the tube. Whereas in my case it was necessary to excise only the mucous lining, together with the submucous tissue, and, although 1½ inch was removed, I found that a little traction was sufficient to draw the divided ends together, and thus a permanent œsophageal fistula was avoided.

The number of recorded cases of simple stenosis of the œsophagus is very small. I have been able to find only 9 cases in addition to the one I have just described. Of those 10 cases, 5 occurred at the upper extremity of the œsophagus immediately below the cricoid cartilage, 4 were found at the cardiac end, and in one (Baillie's) the situation is not given.

The earliest case on record was described by Gerard Blasius (*Observata Anatomica*, 1674, p. 120) in 1674; the second occurred in the practice of Sir Everard Home (*Pract. Observ. on the Treatment of Strictures in the Urethra and in the Œsophagus*, vol. ii. p. 415) in 1798; the third was found in 1822 by M. Cassan (*Archives Générales de Médecine*, tome x. p. 80); the fourth was discovered in a dissecting-room subject by Cruveilhier (*Anatomie Pathologique*, tom. ii, livr. 38, pl. vi), and is pictured in his Atlas; the fifth is reported by Zenker in Ziemssen's *Cyclopædia* (vol. viii, p. 19, 1878); the sixth was described at the Pathological Society of London by Dr. Wilks (*Trans. Path. Society London*, vol. xvii. p. 153); the seventh was recorded in *Guy's Hospital Reports* by Dr. Hilton Fagge (vol. xvii, p. 413); the eighth is found in a communication made to the Royal Medical and Chirurgical Society of London by Worthington (*Med. Chir. Trans.*, vol. xxx, p. 199), and the ninth is given by Baillie (*Morbid Anatomy* (5th edition, 1818, p. 104) in his *Morbid Anatomy*.

In all these cases it is distinctly affirmed that the tissues at the stenosed portion of the tube were absolutely unaltered. There was no evidence whatever of pre-existing injury or of cicatrical tissue. I think we must therefore concede, on the authority of such competent and eminent observers, that a form of stricture may exist in the œsophagus which is neither spasmodic, cicatrical, nor malignant, which has been termed simple stenosis or membranous stricture, but which might, perhaps, be called, with greater reason, idiopathic. The etiology of these strictures is still shrouded in mystery. Most of the writers on this subject attribute them to a congenital abnormality; in Ziemssen's *Cyclopædia* Zenker goes so far as to label them as "simple (congenital) stenoses." The points they rely on in support of this view are, first, the history of the cases, and secondly, the difficulty of explaining their occurrence in any other way. Morell Mackenzie[1] cautiously observes: "Although it is highly probable that the condition is a congenital abnormality, I am not aware that there is any instance on record in which its existence in early life has been proved by *post-mortem* examination." Other writers have not, however, observed the same caution. Like Zenker[2] they start with the theory that these strictures are congenital, and they lay undue emphasis on portions of the history which seem to confirm this view. In alluding to the cases of Sir E. Home, Cassan, and his own, Zenker states: "In all three the patients declared they had suffered from earliest childhood from difficulty in swallowing, which was especially troublesome when solid substances were swallowed." I do not think the history points always to childhood, though it undoubtedly always indicates a period of several years' duration.

In trying to arrive at some conclusion as to the congenital origin of these stenoses, we cannot implicitly rely upon the history which the patients supply. One of the chief characteristics of all benign strictures of the œsophagus is the length of time they take to develop, and not infrequently the history dates back over ten or twenty years even in cicatricial strictures. It is not very difficult then to suppose that a great number of years becomes synonymous in the patient's mind with "all my life" or "as long as I can remember." The weight to be attached to such expressions depends upon other considerations altogether; and chief among these I consider is the question whether the disease, and consequently the symptoms, are stationary or progressive. One of the essentials of a congenital malformation is, that as long as no secondary disease is superadded, the conditions it gives rise to do not vary. The reverse holds good with an acquired malformation. So long as the originating cause continues to act, so long the malformation increases, and the symptoms it gives rise to become more acute.

If we apply this principle to the cases under discussion, Dr. Wilks's case alone seems to fulfil the conditions necessary for a congenital origin. All the other cases of which histories are given were gradually getting worse, and in most of them the condition found at death, often at an advanced age, were so extreme as to have been incompatible with life. Thus in Sir E. Home's case, aged 46, the blunt end of a probe could only just be got through the opening. In Cassan's case the age was 77, and the opening in the stricture was only one line in diameter. In Zenker's case the age was 66, and the opening in the stricture would only admit the end of a thick sound. In Fagge's case the patient was 84, and the orifice in the stenosed portion was the size of a lead pencil. In Worthington's case, aged 69, the opening would only admit a large-sized urethral bougie. In my own case the patient was aged 46, the dysphagia had been noticed only for three years, and was steadily getting worse. The opening in the contracted mucous membrane was a mere slit about ¼ inch long. This was clearly not a congenital case, and yet the anatomical conditions were almost identical with those found in Home's and Baillie's cases, very similar to the conditions found in the others I have quoted, and therefore, I submit, we may consider it affords strong corroborative evidence that, with the exception of Wilks's, we may classify all these cases under the head of "acquired" and not of "congenital" simple stenosis of the œsophagus.

We may then ask how are these strictures acquired. The parts involved being found texturely normal, no inflammation or ulcerative process has been at work. The only explanation which can be offered is that it is due to a very localised and very prolonged spasmodic condition of the muscularis mucosæ or of the circular muscular fibres in the outer coat. How this is brought about it is difficult to say. Some local irritation may give rise to reflex spasm at a particular part of the canal, and this may leave an atrophic shortening of the muscular fibres of a more or less permanent character. It is thus that Harrison Cripps[3] explains a somewhat analogous condition in the rectum; and a tucking inwards of the mucous membrane alone can, I imagine, only be acquired by some such process.

The material at present at our disposal is too scanty to enable us to arrive at a conclusion satisfactory in all points, still less to dogmatise, but these cases are sufficient to act as sign-posts to indicate in a general manner the direction in which we should travel to arrive at a solution of the difficulty.

[1] *Diseases of the Throat and Nose*, vol. ii, 1884, p. 157.

[2] Vol. xviii. p. 19, 1878.

[3] *Diseases of the Rectum and Anus*, 2nd Edition, p. 221.

AMPUTATION THROUGH THE SHOULDER-JOINT FOR ACUTE EMPHYSEMATOUS GANGRENE: RECOVERY.

By Robert Jones, F.R.C.S.E.,
Honorary Surgeon, Liverpool Royal Southern Hospital.

The operative treatment of acute spreading traumatic gangrene has so disastrous a record that a successful case cannot fail to be of interest and encouragement.

T. C., aged 32, a seaman, was admitted into the Royal Southern Hospital, Liverpool, on May 13th, 1893. He had slipped, fallen upon, and fractured his right forearm. There was a slight wound on the inner side about 2½ inches above the styloid process, which communicated with the ulna. The house-surgeon cleansed but did not enlarge the opening, dressed it with iodoform, and placed the arm in a splint. There was considerable swelling of the forearm.

Next day he complained of pain, and he thought, perhaps, the bandage was too tight. The splint was therefore refixed, and the wound examined. Apart from a little tension the house-surgeon reported very favourably. On the next evening (the second after his admission) he complained of severe, deep-seated, tensive aching. The arm was again examined. The hand was very pale and cold, and did not bleed on puncture. The splints were removed, and the arm was placed in hot bran. He was very restless all through the night, and was kept under the influence of morphine. His temperature reached 102.5°; he perspired freely. On changing the bran during the night it was noted that the dull red colour had spread very rapidly. The house-surgeon saw the arm at 10 the following morning, and found it affected two inches above the elbow. At 12 o'clock I had an opportunity of examining, and found the hand swollen, cold, and darkish-grey in colour. The wound was puffy, tense looking, with pale granulations, but perfectly clean and sweet. The forearm and lower part of arm were of a red dusky colour, varied here and there by patches of a deep, blackish-purple discoloration, with a few small blebs. The affected parts pitted on pressure, and were generally emphysematous. The patient complained of a severe burning pain, which was mainly felt about the elbow. The crackling extended as high as the axilla. I decided to amputate at the shoulder, and at 2 o'clock the patient was brought into the operating theatre, and in the presence of my colleagues, Mr. Rawdon and Dr. Alexander, I again carefully noted the extent of the tissue destruction. In less than two hours the advance of gangrene had measured 3 inches. The arm was dark purple to within 1½ inch of the acromion on the outer side. On the inner side the skin of the axilla was obviously involved, while emphysema and œdema had extended over the pectorals and around the scapula.

Practically the arm was amputated through the shoulder without any attempt at the formation of flaps. Everything looked most unpromising. There was very little bleeding from the stump, which was studded with darkly-coloured patches. After completing the amputation I swabbed the wound all over with pure liquid carbolic acid, which I also insinuated by means of spills between the muscles at the front of the chest, and between those around the scapula. The operation only occupied a few minutes, and was not followed by any alarming collapse. He had a restless night but no pain; his temperature fell to 97° F. The wound was dressed; the surface looked dark, and there remained considerable emphysema about the shoulder. The surface was again cleaned with carbolic acid. On the next morning (May 18th) it was reported that he had slept but little, and was inclined to be sick. Hiccough was very troublesome. Emphysema was present over the whole of the right chest. The pulse was 110, the temperature 97° F.

On May 19th he was a little better, but hiccough was still present. The wound was dressed, a large quantity of liquid chocolate-coloured matter was oozing from below the edges of the skin. Emphysema was present. The chest was tightly bandaged, and the wound swabbed again with carbolic acid.

Not to weary with details I may state that the case made slow but uninterrupted progress towards recovery, and on the eighteenth day after operation he was able to leave the hospital. The most obstinate symptom all through was hiccough, which persisted night and day, sleeping and waking, and did not seem influenced in the least by treatment.

As far as I can learn from a rapid survey of published cases, that now reported would appear to be the most unfavourable for operation yet recorded. Certainly the patient was not a man of weakly constitution or of intemperate habits; but the rapid invasion of disease, its extent, and the unfortunate but inevitable delay of operation rendered his chance a very meagre one.

Surgeons are pretty generally agreed that the chances of recovery after amputation in this condition are largely dependent on the intervention of a healthy area between the disease and the site of incision. The case quoted by Erichsen, in which amputation through the shoulder succeeded after the infiltration had reached the scapula, is one of the very rare exceptions. The author does not mention whether the infiltration was in the form of emphysema, or whether death of the parts had occurred. In the same article he states: "The only chance of safety lies in amputating early, and removing the limb high above the part affected." Harrison Cripps, in his well-known article on "Gangrene," referring to the spreading traumatic form, says: "If amputation be performed well above the gangrenous part, so soon as the disease is recognised the patient will have a fair chance of recovery;" and Nicholas Senn, alluding to the same disease under another name, states: "Progressive gangrene with emphysema is the most fatal form of gangrene, and only in exceptional cases will the surgeon succeed in warding off a certain fatal termination by early operative interference."

The part played by pure carbolic acid in the treatment may mean much or little. I have great faith in it, and it certainly deserves attention. In the gangrene of flaps following amputation after severe injuries I know of nothing to equal it, and it has the great charm of being an almost painless application.

ANAL FIBROIDS, UNUSUALLY LARGE.

By Kendal Franks, F.R.C.S.I.,
Senior Surgeon to the Adelaide Hospital, Dublin.

M. W., aged 66, a seaman, when young suffered much from bleeding piles, and was operated on in Limerick. He was again operated on when 54 years of age. For the last twenty years he has been troubled (he says) with prolapsus recti, which for the last few years has come down whenever he defæcated, but which he was always able to reduce without pain. The bowels were always constipated, so that he was daily obliged to take medicine. Thirty years ago he got a blow on the temporal region, which resulted in the total loss of sight, and he has been blind ever since, only being able to distinguish a shadow in front of his eye when the hand is held up between him and the light. He has also a large reducible right inguinal hernia. He has suffered from frequent micturition for years, and is obliged to pass water four or five times every night. Whilst in hospital the catheter had to be passed every time he required to micturate.

On June 19th he was unable, for the first time, to reduce the prolapse of the rectum, and on the following day he went to a hospital, where it was reduced by the surgeon on duty. It recurred, however, at the next attempt at defæcation. On June 27th, 1894, he was admitted to the Adelaide Hospital, under my care.

He was a very old-looking man for his stated age: his complexion was waxy and white; large tumours, all more or less pedunculated, completely surrounding the anus. The condition could not be called a prolapse of the bowel, as the tumours were clearly fibroids growing from the margin of the anus. On slightly drawing them apart the mucous membrane of the rectum became clearly visible. This was not prolapsed, but merely somewhat dragged down by the weight of the growths. If he had been able to reduce these tumours within the bowel, as he asserted, they must have acted as a mechanical plug, because the sphincter seemed to have atrophied under the continuous dilatation they produced. The descent of these masses at every act of defæcation must obviously have occurred, but it is remarkable how such masses could have been returned within the bowel with the ease that he described.

I removed the whole mass with the greatest ease on July 7th, merely dividing the skin at the base on one side and the mucous membrane at the other side of the pedicle, and, having snipped through the intermediate tissues, I sewed the mucous membrane to the skin all round the anus. He lost very little blood. The wound healed very well, but he had no control over the bowels. On July 21st, a fortnight after operation, symptoms of uræmia set in, and the patient died comatose on July 25th.

Fibroid change is not infrequently seen in external hæmorrhoids, but it is generally to a slight extent, causing tumours which vary from a hazel nut to a walnut in size. Microscopical examination showed that the tumours in this case was composed of loose fibrous tissue, covered with ordinary compound squamous epithelium. There were a few inflammatory patches surrounding small blood vessels scattered through the mass of the tumour.

ON THE TREATMENT OF ENLARGEMENT OF THE PROSTATE BY REMOVAL OF THE TESTES.

By C. Mansell Moullin, M.D., F.R.C.S.,
Surgeon to the London Hospital.

E. B., aged 81, was admitted into the London Hospital on June 21st, 1894, suffering from retention arising from enlargement of the prostate. There was a history of several previous attacks. The prostate as felt *per rectum* was enormously enlarged, and no catheter could be passed, the growth blocking the urethra completely. Suprapubic aspiration was performed, and after that the patient was able to relieve himself, but very slowly and incompletely. At the end of a fortnight no progress had been made; the patient was losing ground, and cystitis setting in. Suprapubic prostatectomy was considered too hazardous. The formation of an artificial urethra, as the patient was very restless and becoming more and more childish, could not be recommended. Castration was proposed and agreed to.

The operation needs no comment; there was no shock, and the patient did well. The next day urine came more freely. Ten days later the prostate was smaller. Three weeks after the operation it had disappeared. An ordinary catheter passed with ease and without having the handle depressed to any extent, and when the finger was in the rectum all that could be felt was a fusiform thickening extending along the catheter, so small and soft that the shaft could be felt everywhere through it.

The case does not stand alone. Ramm, of Christiania, has performed the operation twice in April, 1893; Haynes, of Los Angeles, California, three times; Fremont Smith, of St. Augustine, once; and Professor White, of Philadelphia, once. Moreover, there is one case on record (Mr. Arthur Powell's) in which it was done accidentally. The result has been the same in all, without exception.

I proposed the operation to a patient in November, 1892, but he would not consent. Professor White wrote of it in August, 1893, saying that he had no definite convictions on the subject. The credit of having had the courage of his convictions and of priority belongs undoubtedly to Ramm.

It has been long known that castration in infancy prevented development of the prostate, and in adult life caused it to waste. Now it must be admitted that castration causes the enlarged gland to disappear. The most wonderful thing is the rapidity, for the change is not merely a vascular one, but complete disappearance of a fibro-adenomatous growth. It is probably due to some influence exerted through the nervous system, for, according to Dr. Watson, unilateral castration causes unilateral atrophy.

Clinically the fact is of immense value. Castration will never be resorted to except in desperate cases, but there can be no doubt that many men dying deaths of lingering torture from catheterism and septic cystitis would be only too happy to purchase relief at such a cost. And this is true in spite of the immense improvement recently made in the operations of prostatectomy and drainage of the bladder. There is no need to fear that it will be followed by any of the changes in the secondary sexual characters that occur when castration is performed in early life.

Pathologically it is of no less interest. It proves that the theories that enlargement of the prostate is due to senility, or general atheroma, or hypertrophy in compensation for sinking of the floor of the bladder are untenable. And it equally negatives the view that enlargement of the prostate is analogous, except in the vaguest way, to fibroid disease of the uterus. The representative of the prostate is to be sought, if it exists in the opposite sex, in the perineum, near the ends of the ducts of Gartner; and the representative of the enlarged prostate must be sought in the same situation, nowhere near the uterus. It is true that the relation that exists between fibroid disease of the uterus and the ovaries admits of comparison with that which exists between enlargement of the prostate and the testes: but the fact that fibroid disease of the uterus and enlargement of the prostate both bear a similar relation to two different organs does not prove that there is anything more than the vaguest analogy between them. There is almost as close an analogy between enlargement of the prostate and the fibro-adenomata that so frequently develop in the female breast shortly after its evolution at puberty.

From the point of view of general pathology the fact that atrophy follows castration is of no less interest. When so little is known with regard to the causation of tumours, it is of some consequence to be able to show that, in the case of one organ belonging to the sexual system, a hitherto inexplicable form of overgrowth can be made to disappear completely by the removal of what may be called the master structure of the system.

There is an idea that some connection exists between enlargement of the prostate and second marriages contracted late in life, especially when the wife is young. Without going so far as to say that the disappearance of the enlargement after castration proves this, it may be admitted that it lends it a certain amount of support.

Dr. Ward Cousins expressed his opinion that whatever the result of division or excision of a portion of the vas deferens might be upon the prostatic symptoms so common in old men, in young men this accident was always followed by more or less atrophy and permanent injury of the testicle. He had known this accident occur during the old methods of operation for stone.

OVARIOTOMY IN GENERAL SURGICAL PRACTICE.

By A. W. Mayo Robson, F.R.C.S.,
Senior Surgeon to the General Infirmary at Leeds; Professor of Surgery in the Victoria University; and Member of Council of the Royal College of Surgeons of England.

Such an air of specialism has been wrapped around ovariotomy that, according to some gynæcologists, the operation is one that ought only to be undertaken by obstetric physicians. This has never been put more pertinently and directly than it was in a paper read before one of the London Societies some months ago, and although the opinions of those who heard the papers were probably not altered by the arguments advanced, a number of questions were raised which will well bear discussion.

To elicit opinions is the purpose of the present paper, and were it not necessary to prove a right by experience to discuss the question, I should prefer to leave the "ego" out of my arguments. This, however, might not be considered fair; I therefore hand round a table of a consecutive series of ovariotomies, the greater number of which have been treated in the general wards of a large hospital, to serve as what I believe may be taken as a fair example of what is being done by general surgeons.

I prefer, on the present occasion, to limit the list simply to ovariotomy, lest the discussion might become involved, and only to mention the total number of my abdominal sections, particulars of which I shall be glad to give in a paper on another occasion. I have to thank my house-surgeon, Mr. Oldfield, and my dresser, Mr. Murphy, for abstracting the cases for me, and Mr. Buchanan, F.R.C.S., for his assistance in arranging them.

The total number of my abdominal sections is 850, with a mortality of 11 per cent., and this includes cases of suppura-

tive and perforative peritonitis, acute intestinal obstruction, gangrene of gut, and many other cases operated on when almost beyond hope, in order to give the patient a last chance. My ovariotomies number 216, with a mortality of 5.5 per cent., or, if malignant cases be included, of 6.52.

In looking through the list it is seen that the 14 recorded deaths may with advantage be submitted to analysis, the preventable being distinguished from the probably unavoidable deaths. Two patients (Nos. 151 and 194) died from malignant disease, one ten days after operation, the other from shock within a few hours. Two succumbed to intestinal obstruction, one on the eighth day from volvulus of the small intestines, the other from gangrene of about a foot of bowel, owing to injury of the mesentery in separating adhesions.

One case (No. 90) was admitted with acute peritonitis, and was operated on to give her a last chance; in this case death was certainly not due to operation, although it followed it, and must therefore be included in the mortality. In Case 153, operated on for fæcal fistula of four years' duration following on pelvic suppuration, and accompanied by a pelvic tumour, the adhesions were very extensive, and the opening in the intestine, being deep in the pelvis, was with difficulty closed, and, in fact, reopened in a few days, the patient sinking from exhaustion seven weeks after. One case died of exhaustion at the end of a week after the removal of a large suppurating multilocular cyst; as she was extremely low at the time of operation, and had general peritonitis, the operation cannot be blamed for her death.

Case 109 died of congestive bronchitis, possibly due to ether anæsthesia. Case 148 succumbed on the night of the operation to pulmonary embolism, apparently owing to the patient, who was the subject of heart disease, getting up in the temporary absence of the nurse. The operation was a very simple one, and only occupied about fifteen minutes. Case 95 comes under the preventable causes of death, inasmuch as the ligature on the pedicle slipped during an attack of vomiting twelve hours after operation, and although I reopened, ligatured the pedicle afresh, and transfused, it was of no avail. In this case there was hardly any pedicle, and I used the Staffordshire knot. Since that time I have usually applied a separate ligature to the outer part of the broad ligament where there has been any tension. Of the 4 cases dying from peritonitis, one patient was in a very insanitary ward, a drain having burst recently beneath the floor. I had been assured that the ward was in a sanitary condition, otherwise I should not have used it. One case developed distension after the removal of appendages for a large myoma of the uterus, and had she been freely purged I have no doubt she would have recovered, but at that time (ten years ago) morphine was in vogue. In Case 146 a large suppurating cyst was with difficulty removed, and perchloride of iron had to be applied freely to arrest the hæmorrhage.

In Case 167 a suppurating dermoid cyst was operated on away from my immediate care and was not seen by me until the third day, when distension had set in, with vomiting, morphine having been given from the first night after the operation. Although I reopened the wound and drained, and then tried to purge, it was without avail. In this case abstention from morphine and a turpentine enema on the second day, followed by a purgative, would probably have produced relief.

After the most careful consideration, I think I am justified in saying that the case of hæmorrhage and three of the cases of peritonitis are the only fatalities I might possibly have prevented; all the other lethal cases might happen again. This would bring the unavoidable mortality of the series of cases down to 4.6 per cent. and the preventable mortality to 1.8 per cent.

I fail to see on what grounds ovariotomy should be divorced from general surgery, but I do know that statistical evidence has been used as a powerful argument, and I think, as a rule, without sufficient reason, for I feel sure that the results of ovariotomies in the hands of a number of surgeons whom I could name will compare favourably with those under the care of any of the obstetric physicians practising surgery.

I have also heard it suggested that, as surgeons are constantly handling septic cases, they are unfitted to operate in the peritoneal cavity, and this might at one time have applied, but not now, for let anyone compare the cases in a modern aseptic surgical clinic with those in a gynæcological ward and I think he will unhesitatingly decide in favour of the former.

I would, however, carry this argument further, for with our present knowledge of puerperal complications, the question may very properly be raised as to the advisability of an obstetrician going direct from operating on a pelvic abscess or a suppurating ovarian cyst, or from the examination of an offensive cancerous uterus, to attend a woman in confinement, just as he might be censurable for going direct from a case of puerperal fever to perform an abdominal section. To my mind, if any divorcing of practice is required, it is in the separation of obstetric from all surgical practice, and I should not be surprised if at some time, when the public becomes more fully informed, this were demanded. Nor can the separation of ovariotomy from general surgical practice be urged on the score of diagnosis, for surely the well-educated surgeon is as competent as the obstetrician to diagnose an ovarian or any other form of abdominal tumour; moreover, should an error of diagnosis have occurred, who so competent as the general surgeon to deal with it, inasmuch as he would not be departing from his *rôle* had he to treat a tumour whose origin was not in the pelvis?

With regard to the one or the other being more competent, this is purely a personal question, as, with surgical aptitude and training, work of the kind in question can undoubtedly be undertaken by either physician or surgeon, so that the arguments really amount to a question of expediency, and I would ask:

1. Is it desirable that the practice of midwifery and surgery should go hand-in-hand?

2. Is it desirable that the public should lose the advantages of a class of medical men of high standing, who as obstetric physicians practised as consultants in all gynæcological questions?

3. Is it desirable that, as hitherto, the office of physician and surgeon should be distinct, or that the physician should practise surgery and the surgeon medicine, for if it is done in gynæcology, why should it not extend to practice generally?

I have already expressed my opinions with regard to midwifery and surgery, and with regard to the latter two questions they can well be answered together. I think that the long-honoured custom of medical and surgical practice being distinct is not only of advantage to the physicians and surgeons themselves, but that it is productive of material good to the patient, and although the converse is being advocated by the obstetric physician, I think the same arguments apply with equal or greater force in his case. I conceive that there will be a serious loss to the public if the obstetric physician, as now seems to be the custom, ceases to practise as a physician, and views matters purely from a surgical point of view, as gynæcology is by no means all surgical, and it is certainly not desirable that it should be, and just as there is an advantage to the patient suffering from cholelithiasis, or any similar ailment, in having medical treatment before the surgeon is called in, so I conceive that many of the pelvic cases going directly to one practising surgery may fail to have an adequate trial given to medical and milder measures before operation is suggested. In these views I know I shall be supported by physicians as a rule, and by many obstetric physicians. I can conceive that it may be urged that in vaginal operations special manipulations and methods may be acquired by frequent practice, although without doubt any educated surgeon ought to be able for instance to perform the operation for vesico-vaginal fistula equally as well as he can a staphylorrhaphy, and a vaginal hysterectomy with as much facility as he can a proctectomy; but how the obstetric physicians can lay claim to be the only practitioners who should perform ovariotomy I am quite at a loss to understand, and why, if they lay claim to this, they should not also consider themselves alone efficient to do all peritoneal work I again cannot comprehend on any logical grounds.

If a specialism there must be, let it be one of abdominal surgery, but I think the time has come to protest as strongly as possible against the dictum that a surgeon may perform nephrectomy, or gastrostomy, or cholecystotomy, or enterec-

tomy, but that he is incompetent to perform a hysterectomy or an ovariotomy, which must be handed over to an obstetric physician, who, as in several well-known examples, finds that when he has opened the abdomen, though a specialist, he has to wander into unknown regions beyond his province and perform a cholecystotomy or a nephrectomy for a tumour which he may quite pardonably have mistaken for an ovarian cyst.

Although there may be many anomalies, the personal equation will, as a rule, settle the matter for some time to come, but at the same time we may each of us express our views as to what we consider ought to be, and in such a way haply we may arrive at what is best. It will be seen from the foregoing remarks that I think it would add to the dignity of the profession and be to the benefit of the public if the obstetric physician were one in reality, undertaking obstetric work and consulting gynæcology, and if the surgical part of gynæcology were undertaken by the surgeon, whether gynæcological or general it matters not, so long as he were competent and were fitted by education, practice, and aptitude for his surgical work.

DR. WARD COUSINS congratulated Mr. Mayo Robson on the splendid results of his abdominal practice. He advocated securing the pedicle in all cases wherever possible before any adhesions were separated. He had remarked how well old women underwent serious operations on the abdominal cavity. He expressed the great satisfaction with which he had heard Mr. Mayo Robson's remarks on the practice of abdominal surgery by the general operating surgeon.

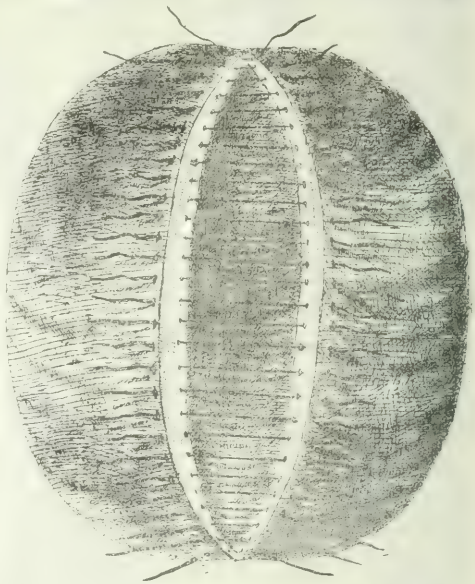
DR. JAMES MURPHY presented a table showing the results of his ovariotomies at the Sunderland Infirmary. The number was 27. No patient was refused operation; no operation was left incomplete; and there was no death.

RUPTURE OF MALE BLADDER SUCCESSFULLY TREATED BY ABDOMINAL SECTION AND SUTURE.

By JAMES MURPHY, M.A., M.D.,
Surgeon to the Sunderland Infirmary; Lecturer on Medical Jurisprudence, University of Durham.

T. B., aged 24, spent an hour or two on May 28th, 1894, in a publichouse, during which time he drank some seven or eight gills of beer; he then felt a desire to pass water, and left the publichouse to proceed to a urinal round the corner. Just as he got outside the door, a runaway horse and cab struck him against the wall and knocked him down. He was soon after admitted into the Sunderland Infirmary, and I saw him some two hours after the accident. He was a man the very picture of health, good tempered, docile, and obedient. He did not complain much of pain nor was he much collapsed. There was slight abrasion of the penis and lower portion of the abdomen; a catheter was passed, and drew off about half an ounce of blood-stained fluid; 10 ounces of boracid acid solution was injected without giving much pain: about an ounce returned. On percussion there was distinct resonance above the pubes, and distinct dulness in both flanks. In the left flank a distinct splash could be obtained. The diagnosis of ruptured bladder was complete.

Abdominal section was at once performed, and on opening the peritoneum about 40 ounces of fluid were removed. The bladder was found to have a tear in it going in a straight line from before backwards over the whole of its fundus, that is, the rupture extended from back to front over the whole surface of the bladder, covered by the peritoneum, and even extended a little beyond that at each end. The peritoneum was stripped off the line of rupture for $\frac{1}{2}$ to $\frac{1}{4}$ inch. My assistant seizing each side of the ruptured bladder between his fingers and thumbs drew it up, and, separating his hands, gave me room to work between them. With a small needle, curved on the flat and held in a needle holder, I passed a catgut suture through the muscular wall of the bladder, beneath the peritoneum, or, rather, internally to it, as it was stripped off, introducing the needle, as shown in the the diagram, about $\frac{1}{4}$ inch from the margin of the rupture and passing it through the muscular coat as near as possible to, without penetrating the mucous membrane. The needle was then removed from the handle and drawn through. Replacing it in the handle it was made to penetrate a corresponding point on the other side of the rupture, just outside the mucous membrane, and to pass through the muscular coat and emerge about $\frac{1}{8}$ inch externally to the line of rupture. The ends of the ligature were then seized by Péan's forceps. In this manner three sutures were introduced as low down in the pelvis as possible, and then by using traction on these sutures it was possible, by pulling up the bladder, to pass two more sutures lower down. The rupture was closed by some fourteen or fifteen sutures passed in a similar manner. The sutures were knotted, and 10 ounces of boracic



acid lotion was injected into the bladder, which was found to be watertight. The peritoneum was sutured over the rupture. The peritoneum was again washed out, a glass drainage tube introduced into the pelvis, and the abdomen closed. The patient was moved to a private ward, and a No. 10 catheter passed into the bladder and secured. To the end of the catheter a piece of drainage tubing was attached, which was brought out underneath the patient's thigh, raised between two pads, and the end of the tubing was placed in a large bottle underneath the bed in such a manner that the nurse could see that the urine was constantly flowing.

He passed from 50 to 70 ounces of urine daily; for the first thirty-six hours it was blood-stained; the catheter was kept in for eight days; for the following two days the water was drawn off by means of a catheter, and for the next four or five days he was told to pass his urine every three hours while he was awake. The drainage tube in the abdomen was removed on the second day after the operation; he was kept in bed for fourteen days, and he was detained at the hospital twenty-seven days. With the exception of a slight urethritis there was no drawback to his convalescence: he is now perfectly well, and his bladder can hold 20 ounces, and possibly more if required.

REMARKS.—I was fortunate in seeing this case within two hours after the accident. The diagnosis of ruptured bladder was certain. The mode of suture adopted was chosen because the rupture was fairly clean cut, and the bladder was very thick and muscular. I therefore brought the ruptured edges

together directly, although hitherto the method of Lembert has been employed. I attach the greatest importance to having the bladder continuously drained by the catheter, so as to keep the ruptured surfaces at rest, and then dilating the bladder gradually at the end of a week by allowing a few ounces of urine to accummulate there. The patient resumed his occupation of coachman a few weeks after leaving the infirmary and has been in constant work ever since and feels as well as ever he did. The accompanying diagram explains the method of suture.

NOTES OF A CASE OF SUCCESSFUL SPLENECTOMY.

By James Murphy, M.A., M.D.,
Surgeon to the Sunderland Infirmary; Lecturer on Medical Jurisprudence, University of Durham.

A. G., aged 45, unmarried, was admitted into the Sunderland Infirmary on April 18th, 1894, at the request of Dr. Scurfield, with the diagnosis of hypertrophy of the spleen, with a view to removal of the organ.

History.—She was a native of Plymouth. Two years and a-half earlier she was much worried by monetary troubles; she then had an attack of influenza, and was confined to her bed for some weeks with pains all over her, and was very feverish. After getting up she had a stroke of paralysis, she completely lost her speech for several days; she also lost the power of the right hand, but the legs were not affected. Speech gradually returned, but it was still very defective; she had to speak very slowly, was frequently at a loss for a word, and often used a wrong one. The use of the right hand was but slightly affected. For more than a year she had noticed a painful swelling in the left hypochondriac region. There had been no affection of the alimentary system, and no alteration in the quality or quantity of the urine. She had been losing weight in spite of a good appetite for several months, and during the same period she had suffered much from shortness of breath, and had become very blue about the face and neck. Her memory was defective, and no further information could be obtained from her; the doctor who attended her during the paralytic seizure is dead.

Family History.—No facts of importance could be obtained.

Condition on Admission.—There is a large tumour on the left side of the abdomen passing under the ribs above, and below reaching to the level of the iliac crest. Externally it reaches far back to the spine, and internally it extends beyond the median line; it is very slightly movable; its surface is irregular, and it appears as if four or five small masses grew from it. The skin moves freely over it during respiration. It is tender on manipulation and dull on percussion, the dulness passing upwards to the lower left ribs behind. The urine is normal; the temperature is about 100° every night; she has a troublesome cough, and the base of the left lung is slightly congested, but no serious disease can be detected in the chest; the heart sounds are normal; the blood was found to be in a fairly healthy condition, and there was no evidence of leucocythæmia. Her breathing is short and rapid, and she is distinctly cyanosed, and she occasionally has slight rigors; she is in a very enfeebled condition, is losing flesh and strength, and suffers much from pain in the spleen. As there was no leucocythæmia, as her symptoms were evidently due to the enlargement of the spleen, as her other organs were fairly sound, as her condition was very miserable and her general health failing rapidly, it was deemed advisable to recommend her to have splenectomy performed, and to this, the risks having been fully explained to her, she readily assented.

Operation.—On April 25th, chloroform having been administered, an incision about 8 inches long was made along the left linea semilunaris down to the peritoneum, the hæmorrhage was excessive—dark venous blood—and some seven or eight large dilated veins were tied with catgut. The peritoneum was then opened. There were no adhesions to the parietes, but the omentum was firmly adherent over the greater portion of the spleen, in some places being puckered up, which gave rise to the irregular feeling discovered through the abdominal wall. The transverse colon was also adherent in two or three places; the adhesions were rapidly but carefully broken down, the bleeding points being instantly seized with Péan's forceps, but quickly as this was done, two or three ounces of very dark venous blood were lost. The vessels, principally veins, were exceedingly friable, and readily tore. All bleeding points from the adhesions being secured, the spleen was gently removed—the lower end first—from the abdominal cavity. She suddenly became very much collapsed, and seemed as if she were about to die. The pedicle, which was thin and broad, measuring about 5 inches, was secured in the following manner: beginning at the upper edge, where the vessels were smallest, it was secured in three portions with double silk ligatures, and divided between them. The ligatures were not locked; in this manner the outlying (so to speak) portion of the pedicle was secured, but the large vessels in the centre of the pedicle were left untouched. In a similar manner the lower outlying portion of the pedicle was secured in four portions, the ligatures were not locked, and the pedicle was cut across between each pair of ligatures after they were secured. There then remained in the centre a portion of the pedicle about the size of a thumb, containing vessels somewhat bigger than a large goose quill; a long silk ligature was carefully drawn through these, and the remaining portion of the pedicle was firmly secured with a Staffordshire knot. The spleen was then cut off; there was no more bleeding. Little blood escaped into the peritoneum, having been caught in sponges. She was in such a collapsed condition that no time was lost in irrigating the abdomen, which was rapidly closed by silkworm-gut sutures; no drain was used. The patient was then removed to a private ward. She was in a very collapsed condition, and rallied slowly; at 7.30 P.M. she was shivering, but did not feel herself cold; she vomited slightly; the pulse was good. At 8.30 P.M. the temperature was 103.6° F.; there was no sweating. At 11 P.M. she was sleeping. She slept fairly, and on April 26th was in good condition. There had been no more vomiting, but cyanosis was more marked than before the operation. Nutrient enemata were being given, and she passed flatus in the afternoon. Gradual improvement ensued, and on May 1st half the stitches were removed. On May 3rd the remaining stitches were removed. The wound was quite healed. On May 8th she was removed to the general ward. On May 9th it was reported that she had been slightly delirious during the night and got up and walked about the ward. Cough still continued. On May 20th there was dulness, crepitation, tubular breathing, and bronchophony at the left base, behind and round to the front, just below the cardiac area external to the nipple. There was also dulness with crepitations and altered breath sounds at the apex in front; there was no cardiac affection. On May 31st the signs at the base behind were much improved: the crepitations were much fewer; the breath sounds were still tubular, but less markedly so. On June 12th she left for our convalescent home at Harrogate; all chest symptoms had disappeared, as also had the cyanosis. She was quite free from pain, and assured me she was in much better health and spirits than she had been for two years. She put on flesh and the cicatrix was perfectly satisfactory, no hernia having occurred.

The following is the report on the tumour by my colleague, Dr. Squance, Physician and Pathologist to the Sunderland Infirmary, to whom I beg to return my thanks, as also to the assistant pathologist, Dr. Larcombe, for the beautiful sections he made of the tumour; and, above all, I am much indebted to my excellent house-surgeon, Dr. Baines, for the careful record he has kept of the case, and the assiduous attention he showed to the patient.

Note by Dr. Squance on Examination of Spleen Removed by Dr. Murphy.

The spleen measured 8¾ inches in length, the circumference of the upper end being 9½ inches, and of the lower 10 inches; the weight was 1¾ lb. The surface was fairly smooth, but in places somewhat "crinkled." There was an abscess cavity invading the spleen in the lower portion of the anterior border, which contained ℥ss of pus. The spleen substance surrounding was hyperæmic, softened, and appeared to be on the point of sloughing. On cutting into spleen the substance was firmer than normal, feeling somewhat "leathery." It contained no new growth.

Microscopical Appearances.—Section through the pyogenic membrane showed on the edge adjoining the spleen substance a large amount of fibrous tissue newly formed, and thickly studded with small cells. Sections through the portion of spleen which appeared to be breaking down near the abscess showed the fibrous tissue well marked in portions, others apparently softening, generally richly cellular, some amount of

granular material, and numerous small hæmorrhages. A large vessel presented a ragged appearance of its walls, as though they were on the point of breaking down; its lumen was occupied by an ill-defined substance somewhat jelly-like in appearance, which had completely blocked the vessel. Section through spleen substance showed increased fibrous tissue and cellular growth, with small hæmorrhages. The Malpighian tufts were sparsely scattered, having been separated by hypertrophied tissues; the cells in them were increased in number, and some of them were commencing to undergo fatty degeneration.

It is difficult to say what is the cause of the abscess—whether or no it be the result of an infarct, evidences of which are found in the occluded vessel in its neighbourhood. The other appearances resemble those caused by congestion. The waxy change is very slightly marked, being insufficient to be recognised by the naked eye, and is evidently just commencing.

Remarks.—It is not now (1894) necessary to refer to the experiments of Tizzoni on rabbits, or those of Credé on dogs, to prove that man can exist without a spleen, as this fact was said to have been proved by Jacchærelli in 1549, and by Terrerius in 1711, and was undoubtedly proved by Péan in 1867, when he removed a spleen, the seat of cystic degeneration, successfully from a woman aged 20. Since then the spleen has been successfully removed for (1) hypertrophy, (2) malarial enlargement, (3) floating spleen, (4) cystic disease, (5) abscess, (6) malignant disease, (7) for various injuries. The spleen has frequently been removed in cases of leucocythæmia, but as far as I know unsuccessfully, so that we have no evidence that it is possible to remove it successfully in such cases, but far be it from me to say that such operations are unjustifiable. I will not occupy space in discussing the history of the operation, which has been so well done by Dr. Greig Smith in his admirable book on *Abdominal Surgery*. Suffice it to say that probably most of the cases have been done for leucocythæmia, and apparently all of these have died, as the case of Franzolini (1881) is a very doubtful one. In the other diseases and accidents for which splenectomy has been done, the operation, though it had a high mortality, has been done successfully, and therefore is justifiable in cases which would otherwise end fatally, although in other cases in which life and health are not seriously threatened with this present high rate of mortality, the operation has not much to commend it. This simply means that the *technique* of the older operators was not as perfect as ours may be. Sepsis with us is but an accidental contingency, which we may hope will soon fail to appear even as an accident. The operation itself presents no great mechanical difficulties, and with means at our disposal of rapidly and efficiently catching bleeding points with Péan's forceps, and with proper treatment of the pedicle, I see no reason why there should not be a successful future for splenectomy in cases which are unamenable to other treatment. Hæmorrhage seems to me to be the great danger, but of that surely we are not now afraid.

A CASE OF SARCOMA OF THE TESTIS,

IN WHICH THE INTERIOR OF THE GROWTH WAS FILLED WITH DECOLORISED CLOT AND BROWN FLUID SIMULATING HÆMATOCELE.

By Charles A. Morton, F.R.C.S.,

Surgeon to the Bristol General Hospital; Demonstrator of Anatomy, University College, Bristol.

The differential diagnosis of hæmatocele and malignant growth of the testicle is often difficult. Mr. Jacobson, in his recent work on *Diseases of the Male Generative Organs*, refers to cases of difficulty with regard to the diagnosis between hæmatocele and malignant growth and to others in which these conditions were combined; and he mentions the tendency to hæmorrhage into the softer forms of growth, but does not place on record any case in which this condition closely simulated hæmatocele. Mansell Moullin, writing of the diagnosis of hæmatocele from malignant growth by exploratory puncture, says, "even this may deceive; on one occasion I tapped a blood cyst in the centre of a sarcoma." In the case which I now record the blood was exactly like that of an old hæmatocele.

G. H., aged 38, came up to the General Hospital on July 12th, with a history of rapidly-increasing swelling in the right side of the scrotum of three months' duration. There had been hardly any pain, and no history of injury. He was a robust-looking countryman. The appearance of the swelling was that of a large hydrocele, pyriform in outline, and extending up to the external ring. The upper third felt quite soft, like fluid; the lower two-thirds very hard, round, and hardly fluctuating. The two portions, the hard and soft, were sharply differentiated. There was no tenderness and no testicular feeling anywhere. The cord could hardly be felt above the apex of the swelling, it reached so close to the ring. There was no translucency in either the hard or soft portions, and no signs of hernia. On the outer surface of the hard round mass one little soft rounded boss could be made out. An exploratory puncture withdrew a syringeful of brown fluid such as would come from an old hæmatocele. No lumbar or iliac glands could be made out, but the abdominal wall was thick. The removal of a fluid so characteristic of hæmatocele led me to think we had such a condition to deal with, and two days later I inserted a hydrocele trochar and cannula. At first a little of the same brown fluid escaped, but almost at once an ounce or more of bright red blood came away. This then ceased, and, although the cannula was cleared of clot, nothing more came, and the swelling was not materially reduced in size, though less tense, so that another small boss could be felt on the surface.

It seemed to me then probable that we had to deal with a hæmatocele associated with a malignant growth, and I determined to remove the mass after a preliminary exploration of the tunica vaginalis. I made an incision from the external ring to the bottom of the scrotum, and then passed a silk ligature underneath the cord, ready to tie if the exploratory incision gave rise to troublesome bleeding from the growth. On then carefully cutting towards the testicle I first came on what seemed to be the tunica vaginalis almost obliterated by adhesions, and then, on cutting deeper, I went through a very thick, dense wall into a cavity. I passed in my finger, and felt that it was filled with soft friable material, and on removing my finger, which acted as a plug to the opening, a considerable quantity of rather dark but fresh blood escaped. From the touch alone it was impossible to say what was the nature of this soft friable material. The first portions I turned out with my finger were evidently decolorised clot, and I could not help thinking it was a hæmatocele with very thick walls after all. Then I managed to break off and turn out something a little firmer, and this when washed was seen to be evidently soft new growth; so I proceeded to remove the testicle. The soft portion of the mass, which extended nearly into the ring, was a collection of hydrocele fluid in the apex of the cavity of the tunica vaginalis, where it had not been obliterated by adhesion, above the testicle.

On cutting open the mass it was found to consist of very soft friable malignant growth, infiltrated and breaking down with hæmorrhage, enclosed within an enormously thickened tunica albuginea. In two places it had burst through this, forming the bosses felt on the surface. In the centre was a cavity formed partly by hæmorrhage, partly by exploratory manipulation, and containing decolorised clot. Here, probably, the brown fluid-like hæmatocele fluid was situated. The growth in the epididymis was firmer. Microscopic section showed the growth to be a round-celled sarcoma.

CLINICAL REMARKS ON SIXTY-FIVE CASES OF OPERATION FOR VESICAL CALCULUS.

By Ernest F. Neve, M.D., F.R.C.S.Edin.,

Surgeon to the Kashmir Mission Hospital.

Mortality after Litholapaxy.

Of twenty-one cases we lost no fewer than three.

Case I.—M. R., male, aged 40. Lateral lithotomy had been performed some years previously. The operation on the present occasion lasted three-quarters of an hour. The stone was soft and phosphatic. Subsequently the urine passed was scanty and very albuminous. The patient died on the third day with suppression of urine.

Case II.—M. L., male, aged 70. The stone was soft and phosphatic; it weighed 190 grains. The operation was prolonged, and the patient suffered from some shock. On the tenth day he refused food; the pulse was rapid and the tongue dry; swelling of the feet ensued, and death occurred on the twelfth day.

Case III.—R. D., male, aged 60. The stone weighed 380 grains. The lithotrite was introduced twice. Subsequently there was constipation, followed by diarrhœa and vomiting. He died on the eleventh day.

These cases indicate the limits of litholapaxy. The patients were all three bad cases. Litholapaxy was selected as the least severe operation. Possibly the rapidity of operation and good drainage afforded by perineal lithotomy might have turned the scale. In similar cases I should in the future prefer perineal lithotrity through a mesial incision, and with the use of a special large evacuating catheter which I have had made for the purpose. In this way the time of operation would be greatly shortened and efficient drainage secured.

Mortality after Perineal Lithotrity.

Renal disease, septic peritonitis, and shock respectively carried off 3 out of the 26 cases operated upon. In the last the stone weighed 624 grs. There was persistent prostatic oozing. The patient died within twenty-four hours.

Mortality after Suprapubic Lithotomy.

Seventeen patients were operated upon. Of these 6 died. The causes of death were various. Two died in 1889 in close succession (somewhat inexplicably, as there was no wound of the peritoneum) from acute septic peritonitis; 1 in 1888 developed tetanus three weeks after operation; another gradually sank from diarrhœa and exhaustion on his return

home; 1 more died seven weeks after operation from chronic diarrhœa; the 6th case died, I believe, from the same cause.

The difference in mortality between stone districts and those in which the disease is the outcome of individual dyscrasia (and frequently associated with diseased kidneys and feeble circulation) is striking, and tends to become still more emphasised by the skill of those operators who, like Keegan, Freyer, and Forbes Keith, have to deal with an immense number of cases.

Kashmir is not a stone country. Calculus is rare and usually associated with a depraved constitution. Consequently the figures which I now give approximate to those of European hospitals—our mortality tabulated was:

Litholapaxy	14.28 per cent.
Perineal lithotrity	0.00 ,,
Perineal lithotomy (lateral)	11.53 ,,
Suprapubic lithotomy	35.39 ,,
Total	18.46 ,,

Among 1,827 cases of lateral lithotomy collected by Sir H. Thompson there were 229 deaths—a mortality of nearly 13 per cent. Dittel, of Vienna, gives the mortality as follows: Litholapaxy, 192 operations, 12 deaths=6.25 per cent.; lateral lithotomy, 65 operations, 25 deaths=38.46 per cent.; suprapubic, 26 operations, 12 deaths=46.15 per cent. Boeckel and Guyon recorded respectively a mortality of 44.4 per cent. and 47.3 per cent. on the high operation. More recent cases published in England appear to give a mortality of rather less than one-fourth in the suprapubic operation, but a large number of children are included.

Successful Cases.

In the 53 cases which recovered the average weight of all stones removed by lithotomy of which we have any record up to 1891 was 2 ounces 1 drachm. Three were between 4½ and 5 ounces, and one was over 7 ounces. The largest stone crushed weighed 1 ounce 5 drachms. Nothing, of course, can be more satisfactory than litholapaxy in healthy children and adults if the stone be not too large. In one case of calculus weighing 20 grains the operation was completed in five minutes. It is the feeble, worn old men with ammoniacal and albuminous urine, with large mixed phosphatic stones, sacculated bladders, bad appetites, and feeble circulations who compel one to resort to lateral lithotomy. By pushing litholapaxy in such cases one is very apt to have disappointing results, and to bring discredit unfairly on that valuable operation.

It is in such cases that perineal lithotrity appears to me to hold out the best hopes of success. Of two stones thus crushed one was the size of a cricket ball. If the perineum be not very deep, a small mesial incision enables one to explore the bladder and stone. To facilitate the evacuation of fragments I have used my own large evacuating catheter, the size of the forefinger. The worst cases are still apt to fall to the lot of suprapubic lithotomy. Nevertheless, Mr. Arthur Neve had a run of successful cases, losing only one of his first ten. Subsequently, however, our results were not nearly so good, and then the operation fell back into its old place, only being used in complicated cases in which there was no alternative.

In young people, no doubt, very striking success may be obtained by the suprapubic method. Of our cases one healed by first intention, and another within three days: but such cases would probably have done equally well after litholapaxy.

Some of the recoveries were remarkable. In one the bladder was lined with calculus, and the stone (4¾ ounces) adherent. For several days the patient hovered between life and death, with a wretched pulse. In another, in which the stone weighed 4 ounces 5 drachms, fever and diarrhœa set in a month after the operation, reducing the man to a skeleton and the wound to a chasm, but the patient finally recovered. Cases of this kind might be multiplied; they illustrate forcibly the narrow line which separates recovery from death. Any of them might have swelled the mortality without bringing discredit on the operation; but they emphasise the need for care in selection of the best method, and in judging each case on its own merits. Rapidity of execution and assiduous subsequent nursing do much to avert disaster in such cases, where a feather's weight may turn the scale.

THE CONDITION OF THE MEMBRANA TYMPANI IN SOME HEAD INJURIES.

By J. Lynn Thomas, F.R.C.S.Eng.,
Cardiff.

The membrana tympani is often injured in cases of fracture of the skull involving the petrous portion of the temporal bone by blows on the chin and by "a box on the ear," the violence in each case being of the indirect nature. The accident may or may not be accompanied by hæmorrhage from the auditory meatus.

The appearance of the lesion in the membrane varies according to the cause. A severe blow on the chin, without evidence of fracture of the glenoid cavity, in one case under my care, caused hæmorrhage into the anterior inferior half of the membrane, but it is to the condition of the membrane in fissured fractures of the skull that I would more particularly like to draw attention.

I have had the opportunity of examining five cases of fractured skull, before and after death, in which the tympanic membrane was involved. The appearance of the membrane was the same in every case—namely, a fissure extending from the periphery more or less towards the *umbo*. I have not met with a fissure extending right across the membrane. The direction of the rent was more or less vertical. In one case, in which the roof and floor of the bony meatus auditorius were fissured, there were two separate fissures in the membrane, one in the upper and the other in the lower portion, as represented diagrammatically in Fig. 5.

The periphery of the fissure in the membrane was always close to the fissure in the bone, hence I think that the fissure indicates the direction from which the fracture extended into the ear.

My impression is that the fissure in the membrane is caused by the gaping of the fissures of the bone at the time of injury; we have evidence that gaping takes place in recorded cases where dura mater or hairs have been found nipped in the fissure.

The skull may be looked upon as being composed of a number of arches of variable spans and thicknesses radiating from the region immediately in front of the foramen magnum. The strength of a chain is determined by its weakest link; likewise, given a series of arches as in the cranial vault with different spans, *ceteris paribus*, its strength would be indicated by the arch with the longest span.

Hence the direction of fissured fractures of the cranium, were it not for the ridges and irregularities of its bones, would be directly transverse, because the longitudinal arch is always larger than the transverse at the ratio of 100 to 76 in English skulls.

The gaping of a fractured skull can easily be demonstrated in the *post-mortem* room by striking the vault with a wooden mallet whilst pressing the point of a knife in the fissure, which gap grasps the knife. Again, when an egg is held by its poles and allowed to fall 3 or 4 inches on a hard body, it will fracture at the point of impact, and the general direction of the fissures will be that of the meridian of the egg: in other words, the arches with the longest span will yield. By exercising gentle pressure on the egg in a transverse direction, it will cause gaping of the fissures at its sides. The general behaviour of an egg under compressing or breaking forces is very similar to that of the skull under like circumstances.

Case I. *Fissured Fracture of the Cranial Vault: Right Membrana Tympani Fissured.*—May 11th, 1888, 7 A.M. G. T., aged 60, when seen by me was unconscious, pulseless, breathing 14 to the minute, and slightly stertorous. The pupils were unequal, the left moderately dilated, the right contracted. Corneal reflex was present in the left eye, not in the right; the left eye not closed when the right cornea was touched. The movements on both sides of the body were slight and equal. There was hæmorrhage from both ears. The patient had fallen into the hold of a ship, and died the same day at 4.30 P.M.

Necropsy.—Twenty-six hours after death the head only was examined. There was a contusion of the scalp over the left parietal eminence. A separate fissured fracture involved both parietal bones, and reached to within 1½ inch of each other on the top. (Fig. 1.) The fissure on the left side on reaching the auditory meatus (external) turned backwards and inwards through the base of the petrous portion and the grooved part of the mastoid portion of the temporal to terminate at the left occipital condyle. The left membrana tympani was intact, and the hæmorrhage came from the fissure in the roof of the external meatus.

The fissure on the right side extended to the base through the anterior surface of the petrous bone as far as the foramen lacerum medium. The

right membrana tympani was fissured in its upper half (see Fig. 3) behind the handle of the malleus. Much hæmorrhage had taken place under the pia mater into the cortex of the brain on the lateral and under surfaces on the right side.

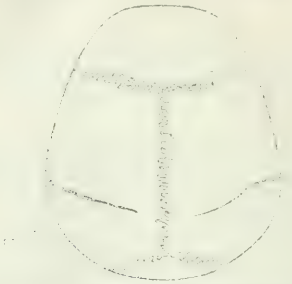


Fig. 1 shows the outline of the vertex, and the dark lines the course of the fissures.

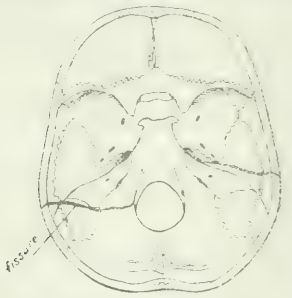


Fig. 2 shows the base of the skull.

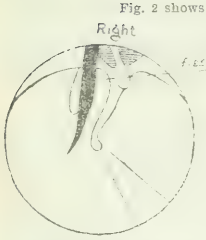


Fig. 3 shows fissure in the right membrana tympani.

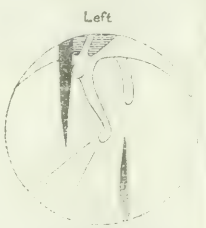


Fig. 5.—The left tympanic membrane showing two vertical slits. They are triangular, with the base at the periphery of the membrane.

CASE II. *Compression of the Brain from Ruptured Meningeal Artery. Two Rents in the left Membrana Tympani.*—November 10th, 1889, a man, unknown, aged about 55, was found insensible in the street, and when first seen was unconscious, livid in the face, and snoring. The pulse was 72, full and bounding. The corneal reflexes were absent. The left pupil was fully dilated, and did not react to light. The right pupil was contracted. Bright red blood was running from the left external auditory meatus. It was thought advisable not to attempt any operation, and the patient died in nine hours.

Necropsy.—There was no wound of the scalp, but a contusion of the posterior half of the left temporal muscle. On opening the skull a large soft blood clot was found on the left side between the dura mater and the bone, extending towards the base of the skull as far as the squamosal suture, and behind to the groove for the lateral sinus. The greatest thickness of the blood clot was three-quarters of an inch. The anterior branch of the middle meningeal was torn near the anterior inferior angle of the parietal bone. A fissured fracture extended from the lower part of the left parietal bone to the base of the skull, through the squamous and anterior surface of the petrous bone to near its apex. The roof and the floor of the tympanum were fissured, and the entire thickness of the petrous bone was involved in the fissure mentioned above.

The two diagrams (Figs. 4 and 5) give a fairly accurate idea of the fissures of the tympanic membrane, and of the course of the bony fissure.

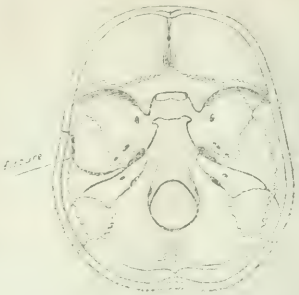


Fig. 4.—Fissure of middle fossa of skull.

I would submit that systematic examination of the ear in head injuries will give much assistance in clearing up the nature of the injury: for example, in the case of hæmorrhage into the lower part of the tympanic membrane adverted to at the commencement of this communication, though the man was brought to the hospital with no history, and insensible, I was able, by examining the ear, to state positively the manner in which the injury had been inflicted.

CASE OF PERFORATIVE ULCER OF STOMACH TREATED BY LAPAROTOMY, STITCHING, AND WASHING OUT.

By R. H. BOURCHIER NICHOLSON, M.R.C.S.,
Surgeon to the Hull Royal Infirmary.

J. L., aged 32, married, one child, was admitted to the Infirmary on October 27th, at 6 P.M., suffering from acute pain in the epigastric region, and in a very collapsed condition.

My colleague, Dr. E. O. Daly, diagnosed ruptured ulcer of the stomach. There was acute pain over the left hypochondriac region, loss of liver, dulness, and some general distension of the abdomen. After consultation with the staff, the first shock of the perforation having passed off and the patient having rallied somewhat, I decided, three hours after the supposed rupture of the ulcer into the peritoneal cavity, to perform laparotomy, stitch up the ulcer if found, wash out the peritoneal cavity, and drain. Ether having been administered by Dr. Waters, the assistant house-surgeon, the first incision, 5 inches long, was made above the umbilicus in the median line. On opening the peritoneal cavity there escaped a large quantity of flatus; this distended the peritoneum and made the opening of it less difficult. I drew the stomach into the wound without much trouble, and was guided by the escaping fluid contents to the anterior and upper surface very near the entrance of the œsophagus; in fact, so near that I could readily detect the perpendicular muscular fibres of the œsophagus entering the stomach walls. The opening was the size of a goose quill. It had clean-cut edges and was the centre of an area of thickened walls, about 1½ inch in diameter. I kept my left forefinger over the opening to prevent further escape of stomach contents—which, by the way, was apparently nearly empty—and after thoroughly cleansing by pressing the ulcer and its surrounding hardness backwards and drawing some of the stomach up I was able to double the surface inwards, so bringing the two healthy peritoneal surfaces together by infolding. Then when these were fixed by eight Lembert's stitches, I again, with a continuous suture, brought the two surfaces together external to the first row of sutures.

The next step, and the most important, was the toilet of the peritoneum; this was performed by washing out with a douche, using boiled water at a temperature of 105° to 110°.

This was carried out, with the assistance of my colleague Mr. Evans, most satisfactorily.

Lastly, for drainage purposes, I made an incision 2 inches long below the umbilicus and just over the pubes. More gas escaped; and, after again washing out from below most thoroughly, I inserted into Douglas's pouch a long glass drainage tube, which we could empty by syringe and tube, still washing with the boiled water until the fluid came away quite clear. The patient rallied directly the washing-out process, which acted as a stimulus, commenced. As it was thought that the method of suturing in layers, which I prefer, might be too tedious and exhausting to the patient, I closed the wounds with deep sutures and a few superficial ones. The wounds were dressed with iodoform gauze and absorbent wool, and the patient was ordered to be fed by rectum with peptonised milk and brandy every four hours.

On October 28th the pulse was 76, and the temperature 97.4° F. She had slept fairly, and had had no sickness. The enemata were well retained, and she had no pain. At 9 P.M. she had a little hiccough and slight cough, and was ordered liquor opii sedativi mxiij every three hours if required. Only one dose was given.

On October 29th the temperature was 97.6° F., and the pulse 120. The cough was a little better. The respirations were 30. She had no pain, but suffered from slight sickness.

On October 30th the patient was quite comfortable; no vomiting; hiccough troublesome at times; slight headache. Had enemata every four hours; no pain after them; bowels open once slightly at 6 A.M. Temperature 97.2°, pulse 114, respirations 22. During the day I ordered half-pint injections of warm water between food. Enemata were given on account of the great thirst; at 10 P.M. sleeping quietly.

October 31st. She had a quiet, comfortable night; no vomiting and very little hiccough. Temperature 98.6°, pulse 102, respirations 20. Removed drainage tubes; wounds almost healed.

Remarks.—To the position of the ulcer, which was fairly fixed by its surroundings, I attribute in some degree the comparative ease with which I was able to command the walls of the stomach.

OPENING OF THE MEDICAL SCHOOLS:

INTRODUCTORY ADDRESSES.

UNIVERSITY OF GLASGOW.

The Inaugural Lecture of the Chair of Pathology.

FUNDAMENTAL CONCEPTIONS AS TO THE CHARACTERISTICS AND EMBODIMENTS OF LIFE, WITH SPECIAL REFERENCE TO PATHOLOGY.

By Professor Joseph Coats, M.D.

[Dr. Coats, in giving his inaugural lecture as first Professor of Pathology in the University of Glasgow, observed that the delay in the foundation of the Chair had not been an unmixed evil, since it had given time for circumstances to consolidate the duties of systematic lecturing and those of pathologist to the Western Infirmary, the great field of clinical and pathological observations for the students of the University, and had ensured that in the future the two offices would remain united. The directors of the Western Infirmary had shown an enlightened interest in the promotion of the study of pathology by making arrangements for the erection of laboratories in which both the University and the Infirmary had their parts, and where not only educational classes would be given, but where facilities would be afforded for original research. To the University Court the duty of founding and endowing Research Fellowships had been confided by the University Commissioners. He was convinced that much of the future of the Glasgow School would depend on the manner in which the Court carried out this trust. Dr. Coats then referred to the importance of the study of comparative pathology, and suggested that it would be a worthy action if one of the great societies which represented the owners of live stock would come forward and endow a scholarship or lectureship on this subject.

Dr. Coats then proceeded to the main subject of his address, from which we extract the following paragraphs:]

Irritability the Test of Life. Glisson, Haller.

Whilst the nature of life eternally eludes our search, and is thus insusceptible of definition, there are certain characteristics of living structures which may be used as tests of the existence of life. Of these, the quality commonly called irritability is the most notable. This term, which was first applied to muscle, is now used to designate the fact that each living structure is capable of being brought into some kind of action by the application of a stimulus from without. Just as muscle contracts on the application of a stimulus either directly or through the nerves, so all living structures are capable of some kind of action on the application of the proper stimulus.

The earliest use of the term "irritability" is to be found, I believe, in the works of Francis Glisson, an Englishman, who was born in the year 1596 and died in 1677. This modest observer, whose name is enshrined in the so-called capsule of Glisson in the liver, seems first to have suggested the view that muscle contracts on the application of a stimulus by means of its own inherent powers, a characteristic of muscle which he designated "irritability."

This term, however, is much more commonly identified with the name of one who lived a hundred years later, the brilliant Swiss observer, Albert Haller, a man pre-eminent not only in the severe walks of science but also in the brighter paths of poetry. Haller's services to biology were doubtless very great. They are embodied in his great work on Physiology, written in Latin and published at Lausanne in the year 1757, in eight quarto volumes.

Haller very clearly expressed the conviction that muscles contract by virtue of a power inherent in themselves, and this inherent force he called *vis insita*. He recognised most distinctly that, although the contraction of a muscle follows the stimulation by a nerve, yet that the power of the nerve is different and separable from that of the muscle. He shows, also, that this *vis insita* of muscular fibre may be excited by other influences besides the nerves. Thus, "it is excited both by the touch of a sharp instrument, and, in the hollow muscles, by inflated air, by water, and every kind of irritant, but more powerfully by electricity than by any other stimulus."

But yet Haller did not carry his conception of irritability beyond muscles and other contractile structures. His views were much discussed in his time, and much opposed. Amongst his most redoubtable opponents were Robert Whytt, who became Professor of the Theory of Medicine in Edinburgh in 1747, and William Cullen, a contemporary of Haller, who was Professor in this University, first of Chemistry and then of Medicine, going afterwards to Edinburgh. His conceptions of the animal body are a retrogression as compared with those of Haller. In his *Institutions of Medicine* (1772), Cullen distinguishes two kinds of solid parts in the body, one whose properties are the same in the dead as in the living, and the same in the animate as in many inanimate bodies; the other, whose properties appear only in living bodies. The one he calls "simple solids," and the other "vital solids," and the latter he regards as the fundamental part of the nervous system. Cullen was very familiar with Haller's views of muscle and the *vis insita*, and was opposed to them. He calls the muscles the "moving extremities of the nerves," and regards the nervous force and the muscular force as one and the same thing. His view seems to have been that the nervous power, taking its origin in the brain, flows into the muscles; a portion of this power is always in the muscles, and the excitement of the muscular fibre may be increased by an addition of more nervous power. He regarded, therefore, the muscular power as dependent on the nervous, and as not different from it. Indeed, he seems to have regarded both of these powers as "having a constant dependence" on the brain, which he took to be the seat and source of the animal power.

John Hunter Anticipated the Modern Standpoint.

From Cullen we pass at once to John Hunter, whose views

of life have not, I think, been sufficiently recognised as having an important bearing on our present position. John Hunter entered on his work doubtless with some knowledge of Haller's views on irritability but with a deeper impress of Cullen's theories, which made the nervous system almost the only vital structure in the body and the only source of power or action. Hunter, who was no mere theorist and speculator but one of the most industrious and painstaking observers and experimenters that have ever lived, at once turned away from this view of the animal body and greatly expanded also the limited view of Haller. Hunter's works are sometimes deficient in lucidity and clearness. Yet in his views of life he is sufficiently explicit. He says, for instance, in the introduction to his great work on the Blood, Inflammation, and Gunshot Wounds:

> I shall carry my ideas of life further than has commonly been done. Life I believe to exist in every part of an animal body, and to render it susceptible of impressions which excite action; there is no part which has not more or less of this principle, and consequently no part which does not act according to the nature of the principle itself.[1]

Again, in his lectures on the Principles of Surgery, which were never published by himself, but were printed from notes made by his hearers, he compares his views with those prevalent before him in terms which seem to bear a direct reference to Cullen and his views on the nervous system as the sole repository of the animal power.

> The principle of life has been compared to the spring of a watch or the moving powers of other machinery; but its mode of existence is entirely different. In a machine the power is only the cause of the first action or movement, and thereby becomes the remote cause of the second, third, etc.; but this is not the case with an animal: animal matter has a principle of action in every part, independent of the others, and whenever the action of one part (which is always the effect of a living principle) becomes the cause of an action in another it is by stimulating the living principle of that other part.... The living principle, then, is the immediate cause of action in every part.... Every individual particle of the animal matter, then, is possessed of life, and the least imaginable part which we can separate is as much alive as the whole.

Do we not, in these words, see an anticipation of the main outlines of the modern views as to the independent vitality of the cellular elements of the body? It is consistent with these views of Hunter's that he attached great importance in pathological processes to sympathy. Regarding the individual parts of the body as possessed of a separate vitality, he looks upon them as affecting one another, and by sympathy taking part in the actions of one another.

It is, I think, clear that Hunter not only understood what Haller had advanced, and had, under the terms irritability and *vis insita*, predicated in regard to muscles, but extended the conception, and made it cover the whole tissues of the animal body. It is curious that Hunter did not use the term irritability in this sense, and even objected to its being so used, apparently because—in the English language at least—irritability has come to mean an abnormal or pathological excitability in the temper or otherwise of the individual, and Hunter was averse to its employment for the most normal and healthy conditions—that of life itself. It is, perhaps, for this reason that Hunter's views of life in this regard have been so much overlooked in their bearing on the advance of science.

THE CELL THEORY: GOODSIR, VIRCHOW.

The discovery of the cell form, first in vegetable tissue by Schleiden in 1837, and in animal tissue by Schwann in 1839, at once fixed and crystallised the views which we have seen to be those of John Hunter. The cells were almost at once regarded as having an independent vitality, and, as these were found to enter into the composition of the body in all its tissues, the conception of local life in the tissues became current.

It was another stage in advance to regard the cells as arising, not from a formative fluid or blastema, as Schwann supposed, but as having their origin in cells. The earliest record of this conception of which I can find evidence is in the works of the late Professor Goodsir, of Edinburgh. In the first article in his *Anatomical and Pathological Observations*, published in the year 1845, entitled "Centres of Nutrition," we find an embodiment of the essentials of the existing view.

> In reading this article it is necessary to bear in mind that, in his own words: "A nutritive centre, anatomically considered, is merely a cell." The conception that all cells are derived from parent cells, is expressed in the following sentences with sufficient distinctness. "The centre of nutrition with which we are most familiar is that from which the whole organism derives its origin—the germinal spot of the ovum. From this all the other centres are derived, either mediately or immediately; and in directions, numbers, and arrangements, which induce the configuration and structure of the being."

It was, however, in the hands of Virchow, who is still the veteran head of pathology in the world, that these views attained to their proper development, and became applicable to pathology. His views are embodied in the fullest manner in the celebrated work, *Die Cellular-pathologie* (1858). Virchow points out that, although vegetable tissue is to a large extent purely cellular, yet in animal tissues, whilst cells are always present, there is also in many cases an intercellular substance interposed between the cells. This substance arises either by a secretion from the cells or by a transformation of part of their substance, and it is dependent on the cells for its general well-being. Thus he recognises not only cells but cell territories, the latter subject to the former.

The vitality of the cells is manifested in their irritability, this term being used very much in the sense of Haller, but with an extended application. The cells present three kinds of activities—nutritive, formative, and functional—and they possess irritability in each of these directions. The first kind is concerned with self-preservation, the due nutrition of the cell and its territory. The second has to do with the production of new tissue, which arises by multiplication of cells. The third, or functional activity, is for each kind of cell, a special action which usually subserves a purpose in the organism as a whole. Muscular contraction and secretion are the most obvious examples of this form of activity. Irritability, or the capability of being brought into action in these three directions, is the test of vitality in the cells. The whole of pathology may be included in defect or excess in nutrition, formation, and function in the active tissues and their cellular elements. Each cell has its parent cell, and all are derived by a direct line of descent from the single parent cell of all, the fertilised ovum. Hence Virchow's great aphorism, *omnis cellula e cellula*.

In regard to the structure of the cell, there are apparently only two essential constituents—the nucleus and the cell contents or protoplasm. Of these the nucleus is the more important, as it subserves the two activities, the nutritive and the formative, whilst the protoplasm is concerned with the special function of each cell.

MODERN EXPANSIONS OF CELL THEORY: FLEMMING, WEIGERT, METCHNIKOFF.

The position of the nucleus has been greatly elucidated by the researches of a number of observers, of whom the principal are W. Flemming, of Kiel, and Strassburger. From these observations, it appears that in the new formation of tissue by division of cells, not only does the nucleus take the leading part, but that it goes through an interesting and striking series of changes. The resting nucleus, with its obscure fine fibrous network, transforms itself into an active body, in which the fibres, becoming thicker and more prominent, go through extraordinary movements and arrangements till they separate into two groups, each of which becomes the nucleus of a separate cell. This method of nuclear division, which has been called karyomitosis, or indirect division, as contrasted with the direct division of Remak, has been now observed in so many growing tissues that it seems to be driving the direct method from the field. Karyomitosis has been observed in pathological new formation no less than in normal growth, and the identity of the two has been thus fully established. In all quickly-growing tumours, where, as in a growing normal tissue, the process of cell multiplication is so active that there is a reasonable expectation of finding examples of the process in actual progress, we find ample evidences of this special form of nuclear activity.

The nuclei of tissues are readily brought out and rendered prominent by certain methods of staining or dyeing. Carmine is the dye-stuff originally used for this purpose. But histological research has received extraordinary assistance from the use of the aniline or coal-tar dyes. The number of these is legion, and much industry has been expended in experimenting with them in various combinations and under various circumstances, with the result that our knowledge of the cells, and especially of the nuclear processes, has been greatly advanced. It is by means of these aniline dyes that

[1] *Hunter*, Palmer's edition, III, p. 2.

Flemming and others have been enabled to demonstrate the processes of nuclear division.

The importance of the nucleus in relation to nutrition has been further shown in the interesting fact that where, in the living body, a piece of tissue dies, or, in pathological language, there is a necrosis of tissue, the nuclei disappear, or at least become inaccessible to those dyes of which I have been speaking. This is so much the case that the disappearance of the nucleus, although not occurring instantaneously on the death of the tissue, may be taken as a test of the existence of a local necrosis as an actual circumstance during the life of the individual. The demonstration of this fact belongs to one of the most distinguished of living pathologists, Professor Weigert, of Frankfort.

The importance of the living cell in pathological processes has received further exemplification from the admirable researches of Metchnikoff. I cannot indeed subscribe to all the doctrine of this indefatigable and resourceful observer, and more especially I cannot agree to his endeavour to reform our use of the term inflammation, but I must admit the beauty and ingenuity of his observations and the soundness of many of his deductions. I cordially acknowledge also that his study of pathological processes in the lower and simpler forms of animal life has opened up a sphere of work of the utmost promise. Metchnikoff's observations have regard to the relation of the living cells of the body, to the intrusion into the body of deleterious and other extraneous matters, and more especially to the intrusion of bacteria or microbes. In Metchnikoff's view, the invasion of hostile microbes is, in many cases, met by a mustering of living cells with a view to the protection of the body. It is well known that living cells, and especially certain kinds of cells, are capable of taking into their substance solid particles of matter. Many unicellular animals live by englobing solid nutritious particles and digesting them in their protoplasm. In the higher animals the leucocytes of the blood and lymphatic fluid are the principal possessors of this power of taking up and dealing with solid particles, although it is not limited to them. It is asserted, then, that when the body is invaded by microbes which are capable of producing disease, the cells, in most cases the leucocytes, meet them and endeavour, by englobing them and digesting them, to dispose of them. There arises in this way a struggle for existence between two different kinds of cells—the microbes and the leucocytes or other animal cells. If the cells of the body are successful then the disease is arrested, but if the microbes are able to survive in sufficient numbers then the disease goes on. Now I am not prepared to admit that Metchnikoff's doctrine of phagocytosis is to be regarded as a full and complete explanation of all the facts concerned; but there is no question that Metchnikoff has much advanced our knowledge by pointing out this important function which undoubtedly is possessed by many cells. It may here be added that this is an example of functional activity in the cells, and, like other functional actions, it resides in the protoplasm, whilst the actions of nutrition and formation have their seats in the nucleus.

The Differences in the Kinds of Cells.

I have hitherto spoken of cells in general, and, except in the case of leucocytes, have not specified any particular kinds of cells. But when we speak of function we come at once to deal with the differences amongst the cells. The nuclei of cells, concerned with nutrition and formation, show a remarkable similarity in all the different sorts, whereas the cell substance or protoplasm, concerned with function, shows great variety in form and constitution. How comes it that from the one parent there spring cells which are so different, as those of the liver and of bone, of the brain and of muscle? We see in the growing embryo that the cells pass regularly into their places, and with steady industry proceed to build up the tissues in regular sequence with all their different characteristics, a process which seems altogether miraculous and mysterious.

In pathological processes the differences in functional activity of different kinds of cells—or, in other words, of different forms of tissue—are frequently exemplified. If we take it as an important function of the cells to control the growth and multiplication of other cells, whether those of microbes or of growing tumours, then we shall find that in this respect the different tissues of the body show strange differences. A cancerous tumour consists essentially of multiplying epithelial cells, which in certain situations multiply by karyomitosis with great vigour. From the primary tumour there are frequently carried out grafts or sprouts which are planted at a distance from the primary growth. If these offsets, which no doubt consist of cells from the tumour, perhaps in association with other cells foreign to the body, get into the blood, they are planted up and down the body by the blood vessels in the most varied organs and tissues. But there are most marked differences in the way they are received and treated by the organs. In the liver, for example, the cancerous structures will mostly grow till you may have much more cancerous tissue than liver tissue. On the other hand, in the lungs there is commonly very little growth. There are often in the lungs evidences of the implantation, but there are also evidences that the growth has been controlled. There are other similar contrasts, say between the bone marrow and the kidneys, and so forth; but I need not seek for further illustration. It is curious that, in tuberculosis, the liver and the lungs present a contrast, but precisely in an opposite sense. If the tubercle bacillus gets into the blood it is implanted, often in enormous numbers, throughout the body, but with the most various results. In the liver, for example, there is microscopic evidence, not only that it has been implanted, but that it has been caught more abundantly than in any other tissue: but the evidences of this are microscopic, and the resulting lesions are so insignificant that even though these are present in vast numbers there is usually no alteration visible to the naked eye, and probably no considerable interference with the function of the organ. On the other hand, in the lungs there are evidences that the microbe has grown freely, and wherever planted has produced manifest results.

It will be seen that in relation to different causes of disease the various tissues of the body exercise the most markedly different influences, even though the cells constituting these various tissues have originally sprung from the same cell. This difference in regard to such an important function is not limited to the various tissues of the same species of animal; but we find, when we compare different species of animals, that even the same organ or form of tissue may present marked differences in relation to such causes of disease as those which I have referred to. For example, we have seen how in man the liver is an inhospitable host to the bacillus of tubercle. But it is not so with the liver of the ox or the guinea-pig. Of similar import is the fact that if we take any one of the pathogenic microbes we shall find that different species of animals present very varying degrees of susceptibility. Even in the case of such a widespread and malignant agent as the bacillus of anthrax, there are all varieties amongst the various species, from immunity, as in the frog, up to extreme susceptibility, as in the mouse and guinea pig. This variation in susceptibility applies not only to species, but to varieties and races of animals and men. It is well known that the white rat presents an almost complete immunity to anthrax, and that Algerian sheep are much less susceptible than the other breeds. A similar fact is that observed in man in respect that negroes are, as compared with white men, singularly insusceptible to yellow fever.

Heredity the Key to these Differences.

If we regard all these variations in function of the various organs, and of the same organs in different animals, as dependent on variations of cellular action, then we have to inquire how such variations have arisen. So far as I can see, it is a matter of hereditary transmission. The earliest animal to be formed presumably consisted of a single cell, and in its reproduction, by simply dividing into two, it would transmit its qualities to both of its descendants. As complexity of structure was evolved, and organs and tissues were differentiated, then the cells concerned in transmission had to bear in them implicitly the various kinds of tissue. Variations in the structure and functions of the individual tissues became, no less, the subject of transmission from parent to offspring. There is nothing more certain than that, taking alone the case of diseases due to the invasion of

microscopic organisms, variations in susceptibility, whether they concern species, race, or even family, depend on transmission by inheritance more than on anything else.

In transmission by inheritance lies the key also to much else in the physical constitution of each individual. If we regard the constitution of a man as the sum total of the various particulars of his bodily frame, then we shall find that each item in the constitution is a matter of inheritance, and by necessity of cellular activity. Not only does inheritance determine the greater and more common features of an animal's constitution, but it condescends on the most minute particulars. It is by hereditary transmission that we belong to the great division of the animal kingdom, the vertebrata, and to the genus and species *homo*; but it is also by inheritance that we have the various racial, family, and individual characteristics by which we are distinguished one from another. If we examine these more individual characteristics, we shall be struck with the extraordinary minuteness of detail to which this force extends. This is best seen, perhaps, in those slight deviations from the normal type which are most readily recognised and distinguished, such as variations in the fingers and toes. Nothing is more definitely hereditary than supernumerary digits and such things as webbing of the fingers or toes. We find also small variations in the coloration and distribution of the hair to be transmitted by inheritance. The individual man, in all the minute particulars of his frame, is compounded of items derived from parent or ancestor. When we consider the physical process of hereditary transmission, this fact fills us with wonder, and makes us almost shrink from any attempt at an explanation of it.

The problem is one of cellular activity. When the fertilised germ cell enters on its career of development, it has in it implicitly all the future bodily conformation of the individual. It has, as it were, an idea or image, or model, after which it aims, and which in its utmost detail is already preconceived in the single cell at the very outset of its course. I do not ask here how we are to explain this, because it is, I think, utterly beyond our powers of conception; but I ask more humbly, how we are to find any means of embodying the problem. Is this idea or image a mere immaterial force, and has the ovum something equivalent to a mind or soul which can hold such an image and work it out? Or have we to go beyond the cell form, and to believe that there is an actual material record in the cell of these various particulars of which the future body is to be made up? To my mind, the latter suggestion is the only thinkable one. I cannot conceive of a cell containing in itself such an idea as I have endeavoured to indicate without this idea having a material embodiment. I cannot conceive, for instance, to take an actual example, that such a deformity as the union or adhesion of two toes on each foot should be transmitted from a man to his grandson, although suppressed in the intermediate generation, without this particular being registered in some material form, and so preserved and perpetuated.

Theories of Heredity: Weismann.

The merit of first seeing clearly and stating the problem (because I do not think they ever supposed they were going beyond that) belongs to two distinguished Englishmen, Herbert Spencer and Charles Darwin. They saw that, for the transmission of such particulars as we have considered, the existence of material particles or units is necessary, and they tried to conceive how such particles might possibly exist and be arranged. Hence arose Spencer's idea of "physiological units," and Darwin's more celebrated doctrine of Pangenesis, which designated the particles as gemmules. A third Englishman, Francis Galton, whose works generally show much insight into the problems of biology, saw still deeper into the problem we are now concerned with. He rejected the idea that the gemmules circulated in the blood, and asserted that they were to be looked for in the germ cell as primarily formed.

It is, however, by the distinguished German zoologist Weismann, whose name at once suggests serious divergences of opinion, that the problem has been seriously and systematically attacked. It is not possible here to give anything approaching to an exposition of the elaborate and thorough attempt which this author has made to state and solve this great and difficult problem. Suffice it to say that, according to Weismann, the nucleus of the cell is not such a simple body as has been usually supposed, but that in the case of the germ cell it contains particles or vital units which represent, and in a measure embody, the various particulars of the future individual. These particles are not in any sense the minute representations of the future structures, but they are living and vital units, which have the power of determining the course of events in the process of development. The whole theory is worked out by Weismann in the greatest detail in his various works, but most fully and systematically in his latest treatise, entitled *The Germ Plasm*. I am far from saying that this theory is to be accepted as an explanation satisfactory in every way of this difficult problem, but what I do say is that we have here a clear and direct statement of the problem and a deliberate and fair attempt to find a solution. The manner in which Weismann has worked out the problem in detail in the various departments of biology is a wonderful exhibition of industry and insight, and where he touches on ground with which I am personally familiar, his treatment of the facts is to me in every way satisfactory, and affords at least a provisional explanation of what has long baffled me. For I may state here that, in several published addresses, I have dealt with this subject of heredity, pointing out how, in respect to both normal and pathological structures, inheritance condescends on the minute particulars of our bodily constitution, and that I did so with only a vague knowledge of Weismann's views, and without any reference to them. It is only just to him to say that his theory offers to my mind a solution of the difficulties which my own reflections had raised up.

There is one point in regard to this matter which calls for a moment's further consideration. If the particulars of the future individual are represented by minute particles in the nucleus of the primary cell, is there actually room in this microscopic object for such a vast number of units? This is a question which would lead us too far even to enter on it in the most cursory fashion. Lord Kelvin, by four different lines of reasoning, has estimated the diameter of a molecule of matter at from the millionth to the ten-millionth of a millimetre. If this be a true estimate, and even if we take the vital unit in the nucleus to be a complex particle containing a thousand molecules of matter, then there is still room in the nucleus, according to Weismann's calculations, for a sufficient number of units to represent the particulars of the future body.

Our conceptions of life have advanced some distance beyond the position of Virchow in his great work on *Cellular Pathology*. We still regard the cells as the active units in the living body, concerned in the building up and maintenance of the tissues, and the seats of all the changes occurring in disease; but we look now more clearly into the varying endowments of these units and the sources of these endowments. Metchnikoff has done service in this line by tracing, in different grades of animal life, the powers of the living cells in their function of meeting and dealing with external agents, and Weismann has indicated how these functions may possibly be transmitted from one generation to another. This has carried us beyond the cell form, and has led us to suppose in the nucleus of the germ cell, and in varying degrees in other cells, still more minute vital units, in which are embodied the forces of life. Each individual has, let us say, his own constitution, made up of a multitude of particulars, each of them represented in the single cell from which he was developed. These particulars of his constitution have their pathological manifestations in differences of susceptibility and tendency to particular forms of disease, and in differences in the powers of vital resistance to the agents which cause disease. These are all practical considerations; and thus it is that pathology, in this as in other instances, having its foundations on the deepest problems of life, is also in touch with the everyday experiences of the medical practitioner.

PRESENTATION.—Dr. J. Shives, on leaving Liversedge after twenty-four years' practice there, was presented by patients and friends with an address and a piece of plate. A presentation was also made to Mrs. Shives.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

J. W. Hulke, F.R.C.S., F.R.S., President, in the Chair.

Friday, October 26th, 1894.

Subdiaphragmatic Abscess Communicating with Right Pleura.

Dr. Hector Mackenzie related for himself and Mr. F. C. Abbott particulars of this case. The patient, a boy, aged 10, was admitted to hospital after an illness of four weeks, the onset of which was sudden and characterised by severe pain in the epigastrium and right hypochondrium accompanied by vomiting. About a week after the onset a swelling had been noticed in the epigastrium. When seen at the hospital there was an acutely rounded and reddened swelling centrally situated in the epigastrium. The right side of the chest gave the physical signs of a pyopneumothorax. Moreover, it was evident that the epigastric swelling freely communicated with the right pleura, for it became much more prominent when the patient sat up or coughed, and then distinctly gave evidence of fluctuation. It was decided to drain the subdiaphragmatic abscess and the empyema by a single opening in the pleura. A portion of the sixth rib was resected just behind the mid-axillary line. Thirty ounces of exceedingly offensive thin watery pus containing some flakes were evacuated. On exploring with the finger the upper surface of the liver was felt through an opening in the fore part of the diaphragm. The whole cavity was well irrigated with warm boracic and a double drainage tube inserted. The cavity was washed out daily, but the discharge continued to be offensive for several days. On the thirty fifth day after the operation the wound was almost healed and there was no discharge. The patient left the hospital cured on the forty-seventh day. The lung expanded well, and the only sign to be detected six months later was a slight relative dulness at the base of the affected side. The history of the illness pointed clearly to an abdominal origin. The most probable cause was the perforation of a gastric or duodenal ulcer, and although there had been none of the usual symptoms of the former it was not uncommon for these to be absent in cases which perforated.

The President mentioned a similar case in Middlesex Hospital, under Dr. Cayley.

Mr. F. C. Abbott said most of these cases occurred on the left side, whilst this one was from the greater sac of the peritoneum above the liver. He had not inserted a drainage tube into the abdomen because the opening between the abdomen and chest was quite free. He thought many abdominal abscesses would be better opened through the chest wall, as the lung would expand and quite close the opening. The danger was less than that resulting from an opening in the middle of the abdomen.

Dr. S. West recalled a case of a man who had had an old abscess treated a year before in India, and who thought it was recurring. The liver was pushed down. The place for operation was nearly decided, when the patient began to spit pus by the lung, and in a fortnight was well. In that case the abscess had probably begun below the diaphragm. Cases in which the right side was mostly affected were probably connected with the duodenum. Two cases opened below the diaphragm had both died. In another case of a swelling containing fluid about the upper part of the middle line of the epigastrium, an incision was made, and pus escaped. The abscess went back to the spine, it was opened behind, and a tube passed right across the abdomen from the front to the back. She quite recovered. If the pleura was opened, he thought the lung would contract, and he would hesitate to open a healthy pleura, and let septic pus drain into it. Mr. Pitts had opened a hepatic abscess through the pleura, the patient subsequently making a good recovery.

Mr. Pearce Gould said that a subdiaphragmatic abscess did not often communicate freely with an empyema, right or left. He had recently seen a young woman supposed to have sarcoma of the liver, with swelling of the lower part of the chest and upper part of the abdomen. There was tympanites all over the front of the chest. The heart's apex was up in the left axilla; and the lower edge of the liver was at the level of the umbilicus. She had for weeks been ill, and had recently been seized with sudden pain. There was evidently an abscess below the diaphragm; this being opened below the xiphoid cartilage gave exit to pus and hydatid skins. The patient had since nearly recovered, the heart having nearly returned to its usual site, and the lung expanded. He asked how one was to tell that there was a diaphragmatic opening in such cases. That was the gist of the diagnosis. To drain a subdiaphragmatic abscess through a healthy pleura seemed a risky proceeding.

Dr. Lee Dickinson asked if Dr. Mackenzie's case was one of rupture of a duodenal ulcer? He suggested that it was more probably a case of perforation of the hepatic flexure of the colon.

Mr. Bruce Clarke had not long since opened one of these abscesses, caused by hydatid, without any untoward accident whatever. He would advise the opening to be made through the nearest part of the body wall (chest or abdomen) to which the abscess was nearest, and where it could be most easily reached. He would have no compunction in opening them through the healthy pleura if it seemed best to do so.

Dr. Mackenzie, in reply, said the place of perforation was not absolutely settled in his case. It was not often easy to say there was an opening from the abdomen to the thorax. But in this case there could be no doubt at all about it.

Multiple Neuritis Fatal on the Sixth Day.

Dr. Churton (Leeds) read notes of this case. A rather fragile girl, aged 14, a year ago had choreic twitchings of the eyes, supposed to be due to imitation of a school friend. In June last the shoulders and head also became affected slightly. On July 26th she went to a school party, was excited and tired: afterwards walked two miles, and was quite exhausted. Next day still felt tired, had "pins and needles" in her fingers, and was unable to play the piano. On the 28th she staggered in walking. On the 29th she was in bed. On the 31st the calves of the leg were doubtfully tender, but the peronei muscles were decidedly tender, and twisting the foot inwards caused pain in them. The long extensors in the forearm were also tender. She had lost the use of her arms, legs, and trunk: there was absolute inability to turn in bed, or to raise her head from the pillow. All reflexes, even the conjunctival, were abolished. Occasional choreic movements of eyeballs and eyelids. Frequent attacks of rapid breathing: heart's action always rapid. Sterno-mastoid very feeble, sphincters normal. Replies to questions rather languid, but sometimes smiling; intellect normal. No loss of sensation; no œdema. On August 1st, at 1 P.M., she died without struggles for breath, apparently from cardiac failure. Analysis of the drinking water of her house showed 0.07 grain of lead per gallon in the cold pipes, and 0.308 grain per gallon in the hot water pipes. Patient had habitually, during two years, taken tea made with water from the latter. In the diagnosis the sensory symptoms distinguished the case from acute anterior poliomyelitis, and the order of invasion of the limbs, together with the same sensory symptoms, separated it from (pure) acute ascending paralysis.

Poisoning by one Ounce of Chloral Hydrate: Recovery.

Dr. R. J. Colenso described this case. The patient, a lady, aged 34, deliberately took, on December 12th, 1893, 1 ounce of chloral hydrate in solution at 8 A.M. At 4 P.M. she was discovered in her bed unconscious. No ordinary rousing measures were of any avail. Medical aid was not procured till 5.30 P.M. The patient was found to be comatose, with abolition of all reflexes. The breathing was shallow and stertorous, pupils both small and very sluggish, pulse 130, small and rather firm; temperature 100.5°. The nature of the poison taken was not discovered for about three hours subsequently. Atropine was given hypodermically, and the stomach washed out with much difficulty; the washings revealed nothing as to the poison taken. Strychnine with ether was next injected under the skin; the pulse began to fail and the coma increased. Nitrite of amyl by inhalation had some good effect on the pulse; deglutition was very imperfect. Sir Dyce Duckworth saw the case at 10 P.M., and at this time a lady friend disclosed the fact that she had on the previous day bought two ounces of chloral for the patient to

send to a friend in India. This could nowhere be found. Enemata of strong coffee were now given, and sinapisms applied to the thighs and legs. The patient was vigorously rubbed and slapped with towels. At midnight the temperature reached 103°, the pulse continued to flag, and the outlook became very bad. Enemata of coffee, milk, Valentin's beef essence, and brandy, were continued, but not till 12.30 A.M. on December 13th were any signs of animation manifested. Twitchings of the face and movements of the limbs were then observed. Groaning and restlessness began about 2 A.M., and the hypodermic use of strychnine was stopped. The patient cried out to be left alone and allowed to sleep, but friction and rousing measures were continued until 3 A.M. Short intermissions were allowed, and sleep for ten minutes at a time, and then the patient was taken from bed and made to walk about. The urine was drawn off by catheter early in the evening, and was of dark colour. From 8 A.M. on December 13th the patient slept thirteen hours and a-half in the twenty-four. Recovery ensued, and the patient left the room on January 7th, 1894. Muscular tone was much impaired for some time subsequently, as was the digestion. Periods of excitement, alternating with great depression, ensued for six weeks subsequently. The patient was a very powerful woman of large build and of good condition. Nine-tenths of a grain of strychnine was employed. The amount of chloral was accurately determined afterwards, the bottle being found, and a full confession of her conduct was made by the patient. An ounce of chloral hydrate dissolved in two fluid ounces of water was the exact dose.

The PRESIDENT had seen a similar case. Artificial respiration was employed, the stomach pump used, and enemata of hot coffee given. Eventually the patient, a woman, made a good recovery. She had probably taken 320 grains of chloral hydrate, and the stomach pump had been used within an hour of its being taken.

Dr. HERRINGHAM inquired if the urine had showed any trace of sugar.

Dr. HALE WHITE mentioned that it would not be sugar, but glycuronic acid, that might be expected to be present. He was surprised that there were no subsequent signs of gastro-intestinal irritation after such a large dose.

Sir DYCE DUCKWORTH considered that life was saved by the assiduous efforts made through many hours by several people for her recovery. He was not aware of any other case in which so large a dose had been taken.

Dr. COLENSO, in reply, said the catheter was only used once, and there was then no sugar present in the urine. He referred to cases in which as many as 120 grains had been given in twenty-four hours, in divided doses, for delirium tremens; this was probably the limit of safety, though 180 grains had been given in twenty-four hours. He had given 30-grain doses at short intervals in a case of tetanus that recovered. His patient was now in better health than usual, and had completely recovered her mental equilibrium.

HARVEIAN SOCIETY OF LONDON.

GEORGE EASTES, M.B., F.R.C.S., President, in the Chair.

Thursday, October 18th, 1894.

CASES.

DR. BOXALL showed an infant, 4 days old, suffering from Spina Bifida. The child was born by a breech presentation about fourteen days before term. He could give no information as to the presence of spina bifida occulta in either parent.—Dr. H. A. CALEY showed a case of Congenital Heart Disease in a girl, aged 11. She had suffered all her life with cyanosis and dyspnœa. The case was regarded as one of combined pulmonary stenosis and incomplete interventricular septum.—Dr. CHARLES W. CHAPMAN showed a case of Reduplicated First Sound of the Heart with a systolic *bruit*, both heard in the mitral area; also a thrill with a rasping systolic *bruit* in the aortic area. The patient was a young woman who had scarlet fever when a child; no history of rheumatic fever or pains. She complained of dyspnœa on exertion, pain under the left breast, and of œdema of the ankles after standing. The patient had much improved under rest in bed and iron.—Dr. SYDNEY PHILLIPS showed (1) a man, aged 24, who contracted syphilis eighteen months ago. Ten months after this he began to suffer from symptoms of Lateral Sclerosis, resulting in his being invalided from the army. The interest in the case consisted especially in its rapid supervention on primary syphilis. (2) A child, 18 months old, with symptoms of Infantile Spastic Paraplegia.—Mr. JACOBSON showed five cases of Renal Calculi, removed during the last few months. One, vesical, weighing 4½ozs., had been removed from a girl, aged 18. The projecting ends of a hairpin showed its origin. The patient made a good but slow recovery after the suprapubic operation. The other four cases were renal calculi removed by nephrolithotomy; three made good recoveries, but one, a young miner, died from hæmorrhage, which came on about two, and again about eight, hours after operation. At the necropsy a contracted mitral valve was found. Mr. Jacobson related two other cases in which he had operated when this condition had been diagnosed.—Dr. SCANES SPICER showed a case of Perforation and Cicatrisation of the Palate from Congenital Syphilis, in a girl aged 10½ years.

MIDLAND MEDICAL SOCIETY.

T. F. CHAVASSE, F.R.C.S., President, in the Chair.

Wednesday, October 24th, 1894.

RENAL CALCULUS.

MR. BARLING showed a girl, aged 9 years, as illustrating a mistake in diagnosis between renal stone with perinephritic abscess and vertebral osteitis. Five years before she had suffered from an abscess in the right lumbar region, which burst spontaneously, and never healed. The diagnosis made by the doctor at that time was disease of the spine, and the part was treated by Sayre's cases with a window for the exit of pus. Mr. Barling, on examining the child, found a sinus in the mid-lumbar region, and, on probing it, a small gritty body could be detected. An incision was made, and a small renal calculus extracted. The sinus was now perfectly dry, and the urine, which had contained offensive pus, was free from pus. Mr. Barling also showed a renal stone removed from a girl, aged 28, who for twelve years had suffered from pain in the right loin, sickness, and occasional hæmaturia. The girl was referred to Mr. Barling for nephrorrhaphy, as the case was considered one of movable kidney, but the presence of blood corpuscles in the urine, and the presence of an acutely tender spot to percussion in the right loin led him to diagnose stone; and this was verified at the operation.

BILIARY CALCULI.

Mr. HASLAM showed a number of gall stones that he had successfully removed from the gall bladder and cystic duct of a woman, aged 47. For the last two years she had had attacks of pain in the region of the liver, accompanied by slight and transient jaundice. A number of small stones were found lying in the gall bladder, and the duct was completely blocked by a larger one, which was removed with difficulty. The patient made a rapid recovery, and had lost all her pain.

MEDIASTINAL GROWTH.

Dr. SHORT showed specimens from a mediastinal growth in a man aged 59. The early signs and symptoms were those of pleurisy on the left side, and blood-stained serum was drawn off. The pain, dyspnœa, and emaciation continued, and a thoracic growth was diagnosed. Three weeks before death he developed paraplegia from pressure on the cord at the level of the tenth dorsal vertebra. The mass, which was shown to be a mixed-celled sarcoma, had completely surrounded the aorta, œsophagus, and trachea, but had not constricted them sufficiently to produce symptoms during life. The left lung was extensively infiltrated.

PAPILLOMATOUS CYSTS.

Dr. THOMAS WILSON showed (1) a papillomatous broad ligament cyst the size of a goose's egg removed from a single woman, aged 25; (2) two papillomatous cysts of the ovaries removed from a married woman, aged 37, by Dr. Malins.

THE LOCALISATION OF, AND THE VARIOUS OPERATIONS FOR, GALL STONES.

Mr. JORDAN LLOYD read a paper on this subject. A few points were mentioned in the etiology of cholelithiasis and then the symptoms, more particularly those indicating the presence of calculi in (1) the gall bladder, (2), the cystic duct, (3) the hepatic ducts, (4) the common bile duct, were dis-

cussed in detail. Mistaken diagnoses, such as pleurodynia, indigestion, spasms, and colic were alluded to. An account was given of the various operations for the relief of the condition, and the difficulties which were met with in some of the more complicated cases.

CLINICAL SOCIETY OF MANCHESTER.

E. Stanmore Bishop, F.R.C.S., President, in the Chair.

Tuesday, October 16th, 1894.

Cases.

Dr. Walter mentioned a case of Incontinence of Urine in a female.—Mr. E. Roberts showed cases of Ocular Paralysis.—Dr. Ernest S. Reynolds showed (1) a case of extreme Microcephalic Idiocy in a man, aged 44; (2) a case of Congenital Spastic Hemiplegia with well-marked post-hemiplegic mobile spasm and choreic movements; (3) two cases of Locomotor Ataxia, one without a history of syphilis but with severe gastric crises, unequal pupils, Argyll Robertson's phenomenon, loss of knee-jerks, and static ataxia, with very slight ataxic gait; and a second with a history of syphilis, paralysis of the left sixth nerve, Argyll Robertson pupil, loss of knee-jerk, and marked gastric crises, without any ataxic symptom whatever.—Dr. Brooke showed several cases of Skin Disease, of which the most interesting was a typical instance of Adenoma Sebaceum in a young woman who suffered from epilepsy. Another case was one of Lupus Erythematosus in an old woman markedly improved by thyroid treatment.—Dr. Milligan showed (1) a young woman, aged 21, suffering from "Teacher's Nodes." She had been a School Board teacher for three years. For two years she had complained of gradually increasing loss of voice. Upon examination two symmetrically placed nodules, about the size of millet seeds, were seen at the junction of the anterior with the middle thirds of both vocal cords; they projected towards the middle line, and interfered with phonation. In treatment vocal rest was of the utmost importance. The application of astringents or of caustics was beneficial in many cases. When possible removal with cutting forceps should be attempted. (2) A man, aged 77, suffering from Malignant Disease of the Œsophagus with laryngeal complications. (3) A case of Complete Abductor Paralysis of the Left Vocal Cord of tabetic origin in a man, aged 43, who had suffered from an attack of syphilis thirteen years previously. Attention was called to the fact that paralysis of the abductor movements of one vocal cord was at times one of the earliest symptoms of tabes dorsalis.

Radical Cure of Hydrocele.

Mr. Southam made some remarks on the radical cure of hydrocele by excision of the sac, and pointed out that this method of treatment was specially indicated in old hydroceles, where the sac wall was thickened and rigid, and in cases where injection had failed, or where a patient was anxious for a radical cure, and did not wish to run the risk of an unsuccessful attempt by injection. He stated that in fourteen cases where he had performed this operation, which was the only certain method of radical cure, he had not met with a recurrence of the disease. A patient who had undergone this treatment three years previously was shown, and it was difficult to detect any trace of the operation, the scar having almost disappeared, and the scrotal tissues moving quite freely over the surface of the testes.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

E. West Symes, M.D., President, in the Chair.

Friday, October 19th, 1894.

President's Address.

The President (who was one of the two original honorary secretaries of the Society), in his address, gave an account of the origin of the Society in 1872 and its earlier career, tracing its history down to the present time. It was now in a most flourishing condition, having a membership of over 300, and a most valuable medical library, which was united with that of the medical department of the Yorkshire College. He claimed for the Society a record of excellent work—scientific, professional, and social.

Osteomalacia.

Dr. Hellier read notes of a case of osteomalacia, gave an account of some of the recent methods of treat. of the disease.

The paper was discussed by Mr. Jessop and Dr. T. Pevelyan.

Acute Peripheral Neuritis partly due to Lead.

Dr. Churton read notes of this case, and discussed t diagnosis between Landry's paralysis, multiple neuritis, a anterior poliomyelitis. The case occurred in one of the lea poisoned districts, and the metal was found to be abundan in both the cold and hot water supply of the house.

Gastrotomy for the Removal of Foreign Bodies.

Mr. Mayo Robson gave an account of a case in which he had successfully removed by gastrotomy the following articles: 47 cast-iron garden nails, 1½ inch long; 93 brass and tin tacks, ½ inch to 1 inch long; 12 large nails, some brass headed; 3 collar studs; 1 safety pin; 1 sewing needle. They had been swallowed by a child aged 10 during the course of the previous eight months. The wound healed by first intention, and the patient made a complete recovery. The symptoms were obscure until a clue was obtained by the vomiting of a nail. Mr. Robson dwelt on the marked effect of transfusion of saline solution in combating shock.

The paper was discussed by Dr. Kilner Clarke, Dr. Dobson, the President, and Mr. Littlewood.

Cases and Specimens.

Dr. Churton showed (1) Photographs of a patient with Acromegaly. (2) A woman whose facial nerve had been destroyed by a Tumour of the Parotid: the left eye had been wide open for four years without any, even the slightest, congestion of the conjunctiva resulting, the fifth nerve being normal; no artificial protection of the eye had been in use. (3) A boy, aged 4 years, admitted into the Leeds Infirmary early in August for Tuberculous Ascites; 85 ozs. of fluid removed from abdomen resembled milk; it was, however, not chylous, but semi-purulent; leucocytes abundant in (probably) opalescent fluid; ten days afterwards 72 ozs. of similar fluid were removed by trocar; the child recovered without further tapping: he seemed to be in perfect health, and the abdomen had resumed its normal shape and size.—Mr. Mayo Robson showed (1) The Cæcum and a considerable part of the Ascending Colon which he had removed ten days previously from a girl, aged 14, for malignant stricture. (2) A large Sarcoma of the Uterus, which he had removed by intraperitoneal hysterectomy: the patient had recovered just as after an ordinary ovariotomy.

Other cases and specimens were exhibited by Mr. T. Pridgin Teale, Dr. Hellier, Dr. Trevelyan, Dr. T. Wardrop Griffith, Mr. Topham and Dr. Mantle, and Mr. W. H. Brown.

Nottingham Medico-Chirurgical Society.—The session was opened on October 24th, by an address by Mr. T. Pridgin Teale, F.R.S., on the Influence of Cicatrix in the Production of Atrophy and its Utility in Surgery. He said that many years ago he found that when operating for symblepharon, if a wedge-shaped piece of skin were left adherent to the cornea, this piece of skin ultimately underwent atrophy, and the cornea regained a normal glistening appearance. Among other instances of atrophy following cicatrix, he mentioned the diminution in size of the prostate after enucleation of fibrous growths, and the atrophy of uterine fibromata in consequence of an operation formerly in vogue, namely, incision of the capsule, followed by tearing and separation of the muscular components of the tumour. Finally, without being dogmatic, he thought that the formation of scar tissue might in part explain the well known good results which followed division of the isthmus of the thyroid.—Remarks were made by Messrs. Cattle, Chicken, and Anderson.

Sheffield Medico-Chirurgical Society.—At a meeting of this Society, on October 11th, Mr. Makeig Jones, the President, delivered an inaugural address on Hospitals and the Profession. He characterised our present hospital system as

tending to pauperise and demoralise the population generally by its discouragement of habits of thrift, etc. He divided hospitals into two classes, those for the relief of the sick and those which in addition were used for training our future doctors. The latter he thought should be directly under the State, as their very purpose was of vital importance to every member of the community. The other class he contended were not required to anything like the extent that the outside public were led to believe. Operations were more successful and convalescence more rapid in the patient's own home than in the most elaborately constructed hospital. His ideal hospital system was when every man's dwelling was fit to be his own hospital, and when the money now spent on hospitals was devoted to providing doctors and nurses for them.

BOURNEMOUTH MEDICAL SOCIETY.—The annual meeting of this Society was held on October 26th, when the report and balance sheet for the past year were presented. The report announced increasing vigour in the life of the Society. Ten new members had joined and only four had resigned. The following were elected officers of the Society:—*President:* Mr. C. H. Watts Parkinson (Wimborne). *Vice-President:* Mr. D. C. Embleton. *Honorary Secretary:* Dr. H. G. Lys. *Committee:* Mr. Blake, Mr. Kemble (Poole), Dr. Marriner, Dr. Muspratt, and Dr. Ramsay. After the meeting the annual dinner was held at the Grand Fir Vale Hotel.

REVIEWS.

DEAF-MUTISM. By HOLGER MYGIND, M.D., Copenhagen. London: Rebman. 1894. (Cr. 8vo, pp. 300. 8s.)

THE aim of the author of this book is to present to the public a description, exhaustive and systematically arranged, of deaf-mutism, considered as a pathological condition. The anatomical and statistical chapters refer chiefly to deaf-mutes in Denmark. In the translation and revision of the English edition the author has been assisted by Dr. N. Wolfenden. The title is not quite appropriate, since speech for the dumb has become universal, and the deaf are no longer allowed to remain mute.

The proportion of congenital to acquired deafness varies greatly, and is dependent on the mode adopted for obtaining statistics. So, again, the proportion of deaf-mutes to the population varies per 100,000 from 34 (Holland) to 245 (Switzerland). For Europe generally it is 79 per 100,000 for South and Central Europe 115, and for the West and South only 54 per 100,000. Among the Jews it is about four times as prevalent as among Christians, mainly, it is asserted in consequence of frequent consanguineous marriages.

Chapter I deals with etiology and pathogenesis: Chapter II with morbid anatomy; Chapter III with symptoms and sequelæ; and Chapter IV with diagnosis, prognosis, and treatment. Epidemic cerebro-spinal meningitis is shown to be a frequent cause of deafness. The labyrinthine disease, which causes loss of equilibrium, etc., is often delayed in its onset for months after the acute attack.

About 11 per cent. of the cases of acquired deafness are traceable to scarlet fever, the numbers varying in different countries from 1·5 per cent. in Italy to 42·6 per cent. in Saxony; the number in Denmark is stated by Dr. MYGIND to be 20·8 per cent.

This discrepancy is traced to the varying degrees of intensity of the fever in different countries. It is curious that in many cases traced to scarlet fever the drumhead was perfect, the disease having involved the labyrinth directly without affecting the tympanum and ossicles. Measles accounts for from 1 per cent. .8 per cent. being due to causes analogous to those existing in scarlet fever. Typhus is found in some countries to cause 1 per cent., and in others 47·7 per cent.—this may really be cerebro-spinal meningitis. Diphtheria causes from 1 to 5 per cent.; small-pox, 1 to 2 per cent. Influenza is stated by Wilde to cause 0·6 per cent. in Ireland, ague 1·3 per cent. in Italy, and whooping-cough 4·3 per cent. in Denmark.

The work, which is a praiseworthy contribution to the subject, closes with an earnest appeal to submit all deaf children to a careful examination, that a rational treatment may be adopted. If hearing cannot be restored, the child should be taught to speak by the "pure oral system," now, happily, obtainable in England.

HYGIENE. By J. LANE NOTTER, M.A., M.D., and R. H. FIRTH, F.R.C.S. London: Longmans, Green, and Co., 1894. (Cr. 8vo. pp. 384. 3s. 6d.)

THIS work has just been added to Messrs. Longmans' series of elementary science manuals, and is intended "as an introductory manual for the use of junior students or others, preparatory to a more extended and practical study of public health work." The editors say that on being asked to prepare a small work to form one of the series of manuals, they were "early confronted with the difficulty of deciding what to include and what to omit." This difficulty they appear to have most successfully overcome. They have avoided, on the one hand, the confusion which results when the attempt is made in an elementary textbook of this kind to touch upon the minutiæ of chemistry and bacteriology; and on the other hand, they have not failed, while making the book readable, to convey to the student a considerable amount of information.

Some of the textbooks on hygiene are so encumbered with chemical and bacteriological detail as to leave room for little else, and there are also manuals which, in avoiding over-elaboration, fall into the opposite extreme of error, and deal largely in truisms and platitudes. The authors of the present work have carefully avoided both these extremes, and have produced a textbook well adapted for the purpose in view. Air, water, food, soils and buildings, refuse disposal, personal hygiene, infection and disinfection, parasites, climate and weather, and vital statistics are discussed in ten chapters in an eminently clear and comprehensive manner. The treatment of the subject of vital statistics may be referred to as being particularly lucid, and as covering none the less a good deal of ground.

The book contains several illustrations, among which are included some original diagrams prepared by Mrs. Bruce. This is one of the most satisfactory of the elementary textbooks on hygiene which have come under our notice.

MODERN GYNÆCOLOGY. By CHARLES H. BUSHONG, M.D. London: Henry Kimpton. 1894. (Demy 8vo, pp. 380. 7s. 6d.)

THIS little book on gynæcology—we object to the title "modern"—is written, the author tells us, for the benefit of general practitioners. As an example of the sort of teaching it contains, we may cite the author's remarks upon the preparation of sponge tents: "The sponge should be thoroughly boiled and then washed in a solution of bichloride of mercury, and further manipulations should be done under an antiseptic spray." The author thinks that prolapse of the urethra is common; "it is frequently called urethral caruncle." He treats it by making a fistula in the urethra by means of Emmet's button-hole scissors. He also states that he has "frequently had a curette enter a dilated tube when doing a *curettement*." In speaking of cancer of the uterus, he says that the most distinctive symptom is pain, which is usually present early in the disease. He does not call attention to the earlier occurrence and, from the point of view of early diagnosis, far greater importance of hæmorrhage. We have indicated a few glaring faults in the book which deprive it of any claim to its title of *Modern Gynæcology*.

NOTES ON BOOKS.

Prescribing and Treatment in the Diseases of Infants and Children. By PHILIP E. MUSKETT, late Surgeon to the Sydney Hospital. 3rd Edition; Revised, Enlarged, and Re-arranged. (Edinburgh and London: Young J. Pentland. 1894. Fcap 8vo, pp. 346. 6s. 6d.)—We noticed the first edition of this book soon after its appearance, and described its general character. It goes somewhat beyond what might be gathered from its title, since it contains in its second part a series of notes, arranged in alphabetical order, and contain-

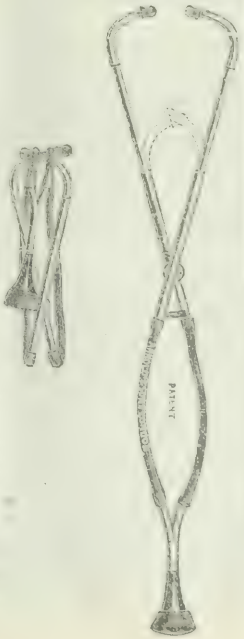
ing in some cases a description of the symptoms and pathology of the diseases as well as of the treatment recommended. Under the head of "Infantile Hemiplegia," for instance, we find some two pages given up to a classification and description abridged from Osler's well-known essay on the "Cerebral Palsies of Children." The present edition has been enlarged by notes upon various subjects, which were either omitted in the first edition or have grown into importance since then. The book altogether is a convenient and handy volume for the consulting-room table.

The English Riviera: a Guide to Sidmouth and its Environs. By Neil Macvean, M.A., and Leonard Williams, M.B., etc. (Sidmouth: Day Brothers. 1894. Demy 8vo, pp. 96. 1s.)—The authors of this little summary are careful to explain that in calling Sidmouth the English Riviera they do not intend to infer that its climate is like that of the French Riviera, and in this respect no doubt they are right; but they wish to maintain that Sidmouth possesses a climate which renders it a suitable winter resort for those invalids who, while unable for various reasons to take a long journey to a Continental resort, need a more genial winter climate than can be found in our inland towns. We think they make out that it certainly has as good a claim to be so considered as Bournemouth, Torquay, or Falmouth. A full description of the climate of Sidmouth will be found in these pages, as well as much useful information for intending visitors as to amusements, excursions, etc.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE "RELIANCE" STETHOSCOPE.

The illustration shows a very portable binaural stethoscope, for which the following advantages are claimed: It is telescopic, and fits into a very small compass; the metal tubes are made oval to prevent turning round; the metal is the same colour throughout, and does not corrode; the ear pieces are made of india-rubber, and are therefore soft for the ears, and the chest piece has an india-rubber air pad cover. When folded it fits into a leather case. It is made by Messrs. Arnold and Sons, of West Smithfield, London, and the price without case is 12s. 6d., with case, 14s.



Proposed Cottage Hospital for Accrington.—Mr. George Bullough has promised £500 towards the fund for the proposed cottage hospital for Accrington district, bringing the fund up to £2,364. The Mayor's appeal for subscriptions was issued only some three weeks ago, and the response has been most generous.

The King of Portugal has conferred the title of Count on Dr. Francisco Bento Alexandre de Figueiredo Magalhaes.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XXIII.—THETFORD.

Thetford is one of the most picturesque of the Norfolk towns; it was at one time the cathedral city, and the doctor showed us some ruins of the cathedral in his field. It is still a thriving country town, its prosperity being doubtless due in a measure to its situation on the main line from Cambridge to Ely and Norwich.

The Workhouse

is a mile from the station, and stands on the edge of a common in an open healthy situation. It is an old house, and the infirmary department is under the same roof. We found the female patients on the first and second floors, the more helpless and bedridden cases being on the first; for these last there are 20 beds in two wards, holding 10 each. The wards had a comfortable appearance; there was matting on the floors, armchairs for the infirm, the windows were cheerful, and flowering plants about. The bedsteads are unusually low in order that the old people may be better able to help themselves at night; they are of fair width, and the bedding of straw or flock, or a water mattress if needed; some of the beds appeared to be insufficiently filled with straw, and the flock beds were lumpy, and by no means conducive to repose.

The Patients.

In the first ward there was a woman in bed, a case of old age, and in the inner ward two other women in bed, also cases of senile debility; the wardswoman is an imbecile; the other women who were sitting about were suffering from infirmity. On the second floor the patients were all up, and among them was a girl of 12 or 14 with an eruption on the head.

The Lying-in Ward

opened out of this ward; it held four beds and had no separate offices. The nurse (untrained), not being a midwife, is unable to attend to these cases, for which the doctor therefore is responsible. The matron told us that these patients were sometimes placed in the charge of the nurse, but the doctor subsequently told us that he did not sanction this, though on the other hand, as he could not undertake to be on the spot whenever his presence was required, such attendance was unavoidable.

The Male Wards

are across the yard, on the male side of the building; here also are twenty beds in two wards. We saw seven patients in bed: one dying of phthisis; another a middle-aged man with dropsy, which he attributed to a chill taken while sheepwashing; one had softening of the brain; another was paralysed, and the rest were cases of senile debility. The matron told us that there were no offensive cases in the ward. We ascertained afterwards that these "dirty" cases are placed in the "back wards" on the other side of a yard, and are in the charge of an ancient pauper. In these wards are eight beds, four for male and four for female patients. We heard that a patient with wandering habits had been placed there, and the wardsman if absent for a time would lock the door and carry off the key. This plan ensures safe custody, but might lead to complications.

The Patients

are practically in the charge of the wardsman, whom we saw feeding the dying man, though there is a paid officer to attend on them. This wardsman was past middle life, and his was all the service available during the night. There are bells from the general wards to the nurse's room, but none from the "back wards."

THE NURSE

was in former days an inmate of the workhouse; she is now clad in uniform, and is called the nurse; she has held the post for four years. This system recommends itself to some boards of guardians on the ground of economy, if that term may be used to describe a transaction which is represented by a low figure in wages, but a high figure in waste of food, of nursing appliances, and perhaps of human life. We saw the nurse flitting about, but not taking the place of a nurse in the ward where the most serious cases were congregated, which was perhaps as well. The doctor informed us that he did not recognise this system as nursing, and that he did not put it to the test by attempting anything like treatment. When the medical officer lives nearly a mile from the infirmary his responsibility and labour are much increased by the absence of a trained nurse in the sick department, whose skilled observation could determine when it is necessary to send for him in the night or at other times. It is most unfair on a doctor to expect him to treat the sick pauper under such conditions, and we look forward to the day when these country infirmaries shall become the properly equipped hospitals of the district.

THE DIETS

are of the usual kind—boiled meat, suet puddings, vegetables, with extras for the sick ordered by the doctor. The matron told us that she sent the dying man any little thing he fancied from her table. In passing through the children's ward we noticed some cases of impetigo and eczema among them. This surely points to a poor diet. We would advise the doctor to bring this matter before his board; indeed, the food of the sick and of the children needs revision.

SANITARY APPLIANCES.

The closets are close to the wards, separated by a single door, and with no disconnecting lobby; commodes are provided for use at night. There is an ample supply of baths, those used by the tramps being distinct from the inmates' baths; but, though these appliances are provided, with the present style of service in the wards there is no guarantee that the baths are used, or that each patient has fresh water; indeed, we have reason to think the contrary.

The airing courts are back yards. There are extensive gardens round the house, but we did not see any seats to show that the old people were welcome there.

At the back of the building is the small infectious hospital, which appeared suitable for its purpose; it was empty at the time of our visit.

RECOMMENDATIONS.

We suggest that these 57 beds for the sick and infirm be placed under the care of a trained nurse, who shall also be a midwife; that a night nurse also be appointed. That wards for the offensive cases be provided, in communication with the rest of the sick department. That the closets be cut off from direct communication with the wards, and that the places for the outdoor exercise of the sick be improved.

INSANE PERSONS IN WORKHOUSES.

From paragraphs in the Sheffield *Daily Telegraph* and in the *Western Mail* and other journals, we see that the position of insane persons in workhouses, as well as of the sick, is far from satisfactory. The proverbial three courses are open to the guardians in dealing with the insane—they may send them to an asylum, provide special wards for them in the workhouse, or let them take their chance among the other inmates in the general wards. In county workhouses the insane inmates, if any, are usually imbeciles, who are healthy enough in body, who are often among the most useful workers, male or female, in the house, and also do well enough in the general wards. For obvious reasons young women of weak intellect must be kept under close supervision; too often in any case they find their way to the lying-in wards, and add to the ranks of the hereditary insane. Children, again, should never be allowed to associate with adults.

It is obvious that all insane persons needing special oversight are better in an asylum, but we think that harmless and fairly healthy lunatics are happier in a workhouse, where they are near their own home and friends, and where the discipline is less strict. But if such persons are found in any large number, even in a workhouse, as at Rotherham, special wards and special attendants should be provided for them.

In such wards the epileptics also may be placed, even when sane, but it is a very improper thing to return sane epileptics among the number of the insane, as is often done, though unfair to the sufferers, and a vitiation of the returns themselves. The medical officer of the Rotherham Workhouse did well to call the attention of the guardians to the subject.

HUDDERSFIELD: PROPOSAL TO EXCLUDE OUR COMMISSIONER.

At the fortnightly meeting of the Huddersfield Board of Guardians, held on October 16th, the Deanhouse Committee recommended the passing of a resolution to the effect that if a representative of the BRITISH MEDICAL JOURNAL, or any other periodical or newspaper applied for admission to workhouses for the purpose of inspection and criticism, such representative be informed by the officials that the consent of the Board of Guardians must be first obtained. Mr. G. W. Oldham, in moving the adoption of the minutes, said that the reason the resolution had been come to was because of the way in which the representative had gained admission to the Stockport Workhouse, and published startling statements as to the conduct of the "House." Mr. J. Burnley seconded. Messrs. A. Broadbent, W. P. Hellawell, J. Kenworthy, and E. B. Woodhead, all spoke against the resolution, remarking that if there were abuses to be remedied, as much light as possible should be thrown upon them, and Mr. Kenworthy expressed surprise at the action of the Chairman of the Deanhouse Committee, where the workhouse was regarded as a model establishment. Mr. J. W. Mellor supported the motion, and the Rev. E. Brownrigg thought there were other ways of remedying abuses than through the public press. Mr. Burnley asked if the officials were justified in allowing persons who had no Government responsibility to visit the workhouse without the Board's consent? The Chairman replied that even the guardians themselves had no right, in their individual capacity, except by resolution annually passed, to visit the workhouse, and those who were not guardians could not visit the "House" without permission of the Board. It appeared that at present persons were admitted as a matter of courtesy. Mr. Oldham said that if persons had no right of entry he would withdraw his resolution; he was not afraid of anyone going to see the workhouse. Mr. Burnley: None of us are. The Chairman remarked that it seemed to him that people should state clearly their object in visiting the workhouse. At the same time he was willing that anyone should visit the workhouse, and on his undertaking to give such instructions as would cover the case the resolution was withdrawn.

PETERBOROUGH.

We have received a report of the discussion at the Board meeting on the question of admitting our Commissioner to see over the Peterborough Workhouse Infirmary. Our Commissioner attended on Saturday, when the Guardians were in conclave, for the purpose of making the request. Mr. Peel, the inspector of the district, happened to be present. Needless to say, the Board was advised to close their doors to our representative. Mr. Peel's evident fear of independent criticism on the houses which he inspects is very significant, especially when taken in connection with the fact that certain radical changes have followed hard on the publication of the reports of our Commissioner, and that some improvements for which medical officers have petitioned in vain because they have been blocked by the inspector, have now been sanctioned. The Brackley Board has received the same advice from Mr. Peel. These public servants seem to forget that all institutions supported by the public funds should be open to the visit of any contributor to those funds, and that when obstacles are placed in the way of such a visit the inference is that the officials have that which they wish to hide.

EASTBOURNE.

We are glad to see that the Eastbourne Board are inquiring into the arrangements for the night nurse, with the view of altering, if possible, the existing regulation of a permanent night nurse. The old method of keeping one nurse always on night duty has many objections. The nurses become demoralised through losing touch with the standard of work maintained during the day, they have not the same interest in the patients as would be the case if they took turn with the other nurses in day nursing, their health suffers in the long run with the perpetual work during the night, and the day staff lose the important experience that can only be learnt by taking duty all round. We trust that the Board will see its way to placing the nurses on a roster of night and day duty.

THE MEDICAL PROFESSION IN SPAIN.—According to some statistics published in *El Siglo Medico*, the total number of licences to practise medicine granted by the Spanish Universities during the eighteen years between 1876 and 1893 was 10,477, being an average of 566 a year. The numbers, however, vary greatly in different years, and during the last few years seem to show a tendency to decrease. The numbers for the several years are as follows: 1876, 700; 1877, 328; 1878, 881; 1879, 868; 1880, 708; 1881, 1,060; 1882, 668; 1883, 636; 1884, 568; 1885, 373; 1886, 502; 1887, 384; 1888, 409; 1889, 435; 1890, 448; 1891, 384; 1892, 333; 1893, 292. During 1894 the total number of licences to practise issued up to September 22nd was 221.

THE MANAGEMENT OF THE INFECTIOUS DISEASES OF CHILDREN IN PARIS.

[FROM AN OCCASIONAL CORRESPONDENT.]

I.—The Hospice des Enfants Assistés.

A Stamping Out System.—Terrible Mortality before its Adoption.—A Counsel of Despair.—Inefficient Disinfection.—General Precautions Devised by M. Hutinel.—The Wards and "Boxes."—Personal Cleanliness of Patients, Medical Staff, and Nurses.—Treatment on Admission.—Premature Infants.—The Prevention of Broncho-pneumonia and other Complications.—The Isolation Huts.—The Management of Convalescence.—The Post-mortem Room.—The Laboratory.—Scientific Cleanliness and its Reward.

Those of your readers who are interested in the recent efforts made in Paris to reduce the great mortality from infectious diseases which has prevailed in various large institutions and hospitals, may like to hear the personal impressions of an English practitioner on a visit just made to two of them.

My first visit was to the Hospice des Enfants Assistés. This institution was a great teaching centre of late years on account of the epidemics of infectious diseases, notably of measles and diphtheria, which raged there. Under the method now followed these diseases have been almost entirely stamped out, and the hospital is deserted by students, as there is nothing to study—except their method, which seemed to me excellent. It consisted mainly of cleanliness and isolation carried to an extreme extent.

Professor Hutinel has related in a recent paper[1] the steps by which he was brought to elaborate the plan of dealing with infectious disorders now in force at this Hospital.

The children admitted to the institution used to be decimated by contagious diseases. Diphtheria in particular caused a frightful mortality: nearly all the children attacked died; nobody dared to do tracheotomy, so fatal was it, though there was a legend that one case had recovered after the operation—in 1876. Down to 1882 children with angina, croup, etc., were treated "pell-mell with the others in the general wards. Under these circumstances, those who had the uncommon good luck to escape measles, broncho-pneumonia, etc., ran a great chance of being carried off by diphtheria."

Certain elementary precautions, introduced about this period, did not have the desired result. A hut was erected in the garden, to which children obviously attacked by diphtheria were removed. Nevertheless, the mortality in proportion to the total number of inmates in the institution increased.

The most glaring defects in the system were: (1) that the children were not removed from the general wards until the diagnosis could be made positively—that is to say, not until after they had been in an infectious state for several days: (2) that they were removed from the hut, "when by chance they recovered;" a few days after the false membranes disappeared—that is to say, while they were still capable of spreading the infection: (3) the linen used in the hut was merely sent to the laundry, and not disinfected. In 1886 a special Isolation Block was built, and a special staff appointed to it. At the same time, a disinfecting stove was put up, and all the linen from the Block disinfected in it. Nevertheless, the mortality in proportion to the total number of inmates increased.

No wonder that M. Hutinel, as he confesses, was tempted to accept the despairing theory of Schlichter, of Vienna, "that the disease was probably not propagated by linen, nor by clothes, nor by bedding; that the germ is not to be found upon the walls nor upon the floors, but that it exists mainly in the air of the wards." M. Hutinel, in 1892, determined to make one more effort. The capricious dissemination of the disease here and there in the institution, and the way in which it attacked porters and nurses, suggested that the mode of infection was indirect, and that it was not the air which was at fault. Very brief investigation proved that the disinfection was utterly inefficient. The linen was kept too short a time in the stove, and the bundles were put into it unopened.

The step which really seemed to be most elementary, of making the disinfection of linen effective, was now taken, and orders were given at this stage that all the bedding from an infectious case should be disinfected, and all toys were directed to be boiled. Every fortnight or ten days each ward was emptied, and thoroughly cleaned and washed with antiseptics. Finally, very strict precautions were enforced with regard to personal disinfection of nurses and other persons having duties in the infectious wards.

There remained the danger of importation of the disease into the wards by children admitted during the incubative stage. To this end routine examination of the throat was instituted, and on the least trace of redness being observed the child was isolated, and the mouth and pharynx irrigated frequently with a solution of boric acid (4 per cent.). When any exudation was observed, bacteriological cultivations were made: if the diphtheria bacillus was found, the child was isolated most rigorously, and all the children who had been in contact with it were placed in a ward by themselves, carefully watched, and submitted to frequent irrigation of the mouth and throat; these suspected children were not allowed back into the common wards until the absence of the diphtheria bacillus had been established by several bacteriological culture observations.

These precautions were enforced on May 1st, 1892. In the first four months of that year there had been twenty-seven deaths from diphtheria. In the remaining eight months there was only one case, and that in a child admitted with the disease. In 1893 not a single case arose in the hospital. The victory appeared to be complete, and some of the precautions were relaxed by the administration of the hospital. Within a few months cases began to occur again, but the threatened epidemic was stopped immediately by the re-inforcement of the precautions indicated.

M. Hutinel recommends a methodical bacteriological examination: (1) Of all doubtful cases of sore throat, particularly when there is any exudation: (2) of the secretions of the mouth and pharynx of children who have been in contact with cases of diphtheria, even though they show no signs of sore throat: (3) of the nasal mucous membrane and the conjunctiva if symptoms exist of any inflammation of these parts.

The mortality from measles in the Hospice des Enfants Assistés has been, in the past, terrific. Oyon stated in his thesis that in the six years ending 1872 there were 1,256 cases of measles, with 612 deaths—a mortality of 48.72 per cent. Parrot, in 1878, reported 204 cases, with 87 deaths—a mortality of 42.64 per cent. Gannelon[2] states that in the four years ending 1885 there were 1,268 cases and 538 deaths, a mortality of 44 per cent. At the same time the mortality from measles in the Hôpital Trousseau averaged 26.60 per cent. The enormous mortality at the Enfants Assistés, therefore, was not due to any special severity of epidemic type. A large part of the mortality was due to the fact that the children suffering from measles contracted diphtheria. Thus, of 1 633 cases of measles in the six years ending 1891, 235 contracted diphtheria, of whom 212 died—a mortality of 90 per cent. During the same period 388 children died of broncho pneumonia, 23.75 per cent. of the whole number of cases of measles, died of broncho pneumonia. During this period, however, a very considerable improvement had taken place, the general mortality of children attacked with measles having fallen from 36 per cent. to 22 per cent. The improvement was attributed in part to the erection of isolation blocks, and, in part, to the system introduced by M. Hutinel of separating children suffering from measles complicated by broncho-pneumonia from others, and the systematic application of antiseptic precautions to the mouths of the patients and to the drinking vessels used by them. The reduction in mortality, from over 40 per cent. to about 20 per cent., is to be placed altogether to the credit of preventive medicine, for the number of deaths among children admitted suffering from broncho-pneumonia was still, at the time Gannelon wrote, almost, if not quite, as high as before. The number of cases complicated by diphtheria has diminished.

[1] *Rev. Mens. des Mal. de l'En.*, October, 1894.

[2] Gannelon: *La Rougeole*, etc. (Paris: Steinheil. 1892.)

The hospital itself is old but roomy, well built, and beautifully clean. The corners of the floors are all rounded off with concrete. Ventilation was effected by windows only. On the morning of my visit, a bitterly cold one, they were all shut, and the wards were very hot, especially those occupied by the very young children. The wards were small, holding from one to six children in each. I estimated that there must be on an average one attendant to every four children. In addition, the larger wards were in process of being divided up into *des boxes*. These were partitioned spaces about the size of a loose box. They were formed of glazed partitions about 8 feet high, with a door in the centre of each, and open at the top to the general ward. A window of the ward was contained in each. The accompanying sketch shows their general appearance. They held about two beds each; I

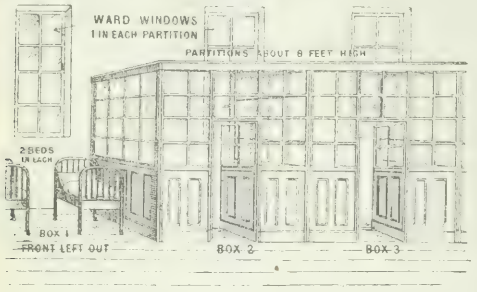


Diagram showing Professor Hutinel's "*Boxes*," Hospice des Enfants Assistés.

heard it was proposed to have others containing only one bed. The beds were all pulled out with the heads about 2 feet from the wall. The children were beautifully clean and warmly kept. In addition to an over flannel they were swathed round the legs and body under their nightgowns with a good square of thick cotton, like bath towel in texture. Antiseptics were not only in evidence, but their use was obviously very thorough. All the attendants and residents wore clean holland overalls. The visiting physician wore a long white apron, over this a long holland coat, and an extra holland coat which he changed from ward to ward. The hands and general appearance of everyone about the hospital were exquisitely clean.

With regard to the treatment of the children, it was also obviously most thorough. All children newly received into the institution were isolated for a preliminary cleansing before being sent among the healthy children in the schools. All heads in the least suspicious were done up lightly in gauze bandages; all children suffering from impetigo or rashes of the slightest description were similarly treated. All cases of discharge from eyes, nose, or ears were bandaged or plugged with wool. Children with the slightest skin affections were kept in bed; in short, every possible precaution was taken against the shedding about of infected epithelium.

Minute premature infants were kept in glazed wooden boxes heated below, but as these were not considered aseptic new china boxes were being made. The eyes, mouth, and umbilicus of these infants are subject to frequent careful disinfection by antiseptics. All new, suspected, convalescent, or most mildly contagious cases were isolated in groups or singly.

All cases of broncho-pneumonia, pleurisy, peritonitis, diarrhœa, or syphilis were carefully isolated in wards or "boxes." Broncho-pneumonia, whether simple or occurring in the course of other diseases, was regarded as highly infectious, and the subjects isolated. The isolation boxes in the larger wards were not kept entirely for the latter cases, but were largely used for them, mainly, I understood, because isolation was found much to diminish the severity of the attack.

For the common infectious diseases a series of brick isolation huts were used, standing alone at some distance from the main building. They stood in a row, all opening on a paved terrace. The scarlet fever was separated from the diphtheria hut by the measles hut. Each contained about six beds, and each had, adjoining it, one or more small rooms with one bed in each, where severe or unusual cases were nursed alone. The huts were kept very warm, but were very airy, with plenty of open windows and doors. Each hut had its own kitchen, etc. There was a space more than equal to the length of each hut between the huts. The cases contained in the huts the day of my visit were of no great interest. There were no cases of scarlet fever, the measles ward was standing wide open, empty (I believe there were two convalescents somewhere), there were no cases of diphtheria, but there were four or five children in the secretions of whose mouths suspicious cocci had been found on bacteriological examination, and who were therefore undergoing isolation to the fullest extent. They had none of them had any membrane, and none of them in the least ill. There were in another hut several children recovering from tonsillitis of varying degrees of severity, judging from their temperature charts, but throughout I did not see a child whose condition was really grave. I heard oxygen freely ordered for these cases.

As soon as one set of children is convalescent the hut containing them is thoroughly aired and disinfected before more are admitted. I inquired about the sequelæ of infectious fevers, such as otorrhœa, but was told that such things were rare and easily cured by antiseptic measures. The prolonged isolation and attention that the patients undergo as convalescents probably explains this.

The *post-mortem* room stood in another part of the grounds with the laboratory, almost walled off by a coal and wood yard. The former room was exquisitely kept, and as clean as the wards themselves. I was present at a *post-mortem* examination on a case of general tuberculosis, and here again all the arrangements were excellent, and the whole operation carried out with scrupulous care and cleanliness.

The laboratory consisted of two rooms, one containing pathological specimens, cultivations, etc.; the other contained stoves, section cutters, etc., and was evidently the room in which the microscopic and cleaner part of the work was done.

Cleanliness aided by antiseptics, and careful diagnosis aided by thorough bacteriological investigation, and followed by what one may term a selective system of isolation, puts in a nutshell the method followed in this hospital, a method amply justified by the astonishing results that it has lately been able to show in reward for its thoroughly scientific endeavour.

THE NEW CRAIG HOUSE ASYLUM, EDINBURGH.

This magnificent building was formally opened by the Duke of Buccleuch, the Governor of the Asylum, on October 24th, in the presence of a large company.

The Chairman of the Board of Managers (Mr. James Howden) made a statement regarding the history of the institution, from which it appeared that the foundation of the Morningside Asylum in 1813 was largely due to the energy of the distinguished physician and philanthropist, Dr. Andrew Duncan. In 1837 it was resolved to admit pauper lunatics, and in 1841 a new building (the present West House) was finished. The East House, for paying patients, has of late years been so surrounded by buildings and railways that it became necessary to find a new site, where privacy and possibilities of extension could be had. The estate of Craig House, with its old mansion house, then occupied by John Hill Burton, was bought. This building gave accommodation for twelve inmates, and space has since been provided for 200.

Dr. Clouston spoke of the medical aspects of the institution. A gold key was then handed to the Duke, who in a brief speech declared the building open. He mentioned, in passing, that in 1813 there were 4 patients in the asylum, in 1836 there were 38, and to-day there were 870.

The company then inspected the building, and thereafter reassembled in the grand hall, where luncheon was served and various toasts given.

The new asylum has been built from the plans of Messrs. Sydney Mitchell and Wilson, and has been in progress for five years. The ground extends to 61 acres, and is separated merely by a road from the 50 acres of land round the existing West Asylum. It is a finely wooded slope, and commands many lovely views of the surrounding country.

The length of the new building from east to west is 360 feet, from north to south 250 feet. The central feature is a square tower 100 feet high. In the centre block is the great hall, 63 feet long, 33½ feet broad, and 45 feet high. It is panelled in oak to a height of 12 feet, above which it is decorated brightly and handsomely. The lighting is excellent. At the south end an open screen-work communicates with a corridor leading to the officers' quarters. On the same level as the great hall, and at its south end, are a drawing-room beautifully decorated, and a billiard room.

Five dining-rooms of various sizes stand on the north side of the great hall. The decorations are different in each, giving the impression (which is carried on throughout the whole place) of a private mansion-house. Below these rooms are kitchens, sculleries, and offices. There are lifts and service stairs.

The whole building was not included in the opening, since only the central and eastern section are yet complete. The eastern part is three storeys high, and gives space for at least 75 inmates. The arrangement is in four sections or wards, each with two parlours and a small kitchen. There are large corridors (brightly decorated) with bedrooms on one or both sides. There are also bedrooms in the central tower.

The heating is by a low-pressure hot-water system, and the lighting by electricity.

The building is divided into various sections for the easy detection of faults in the heating, lighting, or water supply mechanism. Every room can be reached by at least two staircases, a most valuable arrangement in the case of fire.

In addition to this central block two detached hospitals on the east and west sides have been built, and three detached villas; a fourth villa will later be erected. The total cost will be at least £110,000.

ROYAL COLLEGE OF PHYSICIANS.

An ordinary Comitia of the Fellows was held on Thursday, October 25th; Dr. Russell Reynolds, F.R.S., President, in the chair, when the following gentlemen were admitted Members, namely, J. F. H. Broadbent, M.D.; S. Buckley, M.D.; R. H. P. Crawford, M.B.; H. Head, M.D.; F. M. Sandwith, M.D.; G. E. M. Wood, M.B.

The Licence was granted to 134 gentlemen, of whom only 3 did not present themselves under the regulations of the Conjoint Board.

Communications from the Royal College of Surgeons on matters jointly concerning the two Colleges were received; also from Surgeon-Colonel Harvey, President of the Indian Medical Congress to be held in Calcutta in December, inviting the College to send a representative—it was not found, however, possible to comply with this invitation; also from the Colonial Office enclosing a report on the outbreak of bubonic plague at Hong Kong; and from the General Medical Council enclosing the report of the Visitor on the Examination in Public Health held jointly by the two Colleges.

The audited accounts for the year and the quarterly report of the Finance Committee were presented.

The President, in the absence of Sir William Priestley, made a brief report from the Sir Andrew Clark Memorial Committee.

Dr. Robert Harvey was admitted a Fellow *in absentiâ*, and his diploma sealed.

Drs. Poore and Seaton, as representatives of the College at the recent International Congress on Hygiene at Buda-Pesth, gave a brief report of the chief features of that Congress; and on the motion of Sir Henry Pitman, seconded by Dr. George Harley, a cordial vote of thanks was accorded them for their services.

A report from the Committee of Management was received and adopted after some observations by Dr. Tuke showing reasons why it would be desirable in the future to make more use of the private lunatic asylums for clinical purposes. Dr. Norman Moore was re-elected a member of the Committee.

A report from the Laboratories Committee was received, and Dr. J. F. Payne was re-elected a member of the Committee.

The Jenks Scholarship was awarded to Mr. Thomas Chetwood, student of St. Bartholomew's Hospital, on the recommendation of the Presidents of the two Colleges.

The quarterly report of the Examiners for the Licence and the list of books presented to the Library during the quarter were received.

ROYAL COLLEGE OF SURGEONS.

Annual Meeting.

The annual meeting of the Fellows and Members of the Royal College of Surgeons was held on November 1st, under the presidency of Mr. J. W. Hulke. In opening the proceedings The Chairman referred to some of the points mentioned in the annual report of the Council recording the work of the College during the past year. The Committee of Management of the Conjoint Board had held fourteen sittings, and had shown its accustomed solicitude in the discharge of its important duties. The Gresham University project continued unrealised, but the resolutions passed in its favour might perhaps encourage Her Majesty's Government to introduce the necessary legislative measure as preliminary to the accomplishment of the project. It was hoped that the arrangements made for the meetings of the Fellows and Members would prove useful, and also the proposed alteration in the by-laws enabling the Council to deal with certain powers of misconduct which could not now be dealt with. There were at present on the College rolls the names of three Members whose conduct had been deemed by the General Medical Council so bad, that their names had been struck off the *Register*, but they could not be struck off the roll of the College. The Council had been entrusted with funds to distribute as prizes, and would fulfil the duty assigned to it. The laboratories on the Embankment had continued to produce good work. The museum had received numerous additions during the year. The results of the examinations required careful consideration. There appeared to be more collective and less individual instruction than formerly, and less actual dissection, leading, as he thought, to superficiality and weakness. Thirty-one Fellows and 313 Members had died during the year. These losses had been met by the accession of 54 Fellows and 485 Members, making an increase of 33 Fellows and 172 Members.

Mr. Joseph Smith, who had given notice of the following resolution,

> This meeting is of opinion that the resolution which has so frequently been passed by large majorities at meetings of Fellows and Members—namely, "That Members of the College should have some voice in the election of Members of Council," be approved, and that the President and Council be respectfully asked to give effect to such resolution,

said he regretted that no hope had been given by the President that the Members would have their grievances redressed. The resolution standing in his name required no commendation on his part, as it had already been passed for many years not simply by Members but by Fellows, and had been lauded by the whole of the medical press and by all Members who had taken any interest in College reform. The 14,000 or 15,000 Members who constituted the College and who contributed something like £14,000 or £15,000 of the income had no voice whatever in the spending of the money or in the management of the affairs of the College. It was true that the Members were called together with the Fellows, but their meetings were quite useless, as the Council simply listened to what was said, and then there was an end of the matter. No matter of public policy was ever alluded to in the report and consequently Members cared very little about it. Under those circumstances he did not wish to accept the grace of the President and Council in the matter (they having permitted the motion to be brought forward although it was not strictly in order), for, as Members, they had a right to come and discuss matters and resolutions of that character in a fair and proper way. He did not think he should be consulting the dignity of the Members of the College or his own

feelings if he persisted with his resolution, and he must, although with great regret, withdraw it entirely.

Mr. ALDERSON said that, as Mr. Smith had withdrawn the resolution, he would move it in his own name, but in a somewhat altered form, namely:

That this meeting is of opinion that the resolution which has so frequently been passed almost unanimously at annual meetings of Fellows and Members, namely, "That Members of the College should have some voice in the election of members of Council," be approved; and that the Council be respectfully asked to give effect to such resolution by giving a certain portion of its deserving Members a seat in the Council.

He regretted that the finances of the College were not as they should be. They appeared to have declined with the success of Apothecaries' Hall. He hoped that something would be done to increase the finances, and that facilities would be given to Members for obtaining Fellowships which were of great social value. He was glad that the Council had to some extent held out the olive branch, and hoped that it would proceed further in the same direction.

Dr. MEAD, in seconding the motion, hoped that the Council would put itself at the head of a movement by which students in London might obtain greater facilities for securing titular distinctions.

Mr. GEORGE BROWN hoped that the meeting would support the resolution if only as a simple record of pious opinion. The question of finances deserved serious consideration. At present the College seemed to be a decaying institution, fewer candidates presenting themselves for Membership. The reason was that its Members were not supplied with what medical men really required.

Mr. CRAVEN hoped that the Council would take the matter into consideration, and do something in the future, without needlessly tinkering with the constitution of the College.

The PRESIDENT, in putting the resolution, reminded the meeting that every Fellow of the College was a Member, and was not, when sitting in the Council, the representative of a class, but of the whole College. He was himself the son and grandson of a general practitioner, and he had other relatives belonging to the same class; and other members of the Council could say the same thing.

Mr. T. SMITH said that for the last fifteen years the Council had been endeavouring to get the Government to grant their diplomates some power of getting a degree, and similar efforts were still being made. It should be remembered that the Council were elected by the Fellows, and it would therefore be an ungraceful thing on the part of the Council to seek to deprive the Fellows of their privileges.

The motion was then put and carried by 25 votes against 8.

Dr. JOHN INCE moved:

That this meeting of the Fellows and Members of the College desire to thank the Council for the favourable report now presented, especially for the graceful concessions relating to the separate meetings of the Fellows and of the Members; and, further, it hereby expresses its cordial approval of the proposed alterations of By-laws, Sections iv and xvi, as set forth therein at pages 14 and 12 respectively.

He asked the Members to express their gratitude for the graceful concessions of the Council, which he was quite sure they fully appreciated.

The motion having been seconded, and Mr. CRAVEN having supported it,

Mr. T. HOLMES said he was glad to recognise in the report a disposition on the part of the President and Council to meet the claims the Fellows had been making for some years past. The Association of Fellows, however, was still of opinion that the Charter of the College required modification. The matters conceded by the Council ought to be matters not of concession but of regulation by the Charter. One point mentioned in the report related to the system of allowing students to come up for examination in any one division of the subjects of final examination. While he (Mr. Holmes) was a Member of the Council and of the Examining Board in anatomy and physiology he strongly deprecated the present method of cutting the examination into various pieces. A good deal of the present difficulty arose from the fact that the Final Examination of the College had been entirely separated from the Primary Examination, that for anatomy and physiology, and that that examination had again been separated into two pieces. Anatomy was a part of physiology, and should not be separated from it.

Mr. NELSON HARDY agreed with Mr. Holmes on the general question, but disagreed with Dr. Ince as to the obligation of the Fellows and Members to the Council. He considered that the regulations with regard to the meetings were unsatisfactory, and he should vote against the motion.

Dr. DICKENS said that the time had gone by for hard words, and he hoped that there would be a peaceful solution arrived at.

Mr. JONATHAN HUTCHINSON reminded Mr. Holmes that the Final Examination of the College did include anatomy.

Mr. HOLMES said his complaint was that physiology had been altogether omitted in the final examination.

Mr. MARSH said if it was wrong for the College to drop physiology it was equally wrong at Cambridge. There could be no persons who had more thoroughly considered the question of examination than those connected with the University of Cambridge, and they had been driven to do what had been done by the College.

The motion was then put, and negatived by 19 votes against 6 in the affirmative.

A vote of thanks to the President terminated the proceedings.

LITERARY NOTES.

THE first number of *Travaux d'Electrothérapie Gynécologique*, a periodical established and conducted by Dr. Apostoli, has recently appeared in Paris.

The *Life of Richard Owen*, which is shortly to be published by John Murray, will contain an estimate of Owen's position in anatomical science by Professor Huxley. The *Life* has been written by a grandson of Owen, who has been assisted in the revision of the scientific portions of the book by Mr. C. Davies Sherborn.

Professors A. Martin (Berlin) and M. Sänger (Leipzig) are to be the editors of a new *Monatschrift für Gebertshülfe und Gynäkologie*, which is to make its first appearance with the new year. The publisher is S. Karger, 3, Charitestrasse, Berlin.

Two new medical periodicals have recently been born into the journalistic world of Spain, *El Recopilador Medico-Pharmaceutico*, which is to be published fortnightly at Barcelona, under the editorship of Dr. Grañen and Señor Teixido; and *La Ciencia Moderna*, which is to appear in Madrid on the 7th and 27th of each month, under the editorship of Dr. Juan Cruz y Vazquez, with the collaboration of Señor Lobo y Regidor.

Messrs. J. and A. Churchill announce the publication of the Public Health Law of England, Ireland, and Scotland, being the third volume of Stevenson and Murphy's *Treatise on Hygiene and Public Health*. The articles in this work are written by men of recognised legal ability, each of whom is officially engaged in the administration of the law of that part of the United Kingdom to which his article relates. For departmental reasons, however, the names of the authors do not appear.

The *Journal of Comparative Medicine and Veterinary Archives* is a monthly publication issued in Philadelphia. The third number for 1894 was issued in March, and the fourth has just come to hand and is dated September. In a paragraph headed "Change of Management," the editors regret that no numbers for April to August are forthcoming, and think that "those who have paid their subscriptions in advance have a right to feel aggrieved." At the same time, the editors seem to think that they have a *per contra* which balances this in "the dilatory payments made by a majority of the subscribers." However, fresh blood has been infused into the management, and it is hoped that the journal will in future make twelve monthly appearances in the year instead of seven.

Among Mr. H. K. Lewis's forthcoming publications are a ninth edition of Dr. Frederick Roberts's *Theory and Practice of Medicine*; a second edition of Mr. C. Mansell Moullin's *Enlargement of the Prostate*; a book on *Medical Nursing*, by the late Dr. James Anderson, with an introductory biographical notice by Sir Andrew Clark; *Chorea and Choreiform Affections*, by Professor William Osler; and *The Dyspepsia of Phthisis*, by Dr. W. Soltau Fenwick.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, NOVEMBER 3RD, 1894.

THE QUESTION OF THE CHELSEA HOSPITAL FOR WOMEN.

Hospital committees, like Cæsar's wife, should be above suspicion. We are not infrequently called upon to criticise hospitals and their doings, but seldom do we find occasion to impute to them anything graver than honest intellectual error. However strongly we may demur to the indiscriminateness of much of medical charity, we are free to admit that the administration of our great public hospitals is in its general aspects an achievement worthy of the best traditions of English civic life. All the more is it our duty to speak out plainly in the rare cases in which we see those honourable traditions departed from. We, at any rate, cannot be accused of undue hostility to the Chelsea Hospital for Women. We long hesitated to credit the charges brought against its administration by the medical officer of health for the district, and animadverted without reserve on the manner in which his accusations were made. As freely we may now claim to express our opinion upon the singular behaviour of the board of management of the hospital since a part of those accusations were shown to be based on fact.

Our readers will remember that a Commission of Inquiry, accepted by the hospital authorities, was empanelled last summer to inquire into the matter, and that after careful investigation it reported the discovery of grave defects in the conduct of the hospital, for which it clearly intimated that the board of management and the medical staff, or members of it, were equally involved in blame. The accuracy of the report has never been seriously impugned. The medical officers, finding no personal distinctions drawn in its terms, took the only course open to them as honourable men, and placed their resignations in the hands of the authorities, offering themselves individually for re-election. The lay members of the board of management, to everyone's astonishment, instead of following the example of their medical colleagues, clung one and all to their seats, and coolly proceeded to consider the reconstruction of the medical staff as though nothing had occurred to render such a course wanting in decorum.

Their next proceeding was, if possible, more extraordinary still. The resignations of the medical officers were notoriously based on the one only ground of their sense of collective implication in the Commissioners' censure, and, according to the principles which ordinarily govern English public life, the question of their re-election should have been dealt with on that ground alone. There were three legitimate courses open to the board of management if they were entitled to deal with the matter at all. They might have re-elected the medical officers *en bloc*, framing such regulations as might prevent future irregularities. They might, on a theory of collective responsibility, have appointed an entirely new staff; or they might have considered the case of each medical officer on its merits, and re-elected all who were ascertained not to be personally involved in the grounds of the Commissioners' censure. The board took none of these courses; they re-elected three members of the former staff and rejected six, against some of whom, at least, no fault drawn from the Commissioners' report could reasonably be alleged; an action tantamount, under the circumstances of the case, to the infliction of a grave professional stigma upon innocent men. It is a trifle, but perhaps a significant trifle, to add that one of the new candidates chosen to fill up the *cadre* was not even possessed of the professional qualification which the laws of the hospital require.

Dr. Fenton, one of the re-elected, in a letter which we publish to-day, offers a partial explanation of the occurrence. The board, he tells us, decided, *inter alia*, "to elect no one who would not positively state he was not in general practice" in order "to reduce the risk from imported infection." On this we need hardly comment. If it be really the case (and Dr. Fenton seems to be very much in the secrets of the board of management) we can only regard it as a simple evasion of the question at issue. When was it ever suggested that the mortality of the hospital was due to infection imported by reason of general practitioners being on the staff? The Commission attributed it to quite other causes. The censures the Commissioners passed upon the management of the hospital are sufficiently plain, and the board cannot hope to shuffle out of them by the childish expedient of making a scapegoat of those members of the staff who engage in general practice.

The consulting staff showed their sense of these proceedings by immediately severing their connection with the institution. Lord Cadogan, its president, has followed their example, and we may presume that this will mean the withdrawal of the royal patronage which the hospital has hitherto enjoyed; but still the board of management cannot bring themselves to quit the places they seem to think they adorn.

The position is a serious one. As long as the present discredited *régime* lasts it is impossible that public confidence can be given to the hospital. Is a useful charity, then, to be reduced to ruin because these self-satisfied laymen cannot be brought to renounce the authority they have exercised so ill? Are the poor of London to suffer to save the dignity of a committee already convicted of incapacity?

The attitude of the present medical staff we must profess ourselves even less able to understand. Their real position must surely by this time be perfectly plain to them. If they set any store by the opinion of their own profession, we warn them that the best course they can take is a speedy retirement from a preferment which they cannot hope to occupy with due regard to their own credit, or without accessory participation in a grave injustice towards certain of their professional brethren. Can they hesitate as to their duty under the circumstances?

Mr. Gladstone has given £20 towards the building fund of the Royal London Ophthalmic Hospital, through Mr. Edward Nettleship.

The first meeting of the Epidemiological Society for the session will be held on November 16th at 8 P.M., when the President, Mr. Shirley Murphy, will deliver an address on the Study of Epidemiology.

Professor Gussenbauer entered on the duties of the Chair of Surgery in the University of Vienna, in which he succeeds Billroth, on October 22nd. His inaugural address was well received by a large audience of students and members of the profession.

The subject of the address which, as we announced last week, Dr. Robert Barnes is to deliver before the Glasgow Obstetrical and Gynæcological Society on November 22nd as Honorary President is General Physiology and Pathology, illustrated by the study of Menstruation and Gestation.

Mr. Dawson, of Northbrook, has given a sum of £3 000 to the funds of the Devon and Exeter Hospital. The Governors of that institution have directed their President (the Sheriff of Devon) to acknowledge the gift, and to say how greatly it is appreciated. Mr. Dawson was already a liberal donor to the hospital.

The Mayor of Taunton (Alderman H. J. Van Trump) has decided not to give a mayoral banquet this year, and he will instead give a donation of £100 to the Taunton and Somerset Hospital; £75 to be devoted to the hospital itself, and £25 to the funds of the Jubilee Nursing Institute, which is carried on in connection with it.

SMALL-POX IN DUBLIN.

The outbreak of small-pox in Dublin still remains formidable. There are about eighty cases under treatment in hospital. The Board of Guardians of the South Union Workhouse have agreed to receive the convalescents in suitable premises, which are removed from the main buildings.

MORPHINOMANIA IN PARIS.

We have made inquiry as to the supposed existence in Paris of establishments where ladies and gentlemen could enjoy the pleasure of opium eating or morphine injections. We can affirm now that such establishments do not exist. No doubt the abuse of morphine is very great in Paris, principally amongst prostitutes, and it is said medical men, but it has not yet reached the point of national institutions being organised for the consumption of the drug.

THE BARRACK SCHOOL COMMISSION.

The Committee of Inquiry into the condition of pauper children held its first meeting on Wednesday, the Right Hon. A. J. Mundella in the chair. It was decided to exclude both the public and the press. This decision is very greatly to be regretted. The public have a right to know all that is said on one side or the other, and the inquiry should be held in public.

MR. JOSEPH WHITE, OF NOTTINGHAM.

Mr. Joseph White, who has recently retired from practice in Nottingham, was on October 26th presented by some of the members of the medical profession in the town and neighbourhood with a piece of plate bearing a suitable inscription. The presentation, which took place at the General Hospital, to which Mr. White was for many years surgeon, was made by Dr. Tate, Medical Superintendent of the Coppice Hospital for the Insane. Mr. White, it will be remembered, was President of the British Medical Association two years ago, and had been Local Secretary of the annual meeting of the Association at its previous meeting in Nottingham. In acknowledging the presentation, he referred to the cordial relations which had existed so long between his medical brethren and himself, and expressed his great personal regret at the severance of many old ties which his departure from Nottingham involved.

DIPHTHERIA.

We understand that the President of the Local Government Board has had under consideration the question of the prevalence of diphtheria in this country, in connection with certain recent proposals as to methods by which that disease may be controlled. Acting on the principle which has always been maintained in the Public Health Department of the State, it has been decided that the Board should not take any part in supplying materials for the treatment of individual cases of disease. On the other hand, the President is considering how far modern methods of research, carried out under his department, may properly be utilised towards the early recognition and prevention of diphtheria.

EDINBURGH ROYAL MEDICAL SOCIETY.

The 158th session of the Edinburgh Royal Medical Society was opened on Friday of last week with an address by Sir W. H. Broadbent, Bart., M.D. The Senior President, Dr. Hutcheson, was in the chair, and there was a very large attendance, including several of the University professors and a considerable number of the extra-academical teachers and practitioners in Edinburgh. Sir William Broadbent discoursed on the advance of medicine in scientific directions, and the cultivation of the qualities which fitted men for this exercise. He expressed regret that Great Britain had been prevented by obstructive legislation from giving her full share to the work of preventive medicine, which had been so nobly done by M. Pasteur and others. Despite this, excellent work was being done in London, Cambridge, and Edinburgh. He lauded research along scientific lines, and urged on those engaged, or about to be engaged, in practical medicine to cultivate observation, inference, discrimination, and construction of mental pictures of cases under observation. A cordial vote of thanks was, on the motion of Sir Thomas Grainger Stewart, given to the distinguished lecturer.

DIPHTHERIA AND SPEAKING TUBES.

Dr. J. King Warry has presented to the Hackney Vestry a report on an outbreak of throat illness among workgirls employed in a particular establishment in his district. From this report it appears that twenty-two girls employed at the premises in question suffered during June last from inflamed or sore throat, the illness in a number of instances being unquestionably diphtheria. Certain sanitary defects were found to exist, but these did not appear to have been the cause of the outbreak, nor did the evidence point to association of the illness with water supply. Dr. Warry was led to suspect the speaking tubes which were provided in the workroom, and he writes: "From a consideration of the course of this outbreak I am led to believe that the disease was introduced by some one of the workgirls; that it was spread among them mainly by contact—by the use of the four speaking tubes and of the same towels in the lavatory." The speaking tubes in question were "used at times by every one of the workgirls," but they were mainly used by three workgirls who were the nearest workers to the tubes, and thus "messages would most conveniently be sent and received by them." These three girls were among the first to be attacked. The workroom in which the large majority of the sufferers from throat illness worked was situated at the highest part of the building. A shop assistant employed on the ground floor was ascertained,

however, to be suffering from sore throat, and it transpired that it was the "special duty of this assistant to answer the speaking tube communicating with the affected workroom." Two assistants working on the first floor were also attacked. It appeared that these two assistants had made use of the lavatory reserved for the workgirls, and it is suggested that the lavatory towels may have been in these two instances the source of infection. The report is an interesting one, and the evidence adduced renders it highly probable that the mouthpieces of the speaking tubes, to which girls suffering from diphtheria in its early stages frequently pressed their lips, were the means of conveying the disease in some instances to other workers using them. With regard to the illness of the shop assistant on the ground floor, Dr. Warry remarks: "Whether the tube had become infected throughout its whole length, and so conveyed the infection to this assistant, or whether her illness was a coincidence, I cannot be certain, but I do think the incident significant."

THE DEFECTS OF THE LUNACY ACTS.

Medical men in lunacy practice here are, says the *Manchester Guardian*, complaining very strongly of the difficulty of getting a magistrate's order under the Lunacy Act of 1890 for the admission of private insane patients into asylums or into their own houses as single patients. In one case where a lady applied to a magistrate for a lunacy order, assigning as a reason for the application that no magistrate in the parish where the patient resided could be procured, she is stated to have been told to wait till one came home. In another case the doctor is said to have found all the magistrates with jurisdiction to grant lunacy orders out of town, no instructions or references having been left behind them. In a third case the magistrate is alleged to have let his house for a long period. It is also stated that in other cases lunacy orders could not be obtained because the magistrates were business men engaged in the city at the very time when their services were needed. The Lord Chancellor will probably have a representation on the subject addressed to him.

WOOLSORTERS' DISEASE.

The *Leeds Express* of October 16th last records an inquest on a wool dyer, aged 43, who died from woolsorters' disease a short time since. The external indications of the malady seem to have been very few and indistinct, but from the evidence offered by Mr. John H. Bell it seems clear that the case was one of anthrax, the cutaneous form of woolsorters' disease. The wool used came from Buenos Ayres, and the patient was inoculated in the right temple. Mr. Bell very properly resorted to experiment to clear up the case. He inoculated a guinea-pig with the serum of the body. Death took place in forty hours, and on examining its fluids they were found crowded with the specific microbes of anthrax. But what adds alarm to the recognised history of the malady in question is the statement made by Mr. Bell that infected wool, even when made up in wearing material and into garments, may develop anthrax. This is so serious an assertion that its truth demands careful investigation.

CHANCE DISINFECTION.

The experiments of Esmarch in 1888, to which Mr. Defries called attention at the Congress of the Sanitary Institute, in which he investigated the difference in disinfecting power between superheated and saturated steam, never seem to have been assimilated in this country. It will be remembered that, mainly to get disinfected objects dry with the greater speed and certainty, certain makers were in the habit of superheating their steam—that is, heating it by means of ribbed heated surfaces, steam jackets, or otherwise to a temperature above that at which it vaporised. Esmarch's results showed that steam so heated had no greater disinfecting power than hot air, and that in the same object the inside, which had cooled the steam down till it became saturated—that is, of the temperature at which it boiled—might be absolutely disinfected from germs which on the outside, where the steam had risen to a superheated temperature, were not affected. Elsewhere than in England the use of any superheat in steam for disinfection is practically abandoned; and it is time that the practice should also cease here. There is no question that a large amount of valuable disinfection has been done by superheated steam stoves, in the same way as, in Esmarch's experiments, superheated steam by condensing to saturation disinfected the interior of the objects. But it is most undesirable that in any one of the relatively few elements of disease transmission which are really under control we should allow any needless uncertainty or laxity; and the use of a process of which the efficacy depends in some measure on the material to which it is applied, and of which it is impossible to say that it is throughout as the inside and not as the outside of Esmarch's objects, introduces a gratuitous risk which we seem practically to be alone in taking. There is no excuse for tolerating the grave uncertainty thus introduced into disinfection by the presence of superheated steam; for it has been shown, notably in the repeated and elaborate investigations made with the Geneste-Herscher stoves, that every advantage claimed for superheated steam can in a suitable apparatus be given by saturated steam, while real and certain disinfection is at the same time obtained. Our obstinate adherence to the old-fashioned sulphurous acid disinfection, which, while entailing the absolute maximum of inconvenience, has been shown over and over again to be unreliable in laboratory use and simply ridiculous in practice, is even more difficult to understand. On the ground even of economy there is no comparison between this obsolete process and, for instance, the disinfectant spray used in France; and while cases of renewed house infection are familiar to almost every medical officer in this country, we have Dr. Dujardin-Beaumetz's authority for saying that where the disinfectant spray has been introduced they are practically unknown in France. We are too apt in our sanitary practice to overlook those things in which it is easy to have certainty in the attempt to obtain it where it is difficult to obtain. This is poor policy, and it is to be hoped that in the case of disinfection it may before long have seen its day.

ANNUAL MEETING OF THE ASSOCIATION IN LONDON, 1895.

A meeting of the General Committee for the conduct of the annual meeting of 1895 was held in the Marlborough Hall, Regent Street, on October 31st, at 5.30 P.M. Dr. Russell Reynolds, President-elect of the Association, presided, and was supported by Dr. Leonard Sedgwick, President, and Sir W. Priestley, President-elect, of the Metropolitan Counties Branch, and the members of the Branch Council. The attendance numbered upwards of 700, and included a strong representation of every branch of medical practice in the metropolis. Mr. Andrew Clark, Honorary Secretary, announced that 1,126 members of the Association had already joined the General Committee. After a brief address by the Chairman, resolutions were proposed and passed committing the conduct of the annual meeting to an Executive Committee, assisted by 10 special Committees. Sir Richard Quain was elected Chairman of the Reception Committee, Mr. Ernest Hart Chairman of the Foreign Reception Committee, Mr. G. Eastes Chairman of the Finance Committee; Lady Priestley, Mrs. Russell Reynolds, and Mrs. Garrett Anderson managers of the Ladies' Reception Committee; Dr. Wallace Chairman of the General Purposes Committee, Mr. Waren Tay of the Museum Committee, Mr. Jonathan Hutchinson of the Pathological Museum Committee, Dr. Radcliffe Crocker of the Local Entertainment Committee, Dr. Ord of the Dinner Committee, Mr. Walsham of the

Soirée Committee, Dr. Isambard Owen of the Printing and Publishing Committee. It was resolved that the Executive Committee should consist of the local members of the Arrangement Committee, together with the Presidents and Honorary Secretaries of the special Committees, and that Dr. Leonard Sedgwick, President of the Metropolitan Counties Branch, should be Chairman of the Executive Committee. A vote of thanks to Dr. Russell Reynolds for presiding was passed on the proposal of Mr. Jonathan Hutchinson.

LONDON'S SMALL LUNGS.

The number of small breathing spaces in and around London has grown enormously in the last few years. There are now 198 small open spaces, having an aggregate area of 354½ acres. At present there is considerable diversity in the maintenance of these spaces. Some are permanently kept up by the London County Council, some are paid for by vestries and district boards, whilst others are maintained by private individuals or the Government. It is now suggested that all spaces under ten acres in extent, all of which the 198 referred to are, should be managed by the local authorities for the districts in which they are situated, but that the cost of management and maintenance should be defrayed out of the county fund. In this way the cost will be a charge upon the county of London generally, while some of the disadvantages connected with centralisation will be obviated.

FARM COLONIES FOR EPILEPTICS.

What to do with epileptics is one of the difficult questions with which the practitioner is frequently confronted. To send the patient to work seems often only to expose him to danger: to coddle him at home frequently aggravates his complaint; and in the workhouse to which he so often drifts, the bodily risk is by no means lessened, while the mental torment is increased. The farm colony for epileptics which has recently been established at Chalfont St. Peter's, is the beginning of what we may hope will be a new era in the treatment of epileptics in England. We are all agreed as to the advantage of work in the open air in dealing with such cases; the difficulty has always been to find places for them. Fresh air, work (regulated according to the necessity of each case), a healthy, interesting, and hopeful family life, and a simple nutritious dietary, are the advantages offered at this farm colony for epileptics. At present there is only accommodation for a few men, and only of what is called the third class, but it is intended to provide for both sexes and for three classes, the first of which will, by their higher fees, contribute to the support of the institution; the second will be taken at about cost price: and the third will be assisted cases, taken at a fee of 10s. per week, distinctly less than what they cost. It may reasonably be hoped, however, that the expense per case will be materially lessened when a larger number is received. Meanwhile it is satisfactory to find that, although the time is too short to speak positively about improvement in the attacks, there can be no doubt that in general health the inmates have already made great advances. It is hoped that the Poor-law authorities will by degrees find it useful to send a considerable number of cases to the institution. The Local Government Board is understood to have stated that guardians have power to pay for any inmates they may send. In regard to London, however, there is this difficulty—that the cost of adults so sent cannot be charged to the Common Poor Fund; the temptation, therefore, is to dispose of them in other ways. There appears to be need for further legislation in this matter, for if the case of the epileptic pauper were assimilated to that of the blind and deaf and dumb, there would be no difficulty in sending him to such an institution. The lot of an epileptic is always a sad one, but few people recognise how additionally sad is that of the person who becomes a pauper because he is epileptic. The ratio of epileptics among pauper and non-pauper children is not materially different, but among adults the ratio of paupers who are epileptic far exceeds that in the non-pauper classes; showing that a large number of epileptics are paupers only because they suffer from epilepsy. It is difficult to exaggerate the good that may be done by providing epileptics with fresh air, steady work, reasonable diet, and careful supervision. There can be no doubt that people of position and wealth will soon come to recognise the advantages of such an institution, and will pay handsomely to obtain its benefits, but to no class will it be such an unspeakable advantage as to those who are at present forced by their unfortunate malady into association with imbeciles and paupers who in many cases are utterly abhorrent to them.

THE SICK POOR IN PROVINCIAL WORKHOUSES: THETFORD.

Yet another Norfolk board of guardians appears to be content to hand over the care of the sick to an official promoted from the pauper ranks to wear a uniform and the title of "nurse," assisted by other paupers not so promoted. We are not surprised to learn that the doctor declines to recognise this system as nursing, and it is obviously impossible for him to order such treatment for the sick as he would in a hospital, where he could be sure that his instructions would be carried out. Economy is the plea, we may be sure, which is urged in defence of this state of things; for we cannot doubt that the medical officer, here as elsewhere, has brought the matter before his board and has received the stereotyped answer that trained nursing is costly and unnecessary. Yet it is probable that the increased expenditure would be to some extent balanced at the end of the year by the saving effected by better methods; there would be less waste in food and in nursing appliances; less bed linen would be used; while more rapid cures would relieve the burden on the rates. The fallacy that skilled nursing is less required because the proportion of chronic cases is larger in the workhouse infirmaries than in hospital is obvious to every medical man. The doctor can often do but little in such cases, while the skill and tenderness of the trained nurse can do much to alleviate pain and lessen discomfort. The principle that the sick pauper has a right to be cared for is conceded by the existence of the poor-rate, but such a mockery of nursing sets the principle at nought. At Thetford, too, there appears to be the usual structural difficulty; the sick wards are not concentrated, and some of them are not in communication with the quarters of the responsible attendant. We venture to appeal to the guardians to take these matters under their consideration, begging them to remember that not all outlay is extravagance; it may be a profitable investment or it may be demanded by common humanity.

POOR-LAW NURSES.

We have before us advertisements for Poor-law nurses, taken at random from the newspapers; these advertisements are inserted by the authority of the guardians when they seek to engage a nurse for the infirmary of the workhouse or of the schools. We are struck with the great diversity of salary offered for work that seems identical as to responsibility, though there may be divergence in the number to be tended. The lowest salary offered is £16 per annum, the highest being £40. Then, again, there appears to be the utmost licence used in describing a nurse; the applicant must have had "previous experience in nursing," "experience in nursing in some public institution," "a year's training in some public institution," "be competent to treat (!) ophthalmia and scrofula," "must have had experience in nursing sick children," "be qualified to perform the duties "prescribed by the orders of the Local Government Board," "preference given to candidates who have had simila ex

perience," etc. With regard to the midwifery qualification, the requirement oscillates between the certificated midwife and the nurse "who has had previous experience in midwifery." We gather from these advertisements that the medical officer had not been taken into the confidence of the board when formulating the description of a nurse. We seem to see the guardians skating with tender care around the thin ice of trained nursing, dreading lest public opinion should drive them accross the danger-marked spot, and they be engulfed in the cold water of trained nurses for the sick pauper. We can go a step further, and imagine the candidate relating her "previous experience" for the guidance of the bucolic board; but where is the medical man who, by a few test questions, would at once elucidate the exact training that the candidate had received? In nine cases out of ten he is kept in the background, lest he should whisper, "In what hospital were you trained?" It reminds us of a board of old ladies selecting a Trinity House pilot from the boating population of a riparian town. The want of definition in describing a nurse may account for the diversity in the remuneration offered, but it is quite obvious that at the present time nurses know their value, and a salary of £12 or £16 will only catch the failures in some other calling, who think that they will see what nursing is like. If a competent nurse is required, one who has had her training and can produce her certificates, and who bears a good character, the guardians must be prepared to pay a good salary, and nothing under £25 will bring such applicants before the board, and if midwifery is wanted in addition, the candidate will ask for £30—and she can get it.

THE PRICE OF A COLONIAL POLICY.

The French Academy of Medicine discussed recently the climate of Madagascar in connection with a possible military expedition. M. Le Roy de Méricourt, former Director of Naval Hospitals, took a leading part in the debate. He said before he retired he had ordered Dr. Villette, who is attached to the French Residency at Antananarivo, to study the fevers on the Central Plateau. He had also ordered other doctors at Tamitave, Mavotte, and Diego Suarez to furnish him with all the information they could about malaria along the coast. The Central Plateau was fever haunted. Non-acclimatised Europeans suffered. Many, no doubt, who fell ill on the Central Plateau had acquired the disease on the coast. Nor were the fevers on the High Plateau so virulent as those on the seaboard. This part of the island was so unhealthy that Europeans often had not time to hasten through it before they fell ill, and had to be carried the rest of the way. Dr. Le Roy de Méricourt feared that an expedition into the interior of Madagascar must be attended with great mortality. He was in favour of acting first through black pioneers, who might be engaged to cultivate the districts through which it would be desirable to make a road. The seaboard was unhealthy at all seasons, and mortal for the European. In the course of the discussion, it was stated by Dr. Lagneau that the Marine Ministry had never yet furnished statistics of the mortality among the French marine corps and civilians in Senegal and other tropical settlements.

THE ILLNESS OF THE CZAR.

Our Livadia correspondent telegraphs: I reported to you last week concerning our Czar on the best authority that although the official bulletins spoke of occasional rallies and of the relief given by tapping and drainage of the limbs the disease was pursuing its course in a most acute and threatening form. In the acute form of Bright's disease of the kidney, from which the Czar has for some time been suffering in its gravest form, there has been no well-grounded hope for months. All his present sufferings, of extreme emaciation, general cachexia, swelling of the limbs, difficulty of breathing, severe headache, proceeding to coma and convulsions, are only the regular and but too well known chain of symptoms in the continuous development of a most relentless disease. It was deemed prudent to make as light as possible of the worst features of his disorder, for his own sake as well as for State reasons. Unhappily it is one of which the earlier symptoms of albuminuria are often completely masked until a relatively late stage of the disease, and little blame can attach to those who are now severely blamed for not decisively diagnosing the malady in its earlier stages. His Russian physicians feel deeply their position, but their mouths are sealed. It is possible that complete rest from all the affairs of State, and from the special anxieties and shocks of the Imperial position, might have afforded a fair prospect of prolongation of life as has been the case in some few rare but well-known instances. This was what the Czar, in spite of the advice which I can affirm was respectfully but firmly tendered to him, was never willing to permit to himself. It is to the fatalities of his position rather than to any shortcomings of his Russian doctors that the rapid course of the malady should be ascribed. The official telegrams are now so full and frank that I need add nothing to the sad story. I am authorised to state that it is entirely untrue that M. Guyon, of Paris, was either consulted or requested to come to Livadia, nor has there been any question of a surgical operation other than those minor proceedings of which I have spoken. [Since writing the above, a telegram from Berlin has been forwarded stating that the Czar is dead.]

ANXIETY AS A CAUSE OF GRANULAR KIDNEY.

It is interesting, in relation to the ailment of the Czar, to recall a paper read by Professor Clifford Allbutt at the annual meeting of the British Medical Association at Sheffield in 1876. The subject he took up was "Mental Anxiety as a Cause of Granular Kidney," and by an analysis of his casebooks he showed what an abnormally large proportion of the patients showing symptoms of granular kidney had been subject to the depressing influence of prolonged anxiety. He says: "During the last two years I find I have made notes of thirty-five cases of granular kidney occurring in private practice, and I find a marked history of mental distress or care, or both, in twenty-four of them." This is a large proportion even if we admit that the pushing inhabitants of West Yorkshire worry abnormally concerning this world's goods. Several illustrative cases are given, and one especially in which as a consequence of an unfortunate investment, a man, in a good position, for three years "went to bed night by night ignorant whether he might not be gradually drained of his all." Dickinson is in some sense in accord with Allbutt on this question, although not so positive. Prolonged mental disturbance, anxiety, or grief as a cause of granular kidney is, he says, "perhaps problematical; the mode of its operation is not obvious, but must be surmised as through the nervous system. A lowering of nervous force is to be recognised at least as predisposing to every form of albuminuria. I have seen so many instances in which granular degeneration has been immediately sequent upon trouble that, in the absence of other causes, I am fain to conclude that mental conditions are sometimes concerned in its production."

THE CZAR'S "CASE" AS A CLINICAL PICTURE.

However incomplete may be the news which has reached us from day to day regarding the Czar's condition, it presents, when properly collated and when item is compared with item, a striking picture of the later stages of that form of chronic Bright's disease which is pathologically associated with the granular contracted kidney. It would be a matter of considerable interest to know whether previous to the more serious developments during the last few months the kidney secretion had been examined. It would appear from the reports that the existence of kidney disease was first demonstrated in August,

but probably long before that date, if examinations of the urine had been made indications of disease would have been discovered. Speaking on this subject Sir George Johnson tells us an anecdote of Sir William Gull, whom he met in Eastbourne shortly before his death. "You know," said Sir William Gull, "the true translation of *Γνῶ θι σεαυτον* is Test your urine;" and it would be a matter of great interest to know whether this had been done within the last year or two in the case of the Czar. As to cause, no doubt the causes of Bright's disease are various, but among them very suggestively stands prolonged anxiety, a factor which in this case has notoriously been prominent. How this operates may perhaps be a matter of doubt, probably by disturbance of the digestive processes, causing the circulation of imperfectly metabolised products. On this matter reference may be made to page 681 of Sir George Johnson's work. The loss of flesh, the failing appetite, the inability for exertion, the attacks of dyspnœa occurring apparently before any evidence of lung complication, are all suggestive of the gradual destruction of excreting power which takes place in granular kidney. The weakening heart, the failure of the compensatory hypertrophy under the influence of indigestion and owered dietary, the gradual development of dropsy, the orthopnœa, the patient sitting night and day in his armchair, the occasional convulsive seizures, the drowsiness alternating with times of comparative mental brightness, the growing effusion, and now the symptoms of congestion of the lung, with hæmoptysis and difficulty of breathing, are all exactly what one finds continually towards the end of these cases. So long as the resistance in the circulation, so long ago demonstrated by Sir George Johnson, can be overcome by the strong, well-fed heart, no very obvious signs of disease may be apparent, but with failing heart the end steadily approaches.

MR. FROUDE.

The fatal illness of Mr. Froude was, we are informed, due to cancer of the colon, which first made its appearance in May last; up to which time, at the age of 74, he was still a man of unusual vigour and physique, fond of outdoor and active pursuits. He became much emaciated, and gradually lost strength, dying of exhaustion on Saturday morning, October 20th. Happily the pain was never very severe during the whole of his illness, which was, Mr. Twining informs us, easily controlled by hypodermic injections of morphine.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

We this week report further cases of the cure of most severe cases of diphtheria, apparently on the verge of a fatal result by the use of the antitoxin. All the cases hitherto reported in the Journal have been in the practice of private practitioners. The remarkable curative powers of the antitoxin appear to be established here and all over the world. It is a pity that so much credit has been given to M. Roux in Paris and in world-wide telegrams for merely applying a remedy which is of German origin; the hysterical excitement manifested in France, from the President downwards, does more credit to the heart than to the head. A more ridiculous and misplaced outburst of false Chauvinism has rarely been witnessed, even among our charming and able but excitable neighbours. Sir Joseph Lister's appeal is somewhat puzzling, for only a fortnight ago he stopped an appeal of the kind with the statement that the cost of treatment per case did not exceed 9d. to 1s. 6d., which is less than the ordinary cost of existing medication.

PAUPER CHILDREN AND COTTAGE HOMES.

A guardian, writing to the *Times*, draws attention to the defects in the method of bringing up pauper children in what are called cottage homes, such as those established by the West Derby guardians at Fazerkerley, where some 600 children are placed, 30 in each house, under the care of a foster mother, who draws her weekly supply from the "store," and generally supervises her large family. He holds that: (1) Thirty children under one foster parent is too many. Institution rules become necessary when the family exceeds the normal number. (2) Foster parents often change. (3) The children often change, and, when they return after an absence, come under fresh guardianship. (4) The children are not taught, any more than in barrack schools, to mix in an ordinary way with ordinary life. In villages entirely composed of children life must necessarily be strained and artificial. All this is perfectly true. Still, even this arrangement where, at any rate, each child can reach and speak to the supreme authority it has to obey, is far better than the aggregation of the whole 600 under one roof governed entirely by underlings. It must be obvious to everyone, however, that the construction of a child's village is by no means an ideal system, nor even the best practicable system, of dealing with these children. The facilities for supervision, and the small economy of drawing from one store, are no compensations for the evils of what, after all, is but a barrack school spread out. For the maimed in limb or in intellect, the cripples and the imbeciles, among whom may fairly be classed the irreclaimably vicious, strictly classified schools will probably always be necessary. For the orphans and all such deserted little ones as are thrown unreservedly on the hands of the guardians the boarding-out system is undoubtedly the best. For the children, however, of people who oscillate between pauperism and independence—who are constantly in and out of the pauper class—some provision is required which, on the one hand, will give a stricter discipline than can be obtained by boarding out, and, on the other hand, will avoid the evils and the contamination of the barrack school. The requirements of this class would appear to be best met by the cottage home, arranged in such a way as to secure a very strict classification of the children and a very careful adaptation of the foster parent to the child. In every case, however, the aim must be to indue the growing child with the thoughts and feelings normal to its position in life, and this can never be done by erecting a separate and independent community of children, 600 strong, with thoughts and interests entirely distinct from those of the people into whose midst they are intruded.

UTERINE CANCER IN INDIA.

The greater frequency of cases of malignant disease of the uterus is attracting attention in Calcutta. The detection of these cases is attributed to the beneficial action of trained nurses and lady doctors, who recognise and treat a host of ailments among Indian females which would otherwise remain unknown and unrelieved. This is absolutely true. Nevertheless these cases are seldom seen at a stage when milder measures, such as erasion, cauterising, or limited excision might suffice. It has become painfully certain that hysterectomy, abdominal or vaginal, is the only effective measure in most cases that come to light, and even that is too often a remedy of despair. A young Hindu surgeon of Calcutta, Dr. S. P. Lashadicarry, has performed successfully an operation of abdominal, and another of vaginal hysterectomy for uterine cancer in private practice. Those only who know the difficulties of the circumstances can understand what high credit is due to this spirited and skilful practitioner for his enterprise and cleverness. The incident indicates how successful the teaching of surgery has become in the capital of India.

Cork Hospital Saturday.—In addition to the sum collected in Cork on Hospital Saturday, contributions have been sent in to the Committee amounting to £708 2s. 10d.

We are pleased to learn that Professor Awoyama, who was sent with Dr. Kitasato to Hong Kong to investigate the plague, and who himself contracted the disease, has now recovered, and has left Hong Kong for Tokyo.

THE SCANDALS OF MASSAGE.

Report of the Special Commissioners of the "British Medical Journal."

I.

Our readers will remember that we called the attention of the authorities some months ago to gross scandals which had come to our notice in connection with the practice of a certain number of houses of alleged "Massage." We suggested then nothing which was not based upon information furnished with authority, and we felt it our duty to urge that action should be taken by the police. In reply to interrogations the Home Secretary stated in Parliament that he had directed police inquiry on the subject, and the later result was that the public were informed that Scotland Yard had investigated the matter, and found no reason to take action. Our statement that one of the massage houses had been in fact raided by the police was denied, and Mr. Asquith said that the police had no such information. We were duly taken to task by various critics for having started an unnecessary and undesirable commotion. We had meantime the advantage of official visits from Scotland Yard, and placed in the hands of its representative the clues—the names of our informants: but again with a wholly negative result.

It therefore became our duty to continue the inquiries which we had made, not merely in order to establish the facts, of which from the first there was no doubt, but in order to place the evidence in such a form that it shall be beyond the reach of official incredulity. We accordingly commissioned gentlemen, whose medical and legal capacity and status are above criticism, to deal with the evidence and to follow it up further.

We are now in a position to state the results of our inquiry, which are such as it will be impossible for the public to regard with indifference or the police to ignore. We shall deal with these in a short series of articles, setting forth the various aspects of what threatens to become in its way one of the most monstrous of the mischiefs of the time, and has for us the especially painful interest that it is cloaked under the guise and protected by the mask of an assumed medical use. We are driven to this course. It would have been better if the Home Office had followed up our former suggestion by such steps as would have prevented the opening for another season of a scandalous traffic. Why the police could not find out all and more than all we have ascertained we do not know. We feel bound to say plainly that, in reply to their very courteous communications, we placed frankly at their disposal the facts and informations on which our first article was based. What action they took we cannot say. But, in the face of the official declarations and subsequent inaction, it is clear that nothing more is likely to be done, unless a public opinion is aroused which neither the authorities nor the offenders can ignore.

We commence by saying, since the time is opportune, that one of the most obvious symptoms of the mischief may be discovered at any time by an inspection of the advertisement columns of the newspapers. The worst offender, we regret to say, is the *Morning Post*. For many months there have appeared in high-class newspapers, as in certain others, a series of advertisements of persons and places proposing "Massage" treatment. The form of some of these announcements has been itself in many cases sufficiently suggestive. That some of them are not intended as covers for any evil design is, of course, beyond question. That no small proportion are the lures and touts of places of execrable character is equally certain. We shall have occasion to refer to some of them in the articles that are to follow. We will merely call attention here, in the first instance, to the nature of the advertisements and the general arrangements of the trade.

The advertisement generally begins with the word "Massage." To this, "electrical" treatment is sometimes added, and occasionally there is an announcement of a "bath de luxe." This may be, perhaps, a "pine bath"—the speciality consisting, of course, in the cheap and easy addition of a little pinol. It is then customary to announce that "Madame" X., assisted by "Nurses" Y. and Z., "receive patients daily" at some address within easy reach of clubland, "from 11 A.M. to 7 P.M.," or thereabouts. It is indicated that arrangements may be made at other times "by appointment." Occasionally, but not commonly, "Madame" refers to a multitude of diseases of the vaguer type, including, let us say, "debility" and "insomnia." The usual advertisement, however, makes no detailed reference to the supposed medical quality of the operation, unless it be in the insertion of the word "certificated" after the name of the principal. In some cases we have noticed the words "London Hospital" certificate. As there is no real "hospital" qualification in massage, this is probably a reference to a gentleman having more or less of hospital status who grants such certificates; but to this subject we shall return. Sometimes the lady assistants are commended to the public by the significant addition, "fresh staff." In one or two cases there has been special reference to a "page boy;" but this topic, we are informed, has been discouraged by the newspapers. You are occasionally told that the rooms are "well warmed," or "cool and pleasant"—according to the season—or simply that they are "luxurious." One lady advertised, earlier in this year, under the heading "Massage," in the following terms: "Wanted, an assistant, at once, not over 23; bright and nice manners; from 2 to 7." The prospect offered was a pound a week. If the work was honest, this was not much, but as will be seen hereafter, there are sometimes other emoluments besides the stated salary.

There does not, however, appear to be any great difficulty in obtaining assistants, for the advertisements for these are comparatively rare. One enterprising Madame, who was provided with three lady assistants and three "baths de luxe" explained to her clients that there would be "no waiting." Another, who made special reference to "loss of nerve power," called attention to her "special Continental system." Sundays are generally available, and there are occasional intimations that the ladies will come out to "visit" if required. Occasionally a masseur is laid on, but he is an exception. The treatment is almost always left in the hands of young ladies, whose attractive qualities are

deftly indicated in various ways, and who are described either by their pet names as "Nurse Dolly," "Nurse Kitty," and the rest, or by names of a high-flown and manifestly fictitious character, which, to say the least, do not at first sight indicate a very sober conception of their office.

These advertisement have appeared in shoals for many months; they are still continuing day by day. From a study of them it is easy to see that many of the principals change their addresses frequently, and occasionally find it desirable to change their name. It is also apparent that the policy of a "fresh staff" is conscientiously carried out by reasonably rapid changes among the young lady assistants, whom each lady advertises to her *clientèle*. It is not very difficult, in fact, to distinguish certain steady and serious establishments from a kind of floating and shifting gang.

Our readers can judge for themselves from our account, or still better from a file of the newspapers, whether these advertisements do or do not appear to indicate a wholesome development. We are far from saying, we repeat emphatically, that all the advertised establishments are necessarily suspect. We have reason to know that some of these ladies are honest and capable, and we have every sympathy with them, for their legitimate and helpful work is ruined by their less scrupulous competitors.

Some of the announcements, which look suspicious and to which we have directly or indirectly referred, may be innocent or merely indiscreet. We shall bring and desire to bring no charge against any one place or person except those whom we shall presently identify, and as to these we shall state not surmises and inferences, but facts which can, if necessary, be proved.

In the summer months the establishments are closed for the most part. When London fills up again they become active. We will leave for another article the explicit statements which we have to make as to the nature of the practices which go on in many of these places; but for the present it may be sufficient to state shortly what kind of place the casual inquirer will find if he goes for the first time to some of the addresses we refer to. He will find probably a flat of four or five rooms, in a fashionable West End locality. In many cases the establishment is on the first floor over business premises. The approach to it is guarded by various arrangements for privacy. As the visitor enters, an electric bell rings automatically and he will find himself received in a well furnished room by a lady of middle age, with a certain capable air of respectability. She will make no inquiry as to his name, and probably none as to his complaint. He will be invited, with little loss of time in preliminaries, to adjourn to a room luxuriously furnished, where he will find a bed or couch spread with blankets. He will be informed, unless it is assumed that he knows it already, that the terms are for an hour a guinea, but that he can stay as long as he pleases by the same rate. In some instances it will be suggested to him that it would be a good thing to have a bath first and the massage afterwards. It will be assumed, as a matter of course, that he intends to have "general massage," that he will want a young lady to do it, and that he will undress completely.

Madame will then leave him to his own devices. In two or three minutes the lady assistant will appear, and the "treatment" will be duly administered. He will not be interrupted, nor, in fact, will he see "madame" again until he pays her as he leaves the house. This state of things in itself will be admitted by everybody to be sufficiently risky. What it leads to we shall feel it our duty to indicate with decent plainness in another article.

THE GRANT COLLEGE MEDICAL SOCIETY BOMBAY.

This Society is almost coeval with the institution from which it derives its name, and of which it may be considered a branch. Originally organised by the teachers and alumni of the Grant Medical College, it has, during its fifty years of life, enrolled the graduates first of the College and then of the Bombay University, until its members have reached the number of 165. These include about a dozen officers of the Indian Medical Service holding appointments in the presidency town, and some practitioners of Bombay with English qualifications. The Society embodies and represents the *élite* of the medical profession in the western presidency, and constitutes a bond of union and instrument of mutual improvement among the qualified practitioners of Bombay, who are of diverse religion and race, of great social and scientific value. The *Transactions* of the Society for the year 1893, which we have received recently, indicate that this Association is striving to fulfil its purposes with earnestness and energy. The ordinary meetings of the year were well attended, and the papers and discussions practical, intelligent, and useful. One of the papers bears the following startling titles: "Notes of a Case with a Tendency to Protracted Gestation: Successive Periods—12 Months, 18 Months, 21 months, 54 Months." The evidence presented in support of the marvellous performances of this remarkable lady, "of short stature and middle-sized build, jolly temperament, protruding incisors, and dark-skinned features far from prepossessing," was of a very flimsy character, and the good sense of the meeting was firmly opposed to its sufficiency. Nothing attests progress in rational medicine so satisfactorily as the elimination of the marvellous. The special feature of the year was a prolonged discussion on the subject of fever which extended over nine protracted and well-filled meetings. The discussion was opened by a very able paper by Dr. U. U. Katrak, which covered the whole area of the theme—etiology, semeiology, pathology, treatment and varieties; and successive speakers delivered elaborate treatises in time of equal extension. However laudable the spirit which sustained the speakers in delivering and the audience in listening patiently to these orations, it is more than doubtful whether this sort of exercise is calculated to add much to our knowledge. A few pithy sentences from each speaker on points which he had made the subject of special attention would have been more valuable. We gather that typhoid fever is not common in Bombay, especially among natives, and that there is a form of continued fever very prevalent in the island called "Bombay fever," which some speakers were inclined to attribute to faulty sewerage, and to name "municipal fever." This form of disease requires careful observation and study. Another inquiry of a more practical and useful kind regarding the propriety and safety of administering quinine during pregnancy was conducted by a committee of the Society during the year. The conclusion arrived at, after consideration of the experience of thirty-three selected medical practitioners, was that "the existence of pregnancy is no bar to the administration of quinine," and that "abortion following the administration of quinine is either the result of the original malady or the effect of idiosyncrasy." These conclusions were accepted by the Society.

Under the will of the late Mr. G. H. Foster, the Sheffield General Infirmary and the Public Hospital and Dispensary each receive £500.

PARLIAMENTARY BILLS COMMITTEE.

A meeting of the Parliamentary Bills Committee was held at the offices of the Association, 429, Strand, W.C., on Tuesday, October 23rd, 1894.

Present:

Mr. Ernest Hart in the Chair.

Dr. Ward Cousins, President of Council.

Mr. Butlin, Treasurer.

Dr. A. G. Bateman (London).
Dr. R. W. Batten (Gloucester).
Dr. J. Spottiswoode Cameron.
Dr. W. F. Cleveland (London).
Mr. George Eastes (London).
Dr. R. Esler (London).
Dr. Galton (London).
Dr. Bruce Goff (Bothwell).
Dr. W. Gordon (Exeter).
Dr. Ogilvie Grant (Inverness).
Dr. A. J. Harrison (Clifton).
Mr. J. H. Hemming (Kimbolton).
Dr. Holman (London).
Mr. Evan Jones (Aberdare).
Mr. Jones Morris (Portmadoc).
Dr. Isambard Owen (London).
Mr. C. H. Watts Parkinson (Wimborne Minster).
Dr. H. H. Phillips (Reading).
Dr. G. E. Shuttleworth (Richmond Hill).
Dr. R. Somerville (Galashiels).
Dr. John Strachan (Dollar).
Mr. G. T. Street (Newton-le-Willows).
Dr. J. Taylor.
Dr. A. R. Urquhart (Perth).
Mr. F. Wallace (London).
Dr. S. Woodcock (Old Trafford).

The General Secretary read the following resolution of the Council appointing the Committee:

That the following be appointed the Parliamentary Bills Committee: The President, the President-elect, the President of Council, the Treasurer, Dr. Bateman, Dr. Bridgwater, Mr. Eastes, Dr. Esler, Dr. Holman, Dr. Mickle, Dr. Reid, and Mr. Wallace, together with the representatives of the Branches.

It was proposed by Dr. Ward Cousins, President of Council, seconded by Dr. Holman, and resolved:

That Mr. Ernest Hart be reappointed Chairman of the Committee.

Letters of apology for non-attendance from Dr. W. L. Winterbottom, Dr. Lowe, Mr. Langton, Dr. Townsend, Dr. Somerville, Dr. Murphy, Dr. Mickle, Mr. Manby, Dr. Ritchie, Dr. Reid, and Dr. Balding were read.

Amendment of the Medical Acts.

The Chairman said at the last meeting the Committee authorised him to submit the documents on proposed amendments of the Medical Acts for further consideration of counsel, and to prepare a draft Bill based upon the reports received from the Branches. In order to give weight to the remarks on the subject at the Bristol meeting, he had also sent copies of the various speeches made to the Council in case any point had been overlooked. The Committee had before them Mr. Muir Mackenzie's first opinion: in his (the Chairman's) opinion it did not go to the full extent the Committee desired to go. It did not deal with a good many of the desired points. He had, therefore, annotated it, and pointed out that it dealt only with the penal clauses. After subsequent consultations with Mr. Turner and Mr. Costelloe, Mr. Mackenzie had considerably broadened the basis of his memorandum. There was only one point that had not been dealt with, and that was not submitted to him, as the Committee had not yet authorised it, and that was the question of medical aid associations which were employing medical men and making profits out of their work. He would leave it to the Committee to say whether that was not also a thing which should be dealt with. In consulting Mr. Muir Mackenzie the Committee had the advantage of dealing with a gentleman acquainted with the past proceedings of the General Medical Council. The General Medical Council had already received the previous draft report of the Committee. A satisfactory point was that all the counsel were agreed that the disciplinary powers of the General Medical Council have been very much enlarged by the recent decisions of the judges. The existing powers were really larger than they had been known to be.

After some discussion, in which certain additions and modifications were proposed, it was resolved:

That the documents submitted should be forwarded to each of the Branches, with a request for any further observations thereon.

It was further proposed by Dr. Spottiswoode Cameron, seconded by Dr. Urquhart, and resolved:

That the General Secretary be asked to communicate with the Secretary of each of the Branches, and ask them to call a special meeting to consider the matter, and to let the Parliamentary Bills Committee have their observations early in the new year.

Mortality among Children of Women Employed in Factories.

The Chairman said that there was no further progress to report in this matter, except that Mr. Asquith had expressed his willingness to receive a deputation early in November from the Committee.

Dr. Spottiswoode Cameron said he believed Mr. Asquith was making inquiries through his inspectors, so as to get all the facts together. He thought it was a very hopeful sign that the Home Office were making inquiries.

Barrack Schools.

With reference to the question of barrack schools, the Chairman said that he had had several interviews with Mr. Shaw Lefevre. The deputation which waited recently upon the President of the Local Government Board, and upon which the Committee was represented, asked for a Royal Commission, and Mr. Lefevre would probably have granted it: but after further consideration he came to the conclusion that to appoint a Royal Commission would be to hang the matter up for two or three years. Finally, an independent committee, consisting wholly of eminent persons under the chairmanship of Mr. Mundella, was appointed. Mr. Hart thought the committee a most satisfactory and impartial one and it was to him a matter of great congratulation that by three months' work in the British Medical Journal he had been able to lead up to what would no doubt end in a great public reform. He hoped no less from the Commission he had opened of inspection of the provincial workhouses and infirmaries, which had already and in the meantime effected incalculable good in improving the nursing of those establishments.

Cholera at Hardwár and Mecca Fairs.

The Chairman said a resolution was passed at a recent meeting, owing to this matter being referred to the Committee from the Newcastle meeting, requesting him to lay certain facts before the Sultan of Turkey, and he hoped to carry out the resolution during the next month while on his winter holiday.

Vaccination.

The Chairman said a great deal of harm was being done by the delay in the issuing of the report of the Vaccination Commission. That Commission had been sitting for five years, and a great many boards of guardians had decided not to prosecute in the case of non-compliance with the Vaccination Act pending the issuing of the Commission's report. The Commission was waiting for the reports of the epidemics of 1892 and 1893 at Leicester.

Mr. Galton said he quite agreed that a great deal of harm was being done by the delay in issuing the report, and he hoped the Committee would express their strong opinion on the damage being done by the delay. If the Commission were not able to issue a detailed report at once they should at any rate issue an interim report which would set at rest all doubts as to the value of vaccination.

Dr. Wallace said he regretted to say that in the Hackney Union, by a small majority, the vaccination law was a dead letter. They did not prosecute any parents who refused to have their children vaccinated.

Mr. Galton proposed, and Dr. Holman seconded, the following resolution, which was carried unanimously:

That the Parliamentary Bills Committee greatly regret the delay in the issuing of the final report of the Vaccination Commission, and trusts that the Commission will issue it at the earliest possible date. Should it be impossible to issue a detailed report soon, they hope the Commission will, at any rate, issue an interim report, so as to set at rest all doubts as to the value of vaccination.

Vote of Thanks.

On the motion of Mr. Butlin, seconded by Dr. Holman, a vote of thanks was directed to be forwarded to the following

members of Parliament, thanking them warmly for the assistance they had given the Committee and the public services they had rendered in calling attention in Parliament to matters concerning the medical profession and the public:

Mr. R. W. Hanbury, Mr. H. V. Arnold Foster, Captain Cecil Norton, General Goldsworthy, Mr. Archibald Grove, Sir John Gorst, Sir Henry Roscoe, Dr. Farquharson, Mr. Morton, and Sir Charles Cameron.

PAY HOSPITALS AND CHEAP DOCTORS.

The medical profession could not expect to escape the general *bouleversement* with which all our institutions are threatened in this age of emancipation from all authority. Nor can we wonder that as every other commodity is being made cheaper and cheaper daily there should be a steady attempt to cheapen medical fees, especially to "the working classes." Hence the favour with which the institution of "pay hospitals" (where everything is to be paid for except the medical or surgical treatment) has been received in many quarters, especially by the provincial press. One of our provincial journals, commenting on the proposed formation of pay wards at the Great Northern Hospital, mentions as

an instance illustrative of the unique self sacrifice of the medical profession that the staff of the hospital have promised to attend the patients in the new paying wards gratuitously on the same conditions as the patients in the free wards.

We have already spoken of this matter and have given what we believe to be satisfactory reasons for the opinion which we hold that pay hospitals should be kept separate from medical charities, and that in all such pay hospitals an adequate part of the payments should be for medical treatment. Our readers will have noticed an interesting communication in the British Medical Journal of October 27th in this sense from a correspondent. We are glad to see that at the Great Northern Hospital the scheme has not been allowed to come into operation without so weighty a protest as must compel public attention to its working though its authors have refused to postpone its inception. As therefore it is to be tried we abstain from further comment for the present, only urging on other institutions a wise hesitation in following the example of the Great Northern till its results become more appreciable.

Another question, much discussed now by our provincial contemporaries, is as to "cheap doctors." Is it disgraceful in a medical man to be ready to see all comers and give them medicine for sixpence, and ought he to be visited with the censure of the licensing bodies for making it publicly known that he is so ready? Dr. Martin, of Sheffield, has lately been speaking in strong terms of the conduct of practitioners who so act, and his observations—the text of which we regret that we have not seen—have provoked the cheap sarcasms of some local scribe, who thinks that "the medical profession seems to be on the eve of a sort of internal strike." At Birmingham, also, Dr. Martin's address has elicited comments from the press. A leading article in the *Birmingham Daily Argus* strongly advocates the sixpenny scale of fees, though it admits that it must often be the resource of men with no experience and men of damaged character. On this Mr. Pooler, of Birmingham, pertinently observes in the same journal:

From the people's point of view, this cheap doctoring is not necessary. For all who cannot afford to pay there are hospitals, the dispensaries, and, as a last resource the parish doctor; there is therefore no necessity for (to quote your article) "physicians who render invaluable service to the poorer members of the community by giving them medical aid they could not otherwise obtain." As a matter of fact the services are rendered to those who could very easily obtain fairer priced medical aid, and this is why such "sixpenny doctors" are spoken of by Dr. Martin as "the blackest of the black sheep of the profession." Further, the fact that such practices often change hands for large sums is proof that it is not always the needy beginner or the still more needy "man of damaged character" who carries them on.

And possibly, from the business point of view, this answer is sufficient. But the public are apt to forget that there is another view of the matter besides that of mere business. Our critics are fond of characterising any attempt to secure remunerative medical fees as "trade unionism," and to ask if a tradesman is allowed to sell his wares for what they will fetch, why should not a medical man deal with his medical advice on the same terms? The reply, of course, is that the medical man is not dealing in wares which his customer can value for himself or get valued for him, but that character and confidence enter largely, nay vitally, into the transaction. All underselling and all advertising are repugnant to the traditions of an honourable profession because they tend to equalise the trustworthy and the untrustworthy practitioner. Medical aid cannot be made cheaper than it is without driving the "sixpenny doctor" to eke out his insufficient remuneration by some such underhand means as Mr. Pooler hints at in the above paragraph as giving a money value to these sixpenny practices.

From such underhand means the patients must most certainly suffer. The public has not less interest than the profession in seeing that its medical attendants are fairly paid, and in discouraging all those who seek to earn a disgraceful livelihood by the arts of the advertiser and the cheap-jack. On this point we believe that there is little, if any, difference of opinion, however the pressure of need may tempt a few practitioners to courses of which they are themselves ashamed.

THE LAST REPORT ON LICENSED RETREATS FOR INEBRIATES.

The working of the Inebriates Acts has been seriously crippled by the deterrent judicial procedure before two justices, or one metropolitan police magistrate, which has to be faced before an inebriate, applying of his own accord for admission into and detention in a retreat, can be received therein. The wonder is, in the circumstances, that there is a single applicant; yet in one retreat alone (the Dalrymple Home at Rickmansworth), of 344 male inebriate patients admitted for treatment, 159 were persons who put themselves under the compulsory detention provisions for from three to twelve months. Of those thus surrendering their liberty in the hope of protection and cure, 48 did so for the full term allowed by the Act. This fact alone, apart from the large proportion of those who have been restored to their duties in life, is substantial proof that the Acts have not been a complete failure. The number of voluntary applications, in spite of existing obstacles to admission, is a pretty certain indication that the accommodation at present available falls very far short of the demand. The records of the Dalrymple Home, with detailed particulars of the patients' treatment and of their after-history, so far as can be ascertained, are published yearly.

In a recent report the inspector quoted these entire. A summary appended to the home's last report for 1893-94 showed that 109 have "done well," and 12 more have improved; 63 had not been heard from, but if these be all put down as unimproved (an assumption not warranted, for some genuine cases of cure are most anxious to conceal the fact of their having been in a retreat for inebriates), the measure of success has been much greater than the most sanguine supporter of the experiment could have hoped for. If such a result has been attained under the present imperfect law, it is reasonable to suppose that an even better return would reward more effective legislation.

In unison with other societies interested in habitual drunkard legislation, the British Medical Association has been persistent in urging upon successive Governments the urgent need for the improvement of existing provisions, which has been fairly met from time to time by the Secretary of State in model rules. It has also been repeatedly pressed upon Ministers that more compulsory powers are indispensable. The most urgent of such new provisions is power to properly constituted authorities, upon medical and other evidence, to order the reception and detention, in a retreat, of well-defined cases of habitual drunkenness, as at present many such obstinately resist the pleadings of friends and the counsel of their medical advisers, and pursue their downward course unchecked to the ruin of all dependent on them for subsistence. The mere fact of power compulsorily to seclude would at once enormously increase the number of voluntary applications for admission.

The amendment next in importance would be provision for the curative detention of the poor. It is a national opprobrium that at present there is practically no refuge for the impecunious male drunkard but the workhouse or the gaol. Every attempt to provide for this class has failed, causing embarrassment and loss to the philanthropic experimenters.

Nor is it at all likely that this want can be satisfactorily met by voluntary effort. The care of women may be thus undertaken, as remunerative employment can be more easily devised for them, but with men it will probably be found that some direct State effort will have to be resorted to. Recent notorious disclosures indicate the advisability, if not of State management, at least of searching State inspection and control. Other amendments are required, such as the inclusion of habitual drunkenness in cocaine, morphine, and other narcotics, in the range of this department of legislative action, as in many of the United States.

Happily, the influence of the magistracy, the clergy, the legal profession, the officers of prisons and reformatories, has now come to the aid of medical practitioners in this demand on our legislators, a large proportion of whom are favourably disposed. In some of the British Colonies, in America, and on the Continent of Europe, to some extent, the legislation desired is in operation with beneficial results. Still more satisfactory has been the pledge of Mr. Asquith to present a Bill to Parliament embodying many of the recommendations of the recent Departmental Committee on Inebriates. Now that he has been unable to redeem his promise during last session, it is not improbable that he may wait for the evidence about to be taken by the Scottish Committee, of which Sir Charles Cameron is Chairman. If the hope for amended and efficient legislation, however, is to be soon realised, the work of the Association must be redoubled. With that view we call for the strenuous efforts of every member to bring all his energies to bear in influencing his Parliamentary representative to strengthen the Home Secretary in his expressed determination to legislate in accordance with the requests of the Association and the medical profession.

SMALL-POX AND VACCINATION IN 1893.

MANCHESTER.

In moving the adoption of the report of the Monsall Hospital Committee, at the meeting of the Manchester Infirmary Board, held on October 29th, Mr. A. Simpson mentioned that there was in Monsall Hospital on October 28th a larger number of patients than had ever been known before. The fact was due to a considerable epidemic of scarlet fever. At the outbreak of the recent small-pox epidemic, a resolution was passed requesting the chairman of the Monsall Hospital Committee to report to the Infirmary Board as to the mortality of vaccinated and unvaccinated patients who were admitted to the institution. Dr. Berry, the resident medical officer, had prepared statistics which showed that between March, 1892, and October, 1894, 1,004 small-pox patients were treated at Monsall. The mortality in the unvaccinated cases was 30.84 per cent.; in doubtful cases, that was where the patients said they had been vaccinated, but there were no marks left, it was 13.02; and in distinctly vaccinated cases it was 4.03. Of four patients who took the disease after they had been revaccinated, in each of whom it appeared in its mildest form, none died. Not one member of the staff, including the nurses, ward maids, or laundry maids, was affected by the disease.

There was another circumstance even more convincing respecting the value of vaccination, and especially of revaccination. A considerable number of patients had been received who were certified as suffering from small-pox, but who were found to be ill from some other disease. In making that statement Dr. Berry wished to cast no reflection on the certifying doctors, for in its early stages there was extreme difficulty in diagnosing the disease accurately. All these patients were taken into the small-pox wards, where there was strong or dense infection. Upon the resident medical officer determining that they were not small-pox patients, they were revaccinated, and in no single instance did they take the disease. Dr. Berry had stated his conviction that if a person was exposed to the infection of the disease, and was vaccinated within forty-eight hours of such exposure, he would guarantee that such a person would not be seized with small-pox.

Mr. Gerald Peel, in seconding the resolution, remarked that the figures Mr. Simpson had given were very convincing. They were of great interest to the public.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

XVII.—MR. R. H. FRITH (Woolston) writes: The value of antitoxin in the treatment of diphtheria, the diagnosis of which was verified by bacteriological cultures, has just been shown in a case at Netley, under the care of Surgeon-Captain J. M. REID.

L. P., aged 11 years, was taken ill on October 19th with *malaise* and sore throat. Next day the tonsils and uvula were covered with membrane; from portions of this cultures of Loeffler's bacillus were readily prepared.

On October 21st 19.5 c.c. of antitoxin were injected into the right flank. That evening the temperature fell to normal. This was followed by rapid detachment of the membrane, and reduction of glandular enlargement, which previously had been marked. On October 23rd the temperature was normal, the patient felt better; the soft palate and tonsils were nearly free from membrane. The subsequent course of the case has been slow, but uninterrupted towards convalescence.

The antitoxin employed was obtained through Professor A. E. Wright, of Netley, from Dr. Ruffer. Previous to employment, its strength was accurately determined by experiments upon guinea-pigs, with the result that 0.001 c.c. was found to neutralise 1 c.c. of active diphtheria toxin. Obviously, this antitoxin was relatively weak as compared with some prepared by Behring and others; hence the necessity of injecting so large a dose as nearly 20 c.c.

The precise origin of this case of diphtheria is unknown, but a case occurred in the next house some two months ago, and the disease has been more or less prevalent in Netley and adjacent villages during the whole of this year. So far, no cases have occurred in the various married quarters belonging to and within the grounds of the military hospital.

XVIII.—Dr. TREVOR FOWLER (Medical Officer of Health, Epping District) sends the following history of a case of diphtheria treated successfully with antitoxin:

M. R., aged 13, sister of the two cases reported by me in the BRITISH MEDICAL JOURNAL of September 8th, was admitted into the Epping Infectious Hospital on October 15th. She began to feel ill on October 12th, and was seen by Dr. Grubb, of Harlow, on October 14th, when she was found to be suffering from diphtheria. Upon admission the right tonsil was covered with membrane, and the left with a thin white film, the uvula being free. There was some slight glandular swelling on either side of the throat, and slight dysphagia. The temperature at 4.15 P.M. was 102.6°, the pulse 100, and respiration normal; 2 c.c. of Aronson's antitoxin serum was injected antiseptically into the left arm, a chlorine mixture was ordered, and the throat directed to be sprayed with solution of chlorine every two hours. At 10 P.M. the temperature was 102° F. At 6 A.M. on October 16th the temperature was 99.8° F.; at 10 A.M. it was 100° F., and the pulse 90. The membrane had not increased, the uvula was red and swollen, the dysphagia was less, and the patient, who had passed a fairly good night, felt better. The urine was free from albumen. On October 17th, the morning temperature was 99° F., the evening 98.8°. The pulse had fallen to 56, the tongue had become moist; the left tonsil was clean, and the membrane upon the right was separating. The patient said she felt better and was hungry.

On October 18th the temperature was normal, and general improvement was going on.

On October 19th the temperature fluctuated slightly above and below the normal point, the throat had become quite clean, the urine contained a slight trace of albumen. From this time improvement has been continuous, and the patient is now (October 24th) up and about the ward. The urine, however, still shows a trace of albumen.

With reference to Dr. Goodall's suggestion that the source of the antitoxin should be stated, and that a second note of the cases should be sent after an interval of some weeks, I may say that the antitoxin used by me on each occasion has been Dr. Aronson's; where this has been administered early there has not appeared any reason to repeat the injection. Guided by the experience of others I gave a much larger dose in the last than in either of the previous cases. With respect

to the second case reported by me at the end of August, the boy is now suffering from some paralysis of the soft palate, affecting his speech; his legs are weak, his gait uncertain, and there is an almost entire absence of knee-jerk. It appears therefore that antitoxin serum does not prevent these after-effects of the disease.

XIX.—Dr. T. G. WAKELING (Clacton-on-Sea) sends us the following notes on a fatal case of diphtheria treated by antitoxin:

A. C., a girl, aged 6½, complained of headache and earache on October 1st, and on October 2nd shivered and vomited frequently.

On October 6th the throat became sore, the earache persisted, and there was a slightly offensive discharge from the ears.

I first saw her on October 7th, and found membrane all over both tonsils, uvula, and soft palate. The glands behind the angles of the jaw were enlarged and painful. The temperature taken in the groin was 100.6° F., the pulse 130 and slightly irregular. The urine was scanty and highly albuminous. A mixture was prescribed containing perchloride of iron, quinine sulphate, and chlorate of potassium. The throat was sprayed with carbolic lotion (1 in 60).

On the morning of October 8th the child was weaker, and refused food. The temperature was 100.2°, and the pulse 132. During the afternoon there was slight epistaxis. At 11 P.M. the child's condition was very serious. There was marked "whistling" stridor and slight sucking in of the intercostal spaces. The temperature was 99.2°, and the pulse 132, weaker, and more irregular. At this time 5 c.c. of Aronson's antitoxin (kindly supplied with great promptitude by Messrs. Allen and Hanburys) was injected. Within a few minutes a large wheal surrounded by a zone of hyperæmia appeared at the seat of injection. This disappeared in the course of two or three hours.

On October 9th, at 12.30 A.M. (an hour and a-half after the injection), the temperature was 99°. There was no appreciable difference in the pulse, but the child seemed brighter, and said she felt better. At 1 P.M. the child expectorated some large pieces of membrane. There was much less stridor, and the cough was easier. At 2.30 P.M. the temperature was 98.8°, the pulse 120, steadier, and of better volume. Another injection of 3 c.c. of antitoxin was given; this time no local reaction was produced.

On October 10th the temperature was 97.6°, the pulse 108. Improvement still continued. The child passed three soft, green, offensive motions, and salol gr. v. and bismuth subnit. gr. iij. was given, and repeated in two hours. Raw meat juice was given at intervals, and ℥ vi. of brandy ordered to be given every 24 hours. In the course of the afternoon a large quantity of membrane was expectorated. The glands at the angles of the jaw were much less tender, and nearly normal in size. The throat not sore. The temperature in the evening was 99° F. There was no difference in the pulse.

Up to 7 A.M. on October 11th the child continued to improve, taking fluids more freely, but shortly afterwards breathing again became difficult. At 8 A.M. she was drowsy and cyanosed, the intercostal spaces were sucked in. No more membrane could be seen in the mouth. Fluids were regurgitated through the mouth and nose. At 8.30 A.M. tracheotomy was performed. A very small piece of membrane was coughed up upon the trachea being opened. After the operation breathing improved, cyanosis disappeared, and there was general improvement up to 2 P.M., when the pulse began to fail, and the movements of the upper part of the chest ceased. The child was very restless. Four green, foul-smelling motions were passed. Feeding was carried on by nasal tube and nutrient enemata, as everything given by the mouth was rejected through the nose and tracheotomy tube. A hypodermic injection of strychnine gr. $\frac{1}{30}$ produced no effect. By 10 P.M. the breathing was purely abdominal. The child died suddenly at 11 P.M.

REMARKS.—The treatment of the case was rendered very difficult by the irritability of the child, who bit at the hands of anyone attempting to examine her throat, thus rendering the local treatment (which was continued) very difficult. Food also was constantly refused, and had to be given by force. No urine could be obtained for examination after the first occasion, as very little was passed.

The President of the French Republic visited the Pasteur Institute on October 23rd and presented Dr. Roux with the Cross of Commander of the Legion of Honour. M. Roux, in thanking the President for the honour, gracefully accorded to Loeffler and Behring their rightful place in the series of discoveries which finally led to that of the serotherapy. After visiting the Institut Pasteur the President went to the Trousseau Hospital, where he donned the regulation blue blouse. His hesitation to do so was vanquished when it was represented to him that his omission would entail danger not only on himself, but on those who came near him. M. Moizard and his two *internes* explained the treatment to the President and inoculated a patient with the serum in his presence.

M. Casimir-Perier presented Madame Gigot, the superintendent of the diphtheria pavilion, with the "epidemic gold medal." Madame Daussoire, head nurse at the Children's Hospital, received the "Palmes Académiques;" the same decoration was accorded to M. Martin, *préparateur* at the Pasteur Institute, and M. Chatillon, *interne* of the Children's Hospital.

The Versailles Municipal Council has voted £40 to the Pasteur Institute Antidiphtheria Fund. The subscriptions gathered at Havre will soon reach a sum sufficient to defray the expenses of a Havre service for preparing the serum.

M. Poincaré, Minister of Finance, has, in concert with General Mercier, War Minister, authorised the representatives of the Pasteur Institute to choose among the army horses no longer fit for service those suitable for producing the antidiphtheric serum. Sixteen out of twenty-nine have been chosen. The price will be fixed according to the average price fetched by the remainder.

The Austrian Government has ordered a sufficient supply of Behring's diphtheria antitoxin for its effect to be thoroughly tested in all the public hospitals in Vienna. The remedy is already in use in the St. Anne's Children's Hospital and the Kronprinz Rudolph Hospital.

In Dresden a supply has been obtained for the children's hospital at the public expense. The Municipality has voted 4,000 marks (£200) for the purpose.

In Italy the remedy is also being tried. In accordance with a Ministerial decree, only the serum prepared by Meister, Lucius, and Brunning, of Frankfort, and that prepared by M. Roux are at present admitted into Italy.

ERRATUM.—The name of the gentleman who reported Case XVI in the BRITISH MEDICAL JOURNAL of October 27th, page 933, should have been given as Dr. John T. Maclachlan, of Dornoch, Sutherland, and not as there printed.

AMBULANCE ARRANGEMENTS FOR RAILWAYS.

THE recent accident to the Scotch express on the morning of October 4th, at Northallerton, leads us to describe what has been done on the North-Eastern Railway system for dealing with the injured under such painful circumstances.

As the result of a public meeting, held in York in 1890, presided over by Lord Wenlock, a director of the North-Eastern Railway, a circular was issued by the general manager, directing that when any of their servants qualify in first aid, and obtain the certificate of the St. John Ambulance Association, the company would pay their class fees. The locomotive superintendent was also empowered to supply the following articles: A stretcher suitable for railway use, with awning and blanket; a supply of splints of various sizes, a dozen triangular bandages, and a simple tourniquet; and that these were to be retained for permanent use in case of accident. The directors in this circular stated that they have agreed to the above rules with the view of encouraging the men in their service to acquire a knowledge of ambulance work, and station masters and others were urged to do their best to promote the formation of classes in ambulance instruction in their districts.

Subsequently, by a circular of January 1st, 1893, the directors further conceded the privilege of granting, free of cost, the bronze medallion of the St. John Ambulance Asso-

ciation, which is given after passing two examinations at intervals of a year each.

As a result of the above rules, a very large number of railway servants availed themselves of the instruction, and classes were held, not only at their large centres, like York and Newcastle-on-Tyne, etc., but at very many of their smaller stations, as at Thirsk, Northallerton, Whitby, Pickering, Wooler, etc. A considerable amount of ambulance material, such as stretchers, splints, bandages, etc., were in this way distributed over the system for use in case of accident.

The directors further encouraged the work by fitting up at York, on their own premises, a hall, where ambulance drills were held, especially in the use of the stretcher, and the careful handling and carrying of the injured. At the York station, also, there is an ambulance room, with stretcher and wheeled litter always ready in case of accident.

The time and place of an accident must always be unknown. It may be near an important railway centre, or a town, or on any remote part of the line; and it is therefore necessary to emphasise the fact that it is much better to know how to extemporise ambulance appliances and carriages than to trust to carefully devised mechanical apparatus, for the latter can never be sufficiently distributed to meet all contingencies. It has been suggested that a special railway ambulance carriage should be stationed at some of the principal railway centres, fitted up with hammocks and surgical appliances, and a kitchen arrangement as well; but all experience shows that a suspended adjustment, such as a hammock, in a railway train is the worst possible way for removal of the injured; and experience also teaches that the best way of removal, when it is necessary to move the injured by rail, is in a good luggage van on comfortable stretchers, such as the Furley, and with a good supply of blankets. There would be no difficulty in attaching one of these vans, furnished in the way named, to the break-down van train, which is always the first thing to be despatched to the scene of an accident.

We may observe that in both the accidents to the Scotch express—that at Thirsk in November, 1892, and the recent one at Northallerton—these special ambulance carriages would have been of no avail. The former took place within a few yards of a comfortable farm house, where every attention was paid to the sufferers and passengers in the way of food, etc., and within easy distance of the excellent Lambert Memorial Hospital at Thirsk, where the badly injured were taken. The latter took place within easy reach of the houses at Northallerton, and also the comfortable Cottage Hospital in the town, which has an excellent matron in Miss Atkinson, and we have now the testimony of the witnesses at the inquest held on the engine driver Adamson, as to the way the injured men were treated.

Dr. Hutchinson, of Northallerton, says "he was the first to arrive at the scene of the accident, and there was no delay in moving the injured;" and Engine-Driver Clack, of York, who was the most seriously injured, having lost an arm, says "everything possible was done for those injured." Such testimony is valuable, in showing that the system adopted by the North-Eastern Railway Company in the establishment of St. John Ambulance classes for the instruction of first aid to their servants, and the placing of stretchers and ambulance material, as far as possible, at stations over their system, is better than special ambulance carriages, which may seldom or never be required, and which may probably be in the way—a positive hindrance, in fact. No one who has tried it knows the difficulty, nay, positive danger, of lifting an injured person into a carriage on the line, away from a platform, on an embankment, in a cutting, on a bridge or in a tunnel, or even on the level, and accidents may occur in all these positions; indeed, it is a difficult matter for anyone in health to get into a railway carriage away from a platform.

To sum up: What is essential for an efficient railway ambulance service is, first, the encouragement by all railway companies of the establishment of classes under the St. John Ambulance Association on the lines of the North-Eastern Railway Company; secondly, the supply of a stretcher or stretchers (the Furley pattern), and an ambulance hamper, at all railway stations; thirdly, to see that the men keep up their ambulance drill in the same way as any other duty—an hour a month will do; fourthly, the men when they join the railway service should be asked to qualify and obtain the St. John Ambulance certificate, and when a man wants promotion, he should be required to hold the certificate. This rule is adopted by many colliery managers in promoting men in the mining service, and only recently it has been determined that in the examination for mine managers, a certain percentage of marks will be given to the candidates holding St. John Ambulance certificates.

With regard to special ambulance carriages, with hammocks, etc., we are fortified in what we have already expressed by the opinions of the most eminent ambulance authorities in this country and on the Continent. The late Baron Dr. Mundy, of Vienna, says, "luxurious carriages are not required; ordinary luggage vans furnished with supplies of stretchers, bandages, etc., will do for ambulance purposes." And Sir T. Longmore said to Mr. John Furley, with regard to suspending the injured in carriages, "Whatever you do have your stretcher fixed," and not suspended; and Mr. Furley gives an instance "where a distinguished officer wished the stretcher to be suspended; but they had not gone more than five miles before he said, 'We must alter this.' The suspension was done with, the stretcher was fixed, and the patient was then quite comfortable."

EGYPTIAN SANITATION.

The report of Surgeon-Major J. G. Rogers, Director-General of the Sanitary Department, for the year 1893 indicates that, while much is being done to improve public health in Egypt, sanitation in some of its most radical and essential features is still in a very backward state in that country. The absence of a reliable census and the defects of registration of births and deaths render accurate knowledge of the influence and effects alike of insanitary conditions and of sanitary reforms impossible. Without a correct numeration of the population and a faithful record of the gains and losses which take place according to locality and time, the Government of Egypt must work in the dark, and all thought and effort on sanitary questions must necessarily be speculative and unsatisfactory. The cleansing of dirty places and the regulation of the lives and habits of the people so as to prevent contamination of soil, water, food, and air are necessary postulates of civilised existence; but, in the absence of sound vital statistics, it is difficult, if not impossible, to tell where such cleansing is most needed or whether the nature and extent of sanitary effort undertaken are such as in some considerable measure to make for health, to raise the level of public well-being, reduce the prevalence of disease, and extend the duration of life. But, even accepting the canons of sanitary service derived from the experience of more advanced nations, we find from this report that such elementary matters as improvement of water supply and drainage, the advantages of which have been placed beyond question or doubt, are still in Egypt utterly neglected so far as the country at large is concerned. Even as regards the cities of Cairo and Alexandria drainage schemes are still in the stage of survey and estimate. Meantime, "with the large increase of area being built over, the subsoil is becoming more and more saturated with filth, owing to the absence of any sanitary control over buildings and the almost universal system of percolating cesspits." We agree with Rogers Pasha in thinking that, until a sound system of local government and taxation is introduced into Egypt, radical measures of this kind are not likely to be undertaken.

For this purpose legislation is necessary, and, perhaps, Egypt is hardly ripe yet for any substantial delegation of authority and responsibility to local bodies. Meantime, the source of sanitary enterprise is central and bureaucratic, and a system of this sort cannot penetrate so deeply into the civil and domestic life of a nation as is desirable. The Director-General repeatedly laments the crippling of his energies by want of means and faults of agency. The former hindrance to effective action can be overcome only by the collection and assignment of local revenue for local needs. This would, no doubt, be followed by improved administration; but even now there seems to be a waste of power in the absence of an inspectorial staff of sufficient intelligence to point out to local authorities the existence of sanitary defects, and indicate the best way of remedying them. There is also much room

for improvement in the capacity of the rank-and-file of the Sanitary Department. Efforts are being made to provide a more competent staff by raising the standard of instruction imparted in the Cairo Medical School. It appears that the students are taught in the Arabic language, and beyond what they learn in the school, medical science is a closed book to them without a knowledge of English, French, or German. It appears that acquaintance with a European language is now required of them, but it will be still better when the teaching is carried out through such a medium. The Director-General also points out the need of a bacteriological laboratory, which has in these days become a necessity for intelligent medical and sanitary practice. This is all the more needful, that rabies appears to have gained a permanent footing in the country. Arrangements are being made, we observe, for the opening of a veterinary school. But while there is much to deplore in regard to the sanitary outlook in Egypt, this report also gives evidence of progress.

Useful laws have been enacted relating to slaughterhouses and cemeteries. The condition of public mosques has been, under the operation of orders passed in 1892, considerably improved, but private mosques are still very filthy. A cholera scare in June led to the issue of elaborate orders regarding the whitewashing of houses, the cleansing of drains, the emptying of cesspits, the closing of foul wells, and other measures of a similar description, and a great deal of superficial scavenging took place at a cost of some £17,000. The Director General points out with sound reason that spasmodic efforts of this kind are no real safeguard against cholera, and urges that money so spent should be devoted to radical and permanent sanitary reforms, which constitute the only real protection against the disease. The condition of the "birkets" or stagnant ponds which abound throughout Egypt has been referred to a Commission, and some progress has been made in enclosing and thus preventing the fouling of waste land. The want of authoritative building regulations is much felt. The attendance of the sick at hospitals and dispensaries has increased, indicating growing appreciation of rational medicine; but Egypt does not as yet offer much encouragement as a field of private practice. A good deal of money has been spent on the repair of hospital buildings. Mr. Rogers points out that reconstruction would be wiser than patching, and appeals to the charitable feelings of the wealthy, which have not as yet tended in the direction of medical relief. He also repeats his demand, which is a very reasonable one, for a specialist to be placed in charge of the Cairo Lunatic Asylum.

We cannot do better than conclude this notice by quoting the closing sentences of the Director-General's report, which we heartily endorse:

"When these works (hospital construction, etc.) have been carried out, these institutions (for lepers, etc.) founded, and the general organisation of the Department placed on a better footing, the department itself will have almost reached its limit of utility, and yet the general sanitation of the country will remain untouched. To deal with the large questions of water supply and drainage the Government must fall back on local taxation. It is the opinion of many that some of the towns are even now sufficiently prosperous to bear taxation in their own interest. If this be so it is time that a beginning was made. Here will arise the conflict between Egyptian conservatism and modern sanitation. Many in this country argue that if the people are content with the conditions under which they live—conditions causing an acknowledged high mortality—the Government has no right to interfere. Such an argument has ceased to carry weight in the present day, when every civilised Government imposes on the population the adoption of measures, the necessity for which has passed out of the domain of discussion. It is only by following in this respect the example of other nations that sanitation in Egypt can have a beginning."

ROYAL ACADEMY OF MEDICINE IN IRELAND.

THE following officers for 1894-95 have been elected:—

President: James Little (for three years).
General Secretary: William Thomson.
Secretary for Foreign Correspondence: J. W. Moore.
Medical Section.—President: W. G. Smith. Council: J. Hawtrey Benson, James Craig, J. Magee Finny, Richard A. Hayes, A. N. Montgomery, J. W. Moore, J. O'Carroll, A. R. Parsons, J. M. Redmond, H. C. Tweedy.
Surgical Section.—President: W. Thornley Stoker. Council: E. H. Bennett, H. G. Croly, Henry Fitzgibbon, Kendal Franks, Edward Hamilton, F. T. Heuston, John Lentaigne, Sir William Stokes, R. L. Swan, W. J. Wheeler.
Section of Obstetrics.—President: R. D. Purefoy. Council: L. Atthill, R. H. Fleming, Robert H. Flynn, J. H. Glenn, A. J. Horne, F. W. Kidd, J. L. Lane, T. More Madden, A. J. Smith, W. J. Smyly.
Section of Pathology.—President: J. A. Scott. Council: A. W. W. Baker, A. H. Benson, H. C. Earl, Edmond J. McWeeney, Conolly Norman, J. O'Carroll, A. R. Parsons, R. Glasgow Patteson, J. M. Purser, J. B. Story.
Section of Anatomy and Physiology.—President: Alec Fraser. Council: A. Birmingham, D. J. Coffey, D. J. Cunningham, H. C. Earl, J. J. Symington, R. H. Woods.
Section of State Medicine.—President: D. Edgar Flinn. Council: E. Macdowel Cosgrave, E. Winifred Dickson, Thomas Donelly, Ninian Falkiner, J. W. Moore, J. M. Redmond.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1895. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 16th, April 17th, July 10th, and October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely December 27th, 1894; March 28th, June 20th, and October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election. FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST AND WEST KENT DISTRICTS.—A conjoint meeting of these Districts will be held at the Kent and Canterbury Hospital on Thursday, November 22nd, at 3 P.M., Dr. Frederick Eastes, of Folkestone, in the chair. The chairman invites members and visitors to luncheon at the Fountain Hotel from 1.30 to 2.30. Members intending to avail themselves of the chairman's hospitality are requested to send acceptances by Tuesday, the 20th, or they will not be expected. Agenda:—Dr. E. W. White: Psychological Medicine in relation to the General Practitioner. Dr. Thomas Eastes: The Treatment of Diphtheria by Antitoxin. Mr. F. Eddie will relate a case of Diphtheria treated with Antitoxin, and it is hoped that all members who have notes of such cases will either bring them to the meeting, or forward them to one of the honorary secretaries. Mr. Brian Rigden: Some Points in relation to Life Assurance. Tea and coffee will be served in the Board Room of the hospital after the meeting. All members of the South-Eastern Branch are entitled to attend these meetings, and to introduce professional friends.—THOS. F. RAVEN, Broadstairs, and E. GROUND, Maidstone, Honorary Secretaries.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—An ordinary meeting will be held on Tuesday, November 6th, at 4 P.M., at the Portsmouth Medical Library, 5, Pembroke Road, Portsmouth. Business:—Clinical cases and pathological specimens, Dr. Axford: Note on Diabetic Coma. Dr. Blackman: Case of Swallowing of Dental Plate and its subsequent Passage through the Alimentary Canal. Presentation to Dr. J. Ward Cousins (retiring honorary secretary). To read a communication from the Civil Rights Defence Committee. To consider proposals for the Amalgamation of the Portsmouth Medical Library with the South-East Hants District Medical Society.—C. C. CLAREMONT, Honorary Secretary.

SOUTH OF IRELAND BRANCH.—The annual general meeting of the Branch will be held on Saturday, November 10th, in the School of Art, Nelson Place, Cork, at 4.30 P.M. Business:—President's Address; Secretary's Report; Election of Officers; Election of Members; General.—PHILIP GEORGE LEE, Honorary Secretary and Treasurer.

WEST SOMERSET BRANCH.

The autumn meeting of this Branch was held at Taunton on October 26th. Mr. Arthur Durant Willcocks in the chair. Members of the Bath and Bristol and of the South-Western Branches had been invited to join the meeting, and altogether there were (including members of the West Somerset Branch) between thirty and forty present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

New Members.—Mr. W. F. L. Green (North Curry) and Mr. Henry Sharland Pope (Bridgwater) were elected members of the Branch, they being already members of the Association.

Specimens.—Mr. Rigden showed two preparations (1) a Dermoid Ovarian Cyst containing well marked teeth and a lock of hair. (2) A Uterus with four fibroid tumours removed by hysterectomy. Both patients made excellent recoveries.

Modern Methods of Wound Treatment.—Mr. Watson Cheyne delivered an address on the Development of Modern Methods of Wound Treatment, which was listened to with the greatest attention. A discussion followed in which Mr. Nelson Dobson (Clifton), Dr. Meredith (Wellington), Dr. Macdonald (Taunton), Mr. Rigden (Taunton), Dr. Cave (Crewkerne), Mr. Farrant (Taunton) and others took part. Mr. Watson Cheyne replied and answered several questions which speakers had put to him.

Vote of Thanks.—A vote of thanks to Mr. Watson Cheyne for his admirable address was moved from the chair and carried by acclamation.

Invitation to Meetings of the Bath and Bristol Branch.—Mr. Nelson Dobson and Dr. Markham Skerritt, while expressing the pleasure they had felt on being present at this meeting offered a general invitation to members of the West Somerset Branch to come to meetings of the Bath and Bristol Branch, assuring them of a hearty welcome.

Dinner.—An excellent dinner was served at the Castle Hotel at 7 o'clock.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

A meeting of this Branch was held at Pontypool on October 25th, Dr. Mulligan (President), in the chair. About twenty-five members were present.

New Members.—The following were elected: D. G. Edwards, Cardiff; T. L. Davies, Cardiff; T. B. Law, Treharris; A. Ramsay, M.B., Nelson, Treharris; W. F. Nelis, Abergavenny (Branch); J. Glendinning, Abergavenny (Branch); T. G. Prosser, Monmouth (Branch), J. M. Evans, Llandrindod Wells (Branch); W. J. J. Arnold, M.B., Cwmbach, Aberdare; A. Will. Sheen, M.D., the Infirmary, Cardiff; J. O'Keefe, Griffithstown; and H. G. Cook, M.D., Cardiff (Branch).

Meetings.—Dr. Paterson's proposal to hold two extra meetings in the year was discussed, and it was resolved:

That the whole subject of meetings be referred to a special meeting of the Council.

Midwives Registration Association Scheme.—It was resolved:

That copies of the proposed scheme be obtained and circulated amongst the members for discussion at a special meeting of the Branch.

Amendment of the Medical Act.—Dr. Sheen intimated that a special meeting would have to be held to consider recommendations of the Parliamentary Bills Committee for amending the Medical Act. It was resolved:

That this special meeting be held at Cardiff at the end of November or early in December, at as late an hour in the afternoon as convenient; and that the subcommittee appointed at the annual meeting to consider the same matter be called together at an earlier date.

Donations.—Resolved that £5 a year for two years be given from the funds of the Branch towards the education of the daughter of the late Mr. Dixon, of Pontypridd, and that a request be made for further assistance from the Medical Benevolent Fund.

Cases.—Mr. W. F. Brook (Swansea) read notes of (1) a case of Ovariotomy followed by intestinal instruction and (2) a case of Congenital Abscess of the Lower Two-thirds of the Vagina. Mr. Collins, Dr. Griffiths, and the President joined in the discussion which followed.—Mr. J. M. Evans (Llandrindod) read notes of a case of Herniotomy under difficulties in which he had to use his pocket knife to divide the constriction. The patient, an old woman, recovered.—Mr. J. L. Thomas (Cardiff) read notes of (1) case of Gastrostomy without leakage of gastric contents, and (2) Appendicectomy for perforative perityphlitis, with recovery, and showed specimen.—Mr. Gamble (Abergavenny) read notes of a case of Fatal Obstruction of the Bowels due to gall stones, and showed specimen.—Mr. Glendinning (Abergavenny) read notes of a case of Partial Obstruction of the Bowel from a chestnut, resulting in acute peritonitis and death.

The British Medical Association and Unqualified Practice.—Mr. Horder (Cardiff) read a paper and moved the following resolution, which was seconded by the President and carried unanimously:

That the members present consider that it would be to the advantage both of the medical profession and the public if the Council of the British Medical Association were to take power and authority to proceed against unqualified practice and quackery, and in other ways to protect the interests of the profession. And that this Branch requests the Council to take such steps as may be necessary to carry these suggestions into effect, and to promote union and combination among medical men.

Exhibits.—Messrs. Mayer and Meltzer (London) had on view a number of surgical instruments and appliances.

Dinner.—The members present dined together at the Crown Hotel after the meeting.

NORTH OF ENGLAND AND BORDER COUNTIES BRANCHES.

Conjoint Meeting.

A conjoint meeting of the North of England and Border Counties Branches was held at Gilsland on October 30th. Thirty members were present.

Communications.—Dr. Murphy read notes of recent cases of Abdominal Surgery.—Dr. Maclaren read notes of a case of Prostatectomy, with the specimen.—Dr. Robertson exhibited Diseased Ossicles from middle ear, with instruments used in removing them; also a new Instrument for Excising Tonsils.—Dr. George Murray and Mr. George Richardson showed a patient after successful removal of a large Sarcoma of the Brain, with specimens.

Dinner.—The dinner took place at the hotel after the meeting. Thirty were present.

NORTH OF IRELAND BRANCH.

The autumn meeting of this Branch was held at Belfast on October 25th. The President (Dr. Dempsey) in the chair. Fifty members and a number of students were present.

Confirmation of Minutes.—The minutes of the spring meeting were read and confirmed.

President's Address.—In a brief speech the President thanked the members for the honour they had done him in selecting him to fill the chair. He hoped that the coming year would be a prosperous one for the Branch and suggested that a series of discussions on topics of general interest might be introduced with advantage.

Motion as to Discussions.—Dr. Bingham proposed that a portion of the time of each meeting be spent in the discussion of some subject in which the majority of the members took an interest. This was seconded by Dr. St. George, supported by Surgeon Fagan, and passed unanimously.

Communications.—Professor Sinclair described a case of Cholecystotomy and a case of Gastro-enterostomy for pyloric obstruction due to cicatricial contraction, and showed the patients. Mr. Fagan, Professor Whitla, Dr. O'Neill, and Dr. Bryars congratulated Dr. Sinclair on the brilliant results he had obtained.—Dr. St. George (Lisburn) showed a case of Lupus treated by thyroid gland extract without any external application. Dr. Gaussen testified to the great improvement effected. Professor Sinclair said he had failed to get good from the extract, and asked whether bad symptoms showed during treatment. Dr. Fulton (Saintfield) and Dr. Lindsay also spoke. Dr. Lindsay called attention to the fact that Byrom Bramwell's results were variable. Dr. Calwell said the patient had improved after going into hospital, and suggested that protection from cold might have been favourable to the patient. Dr. Gaussen said the patient had always been comfortable at home. In replying, Dr. St. George said he had a case where the thyroid extract did not agree, and could not be given. He gave 5 grains three

times a day for a month; he then rapidly increased the dose to 6 grains three times a day. This made the patient perspire profusely, and the dose had to be reduced to 4 grains three times a day. None had been given for the past month.—Dr. HENRY O'NEILL (Belfast) read notes of a case of Fracture of the Spine, and showed the specimen. He asked the opinion of members as to the surgical treatment of such cases. Professor SINCLAIR said that lumbar cases were, as a rule, suitable for operation; that cases of immediate and persistent paralysis must be dealt with cautiously; that in cases of pressure from blood clot operation was not to be recommended; and that cases where paralysis was immediate but not total were suitable for early operation.—Dr. LINDSAY read notes of a case of Aneurysm, probably of the descending aorta. The PRESIDENT, Dr. MITCHELL, and Dr. CALWELL spoke.—Dr. CECIL SHAW gave the history of a case of Sarcoma of the Tonsil, which had been present for two and a-half years.—Dr. JOHN CAMPBELL showed some Instruments for Vaginal Hysterectomy and other uterine operations.

New Member.—Mr. William Chancellor, M.B. (Belfast), was elected a member of the Association and Branch.

SPECIAL CORRESPONDENCE.

PARIS.

Proposed Inquiry as to Lunatic Asylums.—Overcrowding in Paris.—The Cost of Medical Aid.—Paris Free from Small-pox.—The Case of Dr. Lafitte.—A "Dermographic" Malingerer.—Unveiling the Statue of Claude Bernard.

M. MICHELIN, Deputy of the Seine Department, and many other members of the Chamber of Deputies propose that twenty-two members of the Legislature shall be chosen to form a parliamentary committee to investigate the organisation and direction of lunatic asylums.

M. Bertillon has drawn up some interesting statistics concerning overcrowded dwellings. Houses rented at less than £20 a year have not a furniture tax to pay, such as is paid by others occupying a higher rented house, but it is not these low rented houses which are overcrowded. M. Bertillon has estimated that there are 400,000 of these low rented houses which are not inhabited by strictly-speaking poor people. The higher rented houses are in a larger proportion overcrowded. Three rooms are inhabited by seven, eight, and ten people. M. Bertillon urges that not only the rent should be taken into consideration but also the number of inhabitants. M. Bertillon considers that a house is overcrowded when its inhabitants are double the number of the rooms. Carrying out this calculation there are in Paris 332,000 people, that is to say 14 per cent., inhabiting overcrowded dwellings to the detriment of health and morals. Another important fact comes out clearly from Dr. Bertillon's figures. Overcrowding and mortality are in direct proportion; phthisis is much more prevalent in districts where the dwellings are overcrowded.

The new law concerning medical aid imposes on the State an outlay of three kinds—subsidies to the department for providing the houseless sick with dwellings, the public aid service, and administrative expenses. The first will cost 1,123,198 francs, the second 200,000, the third 250,000 francs, a total amount of 1,573,198 francs.

During the last two months not a single case of small-pox has been notified in Paris. M. Hervieux attributes this to the constant revaccinations. It is fifteen years since a similar state of things existed. In July, 1893, there was an epidemic of small-pox.

The memorial on behalf of Dr. Lafitte (whose case has been more than once alluded to in the BRITISH MEDICAL JOURNAL) drawn up by MM. Hausman and Gauthier de Clagny, legal advisers, and Dr. Cornil, Dr. Crezilly, and Dr. Rauze, syndics of the Association of the Medical Press, Marcel Baudonien and Gilles de la Tourette, secretary and member of the Association, with a petition for a free pardon, was presented to the President of the Republic by the signatories, who were received on October 22nd by M. Casimir-Périer.

A case of malingering has been going the rounds of the Paris hospitals. The impostor is the possessor of a dermographic skin. By means of different pencils, needles, and a lead-pencil holder he successfully imitates on himself eruptions and rashes of different kinds—at one time scarlet fever, at another small-pox, and again urticaria or measles. With the help of a pin he caused the appearance of crops of small papules; a red pencil was used for the production of the red spots; the lead-pencil holder was utilised for the production of umbilicated papules; a fine scarlet fever rash was brought out by rubbing. By these artistic frauds the impostor was always received at the hospital consultations. Sometimes doubts were felt about the eruption: but the next morning, before the doctor went his rounds, he had produced another crop and the question was settled. One day he made a mistake and used the wrong instruments. Having been admitted for scarlet fever, the next morning his eruption was that of small-pox. His "trick" was discovered, and this failure made his fortune. He was afterwards known as the *dermographique;* he thus proudly announced himself on outpatient days, and he was always kept a day or two to be shown to the students. In this way he earned an easy existence, and when the Paris hospitals were exhausted he made a tour in the provinces and abroad.

The ceremony of unveiling the statue to Claude Bernard took place on October 28th. Many members of the Academy of Sciences, and all the professors and students of the Lyons Faculty, besides many notabilities, military and political, were present. The statue, the work of Aubert, a sculptor of Lyons, represents Claude Bernard in a standing position, holding a lancet in his hand and inoculating a frog with curare. Addresses were delivered by M. Lortet, Dean of the Lyons Medical Faculty; M. Brunetière, of the French Academy; Professor Chauveau; M. Dastre, of the Académie des Sciences, and others. M. Brunetière described Claude Bernard as not only a physiologist, but as a *maitre de l'intelligence;* he admired in him his literary gift, his clearness of mind, and his talent for the exposition of physiological facts in such a way that persons without special knowledge could understand.

BERLIN.

The Antitoxin Treatment of Diphtheria.—Virchow and Behring.—A New Method of Producing Anæsthesia.

PROFS. EHRLICH AND WASSERMANN gave their eagerly-expected address on diphtheria antitoxin, its production, the determination of its strength, and its use, to a crowded audience on October 26th. Needless to say that the speeches were followed with the greatest interest, though they were scarcely more than a recapitulation of Kossel's recent paper in the *Deutsche medicinische Wochenschrift*. Wassermann's opinion is that the therapeutic action of antitoxin is quite certain, if used early enough.

Professor Virchow was unable to attend the meeting of the Medizinische Gesellschaft on October 24th; but the vice-president, Dr. Siegmund, read a communication from him to the meeting, in which he said that he owed it to the Society to defend himself against Behring's attacks in the *Zukunft*, by stating the facts of the case. He said that he had no intention of detracting from Behring's merits. That, when the reporter came to "interview" him, he told him that he had had no experience of Behring's antitoxin, and that his experiments had been made with Aronson's (Schering's) remedy, which had been placed at the disposal of the hospital in large quantities. That, when Schering's production of antitoxin had been unfortunately interrupted, he had immediately given orders to buy and make use of Behring's antitoxin. That the hospital doctors inclined to think Aronson's remedy the more effectual; and that as soon as Schering should be able to bring out a fresh supply of it, there would be opportunity enough to test the relative merits of both. That he would then be able to judge impartially. And that, finally, he had never, and would never, claim for himself any personal merit in the matter.

At the meeting of the Hufeland Society on October 25th, Professor Oscar Liebreich presiding, Dr. Schleich read a paper on, and demonstrated, a new method of anæsthesia, called by him "Infiltrations-anästhesie." Dr. Schleich has for some time made use of this new form of local anæsthesia, not for trifling operations only, but for complicated ones, such as

laparotomy, etc. He uses a very weak solution of cocoaine—1 per mille. The cocaine is not dissolved in distilled water, Liebreich having shown in his inquiry on "anæsthetica dolorosa" that distilled water injected subcutaneously has a toxic effect; the solvent used is the physiological salt solution of about half the usual concentration, that is, about 0.2 to 0.3 per cent. of common salt. Schleich's method is as follows; A small spot of the skin near the field of operation is rendered insensible by chloride of ethyl, and here a few drops of the cocaine solution are injected. At the spot of infiltration a bulla immediately rises, which is absolutely without sensation. Pushing the point of the syringe through this area of insensibility, Schleich again injects a few drops; another bulla rises close to the first, and proceeding from bulla to bulla round the field of operation the whole is infiltrated and rendered quite anæsthetic. This is done extremely quickly, as Schleich showed in the case of a man with a large syphilitic abscess on his arm, who was operated on before the meeting. The man felt absolutely no pain; and the duration of the operation, including the anæsthesia, was only 8 to 10 minutes. Dr. Schleich said that he had employed his method of anæsthesia for about 3,000 operations with unvarying success, and without any bad after-effects.

CORRESPONDENCE.

THE NEW PHARMACY.

Sir, You have been discussing the deficiencies of medical education; let me call your attention to defects almost equally important arising out of its redundancies. No small section of the already inadequate time of the medical student is occupied by attendance on lectures on materia medica, and in what is, I think, described as practical pharmaceutical instruction. Is this necessary, is it useful, is it reasonable, is it not even injurious? My son complains to me of the intolerable mass of pharmaceutical sack which he has to swallow in order to obtain a small modicum of therapeutical bread. He asks me, and I vainly attempt to answer, what use it is going to be to him to be able to distinguish Turkey opium from Smyrna opium or Indian opium? Why should he be called upon to distinguish true scammony in bulk from spurious scammony, between the various qualities of rhubarb root, or gum benzoin, or aloes, etc.? It is true that he will in after life have to use extract of rhubarb or powdered rhubarb, but it is no more his business to enter into all the mysteries of the markets and the assay of the raw products, or the signs by which one variety of leaf or root is distinguishable from the other, than it would be to take a course of study at Mark Lane and to learn wool stapling, or to distinguish the qualities and values of Australian from home-grown wool in order to be able to choose for himself a satisfactory coat at his tailor's, or to study the growth and selection of timber because he habitually orders furniture for his rooms. In practice he has to deal only with the finished product, with the final extract or the active principle, in a form suitable for prescription and available for his patients. It may, of course, be answered that he may be called upon to prepare his own decoctions, and to concentrate his own extracts or percolate his tinctures. That is an answer which belongs to the past age and to the pre-scientific period of pharmacy.

I will not undertake to say that there are not general practitioners who still go through these penitential performances from sheer force of habits acquired fifty years ago, or from unacquaintance with the resources of modern pharmacy and the facilities which are brought within easy reach of all of us, and which render such a procedure as unnecessary and unsatisfactory as it is costly and inadequate. I belong to the prescientific period, and for years I suffered under the necessity as it existed in my early days, of combining the troubles, hardships, and labours of the pharmaceutical chemist with the difficulties and responsibilities of a general practitioner of medicine. I was burdened with a surgery; I suffered under an assistant whose main duty was dispensing; I was tormented by a surgery boy, whose strange antics, curious vagaries, inexplicable delays, and frequent misadventures were not the least among the troubles of an arduous life. Although relatively well stocked, my surgery rarely contained all the drugs which I wanted in any one week, and I had to have frequent recourse to a somewhat far off chemist or to my wholesale druggist in London for some urgent supply which was immediately needed, and sometimes, I am afraid, I did not give my patients precisely the drug which I should like to have given them, because it was not to be found on the shelf, or had "gone off," or was not in the form precisely miscible with the decoctions and tinctures with which I was to combine it. My decoctions had a habit of growing stale and my extracts were apt to get sometimes mouldy, and various liquid preparations had a most disconcerting habit of decomposing or growing turbid at inconvenient times. Moreover, I am bound to say that the mixtures—which, following the ancient tradition, I was in the habit of prescribing—were for the most part far from palatable, and gave my homœopathic rival in the neighbouring town a considerable advantage over me, so much so that I came to the conclusion that one important element of his success was that his sugar-coated medicaments were much more acceptable than my orthodox but nauseous pills, potions, and powders. The jam with which affectionate parents endeavoured to conceal my powders often failed to cover the evil flavours which were inherent in them; and in many families in which the elders heroically endured the disagreeables of this form of therapeutics, the children were treated homœopathically, mainly because the globules were so easily and pleasantly swallowed.

From all these troubles I have long since been free, and when my son comes home and asks me to show him the drugs which I use and to assist him in the mysteries of percolation and extraction I can only open a small mahogany cabinet that occupies a corner of my consulting room and show him a range of 300 or 400 bottles which occupy no more space than two or three ordinary bookshelves: but as they are all of nearly uniform appearance he can gather but little information except from the labels, and he will rapidly arrive at the conclusion that the tedious studies which are enforced on him at his school and by the examining board in this matter are time utterly wasted. So much as to the academic aspect of this matter.

But now as to the economic and practical side of the question. I am now doing three times the practice that I was twenty years ago, and I supply my own drugs. I am saved the rent of a surgery, I have no need for the services of a dispenser, and am not called upon to make any of the rather disagreeable and not altogether dignified compacts with the chemist in the nearest town into which I was formerly almost compelled to enter, including quarterly payments to him for medical supplies to my patients. I calculate that the abolition of my surgery and of the dispenser saves me nearly £200 a year. And now as to the drug bill. With a far larger practice my drug bill is 30 per cent. less than it used to be, and I have no anxiety or trouble in supervising the preparation of the old-fashioned drugs.

Your readers will readily apprehend in what direction and by what means I have learned to save myself all this anxiety and excess of expenditure and labour. It is by the application to pharmacy of the great principle of every man doing his own business, and of doing it in bulk and with scientific precision, on a large scale, with the aid of every modern appliance, the work which was formerly ill done and wastefully done in innumerable suburban and village surgeries scattered throughout the country. Formerly, if I wanted to make up two or three dozen pills, or two or three pints of a decoction or extract of liquor, I used to have to buy the crude drugs, the leaves or the roots, or the stems, or to provide myself with certain extracts in bulk, and to combine them in mixtures or pills, as the case might be, each time for myself. That was an enormous waste of labour, for the same operation had to be performed by 5,000 persons, unskilled and ill equipped, in separate corners of the country, and each in his own surgery: it can be done and now is done infinitely better under one roof and in one establishment, and not roughly but with the most accurate and minute precision, by a limited staff, all trained each to do his own work with the aid of the most exquisite modern apparatus, and with an inexpressible saving of time and labour, and therefore cost. In

other words, then, my whole surgery, or to speak more correctly, my therapeutic armamentarium, is now contained within a dozen square feet, filled with classified series of compressed drugs or sugar-coated tabloids. It has sometimes been objected to me by my more conservative neighbours that this must either confine me to a very limited number of formulæ or to a single barrelled method of prescription. That certainly is not so.

Like a good many other old fogies of my time of life, I have some fifteen or twenty customary formulæ which I have been in the habit of using in daily practice for ordinary cases, and which formerly I used to keep in stock bottles, as was the custom in my old days at my hospital, where mistura alba and the house mixture and the linctus and the purgative pills and the lotio flava and lotio nigra were the staple of the larger portion of the daily prescriptions. I do the same now, only in a much more convenient and simple form. I have my compressed medicines made up for me according to my own formulæ in about twenty-five different forms, and I resort to them almost as much as ever. They are cheaper than ever and better than ever; they never get stale or spoil, and they are always at hand precisely in the doses and qualities I require.

I am now supplied with all the tinctures I require evaporated to dryness, compressed, and free from alcohol, which was previously a costly and a disturbing element. I learnt this from the practice of a Temperance Hospital, who object to alcohol in tinctures on principle, while I only find it costly and inconvenient. My purveyors tell me that they recover the dissipated alcohol by distillation, and thus are enabled to spare me the cost of an ingredient which in that relation is unnecessary and added greatly to my drug bill, for I often found when I made my own tinctures that the alcohol used in the preparation cost more than the drug itself. So also as to the lotions: the soluble tabloids improvise whatever lotion I require in the course of a few minutes. The rest of my cupboard consists of a series of approved formulæ for purgative, tonic, eliminating, and mineralising purposes, together with the whole range of active alkaloids. I can within a minute or two, by dissolving these tabloids in distilled water, prepare any mixture I require: but I rarely do this. I find that the old superstition that medicine should be given in a bulky and disagreeable form in order to produce a distinct mental impression is a false tradition. If I wish to give opium with mercury, or if I wish to combine an alkali with an extract of gentian, I can supply the two or any other combination necessary in the tablet form, and spare my patient's palate the misery which his stomach will not suffer when they are dissolved in the stomach by a little water instead of in the mouth. There is no combination of drugs that I have ever yet required that I have not now always in front of me.

My patients are deeply grateful for being spared the horrors of the antiquated potions, and the children of the family no longer escape me; and, best of all, my homœopathic friend has long since decamped, since he has lost his monopoly of pleasant medicines. From time to time my patients go up to a great Midland metropolitan town, or sometimes to London, and with my consent put themselves under the treatment of distinguished consultants. They come back to me with rueful faces, and claim my compassion for the filthy compounds which they have had to swallow by the wineglassful and bottleful. Only a fortnight ago one of them brought me his prescription, and said, "I think it is doing me good, doctor; but it is so horribly nasty that I don't believe I can go on with it." This turned out to be a prescription from an eminent physician in Harley Street, containing tincture of rhubarb, extract of gentian, bicarbonate of soda, syrup, and rose water. I was obliged to say, "Why, my dear friend, I am glad you are so much better; this is exactly what you have been taking before, you may go on with it." And I gave him the same medicines, and enough for a week in a little envelope which he was able to carry away in his waistcoat pocket. They consisted of this same well-known combination, evaporated to dryness and compressed. "How much am I to pay?" he asked; I said, "The usual fee for my advice, and a shilling for the medicine." This gave me 200 per cent. profit on the medicine. He came back next week, and he said, "Doctor, I have paid you a shilling for medicines which are certainly as efficacious as the wineglassful of nastiness which I had to take three times a day in London, at the rate of a bottle every two days, and which cost me 4s. 6d. for the week. Why should the London doctors make us go through so much and pay so heavily for such filthy stuff?" I answered that it was not for me to criticise the ways of the great ones of the profession, but I wrote to my distinguished friend on the subject, and had a very kind and humorous reply to the effect that nasty medicines were good for sceptical patients, and that he preferred to stand in the old ways; moreover, that consulting physicians were bound to adhere to the classic formulæ, "Stand by the good old *Pharmacopœia*." I confess that I was amused rather than convinced; but, however that may be, I am satisfied from my own experience that the general practitioner is not bound by any such arbitrary and senseless conventions, and that he at least may be allowed to consult his own convenience, his own pocket, and the palate and digestion of his patients without being bound by any ancient law and custom of nauseating pharmacy. I am convinced also that the *British Pharmacopœia* in its present form is a book composed in a spirit of the Middle Ages; that to impose the study of its needlessly disgusting formulæ in its present form on our students is to dull and pervert their intellects, and to make a trying and unnecessary tax upon their valuable time and study.

My object in writing this is twofold: first of all, to declare from my own experience that the old-fashioned surgery is a costly and anomalous survival of a bygone time, and that every country surgeon will find benefit in abolishing it.

Finally, let me add (for I feel that I have transgressed unduly on your space) that in visiting patients and for all emergency cases I can carry in my coat pocket a flat wallet not much bigger than my cigar case, and in which I have always at hand, in a most portable sublingual form nearly everything that can be required for emergencies or for immediate use.

Trusting that the experience I have thus detailed may help towards the extension of a useful reform already largely inaugurated but not yet, I think, as widely or fully appreciated as it ought to be and soon will be, I am, etc.,

October 21st. AN OLD FOGEY BUT NOT A FOSSIL.

CHELSEA HOSPITAL FOR WOMEN.

SIR,—I beg to hand you herewith copies of correspondence that has passed between Mr. Jonathan Hutchinson and myself. Its publication in the BRITISH MEDICAL JOURNAL would, I believe, be of considerable assistance towards understanding the difference that has arisen between that gentleman and the Board of Management.—I am, etc.,

W. H. FENTON.

George Street, Hanover Square, W., Oct. 27th.

[Copy.]

27, George Street, Hanover Square, W.,
October 19th, 1894.

Re CHELSEA HOSPITAL FOR WOMEN.

DEAR MR. HUTCHINSON,—It is being inferred by the press that for some reason or other you object to the re-elections which have taken place at the Chelsea Hospital for Women. Will you kindly tell me on what grounds, if any, you object to my being again placed upon the staff of that institution?—Faithfully yours,

(Signed) W. H. FENTON.

J. HUTCHINSON, Esq., F.R.C.S.,
15, Cavendish Square, W.

[Copy.]

15, Cavendish Square, W.,
October 20th, 1894.

Re THE CHELSEA HOSPITAL.

DEAR FENTON,—Your letter affords me an opportunity of which I gladly avail myself for saying that I entirely approve your re-election. In common I do not doubt with all who know what was going on at the hospital, I regarded this as a foregone conclusion.

If you have seen the letters which I addressed to the Secretary you will, I think, have been able to appreciate my reason for making protest against the mode of nomination by asking that my name should be removed from the list of consultants. It was because the nomination, regarded, I believe, as equivalent to election, was made precipitately and without any proper consultation with the consultants or any other professional body. What has since occurred confirms me in this impression. As you are aware, I did not attend the meeting summoned for selection of names, partly because I was never officially asked to do so, and partly because I had then already protested against the thing being hurried through at a pace at which I could not go.

After my resignation both my colleagues, although they had attended the meeting and taken part in the selection, also requested that their names should be removed, thus clearly showing that they were not satisfied with what had been done or left undone.

The Chairman at the meeting last week said that he knew of no reason for the resignations of the consultants other than that probably their friends had not been elected. Thus he made it clear that he believed that the committee, in making its nominations, had not regarded the recommendations of its consultants, and that the new staff were, in truth, put forward by a group of laymen without any responsible professional guidance.

Now there were, I believe, nearly thirty candidates, and apart from the mere question of proper selection, there was the obvious duty of guarding against injustice to those who had been on the staff before. It was quite impossible that a lay committee, without professional guidance and meeting hurriedly, as it did, could make a judicious selection, and against such a procedure I feel bound to bear my protest. I am not seeking to serve the interests of any "friend." It is to me simply a matter of professional propriety and justice.—Believe me, yours truly,

(Signed) Jon. Hutchinson.

You are at liberty to make any use you like of this letter, provided it is used as a whole.

[Copy.]
27, George Street, Hanover Square, W.,
October 21st, 1894.

Chelsea Hospital for Women.

Dear Mr. Hutchinson,—Not merely as a personal matter, but for the sake of the hospital, I was very glad to receive your letter of yesterday. The hospital authorities have been misunderstood in their actions in every conceivable way, and in the matter of reorganising the staff amongst others.

I am not, and never have been, a member of the Board of Management, and therefore cannot speak for them; but I believe a little inquiry will show that the board did not act with undue haste, but that it was a necessity for them to be prompt. Five meetings had been held after they received the mandate of the governors to form a new staff, and before they asked the consultants to sit on a subcommittee to aid them in a selection of the most suitable candidates. At these meetings they appear to have decided the lines on which to elect—namely, to take no one back whose work had not stood the test of the Commission, and to elect no one who would not positively state he was not in general practice; this last to reduce the risks from imported infection. I gather that two of the three consultants accepted the invitation to sit on that subcommittee. It was thought that your invitation was an official one. However, I am sure it was a matter of regret to all that you were not present at the selection of the candidates.

As far as my information goes neither of the consultants present demurred at the shortness of time allowed for the selection. If they had done so, or had you written on the subject, every attention would have been paid to a request for more time.

It is quite conceivable to me that the Board felt it was not right, in the face of the report of the Commission and the criticisms of the press, to work the hospital one day longer with the old staff than was absolutely necessary. I am informed that the Subcommittee of Selection included in their list of twelve names every one of the six subsequently elected. Further, only one of the old staff who was not re-elected appeared amongst the twelve selected. The fact that so many of the Board were leaving town about the beginning of August must have had an influence in deciding prompt action.—Faithfully yours,

(Signed) W. H. Fenton.

MIDWIVES' REGISTRATION AND THE LANCASHIRE AND CHESHIRE BRANCH.

Sir,—I quite fail to see the object of Dr. Macfie Campbell's letter, unless it be to confuse a distinct issue. The Lancashire and Cheshire Branch have twice emphatically decided against the proposals for the registration of so-called midwives, and it only remained for the Branch to express its opinion about those members of its Council who, in spite of the condemnation of the General Medical Council and the Branch, continued to issue worthless documents at a charge of three or four guineas each.

The meeting, probably the largest medical meeting ever held to decide on a question of ethics, agreed *nem. con.* to Dr. Woodcock's motion. Not one of the gentlemen who belonged to the "protest" party attempted to deal with the subject in their speeches, and neither does Dr. Macfie Campbell. If the "Protest" Committee are dissatisfied with the terms of the resolution passed, why don't they state their reasons boldly, and not try to hide themselves in the smoke of abstract propositions? We are glad, however, to recognise Dr. Macfie Campbell as a convert to our views, for he admits the existence of misleading diplomas (practically the whole question at issue); and further, he is good enough to recommend to us certain methods to strengthen our cause, for which I am sure the Branch Committee will feel grateful.

It is regrettable, however, that Dr. Campbell has fallen into so many palpable errors.

First he says, "Dr. Rentoul's name was not favourably received." I entirely deny the accuracy of this statement.

Secondly, I am in no way the leader of the majority of the Lancashire and Cheshire Branch. Mr. W. Hugh Hughes has been from the beginning of the movement, and still continues to be, the Chairman of the Committee.

Thirdly, the majority at the Liverpool meeting on May 11th was not 2, as Dr. Macfie Campbell asserts, but 17.

Fourthly, the Branch Committee have never opposed the granting of "nursing certificates." If the diplomas and certificates illegally granted had been so designated no differences would ever have arisen.

In conclusion, I would ask Dr. Campbell to use his influence with his friends who up to now have been granting diplomas to abide by the Medical Act of 1886 and by the resolutions of the General Medical Council. When this is agreed to the future teaching, enumeration, and control of "midwifery nurses" will become a mere matter of detail.—I am, etc.,

Colin Campbell,
Hon. Sec. Lancashire and Cheshire Branch Committee.

Saddleworth, Oct. 29th.

*** Dr. G. H. Broadbent (Ardwick Green, Manchester) has also written to call in question Dr. Macfie Campbell's statement that Dr. Rentoul's name was not favourably received. Dr. Broadbent also objects to individual members of the Committee being spoken of as "leaders" of the movement.

Sir,—Dr. Macfie Campbell wants to know what are our objections to any one of the six articles of the "short creed." I will only reply to the first article, as the whole creed stands or falls with it—namely, "Midwives are and will be." So-called midwives do exist, but their continuance is not a necessity, after the strong expression of the General Medical Council on this question, after also the abolition of single medical qualifications, and in view of the fact that women are now free to enter the medical profession. It would be a retrograde step to educate midwives, and to give diplomas or certificates as to their skill as midwifery practitioners in natural labours.

The "shorter creed" is "Abolition of midwives, and better trained monthly or obstetric nurses." The so-called certified midwife is educated in three months, and ready for practice. No medical man who knows what the responsibilities of midwifery practice are will for one moment admit that such a short training can possibly be adequate. It takes three years to train a medical or surgical nurse in our hospitals. I strongly advocate the training of obstetric nurses, but it must be more thorough than that now required for certified midwives in our maternity hospitals, so that they may be able to conduct, if necessary, an ordinary labour to its natural issue. We are all agreed as to the necessity for trained women for the lying-in room, but what are they to be called—midwives or obstetric nurses? Most emphatically the latter. If properly trained, we shall have better nurses than the present class of "skilled midwives," and will stop gross abuses, and will be in strict conformity to all the Medical Acts, and in harmony with the letter and spirit of the expressed will of the General Medical Council.

Some of our Committee are desirous to heal the breach in our Branch. This can be done, I believe, if we will unite in formulating a course of training which will educate obstetric nurses. The "skilled midwife" who has a certificate or diploma that she is competent to attend natural labour is for all practical purposes a rival and a competing practitioner to the qualified medical man.—I am, etc.,

John Brown, M.D.Viet.,
Member of the Branch Committee.

Bacup, Oct. 27th.

BERI-BERI IN DUBLIN.

Sir,—Referring to the description in the British Medical Journal of October 6th, p. 767, of the symptoms in the epidemic outbreak at the Richmond Lunatic Asylum, Dublin, of what is supposed to be beri beri there is one point which is at variance with the recognised descriptions of ber-beri and with my own considerable experience in that disease. The description referred to says "hyperæsthesia is evidently present in the majority when the skin is touched." Perhaps, at the very outset of the disease, in exceptional cases there may be some hyperæsthesia of the skin in beri-beri, but this is rare. In developed beri-beri, although there is marked hyperæsthesia of the muscles, particularly of the calf and thigh muscles, readily elicited by squeezing them against the underlying bones, there is distinct anæsthesia of the skin, sometimes nearly complete, particularly in the pretibial

area, in the front of the thigh, the feet, finger tips, abdomen, and occasionally around the lips, and elsewhere. Pekelharing and Winkler made use of this fact as a sign of impending beri-beri, the anæsthesia being often discoverable a considerable time before the explosion of the disease. Paræsthesiæ, such as tingling, burning, etc., are common enough, particularly at the outset: but hyperæsthesia of the skin areas is even more rare in beri-beri than retained patellar tendon reflex.—I am, etc.,

October 20th. SCRUTATOR.

HOSPITAL AND DISPENSARY MANAGEMENT.

HOSPITAL SATURDAY FUND.

ACCORDING to the report of the Council of the Hospital Saturday Fund relating to the last quarter, and issued on October 6th, the receipts from all sources amounted to £11,117 9s. 7d., and the payments were £1,802 8s. 1d. Hence a credit balance of £9,315 1s. 6d. While the workshop collection for the same period showed an increase of £700 compared with the results of the corresponding period last year, the yield of the last street collection was less by £450 than the total of the street collection in 1893.

OUT-PATIENTS AT THE STRATFORD-ON-AVON HOSPITAL.

AT the annual meeting of the Stratford-on-Avon Hospital, held on October 8th, a resolution was moved by the Rev. A. Beal to the effect that the system of providing medical relief to out-patients as now carried on at the hospital was unsatisfactory. He argued that the present system created an unfair competition against the private practices of the medical profession, discouraged thrift, and tended to create an abuse of the objects of the hospital. The resolution was carried, and the matter referred to a special committee. It would be interesting to hear the further progress of this matter.

INDIA AND THE COLONIES.

CAPE COLONY.

PERILS OF PRACTICE.—The recent death by drowning of Dr. Hansell is an illustration of the serious perils of medical practice in the less developed parts of our colonies. He had returned from a long journey to a point nearly thirty miles distant to his home at Riversdale, to find a message waiting for him from a distant farm in an opposite direction. It was pitch dark, raining heavily, and the track led over very bad roads and through swollen rivers. When crossing one of these, about three miles out, Dr. Hansell appears to have made a slight miscalculation as to the point at which to take the ford, and, to quote the words of the *Port Elizabeth Telegraph*, "in less than a minute the vehicle was in deep water, and the night as black as ink. The horses were totally unable to pull the cart out of the hole in midstream, but they stood still." Dr. Hansell sent his black boy servant to a neighbouring farm for assistance, but when he returned with the farmer and his people the cart and its occupant had disappeared. Search was made, and the cart and horses were found in a deep hole in the river, but no trace could be seen of Dr. Hansell, whose dead body was recovered by a search party next day. Our contemporary speaks in terms of high praise of Dr. Hansell. "It must have been," it writes, "no motive mean or mercenary that could have impelled him at the termination of a long and weary journey to instantly start off on another journey, equally long, equally wearisome, and doubly dangerous. And yet to our own knowledge there are many medical men in the colony who are frequently undertaking risks of the above kind. We extol the military hero who leads a forlorn hope—and rightly so. No language is adequate to convey the public estimation of the captain who refuses to leave his ship until all hands are saved. Surely a similar and equally heartfelt encomium is justly due to the memory of a doctor who voluntarily risks his life to save the life of others. Dr. Hansell lost his life while on an errand of mercy, and no grander epitaph can be assigned him than the simple record of that imperishable fact."

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A SURGEON-CAPTAIN who will have to proceed to India (Bengal) in February next to complete about three years and a-half of unexpired tour, wishes to exchange with an officer who can reckon on at least a year on the Home Establishment from that time. Apply with particulars to No. 3,262, BRITISH MEDICAL JOURNAL Office, 429, Strand, W.C.

THE DEPOT AND TRAINING SCHOOL M.S.C.

COMMENTS and correspondence on the important question of further retaining the institution at Aldershot have appeared recently in the military press and elsewhere. There can be little doubt that some years ago the experience of the senior medical officers in charge of the large hospitals at Aldershot impressed on them the fact that, while hospitals were shorthanded of medical officers and Medical Staff Corps orderlies, a number of departmental officers, non-commissioned officers and men, were absorbed by the training school, performing scarcely any specific medical and nursing duties. This led to the opinion that the officers and men at the training school could be better utilised in all work, military and professional, by being attached to hospitals, where ample opportunities could be afforded of acquiring the necessary knowledge of field hospital and bearer company organisation combined with nursing and surgical work, and would thus increase the staff of hospitals, which were inadequate to the needs of the sick. Indeed, it is understood that a proposal of this nature was placed before Lieutenant-General Sir Evelyn Wood, then commanding the forces at Aldershot; but it does not seem to have taken any practical shape. One point is indisputable, and this is, that general complaints in different commands and districts have arisen of an insufficiency of medical officers and orderlies for hospital requirements, leading not only to performance of duties under high pressure, but to the impossibility of officers obtaining relaxation leave.

That a number of probationers for the Army Medical Staff should have to go through two courses, both at Netley and Aldershot, extending over a period of seven months, seems unnecessary. It has therefore been suggested—and the suggestion has the support of several medical officers of experience and seniority—that the depôt should be retransferred to the Royal Victoria Hospital, Netley, where it used years ago to be. Such an arrangement would permit of ward training and nursing being carried out concurrently with drill, discipline, and other duties pertaining to efficiency. As things now are, the orderlies joining stations from Aldershot are imperfectly informed of the most important work of all—namely, that of nursing. These remarks would be incomplete without an allusion to the recruiting of the Medical Staff Corps. Recently every station save London has been closed for recruiting for this corps. This procedure does not, from all accounts, seem to have improved the supply of young men it is desirable to obtain for the Medical Staff Corps, the standard for which is capable of vast improvement.

THE NAVY.

STAFF-SURGEONS E. W. LUTHER and E. H. SAUNDERS, who entered the service March 31st, 1874, are promoted to be Fleet-Surgeons, the former from September 30th, the latter from October 1st. Fleet-Surgeon Saunders was Senior Surgeon of the *Minotaur* flagship during the Egyptian campaign. He landed in medical charge of sailors and marines after the bombardment of the forts of Alexandria; was employed on shore with the Marine Battalion landed from H.M. ships, attached to Sir E. Wood's Brigade, for the defence of Alexandria, and was present at the capitulation and surrender of the forts of Rosetta and Aboukir (Medal and Khedive's bronze star).

Surgeon BASIL ROVERTON CLARKE, M.R.C.S., L.R.C.P., H.M.S. *Melita*, died at Port said on October 13th, aged 27. He was appointed Surgeon R.N., February 11th, 1891.

The following appointments have been made at the Admiralty: HOWARD SLATER, to be Surgeon and Agent at Appledore, October 24th; CHARLES K. ACLAND, to be Surgeon and Agent at Peppescombe, October 24th; BEAUCHAMP F. PARISH, Surgeon, to the *Redbreast*, October 25th; FREDERICK W. COLLINGWOOD, Surgeon, to the *Vivid*, October 25th; HENRY S. ARCHDALL, Surgeon, to the *Rambler*, November 6th; PERCY H. BOYDEN, Surgeon, to the *Rupert*, November 6th; ERNEST E. BRAY, Staff Surgeon, to the *Gibraltar*, undated; REGINALD J. FYFFE, Surgeon, to the *Rattler*, October 27th; PERCY LORD, Surgeon, to the *Victor Emanuel*, October 27th; PERCIVAL M. MAY, Surgeon, to the *Eske*, October 27th; HENRY N. STEPHENS, Surgeon, to the *Hearty*, November 1st; D'ARCY HARVEY and FREDERICK FEDARB, Surgeons, to the *Gibraltar*, undated; WILLIAM G. K. BARNES, Staff-Surgeon, to the *Gibraltar*, for the *Mercury*, November 1st; HUBERT HOLYOAKE, and ARTHUR E. KELSEY, Surgeons, to the *Gibraltar* and *Archer*, November 1st; SAMUEL J. ODDIE, Surgeon, to the *Peacock*, October 27th; GEORGE T. BISHOP, Surgeon, to the *Linnet*, undated; WILLIAM SPRY, Surgeon, to the *Alacrity*, undated.

ARMY MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL H. T. BROWN, who went to India in October, 1889, is appointed to officiate as Principal Medical Officer, Peshawur District, *vice* Brigade-Surgeon-Lieutenant-Colonel G. McB. Davis, M.D., of the Bengal Establishment, who has been appointed Principal Medical Officer to the Waziristan Delimitation Escort.

Surgeon-Lieutenant-Colonel H. F. HENSMAN is placed on retired pay, October 25th. He entered the service as Assistant-Surgeon March 31st, 1862; became Surgeon March 1st, 1873; Surgeon-Major June 29th, 1880; and Surgeon-Lieutenant-Colonel from March 31st, 1882. He served in the Umbeyla campaign on the North-West Frontier of India with the Derbund Field Force. He was appointed to the 1st Life Guards June 29th,

1880, and remained with that regiment up to the time of his retirement from the service. He had previously served with the 2nd Life Guards and with the 77th Foot.

Surgeon-Captain J. S. Forrester, Royal Horse Guards, obtains promotion to the rank of Surgeon-Major in the 1st Life Guards in consequence of the retirement of Surgeon-Lieutenant-Colonel H. F. Hensman.

Supernumerary Surgeon-Major E. H. Fenn, C.I.E., from the Coldstream Guards, is appointed Surgeon-Major to the Scots Guards, *vice* H. R. O. Cross, transferred to the 1st Life Guards, September 26th.

Brigade-Surgeon-Lieutenant-Colonel W. W. Tomlinson retires on retired pay October 31st. His commissions are dated as follows: Assistant-Surgeon, September 30th, 1864; Surgeon, March, 1st, 1873; Surgeon-Major, September 30th, 1876; rank of Lieutenant-Colonel, September 30th, 1884; and Brigade-Surgeon-Lieutenant-Colonel, November 4th, 1889. He was in the Egyptian war of 1882, was present at the battle of Tel-el-Kebir, and has received the medal with clasp and the Khedive's bronze star.

ARMY MEDICAL RESERVE.

Surgeon-Lieutenant J. C. Wright, M.B., 2nd West Riding of Yorkshire Volunteer Artillery (Western Division Royal Artillery), to be Surgeon-Lieutenant, October 31st.

INDIAN MEDICAL SERVICE.

Surgeon-Major R. N. Stokes, G. Bomford, M.D., and C. J. McCartie, M.D., Bengal Establishment, who entered the service as Assistant Surgeons, September 30th, 1874, have been promoted to be Surgeon-Lieutenant-Colonels from September 30th.

Surgeon-Major F. C. Smith, Madras Establishment, has resigned the service from October 9th. He was appointed Assistant Surgeon, March 30th, 1878, and was promoted to be Surgeon-Major twelve years thereafter.

MILITIA MEDICAL STAFF.

Surgeon-Lieutenant-Colonel R. Thomason, 4th Battalion Shropshire Light Infantry (formerly the Hereford Militia), has retired with permission to retain his rank and uniform, October 31st.

THE VOLUNTEERS.

Mr. Percival Macleod Yearsley is appointed Surgeon-Lieutenant to the 16th Middlesex (London Irish), October 31st.

Surgeon-Lieutenant C. E. M. Hey, 1st Tower Hamlets (the Tower Hamlets Rifle Volunteer Brigade), is appointed Second Lieutenant in the same corps, November 2nd. He joined as Surgeon-Lieutenant, April 7th last.

MYOPIA AND THE MEDICAL SERVICE, R.N.

L. M.—A candidate must be able to perform any operation without the aid of glasses, but no definite rule can be laid down, each case being decided on its own merits by the Board of Examiners, when the candidate presents himself for examination in due course.

ARMY MEDICAL OFFICERS AND CHOLERA EPIDEMICS.

The regimental journal of the East Lancashire Regiment, in giving an account of the severe epidemic in July and August, alludes to the work of the medical officers as follows: "Surgeon-Captains Thompson and Pilcher, with their assistants, did herculean work in hospital, and those associated with them at that time will never forget their untiring efforts under the most unfortunate circumstances, and beset on all sides with the most overwhelming difficulties." This is only a repetition of an oft-told tale of the self-sacrifice and devotion of army medical officers under the most trying and depressing conditions conceivable. None but those who have witnessed and gone through a virulent cholera epidemic know how appalling are its scenes, and how wearing the duties that fall on the medical staff.

THE MEDICAL DIVISION, WAR OFFICE.

A military medical officer of long service writes as follows in continuation of our remarks on reforms needed: "The professional assistant is the proper person for charge of the roster, and appointments of medical officers on the principle of *divide et impera*. When unification was introduced in 1873, this was the practice, and it should now undoubtedly be continued."

THE CASE OF SURGEON-MAJOR CLARENCE SMITH, MADRAS MEDICAL SERVICE.

In the *Pioneer* of September 15th there is a long statement of this most unfortunate case, of which the substance is as follows: It appears that while driving in a carriage at Ootacamund in April last with the wife of a civil servant, something passed between Dr. Smith and the lady which caused the latter to complain to her husband. An apology was demanded, and an abject and foolishly-worded one was tendered. The matter and the apology were now reported to the Madras Government, which evidently considered the latter self-incriminatory. Surgeon-Major Smith was given a week to send in the resignation of his commission. He now memorialised the Government, pointing out that resignation at the end of sixteen years' hitherto good service meant absolute ruin financially and professionally, not alone to himself, but to his wife and child, and throwing himself on the mercy of the authorities. As he was within one year of retirement, and on account of his family, the first sentence was cancelled, and he was allowed to serve out the extra year for pension on the promise that he would then retire. Meanwhile, he was banished for duty into the wilds of Burmah.

We cannot say what are the charges brought against him, because they are probably, for the sake of the parties concerned, withheld; as the case stands, it is simply impossible to defend Surgeon-Major Smith on its merits, because he himself admits that his conduct, or indiscretion, if momentary, was in every way reprehensible.

What more concerns the public is the ineptitude of the authorities in dealing with the case. They seem to have departed from the semblance of a judicial attitude, which is the only one permissible to even an Indian Government, and condemned a public servant to the forfeiture of civil rights for an apparent breach of the moral law, without any deferred investigation. It is no excuse to say that the terms of a private admission warranted a sudden and secret sentence. It was their duty to call upon the person implicated to state his case in judicial fashion. There is an end of all constitutional government if men are to be deprived of their property and civil status without due investigation. A commission in the forces of the Crown is undoubted property, of which forfeiture cannot be allowed by mere secret inquisition; let us at least have the decency of legal formality.

This man's case seems to have been decided in a mere spasm of moral hysterics, without due investigation. But are all such lapses from the moral code in the public service treated with equal severity? Not at all; one man, or set of men, may steal a horse, but the other may not even look over the hedge.

H.M.S. TROOPSHIP *TAMAR*.

Most unsatisfactory reports of the sanitary conditions of this troopship are in circulation. Two cases of enteric fever occurred in the vessel, and were landed before it started on its homeward voyage. The overcrowding of the ship is also complained of, ladies being relegated to that part of the vessel generally known as Pandemonium. The ship is stated to be infested with rats, and generally unfit in its present condition for troop-ing service.

OUTBREAK OF FEVER IN TIPPERARY.

A very serious outbreak of fever has occurred in the military barracks, Tipperary. A large number of the men belonging to the Seaforth Highlanders have been attacked. The disease made its appearance about a fortnight ago, and immediate steps were taken by the medical officers to arrest its progress. The infected quarters were at once vacated and thoroughly disinfected; but after some time, when the men came back, the malady made its appearance in a more serious form, new cases appearing every few hours. Reports of a similar outbreak in different parts of the union have come under the notice of the board of guardians, and one relieving officer stated that eight cases had occurred in one townland in the Bansha district.

THE PRESIDENCY OF THE INDIAN MEDICAL BOARD.

We referred last week to the vacancy which is about to occur in the office of President of the Medical Board at the India Office, owing to the retirement of Sir Joseph Fayrer. To the list of names then published is to be added the name of Surgeon-Major-General Rice, at present at Simla, who will be placed on the retired list next March. We understand that Deputy-Surgeon-General Thornton, C.B., is also a candidate for the post. The office is one always given to a retired officer of the Indian Medical Service, and Surgeon-Colonel Cleghorn is still on the active list, though of course there is nothing to prevent his retiring should the appointment be offered to him. The rumour, which appears to have originated in India, that Sir John Tyler, C.I.E., Inspector-General of Prisons in the North-West Provinces and Oude, was also a candidate for the post, appears to be an error, since Sir John Tyler's name does not appear in the list of Indian medical officers.

TEMPERANCE IN THE NAVY.

We have frequently called attention to the remarkable spread of temperance principles and practice in the army. A similar improvement has been going on in our navy. Committees have been chosen on board about 200 ships, and individual members appointed to enrol abstaining sailors and officers of the Royal Navy, in temperance pledge books, in other vessels. Nearly 1,000 seamen and marines belong to this praiseworthy propaganda. In connection with the Sailors' Rests at Devonport and Portsmouth nearly 5,000 pledges have been taken. One thousand naval abstainers are equal to a substantial proportion of additional effectives. The continued progress of this temperance crusade in the navy will prove a valuable addition to our national defence, which for its efficiency so largely depends on the discipline and health of our seamen and marines.

FIELD HOSPITALS IN INDIA.

Some changes in the establishment of field hospitals in India have resulted from the experience gained during the Miranzai, Hazara, and other recent expeditions. In order to facilitate the ready subdivision of a field hospital and provide the necessary medical subordinates for rest camps and wounded proceeding to the base of operations and rest depôts on the lines of communication the medical subordinates have been increased from seven to eight for each field hospital. The number of hospital havildars and pack store sergeants have also been augmented. Two European orderlies for nursing duties have been sanctioned for each section. The ward sweepers and pakhali bhisties have been increased to avoid the employment of temporary servants. An additional hospital storekeeper is sanctioned. The list of medical stores has been modified, many articles that are not really necessary have been eliminated, and requisite alterations in commissariat stores and medical comforts have been effected, for example, the supply of brandy is increased, while port wine is banished. These alterations are recognised as a vast improvement.

Placards for Infected Apartments.—At a recent meeting of the New York Board of Health a recommendation by Dr. H. M. Biggs was adopted, providing for the better protection of the public by the placarding of all apartments where there are contagious diseases. The warning placards are to be in different colours: white for diphtheria, red for scarlet fever, and blue for measles.

MEDICO-LEGAL AND MEDICO-ETHICAL.

"THE COVENTRY PROVIDENT DISPENSARY."

We have received the following communication:

SIR,—The letter in the BRITISH MEDICAL JOURNAL of October 13th upon the above subject demands an answer, as much of it is inaccurate, and misrepresents us to the profession at large. We are arraigned as occupying an "untenable position," and acting generally in an unworthy manner. As we have not hitherto replied to these charges, we must beg for space to justify ourselves by a brief sketch of the facts from our standpoint.

The Coventry Dispensary is not and never was a charity, as alleged. It was founded in the year 1831 essentially as a provident institution to enable the working classes to make a provision for sickness by small and regular payments. It is governed by a committee of twenty-four; of these, twenty-two are selected annually by the members almost wholly from their own ranks, and two are members of the medical staff. The first rule of the founders was that members should consist of working men, their wives and families, and this, on the whole, has been fairly observed in the admission of candidates. Doubtless there are some who, entering as artisans, have subsequently attained to a more independent position, but these, as a rule, belong to sick benefit clubs subscribing to the dispensary as a body, with the individual members of which the committee cannot interfere—clubs similar to those that are attended by the profession generally throughout the country, and by each of your correspondents.

Such, then, was the position of affairs some two years ago, when a movement was initiated in Coventry by some members of the profession with the avowed object of reforming the abuses in connection with club and dispensary practice. If fairly and impartially carried out some good might have arisen from this movement, but, on the contrary, it rapidly degenerated into an attack on the dispensary alone. The institution, the committee, and the medical staff were assailed in every possible way by your correspondents, more especially in the local press, where allegations of the most unworthy and unjustifiable nature were made. At length a deputation was sent to interview the Dispensary Committee on the subject, but the demands of the deputation were so offensive as all the previous actions of the promoters of the movement had been. The assertion made by your correspondents that "the dispensary staff did not assist us in our efforts in reform, but stated that they were not in sympathy with the movement" is quite wrong. For the consideration of the reform movement only two meetings of the profession were held to which we were invited. Three of our number attended the first, while the whole of the staff attended the second, and again expressed sympathy. When, however, we were asked to join in this bitter and unwise attack upon our institution we refused, but with a most important qualification, as will be seen from the following quotation from our letter with regard to it, dated January 23rd, 1893: "While sympathising to the fullest extent with the object in view (medical reform), we feel sure that as a medical committee officially connected with the institution we can do far more to remedy and prevent abuses than by joining a self-constituted committee having no connection with or power over the management of its affairs." Not only did we sympathise, but we brought the matter so forcibly before our committee that a special committee was appointed to inquire into the questions at issue, and important modifications were drawn up and agreed to that would have done much to check the abuses complained of, and we also promised that the objectionable rule prohibiting us from meeting medical men not on our own staff in consultation upon dispensary cases should be disregarded (we had no power to abolish it), and that when asked we should meet them as in private practice.

At this point the offensive conduct of your correspondents so incensed and provoked the members of the dispensary generally that they retaliated by organising and passing a resolution: "That in future the pecuniary position of the applicants be no bar to admission." This resolution was passed at the annual meeting by the members, who did not hesitate to admit that it was entirely brought about by the irritation caused by the injudicious interference of your correspondents, who have thus inflicted what, we fear, is an irreparable injury upon the institution and on ourselves, and who now attempt to add insult by endeavouring to place the odium of the situation on our shoulders. The medical staff opposed the resolution to the last, and afterwards presented to the committee and entered on the minute book a solemn protest against the resolution. We are not aware that any medical organ has declared our position untenable; but whatever it be, it has been created by your correspondents, and we cannot see how our retiring from it would improve matters. On the contrary, our appointments would be eagerly taken up by others, and the position generally would be all the worse.

Here we would point to a most significant fact that three of your correspondents who were most active in assailing and condemning the Coventry Dispensary were themselves recent applicants for a vacancy on the staff, to which, however, they were not elected.

With reference to the unhappy relationship between them and ourselves, we should mention that since the occurrence alluded to we have frequently sent invitations to them to meet us in friendly conference, to settle our differences, to establish peace, and to unite our forces, but those invitations have been scornfully rejected. It is useless, therefore, for your correspondents to express such despair of effecting a reform—as they do in the last paragraph of their letter to you—while they themselves fail to observe the old motto that is so essential to success where the interests of a community are at stake: "Unity is strength."—We are, etc.,

D. McVEAGH,
MARK FENTON, M.D.,
CHARLES DAVIDSON,
W. J. PICKUP,
T. A. HIRD.

*** We willingly publish the above letter from the staff of the Coventry Dispensary, and we leave the matter to the judgment of the profession. Though in itself the question may seem of merely local interest, yet it involves principles of universal application, and of much moment to general practitioners both in town and country. It is, if we mistake not, true that at the present time the so-called "medical charities" are abused to a considerable extent by persons able to pay fees. It is also true that the provident dispensary movement was started partly with the view of obtaining from the working classes such fees as they could be reasonably expected to pay, and thus of benefiting medical men as well as the honest and self-respecting poor. But if the so-called "provident dispensaries" are to admit everybody; if (as the letter says) "the pecuniary position of the applicant is to be no bar to admission," it is clear that provident dispensaries would be greater enemies to the struggling local practitioner than the hospitals ever were. We must say, therefore, that we regard the resolution passed by the members of the Coventry Dispensary as unjust and intolerable, nor can we understand how any conduct of any third persons, however "offensive," could justify the medical officers of the dispensary in submitting to it. If our correspondents are correct in supposing that if their appointments were to be vacated by them they would be eagerly taken up by others, it is a grievous opprobrium to the medical profession in Coventry. At any rate, as we said in the BRITISH MEDICAL JOURNAL of October 13th, the dispensary is not "an undertaking the advertisement of which would knowingly be admitted into our columns."

QUACKS AND MEDICAL CERTIFICATES.

A MEMBER has furnished us with a copy of a certificate given by an unqualified person in the following form:

"This is to certify this (A. B.) is still suffering from neuralgia of the Head and in addition I find that He is slightly affected with his Heart. Reduplication which is sufficient cause for His absention from Work for some Little time. "(Signed) ——."

Our correspondent inquires if any action can be taken against the quack on this certificate? and if so, what?

*** Proceedings might lie under Section 40 of the Medical Act (1858) for wilfully and falsely pretending to be a medical practitioner, but considerable difficulty is often experienced in connection with such proceedings, which should not be commenced except under legal advice and after careful consideration of all the available evidence that can be procured. The proceedings are taken before justices under the Summary Jurisdiction Acts. If it could be shown that the quack referred to prescribes for patients requiring medical treatment, and compounds and supplies them with medicines for gain, proceedings might be taken by the Society of Apothecaries under their Act of 1815. If such evidence exists, our correspondent might communicate with the Clerk to the Society of Apothecaries, Blackfriars, E.C.

INFORMAL SUMMONSES TO INQUESTS.

A CHESTER correspondent informs us that some little time ago he was sent for to see the dead body of an infant who had died suddenly in its mother's arms. Two days afterwards a police constable called at his house and informed him that the coroner would hold an inquest on the case at a certain hour that day, and that he would be wanted there. He went to the place at the hour named, and, after waiting along with the jurymen for an hour for the coroner to arrive, he was informed by the coroner when he did arrive that "he had not told the police to summon him," and "that he must look to them for his fee." "This was said to me," adds our correspondent, "in the presence and hearing of a police sergeant, whom I informed on the spot that I should not come again to an inquest unless the police brought me a written summons from the coroner. Am I right in so saying and doing?"

*** This case illustrates one of the difficulties with which medical men often have to deal in connection with coroner's inquests. There is, we believe, no doubt that a medical man is not obliged to obey a verbal summons to the coroner's court, which is not on a different footing from any other court in this respect. It may be worth while, however, to suggest that the whole relations between the coroners and the police are in need of regulations. We believe the London County Council have, after much inquiry, come to the conclusion that the best course is to make a general arrangement by which the police shall perform the duties of the coroners' officers on a regular and formal footing. We offer no opinion as to the general merits of such an arrangement, but our correspondent's letter clearly shows that much annoyance is certain to result wherever it is the custom of the police to make informal arrangements which the coroner may afterwards disallow.

DENTISTS AND ANÆSTHETISTS.

IN reply to a query published in the BRITISH MEDICAL JOURNAL of August 27th, 1892, we stated, "If a medical practitioner, acting in the capacity of an anæsthetist, in any way professionally identifies himself with an unqualified practitioner, medical or dental, by administering gas or chloroform to his patients, he becomes, so to speak, a *particeps criminis* or accessory, and would therefore, we need scarcely add, be acting unprofessionally." We are informed that at a meeting of the Medico-Chirurgical Society at Nottingham on January 3rd, 1894, Dr. Tressider moved the following resolutions:

1. "That this meeting considers it unprofessional for medical men to give anæsthetics for unregistered or advertising chemists."

2. "That the Dental Association be asked to furnish every registered medical practitioner in the neighbourhood with a printed list of local dentists whose names are on the *Register* and who do not advertise." Carried with but one dissentient. Similar resolutions have been passed by the Plymouth and York Medical Societies. Dentists who have obtained their qualifications from a College of Surgeons, and are on the *Dentist's Register*, who may belong to any of the dental scientific societies —namely, the British Dental Association, the Odontological Society of Great Britain, the Odonto-Chirurgical Society of Scotland, etc., are, like medical men, solicitors, etc., not permitted to advertise, as the following extract from one of the by-laws shows: "No member shall be permitted to advertise his profession, his modes of practice, or his charges, either in the public journals or by circular. They shall not be permitted to expose specimens of their work for public inspection, nor carry on their practice in connection with any other business, nor to conduct themselves in any way derogatory to their profession." Unfortunately, there are a large number of registered dentists who, being unable to form a practice in a legitimate and honourable manner by means of the reputation gained by the skilful and conscientious performance of the work they are called upon to do, try to make up for their lack of skill by the employment of advertisements as a means of attracting patients. In contrast to this the really conscientious professional man knows that skill and kindness, and the confidence which they beget, are the surest passport to honourable success, without resorting to advertising in public papers the wonderful things he can do.

THE PUFF PARAGRAPHIC.

"An Indignant and Ashamed Member of the B.M.A." sends us a paragraph from a local newspaper, which relates how a certain local doctor was called in to treat an old man who for eight days had been treated with embrocations for an injury which turned out to be dislocation of the shoulder and fracture of the arm. Our correspondent states that similar paragraphs in reference to the same medical man appear in the local newspapers "week after week," and asks for our opinion. Our opinion is that the publication of such paragraphs, which read very like puffs of the individual practitioner, are much to be regretted in the general interests of the dignity of the profession, and our hope is that the medical practitioner in question attains this unwonted notoriety without his consent. Possibly the real culprit may be a grateful but injudicious patient, who may perhaps plead in extenuation of his failure to obey the ordinary rule of medical reticence and etiquette the very excellent moral which he appends to the paragraph sent to us: "A doctor's opinion is in most cases worth his fee."

"THE LADIES' FRIEND."

Dr. R. R. Rentoul, referring to our note under this heading on October 20th, demurs to the remark that "the existing law provides no disciplinary control for such midwives," inasmuch as a person who acts or practises as an apothecary may be prosecuted under the Act of 1815. This is perfectly true, but it does not amount to "disciplinary control" of midwives as such, which was the question our correspondent raised. Dr. Rentoul is, we believe, mistaken in thinking that the General Medical Council receives the fines imposed in such prosecutions.

RECOVERY OF CHARGES.

B. W. complains (not unreasonably we think) that in a county court case where he sued a plumber, earning 34s. per week, for medical attendance and medicine for his two daughters, both under age, the judge would not allow his account of £1 16s. for eleven visits (one at 11.30 P.M.) and medicines for the one daughter and two visits and medicine for the other daughter. The judge, we are informed, said "When doctors make their bills out to the working classes they should put down so much a visit and so much for each bottle or box of medicine. I shall reduce this medical account, reduce it very considerably. I order it to be £1 instead of £1 16s. Four shillings a month." The judge required to know the ingredients of which the medicines were compounded and commented on their value. Our correspondent inquires if he can appeal or have the matter tried again. We are afraid there is no appeal, and, in fact, that nothing can be done. We can only hope that this is an isolated case.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Sir Henry Acland, Bart., M.D., F.R.S., has announced his intention shortly to resign the office of Regius Professor of Medicine, which he has held for many years.

UNIVERSITY OF CAMBRIDGE.

Examinations.—The following dates have been announced by the Registrary:

Examination.	Names to be sent in.	Fees and Certificates.	Examination Begins.
First M.B.—			
Chemistry	November 24	December 1	December 7
Biology	November 24	December 4	December 10
Second M.B.—			
Anatomy	November 24	December 1	December 7
Pharmacy ...	November 24	December 7	December 13
Third M.B.—			
Surgery	November 28	December 5	December 11
Medicine	November 28	December 5	December 11
M.C.	November 28	December 8	December 14

Degree.—At the Congregation on October 25th the degrees of M.B. and B.C. were conferred on W. R. Floyd, B.A., of Clare College.

Addenbrooke's Hospital.—At a special court of governors, held on October 29th, Mr. Frederick Deighton, M.B., assistant surgeon, was unanimously elected surgeon to the hospital, in the room of Sir G. M. Humphry. A special court for the election of an assistant surgeon will be held on November 26th. At the same court a house-surgeon will be appointed in the room of Mr. Todd, who has resigned.

UNIVERSITY OF EDINBURGH.

General Council.—The statutory half-yearly meeting of the General Council of the University of Edinburgh was held on Friday, October 26th. The only points of medical importance and interest came up in relation to the reports of the Committee on Ordinances. On the regulations of the encouragement of special study in research and for the institution of Research Fellowships (No. 23) the Committee decline to give approval on these grounds: "It (the Ordinance) mixes up specialised study, training in research under the guidance, instruction, and direction of a professor, and the independent conduct of research as a part of the university work; and it fails to make any definite provision that the interests of research shall be attended to. At every turn it is to the interest of the applicant for 'research student' to commend himself to the Professor, the Faculty or the Committee, and the Senatus; and it is not his interest to pursue any independent course as an independent investigator. The Commissioners' plan may manufacture university graduates; it will not tend to encourage special study and research in the universities." Similarly the Committee set forth that "they are not satisfied with the new arrangement under which the degree of Doctor of Science may be given for a thesis alone. The Council has already protested against this, which is directly contrary to the spirit of the Commissioners' own provisions as to the degree of M.D., which is henceforth not to be taken by thesis alone, as formerly, but by examination *plus* thesis. The strength of the D.Sc. degree has hitherto been that the candidate has not been able to confine himself to the subject matter of his thesis, but that he has had to face a searching examination, without syllabus, in any part of his department, and that specialised to any extent. A degree obtained by thesis alone cannot be of the same value, though of course there may be exceptional cases in which the thesis indicates such outstanding ability that it may be proper and convenient to dispense with examination. This is, however, not the general rule." With reference to the Draft Ordinance on the qualification of candidates for chairs, but that it be subject to "committing selection, without appointment of professors to a small committee of the Senatus," and adds: "Besides the proposed Professorial Committee would not contain the exponents of the special subject being dealt with. Your Committee have repeatedly taken exception to the ordinances of the Commissioners, on the ground that they assign to the Senatus powers which, in their opinion, ought to have been assigned to the University Court. They are, therefore, desirous that it should be specially understood that the present case is not one in which they are influenced merely by their general policy of desiring to support the authority of the Court as the supreme governing body in the University. They are of opinion that the proposed Professional Committee would be a distinctly unsuitable body for the purpose in view. It is in the last degree undesirable that professors should be appointed by what would practically be a system of co-optation."

UNIVERSITY OF ABERDEEN.

Professor Reid, Aberdeen University, has been appointed by the Senatus as a delegate to represent Aberdeen University at the Indian Medical Congress to be held in Calcutta during Christmas week.

SCOTTISH UNIVERSITY COMMISSION.

The powers of the Commissioners under the Universities (Scotland) Act, 1889, have been extended from January 1st, 1895, to January 1st, 1896.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

The following gentlemen passed the First Examination of the Board in the subjects indicated at the quarterly meeting of the Examiners:—

Part I. *Chemistry and Physics.*—E. Ashby, Guy's Hospital; J. L. Baskin, Queen's College, Cork; J. Battersby, St. Mungo's College, Glasgow; W. J. May, Charing Cross Hospital; J. A. Mellish, St. George's Hospital; A. E. Seller, London Hospital; A. W. Walker, Mason College, Birmingham.

Part II. *Practical Pharmacy.*—W. Alcock, Firth College, Sheffield; G. L. Bates, Charing Cross Hospital; F. Bawtree, St. Thomas's Hospital; W. F. Bennett, St. Bartholomew's Hospital; E. N. Berryman, St. Bartholomew's Hospital; F. R. Brooks, St. Bartholomew's Hospital; H. R. C. Clarke, St. Thomas's Hospital; F. Coleman, Charing Cross Hospital; T. G. Feuton, St. Thomas's Hospital; P. Gardner, Middlesex Hospital; S. Gaster, London Hospital; R. C. B. Hall, Mason College, Birmingham; H. N. Harness, King's College, London; F. Hasler, London Hospital; W. A. Henshaw, Mason College, Birmingham; H. N. Horton, Middlesex Hospital; E. T. Jensen, Guy's Hospital; D. V. Lowndes, London Hospital; N. Milner, Firth College, Sheffield; A. Mercer, University College, London; H. Mass, Guy's Hospital; R. J. Norris, St. Thomas's Hospital; L. E. Orton, Mason College, Birmingham; C. K. Pike, London Hospital; H. H. Robinson, Owens College, Manchester; G. V. Smallwood, Mason College, Birmingham; E. P. Smith, Middlesex Hospital; J. N. Smith, Guy's Hospital; E. B. Stevenson, St. Bartholomew's Hospital; G. S. Ward, London Hospital; W. J. Waters, St. Thomas's Hospital; W. F. Wilkinson, Hospital: A. H. Willsher, Oxford University.

Part III. *Elementary Biology.*—T. Chetwood, St. Bartholomew's Hospital; E. J. Crew, Guy's Hospital; W. V. C. Francis, Westminster Hospital; R. W. Rees, Surgeons' Hall, Edinburgh; H. F. Stilwell, St. Bartholomew's Hospital; H. M. B. Stratford, Oxford University.

Part IV. *Elementary Anatomy.*—T. P. Allen, St. Bartholomew's Hospital; A. de V. Blathwayt, University College, London; E. A. Bullmore, University College, London; C. E. Evans, University College, London; E. V. Foss, University College, London; H. M. Hart Smith, Cambridge University; E. T. Jensen, Guy's Hospital; H. J. May, London Hospital; W. D'U. Pemberton, St. Thomas's Hospital; R. W. Rees, Surgeons' Hall, Edinburgh; F. J. W. Sass, St. Mary's Hos-

pital; H. Smith, Mason College, Birmingham; H. F. Stilwell, St. Bartholomew's Hospital; T. H. Talbot, St. Bartholomew's Hospital; E. J. Tonguo, Guy's Hospital; P. H. Ward, Guy's Hospital.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE following candidates, having conformed to the By-laws and Regulations, and passed the required Examinations, were at the meeting of the College, on October 25th, admitted Licentiates:

Abcarius, J. J., Beyrout and London
Abrahams, B. L., University College
Allport, A., Guy's
Armer, A., St. Bartholomew's and Guy's
Bakhle, C. R., Bombay, and University College
Baly, C. F. P., University College
Barr, V. H., Guy's
*Bateman, R. W., London
Bates, J. E., Cambridge, and University College
Battle, E. W., Manchester
Beyfield, J. B., King's College
Best, P., University College
Blewitt, W. F., Birmingham
Boden, J. S., King's College
Bond, C. S., Cambridge, and Guy's
Bower, E., Birmingham
Breen, A. L., St. Bartholomew's
Brereton, F. S., Guy's
Brige, A. P., Westminster
Brierley, T. B., Edinburgh, St. Thomas's, and Liverpool
Brooke, F. A. J. R., London
Brown, D. D., St. Bartholomew's
Budd, W. H., Liverpool
Burditt, R. A., Manchester
Burroughs, W. J., Guy's
Burton, A., Cambridge, & St. George's
Butler, W. B., London
Calverley, J. E. G., St. Bartholomew's
Carter, F. J., St. Bartholomew's
Clark, H. J., St. Thomas's
Clarke, A. H., St. Bartholomew's
Clarke, F., St. Bartholomew's
Cochrane, A. W. R., St. Bartholomew's
Collard, F. S., St. George's
Colley, C. R., Guy's
Collier, W. E., St. Bartholomew's
Cooke, F. A., St. Mary's, and Wolverhampton
Copeland, F., Westminster
Copley, S., Guy's
Corfe, R., St. Mary's
Crossman, F. W., Bristol, and St. Bartholomew's
Currie, J., St. Bartholomew's
Davies, J. E. H., London
Dickinson, H. B., Liverpool
Dobie, E. C., Edinburgh
Dorrell, E. A., Bristol
Drake, C. H., St. Bartholomew's
Drake, E. H., Guy's
Drew, E. H., St. Bartholomew's
Eastes, G. L., Guy's
Edgar, J. C., Manchester
Evison, F. A., Guy's
Firth, H. E., Leeds
Flegg, F. A. M., St. Thomas's
Flemming, A. L., Bristol
Forsayeth, J. R. M., Westminster
Fraser, D. H., St. Thomas's
Frickè, E. H., Charing Cross
Fry, W. H., Charing Cross
Gaman, F. R. S., University College
Genge, G. G., St. Thomas's
Gerrard, A. H., University College
Gooding, A., London
Grattan, H. W., London
Gregor, E. W., Middlesex
Griffiths, A. D., Bristol
Gullan, A. G., Liverpool
Haines, A., St. Thomas's
Hale, L. H. D., St. George's
Hanbury, W. R., St. Thomas's
Harding, H. W., St. Thomas's
Harman, L., St. Thomas's
Hopkins, F. G., Guy's
Howard, V., St. Bartholomew's
Husband, F., Bristol
James, G. P. W., University College
Jenkins, A. W., University College
Job, H. P., University College
Jones, R., London
Joynson, G. G., Man. and Univ. Coll.
Kitson, J. P., University College
Lambert, P., St. Bartholomew's
Latham, A. C., Oxford and St. Geo.'s
Layton, F. G., St. Thomas's
Lewis, F. W., Middlesex
Lowe, G. J. R., St. Bartholomew's
Lowe, L., Birmingham
Loy, M. W., London
MacDonald, G. M., Camb, and King's College
Mason, F. W., St. Thomas's
Matthews, A. K., Guy's
Moon, R. H., Guy's
Morgan, J. A., Charing Cross
Morris, A. H., St. Bartholomew's
Morris, T. H. P., Middlesex
Moses, J., London
Nichols, H. G., Birmingham
Norman, R. L., St. George's
O'Leary, E. G. E., Bristol and Guy's
Ormerod, E. W., Cambridge and St. Bartholomew's
*Owen, A. D., London
Packer, H. D., Guy's
Pain, A., St. Bartholomew's
Palmer, M. H. C., Cambridge and London
*Pavri, M. E., Bombay and Dublin
Penny, F. S., King's College
Peters, E. A., Cambridge and Guy's
Phillips, G., University College
Prain, J. L., St. Thomas's
Prior, J., Leeds and St. Thomas's
Reid, S. T., Charing Cross
Reynolds, B. G., Guy's
Rhind, T., University College
Riddick, G. B., St. Mary's
Robinson, W. E., Oxford and Guy's
Sames, J. W., London
Saunders, A. L., St. Bartholomew's
Savage, W. A., University College
Smith, E. H., London
Spaull, P. W., St. Thomas's
Stanley, A., St. Mary's
Stone, W. G., St. Thomas's
Summerhayes, J. W., St. Mary's
Symons, W. H., St. Bartholomew's
Taylor, H. R., St. Bartholomew's
Thurston, E. O., St. Thomas's
Toombs, H. G., St. Thomas's
Trythall, W. R., Middlesex
Turner, E. P., St. Bartholomew's
Watkin-Williams, P. L., Middlesex
Wiggin, H. P. V., London
Williams, P. G., London
Wilmot, K. B., King's College
Wilson, H. R., Liverpool

* Candidates who have not presented themselves under the Regulations of the Examining Board.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his return relating to the births and deaths registered in England and Wales during the third, or summer, quarter of this year, and to the marriages during the three months ending June last. The marriage-rate did not exceed 14.3 per 1,000 of the population, and with one exception was lower than in the corresponding period of any year on record.

The births registered in England and Wales during the three months ending September last numbered 215,868, equal to a proportion of 28.5 annually per 1,000 of the population, estimated by the Registrar-General to be rather more than thirty millions of persons in the middle of this year. This rate was below that recorded in the third quarter of any year since the establishment of civil registration in 1837, the nearest approach to so low a birth-rate in this quarter of the year having been 29.4 per 1,000 in 1847; in the September quarters of the ten years 1884-93 the mean rate was 31.3 per 1,000. The birth-rates in the several counties during the quarter under notice ranged from 21.5 in Rutlandshire, 23.2 in Westmorland and in Huntingdonshire, and 24.1 in Surrey to 32.4 in Monmouthshire, 32.5 in South Wales, 33.1 in Staffordshire, and 34.2 in Durham. In thirty-three of the largest English towns the birth-rate last quarter averaged 29.8 per 1,000, and was 1.3 above the general English rate. In London the birth-rate was 29.3 per 1,000, while it averaged 30.2 in the thirty-two provincial towns, among which it ranged from 19.7 in Huddersfield, 22.9 in Halifax, and 24.2 in Croydon to 33.0 in Wolverhampton, 33.6 in Cardiff, and 34.4 in Liverpool.

The births registered in England and Wales during the quarter ending September last exceeded the deaths by 108,365; this represents the natural increase of the population during that period. It appears from returns issued by the Board of Trade that 79,947 emigrants embarked during last quarter, for places outside Europe, from the various ports of the United Kingdom at which emigration officers are stationed. Of these, 34,696 were English, 5,600 Scotch, and 14,500 Irish. Compared with the mean proportions in the corresponding periods of recent years, the proportion of emigrants from England and from Scotland showed a considerable decline, while the proportion from Ireland showed a slight increase.

During the third quarter of this year the deaths of 107,503 persons were registered in England and Wales, equal to an annual rate of 14.2 per 1,000 of the estimated population; this rate was 0.7 below the lowest yet recorded in any quarter, and was as much as 3.0 per 1,000 below the average rate in the corresponding quarters of the preceding ten years 1884-93. The lowest county death-rates last quarter were 7.1 per 1,000 in Rutlandshire, 10.3 in Buckinghamshire, 10.5 in Dorsetshire, and 10.9 in Berkshire; while the highest rates were 15.9 in Northumberland, 16.1 in Durham, and 16.6 in Lancashire. In the urban population of the country, estimated at about twenty-two millions of persons, the rate last quarter was 14.9; during the period under notice was 14.9 per 1,000; while in the remaining and chiefly rural population of nearly ten millions it was 12.7 per 1,000. These rates were respectively 3.7 and 2.8 per 1,000 below the mean rates in the corresponding quarters of the preceding ten years. Among thirty-three of the largest English towns the mean death-rate was 16.4 per 1,000; in London the rate was 15.9 per 1,000, while in the thirty-two provincial towns it averaged 16.9, and ranged from 12.4 in Huddersfield, 13.3 in Bristol, and 13.4 in Derby and in Huddersfield to 19.7 in Salford, 21.5 in Sunderland, 22.2 in Preston, and 24.3 in Liverpool. In sixty-seven other large towns, with an estimated aggregate population of about three and a third millions, the mean death-rate was 13.9 per 1,000, or 2.5 per 1,000 below the rate in the thirty-three great towns.

The 107,503 deaths registered in England and Wales during the three months ending September last included 5,891 which resulted from diarrhœa, 2,371 from whooping-cough, 2,092 from measles, 1,845 from diphtheria, 1,142 from "fever" (including typhus, enteric, and ill-defined forms of fever), 1,023 from scarlet fever, and 464 from small-pox; in all, 14,528 deaths were referred to these principal zymotic diseases, equal to an annual rate of 1.92 per 1,000, against an average rate of 2.98 in the corresponding quarters of the preceding ten years. The mortality from diphtheria showed a considerable excess, while that from each of the other principal zymotic diseases was below the average. Of the 464 fatal cases of small-pox, 43 occurred in London, 27 in Willenhall, 20 in Birmingham, 5 in Manchester, 5 in Walsall, and 5 in Dudley.

The rate of infant mortality, or the proportion of deaths under one year of age to births registered, was equal to 134 per 1,000, and was as much as 32 per 1,000 below the mean rate in the corresponding periods of the preceding ten years. In London the rate of infant mortality was 164 per 1,000, while it averaged 172 in the thirty-two provincial towns, among which it ranged from 98 in Halifax, 110 in Bristol, and 114 in Huddersfield, to 215 in Leicester, 234 in Liverpool, and 306 in Preston.

The mean temperature of the air during last quarter at the Royal Observatory, Greenwich, was 58.6°, and was 1.2° below the average in the corresponding periods of 123 years; the mean temperature showed an excess of 0.3° in July, but was 1.3° below the average in August, and 2.5° below in September. The rainfall during the quarter amounted to 7.54 inches, and was 0.25 of an inch below the average amount.

VITAL STATISTICS OF LONDON SANITARY DISTRICTS DURING THE THIRD QUARTER OF 1894.

IN the accompanying table will be found summarised the vital and mortal statistics of the forty-three sanitary areas of the metropolis, based upon the Registrar-General's returns for the third or summer quarter of this year. The mortality figures in the table relate to the deaths of persons actually belonging to the various sanitary areas, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the various sanitary areas in which the patients had previously resided.

The 31,791 births registered in London during the three months ending September last were equal to an annual rate of 29.3 per 1,000 of the population, estimated at 4,349,168 persons in the middle of this year. In the corresponding periods of the preceding five years, 1889-93, the birth-rate averaged 30.7 per 1,000, and the birth-rate last quarter showed a further decline from that recorded in the third quarters of recent years. The birth-rates during the quarter under notice in the various sanitary areas showed, as usual, wide variations, owing principally to the differences in the sex and age distribution of the population. In St. George Hanover Square, Westminster, St. James Westminster, Hampstead, Stoke Newington, St. Martin-in-the-Fields, London City, and Lee the birth-rates were considerably below the average; while in Fulham, St. Luke, Whitechapel, St. George-in-the-East, Mile End Old Town, St. Olave Southwark, and Bermondsey, the birth-rates showed a marked excess.

The 16,863 deaths of persons belonging to London registered during the quarter under notice were equal to an annual rate of 15.6 per 1,000; this death-rate was considerably lower than in any corresponding quarter on record, the nearest approach to so low a rate being 16.6 in 1888. During

the nine years 1885-93 the average rate in the September quarters was 18.3 per 1,000. The lowest death-rates last quarter in the various sanitary areas were 6.9 in Stoke Newington, 10.0 in Lee, 10.2 in Hampstead, 10.9 in Plumstead, 11.0 in Lewisham (excluding Penge), 11.2 in Wandsworth, and 11.9 in St. George Hanover Square; in the other districts the rates ranged upwards to 18.2 in Poplar, 18.4 in Shoreditch, 18.9 in Whitechapel, 19.5 in Mile End Old Town, 20.8 in St. Luke, 21.6 in St. George Southwark, 22.6 in Limehouse, and 29.6 in St. George-in-the-East. During the quarter under notice 3,027 deaths were referred to the principal zymotic diseases in London; of these, 1,211 resulted from diarrhœa, 636 from diphtheria, 459 from measles, 347 from whooping-cough, 228 from scarlet fever, 103 from different forms of "fever" (including 3 from typhus, 99 from enteric fever, and 1 from ill-defined fever), and 43 from small-pox. These 3,027 deaths were equal to an annual rate of 2.8 per 1,000, which was 1.0 per 1,000 below the average rate in the corresponding quarters of the preceding nine years. The lowest zymotic death-rates during last quarter in the various sanitary areas were 0.9 per 1,000 in Stoke Newington and in London City, 1.1 in Lee, 1.2 in St. Martin-in-the-Fields and in Plumstead, 1.3 in St. George Hanover Square, and 1.4 in St. James Westminster; in the other districts the zymotic death-rates ranged upwards to 3.5 in Mile End Old Town, 3.7 in Rotherhithe and in Camberwell, 3.9 in St. George Southwark, 4.1 in Clerkenwell, 4.4 in Limehouse, and 6.8 in St. George-in-the-East.

Forty-three deaths from small-pox of persons belonging to London were registered during the three months ending September last, of which 29 belonged to Marylebone, 4 to St. Pancras, and 2 each to Fulham, Hampstead, and Bethnal Green sanitary areas. Measles showed the highest proportional fatality in Holborn, Clerkenwell, Bethnal Green, Limehouse, Poplar, and Camberwell; scarlet fever in St. George-in-the-East, Limehouse, Rotherhithe, and Woolwich; diphtheria in Fulham, Bethnal Green, Whitechapel, St. George-in-the-East, Mile End Old Town, St. Saviour Southwark, St. George Southwark, Bermondsey, Rotherhithe, Camberwell, and Greenwich; whooping-cough in Fulham, Westminster, Strand, Battersea, and Camberwell; and diarrhœa in Fulham, Clerkenwell, St. Luke, Shoreditch, St. George-in-the-East, St. George Southwark, and Rotherhithe sanitary areas. The mortality from "fever" showed no marked excess last quarter in any of the sanitary areas.

During the three months ending September last 1,592 deaths from phthisis were registered in London, equal to an annual rate of 1.5 per 1,000. Among the various sanitary areas the lowest phthisis death-rates were recorded in St. George Hanover Square, Stoke Newington, London City, Battersea, Wandsworth, and Plumstead; the highest rates in St. Giles, St. Luke, Whitechapel, St. George-in-the-East, St. Saviour Southwark, St. George Southwark, and Bermondsey.

Infant mortality in London last quarter, measured by the proportion of deaths under one year of age to registered births, was equal to 165 per 1,000; owing principally to the unusually slight prevalence of summer diarrhœa, this rate was lower than in any September quarter on record, and was as much as 31 per 1,000 below the average rate in the corresponding quarters of the preceding nine years. Among the various sanitary areas the rates of infant mortality were lowest in Hampstead, Stoke Newington, St. Saviour Southwark, Newington, Lee, Lewisham, and Plumstead; while they showed the largest excess in Holborn, Clerkenwell, Shoreditch, St. George-in-the-East, Limehouse, Mile End Old Town, St. George Southwark, and Rotherhithe.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 5,932 births and 3,714 deaths were registered during the week ending Saturday, October 27th. The annual rate of mortality in these towns, which had increased from 16.0 to 17.0 per 1,000 in the preceding three weeks, further rose to 18.5 last week. The rates in the several towns ranged from 10.2 in Croydon, 12.4 in Leicester, and 13.7 in Cardiff to 23.4 in Manchester, 24.2 in Liverpool, and 26.8 in Sunderland. In the thirty-two provincial towns the mean death-rate was 19.1 per 1,000, and was 1.3 above the rate recorded in London, which was 17.8 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.0 per 1,000; in London the rate was equal to 1.7, while it averaged 2.2 per 1,000

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Distribution of Deaths occurring in Public Institutions, during the Third Quarter of 1894.

Sanitary Areas.	Estimated Population middle of 1894.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Pulmonal Tubercle Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Simple and Ill-defined Fever.	Diarrhœa.	Phthisis.	Deaths of Children under 1 year of age to 1,000 births.
LONDON	4,349,166	31,791	16,863	29.3	15.6	2.8	3,027	43	459	228	636	347	3	99	1	1,211	1,592	165
West Districts.																		
Paddington	121,583	701	437	23.1	14.4	3.4	104	1	20	5	23	11	—	5	—	37	36	175
Kensington	167,350	912	557	21.9	13.1	1.9	78	—	16	2	15	7	—	2	—	35	53	177
Hammersmith	105,696	724	353	27.5	13.4	2.5	66	—	11	4	10	10	—	1	—	30	30	167
Fulham	110,993	967	410	35.0	14.8	3.3	90	2	5	5	19	14	—	2	1	42	37	168
Chelsea	99,032	693	361	27.1	14.8	2.5	61	—	10	6	11	11	—	3	—	20	26	145
St. George Hanover Sq.	75,033	371	223	19.8	11.9	1.3	24	—	3	4	2	7	—	3	—	5	17	124
Westminster	54,414	292	176	21.5	13.0	1.8	25	—	1	2	2	7	—	—	—	8	24	134
St. James Westminster	23,571	121	81	20.6	13.8	1.4	8	1	—	—	2	2	—	—	—	5	12	140
North Districts.																		
Marylebone	138,554	1,049	623	30.4	18.0	2.8	95	28	9	7	11	11	—	7	—	24	32	147
Hampstead	75,443	389	191	19.6	10.2	1.6	30	2	9	3	6	4	—	4	—	4	21	119
St. Pancras	283,739	1,659	963	29.2	16.6	3.0	173	4	19	19	34	23	—	7	—	61	104	167
Islington	331,900	2,350	1,129	28.4	13.6	2.4	201	1	13	17	50	34	—	5	—	81	109	154
Stoke Newington ...	34,172	177	59	20.8	6.9	0.9	8	—	—	—	1	2	—	1	—	4	8	85
Hackney	211,493	1,525	724	28.9	13.7	2.6	136	—	18	15	25	12	—	5	—	61	70	152
Central Districts.																		
St. Giles	38,144	255	150	26.8	15.8	1.7	16	—	1	—	3	2	—	—	—	10	21	161
St. Martin-in-the-Fields	13,783	58	33	16.9	15.4	1.2	4	—	—	1	2	—	—	—	—	1	3	172
Strand	23,179	137	102	23.7	17.7	2.6	15	—	2	—	1	4	—	—	—	8	9	161
Holborn	32,438	185	134	22.9	16.6	2.8	23	—	9	—	3	3	—	2	—	6	16	232
Clerkenwell	65,312	503	285	30.9	17.5	4.1	66	—	19	4	8	5	—	3	—	27	28	195
St. Luke	41,168	451	213	44.0	20.8	3.2	33	—	3	2	4	1	—	2	—	21	26	140
London City	34,832	116	151	13.4	17.4	0.9	18	—	—	—	5	1	—	1	—	1	9	121
East Districts.																		
Shoreditch	123,186	995	565	32.4	18.4	3.3	102	1	12	6	16	7	1	5	—	53	43	209
Bethnal Green	129,840	1,073	581	33.2	18.0	3.3	107	2	19	5	30	7	—	—	—	41	51	168
Whitechapel	75,498	766	356	40.7	18.9	2.8	53	—	4	4	13	5	—	1	—	26	10	179
St. George-in-the-East	45,360	446	335	39.4	29.6	6.8	77	—	6	9	13	4	—	1	—	44	25	278
Limehouse	57,000	461	321	32.4	22.6	4.4	82	—	24	8	9	3	—	1	—	17	28	206
Mile End Old Town ...	108,242	1,034	525	38.3	19.5	3.5	94	—	18	7	21	9	—	8	—	38	34	194
Poplar	170,217	1,346	773	31.7	18.2	3.2	134	1	38	18	25	6	—	4	—	42	66	179
South Districts.																		
St. Saviour Southwark	26,712	175	108	28.3	16.2	2.1	14	—	1	2	6	1	—	2	—	2	19	114
St. George Southwark	160,060	507	324	33.9	21.6	3.9	58	—	8	2	13	2	—	1	—	32	40	243
Newington	118,512	990	522	38.5	17.7	2.2	65	—	7	1	16	3	—	3	—	35	62	160
St. Olave Southwark	12,984	110	49	34.0	15.1	1.5	5	—	1	—	2	1	—	—	—	1	5	100
Bermondsey	84,053	713	369	34.0	17.6	3.0	62	—	1	2	18	5	1	5	—	21	46	137
Rotherhithe	49,365	326	173	32.4	17.2	3.7	37	—	—	5	9	2	—	—	—	21	11	206
Lambeth	282,574	2,247	1,076	31.9	15.3	2.8	196	1	22	8	38	28	—	7	—	98	102	156
Battersea	161,558	1,255	590	31.2	14.6	3.3	134	1	15	5	29	22	—	5	—	7	45	157
Wandsworth	179,518	1,056	502	23.6	11.2	2.1	95	—	20	4	19	14	—	—	—	38	43	121
Camberwell	248,893	1,826	983	29.4	15.4	3.7	220	—	54	13	56	40	1	2	—	64	84	172
Greenwich	173,128	1,273	719	29.5	16.7	3.4	145	—	26	14	38	10	—	7	—	52	54	163
Lee	38,172	197	95	20.7	10.0	1.1	10	—	1	1	1	2	—	1	—	4	11	96
Lewisham	79,963	552	220	27.7	11.0	1.8	36	—	1	2	10	3	—	—	—	20	28	111
Woolwich	42,309	335	171	31.8	16.2	2.8	30	—	5	10	3	—	—	1	—	11	17	137
Plumstead	59,333	478	191	32.4	10.9	1.2	17	—	1	6	6	—	—	—	—	5	15	98

in the thirty-two provincial towns, and was highest in Newcastle-upon-Tyne, West Ham, and Sunderland. Measles caused a death-rate of 1.9 in Sunderland, 2.0 in Hull, and 2.2 in Gateshead; scarlet fever of 1.3 in Salford; whooping-cough of 2.2 in Swansea; "fever" of 1.1 in Sunderland; and diarrhœa of 2.1 in Blackburn. The 79 deaths from diphtheria in the thirty-three towns included 49 in London, 12 in West Ham, and 2 each in Cardiff, Birkenhead, Liverpool, and Manchester. Three fatal cases of small-pox were registered in Liverpool, 2 in Birmingham, and 1 in Manchester, but not one in London or in any other of the thirty-three large towns. There were 50 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, October 27th, against 84, 63, and 60 at the end of the preceding three weeks; 8 new cases were admitted during the week, against 11, 8, and 11 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,145, 2,171, and 2,214 at the end of the preceding three weeks, had further risen to 2,293 on Saturday last; 262 new cases were admitted during the week, against 262 and 261 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, October 27th, 881 births and 527 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.6 and 17.5 per 1,000 in the preceding two weeks, rose again to 18.5 last week, and corresponded with the mean rate during the same period in thirty-three of the largest English towns. Among these Scotch towns the death-rates ranged from 13.0 in Leith to 23.3 in Greenock. The zymotic death-rate in these towns averaged 1.9 per 1,000, the highest rates being recorded in Paisley and Perth. The 245 deaths registered in Glasgow included 8 from scarlet fever, 7 from measles, 5 from "fever," and 2 from diphtheria.

EPIDEMIC SCARLATINA AT HUCKNALL TORKARD.

IN a report recently issued by the Local Government Board, Dr. Horne shows that the district has not been wholly free from the disease since 1887. The prevalence which was a special subject of inquiry comprised 91 deaths from March 1893 to April 1894, with attacks estimated at 1,000, in a population of 14,000. No less than 83 per cent. of the deaths, and 272 per 1,000 living of the attacks, were among children under five years of age; and in the first ten years of life the respective figures were 91 and 152. The source of the epidemic could not be traced with certainty, but spread of the disease was easily accounted for by means of careless exposure, needless intercourse when sick and healthy, lack of proper means of isolation, school influence, and the like. Dr. Horne lays stress on the undue haste made in securing the return to school of children whilst yet in an infectious state. Moreover, notification was not in force, and the activity of the authority may be judged from their expenditure of 2s. sterling for purposes of disinfection during the epidemic. School teachers were without instruction in relation to the spread of disease by scholars, and no schools were closed. It is pitiable to read such an account of bad sanitary administration at the present time in a town amid the busy centres of Nottinghamshire. For the rest, the water supply is good and the sewerage very fair; but the methods of excrement disposal leave much to be desired, and dwellings and overcrowding need looking to. None of the adoptive Acts appear to have been deemed worthy of adoption.

INSANITARY DWELLINGS IN BIRMINGHAM.

REFERENCE was made in the BRITISH MEDICAL JOURNAL of October 27th to the proceedings instituted on behalf of the Health Committee of the Birmingham Corporation, in respect of a number of houses stated to be unfit for human habitation. On October 26th the medical officer of health was again in the witness-box, and gave evidence to the effect that a certain house was in a seriously defective condition, owing to the lack of a damp course. Dr. Hill is said to have stated that he regarded houses which did not possess damp courses as likely to cause risk to the health of those who dwelt in them, and the information was then elicited that there are some 10,000 houses in Birmingham not possessing damp courses.

A critic thereupon asks, "Are we to take it that there are 10,000 houses in Birmingham unfit for habitation?"

The reasoning is a little difficult to follow; it is not clear why Dr. Hill's statement with regard to houses without damp courses should be held to commit him to the opinion that all houses so circumstanced are unfit for habitation. Each case, of course, must be considered on its own merits, and, with regard to the particular houses in question, it may be noted that a number of other defective conditions appear to have been present. Indeed, the critic who propounds the question above referred to, innocently observed that the said houses are "old, and in very cheap character." Hence, he argues, a damp course might have been deemed a luxury by the original builder. The age and the "cheap character" of the houses were, no doubt, regarded by the Health Committee rather as making the case against the houses more serious than as excusing the dampness of their walls.

ANOMALOUS (PNEUMONIC) ILLNESS AT LAXFIELD, SUFFOLK.

A REPORT by Dr. Bruce Low on an outbreak of anomalous illness, characterised chiefly by broncho-pneumonia and sore throat, at Laxfield, in Suffolk, has been recently placed on sale by the Local Government Board. The sickness occurred in April last, and comprised 66 cases, with 6 deaths, all the latter in children under 5 years of age; whilst of the 66 attacks 35 were in males and 31 in females, and no fewer than 66 per cent. were in children of 5 years and under. Households to the number of 32 were invaded, with 34 secondary cases, 17 houses only having single attacks, 3 having 5 cases. Definite pneumonic symptoms were present in 23 cases, and, generally speaking, there was vomiting, drowsiness, fever, difficult respiration, cough, diarrhœa, enlarged cervical glands, and discharge from the eyes and nose. Other symptoms occurring more or less numerously were sore throat, headache, retraction of the head, sweating, herpes of the lips, and epistaxis. The disease was communicable, and attacked all classes alike. Other places not far removed from Laxfield had cases of disease, resembling, though not so severe as, those at that village. In considering the nature of the malady Dr. Low shows that it was in many points very like the outbreak of disease which he investigated at Raunds in 1893, but the latter was in certain respects more severe. He discusses its relations to meteorology, to influenza, to rotheln, and to cerebro-spinal meningitis, and goes at some length into the question, but without arriving at any definite and certain conclusion. The report can be obtained of Messrs. Eyre and Spottiswoode, of East Harding Street, E.C., for 9d.

TYPHOID FEVER AND PUMP WATER.

THE wisdom of shunning delays where the health of the public is in danger was evidenced by the very serious report which Dr. J. Blamey presented on October 26th to the Falmouth Rural Sanitary Authority. It appears that in consequence of the authority having overlooked the strong recommendation of the medical officer to close a polluted pump at Budock, near Penryn, an epidemic of typhoid fever has broken out among the inhabitants.

INVALID VACCINATION CERTIFICATES.

A CORRESPONDENT has forwarded to us a copy of a letter which has been addressed by the Local Government Board to a board of guardians in the West of England, in which the conduct of a vaccination officer is called in question on account of his having accepted certificates of successful vaccination, although signed by a man known to be unqualified to practise medicine, and he asks how far such an unqualified medical practitioner has placed himself within the pale of a prosecution by such signature?

*** Section xxxv of the Vaccination Act, 1867, states that "medical practitioner" shall mean a registered medical practitioner. The Vaccination Acts require that every certificate of successful vaccination shall be signed by a "medical practitioner duly registered," and accordingly if a certificate, purporting to be so signed, is given by a man who is unqualified, we opine that such person would fall within the power of Section xxx of the Act of 1867, which ordains that "every person who shall wilfully sign a false certificate . . . . . under this Act shall be guilty of a misdemeanour, and punishable accordingly." Under Section vii of the Act of 1871 he would "be liable to fine or imprisonment, with or without hard labour, for a period not exceeding two years."

OBITUARY.

CHARLES EMILIUS THOMPSON, M.R.C.S., J.P.

WE regret to record the death of Mr. Charles Emilius Thompson, at the early age of 36. He succumbed, on September 3rd, to injuries received in a carriage accident. He was educated at University College and at Middlesex Hospital. He had a successful career as a student, and became prosector at the Royal College of Surgeons, house-physician at his hospital, and Assistant Demonstrator of Anatomy in the medical school. He went to Australia at an early date, and was soon afterwards appointed surgeon to the South Australian labour prison, and for several years practised successfully at Salisbury, near Adelaide. On the death of his first wife in 1888 he removed to Broken Hill, N.S.W., where the silver mines were then beginning to get into full activity. He speedily acquired a lucrative practice, and he enjoyed a considerable measure of social influence, the full extent of which only became apparent during his illness.

The deceased gentleman was highly gifted, especially in music. He was a Justice of the Peace in South Australia, honorary surgeon to the Broken Hill Hospital, and a churchwarden. He was a brother of Dr. Ashburton Thompson, the Chief Medical Inspector of New South Wales. In 1890 he married a second time, and has left a widow and two young children.

ROBERT McNICOLL, M.R.C.S., J.P.

WE regret to have to record the death of Robert McNicoll, M.R.C.S., J.P., of St. Helens, who died on October 30th, at the age of 74, after a short illness.

Mr. McNicoll commenced practice in St. Helens forty-four years ago, and at the time of his death was the "father of the profession" in that town. He was not only successful as a practitioner, but had won a very high place as an active citizen. He witnessed the growth of the population of St. Helens from 20,000 to 80,000, and at the time when the town became a county borough he was chairman of the Commissioners, and was one of the first aldermen. In 1852 he was

one of the originators of the Mechanic Institute's Library, which has grown into the free public library, of which he was one of the committee of management at the time of his death. He took an active part in the Volunteer movement, and was surgeon, and afterwards surgeon-major, in one of the local corps.

Mr. McNicoll was M.O.H. for St. Helens for twenty-one years, and was one of the founders of the North-Western Association of Medical Officers of Health. He resigned this office last June. But Mr. McNicoll's popularity with his townsmen was founded not only on his solid services, but also on an appreciation of his many genial qualities, and of his ready and incisive eloquence. He was the son of the Rev. David McNicoll, a poet and scholar of some distinction, from whom doubtless he inherited his literary tastes.

Dr. A. Legroux, Physician to the Hôpital Trousseau, Paris, who has just died at the age of 51, was a son of Dr. J. C. L. Legroux, a Paris hospital physician who did good work in his day. A. Legroux won the coveted post of *interne* in 1861, and became *chef de clinique* in 1869 and *professeur agrégé* in 1875. He was appointed physician to the Hôpital Laennec in 1875, and was transferred to the Hôpital Trousseau in 1886. He did excellent service in the ambulances during the siege of Paris, and he was afterwards Secretary of the Commission presided over by E. Arago, for the reform of the French lunacy law. Both as a teacher and a clinician he made his mark, and his public services brought him numerous honours and decorations. The list of his papers, which range over the whole domain of medicine, occupies more than a column of the *Progrès Médical*.

Dr. Ludwig Mauthner, who was selected to fill the vacant Chair of Ophthalmology in the University of Vienna a few days ago, died suddenly of heart disease within twenty-four hours of the official announcement of his appointment. He was born at Prague in 1840, took his doctor's degree at Vienna in 1861, qualified as *Privatdocent* in eye diseases in 1864, and in 1869 was appointed Professor of Ophthalmology in the University of Innsbruck. In 1877 he resigned his chair and returned to Vienna, where he worked as a private lecturer till his appointment to the chair in succession to Professor Stellwag von Carion. The list of his contributions to the literature of his speciality is a long one; it includes a treatise on Ophthalmoscopy (1868), and papers on the Optical Defects of the Eye, Syphilitic Diseases of the Eye, Sympathetic Eye Affections, Brain and Eye, etc. Professor Mauthner was held in high esteem for his personal qualities not less than for his scientific achievements, and his reputation as a teacher was so firmly established that although he was titular incumbent of his chair only for a few hours, his loss is deplored as a serious one in the Vienna school.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are: Dr. Virginius A. Turpin, a recognised authority on cholera and director of the cholera hospitals of St. Louis during the epidemic of 1866, aged 75; Dr. Vladimir A. Betz, Emeritus Professor of Anatomy in the University of Kieff; Dr. Rafael Calvo, Professor of Anatomy in the University of Cartagena (Colombia); Professor Stolikoff, of Warsaw; Dr. Max Perles, formerly assistant to Professor Hirschberg, of Berlin, whose place he took during a lengthy absence, and well known by his own contributions to ophthalmology and pathology; and Dr. Carlo Pedrazzi, formerly assistant in the Medical Clinic of Genoa, and author of investigations of the action of salicylate of soda on the peripheral circulation, percussion of the stomach, the therapeutic action of acetanilide, etc.

The sum of £897 14s. 0½d. was collected in the churches at Brighton on Sunday, October 28th, in aid of the Brighton Hospital Sunday Fund, as against £908 7s. collected last year.

The Institute of Chemistry.—At the examination in Practical Chemistry for admission to the membership of this Institute, held at the laboratories at 30, Bloomsbury Square, from October 9th to 12th, 17 candidates presented themselves, of whom 13 were successful.

MEDICAL NEWS.

The subject of the first Hunterian Society's Lectures, which was delivered by Mr. Bryant, was Some Subjects of Public and Professional Interest.

Dr. Ernest Snell has been chosen by the London County Council to act as resident medical attendant to the men engaged on the Blackwall Tunnel works.

Mr. Edward Buxton, F.R.C.S.Edin., has been presented with a piece of plate by the members and friends of the St. John Ambulance classes held recently at Great Crosby.

A meeting of the South-West London Medical Society will be held at 3, High Street, Wandsworth, on Thursday, November 8th, at 8.30 P.M., when papers will be read by Mr. C. Robertson and Mr. A. E. Dodson.

The next general meeting of the Medico-Psychological Society of Great Britain and Ireland will be held at the rooms of the Medical Society of London on Thursday, November 15th, at 4 P.M., under the presidency of Dr. Conolly Norman. Papers will be read by Drs. Goodall and Bullen, Dr. Campbell, and Dr. Neill.

University College Hospital.—By a strange anomaly, the house-physicians and house-surgeons of University College Hospital have hitherto been required to pay to the hospital which they served the cost of their board. At the meeting of the House Committee on October 31st, it was resolved that this system should end with this year. The relief will affect eight house-physicians, six house-surgeons, and four obstetric assistants annually.

The officers and Council of the Glasgow Obstetrical and Gynæcological Society for the ensuing year have been elected as follows: *Honorary President:* Robert Barnes, M.D. *President:* G. A. Turner, M.D. *Vice-Presidents:* Robert Kirk, M.D.; Malcolm Black, M.D. *Secretary:* J. Nigel Stark, M.B. *Reporting Secretary:* Robert Jardine, M.D. *Treasurer:* A. Miller, L.R.C.P. and S. *Pathologist:* John Lindsay, M.D. *Council:* D. N. Knox, M.D.; A. Richmond, M.D.; William Cullen, M.B.; J. K. Kelly, M.D.; A. R. Gunn, M.B.; T. W. Jenkins, M.B.

Diphtheria at Plaistow.—An outbreak of diphtheria has occurred at Plaistow. It is stated that twenty-three children attending the Hermitage Road Board School have been attacked by the disease, and several deaths have occurred. The West Ham School Board attribute the outbreak to the want of drainage in the neighbourhood, as the children attacked are mostly those who live in houses near the ditches on vacant land. These ditches are stagnant and are the remains of the old drainage system, which is now intercepted by streets. The Board have written to the County Council.

During the month of November a series of lectures will be given at the Sanitary Institute, Margaret Street, W., on the Sanitation of Industries and Occupations. The first lecture, on Coal Mining, will be given by Mr. Simeon Snell, of Sheffield, on Thursday, November 1st, at 8 P.M. Subsequent lectures will be given by Professor Le Neve Foster, on November 8th, on Quarrying; by Dr. Eustace Hill, M.O.H. for the county of Durham, on November 15th, on Mercury, Phosphorus, and Sulphur Works; on November 22nd, by Dr. D. J. O'Neil, of Farnworth, on Chlorine and Chrome Compounds; and on November 29th, by Dr. Simon, of Birmingham, on Copper, Zinc, Brass, and Tin Workers.

Death from Hydrophobia.—An inquest was held on October 21st at Wigan, with regard to the death of a man aged 39. In the evidence it was stated that about four months ago the deceased was attacked and bitten by a dog upon the little finger. No notice was taken of the matter, but symptoms of hydrophobia manifesting themselves, the deceased was removed to the infirmary, where he died. After hearing all the evidence the jury returned a verdict of "Death from hydrophobia caused by the bite of a dog."—At a meeting of the Wigan Contagious Disease (Animals) Act Executive Committee, held on October 21st, the veterinary inspector reported a case of rabies. It was decided to issue notices ordering all dogs to be muzzled from October 29th for a period of three months.

The Association of Registered Medical Women.—The winter session of this Association opened on Tuesday, October 2nd, in the Medical Women's Institute, 144, Euston Road. Thirty-two members were present. Papers were read on Exfoliation of the Entire Lining Membrane of the Bladder as a Result of Retroversion of the Gravid Uterus (Mrs. Marshall), on Atresia of the Gravid Uterus leading to Retention of the Child for Two Months Beyond Term and to Gangrene of the Uterus (Mrs. Scharlieb), and on Scarlet Fever Difficulties and Anomalies (Miss Sturge, assistant medical officer at the North-Eastern Fever Hospital). On Tuesday, November 6th, Miss Cock, Miss Murdoch, and Mrs. Scharlieb will read papers, respectively, on Splenic Leucocythæmia in a Child, Acute Yellow Atrophy of the Liver in a Child aged 2 years, and Epithelioma of the Gall Bladder. Mrs. Scharlieb will also report upon a case in which Porro's operation was performed for Atresia of the Gravid Uterus and Missed Labour.

Charing Cross Hospital Students' Dinner.—The annual dinner of past and present students of Charing Cross Hospital was held on Thursday, October 25th, at the Criterion Restaurant. Mr. J. G. Mackinlay was in the chair, and the numbers present reached 203, by far the largest gathering in the annals of the school. After the toast of "The Queen," the Chairman gave that of "The Past and Present Students," responded to by Mr. Child for the former and Mr. Montgomery for the latter. Mr. J. Harold proposed the health of "The Staff," and Dr. Mitchell Bruce replied; and the list of toasts, commendably brief, terminated with the health of "The Chairman," given by Mr. Boyd. Dr. Mott, Mr. Arthur Reade, and other gentlemen helped by their songs to make the occasion memorable as the most successful gathering in the recollection of those present.

We have received the report of the first session of Livingstone College, which was founded by a small committee of medical men who "had been led independently to realise the great need for simple instruction in medicine and surgery for missionaries proceeding to isolated and dangerous spheres of labour." The first class, which commenced in October, 1893, contained fourteen members. Systematic lectures in elementary physiology, anatomy, medicine, and surgery have been given, and the students have had the advantage of receiving clinical instruction at the West Ham Hospital, the Poplar Hospital for Accidents, and Dr. Barnardo's Hospital for Sick Children, as well as at the Medical Mission Dispensary, Shadwell. Certain students have already left for foreign countries. The objections which we have on previous occasions pointed out to the giving of a smattering of medical knowledge appear to be appreciated by those who are interested in the promotion of this College. Acting on the advice of the late Sir Andrew Clark, no certificates are issued, and each student is required to give an undertaking not only that he intends to become a foreign missionary, but that he will not take to himself the title of medical missionary, nor assume the position of a qualified medical man.

A Medical Hero.—To the long list of medical men who have laid down their lives in the search for curative processes must now be added the name of Dr. Kurt Oergel, assistant in the Hygienic Institute of Hamburg, who recently died at the age of 29, of cholera contracted in the course of some pathological experiments. He was a pupil of Professor Loeffler, and a scientific worker of the highest promise. Though the mode in which the infection was conveyed is somewhat uncertain, there could be no doubt as to the nature of the disease. The cholera vibrio was present in the stools from an early period of the illness. Dr. Oergel had worked a good deal at one time or another with the cholera vibrio, and had experimented with the organism on his own person, but not lately. His own impression was that he had derived the infection from a sample of Vistula water, which had been sent to him from Thorn for examination. In sucking up some of this water through a pipette he took a largish quantity into his mouth. A full description of the case by Dr. Reincke, the chief health officer of Hamburg, was published in a recent number (No. 41) of the *Deutsche medicinische Wochenschrift*.

St. George's Hospital Medical School.—The annual distribution of prizes to pupils of the school took place in the Board Room of the Hospital on October 24th. Mr. Timothy Holmes, Consulting Surgeon to the hospital, presided and distributed the prizes as well as certificates to the entrance scholars of the year, whose names were recently announced in our columns. At the conclusion of the proceedings Mr. Holmes delivered a short address, in which he warned the students against the impression, which the present examination system was liable to produce, that anatomy and physiology were merely introductory subjects instead of integral parts of medicine and surgery. He expressed his belief that the admitted excellence of London medical education was largely due to the healthy competition which exists between the twelve different schools established in the metropolis.

Italian Obstetrical and Gynæcological Society.—The Italian Obstetrical and Gynæcological Society, which was founded on the occasion of the International Medical Congress, last Easter, held its first meeting in Rome on October 15th and three following days. The meeting was largely attended. Professor Morisani, of Naples, was elected President, and Professors Mangiagalli, of Milan, and Fabbri, of Modena, Vice-Presidents. Among the communications presented were the following: Twisting of the Umbilical Cord, by Dr. La Torre; The Curative Effect of Apostoli's Treatment (Intrauterine Galvanisation) in Convulsive Hysteria dependent on a Chronic Inflammatory Process in the Uterus and its Appendages, by Dr. Candia; Should Attendance on Women in Labour be Entrusted Entirely to the Obstetrician and taken away from the Midwife? by Professor Miranda; and Results, Immediate and Remote, of Vaginal Hysterectomy for Cancer, by Professor Mangiagalli. It was decided that the next meeting should be held in October, 1895, or at Eastertide, 1896. The subjects proposed for discussion are: 1. Periuterine Hæmatocele, to be introduced by Professor Pestalozza. 2. Extraction of Fœtus in Footling Presentation, to be introduced by Professor Truzzi; and Antisepsis and Asepsis in Midwifery, to be introduced by Professor Acconci.

MEDICAL VACANCIES.

The following vacancies are announced:

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House-Surgeon; must be duly registered. Salary, £60 per annum, with board, lodging, and washing. Applications and testimonials to J. Bonnett, Secretary, 23, St. Andrew's Street, Cambridge, before November 15th.

BARONY PARISH.—Medical Officer for the Springburn and Possilpark District. Salary, £75, in fui of all duties performed; must reside in the district. Applications to James R. Motion, Acting Inspector of the Poor, Barony Parish Chambers, 38, Cochrane Street, Glasgow, by November 9th.

BAWNBOY UNION, Swanlibar Dispensary.—Medical Officer. Salary, £90 per annum, with £15 yearly as Medical Officer of Health, together with vaccination and registration fees. Applications to Mr. Thomas McGovern, Honorary Secretary, Gortmore, Derrynacrieve, Belturbet. Election will take place on November 17th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—Two Assistant Surgeons. Applications to the Secretary by November 5th.

COUNTY OF LANARK.—Medical Officer; applicants must be under 50 years of age and registered medical practitioners; must hold diploma in Sanitary Science, Public Health, or State Medicine. Salary, £700 per annum, with travelling expenses and allowance for clerk and office. Applications and testimonials to W. Alston Dykes, County Clerk, before November 5th.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis Road, Shadwell, E.—House-Surgeon. No salary. Board, lodging, and washing provided. Applications and testimonials to Thomas Hayes, Secretary, before November 10th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—Resident Medical Officer as House-Physician. Appointment for six months. Salary, £20 per annum, with board and residence; must be unmarried. Applications and testimonials to Adrian Hope, Secretary, before November 21st.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—Resident Medical Officer as House-Surgeon. Appointment for six months. Salary, £20 per annum, with board, and residence; must be unmarried. Applications and testimonials to Adrian Hope, Secretary, before November 21st.

HOSPITAL FOR WOMEN AND LYING-IN INSTITUTE, Brighton.—House-Surgeon, unmarried, and under 30 years of age. Salary, £80 per annum, with board and rooms. Applications to the Secretary by November 15th.

HULME DISPENSARY, Manchester.—Honorary Surgeon. Applications to C. C. Heywood, Esq., F.R.C.S., Honorary Secretary, Medical Committee, by November 8th.

HUNTINGDON COUNTY HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications and testimonials to Mr. A. G. Dilley, Assistant Secretary, Market Hill, Huntingdon, before November 10th.

KENT AND CANTERBURY HOSPITAL.—House-Surgeon; must be a registered medical practitioner, unmarried. Salary, £90 the first year, with board, etc., rising to £100 the second year. Applications and testimonials to A. J. Lancaster, Secretary, before November 23rd.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, Shoreditch, N.E.—Physician; must be F. or M.R.C.P.Lond. Applications to T. Glenton-Kerr, Secretary, 27, Clement's Lane, E.C., by November 15th.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead.—Assistant Physician. Candidates must be graduates in Medicine of a University of the United Kingdom or Fellows or Members of the Royal College of Physicians of London. Applications to L. F. Hill, M.A., Secretary, at the office, before November 3rd.

RADCLIFFE INFIRMARY, Oxford.—House-Physician and House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Tenable for six months. Applications and testimonials to A. C. Virgo, Secretary, by November 10th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand, W.C.—Two Assistant Surgeons. Applications to T. Beattie Campbell, Secretary, by November 3rd.

SUNDERLAND INFIRMARY.—Honorary Physician. Applications to the Chairman of the Medical Board by November 5th.

WEST HAM UNION.—Medical Officers for Districts No. 10 and 11. Salary, £120 per annum, together with extra medical fees prescribed by the Local Government Board. Applications and testimonials to F. E. Hilleary, Guardian's Office, Union Road, Leytonstone, E., before November 7th.

MEDICAL APPOINTMENTS.

BARR, John, M.B., J.P., reappointed Medical Officer of Health for the Rishton Urban Sanitary District.

BODY, H. M., M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Crediton Rural Sanitary Authority.

COOKE, C. J., M.D.R.U.I., M.Ch., appointed Medical Officer to the Plymouth Workhouse, *vice* F. A. Thomas, L.R.C.P., L.R.C.S.Edin., deceased.

COUCH, J. Kynaston, M.R.C.S., L.R.C.P., late Chloroformist and Pathologist, appointed Assistant Surgeon to the Swansea Hospital.

GODDING, Angelo, L.R.C.P.Lond., M.R.C.S.Eng., appointed Surgeon to the Mission for Deep Sea Fishermen.

HARTILL, John Thomas, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health to the Willenhall Local Board.

HERN, George, M.R.C.S., L.R.C.P., L.D.S.Eng., appointed Assistant Dental Surgeon to the Dental Hospital of London.

JOHNSTON, G. Jamison, M.A., M.B., appointed Demonstrator of Anatomy, Trinity College, Dublin.

MYLES, Thomas, M.D.Dub., appointed Medical Officer for the Bowness District of the Wigton Union, *vice* Charles Macculoch, L.F.P.S.Glasg.

NICHOLSON, W. T., M.B., C.M., appointed Superintendent of the Victoria Infirmary, Glasgow.

SHIVES, John, M.D., appointed Consulting Surgeon to the Dewsbury and District Infirmary.

URQUHART, C. Thiselton, M.B.Aberd., appointed Medical Officer to the Old Mill Reformatory School, Aberdeen.

WEBB, F. J., M.B.Vict., Ch.B., appointed Medical Officer for the Gorton District of the Chorlton Union, *vice* H. E. Hackett, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

WILSON, William H., appointed House-Surgeon to the St. George's Hospital.

WELLINGTON, R. Henslowe, L.R.C.P., M.R.C.S., reappointed Medical Officer of Health to the Sutton Bridge Urban Sanitary Authority, also Medical Officer to the Port of Wisbech and Port Hospital.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. R. Marcus Gunn: Cataract. Bacteriological Laboratory, King's College, W.C., 3 to 5 P.M.—Lecture: Actinomycosis and Glanders. Practical Work: Staining Sections and Cultivations. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Whistler: Demonstration of Cases.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 40, Leicester Square, W.C.—8 P.M.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Craig: Alcoholic Insanity.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, 5 P.M.—Dr. Thomas Barlow: The Bradshaw Lecture on Infantile Scurvy and its Relation to Rickets.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Herbert Snow: Myeloid Corpuscles in some Rare Specimens of Cancerous Disease. Dr. Francis Hawkins: Extensive Perirenal Hæmorrhage. Dr. J. F. Squire: Mediastinal Tumour Invading the Lung. Mr. Edgar Willett: (1) Congenital Cystic Adenoma of Kidney; (2) Adenoid Carcinoma of Kidney. Dr. E. W. Goodall: Perforation of Soft Palate in Scarlet Fever. Mr. Stephen Paget: (1) Malignant Disease of the Larynx; (2) Acute Septic Epiphysitis. Card Specimen:—Dr. Voelcker: Uterus Didelphus.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. J. Mitchell Bruce: Cases in the Wards. Royal London Ophthalmic Hospital, 8 P.M.—Mr. A. Stanford Morton: Optic Neuritis.

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown by Drs. Cullingworth, Duncan, Dakin, and Blacker. Dr. Braithwaite (Leeds): On Atrophy with Collapse, (Cirrhosis) Fibroid Degeneration and Angioma of the Ovaries. Dr. W. S. A. Griffith: Note on the importance of a Decidual Cast as evidence of Extrauterine Gestation. Dr. Farrar (Gainsborough): A New and Speedy Method of Dilating a Rigid Os in Parturition.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, 3 P.M.—Lecture by Dr. Gowers.

POST-GRADUATE COURSE, WEST LONDON HOSPITAL, Hammersmith Road, W., 5 P.M.—Dr. Seymour Taylor: The Treatment of Specific Fevers.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Dr. Ormerod: Ataxia. Hospital for Sick Children, Great Ormond Street, 3.30 P.M.—Dr. Archibald Garrod: Paralysis in Children. Central London Sick Asylum, Cleveland Street, W., 5.30 P.M.—Professor Clifford Allbutt, F.R.S.: Cases in the Wards.

THE SANITARY INSTITUTE, Parkes Museum, Margaret Street, W., 8 P.M.—Dr. C. Le Neve Foster: Quarrying of Various Kinds.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Dr. Bantock: Hæmatosalpinx and Tubal Pregnancy Contrasted. Dr. Balls Headley: A case of Puerperal Pelvic Cellulitis from Phlebitis.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY, Great Northern Central Hospital, 8.30 P.M.—Clinical cases by Dr. Harry Campbell, Mr. Mower White, and others.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 8.30 P.M. Card Specimens at 8 P.M.—Mr. E. Treacher Collins: Lamellar Cataract and Rickets. Mr. Kennedy Scott: Notes of a case of Complete Ankyloblepharon. And other papers.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND, 20, Hanover Square, 5 P.M.—Dr. James Cagney: Syringo-myelia and Leprosy: a Memoir. Informal exhibition of patients at 4.30 P.M.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. J. Mitchell Bruce: Cases in the Wards.

CLINICAL SOCIETY OF LONDON, 8.30 P.M.—Clinical cases only will be shown. Every member will receive a card of the Agenda before the meeting.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 11 A.M.—Dr. Percy Smith: Insanity with Syphilis, and Organic Brain Disease.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

DRAKE-BROCKMAN.—On October 25th, at Muttra, North-West Province, India, the wife of Surgeon-Captain H. E. Drake-Brockman, F.R.C.S.E., Indian Medical Service, of a son.

MARRIAGES.

FREELAND—HOOK.—October 23rd, at the parish church (All Saints), Snodland, Kent, by the Rev. J. G. Bingley, Rector, assisted by the Rev. C. W. Hoysted, curate of Gillingham, Douglas Law Freeland, L.R.C.P. Lond., M.R.C.S.Eng., son of Dr. J. Freeland, of Antigua, West Indies, to Marian Eva, only daughter of the late Mr. and Mrs. Eustace Hook, of Delamere, Snodland, and niece of the Misses Hook, of Viles, Snodland.

LAWSON—CORMACH.—At Bombay, on October 18th, Charles Bunbury Lawson, M.B., C.M., A.M.S., elder son of Major-General James Lawson, Dover, to Margaret Campbell, daughter of James Cormach, 22, Glencairn Crescent, Edinburgh. By wire.

MILLER—EASTON.—On October 23th, at St. Margaret's, Rochester, by the Rev. A. J. W. Thorndike, John Miller, M.R.C.S., L.R.C.P., eldest son of the late Henry Miller, Uplands, Ipswich, to Sarah Rogers, youngest daughter of Nathaniel Jonas Easton, of Plymouth.

SANKEY—CORNELL.—On October 24th, at Baschurch, by the Rev. T. J. Rider, vicar of the parish, Edward Hugh Octavius Sankey, M.A., M.B., B.C., youngest son of the late W. H. O. Sankey, M.D., F.R.C.P., of Boreatton Park, Baschurch, to Caroline J. Cornell, only daughter of the late George Cornell, Esq., of Fordham, Cambs. No cards.

DEATH.

EUSTACE.—On October 9th, at the residence of his father, Elmhurst, Glasnevin, Dublin, John Neilson Eustace, B.A., M.B., B.Ch., Dublin University, and M.R.C., eldest son of John Eustace, M.D., J.P., aged 27, late Assistant Physician, Hampstead and Highfield Private Asylums, Dublin.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

INQUIRER wishes to know the publisher and selling price of Dr. Cooke's book on Mushrooms.

*** *Edible and Poisonous Mushrooms: How to Distinguish between them and how to Cook them.* By Dr. M. C. Cooke. London: S.P.C.K. 3s. 6d.

E. H. B. asks to be recommended a small cheap book on practical botany and the microscope, one which treats of the preparation of slides, etc.

*** *Practical Botany*, by F. O. Bower. London: Macmillan and Co. (Globe 8vo; 3s. 6d.) includes chapters on the use of the microscope and staining methods, and is complete in itself.

HIP JOINT DISEASE.

INQUIRER desires to be recommended a really useful and reliable apparatus for concealing the deformity due to shortening of the limb after hip joint disease, so as to avoid the use of an unsightly cork boot or patten. The writer has heard of the "O'Connor Extension" for this purpose, but desires the opinion of one who has seen it or any other appliance in actual use.

TREATMENT OF UMBILICAL WART.

UMBILICUS asks for advice in the treatment of the case of a child 3 months old suffering from inflamed navel, which has been present since birth. In addition to the inflammation there is some protrusion necessitating the use of an umbilical pad. He has tried dusting powders, oxide of zinc, etc., astringent solutions, and mild caustics, but without avail.

WANTED, A LENDING LIBRARY.

A. G. (London) writes: I am anxious to know if there is any library or society from which public health reports, the leading scientific English and French journals (such as *Annales de l'Institut Pasteur* and *Comptes Rend. de l'Acad. des Scien.*), and reports of medical societies could be obtained for home reading at little expense. Current numbers not a necessity. I have not the means to purchase nor the time to attend the libraries where this class of literature may be found.

CHEMISTRY AND BACTERIOLOGY FOR THE D.P.H.

SANITAS asks for information as to the books dealing with chemical and bacteriological examination of water which he should study with a view to obtaining a diploma in Public Health.

*** A list of books suitable for practitioners preparing for examination in Public Health is given in the BRITISH MEDICAL JOURNAL for September 1st, 1894. As far as chemistry and bacteriology are concerned, however, practical work is the chief consideration, and "Sanitas" cannot expect to obtain the knowledge he desires by private study alone.

NURSING IN INDIA.

WIGS writes: Could you inform me of the best method for a trained nurse to pursue who is anxious to go out to India, nursing? Are there institutions there for trained nurses, and, if so, what are their addresses? Also what are a nurse's prospects with regard to pay, etc., in India?

*** We have communicated with Lady Dufferin, who states that the Dufferin Fund never sends nurses to India, but that all its nurses are trained in India. Applications for military nursing appointments should be made to the India Office. Some nurses are sent to India by a committee, of which Lady Lyall (18, Queen's Gate, S.W.) is a member. These nurses go out to nurse Europeans, and the Dufferin Fund has nothing to do with them.

MICROBES FROM SEWER VENTILATING SHAFTS.

WE have received from the medical adviser of the Sydney (Australia) Metropolitan Board of Water Supply and Sewage the following letter: "Sydney, September 12th, 1894. Dear Sir,—I forward you a copy of our report, and would ask you to refute the statement contained in Sir Charles Cameron's speech at Bristol. Our ventilators do not shower organisms into the windows of houses, and since their institution our death-rate from typhoid fever has fallen from 8.43 per 10,000 of the population to 1.4."

*** On referring to the report, Sir Charles Cameron's statement, we find, was made on the faith of a report by Mr. J. McGarvie Smith to the Board, which is published in the report sent to us. Mr. ith says that "cultures made from the various samples of sewer air taken from the top of the shaft prove that the germs are carried out into the atmosphere." He recommends the closing of the shafts. The city engineer takes exception to this statement, and points out that the cremation of the germs in sewer air by a furnace, as suggested by Mr. Smith, is impracticable. The report contains a rejoinder by Mr. Smith to the effect that the engineer is not a biologist, and is incompetent to deal with the subject.

ANSWERS.

E. G.—We cannot ascertain that the Education Department has ever contemplated the appointment of medical inspectors to schools. We apprehend that our correspondent is under some mistake.

HOMES FOR EPILEPTICS.

J. B., DR. L. MACKENZIE, DR. THOMAS A. SMITH.—Our correspondents are referred to a short article on Epileptic Colonies printed at page 1000. There is an Epileptic Home at Maghull, near Liverpool, to which Dr. W. Alexander, of Liverpool, is consulting surgeon. After cases are taken in for treatment at the National Hospital for the Paralysed and Epileptic, Queen Square, London, and into the Hospital for Epilepsy and Paralysis, Regent's Park. With the exception of the institutions mentioned, we fear there is no refuge for these unfortunates other than the county asylums, which only become available when the disease has resulted in hopeless imbecility.

COMPULSORY PROVISION OF ISOLATION HOSPITALS.

W. E.—We know of no power whereby a sanitary authority can be compelled to provide isolation hospital accommodation for patients suffering from any particular disease. As a matter of fact, hospitals provided by sanitary bodies often serve for the reception of only one disease at a time, others for two diseases at once, and others, again, for several infectious fevers at the same moment. It will readily be seen that in numerous instances in the first category the reception of a particular case of disease would at times be fraught with danger alike to the patient and to the other inmates of the hospital. The folly of providing for the isolation of but one disease at a time needs not to be insisted upon. It is self-evident, and that in only too many instances in a very unpleasant manner.

MAXIMUM AGE FOR COMPULSORY VACCINATION.

IN reply to a correspondent we may say that Section 31 of the Vaccination Act of 1867 states that justices may make an order for the primary vaccination of any unvaccinated person under the age of 14 years, so that apparently the operation could not be enforced on any individual over that age.

PERCENTAGE OF CHLOROFORM WITH THE "OPEN METHOD."

A. C. E.—There is no exact way in which the percentage strength of chloroform can be measured when that anæsthetic is given evaporated from a towel or mask. It must vary according to the condition of the atmosphere, temperature of the room, and the condition of the patient's respiration. In Sir Joseph Lister's article on Chloroform in Holmes's *System of Surgery* some experiments are given which throw some light upon the matter. If chloroform in measured quantity be thrown upon lint or a cloth or mask, and counterpoised in a chemical balance, the quantity evaporated in a given time can be arrived at under determined conditions of temperature, etc., and so approximately the percentage of chloroform given off may be arrived at. Our correspondent will find the article worth perusal in this connection.

NOTES, LETTERS, Etc.

THE NOTIFICATION OF SORE THROAT.

DR. F. W. JORDAN (Heaton Chapel, Stockport) writes: With reference to "R. T. W.'s" letter, I quite agree with him. In my experience in private practice it is certain that it is sometimes very difficult to distinguish between mild forms of diphtheria or diphtheroid and harmless forms of sore throat. I have referred at length to this subject in a paper published in *Public Health* in January last. In case of doubt the patient should be considered to be suffering from the more serious affection. This is the best plan all round, especially as effectual treatment will prevent its spread in case the diagnosis turns out to be correct. I have seen many instances of sore throat spreading from one member of a family to another, in which there has been no false membrane, but merely redness, or perhaps patches of inspissated mucus, and in which it has been difficult to exclude the idea of there being an element of diphtheria. I get over the difficulty by calling it diphtheritic sore throat. These cases ought to be isolated and notified, as they may give rise to typical diphtheria in other people.

Under present conditions it is difficult to know what to do in this direction amongst the poor, and I think "R. T. W.'s" suggestion of providing a ward in hospitals for such suspicious cases a good one.

The Anderson Appeal Fund.

The Civil Rights Defence Committee beg to acknowledge with thanks the following further contributions to the Anderson Appeal Fund. In consequence of much misunderstanding on this subject, the Committee desires to explain that the fund is being applied strictly to the purpose for which it was established: to enable Dr. Anderson to obtain before the Judicial Committee of the Privy Council a reversal of the decisions and orders of the Courts of Trinidad and Tobago against him which are still in force there, and which, in the language of the appeal made to the profession for funds, "prevent him from returning to Tobago, to carry on his practice, collect his debts, or in any way settle his affairs."

Dr. Anderson has large amounts of debts due to him in Tobago rapidly becoming statute-barred whilst he is unable to collect them, and an extensive estate which necessarily he cannot make the most of in his absence. Were he to attempt to return to resume the practice of his profession, to endeavour to collect the amounts due to him, or to carry on his estate, nothing could prevent the plaintiffs in these actions from at once putting in force their executions against him. Dr. Anderson's strenuous resistance in this country alone stays their hands. That ceasing their rights under their judgment would stand admitted, and his ruin be completed by forced bankruptcy, which he has successfully struggled against for five years.

Under these circumstances the Committee has no hesitation in continuing the appeal for funds to reverse these illegal decisions which were pronounced by Sir William Markby and Sir Frederick Pollock and have since been declared by a judge to have been a "judicial persecution." The petitions to the Queen in Council for special leave to appeal in the three cases have now been prepared from materials collected on the spot, and all expenses thus incurred have been defrayed. The next steps are to lodge the petitions and to obtain special leave to appeal; and for the first of these steps, beyond what has already been received, a further amount of £75 is necessary by way of deposit to cover office copies and printing in the Privy Council, and this, the Committee hopes, the generosity and public spirit of the profession will shortly enable them to make:

	£	s.	d.
Sir Joseph Lister, London (further subscription) ...	3	19	0
Sir James Paget, London ...	1	0	0
Sir E. Saunders, London ...	2	2	0
Sir Henry Thompson, London	2	2	0
Mr. T. Annandale, Edinburgh	1	1	0
Dr. W. G. Bacot, Bournemouth	1	1	0
Mr. J. E. Bartrum, Bath ...	0	10	0
Dr. Batterham, St. Leonards	1	0	0
Dr. Bradley, Surbiton ...	1	1	0
Mr. C. Carter Braine, London	1	1	0
Mr. Woodhouse Braine, London	1	1	0
Mr. J. B. Brookhouse, Nottingham	0	10	6
Mr. H. Cayley, Southampton	0	10	0
Mr. Willington Clark, Norwood	1	1	0
Dr. A. T. G. Codd, Bromley	1	1	0
Dr. H. G. Cook, Cardiff ...	0	10	6
Mr. F. S. Craister, South Africa	0	10	6
Mr. H. W. Crowfoot, Beccles	1	1	0
Mr. Deansley, Wolverhampton	0	10	6
Dr. W. Domett-Stone, London	1	1	0
Dr. Duka, London	1	1	0
Mr. C. J. Evans (South Midland Branch B.M.A.) ...	0	12	6
Mr. France, London	1	0	0
Mr. Freeland, Antigua ...	0	10	0
Mr. Gilford, Reading ...	0	10	0
Mr. J. Griffiths, Cambridge	0	10	6
Mr. Christopher Heath, London	1	1	0
Mr. W. Lenton Heath, London	1	1	0
Mr. C. Johnson, Leicester	1	0	0
Mr. E. Muirhead Little, London	1	1	0
Mr. A. McHattie, Antigua...	1	1	0
Mr. N. C. Macnamara, London	1	0	0
Professor C. J. Pearson, Cork	1	1	0
Mr. J. R. Sampson, Southampton	0	10	0
Mr. A. R. Saunders, Jamaica	1	1	0
Mr. T. Sinclair, Belfast ...	0	10	0
Dr. J. C. Uthhoff, Brighton	1	1	0
Mr. Jas. Taylor, Chester ...	1	1	0
Dr. G. O'Donnell Walton, Barbados	1	1	0
Mr. J. Robinson Wells, Acton	1	1	0
Mr. A. W. Willett, London	1	1	0
Mr. G. A. Wright, B.A., M.B., Manchester	1	1	0

Communications may be addressed to the Secretary, Mr. W. Monnington, 7, Fig Tree Court, Temple, E.C.

Tubercle and Cancer.

Mr. W. Roger Williams, F.R.C.S. (Preston), writes: In Sir J. Paget's lecture on Scientific Temper, I am surprised to read the following remarks: "It has never been carefully studied what may be the result when one parent has one transmissible disease, and another has another; what comes if one parent is a member of a cancerous family, and another a member of a tuberculous family? Do these two diseases in any respect disturb one another; are they mutually exclusive or do they mingle together? We know that acute tuberculosis and acute cancer never make rapid progress together; they seem, in so far as that, to be antagonistic. But what comes of it when they are mingled together by inheritance?"

From this I conclude that Sir J. Paget is unacquainted with the work done by me in this direction during the last few years. From the very standpoint advocated by him I have investigated the inter-relations of tubercle and cancer, on a far larger scale than has ever before been attempted, with the result that those demonstrated the existence of certain correlations between these two diseases, never before set forth in their true light, which have important bearings on the etiology and treatment of cancer.

As I have fully entered into this subject in my immediately forthcoming book on *Diseases of the Breast*, I will here merely set forth in the briefest manner possible the conclusions at which I have arrived. These are as follows:

(1) Pulmonary tubercle is by far the most prevalent disease among the relatives of cancerous persons. Such persons are very much more prone to it than the rest of the community; indeed, their liability is so considerable as even to equal that of the phthisical themselves.

(2) A large proportion of cancer patients are the surviving members of tuberculous families.

(3) No heritable condition is more favourable to the development of cancer than that which predisposes to and accompanies tubercle. The like is true of insanity.

(4) Nevertheless, between tuberculous and cancerous manifestations there is a certain antagonism; for it is very rare to find both diseases in active progress in the same individual.

(5) As a rule, where tuberculous diseases are most prevalent there cancer is rarest.

(6) The great increase of cancer during the last half century has coincided with a remarkable decline in the death-rate from tuberculous diseases, especially phthisis. It seems to me exceedingly probable, from considerations derived from the study of the family history of cancer patients, that a large proportion of those thus saved from tubercle eventually perish of cancer and insanity; and I think the increase in the latter disease has largely been brought about in this way.

(7) It will be gathered from the foregoing that I regard the predisposition to cancer as closely allied to the tuberculous predisposition, of which in all probability it is but a diluted form.

Sanitary Condition of Workplaces.

The Labour Commissioners recommend that with a view to the improvement, or, where that should prove impossible, the gradual extinction of the lowest class of workplaces in which "sweated" industries are carried on, legislation to the following effect is desirable: "That within the industries or districts affected by the proposed legislation, or by administrative orders under it, all occupiers of workshops (excluding domestic workshops, which we do not think can be dealt with at present), and, perhaps, also of factories, shall be required under penalties to obtain a certificate from a competent public authority to the effect that the premises used by them are in all respects in an efficient sanitary condition, and contain sufficient cubic space for the number of persons employed therein, such certificate to be withdrawn at any time if it were found that the conditions were no longer complied with. The occupiers should be primarily liable, but that immediate owners, who receive the rents of workshops, should also be liable for penalties which could not be recovered from occupiers in case of such workshops being carried on without the certificate having been obtained, or after it had been withdrawn. That all contractors and shopkeepers in the industries or districts in question who should employ outworkers should keep lists of such outworkers, and should be bound to take all reasonable precautions that work so given out was, if done in workshops, only done in those which had a proper certificate.

The "Medical Aid Business."

Dr. R. H. Wolstenholme, 68, Eccles New Road, Salford) writes: The enclosed copy of correspondence explains itself, and is of some interest. I trust you will find room for its immediate insertion. The "M.M.P.P.S." to which Dr. Fraser refers is a new medical society just formed in Manchester for mutual help and counsel, and seems to have already done good service in giving Dr. Fraser the courage to act in the admirably straightforward manner that he has done.

Copy.

Industrial Branch. .....Assurance Company, Limited.

To Dr. Fraser, Eccles New Road. October 25th, 1894.

Dear Sir,—We are about to commence the medical aid business in connection with our industrial business. My directors are desirous that you should have the preference to be the first appointed medical officer. Terms are 3½d. per month single members, 3s. 6d. per annum; and 1s. 5d. per month for families of five and upwards, 17s. 6d. per annum. Please to let me know if you will allow yourself to be appointed: if so I shall arrange to commence the business forthwith. Your reply will favour,—Yours truly,

Reply.

Salford, October 27th, 1894.

Dear Sir,—In reply to your favour of the 25th inst., I regret to have to inform you that as a member of the M.M.P.P.S. it is impossible for me to accept the appointment mentioned.—Yours truly,

Wm. Fraser.

"Youngest England."

Mr. D. Biddle, M.R.C.S. (Kingston-on-Thames) writes: I must apologise to Dr. Hugh R. Jones for having allowed my paper with the above heading to be published without referring your readers to the *Journal of the Royal Statistical Society* for March last, which contains an elaborate and able article by him, entitled, "The Perils and Protection of Infant Life," for which the Howard Medal for 1893 was awarded. The truth is that my paper was the outcome of an investigation which originated in a desire to settle the question of the influence of school attendances on diphtheria and other zymotic diseases, and it was not until I found how terrible and increasing was the incidence of mortality upon the earlier-age group, that I determined to present the facts regarding that group separately. I had not the good fortune to read Dr. Jones's paper until my own was completed and in your hands. I am glad to find that I do not traverse many of his statements, nor trench very much on his ground.

Dr. Hugh Jones, however, considers that I assume too much in attributing the continual increase in the comparative incidence of mortality upon the group referred to (0 to 5) to a diminution in the comparative power of resistance on the part of this group to disease and death. I should like to know to what he himself attributes it. He will observe that I do not assert that it is solely due to loss of stamina, although I draw attention to the fact that a larger proportion of the group is born and bred in the slums than was formerly the case. But since he admits that the death-rate of the group in question has not declined to the same extent as the general death-rate at all ages, I am curious to know how he accounts for it. To my mind it seems clear that the death-rate at all ages represents the intensity of the onslaught of disease and death, whilst the comparative incidence of

mortality upon a particular age group is in inverse proportion to the comparative power of resistance exercised by that group.

Power of resistance to disease and death does not always lie in the individual, but often depends on protection exercised by others. Moreover, it is affected by the form in which the enemy presents itself. Babies are powerless to resist being overlain and otherwise treated with violence, nor can they argue with their parents on the necessity of being vaccinated and otherwise protected against the incursions of disease. Account for it as we may, the fact remains that two deaths occur in the group we are considering (0·5) for every three that occur in all the other age groups put together, although the group in question comprises only one-eighth of the total population. Moreover, the comparative incidence of mortality upon the group has steadily increased.

A HOPEFUL PATIENT.

THERE is, or used to be, a tombstone in the Bunhill Fields burying ground on one side of which were the name, age and date of death of a certain "lady of quality," and on the other the following inscription:—

> "In 67 months she was tapp'd 66 times,
> Had taken away about 240 gallons of water,
> Without ever repining at her case
> Or ever fearing the operation."

This statistical epitaph is recalled by the following interesting piece of autobiography which was sent some time ago to a physician of Boston, U.S.A., by a former patient who had been turned over to the care of a New York surgeon for the operative treatment of tuberculous glands of the neck:—

> "*Account of Myself up to October 20th, 1893.*

"Operated on May 10th, October 16th, 1890, and April 1st, 1891. Have had 87 enlargements up to now and 66 suppurating openings. Have now 27 openings suppurating—8 in neck and throat, 6 in chest, 7 in back between waist and shoulder blade, 2 in thumb joint, 1 in right armpit, 3 in left armpit, 1 in left side 5 inches below armpit. No less than 160 quarts of pus has come from me. Have used no less than 6,000 yards of bandages, 15 yards of court plaster, 2 yards of oil silk, 100 pounds of flax seed, 20 pounds of absorbent cotton, 6 pounds of vaseline, 1 pound of salve, 1 pound of oakum, 2 pounds of liquorice powder and pills, 1 pound of carbolic acid, 4 ounces of iodoform, 600 pills mostly sulphide calcium, 10 plasters, 1 caustic pencil, 70 quarts inward medicine, 2 quarts peroxide hydrogen, 2 quarts carbolic acid, 12 quarts liquor, 1 pint iodine, ½ pint balsam, 4 syringes. This does not reach the figure at all; yet it is enough to convince the most morbid. I hope to get well yet." Truly, as the poet says, "Hope springs eternal in the human breast." Certainly if this poor fellow does not succeed in getting well it will not be because he has not deserved to do so.

POPULAR MEDICAL SUPERSTITIONS.

DR. C. R. LEADER, M.B., Surgeon Roman Gravel's Mines, etc. (Worthen, Shrewsbury) writes: Dr. Williams's article on some popular superstitions in the BRITISH MEDICAL JOURNAL of October 13th, is both instructive and amusing as showing the extent to which many people's credulity at the present day may carry them, and although the treatment to which he shows us the newly-born infant is subjected may be painful, not to say dangerous, yet I think the following case will show the still more dangerous extent to which these superstitions are often carried.

A patient of mine was recently prematurely confined during the first week of a bad attack of typhoid fever, and during my attendance I was daily struck by the increasingly offensive odour of the room, which at length led me to discover a highly decomposed placenta under the patient's bed, and at the same time to the discovery that the midwife's means of preserving her patient free from the danger of an attack of puerperal fever, or "inflammation" as she called it, was to keep the patient's placenta underneath the bed until such time as she is able to get up. As this is not (I have since discovered) a superstition confined to this old lady's individual practice, an exposure of it may, I trust, help to prevent many a case of that very disease against which this precaution is taken.

MILLIONAIRES AND THEIR DOCTORS.

DR. G. F. SHRADY, writing in the *Forum* on the pay of physicians, speaks as follows as to the way in which some American millionaires pay their doctors: American millionaires are quite liberal with their physicians, but the attendant who has only one patient must necessarily have something for the sacrifice of his other business. The sums range from 60,000 dols. to 100,000 dols. yearly, with the usual luxurious surroundings. One physician received 37,000 dols. for attending the daughter of a millionaire for two months; another 60,000 dols. for a yachting cruise of less than six months; and another 2,000 dols. for intubation, an operation performed in a few seconds. A distinguished ear specialist was paid 5,000 dols. for a flying trip from New York to St. Paul; and still another physician received 25,000 dols. for a similar professional visit, involving a trip from Philadelphia to San Francisco.

CONCURRENT VACCINATION AND MEASLES.

DURHAM writes to suggest that the rash described by Dr. Garson in the BRITISH MEDICAL JOURNAL of October 27th as being that of measles associated with vaccinia was one that sometimes follows vaccination. This rash, he adds, is almost identical with that of measles, but can be distinguished from it by the absence of the other symptoms of measles —namely, cough, coryza, etc. He saw a similar rash last week, which appeared on the ninth day after vaccination with calf lymph. The child was otherwise quite well, and the rash disappeared in two days. Formerly as a public vaccinator he saw many such cases.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) A. C. E.; Messrs. Arnold and Sons, **London**; Mr. H. Adler-Smith, **London**; J. Adrian, M.B., Larne; Dr. J. H. E. Austin, Bombay; Army Medical Corps; Mrs. E. G. Anderson, M.D., London; A. G.; Anxious **(B)** B. J. Baron, M.B., Clifton; Dr. J. Broom, Clifton; Mr. C. Birchall, Liverpool; Dr. F. Beach, Kingston Hill; Mrs. A. Bodington, Hatzic, B.C.; Dr. H. Bartlett, **London**; Mr. E. H. Ball, Bolton; Dr. R. Barnes, Lyss; Mr. D. Biddle, Kingston-on-Thames; Mr. C. J. Bond, Leicester; Dr. J. Brown, Bacup; Bristol Hospital for Sick Women and Children, the Secretary of, Bristol; Mr. G. H. Broadbent, Manchester; Mr. E. Buxton, **Liverpool**; B. O. S.; Dr. E. A. C. Baylor, Dover; Mr. D. Butler, **London**; Mr. L. A. Bidwell, **London**; Mr. A. Berrill, South Woodford; Dr. Burnes, Dent. **(C)** Mr. G. F. Chadwick, **London**; Mr. C. R. Crawford, Brighton; Mr. H. B. Collins, Kingston-on-Thames; Dr. J. Campbell, Belfast; Professor Crookshank, East Grinstead; Mr. J. K. Couch Swansea; Dr. C. C. Claremont, Southsea; Dr. C. H. Cattle, Nottingham; Mr. C. Campbell, Saddleworth; Dr. W. S. Colman, **London**; Mr. E. C. Cripps, Cirencester. **(D)** Mr. P. Dunn, **London**; Dr. Jäeger's Sanitary Woollen System Company, Limited, **London**; Mr. W. Dalton, Blackpool; Mr. H. M. Duncan, **London**; C. J. W. Dixon, M.B., Hawick; Disgusted. **(E)** Mr. W. Eddowes, Shrewsbury; Mr. J. Edkins, Shanghai; Esperance. **(F)** Mr. S. Farmer, Shap; Mr. T. Fowler, Epping; Mr. E. F. Flynn, **London**; Dr. W. H. Fenton, **London**; Mr. W. G. Fitzgerald, **London**. **(G)** G. P.; Mr. A. Gurney, Peterborough; Mr. A. Gooding, **London**; Mr. T. P. Gostling, Worcester. **(H)** Miss E. Heather-Bigg, London; D. Harris, M.B., Carmarthen; Mr. F. C. Hicks, Oxford; Mr. G. Hern, London; Mr. T. G. Horder, Cardiff; Hindoo; Dr. A. Hill, Birmingham; Mr. G. A. Hatton, Leamington; Mr. G. Hogg, **London**. **(J)** Dr. G. J. Johnston, Dublin; J. A. P.; Dr. R. Jardine, Glasgow; Mr. S. E. Jones, Wrexham. **(K)** Dr. J. R. Kennedy, Carrodale; Dr. W. M. Kelly, Taunton. **(L)** Mr. A. Lèche, Axbridge; J. D. Leigh, M.B., Brotton-in Cleveland; Lucifer; Mr. H. Littlewood, **Leeds**; Mr. H. Lee, Cork; Dr. H. G. Lys, Bournemouth; H. Lund, M.B., Manchester. **(M)** Mr. H. W. Miller, Ipswich; *Midland Daily Telegraph*, the Editor of, Coventry; Mr. W. B. Mason, Southsea; Mr. G. Molloy, Blackpool; M.B.Cantab.; Member; M.D.; Mr. W. C. McDonnell, **London**; R. Miller, M.B., Dundee; Dr. W. A. Michie, **London**; J. T. Maclachlan, M.B., Dornoch. **(N)** W. T. Nicholson, M.B., Glasgow; Mr. R. H. B. Nicholson, Hull. **(O)** Omega. **(P)** Dr. F. W. Pavy, London; Mr. J. Palmer, Snodland; J. Pirie, M.B., Edinburgh; Mr. R. B. Pilcher, **London**; Mr. A. D. Pithie, Lymington; Mr. J. R. Pleace, **London**; Mr. E. S. Pattison, London. **(R)** Dr. J. J. Ridge, Enfield; Royal College of Surgeons in Ireland, the Secretary of, Dublin; Messrs. Raphael Tuck and Sons, London; Rural Member; Dr. J. Robertson, St. Helens; Mr. J. W. Rogers, Bristol. **(S)** Mr. A. W. Sinclair, South Petherton; Mr. J. S. Sewill, **London**; Dr. J. Shives, Liversedge; Dr. S. Spicer, **London**; Mr. J. Smith, London; Mr. C. T. Snedeker, Paris; Dr. T. H. Scott, Camberley; Dr. F. F. Schacht, London; Sheffield Medico-Chirurgical Society, the Secretary of, Sheffield; Salford; Messrs. Salt and Sons, Birmingham. **(T)** Mr. J. A. Thompson, Sydney; Mr. A. H. Thompson, Darlington. **(U)** Dr. A. R. Urquhart, Perth; Umbilicus. **(W)** Mr. H. Wilson, Southampton; Dr. H. Worthington, Ravensthorpe; Mr. J. Wright, London; W. P. M. B.; Mr. R. H. Wellington, Wisbech; G. E. Williamson, M.B., Newcastle-on-Tyne; Mr. G. J. Williams, Fishguard; etc.

BOOKS, ETC., RECEIVED.

An Introduction to Comparative Psychology. By C. L. Morgan. London: Walter Scott. 1894. 6s.

Recueil des Travaux du Comité Consultatif d'Hygiène Publique de France et des Actes Officiels de l'Administration Sanitaire. Annexe du Tome XXII. Le Choléra en 1892. Melun: Imprimerie Administrative. 1894.

Uber traumatische Tabes und die Pathogenese der Tabes im allgemeinen. Von Dr. E. Hitzig. Berlin: August Hirschwald. 1894.

Practical Physiology of Plants. By F. Darwin and E. H. Acton. Cambridge: University Press. 1894. 6s.

A History of Epidemics in Britain. By Dr. C. Creighton. Vol. II. Cambridge: University Press. 1894. 20s.

A Practical Ready Reference Guide to the Election of Parish and Rural District Councillors. By J. H. Stone and J. G. Pease. London: G. Philip and Son. 1894. 2s.

A Brief Review of the Operations of the Home Department, in connection with the Cholera Epidemic of the Twenty-third Year of Meiji (1890). Tokyo: Sanitary Bureau of the Home Department.

On Gangrene of the Limbs following Typhoid Fever. By Dr. F. D. Drewitt. London: H. K. Lewis. 1894. 1s.

The Theory and Practice of Medicine By Dr. F. T. Roberts. Ninth Edition. London: H. K. Lewis. 1894. 21s.

Physiology for Beginners. By Dr. M. Foster and Dr. L. E. Shore. London: Macmillan and Co. 1894. 2s. 6d.

A Treatise on Hygiene and Public Health. Edited by Dr. T. Stevenson and Mr. Shirley F. Murphy. In Three Volumes. Vol. III: Sanitary Law. London: J. and A. Churchill. 1894. 20s.

*** **In forwarding books the publishers are requested to state the selling prices.**

THE BRADSHAW LECTURE
ON
INFANTILE SCURVY AND ITS RELATION TO RICKETS.

Delivered before the Royal College of Physicians of London.

By THOMAS BARLOW, M.D., F.R.C.P.,
Physician to University College Hospital; and to the Hospital for Sick Children, Great Ormond Street.

Mr. President,—Eleven years ago I submitted to the consideration of members of our profession the results of an analysis of thirty-one cases of what I believed to be infantile scurvy. Such cases, though scantily reported in England, were well known in German medical literature, and described under the title of "Acute Rickets." So far back as 1873 Dr Ingerslev, a Swedish physician, had suggested the scorbutic nature of one case under his care. But scurvy had been dismissed by the German school, amongst other reasons because no sponginess of gums was to be found in many of the cases. In 1881 Dr. Gee had given a brief but graphic description of five cases, under the title of osteal or periosteal cachexia. He insisted that the obscure symptoms referable to the bones and the cachexia were not explicable by either rickets or congenital syphilis. But in 1878 three cases were fully described by Dr. Cheadle, in which definite sponginess of gums occurred, and likewise obscure symptoms referred to the lower limbs. These cases he claimed on clinical grounds to be true scurvy. In 1879 and in 1882 Dr. Cheadle published further examples, and he suggested that the disease could be grafted on a rickety stock. Dr. Cheadle's papers laid down the original lines of the true interpretation of the disease which we have to consider, and I do not think that anything has invalidated the soundness of his conclusions. There had been a singular paucity of pathological evidence on this subject, and I was able, as the result of three *post-mortem* examinations, to formulate the anatomical substratum, which appeared to explain many of the symptoms found. I propose to review the main clinical and anatomical features of the group, to give the conclusions deduced eleven years ago, and then to state briefly how far these have been modified by subsequent investigation and criticism.

The group of symptoms to which attention is called has generally a rather sudden onset beginning at any period after the age of 4 months, but predominantly in what may be called the second period of infancy, that is to say, from the age of 9 months to that of 18 months. The child is generally rickety, but fairly clothed so far as subcutaneous fat is concerned. There may have been antecedent digestive troubles, or, on the other hand, in respect to obvious symptoms little to show. But a careful observer will have noticed a certain amount of pallor. Suddenly, without obvious cause, the child becomes fretful in a special way. So long as it is left alone it is tolerably quiet. The lower limbs are kept drawn up and still. But when placed in its bath or otherwise moved there is continuous crying, and it soon becomes clear that the pain is connected with the lower limbs. At this period the upper limbs may be touched with impunity, but any attempt to move the legs or thighs gives rise to screams. Next, some obscure swelling may be detected; first on one lower limb, then on the other, though it is not absolutely symmetrical. The skin still remains pale, and there is no local heat, and no pitting. The swelling is ill-defined, but is suggestive of thickening round the shafts of the bones, beginning above the epiphysial junctions. Gradually the bulk of the limbs affected becomes visibly increased. No fluctuation can be obtained, but a little œdema may now appear on the feet. The position of the limbs becomes somewhat different from what it was at the outset. Instead of being flexed they lie everted and immobile, in a state of pseudo-paralysis. The knee-jerks may be obtained, and likewise the plantar reflexes. About this time, if not before, great weakness of the back becomes manifest. A little swelling of one or both scapulæ may appear, and the upper limbs may show changes. These are rarely so considerable as the alterations in the lower limbs. There may be swelling above the wrists, extending for a short distance up the forearm, and some swelling in the neighbourhood of the epiphyses of the humerus. There is symmetry of lesions, but it is not absolute; and the limb affection is generally consecutive, though the involvement of one limb follows very close upon another. The joints are free. In severe cases another symptom may now be found—namely, crepitus in the regions adjacent to the junctions of the shafts with the epiphyses. The upper and lower extremities of the femur, and the upper extremity of the tibia, are the common sites of such fractures; but the upper end of the humerus may also be so affected. Rarely a fracture occurs in the femur, at some distance from the epiphyses. A very startling appearance may be observed at this period in the front of the chest. The sternum, with the adjacent costal cartilages and a small portion of the contiguous ribs, seems to have sunk bodily back, *en bloc*, as though it had been subjected to some violence which had fractured several ribs in front and driven them back. Occasionally thickenings of varying extent may be found on the exterior of the vault of the skull, or even on some of the bones of the face. There is great tenderness, but, as with other lesions, there is no local heat, and there is seldom change of colour Here also must be mentioned a remarkable eye phenomenon. There develops a rather sudden proptosis of one eyeball, with puffiness and very slight staining of the upper lid. Within a day or two the other eye presents similar appearances, though they may be of less severity. The ocular conjunctiva may show a little ecchymosis, or may be quite free. With respect to the constitutional symptoms accompanying the above series of events the most important feature is the profound anæmia which is developed. Whatever there may have been at the onset, when once the limb affection has become pronounced the pallor becomes intensified. The anæmia is proportional to the amount of limb involvement. As the case proceeds, there is a certain earthy-coloured or sallow tint, which is noteworthy in severe cases, and when once this is established bruiselike ecchymoses may appear, and more rarely small purpuræ. Emaciation is not a marked feature, but asthenia is extreme and suggestive of muscular failure. The temperature is very erratic; it is often raised for a day or two, when successive limbs are involved, especially during the tense stage, but is rarely above 101° or 102°. At other times it may be normal or subnormal.

Let us now consider the digestive tract. The condition of the gums is very important. Defective observation on this point has led to frequent misconceptions as to the nature of the disease. Stated generally, the gum condition may be said to bear a definite relation to the number of teeth which have appeared. If several teeth have appeared, considerable sponginess of the gums may be manifest. Fleshy swellings form, which even project from the mouth, and give rise to bleeding and fetor. But if only a few teeth have appeared, the sponginess may be slight though definite, forming a narrow, fleshy ridge round each tooth.

If no teeth have appeared the gums may be normal or may present small bluish extravasations over the sites of the oncoming teeth. The condition of the gums sometimes gives rise to trouble in feeding. Occasionally there is nose bleeding. As a rule the appetite is fair, sometimes it is ravenous. There is seldom vomiting or diarrhœa, but a few cases have been recorded of blood in small quantities being passed *per anum*. The urine often contains a trace of albumen and a little blood. It is sometimes scanty in amount, and coarse concretions of uric acid may be passed. In rare cases the spleen is a little enlarged. Except in the fatal cases, the heart and lungs give rise to no symptoms.

What is the course of this disease? If the cachexia is very profound, the supervention of bronchitis, pleuro-pneumonia, severe diarrhœa, or an intercurrent exanthem, may bring about a fatal issue. It is sometimes a relapsing disease, and may run a chronic course over many months; but the average duration, when uninfluenced by treatment, is from two to four months. The chief interest of the disease turns on the limb affection, and its progress I will follow with a little more detail. First with regard to the cases in which no frac-

tures are detected. By slow degrees the swelling subsides, and with it the tenderness lessens. There is considerable wasting of the muscles, and it becomes evident now that there is a sheath of firm resisting tissue round part of the bone shaft which has been chiefly affected. This is most commonly found round part of the femur, but may be traced round part of the tibia also. Such sheaths, although often found in both lower limbs, are not generally of equal extent on the two sides. It may take months before these osseous sheaths are absorbed. By degrees voluntary mobility is restored, and the child also begins to raise itself from a horizontal posture. In the cases where fractures occur near the epiphysial junction, there is satisfactory repair, with little or no deformity. The same may be stated with respect to the ribs. In the rarer event, when the fracture occurs in the middle of the shaft, there is often an extensive callus and some deformity. The anæmia, the hæmorrhages, the asthenia, the pain, subside *pari passu* with the clearing up of the limb affection. Thus far, on the clinical side; let us now consider what *post-mortem* investigation teaches with respect to this disease. In two of these children, aged respectively 23 months and 19 months at death, the appearances were practically identical with what was found in another case, aged 10 months, and what has been since found in other cases by subsequent observers.

The specimens [exhibited] show that the essential lesion is the subperiosteal blood extravasation, with its secondary consequences. Thus, around the shaft of the femur, there is an extensive sheath of blood clot, which intervenes between the periosteum and the shaft except for a short distance at the upper extremity. A fracture had occurred through the junction area, between the lower epiphysis and the shaft. The surfaces were rough, but not splintered. There was evidence of rickets in the loose spongioid ossification of this region, and also in the diffuse ossifying centre of the lower epiphysis. The periosteum was intensely vascular, but there was no lymph or pus. In the muscles of the thigh the superficial layers contained a certain amount of pale yellow blood serum, which to some extent macerated the muscular tissue. In the deeper layers there was extensive blood clot, pretty evenly disseminated. The periosteum of the right tibia was also thickened and vascular. There was blood extravasation between it and the shaft along the whole length. Fracture was present in the loose, imperfectly ossified region, connecting the shaft with the epiphysis. The trabecular structure in the interior of the bone broke down easily, and there was much hæmorrhage in the medulla of the shaft. The ossifying centre of the epiphysis and the loose ossification in the junction area resembled what was found in the femur. There was extensive blood extravasation in the deeper layers of the muscles of the leg. The periosteum of the fibula was only slightly detached, but it was very vascular, and there was slight extravasation near the extremities. The bones of the other side were similarly affected, though not quite to an equal amount. The scapulæ were very interesting. They showed extensive blood extravasations on both dorsal and ventral surfaces. The dorsal extravasations associated with muscular extravasations had given rise to swellings, which had been obvious during life. On the ventral surface the upraised periosteum had deposited a thin, new layer of osseous material; in this respect resembling the bony sheaths which had been felt during life, in the middle stage of the recovering cases, on the shafts of the lower limb bones. The humerus in this case showed no subperiosteal effusion, but in addition to the evidences of spongioid ossification, showed extensive hæmorrhage into the medulla.

I may refer to the condition of the ribs in another case. The periosteum was found extensively detached, with much chocolate-coloured detritus of broken down blood clot between the periosteum and the rib. The ribs themselves were quite bare, and were broken away close to the junction region with the costal cartilages. On section of the ribs it was found that the bony material was a mere shell, and there was an extensive endosteal extravasation. The cranium showed thin areas of subperiosteal hæmorrhage in the neighbourhood of porous bone on both parietals. Extensive blood and serum extravasations were found in the thigh muscles, the muscles were wasted, and subperiosteal extravasations were found in connection with the innominate bone and the femora.

The other case showed changes almost identical with those which I have described. I need not further particularise them, but will only mention two points of interest. Although there was no fluid effusion into any joint, there was a minute extravasation into the synovial membrane of one hip-joint.

The specimens from these cases are on the table, and besides the subperiosteal extravasation the hæmorrhage into muscles and the fractures I ask your attention to the remarkable absorption of bony material in the centre of this detached shaft of a femur. A vertical section has been made and the blood clot removed, both from outside and inside the bone. It will be seen that the compact tissue is reduced to a mere shell, thus resembling the state of the ribs which I have described. Microscopical examination of these bones confirmed the naked-eye appearances. The periosteum was vascular and thickened, but without cellular infiltration. The bone presented extensive absorption of trabecular structure, showing large spaces with eroded margins, and at the junction regions characteristic rickety ossification.

The visceral changes were not very important. In one case there was blood-stained serous effusion in one pleura, with extensive petechiæ on the parietal pleura; in another there was a hæmorrhagic focus in one lung with a little lymph over it; in a third there was some splenic enlargement, with blood extravasation under the capsule, and with some also into the substance. In the light of these anatomical substrata, we are now able to explain many of the symptoms which I have described. The special characters of the lower limb swelling—namely, the deep thickening referred to the neighbourhood of the bone shaft, the solid effusion into the muscular masses, the exquisite tenderness, the pseudo-paralysis, the absence of local heat or redness, are all in harmony with the conditions found *post mortem*. The absence of any true inflammatory sign is in harmony with the general absence of persistent pyrexia. The occasional moderate elevation of temperature may well be explained by the tension set up by the blood effused beneath a rather resisting membrane. The anæmia, which becomes so profound after the onset, and which is increased after each fresh involvement of a limb or portion of a limb, is explained by the successive internal hæmorrhages, which are just as much an impoverishment as if the blood had been discharged from the body. The fractures are not difficult to understand when we consider not only the lack of support outside the shaft in consequence of the stripping up of periosteum, but also, in the advanced cases, the hæmorrhage into the centre of the shaft with the extensive absorption of trabecular structure. In no bones is this internal absorption, combined with extravasation outside and inside, carried to a greater degree than in the ribs, and this explains the extraordinary deformity of the chest to which I have referred, which deformity is almost pathognomonic of the disease in question. The irregular bony sheaths round the long bones, felt during the middle stage of recovery of the severe cases, is due to the osseous material which has been thrown out by the upraised periosteum, and is analogous to what is found round the base of a recovering cephalhæmatoma. I may refer once more to the figure showing the same process over the ventral surface of the scapula.

The extremely interesting eye changes which I have already described are explained thus: the periosteum which lines the under surface of the roof of the orbit is even in the normal condition very loosely attached to the bone. The proptosis which occurs in this disease is caused by a blood extravasation into this easily distended space between the roof of the orbit and its periosteum. The eyeball is pushed downwards and forwards, and the upper lid becomes tense and bulged, and sometimes a little discoloured. The swellings on the cranium are due to blood extravasations, especially in connection with portions of bone previously more vascular than normal, owing to pre-existing rickety deposit.

Thus far we are on safe ground, and there can be little difference of opinion as to the anatomical conditions found and their relation to the symptoms observed; but when we go a step further and inquire as to the true nature of this disease and its etiology, there is room for great divergence of opinion. First, as to the question of rickets. The doctrine held by many German authorities that these cases were

examples of acute rickets was formulated without adequate *post-mortem* evidence, and it was obviously unsatisfactory. Clinically it is true that, in the great majority, antecedent rickets is shown by beaded ribs, large epiphyses, and delayed teething. Two manifestations of rickets, namely, marked head sweating and laryngismus stridulus, are often present throughout the course of the disease now under consideration. Moreover, after the subsidence of the special group of symptoms which I have described, there are in a large number of cases persistent signs of rickets, which run the ordinary, typical, somewhat protracted stages of that malady. In the specimens pourtrayed there is evidence of a definite amount of rickety change in the spongioid ossification in the epiphysial junction region. But Sir William Jenner, to whom I showed these specimens, told me that in the very large number of cases of rickets investigated by him in years past, he had never seen any such condition as the hæmorrhages here present. Nor have I been able to find in any of the pathological accounts of rickets any record of such a condition. But although in these specimens there is a tangible amount of rickets present, yet in some milder cases which have recovered, the amount of rickets clinically evident has gone to the vanishing point, and in some cases it has been impossible to say clinically that rickets was present at all. Let us further note that cases of aggravated and progressive rickets, which are occasionally met with in which there is excessive bony deformity, with multiple fractures, or with extreme bone softening, do not present in spite of cachexia, during life, the symptoms which I have described, or *post mortem*, the hæmorrhages here shown. This was a difficulty quite recognised by the German writers, who wrote with inadequate knowledge of the *post-mortem* conditions, and they drew the distinction between acute rickets and severe rickets. It is clear that the phenomena of our disease and those of rickets, as commonly understood, though often coexistent, do not present what logical writers describe as concomitant variations.

As to congenital syphilis: In a very few cases an early history, compatible with that disease, was obtained, but no conclusive sign of active syphilis was noted during the course of the malady in question; nor was any syphilitic lesion found *post mortem*. The course of the limb affection, even with the pseudo-paralysis and the deep thickening, is distinct, clinically and pathologically, from that of any syphilitic bone disease with which we are acquainted. Though in a vague, indeterminate way some of these cases have been reported as infantile rheumatism, study of the descriptions given has shown that the joints proper were not invaded. This negative feature, with the freedom from heart affection, are adequate practical reasons for dismissing rheumatism as a factor in our disease.

None of the cases, so far as I know, belong to families of "bleeders." Moreover, the general absence of joint involvement shuts out the special limb attacks of hæmophilia. Although it is true that ecchymoses of various kinds occurred, and certain internal hæmorrhages likewise, yet small extravasations were rare, and the protracted course, and the special type of limb affection were unlike any case recorded of purpura hæmorrhagica.

With what known disease, then, does the group under consideration present most affinities? I submit that it presents most affinities with scurvy. The bone lesions which I have described have been found in scurvy, especially in young adults and adolescents. The special forms of fracture in the neighbourhood of the epiphyses have been described as occurring in young scorbutic subjects as far back as the time of Poupart. The special fractures of ribs, in which the rib proper is separated away from the cartilage, have been repeatedly observed in adult scurvy. The subperiosteal hæmorrhages again have been found. They are graphically described by our countryman Lind, whose work on scurvy was the pioneer of modern knowleage of that disease. They have also been described by Budd. In the cases of scurvy which occurred during the siege of Paris several necropsies were made in which blood was found effused under the periosteum of the tibia. Endosteal blood extravasations have also been described, both in the long bones and in the ribs, and a rarefying osteitis, like what I have mentioned, which doubtless greatly facilitated the proneness to fracture. The predominance of lower-limb affection, however explained, is the same in our malady and in adult scurvy.

Passing to other structures, the hæmorrhages and serous exudations of the muscular masses, and the consecutive wasting of the muscles, are characteristic. Moreover, the scanty internal hæmorrhagic lesions which I have described, as far as they go, agree with what has been found in scurvy. The great pallor and the muddy tint, probably due to reabsorption of altered hæmoglobin, are also common to our disease and to typical scurvy. Finally, with respect to the gums. We may classify the infantile cases into those who have limb symptoms with spongy gums, and those who have limb symptoms without spongy gums; and we have found that the state of spongy gums is practically conditioned by the presence of teeth. If there are several teeth, the sponginess is efflorescent, and in the severe cases the fetor, the bleeding, and the protruding tumours are indistinguishable from what we find in typical scurvy. If there are no teeth, there is no sponginess, though there may be found on careful inspection minute ecchymoses. Now the greatest stress has been laid upon the gum condition in adult scurvy: but there is abundant evidence that a toothless man may present the limb weakness, the cachexia, and anæmia, and yet show no sponginess of gums whatever. In mild cases of land scurvy, also, it is constantly observed that the sponginess is limited strictly to the neighbourhood of those teeth which remain; and, if there be large intervals where the teeth have been lost, no sponginess appears in these intervals. I may here refer to a series of five cases which have been under my observation at different periods, but which in age were beyond the limit of infancy. In these five cases—children from 2 years to 10 years of age—there was undoubted scurvy, produced, I believe, by a curious hysterical antipathy to vegetables and meat. The gum affection was generally more severe than that of the infantile cases above described. The limb affection resembled that of the infant cases, but was less severe. The study of these cases occurring in childhood shows, I believe, a middle term (so far as the symptoms are concerned) between the infantile group and adult scurvy. The inverse relation to which I have referred is reasonable when we consider the physiological differences which exist. Before the eruption of the teeth there is a much smaller aggregate of blood vessels and blood supply, and much less liability to attrition than at a later period, when every tooth means the presence of a large leash of vessels. The physiological activity of every part of the growing bones of an infant is one of the most striking features of its physical life. This activity is modified apparently in the most rapid and subtle way by changes of general nutrition, and if there has already been induced a condition of rickets, with the alterations in the epiphysial line and in the periosteum which are characteristic of that disease, there is manifestly a prepared soil on which hæmorrhagic lesions can develop if an adequate blood alteration is forthcoming. Let me state it in another way. Rickets *per se*, as I have already said, does not (so far as experience goes) lead to these hæmorrhages. If it were so, considering how common a disease rickets is, surely these hæmorrhagic cases would be more frequently met with. Scurvy, we know from experiences in adults, is adequate to the production of such hæmorrhagic lesions. If, then, in our infantile cases the blood change due to scurvy comes into operation, the rickety change already present may act as a physiological determinant of the sites in which scurvy becomes manifest.

Now let us inquire whether there is anything in the antecedent conditions of these children which brings them into line with those under which adult scurvy arises. What are the conditions under which adult scurvy arises? There are many predisposing circumstances of faulty hygiene: but surely there is a sufficiently conclusive experience that prolonged deprivation of fresh vegetables or their equivalents is the most constant fact amongst the antecedents of the disease. I have said prolonged, because it is clear that the organism has the power of drawing on its reserves for lengthened periods to meet the deprivation of a complete aliment; and I have used the phrase "fresh vegetables or their equivalents" because we now know that fresh uncooked meat and fresh milk are antiscorbutic as well as, though perhaps not in so rapid a way, as fresh vegetables and fresh

fruit juices. Looked at as antiscorbutics, probably much larger quantities of fresh uncooked meat and fresh milk are needed than fresh vegetables and fresh fruit juices.

The chemistry of scurvy is still an unsolved problem—or perhaps I should say an incompletely-solved problem—for, thanks to the labours of Garrod, Ralfe, and others, we know that there is a diminished alkalinity of blood, and probably some fault in the presentment of the saline constituents of the food and in the facility with which they part with their bases. But the problem is possibly biological as well as chemical. It seems fair to say that the further we get from a living food the less is the antiscorbutic power. Fresh vegetables are more powerful antiscorbutics than preserved or cooked vegetables. Raw meat is more antiscorbutic than cooked meat, and raw meat juice than beef-tea. I suspect it will ultimately be found that raw uncooked milk is more antiscorbutic than cooked milk. What is there, then, in common between the antecedents of our infantile patients and those of recognised scurvy? So far as faulty hygiene is concerned, there is little in common. The majority of the infantile cases have been found in healthy homes and amongst good surroundings.

Let us turn to the question of food. In the group which I have described, in no single case at the time of onset of the malady has the child been breastfed. In the great majority, where complete details have been obtained, these infants are found to have been nourished on what may be called "preserved foods." In the front rank come the various proprietary infant foods, prepared by the addition of water to certain powders. Then come the different forms of condensed milk, and the proprietary foods made with condensed milk. Then come cases in which, either accompanied by proprietary food or not, fresh milk has been given, but with extreme dilution, during the later stages of infancy. Other categories I will speak of subsequently. Now let it be assumed, for the sake of argument, that such a diet as I have described is a scorbutic diet; and that an infant presenting the symptoms described is at the time being fed on this diet. The obvious test of the reasonableness of the scorbutic hypothesis is to alter the food in the antiscorbutic direction, and note the results. For the condensed milk let fresh cow's milk be substituted. For extremely diluted cow's milk let undiluted fresh cow's milk be substituted, as, for example, a full pint for a child of six months old. Instead of the proprietary food let some sieved potato be mixed with the milk every day, and a tablespoonful of meat juice or gravy likewise. Finally, let a tablespoonful of orange juice or grape juice be administered every day in divided doses, mixed with water as required. And what is the result of these very simple alterations? The result in two or three days is startling. As a rule, the food is taken greedily and without digestive disturbance. The child becomes much more contented; the tenderness of the limbs rapidly diminishes; the sponginess of the gums almost immediately recedes; the pallor becomes notably less; if there has been any renal hæmorrhage it ceases; fresh ecchymoses rarely appear.

It is clear that the progress of the disease is definitely arrested. So far as the local treatment of the limbs is concerned nothing is essential but the maintenance of rest in the horizontal position; and this meets another indication, namely, to prevent possible heart failure, consequent upon the extreme anæmia and fatty degeneration. Experience has abundantly shown that the blood tonics, such as iron, arsenic, and phosphorus, are useless if the proper change is not made in the diet; and if the proper change is made they are scarcely necessary; although fresh air and sunshine will not prevent the oncoming of the disease, they probably aid recovery when the food change has been effected. It is occasionally found that after the scorbutic need has been satisfied, and the cachexia has subsided, the child is no longer able to assimilate the large quantities of vegetable material and fresh undiluted cow's milk, which at the beginning of the treatment were taken with avidity and digestion. This also is parallel with what has been found in the treatment of adult scurvy.

This completes the recapitulation of the results submitted to the profession in 1883. I now pass to the second part of my lecture, and shall state as concisely as I can how far the former conclusions have been modified by subsequent experience and criticism. First let me mention the experience of others. A considerable number of examples have been recorded both at home and abroad. Dr. Cheadle has reaffirmed his original propositions with further illustrations and the account of one important necropsy, to which I will subsequently refer. Dr. Gee, Dr. Eustace Smith, Dr. Goodhart, Dr. Railton, Dr. Sutherland, Dr. Green, and Dr. Charpentier have published cases, or series of cases. In Germany series of cases have been recorded with considerable detail by Dr. Rehn, of Frankfurt, and Dr. Heubner, of Leipzig. The general conclusions previously stated have been strongly supported by these two eminent physicians. The most striking confirmation has come from America—a country which rivals our own in the favour with which proprietary infant foods have been received, and in the reluctance of well-to-do mothers to suckle their offspring.

The first case which appears to have been observed was in 1889, and was reported by Dr. Northrup, physician to the New York Foundling Hospital. In 1891 11 cases were collected by him; and in February of this year no fewer than 106 cases were reported to the New York Academy of Medicine by Dr. Louis Starr, Dr. Rotch, Dr. Holt, and others.

Detailed histories of 36 of these have been analysed by Dr. Northrup. It is obvious from his paper that the clinical and anatomical features described are identical with those of the group under consideration, and the conclusions arrived at are almost word for word those which were stated in 1883. My own experience of this disease since 1883 comprises 33 typical examples, besides a number of what may be called "borderland" cases, to which I will presently refer. But after this general enumeration of available material, let me refer to some of the results of the collective experience. First as to anatomical results. A very striking case was communicated to me by my friend Dr. Stephen Mackenzie. On *post-mortem* examination extensive subperiosteal and endosteal extravasations and fractures of ribs and lower limb bones were found. But in addition there were innumerable small hæmorrhages in the intestines, mesenteric glands, lungs, and the pyramidal structure of the kidneys.

Dr. Colcott Fox has published drawings of a remarkable case with extremely widespread subperiosteal hæmorrhages. In the American series, collected by Dr. Northrup, there are four *post-mortem* examinations recorded. The most important one is Dr. Northrup's case. This was a child 18 months old with extensive subperiosteal hæmorrhages, but no rickety changes. The necropsy recorded by Dr. Cheadle presented only slight rickets, and the bones and muscles were free from hæmorrhage. Besides the characteristic hæmorrhages into the gums there were extensive extravasations into the lungs, and minute extravasations into the intestinal mucous membrane and lymphatic glands. One of the most interesting recent communications is that of Dr. Sutherland, who, whilst laying great stress on the frequency of the limb extravasations, reports a fatal case like Dr. Cheadle's in which the bones were free. Dr. Sutherland has also reported two examples of extensive hæmatoma of the dura mater, which he believes to have been due to infantile scurvy. A similar condition is recorded as occurring in adult scurvy. Since Dr. Sutherland's paper was published I have also had a case of a boy, aged 15 months, who under my observation presented slight scurvy of the gums. From the history I believe it probable that he had had an earlier attack of this disease. At the *post-mortem* examination an old extensive hæmatoma of the arachnoid cavity was found. This was possibly due to a long-past scorbutic hæmorrhage. At the Children's Hospital, Great Ormond Street, since 1883 three *post-mortem* examinations on cases of scurvy have been made: one under Dr. Cheadle, to which I have already referred; one under Dr. Abercrombie, and one under Dr. Lees presented characters identical with those described in the first part of the lecture. Besides the actual necropsies there is a certain amount of anatomical experience which has been obtained by surgical exploration during the life of the patients. The most striking example of this kind was recorded by Mr. Page, in which prolonged incisions were made down to the bone in both thigh and leg, and great masses of blood clot removed. There was recovery, but in addition to the operation an entire change was made by Mr. Page in the diet, and the proprietary food with which the child had been fed since three weeks old up to nine months was replaced by fresh food. In some of Rehn's

cases and in some of the American cases simple exploratory incisions have been made, and the existence of blood extravasation under the periosteum established. Thus far as to anatomical results. And now as to the clinical addenda to our knowledge. Mr. Holmes Spicer has drawn the attention of ophthalmic surgeons to three examples of the curious eye affection which I have already referred to in the first part of this lecture. After pointing out the association of this special form of orbital hæmorrhage with other scorbutic signs, he suggests, in the case of a handfed child of seven months, that a similar orbital hæmorrhage was the only scorbutic sign. This is a difficult doctrine to accept, but I believe it to be sound. Out of seven of my cases in which orbital hæmorrhage occurred, four presented the orbital symptoms before the limb symptoms, and in some of these the limb symptoms were slight, there being great local tenderness, much irritability, but little swelling.

I have spoken of hæmaturia as one amongst the symptoms of our typical group. Dr. Gee, and subsequently Dr. John Thomson, have pointed out that occasionally hæmaturia may be almost the solitary manifestation of scurvy in infants, and that it may immediately vanish after the employment of fresh food. Sir William Roberts has told me that he has observed examples of this scorbutic hæmaturia, without other symptoms, but responding to antiscorbutic diet. I have notes of two cases of hæmaturia in which, though no bone lesions were to be felt other than rickets, there was an excessive irritability, resentment to the slightest touch of the lower limbs, and some amount of anæmia. They had been fed on preserved food, and one of them immediately responded to antiscorbutics: the other I have been unable to trace. These cases lead me to mention another example of what may be called a borderland condition. There are cases of rickety infants in whom, though no lesions pointing to scurvy can be detected, the irritability and tenderness are out of all proportion to the signs found. The substitution or increase of what may be called "living food" in the diet, will often entirely eliminate this irritability and tenderness, just as in the typical cases which I have already described. I find that Dr. Cheadle and Dr. Eustace Smith have noted a similar experience. Just as we are familiar with a vanishing point of rickets, we may possibly have to recognise a vanishing point of scurvy. The collective experience shows that some of the cases have had an early infancy with much stress and storm in the way of digestive disturbance. The artificial food upon which ultimately they have been nurtured is a sort of survival of the fittest, as being the one attended with least diarrhœa and vomiting; and it is whilst assimilating this artificial food that the scorbutic symptoms have developed. But I wish to emphasise the statement that in chronological order the symptoms of our disease cannot justly be regarded as the last term of a condition of marasmus. It is not in the least comparable to the appearance of purpura at the close of a chronic wasting disease. Further, it is recorded that, in a great many cases, at the onset there is no obvious digestive disturbances, or one only of very moderate degree. Many of the later reports state that the children were well clothed with fat, and regarded by the friends as well nourished. The immediate determining cause of the catastrophe is difficult to ascertain. In some of the cases, as in adult scurvy, a slight accident—bruise or fracture—seems to have started the complaint.

One of the most suggestive results of the collective experience relates to the social state of the children amongst whom the disease predominantly occurs. The clinical *tout ensemble* of a typical example is as striking in its own way as that of myxœdema or acromegaly. If this were a common disease in our large out-patient departments of the general hospitals and the children's hospitals it would be recognised: but amongst the very poor it is not a common disease. Of the 33 typical examples which have come under my care since 1883, only 6 were hospital cases. The others were the children of well-to-do people with healthy surroundings and good homes. There was nothing to suggest either wilful neglect or faulty hygiene in any gross sense. We may speak with confidence of what we ourselves observe as to the relative frequency of a disease in different groups of people; but it is somewhat rash to generalise as to the change of type of any disease in different times. Nevertheless, I will hazard the statement that this disease is probably more frequent now than, say, twenty-five years ago. It is, I think, inconceivable that men of the authority of Jenner and West and Hillier should not have insisted upon it if this group of symptoms had often occurred within the common range of their experience. I observe that Dr. Northrup, in his valuable summary of the American experience, states that it seems probable that the disease is increasing in frequency in America. Is there anything noteworthy of late years about the bringing up of the infants of the well-to-do classes? I think it may be safely stated that, besides the increasing difficulty of getting the mothers to suckle their infants, there has been an enormous increase in England and America in the employment of proprietary infant foods. The proprietary foods are much more extensively used among the well-to-do than among the poor. But different forms of condensed milk have also come into extensive use, and to a considerable amount among the poor.

Is there any other reason why the poor, though by no means exempt from the disease in question, should suffer from it in a remarkably less degree than the rich? I believe that an important suggestion made by Dr. Cheadle gives a second clue to this remarkable difference. The children of the poor at a much earlier period than those of the well-to-do receive small portions of the same food as that of which their parents partake. No doubt in consequence of such indulgence there are occasional primary digestive disturbances. Nevertheless, some breaks are made in the monotony of the diet, and probably some antiscorbutic article of food is taken. Among the children of the poor, potatoes especially are given at a much earlier period than to the children of the well-to-do. Thus, although the children of the poor are rickety, they are much less frequently scorbutic than the children of the rich.

Thus, to sum up, the children of the poor suffer less from scurvy than the children of the rich, because poor parents cannot afford to buy the proprietary food which the rich parents buy, and because the poor parents, even when they use condensed milk, give their children a mixed diet at a much earlier period than rich people give it.

Are there any addenda to be made to the former results obtained in respect to the diet of the children who were attacked with this disease? I think there are. Permit me to speak first of the results of my own later experience on this point. It still stands out as a striking fact that the proprietary foods are the great offenders, especially those which are prepared with water and with condensed milk, or with a very small amount of cow's milk. Condensed milk is responsible for a fair number. The disease also occurs when very diluted cow's milk is used, and especially when for some reason, after a long employment of considerably diluted milk, the dilution is suddenly carried to a further stage, even with or without the substitution of some artificial food. The disease also occurs when peptonised milk has been given over long periods. Several definite examples have been observed in infants to whom for several months as much as a pint and a-half and one quart of humanised sterilised milk have been given in the twenty-four hours. By this preparation I mean milk which has been deprived of half its quantity of casein, and which has been subsequently sterilised, and in several cases stored for some weeks. I think there is reason to suspect that the boiling of cow's milk and prolonged sterilisation (especially at high temperatures) lessens in some degree its antiscorbutic quality. In Germany and in America the sterilisation of milk has become much more systematised and extensively adopted than with us. Professor Heubner, of Leipzig, in his summary of conclusions in regard to scurvy in infants, speaks with the greatest caution on this point. He is very emphatic against prolonged sterilisation, or sterilisation at high temperatures. The same suggestion is embodied in the summary of the American experience to which I have referred. Any extensive employment of the storing of sterilised milk for long periods by the dairy companies is, I believe, attended with risk: but when we consider the risks of the dissemination of various diseases by unscalded milk, and the serious primary digestive disturbances that arise in connection with it, it would be a retrograde step to say a word in discouragement of the routine practice of scalding milk. There is, I think, a way

of meeting the difficulty. If I have made my meaning clear, it will be abundantly manifest that as a rule it is the prolonged use of a defective diet which induces the symptoms which we have considered. The early cases of infantile scurvy are very exceptional. The age at which we ought to be on the *qui vive* for the initial symptoms of scurvy is about the eighth month of infantile life. If by that period a moderate quantity of scalded milk have been given (say, ½ pint in the twenty-four hours), then, instead of adding one of the proprietary foods as is the common practice, we may ward off the occurrence of scurvy by the addition of gravy or meat juice to the milk, but still better by the addition of some carefully sieved potato. The fear of non-assimilation of starch has prejudiced us unduly against the use of living food. Should it be found that potato, cooked and sieved and given with milk and gravy, is not tolerated (which is a very rare event), we have in small quantities of the juice of fresh fruits a ready method of anticipating scorbutic symptoms. There is still one other point to which I must refer as one of the alleged results of the later experience. I refer to the possibility of scurvy appearing in infants at the breast.

At the discussion on infantile scurvy at the Berlin International Medical Congress, Dr. Pott stated that he had seen one example of twin children suffer from the disease although breastfed. No details are given as to whether the mother was scorbutic or as to the total amount of milk taken by the infants: but it is stated that their suckling was impossible on account of the soreness of the mouth. No information is given as to other scorbutic symptoms, and it seems an open question whether the stomatitis was really scorbutic. The case scarcely invalidates my original contention. In the *Deutsches Archiv für klinische Medicin* for 1880 there is the record of an epidemic of scurvy by Dr. Kuhn, of Moringen. There are 13 cases of infants recorded, several of them quite young, and being suckled by mothers who were scorbutic at the time. These infants suffered from severe catarrh of the mouth, from bronchitis, and from some skin affections, for example, pemphigus, erythema, and in a few cases petechiæ. Some of them died, but I fail to find any account of *post-mortem* examination. The details are too meagre to help us in our inquiries. The time at my disposal will not permit me to refer at length to the criticisms which have been offered to the view held by Dr. Cheadle and myself as to the pathology of this disease. They may be summarised under these three headings: (1) That the disease is nothing more than acute rickets; (2) that the food conditions under which the disease arises are different from those under which undoubted scurvy arises; (3) that although the group of symptoms and the pathological appearances present a close resemblance to those of scurvy, these infantile cases cannot be considered true scurvy because they do not occur in an epidemic or endemic form.

With the first view—that the disease is nothing more than rickets—I have dealt at length in the course of this lecture, and I need not further discuss it. The German physicians, so far as my reading has gone, have relinquished it entirely. With respect to the second criticism—that the food conditions under which the disease arises are not truly scurvy-producing—I have given reasons for the opinion that the diet employed does not come under the category of living food, adequate in quality and amount. I have also shown that inadequacy of living food, *plus* a basis of rickets, gives the simplest explanation of the typical case. The immediate result of antiscorbutic treatment seems the most conclusive answer to this criticism, and in a crude way would seem to be a measure of the proportion of scurvy present in any given case. The third objection—namely, that the scorbutic nature of these cases cannot be accepted because the cases do not occur in epidemics—has been urged recently by Dr. Hoffmann in his work on constitutional diseases. In common with many of the German school, Dr. Hoffmann is dominated by the epidemic doctrine of scurvy, and by the hypothetical view that the efficient cause of it is some micro-organism. On that hypothetical view I will express no opinion, but English physicians since Lind's time are not dominated by the epidemic doctrine. The many undoubted sporadic cases are to them just as significant, and in some respects more instructive, than those which occur in epidemics. With these examples our cases come into the closest relationship, and a perfect series may be traced from infancy, through childhood, to adult life, in which the differences of symptoms are explainable by the different physiological activity of the tissues specially involved.

SIXTY-SECOND ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF MEDICINE.

FREDERICK T. ROBERTS, M.D.Lond., F.R.C.P., President.

A DISCUSSION ON FUNCTIONAL DISEASES OF THE HEART.

I.—R. DOUGLAS POWELL, M.D., Lond., F.R.C.P.,
Physician Extraordinary to the Queen; Physician to the Middlesex Hospital: Consulting Physician to the Brompton Hospital.

THE subject which I have the honour to introduce for discussion to-day is one of such wide and ill-defined limits, that I fear I shall have great difficulty in keeping within the time at my disposal, and in bringing out those points which are for special discussion; but I shall do my best, and, by the aid of the diagrams and tables which I have had placed on the wall, I hope to be able somewhat to shorten what I have to say.

The term "functional diseases" (which is not of my choosing) has in recent times excited some controversy, but I am bound to say that I think it is a very excellent term to cover that large class of disorders of the heart which cause a vast amount of discomfort, and sometimes an acute degree of suffering, which lead up in many instances to distinct cardio-vascular changes of a morbid kind, and which are yet, in the early periods, not associated with any actual structural change of the heart. An old friend of mine was once consulted by an American lady on account of her health, and, after going through the whole of her symptoms with his usual thoroughness and care, he informed her that she had no disease of any organ whatever. The remark of the lady was, "Well then, doctor, I guess any way I don't function well." Functional disease of the heart may be described as a state in which, without any organic change that we can discover, it yet does not "function well." "A perverted action and sensibility of the heart, not dependent upon structural change."

I venture to think, however, that we must somewhat enlarge the scope of this definition. It is impossible in clinical medicine adequately to consider the heart as a working organ without taking also into consideration the conditions of the vascular system generally. We cannot but perceive that the heart and arteries constitute an interdependent mechanism, in whose grasp the blood is held—a mechanism regulated by an involuntary nervous system, in its turn watched and in part controlled by our consciousness; and this wider scope of our subject necessitates the substitution of the term "cardio-vascular system" for "heart" in our definition.

UNDUE PERCEPTION OF THE HEART'S ACTION.

Now, the first group of cardiac disturbances of which I shall have to speak brings into strong relief the close association between the small vessels and the heart of which I have been speaking. It is characterised by an undue consciousness on the part of the patient of his heart's function. This is a very common disorder, and amongst people of nervous temperament it sometimes amounts to positive suffering and disease. I have under my occasional observation at the present time a brother and sister, aged respectively 46 and 42, who have a very strong nervous inheritance. Their father died insane; their mother died of ascending paralysis

TABLE I.

Cardio-vascular Hyperæsthesia.	Source of Altered Innervation.	Exciting Cause.	Method.	Rhythm.
1. Undue perception of heart's action, whether normal or altered	Central neurosis, hereditary	Mental shock Nervous exhaustion	Variable degrees of [illegible] cision	Variable, with varying tension
2. Oppressed heart's action with raised arterial resistance Paroxysms of palpitation, see also Table II, Nos. 2 and 4	Central	[illegible] Nicotine Constriction Increased [illegible] Uræmia	Vasomotor vagus irritation	Regular, with arhythmic interludes
3. Angina pectoris (*a*) Vasomotoria (*b*) Vera (certain forms of) in which the vasomotory excitation causes embarrassment to a heart structurally diseased	Cardiac plexus	Mental emotion Peripheral excitation (*a*) Surface (*b*) Visceral	Vasomotory excitation causing secondary cardiac embarrassment	Slow and laboured or quick and disorderly

TABLE II.

Heart's Action Accelerated.	Source of Altered Innervation.	Exciting Cause.	Method.	Rhythm.
1. Paroxysmal palpitation under mental excitement	Central	Intense volition in emergencies	(*a*) Shock, vasomotory inhibition (*b*) reaction, vasomotory stimulatn. (*c*) Intra-cardiac pressure vagus control (*d*) Vessel relaxation from altered blood	Regular
2. Paroxysmal palpitation from indirect vagus irritation	Visceral irritation Central irritation	Dyspepsia Gout	Vagus inhibition	Irregular
3. Paroxysmal palpitation from direct irritation	Cardiac plexus	Cardiac overstrain Pericarditis Endocarditis	Sympathetic irritation Vagus irritation	Irregular
4. Paroxysmal palpitation from vasomotor relaxation	Centra	Nerve storm Hot bath Amyl nitrite, etc.	? Anæmia of vasomotory centre	Variable
5. Sustained hurry of heart with paroxysmal increase (tachycardia)	Central	Mental shock Mental overstrain Physical overstrain		Regular

TABLE III.

Heart's Action Retarded.	Source of Altered Innervation.	Exciting Cause.	Method.	Rhythm.
1. Sustained retardation (bradycardia) congenital / sequel to acute illness / from overstrain	? Cardiac periphery	Sequela of acute fever Malarial influence Influenza Uric acid retention	Results of ? neuritis Morbid blood affecting heart muscle	Regular.
2. Paroxysmal retardation (1) from increased intracardiac pressure	(*a*) Hæmic (central (*b*) Peripheral	Raised arterl. tension Influenza Uric acid diathesis Surface chill	Vasomotory and secondary vagus irritation	Regular.
,, ,, (2) from nervous shock	Central (rare) nerve storm Injury to visceral nerves, blows, etc.	?	? Vagus Vagus excitation	Irregular, with low arterial tension.
,, (3) from cardiac neuritis or neurasthenia	Cardiac plexus	Influenza, diphtheria, etc.	Impaired nervous conduction	Variable, with low arterial tension.

of fourteen years' duration: their grandmother was on the verge of insanity, and their brother is highly neurotic.

With regard to the gentleman aged 46, when a student at the age of 17 he overworked himself. He had a seizure of some undefined kind, losing consciousness for a time. He left the student's life and went into business. Since that time he has been a victim to irritable heart and insomnia. He is extremely sensitive to noises, and is subject to occasional chilliness which is quite independent of external temperature, sometimes finding it necessary to put on extra clothing on a hot summer's day. He is always conscious of palpitation of the heart; under slight provocation his heart's action becomes very disturbed. Unless he keeps quiet for an hour or more after the midday meal, his heart functions grow more and more disturbed as the day goes on. He is subject to neuralgia, and whilst the pain lasts his heart symptoms may be in complete abeyance; this is one of the features frequently met with in this class of disease. I see sometimes an old lady who rings the changes upon various vagus neuroses; at one time suffering from sighing dyspnœa and then perhaps an attack of irregular heart's action, approaching on two or three occasions to syncopal angina; again with enormous distension of the bowels from paresis of the abdominal section of the vagus; then again she will

have a bout of neuralgia in some form or other, her heart and abdominal symptoms being then in abeyance. The gentleman of whom I was speaking has no cardiac disease whatever. His heart beats with the accentuated rhythm common in nervous individuals; otherwise there is no morbid sound, and the outline of dulness is normal. His general health is, so far as can be seen, fairly good; his pulse ranges at about 88. It is apparently regular, but if it be observed closely, it is found to vary in degree of tension from time to time, this tension being, moreover, of a somewhat high range. His illness, though not severe, is enough to incapacitate him from business. His sister is affected very much on the same lines, but her cardiac affection is very much more pronounced; she is occasionally the subject of very great cardiac discomfort, which she uses all kinds of grotesque expressions to describe.

With regard to the management of these cases, it is very important to remember that with people suffering from this form of cardiac disorder, the best plan is to treat them on those robust lines so well indicated by Dr. Goodhart in his address to the Harveian Society, namely, by steady encouragement: not ignoring their illness, but encouraging them to make the best of their unfortunate inheritance, which is often associated with some advantages of another kind, insisting upon much fresh air and physical and mental exercise short of fatigue, and, above all things, avoiding drugs, especially sedative drugs, to make them sleep.

Oppressed Heart's Action.

The second grade is one in which the patient's consciousness is not so much drawn to his heart by a kind of introspection, as compelled towards his heart by a perceptible excess of labour of that organ, owing to increased arterial tension. The symptoms in these cases are those of excessive arterial tension. The patient complains of some headache, with a tightened feeling across the brow and dull pain behind the eyes, and he experiences, in variable degree, a consciousness of labour about the heart, giving him a constant and harassing feeling of discomfort, and often a vague anxiety which pervades his busy life, amounting sometimes to a sense of impending calamity. And it is this sense of anxiety about the cardiac region which at last induces him to seek advice, much in dread as to what the opinion will be. We cannot fail to recognise in this last very common feature an infinitely mitigated degree of that peculiar mental terror which is so characteristic a feature of most cases of angina pectoris. The peculiar uneasiness is referred to the region of the apex beat and the base of the ensiform cartilage; sometimes a fluttering feeling is complained of, due to local muscular tremor or vibration, when there is no palpitation present. During the more marked symptoms the urine is increased and of low density; in the intervals it is often highly charged. These are some of the characteristics of these attacks which are of variable duration from one to many days, with recurrences. The subjects are mostly middle-aged, and mostly males; but sometimes they are of the female sex. The men particularly are given to excess in food, with a decided deficiency of exercise. They begin the day by rising late, and continue by scrambling through their breakfast, rushing to catch trains (generally quite close), hurrying through their business, and returning greatly fatigued to a perhaps full dinner, sleeping for a time afterwards, and perhaps doing their correspondence after that; then they have a more or less restless night. They are frequently great smokers, and in many cases there is an element of gout mixed up with their other troubles. The pulse is generally rather slow, with variable tension; and any slight shock or trouble, neglect of the bowels or an approaching gout storm, will cause the tension of the pulse to become very marked, with great increase of cardiac discomfort. The heart is sound, at least in the early stages; there may be slight increase of the area of dulness; the apex beat is obscurely felt; the first sound is obscured, the second intensified; but one may see that there is no lesion of the heart.

Combined Cases.

Now from amongst these two groups of cases comes a third class of persons presenting the combined features of the two—persons who have generally a very strongly pronounced nervous inheritance, in whom under the effects of flatulence, dyspepsia, and the like, or the approach of gouty paroxysms or more often after surface chill arising from immersion in the sea, driving against a cold wind, etc.—a cardiac storm is brought about, attended with acute suffering and all the symptoms of angina pectoris. At and about the time of attack these people are especially the subject of high-tension pulse of varying degree. During the attack they have the pronounced cardiac symptoms, oppressed and disturbed action, with pain more or less acute, and radiating in directions we are familiar with—the pronounced restlessness, agitation, and fear of death, etc, and other symptoms which are observed in angina.[1] Restlessness is a great feature of these attacks. Instead of stopping short as a man stops who is the subject of true angina, these people tend to move about their rooms, walking to the open windows for air; they sometimes, if on horseback, continue their ride. This form of angina (vasomotor) affects people earlier in middle life than true angina; it also affects quite young people, and occasionally persons of advanced years. Young people thus affected are always, so far as my own experience goes, of the *male* sex; no doubt this may be attributed to over-smoking, alcoholism, sexual excess or other morbid habit. When old people, on the other hand, are affected, they are almost invariably of the *female* sex. I will mention a case which I have several times seen in consultation with Dr. Dickinson, of Sloane Street.

A. D., aged 72, married, has had four children. Father died suddenly of bursting of abdominal aneurysm; mother of diabetes; one brother of dropsy, probably renal: one sister of consumption; one sister of asthma, and a sister living has diabetes. The patient has passed uric acid calculi, and has had two attacks of broncho-pneumonia. She is a thin, bright-eyed woman, of vivacious manners and nervous temperament. For twelve years she has suffered from attacks of pain at the heart, which are brought on by physical exertion, or passing into a colder atmosphere, or the excitement caused by seeing visitors, and frequently on commencing a meal. This pain is situated behind the sternum, and spreads upwards to the throat, jaw, under the tongue and ears, thence to the shoulders and down the arms; it is also felt to some extent in the back, but leaves the cranial vertex free, and never goes below the waist. The bowels are habitually confined, but are kept diligently regular by cascara. The urine shows absence of albumen and sugar; the pulse is hard, tense, and has been observed to become more so during the attacks; rate 76. The heart sounds are normal, the action somewhat forcible. Since the beginning of 1894 these attacks have, under trinitrine treatment, to some extent become less frequent, but have lately been replaced by attacks of palpitation, during which the pulse is soft and the heart's action very irregular; these attacks are remedied by ether and strophanthus, and have taken place since the liq. trinitrin. was left off, and are, therefore, not immediately caused by that drug. I may add that this lady has no sign of disease of the heart, but on the several occasions on which I have seen her, usually soon after an attack, the pulse has always been thready, and impressible; and on one occasion, when a mild attack came on during my visit, it perceptibly hardened.

It is important to recognise the part played by the vasomotor system in the mechanism of these affections, because the whole of our effective treatment is based upon it, being first of all that of the attack of disturbed heart's action by remedies of the class of cardio-vascular sedatives; secondly, the removal of arterial tension by appropriate treatment of its causes in each case; thirdly, digitalis becoming useful in the later periods of the malady, at the time when the heart, after an attack, has become wearied or enfeebled by more or less change in the texture of its walls.

It is important also to bear in mind, whilst we are describing disturbed function of vasomotor incidence in healthy hearts, varying from mere discomfort to actual anginal seizures, that the same mechanism holds good in the case of diseased hearts, and we may have a series of symptoms on a similar graduated scale, but attended with the special gravity attached to the damaged heart.

Angina Pectoris.

There is abundant evidence of the power of contraction of small vessels to embarrass the heart. I need not speak of direct experimental evidence, familiar to us all, nor of physiognomical evidence, such as "dead hands," and the like, leading up even to Raynaud's disease. Clinical evidence is furnished by the features of the pulse, which, as appreciated by the finger and recorded by the sphygmograph, can only be explained by increased peripheral resistance in-

[1] I have dealt with the symptoms of angina pectoris variation at some length introductory to a discussion on the subject at the Medical Society in 1891 (see *Transactions*).

duced by vessel spasm. The pulse characteristics are depicted in this diagram, which was drawn to illustrate a case

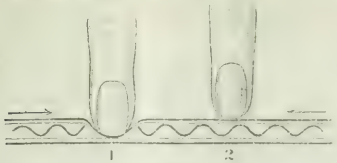


Fig. 1.

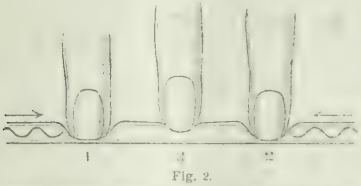
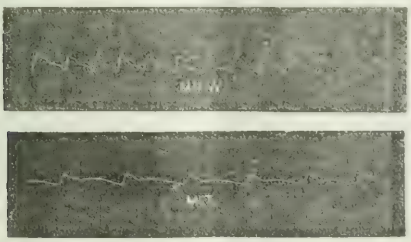


Fig. 2.

of vasomotor angina recorded in my paper read before the Medical Society: its hardness, fulness between the beats, and peripheral reflux are characters which can, I think, only be explained by such a degree of resistance in the small vessels that if one of the tributary vessels be partly or completely closed it fills up from collateral channels communicating with its peripheral end. I wish particularly to draw attention to peripheral reflux as the clinical test of high-tension pulse. On pressing the radial with one finger and feeling it with a second finger beyond, the pulse is felt nearly as well by the second finger as by the first. On gradually bringing the second finger down (2, Fig. 2) we find that the pulsation is appreciable only on the peripheral side of this finger, so that whilst the pulse is perfectly stopped by the first finger a second beat is felt from the periphery by the second finger.

The sphygmographic tracings of the high-tension pulse are well known, the sloping ascent, broadened summit, wave and gradual descent. I will not dwell upon that subject, but I should like to draw the attention of all those skilled in sphygmography to these two diagrams, one of high tension rapid pulse, and the other of high-tension slow pulse. It will be seen that while the features of high-tension pulse are fairly well marked, yet that the dichrotism always more or less obscured in high-tension pulses is here postponed in the tracing, presenting us a wave of second rise towards the end of the descending line.



I cannot but think that in explaining the production of this delayed dichrotism in the pulse we have to take more into account than in the production of a normal pulse this reflux from the periphery as a factor, which is so distinctly felt by the finger when examined critically as shown in Fig. 2.

Clinical evidence of the dependence in many cases of real anginal seizures upon vasomotor spasm increasing intracardiac pressure may, I think, be found in the observation that the development of a mitral murmur will in some cases at least be coincident with the disappearance of the anginal attacks. The first case that presented to me this feature was that of a gentleman, aged about 54, engaged in anxious and pressing business, and who had been for some years the subject of gouty glycosuria; he complained five years ago that occasionally while walking over London Bridge he would be seized with sudden pain at the heart, causing him to stop instantly, and either stand still or lean against some support. After a few minutes he would get on slowly and carefully, being stopped once or twice on his way. He had had several of these attacks, and an ether and ammonia draught containing 1-minim doses of nitro-glycerine gave him relief. His heart was distinctly and considerably enlarged, but there was no murmur present until two years ago a mitral *bruit* was developed; since that time he has hitherto had no attack. I may say that this gentleman's mother died suddenly in a railway carriage, and his sister dropped dead of heart disease. My belief is that his mitral incompetence has served as a safety-valve against excessive intracardiac pressure, and so has kept him free from attack.

As therapeutical evidence it may be urged that the whole modern treatment of angina—a treatment that has immensely influenced the prognosis of this still sufficiently terrible disease in its most serious forms—is based upon the assumption that in a large proportion of cases its cardio-vascular mechanism is a functional disorder, the nature of which I have attempted to describe.

In the annexed table I have placed the physiological features of the angina pectoris seizure, and, for contrast, beside them under the same numbers, the special features of normal attacks of asthma; in the one case the obstruction of the cardiac functions from arterial contraction and in the other the obstruction of the respiratory function from bronchial contraction are noted and the similitudes of the two affections indicated.

TABLE IV.

Asthma = Obstructed respiratory function from spasmodic contraction of bronchioles.	Angina [illegible] function from [illegible] contraction.
1. Excitation of spasm = peripheral, visceral, central (hæmic).	1. E[illegible] peripheral [illegible].
2. Special pulmonary lesion = none in the early stages.	2. Sp[illegible] lesion: none in the early stages.
3. Chief factor = bronchial hyperæsthesia—a neurosis.	3. Chief factor = cardio-vascular hyperæsthesia.
4. Consequent lesion = emphysema and its consequences.	4. Consequent lesion = atheroma, thickening, dilatation.
5. Attendant lesions — many and various, none of them essential.	5. Attendant lesions = any variety of heart disease, none essential.
6. Prognosis = depends upon attendant or consequent lesions present, that is, upon integrity of motor mechanism.	6. Prognosis = depends upon integrity of the heart, that is, upon soundness of motor mechanism.
7. Family history = includes some one or more of various neuroses, asthma, epilepsy, hysteria, diabetes, insanity, chorea, Graves's disease, etc.	7. Family history = includes similar neuroses.

Within the scope of each malady certain cases are included which require special explanation and nomenclature.

Excited or unduly frequent action of the heart has been so recently and so ably discussed by Dr. Sansom at the Medical and the Royal Medical and Chirurgical Societies and in his well-known work, and also by Dr. Bristowe, that, although it naturally forms a very essential part of the subject now before us, I shall but touch upon it very lightly. It has appeared to me that we meet in practice with five kinds of rapid heart action.

First, there is the ordinary palpitation of sudden excitement or emotion, or sudden effort. Now, so far as I have observed—but I think that this point might very well form the subject of careful experimental observation, and in these athletic days the material for such observation should be abundantly at hand—so far as I have observed, such cardiac disturbances are of central origin, and arise from some sudden stimulation of the sympathetic and vasomotory systems, the first result being, no doubt, momentary relaxation of cerebral vessels from shock or intense volition; and, secondarily, contraction of peripheral vessels and violent action of the heart. The ardour of battle, the intense motor volition of the athlete in the first struggle, and the sudden reaction of the brave man to peril, are attended with these phenomena, the effect and object of which are to raise the general blood

pressure to the point necessary for prompt and energetic action of cerebro-spinal centres. Flushing of the face, with throbbing neck vessels, followed by pallor, and a tightened radial artery are, if we may judge from such cases as come within our observation, the phenomena we may observe. Weakhearted or timid people are apt to get syncope under the strain: but in the better equipped, after a variable time, if the necessity for effort or brain function continue, the more languid vagus, stimulated by intracardiac pressure, controls the heart beats to a slower rate, whilst the small vessels supplying the muscles are relaxed by the altered blood rendered more acid from rapid tissue change; the first stress in the pulmonary circulation is also relieved, and the subject gains his second wind or his capacity for more sustained effort. It is not difficult to perceive here the close alliance between this series of physiological reactions and the more sustained phenomena of functional disorder, with raised or prolonged arterial tension, of which I have been speaking.

This form of functional heart disturbance is thus purely physiological, and is the best instance of functional disturbance that one could give. It is probably a survival of the conditions now more rarely called into play under which, in times of personal strife and danger, prompt thought and instant action would alone protect the individual. In the present age the same mechanism is called forth by the less intense mental shocks and minor worries so frequently besetting the actively engaged business and professional man, becoming less actively but more abidingly effective in the direction of raised arterial tension and its consequences, alluded to under the second heading of Table II and the first and second of Table I (page 1035).

Greatly increased rapidity of heart's action is, in cases of what may be truly called physiological palpitation, associated with regularity of action. The second sound is intensified and sometimes reduplicated, the first sound banging but wanting in definition. In cases where the excitement occurs in combination with a full stomach or in an unstable nervous system there may of course be irregularity and tumultuous action. In palpitation, on the other hand, occurring from the reflex or direct causes next to be spoken of the rhythm is almost always irregular, often varying greatly in the same attack. But let us further remember that the same mechanism may be started in the subject of a diseased heart, and with fatal results.

A second form of functional disturbance is very common in persons of unsound heart, whether from valvular disease or dilated hypertrophy; this variety of disturbance is almost always of reflex origin, and consists of increased rapidity of action with disordered rhythm. The exciting cause of the disturbance is generally reflex, and especially dyspeptic distension of the stomach or bowels; but possibly, although I venture to think very rarely, it may be central in gouty individuals, the tendency in these cases being more often to slowed action. No doubt partial inhibition of the vagus portions of the cardiac nerves is responsible for this effect, and the reason that the cardiac disturbance from this cause is more frequent and notable with unsound hearts is that the organ is already fully occupied with the work of maintaining the circulation, and a slight disturbance of its function causes embarrassment and disordered effort. The severe and prolonged bouts of palpitation common in mitral stenosis and gouty thickened heart would come under this heading.

Direct irritation of the cardiac nerves in pericarditis, and sometimes in endocarditis, will cause rapid and irregular action. Toxic drugs, such as nicotine and digitalis, when pushed beyond its slowing effects, will also cause it, but these are exceptional causes. Overstrain is also a cause of acceleration, and under this heading I would place those remarkable cases of irritable heart so admirably described by Da Costa as common in soldiers during a campaign, in which there is a persistent quick action of heart with precordial and left shoulder pains, and bouts of severe palpitation under slight exertion or digestive disorder, at first unattended with any notable alteration of physical signs, and possibly subsiding without such signs developing, but in severe cases proceeding to obvious enlargement of the heart. I used to see a fair number of such cases at the Brompton Hospital, but they had mostly passed on into the stage of hypertrophy, with more or less vessel degeneration. One would regard some direct damage to the cardiac nerves, both at their sympathetic and vagus terminals as almost necessary to explain these phenomena, the immediate effect of exercise in inducing the attacks being especially significant.

Another variety of functional disturbance of the heart, of which we meet with frequent examples, is characterised by sudden attacks, from slight and often quite inadequate causes, of increased frequency of heart's action, with lowered arterial tension and partial or momentarily complete loss of consciousness. Let me briefly allude to a case:

Miss Q., aged 28, consulted me on account of her being subject for the past four years to fainting attacks, with momentary loss of consciousness. At first the attacks came on at the close of the monthly period, and terminated with hysterical symptoms, but not so of late. She will have three or four attacks a day, and then go three or four weeks without one. They occur generally by day, but at no specified hour, and are never attended with involuntary escape of secretions. She describes the attacks as preceded by a "slack" feeling for about half an hour, an ill-defined sense of want of power, which is, however, sufficiently marked to warn her of an impending seizure. A throbbing at the heart and throat follows, and she falls down, and may remain helpless for a time varying from a few minutes to a couple of hours. She is said to be pale and her extremities cold during an attack, but there is no convulsion. She is a bright, well developed, intelligent lady of neurotic and energetic temperament, fond of outdoor life and animals. Her heart is sound in all respects. The catamenia are moderate, of four days' duration, every fifth week. There is no asthma, epilepsy, chorea, or rheumatism in her family or personal history, but her paternal grandmother was insane, and her brother, if hard worked, gets twitching of the facial muscles. In lighter attacks she does not necessarily lose consciousness. Whilst under examination she had a slight seizure, falling back in the chair, the limbs flaccid, the head falling loosely, slight twitching of the left angle of the mouth, momentary unconsciousness. The pulse continued regular, but was quickened and of low tension; the pupils were dilated, and remained so for some minutes afterwards. There was no notable change of colour.

Tachycardia.

We next come to consider that very interesting group of cases of sustained hurry of heart with paroxysmal increase to which the term tachycardia has been given, and should, I think, be strictly limited. I can, however, only briefly speak of this condition.

One of the very first cases recorded was that by my late colleague, Dr. Cotton (1867), in whose large experience it was unique, and who I remember at the time was much interested about it. Many cases have been recorded since under the terms "runaway heart," "rapid heart," "paroxysmal hurry of heart," and "tachycardia." That cases of this disease are serious would appear from the high mortality (12 deaths out of 41 cases, all fairly representative), from the long duration of those that survive, and from the few permanent recoveries, there being a great tendency to relapse. The evidence afforded by the following salient features of the disease seems to me convincingly in favour of its purely nervous origin, and of the view that any heart changes that ensue are secondary. The chief features observed in typical cases are:

1. A persistent hurry of pulse lasting for periods varying from hours to many weeks, during which the pulse is rapid, from 120 to 200 or more, regular, small, of sustained, I should say, rather than of high tension.

2. Intervals of severe palpitation attended with precordial pain, notable distress, and more tumultuous, irregular action of heart.

3. Although murmurs may be heard and the cardiac dulness may be broadened during attack, in the intervals the dimensions and sounds of the heart may in the earlier stages be perfectly normal.

4. In the earlier stages and in the most typical cases the heart hurry has been observed to begin and to finish quite abruptly. This was so in Dr. Cotton's case and in Sir T. Watson's, in the latter the pulse suddenly changing from 216 to 72, with subsidence of all symptoms, whilst he was still in the room.

5. So far as exciting cause can be stated, it has been for the most part mental shock, mental or physical overstrain.

6. Lastly, as with the cases of irritable heart recorded by Da Costa, it is only in the later periods of the disease, when secondary changes have occurred in the heart, that remedies of the digitalis class are found useful.

Cases of this disease, carefully separated from obvious and concealed Graves's disease with which they are closely allied, are very rare, and whilst the disease itself may be most appropriately combated by nervo-vascular sedatives; a course of digitalis with arsenic or iron comes in usefully to tone up the wearied heart after a paroxysm of palpitation, and in the

later stages of the disease. Dr. Sansom has found the galvanic current to the vagus useful, and doubtless, as in the very analogous cases of exophthalmic goitre, the strong brine baths of Nauheim, by their stimulating effect on the vagus centres, will prove of value.

I have no time now to consider cases of functional disturbance of heart in exophthalmic goitre. Exophthalmic goitre is indeed a functional hurry of heart due to manifest local, and some general, vasomotor paralysis. Its alliance with tachycardia is very close indeed, and in some cases—those few which I have seen—it has been very difficult to decide on which list to place them. There may be no goitre, there may be no exophthalmos, but always hurry of heart, and yet there is something suggestive of the same neurosis.

In one case of moderate tachycardia, pulse constantly above 100, besides small beady eyes, suggestive but not typical, the lady has another remarkable neurosis, which she finds most annoying but impossible to conquer—namely, she cannot make a start to do anything involving even slight mental anxiety, without an attack of vomiting as an invariable preliminary.

It may well be, as I think Dr. Sansom has suggested, that it is a mere question of extent of central neurosis and precise position of centre whence nervous discharges proceed, whether we shall have one function or more disturbed. I hope in the discussion these points may be further elucidated.

Bradycardia.

The slow pulse, the slow irregular pulse, and the slow pulse with intermediate heart beats, are all conditions occasionally met with. An abnormally slow pulse of below 50 is met with as a sequel to diphtheria, influenza, typhoid, and no doubt some other acute diseases; it sometimes slows down to extinction in diphtheria; I have never observed it do so in any other disease. In cases of influenza I have known the pulse slowed down to 45 and 32, but more usually to between 50 and 60, and it has commenced within a few days of the termination of the fever. I have observed the disorder of the circulation attended with marked excess of urea in the urine. The heart sounds are feeble, with prolonged pause; the pulse soft, compressible as a rule. The normal heart's action is, as a rule, resumed within a fortnight or so, but I have observed the slow, languid pulse, with languid peripheral circulation and mental fatigue, continue for several months. The pulse has been known to remain permanently lowered after fever. These cases, in all probability, have at least two sources of origin: first, a neuritis of the cardiac nerves, probably within the heart; secondly, a partial inhibition of the cardiac muscle by a morbid condition, undue acidity, of the blood with which its structure is infiltrated.

A slow and irregular pulse is (excluding senile cases), so far as my experience goes, met with most commonly in young people, and especially in young males about or soon after puberty. Early excess in smoking is a distinct cause; probably morbid sexual habits also, although I have not myself been satisfied on the point. I am sure that in some cases physical over-fatigue of heart has been a cause. Increased arterial tension is usually present, and cardiac hypertrophy, which may only be temporary, follows. These are the cases of cardiac hypertrophy which the patient outgrows. I have met with a few cases in which epileptic vertigo has been present. The slow pulse with intermediate heart beat has been regarded by M. Triplin as a distinctly epileptic feature, but it is certainly observed in gouty conditions. I have seen a case in an old gentleman in whom there was certainly epileptic vertigo but also marked high tension pulse of renal and gouty source, and in whom during convalescence from a cerebral seizure attended with acute gout, a nervous shock caused the pulse to drop from 50 to 25. His circulation was, nevertheless, fairly sustained and he was able to walk about. On auscultation a small intermediate beat was heard each beat recorded by the pulse. This double beat with slow pulse is very commonly observed when digitalis is gradually pushed to the verge of excess, the further stage being rapid and disorderly between beats.

The newly-established Faculty of Medicine in the University of Lemberg was formally opened by the Emperor of Austria in the latter part of September.

II.—Paul M. Chapman, M.D.Lond., F.R.C.P.,

Physician to the Hereford General Infirmary.

Functional disease of an organ is generally understood as a considerable, and more or less lasting, defect or aberration in the performance of work, this being unaccompanied by appreciable organic change in the tissues of which the organ is composed. Appreciable *post-mortem* deviations from the normal, either in structure or in arrangement of parts, are called organic changes. Changes in the nerves supplying the part are less easily appreciable *post mortem* than are the grosser changes. Since function is influenced by nerve changes, we are therefore led to consider alterations in performance of nervous origin to be the sole examples of purely functional disease. In other words, all functional diseases of the heart are considered to be of nervous origin, direct or reflex.

I do not quite agree with this view. I look upon the term function, when applied to the heart, to be peculiarly relative to vital activity of movement. We should all be agreed that great functional alterations occur in cases of organic disease, which are conservative and healthy, which tend to the preservation of life though the alteration of function may be great. On the other hand, to give a good example, the alteration of activity which is shown in the excessively short time contractions exhibited by fatty hearts, though accompanied by and in a sense due to organic change in the muscular fibre, and not due to nervous changes, should, being a demonstrable alteration in vital performance of a kind not conducive to well being, be taken as a genuine exhibition of functional disease. It is an alteration in the irritability of muscle, not of nerve, but is a real functional disease, because it is demonstrable as an alteration in contractile power. To express it clearly in another way, functional disease, being an alteration in activity, can only be exhibited in performance. It can, for that reason, never be understood through *post-mortem* examination. It can only be understood through study of the phenomena exhibited by living tissues in a state of vital activity. It is, therefore, no discredit, as is often idly imagined by the ignorant, to speak of a disease as "functional." The use of the term may be most proper and helpful when employed by one familiar with the physiology of his subject. Too many practitioners have only one cardiac drug, even as Englishmen have only one sauce, and show their disrespect for function by administering digitalis indiscriminately in all cases of organic change. Forgetting that it is function rather than tissue which is within the reach of the poison they administer, they are none the less proud of their disbelief in functional disease; and, thinking themselves "practical" men, they ignore those very practical and suggestive facts which are taught us by the study of a living physiology.

The short persistence in ventricular contraction when the muscular fibre is fatty is such a physiological fact, and is demonstrable by the cardiograph. While not assuming that it is the sole cause of an abnormally short contraction, the presence of a very short contraction is highly suggestive of fatty degeneration of the heart's muscular fibre. It has to be compared with the normal duration of ventricular contraction for different pulse rates, for which I must refer to my published tables.

For examples of functional heart disease we are, therefore, bound to look at the parts called into play during active contraction; these are nerve and muscle. The abnormalities noticed may or may not be associated with valvular or other structural diseases, but these are not of their essence.

A summary of the physiology of the heart bearing on the explanation of certain functional diseases would be out of place here. The immense advance in our knowledge is as yet only to be partially found in our textbooks, and is scattered in English and foreign journals. The slowing of the pulse owing to irritation of the cardiac end of the severed vagus is often called depressant: the individual beats, however, gain in amplitude and power. Removal of the influence of the vagus or stimulation of the accelerator nerves is, on the other hand, followed by extremely rapid pulse, but there is here a loss of work done in the individual contractions. The condition known as "tachycardia," or rapid pulse, is due to a nerve influence of this nature. I have met

with it as almost the sole sign of tuberculosis of the meninges of the base of the brain, the pulse frequency reaching 200, with apyrexia and an unclouded intellect.

We assume the same kind of interference, associated with a number of other very interesting symptoms, amongst the phenomena of Graves's disease, accompanied sometimes with slow, perhaps more frequently with rapid, pulse. The first question which arises is, What is the real mode of action of the vagus on the heart?

Very suggestive are the experiments of Gaskell[1]. After irritation of the vagus the power and work of the heart are increased, as also the readiness of the heart muscle to transmit excitement. When the heart is contracting irregularly, irritation of the vagus restores regular contraction. According to Gaskell the vagi are to be classed among the "trophic" nerves—that is, they bring about constructive changes, their action is to promote the building up of tissue, and their function is to nourish by this means. Not only in their obvious effect of slowing the pulse are the vagi antagonistic to the accelerator nerves; in their very nature they are opposed to them. The accelerator nerves bring about a destruction or dissolution of substance; the so-called inhibitory influence of the vagi is one of construction or building up. According to Gaskell, therefore, the influence of the inhibitory nerves is exercised in no more roundabout manner than that of the accelerator nerves.

It has indeed been observed by others that section of the vagi in birds and rabbits leads to fatty degeneration of the heart muscle. Still further, when one vagus has been divided, and the body generally has undergone no changes, atrophic and degenerative changes, though not necessarily fatty, have been observed in different parts of the ventricular wall, according as to whether the right or the left vagus has been severed. Death ensued, not through general somatic degenerative changes, but from direct degeneration of the heart muscle owing to deprivation of the trophic influence of the vagi.

Supporting this view from another point, Brown-Séquard found that when two rabbits were bled to death, if the vagus of one of them were excited just before death the heart of that one beat both more strongly and for a longer time than that of the other.

Still further in the same direction Laffont found that direct irritation of the ventricle during simultaneous excitation of the vagus did not produce the deleterious effects which were observed when the vagi were not synchronously excited.

I have thought of these facts in the consideration of certain cases of tachycardia occurring in Graves's disease. Coincident with the rapid pulse and enlargement of the thyroid gland there has been general wasting and increased excretion of urea; the heart has become dilated, its action irregular, and loud mitral murmurs have appeared which can be too readily assumed to be organic. All these signs and symptoms may disappear, but the manner of disappearance is interesting. For instance, in one patient of mine, a grown-up young lady, during the increase of the heart and thyroid symptoms, with distinctive exophthalmos, a gradual emaciation set in, till in a year her weight had fallen to 86 lbs. This condition persisted for a while, until gradually she began to gain in weight. As her body weight rose to 90, 100, 110, and 120 lbs., and upwards, the symptoms of tachycardia, exophthalmos, and thyroid thrill progressively disappeared. The whole of the improvement has been continuously and directly coincident with increased general nutrition. I purposely refrain from saying they are directly due to it, but the coincidence is striking, and I am inclined to lay much more stress upon trophic influences through the combination of facts which I have given.

A word on the treatment of the disease may not be amiss. Belladonna has been recommended. It would be imagined that belladonna, being an accelerator stimulant and a depressant of the heart and vagi, would be harmful in this disease on any other than a homœopathic hypothesis. I am happy to say that I have found it useless. The most beneficial results, I believe, are to be gained by continuous treatment with arsenic and iron, together with the use of strophanthus, extending over a long period. I have been surprised to so frequently read and hear of Graves's disease being for the most part an incurable disease. It is true that nutrition is profoundly affected, and that its duration extends over two years at least, but as far as my own observations go I am inclined to think that most patients eventually recover if treated carefully and intelligently.

[1] *Journal of Physiology*, 1885-86.

III.—J. A. Lindsay, M.D.,
Physician to the Belfast Royal Hospital.

Dr. Lindsay said he would address himself to one phase of the subject—How, in a doubtful case of cardiac disorder, associated with anæmia, dyspepsia, and rheumatism, to draw the line between organic and functional disease? The points on which he was in the habit of relying were the following:

A. *History.*—A history of rheumatism was of great weight in a doubtful case, pointing (not, of course, conclusively) to organic disease.

B. *Symptoms.*—The symptoms in the two cases might be practically identical. The influence of exercise might be of value, but required to be interpreted carefully. In many functional cases exercise greatly aggravated the symptoms, but, as a rule, this aggravation was much more marked in organic cases.

C. *Physical Signs.*—An apical systolic murmur was not, as the older writers believed, conclusively of organic disease. He agreed with Dr. Sansom that this murmur was sometimes present in functional cases, though, in his experience, he had nearly invariably found a left basic systolic murmur present also. Signs of hypertrophy or dilatation were strong presumptive proof of organic disease, though it must be remembered that prolonged functional palpitation might produce a certain amount of hypertrophy. As regards treatment, removal of the cause was the most important point in functional cases. Iron and arsenic were the best drugs.

IV.—A. Ernest Sansom, M.D.Lond., F.R.C.P.,
Physician to the London Hospital.

Dr. Sansom thought that it was very important to face the question of the subjective symptoms referred to the heart in their relation to the objective and physical signs. There was a danger that some affections might be considered as hysterical or neurotic, which were due to more serious conditions of disease. He had observed recently a case in which severe paroxysmal precordial pain, without any of the usual signs of cardiac disease, had a fatal issue. There was danger also that the diagnosis of fatty degeneration of the heart, if communicated to a patient, might cause worry and misery to that patient. Contrary to the usual notion, fatty degeneration of the heart was a very rare cause of sudden death, and then only through disease of the arteries. Fatty infiltration in these and alcoholic subjects, however, was a condition which should be recognised and was fraught with danger.

V.—G. A. Gibson, M.D., F.R.C.P.Edin.,
Assistant Physician, Royal Infirmary, Edinburgh.

Dr. Gibson desired to bring before the Section two points in regard to cardiac pain. In the first place he called attention to the nature of such pain, and supported the view enunciated by Dr. James Mackenzie, that it was a referred or somatic pain. In the second place he wished to express his own opinion that cardiac pain was almost invariably associated with structural changes in the heart itself, and cited, in support of this belief, such cases as the alcoholic, tea, and tobacco heart, in which that organ, on careful examination, was found to be almost if not quite uniformly dilated.

VI.—R. Shingleton Smith, M.D.Lond., F.R.C.P.,
Senior Physician Bristol Royal Infirmary.

Dr. Shingleton Smith spoke on the comparative difficulty of the diagnosis of neuritis of the cardiac nerves; hence arose one of the difficulties in determining between functional and organic disease. He also pointed out that the functional condition and its derangements were always present with the organic, and that the one was often the preliminary to the other. He alluded to the production of organic valve failure as a sequel to such conditions as exophthalmic goitre and

long-continued anæmia, and to the production of fatty degeneration of the heart muscle in cases of anæmia and phthisis. He insisted on the great importance of these functional disturbances over the mere presence of a *bruit*, and to the fact that even a *bruit* might be of functional and temporary character. He drew attention also to the influence of peripheral resistance, and its control by the action of such drugs as amyl nitrite, and showed sphygmograms of a case of local asphyxia of one hand, in which the absent pulse was restored by amyl nitrite, at first temporarily and then permanently.

VII.—P. Watson Williams, M.D.Lond.,

Assistant Physician, and Physician to the Throat Department, Bristol Royal Infirmary.

Dr. Watson Williams suggested that the persistent arterial tension which was so very generally present in patients who were the subjects of angina pectoris was, as a matter of fact, a physiological attempt to meet the necessities of certain pathological states—those, namely, that were attended by increased arterial tension which was nearly always present in cases of angina pectoris. That being the case, the occurrence of vasomotor spasm in angina might be regarded as the result of exhaustion, and consequent irritability of the vasomotor centres. Acting on this hypothesis, he had been in the habit of treating cases of angina pectoris with cardiac tonics: even digitalis in the less grave cases was capable of relieving the tendency to anginal attacks, although the remedy *par excellence* in angina pectoris was cactus grandiflorus. These means must, of course, be combined with an endeavour to remove all causes of the persistent increased tension.

VIII.—Harry Campbell, M.D.Lond.,

Physician to the North-West London Hospital.

Dr. Campbell concurred with Dr. Douglas Powell as to the influence of heredity in predisposing to cardiac neuroses, but was sceptical as to the value of the recurrent radial pulse in estimating blood pressure. He expressed the opinion that the most common form of functional heart disease was that which occurred in women during the reproductive period of life in association with other symptoms of general nervousness, such as headache, flushes, mental depression. The cardiac disturbance in these cases might last uninterruptedly for hours, even for days, together. Much more frequently, however, it took the form of short seizures of a few minutes' or perhaps even a few seconds' duration only. Evidently such seizures were due to a wave of disturbance spreading over the cardiac centres, and might aptly be termed heart-storms. The patient was suddenly seized with violent palpitation or marked irregularity of beat, the heart "fluttering," "turning over," or "stopping dead." With this she trembled, turned hot or cold, or both in succession, was breathless, or might have a choking sensation, felt faint, and, in severe cases, "as if she were dying." Pain, or a less-defined sensation, might be felt at the heart, and ascend to the throat, or beyond it, into the head. Sometimes the left arm turned numb or cold, and even became semi-paralytic. Such heart-storms might occur as aurae to the epileptic or hysterical fit, but much more frequently they constituted part of the so-called flush of heat, which was highly complex in nature, and bore many resemblances to the genuine epileptic fit. If these flushes were inquired into carefully, it would often be found that they were attended with cardiac disturbance, and it was not surprising, when this was marked, that the seizure was regarded as purely cardiac, its true nature being entirely overlooked, just as when the faintness which almost invariably attended the flush passed into unconsciousness, the nature of the case was thought to be sufficiently indicated by calling it syncope. Fainting in women was generally a manifestation of the flush storm; but cardiac disturbance might not only form part of an epileptic, hysterical, or flush storm: it might occur as a symptom of that numerous array of unclassified nerve storms which we might term anomalous nerve storms. He desired to emphasise the fact that the cardiac seizures described generally occurred as part of a complex nerve storm, that the nerve perturbation was by no means limited to the cardiac centres, and indeed did not necessarily originate in them. The influence of exercise in exciting these attacks was noteworthy; they might be induced by going up stairs, even by gentle walking and by stooping. In one patient lifting the left arm in hanging out clothes occasionally excited them. It must not therefore too hastily be assumed, in a doubtful case of organic disease of the heart, that it was necessarily organic if effort unduly disturbed the heart action. He was not aware that the occurrence of tremor in connection with these cardiac paroxysms had been pointed out. Tremor was a well known accompaniment of Graves's disease, and the paroxysm of fear; and it would therefore appear that it was essentially related to the cardiac disturbance which was so pronounced a feature in both these conditions. The state of the breathing in these heart storms was of interest. It was not surprising that the respiratory movements should be modified in derangements of cardiac action, seeing that these movements played an important part in the circulation, notably the pulmonary circulation. In rapid action of the heart it would, he believed, generally be found that they were increased in frequency. In treating heart storms in women, the general condition of the patient should be considered, and all sources of peripheral irritation removed. In regard to specific drugs, a mixture of perchloride of iron, strychnine and nitro-glycerine would very often be found useful.

IX.—Henry Handford, M.D.,

Physician Nottingham General Hospital.

Dr. Handford alluded to the want of more precise knowledge of the influence of the action of the cerebral cortex on the heart. There were many cases which were not explained satisfactorily by any action of the vasomotor centre, and in which the alterations in vascular tension were secondary and not primary. In general terms, the influence of mental worry and distress was recognised in producing persistently rapid action of the heart. Such cases required mental rest rather than too much bodily rest. While not allowing excess in exercise any more than in anything else, it was necessary to treat them as mental cases rather than cardiac—to send them into quiet country places or small seaside resorts. Dr. Handford further alluded to the frequency of pseudo-angina and other neurotic cardiac disturbances in association with epilepsy, and expressed the opinion that such attacks were in a few cases due to the frequent and sudden alterations in vascular tension common in epilepsy, but in many to local cortical nerve storms such as, when general, constituted an epileptic fit.

X.—W. J. Tyson, M.D., F.R.C.S.,

Medical Officer Folkestone Hospital.

Dr. Tyson observed that bradycardia or slow pulse was a symptom not infrequently connected with organic disease of the heart; on the other hand, there were many instances in which, on careful examination, no organic trouble could be discovered. As low temperatures were more rarely met with than high ones, so slow pulses were less frequently encountered than quick ones. These slow pulses occurred under different conditions: (1) In diphtheria and influenza, which might be classed as acute cases, and happened for the most in early life; and (2) cases coming on as more or less a chronic condition, and occurring in late life. This class came on more often in men than women. Another peculiarity about the slow pulse was that tall men seemed more liable to it than short ones. When the pulse reached a certain number, on an average 20 to 24, then insensibility commonly happened, the patient going through what appeared to be an ordinary convulsive fit, doubtless connected with brain anæmia, and not in any way associated with epilepsy. In 1879 and 1880 there were recorded in the British Medical Journal 11 very interesting cases of slow pulse: the average age was 72: 8 of the cases were males, and in 4 of them symptoms of syncope were seen. Lastly, there was the slow pulse produced by the taking of heavy meals at bedtime, occurring for the most part in men, and at late periods of life. Dr. Tyson said that he had seen two deaths in this condition: the cause was probably twofold: the first was mechanical, the stomach pressing from its fulness on the

heart, the horizontal bed position aiding; the second was irritation of the pneumogastrics from the undigested food, and consequent slowing of the cardiac rhythm.

XI.—JAS. BARR, M.D.Glasg.,
Physician, Northern Hospital, Liverpool.

DR. BARR referred to cardiac irregularity, and showed how the causes and symptoms of so-called functional and organic diseases were linked together. He pointed out that damming back of the blood in mitral and other organic diseases of the heart, and also in functional diseases, the right side of the heart was stimulated to act in advance of the left. As a consequence there was produced doubling of the first sound of the heart, and marked irregularity in the pulse. The right side of the heart was more sensitive than the left, and Dr. Barr had seen the right auricle acting for some hours after the rest of the heart had ceased to beat. Whether it were believed that the rhythmic action of the heart was regulated by the mechanism of the cardiac plexus, or —with Dr. Gaskell, that the cardiac muscle was capable of rhythmic contraction, independently of the nervous system—it would be acknowledged universally that the contraction was induced by the stimulating influence of distension with blood. When the right side of the heart was slightly dilated, or the balance of the blood pressure disturbed in the two sides of the heart, then the right side was stimulated to act slightly in advance of the left, and a tumbling action of the heart and other symptoms consequent on the irregularity ensued.

XII.—J. M. RATTRAY, M.D.Aberd.,
Surgeon Frome Cottage Hospital.

DR. RATTRAY referred to the treatment of that form of functional diseases of the heart—sustained heart hurry without physical signs—which was probably mental in origin. He had tried and been disappointed with all the methods of treatment suggested by the former speakers, but had no experience of cactus grandiflorus as used by Dr. Watson Williams. Latterly he had been well pleased with paraldehyde, which he found effectually slowed the heart's action and caused amelioration of the mental anxiety so frequently associated with "fast heart."

XIII.—FREDK. T. ROBERTS, M.D., F.R.C.P.,
President of the Section.

DR. ROBERTS congratulated Dr. Douglas Powell on the excellence of the discussion which his most useful and interesting paper had elicited. Dr. Roberts maintained that purely functional diseases of the heart existed, and gave examples. At the same time, he recognised the great importance of cases in which there were changes in the heart or its nerves, which it might be very difficult or impossible to detect; as well as of those in which functional disorder was added to gross organic cardiac disease. He made some remarks on "referred pains" in relation to the heart, but uttered a warning against paying too much attention to these supposed pains. In conclusion, he discussed some points relating to the classification, causation, diagnosis, and treatment of functional cardiac disorders.

THE IRREGULAR HEART AFTER INFLUENZA.

By ARTHUR ERNEST SANSOM, M.D., F.R.C.P.,
Physician to the London Hospital, etc.

IN this communication I propose to consider the evidence, from the clinical aspect, of cases observed by myself in which irregularities of the heart's action have been manifested after attacks of influenza. I cannot pledge myself that in all these the cardiac rhythm was perfectly regular before the attack or attacks of the disease; nor do I assert that other morbid influences may not have concurred to produce the symptoms. The links of evidence, however, appear to me to unite in a complete chain, and I hold that there is an irresistible conclusion that one of the effects of the *materies morbi* of influenza is a long-continued disturbance of the heart's action in the sense of irregularity.

From an analysis of 100 cases in which I considered that morbid affections of or referred to the heart were in causal relation with influenza, I found the relative frequency to be: Pain in the heart region, 23 cases; morbid acceleration of the heart's contractions (tachycardia), 37 cases; irregularity of the heart's action (arhythmia), 25 cases; abnormal retardation (bradycardia), 5 cases; organic diseases of the heart, 10 cases.[1]

I now propose to consider an analysis of thirty cases in which irregularity of the heart was manifested after influenza, and I think that these may be conveniently viewed in certain groups, though I shall call attention in the proper place to associated symptoms which are common to many or all.

GROUP I. —CASES PRESENTING SOME OF THE SIGNS OF GRAVES'S DISEASE.

As an example I will take the following:

A lady, aged 35, of very good physique, suffered from an attack of influenza in January, 1892. At the age of 16 she had a fall from her horse which occasioned, it was said, concussion of the spine, and for a long time she wore spinal supports. She made, however, a complete recovery, and for nine months previously to her acute illness she had been quite strong, and had done much walking exercise. Two months after the influenza she began to suffer from pain in the region of the heart, especially a "catching pain" on stooping, and occasionally a sense of deadness down the left arm, with "pins and needles" on recovery. I saw the patient in June, 1892. I found that the physical signs in regard to the heart were quite normal but the rhythm was irregular. The irregularity was rhythmic in the manner of coupled beats, which are well shown in the sphygmogram (Fig. 1). There was a decided prominence

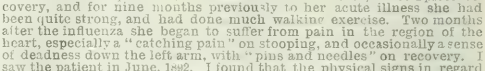


Fig. 1.—Coupled beats in a case manifesting some of the signs of Graves's disease after influenza; female patient, aged 35.

of the eyeballs (exophthalmos), and the upper eyelid was abnormally retracted (Stellwag's sign). There was no von Graefe's sign. The patient was treated chiefly by a weak continuous galvanic current (about 2 milliampères) from the nape of the neck to the region of the vagi (each side of larynx and trachea) repeated three times daily for six minutes.

After four months there was very considerable general improvement. The heart was still irregular; it did not present the phenomena of coupled beats, but often there were groups of four pulsations. Sometimes, however, there were intermissions at irregular intervals. Occasionally slight attacks of palpitation occurred, but usually the normal rate of the heart was not quickened; it varied only between 80 and 84 on all occasions when I observed it. Paroxysms of indigestion, with sternal pain and discomfort, referred to the throat ("vagus storms" as I have termed them), occurred sometimes. The exophthalmos and the Stellwag's signs passed entirely away. In February, 1893, I found the pulse quite regular, and, except for occasional slight manifestations of dyspepsia, there were no morbid symptoms.

Deferring for a short time a consideration of the signs more especially indicating an alliance with Graves's disease, I will consider some that were manifested in this case in their relation with those of all the series.

1. *The Forms of Cardiac Irregularity.*—In this case there was some rhythm in the irregularity; the beats were coupled at one time, in groups of four at another. In a second case I noticed an alternating pulse, a stronger being always followed by a weaker ventricular systole. In a third case the rhythmic irregularity was exemplified by a stronger being followed by two weaker systoles. This grouping seemed to be constant, and it is vividly registered in the sphygmogram (Fig. 2). In a fourth case there were groups of three pulsa-

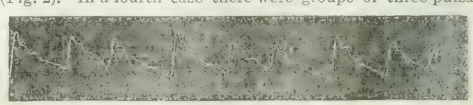


Fig. 2.—Rhythmic irregularity; grouped beats in a case manifesting tinnitus aurium after influenza; male patient, aged 62.

tions. In the majority, however, there was no rhythm in the irregularity, and in a considerable number of cases such irregularity was extreme to the degree of "delirium cordis." There was no relation between the form and degree of irregularity and the subjective symptoms; in the most pronounced irregularity (just as I have found to be the case in the arhythmia generally which is not associated with organic disease) there might be no sense of discomfort or pain at

[1] Report of paper and discussion on Cases manifesting Pain at the Heart or Morbid Acceleration of the Heart's Contractions (Tachycardia) subsequently to Influenza, BRITISH MEDICAL JOURNAL, June 16th, 1894, p. 1366.

heart, whilst in the cases manifesting a slighter irregularity or intermission the subjective symptoms might be severe.

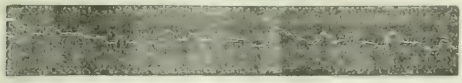


Fig. 3.—Arhythmic irregularity: heart symptoms (pain, faintness), four months after influenza; female patient, aged 58.

2. *The Signs of Præcordial Pain and Cardiac Discomfort.*—There were subjective symptoms referred to the heart or its immediate neighbourhood in 15 cases—just half the total number. This is a far larger proportion than I found in those in whom the legacy of influenza had been morbid acceleration of the heart's action (tachycardia); in the latter only a minority suffered from cardiac pain or discomfort. I have seen the most pronounced painful crises after influenza in patients who presented no morbid objective signs in regard to the heart. Yet it must be recognised that in one half the cases of post-influenzal irregularity of the heart some symptoms of pain were manifested. In four cases the pain was very severe, resembling angina pectoris. In one it was described as "excruciating agony," radiating to the chest and abdomen; and in another acute pain, with sense of pressure, occurred paroxysmally over the sternum, and extended down both arms as far as the elbows, being worse on the left side. In one case there was a soreness as of a knife cutting. In two cases there was a feeling of impending death, without severe pain. In three there occurred feelings as if the heart stopped, together with a sense of faintness. In three the movements of the heart were felt to be attended with pain. The heart was felt to thump, and in one the thumps shook the whole body; in only one case, however, was extreme irregularity felt and timed as a subjective sensation.

3. *The Association with Paroxysms of Dyspepsia.*—I have said that these were notable symptoms in the case I have mentioned; they were present in twelve of the thirty cases. In the case of a man of 29 they were described as "extreme agony," the pain being abdominal with radiation over the chest, associated with flatulence and diarrhœa; the patient complained that the throat felt dry and there was difficulty in swallowing. In another case, that of a man aged 46, the pain at the time of the attacks was chiefly in the interscapular region. There was extreme nausea and sometimes vomiting occurred; diarrhœa alternated with constipation; flatulence was distressing, and there were perspirations and intense depression. Although there was in many cases a continuous enfeeblement the attacks were paroxysmal, in some cases occurring during the night. The symptoms, other than those I have previously mentioned, were in some of the cases dyspnœa (in some instances alarming), rigors, sneezings, faintness and sensations of sinking, suffocation (as from a grip at the throat), and enfeeblement or loss of voice. To paroxysmal attacks, having like characters, I have previously given the term "vagus storms."[2] They seem to resemble the gastric crises which occur in some of the subjects of Graves's disease, but I have found them much more pronounced in the cases of irregular heart (from all causes) than in those of rapid heart (from all causes).

4. *The Association with Symptoms of Multiple Neuritis.*—In the case previously described such symptoms were manifested for varying periods. They were a "deadness" of the left arm, with sensation of "pins and needles" at intervals, together with enfeeblement of the muscles. The signs passed away, but recurred on many occasions from two to eight months after the attack of influenza. In another case there was numbness of both hands, more marked in the left. In a third there was numbness of the left thumb. In a fourth, a lady who had suffered a severe attack of influenza in Paris at Christmas, 1889, there were severe pains in all the limbs soon afterwards. Six months after the attack there were burning pains and varying numbness in all the limbs; nine months after both arms "seemed to go to sleep," and there were severe pains in both knees and in both great toes. In a fifth case there were severe pains in both arms as far as the elbows, worse in the left arm. In a sixth (a lady, aged 32, who manifested some exophthalmos, and suffered an almost constant pain in the heart region with nocturnal exacerbations, there were pains and tenderness in both calves such as one observes in alcoholic polyneuritis. The attack of influenza had occurred four months previously to my observation; any causation by alcohol was entirely excluded. In a seventh case there was pain above the left hip and down the left thigh, as well as in the calf on the same side.

It is to be noted that in some of these cases the pains and perversions of sensation were not continuous but remitting. I did not observe the signs of Raynaud's disease in any of these, but I have seen an example of well-marked Raynaud's disease in direct sequence to influenza. The association of Raynaud's disease and polyneuritis has been often observed. In several cases the pains were long lasting, and there was distinct impairment of muscular power. The experience of many observers leaves no room for doubt that multiple neuritis may be a direct consequence of influenza, though it may be manifested at periods remote from the original disease. I have myself observed many cases of post-influenzal neuritis.

Having considered certain manifestations in the case cited as an example in their relations with those of the whole series of cases presenting signs of cardiac arhythmia after influenza, I come now to a brief review of the characteristics of the special groups—namely:

5. *The Association with some of the Signs of Graves's Disease.*—In the case quoted there was decided proptosis, and a retraction of the upper eyelids, but those signs passed completely away. There was no thyroid enlargement. In a second case, a lady aged 32, four months after an attack of influenza, I noted decided exophthalmos associated with the cardiac arhythmia. In a third case, a gentleman aged 36, Stellwag's sign was manifested.

In several instances I have noticed a tremor of the levatores palpebrarum when the lids are closed. I ask for evidence in regard to this sign, for it has seemed to me to precede the more marked lid signs in Graves's disease. Tremors of the trunk and limbs have been manifested in some of these, as in other cases of Graves's disease. In a fourth of this group of cases the patient, a lady, aged 54, complained of aching and swelling of the throat soon after an attack of influenza in January, 1892. About the same time she suffered from palpitation and paroxysmal attacks of flatulence. There was an almost constant nausea. She was observed by me nine months after the attack. The pulse-rate was about 100, but the action was irregular, and there were occasional intermissions. The thyroid was considerably enlarged, the enlargement being most marked in the right lobe. There were pigmentations of the skin, especially a brown staining of the neck. No exophthalmos nor lid signs were manifested.

From the evidence of the cases that I have observed, I cannot doubt that disorders closely allied to Graves's disease can be initiated by influenza. It may be objected that the signs in some of the cases mentioned were but slight, and that the complete *ensemble* of symptoms of Graves's disease has not been presented. I have shown, however, in a paper recently read before the Royal Medical and Chirurgical Society, that in cases manifesting the rapid heart after influenza all the cardinal signs of the disease may be evidenced. I have also shown that the irregular heart may be a characteristic of typical Graves's disease.[3] I here show that the irregular heart, manifested after influenza, may also be associated with many of the signs of Graves's disease.

This observation cannot but be of interest in the discussion as to the pathology of so-called exophthalmic goître. A theory has been strenuously advocated that hypertrophy of the thyroid, attended by the resorption of the too abundant secretion of the gland, is the cause of the tachycardia of Graves's disease. It would seem very improbable that such would cause extreme rapidity of the heart's action in some cases, and extreme irregularity in others. The theory is rendered still more improbable when, as in the cases observed by me, there has been no relation between the size of the thyroid and the degree of pronunciation of the cardiac signs and symptoms. I consider that the evidence tends much more

[2] The Irregular Heart: a Clinical Study. *Transactions of the Medical Society of London*, vol. xvi.

[3] Annual Oration, *Transactions of the Medical Society of London*, vol. xiii, p. 482.

strongly to the conclusion that lesions of the cerebro-spinal system are the prime causes of the phenomena, and that, according to their position, they produce morbid acceleration (tachycardia), irregularity (arhythmia), or abnormal retardation (bradycardia).

GROUP II.—CASES MANIFESTING PERVERSIONS OF THE AUDITORY FUNCTION.

A lady, aged 25, suffered from an attack of influenza in January, 1890. Urticaria followed. Ever since the attack she has been subject to earache and to attacks of the nature of aural vertigo. I saw her in February, 1891. The heart sounds were normal, but the rhythm was irregular. The attacks of aural vertigo were always followed by palpitations and rachialgia, the pain being from the sacral region to the occiput.

Very similar symptoms were manifested in another case, a lady, aged 26, who first came under my notice nearly two years after an attack of influenza. There were severe paroxysms of giddiness, with vomiting and feelings as of impending death. The heart rhythm was irregular; a systolic murmur was heard over the pulmonary artery, but there were no signs of organic valve disease.

In a third case, of a lady, also aged 28, after two attacks of influenza (in 1890 and 1891) there were very similar symptoms, together with pain at the heart and such general weakness that the patient could scarcely walk, the sensation being as of treading upon cotton wool. Here also there was irregularity of the heart rhythm, the rate of the pulse varying between 88 and 94.

In a fourth case, of a lady, aged 70, who had a severe attack of influenza in Paris at Christmas, 1889, there followed the signs of multiple neuritis, and three months after the attack distressing tinnitus aurium with insomnia. The pulse was irregular.

A fifth case was that of a man, aged 62, who said he had been well and strong until an attack of influenza in January, 1893. Palpitations occurred soon after. I saw him in May, 1894. He was slightly deaf, and complained of tinnitus aurium, the noise being as of a steam engine. There were attacks of palpitation with subjective sensations of irregularity and stoppage of the heart. The general pulse rate was 80 per minute. The irregularity on the sphygmogram is shown in regular grouping—a more ample succeeded by two less ample systoles. (Fig. 2.)

It is the consensus of a large number of observers that aural diseases, as well as tinnitus aurium and auditory vertigo, are often the direct consequences of influenza.[4] The immediate relation between auditory disturbances and irregularity of the heart may be deemed by some more problematical. I have found, however, that out of 27 cases of irregular heart not associated with organic heart disease, 10 were accompanied by disturbances of the organ of hearing or by nasopharyngeal irritations.[5] In this series of 30 cases of irregular heart observed after influenza there were 6 associated with auditory disturbances. About one-fifth of the cases in each series manifested disorders of the auditory mechanism; the association between such disorders and irregularities of the heart cannot, therefore, be looked upon as fortuitous. It is well known that cardiac symptoms—palpitations, faintnesses, and painful crises—often occur in the subjects of auditory vertigo.

It is an interesting and a practical question whether the symptoms are due in some cases to a reflex from the nasopharyngeal mucous tract. I have noted a case in which severe auditory vertigo attended by very pronounced irregularity of the heart's action disappeared after the removal, by Dr. Woakes, of a fibrocystic growth from the middle turbinate bone, the patient making a complete recovery. In many cases after influenza I have observed small submucous hæmorrhages in the uvula, velum palati, and pharynx. In many instances local treatment of the nasal and pharyngeal mucosa has been followed by much improvement in the symptoms. I have prescribed local applications of weak solutions of nitrate of silver or sulphate of copper, and a 5 per cent. solution of cocaine hydrochlorate. An oil spray by the parolein atomiser of menthol and oil of eucalyptus (2½ per cent. of each in parolein) has seemed to me to have been of much advantage.

GROUP III.—CASES MANIFESTING GOUT OR HEREDITARY TENDENCY THERETO.

A gentleman, aged 58, who had been the subject of typical acute gout, came under my notice complaining of severe cardiac symptoms after two attacks of influenza. The first attack, two years previously to my observation of the case, had been accompanied by pleuritis with pneumonia and by acute nephritis. The second attack, one year ago, had also associations with pneumonia and acute nephritis. At the time of my observation the subjective heart symptoms were distressing, and the irregularity of the heart's action extreme. The dyspnœa for some periods assumed the rhythmic character of Cheyne-Stokes breathing. There was much œdema of both legs. The urine, of specific gravity 1020, contained granular and epithelial casts with many crystals of uric acid, some aggregated in rosettes. The prognosis seemed to be very grave: there were great fears of the imminence or existence of chronic interstitial nephritis (in addition to the acute form), and of the associated cardiac hypertrophy and arterio-sclerosis. Considerable improvement, however, took place, and when I saw the patient twelve months afterwards—though there were subjective feelings of irregularity of the heart at times and of præcordial discomfort—the heart outline was fairly normal, and during the time of my observation the rhythm was quite regular, the rate being 72 per minute. There was so good a recovery that the last time I saw my patient, some months afterwards, he was presiding over a large assembly, and seemingly in good health.

In a second case, a man aged 27, whose father and brother had suffered from acute gout, nephritis occurred coincidently with or immediately succeeding an attack of influenza. Subsequently irregularity of the heart with much subjective discomfort became manifest. In a third case, a young man aged 21, with a very marked family history of gout, influenza was followed by marked irregularity of the heart rhythm and by acute pains referred to the præcordia.

I mention the following case as giving, I think, cogent evidence of the effects of influenza in inducing cardiac irregularity. A gentleman, aged 63, had been frequently under my care during eleven years. He had disease of the upper lobe of the right lung, which assumed fibroid characters and had become practically inert, some emphysema being manifested. The lung had long ceased to give trouble, but there was much complaint of dyspepsia. Nevertheless, the patient became fat and did not stint himself of the good things of this life. There were gouty associations in the family history. In November, 1893, I saw the patient during an attack of influenza. Neither at this time, nor at any of my previous observations had there been any noticeable irregularity of the heart's action. The patient took a sea voyage. I saw him on his return seven months after the attack of influenza. He had experienced no symptoms of cardiac discomfort. I found, however, an extreme irregularity of the rhythm (Fig. 4). At the time of my observations the

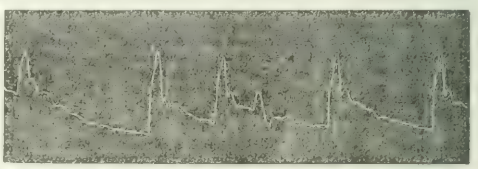


Fig. 4.—Extreme irregularity in a probably gouty subject; observed seven months after influenza; no cardiac symptoms; male patient; aged 63.

patient was entirely ignorant of any cardiac disturbance, and I forebore to give the slightest indication that any such was in evidence.

I have frequently observed that the degree of irregularity is in no way commensurate with the subjective symptoms. A most riotous action—a delirium cordis—may be manifested without the proprietor of the heart being aware of anything wrong with the circulatory mechanism. On the other hand, a similar irregularity may be accompanied by grave subjective signs. The tracing (Fig. 5) was from a case in which these were severe.



Fig. 5.—Extreme irregularity; rhythmic dyspnœa of Cheyne-Stokes character; observed four months after influenza in the subject of alcoholism; male patient, aged 62.

The patient, a man aged 62, suffered from an attack of influenza in January, 1893, accompanied by "congestion of the lungs." There had been a five years' history of dyspepsia, and over-indulgence in alcohol was undoubted. Difficulties of breathing had been manifested ever since the attack, and at the time of my observation there was rhythmic Cheyne-Stokes dyspnœa. Improvement took place and, I believe, still continues.

I have just mentioned a case in which this symptom, so often of fatal import, was manifested after influenza and yet the patient recovered. In a third case under my care at the London Hospital, when the influenza was immediately followed by signs of spinal pachymeningitis, there was typical Cheyne-Stokes dyspnœa, and yet the patient made a good recovery.

It has been my experience that the implication of the nervous system with or after attacks of influenza has occurred with marked severity in the subjects of gout or the inheritors of a gouty tendency and in those who have been prone to alcoholic indulgence.

[4] *Cf.* Althaus, *On Influenza*, London: Longmans and Co., 1892, pp. 247-255.

[5] *Transactions of the Medical Society of London*, 1893, vol. xvi, p. 15.

Pathology.

In the cases of irregular heart after influenza there seems to be no evidence of disease of the myocardium, but the series of phenomena tends to the conclusion that the irregularities of rhythm are due to a disturbance of the nervous mechanism of the normal cardiac reflex. In the rapid heart (tachycardia) it seems probable that the vagus is in *minus* action—that there is some lesion of paresis in its cardiac branches; possibly an irritative lesion of the sympathetic or cardiac accelerator agencies may be a concurring case. In the irregular heart, for the most part, it would appear probable that the vagus is in relatively *plus* action. Either some lesion of irritation affects its nuclei of origin or its fibres in some parts of their course, or else a lesion of paresis of the cardiac accelerator agencies leaves it relatively in the ascendant. Professors Roy and Adami [6] have shown that an excitation of the vagus brings about irregularity of the heart by weakening the contractions of the auricles. Thus the rhythmic stimuli reaching the ventricles from the auricles are diminished or suppressed, and the ventricles tend to take on a rhythm of their own. The interference of the two rhythms produces an arhythmic irregularity. When a weakened auricular impulse fails to excite the ventricular contraction, there is an intermission or a delay in the subsequent contraction; and these events may be repeated in rhythmic sequence. In extreme irregularity in the dog, the observers quoted state, the vagus may lose all control, and the ventricular wall and the musculi papillares may fail to act in any correlation. It may be, therefore, that irregularity can be due either to an increase of action of the vagus, or to an annihilation of its action. The nervous mechanism of the cardiac reflex is undoubtedly very complex, and we may adopt as a working hypothesis the simple formula that a morbid change in it generally may have its expression in irregularity of the cardiac rhythm. The immediate cause of the lesion may be hæmorrhages, for we know that blood extravasations are common accompaniments or sequelæ of influenza, or a neuritis caused by the toxines of the disease-producing microbes. We know that the effects may be manifested at very varying periods from the original disease.

Treatment.

It may be questioned at the outset whether in certain of the cases any form of treatment is necessary. We may detect at all times of our observations a great, it may be an extreme, irregularity, which the evidence shows (with the highest probability) to be habitual; and yet, not only is the patient unconscious of any perturbation, but the circulatory and nutritive needs of the organism seem to be served in a perfectly adequate manner. The subjects of the rapid heart as well as of the irregular heart may present no symptoms referable to the circulatory disorder for months or years. It is in the highest degree important in such cases that the skilled observer should refrain from calling the attention of the patient in any way to the condition of irregularity, for once the mind is directed to it, subjective discomfort and distress are often initiated. It is rarely, however, that some associated symptoms are not present, and the treatment then resolves itself into putting the patient into the best attainable condition of comfort. Dyspepsia is usually the chief condition calling for therapeutic interference, and it may be paroxysmal or constant—a cause or consequence, an accompaniment or legacy, of the vagus storms. It has seemed to me that the best results have been from treatment by pancreatin and papain, with alkalies and bismuth after food. Small doses of arsenic (as two or three minims of Fowler's solution three times a day) have been added in some cases with seeming advantage. In the painful crises, hypodermic injections of ¼ or ½ grain of hydrochlorate of morphine have been used, but opiates are generally ill-borne. Antipyrin or phenacetin—especially the latter—has seemed to me to be of much advantage, not only in the treatment of the headaches which so often are manifested, but of the abdominal pain and discomfort. I have given the phenacetin in from 5 to 7 grain doses in wafer cachets, adding to it, in some cases, camphor, musk, or caffein citrate. For the insomnia, chloralamid, in doses of 20 to 25 grains nightly, or on alternate nights, has been generally successful and free from all adverse consequences. Sulphonal is not so innocent, and chloral hydrate and opiates are harmful.

In the treatment of the irregularity itself, when the disordered action of the heart is felt by the patient, and is a source of discomfort and distress, I have found all cardiac tonics, with one exception, inefficacious. Digitalis has proved not only useless but, I think, even harmful. In this regard my experience corroborates that of M. Huchard of Paris and other able observers. The one exception is belladonna, which has seemed to act beneficially in some cases.

I feel convinced that the irregularity can be reduced and the subjective symptoms ameliorated by the employment of weak continuous galvanic currents from the cervical spine to the regions of the pneumogastric nerves. The method, as adapted to the treatment of the rapid heart of Graves's disease, has been fully described by the late Mr. H. W. D. Cardew,[7] who observed several of my cases, and recorded the sphygmographic evidence before and after treatment. Though the results were less favourable than in the cases of rapid heart there was good evidence that the arhythmia became reduced. Subsequent experience has confirmed me in this opinion, and I feel sure that the subjective symptoms have been lessened by the method. The batteries employed were those of Schall of four to six cells (current about two to three milliampères). The larger electrode (the anode), well moistened with hot water, is applied to the nape of the neck just above the vertebra prominens; and the smaller, similarly moistened, is held in the groove outside the larynx and trachea on the right and left sides alternately.

The applications should be made for six minutes three times a-day, and it must be quite understood that the signs of improvement are slow to be perceived; there is seldom much amendment under six months. The method is so simple that the patient or nurse can find no difficulty in carrying it out under the direction of the medical attendant. It has seemed to me to give better results than any form of medicinal treatment.

[6] Contribution to the Physiology and Pathology of the Mammalian Heart, *Phil. Trans.*, vol. 183, 1892, B., p. 283.

[7] *Lancet*, July 4th and 11th, 1891, pp. 6 and 61.

THE TREATMENT OF CHRONIC DISEASES OF THE HEART BY BATHS AND GYMNASTICS AS PRACTISED AT NAUHEIM.

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The baths and waters of Homburg, Aix-les-Bains, Baden, and many other Continental resorts are well known to Englishmen generally, and their therapeutic value fully recognised. Very few English people, however, have ever heard of Nauheim, and it is even almost a *terra incognita* to the members of the medical profession, although in Germany it is a recognised and much frequented health resort, during the season as many as 1,500 baths being given daily. As we are bound to consider any treatment which may possibly prove of value to our patients, I thought it would be of interest to the members of this Association if I brought to their notice the treatment of chronic diseases of the heart as practised at Nauheim, as, from a personal visit to the place recently, I feel convinced that a most valuable therapeutic measure is offered by the special means there adopted. Owing to the kindness of Dr. Schott, of Nauheim, whom I cannot sufficiently thank for the trouble he took in affording me opportunities of observing the treatment he adopts, I was able to investigate over forty of his cases then under treatment, and, in addition to obtaining their clinical histories from themselves, to ascertain their then physical condition.

The treatment of chronic diseases of the heart by baths and gymnastics is of the more interest as Dr. Schott assured me that it is quite possible to make artificial Nauheim baths, and his exercises when once learnt may be practised anywhere. To this point I shall again refer.

Nauheim is situated in the Taunus, being reached by rail from Frankfort-on-the-Maine in about forty minutes. The season commences in May and lasts until the end of September. The special treatment there adopted for diseases of the heart, as already stated, is by baths and gymnastics,

and although these are generally practised together, for purposes of explanation it will be better to consider them separately.

THE BATHS.

There are twelve springs in Nauheim, known as Nos. I to XII; only four, however, are used—Nos. VII and XII for baths, and Nos. VIII and X for drinking the waters.

The beneficial effect of the baths on patients suffering from cardiac disease was first mentioned by Beneke in 1859, and in 1872 the same observer wrote still more emphatically on the subject in a monograph published in Berlin,[1] and from time to time other articles have appeared by the brothers Schott, Groedel, etc., but they have attracted but little notice in this country.

The springs used for baths (Nos. VII and XII) contain certain mineral salts in solution, chiefly chloride of sodium (about 2.8 per cent.), and chloride of calcium (0.2 per cent.), together with small quantities of iron, manganese, iron lime, etc. The chief characteristic is, however, the large amount of carbonic acid contained, partially combined with the salts and partially free. Thus, in Spring No. VII, in 1,000 grammes there are 889 c.cm. of free carbonic acid, and in Spring XII in 1,000 grammes 1,066 c.cm.

For medical purposes the baths are used thus:

1. Warm brine baths without carbonic acid.

1A. Warm brine baths with addition of "mother liquor," obtained from the neighbouring salt works after the salt has been abstracted.

2. Warm brine baths with a small amount of carbonic acid.

3. The same, but water being allowed to run in during the bath.

4. Effervescing baths: the natural water from Springs VII and XII.

5. Effervescing running baths.

(1). The warm brine baths (temperature about 95° F.) are used for patients with great cardiac weakness. The duration of the baths is at first about 8 minutes, the time of immersion being gradually increased. The patient takes three baths on successive days, and then rests for a day. If improvement is manifested the strength of the bath is increased by the addition of "mother liquor."

After a variable number of baths the patient changes to "2", the natural water, which has been exposed to the air for a time in the form of a spray, so that a large proportion of the carbonic acid has escaped. The temperature of the bath is usually about 89° to 92°, and the time of immersion from ten to twenty minutes. On first entering the bath there is a feeling of chill, followed in about half a minute by warmth, which is maintained as long as the whole body (with the exception of the head, of course) is immersed, but if the arm, for instance, is raised out of the water the chilly sensation is again experienced. A certain amount of oppression is felt, confined chiefly to the epigastrium, but this, patients told me, passed off after a few baths. The effect upon the heart, as judged by the pulse, is manifold. Even upon the healthy heart an alteration in pulse-rate is noticed; in my own case it was reduced four beats per minute, the volume of the pulse being at the same time increased.

Upon a diseased heart the effect is very marked. The number of beats per minute is decreased; if there is irregularity this disappears to a more or less marked extent, the volume becomes greater, and the general character of the pulse steadier and quieter. The respiration becomes slower and deeper, and the patients describe the relief to their subjective symptoms as being very great. The effects last at first from one to three hours, the time gradually increasing with the duration of the treatment.

With the kind permission of Dr. Schott, I will here give the outline of a case which well illustrates the effect of such a bath:

Dr. G., aged 51, a medical man, had suffered from attacks of gout since 1886, and in December, 1890, also suffered from asthmatic paroxysms. From December, 1890, to May, 1891, the cardiac symptoms were so severe that he could scarcely walk; there was urgent dyspnœa, œdema of the extremities, etc. Aortic stenosis, with considerable cardiac dilatation, was then diagnosed. He went to Nauheim in May, 1891, and took a course of baths with great benefit, so that he was well able to pursue his ordinary course of life. The improvement was maintained until January of this year (1894), when the symptoms returned, and he again went to Nauheim on May 21st. I saw him on May 22nd. He had then sligh wheezing respiration; the pulse was 90 per minute, irregular in force and rhythm. The heart was considerably dilated, the apex-beat being indistinctly felt in the fifth interspace, 2 inches outside the nipple line, and the dulness extending from the third rib above and to about three lines to the right of mid-sternum. On that day he took a warm brine bath, containing a small amount of carbonic acid, at a temperature of 89.6° F. Owing to his having walked to the bath, his pulse was a little quicker than when I first saw him (102 per minute), and, owing probably to the presence of a stranger, this was not reduced below 100, but the irregularity almost disappeared, and the volume was markedly increased, whilst at the same time the wheezing character of the respiration was lost, and he expressed himself as feeling much easier in every way.

To resume, after a variable number of baths, the natural effervescing baths are employed, the temperature being 88.3° or 91.4°F., according to which spring is employed. The same sensations are experienced as described above, but the effects on the pulse are more marked. My pulse was reduced from 72 to 60 in three minutes, and did not regain the former rate until about two hours after the bath, the sensation of oppression over the epigastrium was also more marked. The effect of the gas was peculiar, each minute hair on the body being covered with multitudinous bubbles, which escaped on the least movement. No fatigue was felt after a bath. I did not have an opportunity of observing a patient in the bath. The stream baths have similar but again more marked effects, with the exception, however, that during the bath the pulse-rate is slightly raised, but the increase in strength and volume is more marked than in any of the baths. Thus during the bath my pulse rose from 72 to 74, but half an hour afterwards it fell to 64 and remained so for about three hours.

As regards the explanation of the effect of the baths I can say but little. Dr. Schott considers that a reflex action is set up, starting from the sensory nerves and passing down the vagus to the heart. Certainly there is a slight general irritation to the surface of the body, for on getting out of the bath one's skin is quite red. Before discussing what are the most suitable cases for this treatment, I will pass on to the second division of the Nauheim treatment, namely, the gymnastics.

THE GYMNASTICS.

Oertel was the first to show that to make a patient lie perfectly quiet was not always the best treatment for chronic affections of the heart, but that considerable benefit might be obtained by graduated exercises, and he therefore introduced the "*terrain cur*," or hill climbing. It is, however, difficult to accurately gauge the amount of exertion used by the patient, and there is therefore some danger that too much strain is put upon the heart, and thus the good effects of the treatment may be frustrated. To more carefully control the actions of the patient Zander introduced his mechanical apparatus, but this treatment also has many drawbacks. Both the above methods are employed at Nauheim in conjunction with the baths, but only to a limited extent, but the form of so-called gymnastics to which I would particularly call attention are the "resistance gymnastics," introduced by the brothers Schott, of whom, however, only one (Dr. Theodore Schott) is now living, but he has carried the system to a commendable degree of perfection.

A better term in English than "gymnastics" would be "exercises" or "movements with resistance." They consist of certain movements of the arms, trunk, and legs: extension, flexion, and rotation. Each exercise is made extremely slowly and regularly, and is resisted by the doctor or trained attendant. No one exercise is performed twice in succession, and a pause is made between each. The force exerted to resist the movement is carefully regulated according to the condition of the patient; and any sign of breathlessness, such as working of the alæ nasi or sudden quickening of the pulse, is an indication that the movement has either been made too quickly or that too much resistance has been applied (probably the former), and a rest should be immediately ordered. Needless to say, that should an attendant be employed he must be most perfectly trained. After the patient has practised the exercises a few times he will be able to judge by his own sensations whether the right amount of resistance has been employed. If an attendant is not available another form of Schott's treatment may be employed, known as "self-resisting gymnastics," in which, instead of the muscles being quietly brought into action, as in the manner already described, they are held perfectly rigid, all

[1] *Zur Therapie der Gefässkrankheiten . . . insbesondere chronischen Herzkrankheiten.*

the antagonistic muscles being brought into play, the patient, in short, resisting his own movements.

The effect of the movements upon the heart is as marked as in the case of the baths. The pulse becomes more regular and its volume increases; but what is more remarkable is that the rate is also diminished; should it be found that the pulse has increased in rapidity the movements have been performed too quickly.

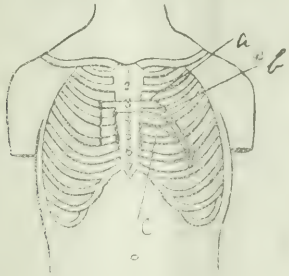


Fig. 1.

Another interesting effect is that after the movements—half an hour is the usual duration daily—the area of cardiac dulness will be found to have diminished, sometimes to an astonishing extent. As an instance of this, I will hand round this tracing which I took from one of Dr. Schott's cases. The patient was a boy, aged 14, suffering from mitral regurgitation, the result of rheumatic endocarditis. The line (*a*) indicates the area of cardiac dulness before the exercises, so that there was considerable dilatation of the heart. The broken line (*b*) shows the extent of cardiac dulness after twenty minutes' exercises with slight resistance, whilst (*c*) marks the area after ten minutes' further exercises with "medium" strong resistance. I may here say that the amount of resistance employed is designated as "slight," "medium strong," and "very strong."

As another example, I may give the case of Dr. G., already referred to when speaking of the bath treatment. I was present when he was put through the exercises for the first time. The diagram (Fig 2) shows the areas of cardiac dulness before (*a*) the exercises and after medium strong (*b*) and very strong (*c*)

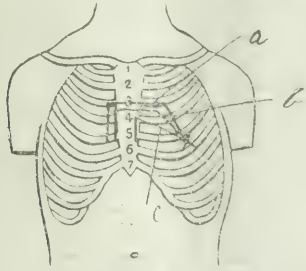
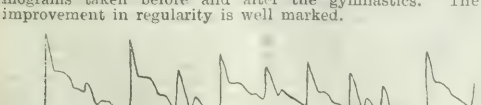
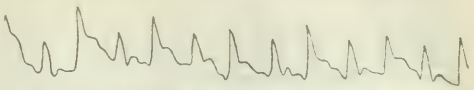


Fig. 2.

resistance respectively. Equally as striking are the sphygmograms taken before and after the gymnastics. The improvement in regularity is well marked.



Dr. G. May 22nd, 1894. Before gymnastics, frequency 98; pressure of the pulse, 134.



Dr. G. April 22nd, 1894. After 40 minutes' gymnastics with resistance, frequency, 84; pressure of the pulse, 160 mm. Hg.

After a course of such treatment, Dr. Schott frequently orders hill climbing, but he never adopts this method at the commencement. As before stated, the baths and gymnastics are generally prescribed together; but in some cases the baths only are employed, and in some the exercises only.

The explanation of the effect of the gymnastics is difficult. Dr. Schott considers that it is also a reflex mechanism derived from the motor nerves and passing through the vagus to the heart. Probably the increased facility afforded to the circulation, especially through the lungs, by the increase in depth of the respiration—which, I ought to have mentioned, is very characteristic—also aids in bringing about the result.

With regard to the important question, what class of cases are most suitable for Nauheim, Dr. Schott, from his great experience, is of opinion that all forms of heart disease may be greatly benefited, if not cured, by the treatment above detailed, with the exception of cases of aneurysm, and those in which there is an advanced degree of arterio-capillary fibrosis with high arterial tension, and even in these latter improvement is sometimes manifested. The above seems rather a sweeping statement, but, from the opportunities I had of observing the cases, I do not think it is exaggerated. A few of the cases I examined were most advanced cases of valvular disease, with urgent dyspnœa on the least exertion, ascites, œdema, etc., but even these patients seem to improve to a degree that I have rarely observed in drug treatment. They were not, of course, in any sense of the word "cured," but were very emphatic in their statements that they were never so well as when at Nauheim undergoing the bath treatment, for they were unable to practise the exercises. Whilst taking the baths the breathing became so much easier, and the ascites and œdema lessened to such a degree, that daily drives were possible, and even a little walking exercise. This improvement, it is true, was only temporary, but even such as it was it was greatly appreciated by the sufferers themselves, who yearly undertook the journey readily, so that the result can only be considered a successful one. Such cases, however, could hardly be advised to go from England. The cases undoubtedly that do best are those of a dilated heart, due to some structural alteration, in which there are indications of a failing ventriole, especially those in which the patient suffers from a good deal of cardiac pain, pseudo-angina pectoris. Such cases do remarkably well in the exercises only, without the baths. If the movements are made with proper precautions an attack of pain is never produced; on the contrary, after a short period of treatment, the patient is able to undergo considerable exertion without inconvenience, and finally the attacks disappear entirely. Cases of true angina pectoris (vasomotor form) also do extremely well. I was much struck with the following case:

Mr. N., aged 40, whose father and brother both died of angina pectoris, was seized with the same complaint in 1889; the attacks at first were very severe and frequent, occurring on the least exertion. For two years he was treated by the ordinary methods with only slight benefit. In 1891 he went to Nauheim, and underwent a course of baths and gymnastics. Improvement was slow but sure, and he remained eight weeks, at the end of which time the attacks were rare and less severe, and he was able to take walking exercise. He stated that he had experienced especial relief from Dr. Schott's gymnastic exercises. There was no relapse, but each subsequent year, for three years, he visited Nauheim; and, when I saw him, appeared a healthy, well-built man, the only feature of cardiac trouble being that the pulse was slightly irregular. The anginal attacks had completely disappeared, and he was able to do a considerable amount of physical exercise, frequently enjoying a long day's shooting.

Cases of valvular disease also do well, provided that they are not too advanced, although as above stated even then relief may be obtained. Patients suffering from tachycardia of purely nervous origin are particularly suited for this method of treatment.

At the commencement of my paper I stated that artificial Nauheim baths may be tried, whilst of course the exercises may be practised anywhere, provided that a carefully trained

assistant be employed when the medical man is unable to perform them himself.

Two cases have been tried by these methods at the Middlesex Hospital, and I have the kind permission of the physicians whose care they were under to record them here.

R. B., aged 58, was under the care of Dr. Douglas Powell, and for the notes I am indebted to Dr. K. C. Thompson, his house-physician. He was admitted on May 12th of this year, suffering from bronchitis, œdema of the extremities, and albuminuria. The heart's apex beat was faintly seen in the sixth interspace, 1½ inch external to the nipple line. There was diffused epigastric pulsation. The impulse was diffuse and weak. The area of cardiac dulness commenced above at the upper border of the fourth rib, and to the right, at the left border of the sternum. A blowing systolic murmur was heard over the apex and was conducted into the axilla. The liver was slightly enlarged. There was a trace of albumen in the urine. The patient was at first treated with digitalis, and considerable improvement followed, but after about a month the influence of the drug was not so marked. The pulse was irregular both in force and rhythm, and he was troubled with sleeplessness. On June 19th he was bathed, the bath containing 1½ per cent of chloride of sodium and 0·2 per cent. of chloride of calcium, the temperature of the bath being 92° F. Before the bath the pulse was 88° F., and every second beat could scarcely be felt. During the bath the respirations were considerably deepened, and the pulse beats became more regular. The bath lasted ten minutes, and on returning to bed the patient slept soundly for an hour and a-half, and that night had the best night since his admission into the hospital. On June 21st, 22nd, and 23rd he had baths of the same strength, and the pulse became more regular. The baths had a markedly sedative effect, and the patient expressed himself as feeling considerably better since the commencement of the treatment. On June 25th the strength of the bath was increased, the chloride of sodium to 2 per cent., and the chloride of calcium to 0·5 per cent. The baths were repeated on June 26th, 27th, and 29th, and on July 3rd and 4th. After consultation with Dr. Plimpton, lecturer on chemistry at the Middlesex Hospital School, on July 5th, I prepared the bath as follows: The bath held 50 gallons of water, 10 lbs. of chloride of sodium were added, 2½ lbs. of chalk, and 5 lbs. by weight of pure hydrochloric acid: a smart effervescence was the natural result, and twenty minutes after adding the chalk the patient was bathed as usual. This method answered very well, and it was repeated on July 7th, 8th, and 9th. Thus fifteen baths in all were given, and the physical signs were as follows: The apex beat could be easily seen in the sixth interspace, and on palpation was judged to be just outside the nipple line; it was well localised and heaving in character; there was scarcely any epigastric pulsation visible. The systolic murmur at the apex was plainly heard, but it did not replace the first sound occurring just after it. The patient was able to walk about well, and there was no œdema. This result can therefore be regarded as favourable, the improvement occurring so rapidly that one can only suggest that this method of treatment should be further tried.

The following case was under Dr. Cayley, and for the notes I have to thank Mr. Kenith Lawson, his house-physician.

P. C., aged 6, was admitted on May 28th. He had had an attack of rheumatic fever three years before coming under observation, and had suffered from cardiac trouble since that illness. On admission the heart's apex beat was diffuse, and situated in the sixth costal interspace 1 inch outside the nipple line. The area of cardiac dulness commenced above in the second interspace, and from the right border of the sternum internally. A loud blowing systolic murmur was heard over the apex and a double murmur over the aortic area. The pulse was regular in strength and volume. The urine contained about one-tenth of albumen. There was a considerable amount of ascites, which was removed on June 1st, with considerable relief to the little patient. Schott's exercises were first practised on June 6th, and were continued almost daily for three weeks. The child recovered very rapidly, and in a fortnight was able to walk about the ward without any dyspnœa supervening. Without going further into detail, I will only say that after the three weeks' treatment the physical signs were as follows: The apex beat was distinctly felt a quarter of an inch outside the nipple line. The cardiac dulness commenced above at the fourth rib and at the right from the mid-sternal line, there showing a considerable and rapid diminution. The murmurs were not so loud. The health of the child was excellent, but unfortunately further treatment of the kind was temporarily stopped by an attack of tonsilitis. On July 27th the note states that he was much better, but the cardiac treatment had not been resumed.

Bust of Professor Harvey for Marischal College.—Many "alumni" will be pleased to learn that a marble bust of the late Professor Harvey was unveiled at Marischal College on October 23rd by the Lord Rector of the University (the Marquis of Huntly). The bust, which was taken from a portrait, is an admirable bit of sculpture and a good likeness. It is the work of Mr. Joseph Whitehead. It was exhibited in the Royal Academy, and was looked on as showing evidences of marked skill. Surgeon Colonel Robert Harvey, of the Bengal Army, Inspector General of Civil Hospitals in Bengal, presented the bust. Graceful speeches were made by Professors Stephenson and Trail, and also by Dr. Farquharson, M.P., in which pleasant memories of Dr. Harvey were recalled.

Dr. C. Van Cauwenberghe, Professor of Obstetrics in the Medical Faculty of Ghent, has been elected Rector of the University for the period 1894-97.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

HYPERPYREXIA: DEATH IN FIFTEEN HOURS.

The following remarkable fatal illness occurred in a man, aged 65. His previous medical history included nothing further than occasional mild bronchitic attacks, and in December, 1893, an attack of influenza. Latterly he had been rather addicted to alcohol.

For four days before the onset of the fatal attack, he complained of having a slight cold, but continued at his work, and apparently much in his usual health. About 4 A.M. on the fifth day he awoke feeling breathless, cold, and very ill. Four and a-half hours afterwards, when he was first seen, his condition seemed hopeless. The face was of a leaden hue, the extremities cold with a clammy perspiration, the breathing was 52 per minute, the pulse could with difficulty be felt, and its rate was unascertainable. He was perfectly rational, and complained of no pain, but felt his condition very alarming. There was wheezing all over his chest, with a few small *râles* over the upper lobes, but abundant subcrepitant *râles* at both bases. No consolidation was made out. The heart sounds were very feeble, and no murmurs were heard.

Two hours afterwards, the coldness of the extremities was passing off, and the collapse was not so marked. The pulse was now made out to be 128 per minute. At midday the temperature was 101° F., and at 3 P.M. it had risen to 102° F. The pulse had become much stronger, and its volume had increased. There were fewer moist sounds in the lungs, and over the upper lobes *rhonchi* were mainly to be heard. The breathing and pulse rate still remained very rapid. At 5 P.M. the patient became comatose, and an hour later his temperature was found to be 108·2° F. Death took place at 7 P.M., fifteen hours after the onset of the illness. No *post-mortem* examination was made.

The beginning and end of this patient's illness are alike puzzling and unusual. An embolus of the pulmonary artery might explain the sudden onset, dyspnœa and collapse, and the physical signs in the chest. In a previous illness I had concluded that the man had a degenerate cardiac wall, so that embolic plugging of the pulmonary artery, or a large branch of it, would so seriously embarrass the heart that œdema and congestion of the lungs might rapidly be produced. The diminution of the moist sounds, with an improving pulse, also pointed to cardiac failure as so far explaining the condition of the chest. Why, however, did hyperpyrexia follow? Cerebral embolism may produce this, but other evidence of its presence is invariably to be found. In this case there was no paralysis, nor anæsthesia, and the mental condition was clear till obscured by the rising temperature. The pupils were equal, and there was no squinting, and no deviation of the tongue when protruded. The only symptom at all pointing to brain irritation was some jerking of the right arm shortly before death.

Could the man have died through an anomalous and malignant action of some toxin? In this case one would naturally suggest a product of the pneumococcus.

Sheffield. J. Black Milne, M.B.

LEMON JUICE AS A HÆMOSTATIC.

Some years ago I was summoned to a severe case of epistaxis in a full-blooded young man. When I saw him he was pale, with a feeble compressible pulse, and bleeding profusely from the nostrils. I injected into the nostrils with a common glass syringe a mixture of lemon juice and water (1 in 4), with the result that hæmorrhage was instantly controlled, and there has been no recurrence.

Six months after I was called to a case of hæmatemesis in a woman, aged 30. I tried the usual remedies—ice, gallic acid, lead—with no result. She still kept discharging blood to an alarming extent, when I administered lemon juice freely. The bleeding ceased directly, but recurred on the following day. I continued the lemon juice, and the patient made a quick recovery.

Three weeks ago I had a case of typhoid fever in a man,

aged 27. Severe hæmorrhage from the bowels occurred on the fourteenth day. The usual remedies gave no relief. Again I had recourse to the lemon juice with equally satisfactory results, the bleeding being at once arrested. In this case, however, the prognosis being most unfavourable from the start, the patient ultimately died from exhaustion.

In the last two cases there was troublesome vomiting, with a strong feeling of nausea present; still the lemon juice was not rejected, but relieved the sense of sickness as well as the consequent thirst of hæmorrhagic cases. If other practitioners will give a trial to this treatment, and are able to speak as I do of its efficacy, we shall have discovered a simple and agreeable way of controlling a hitherto troublesome class of cases.

E. T. Burton, L.S.A.

Birmingham.

VARICELLA BULLOSA.

I was greatly interested in the article in the British Medical Journal of September 29th by Mr. George Morgan on "Varicella Bullosa." I do not think the condition is so rare as he suggests, for within the present year I have seen at least two cases presenting almost precisely all the physical appearances described.

In one case, an infant of about 6 months old, the lesion first followed the course of a rib, and might have been mistaken for herpes zoster, only that (1) the vesicles were very large, varying from the size of a sixpence to that of a shilling; (2) the distribution became afterwards very irregular, extending into the interscapular regions and covering the face and scalp; (3) the child had at the same time the true vesicles of varicella.

In the second and more typical case the child was five years old. I was called in after the disease had lasted a few days, and found typical varicella vesicles, some new and others crusting; also the history that nearly all the other children in the house had had chicken-pox, some, not quite recovered, being shown to me. No medical aid had been summoned in all these cases, but the appearance in this particular case of large bullæ had caused the parents to send for me. The child's abdomen was nearly covered with large bullæ, one of which was at least two inches across, partly broken at its upper part, and containing at its lower circumference a small quantity of semi-purulent fluid. The others were similar, and presented exactly all the appearances Mr. Morgan describes. Several had burst, leaving scars similar to those left by a burn, the surface being more or less healed, suggesting that the bullæ arise, like the vesicles, in successive crops. The child made a good recovery, the wounds healing rapidly. After an interval of three months one case I examined to-day presents no scars, and only a slight pigmentation over the spot where the bullæ were most profuse.

Bristol. J. B. Stephenson, M.B., B.S.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

William Pavy, M.D., F.R.S., President, in the Chair.

Tuesday, November 6th, 1894.

Myeloid Cells in Malignant Disease.

Dr. Herbert Snow exhibited microscopic preparations, showing myeloid cells in certain tumours of the breast. In the first case the patient was 62 years of age; her left breast was the seat of a large sarcoma, in which myeloid cells occurred. The growth was very vascular. The lymphatic glands were converted into small cysts filled with black grumous fluid, but devoid of malignant disease. Rapid increase ensued in the pectoralis after removal of the tumour. In the second case the myeloid cells occurred in the thick wall of a mammary cyst, which had been noticed for fourteen years in a woman, aged 44. Two months previous to its removal the patient had received a blow, and this was followed by pain and rapid increase. The cyst was filled with a blackish fluid, and its wall consisted of fibrous tissue, containing the cells above noticed. In the third case similar cells were found around the advancing edge of a scirrhous carcinoma of the breast. The tumour had been noticed for one year, and on section after removal was of a reddish-black colour, suggestive of melanosis. Subsequently a recurrent nodule was removed from the inner end of the cicatrix together with an axillary gland; and after this, at a later operation, two nodules were dissected out from the muscular substance. All these presented the same macroscopic and microscopic characters. The author regarded the last case as unique. He did not think that the cells should be regarded as macrophages. Although typical myeloid cells contained many leucocytes others were quite amorphous, and such offered the key to a comprehension of their nature—they were fibrinous coagula.

Mr. A. A. Bowlby observed that multinucleated cells were present in many tumours and he had seen such in carcinoma. It was rather in their numbers that any rarity lay, and he did not gather in what proportion the cells occurred in Dr. Snow's specimens. He had himself observed one instance in which multinucleated cells were present in the walls of a cyst round a breaking down blood clot.

Dr. Snow replied that the cells lay not in the carcinoma, but around its advancing edge. He did not think that the cells referred to by Mr. Bowlby, as seen in carcinomata, were true myeloid cells such as he had described.

Perirenal Hæmorrhage.

Dr. Francis Hawkins showed the kidneys of a man, 31 years of age. The left was embedded in an extensive blood clot, which lay chiefly in front of it; there was a similar extravasation on the posterior aspect of the right. The patient, who was temperate in habits, was suffering from peripheral neuritis and mitral regurgitation. There were no signs of purpura hæmorrhagica or scurvy. A few years previously he had had rheumatic fever. The author had not discovered any aneurysm to explain the hæmorrhage. There were infarcts in the lungs and spleen.

Dr. Newton Pitt cited two instances of perirenal hæmorrhage due to the rupture of aneurysms. In one case, an exploratory operation was performed, on the supposition of the swelling being possibly a malignant tumour. The patient died ten days afterwards from exhaustion, though no attempt was made to remove the kidney. In the second case, a man was admitted with collapse and symptoms of intestinal obstruction. No swelling was observed in the renal region. After death, retroperitoneal extravasation was found to have proceeded from a ruptured aneurysm. He thought that the presence of the infarcts in Dr. Hawkins's case pointed to the possibility of ulcerative endocarditis and embolic aneurysm.

Dr. Hawkins stated, in reply, that there was no ulcerative endocarditis present.

Congenital Cystic Adenoma of Kidney, Etc.

Mr. Edgar Willett exhibited a tumour of the kidney removed by operation from a child, aged 10 months. Death took place eleven months later with extensive recurrence, though the whole of the kidney was removed with the new growth. Histologically he had named it a cystic adenoma, though its recurrence showed that this was erroneous; nevertheless, it was apparently isolated from the renal tissue, and throughout appeared minutely cystic, the spaces being lined with columnar epithelium. He exhibited also the kidney of a young gentleman, aged 19, which had been removed for a large friable tumour. Histologically he had named this a carcinoma, but no recurrence had yet taken place (eighteen months since the operation). In this instance there was no limiting membrane to the growth on the side of the kidney, and there were nodules distributed in the renal substance. Such tumours had been alleged to arise from the Wolffian body, but on this he had nothing to say.

Tumours of the Kidney.

Mr. J. H. Targett gave a lantern demonstration of a series of renal tumours. The two first were examples of adenoma, the spaces of the growth being lined with columnar epithelium; one was removed from a child a year and a-half ago, and no recurrence had taken place. Some such admitted of surgical enucleation, and this operation had been successfully accomplished in certain cases. The other illustrations concerned tumours composed partly of striated muscle and

gland tissue; others of pure sarcomatous tissue; others of a cystic adenomatous kind. In two the disease was bilateral. In one of these the growth filled the hilum, and thence spread by the vessels into the renal tissue; it contained no glandular tissue, but fat and striped muscle fibre.

Dr. SNOW observed that sixty cases of similar tumours had been collected by Mr. Windle, who regarded them as arising in vestiges of the Wolffian body. He had himself proposed to call all tumours arising in embryonic vestiges, blastomata; and he thought the term adenoma ill-defined.

Dr. NEWTON PITT referred to the small adenomata at times met with in the cortex of the kidneys of adults; he did not know whether these were of the same nature; some renal tumours were possibly related to aberrant suprarenal bodies: the small fibromata met with now and then in the kidney might have been glandular in their early stage of formation.

Mr. WILLETT and Mr. TARGETT concurred in the view that the term "adenoma" was quite applicable, though Birch-Hirschfeldt had used that of embryonic renal tumour, and Dr. Paul that of congenital renal tumour.

PERFORATION OF SOFT PALATE IN SCARLET FEVER.

Dr. E. W. GOODALL recorded a series of instances in which the soft palate had been perforated in the course of scarlet fever. He exhibited one of the most marked, which came from a girl of 6 years; during life there had been superficial ulceration of the soft palate and uvula; both tonsils had sloughed. The perforation was through the left anterior pillar of the fauces. He had observed fourteen such cases, in all it was the anterior pillar that was perforated: the perforation took place from the ninth to the twenty-eighth day. He had witnessed similar perforation in diphtheria; but he agreed with Dr. Fowler that perforation of the palate was almost diagnostic of scarlet fever. The perforations might be single or multiple.

MEDIASTINAL TUMOUR.

Dr. J. E. SQUIRE exhibited a typical instance of the above, remarking upon its commonness, though he had not found a large number recorded in the *Transactions* of the Society.

CARD SPECIMENS.

Dr. F. VOELCKER: Uterus Didelphus; Syphilitic Ulceration of the Large Intestine, with Recto-vesical Fistula.

HARVEIAN SOCIETY OF LONDON.

GEORGE EASTES, M.B., F.R.C.S., President, in the Chair.

Thursday, November 1st, 1894.

BACTERIOLOGY IN ITS PRACTICAL ASPECTS.

DR. R. T. HEWLETT read a paper on this subject. He showed the value of bacteriology in commerce, in brewing, in fertility of soils as influenced by nitrifying organisms, and in silk-worm industries. The subjects of antiseptics and aseptics in surgery were next considered, the speaker insisted upon simplicity in all antiseptic methods of treatment. The aseptic system must occasionally break down, no matter how carefully it was carried out, and the antiseptic system was the only logical one and was safer in the long run. Antiseptic solutions were shown to be more powerful in their effects when their temperature was raised, anthrax spores surviving a 36 days' immersion in 5 per cent. aqueous carbolic solution at the ordinary temperature, whereas they were soon killed in that solution at 55°C. This use of hot solutions was of importance where a strong local antiseptic effect was required. Reference was made to such local treatment in diphtheria and tetanus. Dr. Hewlett next showed how we were indebted to bacteriology for the promising antitoxic treatment and he described the principles upon which antitoxins were prepared and referred to their immunising power. He went on to the value of bacteriology in the diagnosis of tuberculous disease, and showed how the inoculation method in that disease was a further development and described the manner in which it was carried out. He would like to see tuberculous disease notifiable, and showed the advances made recently in this direction in New York. He then discussed the value of tuberculin and mallein and showed how the latter was prepared and the manner in which it was used as a diagnostic agent in glanders. He reviewed the diagnosis of anthrax, cholera, diphtheria, and gonorrhœa by the aid of bacteriology, and referred to the excellent facilities afforded in New York for the rapid diagnosis of diphtheria. The effects of sewer gas upon animals were next considered, and it was pointed out that whether organisms were or were not present in sewer gas it had a marked effect in lowering the vitality of animals exposed to its influence. In conclusion the lecturer said that the practical applications of bacteriology bid fair to be much extended in the future and that it was a matter for surprise, if not regret, that no elementary bacteriological course was included in the five years' curriculum. The paper was accompanied by specimens of antitoxin, mallein, and microscopic specimens of various micro-organisms, under $\frac{1}{12}$ inch objectives.

Dr. H. A. CALEY expressed the opinion that one of the most important practical bearings of bacteriology was in relation to the dissemination and prevention of tuberculosis.

Dr. SOLOMON SMITH drew attention to the large *rôle* which was now thought to be played by mixed infections, and inquired whether recent investigations had shown the existence of any companion micro-organism by which the virulence of the "comma" bacillus of cholera was raised to epidemic importance, for it was pretty obvious from the researches which had been made in isolated outbreaks in recent years, and even where no outbreak had occurred, that however important the "comma" might be, it was not by itself the sole cause of epidemics.

The PRESIDENT, Dr. HILL, Mr. SCANES SPICER, Mr. CRIPPS LAWRENCE, and Dr. BOXALL also took part in the discussion.

LIVERPOOL MEDICAL INSTITUTION.—At a meeting on Thursday, November 1st, CHAUNCY PUZEY, F.R.C.S., President, in the chair, Dr. T. B. GRIMSDALE related the case of a lady, aged 34, who was confined of a child, the subject of Ascites and General Dropsy, the mother herself suffering from general anasarca and albuminuria. Labour was difficult on account of the size of the fœtal abdomen, which had to be tapped. The mother recovered completely after delivery. Dr. Abram found numerous lymphadenomatous nodules in the liver and kidneys of the child, and the cells of both these organs were markedly degenerated. The course of events in this case was presumed to be as follows: Disease of fœtal liver and kidneys; ascites; hydramnios; maternal nephritis.—Dr. CRAIGMILE read notes of a case of Acute Ascending (Landry's) Paralysis in a woman, aged 48, in whom there was no suspicion of syphilis or alcoholism. The disease ended in death after seventeen days' illness. Inquiry was made as to the possibility of a dog bite, but with a negative result. No *post-mortem* examination was allowed, so there was no opportunity for investigation as to the presence of any toxin. Remarks were made by Dr. CARTER and Dr. BARR.—Mr. BANKS related the case of a woman, aged 30, who suffered from repeated attacks of Intestinal Obstruction of increasing severity, necessitating at last operative interference. Abdominal section revealed a hard stricture of the small gut, situated about 2 inches from the cæcum. The stricture was cut out and the bowel was rejoined by means of Murphy's button. Leakage occurred from the intestine, and the patient died in thirty hours.—Mr. NEWBOLT made remarks on a case of Excision of Both Knees for Angular Ankylosis. The patient was shown, who, formerly a cripple, was now able to walk well.—Dr. STEEVES read a paper entitled The Infectious Diseases (Notification) Act, 1889: its Application and Results in Toxteth Park Urban District, which was discussed by Dr. CARTER, Dr. HARVEY (M.O.H. Wavertree), Drs. LOGAN, BARR, PAUL, and A. DAVIDSON.—Mr. GEORGE HAMILTON showed Kocher's Artificial Finger and Forceps, a Steriliser for use in private practice, and other Instruments.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—DR. ROBERT BARNES, Honorary President, was entertained at dinner by the Society on November 2nd, and afterwards gave an address on General Physiology and Pathology, illustrated by the study of menstruation and gestation. He dwelt upon the opportunities for physiological observations which would be afforded by experiments upon animals during gestation. A marvellous transformation was wrought in every part of the organism. Every part felt the new impulse. Every

function was doubled. In healthy gestation an exact equilibrium was maintained between the wants of the two organisms, but at times the maternal organs were overtaxed, physiological action passed into pathological processes, and changes in structure took place. He next drew attention to the fact that the mucous membrane of the vagina and rectum showed deep congestive desquamation, which corresponded with the deepened areola and the secretion of milk. We might fairly conclude that similar conditions existed in the mucous membrane beyond our sight. The study of the nervous phenomena of pregnancy went far to elucidate some forms of nervous disease unconnected with pregnancy. After gestation was accomplished there was a sudden fall of tension, and a substitution of absorption for construction. The tide turned from the periphery to the centre, and a new seat of activity was developed, the secretion of milk. The effete tissues were thus got rid of. When lactation was hindered the organs lost their proper mode of relief, the process of fatty metamorphosis was interfered with, involution was hindered, and physiological hypertrophy passed into pathological hyperplasia. Fatty metamorphosis and elimination gave way to fatty degenerations. This was the history of many cases of fatty heart, fatty liver, and Bright's disease. Enlarged heart was apt to persist when lactation had been interrupted. In 1851 he had described fatty and calcareous degeneration of the placenta. In pregnancy calcareous deposits were found in the cranium as well as in the placenta. These were probably part of the ossific material prepared for the building up of the fœtal skeleton. He then touched upon the therapeutical application of forces of gestation. Atrophy was apt to occur when the processes of absorption were carried to excess.

REVIEWS.

FIBROID DISEASES OF THE LUNGS, INCLUDING FIBROID PHTHISIS. By Sir ANDREW CLARK, Bart., M.D., LL.D., F.R.S., late President of the Royal College of Physicians, London, etc.; W. J. HADLEY, M.D., Assistant Physician to the London Hospital, and to the City of London Hospital for Diseases of the Chest, Victoria Park; and ARNOLD CHAPLIN, M.D., Assistant Physician to the City of London Hospital for Diseases of the Chest, Victoria Park, and to the East London Hospital for Children, Shadwell. London: Charles Griffin and Co. 1894. (Cr. 8vo, pp. 208, with 8 coloured plates, charts, and tables. 21s. net.)

We welcome the appearance of this book because it is due to the late Sir ANDREW CLARK's eminence as a physician and as a clinical teacher that some permanent record of his most important piece of pathological and clinical work should be published. He had in his mind for many years, as we have reason to know, the publication of a book upon the subject, and was rather encouraged in this enterprise, than deterred, by the flood of light thrown upon phthisical processes by the discovery of the infective agent in tuberculosis. We gather from the preface that, without being aware of Sir Andrew Clark's intentions, Drs. HADLEY and CHAPLIN had undertaken a special study of fibroid disease of the lungs. During the course of the delivery of some clinical lectures by Sir Andrew Clark, at the London Hospital, some of the cases collected by the other authors of this book were brought under his notice. It is, as Drs. Hadley and Chaplin observe in their preface, characteristic of Sir Andrew Clark that he at once proposed that he should write the book conjointly with his younger colleagues. Before his lamented death the whole of the work, it is stated, had been written, and had been twice revised by all engaged in it. It thus embodies Sir Andrew Clark's latest views upon a subject which he had made his own.

The attentive reader will discover in many parts of the book distinct evidence of Sir Andrew Clark's hand, but especially, perhaps, in the second chapter, entitled "On the Term 'Fibroid Phthisis.'" The term, it is said, "has been widely discussed, inaccurately apprehended, and adversely criticised." What, it is asked, are the criteria of a specific distinction? And the answer is of such wide general application that we may be forgiven for quoting it in full. "If a given group of facts and phenomena is well defined, if it possesses sufficient unity and continuity of history, if its constituents are inter-related and coherent, if it responds in the same general manner to its environments, if throughout its course there can be always predicated of it what cannot be predicated of any other group, then the framing of a specific distinction is not merely justifiable but imperative."

Given the existence of a specific distinction, the propriety of employing a special term follows of necessity. Again we feel impelled to quote the three conditions which are laid down as those to be fulfilled by a good name: "(1) The name should be simple and intelligible; (2) it should be formed out of the unchanging physical characteristics of the group named; and (3) it should neither convey nor suggest any hypothetical explanation of its nature." It is indeed true that if the first instruction to a writer on scientific subjects should be "Verify your references," the second—perhaps the first in order of time—should be "Define your terms." In the next few pages, which are really the kernel of the book, the principles just quoted are applied to the great group of cases included under the term "pulmonary phthisis," which, as is well said, neither suggests nor conveys any hypothesis, but is framed out of the physical characters of the group of facts requiring to be named.

It is contended, and we take this to be the main contention of the book, that a careful study of chronic disease of the lung reveals the fact that the cases fall into two groups, which, when their signs and symptoms and their completed life-histories are contrasted, are seen to be radically different throughout their respective courses, and therefore to demand distinctive appellations. The two groups are of very different size. In the larger group the chief agency in the production of phthisis is the bacillus tuberculosis, and to this group the term "tubercular," or, as we should prefer to say, "tuberculous" phthisis, is to be applied. In the smaller group the phthisis is dependent upon a fibroid transformation, tubercle playing no part in its production. It is this last group which constitutes "fibroid phthisis."

The etiology of the condition is discussed with much impartiality, but the fact that the authors are obliged to fall back upon the existence of a fibroid diathesis cannot but lead to the suspicion that there is yet a good deal to be learnt on this head. This diathesis is defined to be "a vulnerability, or susceptibility of the organism to take on a fibroid process, when the particular organ to become so affected has, by some means or other, its vitality lowered and its nutrition altered." The causes which operate to produce this lowering of vitality and alteration of nutrition are broncho-pneumonia, acute croupous pneumonia, collapse of the lung, and pleurisy, which produce their effect chiefly in early life; while in later life they are, in addition to acute pneumonia and pleurisy, bronchitis, bronchiectasis, injuries, alcohol, and syphilis. Dust, it is held, is only a secondary cause, acting through an antecedent stage of bronchitis. This opinion seems to be very much open to question, and we should have been glad to find it discussed more fully. The book contains an admirable clinical description of fibroid phthisis, and a critical analysis of the signs and symptoms to which it gives rise. A table is given of forty-five cases of pure fibroid phthisis, and is in later pages subjected to a rigorous analysis. A table is also given of thirteen cases of fibroid phthisis complicated with tubercle, and this also is subjected to analysis. The concluding chapter of the book consists of a reprint of the paper on a case of fibroid phthisis, read by the late Sir Andrew Clark before the Clinical Society in 1868.

A historical account of the views of previous writers occupies the first chapter, and forms a fitting introduction to a volume which will be highly valued by every clinical physician.

DONATIONS AND BEQUESTS.—The Blackpool Hospital, which was opened for the reception of patients early in August, has received, through Dr. Kingsbury, the Consulting Physician, the following donations: Anonymous, £1,000; Mr. James Parrott, £1,000; Miss Haworth, £250; Mr. James Higgin, £100.

RECENT REPRINTS FROM THE "BRITISH MEDICAL JOURNAL."

Essays on State Medicine. By Ernest Hart, D.C.L.

Compulsory Vaccination and Small-pox in Relation to Vaccination. 1s.

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Hypnotism, Animal Magnetism, and Hysteria. 1s.

To be obtained at the British Medical Journal Office, 429, Strand, W.C., and of Messrs. Smith, Elder, and Co., 15, Waterloo Place, S.W.

NOTES ON BOOKS.

Grundzüge der Arzneimittellehre: ein klinisches Lehrbuch [The Elements of Therapeutics: A Clinical Textbook]. Von Dr. C. Binz. Twelfth and enlarged edition. (Berlin: August Hirschwald. 1894. Demy 8vo. pp. 345. 5 marks.)—This little book was originally written by Professor Binz to save his students the labour of note-taking, and, further, to spare himself the necessity of going into too much detail in his lectures, thus leaving more time for illustrative experiments and explanations. Its popularity has, however, given it a very much wider circle of readers, and, besides foreign translations, has necessitated no fewer than twelve German editions. It does not profess to be an exhaustive treatise on the therapeutical uses of drugs, but has more the character of a very extended syllabus of a course of lectures. The drugs are discussed according to their therapeutical actions and are considered in large classes, such as antipyretics, astringents, etc., the arrangement professing to be, as far as possible, clinical and practical. A short chapter on prescribing has been added by Dr. Dreser, and the most recent additions to the German *Pharmacopœia* have been incorporated in the work. The latter are of some interest, and include diuretin, kresol, the double benzoate of caffeine and sodium, salicylate of bismuth, and corrosive sublimate tabloids, most of them, if not all, being already well known and largely used in this country.

The Insurance File. (London: W. J. West. 1894. Long Cr. 4to. pp 222. 1s.)—The *Insurance File* is a reprint of all the reports and balance-sheets issued by insurance offices doing business in the United Kingdom. By the aid of photography the reports, etc., are reproduced in reduced *facsimile*; and, to render comparisons as easy as possible, a summary is added giving in tabular form all the important items in the balance-sheets. There is in addition a chapter on the "Salient Features" of insurance offices, containing concise explanations of such terms as "non-forfeiture," "bonus options," "limits of travel." Altogether the *Insurance File* is a useful handbook on all assurance matters.

A Healthy Home. By Francis Vacher, M.D., County Medical Officer of Health for Cheshire. (Office of *Sanitary Record.* Cr. 8vo. pp. 203. 23 woodcuts. 3s. 6d.)—In twelve chapters, written in a popular, clear style, Dr. Vacher gives useful information in the first place as to site, building materials, and construction, and then passes on to warming, lighting, ventilation, drainage, and sanitary appliances. In the eleventh chapter he gives minute directions "how to keep a house clean;" this may be studied profitably by both mistress and maid. The work has a good index, is well printed, and contains, in addition to the above information, a summary of sanitary law as it affects a householder. There is no work occupying identical ground, and it supplements the well-known book, *On Defects in Drainage and Plumbing*, by the same author.

Refraction of the Eye: its Diagnosis and the Correction of it Errors. By A. Stanford Morton. 5th Edition. (London H. K. Lewis. 1894. Cr. 8vo, pp. 72. 3s. 6d.)—The appearance of a fifth edition of this little book is sufficient proof that it is valued by students and practitioners, and that it meets a definite want. The changes in the new edition are not numerous, and consist chiefly in amplification of certain parts, and slight alterations tending to greater clearness of description in others. In the chapter on retinoscopy we notice that the author still states that in making use of this method the observer, if not emmetropic, must correct his error of refraction. This is somewhat misleading, for except in cases of gross ametropia the condition of the observer's refraction cannot affect the results of this test. We can recommend this little book to beginners in refraction work as a useful practical guide.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

HOME CISTERNS.

Captain G. H. Lane sends us a sketch of a method he has devised for separating the drinking water supply from the contents of the common cistern in cases where the supply, as is frequently the case, is too slow to make it practicable to draw from the rising main. He provides a small tank, holding about 2 gallons, so placed within the cistern as to receive all the water as it flows from the ball tap, and from this small tank a pipe proceeds to the drinking water tap. The edge of the tank is 3 inches higher than the level of the water in the cistern; the ball of the ball tap floats as usual on the water in the main cistern. The action is this—all the water flows first into the drinking water tank, and the overflow from this fills the cistern; thus the drinking water is always fresh from the main, and the water in the cistern is by the ball tap always kept at a lower level than that in the tank, which therefore never gets fouled. The cost of fitting this arrangement seems to be small, and as a means of escaping some of the evils arising from a dribbling water supply it seems likely to be effectual. We cannot admit however, that the water companies are doing their duty when pure water cannot be obtained without having recourse to such contrivances. It is, in our opinion, a complete subterfuge and an evasion of the Act to give, under the name of a constant supply, such a mere dribble as necessitates the use of a cistern for ordinary domestic purposes. For the sake of speedily filling a bath, or for safety in the use of hot water apparatus, a cistern may be necessary, but nothing can fairly be called a constant supply which does not enable people to fill their jugs and kettles from a tap directly connected with the main.

COCA WINES.

Looking to the importance that coca wine, like other wines, should be available for the numerous class of persons for whom sweet wines are undesirable or noxious, we have had a series of examinations made of the present coca wines of commerce. They have been examined for sugar, and the following are the results obtained:

	Sugar per cent.
1. Hertz and Collingwood's Tonic Coca Champagne ...	0.17
2. Mariani	2.00
3. Armbrecht	13.00
4. Corbyn	9.90
5. Hall	14.50
6. Lorimer	12.20
7. Vina Coca	4.90

Numbers 2, 3, 4, 5, and 6 are red wines, and with the exception of No. 2 they contain large amounts of sugar. No. 7 is a white wine of the Marsala type, and it also contains a considerable amount of sugar.

AN INQUIRY

INTO

THE RELATIVE EFFICIENCY OF WATER FILTERS

IN

THE PREVENTION OF INFECTIVE DISEASE.

A Special Report to the "BRITISH MEDICAL JOURNAL."

BY

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PART I.

Non-pressure Filters—"Table," "Pocket," and other Portable Forms.

The purpose of the investigations of which this report gives an account was to decide by direct experiment the influence which the various domestic filters in common use exert in the purification of water, and to learn how far they may be trusted to prevent the communication of disease through the agency of water. This is a question which affects not merely medical men, among whom the most varying opinions are held as regards the utility of such filters, but also the general public, who, as a rule, purchase these filters without consultation with their medical advisers, and value them according to the extent and nature of the claims made by the makers, the distinguished persons who are said to be using them, and the number which are stated to have been sold.

Filters are used for the purpose of subserving one or more of the following purposes:

1. To remove all suspended material visible to the naked eye.
2. To chemically alter water, as in the case of hardness due to lime, etc.; or to retain metals such as iron, lead, etc.; or to remove organic matter present in solution.
3. To aërate water, and thus render it sparkling and more palatable, especially in those cases where boiled or rain water has to be used for drinking purposes.
4. To remove micro-organisms from the water, especially those concerned in the spread of disease.

It may be stated at once that many of the filters which are here reported upon function very perfectly as regards one or more of these purposes (Nos. 1, 2, or 3), and, unfortunately, the testimonials given appear in almost all cases to be founded only upon the tests made to determine their action in regard to these three points, whilst the general public suppose, and very naturally, that the commendations refer also to No. 4—that is, in providing a safeguard against the passage of disease organisms.

In this connection we must point out the misleading nature of the testimonials given, often by eminent analysts and medical men, some of them evidently written many years ago, before bacteriological methods were in the habit of being applied to water, and even some of later date, when the method of such analysis was still imperfectly understood. As regards the conversion of a dangerous water into a wholesome one by the reduction of the organic matter present through the action of any of these filters, the out-of-date character of these testimonials cannot be too strongly insisted upon. The chemist no doubt, by informing us of the amount of organic matter present in water, places in our hands evidence of its dangerous or suspicious nature; but the removal of these substances does not necessarily imply the elimination of the real source of danger, as organic impurity is simply an indication of probable sewage or other contamination. It is now indeed generally accepted amongst hygienists that the small excess of organic matter which converts a good water into a bad one (in the opinion of the chemist) is not of itself capable of exerting any directly injurious influence, but merely of acting as an indicator that the water is probably open to contamination with sources of infective disease (microbes), or that the presence of this organic matter may, perhaps, render the water a more suitable medium for the growth of pathogenic organisms, should these gain access to it. Accordingly, any conclusion such as is drawn by the filter makers and the general public as regards the conversion of a dangerous into a wholesome water by the mere diminution in the amount of organic matter present, is based upon absolutely erroneous data, as such water can only be rendered harmless by the removal of the sources of danger present in it, that is, the micro-organisms.

We deal here only with No. 4, as being the function with which we are chiefly concerned from the hygienic point of view, as our present object is to determine precisely what safeguard each filter offers against the communication of disease. In every case we shall specify exactly the claims of the vendors or manufacturers of the filters, and then state how far these claims conform with the facts elicited by direct experimentation. In not a few cases the filter vendor, in his circular, points out the dangers of blood poisoning, and indeed of all the probable and improbable diseases which may originate from the drinking of impure water, or even in the use of filters supplied by other makers, which they maintain may actually greatly increase the danger, owing to their imperfect nature, as a consequence of which "it becomes easy to understand the terrible fact that the very filters relied upon as safeguards are frequently themselves actually the direct cause of blood poisoning." As most of the well-known firms are great sinners in this respect, it is unnecessary, and would perhaps be invidious to individualise. In other circulars the statements are so general that we have not thought it expedient to quote them in detail; but inasmuch as the filters advertised are recommended as suitable for the purpose of purifying water and thereby rendering it suitable for drinking purposes, the necessity for reporting on these filters is obvious. In other cases, however, although no absolute statements are made by the filter makers as regards freeing the water from disease germs, the chief object of the filter being to aërate the water and render it pleasant and sparkling to drink, an examination and report on such filters was none the less necessary, as the general public naturally assume that even filters of this kind will confer a certain protection against disease organisms which may be present in the unfiltered water. In only one instance do the makers state expressly the incapacity of their filter to arrest germs.

General Structure and Mechanical Details of Filters.

In making a selection of filters for examination, we were guided by two principles: (1) We endeavoured to obtain a specimen of every filter that is in extensive general use. In

order to obtain evidence on this point we made careful inquiries at the chief depôts, stores, etc., in London and elsewhere, as to which forms were most in demand. (2) We then made a collection of every type of filter which differed in any way, either in principle or in construction, as regards the material used or the way of using it, from any of the forms that we had already obtained. Thus in many cases filters which are absolutely identical as regards their essential structure are fitted with different casings, the filtering medium employed (usually a charcoal block) being obtained frequently from the same source, the earthenware jar or case, however, differing according to the taste or exigencies of the individual manufacturer or vendor. In obtaining information on these points, the assistance of several experts saved us much unnecessary labour.

We were thus able to obtain filters in which the following materials were used as filtering media :

1. Carbon in its various forms, either pure or compounded with some other chemical substance, as in the case of the silicated or manganous varieties :
   (*a*) As blocks, or in the powdered or granular form, used either separately or in combination.
   (*b*) Charcoal as fine powder deposited on asbestos cloth or placed in the interior of a stone block.
2. Iron in the form known as *spongy iron* or as *magnetic oxide* either :
   (*a*) Alone, or
   (*b*) Along with asbestos cloth.
3. Asbestos in various forms, either :
   (*a*) Alone as a fine film, or
   (*b*) As a film in combination with cellulose.
   (*c*) Along with some finely powdered or granular medium.
4. Forms of prepared porcelain and other clays.
5. Natural porous stone, either :
   (*a*) Alone, or
   (*b*) With other substances such as powdered carbon, etc.
6. Compressed silicious or diatomaceous earths.

After most careful inquiry we have come to the conclusion that we have here specimens of all the materials and combinations of materials that have been used to any extent in the construction of filters.

This is, perhaps, the most convenient place in which to refer very briefly to the differences in the mechanical details of the different filters.

Taking, first, the "table" filters, one is at once struck by the almost invariable inefficiency of the plug by which the filtering block is fixed into the bottom of the funnel, and through which the delivery pipe passes into the receiver. In nearly every case the substance employed was a cork, usually of very inferior quality, so that in order to avoid the possibility of leakage, and to make certain that we were testing the absolute filtering value of the block under examination, we were obliged to make the joint perfect with a luting of shellac or electric cement. The junction between the delivery pipe and the filtering block, where such was used, was usually equally imperfect, and required similar treatment. In many cases such imperfect corks were replaced by tightly-fitting india-rubber bungs. Assuming that these filters possessed the power of arresting the microbes present in the water, the fittings as sometimes sent out, and certainly in the course of time in the case of others, would in many cases allow of the direct passage of unfiltered water from the upper reservoir to the lower receiver, thus frustrating the whole object of the filter.

In the case of the larger filters the taps are usually fitted into the receivers with corks which here also are open to the above-mentioned objection, in addition to which, as the filtered water lies in contact with them for some time, they must form very favourable breeding grounds for microbes, and so greatly enrich the bacterial contents of the water that is about to be drunk. Some of the filters were fitted with india-rubber corks, and these are to be preferred; but perhaps the best form of fitting that was sent out with any of the filters was a tap with a screwed stem, provided outside the filter and behind the shoulder of the tap with a washer of india-rubber, and a nut inside the filter, which when tightened fixes the tap in position, a minimum surface of the india-rubber being thus in contact with the water in the receiver.

Even the general public have now become alive to the fact that filters require frequent cleansing, on account of the unpleasant taste imparted to the water by a dirty filter. In spite of this now being generally recognised, the facility with which this cleansing may be carried out varies enormously in the different types of filter. Some are still constructed in such a manner that the removal of the filtering medium by the user is a matter of the utmost difficulty. Others, indeed, have the parts so fixed that the filter can only be cleaned and renewed by the makers; this being no doubt explained in some cases by the contention of the manufacturers or vendors that the filters are self-cleansing, and never get out of order.

Although no doubt considerable differences may be observed as to the period that the filtering media remain "sweet," it must be borne in mind that the organic matter must either be retained in the filtering medium and undergo its normal decompositions *in situ*, or, as is probably the case in the so-called "self-cleansing" forms, pass through directly. Thus a self-cleansing filter must, from its very nature, have little or no filtering action.

We have also evidence that even the same filter block as supplied by any manufacturer varies within very wide limits as regards the fineness of its pores, as indicated by the amount of water that passes through in a given time. It has also been observed on several occasions that the permeability of the blocks seemed to be—at least initially—increased when kept in continuous use for some time. In addition to this, however, other factors beyond our control no doubt come into play in determining the amount of water passed in a given time, so that the figures given in the accompanying table must neceessarily be taken as being merely approximate. Thus, for instance, the fact whether the upper reservoir is constantly replenished so as to keep up the maximum pressure naturally exerts a very important influence on the rate of outflow, whilst the size of the filter is, of course, of prime importance. It must be remarked, however, that the rate of flow bears no necessary relation to the efficiency of the process of filtration, as some of those filters which functioned most imperfectly as regards their filtering power had an exceedingly restricted rate of outflow.

Under the heading of mechanical details it is convenient to consider the power possessed by the various filters of keeping back fine suspended matter, which, previous to the "bacteriological era," was the only criterion by which filters could be properly tested. Although we can now place no reliance on this method of testing, still, inasmuch as the passage of the larger particles through a filter at once placed such filter out of court, we have utilised the method in carrying on rough preliminary experiments, as at once affording evidence as to the mechanical efficiency of the different filters. The substances used in these experiments were the finest gunpowder charcoal (Enfield) (particles 24 μ to 0·9 μ); artificial ultramarine (particles 16 μ to 0·6 μ, or even less in diameter) in suspension; and milk (minute granules and globules of fat 0·5 μ to 30 μ or more in diameter) freely diluted with water.

It should be noted in the case of ultramarine, that its absence from the filtrate of the spongy iron filter may very possibly be due to a chemical interaction. The filter received repeated charges of these suspensions, as we observed, in the case of ultramarine, that this substance sometimes appeared in the filtrate only after the lapse of a certain time, the colour being detected only with certainty when a column of the filtrate was examined in a glass vessel. These repeated chargings could not, however, frequently be carried out in the case of the milk test, as the filtering medium became clogged as in the case of the Wittmann filter, so that the negative result recorded cannot be regarded as altogether satisfactory. The number of crosses in the table indicates in each case the larger or smaller amount of the substance which appeared in the filtrate.

In the following table are given the results of these experiments, along with the rate of filtration and the proportion of organisms which are allowed to pass through the various filters, as measured by enumerating the number of colonies developed in gelatine plates inoculated with a definite quantity of the filtered water. The filters were first sterilised in order to get rid of any micro-organisms

that might already be present, and then ordinary tap water was passed through them, and a comparison was made between the number of organisms in the filtrate with the number in the tap water, and from this was computed the percentage passed. These numbers are of course only approximate, especially in those cases where only a small proportion of those present passed into the filtrate. There are also other factors, such as the influence exerted by the depth of the filtering medium on the time required for the organisms to be washed through into the filtrate, which prevent any comparisons of this kind being absolutely accurate, but these disturbing factors are considered in greater detail elsewhere.

TABLE 1.

Name and Type of Filter.	Time (in Minutes) required for Filtration of 1 Pint of Water.	Presence or Absence of Carbon in Filtrate.	Presence or Absence of Ammonia in Filtrate.	Presence or Absence of Milk in Filtrate.	Percentage of Organisms per c.c. still found to pass into Filtrate.
Silicated carbon table filter (glass)...	68	0	+	+ + +	7
,, Ascension table filter (glass)	120	0	+	+ + +	16
Silicated carbon pocket filter ...	Not recorded	0	+(?)	+ + +	Not recorded
Doulton's pint table filter (solid block)	27	0	+	+ + +	20
Doulton's pint table filter (solid block and granular carbon)	18	0	+	+ + +	13
Doulton's carbon bottle filter ...	13	0	0 (?)	+ + +	17
,, natural porous stone bottle filter	15	0	0 (?)	+ +	31
Doulton's pocket filter...	Not recorded	0	+	+ + +	Not recorded
Maignen's domestic Filtre Rapide...	4	0	0	+ +	0 (?)*
,, table Filtre Rapide (glass)	32	0	0	+ +	4
Atkins's Admiralty filter (No. 1) ...	5	0	+ +	+ + +	20
,, pocket filter	Not recorded	0	+	+ + +	Not recorded
Nibestos filter	6	0	0	+	7
Fr. Lipscombe and Co., new patent cylinder filter	28	0	+	+	10
Fr. Lipscombe and Co., table filter (solid block)	30	0	+	+	15
Lipscombe Filter Company, table filter (powdered and granular charcoal)	7	0	+	+	30
Lipscombe Filter Company, table filter (solid carbon block)	16	0	+	+	25
Spencer's magnetic domestic filter	9	+	+ + +	+ + +	15
Spongy iron table filter (glass) ...	14	0	0	+ + +	6
,, table filter (porcelain)	17	0	0	+ + +	10
Morris's 2-gallon domestic filter ...	2½	0	+ + +	+ +	12
Cheavin's Idiocathartes domestic filter	4	+	+ + +	+ + +	37½
Crown Filter Co., table filter (quart)	3	0	+	+ +	28
Barstow's table filter (quart)... ...	35	0	+	+ +	27
Alcarazas domestic filter, No. 1 ...	57	0	0	+	0 (?)*
Slack and Brownlow's compressed charcoal domestic filter	1	0	+	+	28
Wittmann's charcoal vase table filter	10	0	0	0	0 (?)*
Defries and Son's carbon block glass table filter	19½	0	+ +	+ + +	24
Pasteur-Chamberland filter (single candle, style F.)	120	0	0	0	0
Berkefeld filter (single candle, No. 13)	140	0	0	0	0
London Pure Water Co., cistern filter	Not recorded	+	+ +	+ + +	Not recorded
Maignen's field service Filtre Rapide, A.M.D.	Not recorded	0	0 (?)	+ +	Not recorded
Silicated carbon syphon filter, A.M.D.	Not recorded	0 (?)	+ +	+ +	Not recorded
Stoneware filter with spouge plug, A.M.D.	Not recorded	+	+ +	+ +	Not recorded
Morris's 4-gallon domestic filter. A.M.D.	Not recorded	0	+	+	Not recorded

*As the number of organisms found in the gelatine plates came within the range of experimental error, a positive result could not be recorded, but, as will be seen later, when treated with suspensions of the test organisms, all these filters allowed of their direct passage.

From this table it is at once evident that any filter which allows of the passage of the particles of any one of these substances fails to keep back micro-organisms, but the converse does not necessarily hold good that if these particles are kept back micro-organisms are also intercepted.

Principles on which the Method of Testing Filters is Based.

The questions involved in the possible passage of a disease germ through a filter are partly physical in their nature and partly biological. Inasmuch as the disease germ has a certain size, shape, and weight, it conforms physically to any other material body having similar characters; but, on the other hand, as a living organism, in virtue of its motility and power of growth, it may comport itself under certain circumstances quite differently. The method too frequently adopted, at any rate in this country, of testing filters, consists in applying to them a fluid containing very fine particles in suspension, such as are obtained by the addition of ultramarine or barium sulphate to the water which is to be subjected to filtration. The obvious objection to applying any results obtained in this way to what would happen in the case of micro-organisms, arises from the fact that, first, the size of the particles varies greatly, and we do not know how far these particles approximate in size to the microbes in question: secondly, these chemical bodies may comport themselves quite differently as regards being mechanically entangled in the meshes of the filtering framework, or retained by the "surface action" of the walls of its channels, from the organic matter of the living microbes. Although, however, we cannot make use of the physical properties of the microbe in applying results obtained from similar small particles to what would occur in the case of living micro-organisms, we are quite justified under certain conditions in concluding that when any microbe of similar form and size *directly* traverses the substance of the filter, a corresponding disease germ would comport itself in a similar manner. In order that we may, however, more clearly realise the methods on which a filter is to be tested, we must consider briefly the way in which we suppose those filters which undoubtedly—at any rate temporarily—arrest the passage of germs are supposed to act.

No doubt the theoretically perfect filter would be one which might, so to speak, be infinitely thin, inasmuch as its meshes would be so close as to prevent the passage of any micro-organism. On the other hand, the physical conditions in this case would probably prevent the passage of the water, certainly at any of the ordinary pressures at our command. It is not, however, contended by the inventors of any of those filters which undoubtedly at first give germ-free filtrates that the pores are of so fine a nature as to act in this manner, but it is assumed rather that the microbes are arrested in the channels by a process of surface attraction (fliichenattraktion) as it is called. It seems to us, however, very probable that the arrest of the microbes depends also in great part on a process of entanglement of the organisms in the channels of the medium. The organisms which are arrested in either of these ways in the substance of the filter are not killed, but may, under certain conditions, grow through and appear in the filtrate, which proves that the diameter of the pores is larger than the diameter of the microbes. This growth of the organisms usually present in water through the walls of all the filters which have as yet been subjected to scientific examination may occur even in the course of three or four days according to the conditions present, and it is as regards the significance of this fact that the difference of opinion in estimating the value of such filters in protecting from the passage of disease germs that a certain amount of divergence of scientific opinion still exists. We have to determine whether disease organisms, such as those of cholera and typhoid fever, can, in the course of time, traverse the walls of the filter in a similar fashion to the organisms normally occurring in water, and, if so, whether such conditions would actually occur under the circumstances in which these filters are ever brought into operation, and whether such growths can be arrested by any convenient means of cleansing not injurious to the filter. This question is of interest only as regards those filters which give a sterile filtrate when first put into operation, and will be discussed in full detail when we come to the consideration of such filters.

We shall now consider briefly the different ways in which

a filter may function imperfectly and the causes to which they are due.

1. A filter when treated with a fluid containing micro-organisms may permit them to pass directly through the filtering medium into the filtrate. In this case it is obvious (unless the fittings are imperfect and allow part of the water to escape the filtering process) that the filtering substratum is itself pervious to the organisms, from the fact, in all probability, that its pores are much too large to exert their specific influence in arresting the microbes. This is the regular method of testing a filter, and unless a filter comes up to this standard it must be at once rejected. The process is usually carried out as follows: A culture of a well known and easily recognisable microbe is added to a quantity of sterile water, with which the filters to be examined are now fed; naturally an organism is chosen which it is highly improbable could have been originally present in the filter, otherwise this danger may be entirely obviated by previously submitting the filter to a process of sterilisation. The microbes usually selected for this purpose are such as produce striking colours by their growth, and are thus easily recognised, for example, micrococcus prodigiosus, bacillus violaceus, and staphylococcus pyogenes aureus. Any filter which permits the direct passage of such microbes may be at once dismissed from further examination, as we may at once conclude that it would comport itself in a similar fashion towards disease germs; but in order that there should be no dubiety upon this question, each filter, in addition, has been treated with suspensions of the bacilli of cholera Asiatica and of typhoid fever, which passed through into the filtrate in a similar fashion.

2. Filters which have passed the first stage and have given a sterile filtrate when treated directly with microbe-containing fluids, may in course of time, under continued use, manifest their presence; this may be due to one of two causes.

a. It may occasionally happen that an imperfect filter can at first give a germ-free filtrate, owing to the fact that the filtering medium must receive a succession of charges, in order that the organisms may be washed through into the filtrate; this cannot occur, however, if the precaution be taken of collecting samples only after the filters have received a number of charges, unless in the case of those which filter extremely slowly.

b. The appearance of the microbes in the filtrate after continued use may be due to structural imperfections in the filtering medium which have been induced during its use,[1] such as cracks or faults in its substance. This is especially liable to occur in the case of those composed of compressed asbestos, and is attributed chiefly to changes in the water pressure to which they are subjected gradually breaking down their finer texture. Such a filter has then been reduced to Class No. 1, and if sterilised and treated with a suspension of our test microbes, should now allow of the direct passage of the organisms.

c. The organisms originally present in the water may gradually grow through the substance of the filter, and thus appear in the filtrate. This under certain circumstances occurs in the course of time in the case of all filters with more or less rapidity, according to the conditions to which they are exposed.

The conditions which chiefly influence the growth of bacteria through a filter appear to be the following: First, the temperature—the higher this happens to be (within reasonable limits) the more rapidly they grow, as the conditions are more favourable to their multiplication; secondly, the intermittent use of the filter—this allows the organisms time to develop undisturbed, and also probably aids in their detection by preventing their being washed away; an intermittent use of a filter also tends in most instances to induce the the growth of micro-organisms, by the water in the filter attaining a higher temperature than that which it originally had: thirdly, the nature of the organisms present in the water exerts a great influence on the rapidity with which they traverse the walls of the filter. Naturally only those which multiply readily in the fluid can effect a passage, and of such micro-organisms those which are actively motile probably possess a certain advantage. On the other hand it has been suggested that motile organisms which possess flagella will on that account be more readily retained in the channels of the filtering medium.

The question now comes to be, would pathogenic organisms—disease germs—grow through the filter like the water organisms are able to do, and eventually appear in the filtrate? We know that many of the conditions which allow of the multiplication of the water organisms and favour their passage through the filtering substratum, would be wanting in the case of the much more susceptible and fastidious pathogenic germs. This question had not yet, in our opinion, been definitely decided, and still required further experimental investigation. Kubler assumed that the pathogenic organisms would comport themselves like the water organisms in growing through the filter; and Kirchner states that in his experiments they passed through into the filtrate, but unfortunately his suspensions of pathogenic organisms were obtained by the addition of broth cultures to water, and the addition of this highly nutrient fluid to the water of course introduces quite a new factor into the experiments. Grüber and his pupils, on the other hand, maintain that neither typhoid nor cholera bacilli are able to grow through the walls of a good filter. It was found that when the filters were fed with suspensions of these organisms in water obtained from the surface of an agar culture the filtrate remained free from them even up to the twentieth day. If, however, during the course of the experiment a small quantity of broth was added to the suspensions of the germ, the organisms appeared in the filtrate in the course of three or four days, but again gradually diminished in number if no more broth was added to the water. In Grüber's opinion the addition of the broth raised the nutrient capacity of the water to the same standard as regards disease germs as it originally had naturally for water organisms, but that direct experiment had convinced him that even the most impure potable waters, or even diluted sewage such as occurs in the sewers of Vienna, did not supply the conditions necessary for the passage of these organisms through the walls of the filter. We shall, however, return to this subject when we repeat the experiments on the filters in question.

It is, therefore, already quite obvious that we must draw a great distinction between those filters which allow of the passage of microbes into the filtrate due to cause *b* or to cause *c*, and we may briefly indicate here the means by which we can discriminate between these two causes.

1. Where the passage is due to growth through the filter, the organisms appear first in the filtrate after a certain definite time, according to the conditions to which they are exposed; and, when the filter is again sterilised, these appear in the filtrate only after the lapse of a similar interval. On the other hand, as already remarked, if the passage of organisms is due to an imperfection which has been induced in the filtering substratum by the sterilising process, the organisms appear at once in the filtrate. 2. As the passage of the microbes is due in the one case to their direct and continuous growth, if the filter and the water with which it is supplied is retained at a sufficiently low temperature, the filtrate obtained may remain sterile for an indefinite period. The quality of the filtrate obtained from imperfect filters, as the question here is purely a mechanical one, is not affected by the temperature at which they are held. 3. In the case of growth through the filter the number of organisms in the filtrate bears no relation to the number originally present in the water supplied. In addition, if the species which first appear in the filtrate are examined, it will be found that some of those species present in the original water appear much sooner than others; and usually not all the species originally present in the water, but only certain forms, appear able to grow through the walls of the filter. Where, however, the filter itself is faulty, the number of organisms found in the filtrate bears a direct relation to those present in the water from which they are obtained, and the different species occur in relatively similar proportions. 4. In the case of intermittent filtration, where the organisms have grown through the filter, we obtain a much larger proportion of organisms in the first portion of water which is passed through each day, as this contains most of the organisms which were in a position to be easily washed through, and as a consequence, under

[1] Such flaws or imperfections may, for example, be induced in certain cases by the process of periodical sterilisation by heat, which it is usually recommended a filters should undergo.

continued filtration, these diminish in number. This is not nearly so marked a feature in the case of imperfect filters.

Methods Employed in Testing the Filters.

From a purely scientific point of view any one of the first three tests employed would have sufficed in order that we might come to a definite conclusion as to whether a filter prevented the direct passage of micro-organisms, in which case we should only have had to investigate the further question as to whether or no disease germs could in course of time grow through the substance of the filter. In every case, however, the filters were treated not merely with one of the usual test organisms (No. 1), but in addition were tested with cholera and typhoid fever bacilli, in order that there might be no question as to the possible passage of these organisms. The fourth test to which they were subjected was to treat them from day to day with water, so as to make the conditions as much as possible like those that occur when used for household purposes, in order that we might ascertain how far the filtering medium served as a breeding ground for the water organisms, since we know that under such circumstances the numbers of organisms in the filtrate may be actually much greater than those present in the water with which they were supplied.

No. 1.—Staphylococcus Pyogenes Aureus and Yeasts.

In testing the filters as regards their power of keeping back organisms in the usual manner by means of a chromogenic organism (staphylococcus pyogenes aureus) it occurred to us that we might perhaps grade off the filters into different sets according as they allowed still larger organisms to pass. For this purpose the yeasts naturally suggested themselves as organisms which from their varying size would readily lend themselves to our purpose. A few tentative experiments, however, convinced us that a simple mixture of the staphylococcus pyogenes aureus and a white yeast supplied us with all the information that could be obtained in this way. The size of the staphylococcus varies from 0.75 μ to 1 μ, while the white yeast is usually 3 μ in diameter with a small proportion, one in every 10 or 15, of about one-third that diameter. This mixture supplies us with very interesting information, inasmuch as by comparing the relative proportions of these two organisms present in the fluid before and after filtration, we are able to come to a conclusion as to the relative preponderance of the channels of these two sizes, should such happen to be present in the filter. Thus, in several cases where the filter permitted of the passage of only a very small proportion of the organisms present in the fluid with which it was fed, but in almost their normal proportions, we were able to conclude that their passage was due to a small crack or fault, so to speak, in the filtering mechanism. The passage of the yeasts also afforded us a means of forming an opinion as to the passage of such amœboid bodies as are associated with malaria, and also, perhaps, as to the ova of certain of the tænia (tape-worms). The size of the malaria parasite, according to most observers, varies according to its age, from 1 μ to 10 μ, while that of the ova of the various tænia, although probably much larger, does not appear to be quite definitely settled. This question is of most importance as regards pocket filters, which are frequently used to exert their supposed purifying influence upon waters of a most suspicious nature.

The method by which our suspension of test organisms was obtained, not only in this case, but also in Nos. 2 and 3 was as follows: Fresh agar cultures of the organisms were treated with small quantities of sterile distilled water, and from the fine suspension of the micro-organisms obtained by gentle agitation of the tube, definite quantities were added to each litre of sterile tap water. In this way as little nutrient medium as possible was added with the organisms to the tap water, so that this factor, which in some cases might be of importance, was to a great extent eliminated.

No. 2.—Cholera.

The filters were each treated with sterilised tap water containing a fine suspension of cholera bacilli made as above. The first filtrate obtained was not usually taken for examination, as early in our experiments we observed that this, sometimes, was comparatively poor in the test organisms, whereas later they occurred in much larger numbers. This is shown very clearly in the case of those filters which were examined on two successive days, as although on the second day the filters were fed with sterilised water without the addition of cholera, the number of colonies originating from 1 c.c. of the filtrate had very much increased. In consequence of this the filtrate first obtained was repassed through the filter several times before the sample was taken for examination and cultivation purposes.

We have also made an attempt to determine how long the cholera microbe would remain alive in the filtering medium and capable of infecting the water when fed with what is considered a good potable water. On the second and each succeeding day for a week the filters (ten in number) were fed with unsterilised tap water and a portion of the filtrate taken and incubated by Koch's method for the separation of cholera bacilli from water. We modified Koch's method in one particular: instead of adding the 1 per cent. of peptone and of common salt in its solid unsterilised condition, we made up a concentrated solution of these two ingredients—which was then sterilised by heat—and added the required quantity of this to the water to be tested: this mixture was then incubated at 37° C. We found this a distinct advantage, as we were thus able to reduce the number of foreign organisms which were present along with the cholera microbe. The surface of the fluid, in which the cholera bacilli specially collect, was then examined from time to time for the presence of cholera bacilli while undergoing incubation at this temperature. In all ten filters used cholera bacilli could be demonstrated with more or less ease up to the eighth day; after that the experiment was continued with two of the filters only, namely, a Lipscombe and Co.'s filter, as representing the carbon block type, and a Maignen's Filtre Rapide, as representing the combination of asbestos cloth and powdered charcoal. These two were examined at intervals for over a month; and, although cholera was demonstrated sometimes only with considerable difficulty, secondary inoculations from the first fluids incubated being sometimes necessary, we were still able to separate it out in gelatine plates and cultivate it on the various media necessary for its cultivation and recognition.

The importance of this is at once obvious, when we consider the conditions under which cholera is propagated. Leaving out of consideration altogether the contentious question as to how far cholera bacilli can multiply in a potable water, or in the slimy mass of organic matter which accumulates in the substance of the filtering medium, and supposing only that instead of the consumer getting all the cholera bacilli at one dose, so to speak, they receive instead smaller quantities distributed over a longer period, let us consider what the probable difference in the risk would be. The history of cholera epidemics in former times indicates clearly that the human subject is not at all times equally susceptible to the disease; although the whole community may have been equally subjected to the infective agent (contaminated drinking water), yet only a certain proportion have been attacked, and these at different periods, which suggests that the organisms are able to set up the disease only under certain conditions which probably consist in a disordered condition of the *gastro-intestinal* tract.

The perverted action of the stomach would probably influence the acid secretion of the gastric juice through which the bacillus may then pass uninjured, and thus the distribution of the dose over a more lengthened period would appear greatly to increase the risk of infection. It would seem, also, that a disordered condition of the intestinal mucous membrane (probably resulting in a serous effusion) is also usually necessary for the disease to be set up. Thus recent observation made by Metchnikoff and others, that cholera bacilli may be demonstrated in the intestinal excretion of apparently healthy persons for several weeks without giving rise to the disease appears to us to establish this point quite conclusively.

This power of multiplication of the cholera organism in the contents of the apparently healthy intestinal tract is probably also of great importance in relation to the dose necessary to ensure infection—a factor which we must now take

nto consideration. It is now recognised that in a number of diseases a certain number of organisms must be introduced to set up infection, whilst a smaller dose may only set up a passing indisposition, in fact may act as a vaccine. This, no doubt, holds good as a general rule where the microbe is introduced directly into the living tissues, and the vital activity of the cells comes into play; but it is probable in the case of such pure intoxications as cholera, or such a disease as typhoid, where the microbes can multiply undisturbed in the intestinal tract, that the quantity primarily introduced is a matter of little or no importance. We must accordingly conclude that the danger to the individual is immensely increased by spreading the dose of cholera over a more prolonged period, as in this way the material may be ingested at a moment when the conditions are favourable for their escaping the action of the gastric juice, and thus entail the possibility of the production of the disease; while the diminution in the number of organisms ingested involved in the distribution of the dose over a longer period probably exerts no influence on the risk of infection or the gravity of the disease which is set up. This danger of all imperfect filters, when once infected with a disease organism, of continuing to infect the water for a more or less varied period is most marked in the case of pocket filters, as when these have once become infected the disease germ may be carried for indefinite periods from place to place.

No. 3.—Typhoid.

The filters were each treated with sterilised tap water containing a suspension of typhoid bacilli, obtained in the usual manner from an agar culture. When this had been passed through the filter two or three times, a sample was taken and gelatine plates were made from 1 c.c. of the filtrate. Inoculations were made from the colonies which appeared in these plates on potatoes and milk, in order to demonstrate with certainty that this was the organism of typhoid fever. As we have, in the case of typhoid, no method similar to that which Koch has elaborated for the separation of cholera from suspected waters, Parotti's method, which we consider the best of those at present at our disposal, being very unsatisfactory—we are unable to carry out our experiments, as in the case of cholera, with unsterilised tap water to decide as to how long the typhoid fever bacillus could remain in the filter when in the presence of other water organisms. We have, however, carried out the experiment with *sterilised* tap water in the case of a carbon block from the Silicated Carbon Company, which we specially fitted up in a glass cylinder, closed at its other extremity with a cotton-wool plug, in order that extraneous organisms might be kept out for as long a period as possible. This block, which had been treated on the first day with a suspension of typhoid bacilli in sterile water, and on succeeding days with sterile water alone, up to the eleventh day showed innumerable colonies of typhoid bacillus; but at this point the presence of other organisms, which had obtained an entrance from outside, interfered so seriously with their demonstration that the experiment was brought to a close, although no doubt, as in the case of cholera, the disease germ would remain capable of infecting the water for a much longer period of time than we were able to demonstrate.

No. 4.—Water.

In these experiments the filter was first carefully sterilised, and as this sterilisation in some cases presented considerable difficulties, in order that we might be quite certain of its condition, sterile water was passed through the filter and plates were made from the filtrate before the crucial experiment was made, always with negative results. The sterilised filter was now fed with the tap water of the laboratory, and after receiving five or six charges, a sample was taken from which gelatine plates were made. In some cases a sample was taken from the very first water passed and this was naturally in most cases poor in organisms as the greater number of these were still retained in the upper layers of the filtering medium. On the succeeding three days two sets of plates were usually made on each date, the first sample being that collected from the first portion of water passed through the filter early in the day, the second being collected after the filters had received nine or ten charges of the tap water in the course of the day. In the first sample taken from the second day onwards we obtained not merely the organisms present in the tap water which had been passed through the filter but, in addition, many of the organisms which had been retained in the filter on the previous day and had undergone multiplication in the body of the filter. The second sample taken from the filter gives one a good general average of the bacterial contents of such a filter working under the most favourable conditions as regards continuous daily use. These experiments were continued only up to the fourth day, but they indicate sufficiently clearly how rapidly the substance of the filtering medium under examination becomes contaminated and able to add to the bacterial contents of the water. We have, however, had an opportunity of investigating several filters which had been in constant use for several months without intermission and the results obtained from these apply without doubt to those which we have had under observation.

The first two filters recorded in the following table had been in constant use in large public buildings for five or six months, while the third was one of unknown origin in private use, which had been in operation, without being cleansed, for a much longer period.

Table II.—*Tap Water.*

Name of Filter.	Average Number of Organisms per c.c Present in the Filtrate.	Average Number of Organisms per c.c. Originally Present in the Tap-Water.
Silicated Carbon Domestic Filter ...	800 to 1,000	30 to 40
Atkins's Admiralty Filter	600 to 800	40 to 50
Carbon Block Table Filter (unknown origin)	5,000 to 6,000	20 to 30

It might at first sight appear of little moment whether the number of water or putrefactive organisms were few or many in the fluid which we drink. We must remember, however, that owing to the processes of cooking, etc., to which most of our food is subjected, it is ingested in a more or less sterile condition: and that, accordingly, the number of organisms which we are usually in the habit of taking into the alimentary canal is by no means so great as one might at first sight suppose. The importance of sterilising the milk that is to be used for feeding children is now everywhere recognised. It has also been frequently observed that individuals who are in the habit of only drinking water which has been previously boiled, or who habitually drink mineral waters which contain few or no living micro-organisms, often suffer from gastro-intestinal disturbances when they happen to drink other waters. Whether this has become an acquired susceptibility of these individuals or not, is of no importance; it indicates, at any rate that the presence of such micro-organisms is not quite a matter of indifference. The organisms present in water have a much better chance of passing unscathed through the stomach to the alkaline contents of the lower straits of the intestine than those present in any other articles of diet. Thus we may frequently partake of water between meals when the stomach is empty, and this may be passed on into the intestines unaffected by the gastric juice, as has been clearly shown in some experiments made by MacFadyean,[2] to which far too little attention has been paid. He found that when he fed fasting animals in the early morning with suspensions of cholera bacilli in water, the bacilli passed in a living condition into the intestines, whereas if they were introduced with milk none appeared to escape the action of the gastric juice. The explanation of this is probably the very simple one that the stomach reacted with its secretion of gastric juice only to the food (milk), but simply passed the water on into the intestines. It is probable that it is partly on this account that water may so frequently serve not only as the carrier of disease germs, but also of those organisms which flourish in the intestines, and there set up their fermentations.

[2] *Journal of Anatomy and Physiology*, vol. xxi.

It might at first sight appear possible to range the different filters in a scale as regards their filtering capacity according to the proportion of organisms which they allow to pass into the filtrate. A merely cursory examination of the tables, however, shows that the figures obtained in this way would vary very considerably even in the case of the same filter. The precise number of organisms present in the sample taken for examination depends, indeed, upon so many conditions which we may regard in this respect as accidental that no great value can be attached to this feature. In an imperfect filtering medium which permitted of the direct passage of micro-organisms into the filtrate the following conditions would tend to diminish the numbers present: (*a*) A large quantity or great depth of filtering medium, which would require a succession of charges of water to wash through the organisms, many of which were at first retained in the upper layer; (*b*) the fineness of the pores of the filtering medium, which would only allow the microbes to be washed through after a certain time; (*c*) the pressure under which the water is passing through the filter at the time the sample is taken; this naturally depends on the height and capacity of the upper reservoir of the filter and the amount of water present when the filter is tested. The influence of the pressure on the number of micro-organisms passed is brought out very markedly in the case of the bottle filters, where the water practically diffuses through, and in the case of the cistern and pocket filters, where it depends on siphon action. If we compare these with table filters of similar composition, we find that the latter transmit a much larger proportion of micro-organisms.[3]

A consideration of the influence exerted by these three factors provides us with an explanation of the apparently varying action of the same filter at different times. Thus we constantly observe that the number of organisms passed into the filtrate on the second day in the cholera experiments is very much increased, and indeed in some cases appears to be even richer than the original material with which they were charged. This is no doubt chiefly due to the fact that the organisms in the previous charges are washed down and collect in the deeper layers of the filters, but may also in part be ascribed to the fact that groups and bunches of organisms are gradually disintegrated into their individual members. It is possible also that when filters are tested on the first day with material derived from an agar culture, the groups of organisms may plug up the larger pores of the filter, and themselves act in a certain degree as a filtering medium. We are accordingly of opinion that the best comparative test of an imperfect filter is the proportion of water organisms which it allows to pass when first examined, but, as already mentioned, the result obtained depends greatly on the character of the filter and the number of charges which it has received. We must insist, however, that this question is of little or no importance, as any filter which permits of the direct passage of micro-organisms will probably allow, in course of time at least, the greater part of the pathogenic organisms which it has received to pass into the filtrate, and must accordingly be condemned.

[3] It is quite possible that under certain conditions imperfect filters with the first sample give a relatively germ-free filtrate, and this may be offered as an explanation and excuse for some of the testimonials and statements which are published by the vendors of these filters. These results, however, depend on imperfect methods of testing the filters.

(To be continued.)

The President and Council of the British Medical Temperance Association will give a *conversazione* to medical students on Friday, December 7th, at the London Temperance Hospital, Hampstead Road. Eighteen medical men who are total abstainers have recently been elected members.

The Bacteriological Diagnosis of Diphtheria.—A Paris medical journal, *La Presse Médicale*, has established a laboratory for the bacteriological diagnosis of diphtheria; the services of the staff will be given gratuitously.

Italian Surgical Society.—In view of the recent meeting of the International Medical Congress in Rome, the Italian Surgical Society has, at the suggestion of its President, Professor Durante, decided not to hold its usual annual meeting this year.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XXIV.—GREAT YARMOUTH.

The old fishing town possesses a large house for the reception of those, fisher-folk or others, who seek maintenance within its walls. The house is at the outskirts of the town, at a short distance from the grand old church of St. Nicholas, the pride of the town and of the kingdom. The medical officer, Dr. Collie, was awaiting us by request from the Board of Guardians, and, after some unusual and rather tedious formalities had been complied with, we were admitted within the gates.

The Workhouse

is a red brick building of ancient date, and its rambling structure, altered and patched from time to time, is an indication of the change that has come over the character of the work carried on within these buildings. At the present time the inmates number 424; of these, 198 are on the medical relief book, and 84 are certified lunatics; that is, more than half of the total number are under the charge of the medical officer.

The Infirmary

is difficult to describe; we found a ward on the female side, adjacent to, but quite separate from, the imbeciles' wards, in which female lock cases are put at one end, screened off from other patients when the wards are crowded. Passing out of the main building by a covered passage, we reach the sick wards situated on the ground and first floors.

The Women

are lodged in the old wards, situated on either side of a lobby and wide staircase, terminating on a roomy stone landing. Off this and between the wards is a room which might be (but is not) a bath room; it contains fixed basins, a wash-up sink, and a coal bunker. There are four long wards in each block, holding from 12 to 15 beds each. The beds are close together, and the wards, serving also as dayrooms, are overcrowded when all the beds are occupied; this remark applies equally to the male and female blocks.

The Windows

in the old block are only on one side; in the opposite wall, more than half way up, are semicircular glazed openings. In the more modern block the windows are on each side and of the same size. The ventilation is by means of the windows and of the open fireplaces at each end of the ward. The walls are colour or whitewash, and a few pictures are hung about.

The Male Infirmary

is in a similar building, though of more recent date, and it forms part of the same block as the female department. Here, also, there is no day room or outlet for the men except into the grounds. The bedsteads are mostly of an old pattern and narrow; in the male infirmary there are a few new ones; those for the epileptics are low and wide. The bedding is flock or straw, with a few feather beds.

The Patients.

Only a small proportion of the patients were in bed at the date of our visit; among these we saw a little lad of about 9 or 10, in the male ward (there is no children's ward), recovering from typhoid fever; a man with malignant disease of cervical glands, another with rheumatism, periostitis of the leg, and various forms of bladder trouble classed in one ward; on the female side a bad case of pericarditis, a case of gumma, which was being treated with poultices; phthisis, and the usual amount of paraplegia, old age and infirmity that form the majority of cases in a workhouse infirmary. The doctor informed us that he is not supposed to do any

operations except in emergency, nor did we judge that the staff of nurses at his disposal would be adequate for skilled nursing.

The Nursing Staff

consists of an attendant on the female side, assisted by an inmate who is paid, and by two attendants on the male side, none of these being trained; there is no night nurse, trained or untrained. In conversation with the matron as to the course pursued in dealing with the case of pericarditis, she told us that she had to share the nursing with the ward attendant, and that among them they pulled the woman through, and the same in the case of the child with typhoid fever; but it was evident that the acute cases put a great strain on the nursing staff. Another point that came out in conversation was that, on account of this same strain, the day staff, which begin work at 6.30 A.M., close the wards as early as possible in the evening, with the result that the helpless patients may be, and often are, from 8.30 P.M. until 6.30 A.M. without anyone to minister to their needs. Can this be tolerated? Is it not most inhuman to leave nearly 200 infirm, old and sick folk for eight or ten hours with only such assistance as they can render each other? Again, if the medical officer has an acute and anxious case in his wards his responsibility is immeasurably greater that he has no skilled nurses to watch progress in his absence.

The Imbeciles

are lodged in the wings at the ends of the main building; on the male side there were 40 patients, with a capacity for receiving 49, and on the female side there were 49 with beds for 54. All the certified patients are treated in these blocks, but otherwise there is no classification; epileptics, idiots, and lunatics, all meet and live together in the same day room. These day rooms have access to the pleasant gardens which serve as the airing courts. The sleeping rooms are of all sizes, the single room for the noisy patient, and the dormitories for the epileptics. In the event of acute illness the patient would be treated and nursed in these quarters. There is a padded room in each block; an unfortunate woman was secluded, being at present too violent to be at large. Such a patient on release from the padded room is placed in a single room to test her quietness and convalescence.

The Staff

employed in these blocks contrasts very favourably with that for the infirmary; in each block there is a superintendent nurse, with two assistants by day and one night nurse, those for the men being male nurses. The women are employed as far as possible in needle work or in the laundry the latter more as an occupation; there was one old woman who amused herself all day at the washtub. The men have a billiard table, and work in the grounds.

The Lying-in Ward

is close to these wards on the first floor. It holds eight beds, two of which were occupied at the time of our visit. There is no separate labour ward. The midwife is non-resident; she works in the district; after the confinement is over the patient is taken in charge by an inmate. The doctor holds himself responsible for the confinement cases, and endeavours always to be present. He pointed out the freedom from puerperal fever, the last case having occurred almost out of recollection. The ward is near to the matron's rooms.

The Nursery

we found in a remote part of the buildings, at the end of a new block originally intended for sick wards, but at present used for the school children. The room in itself is not bad, but there is practically no supervision over the two paupers placed in charge of the children. The nurse of the female side is in her block at a little distance, and the matron would not be near the nursery unless she went there on purpose. We saw five infants, three of whom were suffering from marasmus in a greater or less degree, and we also noticed the usual absence of anything like childlife or cheerfulness. Is the pauper infant a separate species, without the joyousness of childhood? These babes exist, they cannot be said to live.

Classification and Isolation.

From the foregoing account it will be seen that there is practically no means of classification. We found that the doctor put all the bladder cases in one ward, and he managed, as far as possible, to have the paraplegic and hemiplegic cases in the imbecile wards, because the attention given there was more efficient than in the infirmary; he was therefore able to say that he had no cases with bedsores. There are no small wards in the infirmary for isolation cases, and there is no classification possible either in the infirmary or in the imbecile wards.

The Male Lock Cases

are in a small separate building, holding twelve beds in two wards, under the care of a male attendant; there are separate offices. The male receiving ward is a wooden shed, the female receiving ward a small room at the end of the corridor parallel with the imbeciles' corridor, but approached by a separate door. It had the appearance of a makeshift.

Infectious Cases

are isolated in a small ward near the tramps' quarters. Scarlet fever would be removed to the sanitary hospital close to the workhouse; for small-pox special arrangements would have to be made.

The Water Supply

is inadequate; in no closet that we tested was there anything like a flush, and in one instance the trickle did not empty the pan of its contents. There is no water laid on to the upper floor of the imbecile wards, but on the lower floor there are baths with hot and cold water. The matron informed us that the town and the guardians were at variance on this question of the water supply, and that the officials were much hampered by its insufficiency, especially for the baths. There are no bath-rooms in the infirmary; all the work is done with movable baths, which have to be baled.

Transition State.

We learned that Yarmouth Workhouse is in a state of transition; there are plans for the removal of the children to a distance, and this would set free the new block containing suitable sick wards; but everything is at a standstill until certain differences of opinion among the members of the Board are got over. Meanwhile the old buildings are turned and twisted, altered and patched like a worn-out garment. There are bells from the wards to the matron's quarters, but no telephone to the doctor's residence, three quarters of a mile away; he is fetched when necessary by an inmate. Nor has the doctor any surgery in the building; he is indebted to the courtesy of the master for a place in which to keep his drugs. The ward medicines are kept in miscellaneous cupboards in the wards.

Recommendations.

We were much impressed with the absence of plan in these buildings; the several erections appeared to be too close to each other, and admitted of no adaptation. We would suggest that the plans referring to the children be hastened on, but, though this would relieve the congestion, yet the vacated block would not make a complete infirmary, and some more radical scheme seems therefore necessary. New hospital wards are wanted, and increased space for the imbeciles, a better situation for the nursery, and, that which is of first importance, a staff of trained nurses, for day and night, sufficient for the nursing of 200 or more patients a large proportion of whom, being helpless chronics, must be reckoned as a permanent charge on the staff.

THE MEDICAL OFFICER OF TOTNES WORKHOUSE.

THE *Totnes Times* is calling upon the Board to refute a statement made by an inmate that the medical officer had not visited the women's hospital for a fortnight, and gives as a reason that our Commissioner has lately visited Totnes, and may have heard and accepted this statement. Our Commissioner has visited Totnes, and the report has been placed in our hands; when published, it will be open to the criticism of our contemporary, but we wish at once to correct a misstatement: our Commissioner did not go round the house alone, but was accompanied by the deputy master and matron. We would also observe that no statements like the above would be reported by our Commissioner, reflecting as they do upon an officer who is amenable to the Board, and not to the BRITISH MEDICAL JOURNAL.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, NOVEMBER 10TH, 1894.

THE MEDICAL PROFESSION AND THE NEW GUARDIANS.

The boards of guardians will be elected in December on a new franchise and by a new method. The electors will henceforth be those who are most nearly concerned in the administration of poor relief, and they will vote not by voting papers but by ballot. The question is whether the boards so elected will carry on the policy which has hitherto been directed by representatives of the ratepayers, or whether they will inaugurate a revolution in favour of a policy which will be lavish in meeting the needs of the poor. There has been much which is admirable in the old policy. The scandals which are occasionally made public are only blots on an administration which, as a rule, has been orderly and considerate of the needs of the poor as of the claims of the ratepayers; but the policy has been unsympathetic, and has not influenced public opinion. There is much which calls for a revolution, and the general order with which relief is administered does not excuse the neglect to consider the human needs which education has developed among paupers. It is not enough that cleanliness has been secured if the minds of the inmates of a workhouse are left unoccupied; it is not enough that the sick and the children should be cared for in schools and infirmaries if their future care is not also secured. It is not enough that a principle of relief should be adopted if the humanity of the principle is not made obvious. There are wrongs felt deeply by those who, being poor, are conscious of rights which call for a revolution, but a revolution would be destructive of much that has been proved to be good, and would lead to reaction.

The new Boards have a great opportunity. They will begin with the confidence which comes from a mandate from the people. They will have the power which contact with the electorate gives. They may do much to put the national health on a sounder basis. The one thing necessary is that the persons—men or women—returned to serve as guardians be those who, in sympathy with the people, are also skilled administrators.

Medical men have a double interest in trying to secure the return of such persons. They have the common interest in their neighbours; they have a special sympathy with efforts to raise the standard of health. The guardians have the choice of the medical officers who are at the call of the destitute sick. They may choose men who will not only prescribe for disease, but by representations and recommendations prevent the spread of disease. They see as few others see the habits of the poor: they know the difficulties which beset them as they try to nurse or isolate the sick; and they are familiar with the houses unfit for habitation. They might instruct not only the poor in getting over the difficulties, but advise the guardians as to what should be done for their assistance. Few people could speak with more authority, and a board careful about health would encourage such speaking as would reach even the ears of Parliament.

The guardians are in control of infirmaries which might be made model hospitals and even schools of medicine. They might appoint men as chiefs and assistants who would introduce the best methods, and by administration as by care reduce the number of the weak and ailing who leave their beds unable to work. The chief medical officer of a large infirmary has a position from which he might tell more than most men about the causes of poverty, the effect of work on disease, and give recommendations of the greatest value. An enlightened board would encourage him to make such a study, and it would help him to use his experience for the benefit of students. There is no reason why an infirmary should not be a medical school, visited by outside physicians, as it was intended to be by Mr. Ernest Hart, and as it was to be under Gathorne Hardy's Act, and one offering a rare opportunity for the study of cases not usually retained in the general hospitals.

The guardians, again, control the care of the children. They have ample funds. They have at their disposal the experience of past years. They might so treat the children as to check the growth of diseased tendencies, and surround them with influences good for health. They might send them out into the world as missionaries to tell the benefit of fresh air and fresh water.

In these and other directions guardians may affect the national health; medical men are thus called to exert themselves to secure the election of fit and proper persons. They, without identifying themselves with any political party, might well point out how the right persons on the board will affect the health of the whole neighbourhood. They might well suggest some test questions with which to try the candidates. "Will you appoint sufficient medical officers to give attention to individual cases?" "Will you call on them for reports as to the condition of the people they visit?" "Will you see that the sick have every comfort and appliance necessary to their complete restoration?" "Will you secure the separation of the children from all pauper accessories: and, if possible, put them in isolated homes, where each child may get individual attention?" By such questions candidates may be tested and boards instructed. Our recent Commissions of Inquiry into Barrack Schools and Poor-law Infirmaries have led the way and opened the path. We can, however, only investigate and point out the way of reform. It is not enough that Commissions sit: the public must bestir themselves, and their best counsellors will be the doctors. If medical men will themselves serve on boards, they will find a large field open for the exercise of their knowledge, and a public duty waiting to be done which they only can perform. It would be unworthy of the devotion

always shown by the profession to suggest that the service would have its reward in increased interest, in addition to knowledge, in a sense of union with the community. It is truce to say that those medical men who make the sacrifice of serving on boards of guardians may secure for the sick and poor greater comforts in time of need and distinctly raise the standard of national health. This is one of the ideals of medicine.

PRIVATE LUNATIC ASYLUMS.

Mr. Corbet has restated, in the *Westminster Review*, the familiar arguments against private lunatic asylums; we regret that he has done so in an exaggerated and sensational style which we fear will do more harm than good to the cause which he advocates, as it will repel those thoughtful readers who are best fitted to form public opinion on the matter. Nor does Mr. Corbet excite incredulity by his style only, but also by the careless arrangement of the materials of his argument and a management of the facts of the case which may seem disingenuous, but is probably due rather to much prejudice and little judgment.

A writer who is capable of deliberately stating that "for pecuniary considerations not only the unsound, *but frequently the sane*, are shut up and kept in the custody of speculators" (the italics are ours), cannot command the attention of serious men. Two pages later, Mr. Corbet says that an "avaricious or impecunious next-of-kin takes advantage of some escapade of a rich relative," charges him with lunacy, commits him to "the care of an accommodating proprietor," who is well paid, "and so enters into the enjoyment of the property himself." It is scarcely credible that any responsible man should make so rash and injurious a statement. Will Mr. Corbet explain the machinery by which the next-of-kin cashes cheques on another man's account, is supplied with dividends by obliging secretaries, and collects rents from tenants who have no fear of being requested to pay them over again to the rightful owner?

Again, Mr. Corbet brings stories, dating from years before the establishment of the Lunacy Commission, into his arguments on recent events, and he keeps up the habit of talking of persons as "incarcerated" in a private asylum, forgetting that every person in such asylums is supposed to be seen four times a year by the justices, and is seen twice a year by two Commissioners, by whom offers of private interviews are continually made to inmates, and very commonly accepted. Moreover, all certificates are personally examined by the Commissioners in Whitehall, and cases of a doubtful character kept under vigilant observation; and we much doubt whether any case of "incarceration" of a sane person or even any case of detention of a merely eccentric person beyond a few days can be adduced.

We are wishful to make all this clear, because we think that, on the whole, Mr. Corbet's purpose is a proper one. We can say nothing about Irish asylums, whence Mr. Corbet's stories seem mostly to come, but we have collected a great deal of confidential information about the private asylums regulated by the English Act of 1890. In our opinion abuses must be very rare indeed, and readily redressed if they occur at all. Moreover, if we must talk of such motives, the temptations of a medical superintendent to please the committee of his hospital by showing a prosperous balance sheet, and so to lead to the increase of his salary and other advantages, must be of the same kind, and but little less great than the temptations to profit in a private asylum.

Nevertheless we agree that private asylums cannot be defended in theory, and are open to abuses, as are all such institutions, public and private, which tell far more heavily against an individual than against a committee. We have had reason, indeed, to fear that the almost irresponsible managers of hospitals for the insane may be more obstinate and self-righteous under criticism than the proprietors of private asylums, who know, that the suspicions of justices and Commissioners may quickly deprive them of their means of livelihood.

Mr. Corbet omits one argument against private asylums, namely, the difficulty under which a conscientious proprietor may, and often does, labour of detaining a convalescent long enough to ensure his fitness for the life of the world. There is nearly always a stage in convalescence when the patient keeps a precarious sanity in the house which contact with the world would soon break down.

Admitting as we do that the position of a private proprietor is open to animadversion, and that the retention of the system is contrary to the spirit of modern legislation, yet we must not forget the chief reason why private asylums continue. This is that the public demand them. The relatives of persons so afflicted desire, and naturally desire, a home for these rather than a hotel.

So far as material comforts and appliances go, modern asylums are almost perfect, but there is but little imagination used in respect of the life in them. Weary and despondent as many of these sufferers must be, the burden is somewhat lightened by the homely life of a private house, and the personal care of the medical head of a small home of the kind is more grateful than the occasional notice of a man whose mind is chiefly given to administration. That most of these private asylums are conscientiously managed Mr. Corbet seems to admit, and if so there is still a demand for them by the gentler and more retiring class of patients and their friends. All relations are not venal or hoodwinked.

Dr. C. S. Sherrington, Professor Superintendent of the Brown Animal Sanatory Institution, will, on Tuesday, November 13th, at 5 o'clock, give a lecture at the University of London, Burlington Gardens, on The Blood in Inflammation, and again on Tuesday, November 20th, at 5 o'clock, at the same place, one on The Sensory Apparatus of Muscle.

We are informed that Dr. Russell Reynolds, President of the College of Physicians, has found that his other engagements are incompatible with the due performance of his duties as a member of the Committee on the Poor-law Barrack Schools, and he has therefore felt compelled to resign. Mr. Shaw Lefevre has applied to Mr. Nettleship to fill the vacant place, and he has consented to do so. Mr. Nettleship was present on Wednesday at the first sitting of the Committee for the purpose of taking evidence.

We understand it is probable that the staff and old students of the medical faculty of University College London will arrange to entertain at an early date Dr. Russell Reynolds, elected President of the Royal College of Physicians last year: Sir John Williams, who was created a baronet a few months ago; and Dr. Jameson, whose public

services in Mashonaland have been recognised recently by the decoration of C.B. All three gentlemen were students of University College. Dr. Russell Reynolds was for many years Professor of Medicine, Sir John Williams was for some time Professor of Obstetrics, and Dr. Jameson held the post of Resident Medical Officer at the time he determined to proceed to South Africa.

THE CZAR.

Professor Leyden telegraphed to us from Livadia on Saturday, November 3rd, in reply to questions, saying that the death of His Imperial Majesty the Czar occurred from complications arising out of infarction of the left lung, the obstructive clots having been conveyed into the lung owing to failure of circulation three days before death. The Czar died during an attack of dyspnœa in a sitting position, surrounded by his family. He was in possession of his full consciousness at the last.

THE BARRACK SCHOOLS COMMITTEE.

This Committee, appointed to inquire into the condition of pauper schools, sat on Wednesday, for the first time, at Westminster, to take evidence. Mr. Mundella, M.P., presided, and the other members were: Sir John Gorst, M.P., the Hon. Lyulph Stanley, the Rev. Brooke Lambert, Mr. Edward Nettleship (in place of Dr. Russell Reynolds), Mr. William Vallance, and Mrs. Barnett, and Mr. Aveling, Secretary. The whole day was occupied with the evidence of Mr. Ernest Hart; and the Committee adjourned until the following day.

SUPPLY OF DIPHTHERIA ANTITOXIN IN ENGLAND.

In reply to numerous inquiries we may state that we are informed that the diphtheria antitoxin cannot as yet be obtained in London and the supply from the Continent is quite exhausted. The British Institute of Preventive Medicine is now taking steps to provide the serum at cost price, and several horses are now nearly ready. The temporary address of the institute is 101, Great Russell Street. The serum will keep for three months at least if kept in a cool and dark place. We are informed that the price of a dose sufficient for one child will not exceed 1s. 6d.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.

The opening meeting of the session of the Aberdeen Medico-Chirurgical Society was held in the hall, King Street, on November 1st. Dr. Angus Fraser, in his valedictory address as President, sketched briefly the changes that had taken place in Aberdeen, both in the personality of the profession and in their methods of treatment of disease, since he graduated thirty years ago. He also pointed out changes in types of disease, medical and surgical, as in diphtheria and uric acid calculi. The decrease of uric acid calculi he explained by the changed diet of the natives of Aberdeenshire, who formerly lived largely on half-cooked oatmeal. Dr. Fraser declared that he was no ardent believer in new drugs—that he stuck to old, well-tried remedies, and he deprecated the chase of novelty in therapeutics.

THE CHELSEA HOSPITAL FOR WOMEN.

We are glad to be able to state that the Board of Management of this hospital have taken the step which, in the first instance, we recommended. They have resigned. In accordance, also, with our recommendation, the medical staff (who hold a disagreeable position at present, and one which we could not countenance) have, we are informed, the intention of placing their resignation in the hands of the meeting of Governors which will be held to elect a new board of management, and of recommending to the Governors the appointment of an independent committee, including leaders of the medical profession, to advise on the selection of a medical staff. With a clean slate and an entirely new committee of management, some of the errors of the past may be amended, and a brighter future may be opened to this ill-starred institution.

METROPOLITAN WATER SUPPLY.

It is satisfactory to learn that the London County Council is about to take proceedings against the East London Water Company under Sections 7 and 19 of the Metropolis Water Act of 1871. If a constant supply of water to the metropolis is to be a reality and not a sham, it is high time some notice were taken by the powers that be of the recent flagrant violation of its statutory obligation by the above company, and it will be interesting to see what view is taken by the courts of the plea of unavoidable drought.

MR. SHAW LEFEVRE AND MR. PEEL.

The President of the Local Government Board has written to Mr. Ernest Hart with reference to the remarks recently made by Mr. Peel, one of the inspectors of the Board, as to favouring the exclusion by the guardians of commissioners from the British Medical Journal asking permission to inspect their local workhouse infirmaries. He states that in the first place Mr. Peel's observations were not intended to have a general application. On the contrary, in his opinion the guardians of every union should have pleasure in allowing their workhouse to be inspected by anyone who desired it. In the particular instance in question his objection referred to an individual. Mr. Shaw Lefevre adds that Mr. Peel expressed in this matter his personal view, and that he did so without previous communication with the Local Government Board. We shall take an opportunity of testing the justification for the extremely personal character which Mr. Peel's announcement now takes (one which we wholly repudiate), but meantime we desire to call the attention of the boards of guardians to the general statement now communicated to us by the courtesy of the President of the Local Government Board, which is to be read in a very different sense from the printed reports which have been published of Mr. Peel's remarkable utterances. These were certainly of a kind to lead to an exactly opposite conclusion to that which the Board favours, and to encourage guardians to refuse admission to their infirmaries, a course obviously contrary to the public interest.

UNVACCINATED CHILDREN IN PUBLIC SCHOOLS.

To the great ire of the antivaccinators, Mr. Wynter Blyth, taking advantage of an article in the Education Code which enjoins the school managers, on pain of losing their grant, to obey the orders of any sanitary authority with regard to the exclusion of children from school, excluded temporarily unvaccinated children from certain board schools in areas infected with small pox. The grounds on which they were excluded were: (1) The possibility that they might become infected from children who were immune, but who might have been in contact with persons suffering from small-pox; and (2) in order that they should have ample opportunity to get vaccinated, for which, at the time, special facilities were afforded. Whether the particular article in the Education Code contemplated the exclusion of healthy children whose homes were also healthy is doubtful; but as to the utility and success of the measure there can be little difference of opinion, and we are pleased to find that the vestry of St. Marylebone support the action of their officer.

NATIONAL SOCIETY FOR EMPLOYMENT OF EPILEPTICS.

The foundation stone of the first permanent home on the Farm Colony for Epileptics at Chalfont St. Peters, in Buckinghamshire, will be laid on November 14th by Mr. Passmore Edwards. The colony was opened on August 1st, a temporary iron building having been erected for the accommodation of eighteen epileptics. The colonists have been

engaged chiefly in outdoor work upon the land, and the experiment has so far been attended with the most encouraging results; not only has the general health of the men vastly improved, but their fits have in most cases greatly diminished in frequency. Though the Society have acquired, through the generosity of Mr. Passmore Edwards, enough land to form the site of a colony for some hundreds of inhabitants, their present funds will be almost exhausted in the erection of a permanent building for about twenty men, leaving women and children totally unprovided for. The Committee now make an earnest appeal for help to enable them to extend their work, the need for which is demonstrated by the fact that in London alone there are over 600 sane epileptics in the workhouses, to which in most instances they are driven, not by incompetence or vice, but simply by inability to retain employment owing to the fits. The Secretary of the Society is Mr. G. Renn Gaskell, 12, Buckingham Street, Strand, W.C.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE FRIENDLY SOCIETY.

THE usual quarterly meeting of this Society was held at 429, Strand, London, W.C., on October 24th. There were present the Chairman, Dr. de Havilland Hall, in the chair, Mr. F. Swinford Edwards, Dr. M. Greenwood, Dr. Walter Smith, Dr. J. B. Ball, Dr. J. W. Hunt, Dr. W. Knowsley Sibley, Mr. R. S. Charsley, Mr. W. J. Stephens, and Mr. William Thomas. The accounts presented showed the Society to be growing in financial strength, and rapidly increasing its sphere of usefulness. As is usual about this time of the year, the sickness claims were moderate, but many of them showed clearly the great value of the work which the Society is doing among members of the medical profession. The Society has paid since its foundation in 1884 over £26,000 in sick pay to its members, and has now accumulated over £80 000 of reserves. It has been determined to distribute £5,000 of the surplus funds among the members, and during the present week about one thousand of the older members will receive a substantial cash bonus, whilst ample reserves have been made for those who have more recently joined the Society. Prospectuses and all information may be obtained on application to Mr. F. Addiscott, Secretary Medical Assurance Society, 33, Chancery Lane, London, W.C.

HOSPITAL ADVERTISEMENTS.

OUR attention has been called recently to a method of advertisement adopted by the secretaries of certain hospitals. In these advertisements there is, we think, a distinct abuse of the use of photographs and drawings intended to appeal to the feelings of the charitable. One of the offenders is the National Orthopædic Hospital, Great Portland Street, London, which has issued a pamphlet which is, in fact, an appeal for subscriptions. The pamphlet contains a series of short articles on various forms of deformity of the lower extremity, each illustrated by woodcuts before and after treatment, and spiced by the gushing letters of grateful relatives. We are glad to notice that the names of the surgical staff are not mentioned, but we have not heard that they have made any protest against this method of advertisement. The second hospital to which we refer is the Bristol Hospital for Sick Children and Women. The secretary here has issued reproductions of photographs of a little boy suffering from talipes, lately an in-patient of the hospital. The one photograph is headed "As I Was" and the other "As I Am." We are informed that this circular was printed and distributed by the secretary without the knowledge or sanction of the medical staff, and that the secretary's action has been upheld by the committee. The committee, however, would have better consulted the true interests of the hospital and the professional dignity of the medical and surgical staff by accepting their advice upon this point, and we trust that upon further consideration they will see their way to withdraw a circular to which the medical staff of the hospital take exception. In this objection they will, we believe, be generally sustained by the members of the medical profession throughout the country.

THE SICK POOR IN PROVINCIAL WORKHOUSES: GREAT YARMOUTH.

ONCE more our Commissioner's report shows a large infirmary in an important town where the sick poor are nursed, if we can venture to use that term, under conditions almost inconceivable to those acquainted with the degree of efficiency required in every hospital which has not the misfortune to belong to the State. The buildings are old, squalid, unsuitable, and a projected improvement is at a standstill until the Board shall be unanimous as to its necessity. There is no trained nurse in the whole sick department, containing nearly 200 patients, and no night nursing of any kind, unless an acute case renders it necessary for the matron and the day staff to do what they can for the patient by night as well as by day. The imbeciles, though overcrowded and unclassified, have at least a sufficient number of attendants, and the contrast is so marked that the doctor puts his cases of hemiplegia among the imbeciles and epileptics in order that they may have the benefit of the more efficient attendance. The comparatively better care bestowed upon the certified patients by many Boards of Guardians is probably due to the fact that the Commissioners of Lunacy have the power to enforce their recommendations, and the sooner this power is conferred upon that anomalous body, the Local Government Board, the better will it be for the pauper sick and children. Meanwhile, if public opinion could only be roused to consider the question and give its support to the reforming party which exists, we are convinced, on every Board, the improvement of the workhouses need not wait for that distant day when a Government department shall alter its mode of procedure. At Great Yarmouth, as elsewhere, the medical officer and the rest of the staff are struggling to do their best for their helpless charges under conditions which make their task unnecessarily difficult.

ATHLETICS AS A MENTAL TRAINING.

IN England we are apt to take the necessity for sports in some form for granted, but in America the subject of athletics is discussed with a seriousness which hardly obtains in this country. Dr. Conant, of Boston, in a very suggestive article in the *Boston Medical and Surgical Journal*, pleads earnestly for the general acceptance of athletics, not as a mere sport or pastime, but as part of the system of education which the universities supply. There can be no question that while the "sit-still system" of education has done much harm to children, free muscular activity has been conducive to brain development, partly, probably, by supplying it with more healthy blood, but partly, also, by the cerebral activity involved, the muscle and the nerve being, in fact, but two parts of one machine. Much as one might imagine that carefully-planned gymnasium exercises could be arranged to give the exercise required, the gymnasium does not seem a popular place; nor does Dr. Conant seem to think much of it as a means of education. As usually arranged it is under cover, and so lacks that great essential—fresh air; and it lacks the stimulating influence of outdoor sports, and especially of games. Nevertheless gymnastics, although not the most useful form of exercise, are of great advantage as a training for a crew or team. If, however, says Dr. Conant, there is to be any attempt at regular and systematic development, not only of the body, but of the mental faculties as well, one must have, in order to get the highest good from such training, a certain amount of stimulus in the work to be done, the stimulus arising from competition and from public appreciation. Speaking of foot-

ball, he says that there is a considerable risk of injury in the game, especially to men who have not been carefully trained in the sport at school. What is wanted is some constant and careful supervision over the players, so that they shall be in a condition both of physical and mental health. A list which is given of the injuries received by the Harvard men during the last four seasons shows a considerable number of accidents, but comparatively few of a serious nature, and those appear to have occurred chiefly among the "class" rather than the "'Varsity" teams, showing that the better trained men are far the least liable to injury. There seems no doubt that rowing is one of the best means of developing a man in an all round way; but both in regard to it and "track" athletics much of the benefit arises from the individual training or "coaching" given to each man. We come round, then, to the old point that athletics should be looked on as part of the education of that inseparable neuro-muscular arrangement of which man is principally made up, and to the activity of which all expression of either intellect or emotion is due. In considering the further bearing of this question, the influence which an athletic training has upon a man after he has left college must not be lost sight of. Many a man feels that his success in after-life is largely due to the excellent condition of his mind and body brought about by the athletics which he practised when in college. This athletic training never entirely leaves him in after-life, and, although he may be much occupied in other ways, he still finds opportunity for indulging in some form of athletic work which keeps him physically a healthy man and mentally a bright one.

DEATHS FROM WILD ANIMALS AND SNAKES IN INDIA.

The official returns for 1893 show that 21,213 human beings were killed in India by snakes, an increase of 2,188 on 1892; and 5,122 cattle, an increase of 624 on 1892; by wild beasts—meaning thereby tigers, leopards, wolves, bears, hyænas, etc.—2,804 human beings were killed, a decrease of 159 on 1892, and 85,131 cattle, an increase of 7,961 on 1892. The number of wild beasts destroyed was 15,309, a decrease of 679 on 1892; the number of snakes destroyed was 117,120, an increase of 32,331 on 1892. The amount paid in rewards for the destruction of wild animals was in 1893 Rs. 104 840 against Rs. 107 975 in 1892; for snakes it was Rs. 12 607, against Rs. 9,741 in 1892. The official returns of human beings killed by wild animals and snakes for the past six years and for 1877 are as follows:

Year.	Human Beings Killed.	Year.	Human Beings Killed.
1877	... 21,201	1891	... 21,931
1888	... 24,348	1892	... 22,672
1889	... 26,141	1893	... 24,017
1890	... 24,812		

It will thus be seen that the mortality from this cause in 1893 considerably exceeded that of 1892, and that the returns, though fluctuating slightly year by year, show a decided increase on those of 1877. The Government of India have always expressed a commendable anxiety to do all in their power to diminish this mortality, but if one may judge by results, it would appear that their endeavours have met with but a small measure of success. That this cause of mortality is to a great extent preventable there cannot be a doubt, though it has never been pretended that it can be removed altogether, as long as wild beasts and poisonous snakes exist. Obviously the remedy is a well-organised system of warfare to be carried on persistently and steadily against these creatures, and until—as has been over and over again pointed out—this be enforced, there seems to be little hope that any material diminution in the death-rate will take place. The measures that have been hitherto adopted have consisted in the giving of rewards for the destruction of these creatures, and more recently in clearing away from about villages the jungle in which the snakes are supposed to harbour. As to the rewards, much difference of opinion exists among local authorities as to their value as a preventive measure; in some places they have been withheld altogether, on the plea that they would cause the breeding of such snakes—a most improbable result—or that they were so ridiculously small that no one was likely to risk his life or lose his labour in following up such an unprofitable employment as hunting after poisonous snakes for the small reward offered. The cutting down of jungle is obviously inadequate, as the snakes are by no means confined to those places. With reference to the tigers and other wild animals, a more consistent system of rewards has been, and probably still is, carried out, but not with that determination, persistence, and uniformity which should obtain, and the result is that men and animals continue to perish at this appalling rate. It is impossible, under the circumstances, not to be impressed with the idea that a more systematised scheme of destructive measures should be insisted on, such as has been more than once suggested; that a scheme having been thoroughly organised and determined on should be carried out persistently and without reference to the varying opinions of different individuals, throughout the length and breadth of the Indian Empire. Surely the annual death of over 24 000 human beings and 80 000 cattle is a matter of sufficient importance to justify such an arrangement. In the case of Thuggie, in which probably the loss of life was less than it is in that under consideration, a department for its suppression, under the guidance and control of a competent officer, was perfectly successful in extinguishing the evil, and what Colonel Sleeman and his successors did for the Thugs, an officer—and there must be many who would do it—selected by the Government would do for the snakes and wild beasts. It is well known that a general recognition on the part of Government of this evil exists, and a desire to get rid of it, but it is equally well known that great differences of opinion exist among local authorities as to modes of procedure. It seems tolerably certain, too, that a result of these differences of opinion is a failure to grapple with the evil. There may be, no doubt, a reasonable disinclination to impose new responsibilities and duties upon officers overtaxed with work, and therefore to no one in particular is this duty assigned. What is everybody's duty really becomes nobody's, and it is consequently again suggested that the matter should receive reconsideration, and that the duties of suppressing the ravages, and of furthering the destruction of the animals, should be entrusted to one officer, who might have his departments in different provinces of India, as in the case of Thuggie. We repeat that this great loss of human and animal life not only justifies but demands such a measure, unless the Government of India can propose something more effective. Obviously those hitherto adopted have not had satisfactory results.

SCURVY IN CHILDREN.

Dr. Barlow's Bradshaw Lecture, to which we devote much space this week, deals with a subject of great practical importance. It is one upon which he is peculiarly competent to speak, since his study of the condition he describes has been so thorough that infantile scurvy is commonly spoken of in Germany as *Barlow'sche Krankheit*. The lecture will repay careful study, for there can be little doubt that the condition is becoming more common, and, in spite of the fact that it presents symptoms of a distinct type, is often overlooked. The malady is one of children artificially fed, and in the great majority of cases the food is found to have been some kind of preserved food—proprietary foods, condensed milk, or foods of which condensed milk is the basis. More rarely it follows on the use of an over-diluted fresh cow's milk. Quite recently it would appear that a new danger has arisen owing to the extensive use of sterilised milk. It seems that the prolonged sterilisation of milk at high temperatures lessens its antiscorbutic properties, and

that the danger is increased when sterilised milk is stored for long periods. Dr. Barlow speaks with great caution on this point, as he is fully alive to the greater, or at any rate the more urgent, risks which may attend the use of unsterilised milk. The therapeutic suggestion is, of course, obvious. So rapid, indeed, is the action of antiscorbutics that they may be used as a therapeutic test in cases on the borderland, rickety infants in whom, though no lesion pointing to scurvy can be detected, the irritability and tenderness are out of all proportion to the signs found. In a certain number of these cases antiscorbutics will at once produce improvement, thus indicating the cause by which the condition has been produced.

TYPHOID FEVER AT NEWPORT.

An inspector of the Local Government Board has visited Newport, and upon public grounds his report should be published. Several cases of typhoid have occurred at the convict prison. Newport is the only place in the Isle of Wight that has persistently refused to adopt the Notification of Infectious Diseases Act, which has been more than once urgently pressed upon the corporation by the County Council.

THE JENKS MEMORIAL SCHOLARSHIP.

By her will, dated December 21st, 1891, the late Miss Mary Sarah Johnstone left a sum of money in trust to found a scholarship in memory of the late Dr. Jenks, F.R.C.P., of Bath. The award was placed in the hands of the two Royal Colleges, and is made on the nomination of the President and Fellows of the College of Physicians and of the President and Council of the College of Surgeons in alternate years. This year, the second since the foundation, the nomination was in the hands of the latter body, who awarded the scholarship to Mr. Thomas Chetwood, student of St. Bartholomew's Hospital. By the terms of the trust deed, the head master of Epsom College is asked each year to recommend a suitable candidate from amongst those about to enter at one of the medical schools; if he should not recommend anyone, the head masters of the other public schools recognised by the two Colleges are to be invited in rotation to make such a recommendation.

THE NATIONAL HEALTH SOCIETY IN INDIA.

The idea of starting a branch of the National Health Society in India has now taken definite shape, and Mr. Ernest Hart, who starts for India this month, will set to work to form local committees and to interest the public—European and native—in the diffusion of sanitary knowledge among all classes of the community. To those who know what sanitation in India is, the importance of the movement cannot be over-rated; but that it is a formidable undertaking will be admitted when it is remembered what the position of the women in India is, what their customs are, and their castes and creeds. It is intended to hold small gatherings of native women in schoolrooms, or in their own houses, once a week, to listen to short, stirring addresses from some women workers, who would be able practically to assist anyone desirous of rendering her house more sanitary. Simple and easy literature, printed in English, Hindustani, and the different vernacular languages, is being prepared on similar lines to those used by the National Health Society here.

UNVEILING OF THE MARION SIMS STATUE.

The statue of the late Dr. J. Marion Sims in Bryant Park, New York, was unveiled on October 20th in the presence of a large and representative gathering of the medical profession. Among those present were: Dr. D. B. St. John Roosa, President of the Academy of Medicine; Dr. Abraham Jacobi; Dr. L. A. Sayre; together with delegates from the New York Academy of Medicine, the New York Pathological Society, the American Gynecological Association, and other learned bodies. Dr. W. W. Keen and Dr. Theophilus Parvin represented the Jefferson College of Philadelphia, where Marion Sims took his degree in 1835. Addresses were delivered by Dr. George F. Shrady, who sketched the character of Sims as a surgeon and a philanthropist, and by Professor Paul F. Mundé, who dealt with Sims as the gynæcologist and the founder of the new American School. At the conclusion of the addresses Dr. Shrady, as Chairman of the Committee, presented the statue to the Hon. A. B. Tappan, a member of the Board of Park Commissioners, who accepted it on behalf of the City of New York. The statue is the work of Müller, of Munich. It is of bronze, in full length, and of heroic proportions. It stands upon a pedestal of brown granite. On one side is the inscription:

J. MARION SIMS, M.D., LL.D.
Born in South Carolina, 1813. Died in New York City, 1883.
Surgeon and Philanthropist.
Founder of the Woman's Hospital, State of New York.
His brilliant achievements carried the fame of American Surgery throughout the civilised world.
In recognition of his services in the cause of Science and Mankind.
He received the highest honour in the city of his countrymen, and decorations from the Governments of France, Portugal, Spain, Belgium, and Italy.

On the opposite side the inscription recites that the statue was "Presented to the city of New York by his professional friends, loving patients, and many admirers throughout the world."

ALARMING OUTBREAK OF SMALL-POX IN EDINBURGH.

Although there has never in any one week been a large number of cases, yet small-pox has continued to smoulder on, so to speak, since the outbreak in June last. Last week, however, a sudden and ominous outbreak took place, when 43 new cases were reported to the authorities up to Saturday, 5 further cases on Sunday, and 2 on Monday—50 cases in nine days. So seriously does the Public Health Committee look on this that orders were last week given for the completion of the temporary small-pox hospital in the Queen's Park (a building which at the time it was begun called forth such a deal of stupid and ignorant abuse), and men were engaged even on Sunday pushing forward the work. It is intended that this temporary hospital shall be occupied on Wednesday. The recrudescence of the disease seems to be mainly in the poorer districts of the town in the region of the High Street, though isolated cases seem to have occurred at several other points of the city. Happily the cases are all of a mild type, and no deaths occurred last week. In addition to the actual cases of disease, some fifty persons are detained in quarantine. So far no fresh cases have been reported from Leith.

THE MILK TRAFFIC.

At the recent Sanitary Conference at Aylesbury, Dr. George De'Ath read a very spirited paper on The Sanitary Protection of the Milk Traffic. He said that the real problem lay not in the question whether sanitary powers were adequately exercised by local authorities, but in the question: Do the people of this country really get what the farmers of this country produce? To this question the answer he returned was: They do not. Consumers, he said, were so gullible, so ignorant, and so stupid, that they allowed themselves to consume an article which was not what it was represented to be, and by this means agriculture was sweated; not to add to the health of the community, but to fill the pockets of the London milk sellers. The fallacy that milk of a yellow colour was more valuable than milk of any other colour seemed to be deeply ingrained in the public mind. But the mere colour was no test of nutritive value, and the poorest skim milk and the poorest cheese could be made to look like the richest milk or cheese by the addition of colouring matter. Again, what became of the milk

from which the cream had been extracted by centrifugal "separators?" It was sent to London and other large towns in enormous quantities, thousands of gallons daily, and was mixed with new milk in proportions which were just sufficient to keep within the law as to the extent of butter fat in the mixture. This was sold as new milk, fresh from the farm. The fact was that milk deprived of its cream was of such small money value as compared with milk as sold by the farmer that wherever it could be used as a substitute or as a part substitute, either by colouring it artificially or mixing it with new milk, or by both means, the profit to the milk distributor was enormous. The sanitary protection of the milk traffic should begin at the selling centre and not at the producing circumference. It was of no use to tickle the public ear by administrative reports as to clean farmyards and sanitary cowsheds while the public throat swallowed, not what was produced locally, but what was manufactured centrally by those engaged in the trade. The public demand must press on all alike, and not merely nor in the first place on farmers. In conclusion, he expressed the hope that a voluntary commission of inquiry would be made into the whole question: evidence could then be made public which would have the effect of putting a stop to a condition of trading which was in its present state—to use, he said, a House of Commons expression—"simply damnable."

THE SANITARY CONDITION OF BAKEHOUSES.

A leading London baker has been expressing his views upon this subject. He appears to be impressed with the desirability of licensing bakehouses, and preventing the use of underground bakeries by refusing to grant new licences in respect of underground premises, and insisting upon the abandonment of the use of such places on the expiration of existing leases. There is something to be said in favour of proposals of this kind, having regard to the difficulty which arises in connection with the ventilation and lighting of cellar bakehouses. The opinion was expressed, too, that hand labour was objectionable, and that small bakeries would tend to die out, and to be superseded by large establishments. A new aspect of the question is opened up, however, when we are told that the reason why bakeries are not hygienic is because women buy the bread, and insist upon purchasing it, where it can be had cheap. Preach as you like, says this authority, women will never take any interest in sanitation, and if they think bread is a farthing cheaper next door they will go there, no matter what the condition of the bakery may be. This is a bold statement, and one which its author would probably hesitate to repeat in the privacy of his domestic circle. It is open to question, moreover, whether men would be more particular with regard to such a matter than women are. At the same time it is no doubt true that if a higher standard of sanitation is enforced either the price of bread must rise or baking must be more exclusively conducted by large firms carrying on business on an extensive scale.

A LOW DEATH-RATE.

In a paragraph in the British Medical Journal of September 15th, page 604, attention was drawn to the low death-rate at that time prevailing in London, and to the lessened amount of sickness requiring medical attendance which was noticeable in the metropolis and elsewhere. And it was pointed out that the healthiness of a cool wet season such as was then present in the south-eastern districts of England was probably in part due to the lessened number of micro-organisms in the air. The quarterly return of the Registrar-General for England, of which an abstract was published in the British Medical Journal of November 3rd, shows conclusively that the low death-rate of the third quarter of this year was not confined to London only, but that it prevailed everywhere, in rural districts as well as amongst urban populations. The figures are remarkable. The deaths registered during the quarter in England and Wales were 107,503, and were in the proportion of 14·2 deaths annually per 1,000 persons living, this rate being by far the lowest yet recorded in any quarter. It was not less than 3·0 per 1,000 below the average rate in the corresponding quarters of the previous ten years, during which period the lowest rates for this season of the year were 15·9 in 1891, 15·7 in 1892, and 15·2 in 1888. The average rate for the third quarter of the year during the forty-six years 1838-83 had been 20·2 per 1,000. In registration counties the death-rate last quarter was so low as 7·1 per 1,000 in Rutlandshire, 10·3 in Buckinghamshire, 10·6 in Dorsetshire, and 10·9 in Berkshire; while the highest rates were 15·9 in Northumberland, 16·1 in Durham, and 16·6 in Lancashire. In urban populations, estimated at a little above 20 millions, the quarter's death-rate was 14·9 per 1,000 living; in the rural population of nearly 10 millions it was 12·7. These rates were respectively 3·7 and 2·2 per 1,000 below the mean rates in the corresponding quarters of the previous ten years. Compared with those mean rates the mortality last quarter of infants under 1 year of age showed a decline of 19·3 per cent., that of persons aged between 1 year and 60 years, a decline of 14·8 per cent., and that of persons aged 60 years and upwards a decline of 12·8 per cent. The zymotic death-rate was 1·92, against an average of 2·96 in the previous ten corresponding quarters; and there was lessened mortality from each zymotic disease except diphtheria. It was in the mortality for diarrhœa, however, that the decline was most apparent, the death-rate from this cause having been less than half the average rate.

BACTERIOLOGY AND THE PREVENTION OF DIPHTHERIA.

The demand for the employment of bacteriological methods for the examination of cases of suspected diphtheria must eventually be considered by more than one sanitary authority. It is, we understand, already before the Metropolitan Asylums Board, and reference to the subject has already appeared in the report of one medical officer of health. Mr. H. Beale Collins has recommended the Kingston (Surrey) Town Council to make provision for this purpose, has pointed out the use to which bacteriological examination is put in New York, has stated that the cost of the establishment of a laboratory would only amount to some £30 or £40, and that the cost of maintenance would be very small. We do not doubt that bacteriological examination would serve a useful purpose if it were made part of the administrative machinery for preventing the spread of diphtheria, but we doubt whether the New York system would find a convenient place in our local administrations without some modification. In New York it appears to be so generally used that the clinical diagnosis of diphtheria is likely to occupy a less important position in that city than it deserves. In many cases the aid of the bacteriologist is unnecessary, the symptoms of the disease leaving no room for doubt. In others, and especially in mild cases of the disease, it is a valuable coadjutor, and sanitary authorities would do well to give facilities for its employment. But for this purpose every step in the process, from the collection of the material to be examined to the cultivation of the bacilli which it contains, must be conducted in such a manner as to make sure that no error creeps in through want of skill on the part of those concerned. The announcement, after such examinations, that a particular patient was not suffering from diphtheria would be immensely prejudicial to the reputation of an administration if subsequent and unmistakable cases of diphtheria occurred in the same house; and, again, if a patient were on such grounds certified to be free from infection, and were a source of infection to other persons, the result would be disastrous. How, then, are the medical officers of health and the medical attendant to have the advantages of the aid of bacteriological examination so that the work shall be

done with a precision which would obviate such occurrences? Certainly it would not be possible if the cost to the sanitary authority was very slight. The medical officer of health would have to undertake some responsibility, and the authority would have to employ a thoroughly competent bacteriologist. That the result might effect a saving in the cost of maintenance of the sick in hospital we think likely enough, but we are satisfied that no authority ought to embark in such an undertaking unless it were prepared to do its work in the very best way.

THE INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA.

The fourth session of the Intercolonial Medical Congress of Australasia will be held in Dunedin, New Zealand, during the week beginning Monday, February 17th, 1896, under the Presidency of Dr. F. C. Batchelor, of that city. It has been decided to divide the work of the Congress into the following five sections, as at the Sydney meeting: 1. Medicine, including Diseases of the Skin; Secretary, Daniel Colquhoun, M.D., M R C P., High Street. Dunedin. 2. Surgery, including Diseases of the Eye, Ear, and Throat: Secretary, William Brown, M.A., M.B., C.M., High Street, Dunedin. 3. Midwifery and Diseases of Women and Children; Secretary, Thomas Morland Hocken, M.R.C.S., Moray Place, Dunedin. 4. Public Health, including State Medicine, Forensic Medicine, Physiological Medicine, and Demography: Secretary, Francis Ogston, M.D., Ch.M., High Street, Dunedin. 5 Anatomy, Physiology, Pathology, and Pharmacology; Secretary, William Stewart Roberts, M.R.C.S., Moray Place, Dunedin. European visitors will be welcomed.

CHEAP TEA AGAIN.

Under an Act of Parliament which is but little known—the 17th of George III, cap. 29, sect. 1—two enterprising persons have just been charged before a metropolitan police magistrate, at the instance of the Board of Customs, for "fabricating and manufacturing certain leaves of tea that had been used, in imitation of tea." The penalty to which transgressors are liable under the Act referred to is £5 for every pound weight of the delightful material produced, and the full penalty incurred by the defendants appears to have amounted to no less a sum than £36 000. Under these circumstances, an order that each defendant should pay £14 fine and £20 costs appears to be moderate. An interesting point in the case was the fact that a special machine, of an ingenious character, and invented by one of the defendants, was used for the so-called "re-firing" of the exhausted tea leaves purchased from various well-known restaurant keepers in different parts of London. By blowing the leaves by means of a fan through a heated tube, they were made to curl up, and when collected in a receptacle at the end of a tube possessed the outward form of ordinary tea. The business, which was described as that of a "Tea Drier and Improver," seems to have been a lucrative one while it lasted, but what it was that was "improved" does not appear; it could not be the tea leaves, nor could it be the pecuniary position of these developers of waste products burning to benefit their fellow creatures in the first place and themselves only in the second. During two months no less than 6,092 lbs. weight of the "dried and improved" was disposed of, and it may astonish some people to learn, from the reported evidence of a person named Small, that 1,340 lbs. of the "dried and improved" were purchased by one firm of tea merchants in the City at 6½d. per lb., and mixed by this firm with other "teas" of a "better brew." The "blended and packed" mixture of "dried and improved" with "better brew" was then sold at 9½ per lb. Those who regard adulteration as a form of competition may do worse than ponder upon these charming revelations.

CORPORAL PUNISHMENT.

The question of corporal punishment of children has cropped up in two very opposite directions. On the one side complaints regarding it are among the various allegations brought against the Leytonstone Industrial School for Girls, and on the other we find some magistrates of Middlesex asking to be allowed to apply the birch to juvenile apple stealers instead of sending them to prison. With the latter request we may express a certain sympathy; far better both for the boy and for public respect for law that he should be caned than that he should be made a gaolbird. In regard to the industrial schools the matter is somewhat different. We may admit that where many unruly girls are crowded together, and where among them is a leaven of "the most vicious and debased class that could possibly be found in a larger city," it may extremely difficult to maintain discipline. After all, however, the necessity for using force is a reflection on the management quite as much as on the children, and at the bottom of the mischief often lies some grave defect in classification. The evidence given in regard to the Leytonstone School is strongly suggestive of this being the case there. It is all very well to sort people out according to their presumed religions, but it will become a serious question whether it is justifiable to maintain such a classification according to religion if it involves the scandal of mixing together girls who, according to evidence, "were of a very low class, and many of them had been prostitutes," with others who, according to the statement of the Rev. A. Drew, Chairman of the Industrial Schools Committee of the School Board, were many of them girls with bad parents, who were sent to the school to avoid the contamination of an evil home. A little leaven leaveneth the whole lump, and, whatever other classification may be desirable, classification according to character is the first essential. It is a scandal that girls sent to these schools by well-meaning magistrates to save them from contamination should, in the name of classification according to religion, be condemned to herd with ex-prostitutes.

ICE CREAMS AND BACTERIA.

The report laid recently before the Islington Vestry by Dr. Klein contains matter well worthy the consideration of those who would mimimise the amount of legislative interference with public health matters. Dr. Klein has again been examining bacteriologically the ice creams sold in the public streets, and the water used for washing the glasses in which they were served. In all, six samples were examined, and in each sample such an abundance of pathogenic and other germs was found, that it led Dr. Klein to assert that they were not inferior to ordinary sewage. Many of the forms identified bore striking resemblance to those diagnostic of typhoid—if, indeed, they were not identical. In view of these facts the importance of careful legislative control over food provision cannot be overestimated. So various are the conditions of life under which bacteria are now known to exist, that it seems not sufficient to exercise a general supervision over the sale of eatables, but each individual case must be dealt with as it arises, for by such an apparently insignificant person as the itinerant ice cream vendor an elaborate prophylactic scheme may be easily broken through, and an epidemic of typhoid, for example, may suddenly arise in our midst from "unknown" causes. The possibility of such an occurrence is worth the careful consideration of the advocate of "telluric," "atmospheric," and other suggested epidemiological factors.

Professor Leyden has received the Russian decoration of St. Anne—the first class of the Order.

The will of the late Dr. Thomas Duncan, of Richmond, who died on August 26th last, has been proved of the value of £70,682 4s. 2d. The value of the late Dr. Weir's (Malvern) personal estate has been sworn at £11,501 6s. 4d.

THE SCANDALS OF MASSAGE.

Report of the Special Commissioners of the "British Medical Journal."

II.

We have said that the police did not appear to be able to discover any of the abuses to which we called their attention before the vacation, and which we described in the last article under this heading. Our Commissioners, however, did not find that the task presented any peculiar difficulty. Various gentlemen took occasion to present themselves at different establishments in the ordinary course of business; and they found that the young lady assistants, who carried on the treatment were quite prepared, if not on the first, at least on the second or third, visit to talk with sufficient freedom about the peculiarities of the trade. One fact was common knowledge everywhere—the alarming incident of the closing of the house to which we had already referred, and as to which Mr. Asquith averred in the House of Commons that either it had never occurred or at least he had not been able to find any trace of it. The establishment was situated in the City. We will not name the address, although we have it; but it was in very close proximity to the business centre of London. According to some accounts, it was kept open all night; but, whether this be true or not it is agreed by all parties that it was a somewhat startling establishment, and that it pursued a prosperous and notorious career, until the police visited it one day, and it had to close for ever. Of course, we cannot say whether the Home Office denial may not be technically true, for it is quite possible, looking to the history of some of the other persons who have taken up massage business, that the police may have "wanted" someone at the City establishment for offences of a more ordinary and commonplace character than the scandals with which we are dealing. The fact remains in any case that there was such a house in the very centre of the City, and that its career was suddenly closed by the intervention of the police. We have even reason to identify certain of the lady assistants who officiated in the City house with certain ladies who have been in fact advertised in connection with West End establishments very recently, if indeed the advertisements are not still appearing.

As regards the West End houses, we repeat what we have already said, that it would be most unjust to suggest that all the establishments which are advertised, or even all of those whose advertisements contain the phrases we have noted as suspicious, are otherwise than honestly intentioned establishments. But in almost all those which we have investigated it is beyond question that the method in which the business is carried on is dangerous to the last degree, and that the customary arrangements are of such a nature that it would be hardly rational to expect that scandals should not arise.

Nothing is more honourable than the profession of a genuine nurse, and certainly no one would suggest in this Journal that mere questions of necessary exposure in the difficult and delicate business of nursing could be stigmatised as indecent. But the system of these houses is a very different matter. The clients who attend are not persons reduced by illness to a hospital bed; they are men for the most part fresh from the clubs, and very often not only full of health, but full of wine. They come upon no kind of medical prescription, and, indeed, with no pretence that their object is genuine medical treatment or that they are suffering from any complaint which requires it. They walk in and order "general massage" in much the same fashion as they might order a Turkish bath; and it is assumed, as we have already said, that they will undress.

If it were proposed to open a Turkish bath establishment for men in which all the attendants would be attractive young women, we have no doubt the Home Office would see its way to interfere. But even that would not be quite so bad as what happens every day in the massage houses, for not only is the client treated by the so-called nurse in a condition of nudity, but the two are left deliberately alone for as long a period as the gentleman chooses to pay for. The only remnant of decency in this extraordinary custom is that in some establishments the gentleman is supposed to lie down on a bed or couch and cover himself with a blanket, but as often as not he does nothing of the kind. Where there is a bath, the lady attendant calmly attends upon him all the time, and he lies down and has the massage applied to him immediately afterwards. We ask the Home Office and the profession, not to speak of the general public, whether this is not a state of things which involves the most obvious risk?

As a guarantee that our statements are in no way exaggerated, we append a literal account of the initial experiences of one of our Commissioners in his own words. We will only premise his graphic account by stating that he is a professional gentleman well known in London, and that he chanced at the time to be suffering from a slight rheumatic affection. After relating a visit to an undoubtedly honest and scientifically conducted establishment, he proceeds to describe a subsequent visit to another of the advertised houses. We possess, of course, the name, date, and address, but we do not at present think it necessary to publish them in view of the possibility of further action.

"It was," says our correspondent, "a more pretentious establishment, and things were conducted on a more lavish scale. I was introduced to the proprietress, who was called 'Madam' in the advertisements, but who appeared to be more familiarly known as 'The Boss.' I explained to her that I was suffering from a slight rheumatic affection of one of my joints. She was very sympathetic, and told me that if I would adopt her system and take a seat for a few minutes, she would speedily afford me relief. She thought that a *Bain de Luxe* would be appropriate, but when I told her that I preferred massage, she assured me that it would do equally well. I was shown into a cosily-furnished room in which Madam left me, telling me that I would find it more convenient if I would completely undress, assuring me that the correct principle, and the only one followed in the establishment, was complete general massage, with special massage of the affected part. I followed her instructions and in a few minutes was visited by a gracefully attired young lady, who performed general massage, and made herself generally agreeable. I had some conversation with her, from which I gathered that three or four assistants, all young women, were retained by Madam, and that they had to work from 10 in the morning till 7 in the evening. She pleaded that women had to make a living somehow, and that it was remunerative. I suggested that her salary was in all probability not a big one, and she admitted that it was very small indeed. I offered her a small present, which she accepted with avidity. On going out I discharged my indebtedness to Madam and left with the conclusion that it was a profitable game for the proprietress. I was asked if I had received attention and

satisfaction, and was cordially invited to come again. I felt that I had not fully availed myself of the attractions offered by the establishment."

The next report proceeds as follows:

"I again saw Madam, and told her that I wished for the services of the young woman who had previously attended me. Madam cheerfully acceded to my wish, and suggested that in addition to the massage I should have a bath. She took me upstairs to a room furnished with a bed or couch, and having a bath in an anteroom. She herself prepared the bath, and told me to undress and get in. In a few minutes she returned, and remained talking to me for some minutes whilst I was in the bath, explaining that the young lady would be with me in a few minutes. The bath was an ordinary full-length one.....[here follow some unimportant details].....No dress and no bathing costume of any kind were produced, and the patient was evidently expected to expose himself fully to the gaze of the attendant. In a few minutes the young lady appeared, charmingly attired as before, and after giving me a cordial welcome turned on the current. She then proceeded to wash my face and soap my arms and legs and thighs, and finally my back. After a few minutes' desultory conversation she helped me out of the bath, and without any attempt at covering laid me on the couch and repeated the massage as before. I remained for about an hour, and at the expiration of my visit offered her a small present, which as before she accepted without hesitation. She finally took me downstairs to Madam, to whom I paid a guinea for the services rendered. In one of the rooms I noticed a framed certificate signed by a physician who makes a specialty of such documents. I had not an opportunity of examining it closely, but I was informed that it was Madam's diploma. I was told by the young lady that they were 'full up' nearly all day long, that they did the work whilst Madam received the visitors and took the money."

We remark then that in this establishment, against which so far it will be observed we make no charge, and draw no inferences beyond the bare recital of what any chance visitor would see, there were certain young ladies engaged, as was stated, all day long manipulating men of all kinds, unknown and unintroduced, in a state of nudity and quite alone. These ladies depended for their living largely on the "tips" of their clients. It will be observed, in Madam's favour, that some colour of medical treatment was given to the operations by the accident that the visitor had a slight ailment, and that a certificate, signed by a London physician, was a framed ornament of the establishment. We believe, to do her full justice, that this lady did know a little about real massage. But it will be obvious in the sequel that such knowledge is not to be expected, even in the most moderate degree, from the operators in most of the establishments. It will also be seen that the initial allusion to rheumatism was only the result of the visitor's inexperience. In entering the houses to which we have referred as a scandal, it is wholly needless, and indeed absurd, to complain of any ailment. To these points —namely, the system of "certificates" and their medical value, the system of tips and the recruiting o the girls employed, and the gross and palpable offences to which this state of things in fact leads up—we shall refer in our further articles.

THE Lord Chief Justice will preside at the festival dinner in aid of the funds of the City of London Hospital for Diseases of the Chest, to take place at the Hôtel Métropole on April 30th, 1895.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

WE understand that the appeal of Sir Joseph Lister for funds to enable the British Institute of Preventive Medicine to carry on on an adequate scale the preparation of the serum antitoxin in diphtheria, has thus far produced a sum somewhat under £500. But the minimum sum needed for the necessary preparation on a proper scale will not be less than £2 000, and it may be hoped that this sum will be promptly placed in the hands of Sir Joseph Lister and the Council of that Association. The appeals for the supply of this material are daily numerous, and often heartrending. In one case a distinguished practitioner telegraphed for a supply to be used for his son at a public school, who was suffering from a most threatening attack. We ourselves receive every day urgent appeals of the kind, but the means exist at the Institute for satisfying only a few. In many cases where they have been able to satisfy the demands made upon them, surprising and gratifying results have frequently been attained. In two instances the relatives of medical men have been benefited by its use. A young man was seized with diphtheria, had been tracheotomised, and was at the point of death. His life has been saved, almost miraculously, by the use of the antitoxin. At the hospital to which in the first instance the Institute of Preventive Medicine has supplied antitoxin for the purposes of the patients, the results are not less encouraging. The mortality of true diphtheria cases has at once been reduced to 10 per cent., a mortality hitherto unknown in this or any other country and one which contrasts favourably even with M. Roux's statistics of 24 per cent. In this statistic it should be noted that, as with M. Roux, all cases have been eliminated which do not strictly in the first instance answer to the diphtheria test by showing the presence in the diphtheria membrane of the characteristic bacillus. This, of course, signifies a much more severe test of any treatment or of any statistic than has hitherto been common. In the past cases have been admitted to hospitals and classified as diphtheria which presented clinically symptoms akin to that disease. The cases in the hands of private practitioners, of which the reports are being weekly furnished to us and of which thus far we have published 38, show equally good results, and, indeed, apparently better results. But then we cannot in all cases be sure that the bacillary tests have been previously applied in their diagnosis. About 40 per cent. of the cases usually sent to hospital as diphtheria are so defined only in so far as they present the clinical symptoms of that disease, which it is well known may be simulated by other forms of croup, pharyngitis, and laryngitis. Those who have tested the application of antitoxin have done so by the most severe and exclusive methods which can be adopted, omitting all but fully proved cases. The results achieved both in this country and abroad no longer leave room for doubt of the very high value of this remedy as a curative means. Of course no one has ever been able to predict or to hope that it can prove curative in all cases. It is probable, however, that it will effect an enormous reduction of the mortality of a disease which in its true manifestation has hitherto been terribly fatal.

It is very urgent that the British Institute of Preventive Medicine should be put as quickly as possible in the position to produce this valuable therapeutic material on a large and adequate scale; for, as we have already pointed out, commercial products are not by any means in all cases to be relied upon, and it is extremely important that no material should be sent out which has not been produced under circumstances of the greatest care, and without being thoroughly tested with regard to its efficacy.

XX.—DR. JAMES B. SIMPSON (Golspie, Sutherland, N.B.) sends the following notes of three cases of diphtheria, one of which was treated with antitoxin:

CASE I.—On September 1st, 1894, I was called to a girl, aged

6, the daughter of a poor weaver. She had fallen ill on August 28th. The evening before I was sent for, however, the difficulty of breathing became marked. I found the child evidently dying from laryngeal obstruction. There was enormous glandular enlargement in the neck and the tonsils; the soft palate and the back wall of the pharynx were covered with a dirty-grey diphtheritic membrane. Owing to the wretched surroundings of the patient, and considering the extensive nature of the disease, I did not feel justified in performing tracheotomy. The child died twelve hours after I first saw it.

Case II.—On September 6th, in the same house, a brother of the girl, aged 3, fell ill of diphtheria. For five days he did well. He took food freely, and a 1 in 1,000 solution of corrosive sublimate in glycerine and water was frequently applied locally, and internally iron and chlorate of potash was given. On September 12th, however, the pulse ran up from 100 to 130. On September 13th the membrane, which had been confined to both tonsils, could be seen extending down towards the larynx. The pulse was 140. On September 14th a loud croupy cough began in the morning, breathing became very laboured, the pulse became uncountable, and at 3 P.M. the child died.

Case III.—On September 19th another member of the family, a girl, aged 12, fell ill. At 11.30 A.M. I found the tonsils and soft palate of a deep angry red. The right tonsil somewhat swollen, and had a grey patch of membrane about the size of a sixpenny piece on its surface. There was considerable glandular enlargement in the neck, and difficulty in swallowing. The temperature was 100°, and the pulse equal 76. A solution of corrosive sublimate in glycerine and water (1 in 500) was applied locally, and iron and chlorate of potash given internally. Food was administered with difficulty.

The patient had a restless night, and on September 20th, at 10.30 A.M., the glandular enlargement was increasing. Both tonsils were covered with membrane, and the throat was more swollen. The temperature was 100°, and the pulse 120, regular.

She again passed a very restless night, and at 10 A.M. on September 21st had taken almost no food during thirty-six hours. The glandular enlargement tended to increase. The membrane had spread from the tonsils to the soft palate, and tended to pass down towards the larynx. The temperature was 99·8°, the pulse 132, regular, but very compressible. At 6 P.M. the pulse was 140. I injected 20 minims of Aronson's diphtheria antitoxin (procured through Messrs. Zimmerman and Co.) deeply into the muscles of the back. I used an ordinary hypodermic syringe, previously sterilised by soaking for six hours in a 1 in 20 carbolic solution. Until 9 P.M. the child was very restless, but from that time she rested fairly well until 4 A.M.

On September 22nd, at 9.30 A.M., the glandular enlargement was distinctly less. The patient asked for food, the first request of the kind since September 19th. The tonsils and soft palate were still covered with membrane, but no extension had taken place. The throat was not so much swollen nor of such an angry colour. The temperature was 99.2° and the pulse 86. At 9.45 A.M. I injected 40 minims of antitoxin, thus making the two injections equal to 4 c.c. At 8 P.M. the patient coughed up a considerable amount of grey tough membrane, with a large amount of mucus. Thereafter she fell asleep and slept quietly all night.

She awoke at 9 A.M., on September 23rd, after a sound sleep of twelve hours. The cervical enlargement had almost gone; the tonsils and soft palate were absolutely clear of membrane. The temperature was 99°, and the pulse 74. She felt hungry, and looked bright and smiling.

From this date the patient made an uninterrupted recovery. She is now (October 30th) as strong and healthy as ever. No paralytic symptoms whatever have appeared.

Remarks.—(1) It is interesting to note that the cottage in which these three cases of diphtheria occurred stands isolated on the slopes of a highland strath, about 150 feet above sea level. A healthier, breezier situation one could not imagine. The well from which they draw their water lies up the hill side, above the cottage, and any contamination of the water seems impossible. There have lately been cases of diphtheria in the district, but none in the vicinity of this house. The only plausible explanation seems to be that the diptherial poison was carried to the house in scraps of cloth and old clothing which the weaver takes in from all quarters to make up bed quilts for the country people.

(2) The speedy recovery of the case in which the antitoxin was used was most striking. The case seemed to be slowly but steadily growing worse, and one felt almost prepared for a fatal issue, as in the other cases; but within forty-eight hours of the first dose of antitoxin the child was bright and lively, eating well, sleeping soundly, and not a trace of membrane on tonsils or palate was to be seen. The diagnosis of diphtheria in these cases was confirmed by Dr. Sutherland, medical officer of health for this county, who kindly visited them with me.

XXI.—Mr. William Lees, M.R.C.S., L.S.A. (District Visiting Surgeon, Chester General Infirmary) reports the following case:

A. D., aged 2½ years, a female, was taken ill on October 6th, and was first seen on October 8th, at 11 P.M. She was suffering from a sharp attack of bronchitis. The patient lived in a row of three cottages in the country. After seeing this patient, I was asked to see a youth in the next house, and found him to be suffering from diphtheria; he was eventually removed to the fever hospital.

On October 9th, A. D. was much about the same, except that the breathing was characterised by marked stridor. The temperature was 102·4° F.; the respirations 44; the pulse 116. The throat was rather redder than normal, but there was no sign of any membrane.

On October 10th, at 12.45 P.M., the child was not quite so well. The temperature was 102°; the pulse 124; and the respirations 48. Both tonsils and the right side of the uvula were covered with a thick greyish membrane. Externally the glands were considerably swollen. Breathing was more shallow and stridulous, and cough very croupy. She was ordered a spray of dilute sulphurous acid, and a mixture containing tincture of the sesquichloride of iron and chlorate of potassium. The urine was slightly albuminous.

On October 11th, when seen at 6.30 A.M., she was very much worse. The membrane had spread considerably, and the swelling of glands much increased. The temperature was 102.4°, the respirations 64, and the pulse 128. The breathing was very laboured, and the intercostal spaces much depressed. The features were cyanosed. Antitoxin (Aronson's) ♏x was injected into the left buttock. The spray and mixture were continued. She was seen again at 12 P.M. The temperature was 99°, the pulse 116, and the respirations 50. The breathing became easier, according to the mother, within one hour after the injection. There had been no further spread of membrane and the swelling of the glands was somewhat less. She was seen again at 9.30 P.M. The temperature was 98.6°, the respirations 40, and the pulse 116. The breathing was easier, and there was less stridor. The swelling of the glands had lessened distinctly. The membrane looked thinner, and in places was fissured and inclined to curl up at the edges. She had slept fairly well. Antitoxin ♏xv was injected in the thigh.

On October 12th at 10.20 A.M. the temperature was 98°, the pulse 112, and the respirations 40. She was sleeping more comfortably, stridor was much less, and the lips and cheeks were of better colour. She had passed a good night, taking nourishment well. For the first time she had coughed up several small pieces of membrane. The membrane was nearly all gone. Externally the swelling had almost disappeared. Expansion of the chest had improved. The urine was still albuminous. Antitoxin ♏x was injected in the left arm.

On October 13th membrane was coming up in larger pieces and increased quantity. The fauces were quite free from membrane. The temperature was 97.4°, the respirations 32, and the pulse 110. She was sleeping and taking nourishment well. On the evening of this day some slight paralysis of the palate was noticed. The urine still albuminous (about $\frac{1}{5}$).

From this date the patient improved steadily. The paresis of the palate passed off in five days, and on October 20th the urine was quite free from albumen. There was no loss of knee-jerk.

Remarks.—The source of infection of this case and the other one referred to was undoubtedly the general insanitary and filthy condition of the houses. Another person, living

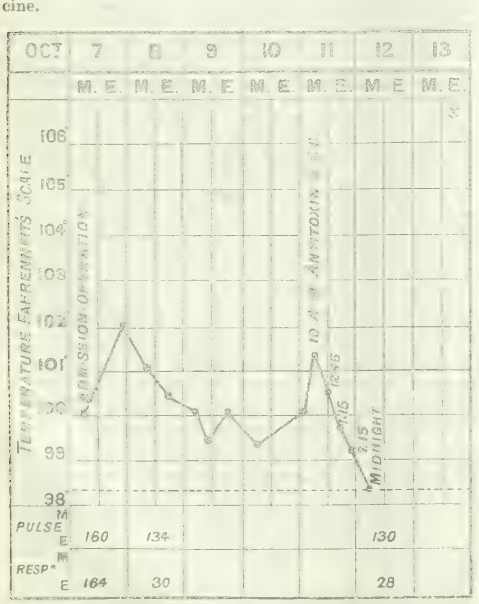
in the third house of the row, attended for hæmoptysis, developed very suspicious throat symptoms, but these cleared up under ordinary treatment. I was fortunate enough to be successful in obtaining some antitoxin serum on October 11th, early in the morning before seeing the patient, and gave the first injection early on that day. There were no signs of any local reaction at the sites of injection, and no symptoms of any general depression. I fully believe that the patient would have rapidly succumbed to the disease under the old principles of treatment, as the strength was already much weakened by the preceding bronchitis, which had existed for three or four days before I first saw the patient.

XXII.—We have received from Dr. W. L. Christie, F.R.C.S. Eng., House-Surgeon to the Bristol Hospital for Sick Children and Women, the following report of a case of diphtheria, under the care of Dr. Barrett Roué, in which the beneficial effects of antitoxin after tracheotomy were apparent:

F. J., aged 4 years, was admitted to the croup ward at 11 A.M. on October 7th, suffering from severe dyspnœa, and with well marked retraction of the chest on inspiration.

The fauces were covered with characteristic false membrane. Assisted by Mr. Ewens and Dr. Jamison, I did tracheotomy at once to the complete relief of the dyspnœa. The steam cot was used, and the throat was swabbed with perchloride of iron and glycerine. Albumen was found in the urine, and some agar tubes were inoculated with the faucial membrane. The temperature rose in the evening to 102°, but fell a degree each day till October 11th, when a vulcanite tube was inserted in place of the silver one. The tonsils and pharynx were cleaning rapidly, but lumps of membrane came from the trachea, and as the temperature rose again to 101.2° F., it was feared that membrane was extending down the trachea.

With the hope of checking this, and possibly of averting paralytic sequelæ, it was deemed advisable to use antitoxin, which, owing to the kindness of Dr. Armand Ruffer, we had just obtained from the British Institute of Preventive Medicine.



On October 11th, at 10 A.M., 5 c.c. were injected on the outer side of the thigh by Debove's sterilisable syringe. The temperature steadily fell, as shown by the accompanying chart.

On October 12th, the tracheotomy tube was removed.

On October 14th, temperature normal, and never again reached 99°, save once in the evening.

On October 18th, the urine was free of albumen, and the wound was well healed.

On October 27th, felt extremely well, and showed no signs as yet of sequelæ. The culture showed spreading membrane and liquefaction. It has not yet been microscopically examined.

Remarks by Dr. Barrett Roué.—I think this case is instructive as illustrating the combined effects of tracheotomy and antitoxin. It was obvious, I imagine, that the dyspnœa was so great on the arrival of the patient that, had we had the antitoxin at the time, it could hardly have been trusted to alone, although when the obstructive difficulty had been dealt with by tracheotomy, the use of the antitoxin came in just at the commencement of the critical time—the second rise of temperature.

XXIII.—Mr. J. A. Phillips (Cardiff) sends the following notes of a case of diphtheria treated successfully by tracheotomy and injection of antitoxin:

E. W., aged 4 years, had been ailing for two or three days with slight sore throat, headache, *malaise*, etc. She was first seen at 10.30 P.M. on October 14th. The temperature was then 104.2°, the respiration 64, and the pulse 160. There was great inspiratory stridor; the voice was almost inaudible. The fauces were slightly injected, and there was a small patch of membrane upon the right tonsil. The urine was scanty and albuminous. The case clearly was one of laryngeal diphtheria.

The child was at once placed in a tent and steamed, and a chlorine mixture given every two hours. On visiting her again at 2 A.M. the symptoms had become so urgent that I performed tracheotomy at once, and at the same time injected 10 minims of Aronson's antitoxin into the buttock. At 9 A.M. the patient was much easier. The temperature was 100.4°, the respirations 40, and the pulse 120. She was taking nourishment well. The steam was medicated with a mixture of carbolic acid and compound tincture of benzoin. On October 16th, breathing having become more difficult, 8 minims of the antitoxin was again injected. The case from this time progressed most satisfactorily, although complicated by a sharp attack of bronchitis. I removed the tube on the fifth day, and the opening closed on the seventeenth day. The patient is at present almost herself.

Cases at St. Bartholomew's Hospital.

Inquiries made at St. Bartholomew's Hospital by our representative indicate that for many months cases of diphtheria have been treated in that hospital by the serum antitoxin method. Discrimination is however exercised in the admission of patients. None are taken into the diphtheria wards except those urgent cases of pronounced diphtheria and in which the operation of tracheotomy is subsequently to become necessary. Upon the admission of the cases a specimen of the false membrane is taken, and in most of the cases has been subjected to bacteriological examination, with the result that the diagnosis has been absolutely set at rest and the diphtheritic nature of the malady verified.

The patients are of course isolated in a ward set apart for diphtheria cases. Unlike what is found in the children's hospitals in France (Enfants Malades and Trousseau) no cases of other specific diseases are admitted into this ward. In the French hospitals pneumonia and scarlet fever cases are to be seen side by side with indubitable cases of diphtheria. Thus in St. Bartholomew's Hospital every facility exists for giving the remedy a fair clinical trial, and factors which might impede or alter the results have been carefully excluded. Some of the cases have been seen by Dr. Lauder Brunton, who has carefully watched the results of the treatment in many of them, and whose judgment has been of vast importance in guiding the younger practitioners as to the proper mode of conducting the treatment. Some of the cases in Dr. Church's wards

have been treated very successfully, and the results have been declared by the observers to be distinctly good.

The fluid which has been in use at this hospital for a few months is Aronson's fluid, and has been obtained through Schering. The cases which have here been treated do not differ in detail from those which have already been published in the British Medical Journal.

A conference of the chief State medical officers of the German Confederate States was held in the rooms of the Imperial Board of Health in Berlin on November 3rd, the subject under discussion being the diphtheria antitoxin. The Prussian delegates proposed that the State should take in hand its manufacture, but met with opposition from the delegates of the southern States, who were of opinion that the remedy had not been sufficiently tried to be ripe for State manufacture.

There is a momentary stoppage in the antitoxin production at Höchst, but a new supply is hoped for in a few days. The concentration of the dose used for immunising persons near a case of diphtheria has been increased from one-tenth of dose 1 to one-fourth of the same.

In France the question of providing hospitals and the poor population with antidiphtheria serum is to be solved by the establishment of a depôt at the Public Assistance. The hospitals and the needy will be provided with the serum directly from this establishment. In the hospital dispensing departments there will be depôts for the purpose of providing the *médecins de secours à domicile*. How to provide the paying public with authentic serum is a more difficult matter, as, according to French law, pharmacists have the sole right of selling drugs. Government is considering the question, and it is believed that the example of the Italian Government will be followed, and a legal Government monopoly of the serum will be asked for. M. Paul Strauss proposes that the Municipal Council vote £600 to the Pasteur Institute, to facilitate the preparing and distributing the antidiphtheria serum, and £300 for the purpose of putting in order stalls at the Grenelle slaughterhouse to be used for stabling horses for the Pasteur Institute service. During the months of November and December of 1894 £60 is to be paid to the Pasteur Institute to help to defray the expenses of preparing and distributing the serum. The Municipal Council urges the Director of the Public Assistance to effect a reform in the hospital diphtheria service as well as a general reform in the children's hospitals.

In the French departments the tide of enthusiasm shows no signs of ebbing. The Municipal Council of Bordeaux has voted £200 for the immediate expenses of preparing the serum, and a credit account of £320 to provide funds to enable the laboratories to carry on its work for a year. It is expected that in January the Bordeaux laboratory will be in a position to furnish neighbouring towns and communes with such supplies of antitoxin as may be necessary. A subscription has been opened at Rochelle in the Charente Inférieure at the head of which appears a sum of 200 francs voted by the Municipal Council. The Municipal Council of Saint Nazaire has voted a similar sum. Rodez in the Aveyron has undertaken to secure a supply of serum, and has voted a sum of 2,000 francs for the purpose. The town of Nancy has sent 1,000 francs to M. Roux.

The municipal authorities of Rome have taken steps to obtain the necessary material for the antitoxin treatment of diphtheria. The Public Health Office telegraphed to Professor Behring for a supply, the Town Council having voted a sum of 1,000 lire (£40) for the purpose. The serum will be placed at the disposal of such practitioners as may require it at cost price; provision will also be made for the needs of the poor. Professor Roseo has asked the Congregazione di Carità to set aside an isolated ward in one of the public hospitals for the treatment of cases of diphtheria by the new method. If the results are satisfactory the municipality will ask the Minister of the Interior for permission to undertake the manufacture of the antitoxin.

At its annual meeting recently held at Brussels, the Fédération Médicale Belge, at the suggestion of Dr. Jules Félix, decided to petition the Government to establish a "serotherapeutic institute" for the supply of diphtheria antitoxin. This institute, the establishment of which was represented as being a matter of urgency, will be on the same administrative basis as the State Vaccine Institute.

The *Gazette Médicale de Liège* states that the results of the treatment as carried out in the Hôpital Saint Pierre at Brussels have so far been very encouraging. In less than three weeks Roux's serum is believed to have saved the lives of some twenty little sufferers from diphtheria.

In the Pædiatric Clinic of Florence, of which Professor G. Mya is the head, the treatment has been carried out since September with a supply of Behring's serum provided by the Administration of the R. Arcispedale di S. Maria Nuova. For the treatment of poor children at their own homes the Congregazione di Carità, at the suggestion of Dr. Billi, has placed in the hands of Professor Mya a sum of money sufficient to ensure an abundant supply of antitoxin to the district medical officers (*medici condotti*). Professor Mya has not only undertaken the trust, but has placed his laboratory and the services of its entire staff at the disposal of those who wish to make the investigations necessary to establish the bacteriological diagnosis of diphtheria. The results of the therapeutic experiments will be published in due course.

The Republic of Uruguay has commissioned Drs. J. Rodriguez and Turenne to study M. Roux's method at the Pasteur Institute in furtherance of his work, and its example has been followed by Versailles.

DEATHS UNDER ANÆSTHETICS.

[The following case is perhaps not properly to be classed as a death under chloroform, since alarming symptoms did not arise until after recovery from the anæsthetic. We are indebted to Mr. H. W. Kendall, House-Surgeon to the Great Northern Central Hospital, for the notes.]

On October 17th, B. C., a boy, aged 9, was operated on by Mr. Lockwood for rupture. The operation was found necessary as the testicle was in the canal which made it impossible for him to wear a truss. All his organs had been previously examined, and found to be healthy. He took the anæsthetic—chloroform—and on recovering from it vomited a little before he left the operating table. His pulse and respirations were at this time quite regular. On the way to the ward he spoke one or two words. Immediately after he was put to bed he gave several sighing respirations, and then ceased to breathe, and his pulse could not be felt. Artificial respiration was at once commenced; ether, brandy, and strychnine injected, the battery and suspension were used, and hot towels were applied to the nape of the neck and abdomen. Efforts to restore him were kept up for over two hours, but all to no purpose. The operation lasted three-quarters of an hour, and the shock was the greater owing to the tension on the cord and testicle necessary to draw it down and suture it to the scrotum.

Dr. R. W. Carter (Weymouth) sends the following further explanations of the system of administering chloroform, which he advocates: The vapour is given in inspiration only, and at first much diluted, when the patient generally merges into a quiet sleep without the stage of excitement (which, like resistance, coughing, etc., should be carefully avoided, as they are nearly always provoked by too concentrated a vapour) when the corneal reflex is then in abeyance and anæsthesia complete.

It is asserted that the maximum of danger obtains in the early stages of inhalation. I have never had any anxiety at this period, and find no discomfort or terror when proper dilution has been employed—but a gradual accommodation of the system to the new state, the tolerance of the vapour is great when gradually introduced thus, and a proportion is breathed with ease at the later stage, which would induce

resistance spasm of the glottis, etc., if given at the beginning.

Dr. A. E. Sansom says: "I am quite sure the danger of chloroform is not proportionate to the quantity retained in the system; it is its early influence, the *brusquerie* of its action which has caused the great part of the fatality; it is not only at the early stages of inhalation, but in cases where the smallest quantities have been used that cases have been rendered suddenly fatal," and Dr. Snow says[1]: "The truth is, however, that if there be too much vapour of chloroform in the air the patient breathes it may cause sudden death, even without previous insensibility, and while the blood in the lungs is of a florid colour."

It is pretty generally agreed that 3½ per cent is the dilution which should not be overstepped, and this ratio should be sustained by mechanical means, and by no guesswork contrivance. If 5 per cent. is overpassed look out. What are we to gather, then, from the so-called ready method, when a proportion equal to 12 per cent. may be breathed?

The open method is more handy, which may unfortunately be considered a desideratum. The method I employ is troublesome, and enforces attention to its employment. It has been said that the objection to the open method is overcome if it be employed by one who can manipulate it, and who is zealous to interpret signs of danger. No signs of danger, it is answered, will indicate the strength of the inhaled atmosphere, and the anæsthetic state should be kept in bounds by no such marks as these, for it is as desirable to measure accurately the strength of the vapour as it is a dose of a potent medicine. There is a narrow limit between the strength in which the vapour may be safely inhaled, and that which is likely to produce alarming symptoms, if not death.

[1] *On Anæsthetics*, p. 79.

OPENING OF THE MEDICAL SCHOOLS.

Royal College of Surgeons in Ireland.

The session of the school of the Royal College of Surgeons in Ireland was opened on Thursday, November 1st, by Mr. Thornley Stoker, the President, who presented the prizes and then delivered an admirable address. Having referred to certain grievances which had been redressed, he proceeded:

The matter of requiring from rejected candidates evidence of having attended additional courses of practical instruction is one we need not stop to discuss. The rule is not ours. It is made by the General Medical Council, and we are powerless to alter it. We have one protection against its abuse—that it is discretionary. To pass from matters which have troubled you to those which seem to be exercising other people of late, I would like to say a word about the alleged falling off in the Dublin School of Surgery and Medicine. I utterly repudiate the idea that any decadence in the quality of teaching has taken place. I am convinced that the abilities and devotion which marked the teachers of a past generation is existent in that of to-day, and that those who succeed the Irish workers and thinkers of our time will do them the justice of a recognition they can surely claim. Apart from a change in quality, it has been stated that a falling off in numbers has taken place in the students of the Dublin School of Medicine, and it has been inferred that this implies a material decadence. Supposing the fact to be true, I deny the inference; but do not number Dublin students only when you measure the Irish school; recollect that three new centres of education have sprung up in Belfast, Cork, and Galway, and that they have naturally subtracted from the congregation of students in this city; or if you come to gauge our strength by the number of men who obtain qualifications from the Irish universities and colleges, do not forget that nearly every student educated in certain provincial schools who does not proceed to the degrees of the Royal University goes to England or Scotland for his diploma If these students elect to obtain Scotch or English qualifications, it is surely no argument against Irish schools, where they have obtained the training necessary to fit them for their diplomas. Let us see if this exodus can be fairly taken as an argument against Irish licensing bodies. Why do these students go? Is it because the diplomas are cheaper than those at home? If this be a reason it does not apply to England, and the difference is so small in Scotland that it can only influence a moderate number of students, and is of no general import. This is the more true that the apparent economy of the Scotch fee is lessened by the amount of the charges for re-examination; or is it because the examinations are more easy to pass? If this is true, it is to the credit of the Irish corporations that they have not entered into an unworthy downward competition, but have in the best interests of the public good maintained a proper standard of professional fitness, and refused to flood the market with practitioners of inferior merit. But even suppose a falling off in the aggregate of Irish students had taken place, would it be wonderful? Look at the impoverished condition of the country and the unsettled state of those classes from which our students have been chiefly drawn, and see the way in which the gates of the approach to our profession are being gradually locked by that most imperious and irresponsible body, the General Medical Council. It seems to be working in nearly every direction except the right one; it is overloading the unhappy student with new subjects and new courses, and now has imposed a sorry burden on him, and those who pay for him, in the shape of a fifth—and, I believe, wholly unnecessary—year of study. If any argument can be brought forward to justify this fifth year, it is that so much of so many things have been given to the pupil to do that he cannot complete them in four years. This is a reason for diminishing his curriculum, not for weighting him with a further period of study. The General Medical Council is working at the wrong end: it is all very well and very proper to bar the gate that leads from the life of the student to that of the practitioner, and to let none through save those duly qualified; but this process has been carried to excess, and enough attention has not been paid to guarding that other gate which leads into the life of the student. Men are allowed to enter the outer court of the temple who can never pass into its penetralia. Registration as a student of medicine should be dependent on passing a much more exact matriculation than at present, and subjects such as physics should be passed at this period, so as to leave the worker free for the more purely medical branches of his work. This would impose no additional penalty on the pupil, would add to his professional opportunities, and would prevent many a poor fellow commencing medical studies who will never be able to complete them. There is necessarily, under the growing severity of tests, an increasing number of such men, and the waste of time, money, and opportunity consequent on their being permitted by too easy matriculation to enter on medical studies are to be lamented. The latest exploit of the General Medical Council is an act with reference to dental students, which seems to me strike a blow at the honesty and efficiency of their education. The old and costly system of apprenticeship has practically been reimposed, and this College, which has abolished it, has been compelled by the General Medical Council to return to the *status quo ante*. That a mistake has been made will be evident when the time comes—and it is not far off—when this imposition shall be again removed. There is a recent occurrence which affects Irish students unfairly, and of which I would say a word. Until lately the class of gentlemen who were appointed to examine candidates for the army medical services was nothing short of a scandal. So much so, that Mr. Campbell Bannerman proceeded to rectify the abuse, and appointed a new board of examiners, but one composed of men working and teaching in London. In spite of strong representations made to him as to the injustice thus inflicted on Irish students, who form a large proportion of those competing for the Army Medical Service, the Minister for War refused to make any change. He was asked to appoint one Irish and one Scotch examiner for each two English; but no, it would not be done. Of course, students do better in competition when examined by those who have been engaged in educating them, and so a direct premium is offered to prepare for the army competitions in London. Considering that so large a part of the Military and Naval Medical Services have been recruited from Ireland, this is a grave injustice to our students and teachers. [Mr. Stoker reminded the students that of all the individual qualities at our command there are three that seem most precious to

our well-being and dignity—silence, tolerance, and obedience. He had learned that the quality which carried men most happily and successfully through life was that most uncommon one—common sense—that possession of sound judgment which avoids mistakes.] In conclusion, he said: Cultivate common sense; be silent, tolerant, and obedient, and be not unrestful or unduly given to striving; accept things as they are ordained, and remember the words of the Caliph Ali, "Thy place in life is seeking after thee; therefore, be thou at rest from seeking after it."

The College of Medicine, Newcastle.

The Bacteriological Laboratory at the University of Durham College of Medicine, which is under the direction of Professor George Murray, has already been found to be too small, and a much larger room in the basement of the anatomical wing is now being fitted up instead, and at the same time the large Physiological Laboratory will be refitted. The dissecting room, lecture theatres, and laboratories are to be lighted by electricity, and in two of the rooms there will be an arc light for lantern purposes. In systematic lectures lantern slides are beginning to supersede diagrams, and it is intended also to project ordinary microscopical preparations on the screen, which can be successfully done with such a powerful light by using apochromatic objectives.

The vacancy at the College occasioned by the death of the late Dr. Gibson will not be directly filled up. The subject of diseases of women, on which he lectured will, in accordance with the new regulations, be taught clinically at the Royal Infirmary. Dr. Nesham will continue to lecture on midwifery, taking up also the diseases of women consequent on childbirth and the diseases of newborn children.

The portrait of the President, Professor Philipson, which has been presented by him to the College, is now hung in the Council room, where it has been much admired.

Owens College, Manchester.

On November 6th the Duke of Devonshire, President of Owens College, formally opened the new buildings which have been erected as an extension of the medical department of Owens College, Manchester.

The Duke and Duchess of Devonshire were received by the Principal, Professor Ward, and by Dr. D. J. Leech. Addresses were presented by Dr. Ward, Mr. Thorburn, and Dr. Crossley on behalf of the governors and teachers, the associates, and the arts, science, and law departments. In acknowledging them, the Duke of Devonshire observed that while Owens College had by the peculiar constitution of its governing body secured that connection with the outer world which it was so essential that a college of that character should possess, he had doubtless been selected to occupy the office of president as the representative of a class who, though they could be of no assistance in the guidance of internal affairs, might under possible contingencies become of use in external relations.

In the physiology theatre of the new buildings Professor Young, the Dean of the Medical School, explained that the new buildings included administrative rooms, class rooms, and laboratories both for instruction and research. The addition was larger than the whole block of the old school, but the increase has been rendered necessary, not only by improved methods of teaching, but by the fact that the students had increased from 274 in 1881 to 423 in 1891. An address was presented by Mr. Goodfellow on behalf of the students.

The Duke of Devonshire, who was loudly cheered on rising to declare the building open, after a brief reference to the progress of the school described by Professor Young, observed that the treatment and cure of disease was only a part, perhaps not the largest part, of the duty of the medical profession. To it only could the public look, not only for the cure of disease, but also for protection against disease. He touched upon the peculiar social position occupied by the medical profession, which brought its members into more intimate relation with all classes of the community, and gave them the power and the opportunity of binding together the different classes of society. The medical men could tell the rich much of the hardships and sufferings of the poor, and tell the poor how the wealthier classes possessed a sympathy for the poor which only awaited full knowledge and enlightenment to assume a practical form. It was important that a class occupying this peculiar and exceptional position in society should not only be as highly trained as possible to the practice and science of their own profession, but also that they should be men of wide sympathy, of liberal education, and, above all, of the highest character. There seemed some reason to suppose, he said, that there was a necessity for increased attention and care, and perhaps for action, on the part of the public in respect to medical education. A *primâ facie* case for such public assistance appeared to have been made out. It appeared to be true, that in every branch of higher education the cost was greater than the amount which could be reasonably exacted in fees, and that in the case of medical education this deficit was greater than in other forms of higher education, owing to the long period over which medical education must extend, and the variety of subjects which it must include. The gap has been bridged over, so far as it had been bridged over, by the action of the great hospitals, who had applied some of the funds at their disposal to make provision for medical education. It was perhaps true that the public had not yet fully appreciated its duties in this respect: but, if so, it was largely due—perhaps mainly due—to the conduct and sacrifices which had been made by members of the medical profession itself, who, either from devotion to their profession, or from the hope or prospect of distinction and honour, had devoted large portions of their time to the duties of medical instruction without receiving any remuneration at all, or an utterly inadequate rate of remuneration.

Subsequently luncheon was served in the court room, when the health of the Duke and Duchess of Devonshire was drunk with enthusiasm. After the luncheon a general reception was held in the museum and was attended by a large number of old students and friends of the college.

Aberdeen University.

Our Aberdeen Correspondent writes: The number of medical students who have matriculated at Aberdeen University for the year 1894-95 is 290. The number who entered for the year 1893-94 was 408. There is thus a decrease of 118 students. Two causes are plainly at work to cause this result; one, the sudden and highly-pitched preliminary examination, especially some of the subjects, for example, mathematics; and, secondly, the five years curriculum. Both conditions are remediable in time, but, meanwhile, the attendance at the University dwindles.

THE MANAGEMENT OF THE INFECTIOUS DISEASES OF CHILDREN IN PARIS.

[FROM AN OCCASIONAL CORRESPONDENT.]

II.—The Hôpital des Enfants Malades.

An Old Hospital.—Isolation and Cleanliness Defective.—The Wire-Screen "Boxes."—The Food Baskets.—Blouses and their Uses.—Elaborate Rites Imperfectly Observed.—The Diphtheria Blocks.—Out-Patient Room and Laboratory.

This hospital, which claims to have reduced its mortality by a system of isolation of infectious cases, differs in many respects from that of the Hospice des Enfants Assistés.

The hospital bears its age upon its face, the paint, plaster work, and worn wooden staircases, looking in part picturesquely near the point where old age meets decay.

The wards were hot and smelt stuffy. The day was not very cold, but the windows were all shut, and some were streaming slightly. The windows were old and ill-fitting. There was dust about. The wards were very dull and poorly furnished, though the beds seemed good. The wards were divided up by glass partitions into smaller rooms, each containing six or eight children. If the cases in each division were in any way classified with a view to even partial isolation, I did not observe it. The usual antiseptics were on the tables.

The children wore nightgowns only, with the exception of one or two little ones, who seemed to be in bed in their petticoats; they may, however, have been partially undressed for

the physician's visit. The bedding and night clothes were not so spotless as those at the Hospice des Enfants Assistés.

Some of the children were far from well washed; one was dirty. Scaly heads were uncovered, and none of the minute precautions taken at the other hospital were in operation.

All the doctors, students, and attendants were in holland blouses; hats were not allowed. Some of the blouses looked as if they had attended operations, and been imperfectly washed.

The iron wire "boxes" invented by Professor Grancher were in use round about half the beds. As will be seen by the sketch, they were iron-wire screens of five or six flaps

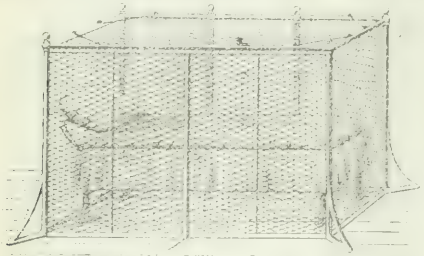


Diagram showing Professor Grancher's Wire Screen (Hôpital des Enfants Malades).

filled in with woven wire of double or single web, like the wire mattresses on beds. They were painted chocolate colour. Their interstices were full of dust, and I should say impossible to keep clean. They were placed so as to surround the beds in various ways, according to situation, sometimes merely hemming the bed in a corner. They were mostly about 4 feet high, and reached about 18 inches to 2 feet above the patient's head when lying down.

The following form was observed. The visiting physician alone went inside the screen. The students leaned over, surrounding the bed more closely than they would have done without the screen. They were apparently not allowed to rest their hands on the tops. After examining the patient the physician cast his blouse on the bed, came out, washed his hands, and put on a fresh blouse. The attendants were supposed to do the same after touching the children.

At mealtimes a mackintosh sheet was spread on the bed, and a shallow oblong galvanised wire basket, with a tall handle, was placed on it. Its form is shown in the accompanying



Wire Food Basket.

sketch. It contained in the middle a basin for the patient's food, and had cross-divisions at the sides, which were, I was told for a glass, salt, etc. The basket was carried straight to the kitchen after meals, and plunged into a special tank of boiling water. This I saw, and thought the whole arrangement a good one for infectious cases. I did not see the mackintosh covers (there was a little unpleasantness in the ward because they were not forthcoming on the very day I was seeing over), the children having dined without them.

I asked if the wire "boxes" and blouses were considered anything more than "danger signals," and was told that they were not, but that their main use was to cause those in contact with the children to "pay attention."

The system seemed to me a very insufficient means of keeping any given child from contact with infection, if infection were present, and to be a most irksome if not impossible one for the attendants to carry out, while having incessantly to look after the children. The attendants, moreover, were constantly engaged in removing armfuls of cast-off blouses and towels used in the direct auscultation of the children. The last-named proceeding tended in no small degree, I thought, to frustrate their intentions with regard to isolation. It was difficult to contemplate the "boxes," the blouse system, and the general appearance of the wards, and not to believe that the good effects claimed for them could have been much more easily obtained by improved conditions in the wards themselves. These cumbrous paraphernalia and elaborate rites, when all was said and done, suggested the dissemination quite as much as the restriction of infective influences, and was to my mind of no interest when compared with the careful classification followed and hygienic surroundings obtaining at the Hospice des Enfants Assistés.

The diphtheria blocks were tents of good size, and were in a part of the grounds remote from the general wards. They were built round three sides of a square. They may have been for other infectious cases, but I only saw one diphtheria ward occupied. This was a good-sized airy ward, of course newer, and looking cleaner and better kept than the rest of the hospital. There was a strong atmosphere of carbolic acid; a heated bowl of this antiseptic was evaporating in the middle of the ward. There were about eight or ten children in bed, and one convalescent in the nurse's arms. They were all well wrapped up. Two or three seemed very ill with greatly swollen glands, and unable to speak. One had a patch of membrane at the corner of the mouth. The physician did not examine them at the time of my visit. Two or three were comfortably intubated. No treatment was being adopted except antitoxin injections and antiseptics. I was told that tracheotomy is now quite rarely done. Most of the children were, of course, advanced in the disease when admitted.

About the general plan of the hospital I cannot say much, as I did not, I think, see it all. I saw a small stuffy out-patient waiting room holding about 50 or 60 patients, which was on the same floor and approached by the same staircase as the general wards. Leading out of this was a small room where minor operations were being done, and where eyes were being examined. The entrance to the wards was closed by a thickly padded door. Above, on the next floor, was a large well-appointed laboratory into which I wandered in looking for the wards. I did not see any other operating room or the *post-mortem* rooms.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1895. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 16th, April 17th, July 10th, and October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely December 27th, 1894; March 28th, June 20th, and October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election. FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting will be held at the Queen's Hotel, Eastbourne, on Thursday, November 29th, at 3.30 P.M., Dr. Gabbett in the chair. Notice of papers, cases, etc., should be sent to the Secretary by November 16th if possible.—J. W. BATTERHAM, Bank House, Grand Parade, St. Leonards, Honorary District Secretary.

MIDLAND BRANCH: LINCOLNSHIRE DISTRICT.—A meeting will be held at Grantham on Thursday, November 29th. Members desirous of reading papers are requested to communicate with the Honorary Secretary, DR. CARLINE, Lincoln.

SOUTH-EASTERN BRANCH: EAST AND WEST KENT DISTRICTS.—A conjoint meeting of these Districts will be held at the Kent and Canterbury Hospital on Thursday, November 22nd, at 3 P.M., Dr. Frederick Eastes, of Folkestone, in the chair. The chairman invites members and visitors to luncheon at the Fountain Hotel from 1.30 to 2.30. Members intending to avail themselves of the chairman's hospitality are requested to send acceptances by Tuesday, the 20th, or they will not be expected. Agenda:—Dr. E. W. White: Psychological Medicine in relation to the General Practitioner. Dr. Thomas Eastes: The Treatment of Diphtheria by Antitoxin. Mr. Biddle will relate a case of Diphtheria treated with Antitoxin, and it is hoped that all members who have notes of such cases will either bring them to the meeting, or forward them to one of the honorary secretaries. Mr. Brian Rigden: Some Points in relation to Life Assurance. Tea and coffee will be served in the Board Room of the hospital after the meeting. All members of the South-Eastern Branch are entitled to attend these meetings, and to introduce professional friends.—THOS. F. RAVEN, Broadstairs, and E. GROUND, Maidstone, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

A MEETING of the North London District of this Branch was held on October 31st at 199, Maida Vale, W. (Dr. Cleveland's residence). Dr. CLEVELAND presided.

Communications.—Dr. CLEVELAND gave interesting details of and comments on a case of Sudden Death from Extreme Cold, and a case of Salivary Calculus.

Paper.—Dr. RENNER read a paper on the History and Development of Animal Vaccination. He gave a history of the introduction of inoculation into this country by Lady Mary Wortley Montague, and of the discovery by Jenner of the protective power of vaccination. A full account of the various modifications in the methods of obtaining and using the lymph, with necessary precautions against the transmission of infectious disease thereby, was next given. With regard to the relation between small-pox and vaccinia, most were agreed that vaccinia was variola modified by passing through the organism of a bovine animal. Modern experience and experiments all tended to strengthen the opinion of their essential identity. The proof of the protection afforded by vaccination rested (1) on the empirical fact of protection by one attack of small-pox: (2) its essential identity with cow-pox; (3) the equivalence of either disease, whether taken naturally or given artificially. These conclusions were fully borne out by statistics. Against the great advantage afforded by vaccination had to be set a few risks, some real, others imaginary. That from tuberculosis had no foundation in fact, certainly with calf lymph. Tuberculosis was extremely rare in calves, and examination of the vaccinifer was an extra safeguard against any possibility in this respect. Although pure vaccine can by itself produce nothing but vaccinia, harm might arise in exceptional cases through accidents. First of all the little wounds might give entrance to infective germs from the air, especially under insanitary surroundings. The most serious, but fortunately extremely rare infection was that with erysipelas, after that septic infection, phlegmonous abscess, and ulceration. Most of these were avoidable by proper care and strict attention to cleanliness. Among minor sequelæ might be mentioned skin eruptions, belonging chiefly to the macular form. An eruption resembling measles was the most frequent, but papular and vesicular eruptions (the latter sometimes mistaken for generalised vaccinia), eczema, and herpes circinatus had been observed. Ulceration was due generally to dirt and injury to the scabs, with consequent suppuration and retention of decomposing matter, especially in weakly or diseased subjects. Hence the most scrupulous cleanliness in everything pertaining to vaccination was essential. Properly employed animal vaccine had great advantages over the old human lymph. It was free from the possibility of syphilitic transmission, and it could be produced in unlimited quantities at short notice. In using it, it was desirable to create larger surfaces of contact than mere punctures would give by making superficial incisions or light scarifications through the horny layer of the epidermis, only leaving clear intervals between the sets. If out of a number of insertions made, one or two only resulted in vesicles, it was advisable to vaccinate again with lymph from the calf or from the patient's own vesicle. This was nearly always successful, even when done as late as the eighth day after vaccination, the usual day of inspection, provided the secondary areola had not yet developed itself. The lymph was best used in a liquid state, emulsified with glycerine. It seemed that sometimes a calf or a child refused to take a particular lymph. The vaccination failed entirely to produce any effect, while other subjects took readily with the same lymph. Supernumerary vesicles sometimes occurred from vigorous lymph in particularly susceptible patients. Intercurrent diseases seemed sometimes to delay the development of vaccination till after recovery of the patient. The protection conferred by vaccination was practically absolute at first, but in course of time susceptibility to small-pox gradually returned. The obvious remedy was revaccination, and the best time puberty. But even revaccination could not be depended on for lifelong protection, and during severe epidemics it was wise not to trust too much to protection acquired a long time ago. The old scars gave no indication of the degree of protection present, as he had had many occasions to observe.—A discussion followed the reading of Dr. Renner's paper.

Vote of Thanks.—A vote of thanks was passed to the President for his hospitality.

OXFORD AND DISTRICT BRANCH.

A MEETING of this Branch was held at the Radcliffe Infirmary on October 26th; Dr. HUTCHINSON, President, in the chair. Twenty-eight members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Civil Rights Defence Committee.—A communication from the Civil Rights Defence Committee was read and ordered to be laid on the table.

Communications.—Mr. D'ARCY POWER read a paper on the Infectivity of Cancer—a Retrospect and a Forecast. A vote of thanks to Mr. Power for his interesting paper was unanimously carried.—Mr. R. RICE read notes of an interesting case of Tuberculous Peritonitis.—Dr. COLLIER read a paper on Sewer Gas as a Cause of Disease. An interesting discussion followed.—Mr. W. LEWIS MORGAN read notes of a case of Foreign Body in the Knee-Joint removed by Operation, the foreign body proving to be a piece of cartilage separated from the lower surface of the internal condyle.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

THE annual meeting of this Branch was held at Aberdeen on October 27th. There was a large attendance of members, and the chair was taken first by the retiring president, Dr. PATERSON, Inverurie, and afterwards by the new president, Professor STEPHENSON, Aberdeen.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Report of Council.—The report for 1893-94, dealing with the condition of the Branch, the attendance at the ordinary meetings, the numerical strength and the movement for conjoint meetings with the sister Society, was submitted and adopted by the meeting.

Treasurer's Balance Sheet.—The balance sheet for 1893 was submitted by the treasurer, showing a favourable balance of £54 5s. 10d., and audited by Drs. Rose and Taylor. It was unanimously adopted.

Election of Officers.—The following were elected for the ensuing year:—*President-elect:* Dr. MacHardy, Banchory. *Joint Secretaries:* Dr. Thiselton Urquhart; Dr. J. Scott Riddell. *Honorary Treasurer:* Dr. Dalgarno. *Members of Council: For the Counties:* Dr. Fergusson, Banff; Dr. Taylor, Keith; Dr. Wilson, Old Meldrum. *For the Town:* Drs. Blaikie Smith, George Rose, and Mackenzie Booth, Aberdeen.

Summer Meeting, 1895.—On the motion of Dr. MACKENZIE BOOTH, supported by Dr. TAYLOR, Keith, was chosen as the place for the next summer meeting.

President's Address.—The chair was then taken by Professor Stephenson, who delivered a short inaugural address dealing with the changes in medical education and the alterations that were taking place in Marischal College.

Hospital Visit and Pathological Demonstration.—A hospital visit was made, when Professor Hamilton, assisted by Dr. Dean, gave a Demonstration of Germ Cultures and Bacilli in the Pathological Laboratory, Marischal College, which was largely attended.

Votes of Thanks.—Dr. Mackenzie Booth having resigned the position of Joint Secretary, a vote of thanks was passed to him for his services during the past ten years. Dr. MacHardy, Banchory proposed, that a hearty vote of thanks be accorded to Professor Hamilton for his kindness in giving the members that day a demonstration of germ cultures and bacilli; that the same be recorded in the minutes of the Branch, and that the secretaries be instructed to draw up an extract of the same and transmit it to Dr. Hamilton. This was unanimously agreed to by the meeting.

Annual Dinner.—The annual dinner of the Branch was held in the afternoon in the Imperial Hotel, under the presidency of Professor Stephenson.

HALIFAX, NOVA SCOTIA, BRANCH.

The annual meeting of this Branch was held at Halifax on October 11th; Dr. D. A. Campbell, President, in the chair.

Report of Council.—The report of the Council was received, showing that thirteen meetings had been held last year, with an average attendance of twelve members. The membership had slightly increased during the past year. The Council's report was adopted.

Election of Officers.—The following officers were elected for the year: *President:* Thomas Milsom, M.D., M.R.C.S. *Vice-President:* Surgeon-Captain Barefoot, M.S. *Treasurer:* M. A. B. Smith, M.D. (re-elected). *Secretary:* G. Carleton Jones, M.D., M.R.C.S. (re-elected). *Council:* Edward Farrell, M.D.; D. A. Campbell, M.D., C.M.; Thos. Tienaman, M.B.; Surgeon-Captain Barefoot, M.S.; E. A. Kirkpatrick, M.D., C.M.; G. M. Campbell, M.D.; John F. Black, M.D. *Representative on the Council of the Association:* Dr. D. A. Campbell.

PERTHSHIRE BRANCH.

The annual meeting of this Branch was held on November 2nd, Dr. Mackay, Aberfeldy, in the chair.

Confirmation of Minutes.—The minutes were read, approved, and signed by the Chairman.

Election of Officers.—The following were elected for the ensuing year: *President:* Dr. Niven, Newburgh. *Vice-President:* Dr. Leigh Hunt, Perth. *Secretary:* Dr. Urquhart. *Treasurer:* Dr. Campbell. *Council:* Drs. Carruthers, Taylor, Irvine, A. Thom, and G. M. Robertson.

Amendment of Medical Acts.—The amendments to the Medical Acts as proposed to the Parliamentary Bills Committee were generally approved.

Medical Aid Associations.—On the motion of Dr. Irvine, seconded by Dr. Paton it was resolved:

That the Branch repudiate any connection with medical aid associations, and express the hope that no member will ally himself with such associations; and further, that no member of the profession so acting will be eligible for election to this Branch.

The Secretary was instructed to forward this resolution to the Secretary of the Parliamentary Bills Committee, the resolution having been unanimously agreed to.

Summer Meeting.—It was resolved to hold the summer meeting at Newburgh, in the month of July, on a date to be fixed by the Council.

Communications.—Dr. Irvine read an account of two surgical cases, one illustrating the value of the Aseptic Blood Clot as a Surgical Dressing, and the other illustrating the importance of the Nutrient Artery and Vein for the shaft of the tibia, in regard to its vitality. Dr. G. M. Robertson showed a series of photographs by the limelight lantern, illustrating recent work on Cerebral Histology at the Royal Edinburgh Asylum.

Dinner.—The members thereafter dined in the Station Hotel, in accordance with usual custom.

SOUTH INDIAN AND MADRAS BRANCH.

A meeting of this Branch was held at Madras on October 6th, 1893, Surgeon-General W. F. de Fabeck, I.M.S., President in the chair.

Communications.—Surgeon-Captain G. C. Hall showed the following cases: (1) Severe case of Pseudo-hypertrophic Paralysis. (2) Another patient suffering from the same disease, but not so well marked. (3) Case of Progressive Muscular Atrophy, probably Erb's puberty type. (4) Another case of Progressive Muscular Atrophy: previous history contains a long regular course of masturbation.—Surgeon-Captain Simpson showed a man on whom he had performed Resection of Right Upper Jaw with Ligature of Both Common Carotids.—Surgeon-Major William F. Thomas read reports of the following cases: (1) Sarcoma of the Left Choroid and Lipoma of the Left Parotid Gland in a boy, aged 3 years; operation; recovery. (2) A case of Fibrous Tumour of the Lower Jaw in a girl, aged 15; operation; recovery. (3) A case of Sarcoma of the Scalp in a man, aged 49; operation; recovery. (4) A case of Cobra Bite in a man, aged 30, successfully treated by the hypodermic injection of strychnine.—Surgeon-Captain A. E. Grant read a case of Lymphadenoma, a disease comparatively rare in India.

At a meeting held on November 3rd Surgeon-Captain Williams showed a Eurasian man, aged 36, suffering from chronic Superficial Glossitis.—Surgeon-Lieutenant-Colonel Branfoot read reports of (1) a case of Symphysiotomy (which will be published), and (2) a case of Extrauterine Gestation.—Surgeon-Captain A. E. Grant read observations on a case of Enteric Fever, illustrating the great value of the cold water treatment in certain cases when boldly and steadily persisted in.—Surgeon-Captain C. L. Williams showed a specimen of Primary Cancer of the Liver from a Hindu, aged 30.—Surgeon-Lieutenant-Colonel Branfoot showed a specimen of Fibrocystic Tumour of the Uterus.—Surgeon-Major C. M. Thompson showed a specimen of Aneurysm of the Heart, from a Hindu, aged 40, who had served for a few years as a sepoy, and read notes of the case.

At a meeting held on December 8th Surgeon-Major Maitland showed (1) a Hindu lad, aged 12, suffering from Yaws the case was a typical one and its origin by contagion clearly proved; (2) a patient suffering from Paralysis of the Arm following an injury.—Surgeon-Captain D. Simpson showed a case of Spastic Hemiplegia of Infancy with intense choreiform movements of the left arm, forearm, and fingers; the patient, who was 25 years of age, was well nourished and otherwise healthy.—Surgeon-Captain Williams showed (1) a specimen of large Red Kidney (hypertrophic cirrhosis) from a European tea planter, aged 50; (2) a specimen from a case of Perforating Wound of the Lung, caused by a piece of glass, in a boy, aged 13.—Surgeon-Major Maitland showed specimens of adult Male and Female Filariæ Sanguinis Hominis.

Annual Meeting.

The annual meeting was held on January 26th, 1894.

Report.—The report stated that the Branch opened on January 1st, 1893, with 86 members; 6 new members had joined during the year, 4 had resigned, and 1 (Dr. H. L. Ansted) had died. Eight meetings had been held, the average attendance being just over 13. The Treasurer's report showed a balance of Rs. 768—9—7 in favour of the Branch, in addition to Rs. 2,000 invested in Government securities.

Election of Officers.—The following were elected officers for the ensuing year: *President:* A. M. Branfoot, M.B., Surgeon-Lieut.-Colonel, I.M.S. *Vice-President:* E. C. Markey, C.B., Surgeon-Colonel, M.S. *Honorary Treasurer:* W. R. Browne, M.D., Surgeon-Lieut.-Colonel, I.M.S. *Honorary Secretaries:* H. Allison, M.D., Surgeon-Lieut.-Colonel, I.M.S.; C. B. Rama Row, L.M.S. *Committee:* C. M. Thompson, M.B., Surgeon-Major, I.M.S.; Mr. J. Nield Cook, M.R.C.S.; W. B. Browning, Surgeon-Major, I.M.S.; J. Maitland, M.D., Surgeon-Major, I.M.S.; T. H. Pope, M.D., Surgeon-Major, I.M.S. *Representative Member in General Council:* E. F. Drake-Brockman, F.R.C.S., Brigade-Surgeon-Lieut.-Colonel.

Communications.—A paper on House Drainage for Madras was read by Mr. J. Nield Cook, Health Officer, Madras

Municipal Commission, which was discussed by Surgeon-Major Browning, Surgeon-Captain A. E. Grant, Mr. C. B. Rama Rao, and the President; and Mr. Cook replied.—Surgeon-Lieut.-Colonel Branfoot showed a Uterus with symmetrical fibroid tumours (one on each side); another tumour also occupied the body.—Dr. G. Rama Row showed a Malformed Fœtus.

PROCEEDINGS OF THE COUNCIL.

At a meeting of the Council, held in the Council Room, at the Office of the Association, 429, Strand, W.C., on Wednesday, October 24th, 1894:

Present:

Dr. J. Ward Cousins, President of the Council, in the chair.
Dr. E. Long Fox, President.
Dr. Russell Reynolds, President-elect.
Mr. Henry T. Butlin, Treasurer.

Dr. James Barr, Liverpool.
Dr. G. B. Barron, Southport.
Dr. R. W. Batten, Gloucester.
Dr. M. Beverley, Norwich.
Dr. T. Bridgwater, Harrow-on-the-Hill.
Mr. Langley Browne, West Bromwich.
Dr. J. S. Cameron, Leeds.
Mr. Andrew Clark, London.
Dr. H. R. Crocker, London.
Dr. J. L. H. Down, London.
Brig.-Surg.-Lieut.-Col. E. F. Drake-Brockman, London.
Mr. G. Eastes, London.
Dr. W. A. Elliston, Ipswich.
Dr. W. Finlay, Aberdeen.
Mr. R. S. Fowler, Bath.
Dr. J. H. Galton, Upper Norwood.
Dr. Bruce Goff, Bothwell.
Dr. W. Gordon, Exeter.
Dr. O. Grant, Inverness.
Dr. H. Handford, Nottingham.
Mr. J. D. Harries, Shrewsbury.
Mr. J. H. Hemming, Kimbolton.
Dr. C. Holman, London.
Dr. J. B. Isaac, Crowthorne.
Mr. T. Vincent Jackson, Wolverhampton.
Mr. Evan Jones, Aberdare.
Mr. N. C. Macnamara, London.
Mr. H. J. Manning, Salisbury.
Dr. W. Withers Moore, Burgess Hill
Mr. W. Jones Morris, Portmadoc.
Mr. R. H. B. Nicholson, Hull.
Mr. C. H. W. Parkinson, Wimborne Minster.
Dr. C. Parsons, Dover.
Dr. F. M. Pope, Leicester.
Dr. R. Saundby, Birmingham.
Dr. A. Sheen, Cardiff.
Dr. E. Markham Skerritt, Clifton.
Mr. Noble Smith, London.
Dr. J. Strachan, Dollar.
Mr. H. Stear, Saffron Walden.
Mr. J. Taylor, Chester.
Dr. T. W. Trend, Southampton.
Dr. A. R. Urquhart, Perth.
Mr. T. J. Verrall, Brighton.
Dr. W. F. Wade, Birmingham.
Mr. F. Wallace, Upper Clapton.
Mr. Joseph White, Nottingham.
Mr. G. E. Williamson, Newcastle-on-Tyne.
Mr. A. Winkfield, Oxford.
Dr. W. L. Winterbotham, Bridgwater.

The minutes of the last meeting having been printed and no objection reported, were taken as read and signed as correct.

The President of Council introduced to the Council the following new members: Dr. Drake-Brockman, representing the South Indian and Madras Branch; Dr. J. B. Isaac, representing the Reading and Upper Thames Valley Branch and Dr. David W. Finlay, from the Aberdeen Branch.

Letters of apology for non-attendance were received from Professor Gairdner, Mr. Jessop, Dr. William Russell (Edinburgh), Dr. Glascott, Dr. Roberts Thomson, Dr. Bristowe, and Dr. Dickinson.

Resolutions passed in the Section of Psychology on criminal responsibility in mental disease at the annual meeting at Bristol, 1894, were then considered (see page 353).

Resolved: That the resolutions be referred to the Parliamentary Bills Committee.

Resolution passed in the Public Health Section at the annual meeting held at Bristol on the present imperfect system of procedure for the certification of deaths (see p. 314) was then considered.

Resolved: That the resolution be referred to the Parliamentary Bills Committee.

Resolution of the general meeting passed at the annual meeting at Bristol, together with a letter from Mr. T. Frederick Pearse on the subject of the appointment of an Ethical Section.

Resolved: That the consideration of the question be postponed until the report of the Arrangement Committee be considered.

Read abstract of the report of the annual meeting upon the subject of medical aid societies, together with a communication of the East Sussex District of the South-Eastern Branch.

Resolved: That the resolution passed at the East Sussex District of the South-Eastern Branch, having been duly considered by the Council, the request therein contained be granted, and a Committee appointed to carry out the suggestions.

Resolved: That the President of Council, the President-elect, the Treasurer, Dr. Bridgwater, Mr. Wallace, Dr. Bruce Goff, Mr. Jones Morris, Mr. Nicholson, Dr. Saundby, Mr. Parkinson, Dr. Parsons, and Dr. Withers Moore, be appointed the Committee to consider the preceding resolution.

Resolved: That the question of medical aid associations, brought forward by the Oxford and District Branch, be referred to the Committee to report to this Council at the earliest possible date.

Read letter from National British Women's Temperance Association forwarding resolution asking that such arrangements be made for the better representation of the medical men of England on the International Temperance Conference.

Resolved: That the National British Women's Temperance Association be informed that the British Medical Association has never sent any representative to the International Temperance Conference, and it does not at present propose to do so.

Read letter from Dr. Brierley, together with the resolution of the General Medical Council, on the subject of the issue of certificates to midwives.

Resolved: That a reply be sent to Dr. Brierley that this Association does regard the General Medical Council as a supreme authority on educational matters, and suggests to Dr. Brierley the wisdom of referring the matter of his letter to the General Medical Council.

Resolved: That Messrs. Price, Waterhouse and Co. be re-appointed public auditors for the ensuing year, in accordance with By-law 26.

Resolved: That the 113 candidates whose names appear on the circular convening the meeting be and they are hereby elected members of the British Medical Association.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Journal and Finance Committee contain the report and accounts for the quarter, amounting to £7,545 18s. 7d., and report of the auditors.

Resolved: That the minutes of the Arrangement Committee of the 23rd inst. be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Arrangements Committee contain the arrangements and programme for the annual meeting.

Resolved: That the minutes of the Parliamentary Bills Committee of the 23rd inst. be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Parliamentary Bills Committee contain a resolution authorising the General Secretary to communicate with the Branches to consider the question of a Draft Bill to amend the Medical Acts; also a resolution regretting the delay in the issuing of the final report of the Vaccination Commission.

Resolved: That the annual meeting of 1895 be held on Tuesday, Wednesday, Thursday, and Friday, July 30th, 31st, August 1st and 2nd.

Resolved: That there be three Addresses, namely, Medicine, Surgery, and Physiology; that Sir William Broadbent be invited to give the Address in Medicine, Mr. Durham be invited to give the Address in Surgery, and Professor Schäfer, F.R.S., be invited to give the Address in Physiology.

Resolved: That the minutes of the Premises and Library Committee of the 23rd inst. be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Premises and Library Committee contain a report of the Honorary Librarian, some estimates for fittings, and report on alterations and new sites.

Resolved: That the minutes of the Scientific Grants Committee of the 23rd inst. be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Scientific Grants Committee contain the appointment of Dr. Soltau Fenwick as third Research Scholar.

Resolved: That the minutes of the Branch Organisation Committee of to-day's date be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Branch Organisation Committee contain the proposed by-laws of the Malaya Branch, and proposed alterations to the by-laws of the Dundee Branch.

SPECIAL CORRESPONDENCE.

PARIS.

Professeurs Agrégés.—Opening of the Paris Dental School.—The Universal Exhibition of 1900 and Athletic Sports.—General News.

AT the Congress of Superior Instruction recently held at Lyons the Section of the Congress which deliberated on the medical faculties came to the following decisions: That the competitive examination for the post of *Professeur Agrégé* be abolished; each faculty to decide on the number of *agrégés* attached to it; the lectures given by the *agrégés*, in addition to those of the University programme, not to be paid for by the State, but by fees to be fixed by the faculty. A new degree, that of *docteur ès sciences biologiques* (biological sciences) might be created and all candidates for the agrégéship be called upon to take it. The *agrégés* should be elected for a term of three years, and after that should be re-elected or not as the faculty may decide. *Professeurs adjoints* should be elected by the faculty for a period of six years, with salary. The list of candidates for the post of professor is to be drawn up by the faculty and submitted to the General Council of all the faculties. The fees of titular professors are to be decided by the faculty to which the professors belong.

Dr. León Labbé presided at the opening ceremony of the Paris Dental School, which took place recently. In the Senate he is a champion of the medical students. At the dental school, in his address he declared he would defend the interests of this *école libre*: it was only specialists such as those attached to the school who could give the necessary technical instruction. Furthermore, Dr. Labbé declared that he would defend the interests of the school in order to stem the tide of the invasion of foreigners. Dr. Labbé considers that "France offers a too generous welcome to foreigners, who in return fail to furnish any guarantee."

The Commission for the Exhibition of 1900 has named eleven subcommissions for the purpose of studying the question of physical education: gymnastics, athletic sports, fencing, rifle practice, horse exercise, velocipedic exercise, nautical sports, saving life, and aëronautics.

Dr. Gingebre, founder of the medical syndicate of the Hérault valley, died recently and bequeathed to the Montpellier medical faculty £1,400 to be devoted to a biennial prize for the best thesis on sanitation. Dr. Gingebre has also left a legacy to the Hérault Medical Syndicate.

CORRESPONDENCE.

DR. JAMESON, C.B.

SIR,—In a short time Dr. Jameson, C.B., whose able administration and skilful generalship in the late Matabele campaign have won universal approbation from all who admire British pluck, will arrive in England. It appears to me that some steps should be taken by the medical profession to welcome him on his arrival, and that a public dinner should be arranged to do him honour. The British Medical Association, through its Council or the Council of the Metropolitan Counties Branch, might organise such a dinner, inviting—in addition to Dr. Jameson—Mr. Rhodes and Major Sawyer, late Military Secretary to Sir Henry Loch, who was engaged in his military capacity throughout the campaign. I am sure if the Council would undertake the initiation of the banquet the profession would gladly support them. Dr. Jameson is an honour to his profession, and his administrative abilities would have done credit to the highest diplomatic official. The verdict of the High Commissioner appointed to examine into the vile charges brought against Dr. Jameson has shown the utter falsity of the imputations made against him, and we should at the earliest possible opportunity after his arrival do something to show him how greatly we appreciate his work, and how gladly we congratulate him on the result of Mr. Newton's investigations. The British Medical Association, representative, as it is, of the medical profession as a whole, should not lose the opportunity now afforded it to honour one who has shown under the most trying conditions a most marvellous combination of tact, courage, and ability.—I am, etc.,

Constitutional Club, S.W., Nov. 5th. A. GEORGE BATEMAN.

MIDWIVES' REGISTRATION AND THE LANCASHIRE AND CHESHIRE BRANCH.

SIR,—The position of affairs in the Lancashire and Cheshire Branch in reality opens a very important question. In the BRITISH MEDICAL JOURNAL I find letters on the question as to the propriety of giving a legal status to midwives, and in the report presented to the tenth annual meeting of Fellows and Members of the College of Surgeons of England a statement to the effect that it has been the endeavour of the Council of the College to obtain powers to grant a degree ranking with that of the university Doctor of Medicine. In *Public Health* I find Mr. Manley's excellent presidential address to the Birmingham and Midland Branch of the Incorporated Society of Medical Officers of Health, in which he warns us in all earnestness of the apotheosis of the inspector of nuisances. In the first case the doctor who practises midwifery is threatened with an uneducated competitor; in the second, university education is threatened with being placed on the same footing as the training of the medical schools; and in the third, the doctor who takes a public health appointment is threatened with an opponent in the shape of his inspector of nuisances. All three cases tend to show that the best interests of our profession are liable to be jeopardised by the ill-considered action of certain of our members.

It has been constantly denied that the midwife will be a competitor if she has a legal status given to her. What says *Nursing Notes*, of November 1st, the organ of the Midwives' Institute?—"With private practice and a small parish allowance a midwife could exist with fair comfort under circumstances where a medical man could not live."

This body then at all events contemplates competition with doctors aided by State support. Such a system has failed abroad, but it is argued that it has done so because of the mediæval customs and general backwardness in a country such as Germany. Now, considering that the Germans, with the possible exception of the Swiss, possess the most thorough system of compulsory education and have possessed it for many years this objection is ridiculous.

The status is desired by bodies like the Midwives' Institute to allow them to enter into competition with our profession on equal terms. For there is, at the present time no let or hindrance in the path of the many midwives (so called trained) who wish to practise midwifery. And not content with a State status they demand a State grant to further help them.

It can scarcely be a matter of astonishment that a feeling of great irritation has been set up generally by the action of certain members of the profession who are allies of bodies like the Midwives' Institute, and that anomalous association which is supported by a grant already.—I am, etc.,

Hatfield, Nov. 5th. LOVELL DRAGE.

SIR,—In the BRITISH MEDICAL JOURNAL of November 3rd Mr. Colin Campbell states, in reference to the meeting at Manchester, that Dr. Woodcock's motion was carried *nem. con.*, and that not one of the gentlemen who belonged to the "protest" party attempted to deal with the subject in their speeches. Mr. Colin Campbell knows full well that many of us had no opportunity. I left in disgust at 7 P.M., and find

from the Journal report of the meeting, page 896, that afterwards the closure was applied, and Dr. Woodcock's motion carried by a large majority.

The speech of Dr. Brassey Brierley, in which he announced that he had a midwives' notebook of lectures delivered to women students at St. Mary's which contained "an indecent drawing," showing his disgust by throwing the book on the floor, and saying it was so bad that he could not tell his hearers what it was, disgusted a good few of the "protest" party, when Dr. Walters announced that it could be nothing else than a copy of a diagram taken from *Gray's Anatomy* of the female external genitals.

You will see by the report in the Journal that even after separating "the sheep from the wolves" the largest vote on an amendment of Dr. Brassey Brierley was 148 to 115, showing that Dr. Woodcock's eloquence did not convince everybody; and I cannot see where the Registration Committee can claim that the Lancashire and Cheshire Branch have twice emphatically decided against the proposals for the registration of so-called midwives. Surely bare majorities are not sufficient to decide such a question as this.

I am one of those that believe "midwives are and will be" till women are educated to place their lives in the doctor's hands and also are able to pay a doctor for his services.

The fact of medical men having sons joining the profession and willing to take low class midwifery will not induce every woman to employ a doctor in her confinement, and surely she must be considered. I know many women who would like a doctor if they could afford one, but are too independent to pauperise themselves by applying for the Union surgeon. I know others who can well afford to pay a doctor, but prefer to have a midwife to attend them. I cannot see as far as Dr. Brown that a midwife must be called an obstetric nurse. What does it matter what she is called, provided her duties are defined and her work limited?

Dr. Brown says, "The 'skilled midwife' who has a certificate or diploma that she is competent to attend natural labour is for all practical purposes a rival and a competing practitioner to the qualified man;" but I do not find it so. We have three certificated midwives in our neighbourhood, two Manchester and one Liverpool trained, and I do not find any greater demand for them than there is for those that are self-educated, and are of the Mrs. Gamp type.

I have joined the "protest" committee, believing that legislation will come just as it did for the chemists and the dentists, and that we shall best safeguard our interests as a profession, not by trades union cries of abolition, but by watching and assisting in drawing up a fixed programme of study and definite rules as to practice. Many of those who have joined this outcry are amongst those who give ambulance lectures and sign ambulance certificates, and from the trades union view, which they adopt, quite as much injury can be done to the young practitioner by ambulance men as by midwives in their calling.—I am, etc.,

Wigan, Nov. 3rd. William Berry.

P.S.—The Coombe Lying-in Hospital has no more right to grant a L.M. than St. Mary's Hospital, Manchester, nor is the certificate given by the College of Surgeons and Physicians of Edinburgh a licence at all.

ST. JOHN AMBULANCE WORK.

Sir,—I shall feel obliged if you will call the attention of the medical men who lecture in the above to an important point that is coming forward. Under the County Council Act there is a clause which enables classes and ambulance work to be paid for by the County Council.

As a secretary of a large centre, I have declined to lecture under the County Council grant on the ground that such lectures are paid out of the rates, and are technical; therefore the lecturers should be paid for the lectures at the usual fee.

My object in writing you is to ask secretaries and medical men generally to abstain from lecturing under or to classes which are receiving grants from the County Council unless they are paid the fee of a guinea per lecture. I need not say that the old system still obtains.

I think every lecturer or medical man who has not yet lectured will fully see the necessity of remaining firm on this point, and avoiding a precedent which may involve us in very heavy work without remuneration.

The London executive will, I know, support us if we are firm.—I am, etc., F. B. Judge Baldwin.

Rotherham, Nov. 5th. Honorary Secretary, S.J.A.A.

THE NEW PHARMACY.

Sir,—Reading in the British Medical Journal of November 3rd, p. 1013, a most instructive letter from one who styles himself "An Old Fogey but not a Fossil," on the above important and most interesting subject, I would refer him to a paper in the Journal bearing date November 25th, 1893, wherein I advised the use of such chests as contain a full complement of drugs in tabloid form. These should be substituted for the ponderous and inefficient medicine chests still carried by even the largest steamships. This advice applies even more to the private practitioner. The writer brings home to his medical brethren in well chosen words the benefits conferred on him personally by using tabloids, which have only been in vogue a decade or rather less. His facts are amply confirmed by my own experience clinically during the three years for which I have constantly prescribed them in tropical Africa and other parts.

Personally, tabloid drugs saved my own life when battling against a deadly attack of African remittent during my sojourn in the forest country of West Africa, when ordinary tinctures, etc., failed to exert any curative influence whatever. I dissent from your correspondent only in one particular, namely, that he lays too much stress on the mere pecuniary gain per annum, whereas the main consideration in their favour (tabloids) should be his increased reputation as a physician and the safety of his patients—safeguarding them by this form of treatment from dispensers' mistakes, such as taking liquor strychninæ instead of liquor chloroformi, and makes one sure of giving an exact dose of the drug intended. We as a profession should not be slow to recognise the value of the tabloid system of treatment, and should well be able to gauge the value of these medicaments.—I am, etc.,

Charles Forbes, M.D., C.M., D.P.H.,

London, Nov. 7th. Late Surgeon, Wassa Gold Mines, W. Africa.

IRISH WORKHOUSES AND UNION INFIRMARY SURGEONS.

Sir,—In continuation of a subject recently discussed in your columns, namely, those much neglected institutions called workhouses, I wish to direct your attention to some of the gravest disadvantages suffered by Irish medical union infirmary surgeons under the present Poor-law system, and to hope that your advocacy will be extended to the reform of Irish Poor Laws generally and of those relating to workhouses particularly. I shall briefly hint at a few of the many reforms needed.

1. Appointment of trained nurses in sufficient numbers, with proper means of controlling same. At present the Local Government Board issues no regulations regarding union nurses, which omission leads to great administrative difficulties.

2. Limitation of the powers of boards of guardians to dismiss medical officers without assigning definite cause. It is now in their power to make such dismissal subject only to the sanction of the Local Government Board, without whose existence Poor-law medical appointments would soon become untenable.

3. The necessity for strictly defined regulations as to the relations of the several officials—medical officer, master, matron, and nurses—so as to prevent one inharmonious worker marring the harmony of the whole.

4. Alteration of present Act of Parliament relating to the removal of dangerous lunatics from the union to the county asylum. The present rule, which savours both of insult and injustice to the medical officer, obliges a stranger to be called in, who has generally to rely on information supplied by the union officer. The Poor Laws, which offer a meagre stipend to their regular officer for this perfunctory act, pay to the outsider a fee of not less than a guinea. This matter has already received the consideration of your Parliamentary Bills Committee, but still remains unaltered.

A kindred anomaly to the foregoing is the fact that union

medical officers are obliged to operate as general hospital surgeons, to perform many surgical operations without additional reward, and usually—owing to the ignorance and incapacity of pauper nurses—to do the skilled nursing themselves; while the anæsthetist, when such can be got, receives without question his due fee.

My earnest wish is that in the good work you have undertaken to improve the nursing in provincial workhouses you will bear in mind that this reform ought to be inseparable from general Poor-law reformation; and that by improving the position of Irish Poor-law medical officers, and doing away with the present disgraceful mode of admission to the service, you will do more for the sick poor and for our poor profession than you are aware of now. With the advancement and improvement of the status and utility of the union medical officer, the best interests of the friendless poor, of the nursing staff, and of the workhouse generally are closely allied.

Surely the eyes of statesmen must be singularly blind to the social evils of our present Poor-law system. From what worse evil can a country suffer than a system which perpetuates pauperism? The young workhouse casual becomes the adult workhouse tramp and schemer, and, later on, the aged workhouse inmate.

R. R. Leeper, F.R.C.S.I.

Rathdrum, co. Wicklow, Nov. 1st.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A Surgeon-Major near the top of the roster for foreign service, but not expecting to go to India this drooping season—all officers of that rank having been warned the foreign service would probably be a colony this summer—wishes for an exchange to stay at home for two years longer. Please address "Re emerito," care of Holt and Co., 17, Whitehall Place, London, S.W.

A Surgeon-Major under orders for India this season (about February) wishes to effect an exchange with an officer for a whole or part of a tour at home, or with an officer under orders for a colony, or already in a colony. Address: "Field Officer," care of Messrs. Holt and Co., 17, Whitehall Place, London, S.W.

THE NAVY.

Staff-Surgeon T. J. Preston has been promoted to be Fleet Surgeon, October 19th. His commission as Surgeon dates from September 30th, 1873, and that of Staff Surgeon from September 30th, 1885. He was Surgeon of the *Sultan* at the bombardment of Alexandria in 1882, and during the Egyptian war; landed in medical charge of Royal Marines after the action; was employed on shore as Senior Medical Officer of the Royal Marine Battalion: landed from Her Majesty's fleet and attached to Sir E. Wood's Brigade for the defence of Alexandria; and was present at the capitulation and surrender of the Aboukir and Rosetta forts. Medal with clasp and Khedive's bronze star.

ARMY MEDICAL STAFF.

Surgeon-Captain J. S. Forrester, F.R.C.S.Edin., from the Royal Horse Guards, is appointed Surgeon-Major to the 1st Life Guards, in succession to Surgeon-Lieutenant-Colonel H. F. Hensman, retired, October 19th. Surgeon-Major Forrester entered the service September 30th, 1874, and after completing a tour of service in India, and being at several Home stations, was appointed to the Royal Horse Guards, Jan. 18th, 1885, and has remained with that regiment till now. He was engaged in the Egyptian war of 1882, and was present in the engagement at Tel-el-Mahuta, in the two actions at Kassassin, and at the battle of Tel-el-Kebir (medal with clasp, and Khedive's bronze star). He is now promoted to be Surgeon-Lieutenant-Colonel, September 30th.

Surgeon-Majors B. W. Wellings, Robert Smith, M.B., F. W. Trevor, M.B., Harvie Scott, M.B., James McGann, James Powell, S. H. Carter, M.B., W. A. May, G. D. Bourke, and John Hoysted, all of whom entered the service as Surgeons September 30th, 1874, and were appointed Surgeon-Majors twelve years therefrom, are promoted to be Surgeon-Lieutenant-Colonels, September 30th. The following are their respective war services:—B. W. Wellings—Afghan war in 1880 with the Southern Afghanistan Column (medal); Egyptian war of 1882, and present at the battle of Tel-el-Kebir (medal with clasp, and Khedive's star); and soudan campaign in 1885 (clasp). R. Smith—Boer war of 1881; and Soudan campaign in 1885 (medal with clasp, and Khedive's star). F. W. Trevor—Afghan war of 1878-80 with the Candahar Field Force, and present in the engagement at Ahmed Kheyl; accompanied Sir Frederick Roberts in the march to Candahar, and present at the battle of Candahar (medal with two clasps and bronze decoration); and with the Nile Expedition in 1884-5 (medal with clasp), and Khedive's star). H. Scott—Boer war of 1881. J. M'Gann—Boer war of 1881, and present in the engagements at Lang's Nek (mentioned in despatches) and the Ingogo River (mentioned in despatches). James Powell—Boer war of 1881; Nile Expedition in 1884-85 in charge of Kaibur Field Hospital (medal with clasp, and Khedive's star); and in the operations of the Egyptian Field Force in 1885-6, including the engagement at Kosheh. S. H. Carter—Afghan war of 1878-80, and present in the engagement at Ahmed Kheyl (medal with clasp); and in the Egyptian war of 1882, and present at the battle of Tel-el-Kebir (medal with clasp, and Khedive's star). G. D. Bourke—Nile Expedition in 1884-85 (medal with clasp, and Khedive's star); with the Egyptian Frontier Field Force in 1885-86, including the engagement at Ginniss; and with the Chin-Lushai Expedition Force in 1889-90 (mentioned in despatches, medal with clasp). J. Hoysted—the operations in the Malay Peninsula in 1875-76 (medal with clasp); the Afghan war of 1878-80 (medal); and in the Soudan campaign in 1885 (medal with clasp, and Khedive's star).

Surgeon-Major William Campbell, M.B., Grenadier Guards, is promoted to be Surgeon-Lieutenant-Colonel, October 25th. His previous commissions are: Surgeon, September 30th, 1874; and Surgeon-Major, 12th, 1881; and was transferred to the Grenadiers, November 5th, 1887. He served with the 1st Battalion of the Scots Guards in the Egyptian war of 1882, and was present at the battle of Tel-el-Kebir, receiving the medal with clasp, and the Khedive's bronze star.

MILITIA MEDICAL STAFF CORPS.

Mr. Thomas William Gordon Kelly, M.D., is appointed Surgeon-Lieutenant, November 7th.

THE VOLUNTEERS.

Surgeon-Lieutenant E. Downes, M.D., 2nd Surrey Artillery, is promoted to be Surgeon-Captain, November 7th.

The undermentioned officers are appointed Surgeon-Lieutenants to the regiments mentioned, dated November 7th: John Wreford, 1st Northumberland Artillery (Western Division Royal Artillery); William Barter, M.D., 5th (West) Middlesex Rifles; Thomas Livingstone, M.D., 2nd Volunteer Battalion the Durham Light Infantry.

Surgeon-Lieutenant W. Hume, M.B., 1st Roxburgh and Selkirk (the Border) Rifles, has resigned his commission, November 7th.

Surgeon-Lieutenant F. Crowcher, M.B., 2nd Volunteer Battalion the Queen's Own Royal West Kent Regiment has also resigned his commission from the same date.

Surgeon-Captain W. M. Vores, M.B., from the 2nd Volunteer Battalion the Norfolk Regiment, is appointed Surgeon-Captain to the 2nd Volunteer Battalion the Royal Sussex Regiment, November 7th.

VOLUNTEER MEDICAL STAFF CORPS.

Surgeon-Captain Denis M. O'Callaghan, Army Medical Staff, to be Adjutant, in succession to Surgeon-Captain J. P. S. Hayes, whose term of office has expired, November 7th.

Mr. William Pilling is appointed Quartermaster to the London Companies, November 7th.

AN INTERESTING SURGICAL CASE IN MILITARY PRACTICE AND ITS SEQUEL.

A. B. C. writes: It will be in the memory of many that some years ago a case—which created a great commotion—of what was then termed a non-diagnosed dislocation of the hip occurred at one of our large garrisons, the patient having to be ultimately invalided. For what was at that time considered to be neglect and professional shortcomings on the part of military surgeons an officer of administrative rank was forced to retire, two officers of long service and high in the executive ranks lost their promotion, and two younger officers suffered in loss of service for some time. The remarkable part of this case is its *finale*. It is now reported, with some authority, that the patient in question died the other day in a public hospital, and, a *post-mortem* examination being made, it was proved that there never had been any dislocation of the hip. These particulars will, no doubt, meet the eyes of those who may be in a position to furnish fuller and further information on a case through which several army medical officers suffered both in reputation and pocket, and to whom it is difficult to see what reparation can now be made.

MEDICO-LEGAL AND MEDICO-ETHICAL.

AN UNFORTUNATE CASE.

An action for damages against a medical man occupied much of the time of Mr. Justice O'Brien's Court in Dublin last week. Briefly stated, the facts of the case were that a groom sustained a fracture of the collar-bone and was treated by the defendant for that injury. He was seen on the two following days, but on the third day it was found that gangrene of the fingers was commencing. The defendant summoned to his assistance Dr. P. J. M'Namara, who found it necessary to amputate the arm. The jury, after hearing evidence and expert evidence on both sides, found a verdict for the plaintiff, with £175 damages.

This unfortunate case becomes of general interest because of certain observations of the judge. He is reported to have said that he could not acquiesce in the statement made by counsel that the proper definition of the law was that it presumed a professional man to have "reasonable" skill. The judge went on to lay down that the skill which a doctor must possess was "competent" skill, and that he was also required to show competent care and diligence. We confess that we do not fully appreciate the difference which the learned judge appeared to draw between "reasonable" and "competent." Apparently he intended to convey by insisting upon the use of the word "competent" a skill greater than that connoted by the term "reasonable." If that be so it would appear that he has introduced a new and dangerous precedent.

DISPENSARY TOUTING.

We have received from Dr G. H. Broadbent, Honorary Secretary of the Manchester and Salford Provident Dispensaries' Medical Officers' Asso-

ciation, a copy of a correspondence with the Hulme Branch Provident Dispensary in regard to a letter on Dispensary Touting which appeared in the BRITISH MEDICAL JOURNAL of September 29th. The only advice we can offer is that the medical officers should endeavour to show to the various committees the errors of their ways and persuade them to give up the disreputable practice of touting for members, even though it involve their resignation. The question whether people able to pay ordinary fees can properly be admitted as patients is another matter and obviously depends on the wording of the rules or articles of association. We have no hesitation in saying that all rules should be so drawn as to exclude them, but whether in this case they are so drawn is a mere matter of reference to the words used. On the matter of touting, however, there can be no doubt. If the members of the staff have a voice in the management and a share in the receipts they certainly must be considered responsible for the respectable management of the concern, and should resign rather than be participators collectively in what individually would be disreputable. But a clear line must be drawn between the touting and the acceptance of what we should call improper cases, for, however regrettable this last may be, it involves no professional impropriety.

DOCTORS AND SOCIETIES.

A CASE was tried in Dublin on October 29th, before Judge Gibson and a common jury, in which Mr. Thomas Sheedy, L.R.C.P. Edin. and L.R.C.S.I., sought damages to £113 10s. from the Operative Bakers' Union for wrongful dismissal. The defence was that the plaintiff had wilfully disobeyed the reasonable orders of the defendants. The plaintiff admitted on examination that when he was seeking the office of medical attendant he had, on advice, paid the secretary £20. He did not look upon that as a bribe. He heard that some of the other doctors who were looking for the appointment took men out of the bakery and gave them drink. The jury gave a decree for six months' salary, £15.

A CARD ADVERTISEMENT.

SEVERAL correspondents send us the following astonishing advertisement, cut, they state, from a recent number of the *Lancashire Daily Post*. The unblushing pretension to cure several forms of disease generally recognised as incurable recalls the methods of the ordinary quack, whereas the paragraph about testimonials and references reminds us of the methods of the patent medicine monger or soap dealer.

DR. MCGUIRE, Physician and Surgeon,
Fully qualified and registered M.D., L.R.C.P., L.A.H., L.M., and Dental Surgeon, Dispensary, 33, Salford, Blackburn.

Sufferers from Cancers and Tumours, in any stage, either internal or external, completely cured.

Kidney and Liver Diseases, Rheumatism, Nervous Debility, Fits, etc., cured.

Testimonials and references supplied on application.
Dr. McGuire may be consulted daily at 33, Standish Street, Burnley.

A DEATH IN CHILDBIRTH.

FROM a report in the *Leicester Daily Express* of October 27th, we learn that Mr. Harvey, the coroner for Leicester, held an inquiry on the previous day with regard to the death of a married woman, aged 37, who died shortly after delivery. According to the evidence, the deceased woman had sent for Miss Langham, a midwife, on the morning of October 24th. She attended and remained for two hours. She gave the deceased woman a draught, and made some observation on leaving the house which induced the woman's mother to send for a doctor. This gentleman is reported to have said that it was a bad case, and recommended that the midwife should be requested to communicate with the Poor-law medical officer. This the midwife declined to do; but eventually, after much delay due, it would seem, to the circumstance that the medical officer had only taken up his duties that day—he attended about 8 P.M., and found that it was a most unusual and dangerous case. The patient was delivered, but died shortly afterwards, death being due, according to the medical evidence, to loss of blood sustained during the day. In accordance with the finding of the jury, the coroner cautioned the midwife.

A BENEFIT SOCIETY.

A CORRESPONDENT in Bristol sends us a small handbill which he says has been circulated in the neighbourhood. It gives the rules of the Lawrence Hill Medical Benefit Society, and states in very large letters that Dr. J. D. Sexton, Physician, Surgeon, and Accoucheur, is the medical officer. The rates charged are 1d. a week a member, families 4d. There is no entrance fee, but members are not in benefit until four weeks after entrance, so that as things go the society is not badly constituted. As an additional inducement to join it is stated that vaccination is performed "with pure calf lymph daily. One mark only, is." The circulation of such handbills is in the worst possible taste, and Dr. Sexton should take steps to induce the managing committee of the Lawrence Hill Medical Benefit Society to withdraw the circular. As he will be able to explain to the committee, it is of a kind which is regarded by the medical profession and the medical corporations and colleges with great disfavour, as tending to lower the dignity of the profession.

IRISH DISPENSARY MEDICAL OFFICERS AND CONSULTATION: AN IMPORTANT DECISION.

IN the Exchequer Division at Dublin a case of much importance was decided by the Judges on appeal last week. Dr. Mayne, of Longford, had sued the guardians of the Union for fees due for consultations with Dr. Maguire, one of their medical officers. The amount was £11 11s., and the County Court judge awarded £8 8s. Both parties appealed to the assize judge, who stated a case for the superior courts. The Chief Baron gave the unanimous judgment of the court, and said he held himself to be bound by the orders that had been made from time to time by the Poor Law Commissioners and by the Local Government Board. No doubt Article 21 of the regulations did not expressly provide what was to be done in cases of urgency, but Rule 2 of that article directed the dispensary doctors, amongst other things, to supply all requisite medical and surgical advice and assistance to any poor person in the district when he shall be required to do so by a ticket. These words he held to include the employment, if necessary, of a second physician or surgeon, and the practice which he believed existed in every union in Ireland of authorising the employment of the second physician or surgeon in cases where there was the authority of a ticket was valid. His lordship held that under another of the articles the dispensary doctor was entitled in an urgent case to do whatever was necessary on his own responsibility. Therefore the plaintiff was entitled to recover his consultation fees, and in the cases in which he had acted for the dispensary doctor at the request of the latter on the occasions of his illness he was entitled to recover because the guardians had adopted his services.

SCHOOL CERTIFICATES.

M.D. propounds the following questions: 1. Are parents obliged, at the request of the School Board or one of its officers, to supply a medical certificate as to the unfitness of their child to attend school? 2. Who is liable for the expense incurred in furnishing this certificate? 3. Is a practitioner justified in refusing to supply such certificate unless paid for by the Board?

"*.*" 1. No, but by doing so they may avoid trouble with the school authorities, who may not accept a verbal assurance from the parents. 2. The parents, if the certificate is given at their request. 3. It is not clear that the Board have any power to pay such fees. The giving or withholding of the certificate is a matter between the practitioner and the parents.

A SUPPOSED MIDWIFERY EMERGENCY.

LEX writes: I shall be glad to know the ethics of the following case: A. and B., two medical men, live two miles and a-half apart in a suburb of London. A. has a lady patient C. living near B., whom he has engaged to attend at her approaching accouchement. On labour commencing C., getting alarmed, sends for B., under the impression that help is required before A. can arrive. B. at once calls, and assures the patient that there is no occasion to send for A. until next morning, which prognosis proves to be correct. The labour taking place on the following day, and A. attending. C.'s husband meets B. and asks him the etiquette of the case. B. brushes it aside, saying, "A. will send me a fee; you leave it alone."

1. Under the circumstances to whom should B. look for remuneration? 2. If from A., is that remuneration an ordinary visiting fee or a proportion of the confinement fee?

It ought to be noted that on a former occasion B. has acted in an emergency for A., for which he was thanked.

"*.*" The principle which, in our opinion, should govern the above question, is that enunciated in the following rule, and not that which especially relates to *de facto* attendance, or long detention at an accouchement for another, in which latter case B. would have been entitled to one-half of the fee: "When a practitioner is called to an urgent case, either of sudden or other illness, accident or injury in a family usually attended by another, he should (unless his further attendance in consultation be desired), when the emergency is provided for, or on the arrival of the attendant in ordinary, resign the case to the latter, but he is entitled to charge the family for his services."

LOCUM TENENS AND INFECTIOUS DISEASE.

G. P.—A *locum tenens* has no claim for compensation under the circumstances detailed by our correspondent. Although it may occasionally happen that a principal will be put to considerable expense owing to his *locum tenens* or assistant having contracted a contagious disease in his service—an expense which he might have some difficulty in recovering, and one which probably most medical men submit to cheerfully as an unavoidable misfortune—it cannot for a moment be argued on this ground that a *locum tenens* has any legitimate claim for personal compensation. Any medical man undertaking the duties of this office knows very well the risks incident thereto, and it may be reasonably assumed that these are taken into consideration when he contracts with his principal; to entitle him to extra compensation for such risks a special stipulation would have to be made with the latter in all cases, for in the absence of this such a compensation is never contemplated in the ordinary contracts between principal and *locum tenens*.

CHARGE OF NEGLIGENCE: VERDICT FOR THE MEDICAL ATTENDANT.

AT the Colchester County Court on October 25th Walter Stead and his wife Elizabeth claimed £50 damages, said to have been incurred owing to alleged negligence on the part of Dr. W. J. Cook, of Colchester. After hearing the evidence the jury returned a verdict for the defendant.

A CONSULTANT AND A GENERAL PRACTITIONER

E. S. P.—We have read with care the correspondence submitted, and given the matter our impartial consideration. We do not see that our correspondent has any grievance against the consultant, who acted in accordance with the customary rules of medical etiquette. As we understand the circumstances, the consultant ascertained in the course of conversation, by questions specially directed to this end, that the patient was being attended by our correspondent. "E. S. P." The consultant declined to give the patient a prescription, but instead addressed to "E. S. P." a letter stating the view which he took of the case and recommending certain drug treatment. We hardly see what more the consultant could do, or that our correspondent has suffered any injury in credit or pocket except such discredit as he may have brought upon himself if he has given his patient to understand that he would dislike a second opinion to be obtained.

IRREGULAR CONSULTATIONS.

COUNTRY G. P.—The principle enunciated in the rule appended is that with which the conduct of the "Town G. P." should have accorded, and from which he may derive an instructive lesson in medical ethics for his future guidance. The plea that in prescribing for the patient he neither sought pecuniary profit nor to supplant the "Country G. P." affords no justification for so unethical a procedure:

"When a practitioner is called into, or consulted by, a patient who has recently been, or still may be, under the care of another for the same illness, he should on no account interfere in the case, except in an emergency; having provided for which he should request a consultation with the gentleman in previous attendance, and decline further direction of the case except in consultation with him."—*Code*, Chap. ii, sect. 5, rule 9.

SIGNBOARDS.

A. P.—The descriptive sketch of the proceedings of Mr. Alex. Macdonald had, in our opinion, better be referred to the Royal Colleges of Physicians and Surgeons, Edinburgh, of which the practitioner is stated to be a Licentiate.

P.—Personally galling to B. as such unjustifiable observations as those which our correspondent mentions must naturally be, and alike indefensible on the part of A., we would nevertheless counsel the former to abstain from legal proceedings until he is in a position to prove that his professional reputation has been injured thereby; and, in the meantime, to content himself by instructing his solicitor to write a cautionary letter to A.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

DATES OF EXAMINATION FOR THE M.B.—The Regius Professor of Medicine gives notice that the final examination for the degree of Bachelor of Medicine will commence on Monday, November 26th. The Secretary to the Board of Faculties will receive the names of candidates at his office in the Clarendon Building, on Saturday morning, November 10th, or by post on one of the special terms not later than that day. The fee is £1 11s. 6d. The first examination for the degree of Bachelor of Medicine will commence on Friday, December 7th. Names will be received by the Secretary to the Board of Faculties on November 22nd, or by post on the proper form on any previous day. The fee for Organic Chemistry and Materia Medica is 16s.; for the remaining subjects, £1 11s. 6d.

UNIVERSITY OF CAMBRIDGE.

UNIVERSITY COUNCIL.—At the biennial election to the Council of the Senate, on November 7th, Dr. Donald MacAlister was re-elected for a third term of four years. Dr. Peile, Master of Christ's, and Mr. Charles Smith, Master of Sidney Sussex, were elected as new members.

UNIVERSITY OF EDINBURGH.

THE Sibbald Scholarship in the subjects of Chemistry, Botany, Natural History, and Physics has been awarded to D. B. Waters, and the Thomson Scholarship, in the subjects of Botany, Zoology, and Elementary Mechanics, to James Masson, M.A.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH, ROYAL COLLEGE OF SURGEONS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

THE quarterly examinations for the triple qualification took place in Edinburgh during October, with the following results:

First Examination: Four Years' Course.—Of 28 candidates the following 12 passed: J. T. Waite, A. K. Ludlam, J. G. Mylan, K. V. Rau, R. Connolly, T. H. L. Guthrie, J. Elliott, A. G. Sutton, Ann Ellen Greenwood, A. W. B. Anderson, A. S. Trapaga, and W. McHarry. Three candidates entered for divisions and 2 passed. *Five Years' Course.*—Of 23 candidates the following 8 passed: H. S. Anderson, J. Tobin, Georgina Collier, A. M. Hardie (with distinction), E. L. M. Hackett, W. J. Morgan, P. J. van Coller, and A. J. B. Albertyn. Fifteen candidates entered for divisions and 9 passed.

Second Examination: Four Years' Course.—Of 61 candidates, the following 32 passed: E. Regan, G. Hetherington, A. T. Clarke, A. K. Ludlam, A. J. McFarlane, J. T. Waite, L. R. Steele, J. C. Thompson, G. Henderson, R. Wilbond, H. E. Fellowes, M. O'Brien, R. A. Bowen, D. Ritchie, J. H. Abrahams, H. H. Lawrence, E. E. S. J. Galbraith, A. S. Trapaga, J. O'Meara, A. E. Blades, T. O'Callaghan, W. A. Mushé, J. L. Brownridge, E. J. Howley, G. Singh, W. H. Rowthorn, A. McL. Wilson, T. J. Chidley, T. Duff, C. Scott-Wilkinson, J. J. Uniacke, and G. P. O'Connor; 14 candidates entered for divisions, and 5 passed. *Five Years' Course.*—Of 8 candidates, the following 6 passed: E. Ryan, Georgina Collier, Flora Rosina Cartwright Wood, J. McGlynn, Selina FitzHerbert Fox, and A. Gairn.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

THE following gentlemen, having passed the requisite examination, have been admitted Fellows of the College:

G. S. Hatton, M.R.C.S.Eng., E. Buxton, M.R.C.S.Eng., J. W. Dowden, M.B., C.M., L.R.C.S.E., W. Bain, L.R.C.S.E., H. L. Murray, L.R.C.S.E., G. H. Hetherington, M.R.C.S.Eng., T. B. Richardson, L.R.C.S.E., R. A. Newton, M.R.C.S.Eng., and E. E. Maddox, M.D., M.B., C.M.

Final Examination.—Of 123 candidates the following 61 passed, and were admitted L.R.C.P.E., L.R.C.S.E., and L.F.P.S.G.:

G. P. P. Clapham, C. O. Parsons, G. F. N. Taylor, R. A. E. Lowry, M. J. Hatton, Isabella Beattie Venters, Amy Gordon Lillingston, S. Wood, J. Tibbetts, J. Prichard, J. B. Stewart, E. J. M'C. Morris, J. D. Liston, W. H. Jamieson, A. E. Downey, Ethel Bentham, Jessie Ballard Ferguson, W. R. Thompson, S. B. Siddall, C. J. da Cunha, P. P. Ramchundra, Ursula Mary Dewes Fowler, G. T. H. de Clive-Lowe, A. D. Clark, J. S. D. McCormac, J. S. Matheson, W. J. Lewis, R. S. Dowd, J. A. Blayney, W. Bratton, T. Shanasy, D. A. Anderson, W. J. Collins, C. A. Wilkinson, N. B. Baker, O. Johnson, T. J. Chidley, W. J. S. Clucas, T. Bishop, R. Valentine, T. Burton, M. Sherwen, Beatrice Ritchie, G. Innes, W. G. Rainer, G. W. Baker, T. C. K. Kurup, W. Davis, C. J. A. Coates, E. J. Treasuryvala; T. P. Powell. A. E. Marwood, S. Johnson, J. Hunter, A. J. Nevett, E. McC. Campbell, M. Stewart, W. S. Robinson, J. H. G. Howe, J. Moorhead, G. W. Crooks, and W. Macdonald.

Twenty-two candidates entered for divisions, and 17 passed.

OBITUARY.

OCTAVIUS STURGES, M.D., F.R.C.P.,

Senior Physician to the Westminster Hospital.

THE death of this distinguished physician on Saturday, November 3rd, from the results of an accident which befell him only a week previously, has robbed the profession of one of its best and worthiest members, and caused a loss to his friends, his colleagues, and his pupils which will long be felt and deeply deplored. While crossing Cavendish Square on the evening of October 26th he was knocked down by a cab, the approach of which with india-rubber tyred wheels he had not heard, being somewhat deaf; and, though at first there was no evidence of mischief apart from some external bruises, signs of probable injury of intestine appeared before long, and on the afternoon of November 3rd—the day of his death—a condition of collapse set in suddenly which forbade further hope of his recovery.

Dr. Sturges was at the time of his death Senior Censor of the Royal College of Physicians, and Senior Physician to Westminster Hospital and the Hospital for Sick Children in Great Ormond Street. He was in active and busy work, and full of health and mental vigour. He was born in London in 1833, and in course of time went to Addiscombe as a cadet in the service of the East India Company. Thence he passed out to India as a lieutenant in the Bombay Artillery. After some five years of this life he found it unsatisfactory to his many activities, and, returning to London, he entered St. George's Hospital, where, in 1863, he was appointed Medical Registrar. His work during his tenure of this post showed more than signs of the intellectual grasp and clinical insight which was apparent throughout in his later writings and hospital teaching.

One of the earliest of his contemporaries, now a well-known physician, well remembers how interesting and instructive it was to attend him while he was working there in the wards, and how all the better students flocked around him. It was at this period, too, that he began that close and accurate study of pneumonia—a subject he made peculiarly his own—which formed the basis of his now well known and classical monograph on that disease.

He had previously entered at Emmanuel College, Cambridge, taking his degrees as B.A. and M.B. in 1862. In 1863 he became Member of the Royal College of Physicians, in 1867 M.D. of Cambridge, and in 1870 was elected Fellow of the Royal College of Physicians. His appointment as Assistant Physician to Westminster Hospital dated from 1868, as also his lectureship on Forensic Medicine, which he vacated in 1871 on being chosen Lecturer on Materia Medica. In 1874 he resigned this chair for that of Medicine, succeeding his friend the late Dr. Anstie; and continued to lecture on this subject for 20 years, resigning only last year.

His lectures were practical, terse, and vigorous, and were much appreciated by his audience. Both by their matter and style they compelled attention and stimulated thought. He was full Physician from 1875 until he died, and continued up to the time of his fatal accident to visit the hospital almost daily, to teach in the wards, and deliver the regular clinical lectures. He was never more vigorous in his work or more popular among the students than he was at the last, and therefore his almost sudden death has been keenly felt by his pupils as well as by his colleagues.

Recently Dr. Sturges was Examiner in Medicine and Assessor to the Regius Professor of Physic in the University of Cambridge. For many years he had been on the staff of the Hospital for Sick Children in Great Ormond Street, and h

found there much of the clinical material for his work on *Chorea*, which, as a clinical study, must always take a leading place among books on this subject, and has long been of acredited value.

It is indeed mainly in his two works on *Pneumonia* and *Chorea* that Dr. Sturges's memory will live outside the circle of his friends and colleagues; and it may fairly be said that these two books are a credit to English medicine, on account not only of their truth to Nature, and the breadth and depth of the criticism they display, but also of the lucidity and purity of their literary style. It is not the place here to criticise these works, but all who read them must confess that they show not only much knowledge and much practical wisdom, but also the most scrupulous regard to facts, the greatest logical acumen, and an almost punctilious fairness in argument. An early and small publication of Dr. Sturges's, entitled an *Introduction to the Study of Clinical Medicine*, deserves especial mention here, although probably forgotten by many. It has all the marks of his other work, and as a real "introduction" is second in merit to no book of its size.

In character and conduct Dr. Sturges bore out the qualities shown in his work. There is a close alliance between moral and intellectual truth; and no one could illustrate this in his person more brightly than Dr. Sturges. He was a man of the strictest honour in thought, word, and deed; and the unconscious influence of his personality on those with whom he came in intimate contact forms a no less valuable record of his life than his more widely known and brilliant work.

In disposition he was a lover of peace, but was always fearlessly outspoken when there was a necessity for upholding what he thought to be right. He was thoroughly in earnest and carefully painstaking in all he did; but his earnestness was lightened by a humour which was always kindly, and at all social gatherings of staff or students his wise and witty sayings were looked for and heard with never-failing satisfaction. His popularity among the students was very great, and of the highest kind, in which affectionate regard and deep respect were equal factors. He courted no man, was just and courteous to all, and to many was a warm and invaluable friend. In private his geniality, his humour, and his varied knowledge of men and things—for he was a keen observer and had read much and widely—made him one of the most delightful of companions.

Such a man will be long and sincerely regretted by his relatives and friends, who knew and loved him so well; by his colleagues on the staff and managing board of each hospital which he served, where his presence was always welcome and his opinion greatly valued; by the resident officers and pupils of Westminster Hospital, who respected him so highly; and by the College of Physicians, in which he ably and conscientiously discharged the duties of the important office he held at the time of his death.

The following resolution, proposed by Sir Rutherford Alcock, K.C.B., seconded by Mr. George Cowell, F.R.C.S., was passed at a meeting of the House Committee of the Westminster Hospital, held on November 6th:

That the House Committee desire to place on record their deep sense of the severity of the loss which the Westminster Hospital has sustained in the death of the Senior Physician, Dr. Sturges and to express their admiration and gratitude for the consistent adherence to duty, the kindly and skilful care for the patients, and the enlightened promotion of the varied interests of the hospital, which distinguished him during his many years of office.

The funeral took place on Thursday, the first portion of the service being conducted at St. Andrew's, Wells Street, by the vicar of the parish, assisted by the two brothers of the deceased. A very large and representative gathering of the profession so far as the hospitals are concerned was present. Dr. W. H. Dickinson was chief mourner, and there were also present, in addition to all the physicians and surgeons connected with the Westminster Hospital and the Hospital for Sick Children Great Ormond Street, Dr. Russell Reynolds, Sir Dyce Duckworth, Dr. Gee, Dr. Pye-Smith, Dr. Whipham, Dr. Liveing, Dr. John Ogle, Sir W. Priestley, Mr. Timothy Holmes, Mr. Howard Marsh, Drs. Cheadle, Wilks, Blandford, Buzzard, Bastian, Professor Clifford Allbutt, Drs. F. T. Roberts, Savage, Champneys, Coupland, Bowles, Abercrombie, Lee Dickinson, and many others, as well as representatives of the committees of the two hospitals and a large contingent of nurses from each. The interment took place directly afterwards at Kensal Green Cemetery.

WALDEMAR JOSEPH ROECKEL, M.B.Lond., F.R.C.S. Mr. W. J. Roeckel, who recently died at Melbourne, Victoria, aged 43, was a member of a family which included more than one distinguished musician, and was himself a good pianist. He was born in Bath, and received his medical education at St. Bartholomew's Hospital. He also studied in several Continental medical schools. After taking the Fellowship of the Royal College of Surgeons, he served on the teaching staff of St. Bartholomew's, the London, and Charing Cross Hospitals. He was also Surgeon to the National Orthpædic Hospital, Great Portland Street, for several years, and was undoubtedly a skilful orthopædic surgeon. Unfortunately he became a great sufferer from gout, which entirely prevented him from pursuing his professional duties. After two voyages abroad, he found that his health was always restored in a dry climate. He therefore determined, two years since, to dwell in Australia, and accordingly left England and took a partnership in a private practice in Melbourne. His death occurred rather suddenly. Mr. Roeckel was well known in medical, literary, and artistic circles during the twenty years that he lived in London as a genial and accomplished gentleman. His numerous friends in England will, we feel sure, hear of his decease with regret.

The *Australian Medical Journal* of September 20th, reports that the deceased surgeon was found dead in his bed, while on a visit to Ballarat, and from the evidence at the inquest, the death was due to an overdose of cocaine hypodermically injected. During his residence in Melbourne, his courteous and genial manners and undoubted ability had made him many friends, to whom his death came as a sad shock.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

WATER STERILISATION.

The bacteriological data acquired in the last fifteen years have substituted some definite knowledge of the connection between bad water and disease for the speculative interpretation of chemical results which used to serve in its place. The principal value of this knowledge is as a means of scientifically controlling the processes proposed for the purification of water. The looseness of the control which existed previously cannot easily be exaggerated. It is seen in the grotesque credulity with which many filters of commerce have been accepted as purifying water, while in fact they were contaminating it to an indefinite extent. Compositions, each professedly capable of softening all waters, have been admired, in spite of their being, so far as existing knowledge goes, plain chemical impossibilities. It is perhaps natural that, in the absence of exact knowledge as to the way in which water is associated with disease, superstitions should have arisen on the subject; but there is every reason for wishing them to be excluded from a practice having a more assured foundation. Dr. Quinochet's recent review of the processes of water purification is a reminder of the care with which this relatively new basis of examination must be used if it is not in its turn to become discredited.

An instance of the ease with which false inferences may in the present state of our knowledge be made is the sterilisation of water by boiling. It is well recognised that boiled water favours to a much greater extent than unboiled water the development of the organisms which ordinarily fall into it when it is kept for a short time. It has, however, till recently been assumed that, when carried to an extent sufficient to kill the organisms contained in water, boiling deprived it of its capacity to cause disease. Dr. Guinochet points out that the researches of Gamaleïa and Straus, to which he might have added those of other experimenters, make it more than doubtful whether anything short of the removal of germs from the water is

sufficient for this purpose. Accordingly, he lays great stress on the importance, wherever practicable, of verifying laboratory results and theoretical inferences by a sufficient practical experience. It is, for instance, not mainly on their bare laboratory performances that he estimates the Anderson process of purifying town supplies, or even the Pasteur filter for domestic purposes as the best means yet proposed for their respective purposes, but on their wide use in practice during many years. The records so carefully compiled since 1888 by the French Government, showing the disappearance of water-borne disease in all places and under all circumstances in which the Pasteur filter was applied. Such records were necessary for the complete confirmation of the expectations previously formed from its laboratory results; and whatever its laboratory performance had been, its claim on public confidence would have been comparatively tentative without them.

The moral of researches such as those of Dr. Quinochet is that we must proceed with the utmost caution in inferring the efficacy of any process by the analogy of other processes in like circumstances, or in conditions differing from those of actual practice. So much has already been done towards obtaining in practice a rigorous sterilisation by Pasteur's porcelain cylinders, that it is most important that no means should be allowed to creep into use without at least equal efficiency. The purification of water is no longer mere guesswork. There is a real prospect of attaining both finality and increased variety in the means available. It is important that no retrograde step or premature assumption shall be allowed to compromise this prospect, or debase the standard of purification below what has been shown to be actually practicable.

THE COUNTY COUNCILS AND CORONERS.

A SCHEME of reform, affecting the position, emoluments, and duties of the London coroners, has been prepared by the Public Central Department of the County Council, and submitted to the coroners for their observations thereupon. The subject will shortly come before the Council, and should the scheme be approved, it will be embodied in a Bill for presentation to Parliament next year. It is proposed considerably to reduce the present number of coroners by the amalgamation of certain districts, and to make the position of those who continue in office analogous to that of the metropolitan police magistrates, with a similar salary of £1,200 a year, and with a proviso that they shall devote their whole time to the work. There will be a Central Coroner's Court in each of the newly-arranged districts, and as each coroner will be available for service in another district if required, deputy coroners will be abolished. The new districts are to be so arranged as to make the work in each approximately equal, and the franchise districts, which elect their own coroners, are to be absorbed. These districts at present comprise Westminster, Southwark, the Savoy, the Liberty of the Tower, the Duchy of Lancaster, and the Royal Palaces.

Medical investigators are to be appointed to inquire into all cases of uncertified deaths assisted by qualified and responsible inquiry officers. They are to examine the body in all such cases and make *post-mortem* examinations where necessary and to report the result to the coroner sitting in court who will then decide as to the necessity for holding a formal inquest. They are also to give evidence at inquests and act as medical advisers to coroners. One or more medical investigators are to be attached to each court and paid by salary. There will also be a clerk attached to each court with inquiry officers and other necessary officials, as in police courts, and all expenses of such courts will be paid by the county.

The requirement that the jury shall view the body is no longer to be enforced, and the number of jurymen is to be reduced to not less than six or more than twelve. In cases involving subsequent criminal proceedings, such as murder or manslaughter, or where the evidence discloses any criminal offence the coroner is to have full power to commit the accused for trial and to bind over all witnesses; and the magisterial investigation of such cases which is now required is to be abolished. This is reverting to the old practice, which obtained until a few years ago, when the Home Office directed that the accused should be brought before a magistrate. Provision is made in the scheme for a proper record of all cases inquired into, whether an inquest be held or not.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,540 births and 3,475 deaths were registered during the week ending Saturday, November 3rd. The annual rate of mortality in these towns, which had increased from 16.0 to 18.5 per 1,000 in the preceding four weeks, declined again to 17.3 last week. The rates in the several towns ranged from 10.2 in Croydon, 11.3 in Plymouth, and 11.8 in Birkenhead to 23.8 in Sunderland, 24.0 in Bradford, and 25.4 in Burnley. In the thirty-two provincial towns the mean death-rate was 18.0 per 1,000, and was 1.6 above the rate recorded in London, which was 16.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London the rate was equal to 1.5, while it averaged 2.2 per 1,000 in the thirty-two provincial towns, and was highest in Burnley, Brighton, and Gateshead. Measles caused a death-rate of 2.0 in Leeds, 2.3 in Sheffield, 2.7 in Portsmouth, and 2.8 in Salford; scarlet fever of 1.0 in Salford and 1.1 in Huddersfield; "fever" of 1.1 in Gateshead; and diarrhœa of 1.6 in Burnley and 1.9 in Nottingham. The 90 deaths from diphtheria in the thirty-three towns included 54 in London, 9 in West Ham, 7 in Manchester, and 3 each in Brighton, Wolverhampton, and Liverpool. Two fatal cases of small-pox were registered in Birmingham, and 1 in London, but not one in any other of the thirty-three large towns. There were 48 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, November 3rd, against 63, 60, and 50 at the end of the preceding three weeks; 8 new cases were admitted during the week, against 8, 11, and 8 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,171, 2,214, and 2,285 at the end of the preceding three weeks, had declined to 2,240 on Saturday last; 223 new cases were admitted during the week, against 231 and 254 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, November 3rd, 883 births and 672 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.5 and 18.5 per 1,000 in the preceding two weeks, further rose to 22.2 last week, and exceeded by 4.9 per 1,000 the mean rate during the same period in thirty-three of the largest English towns. Among these Scotch towns the death-rates ranged from 10.3 in Perth to 30.0 in Greenock. The zymotic death-rate in these towns averaged 1.9 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 202 deaths registered in Glasgow included 8 from measles, 6 from diphtheria, 6 from "fever," and 1 from scarlet fever. Three fatal cases of diphtheria were recorded in Greenock.

INSANITARY DWELLINGS IN BIRMINGHAM.

ON October 26th, summonses relating to twelve houses, with respect to which closing orders were applied for by the Health Committee of the Birmingham Corporation, were heard at the city police-court. The cases appear to have been those outstanding from the 42 applications referred to in the BRITISH MEDICAL JOURNAL of October 27th as having been made on October 12th. Evidence was given on October 26th by Dr. Alfred Hill, Medical Officer of Health for the city of Birmingham, and Dr. Reid, Medical Officer of Health of the County Council of Staffordshire. In each of the 12 cases a closing order was made. The proceedings instituted on October 12th appear now to have been brought to a successful termination in every instance.

PAYMENT FOR ADMINISTRATION OF ANÆSTHETICS.

THE following circular letter on this subject has been issued and circulated to the clerks of the guardians in England by the Local Government Board:

Local Government Board, Whitehall, S.W.,
1st November, 1894.

Sir,—I am directed by the Local Government Board to state that it would appear from representations which have been made to them that some misapprehension exists as to the power of boards of guardians to pay for the professional assistance required by their medical officers in connection with the administration of anæsthetics in cases of operations.

As the guardians are aware, the Board recommend that, under ordinary circumstances, a case in which a serious operation is required should not be treated in a workhouse or at the patient's home, but should be sent to a public hospital. When, however, the latter course is not practicable, or when the operation is not of a serious character, the Board are prepared, in any case where an anæsthetic has been required, to consider an application from the guardians for sanction to the payment to the medical officer of a reasonable sum in respect of any assistance which it was necessary for him to obtain in connection with the administration of the anæsthetic, or of any other cost incurred in connection with its use.

It has been the invariable practice of the Board to give their sanction to reasonable payments which have been proposed by guardians in respect of services of the character referred to; but they deem it desirable to draw the attention of the guardians to the matter, with the view of removing any doubt that may be felt on the point.

I am, Sir, your obedient Servant,
The Clerk to the Guardians. HUGH OWEN, Secretary.

HOSPITAL ACCOMMODATION IN LANCASHIRE.

Dr. Sargeant, in his annual report on the county palatine of Lancaster, states that of the 137 sanitary districts in the administrative county at the end of 1893 there were 24 with hospitals, and 16 with small-pox or temporary hospitals; whilst 19 had schemes for joint use of hospitals in progress; 31 districts can send patients to hospitals in neighbouring areas, but only 14.3 per cent. of notified cases received isolation in these districts, 7 of them sending no cases, small-pox alone in other of them being dealt with. In the county at large under 20 per cent. of notified cases went to hospital. Dr. Sargeant dilates on the unsatisfactory method of establishing "emergency" hospitals; they are, he says, open to grave objection even for the temporary requirements of the districts which they are made to serve; but he has hopes of better things in future, and with the activity now being displayed and the help of the Isolation Hospitals Act, these hopes may be fulfilled. At present 35, or nearly one third, of the county districts, with 370,830 population, are entirely without the means of combating infectious sickness.

ELECTION OF DISTRICT MEDICAL OFFICERS.

Espérance will find most of the information he requires relating to the appointment of district medical officers if he refers to the British Medical Journal, October 27th, 1894, p. 938. Parish councils, when established, will have nothing whatever to do with the appointment of Poor-law medical officers.

LITERARY NOTES.

The *Bulletin of the American Academy of Medicine* for October contains a full report of the papers read at the recent nineteenth annual meeting of the Academy. In addition to the presidential address of Dr. Geo. M. Gould, of Philadelphia, which has already been noticed in the British Medical Journal, there are interesting papers on "The Relations of Food Adulteration to the Dependent Classes," by Dr. Henry Leffman; "Is Blindness Increasing, and what are the Best Means of Prevention?" by Dr. James A. Spalding; "The Prevention of Insanity," by Dr. Gershom H. Hill; "Physical Training as a Reformative Agent," by Helen C. Pulnam, M.D.; "Can the Sick be Healed by Faith Alone?" by Dr. Henry O. Marcy, etc.

It is well known that in the Middle Ages the practice of medicine, especially in the higher strata of society, was to a large extent in the hands of Jews. The Kings of Aragon and Catalonia protected Jewish physicians by special decree. Ferragut and Bengesta were the body physicians of Charlemagne; Don Juan II of Aragon was cured of cataract by a Jewish leech named Crexcuas; Elias Montalto was physician to Marie de Medicis; Izchac was physician-in-chief to Alfonso VII of Castille; and many other kings of Spain had their diseased bodies ministered to by the children of Israel. Francis I of France sent to Spain for a Jewish doctor: none, however, but such as had found salvation within the Christian fold could be found. Francis, however, was determined to have the genuine article in its native purity. He was at last successful in procuring a Jew, warranted as unconverted, from Constantinople by the friendly offices of the Sultan. According to Dr. L. Comenge, in an article in the *Revista de Ciencias Medicas de Barcelona* entitled "Judios en el Vaticano," such was the reputation of the Jews for medical skill that even some of the Popes were fain to entrust their sacred persons to the care of men whom they looked upon as worse than heretics. From the lists of pontifical physicians drawn up from the Vatican archives by Mandosio and Gaelano Marini, it appears that Angelo de Manuele, a Jew, was appointed physician to Boniface IX and to the Conclave on July 1st, 1392. Special rewards and exemptions made in favour of the said Angelo and his son by the Roman Senate were ratified by Boniface in 1399; these privileges were confirmed by John XXIII and Martin V. The latter appointed as his chief physician another Jew, by name Elias. On July 14th, 1505, a Spanish rabbi named Samuel Safardi received from Pope Julius II, as part of his official salary, a sum of 125 gold scudi. The same physician continued to enjoy the confidence of Leo X, Clement VII, and Paul III. Innocent VIII also put his trust in Jewish doctors, such as Elias di Sabbato, Mosé di Tivoli, and Mosé de Lisboa. One of these Moseses seems to have been murdered by another Jewish physician named Elias from motives of professional jealousy—a sad illustration of the *invidia medicorum* which is said to be the worst form of envy. Julius III had three Jewish physicians—Amatus Lusitanus, Vital Alantino, and Teodoro de Sacerdotibus. A letter to the latter, addressed "Theodoro de Sacerdotibus, Hebreo medico nostro," in which the Pope announces that he has chosen him as his archiater, is still extant; it bears date June 7th, 1550. The Popes, like Francis I., seem to have liked to take their Jewish physic without any theological adulteration, for they protected their doctors by special enactments against persecution on the score of their faith, even when their coreligionists were most grievously harassed. The Antipope Luna, calling himself Benedict XIII, perhaps on the principle of being "more Catholic than the Pope," insisted on his physician, Jehosuah Ha-Lorqui, the celebrated Talmudist, being baptised under the name of Hieronymus de Sancta Fide. So zealous a convert was Jehosuah that he is said by his eloquence to have snatched no fewer than 3,000 Hebrew brands from the burning.

Dr. Millot-Charpentier recently described to the Académie de Médecine, under the name of "a new hæmostatic procedure," a method of securing a divided vessel by transfixing it with a needle threaded with catgut, and treating it as the pedicle of a tumour by twisting the catgut around its ends. In the *Revue de Chirurgie* of July 10th M. Nicaise points out that a similar method was described in the fifteenth century by Bertapaglia, an Italian surgeon, who died about 1460, and who was the author of a *Treatise of Surgery*, which is really a commentary on the fourth *Canon* of Avicenna. Bertapaglia, in an edition of his work published at Venice in 1499 (fol. 230), says:

> Primo sit tale regimen cum volueris ligare venam: ut pervenias ad extrahendam ipsam cum uncio ferreo et cum scissione paucæ carnis quæ cooperit ipsam venam: hoc est ipsam excarnando: et postea liga ipsam cum filo lineo. Ut melius et tenacius teneat perfora dictam venam cum acu et cum filo circumcirca volvendo stricte nodum supra nodum: et sic dimitte donec virtus regitiva filum expellit.

which may be translated as follows:

> In the first place let the following be the procedure when you wish to tie a vein: draw it out with an iron hook, cutting the small amount of flesh which covers the vein: that is, cleaning it: and afterwards tie it with a flaxen thread. That it may hold better and more firmly, pierce the said vein with a needle and thread, twisting the latter around it tightly knot upon knot: and so leave it till the directing power [of Nature] expels the thread.

A similar method of further securing an artery after ligature was described by Dionis in his *Cours d'Opérations de Chirurgie* published in 1707, and a modification of the same procedure was employed in the treatment of aneurysm by Sir Astley Cooper.

M. Kieffer, who has investigated the history of kola nut, says the first mention he has been able to find of it in literature is in a compilation of the thirteenth century attributed to Ibn Bailar of Malaga, in which the statements made by El-Ghafeky, an Arabian physician of the twelfth century, who seems to have been acquainted with the substance, are cited. There is some uncertainty about this reference, but there is none about a mention of kola nut which is found in the *Relatione del Reame di Congo* of Odoardo Lopez (1591), who speaks of the use of chewing the nut to relieve thirst. In 1594 Andres Alvarez described the kola nut, with which he had become acquainted during a visit which he paid to Guinea in 1566. At the end of the sixteenth century the Portuguese exported kola from Senegambia to the interior of Africa, where it was largely used for purposes of barter. In the *Annales des Jésuites* (1604-1605) it is stated that the Portuguese also imported kola nut to Sierra Leone. It was then a common saying in that region, *Quem come cola, fica em Angola* (Whoso eats kola remains at Angola). At the end of the sixteenth century samples of kola nut were brought to London and described by James Garet (? Garrett) and Clusius, a botanist. From the commencement of the seventeenth century references to kola nut become numerous, and its use by the negroes is frequently alluded to. It was not till 1882, however, that the substance was studied chemically and physiologically by Heckel and Schlagdenhauffen in the *Journal de Pharmacie et de Chimie*, 1883.

The number of medical journals at present published in Russia is 38. Of these 20 are published in St. Petersburg, 5 at Moscow, 4 at Warsaw, 2 at Odessa, 2 at Charkoff, and 1 at Kasan, Kieff, Saratoff, Woronesz, and Pultawa respectively. The oldest of them all is the *Medizinskoie Obozrenie*, which is just on the point of attaining its journalistic majority: next comes the *Russkaia Medizina*, which is in its nineteenth year, the *Vratch*, which is in its fifteenth, being third.

MEDICAL NEWS.

The subject of Indian fevers occupies a prominent place in the list of the special papers to be read at the Calcutta Medical Congress. It will be dealt with by Surgeon-Major A. Duncan, Surgeon-Captain H. Hendley, Surgeon-Captain C. E. Sinclair, Dr. Katrak, Dr. Tavaria, and Assistant-Surgeon Ram Kissen. The last mentioned will deal with typhoid fever among natives of India.

A Uniform Training for Nurses.—At a recent meeting of the Matrons' Council (a body composed for the most part of hospital matrons), a paper containing a plea for uniformity in the education of nurses was read by Mrs. Strong, Matron of the Royal Infirmary, Glasgow. After a lengthy discussion, the following resolution was adopted unanimously: "That, in the opinion of this meeting, it is necessary that an Act of Parliament should be sought for so as to provide for the uniform training, the uniform examination, and the legal registration of nurses."

On November 3rd, Dr. Sophia Jex-Blake was presented with a congratulatory address on the opening of the medical degrees of Edinburgh University to women. The presentation was made by Miss Louisa Stevenson at the Edinburgh School of Medicine for Women. A similar address was presented by the students. The recipient, in expressing her thanks, said that two things remained to be wished for in Edinburgh—a thoroughly good school, and a thoroughly equipped hospital for women.

The Newcastle Royal Infirmary.—The governors of the Royal Infirmary, Newcastle-on-Tyne, have decided to increase the number of assistant surgeons from two to four, on the recommendation of the medical staff and of the House Committee. The election takes place on November 15th, and it promises to be an exciting contest. The candidates, we are informed, are Mr. W. Ridley, M.B., M.S., F.R.C.S., lately Surgical Registrar to the Infirmary; Mr. A. M. Martin, M.B., B.S., Surgical Registrar; Mr. J. V. W. Rutherford, M.B., M.C.; Mr. W. G. Richardson, M.B., B.S., F.R.C.S.; and Mr. G. Metcalfe, M.B., B.S. With the exception of Mr. Rutherford, they have all been educated at the Newcastle School; and Messrs. Ridley, Richardson, and Martin have been house-surgeons at the infirmary. The appointments are now made by a selection committee of about sixty, composed of the staff, the House Committee, and about thirty others. This is a great improvement on the old system of election by the five or six hundred governors, and, as soon as a vacancy is declared, no personal canvassing is allowed. The question of appointing assistant physicians was raised at the governors' meeting, and was referred to the medical staff for a report.

British Orthopædic Society.—The first general meeting of this Society took place at the Holborn Restaurant on Saturday, November 3rd. The chair was taken by Mr. Noble Smith (Chairman of the Provisional Committee); a number of gentlemen interested in orthopædic practice were also present. Mr. E. Luke Freer (the Provisional Hon. Secretary) read the notice convening the meeting, and gave the names of several gentlemen who were unable to attend but had signified their willingness to join the Society; all these were elected *en bloc*. Rules for the government of the Society were discussed and referred to the Council, to be brought up for ratification at the next meeting in January. It was resolved, following the lines successfully adopted by several other societies, that the meetings should be of a semi-social character, the Chairman to be elected by the members present at each meeting; that the meetings should be held alternately in London and the provinces; and that the election of members should be by ballot, the subscription being fixed at half a guinea annually. The following officers were elected: *Hon. Treasurer:* Mr. C. R. B. Keetley. *Hon. Secretaries:* Messrs. A. H. Tubby and E. Luke Freer. *Council:* Messrs. Walsham, Muirhead Little, D'Arcy Power, Noble Smith, R. Jones (Liverpool), Grattan (Cork), Reeve, Sunderland, and Holland (Liverpool). Applications for membership may be made to the Hon. Secretaries, A. H. Tubby, 39, Finsbury Circus, London, E.C.; or E. Luke Freer, 43, Newhall Street, Birmingham.

MEDICAL VACANCIES.

The following vacancies are announced:

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House-Surgeon; must be duly registered. Salary, £60 per annum, with board, lodging, and washing. Applications and testimonials to J. Bonnett, Secretary, 23, St. Andrew's Street, Cambridge, before November 13th.

BAWNBOY UNION, Swanlibar Dispensary.—Medical Officer. Salary, £90 per annum, with £15 yearly as Medical Officer of Health, together with vaccination and registration fees. Applications to Mr. Thomas McGovern, Honorary Secretary, Gortmore, Derrynacrieve, Belturbet. Election will take place on November 17th.

BELFAST ROYAL HOSPITAL.—Assistant Staff-Surgeon and a House-Surgeon for the Extern Department, doubly qualified. Applications to the Chairman of the Board of Management by November 17th.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.—Assistant in the Bacteriological Department. Salary, £150 per annum. Particulars from the Director at the temporary offices, 101, Great Russell Street, W.C.

CHARING CROSS HOSPITAL.—Physician or Surgeon for Diseases of the Skin. Application to the Chairman of the Committee of Selection by November 12th.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis Road, Shadwell, E.—House-Surgeon. No salary. Board, lodging, and washing provided. Applications and testimonials to Thomas Hayes, Secretary, before November 10th.

EAST SUSSEX COUNTY ASYLUM, Hayward's Heath.—Junior Assistant Medical Officer. Salary, £100 per annum, with board and lodging. Applications to the Medical Superintendent by November 20th.

FARRINGDON GENERAL DISPENSARY AND LYING IN CHARITY, 17, Bartlett's Buildings, Holborn.—Honorary Physician. Applications to the Secretary by November 10th.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon; must possess surgical qualification. Appointment for six months, but may be held by re-election for a further period of six months. Board, residence, and washing provided. No salary. Applications to the House-Governor by December 1st.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—Resident Medical Officer as House-Physician. Appointment for six months. Salary, £20 per annum, with board and residence; must be unmarried. Applications and testimonials to Adrian Hope, Secretary, before November 21st.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—Resident Medical Officer as House-Surgeon. Appointment for six months. Salary, £20 per annum, with board, and residence; must be unmarried. Applications and testimonials to Adrian Hope, Secretary, before November 21st.

HOSPITAL FOR WOMEN AND LYING-IN INSTITUTE, Brighton.—House-Surgeon, unmarried, and under 30 years of age. Salary, £80 per annum, with board and rooms. Applications to the Secretary by November 15th.

HOSPITAL FOR WOMEN, Soho Square, W.—Registrar. Appointment for twelve months. Honorarium, 25 guineas. Applications to David Cannon, Secretary, by November 20th.

HUNTINGDON COUNTY HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications and testimonials to Mr. A. G. Dilley, Assistant Secretary, Market Hill, Huntingdon, before November 10th.

KENT AND CANTERBURY HOSPITAL.—House-Surgeon; must be a registered medical practitioner, unmarried. Salary, £90 the first year, with board, etc., rising to £100 the second year. Applications and testimonials to A. J. Lancaster, Secretary, before November 23rd.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon, doubly qualified. Salary, £70 per annum, with residence and maintenance in the house. Applications to the Chairman by November 24th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, Shoreditch, N.E.—Physician; must be F. or M.R.C.P.Lond. Applications to T. Glenton-Kerr, Secretary, 27, Clement's Lane, E.C., by November 15th.

PARISH OF CAMBERWELL.—Temporary Medical Officer for the Infirmary and Workhouse, doubly qualified. Must reside in the immediate vicinity. Appointment for six months. Salary at the rate of £300 per annum. Applications to Charles S. Stevens, Clerk to the Guardians, Guardians' Offices, Peckham Road, S.E.

RADCLIFFE INFIRMARY, Oxford.—House-Physician and House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Tenable for six months. Applications and testimonials to A. C. Virgo, Secretary, by November 16th.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Lecturer on Chemistry. Applications to George P. Field, Dean, by November 12th.

MEDICAL APPOINTMENTS.

Cameron, R. W. D. Macmartin, M.D., D.Sc.Edin., appointed Medical Officer of Health for the combined Counties of Wigtown and Kirkcudbright.

Firth, H. E., appointed House-Physician to the Leeds General Infirmary.

Hainsworth, J. W., M.B.Vict., appointed Resident Obstetric Officer to the Leeds General Infirmary.

Hicks, Jno. Abernethy, jun., M.R.C.S.Eng., L.R.C.P.Lond., L.S.A., M.P.C., appointed Honorary Physician to the Nazareth House Convalescent Hospital, Bexhill-on-Sea, Sussex.

Kennedy, John R., M.B., C.M.Aberd., appointed Medical Officer, Colonsay and Kintyre, Argyleshire.

LUER, Thomas D., M.B., B.Ch Irel., appointed Junior House-Physician to Smedley's Hydropathic Establishment, Matlock, *vice* Dr. Finney, resigned.

MCCLELLAND, W., M.B., Ch.B.Vict., appointed non-Resident Medical Officer to the Gynæcological Department of the Liverpool Royal Infirmary.

MATHIESON, Alexander L., M.B., C.M.Glasg., appointed Medical Officer for the Grimesthorpe District of the Sheffield Union.

MORRIS, Walter, L.R.C.P.Edin., L.F.P.S.Glasg., appointed Medical Officer for theWestern Bolton District of the Bolton Union.

NEWTON, Lancelot, M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the Sawtry District of the Huntingdon Union.

PIM, Joseph H., L.R.C.P., L.R.C.S.Irel., L.M., appointed Medical Officer for the Blankney District of the Sleaford Union.

RAYNER, Herbert E., F.R.C.S.Eng., appointed Surgical Registrar and Anæsthetist to the Hospital for Sick Children, Great Ormond Street, *vice* C. F. Marshall, M.D., B.S., F.R.C.S.Eng., resigned.

RICHMOND, J. R., appointed Medical Officer for the Overton and Penley District of the Ellesmere Union.

ROBINSON, A. S., M.A.Cantab., L.S.A. Lond., appointed House-Surgeon to the Leeds General Infirmary.

SIMPSON, Geo. Augustus Garry, M.R.C.S.Eng., L.S.A., appointed Medical Officer of Health to the Acton Local Board.

SMITH, P. Caldwell, M.A., M.D., D.P.H.Camb., appointed Medical Officer of Health to the Parish of Wandsworth, *vice* G. E. Nicholas, M.D., deceased.

STEVEN, Mr. Hugh, appointed Medical Officer for the Second District of the Warminster Union.

STONEY, W. M.B.Vict., appointed Resident Medical Officer to the Ida Hospital of the Leeds General Infirmary.

TRUMPER, D. B., M.B.Vict., appointed House-Surgeon to the Leeds General Infirmary.

WALKER, F., M.R.C.S., L.R.C.P., appointed House-Physician to the Leeds General Infirmary.

WASHBOURN, William, M.R.C.S., L.R.C.P., appointed Assistant-Surgeon to the General Infirmary at Gloucester and the Gloucestershire Eye Institution, *vice* J. J. S. Johnstone, M.A., M.D., resigned.

WESTLAKE, Algernon, M.B., C.M.Edin., appointed Medical Officer of the Workhouse of the Grimsby Union.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. A. Stanford Morton: Ocular Injuries. Bacteriological Laboratory, King's College, W.C., 3 to 5 P.M.—Lecture: Typhoid Fever and Diphtheria. Practical Work: Staining Sections and Cultivations. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Whistler: Tuberculosis of Pharynx and Larynx.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Clinical evening. Mr. Harrison Cripps: Successful case of Anastomosis of the Small Intestine. Mr. Goodsall: Case of Opening the Cæcum for Intestinal Obstruction caused by Cancer. Dr. F. de Havilland Hall: Case of Late Inherited Syphilis. Mr. H. H. Clutton: Case of Dislocation of Head of Humerus, with Fracture at the Surgical Neck; Operation. Mr. Astley Bloxam: (1) Portions of Calculus removed by Lumbar Incision; (2) Aneurysm of Popliteal. Mr. Spencer Watson: Case of Enlarged Turbinals associated with Nasal Polypi. Mr. E. Hurry Fenwick: An unusual case of Villous of the Bladder. Dr. A. E. Garrod: A Cretin under Thyroid Treatment. Dr. Morgan Dockrell: (1) Adenoma Sebaceum; (2) Mycosis Fungoides improving from the use of Resorcin. Dr. Herbert Snow: Removal of Large Facial Epithelioma.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Hyslop: Impulsive Insanity; Homicidal Insanity; Moral Insanity.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Dr. J. J. Pringle: A case of Actinomycosis Extensively Involving the Skin. Mr. E. Squire: The Influence of Heredity in Phthisis.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. T. D. Acland: Cases in the Wards. Royal London Ophthalmic Hospital, 8 P.M.—Mr. A. Quarry Silcock: Glaucoma, with Illustrative Cases.

POST-GRADUATE COURSE, WEST LONDON HOSPITAL, Hammersmith Road, W., 5 P.M.—Dr. Ball: Throat and Nose Cases.

LARYNGOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, 5 P.M.—Cases and specimens will be exhibited by Mr. Anthony A. Bowlby, Dr. A. Bronner, Dr. James Donelan, Dr. Dundas Grant, Dr. P. de Santi, Mr. Walter G. Spencer, Dr. Scanes Spicer, Mr. W. R. H. Stewart, Dr. E. B. Waggett, Mr. Walsham, and Dr. W. McNeill Whistler.

HUNTERIAN SOCIETY, 8.30 P.M.—Clinical Evening. The President: (1) Fracture of Patella nine months after Suture; (2) Gastro-Enterostomy five months after Operation. Mr. Campbell M'Donnell: Locomotor Ataxy without Ataxic Symptoms. Dr. Fred. J. Smith: Syphilitic Disease of Spinal Cord. Dr. Arthur Davies: Raynaud's Disease (?). Mr. Hope Grant Giant Toes. And other cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, 3 P.M.—Lecture by Dr. Beevor.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Dr. Taylor: Hemiplegia. Hospital for Sick Children, Great Ormond Street, 3.30 P.M., Mr. C. A. Ballance: Clinical Lecture. Central London Sick Asylum, Cleveland Street, W., 5.30 P.M.—Mr. A. Pearce Gould: The Arrest of Hæmorrhage.

THE SANITARY INSTITUTE, Parkes Museum, Margaret Street, W., 8 P.M.—Dr. T. Eustace Hill: Workers in Mercury, Phosphorus, and Sulphur.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND, Chandos Street, W., 4 P.M.—Dr. Goodall and Dr. Bullen: Intercurrent Diseases and Insanity. Dr. Campbell: The Breaking Strain of the Ribs in the Insane; an Analysis of Fifty-Eight Cases treated with an Instrument specially devised by Dr. Mercier. Dr. Neil: Three cases of Recovery from Melancholia after unusually long periods. Council meeting at 2.30 P.M.

SOCIETY OF ANÆSTHETISTS, 20, Hanover Square, 8.30 P.M.—Opening Address by the President (Mr. F. Woodhouse Braine).

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Mr. A. Pearce Gould: Some cases of Suture of the Urethra after Rupture and External Urethrotomy.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. Percy Kidd: Cases of Laryngeal Tuberculosis.

EPIDEMIOLOGICAL SOCIETY OF LONDON, 8 P.M.—Inaugural Address by the President (Mr. Shirley Murphy) on the Study of Epidemiology.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 8.15 P.M.—Adjourned discussion on Diphtheria.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 11 A.M.—Dr. Craig: General Paralysis.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

EVANS.—On November 6th, at 6, Windsor Esplanade, Cardiff, the wife of of Percy Evans, M.D., of a son.

FOWLER.—At Loirston, Kincardineshire, N.B., on October 31st, the wife Surgeon-Captain J. F. S. Fowler, A.M.S., of a daughter.

MARRIAGES.

ALDERSON—HAINES.—On October 31st, at St. Stephen's, Ealing, by the Rev. Canon Morris, D.D., Chaplain to the Duke of Westminster, K.G., assisted by the Rev. George Miller, M.A., Vicar of Holy Trinity, Westminster, and the Rev. Seymour Tupholme, Vicar, Frederick Herbert Alderson, M.B., L.R.C.P., M.R.C.S., of 32, West Kensington Gardens, eldest son of Frederick Henry Alderson, M.D., Southerton House, Hammersmith, to Laura, only child of the late George Haines, Esq., Courtlands, Castlebar, Ealing.

GILLESPIE—CUNYNGHAME.—At St. John's Episcopal Church, Edinburgh, on Thursday, November 1st, by the Rev. G. J. Cowley-Brown, M.A., assisted by the Rev. E. C. Dawson, M.A., Alexander Lockhart Gillespie, M.D., F.R.C.P.E., to Mabel Margaret Blair, elder daughter of R. J. Blair Cunyghame, M.D., of Cronan and 18, Rothesay Place, Edinburgh.

MCKIE—BROWN.—At Dee Cottage, Tongland, Kirkcudbrightshire, on Monday, November 5th, Norman James McKie, M.D., Newton Stewart, N.B., to Grace, youngest daughter of the late Alexander Brown. No cards.

MOWAT—JACKSON.—At the Clarendon Hotel, Princes Street, Edinburgh, on October 31st, by the Rev. William Mowat, M.A., Galashiels, brother of the bridegroom, assisted by the Rev. Thomas Kennedy, D.D., Edinburgh, ex-Moderator of the United Presbyterian Synod, Daniel Mowat, M.D., London, to Miriam, youngest daughter of the late Edward Jackson, of Cheshunt.

PARRY—COLE.—On November 5th, at St. Stephen's Church, Ealing, by the Rev. B. Seymour Tupholme, D.D., Thomas Wilson Parry, M.A., M.B. Cantab., of Youlgreave, Derbyshire, second son of the late Joseph Chatwin Parry, of Delhi, to Sophie Minnie Amelia, eldest daughter of Robert Capon Cole, of Ealing.

WOOD—LYON-CAMPBELL.—On October 31st, at St. Matthew's, Thorpe Hamlet, Norwich, by the Rev. J. H. Rogers, Vicar, Hubert Moody Wood, Esq., L.R.C.P., M.R.C.S., third son of Louis H. Wood, Esq., of Dulwich, to Louisa (Lola), elder daughter of Colonel C. A. Lyon-Campbell, late Royal Engineers.

DEATHS.

HARGREAVES.—On October 26th, at his residence, Wellgarth House, Armley, Leeds, James Bourne Hargreaves, F.R.C.S.Edin., L.R.C.P. Edin.&L.M., L.F.P.S.Glas.&L.M., also Medical Officer of Her Majesty's Prison, Leeds, aged 46.

LOWE.—At 28, Hartington Place, Edinburgh, on November 2nd, Margaret Macdonald Pennefather, the dearly loved mother of G. T. de Clive Lowe, L.R.C.P., L.R.C.S., Edinburgh, L.F.P.S.Glasg.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A MEMBER asks for advice in the treatment of the case of a young lady whose hair is rapidly becoming grey. She is otherwise in good health.

GENERAL PRACTITIONER writes: Would any of your readers tell me about what would be the cost of a winter's residence at Mentone; I mean to a patient of moderate means?

M.D. asks for information and guidance as to the best examples of recently-built small general hospitals that would serve as patterns for the rebuilding of a provincial hospital of about 100 beds; also information as to the best examples of out-patient departments.

MR. H. W. HAYDON, L.R.C.P., etc. (Wadebridge, Cornwall), writes: What is the best material for arm and leg baths to be constructed of, so that they may be used with solutions of corrosive sublimate?

LATE PREGNANCY.

W. P., M.B., asks what is the latest age at which a woman can bear a child; also if pregnancy can occur after the cessation of menstruation.

*** The latest age authenticated by good evidence is 54. Pregnancy is possible although menstruation seems to have ceased.

PHRENOLOGY.

PROVINCIAL MEMBER asks to be recommended a treatise or treatises criticising phrenology, and where they would be procurable; also a popular book on phrenology.

PARADOXICAL CONTRACTION OF MUSCLES UNDER INDUCTION COIL STIMULATION.

A CORRESPONDENT wishes to know why electrical stimulation of the extensor muscles of a limb sometimes produces a movement of contraction in the flexors and *vice versâ*.

*** This is most commonly seen when there is diminution or loss of irritability in the muscles to which the stimulus is applied. Under these circumstances the electrical current, though insufficient to evoke contractions in the affected muscles, may yet excite the contraction of other muscles in their neighbourhood. Diffusion of current always occurs through the muscles of the limb to which the electrode is applied, and the smaller current, reaching remoter muscles, may excite a greater effect in them than the larger fraction of current is able to do in the muscles which, though nearer the electrode, are less susceptible to the form of stimulation applied. This applies equally in testing the nerve trunks of a limb.

THE WEIR-MITCHELL TREATMENT.

F. M. R. writes: Could you inform me if there is any institution where the "Weir-Mitchell" treatment for hysteria is, or can be, thoroughly carried out for patients of the poorer classes, who cannot afford to pay the fees necessary for its being carried out privately? If you know of any such place, I shall be much obliged if you would give me the address of the person to whom to write for further particulars.

*** We are acquainted with no institution of the kind. The amount of personal attention required for many weeks in order to secure a satisfactory result makes it impracticable for the poor. The minimum cost for an adequate course is about £100. The isolated maintenance, feeding, skilled rubbing, and medical supervision will be easily computed to approximate that sum in the course of two months. Imperfectly carried out it is generally useless. Regret that the cost should make it impracticable for the poor may, however, be lessened by the circumstance that, for them, ordinary hospital treatment is very often successful. The physical elements of the treatment are, of course, available at any institution. That in which it is distinctive is the combination, with those of moral influences, for which isolation affords a peculiar opportunity. The special need for this is rare in the poor, and generally occurs in those who can afford it, as with most systems of treatment that have a special name, the designation carries with it much misconception.

INCOME TAX ASSESSMENT.

M.D. writes: With reference to my letter of October 8th on the above question I would be thankful for further information, and a general expression as to the legitimate claims for the working of a profession in a city which necessarily requires a horse, etc. This is the only claim in dispute, and involves a principle. Chapman, in his book on *Income Tax*, says "the medical profession are as a rule over assessed," but makes no mention of the sums which a doctor should claim, and if not allowed by the Income Tax Commissioners should look for. When the Commissioners are convinced of the honesty of making any kind of concession, is there any reason why they cannot be compelled to allow such sums as would meet inevitable claims? It is obvious that an allowance of £60 a year for the keep of man and horse is wholly inadequate: this sum only pays for the man and his clothes. I always heard that doctors in London and Dublin and other large towns pay £200 a year for the use of brougham, man, and horse. My claim for these, together with wear and tear, office, and payment of substitute was only £180. Is this sum a just and legitimate claim?

*** We have referred this letter to the Income Tax Repayment Agency, of 6, Chichester Road, Paddington, London, W. The following is an extract from Mr. Chapman's letter to us:

"The Commissioners have no right whatever to reduce any expenses that have been wholly and necessarily incurred in the exercise of a profession. The words of the Act are very clear, and such expenses are to be deducted in full from the profits. Unfortunately, the powers arrogated to themselves by the Commissioners are practically unlimited, and the only possible appeal against an unjust decision is on a point of law. This involves the statement of a case for a decision from the High Court of Queen's Bench, which is extremely costly and out of all proportion to the relief which would be obtained by any individual appellant. Thus it might cost £100 to obtain relief of £2 or £3. The only thing that we can recommend is to appeal again at the end of the year of assessment, producing, if possible, the receipts to prove that the expense has been incurred. In such a case as that mentioned we should be happy to assist any of your readers who consider themselves aggrieved by the decision of the General Commissioners."

ANSWERS.

J. B. L.—We cannot undertake to adjudge the merits of the several diplomas in question.

A. D. P.—We are informed that the Hermite system for the electrical treatment of sewage is now being tried at Ipswich.

H.S.—We must ask our correspondent (1) to verify his communication by his name, not necessarily for publication; and (2) to send specimens of the handbills.

ENQUIRER.—At the ambulance classes, which it is proposed to hold, are to be given in connection with the St. John Ambulance Association, it would be well to follow the course laid down in the manuals written by Dr. Shepherd, and published by the Ambulance Department of the Order of St. John of Jerusalem in England.

HIP-JOINT DISEASE.

E. writes, in reply to "Enquirer": An old hip case of mine with considerable shortening, came to me wearing O'Connor's apparatus, with which he was much pleased. It was not at all unsightly, or indeed noticeable, and as far as I saw very satisfactory.

UMBILICAL WART.

W. F. writes: Such is the heading of the inquiry, but "some protrusion" may mean something else. After twenty years' practice I saw my first case of a moist red papillary growth quickly sprouting from the umbilical pits, about three weeks after birth. I tightened a piece of silkworm gut round it, and next day it had dried up and tumbled off. In a few weeks I saw my second case. The "wart" was much smaller. I prescribed a tannin dusting powder, and when I went to ligature it in a week or so it was gone.

SWELLING OF EXTERNAL GENITALS IN PREGNANCY.

DR. WM. MCDONALD (Burgh House, Marghill) writes to suggest that the patient whose case was described by M.B.M.Asson. in the BRITISH MEDICAL JOURNAL of October 13th, p. 850, was probably suffering from thrombus. He recommends that the abdomen should be supported without compression, that the patient should recline with the hips raised, and that a saline purgative, say Rochelle salt, every second day; 2 grains of nit. pot. in a glass of tepid water should be given three times daily.

LIFE ASSURANCE FEES.

J. D. L.—The question of the fees to be paid for a medical examination for the purposes of an insurance company is one of considerable importance, as our correspondent remarks. We understand that the matter will shortly be brought under discussion at the Life Assurance

Medical Officers' Association, and in the present crowded state of our columns we think it will be preferable to postpone any discussion in them until after the opinion of the chief medical officers of the companies has been ascertained by the discussion before the society.

THE POLLOCK AND BELLAMY MEMORIAL.

"DISGUSTED" seems to have assumed that *nom de plume* without sufficient grounds. If he will turn to page 1,159 of the BRITISH MEDICAL JOURNAL for 1891, Vol. i, he will find that a meeting of the subscribers was held, and that certain resolutions were arrived at, and a small executive committee appointed to carry those decisions into effect. That committee were not in any way asked to refer to or to report to the general body of subscribers. If "Disgusted" had taken the trouble to revisit his old school, he would have seen some of the results of the work of that committee in the shape of a large number of Hills models, a large model of the ear, two fine skeletons (male and female), a skeleton to show the mode of ossification, etc., and other preparations. A large number of disarticulated bones have been purchased to be marked and mounted, and with these progress has no doubt been slow; workers with the requisite knowledge and skill have been few; still some progress has been made. The committee still have some money in hand, not because there would be any difficulty in spending it, but because they are determined to proceed with caution and deliberation, and lay out the money to the best possible advantage.

NOTES, LETTERS, Etc.

A WARNING.

A VICTIM desires to warn medical men against a young man, giving the name of Ernest Johnson, who offers to collect old debts for medical men as the manager of a firm having offices in Sunderland, Shields, and Newcastle. He is described as about 32 years of age, fair complexion, light moustache, and stands about 5 feet 7 inches. He speaks with a slight Northumbrian accent. He rides a bicycle, and is often dressed in knickerbocker trousers. Our correspondent suggests that any person on whom he calls should ask him to call again, and in the meantime communicate with the police at South Shields.

"THE FEEDING OF INFANTS."

SEVERAL correspondents have called attention to an obvious clerical error, by which, in an article on the Feeding of Children, published in the BRITISH MEDICAL JOURNAL of September 22nd, p. 664, we were made to speak of "starch" as a natural food of infants. The word "starch" ought, of course, as is sufficiently clear from the context, to have been printed "milk."

EPIDEMIC SKIN DISEASE AND THE LAY PRESS.

DR. THOMAS D. SAVILL (Upper Berkeley Street, W.) writes: When I wrote you on October 13th disclaiming any connection with an article which appeared in the *Pall Mall Gazette* of October 11th, containing a *précis* of my monograph on epidemic skin disease, I stated my belief that it would hardly be necessary to trouble you to publish my letter, as it seemed to me sufficiently obvious to anyone who read it closely that I could not be held in any way responsible for that article.

Subsequent events have shown me, however, that a public disavowal is desirable; and I should esteem it a favour if you could find a place for this in your columns. Enclosed I beg to forward for your perusal a letter addressed to me by the assistant editor of the *Pall Mall Gazette*, stating "that the article in the *Pall Mall Gazette* of October 11th, on the 'New Skin Disease,' was not published at your instigation or suggestion, and, so far as I know, you read it, like the rest of the world, first in our columns. The writer was never in communication with you, and was, and is still, unknown to you." The article was published entirely without my knowledge, consent, or approval.

ON THE TREATMENT OF CANCER BY INJECTIONS OF IODINE AND CARBOLIC ACID.

SURGEON-LIEUTENANT-COLONEL T. ROBINSON, I.M.S. (Chiswick), writes: In the BRITISH MEDICAL JOURNAL of July 16th, 1892, I published the result of treatment of two cases of cancer, and a hope was expressed that the treatment, which was described, might be tried by someone who had more opportunity of seeing such cases than fell to my lot. [The treatment in both the cases related consisted of injection of a saturated solution of iodine in commercial carbolic acid; the syringe was charged with m 20, the needle introduced at the margin in any direction towards the middle of the mass, two or three drops pressed out, then partially withdrawn, sent in another direction, a few more drops ejected from the syringe, and so on till the whole tumour had been got inside the cancer. Surgeon-Lieutenant-Colonel Robinson recommended that the injection should be made every day in large epithelomata, every second day in small ones. Sometimes the point of the needle was found to get into a fissure, and the black strong fluid appeared on the surface, where, if it did little good, it did no harm. The syringe and the fluid should be warmed before use, otherwise the needle becomes clogged. The idea underlying the treatment is this: wherever the blood can go in epithelioma, and that is to every part, this fluid can go too.] Since then I have had one case (epithelioma of lip), which under the same treatment is now practically cured. The patient (a peasant woman otherwise healthy, aged about 60, widow of a man who died of cancer of the upper jaw) first noticed her ailment about March, 1892, but only within the present year did it grow rapidly. The treatment began on July 25th, the epithelioma being the size of a half-crown piece, and was continued with only one day's intermission until August 9th. The amount injected was m 87, and afterwards m 11. But it is doubtful whether any specificity remained after August 9th. The treatment is rather long (including the after-treatment), but it seems to be effectual.

INDEPENDENT ORDER OF FORESTERS INSURANCE SOCIETY.

MEDICUS writes: You have stated in the columns of the BRITISH MEDICAL JOURNAL that the Independent Order of Foresters Insurance Society is not to be recommended to assurers. May I mention a very good reason why medical men should not accept the position of medical referees to it? Because the fees are so inadequate. I have noticed that the gentlemen who have accepted the post named are called "High Physicians," which is certainly an ironical term, as the fees they are entitled to are undoubtedly low. A fee of 5s. is paid to the High Physician for the examination of a candidate insuring for £100, 7s. 6d. for £200, and 10s. for £300. Perhaps I ought to mention that the physicians' names are duly advertised in circulars which are distributed from door to door.

*** The fees quoted are very considerably below the average usually paid for such examinations. The term "High" Physician may possibly be ironical, as suggested. It is difficult to see what material advantage would be likely to accrue from such an appointment beyond the advertisement alluded to by our correspondent. It need hardly be said that advantage gained in this way is altogether to be reprobated.

GAS COOKING STOVES.

PENSIONER, M.D., writes: In common with a great many other members, I read with much interest the series of articles which appeared in the BRITISH MEDICAL JOURNAL some months ago on Gas Stoves and Grates. I am now thinking of putting a gas cooking range into a rather small kitchen, which has to provide for a family of eight. I also wish to put a grate into a dining room 18 feet by 18 feet, and also into one or two medium-sized bedrooms. I have no doubt that numberless stoves have been ordered as the outcome of your recommendation. Some member may be able to tell me what apparatus are best suited to my several requirements. I live in rather an outlandish spot, where possibly the prejudice of servants against such innovations may be hard to overcome. I should be glad to learn how gas ranges are received by cooks, and whether the cooking is satisfactorily effected by them; also if the wear and tear of the apparatus are, or are not, greater than in ordinary ranges. Is economy a result, or otherwise?

I am also putting gas brackets into my rooms. Hitherto I have used mineral oil. Can any member kindly inform me if the "Welsbach Patents" fulfil their promises, or if any other sort is more likely to give satisfaction?

OIL STOVES.

DR. MAURICE G. EVANS (Caerphilly) writes: In reply to G.W.A. I would recommend one of Rippingille's oil stoves as the best for heating purposes. I have used one in my bedroom for the three winters and if, as you say, they are properly attended to and good oil used there is no smell whatever. But the question is who will do so? Unless, as our old friend *Punch* says, "If you want a thing done you must do it yourself." Such is my experience. The stove I use, a small one, is named the Early Bird. I have two in use, one for my consulting room.

*** This is a matter of considerable practical importance to dwellers in the country and to those who require a certain degree of warmth in places where no chimneys are available to carry off the products of combustion. The problem how to make a stove that shall not require a flue is one that has occupied the minds of many inventors, and, although it is easy to say that so long as carbonic acid is one of the products of combustion the thing is impossible, there is a good deal of experience to show that a considerable degree of heat may be safely obtained from the combustion of hydrocarbons without any other flue or outlet than is required for the removal of the products of respiration of those who dwell in the room. We do not think that the experience has yet been accumulated which would enable us to speak positively as to the innocuousness of a considerable admixture of carbonic acid with the air we breathe, but the knowledge that in hundreds of cases, as in the personal instance described by Dr. Evans, oil stoves are used for warming living rooms and even bedrooms without apparent injury to the occupants, and that in the days of early history and even of recent history in many parts chimneys were unknown, makes one feel fairly confident that the products of the complete combustion of hydrocarbons are not injurious when mixed with such an amount of air as is sufficient to dilute to a proper degree the exhalations of respiration.

In examining the air of living rooms we are accustomed to regard anything over 0.6 of carbonic acid per mille as indicating concomitant and injurious organic impurity, but that is only on the assumption that the carbonic acid is the product of animal respiration. It is the organic substances poured out by the organism which do the harm, not the carbonic acid, which is "the harmless index" (Whitelegge) of their presence; hence the dictum that the amount of carbonic acid allowable in the air of rooms should not exceed 0.6 per mille does not apply to cases in which it is formed by lamps and stoves. Unfortunately we have no very complete data as to the proportion of pure carbonic acid which it is safe to breathe for long periods, but the probabilities are that danger does not arise until a far larger proportion is reached than would be produced by an oil stove warming a room in which there is sufficient ventilation to keep it sweet even if no stove were present.

A series of articles appeared in the *Plumber and Decorator* some time ago by Mr. E. J. Smith on Gas Stoves and Ventilation, which showed, as the result of practical experience, that in the use of what are called condensing gas stoves, so long as the recognised standard of 3,000 cubic feet of fresh air per head per hour was supplied, the carbonic acid produced by the stove might be entirely neglected. The author of the

paper had fitted certain rooms in his house with condensing stoves. the gas being supplied through mercurial regulators. The stoves were found to be capable of maintaining the temperature within the rooms 2° F. above that of the outside air. The result of his observations was that if the room were properly ventilated as regarded its inhabitants, the carbonic acid produced by the stove, and remaining in the room, would be utterly insignificant.

If a stove burning gas will give these results, it appears to follow that one burning oil would do the same. The two points to be attended to in the safe burning of either oil or gas are (1) that the combustion shall be complete, producing neither carbonic oxide nor acrid compounds: (2) that the ventilation of the room shall be sufficient. The author of the paper referred to states that in actual practice during winter months the temperature is maintained at 58° F., while the window is always kept open; and, as he justly enough says, he gets the benefit of this ventilation, whereas "thousands of persons spend eight or nine hours every night in winter in rooms from which they exclude every possible ingress of air, windows closed and sandbags over the joints, blinds down and thick curtains drawn, the grate register closed, and india-rubber edging nailed round the door." He also says: "I have three of these stoves burning continuously (in the winter) day and night, one being in my bedroom, and, though somewhat of an invalid, my breathing apparatus being out of order, I have never experienced the slightest sense of oppression or discomfort, but have found them in practice a great comfort and convenience. I have, moreover, been able to keep my windows more or less open all the winter, and have thus breathed a purer air, notwithstanding the carbonic acid, than I should have done without the stoves."

Of course oil stoves are also made on the condensing principle, but this is a refinement. The products of the combustion of gas are condensed chiefly for the sake of getting rid of the sulphur, which is but a small item in the better classes of oil. The great thing in an oil stove is first to ensure that the combustion is perfect, and next to take care that the heated products do not rise straightways to the ceiling. A diffuser or radiator, something which will absorb the heat from the products and diffuse it by radiation through the room, is essential for the economic use of oil as a heating agent. It is much to be desired that facts should be collected with the view of determining how far, when burned in this way, and with ventilation sufficient to remove the respiratory products of the inhabitants, oil may be safely used for heating purposes.

TREATMENT OF RECTAL GONORRHŒA OF FEMALES.

MR. SPENCER S. DUNN (Sheffield) writes: T. H., a young woman of 25, single, and of loose habits, came to me early this year suffering from acute purulent vaginitis following coitus about four or five days previously, and also with some severe symptoms referable to the rectum, very acute and prolonged pain, and heaviness in the rectum, increased on making water or going to stool. The genitals were much swollen, the mucous membrane deep red, and in parts excoriated. Here and there it was studded with granular prominences, and a thick, creamy, purulent discharge was present in great amount; this discharge was more plentiful surrounding the cervix. The usual symptoms of scalding and smarting on passing urine, itching of the parts, and pains in the lumbar region were also present. Examination *per rectum* was made both by finger and speculum. The mucous membrane was thickened and inflamed, and from the anus came a thick creamy discharge. Although both rectal examinations were made with care and gentleness, they caused the patient to scream. About half an inch from the anus the rectum was somewhat constricted, but no ulcerated sores were detected. Fæces were voided in hard lumps with much pain and straining. The rectal troubles were attributed to the presence of the gonorrhœal discharge from the vagina. The patient was kept warm in bed, the vagina was thoroughly washed out with a quart of tepid water three times a day, after which I drachm of sulphate of zinc to a pint of hot water was injected slowly into the vagina by the douche. The rectum was gently irrigated by hot water twice day, a sitz bath ordered at first, and the rectum emptied with an enema of hot water with ʒiij olive oil. The following injection was administered twice a-day, 3ss being used: ℞ Zinci permangan., gr. x; glycerini, ʒj; aq. rosæ ad, ℥iv. To relieve the pain a suppository containing morphine and belladonna was given every night. At the end of a week the pain in the rectum had gone, and on the fourteenth day the purulent discharge had ceased from both rectum and vagina. From the characteristic discharge from the anus and the presence of a gonorrhœa, I am of the opinion that a gonorrhœa also existed in the rectum.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) Mr. C. L. Anderson, Liverpool; Mrs. E. G. Anderson, London; Associate; Professor T. C. Allbutt, Cambridge; Mr. M. Andrews, London. **(B)** F. Browne, M.B., Leeds; Dr. M. Beale, London; Dr. J. W. Barkwell, London; J. W. Batterham, M.B., St. Leonard's-on-Sea; Mr. W. Berry, Wigan; Mr. F. B. J. Baldwin, Rotherham; Mr. F. W. Braine, London; Mr. R. T. Beale, London; Dr. J. Brown, Bacup; Dr. C. E. Beevor, London; Mr. L. A. Bidwell, London; Mr. T. Blair, Leeds; Mr. W. L'H. Blenkarne, Leicester; Mr. W. Bentley, Lancaster; Mr. E. Bellis, London. **(C)** Mr. C. A. L. Campbell, Norwich; Mr. E. C. Cripps, Cirencester; Mr. J. G. Clendinnen, Coseley; Mr. F. A. Cates, London; Mr. F. Chambers, Bombay; Mr. H. Cart, London; Dr. E. Clarke, London; C. S. W.; Mr. A. A. Carr, Cannes; Mr. E. Crockett, Fleetwood; Dr. R. W. D. M. Cameron, Ardrishaig. **(D)** Mr. Q. R. Darling, Eardisley; Mr. E. G. Doyle, Trinidad; Mr. A. C. Dorin, London; L. Drage, M.B., Hatfield; Dr. E. Deansley, Wolverhampton; Dr. T. Dilworth, Fermoy; Mr. G. H. De'Ath, Buckingham. **(E)** W. Edmunds, M.B., London; Ethics; Dr. E. J. Edwardes, London. **(F)** Mr. J. H. Fowler, Aberdeen; Mr. C. E. S. Flemming, Freshford; Mr. J. M. Fox, Lymm. **(G)** General Practitioner; Mr. E. C. Greenwood, London; Messrs. C. Griffin and Co., London; Mr. W. Gedney, Blackpool; Dr. W. Graham, Middleton; Mr. G. R. Gaskill, London; W. Grant, M.B., Treherbert. **(H)** Mr. H. W. Haydon, Wadebridge; Mr. J. A. Hicks, Bexhill-on-Sea; Mr. F. H. E. Hutchinson, Cheltenham; Dr. H. Holmes, Whitefield; F. Harris, M.B., London; Dr. J. G. Houseman, Houghton-le-Spring; Mr. T. A. J. Howell, London. **(I)** Mr. R. N. Ingle, Taunton. **(J)** Dr. R. Jardine, Glasgow. **(K)** Mr. N. Kothe, Friedrichroda; Mr. H. W. Kendall, London; Mr. S. Karger, Berlin; Mr. W. J. Keir, Melksham. **(L)** Dr. A. Legat, South Shields; Mr. W. Lees, Chester; Mr. R. R. Leeper, Rathdrum; Mr. H. C. Linden, Basingstoke; Mr. R. Lake, London; T. D. Luke, M.B., Prestonpans; R. C. Lees, M.B., Glasgow; L.R.C.P., L.R.C.S.Edin. **(M)** Mr. W. L. Morgan, Oxford; Mr. E. W. Moir, London; Mr. J. Meredith, Northampton; Metropolitan Counties Branch of the B. M. A., the Secretary of, London; M.D.; M. N. Q.; Mr. T. Maltby, London; Dr. P. H. Murray, Beckenham; Dr. J. W. Martin, Sheffield; Member; Mr. H. G. Myles, Mullingar; W. S. Melsome, M.B., Cambridge; Dr. H. Malet, Wolverhampton; Dr. C. M. Mitchell, Nelson-in-Marsden; T. E. Mitchell, M.B., Old Hill; G. H. Mapleton, M.B., St. Kitts, W. I. **(N)** Mr. W. G. Nash, Bedford. **(P)** Prosperity; Mr. H. P. Pike, Gloucester; Mr. F. W. Pilkington, Adlington; Mr. W. R. Parry-Jones, Wrexham; Perplexed; Mr. A. J. Philipson, Newcastle-on-Tyne; Mr. J. R. Polson, Worcester; Pensioner, M.D.; Dr. C. Porter, Stockport; Mr. J. A. Phillips, Cardiff; Provincial Member. **(Q)** Mr. S. M. Quennell, London. **(R)** Dr. H. B. Robinson, London; Mr. J. Robertson, Edinburgh; Mr. H. E. Rayner, London; Mr. H. M. Rainsford, London; Royal Microscopical Society, the Secretary, London of; Royal College of Surgeons in Ireland, the Secretary of, Dublin; Dr. A. Ransome, Manchester; Mr. A. Ravenhill, London; Mr. C. Ruata, Perugia; Dr. H. Rayner, London; Mr. J. R. Richmond, Overton. **(S)** Mr. G. A. G. Simpson, London; Mr. R. H. Shaw, Stockport: Dr. J. B. Simpson, Golspie; Dr. W. T. Stoker, Dublin; Dr. H. Snow, London; Mr. P. C. Smith, London; Messrs. Street, Bros., London; Dr. L. G. Smith, Tottenham; K. Scott, M.B., Cairo; Mr. C. H. Shears, Liverpool; Dr. C. S. Sherrington, London; Mr. W. S. Symes, Gamlingay; Dr. S. Spicer, London; Mr. J. W. Smith, Kilmarnock; Mr. A. J. Schneider, London. **(T)** Mr. H. Tomlinson, Edgbaston; Mr. S. Tidey, Florence; Mr. N. Tarachand, Mansfield; Mr. J. P. Tildesley, Willenhall. **(U)** University College Hospital, the Secretary of, London; Dr. A. R. Urquhart, Perth. **(V)** Mr. H. B. Vincent, Dereham. **(W)** Dr. H. Worthington, Middleton; Mr. R. H. Wolstenholme, Salford; Dr. W. Woodward, Plymouth; W. F.; Dr. J. H. Walker, Edinburgh; Mr. W. O'B. White, Tralee; H. Watthews, M.B., Holmfirth; G. E. Williamson, M.B., Newcastle-on-Tyne **(X)** X. Y. Z.; etc.

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***** In forwarding books the publishers are requested to state the selling prices.**

SIXTY-SECOND ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION,
Held in BRISTOL July 31st, and August 1st, 2nd, 3rd

PROCEEDINGS OF SECTIONS.

SECTION OF MEDICINE.

FREDERICK T. ROBERTS, M.D.Lond., F.R.C.P., President.

A DISCUSSION ON PYREXIA AND ITS TREATMENT.

I.—W. HALE WHITE, M.D., F.R.C.P.,
Physician to and Lecturer on Pharmacology and Therapeutics at Guy's Hospital.

AN animal is said to be suffering from pyrexia when its temperature exceeds the highest point of its healthy range. The healthy range of adult warm-blooded animals is small, in man between 98° and 99°; that of cold-blooded animals is large. One of the most remarkable facts in natural history is the evolution of warm-blooded animals from cold-blooded and I have elsewhere[1] tried to show that this is probably due to the fact that the latter are primarily aquatic and the former primarily terrestrial.

MECHANISM BY WHICH THE TEMPERATURE OF THE BODY IS MAINTAINED CONSTANT.

1. *Seat of Production of Heat.*—The chief seat of heat producing katabolic processes is the muscles, and Lukjanow,[2] Mosso,[3] and MacAlister[4] have shown that probably the thermogenetic function is distinct from the motor function of muscle. In some animals an enormous quantity of heat must be produced in the muscles: for instance, the temperature of the Arctic fox may be 107° when that of the air is 31°, and dogs can sleep on ice to which they freeze.[5]

2. *Control of the Production of Heat.*—Rohrig and Zuntz[6] and Reichert[7] have shown that curare in large doses stops thermogenesis, because, by its action on nerve endings in muscles, it prevents impulses from arriving at them. Among 27 experiments I made,[8,9] in all of which the corpus striatum was damaged, in 7 the temperature rose to 106° or over; in all the remainder there was a considerable rise, often over 105°. Reichert[10] has confirmed these results, and the greatness of the rise and the few calorimetrical observations which have been made, point to the fact that the production of heat is increased. Wood,[11] Reichert,[12] and myself[13] have produced pyrexia by lesions of the crura, and it is well known that damage to the pons and upper part of the cord has the same effect. It thus appears that the thermogenetic function of muscle is under the control of the corpus striatum, from which impulses are constantly proceeding by means of the crura, pons, cord, and nerves; whether these impulses are restraining or exciting is not known. The activity of this neuro-muscular thermogenetic apparatus must depend to some extent on the quantity and composition of the blood in it, and thermogenesis can no doubt be reflexly affected by peripheral stimuli.

3. *Seat and Control of the Loss of Heat.*—Most of the loss of heat takes place from the skin by radiation and evaporation. The cutaneous vessels and the sweat glands are controlled by the central nervous system. Some loss takes place from the lungs, the vessels of which Bradford[14] has shown are controlled by nerves. The quality and quantity of the blood and peripheral stimuli will affect thermolysis as they did thermogenesis.

4. *The Regulating Mechanism.*—Some experiments[15] I did show that the specific heat of living tissues is very high. This of course renders the maintenance of an even temperature easier that it would otherwise be. Experimental damage to the cortex is often followed by considerable pyrexia. Some suppose that this is because there are in the cortex thermotaxic centres, the function of which is so to adjust the loss and production of heat that the temperature is always constant. Others do not think it necessary to assume the existence of thermotaxic centres, but believe that the cortex contains either thermogenetic or thermolytic centres in addition to those elsewhere.[16,17]

The high delicacy of adjustment seen in man has been but recently evolved, and, therefore, after exhausting illnesses, or in children,[18,19] it is easily upset, and the temperature often fluctuates considerably.

CALORIMETRY.

The thermometer gives us but a rough idea of the production of heat. Only a calorimeter will do this properly. Drs. Haldane, Washbourn, and myself[20] have described one which we believe to be accurate, and we have given a complete bibliography of the subject.

CLINICAL PYREXIA.

A.—PYREXIA DUE TO DISEASE OR DAMAGE OF THE CENTRAL NERVOUS SYSTEM.

We have seen that experimental damage to the cortex, corpus striatum, crus, pons, and cord produces pyrexia. Let us see if this is true clinically.

(1) *Cortex.*

(a) Traumatic Damage.—Dr. J. H. Bryant[21] has shown that out of 100 cases of hyperpyrexia, in 8 it was due to injury of the cerebral cortex. Usually there was also meningeal hæmorrhage, but in one there was only laceration of the cortex. The temperatures were 109°, 108.4°, 107.8°, 107.4°, 107°, 107°, 107°, and 106.6°. Phelps[22] also gives cases of pyrexia due to damage of the cortex, and the following temperatures due to meningeal hæmorrhage, with consequently a clot pressing on the cortex, are recorded: 108.4°, 107°, 104.8°, 103.6°, 103°, 102°, 102° (Jacobson);[23] 109° 107.2°, 107.2°, 106.2°, 105.2°, 105°, 105°, 105° 104.6°, 102.6° (Battle);[24] 108.7°, 105.8°, 105°, 104.4° (Hulke);[25] 109° (Weisman);[26] 109° (Mansell Moullin);[27] 105.7° (Goodhart);[28] 104.2° (Colby);[29] 102.8° (Golding-Bird);[30] and I have seen a case in which a clot on the surface of the brain, in a case of ruptured cerebral aneurysm, was associated with a temperature of 104.6°. The following temperatures were due to simple laceration of the cortex: 109° (McLaren);[31] 108.4°, 105°, 104.6° (Battle),[32] 104.2° (Hale White).[33] A tumour caused a rise to 101° (Starr).[34] Two very interesting cases are one recorded by Eccles,[35] in which the skull was fractured by a blow on the right parietal bone, and the temperature rose to 107.8°, but was 1.8° higher on the left than on the right side of the body, and one I have recorded[36] in which excision of the cortex in the left Rolandic area led to pyrexia for three days, during which the temperature was about 1° higher in the right axilla than in the left, and this continued even after it became about normal.

(b) Meningitis.—The temperature may be exceptionally high, low, or irregular, as in a case in which in a few hours it varied between 96° and 106°; in two others 106.8°[37] and 108°[38] were attained in spite of antipyretics. No cause for the pyrexia, save the meningitis, could be discovered, and, as we have other evidence that damage to the cortex may lead to pyrexia, it seems probable that sometimes the pyrexia in meningitis may in part be due to interference with the functions of the cortex.

In the following diseases the functions of the cerebral cortex are probably disordered, and therefore it is interesting to observe that sometimes pyrexia may be seen in them.

(c) Epilepsy.—Occasionally, as in a recent case of mine, well-marked pyrexia may be noticed after a fit. Oliver[39] gives an instance in which 109° was reached. Féré[40] mentions a case, and pyrexia is met with in the status epilepticus.

(d) Hysteria.—Michell Clarke,[41] Teale,[42] Jacobi,[43] Barie,[44] J. H. Bryant,[45] Scarbo,[46] Affleck,[47] Boulay,[48] and myself[49] have all described cases and discussed hysterical pyrexia.[50] We ought to be excessively cautious how we make the diagnosis, for it is so easy to overlook enterica, tubercle, or deep-seated suppuration. The following are the chief characteristics of hysterical pyrexia:

1. It occurs most often in women.
2. They are otherwise hysterical.
3. They are of an age at which hysteria is common.
4. The temperature is very erratic, and may attain a great height.

5. It may be different at different parts of the body.
6. The effect of antipyretics is uncertain.
7. The normal ratio of the pulse and respiration to the temperature is often altered.
8. The other symptoms of fever, as rigors, hot skin, and delirium may be absent.
9. Ovarian tenderness is often present.

Paradoxical Pyrexia.—Hysterical pyrexia leads us to what has been called inexplicable, paradoxical, or innominate pyrexia, in which there is absolutely nothing wrong to be discovered except the pyrexia, and there is no reason to suspect hysteria. Cases have been recorded by Dr. Goodhart[51] and myself.[52] Very rarely they may be fatal; for example, a woman was under the care of Dr. F. Taylor for eleven weeks. Her chief symptom was a daily series of rigors. The rises of temperature usually took place with great regularity: thus, for a week the highest point (103°) was reached at noon, and then for a week at 3 P.M.; each day it fell again to normal. She gradually wasted and died. Usually the patient does not seem much worse for the pyrexia. In 1885 two non-fatal cases came into Guy's: a boy who had pyrexia nearly all the time from August 12th to December 5th, and a youth, aged 18, in whom it lasted for a month. The charts may be very varied, but often they show a remarkable regularity of range from normal to a considerable height every day. The most reasonable explanation of these cases is that the pyrexia is due to a loss of the usually accurate balance between the production and loss of heat.

(*e*) *Delirium Tremens.*—Fiüs,[53] among 129 cases, found a rise in 91 per cent. J. H. Bryant[54] gives temperatures of 103°, 107.2°, 106.2°, and I have recorded one[55] of 108°.

(*f*) *Chorea.*—Together with the last-mentioned case will be found one of chorea, under Dr. Taylor, in which 108.4° was reached; and pyrexia in chorea has been mentioned by various writers.

(2) *Corpus Striatum.*

(*a*) *Hæmorrhage.*—So many cases have been referred to by Bourneville,[56] Ferrier,[57] J. H. Bryant,[58] myself,[59] and others,[60 61 62] that it is now known that, unless a large loss of blood keeps the temperature down, hæmorrhage into the corpus striatum causes pyrexia—it may be to 108°. A study of these cases brings out the following facts: (1) If only one corpus striatum is damaged the temperature will be higher in the opposite axilla than on the same side as the lesion. The probable explanation is that the heat fibres decussate, and so the lesion causes an excess of heat to be produced in the muscles on the opposite side. The blood circulating through the muscles is warmed, and thus the temperature of the whole body is raised, but the rise is naturally greatest nearest to the source of increased heat. (2) For the first few hours there may be a fall below normal, owing to the shock and loss of blood, but as the effects of this pass off the rise shows itself. (3) The maximum is usually reached within twenty-four hours. The temperature then slowly falls, the normal point being reached in a few days. (4) After this it usually falls a degree or so below normal, and remains subnormal for a few days before attaining the healthy standard. When it is subnormal it is still a little higher on the side opposite to a unilateral lesion.

(*b*) *Other Damage to the Corpus Striatum.*—A case of softening in which the temperature was 106° has been recorded.[63] Dr. J. H. Bryant mentions one of a cerebral cyst pressing on the corpus striatum in which 107.6° was reached.

(3) *Crura Cerebri.*

Beevor[65] has recorded a case in which 107.4° was reached. A tumour pressed on the right crus.

(4) *Pons and Spinal Cord.*

It is well known that disease of these structures will cause considerable pyrexia.

We learnt, from experimental evidence, that the cerebral cortex, the corpora striata, the crura, the pons and the spinal cord, were the parts of the central nervous system, damage of which would cause pyrexia, and I think we may claim to have shown that the same is also true in clinical medicine. Physicians when thinking of pyrexia hardly appreciate sufficiently the importance of the central nervous system, but Dr. Bryant has shown that out of 100 consecutive cases in which the temperature rose over 106°, 11 were due to injury to the brain, 3 to cerebral tumour or hæmorrhage, 6 to injury to the spinal cord, and 1 to myelitis, in all 21 per cent., and hyperpyrexia occurred in 2.18 per cent. of all cases of fractured skull.

B. Reflex Pyrexia.

It is so well known that processes under the control of a "centre" may be profoundly affected by a strong peripheral stimulus, acting on that centre, that it is worth while to see whether a profound peripheral stimulus ever leads to pyrexia.

Horsley[66] stated that out of 168 cases of simple fracture of bones there was a rise of temperature, sometimes to 101°, in 92 per cent., and Volkmann found a rise in 78.5 per cent., and Angerer in 70 per cent. Here, as there was no external wound, the most likely explanation is that damage to peripheral nerves reflexly leads to pyrexia. In the same way we may explain the pyrexia of biliary colic,[67] that of renal colic, and the slight pyrexia which may be observed during labour. Some authorities regard urethral fever as reflex. J. H. Bryant[68] records six cases of severe burn or scald with temperatures of 109.8°, 108°, 107.2°, 106.4°, 108°, and 106.2°. Five died, and three were examined *post mortem*, and in none was there any other explanation of the pyrexia save the burn. The case that recovered had no bad symptoms; and except that one case had a "pink rash," in none was there any evidence of septic absorption; so that it appears fair to assume that the severe peripheral stimulation due to the burn was, in part at least, responsible for the hyperpyrexia.

Lastly, even when pus is present, the peripheral irritation of the abscess is perhaps to some extent responsible for the pyrexia, because, as a general rule, the more tense the abscess the higher the temperature. For instance, in acute suppurative tonsillitis the pus is very confined, the pain is great, the tonsil is very tense, and the temperature is often very high, yet the illness is not commonly otherwise severe, and the symptoms quickly subside when the abscess bursts. There is, therefore, evidence that sometimes pyrexia in man is due to a peripheral stimulus acting reflexly upon thermogenesis or thermolysis through those parts of the cerebral nervous system that preside over these functions.

C. Pyrexia Produced through the Circulation.

Many substances when absorbed into the blood produce pyrexia by their circulation through the thermic apparatus. Among the vegetable alkaloids we may instance atropine, strychnine,[69] cocaine,[70 71 72] and caffeine.[73 74] The last two are said to increase thermogenesis, as also is pilocarpin,[75] which, however, causes a fall of temperature because of the excessive diaphoresis. Several animal poisons can produce pyrexia—for example, poisoning by mussels,[76] ham[77] (temperature 104°), cheese[78] (temperature 104°), bad meat[79] (temperature 104°), brawn[80] (temperature 103.4°), pork pie,[81] etc. Experimental pyrexia has been caused by the injection of tuberculin, tuberculous sputum,[82] pepsin,[83 84] albumose,[85 86] etc.

We know that weariness[87] is the result of poisoning by the products of metabolism, and excessive metabolism may produce pyrexia. I have seen the temperature raised three degrees after an excessively arduous climb. Vaughan[88] and Novy and Knott[89] have described this fatigue fever.

But by far the most important variety of pyrexia is that caused by the circulation in the blood of the toxins of the micro-organisms of the specific fevers. S. Martin[90] showed that the anthrax bacillus forms a pyrogenous albumose, and an alkaloid which causes coma and œdema. Both he and Petermann[91] obtained with this albumose rises of about 4° F. Martin also isolated pyogenous albumoses in diphtheria and malignant endocarditis; and Sanarelli[92] has caused pyrexia by the injection of the typhoid toxin, and Donath[93] has done some work in the same direction with regard to the products of streptococcus pyogenes, staphylococcus pyogenes aureus, and bacillus pyocyaneus, but he does not appear to have isolated the fever-producing toxins.

Treatment.

A. Hyperpyrexia.

By this term is usually meant such an elevation of temperature that it of itself is probably of danger to the patient. The point of danger varies a little in different persons and different diseases, but for the majority a temperature over

106° is hyperpyrexial. The few cases of extraordinarily high hysterical temperatures are so rare and so little understood that, although often not dangerous, they are for convenience usually considered as hyperpyrexial. Whether we are correct in implying that in hyperpyrexia the temperature of itself is dangerous, or whether it ought to be regarded as merely an indication of danger due to some hidden cause, is an open question. The heat mechanism is so elaborate, and the maintenance of an even temperature demands the expenditure of so much energy that, *a priori*, we should suppose that hyperpyrexia must be a source of great peril, especially as heat kills protoplasm and coagulates albumen. Be this as it may, the physician knows that hyperpyrexia usually means that the end is not far off. J. H. Bryant [74] found that 84 per cent. of all cases of hyperpyrexia died.

In many instances all treatment is hopeless from the first, and in many others the hyperpyrexia is only registered immediately before death, but in all other cases cold must be applied promptly and resolutely. Occasionally in children, in whom the temperature fluctuates easily, cold sponging may suffice. For instance, a child, aged 5, was under my care for pneumonia; the temperature was often between 104° and 105°, and on one occasion 106.4°. Under treatment by cold sponging and ice poultices the patient recovered. But in nearly all cases a cold bath must be employed. For an adult, whose temperature is over 105°, that of the bath should be between 70° and 75°; for children it may be a little higher. The patient should be lifted into it in a sheet. The water should be stirred, and when the rectal temperature is 100° or 101° he should be taken out and put back to bed with a sheet over him. The usual duration of the immersion is ten minutes. If he is collapsed after the bath, hot water bottles and strong brandy and water are necessary. In private practice a cold bath may be improvised by putting a large mackintosh sheet under the patient, banking it up with pillows so that he lies in a trough, raising the head end of the bedstead, and pouring cold water in at the head of the trough, and letting it run out at the foot into a pail. For hyperpyrexia the cold bath, unless the shock of it is too severe, is much more efficacious than the tepid bath gradually cooled. Ziemssen and Immermann [75] give the proportionate efficacy of the cold affusion, a series of four cold packings, the gradually cooled bath, and the cold bath as 1, 2, 3, 4. No dependence can be placed on antipyretic drugs; they act too slowly, in large doses they are direct cardiac poisons, and the more powerful of them break up the red corpuscles. J. H. Bryant found that thirty-three out of fifty-six cases of rheumatic hyperpyrexia treated by the cold bath recovered, but of seven not treated and four treated with antipyretic drugs all died. The report of the Clinical Society [76] also showed that the treatment of rheumatic hyperpyrexia by cold baths is most encouraging.

B. Pyrexia.

We now come to the very important question of the treatment of pyrexia when we cannot remove some obvious cause, as a clot on the brain, and we do not think that it is sufficiently high to, of itself, threaten the death of the patient.

We must remember that it has never been shown that ordinary pyrexia is of itself harmful, and that in treating it we are only treating a symptom, just as we were when antimony and aconite were given to reduce the pulse in fever. Now we believe this treatment to be unwise; and as in any fever we are much in the dark concerning the cause and mode of production of pyrexia, and we do not know for certain whether our treatment diminishes the production or increases the loss of heat, we must admit that the treatment of this single symptom of fever has no *a priori* evidence to show that it too is not unwise. It has been, indeed, thought by some—as, for example, Cantani [77]—that pyrexia is beneficial. He suggests that a moderate degree of it may diminish the virulence of the cause of the fever, aid phagocytosis, and have a kind of sterilising action on the body. He would not, therefore, treat it unless there is reason to think that it is diminishing the activity of the heart or nervous system. Professor Roy, [78] too, brought before us strong reasons for regarding fever as a defensive mechanism, and Sanarelli [79] holds the same view with regard to the pyrexia of typhoid. But even if pyrexia is not beneficial, that is no reason why we should treat it, for it may do neither harm nor good, and the remedy may be worse than the disease.

That this is so will be seen from the following considerations. To begin with, the treatment of single symptoms, although sometimes necessary, should never be resorted to unless the patient will undoubtedly be thereby benefited. It is bad for the state of mind of the doctor, and, therefore, bad in the long run for patients generally. Then mere reduction of pyrexia may give a false sense of security. We have seen that some at least of the specific micro-organisms manufacture two substances, one pyrogenous and the other causing fatal symptoms. By treating the pyrexia this last is still left active, although the patient appears better. We must also remember that by abolishing an important aid to diagnosis, antipyretics do great harm in the early stages of obscure febrile cases. Then, again, lowering the temperature may impair the immunity which a single attack of a specific fever often confers, for we know that the conference of immunity, as by vaccination to protect from small-pox, often entails pyrexia. Another objection to acetanilid, phenazone, and phenacetin, is that large doses are powerful poisons. [103] For all these reasons it appears that the practice of giving antipyretics for ordinary cases of pyrexia is pernicious and unscientific. [104]

As we have not been able to show that pyrexia is necessarily harmful, and, indeed, the treatment of it may do harm, let us examine the diseases for which antipyretics are commonly used.

In ague, quinine does not cure because it is an antipyretic, but because it is a direct poison to the plasmodium on which ague depends. [102]

The cold water treatment of typhoid fever is too wide a subject to discuss fully here. [105] Suffice it to say that if large numbers are taken the mortality is less with this than with the expectant method. [106] but mild cases do not require it; that no point of temperature, fixed for all cases at which to employ it should be chosen, but that each case should be judged upon its merits; that it is rarely required if the temperature is under 103°, or, according to some, 102.5°, and, lastly, the cold bath is usually undesirable as the shock is too great. Cold sponging, the cold pack, the cooled tepid bath, and the tank treatment, [105] have all been employed.

No physician should be slavishly tied to one method: what is appropriate for one case is unsuitable for a patient more severely ill. For many cases frequent sponging with water at 80° suffices. This, too, is usually an appropriate temperature for a macintosh bath lasting fifteen minutes.

I want particularly to direct attention to the fact that it is not proved that it is because it lowers the temperature that this treatment is beneficial. It does more than this: it diminishes the delirium, the tremor, the prostration, and the liability to complications, although the pyrexia is probably not responsible for any of these. Perhaps it acts as Roque and Weil [107] believe. They claim to have shown that "in typhoid fever left to itself the toxic products manufactured by the bacillus and organism are eliminated in part during the illness. The urotoxic coefficient is double the normal, but this elimination is incomplete, and is only completed during convalescence, for the hypertoxicity of the urine continues for four or five weeks after the cessation of the fever. In typhoid fever treated by cold baths the elimination of toxic products is enormous during the illness. The urotoxic coefficient is five or six times the normal. The hypertoxicity diminishes as the general symptoms mend and as the temperature falls, so that when the period of pyrexia and convalescence sets in the elimination of the toxins has ceased."

I maintain, indeed, that we ought not to regard the cold bath, or sponging, as an antipyretic any more than as an antidelirant, but as acting—possibly by aiding the excretion of toxins—as a direct specific for typhoid fever. This explains the fact that it improves not only the temperature, but the patient's whole condition, and diminishes his liability to complications.

The profession is gradually looking with more and more disfavour upon phenazone, acetanilid, and phenacetin in typhoid fever. Nor is this surprising, for not only may they produce cardiac depression and cyanosis, but Roque and Weil believe that they do not accelerate the excretion of toxins.

In rheumatic fever the salicylates probably act not as antipyretics, but as direct specifics; for they are not power-

ful antipyretics, but, nevertheless, they remove the pain and sweating which powerful antipyretics fail to touch.

In pneumonia observations upon the effect of treatment by cold baths have been published by Liebermeister,[107] Gignoux,[108] Fismer,[109] and others, and Goodhart,[110] Lees,[111] and Fenwick[112] have given an account of treatment by the ice poultice. We have not, however, sufficient knowledge to state whether cold reduces the mortality, for cases vary so in intensity, and the general treatment and early recognition of pneumonia have become more skilful. All who claim any good, however, point out that not only is the temperature lowered, but the other symptoms improve, so it is quite likely that if cold is beneficial it acts not solely as an antipyretic, but in the same way as cold baths in typhoid fever. Personally, I have certainly found that an ice poultice often relieves the pain and gives comfort.

Conclusions.

To sum up: Hyperpyrexia should be energetically treated by cold baths. In ordinary pyrexia the routine use of antipyretics is bad. In the cases in which benefit follows coincidently with the reduction of temperature, the means employed has a specific beneficial effect on the particular disease; consequently, the temperature falls at the same time as the other symptoms improve. The means used is only antipyretic in the same sense as mercury is antipyretic in syphilitic fever. Phenazone, acetanilid, and phenacetin should rarely be used as antipyretics.

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II.—James A. Lindsay, M.D.,

Physician to the Belfast Royal Hospital.

Dr. Lindsay said that he had seen several cases of hyperpyrexia in nervous diseases, especially in chorea and paraplegia. The mortality in such cases was very high. He thought the treatment of pyrexia was greatly embarrassed by the want of any accepted theory of fever. We were in doubt whether to regard moderate fever as an enemy or a friend. Dr. Hilton Fagge, one of the most philosophic intellects that the profession ever possessed, inclined to the latter view. It might well be that fever was, as Dr. Hale White expressed it, a "defensive mechanism." All were agreed that hyperpyrexia was most dangerous, and called for prompt and vigorous treatment. External cold was the only efficacious agent in such cases. In typhoid he had found no permanent benefit from the use of antipyrin, antifebrin, and phenacetin. He thought an occasional large dose of quinine (20 grains or upwards), given six or eight hours before the maximum rise, was often beneficial. The most important agent, however, was external cold—either the cold bath or cold affusion. He thought that the public in this country ought to be trained to the more frequent use of the cold bath. His experience of the treatment of phthisical pyrexia was very discouraging. The slighter degrees were often best left alone, or treated by dieting, fresh air, and rest. The severer degrees were often uncontrollable. He hoped the discussion on Dr. Hale White's able paper would tend to moderate the ardour with which antipyresis was at present often pursued.

III.—James Barr, M.D.Glasg.,

Physician, Northern Hospital, Liverpool.

The part played by the nervous system in the regulative mechanism of the body heat, whereby a fairly uniform temperature was maintained in health might be at once conceded, and the disturbance of this mechanism might readily lead to increase or depression of temperature in disease. The views enunciated by Dr. Donald MacAlister on thermotaxis, thermogenesis, and thermolysis (and of which Dr. Hale White was an able exponent), formed a fairly good working hypothesis which helped a comprehension of the nature of the pyrexial process, but this was only one link in the chain. In disease it was necessary to go a step further back and find out the cause of the disturbance in this regulative mechanism. No doubt oxidation was the chief source of body heat, but there was not always evidence of inward combustion to account for increment of temperature; the pyrogenic agent which had given rise to the disturbance in the production and dissipation of heat must be discovered. The temperature of a body represented the energy with which its heat tended to transfer itself to other bodies. Now the amount of this energy was in the case of fever as a fair gauge of the severity of the pyrexial process, but this was not an invariable rule, because the fever poison was capable of splitting up some of the higher organic compounds, and unless the resultant products were oxidised there was no consequent production of heat, so in low states of vital activity the fever might be working havoc without giving rise to any pyrexia. It is chiefly on this account, Dr. Barr continued, that all the new antipyretic drugs stand condemned in the treatment of the continued fevers. Such drugs no doubt diminish the production of heat and increase its dissipation, but they have no effect whatever on the fever poison except to permit it to work its ravages under conditions of lowered vitality. Their use in the continued fevers is about as rational as it would be to quiet a patient suffering from delirium tremens by knocking him down with a blow on the head.

If the metabolic changes in fevers are accompanied with increased oxidation we get heightened production of heat; and this in itself can scarcely be said to be a deleterious consequence, seeing that this oxidation indicates vital activity. But, unfortunately, with the raised temperature, anabolic changes cannot take place—there is no tissue up-building and no repair of the waste which the fever process has induced. In health the greater the oxidation the more active the vitality, provided that waste is compensated by repair. Here the heat evolved by combustion is used up, not merely in maintaining the temperature of the body, but as a force in tissue renovation. In fevers the process is quite different. Anabolic changes are arrested, katabolic increased, and the high temperature renders tissue renewal impossible.

The amount of heat generated by the combustion of 124 grains of carbon is capable of raising the temperature of 140 lbs. of water one degree Centigrade. The oxidation of many of the products in the body cannot produce so much heat as this, but the combustion of the hydrocarbons will give rise to more. We thus see how easily pyrexia may be established and maintained. In the treatment of pyrexia we primarily wish to lessen the fuel to be

burned by diminishing katabolism. Therefore our effort should be directed to the cause of the pyrexia rather than to a mere reduction of temperature. No one would think of treating an empyema or an ordinary abscess by antipyretics; and as far as possible in all diseases we should try to eliminate the *materies morbi*, or counteract its effects. A good purgative after a meal of measly pork may avert the severe fever of trichinosis. Unfortunately, we possess very few specifics for the pyrexial diseases, so we are largely obliged to deal with them symptomatically. Antiseptics are greatly in vogue in the present day, and no doubt their judicious use is often highly beneficial, but their indiscriminate employment may work mischief, as the patient is often more easily killed than the bacilli. In any method of treatment we should conserve the energy of the vital powers, and so adapt the environment as to make it almost impossible for the patient to die.

In fevers much of the tissue degradation is due to the fever poison irrespective of the pyrexia, but still high temperature is of itself capable of working mischief irrespective of its cause. In the reduction of temperature the physical agents of which we chiefly make use are air and water. Unfortunately both these agents are exceedingly bad conductors, and the former is almost an absolute non-conductor. On the other hand, their specific heat is high, and so they are capable of absorbing much heat from the body. As they remove heat by convection they are both best applied in current. An enormous amount of latent heat can also be insensibly removed from the body through the exhalation of watery vapour. The latent heat of water is 142° F., while that of steam is 966° F. On this account a properly made and properly applied warm linseed poultice becomes a valuable antipyretic agent. It should be free from oil, very moist, and allowed to evaporate freely from its external surface. In this way the poultice tends to cool rapidly, and as quickly absorbs heat which is brought to the surface through the dilated capillaries, and insensibly transferred to the atmosphere in vapour. As poultices are usually applied with some impermeable covering, or the patient and poultice wrapped up in a thick blanket, evaporation is impossible, and consequently no antipyretic effect is obtained. The tender care of most physicians seems to be directed to keeping the poultice warm, rather than to cooling their patients.

Heat can also be abstracted from a body by radiation. All bodies radiate heat more or less, and I made some experiments to see how far this physical property could be utilised in the treatment of pyrexia. I had some tins made with parallel surfaces in segments of a circle. These tins could be filled with ice and then stoppered. The patient was then almost completely surrounded with these ice tins, but did not come in contact with them, so that he was placed in a kind of refrigerator. As radiant heat does not affect the media through which it travels, the patient was not rendered very uncomfortable so long as the air was kept still. As the absorbing and radiating powers of any substance stand in direct ratio to one another, I had the tins coated with lamp-black. In order to have made the experiments more perfect, and perhaps more efficacious, I should also have coated the patient's skin with lamp-black. Now, as no covering is quite diathermanous, in such experiments it is important that nothing but the atmosphere should intervene between the radiating and absorbing surfaces.

A somewhat analogous proceeding has been adopted at the London Hospital. In this case open tins of ice are hung on a cradle round the patient, so that he is subjected to a cold moist atmosphere: but here the absorbing surface is very imperfect: the air becomes saturated with moisture, and no latent heat is carried away from the body. The results may be all that are claimed for the treatment, but the method does not commend itself to my mind as a scientific proceeding. It has been even found by those who have tried this treatment that the air must be in motion. If you use air as an antithermic agent then it is much more efficient to use a current of dry air at a moderate temperature. My own patients are always lightly covered. In cases of typhoid fever usually the only covering is a single sheet.

Our great physical agent in reducing temperature is water. This has been used at very varying temperatures and in various ways. In moderately severe cases it may be sufficient to apply cold compresses or wet packs. In cases of hyperpyrexia we use cold baths or cold douches, not merely to abstract heat, but to rouse up the nervous system, and make it take hold of the production of heat. As Currie pointed out, the effect of the application depends not so much on the temperature of the water as on the suddenness and momentariness of the application. I prefer to treat these cases by playing water on them out of a hose pipe. In other severe cases of pyrexia with prolonged high temperature and especially cases of typhoid fever, I treat by constant immersion in water at a temperature varying from 90° to 98°, according to the individual cases. I am quite satisfied with my results.

IV.—R. Douglas Powell, M.D., F.R.C.P.,

Physician Extraordinary to the Queen, and Physician to the Middlesex Hospital.

Dr. Douglas Powell expressed his appreciation of the great value and importance of Dr. Hale White's paper. For therapeutic purposes pyrexia had to be considered from the microbic side and from that of the nerve centres. Unquestionably microbes required for their cultivation a temperature decidedly below that which they occasioned by the toxin poisons which were the results of that cultivation. The pyretic temperature thus induced tended to inhibit the further productive activity of the microbe. This was an important consideration in the treatment of pyrexia. Many remedies of the thermolytic class—antipyrin, phenacetin, etc.—whilst valuable in reducing temperature if excessive, required careful handling, for if the temperature were reduced considerably below that normal to the disease, the danger of relapse of microbic activity was greatly increased. Remedies of the quinine and salicin class, on the other hand, were antipyretics by being germicides and antitoxins. He would draw attention to the value of occasionally combining these two remedies. It could not be remembered too carefully in clinical medicine that a raised temperature was normal to certain diseases, and that a man having pneumonia with a reduced temperature was more ill than if he had a temperature proper to the disease. From the nerve centre side the effect of antipyretics of the thermolytic class was to weaken the resistance of those nerve centres which, as Dr. Hale White had so well illustrated, were immediately responsible for temperature, and might keep it up in the absence of any lesion.

V.—Mrs. Eliz. Garrett Anderson, M.D.,

Lecturer on Medicine London School of Medicine for Women.

Mrs. Garrett Anderson thought an illustration of the truth dwelt upon by Dr. Hale White might be taken from the facts of relapsing fever. Here there was high temperature, much higher than in typhoid, with a very low mortality, and with very little disturbance of the digestive functions. If the temperature in typhoid were the all-important thing in itself, as some thought, why could it be so unimportant in relapsing fever? She had seen several cases of unexplained high temperature without hysteria, so far as it could be ascertained. One patient in the New Hospital for Women had a temperature of 105° F. and upwards for three months, and nothing wrong could be found. She eventually went out, and the temperature a year later had come down without further treatment. Mrs. Anderson thought there was probably more individual peculiarity as to temperature than was generally admitted. It was known that children were more mobile as to temperature than women, and women more than men. But within these classes there were great varieties. Small disturbances that would produce no effect on one person might send the temperature up one or two degrees in another. She had been much interested in the temperature sometimes seen in anæmia. She had seen in severe anæmia the temperature up to 102.5°, and go down rapidly with rest in bed and iron.

VI.—W. Osler, M.D., F.R.C.P.,

Professor of Medicine, Johns Hopkins University, Baltimore.

In illustration of disturbed thermotaxic mechanism, Dr. Osler mentioned that in chorea there might be increased temperature on the affected side in some cases, while in the generalised form the fever was in some degree proportionate

to the intensity of the movement, certainly in the maniacal form, the *chorea insaniens* of Bernt, pyrexia was an almost constant feature. In Baltimore very much the same febrile disorders were met with as in this country. Sunstroke was more common, of course, and under no circumstances were better results seen from cold water. The prognosis depended directly upon the rapidity with which hydrotherapeutic measures could be carried out. For four years, Brand's method of treating typhoid fever had been systematically carried out with most gratifying results. The mortality had been reduced to 7.1 per cent. in one series of nearly 200 cases, and 6.5 in the series of 80 cases treated in 1893. The patients were put in a bath at 70° every third hour whenever the temperature rose above 102.5°. No medicines were given unless special indications arose.

VII.—R. Shingleton Smith, M.D., F.R.C.P.,
Senior Assistant Physician to the Bristol Royal Infirmary.

Dr. Shingleton Smith concurred in the view that hyperpyrexia must be treated, and vigorously, by the cold bath, but for minor degrees of fever there might be a difference of opinion as to what degree of temperature demanded interference. The utility and safety of the bath were universally admitted by all who had made a general practice of using it; but the introduction of modern antipyretic drugs had removed the disagreeable necessity of adopting the cold bath method in all cases of typhoid and other fevers. He had never seen any harm from the efficient but not excessive use of phenacetin, and at this time he rarely found it necessary to adopt the cold bath method, because the temperature was controlled by simpler and less disagreeable methods. He considered that phenacetin was an advance on the cold bath, but he quite concurred in the view that the cold bath should always be held in reserve to be used in case of necessity. Continuous fever must be checked and controlled by some means or another; if one failed some other method must be employed, no matter how troublesome it might be.

VIII.—E. Markham Skerritt, M.D.Lond., F.R.C.P.,
Senior Physician Bristol General Hospital.

Dr. Markham Skerritt said: "I am gratified to find that the discussion on this important topic has elicited a balance of opinion strongly adverse to the routine use of antipyretics in fever. This is the conclusion to which I have myself long ago been led. It has already been pointed out that the importance of any degree of pyrexia varies with the condition to which it is due. Thus it is well known that a temperature which, if untreated, has a fatal significance in acute rheumatism is of comparatively little immediate importance in relapsing or in malarial fever. Every case must be treated upon its own merits, and the routine administration of antipyretics is to be avoided. It may be stated that the persistence of the effect of an antipyretic remedy is inversely as the rapidity of its action. In my experience quinine is still one of the best and safest of antipyretics. But it must be given in large doses; in the case of an adult 30 to 40 grains should be administered either in one dose or in two with an interval of half an hour. Its effect is developed much more slowly than is the case with drugs such as antipyrin and phenacetin, attaining its maximum in perhaps six to eight or more hours; and this is possibly the reason why there is so little tendency to the production of collapse or other unfavourable symptoms. Its influence, once established, has the great advantage of extending over a much longer period than that of the antipyretics before referred to—often, indeed, persisting for eighteen or twenty-four hours. In typhoid fever I have long given up the use of antipyrin, which I have known produce the most dangerous depression. Phenacetin is of more value; but in severe cases it is not to be compared with quinine given in the manner just described. My experience of the effect of antipyretics in phthisis unfortunately coincides with that of Dr. Douglas Powell; and I have practically abandoned their use. It is generally recognised that in true hyperpyrexia, most often met with in rheumatic fever, energetic treatment is imperative, and that the only antipyretic which has time to act is the cold bath. The point upon which I wish to insist is that no case, however apparently hopeless, should be given up while any life remains in the patient. I was lately called by a medical friend in this city to a case where hyperpyrexia had supervened upon acute rheumatism. The temperature was 108.5°; the patient was comatose, with cyanotic surface and failing pulse, and to all appearances *in articulo mortis*. However, the energetic use of the cold bath, aided by the subcutaneous injection of ether (5 drachms), was successful in reducing the temperature to normal; and the man, who might well have been considered past all hope of recovery, is now in his usual health."

IX.—Frank M. Pope, M.B.Cantab., M.R.C.P.,
Physician Leicester Infirmary.

Dr. Pope said that pyrexia was a condition found to prevail extensively in the animal kingdom. It must have had an origin at some period, and unless the first animal in which a bacterial invasion of the body caused a rise of temperature were benefited by the phenomenon, the liability to pyrexia would not have been perpetuated in the race. It must be believed that pyrexia was under some conditions beneficial. The bacteria had no doubt developed in their turn, and could sustain higher temperatures than in the earlier history of the animal kingdom. It was desirable if possible to ascertain the relative production of heat by the respiratory and cardiac muscles, and by the oxidation going on in other organs of the body. Dr. Pope believed that the former was much greater than the latter, and that many antipyretic drugs acted by slowing down the heart and lessening production of heat. If this were so, the evil of giving in a case, say, of pneumonia, a drug which will further lower the action of an already embarrassed heart would be easily appreciated. *Mutatis mutandis* this was true of other pyrexial conditions. Dr. Pope had used the cold bath treatment of typhoid for two or three years with the result of reducing mortality by 3 to 4 per cent. He had on one occasion given an enema of two pints of ice cold water with good results.

X.—W. J. Tyson, M.D.,
Medical Officer Folkestone Hospital.

Dr. Tyson observed that an important question often arose as to the advisability of removing patients to considerable distances while suffering with moderate high temperatures. His own experience was that it was safer as a rule to do this when the temperature was high rather than when it was subnormal; in the latter there was more probability of a cold or pneumonia following than when the temperature was high. Two common causes of the high temperature which occurred in children were sunstroke and paddling on the beach. Diarrhœa, which was a common accompaniment, should not be checked but rather increased. Aperients in many of these cases were a more natural method of treatment than the now common use of phenacetin, antipyrin, etc.

XI.—Sir Thomas Grainger Stewart, M.D.,
Physician in Ordinary to the Queen in Scotland, Professor of the Practice of Physic and Clinical Medicine, University of Edinburgh.

Sir Grainger Stewart said that he occupied a conservative position in relation to the treatment of pyrexia, for he used baths only when the patient was in danger from high temperature. He was not prepared to adopt the method as a habitual practice, but rather trusted to cold sponging, iced cloths to the abdomen, and the continuous use of antipyretics. He fell back upon the cold bathing only when remedies of easier application failed. He raised the question whether climate might not exert an influence in relation to the treatment by baths or by other methods.

In reply to Sir Grainger Stewart, Dr. Osler said that he did not think that climatic influences had much to do with it. Typhoid fever as he had seen it was the same in London, in Montreal, in Philadelphia, and in Baltimore. The cold bath practice had been carried out extensively in Germany, where the method of Brand had been chiefly followed; in Brisbane, Australia, where Dr. Hare's results had been so remarkable; while in Montreal, New York, Philadelphia, and Baltimore the patients appeared to stand it very well. Personally he had always maintained that it was in a majority of cases disagreeable to the patient, very unpleasant to witness, and very onerous to carry out in hospital or

private work; but so long as this method saved three or four patients in every hundred treated he felt bound to adopt it.

XII.—Herbert Snow, M.D.,
Surgeon to the Cancer Hospital.

Dr. Snow wished to put in a brief remark on behalf of a very old-fashioned antipyretic—calomel. This had been the sheet-anchor of a former generation in all cases of fever, inflammatory or otherwise; and the long duration of the practice indicated that it was not without its virtues. The theory of its action ascribed this partly to purification of the *primæ viæ*; partly also to a partial conversion into mercuric perchloride hostile to microbes. Dr. Snow had known five or six cases of influenza in which, after the administration of 5 grains of calomel, the temperature fell on the following morning to the normal, and the patient recovered without any relapse or sequelæ. He would be glad to learn if Dr. Hale White had used this drug; without some reference to which he thought the discussion would have been incomplete.

XIII.—W. G. Kemp, L.R.C.P.,
Wellington, New Zealand.

Dr. Kemp advocated strongly the bath at a temperature of 100° F., reduced to 90° or lower by putting in ice. It should be used every four to six hours. His experience of this treatment was favourable; antipyretics during the course of enteric fever were not of much use. Aconite in small doses was most useful in febrile conditions, chiefly in children. A symptom like hyperpyrexia must be treated occasionally, when no other symptom could be discovered, as in the case mentioned by Dr. Hale White.

XIV.—R. Heath, M.D.,

Dr. Heath said that though the general opinion seemed against the use of such remedies as antipyrin, he would like to say a word in their favour. He mentioned a case of acute pneumonia in which the temperature rose to 106.2°, and in which 40 grains of antipyrin were given in 10-grain doses every four hours, with the best result. As regards the pyrexia of phthisis, the treatment by antipyrin and phenacetin was most unsatisfactory, but he found the treatment by creasote, if given in large enough doses, did away with the necessity for resorting to those drugs. He drew attention to the value of constant sucking of ice in pyrexia, and suggested that the lowered mortality of disease might be due in some measure to the lessened severity of fevers.

XV.—A. G. S. Mahomed, M.R.C.S.,
Registrar and Pathologist, Royal Victoria Hospital, Bournemouth.

Mr. Mahomed looked upon antipyrin as a dangerous drug. He thought that antipyretic drugs should chiefly be used in robust patients suffering from a short, acute illness, as influenza. In regard to the treatment of typhoid, he thought that intestinal antisepsis, cold water, and quinine fulfilled the chief indications. The application of an ice poultice to the abdomen was best made by sewing up the corners of a piece of waterproof material so as to form a kind of shallow saucer, and filling it with cotton wool with lumps of ice strewn through it. This poultice would remain efficacious for some hours. He agreed with Dr. Tyson that a patient with a high temperature might frequently be removed with safety and benefit.

XVI.—A. J. M. Bentley, M.D.Edin.,
Cairo.

Dr. Bentley considered that quinine acted more as an antidote to the plasmodium malariæ than as an antipyretic; its good effects, when given for "malaria," was most marked during the remission, when the temperature was lowest. It then acted as an antidote to the malarial microbe, but not as an antipyretic. In bilious remittents quinine, combined with sulphate of magnesia, was a most useful combination. Quinine alone was often not effective. A free action of the bowels was a most useful way of lowering the temperature. Cold again might act beneficially in another way besides its effect on the temperature alone. In cholera, even in the algid stage, the best treatment was the wet pack, and application of ice to the abdomen, etc. Under this treatment restlessness was greatly relieved, and reaction followed. Here the application had some other effect than lowering temperature; it might act as an antidote to the cholera bacillus. In influenza the most successful mode of treatment was antipyrin combined with salicylate of sodium, 10 grains of each every four hours, till the temperature came down to normal, which it generally did in twenty-four hours.

XVII.—Fred. T. Roberts, M.D.,
President of the Section; Physician to University College Hospital.

Dr. Roberts thoroughly endorsed the opinion as to the valuable instruction to be derived from Dr. Hale White's paper. He made some remarks on the classification of cases of pyrexia, and on inexplicable fever, fatigue fever, and that associated with murmur. He discussed some points relating to treatment; to the comparative value of baths and drugs; the more simple methods of applying cold; and the removal of patients suffering from high pyrexia. He drew attention to the necessity of using simple remedies, such as a saline mixture, which was so commonly given in former times. He strongly condemned the practice of the laity having a clinical thermometer always at hand, and resorting to powerful and dangerous (supposed) antipyretics as soon as they found the temperature at all raised.

Dr. Hale White's Reply.

Dr. Hale White thanked the meeting for the kind way in which his paper had been received. He quite agreed with the fact to which Mrs. Garrett Anderson had referred, that differences in different patients with regard to the readiness with which the temperature rises were very important. As the President and Sir Grainger Stewart had said, often cold sponging or ice on the abdomen was quite sufficient. The fact that febrile temperatures as a rule ranged higher in the summer than in the winter supported Sir Grainger Stewart's view that febrile diseases were different in different climates. Patients should not be allowed clinical thermometers. As Dr. Tyson said, febrile patients might travel, the only exception being typhoid. Dr. Hale White put patients with hyperpyrexia in a bath of 75°, and for about ten minutes; then the rectal temperature usually fell to 107°. He altogether objected to the early treatment of febrile cases with antipyretics, as it abolished such a valuable means of diagnosis.

STENOSIS AND ENDOARTERITIS OF THE PULMONARY ARTERY A CAUSE OF EMBOLIC PNEUMONIA AND CHRONIC INTERMITTENT FEVER.

By R. Shingleton Smith, M.D., B.Sc., F.R.C.P.,
Physician to the Bristol Royal Infirmary, and Professor of Medicine in University College, Bristol.

The occurrence of endocarditis of the right heart, and its clear connection with features of embolic pneumonia, has been well recognised in recent times, but the occurrence of both, as a sequel to and in association with stenosis of the pulmonary artery, gives this case an especial interest, and its points are well worthy of being placed on record.

Miss H. C., aged 28, was laid up early in 1890 with an attack of influenza, when, on examination of the chest, it was found that some heart defect, probably congenital, was present. At the age of 10 she had an attack of inflammation of the lung, when she was seriously ill for three or four weeks, but no especial attention was given to the heart, and its condition does not appear to have called for comment. At the age of 13 a physician in Glasgow noticed and directed attention to the fact that the heart condition was not normal, but there do not seem to have been any evidences of heart failure, and her general health had been fairly good for many years.

The attack of influenza in January, 1890, presented the ordinary characters of the acute fever—h type, and was in no way influenced by the heart condition. A loud basic murmur existed at that time, but there was no evidence of any heart failure. There was no unusual degree o cardiac disturbance, and no tendency to lung congestion. The patient and the doctor agreed that the attack justified the inference that heart could not be so bad after all.

After this she had been in the habit of getting about actively as usual, and she did not suffer from any unusual degree of dyspnœa, disability, or marked cyanosis.

Dyspeptic symptoms necessitated medical assistance in February, 1891. Attacks of vomiting with acidity recurred at intervals of a week or two, but up to this time there had been no hæmatemesis. She also mentioned palpitation, which was relieved by the vomiting. The heart was found to be abnormal; the apex was a little displaced downwards, and a loud double murmur existed at the base, together with a continuous venous-like hum at the second left interspace. There was no decided cyanosis or dyspnœa; no œdema was present; the lungs were clear; there was no hepatic swelling; catamenia were regular and normal.

A year later (March, 1892) she again complained of symptoms of 'gastric catarrh, and the heart condition was found to be much the same.

In February, 1893, the patient's brother, a medical man, wrote to me as follows: "I am sorry to say that my sister has not been so well lately. The tendency to sickness, with only temporary remissions, has continued for a long time, but now she seems to have had for the first time hæmatemesis. She has been so long subject to the sickness, and is so comparatively well in the intervals that she is inclined to look upon it as inevitable. The vomited matter had the 'coffee ground' appearance, and as my mother was uncertain of its nature she sent me a specimen, which I have examined." This sickness had been a week previous to my visit on February 15th, when I found the heart condition unchanged; pulse was 124; there was no pain, and the general condition not indicative of any active disease.

After this she continued to be fairly well until the end of the year, when she left home to take charge of her brother's house at Newton Abbot. Whilst there she was laid up with pneumonia and never recovered from that time. My information of the details is derived chiefly from the letters of her brother, who on December 27th, 1893, wrote as follows: "I am sorry I am only just now able to present laid up with pneumonia, which has been running on for a fortnight without any definite fall of temperature. The pneumonia began at the left posterior and lateral base on the 13th inst. after a rigor on the 8th. On the 18th she had another slight shivering, after which there was an extension of the dulness above the angle of the left scapula. In addition to these signs there is an area of dulness just below the left clavicle and to the left of the sternum continuous below with the cardiac dulness. There is also some slight diminution of resonance at the left apex. There has not yet been the least expectoration, and there is very little cough; but there is profuse perspiration, especially in the morning after sleep. The heart has kept wonderfully well all through; there is still that very localised pulmonic murmur, with a distinct thrill."

Again, on January 2nd, 1894, the brother writes: "I am sorry to say that my sister is not as yet any better. The temperature for the last three evenings has been 103° or 104°, which is above the previous average (102.2°); the morning temperature has averaged 100.5°. This is now the twenty-fifth day from the initial rigor. She has still no expectoration, and very little cough. There is a suspicion of pleuritic effusion at the extreme left base. The heart defect has not so far complicated the case."

On January 12th I was asked to see the patient in consultation with the brother and Dr. Nisbet. I found her looking exceedingly ill, and she was evidently wasting in consequence of the continuous pyrexia, now of five weeks' duration. This pyrexia was of the quotidian intermittent type, the daily variation amounting to 2 or 3 degrees, and following the pyrexia there was profuse sweating. There was very little cough, and no sputum. There were no abdominal nor cerebral symptoms, and everything indicated that the lung condition was the cause of the pyrexia. Before the onset there had been a suspicion of synovitis in the metatarso-phalangeal joint of the great toe, with surrounding œdema; and previous to that there had been for nearly two months profuse nocturnal perspirations, but no joint swellings and no evidences of rheumatism were now present. Dulness and crepitation up to the middle of the left scapula were decided, and a little friction, but there was no bronchial breathing. The vocal resonance was increased near the dull area, but the vocal fremitus was diminished at the extreme left base. The right lung appeared to be normal. There were no indications of heart failure or embarrassment, and the displacement of apex was less pronounced than formerly; no apex murmur was audible, but the basic murmur was very loud and rough in the pulmonary area, and there was visible pulsation with a very pronounced vibratile thrill at the third left interspace close to the sternum; the continuous venous hum (if present) was entirely masked by the loud vibratile *bruit*. No undue pulsation or *bruit* was present in the tricuspid area.

On January 20th the brother wrote: "Am sorry to say that the evening high temperature persists, but the distressing flatulence and jerking of the heart were relieved at once after taking peptonised milk. The signs of consolidation at the base of the lung have cleared up; there has once been some blood-stained mucous sputum which I have examined for tubercle bacilli without finding them. The morning temperature has been normal, or nearly so."

On January 30th the report was as follows: "In spite of the high temperatures, my sister's strength and spirits have kept up very well; she has taken nourishment well in spite of some slight gastric troubles. There has been no expectoration and very little cough, but now and then some slight pleuritic pain in one side or the other. There is now little difference in percussion note between the two sides, and the breathing is now hardly tubular, but simply weak on the affected side. There is no further sign of consolidation. She still has some tendency to shivering from slight changes of temperature, or even apart from that, but there have been no more actual rigors, although the profuse perspiration still continues more or less."

On February 6th I received the following: "My sister became worse at the end of last week, and we were able to localise a spot where there was an absence of breath sound. At this spot Dr. Nisbet succeeded in withdrawing by the aspirator 3½ ounces of clear serous fluid. The spot was not at the base of the lung but an inch or two above it, not far from the angle of the left scapula. The quantity of fluid withdrawn appeared to be the whole that was present. The pyrexia, rapid breathing, and perspiration continue, and now there is some slight expectoration of viscid, blood-stained mucus. There is only slight comparative dulness at the left base behind, much less than formerly; more decided dulness below the inner third of the left clavicle, and moist *râles* there, and a triangular patch of dulness in the angle between the hepatic and cardiac dulness."

March 1st. "Sorry to say that my sister makes no progress. There has been no further indication of the presence of pus. Two slight pneumonic attacks have occurred (one of these affected the right base), but they passed off without so much discomfort as previously. There is now, however, more especially within the last day or two, very marked tubular breathing in the right side, about the level of the spine of the scapula; the tubular sound is much prolonged, and there is pectoriloquy, but not much dulness. Sputum has been blood-streaked, but not purulent, and repeated examination for bacilli have given uniformly negative results. She takes nourishment well, but has emaciated greatly. The heart is still acting very well."

A few days later, the tubular breathing and the other suspicious indications had nearly disappeared, only, however, to be followed by other pneumonic attacks affecting chiefly the bases of the lungs and subsequently clearing up in the same way. Expectoration was persistent but scanty, and always showed the same characters of viscid blood-stained mucus. Towards the end of March there was for a few days diarrhœa, which, along with gastric disturbances, interfered with nutrition and brought on distressing jerking of the heart. In the beginning of April albuminuria made its appearance, and there was some œdema of the feet. After this the symptoms became more and more troublesome; cough, expectoration, pain, heart-jerking, disturbed sleep, sickness, and diarrhœa in turn reduced the patient to an extreme degree.

On May 2nd she was sent home to Bristol in an invalid carriage, accompanied by her doctor and her medical brother, and she bore the journey without serious difficulty.

On the day following I again saw her, and was surprised at her excessive emaciation and weakness. The mental condition was unimpaired, and there was still no evidence of any abdominal disease, but there was a tendency to sickness and diarrhœa which rendered the feeding very difficult. It was exhausting to her to make perfect examination of the chest, but there did not appear to be any sufficient evidences of damage to the lungs to account for the continued pyrexia, and there were no reliable indications of either thoracic or abdominal tubercle. No dulness could be discovered in front, and only slight defects of percussion note in the bases behind, more particularly the left. Breath sounds were not absent at any part, and clearly there was no accumulation of pus within reach. The heart condition had undergone a change; perhaps partly in consequence of emaciation the pulsation at the third left space was much more obvious, but there was no evidence of general enlargement of the heart or of the right side. The thrill perceptible on palpation was very much more decided than formerly, and the *bruit* in the pulmonary area had become a loud, coarsely vibrating roar.

The character of the pyrexia, its persistence, and the changes in the heart sounds now left little room for doubt that the whole phenomena of the illness had been due primarily to endocardial damage with secondary embolic pneumonia. There was little change from day to day, but the weakness increased steadily, and the gastro-intestinal condition became more and more unstable. Little food could be retained either by the mouth or rectum, and, although the temperature had come down to normal, progressive exhaustion culminated in death on May 16th, over five months from the sudden onset of pneumonia in December. Dr. Nisbet, who carefully watched the case through all its details, makes the following comment:

"A notable feature was the very profuse nocturnal perspiration, which at times was so profuse as to require a change of bed linen. This was going on more or less for at least two months before the pneumonic attacks, and at that time also she was less able to go up hill than formerly. The perspiration was a marked feature all through the illness. At first the pneumonic attacks involved larger areas than later on, and the bases were in the first instance more affected than the other lung areas, though even when a larger area was ultimately involved it was by spreading from one spot. In nearly every instance, when we were able to detect the part affected, the onset being marked by rigor and subsequent rise of temperature, there was considerable pain, and the physical signs of pleurisy were present.

"When I first saw her the first sound of the heart was very rough and loud, the second sound softer and loudly blowing, with no interval free from murmur. The thrill could be distinctly seen and felt in the third interspace near the sternum. The murmur changed in character gradually till before she went to Bristol the first sound was louder if anything but not so rough, and there was less thrill either to touch or vision. Both murmur and thrill were very localised, and there did not seem to be any involvement of mitral or aortic valves, neither did the pulse indicate any special lesion except that latterly it was dicrotic from weakness. The temperature remained throughout high, with evening rise and morning fall. A point to be noted is that the pyrexia persisted even when there was no fresh pneumonic attack, which event was always ushered in by rigor, pain, cough, etc., after which there was the daily rise of temperature as before the attack."

The clinical evidence was as a whole consistent with endocarditis of the right heart and embolic pneumonia resulting therefrom, but we were scarcely prepared to find so complete a solution of all the problems in the case as were afforded by the *post-mortem* examination, when we found the following conditions. The body much emaciated, slight œdema of feet. On opening the chest the lungs were loosely adherent on both sides; there was no collection of pus or of any fluid, and nothing visibly wrong on the surface of the lungs in front. There were no masses of lymph visible and no thickening of the pleura. The lungs on removal were found to be small, and condensed in patches, but there was no lobar consolidation and no appearance of tubercle anywhere. Numerous old puckered scars and indurated patches were observed on the surface of the lungs; both lungs alike, and upper lobes as well as lower; the position of these was not noted accurately but there was no marked difference between the two sides. Some of these patches were nothing more than old scars, others had evidences of caseation, and others were still comparatively recent congested embolic patches, but there was no abscess anywhere, and no evidence of any septic breaking down

These numerous remains of old emboli were found to be equally distributed in both lungs, and there did not appear to be any marked difference between the two sides; they were found also scattered throughout upper and lower lobes alike; they were all on the surface of the lungs and had no doubt been of embolic origin; but none of them appeared to be very recent. There were no tubercles, and the inflammatory patches must have been localised and limited in area to the neighbourhood of one or other of the numerous emboli which must have existed at various times. One embolic patch was found in the spleen, which was greatly enlarged, far more than could be accounted for by the one large triangular recent infarct which was seen to be there. Nothing abnormal was observed in liver, kidneys, intestines, or peritoneum.

The heart was the organ of principal interest. It weighed 8¼ ounces. The pericardium was normal. The left auricle was a little dilated, but the foramen ovale was closed. The mitral orifice was dilated, admitting the points of three fingers, and with the edges of the curtain somewhat thickened. The left ventricle is little dilated and hypertrophied. On the ventricular aspect of the anterior and left cusps of the aortic valve were masses of fungating vegetations as large as a small bean, adhering firmly to the cusps of the valve, but nodulated and looking as if fragments could be easily detached. There was slight fenestration of the lunulæ and some atheromatous patches immediately above the aortic valve. The right auricle was a little dilated, but the tricuspid orifice, valve, and coronary sinus appeared to be normal.

The right ventricle was considerably hypertrophied, the wall being almost double its normal thickness, although the cavity was little if at all dilated. A few small bead-like vegetations were found on the ventricular aspect of the left cusp of the pulmonary valve. The trunk of the pulmonary artery appeared to be somewhat dilated, more especially at the bifurcation, just beyond which there was a sudden contraction of the right branch, leaving an opening not larger than a No. 4 catheter, and the opening was not more than one inch from the seat of bifurcation. Beyond the stenosed spot, the artery dilated again to its usual calibre, and the left branch was of the usual size, excepting at the bifurcation of the main artery, where there was a pouch-like dilatation behind the stenosed spot in the right branch.

The left wall of the trunk along a line from the left cusp to the contraction in the right branch was inflamed and softened, and adhering to the damaged wall was a mass of fungating vegetations much more prolific and extensive, but otherwise resembling those on the aortic valves. This large mass of vegetation adhered for the most part firmly to the arterial wall, but in the trunk of the vessel, and lying loose, were a considerable number of detached masses, some of irregular shape, some showing the remains of a pedicle, some oval, some rounded, and all having a smoothly worn surface, as if they had been eddying in the blood stream for a considerable time. They were of firm consistence, of a pale yellow colour, or covered with a thin layer of recent red clot. Some of these masses were still attached by a long thin pedicle to the wall of the vessel, and the longest measured nearly an inch in its long diameter. There were ten or twelve of these loose masses in all. The dilated portion of the pulmonary arterial trunk appeared to be full of them, but they were too large to pass through the stenosed right branch, although there appeared to be no obstacle to their passage along the other patent canal. Sections of these masses showed the presence of great numbers of micrococci and streptococci.

No indication of abnormal patency of the foramen ovale was found, and there was no deficiency of the intraventricular septum. The branches of the pulmonary arteries to their third or fourth division in the lung were found to be patent, and no masses of clot were found beyond the stenotic orifice near to the first bifurcation, where the obstruction appears to have for the most part prevented the detached masses from being carried further by the blood stream.

The principal points worthy of special comment are:

1. The stenosis of the pulmonary artery. This must have been of congenital origin, and was not a secondary result of the endoarterial disease. The position of the constriction may not improbably have determined the position of the endoarterial disease in its immediate vicinity.

2. The occurrence of endocarditis of the aortic orifice in association with endoarteritis of the pulmonary artery, and the absence of any decided indications of disease in the mitral or the tricuspid valves.

3. The coexistence of these two causes of arterial blocking, the obstruction, and the endoarteritis of the pulmonary arterial trunk.

4. The occurrence of pneumonia, and of repeated attacks of it, as a result of frequently-occurring embolism.

5. The absence of the ordinary evidences of septic infection, such as suppuration or gangrene, the nutrition of the lung having been maintained by the vessels of the bronchial system.

6. The accumulated masses of detached and semidetached clot filling up the calibre of the vessel behind the obstruction, and acting like a valve at the small orifice in one large division of the pulmonary arterial trunk. The stenosed artery being too small to allow of the passage of the masses of clot, these must have become rounded from constant whirling in the eddy, and so became water rolled like pebbles on the shore.

7. The type of the temperature—the chronic intermittent fever of endocarditis—is exactly similar to that so well described by Osler.[1]

8. The persistence of the fever continuously during the whole period of five months.

9. The presence of micrococci and streptococci in the masses of exudation from the arterial coat.

[1] *Practitioner*, March, 1893, p. 181.

THE MECHANICAL TREATMENT OF HEART DISEASE.

By Harry Campbell, M.D.,
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In the treatment of heart disease the physician has hitherto, in my belief, relied too exclusively on rest and digitalis, thereby neglecting to call to his aid the accessory forces of the circulation. In the treatment of mitral disease (of which alone I shall deal in this paper) these accessory forces will be found especially helpful. Oertel's treatment by hill climbing, and Schott's by baths and gymnastics, both essentially benefit by bringing them into action, yet so far as I know, neither of these physicians has properly recognised the fact. As I have already expressed some of my views on this subject in a paper read before the North London Medical and Chirurgical Society, I can be the more brief in the present communication.

Let us see what happens in mitral disease. There is a difficulty in the onward flow of the blood through the mitral orifice. This is met by increased work on the part of the right ventricle: the tension in the pulmonary circuit rises, and the second pulmonary sound becomes accentuated. As the disease progresses, the right heart experiences, in the face of the increasing resistance, greater and greater difficulty in emptying itself: the systemic veins, in consequence, become engorged, and this engorgement is still further increased when the tricuspids give way. We have now hyperæmia and increased blood tension behind the mitral as far as the systemic capillaries; and, on the other hand, anæmia and diminished tension in front of the mitral as far as the systemic capillaries. The left ventricle has, in fact, a diminished resistance to overcome. Some have fallen into the error of supposing that the resistance can work back from the mitral orifice through the lungs to the systemic capillaries, forgetful of the fact that the systemic veins can more than hold all the blood in the body. As a matter of fact, the effect of ligaturing both the venæ cavæ (that is, of producing the greatest possible obstruction to the venous flow) is to cause, with an increasing venous pressure, an immediate fall of arterial pressure, because the arterial blood rapidly rushes into the veins, and is not correspondingly replenished from the left ventricle. Indeed, this is a danger against which there is a constant fight in mitral disease. Owing to the difficulty at the mitral orifice, the systemic arteries are apt to be starved of blood, and, to prevent their already insufficient supply passing with fatal facility into the veins (where it is useless for nutrition), the arterioles contract. This, I believe, explains the somewhat high tension sometimes present in mitral disease. We have, then, ever to keep before us the fact that in mitral disease the resistance in front of the ventricle is actually diminished, except in those cases where there is considerable compensatory vaso-constriction, and that the weak radial pulse which characterises the later stages of the disease is due not so much to a failing left ventricle as to the accumulation of blood in the lungs and systemic veins.

Hence in treating mitral disease we must endeavour to combat, step by step, the tendency of the right heart to be engorged. Directly it experiences a difficulty in emptying itself the nutrition of the entire organ must suffer, for almost all the venous blood from the cardiac walls empties itself by means of the coronary sinus into the right auricle, and when the diastolic tension in this chamber becomes unduly high, this venous return is impeded, the nutrition of the heart muscle is impaired, and the morbid process, termed brown induration, is set on foot. Further, right heart engorgement, leading as it does to general venous engorgement, interferes with the nutrition of the body at large, and thus again the cardiac nutrition suffers. From all of which it follows that the philosophy of our treatment of chronic mitral disease is essentially bound up in the dictum: facilitate the work of

the right heart, in other words, promote the pulmonary circulation.

Let us now briefly inquire what are the chief accessory forces of the circulation. First and foremost we must place the respiratory movements which help to drive the blood from the systemic veins, including those of the cardiac muscle, into the right heart, and from the right heart through the lungs into the left heart; and which further pump the lymph from the peritoneum into the pleuræ, as well as through the entire pulmonary tissues. Wherefore it follows that whatever interferes with the respiratory movements—drowning, suffocation, lung disease—dams the blood back upon the right heart and its afferent veins, as shown by *post-mortem* examination. Anyone may prove the truth of this by holding his breath for a time, when the veins of the neck will swell and violent epigastric pulsation ensue, telling of the difficulty which the right heart is experiencing in emptying itself.

Clearly, then, all cases of chronic mitral disease should be put through a systematic course of respiratory exercise, or, if we prefer the term, pulmonary calisthenics. The patient must be taught to breathe both by the diaphragm and by the ribs, and to inflate his lungs to the utmost. If he has anything of a voice he should learn to sing. I know few exercises more healthful than singing, not only on account of its beneficial effect on the circulation, but because of its influence on the development of the lungs. Talking, again, is a good exercise for the mitral patient. It not infrequently happens, as Sir William Broadbent tells us, that clergymen, who are so breathless from heart disease that they can scarcely mount the pulpit, find their breathlessness vanish during the course of the sermon. I can have no doubt that the relief they experience is traceable to the deep inspirations which a preacher has to take in order to make his voice heard over a large building. While talking and singing are beneficial, the patient should be cautioned against violent respiratory efforts which, as is well known, cause a distension of the systemic veins. Hence he should be taught to deliver his fortissimo notes without strain. For this reason the blowing of wind instruments is hurtful.

It is manifest that in order to get free respiratory movements, all impediments to the free play of the diaphragm and of the ribs should be removed. I shall here refer to two such impediments only—obesity and tight lacing. The former acts injuriously in heart disease in several ways. If there is too much subpericardial fat, the contraction of the heart is hampered; then, again, the increased body weight entails increased effort in moving about; further, and this is what concerns us most, obesity hampers the respiratory movements. A large deposit of fat in the abdomen interferes with the free play of the diaphragm, and thus impedes the pulmonary circulation. Hence there arise pulmonary and general venous engorgement, and this explains, I believe, the tendency of obese patients to bronchitis, itself a serious complication of mitral disease. Wherefore abdominal obesity acts injuriously in a twofold way, and if a stout patient comes before us with mitral disease, we should at once set to work to reduce his weight.

Then as regards tight lacing. It scarcely need be pointed out how fatal a practice this is in the subject of heart disease, yet it is very common among such patients. Some of the most characteristic mitral presystolics I have heard have been in young women who were suffering as much from constriction of the waist as of the mitral orifice, and my efforts at persuading them to abandon this stupid practice have frequently been unavailing. I have no hesitation in saying that all women suffering from mitral disease should abandon stays altogether. Accentuation of the second pulmonary sound is, in my experience, common in women who have no actual heart disease, and I cannot but think that the heightened pulmonary tension in these cases is due to the imperfect respiratory movements resulting from tight lacing.

I have thus far assumed that the lungs are healthy, but pulmonary disease frequently occurs in mitral disorder. Against such disease we should ever be on our guard, since it still further increases the tension in the right heart, and aggravates that very condition which it is the great object of our treatment to prevent. The obstruction to the pulmonary circulation in lung disease is due to two main causes: (*a*) To the interference with the respiratory movements, a fact not sufficiently insisted on in the textbooks. In all lung disease these movements are restricted. The need of pulmonary exercises is therefore all the greater when lung disease complicates mitral trouble. In some cases, for example, in emphysema, we can materially help the patient by pressing up the diaphragm. A plan I frequently adopt is to flex the legs on the thighs, and then, while the patient is breathing out, forcibly to flex the thighs on the abdomen. In this way we are able to get rid of a quantity of residual air, and thus to promote a deeper inspiration than usual, this fuller respiratory movement accelerating the circulation from the right to the left heart. (*b*) Lung disease also impedes the pulmonary circulation by narrowing the pulmonary vascular bed. The narrower the latter the greater the difficulty which the right heart experiences in driving the blood through to the left, and *vice versâ*; the wider the pulmonary bed the easier is the work of the right heart. It therefore follows that in all cases of mitral disease we should develop the patient's lungs to the utmost. I cannot well exaggerate the importance of this. The respiratory exercises mentioned will go a long way in this direction.

We have now to consider the second great accessory force of the circulation—namely, muscular contraction. All the veins which pass through voluntary muscles are provided with valves; consequently every muscular contraction drives the venous blood onwards, as is well shown in phlebotomy, the blood welling out in increased quantities every time the muscles of the forearm are brought into action. Muscular contraction similarly favours the lymph circulation, for the lymphatics, like the veins, are provided with valves—indeed, at much shorter intervals—and it would further appear that the muscle sheath plays the part of a lymph-pump when the muscle contracts.

We have, then, in voluntary muscular contraction an admirable means of helping the venous and lymphatic circulations which in mitral disease tend to stagnate. The extra work thereby put upon the left ventricle is not so injurious as might be supposed, for, as I have already insisted, the systemic arterial resistance tends to be diminished in mitral disease, and we need, therefore, have little fear in increasing that resistance, notably in mitral obstruction; in regurgitation, however, the increased left ventricular action entailed by muscular exercise may help to increase the amount of blood regurgitated. It is nevertheless certain that in all but the worst cases this disadvantage is more than compensated for.

Muscular exercise benefits, it should be noticed, not only by favouring the systemic venous circulation but by increasing the respiratory movements. It, moreover, leads the patient to live in the open air to a greater extent than he otherwise might do. This tends to promote the health of the body in general, and of course the heart benefits.

We must be very careful, while prescribing muscular exercise, not to allow free thoracic movements to be interfered with. We know that all strain is injurious in heart disease. How does it operate in the mitral form? Not so much, as will be seen from what I have said, by imposing extra work on the left ventricle, but rather, I believe, by causing fixation of the chest, which leads to stagnation of blood in the lungs and systemic veins. Whatever exercise, therefore, is taken, the patient should be cautioned never to fix his thoracic muscles, but in any act involving the slightest effort to keep up the rhythmic respiratory action of the thorax.

Again, we must of course be entirely guided by observing the effects of exercise—above all, its effect on the pulse, and we must be very careful to begin cautiously, gradually educating the heart and lungs to the new order of things.

Bearing these precautions in mind most physicians will be able to suggest exercises suitable for individual patients. I have for some time been making experiments with a view to discover the most serviceable ones, but my results are not yet sufficiently definite for publication.

In those cases where the disease is too far advanced for the patients to take free exercise, we may employ massage and electricity. A combination of these with respiratory exercises and mild gymnastics often gives the most happy results. It is obvious that massage and electricity are important aids to the venous and lymphatic circulations, the

former by squeezing the blood and lymph onwards, the latter by causing muscular contraction; and it is surprising that they have not been more largely resorted to. In employing electricity care must of course be taken to secure rhythmical contraction, since a prolonged contraction, by inducing a protracted narrowing of the venous bed, must necessarily impede the blood current.

A SUCCESSFUL CASE OF ANASTOMOSIS OF THE SMALL INTESTINE.[1]

By HARRISON CRIPPS, F.R.C.S.,

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F. P., aged 35, was admitted into St. Bartholomew's Hospital in February, with the following symptoms. For the last three years she had had gradually increasing loss of blood at the monthly periods; during the last six months the loss had lasted for two or three weeks continuously, with seldom more than a week's interval. She had become very weak, and quite unable to do her housework.

Present Condition.—Is very pale and anæmic, both legs considerably swollen. Rising to the umbilicus is an oval elastic swelling. *Per vaginam*, some hard, displaceable masses can be felt in Douglas's pouch. Bimanually these can be identified as continuous with the abdominal tumour. A sound passed 6½ inches. Prolonged rest having been tried without benefit, an operation was decided upon. The tumour was found to be a large multinodular fibroid growing beneath the broad ligament. The tumour was shelled out, the uterine pedicle being secured with the *serre-nœud*. The patient did well till the eighteenth day, when she was suddenly seized with symptoms of acute intestinal obstruction.

In Mr. Harrison Cripps's absence the abdomen was reopened by Mr. Bruce Clarke, who found some intestine adherent to the under surface of the scar. In separating this, owing to the firm nature of the adhesions, the intestine was unavoidably damaged to such an extent as to render its return unsafe, while the patient was so collapsed, and the intestine above so distended, as to make an excision of the implicated part inexpedient. The damaged intestine was therefore stitched to the skin at the lower part of the wound and opened. The immediate effect of this was to relieve the symptoms of obstruction, and the patient recovered from the operation. Two months later she was still passing the whole of her motions through the wound. There were two openings about an inch apart, from both of which the fæces escaped. The motion was very ill-digested, and always mixed with a large quantity of bile. The patient's condition was most deplorable, and by no device could the part be kept clean or dry. The skin over an area of 5 or 6 inches round the openings was excoriated, bright red, and excessively tender. The patient was rapidly emaciating. Two separate attempts were made, with an interval of three weeks between them, to close the fistulæ by a plastic operation. Both failed. The adherent bowel, though freely separated on each side of the opening, was so atrophied and shrivelled, that when united by Lembert sutures its calibre was no more than that of a No. 12 catheter. Indeed, after the second operation, it was less than this. On each occasion, on the third day after operating, the stitches gave way, and the condition was worse than ever. It was obvious from the rapid emaciation of the patient, and her extremely feeble condition, that she would shortly die of inanition. It was under these circumstances that it was determined to give her such a chance as a resection of the intestine would afford. The following operation was performed. The patient was prepared by being kept for two or three days on milk and broth diet. A mild purge was then given, after which no food was given by the mouth for twenty-four hours previous to the operation. Owing to the constant leakage of fæces and bile, no proper antiseptic preparation was possible. When the patient was under the anæsthetic the fistulous opening was firmly plugged with sponges, one being passed upwards into the bowel and another downwards. This effectually stopped the leakage, and gave an opportunity for thorough cleansing.

An elliptical incision, 4 inches in length, was made into the abdominal cavity, so as to include both fistulous openings, together with the cicatricial tissue and about half an inch of skin on each side. On lifting up the oval portion of the abdominal walls thus excised a coil of small intestine, close to the duodenum, was found to be the adherent portion. On tracing the intestine downwards at a distance of 6 inches from the fistulous opening a second firm adhesion to the uterine pedicle was found. This, doubtless, was the point of original obstruction. After separating this lower adhesion the bowel was so torn and thin at the spot that it could not safely have been left. The intestine, therefore, was gently clamped over a thin sponge a few inches below this point, and was also clamped a few inches above the fistulous opening; the intervening portion, 11½ inches in length, was then cut clean out. Maunsell's excellent method of anastomosis, with some modification, was adopted. The abdominal cavity being carefully packed with sponges, the two free ends of the bowel were thoroughly washed out and cleaned. Two temporary silk ligatures with long ends were employed to fix the position of the bowel and bring the two ends into apposition. These ligatures included all the coats of the bowel, the one at the mesenteric attachment, the other opposite to it. A longitudinal cut, ¾ of an inch in length, was made at three inches from the divided end of the upper segment, this incision being opposite to the mesenteric border of the bowel. A pair of pressure forceps passed through this opening and out at the cut end, seized the temporary ligatures, which were then drawn through the longitudinal incision. The cut ends of the bowel following the ligatures were thus invaginated and drawn out at the same opening. The ends accurately adjusted, peritoneal surface to peritoneal surface, were sewn together with fifteen interrupted sutures, which were cut off close to the knots. The joined ends were then drawn back and the longitudinal slit closed with Lembert sutures. A ring of sutures, including only the peritoneal coat of the bowel, was now put round the line of junction as an additional security. The divided portion of the mesentery was brought together by a double row of sutures on each side. In this way absolute co-adaptation of adjacent peritoneal surfaces was obtained, and the weak spot at the point where the mesenteric border of the bowel was invaginated was completely enclosed. This could not have been so satisfactorily accomplished if the stitches had been passed through the whole thickness of the mesentery as usually done. For the sutures the finest silk was used, which was obtained by unravelling No. 6 twist into its three primary threads.

For some days the patient was extremely weak, with a pulse of 150. The temperature remained normal, and she suffered no pain. She was fed chiefly by nutrient injections for a week, but on the third day commenced small quantities of milk and water. On the fourth day she had a fluid action from the bowels, the first for some months. After this she had a good action daily. She was allowed up at the end of a month, and was discharged from the hospital well seven weeks after the operation. (The patient, in excellent health, was shown at the meeting.)

Remarks.—When operating on a case of intestinal obstruction it may happen that the trouble can only be remedied by destroying the continuity of the gut. If the patient be in good condition, and the bowel not much distended, it may be proper, after resecting the part, at once to unite the divided ends, and return the bowel into the abdominal cavity. So far as I have observed in practical surgery, the opportunity for such immediate radical treatment is exceptional. The prime consideration in most cases is how to give prompt relief to the obstruction, and tide over shock which threatens to be fatal in a few hours. It is of little benefit to perform the operation of anastomosis, with its delicate and accurate stitching, merely to demonstrate on the morrow's *post-mortem* that the bowel is impermeable to water. It is impossible to conceive a more inappropriate time for performing what must necessarily be a prolonged operation than when a patient is suffering from complete obstruction. The great distension of the abdominal viscera adds considerable difficulty to the operation, and causes the intestine to crowd out of the incision; while the vomiting and shock incidental to the obstruc-

[1] Read before the Medical Society of London.

tion has so reduced the patient as to leave but a perilous margin of vitality.

Another, and perhaps stronger objection to performing an immediate anastomosis is the relative condition of the bowel above and below the obstruction. Above, the gut is distended and paralysed, while below it is empty and contracted by the action of the circular fibres. The paralysed condition of the bowel above renders it powerless to pass its contents into the contracted portion below. The symptoms of obstruction therefore continue.

I believe, save in exceptional circumstances, it is better surgery to make a temporary artificial anus above the obstruction than to perform an immediate resection, and join the divided ends. Such an artificial anus gives immediate relief to the obstruction. It affords time for the distended and paralysed bowel to regain its power. By waiting a few days or weeks the patient can be carefully prepared, so that there is no food or fæces above the portion to be united, and the operation can be undertaken with far better prospects of success than would have been possible as a primary operation.

As to the best method of uniting the bowel, there is much divergence of opinion, and a far larger experience than is at present available is necessary to decide the question. At present, there are two main principles in vogue: the one is to employ absorbable bobbins, tubes, etc., within the canal of the bowel over which the intestine is sewn; the other is to dispense with these accessory articles. Those who advocate their use believe them to present among others the following advantages:—That they facilitate the suturing, thus shortening the length of the operation; that they make the union more accurate; that they keep open for the time the calibre of the bowel at the sutured parts. I do not, however, agree with these views. The adjustment over the plates, if done so as to afford perfect security, requires quite as many sutures as when no plates are employed, so that if the suturing be done with equal care by both methods time is not saved. As to the theory that the tubes keep the canal patent, facilitating the passage of fæces, it seems quite as probable that an opposite effect is produced by arresting the peristaltic action. The chief objection to the tubes, however, seems that, owing to the tuberosity they produce, all the sutures are on the stretch. This is not the case where no tubes are used, and it is astonishing to see the small size to which an empty portion of intestine will contract in the living body. This contraction takes off all tension from the stitches, and allows them to become nearly buried at once in the peritoneal coat. As further information is still required as to the results, immediate and remote, of intestinal anastomosis, and as to the best time and method of operating, I have ventured to bring this case before the Society as a successful instance of a secondary operation performed without the employment of tubes or plates.

I am indebted to Mr. Sloane, my house-surgeon, for the notes of the case.

HISTORY OF AN OUTBREAK OF OPHTHALMIA IN A GOOD CLASS BOARDING SCHOOL, WITH REMARKS.

By SIMEON SNELL, F.R.C.S.Edin.,

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Records have often, from time to time, been made of epidemics of ophthalmia affecting institutions, but these have, generally speaking, if not always, been those of pauper or low grade schools. A history of an epidemic implicating the boys attending a school not far removed from a public school, cannot, perhaps, fail to be of interest, especially as there are many points connected with it which may be of service to any having to deal with such an outbreak in the future.

When the discussion took place at the Ophthalmological Society a short time since, it was premature, in the opinion of those who had seen most of the outbreak, to discuss the matter, and it was further feared that it might be prejudicial to a school which had already suffered sufficiently. These were, at all events, the reasons which prevented my contributing to the discussion what is here written. Now that the epidemic is practically over, its history can be given with the cordial co-operation of the medical officers, Drs. Jalland and Evelyn, who have borne the brunt of a very anxious time, and with the knowledge of the school authorities, who can only gain by having set forth the care, regardless almost of expense, with which they have endeavoured to discharge their duty.

Towards the middle of August, 1893, I became aware, in consequence of one of the boys being brought to me, that the scholars at a school in Yorkshire were, or at least some of them, suffering from an affection of their eyes. The boy in question had been among these. His condition was similar to that which will be mentioned presently as being found in the others.

Shortly after this I was requested to inspect the school and the boys, in concert with my friends Drs. Jalland and Evelyn, the medical officers to the school. This I accordingly did, and on the evening of August 23rd we inspected the school premises and examined several of the boys. The next day we examined the remaining scholars. The visits were thus arranged to not only give ample time for a thorough inspection of the school and boys, but for a complete discussion of the outbreak with the medical officers. The condition of things found and the circumstances which led up to their prevalence in the school may be thus stated.

In the preceding April (16th) a boy was taken to Mr. Jalland, suffering from ophthalmia. Other cases were at this time noticed, and were isolated as they arose; the boys being transferred to a house which is reserved for those affected with any infectious disorder. The eyes were bloodshot, but with little perceptible discharge. Several boys at one time or another suffered in a similar way; perhaps thirty altogether were affected. They did, however, to all appearances recover quite well.

It was at this period believed that one or two of the boys brought the disease into the school, but in the light of subsequent events it may be doubted whether this was the case or whether one or the other was merely the first to show evidence of the affection.

After the occurrence of ophthalmia in this way, the time was drawing on for the dispersion of the boys for the vacation, it being one of those schools which adhere to the old-fashioned system as to holidays. In consequence also a good deal of the prevalence of influenza they were sent home a week earlier. This would be in the middle of June. On their reassembling in the early part of August, Mr. Jalland soon detected what he considered an unhealthy condition in some of the boys' eyes, and had them again isolated. It was in great part owing to his representations of the necessity of an examination of the whole of the boys that I was requested to co-operate. It should be added that some of the masters had been sufferers at the same time as the boys.

As the result of the examination it may be said broadly that a mild form of follicular conjunctivitis was found to be very prevalent. The vesicles were situated chiefly on the inner surface, which was also reddened, of the lower eyelid, in some cases running the greater part of the length of the lid, like a chain of pearls. In but a few cases was the retrotarsal fold much involved. The upper lids were less affected; when they were they had lost their polish, and appeared often velvety, or in some instances as if the finest sand had been sprinkled on the surface; there was also in some cases an increased vascularity. There appeared in all an absence of perceptible discharge. No discomfort was complained of, and without everting the eyelids hardly a case presented anything abnormal. Altogether eighty-four boys were examined. With the exception of two, all were boarders, and comprised the entire number of pupils at the school. One of the new boys was perhaps the most affected of any that were seen, and it appeared almost certain that he had entered with the condition present. Of the whole number of the boys, there were thirty-eight (Class 1, or healthy) who could be regarded as healthy, but there were as many as thirty-nine (Class 2, or suspicious) whose eyes, though not in many cases showing any very marked departure from a normal condition, yet under the circumstances it was impossible to regard as quite

well. These cases varied a good deal, and it appeared that some at all events on a subsequent examination would be found to be fit to be placed among the healthy ones. There were seven cases (Class 3, unhealthy) in which the condition was marked. In five the condition of follicles before referred to and the velvety state of the lids were very distinct. In no case, however, could we make out the presence of what could positively be stated to be sago-grain granulations.

All the boys had a well-cared-for appearance, and evidently were in good health. They were a particularly hearty-looking lot of lads, even for schoolboys, and there was reason for believing that their feeding was neither unsuitable nor stinted.

The school premises were commodious, and on the whole suited for the purposes of a school. Some of the class rooms were quite recently built. The drainage had also in the previous year been overhauled. There were unusually good playgrounds or fields attached to the school.

The sleeping accommodation was carefully gone into. The boys occupied thirteen bedrooms, and the lowest cubic space allowed in different rooms were 506, 518, and 528, whilst others reached as high as 668, 775, and 796, but the greater number had a space of between 550 and 600. Now, though this space may be passed as not inappropriate for healthy lads, it was pointed out that the boys in the condition we found them could hardly be regarded as healthy, and that, therefore, efforts to provide increased cubic space should be made.

The nature of the affection with which we had here to deal will be discussed further on, but it may now be stated that we reported to the school committee that the disease did not then, nor at any time, appear to have assumed an acute or bad form, and that the cases generally had been of an ill-defined type, and their recognition was hardly possible except by examination. The question of the drainage was referred to, and mention was made to the importance of hygiene in the eradication of the affection from the school.

Suggestions in our report were also made under the following heads:

1. A weekly examination of the scholars should for the present be made. This would enable the boys as they recovered to be drafted from one class to the other, and it would lead to the detection of fresh cases, and admit of their immediate treatment.

2. That the boys, as above classified, should be separated in the house for sleeping purposes. As the boys of Class 3 recovered they would pass into the next class (Class 2), rather than going at once for sleeping among those who were believed to be healthy (Class 1).

3. That it was important to make each boy use separate water and towel.

4. The lavatory basins were also recommended for the present to be dispensed with: the boys to use the running water from the tap.

The importance of fresh air and exercise was insisted upon, and the emptying of the school rooms after lessons, and leaving the doors and windows open was advised, so as to let fresh air freely circulate into the rooms.

The treatment generally suggested was for those in Class 2 a boric acid lotion, and for those in Class 3 the same, with chloride of zinc added to it in weak strength. A solution of argent. nit. was ordered also for the worst cases. This was, however, soon discontinued, as it somewhat interfered with the regular school work.

The suggestions as just mentioned were speedily adopted by the committee of the school, who, it is needless to state, were extremely anxious that an epidemic which was calculated to be damaging to the school should be got rid of as quickly as possible. The periodic examination of the boys was with most praiseworthy zeal carried out by Dr. Evelyn. We were in frequent communication, and after a time, in consequence of his arriving at the conclusion that the number of boys affected, instead of decreasing, had become increased, it was arranged that we should again together inspect the whole of the boys.

The inspection of the school was made on the evening of October 27th, and the boys were examined on the morning of the 28th. Moreover, in addition to the boys, the whole household, including teachers, matron, and servants, were examined. This brought the total examined up to 102. Several among the teachers were found afflicted in like manner to the boys. Among the servants also cases were found, and these were invariably among those whose duties took them into the boys' apartments and who were in their work thrown among the boys and their belongings. The healthy were those confined to the kitchen and who were not brought at all into contact with the scholars.

In our report dated October 30th we stated that, notwithstanding the measures that had been taken, the condition of the boys was not as satisfactory as when we had examined them together in August. Thus, taking the boys again in classes as had been done previously, we found that Class 1, or the healthy class, was greatly diminished (13); that Class 2, or the suspicious class was smaller (19); and that Class 3, the affected class, had become decidedly larger (41). This represents the numbers the first week in November when some of the boys had gone to their homes. It was pointed out that the number of boys in the school to whom under the circumstances an absolutely clean bill of health could be given was very small, whilst in those affected the nature of the malady was more characteristic than on the previous inspection. The freedom from discharge which had been noted before was still true at this time. The absence of anything like acute cases was also persistent.

The diagnosis, at all events at the outset, of follicular from true granular ophthalmia is admitted to be difficult, if not impossible. The opinion formed of this outbreak of ophthalmia from the first was that its type was that of simple follicular disorder rather than the more serious granular or trachomatous conjunctivitis. The situation of the follicles chiefly on the lower eyelids, the absence of acute cases, and even in the large number altogether affected, of any implication of cornea however trifling, the freedom in all from appreciable discharge, and the mild character of the affection were all features that lent force to the belief that the epidemic was follicular. It was, however, quite clear that in spite of the little appearance of discharge, cases were proving contagious, or that there were local conditions favourable to the propagation of the disorder, or that both influences were in play.

After careful consideration we decided to recommend the committee to disband the school as soon as practicable, and to adopt means during the boys' absence for the thorough cleansing of the premises. The measures which it had been possible to adopt at the school had been carried out, and now it had become necessary to pursue these methods still further by preventing the crowding together of the boys. Without a radical measure like this it was pointed out that it was to be feared that the affection might get a firmer hold, and become more difficult of eradication. It was called for alike in the interests of the boys and in those of the school. Under even favourable circumstances the disease was often intractable.

Our suggestions were placed under the following heads:

1. That it was desirable to disband the boys as soon as possible. (It was suggested that they should reassemble in the first week in February, thus giving a holiday of ten to eleven weeks.)

2. That each boy should take to his parents a note stating that, although to casual observation his eyes might appear sound, they had, nevertheless, been affected with ophthalmia, and, in the opinion of the medical officers to the school, required treatment for the same.

3. That a boy unfitted to be an inmate of this school was equally unsuitable for admission to any other until the condition of his eyes had been relieved.

4. That no boy should be allowed to return to the school without a satisfactory medical certificate; the same to be forwarded a week before the opening of the school, to enable it to be submitted to the medical officers who had notes of the present condition of each boy, and would know how far the certificate in any given case would meet the requirements.

5. The absence of the boys should be taken advantage of for a thorough fumigation of the establishment, taking away the carpets from the boys' rooms (not to be replaced), the stoving of the bedding, and the overhauling of the ventilation of the bedrooms, etc.

6. The servants should, if it were desirable to keep them on the premises, occupy separate bedrooms after the boys had left. Anyone still showing evidence of the affection should be got rid of some time before the reopening of the school. It was desirable to put the servants under treatment.

This last remark also applied to several of the masters. It was further pointed out that it would be desirable to adopt treatment which would be less incompatible with school work than had hitherto been the case.

It may be supposed that the subject of the boys themselves proving centres of infection to their friends if they returned home was fully discussed before the recommendation to disband the school was made. The absence of discharge prevented us attaching great danger to their doing so. It is, perhaps, a truism that in conjunctival cases the degree of contagion is proportionate to the amount and character of the discharge. It was further to be remembered that each of these boys would at his home occupy a separate bedroom, especially if the matter was suggested to the parents. That the opinion we formed was a correct one has, I think, been proved by subsequent events. Since the period spoken of I

have had several boys more or less under my immediate care at their own homes, and yet have not met with cases that have been affected in consequence; nor in those which I have been able to follow elsewhere have I learnt differently. I have inquired also of my friends, and they have given me a similar account. In fact I have, after observation and inquiry, been unable to find an authenticated case in which those who returned to their homes were the means of spreading the disease in their families. In our report we urged the importance of drawing the attention of parents to the condition of the boys' eyes because many were of such a nature that, taken separately, they would readily be pronounced to be free from disease, but, viewed as we saw them collectively at school, their condition was one that called for notice. It was suggested to the committee that by adopting the proposals mentioned, it was quite probable the school would reassemble as usual at the date given.

The school committee were perhaps not unnaturally, it soon appeared, very averse to disbanding the school in the way suggested. In the case of certain boys especially who were preparing for examinations the proposal seemed a hardship. It may be stated that for these, few in number, arrangements could have been made which would not have interfered with the plan being adopted for the school generally. It was, however, decided by the committee to ask the advice of Mr. Jonathan Hutchinson, and this gentleman, who had previously seen one of the boys, visited the school. I understand that after inspecting some of the boys and the school premises, he gave it as his opinion that the affection was follicular ophthalmia, leading to granular eyelids, that it was propagated by contagion, and that atmospheric and other influences exerted no effect upon it. Further, he deprecated sending the boys to their homes, as they would be sources of infection to their friends, and because it would not be possible to secure proper treatment in their homes. It would be necessary for some of the boys at least to remain over the vacation for treatment.

The committee decided to act upon this advice. It was a matter of regret to me that an opinion so opposite to the one that had only a few days before been given by me in consultation with the medical officers to the school, after repeated examination by us of the whole of the boys, as well as of the other inmates, and after an acquaintance with the whole of the epidemic, should have been given and accepted without a conference as to the grounds on which our advice had been based over and above the bare statements in my reports.

In a circular issued to the parents the committee at this time represent Mr. Hutchinson as saying, "All parents deciding to remove their boys, either permanently or for the winter vacation, should be informed that however apparently slight the symptoms, it is imperatively necessary that adequate measures be patiently carried out. The disease is very liable to lapse into a chronic form, and it is at all stages contagious. If uncured it may easily cause weakness and irritability of the eyes which may last for years. These considerations are of much weight in support of the recommendation that all the boys affected should remain in the city, where they could have good professional treatment, together with specially adapted methods of instruction. No boy suffering from the disease in any form should be sent to any other school, nor, indeed, be permitted to mix with others without precautions."

From this time my connection with the body of scholars ceased, though up to the time of writing, by means of boys and other inmates of the establishment who have been from time to time under my immediate observation, and through the kind courtesy of my friends Drs. Jalland and Evelyn, my knowledge of subsequent events has been tolerably complete. Recently, also, I have had another opportunity of examining several of the boys and the school premises.

It appears, then, that the division into classes, as mentioned in my reports, was adhered to. Those boys who were well were drafted from the school house into another building, and isolated. Those affected were kept in the old school buildings for treatment, which consisted principally of quinine lotion and applications of solutions of nitrate of silver and chloride of zinc. Many of the boys were at once removed by their parents, and others returned home at the Christmas vacation. At this latter time, those remaining under treatment, about thirty in number, were transferred to Scarborough. An hotel was taken for them; each boy was provided with a separate bedroom, and the treatment was continued. School reopened in the end of January. The new boys, or those who had been at home, went back to the school house. The others remained at Scarborough. Some of the boys who returned from home with certificates were nevertheless rejected by Dr. Evelyn, whose opinion as to their unfitness was fortified by that of Dr. Tempest Anderson, who had from time to time seen several of those affected.

At Scarborough improvement in the boys' condition was brought about. The sea air was distinctly beneficial. If, however, the course I had suggested had been adhered to, it would have been unnecessary, and considerable expense would have been saved.

These divided establishments went on until early in April last, when most of those who had been retained at Scarborough had recovered, and the time had arrived when it was necessary, if possible, to have all the boys once again together. Six of the worst of those left, as well as a new boy, about whose eyes Dr. Evelyn had had some question at one time, were taken to see Mr. Nettleship. He considered them free from contagion at that time, though a certain amount of redness or thickening, or roughness of the conjunctiva might remain for some time to come. He did not, however, think it would be wise, and possibly not safe, to return these, and also the number, nineteen or twenty, who had been at Scarborough, into the body of the school immediately as healthy. They might attend school with the healthy boys, but still sleep separately in a different dwelling, if possible. He advised the continuation of the examination of these boys' eyelids once a week, and the periodical inspection of the healthy boys should be gone on with. He thought that if the measures which had been adopted were continued until the summer holidays, the school would assemble on its normal footing without any isolation of the boys.

The opinion expressed thus by Mr. Nettleship is quite in accordance with that held out by me in association with Drs. Jalland and Evelyn in the early period of the outbreak. An opportunity was also afforded me of seeing these same boys (as well as others), shortly after they had been examined by Mr. Nettleship. I can, therefore, quite concur in the opinion he gave as to their then condition. The state was a widely different one from that observed in the preceding October, and the follicles present were not more than frequently observed in eyes regarded as healthy. In all the boys seen by me then, and at other times, who had recovered, no evidence was visible of cicatrical changes in the conjunctiva, and from first to last there has been an absence of acute cases with a really noticeable amount of discharge, nor have there been any corneal complications. Further, no case has at any time presented to my eyes definite evidence of trachoma. I must take it, therefore, that difficult as it was in the outset to say positively that such a condition as was met with in these boys would not develop into trachoma, yet that later events have justified the opinions expressed by myself and the school medical officers.

Follicular conjunctivitis is often a protracted malady, and Fuchs, whose description of the affection is one of the best with which I am acquainted, remarks[1] that "the follicles ultimately disappear without leaving a trace behind; the disease, therefore, in spite of its long duration, has a good prognosis, in that it is cured without leaving any sequelæ. In this particular follicular catarrh is essentially distinguished from trachoma, which, in its external appearance, bears a great resemblance to it, but which, however, always leaves permanent changes in the conjunctiva."

He further says that "the etiology of follicular catarrh has not up to this time been established. By some contagion, by others miasm (vitiated air) has been assigned as a cause of the disease, without any certain proofs being brought for either one view or the other."

There are, however, many circumstances connected with this outbreak that merit consideration:—

1. Previously to any known eye trouble many of the boys had been afflicted with influenza, which was also at the same time rife in the city.

[1] *Textbook of Ophthalmology*, p. 47.

2. That ophthalmia was prevalent during 1893 in the city, and that in a girls' school, separate from but with intercommunication with our school (brother and sisters), several were also afflicted, and the school was disbanded.

3. The early cases may (*a*) have been mild instances of ordinary catarrhal ophthalmia, and vesicular conjunctivitis, as has happened before, may have developed therefrom; I did not myself see the cases at the first outset. (*b*) The early instances need not have been imported, but have been merely an evidence of the prevalence of the disorder, the more marked cases at that time attracting attention.

4. That at the time of and previous to the outbreak, the drains were open in close proximity to the schoolhouse, the city authorities having the streets up for the purpose of a new drainage system. I am informed that people in the city did attribute their ailments to the smells occasioned by these open drains.[2]

5. The absence of any very gross hygienic defects in the school. The washing arrangements with the epidemic once started were favourable to its progress. Ventilation of some bedrooms was defective, and the cubic space allotted to each boy could have been in some instances larger with advantage. In all these internal matters, however, the school would compare well with others. No source of irritation was discovered when looked for in wall papers or paints.

6. That in spite of hygienic measures, separate towels, etc., the disease spread widely, indicating either in spite of the absence of discharge, that infection was playing a part, or that atmospheric agents (miasms) were at work, or both. Removal from the place facilitated recovery, and did not lead to infection in others.

7. That the outbreak, mild in character, unaccompanied by noticeable discharge, or much visible redness, has been of follicular type, and in cases which have recovered no changes in the conjunctiva has resulted.

In addition to these cases many others of the same character from other schools have come under my observation. In one family, a large one, living in a small house, with distinct overcrowding, many members have suffered. They had been to three different schools. From atmospheric or other causes conjunctival troubles in different parts of England appear last year to have been more than usually frequent.

A word as to the kind of treatment. Experience has shown that mild as opposed to more stringent treatment is the better. It was my belief the applications of silver nitrate rather retarded than promoted recovery, as did also other like remedies. Fresh air and the best hygienic surroundings were of the first importance. In dealing with such an outbreak, it is desirable to get the boys away from the school premises where they are all associated together. For boys of the class we are dealing with, sending them home as was suggested is, I believe, the right thing to do. In a pauper school it would be different, as, indeed, would be the case if true trachoma had to be dealt with.

I have since inspected the school premises, and ascertained that the committee have adopted the suggestions given in our reports, and have disinfected and fumigated the place. Distemper has taken the place of papers on the walls except in a few places where paint has been used. Altogether the committee have spared no expense to put the school premises into the best possible condition, and have been repaid by a loyalty and *esprit de corps* on the part of the parents and boys of such a degree, that the school has passed through its troubles with, at the present time, little or no diminution in the numbers of its scholars.

My thanks are due to my friends, Drs. Jalland and Evelyn, for much courtesy, and the latter gentleman in particular, on whom the burden has chiefly fallen, has deserved the highest thanks of the school authorities for his skilful and zealous services.

[2] The medical officer of health, in his report, May, 1893, speaks of the subsoil as being damp and unwholesome, with but very little natural drainage, and the sewers as liable to being flooded by a rise in the river. Again, he says the inhabitants suffer from those diseases which are characteristic of a damp climate and a cold and unwholesome soil.

Mr. Henry Harben, J.P., L.C.C., has promised to give £4,000 for the purpose of building a convalescent home near the seaside for the working men of Hampstead.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

LOWER MOLAR ABSCESS.

A case having some points of resemblance to that recorded in the British Medical Journal by Dr. Maclaren has lately been under my observation.

S., a man aged 37, consulted Mr. Pegler, of Radnor Place, in December, 1893, complaining of swollen glands under the angle of the jaw on the left side. Owing to the presence of decayed molars and bicuspids on that side and in the absence of any other cause, he was advised to see a dentist; he however omitted to do so. When next seen by Mr. Pegler, in July, 1894, he was found to be suffering from enlarged glands about the angle and rami of the jaw on the same side, and from incipient peritonsillar abscess. The enlarged glands had become acutely inflamed when I saw him, a day or two after he consulted Mr. Pegler; and I found on the left side of the lower jaw remains of two molar and two bicuspid teeth, represented by their roots alone: a large alveolar abscess, from which pus welled up on pressure, being connected with these roots. The wisdom tooth was semi-erupted, half buried beneath the ascending ramus, but quite free from decay. There was very great congestion of the surrounding gums, due to long continued dental irritation. The roots were excised, and their removal gave vent to a large quantity of ill-smelling pus.

The wisdom tooth was removed under an anæsthetic with great difficulty, the inflammatory infiltration into the maxillary muscles being such as to prevent separation of the jaws by more than half an inch. A week elapsed between the extraction of the stumps and that of the wisdom tooth. During this interval suppuration in and round the glands had pointed externally about an inch and a-half below the angle of the jaw, and internal to it. Mr. Pegler opened the abscess by an external incision. The quantity of matter welling up into the mouth was sensibly diminished by the extraction of the roots, and the discharge ceased almost entirely on the day following extraction of the wisdom tooth. Two small sinuses found within the mouth were carefully probed, but gave no evidence of communication with bare bone. They were laid open, and quickly healed up. The external wound was packed, and granulated up in a few days. There was severe constitutional disturbance during the case, and the patient was confined to bed on occasions for several days.

In the absence of any cause other than the decayed teeth and the impacted wisdom tooth, one is bound to assume that these were the cause of the glandular inflammation and suppuration. Cases of this nature are rare in private as in hospital practice, and serve to emphasise the fact that their possible origination in dental disease should be carefully borne in mind.

J. Sefton Sewill, M.R.C.S., L.R.C.P., L.D.S.
Cavendish Square, W.

LOW DEGREES OF EYE STRAIN A SOURCE OF SYSTEMIC DISTURBANCE.

Eight years ago I communicated to the Bath and Bristol Branch of the British Medical Association the notes of two cases in which the ciliary region was proved to be an epileptogenous zone. Both patients completely recovered on the adoption of suitable lenses. That was the first time, so far as I am aware, that the connection between epilepsy and eye strain was noticed. Since that time, I have, when possible, examined the eyes of all patients complaining of headache, giddiness or of other symptoms which might be reflex to an over-exercised ciliary region. The result of this systematic observation of all such cases goes to show that, in astigmatism, the low degrees are far more potent in producing reflex phenomena than the high degrees; although in hypermetropia the reverse of this obtains. The reason, I think, is not far to seek. In mild astigmatism by an effort of focus perfect vision can be obtained, and the ciliary region persists in making this effort so long as its object can be accom-

plished. In more pronounced cases, however, no effort of accommodation can produce clear vision, and, if I may so speak, the ciliary region gives up the attempt in despair. It is not then the astigmatism which produces reflex disturbances, but the effort to overcome it.

The effect of peripheral irritation must depend not only upon the degree of such irritation but also upon the excitability of the brain and reflex centres; a fact which is only too obvious when studying the different results of the same amount of eye strain in different subjects.

Bath. T. Pagan Lowe.

MAJOR OPERATIONS ON OLD SUBJECTS.

The following case shows the extraordinary vitality of some old people.

Mrs. S. F., aged 77, was admitted to the Coventry Hospital on October 13th, 1893, having been run over. There was compound comminuted fracture of both bones of the right forearm with extensive laceration of soft parts, and simple comminuted fracture of both bones of the right leg. A large varicose ulcer made treatment more difficult. Amputation of the forearm was at once performed, 3 inches below the elbow. Though part of one flap sloughed, the old lady made a good recovery. Union in the leg was good, the arm healed satisfactorily, and even the varicose ulcer was nearly closed before she left hospital.

My old friend, A.H., whose case I reported in the British Medical Journal, December 30th, 1892, died recently in her 90th year. The operation I performed on her (in June, 1892) was justified by the fact that no return of the growth took place, and that her life was prolonged for more than two years.

Coventry. F. Faulder White, F.R.C.S.,
Surgeon to the Coventry and Warwickshire Hospital.

ACCIDENTAL GANGRENE OF VULVA.

Some little time ago I was asked to see M. A. S., aged 22, single, who complained of great pain in the vulvar region with inability to follow her occupation as domestic servant, or even to walk. She had noticed for about a week increasing tenderness, and a very fœtid discharge. The vulva generally was much swollen and œdematous, and so very tender to the touch that chloroform had to be administered before the parts could be thoroughly explored. When fully anæsthetised the patient was found to be suffering from gangrene of the left labium minus, the gangrenous part being about the size of a hazel nut. As there was no history of an injury, it was difficult to ascribe a cause for the condition. On close examination, however, it was found that the gangrenous part was "snared" by three or four long pudendal hairs, and in that way the death of the portion included brought about. Under appropriate treatment she was soon all right again.

The interest of the case lies chiefly in the fact that her friends had accused her of immorality, and both they and the poor girl were very much relieved mentally, when the true cause of the condition was made known to them.

Liverpool. J. J. O'Hagan.

A PEMPHIGOID ERUPTION FOLLOWING THE ADMINISTRATION OF COPAIBA.

A. G., aged 28 years, caretaker, in good health, but for a slight attack of urethritis on the night of August 18th last took three copaiba capsules, and five more on the following day. On the evening of August 20th, on rising, he found that his face was swollen and red, and that his body was also covered with red patches. The same evening several blisters appearing on his legs he applied for advice.

His face was slightly swollen and red, and his arms and thighs presented irregular erythematous patches, somewhat raised above the surface. At the lower part of each leg, over the tendo Achillis, were large bullæ about the size of a small hen's egg, with several smaller ones—six on the right leg and five on the left leg. The walls of the bullæ were strong and tense, and contained clear serum. There was no areola around them, and after rupture the exposed skin rapidly yielded to treatment.

Copaiba, it is well known, produces in many people several forms of eruption, mostly of an erythematous type; but an eruption resembling pemphigus is, I believe, quite exceptional. Geo. W. Sequeira, M.R.C.S.Eng., L.S.A.

Jewry Street, Aldgate.

MENTAL DISTURBANCE AS A CAUSE OF HERPES ZOSTER.

Referring to Mr. Roche's note on the etiology of herpes zoster, in the British Medical Journal of October 20th, I should like to record the fact that in the hospital at Wanganui, New Zealand, a case of universal symmetrical herpes was shown to me by the resident physician. The patient was a Maori woman, who had been frightened by a dog. The eruption appeared soon after the fright, and her sufferings were great.

Hawick, N.B. John Haddon, M.D.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Jonathan Hutchinson, F.R.S., President, in the Chair.

Tuesday, November 13th, 1894.

A Case of Actinomycosis involving the Skin extensively. Dr. J. J. Pringle, who read this paper, treated the subject from a purely clinical standpoint. A boy, aged 13, whose family lived until recently over a stable-yard, was admitted, in February, 1894, to the Middlesex Hospital, suffering from an apparently simple attack of serous pleurisy, from which he recovered in a month, with marked retraction of the affected (right) side. Shortly afterwards he was readmitted to a surgical ward on account of abscesses over the front of the chest and right hip, which were considered as tuberculous, and scraped. He returned to the hospital on September 28th, with a very extensive tract of disease implicating the skin, chiefly on the back. The characters of the skin disease were described in detail, the most prominent feature being the presence of large sarcomatous-looking growths, ulcerating at various points, situated upon hard, brawny, and deeply undermined skin. From the ulcerative points pus exuded, mixed with characteristic yellow granules, readily recognised microscopically as composed of actinomyces. There was strong presumptive evidence of invasion of the right lung, pleura, liver, kidney, retroperitoneal and prevertebral tissues. Treatment by iodide of potassium and thyroid tabloids appeared to be attended with benefit, and reasons for the treatment adopted were given. The case was regarded as an example of actinomycotic invasion through the respiratory tract. Special attention was directed to the characters of the skin affection, which differed materially from those of cases described, and points of differentiation from other skin affections, which most closely resembled it, were laid down. The paper was accompanied by a life-sized water-colour drawing and microscopic preparations of the fungus.

Dr. Stephen Mackenzie agreed that the case was one of extreme rarity. He had recently seen a child, aged 11 years, who presented on the face and neck a lesion of the skin with which he was unfamiliar. It evidently belonged to the class of granulomata, and presented indurations, erythematous in character, on which were globular masses varying in size from a pea to a cherry, semi-translucent, soft, spongy, and exhibiting yellow points. The child had been under the care of Mr. Eve in September, 1893, with a sinus on the right side of the cheek; the wound was probed, and found to lead to bare bone on the inner side of the lower jaw. The sinus was scraped and irrigated, and soon healed. In June, 1894, he returned with granulations projecting from the sinus, which had reopened; actinomycosis was then suggested, and the ray fungus looked for without success. It was again scraped and again got well. The lesions at the present time were much like that in the case shown, except that there was no gummy discharge and no escape of yellow particles. The patient's father was a stableman, and the child lived and played in the stable until two years before admission.

Dr. Douglas Powell said that the disease should not, in his opinion, be classified as a skin disease, for it had cropped up here and there, having extended from deeper parts. The

previous attack of pleurisy was interesting in the complete way in which it had cleared up, and in this respect it resembled some cases of tuberculous pleurisy. He suggested that the albuminuria might possibly be due to albuminoid changes, and in this connection the fact that the liver was enlarged was noteworthy. The improvement noted in the child was probably due to causes other than the use of thyroid tabloids. He asked the author whether any other physiological effects besides vomiting had been noticed from using the extract. Almost all cases of actinomycosis had been traced to contamination by straw, though it was not known exactly how the infection arose.

Mr. Godlee had recently seen, in conjunction with Dr. Fairweather, a case of actinomycotic disease about the cæcum, which had pointed in many places. In the case shown in conjunction with Dr. Powell the boy was a cowkeeper, and the appearances of the growth in the skin where it approached the surface formed bulging masses like those in the case shown. In Dr. Fairweather's case the openings of the sinuses were quite flat. The patient had improved under iodide of potassium. It should be remembered that in scraping these sinuses the hæmorrhage was liable to be excessive.

Mr. Malcolm Morris said that the graphic report of the case was most useful for diagnosis. He asked whether there was any evidence of direct inoculation of the skin from the trickling of gummy fluid over it, and also if Dr. Pringle had any explanation to offer as to how the lesions about the hip and chest arose.

Dr. Fairweather had commenced treatment by giving 5 grains of iodide of potassium three times daily without any result. The dose was then advanced to 20 grains with very marked improvement. There was thinning of the discharge, diminution of the granulations, and disappearance of the clubbed elements. The abscesses had nearly closed up, and the patient had gained in weight during the last six weeks. When the remedy had to be temporarily discontinued on account of gastric disturbance the granules reappeared in large quantities. The patient was a publisher, and was not connected in any way with horses or cattle.

Mr. Godlee added that this patient was known to be fond of chewing corn.

Dr. Fowler said that when the case was under his care for pleurisy there was no indication of actinomycosis. The peculiar appearances of the granulations, as they affected the skin, were quite typical of the disease.

Dr. Barlow said that a case was under his care five years ago, which he did not at the time recognise. Later the necropsy was performed by Dr. Delépine, who found very extensive disease in all the cavities of the body, and had published the account in the Pathological Society's *Transactions* for 1889. In that case the tumours diminished considerably under iodide of potassium.

Dr. Frederic Taylor had published a case in the Guy's Hospital *Reports* of actinomycosis of the liver, which had commenced to affect the skin. There were deposits in the lungs, and he suggested in his paper that they were carried there by the blood vessels. He had been unable to find out how the lesion had occurred. He referred to the satisfactory result which followed in Dr. Ransome, jun.'s case, in which, amongst other drugs, iodide of potassium was freely given.

Dr. Samuel West mentioned a case of abscess of the abdominal wall, which discharged itself spontaneously, and in which there had been no infection of the skin. *Post mortem*, masses of growth were found spreading from the left side and involving the skin. It was regarded at first as specific, and iodide of potassium was freely given, but without effect.

Dr. Pringle, in reply, reminded Dr. Mackenzie that it was often difficult to find the organisms of actinomycosis. It was an important fact that in cases of actinomycosis the pleurisy tended to recover, but with an undue amount of shrinkage of the affected side. He had come to the conclusion that the boy was not suffering from albuminoid disease. The collapse and vomiting disappeared when the thyroid treatment was stopped. Surgical interference in the case he had shown was contra-indicated. There was no evidence of direct inoculation of the skin, and he was unable to explain the *rationale* of the deposits about the hips.

CLINICAL SOCIETY OF LONDON.

J. W. Hulke, F.R.C.S., F.R.S., President, in the Chair.

Friday, November 9th, 1894.

Clinical Evening.

Rupture of Prostatic Neck of Bladder.

Mr. Hurry Fenwick showed a patient who had had traumatic rupture of the prostato-membranous urethra, caused by his being buried whilst excavating. Twelve hours after the accident suprapubic incision into the cavity of Retzius evacuated an immense quantity of blood, and it was then found that the bladder had not been ruptured but that the prostato-membranous urethra had been torn nearly across and that the hæmorrhage proceeded from an extensive laceration of the plexus of Santorini. The bladder was drained through a perineal incision. Mr. Fenwick urged that suprapubic incision in all doubtful cases should precede the opening of the peritoneum, and he believed that most cases of extraperitoneal uncomplicated ruptures ought to be cured.

Sclerodermia.

Dr. Herringham exhibited a seaman, aged 39, and for sixteen years a diver, the subject of sclerodermia. There was a slight amount of albumen in the urine. He had been treated at Brisbane with oily inunctions, and lately for a couple of months at Greenwich with pilocarpin. He said he was better than he had been. There had been no rheumatoid symptoms anywhere, but there was some induration on stretched parts, such as fingers and elbows.

Sir D. Duckworth had tried thyroid extract in such a case without any benefit.

Excision of Scapula.

Mr. Watson Cheyne showed a man, aged 50, from whom he had excised the scapula five weeks previously on account of a large enchondromatous tumour of seven years' growth, involving the whole bone and projecting forwards into the axilla. The tumour weighed over 10 lbs. The wound healed by first intention, and the patient left the hospital sixteen days after the operation. The movements of the arm were now steadily increasing in range and power. The chief point about the operation was that an incision was in the first instance made in the axilla, through which the vessels and nerves were freed from the growth, the subscapular artery tied, and the muscles attached to the coracoid process divided.

Tuberculous Disease of the Perineum, Prostate, Ischio-rectal Fossa, and Rectum.

Mr. Arbuthnot Lane showed a case which he had treated successfully by the introduction of glycerine and sulphur into the cavities. The condition was one of many years' standing, and had been preceded by tuberculous disease of both testicles. He commenced the injection of glycerine and sulphur on September 4th, 1894. At the present moment his pain had gone, the aperture in the bowel had closed, the ulceration about the aperture had healed, the prostate was firm, and, except for the escape of a few drops of urine occasionally from a small perineal sinus, he was practically well. On September 4th he weighed 8 st. 11 lbs., now he weighed 10 st., a considerable gain of weight in such a short period.

Primary Atrophy of Muscles of Limbs and Trunk.

Dr. Barlow showed a case of extensive primary atrophy of the muscles of the limbs and trunk, with lordosis, and some contraction of hips (Erb's paralysis). The patient was a lad, aged 5. No particular muscles were atrophied more than others, the atrophy being pretty general. On attempting to stand the back developed marked lordosis. The electrical reactions were very peculiar. It needed a very strong faradic current to excite contraction, but with such current all the muscles could be got to contract. The constant current gave no reaction of degeneration. The knee-jerks were retained, and sensation was unimpaired. There were no fibrillary twitchings, and the sphincters were all right. He was intelligent, but backward. The parents were both healthy. There were three other children, and one of them had slight under-development of the back part of the deltoids and the upper part of the pectorales.

Nothing was noticed until the child proved unable to walk at 12 months of age, and since then the weakness had gone on increasing. Though in some respects the case resembled pseudo-hypertrophic paralysis, it was difficult to classify.

Dr. Ormerod would class the case under the myopathic group of pseudo-hypertrophic cases. Hoffman, of Heidelberg, had lately described cases which he considered dependent on chronic disease of the anterior cornua, and which sometimes occurred in several members of the same family.

Trephining for Traumatic Epilepsy.

Mr. Butlin showed a case in which he had performed this operation. A man was admitted on September 4th, having fallen eight feet, striking his head against the mantelpiece. There were no very marked symptoms beyond some drowsiness until September 8th, when he had a fit which recurred again and again, until, on Mr. Butlin's arrival at the hospital, the man was in his seventeenth fit. The onset of the symptoms pointed to a lesion of the left side of the brain in the neighbourhood of the face and arm centres. He accordingly trephined, and beneath the dura mater he came across a small clot of blood, and in the subarachnoid space underneath there were two or three drachms of fluid, and the brain was distinctly depressed at that spot. He removed a second piece of bone, but discovered nothing further. He let out the fluid in the subarachnoid space and replaced the pieces of bone, and the man made a good recovery, there having been no fit since the operation, though his mental condition remained unsatisfactory for some time. Two or three days after operation the flaps became œdematous, probably in consequence of the escape of cerebro-spinal fluid, as there was no rise of temperature. There being slight suppuration on September 26th, and the man very excited, the wounds were opened up, and the lower piece of bone removed, which Mr. Butlin now regretted. The patient was excited, and required watching up to October 22nd, since when recovery had proceeded rapidly, and he had written a good letter.

Mr. Pearce Gould described a similar case in the Middlesex Hospital. A man fell and struck his head, and was admitted a few days afterwards with fits of the left side. He was trephined on the right side, no clot was found, but a little fluid beneath the arachnoid, which was drained. For a few weeks afterwards he was free from fits, but he understood he was now in University College Hospital, under Mr. Barker.

Mr. Barker said the patient had entered that hospital five days ago, unable to walk straight. He gave a most fallacious history, and said he had "never had fits." Information from the Middlesex Hospital arrived in time to prevent his being again trephined.

Bullet Wound of the Parietal Lobe.

Mr. Jacobson showed a man who had been operated on for such an injury. The wound had been inflicted while skirmishing on the West Coast of Africa, where he was struck by a bullet, which lodged in the lower part of the left parietal lobe, or at the junction of this with the temporo-sphenoidal. He became unconscious, and five weeks after he returned to England, his wound closing for a time, then reopening, giving exit to pieces of bone and discharge. During this period there had been no hemiplegia, no hemianæsthesia, no crossed amblyopia. There were present visual aphasia, or interference with the visual perception of words and alexia, or inability to read. This state of things lasted ten weeks. Severe headache frequently occurred when the wound closed for a time. On June 27th an attempt was made at Plymouth to remove the ball, but, as brain matter escaped, this was desisted from. There was a sinus above, and 1½ inch behind, the left auditory meatus, and a probe passed through a jagged opening in the skull and to the left for 3 inches. Save for the headache, his general health was excellent. On October 19th the opening was exposed and enlarged, when one came upon the mouth of a sinus-like track in the dura mater, blocked with granulations. This membrane was quite healthy all round. Two small pieces of bone were removed from a spot about three-quarters of an inch from the mouth of the sinus. Two inches further in the probe struck a foreign body, which proved to be the bullet. This was removed by the aid of a sharp spoon. He showed the bullet embedded in granulation tissue. It was of hammered iron and facetted, and a similar bullet weighed 172 grains. The patient made a rapid recovery, and had since entirely lost his headaches. Mr. Jacobson discussed the advisability of removing the bullet in such cases. He thought that if the cases were followed up, those in which the bullet was left did not turn out successful; troubles of many kinds were apt to ensue. The bullet should, if it were possible, be removed.

The President pointed out that had the missile been of lead, it would probably have been torn into fragments on entering the skull.

Eczema following Typhoid Fever.

Dr. Hale White showed a boy, aged 10, who had had acute eczema of the face following typhoid fever. He had a mild relapse of typhoid, and then developed a severe eczema, which began as a few vesicles near the lip, and rapidly spread so that the whole face and ears were covered: the eyes were affected with conjunctivitis. The condition slowly subsided, and six weeks after its first appearance had nearly disappeared.

Acromegaly.

Dr. Harry Campbell showed a case of acromegaly. The patient was a man, aged 46, whose photograph taken when he was 22 showed that he was then free of the disease. The eyelids, nose (all its tissues), lips upper and lower, and ear were markedly affected. The cranium was not altered. The lower jaw was much hypertrophied, and projected an inch or two. The tongue, soft palate, and tonsils were also hypertrophied, as were also the hands in all their tissues. The nails had marked longitudinal striæ. The radial arteries were greatly thickened. There was bowing of both legs. He had recently taken Fowler's solution, gradually increased to a dose of 30 minims taken three times a day; and the hypertrophy of all parts had become diminished. In reply to Dr. Handford (Nottingham), Dr. Campbell stated that there was no glycosuria nor any affection of vision, except that there was presbyopia.

Graves's Disease and Nasal Polypi.

Dr. Scanes Spicer showed a case of incomplete Graves's disease with nasal polypi in the person of a young woman who had been sent to him for the removal of the nasal growths. The thyroid gland presented the usual elastic feel, with thrill and pulsations; there was tachycardia (140 per minute), and fine tremor of the arms. The girl was, moreover, of a markedly neurotic type. He had removed a large number of the polypi but some still remained. Since that had been done the patient had improved in some respects. He pointed out that both conditions were discovered together three years ago, so that it could not be said that the Graves's disease was due to nasal operations. He could not help thinking that the connection between these two conditions was something more than a coincidence. At any rate, cure of the symptoms of Graves's disease had followed the treatment of the nasal polypi in three cases.

Dr. G. Stoker referred to the case of a man, aged 33, who had a soft goitre, together with intranasal polypi, and whose goitre had resisted all kinds of treatment, until the galvanic cautery was applied to the polypi. The treatment being continued the goitre lessened, and in two months disappeared.

Nodules of Doubtful Nature.

Mr. Godlee showed a man with multiple nodules of doubtful nature. He was aged 28, and his troubles began in April of this year. There were numerous hard nodules in the eyelids, on the forehead, jaw, arms, condyles, etc., and on the knuckles, but none on the legs. There was an enlargement of bursæ over the olecranon, and some thickening of the skin over the front of the forearms and on the buttocks. There were enlarged glands under the right sterno-mastoid muscle. The nodules were probably produced by some obstruction of the lymphatic vessels. There was no history of syphilis, rheumatism, or gout in the patient or his family. The blood was apparently normal. He had been given full doses of iodide of potassium without benefit, but Donovan's solution seemed to have caused a diminution in size of some

of the nodules. Microscopically the nodules were said to be composed of fibrous and not lymphatic tissue.

Charcot's Disease.

Mr. Bowlby showed a man with Charcot's disease of the hip with dislocation. The patient was a man, aged 58. His history was that he slipped and dislocated his hip ten years ago, the dislocation being produced with hardly any violence, and he had only had some pain at the hip two or three days before the dislocation. Since that time he had walked very lame. At present the affected limb was much shorter than its fellow. The upper end of the femur could be plainly felt on the dorsum ilii. There was evidently no head to the femur, but there was a great deal of new bone in the neighbourhood of the neck. The femur had great mobility on the ilium and, in walking, moved up and down more than 3 inches. There was no pain whatever in the joint. The evidences of tabes were as follows: Lightning pains in limbs, dim vision and grey atrophy, absence of knee-jerks, and inability to stand with the eyes shut.

Spontaneous Dislocation of Hip.

Mr. Willett showed a man, aged 44, with spontaneous dislocation of the hip, which took place six years ago. His tabetic symptoms were steadily progressive. There was also considerable change in the acetabulum and femur. The right hip was extremely swollen, but under rest greatly subsided. Over the hip was serous infiltration, with some large nodules of bone movable beneath the skin. The acetabular region also bulged greatly into the interior of the pelvis. He had fair range of normal movement of the limb. In standing the limb was rotated outwards. All the muscles below were much atrophied. The tabetic symptoms were not very pronounced. There was loss of knee-jerk, unsteadiness if he stood with eyes shut, but no Argyll-Robertson pupil. He vomited each morning for three years, and had some dysuria if he took cold.

Mr. Godlee asked if it was quite certain that Mr. Bowlby's case was not one of spontaneous fracture.

Mr. Bowlby replied in the affirmative.

OBSTETRICAL SOCIETY OF LONDON.

G. E. Herman, M.B.Lond., F.R.C.P., President, in the Chair.

Wednesday, November 7th, 1894.

Specimens.

The following specimens were shown:—Dr. Cullingworth: Primary Carcinoma of Fallopian Tube.—Dr. Duncan: Small Ovarian Cyst ruptured during Examination. Dr. Dakin: (1) Sarcoma of Ovary; (2) Fœtus of Seven and a-half Months expelled in Membranes with Placenta attached, after much Concealed Accidental Hæmorrhage.—Dr. Blacker: Rupture of Uterus.—Dr. Galton: Uterine Fibroid enucleated after Abdominal Section, with Cystic Ovary from the same case.

A New and Speedy Method of Dilating a Rigid Os in Parturition.

Dr. Farrar (Gainsborough) related two cases of rigid os, in one of which, after endeavouring vainly to relax the cervix by the aid of chloral, bromide of potassium, and morphine, followed by most persevering attempts at digital and mechanical dilatation, with and without chloroform, he applied a 10 per cent. solution of cocaine preparatory to incising the edge of the os. After five minutes, on introducing the finger as a guide to the scissors, the os was found widely dilated. In the second case, aged 48, which, like the first, was that of a 1-para, where no dilatation occurred although the same means as were tried in the first case were used, he waited three days and then applied the cocaine. In four minutes the os was found to have yielded. He considered the dilatation to be due to the cocaine in both instances.

Dr. Amand Routh said that Dr. Dabbs, of Shanklin, had recommended cocaine as relieving the pains of the first stage of labour, and that Dr. Head Moore advised cocaine and boric acid pessaries in cases of rigid os. He himself had found it useful.

Dr. Leith Napier had found it difficult to produce anæsthesia with a 20 per cent. solution in gynæcological cases, and thought a much larger series of instances should be observed.

Dr. Peter Horrocks thought that the action of chloroform on involuntary muscle was not yet known, and that the sphincter ani, the relaxation of which during anæsthesia was a signal of danger, was relaxed while the os still remained rigid. He mentioned that the injection of a 5 per cent. solution beneath the integument was more certain than painting the surface with a 20 per cent. solution.

The President said it was very difficult to draw a clear distinction between mere slow dilatation of the cervix, the labour being normal in every respect save speed, and dilatation arrested by some abnormal spasmodic contraction of the cervix, if such a thing existed. He thought a drug might influence the latter condition and yet not the former. In Dr. Farrar's cases it seemed as if there were something more than mere slowness of dilatation, for in one the condition was stationary for forty-eight hours, and in the other for three days, and the dilatation occurred with wonderful rapidity. Two cases was rather a slender foundation on which to base a therapeutic statement. If Dr. Farrar's results were confirmed by further experience, he would have made a valuable addition to our obstetric resources.

Dr. Farrar, in reply, said he did not pretend to explain the mode of action of the drug. He would try it in future cases, and communicate the result to the Society.

On Atrophy with Collapse (Cirrhosis), Fibroid Degeneration, and Angioma of the Ovaries.

Dr. Braithwaite read this paper. After detailing the clinical histories of three patients suffering from this condition of ovary, he described the histological characters of the affected organs. The fibroid degeneration which was co-existent with the collapse was evidently not the cause of it, but was brought about by the same debilitating causes; and the fibroid degeneration, with the hyaline change in the vessels, and the angiomatous condition present, were exaggerated examples of what might occur normally in a senile ovary.

The President said many cases had been reported in which the ovaries had been removed because they were painful, and the cause of the pain was said to be that they were "cirrhotic," that is, small, puckered, with few follicles and much fibrous tissue. Dr. Braithwaite's case differed from these only in being much more fully and carefully reported than the majority of them. Healthy ovaries varied very much in the above characters. He knew of no criteria by which, if two small, puckered ovaries, one taken from a patient on account of pain, the other from a patient who had no pain, were put side by side on a plate, the ovary which was painful could be identified; nor did he know any author who had attempted to describe such criteria.

Mr. Targett said that he had recently examined a pair of ovaries in which the curious folding of the serous surface, resembling the convolutions of the brain, was even more marked than in the specimens shown by Dr. Braithwaite. Microscopical examination revealed an advanced condition of chronic endarteritis, not of a syphilitic type: the lumen of the vessel in some instances was almost obliterated. He was of opinion that the glandular atrophy and fibroid degeneration in the organ might be due to the presence of this vascular lesion.

Dr. Leith Napier mentioned the names of some authors who had dealt with this subject.

Mr. Malcolm said that the ovaries referred to by Mr. Targett were removed in the course of an ovariotomy and not for pain. One of them was attached to a large ovarian cyst, but the form of the ovary was quite distinct except at its junction with the tumour. The other ovary showed an extreme degree of corrugation of the surface.

The Importance of a Decidual Cast as Evidence of Extrauterine Gestation.

This paper was read by Dr. W. S. A. Griffith. A patient was admitted into hospital supposed to be suffering from extrauterine gestation which had not yet ruptured. A large uterine cast was found and removed from the vagina. On examination under an anæsthetic the uterus was found a little enlarged (2¾ inches), but no tumour was discovered in its

neighbourhood. The cast was identical with those found in cases of extrauterine gestation and showed characteristic decidual cells. The woman's abdomen was opened and no evidence of extrauterine gestation was found. The author enumerated the different kinds of uterine casts and their distinguishing characters, and considered the case capable of explanation in one of two ways: either the uterus was capable of developing the decidua which we had believed to be the result of fertilisation of an ovum alone without this stimulus, or, as appeared to him less improbable, a fertilised ovum might have provided the necessary stimulus either inside or outside the uterine cavity but have completely disappeared. He was of opinion that in future we should regard a cast as evidence of the highest value instead of as conclusive of extrauterine gestation.

Dr. Remfry inquired if the size of the uterus had been ascertained by passing a sound immediately after the expulsion of the decidua, as this evidence would have been important in the diagnosis of the case.

Remarks were made by the President and by Dr. Leith Napier; and Dr. Griffith replied.

MEDICAL SOCIETY OF LONDON.

Clinical Evening.

Sir William Dalby, M.B., F.R.C.S., President, in the Chair.

Monday, November 12th, 1894.

Opening the Cæcum for Intestinal Obstruction.

Mr. Goodsall showed a man who had come into the Metropolitan Hospital for intestinal obstruction caused by cancer of the rectum. He opened the abdomen over the sigmoid flexure but was unable to get the gut to the surface, it being packed and distended with putty-like fæces. After waiting several days, the patient's condition obliged him to endeavour to afford relief by an operation on the other side. He, therefore, cut down upon the cæcum, and after some manipulation he managed to get it to the surface. He opened it immediately, leaving the patient on the operating table for forty-eight hours in order to reduce the risk of extravasation to a minimum. The patient was doing well. This was the third time he had opened the cæcum. In the first case he had postponed opening the cæcum for forty-eight hours, but no adhesions had formed between the cæcum and the parietal peritoneum, and the man died.

Mr. Harrison Cripps objected to the cæcum being opened unless no other course was practicable, great inconvenience resulting from the discharge of liquid fæces. He said that when the gut could not be drawn out it might be sutured to the parietal peritoneum, thus preventing extravasation.

Mr. Keetley suggested that when it was necessary to empty the cæcum at once the vermiform appendix might be made use of as a spout.

Mr. H. Allingham only admitted the propriety of opening the cæcum when indispensable. In some cases it might be preferable to open the transverse colon rather than subject the patient to the inconvenience of a discharge of liquid fæces from the opened cæcum.

Anastomosis of the Small Intestine.

Mr. Harrison Cripps showed a case and read a paper, which is published at p. 1103.

Mr. H. Allingham said he had had 7 cases of the kind; 4 were cases of secondary anastomosis and 3 of immediate anastomosis. The three latter had died and the others had recovered. He urged that Mayo Robson's bobbin acted as a splint to the joined gut, preventing dilatation or contraction of the sutured part.

Mr. Keetley had performed Maunsell's operation in one case with success. At present no one operator could have had sufficient experience to enable him to decide which was the best operation.

Late Inherited Syphilis.

Dr. F. de Havilland Hall showed a lad, aged 16, with the following history. Up to 8 years of age there was nothing the matter with his nose, but at that date he noticed an unpleasant smell. He had been two years under treatment at the Golden Square Hospital. When seen by Dr. Hall in January, 1891, there was marked ozæna, the septum was completely destroyed, and the bridge of the nose had given way. Treatment was discontinued in April, and he was lost sight of until October of this year. He then had extensive destruction of the soft palate, ulceration of the pharynx, and thickening of the epiglottis. There was no other indication of inherited syphilis, and he had two older sisters and one younger alive and well. At the time of his first attendance at the hospital his mother was at the same time under treatment with well-marked tertiary syphilitic ulceration of the throat.

Mr. Spencer Watson observed that late symptoms of inherited syphilis had come under his notice as late as 20, or even 30, years of age.

Mr. Astley Bloxam asked whether the earlier treatment had been only by iodide of potassium, and observed that though temporary benefit usually followed such treatment, the disease invariably recurred later on unless a proper mercurial course was gone through.

Dr. Hall, in reply, admitted that the earlier treatment had been by iodide of potassium. He was not able to say at what date the mother had contracted syphilis.

Dislocation of Head of Humerus with Fracture of Surgical Neck.

Mr. Clutton showed a boy, aged 13, who had had the humerus dislocated along with a fracture of the surgical neck of the bone. The injury to the lung prevented treatment for eleven days, when an attempt was made, but in vain, to reduce the dislocation. The fracture and the joint were therefore exposed. The head of the bone was firmly fixed between the clavicle and the coracoid, but it was brought down and fixed to the lower fragment by an ivory peg driven in from the articular surface down the central axis of the humerus. The biceps tendon, which had been divided, was then reunited. The wound healed rapidly, and by April 25th (six weeks after the accident) the fracture felt quite firm. There was almost perfect movement of the joint. No passive movements had been practised.

The Thyroid Treatment of Cretinism.

Dr. Garrod showed a girl, aged 10, a cretin, who had considerably improved under a course of thyroid treatment extending over a period of one year and nine months, inaugurated by the late Dr. Hadden. She had grown 5 inches during that time, and she would not now be recognised as a cretin. He referred to two other cases, in one of which, the patient's condition being much worse to begin with, the treatment had not proved anything like so successful.

Mr. Spencer Watson, Dr. Morgan Dockrell, Mr. Hurry Fenwick, and Mr. Herbert Snow also showed cases.

Calculi.

Mr. Astley Bloxam read notes of the case of, and showed calculi weighing 13 ozs. removed by him through a lumbar incision from, a woman who had presented few symptoms of her condition. He also showed a preparation of an Aneurysm of the Popliteal in which recovery had taken place, giving the clinical history of the case.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Stephen Mackenzie, M.D., Vice-President, in the Chair.

Thursday, November 8th, 1894.

The Association of Lamellar Cataract and Rickets.

Mr. Treacher Collins read this paper. He pointed out how the opinion of Davidson and Homer, published in 1865, that lamellar cataract was the result of rickets, though widely accepted on the Continent, was not even referred to in a large number of the textbooks on eye disease in this country. He then read several communications from physicians and ophthalmic surgeons collected for him by Dr. Barrett, of Melbourne, and Dr. Symonds, of Adelaide, as to the relative frequency of these two diseases in South Australia. The evidence thus obtained went to show that in Adelaide rickets was a very rare disease and lamellar cataract very infrequent. In Melbourne rickets was until recently comparatively rare. It was more common now, but the severity of the affection was much less than in the old world. Lamellar cataract was exceedingly rare, and the honeycombed condition of the

enamel of the teeth was not often met with. In Sydney, the oldest city in Australia, rickets was said to be as common as in England, but he had no statement as to its comparative severity. Lamellar cataract was less frequent than in this country. In a recent visit he had paid to Persia he had endeavoured to ascertain the amount of these two diseases there. He was assured by the medical men he met that rickets was uncommon; the conditions of life, moreover, were not such as were usually considered likely to favour its development. Amongst a very large number of eye patients he saw in that country he had met with only one case of lamellar cataract.

Mr. Marcus Gunn said it was still a moot point whether the condition of lamellar cataract was brought about by changes before or after birth. The decision of this point would have an important bearing on the question of association with rickets.

Mr. Jones, who had spent twelve months as house-surgeon and three months as ophthalmic house-surgeon in Australia, said that he had seen no case of lamellar cataract or of rickets there.

Mr. Sydney Stephenson stated that he had examined all the new comers at one parochial school—in all about 5,000 children—and among these he had found only four cases of lamellar cataract, the striæ being very fine and easy to overlook. Rickets was very common, and its effects were readily discerned in children of 5 or 6 years.

Mr. Silcock referred to the Chairman whether both conditions might not be due to one common cause.

Mr. Power said that many lamellar cataracts were congenital, and belonged to a period antecedent to that at which rickets occurred.

Mr. Lang contended that the changes in the lens involved the entire nucleus as well as the periphery, and that this, as well as the development of the enamel, dated from before birth. He thought the whole change was antenatal.

Mr. Marshall, pathologist at Moorfields, thought that the occurrence of fits, lamellar cataract, and defective development of the enamel, being all referable to abnormal changes in the epiblast, were probably associated with some antenatal defect in the central nervous system.

Mr. Lawford, referring to the interference with the growth of the enamel being subsequent to birth, quoted the domestic cat as being sometimes the subject of lamellar cataract. Similar changes in the eye of the rabbit, as observed by Bowman, were quoted by Mr. Lang, and in the eye of the Australian bear by Mr. Marcus Gunn.

The Chairman said that observers had not yet paid much attention to the association of lamellar cataract and rickets, and he was not sure how far such a contention was established. He knew of no common cause of this condition and changes in the enamel organ. It was difficult to say whether the opacities in the lens were developed or only discovered after birth.

Mr. Treacher Collins, in reply, said that though most of the speakers appeared to dissent from the proposition involved in his paper, none had attempted to explain the absence of both conditions together in Australia. Rickets was to a great extent an evanescent disease, and its traces could not always be expected to be recognised in the subjects of lamellar cataract. The mode of development of the condition was but little known, as attention was called to the lenses only when the sight had become markedly defective. Calcification of the permanent teeth occurred about the third year of life, about the time that rickets prevailed. He met the suggestions of cataract in the lower animals by quoting Mr. Bland Sutton's observations on rickets in mammals.

Complete Ankyloblepharon.

Mr. Kenneth Campbell (Cairo) communicated this paper. The patient, a native of Upper Egypt, aged 50, presented himself with a large rounded tumour which completely masked the right orbit. There was no evident appearance of palpebral fissure. The swelling was dull red and shiny, with some large veins on the surface, and measured laterally 4.8 cm., vertically 3.2 cm., and projected forward 3.2 cm. from the orbital margin, being tense but fluctuating, and moving co-ordinately with the lid of the other eye. The man stated that the sight had been lost since childhood, and that the swelling had appeared before on more than one occasion, but had subsided under poultices. A minute examination disclosed a trace of palpebral slit without eyelashes at the extreme lower margin of the tumour, and the opinion was formed that the case was one of complete ankyloblepharon, with retained and probably semipurulent lachrymal secretion. This was confirmed on the day preceding that fixed for operation by the giving way of the skin in the centre of the upper eyelid, attended with escape of semipurulent fluid and total collapse of the tumour. The palpebral slit was reopened and the conjunctival sac dilated to obviate recurrence, but no attempt was made to re-establish the lachrymal channels owing to the parts being too much altered by cicatrisation.

Cases.

The following cases were shown: Mr. Treacher Collins: Polycoria with Deep Cupping of Optic Discs. Mr. Lang: Cholesterine in the Lens.

BRITISH GYNÆCOLOGICAL SOCIETY.

Professor Thos. Savage, M.D., President, in the Chair.

Thursday, November 8 h, 1894.

Specimens.

Mr. Bowreman Jessett showed two specimens, and read the notes of three cases of Cancer of the Uterus removed by Vaginal Hysterectomy. One was an adeno-carcinoma, one an epithelioma, and the third a scirrhus. Two of the patients left the hospital well five weeks after operation, the third died on the sixteenth day. The pathologist reported that death was due to œdema of the lung, resulting from a weak heart: the vaginal wound was quite healed, and there was no trace of peritonitis. In one case, owing to smallness of the vagina, the perineum was divided.—Remarks were made by Drs. Purcell, Heywood Smith, Macnaughton Jones, The President, Dr. Routh, and Dr. R. T. Smith; and Mr. Jessett replied.

Puerperal Pelvic Cellulitis from Phlebitis.

A paper on this subject by Dr. Balls Headley (Melbourne) was read by the Secretary. After relating the history, symptoms, and progress of a case in which recovery ultimately took place, Dr. Headley discussed the causation of pelvic cellulitis by phlebitis. Phlebitis was a rare cause of pelvic cellulitis, because, if unduly virulent, death resulted; while if unduly mild, resolution occurred. But, in the intermediate stage, the thrombus which formed on each side of the septic focus was strong enough to prevent on the proximal side (with reference to the heart) discharge into the larger veins; and, on the distal side, discharge into the uterine cavity. Under these circumstances the purulent action went on until the vein ruptured into the connective tissue, and the abscess developed along the lines laid down experimentally by König. There was in the case related some predisposition to phlebitis, as indicated by the presence of an inflamed vein in the calf of the leg before labour. The exciting cause was probably to be sought in long-continued pressure of the head against the pelvic structures. The long, slow progress and the small quantity of the pus finally discharged pointed to the limited character of virulence of the connective inflammation and necrosis.

Dr. Hodgson referred to the value of a preparation of equal parts of liq. ammon. acet. and liq. hydrag. perchlor. in the treatment of phlebitis. Three cases of his lately had made rapid progress to recovery under this treatment.

Dr. Schacht questioned whether phlebitis was always of septic origin. He had had a case in which a patient went on very well for fourteen days after an operation and then developed phlebitis. There was nothing in that case to point to sepsis. Similarly, Keith recorded lately a case of hysteropexy where the patient had phlebitis a week after operation.

Dr. Napier thought too little attention had been paid to the autogenetic origin of many inflammatory conditions following delivery. He had seen and reported cases which illustrated this mode of production of puerperal inflammation. He thought that Dr. Headley's theory was almost too ingenious to be true.

Dr. Macnaughton Jones said that, for phlebitis, the treat-

ment he advocated was, externally, an application of the oleate of mercury with belladonna; internally a simple diaphoretic with quinine. Where the heart's action was weak a little digitalis might be added. He would call attention to the difficulty which often existed in the diagnosis of the early stages of pelvic inflammation from the early stages of typhoid.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

E. West Symes, M.D., President, in the Chair.

Friday, November 2nd, 1894.

Aneurysm affecting four Arteries in the same Patient.

Mr. Jessop read an account of a patient in whom, during a period of four years, there had formed four successive aneurysms—at the bend of the left elbow, on the left femoral artery, on the right external iliac artery, and finally on the left internal iliac artery. The first three were successfully treated by the Hunterian ligature; the last proved fatal by rupture, which had taken place before the aneurysm had been detected.

Treatment of Aneurysms of Arteries of the Extremities by Extirpation of the Sac.

Mr. Littlewood read notes of two cases illustrating this plan of treatment. 1. Man, aged 40; had an aneurysm in the vessels of the upper part of the thorax, and another of the left femoral artery; the latter became diffuse after moving from one ward to another, and increased enormously in size. An incision about five-sixths the length of the thigh was made over the aneurysm, the femoral artery tied, 4 lbs. of clot turned out, and the portion of the artery with the aneurysm removed. The patient made a good recovery, and was shown at the meeting. The thoracic aneurysm appeared *in statu quo*. 2. Man, aged 63, with a diffuse aneurysm of the right popliteal artery. For twenty years he had had some stiffness of the right knee, and ten weeks before admission he strained the knee, and developed the aneurysm. On August 25th, 1894, an incision about 8 inches in length was made over the swelling in the popliteal space, 8 ounces of clot cleared out, and the portion of artery from which the aneurysm had arisen dissected out. The patient made a good recovery. Mr. Littlewood argued in favour of performing this operation in most cases of aneurysm affecting arteries of the extremities; the removal of the sac prevented any chance of recurrence of pulsation and extension of the disease. The artery was quite as likely to be diseased at a distant point as one immediately above the aneurysm, and the liability of secondary hæmorrhage, if this was really due to a diseased state of the vessels, was not greater than in the Hunterian operation. The risks of gangrene in cases of popliteal aneurysm were probably less.

Mr. Ward had seen both cases and spoke in favour of the method advocated by Mr. Littlewood. He pointed out that when the Hunterian operation was not successful it failed in one of the following ways: (1) return of pulsation, (2) sloughing or giving way of the sac, (3) gangrene, (4) secondary hæmorrhage. By extirpation the first two difficulties were done away with. The chances of gangrene were not greater than after the Hunterian operation, and secondary hæmorrhage had practically been put out of court by modern methods. He thought extirpation of the sac the most scientific and ideal method.

After some remarks from Dr. Barrs, under whose care the first of the two cases had been admitted to the infirmary,

Mr. Mayo Robson said extirpation of the sac was good treatment for diffuse aneurysms, but for other cases he preferred the Hunterian plan.

Remarks were also made by Mr. J. Crossley Wright (Halifax), the President, Mr. Hartley, Dr. Wardrop Griffith, and Dr. Trevelyan.

Mr. Littlewood replied.

Mr. Jessop, in reply, congratulated Mr. Littlewood upon the brilliantly successful issue in his two cases, and remarked that whilst he agreed with the generally expressed opinion in favour of excising a diffused aneurysm in a limb, he would nevertheless hesitate to apply the same treatment to an ordinary case of true aneurysm, seeing that aseptic ligature had ceased to be attended with the many dangers familiar to surgeons in bygone times. He would be pardoned for expressing himself in favour of the Hunterian operation when he told them that he had seven times tied the external iliac, once the internal, once the common femoral, and he knew not how many times the superficial femoral without ever having encountered secondary hæmorrhage or any of the other dangers so graphically depicted by Mr. Ward.

Mastoid Abscess and Thrombosis of Lateral Sinus.

Mr. Secker Walker read notes of a case of double mastoid abscess with septic thrombosis of the left lateral sinus. The patient, a woman, aged 34, had had double otorrhœa for four years. Abscesses appeared on each parietal bone a month previous to admission, but the mastoid region on each side seemed healthy. For a fortnight there had been constant vomiting and headache, and rigors every night. Temperature when seen 103°, pulse 130. The left mastoid cells were opened, and the contents cleared out, the lateral sinus laid bare and found to contain pus and breaking-down clot; this was scraped away until free hæmorrhage from the upper end of the sinus took place. This was plugged with antiseptic wax. The right mastoid was opened, and pus and *débris* removed. The patient recovered, and was shown at the meeting.

The paper was discussed by Dr. A. Bronner and Dr. Barrs.

Mr. Walker replied.

Cases and pathological specimens were shown by Dr. Solly (Harrogate), Dr. T. Wardrop Griffith, Mr. Littlewood, Dr. Trevelyan (for Dr. Ewing), Dr. Gordon Sharp, and Mr. Mayo Robson.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Wednesday, November 7th, 1894.

T. S. Clouston, M.D., President, in the Chair.

Operation for Tumour of Frontal Lobe.

Mr. Cotterill showed a lad, aged 20, in whom the greater part of the frontal bone had been removed in May, 1894, for tumour of the frontal lobe. The tumour was in the middle line of the forehead over the frontal bone, and had many of the characteristics of a sarcoma. No fluctuation could be felt. The growth had been there two years, and the lad was in very good health. Most of those who saw it in the infirmary thought it was a sarcoma. The piece of bone removed was about three-quarters of the frontal bone. The tumour had affected the dura mater. It had dipped down into the frontal sinus on the left side, not on the right. Three pieces of dura mater that were affected were removed, and the frontal sinus was plugged. The wound healed without any rise in temperature. The tumour proved to be tuberculous. As most of the frontal bone was removed, the patient now wore a celluloid shield on his forehead. There evidently had been considerable growth of bone on the forehead, and it seemed to be closing in very well. Far less pulsation was felt now than some months ago.

Operation for Traumatic Meningeal Hæmorrhage.

Mr. Alexis Thomson showed two cases after operation for traumatic meningeal hæmorrhage. In one case there was fracture, in the other not. 1. Some days after accident (a fall from a cart) paralysis of the left arm, the left side of the face, and the left side of the tongue came on. In the operation a flap of scalp and bone was turned out like the lid of a box. The dura was found to be bulging, and on opening it some bruising of the cortex was observed. 2. The second patient was found lying unconscious below a horse in a stable. It was thought that he must have been kicked. He had lost much blood. He was not paralysed. A flap of scalp and bone was turned out with the aid of Cotterill's circular saw. A gush of blood took place from the middle meningeal artery. This vessel was tied with a suture. Three weeks afterwards the patient smiled, and has made a good recovery.

Cases.

Mr. Hodsdon showed a patient whose Larynx had been removed. The man could now articulate distinctly, though he had no vocal cords.—Mr. Camp showed a case of Ununited

Fracture of the Humerus, which had been treated by passive congestion, and in which union was now taking place.

Exhibits.

Dr. Alexander Bruce showed a new Sliding Microtome for cutting under spirit. There was a treadle arrangement, which was worked by the foot. This allowed both hands to be free for removing the sections as they were cut.—Specimens of Demodex Folliculorum *in situ* were shown by Dr. Norman Walker.

Method of Trephining.

Mr. Cotterill read a note on a method of trephining. He advised that a part of the scalp carrying large vessels should be selected for operation, in order to get as good a blood-supply into the flap as possible. An *omega*-shaped incision was made, and at the free ends of the *omega* the periosteum being pushed off, two small discs of bone were trephined out. Then a little tunnel was made between the two openings between the periosteum and the bone, and here a saw was put in and the outer table cut through. The saw was worked by a modified dental engine designed by Mr. Cotterill. This could be easily taken to pieces and carried about to operations. The bone ought to be cut obliquely with the saw. It was quite easy to know by touch when the outer table had been cut through, as the bone of the inner table was so much denser. The inner table would crack through with perfect accuracy at a later stage of the operation. At the opposite end of the *omega* two similar trephinal openings were made. Any elevator would do for lifting up the flap of bone. The operation was neither difficult nor tedious; the first time the operation was performed by Mr. Cotterill, the patient was off the table in thirty-five minutes.

Drs. Joseph Bell, Shaw McLaren, Byrom Bramwell, Mr. Alexis Thomson, and Mr. Wallace took part in the discussion which followed.

The Treatment of Ununited Fracture by Passive Congestion.

Mr. Caird read a paper on this subject. He described the case of a young lad who had a fracture in the thigh. After long treatment with splints no union had been obtained. Then an operation was performed, and the ends of the bone applied to each other, but at the end of four months there was still no union, and a sinus had formed. Then the method of passive congestion was tried. An elastic bandage was put on above the fracture, and ordinary bandages below this. In a short time it was found that union was taking place.

Mr. Cathcart called attention to the fact that Mr. Thomas, of Liverpool, had years ago used a method like this. He had used passive congestion for some time or several times every day, always taking the bandage off after a certain period.

Mr. Chiene said that at first he could not believe that such good results could be effected by the production of venous congestion round the injured part; but after having watched the cases which Mr. Caird had described he had been convinced that the method was a valuable addition to surgical treatment.

On November 7th the following office-bearers were elected for the ensuing session:—*President:* Dr. Clouston. *Vice-Presidents:* Dr. Blair-Cunynghame, Dr. John Wyllie, Dr. W. Craig. *Councillors:* Dr. Melville Dunlop, Dr. R. W. Philip, Dr. Joseph Bell, Dr. Russell Wood, Dr. Dow (Dunfermline), Dr. W. Russell, Dr. Sloan, Dr. Burn Murdoch. *Treasurer:* Dr. Mackenzie Johnston. *Secretaries:* Mr. Hodsdon, Mr. G. A. Gibson. *Editor of Transactions:* Dr. William Craig.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Pathology.

J. A. Scott, M.D., President, in the Chair.

Friday, November 2nd, 1894.

Iron Deposits in Pernicious Anæmia.

Dr. Scott showed sections taken from two cases of pernicious anæmia under the care of Drs. Beatty and Bewley in the Adelaide Hospital. The blood showed considerable variation in size of the corpuscles, and many nucleated corpuscles. In one case the iron was deposited in the outer zone of the hepatic lobules, while the kidney was free from iron in excess; while in the other case the iron was only found in the kidney by the Prussian blue reaction, the liver being free.

Dr. Boyd considered the increased hæmogenesis in pernicious anæmia to be due to an increased hæmolysis. In the anæmia following hæmorrhage increased hæmogenesis brought the blood up to the normal standard, and it was conceivable that in both cases increased demand caused increased supply.

Dr. Graves mentioned some cases of pernicious anæmia in which he had demonstrated a good deal of iron to be present in the liver cells.

Dr. Scott, in reply to Dr. Frazer, stated that the iron was probably present in the form of an oxide. It was quite possible that toxins might be absorbed, but it was doubtful whether this occurred at the beginning or end of the disease.

Tuberculous Iritis.

Mr. Arthur Benson showed a microscopic section of a case of what appeared to be tuberculous iritis. The case had been seen by him in London in May last, through the kindness of Mr. Hartridge, and the section was sent to him by Dr. Robert Jones, with a short history of the case—a girl, aged 15, without definite tuberculous history. She had been troubled with the eye for about nine months, a brown spot on the base of the iris being the first change noticed. Other similar ones followed. The growth consisted of a granulomatous-looking mass (with a few ill-defined giant cells) situated near the base of the iris, and blocking up the iritic angle. The eye having become blind was enucleated.

Dr. Story related the case of a girl he had seen, many years ago, with an ulcer on the conjunctiva, between the lower lid and the eyeball. This was treated for many months without effect, and finally the eye was enucleated. Microscopic sections, which he had exhibited in 1881 at the International Medical Congress in London, showed very fine giant cells. The experts there present considered it a case of tuberculous disease. The girl was now alive and healthy.

Mr. Swanzy within the last two years had seen about four cases of tuberculous iritis. The diagnosis depended upon the presence of small tumours of a cinnamon colour, varying in size from a pin's head to three or four pins' heads, and numbering in an eye from two to ten. Stripping of the back of the cornea and iritis was also present. He had removed one of these growths, and had submitted it to a pathologist for examination, who stated that on microscopical examination it resembled rather a sarcomatous than a tuberculous growth. Later on he had the opportunity of showing it to Professor Leber, of Heidelberg, who said that, although he could not be positive, he thought it was a tuberculous growth. In none of his cases could he find evidence of tuberculous disease elsewhere. All the cases he had seen made a fairly good recovery, and Professor Leber had suggested the term of "attenuated tuberculosis."

Remarks were also made by Dr. Scott; and Mr. Benson replied.

Melanotic Tumour of Eye: Death from Secondary Growths.

Mr. Story and Dr. Graves communicated the case of a man, aged 54, from whose sclerotic a melanotic tumour, about the size of a broad bean, was removed in February, 1890. In autumn of same year a second growth, of the size of a small pin's head, was removed from the conjunctiva of the same eye, and nothing went wrong till the spring of 1893, when the præunicular gland began to enlarge. It was removed by Mr. Franks, but new growths developed in the jaw and abdomen, and the patient died in the spring of 1894. The two eyeball tumours were typical specimens of the alveolar sarcoma. The gland tumour, in addition, exhibited specimens of other types—round-celled, spindle-celled, pigmented and non-pigmented sarcomata.

Spontaneous Fractures of the Clavicle.

Dr. E. H. Bennett presented specimens of spontaneous fractures of the clavicle due to syphilis, malignant disease, rickets in the infant, in the adult, and in the aged; and he directed attention to the importance of the study of these in-

juries and the mechanism of their production, attributing the fractures of infantile and adult rickets and of syphilis to muscular action, and those occurring in the aged to action of the weight of the upper extremity.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on November 6th, Dr. S. JOHNSTON, President, in the chair, Mr. MIALL read a paper advocating the use of Picric Acid as a means of estimating the quantity of sugar in urine, and compared the method with the use of Fehling's solution, and with the fermentation test.—A paper on the Initial Rashes of Small-pox, by Drs. A. E. Foster and Arnold Evans, was read by Dr. EVANS. It was based on 1,055 cases seen by the authors in the recent epidemic in Bradford. In only 3.9 per cent. of the cases was an initial rash present. The rashes were of the nature of a general or of a partial erythema; in some cases resembling measles, in others scarlatina. The lower part of the abdomen, the inner surface of the thighs, the lateral aspect of the trunk, passing up to the axilla and down the inner surface of the arms, were the typical positions for these rashes. Where the initial rash was severe the typical rash of small-pox was slight, the presence of an initial rash being regarded as unfavourable with regard to prognosis.—Dr. WOOD related a case of Gunshot Wound of the Intestine in a man. Four hours after the infliction of the wound the abdomen was opened by Mr. Roberts, and much blood was found in the peritoneal cavity, the bleeding coming from a vein in the mesentery. The bowel was examined from the stomach downwards, eight perforations being found in the gut and three in the mesentery. These were sutured with silk, Lembert's suture being used. The bullet was found and removed and the peritoneal cavity irrigated with hot boric lotion and sponged dry. The operation lasted two hours. The bowels acted on the third day, and the patient made a good recovery. The gut was empty at the time of receiving the wounds.—Specimens and cases were shown by Dr. WOOD, Mr. HORROCKS, Dr. KERR, Dr. MAJOR, and Dr. S. LODGE.

REVIEWS.

UNE VISITE À L'HÔPITAL INTERNATIONAL. Par M. PAUL HIPPEAU, précédée d'une Lettre-Préface de M. le Dr. PROSPER DE PIETRA SANTA. Paris: Aux Bureaux de la Soc. Franc. d'Hygiène. 1893. (Foolscap folio, pp. 71, with 24 Illustrations. 5 francs.)

THIS is an elaborate description, accompanied by plans and drawings of things important and unimportant, of a hospital recently established at his own cost by M. Péan, the eminent Parisian surgeon. To this institution, which is a general surgical hospital for the two sexes, is annexed a "policlinic," in a separate building, but united to M. Péan's hospital by an administrative block, the space enclosed by the three buildings being laid out as a garden. The policlinic is divided into departments for in- and out-patients, each under the charge of a "specialist," with laboratories in which biological chemistry, pathological anatomy, bacteriology, histology, etc., are studied, and (as we infer) taught, with other rooms for massage, electrotherapy, hydrotherapy, baths, and orthopædic gymnastics. The details of this policlinic are not described with the same elaboration as those of M. Péan's hospital; but the author of the pamphlet (M. PAUL HIPPEAU) expresses his opinion that "this assemblage, in one and the same place, for consultation and operation, of specialists already famous for their long experience in their art, is an innovation equally felicitous and indispensable in the hospital world" (p. 71). The whole institution, in fact, marks the extreme point to which specialism has advanced in France. It would carry us, perhaps, too far, if we were to embark on any discussion here of the general questions of specialism in hospital practice and tuition. Our readers can judge for themselves of the desirability of carrying the "one-man system" so far as this hospital carries it.

Leaving the general question then aside, we may say that the details of M. Péan's hospital seem to have been carefully thought out and elaborated with, perhaps, unnecessary minuteness. Everything seems to have been done to secure ample air-space, good and natural ventilation, the supply of pure air and water, and all the other details which contribute to success in hospital practice, especially in surgery. It was the total neglect of all these details which rendered the old Parisian hospitals so deadly, and which, in fact, almost forbade the performance in them of the major operations. Of course the operations which fall into the category of M. Péan's "specialty" demand an almost exaggerated attention to scrupulous cleanliness. The most elaborate machinery is here described (and figured) for "sterilising" the air and water, and for distributing the air so sterilised at a given temperature, and rendered hygrometric, into the wards. The wards themselves are all paved and lined with tiles, and the angles rounded off so that no dust or dirt can lodge. The waterclosets are properly separated from the wards, well ventilated, and all due care given to prevent the consequences of the extremely dirty habits of French peasants in this particular: and all the minor details, from the operating table down to the making of the "tisanes," are described with the same encyclopædic minuteness. It would be rash to say that some of these details are superfluous; at any rate, if it is a fault, it is one on the right side. It will be interesting to know the exact results of the whole experience of such an institution as M. Péan's over a term of years. We trust that arrangements have been made for recording that experience fully and impartially.

REAL-ENCYCLOPÄDIE DER GESAMMTE HEILKUNDE: MEDICINISCH-CHIRURGISCHES HANDWÖRTERBUCH FÜR PRAKTISCHE ÄERZTE [Encyclopædia of Medical Sciences. Medico-Chirurgical Dictionary for Practitioners.] Dritte gänzlich umgearbeitete Auflage. Herausgegeben von Professor Dr. A. EULENBURG. Lieferungen I and II. Wien u. Leipzig: Urban and Schwarzenberg. 1893. (Royal 8vo, pp. 160. Pro Lief. 1m. 50pf.)

THE reputation which this Encyclopædia has already obtained, and the well-recognised standing of its contributors, render but few remarks necessary by way of introduction. It is, of course, something much more than a dictionary, the articles being mostly exhaustive. The first edition began to appear in 1880, and the second in 1890. The present edition is to be complete in some twenty parts, each containing about 80 pages. It is arranged in alphabetical order, and all the articles are signed. The first part begins with Aachen as a health resort, and ends with enteric fever (abdominal typhus), and the second ends with accommodation. The most important subjects dealt with in these two parts are, besides enteric fever by the late Professor Zuelzer, abortion and death of the fœtus by Professor Kleinwächter, and abscess by Professor Albert. The article on enteric fever is very full and abundantly illustrated, the frontispiece representing ulceration of the intestine being particularly fine. It is curious to note that the late author did not fully share all the modern views on the bacteriology of enteric fever. While admitting that the bacilli are present, he hardly accepted their causal relation to the disease. The author distinctly believed in the application of cold in one way or another as a method of treatment and an apparatus is figured by means of which water circulating in a mattress could be made to surround the patient. Few words are given to the antiseptic treatment; it is said that no specific action due to it has been noted. The general article on abscess will be read with considerable interest. Professor Ziehen contributes an account of abasia. It hardly seems necessary to give as much as three pages to the question of abiogenesis, however interesting the subject. Abortion is fully and very practically treated from all sides, including artificial and criminal abortion. The article on purgatives by Dr. Lewin includes their mode of action, by-effects, indications for use, manner of administration, and contra-indications.

The articles in these two parts seem to be very even in character and of high quality. The type is very clear and the illustrations well done. We trust that the Encyclopædia may continue to enjoy the success which it deserves.

NOTES ON BOOKS.

Deaf-Mutism: a Brief Account of the Deaf and Dumb Human Race, from the Earliest Ages to the Present Time. By Henry W. Hubbard, a member of the medical staff of the Stainers' Homes for Deaf and Dumb Children. 1894. (London. Demy 8vo, pp. 12. 6d.)—This pamphlet, reprinted from the *Leisure Hour*, gives an account of the origin, nature, and means by which deaf-mutism is perpetuated, and the methods practised during the last three centuries for training those who lack two faculties for mental culture. As far back as the eighth century B.C. deaf mutes were known to exist, and, under the Spartan system then in vogue, were sacrificed in early childhood. The causes of the condition are discussed, and it is stated that consanguineous marriages and heredity are chiefly responsible for it. An account of the three systems for educating deaf mutes, namely: the sign-manual, or French; the oral and pure oral, or German; and the combined, is given. As a result, those who have been trained are able to compete with others in science, in the fine arts, in commerce, and the many kinds of industrial life.

Festigkeit der menschlichen Gelenke mit besonderer Berücksichtigung des Bandapparates [The Strength of Human Joints, with Special Reference to Surgical Appliances]. Ungereicht von Dr. Med. J. Fessler. (München: M. Riegerische Universitäts Buchhandlung. 1894. Roy. 8vo, pp. 274, 5 plates, and 22 woodcuts. M. 4.)—This is a record of very laborious and elaborate experiments made for determining the resistance of the different joints of the human body to extension by weights. The results thus fully reported, though interesting from an anatomical point of view, are not very important to the practical surgeon. The degree of resistance and the amount of extension required to overcome elasticity, and subsequently to produce luxation, vary not only in different joints in the same subject, but also in the same joint in different subjects, and are influenced by age, sex, and by bodily development. In most joints the ligamentous structures, it is stated, are less resistant than the adjacent bones, unless the latter be altered by disease or senile degeneration.

How to Use the Baths: Strathpeffer Spa, N.B. By J. Trebelles Fox, M.R.C.S., L.S.A. (London: J. S. Forsaith. Demy 8vo, pp. 16. 6d.)—This pamphlet contains a few commonplace remarks on taking baths which may possibly be of some use to lay readers. The injunction to take "a brisk walk just before the bath" must sound a little odd to the sufferers from chronic rheumatism who go to Strathpeffer in order to recover the capacity of walking.

A Guide to the Use of the Buxton Mineral Waters. By W. H. Robertson, M.D., F.R.C.P. Twenty-fifth edition. (Buxton: C. F. Wardley. 1894. Cr. 8vo, pp. 67. 6d.)—The veteran physician of Buxton, Dr. Robertson, in the preface to this, the twenty-fifth, edition of his valuable little guide to the Buxton waters, refers with natural pride and gratification to the enormous circulation it has had, which he estimates at 40,000 copies. Dr. Robertson thinks highly of the bracing mountain climate of Buxton and believes it aids in suitable cases the curative effects of thermal treatment. He also thinks it desirable sometimes to raise artificially the natural temperature of the springs when using them as baths for certain cases. Analyses of these springs made at various periods are given and the results criticised and compared with those of analogous springs. A full account is also given of the best method of using the water and baths and the cases best adapted for treatment at this "mountain spa."

At the last meeting of the Royal Microscopical Society Professor Jeffrey Bell referred to the loss which the Society had sustained in the death of Dr. G. E. Blenkins, a former secretary. Papers were read by Mr. E. B. Green, Dr. H. Stolte foth, and Mr. F. Chapman. Dr. W. H. Dallinger described a new model of microscope, made by Messrs. Watson and Messrs. Ross, and exhibited specimens of their "Eclipse" microscope.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

AN ARTIFICIAL EYE FOR SHRUNKEN SOCKET.

Mr. Salt, of 69, Corporation Street, Birmingham, has submitted to us a form of artificial eye, designed to meet the needs of cases in which an ordinary artificial eye cannot be fitted, either because of shrinking or of closure of the lids. It will also be of use to hide the result of disfiguring accidents or operations about the eye. Briefly, it may be said to be a pair of spectacle frames, on one of which, as is shown in the accompanying diagram, an eye is represented. The eye-



piece is made of a material which is unaffected by tears or secretions. The eye consists of the ordinary glass portion of one side of a pair of spectacles, around which artificial lids are moulded. When in position the eye rests lightly against the lids, and when the necessary great care has been taken in adapting the eye to the requirements of the individual case, the effect appears to be very satisfactory. The invention has been patented.

HEATING BY ELECTRICITY: SOME NOVEL APPLICATIONS.

Mr. Snedeker, who has already devised a useful appliance in the form of an electrically warmed pad for application to the body as a substitute for a poultice, sends from Paris (14, Rue des Pyramides) an account of an electrically heated incubator for bacteriologists, which has been invented by him. The temperature admits of exact regulation, and the incubator is divided into compartments, some dark, some light, some dry, others moist, for supplying all the requirements of carrying out artificial cultures. Where an electric lighting supply is available for use it is possible that this mode of heating an incubator may present some advantages.

WOOLLEN VESTS.

"Riphokam" is the name given to a new under vest made of undyed wool, invented by Mr. John Rogerson, of 304, Brixton Road, S.W. The front of the vest is made of a single weaving, while the back is woven in a diced fancy or ribbed style, which, without doubling the material, adds greatly to the warmth-giving properties of the vest with only a slight increase of weight.

CASE AND PROTECTOR FOR CLINICAL AND OTHER THERMOMETERS.

Page's patent case and protector has been specially designed with the view of practically obviating the great loss through the accidental breakage of clinical thermometers. By simply withdrawing the larger cap of the protector the thermometer is ready for use. It is made in silver, aluminium, and other suitable metals by Messrs. Robert G. Ivey and Co., 12 and 13, Laurence Pountney Lane, E.C.

Presentation.—Dr. Ernest Wills, of the London County Asylum, Claybury, has been presented by his colleagues and the staff of the asylum with a complete set of surgical instruments in an inscribed case, as a mark of their esteem and regard on his departure for South Africa. The Medical Superintendent, Dr. Robert Jones, expressed the debt they owed to Dr. Wills for his help and advice in organising this new asylum for over 2,000 patients. Mr. Alderton, as the first resident member of the staff, then made the presentation.

AN INQUIRY

INTO

THE RELATIVE EFFICIENCY OF WATER FILTERS

IN

THE PREVENTION OF INFECTIVE DISEASE.

A Special Report to the "BRITISH MEDICAL JOURNAL."

BY

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PART I (Continued).

Non-Pressure Filters—"Table," "Pocket," and other Portable Forms.

We shall now give the results in detail of our examination of the various filters which have been brought under our notice. We have divided these into two groups:

A. Those filters which allow of the direct passage of disease organisms into the filtrate: and

B. Those which do not allow disease organisms to pass directly into the filtrate.

A. Filters which Directly Transmit Disease Germs.

I.

The Silicated Carbon Filter Company, *Battersea, London.*—The filters of this firm, which are in very extensive use in this country, have the following claims put forward on their behalf. Their filter, they say, "renders the worst water pure and wholesome." "By means of this filter perfectly pure and wholesome water may be drunk from any pond or stream." These statements are so definite that we proceeded to test their accuracy on the following types of filter supplied by this company.

(No. 1.) Plain Pint Glass Filter.

Table III.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	2,000 to 4,000	1,000 to 2,000
Cholera bacillus (first day)	5,000 to 8,000	200 to 300
Cholera bacillus (second day)	—	6,000 to 8,000
Typhoid bacillus ..	20,000 to 30,000	4,000 to 5,000

Table IV.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 2 ...	40	5
Second day, sample No. 1 ...	200	100
,, ,, ,, No. 2 ...		200
Third day, ,, No. 1 ...	60	4,000
,, ,, ,, No. 2 ...		1,000
Fourth day ,, No. 1 ...	20	Innumerable
,, ,, ,, No. 2 ...		,,

(No. 2.) Silicated Carbon Ascension Filter.

Table V.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 15,000	5,000 to 6,000
Cholera bacillus	10,000	2,000 to 3,000
Typhoid bacillus	20,000	800 to 1,000

Table VI.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1 ..	—	Not recorded
,, ,, ,, No. 2 ...	30	5
Second day	—	Not recorded
Third day, sample No. 1 ...	50	60
Fourth day, ,, No. 1 ...	40	600 to 800
,, ,, ,, No. 2		200 to 300

(No. 3.) Silicated Carbon Pocket Filter.

Table VII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 15,000	4,000 to 5,000
Cholera bacillus	10,000	2,000
Typhoid bacillus	10,000 to 15,000	800 to 800

1. Plain pint glass filter containing a simple silicated carbon block.

2. Silicated carbon ascension filter, in which the outer and upper surface is covered with a coat of porcelain, which compels the water to pass upwards through the block before passing into the filtrate.

3. Silicated carbon pocket filter.

4. A large block of carbon, 6 in. in diameter (siphon filter), apparently fitted up on the same system as the pocket filter, enclosed in a tin case with a perforated bottom, which was

supplied to us through the courtesy of the Director-General of the Army Medical Department.

(No. 4.) Silicated Carbon Syphon Filter (Army Medical Department).

Table VIII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 15,000	1,000

It is evident at a glance that none of these filters possess the power of intercepting the micro-organisms which may be present in the water, and accordingly cannot possibly render "the worst waters pure and wholesome." From what has already been said concerning the increased risk of infection through the use of an imperfect filter that has once become contaminated with disease germs, we must conclude that these filters not only confer no protection, but in all probability materially increase the risk of infection. We may state here also that we have examined their tap filter, which they affirm "yields absolutely sterile water at any pressure," but have found that this is not the case. The tap filters, however, will be treated in detail in a further report.

II.

Messrs. Doulton and Co., *Lambeth Pottery, London, S.E.*—The filtering medium supplied by this firm consists of their manganous carbon, which they maintain acts not merely mechanically but also chemically through the intervention of the manganese, which absorbing oxygen from the atmosphere, oxidises the organic impurities present which are thus burned up and destroyed. How far this contention accords with the accepted notions of modern chemistry we must leave the chemist to decide, as this lies outside the province of the present investigation. "*Manganese also exerts a preventive influence on the growth of organisms*, the result being that the media, purified by the treatment, and increased immensely in the oxidising power by the carrying action of the manganese, *acts better and lasts longer than any other*." This material is used not only for table and domestic filters, but is also supplied in suitable forms to be placed in cisterns and attached to taps. The filters are supplied in three forms: (*a*) simple granular manganous carbon; (*b*) block of compressed manganous carbon; (*c*) mixed filter, consisting of a block of manganous carbon surrounded by a layer of the granular material. They also supply a filter in bottle form consisting of manganous carbon and a non-corrosive metal, and also one consisting of natural porous stone. They manufacture, in addition, pocket, tourist, and army filters, which, as in the case of the bottle forms, are supposed to be suitable for rendering pond and other suspicious waters suitable for drinking purposes. We have examined the following forms of filters:

1. Simple block of compressed manganous carbon.
2. Block of manganous carbon surrounded by a layer of granular carbon.
3. Pocket filter (No. 24 of their list), consisting of compressed block and granular charcoal.
4. Manganous carbon bottle.
5. Natural porous stone bottle.

(No. 1.) Simple Block of Compressed Carbon.

Table IX.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 15,000	2,000 to 3,000
Cholera bacillus	10,000	3,000 to 4,000
Typhoid bacillus	10,000 to 15,000	800 to 1,000

Table X.—*Tap Water.*

		Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day,	sample No. 1	—	Not recorded
,, ,, ,,	,, 2	40	
Second day ..	No. 1	50	
,, ,, ,,	No. 2		
Third day ..	No. 1	40	
,, ,, ,,	No. 2		
Fourth day ..	No. 1	25	Innumerable
,, ,, ,,	No. 2		Over 1,000

(No. 2.) Mixed Filter (Compressed Block and Granular Carbon).

Table XI.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 15,000	30 to 40
Cholera bacillus	10,000	3,000 to 4,000
Typhoid bacillus	10,000 to 15,000	900 to 1,000

Table XII.—*Tap Water.*

		Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day,	sample No. 1	—	Not recorded
,, ,, ,,	,, 2	—	1
Second day ..		—	Not recorded
Third day ..		—	Not recorded
,, ,, ,,	No. 2	—	—
Fourth day ..	No. 1	—	800 to 1,000
,, ,, ,,	No. 2	—	200 to 300

(No. 3.) Pocket Filter (Compressed Block and Granular Charcoal).

Table XIII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 15,000	1,000 to 1,500
Cholera bacillus	10,000	800 to 1,000
Typhoid bacillus	10,000 to 15,000	2,000 to 3,000

(No. 4.) Manganous Carbon Bottle.

Table XIV.—*Test Organisms.*

	Average Number per c.c originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts ...	10,000 to 15,000	1,000 to 1,500
Cholera bacillus	10,000	3,000 to 4,000
Typhoid bacillus	10,000 to 15,000	800 to 1,000

TABLE XV.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1		6
,, ,, ,, No. 2		25

(No. 5.) NATURAL POROUS STONE BOTTLE FILTER.

TABLE XVI.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 15,000	30 to 40
Cholera bacillus	10,000	50 to 60
Typhoid bacillus	20,000	60 to 70

TABLE XVII.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	35	11
,, ,, ,, No. 2		15

We have found no evidence confirmatory of the statement of the makers that the manganese present in their filters prevents the growth of micro-organisms, although it is quite possible that their blocks may remain "sweet" for a longer period than those from which it is absent. We must again insist upon the danger incurred through the manufacturer asserting that the filter is self-cleansing—an idea with which the public is only too ready to fall in. Such filters must probably either pass the impurities, at once, unaltered into the filtrate or retain them in the pores of the filter, where they undergo their natural process of decomposition, and then pass into the filtrate. As a consequence of this advice these filters are often used continuously without being subjected to that process of cleansing and sterilising which is in all cases so essential. It is quite certain that their filters confer no protection against the passage of disease germs, and the danger to which the public is exposed is perhaps most obvious in the case of the bottle form of filters, which they expressly state "are specially adapted for use in hot climates where the water supply is usually bad."

III.

MAIGNEN'S "FILTRE RAPIDE" AND "ANTI-CALCAIRE" CO., Limited, *255, Regent Street, W., and 34, Eastcheap, E.C.*—The method of filtration carried out in the many forms of filter which are sent out by this firm appears to be the same in all cases. The water passes first through a layer of granular carbon, which is protected from the direct onset of the water by means of a china screen or breakwater, then through a layer of very fine powder which has been deposited in the meshes of an asbestos screen, and finally through a sheet of asbestos cloth. The medium employed is known as "patent carbo-calcis." It is stated that this filter "will remove from water germs of disease, organic matter, and every trace of metallic poison." "The water that issues from the filter is clear and pure.....a perfect beverage and a preventative against disease. The particles of the filtering medium are so small, they lie so together, that nothing whatsoever that has a body, however small, can pass through.....The water that issues from it is better than that of the finest spring, and a perfect guarantee against disease."

The forms of their filters with which we worked were:—

1. Cottage filter No. 1 (page 15 of their catalogue).
2. One pint table filter.
3. Field hospital service filter, for the use of which we are indebted to the courtesy of the Director-General of the Army Medical Department.

(1) COTTAGE FILTER NO. 1.

TABLE XVIII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	3,000 to 4,000	10 to 15
Cholera bacillus (first day)	5,000 to 6,000	40 to 50
Cholera bacillus (second day)	—	150 to 200
Typhoid bacillus	20,000 to 30,000	20

TABLE XIX.—*Tap Water.*

		Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample	No. 1	—	Not recorded
,, ,, ,,	No. 2	50	0
Second day ,,	No. 1	60	3 to 4
,, ,, ,,	No. 2		4
Third day ,,	No. 1	25	18
,, ,, ,,	No. 2		20
Fourth day ,,	No. 1	30	400
,, ,, ,,	No. 2		100
Fifth day ,,	No. 1	—	Not recorded
,, ,, ,,	No. 2	20	300

(2) ONE PINT TABLE FILTER.

TABLE XX.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 15,000	50 to 60
Cholera bacillus	10,000	800 to 1,000
Typhoid bacillus	10,000 to 15,000	5 to 6

TABLE XXI.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	40 to 50	0
,, ,, ,, No. 2		2

No 3. FIELD HOSPITAL SERVICE FILTER.

TABLE XXII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 15,000	100 to 150

As will be seen on comparing these results with those obtained in the case of the other table and household filters, the filtration is not nearly so imperfect as in many of the other cases. It will also be noted that the results obtained

vary greatly in different instances; this requires a word of explanation. As it seemed to us very probable that the fine deposit of powdered carbo-calcis might easily be disturbed in the process of sterilising, and thus give rise to imperfect action on the part of the filter, we usually preferred in the case of the test organisms to use a fresh charge on each occasion without sterilising. The difference in action of the filters in the different cases is accordingly to be referred in part to the degree of perfection of the deposit on the asbestos screen, which had been formed in each case. There can be no doubt that this may vary in different cases, and is practically beyond our control even when the greatest care is exercised. It must also be observed that even where the filter appears to be acting at its best the pores are large enough to permit the passage not merely of the staphylococcus pyogenes aureus, but also of the much larger white yeast in its true proportions, although it has been suggested that this is due to a minute crack or fault present on some part or other of the filtering surface. We must also point out that, as might naturally be expected in the case of a filtering medium consisting of fine granular particles, the organisms are gradually washed through into the filtrate on continued use, and appear in much increased proportions, as is shown in the case of cholera bacillus (Table XVIII) on the second day.

We have also carried out an extended experiment with Cottage Filter No. 1, to ascertain how long, having once been infected, it would remain capable of infecting with cholera when afterwards fed daily with ordinary tap water. From the following table it will be seen that Koch's cholera bacillus could still be separated on the 32nd day, but at the end of six weeks a negative result had to be recorded.

TABLE XXIII.—*Filtre Rapide, Cottage No. 1.—Cholera.*

2nd day.	4th day.	7th day.	9th day.	11th day.	15th day.	16th day.	21st day.	25th day.	32nd day.	42nd day.
+	+	+	+	+	+	+	+	+	+	-

Although, as we have said, these filters act in a relatively much more perfect fashion than most of those with which we have had to deal, still it cannot be contended that they confer any protection against the communication of infective disease, inasmuch as, although a large proportion of the micro-organisms are undoubtedly retained in the meshes of the filter, yet in course of time, in all probability, these, or at any rate the greater number of them, pass into the filtrate, and are drunk by the consumer. Now as the manufacturers of these filters state as among the requisites of a good filter that it should include the provision to arrest "the suspended matter, large and small.....even the spores of cholera and typhoid fever germs, algæ, diatoms, and all other microscopical and ultra-microscopical organisms"—we cannot agree with their statement that this filter possesses these qualities, and is "a perfect guarantee against disease."

(To be continued.)

THE Royal Scottish Society of Arts has awarded to Dr. Dawson Turner, of Edinburgh, a Keith prize for his papers on Electrical Resistance, and a Hepburn silver medal to Mr. W. B. Blakey, of Edinburgh, for improvements in ambulance waggons and carriage beds for invalids.

DEVON AND EXETER HOSPITAL.—This old and excellent county hospital is, as we find from the *Devon and Exeter Gazette* of November 3rd, in need of extension and improvement. The sum asked for is not large—from £13 000 to £15 000—and as one donation of £3,000 has already been promised, we cannot doubt that the whole sum will soon be raised, as the hospital is the main agent in supplying medical and surgical aid to the poor of a large and rich district in the West of England. The hospital has had a high surgical reputation for many generations.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

XXV.—EAST AND WEST FLEGG, NORFOLK.

On the edge of Ormsby Broad, among the waterways of Norfolk, stands the quaint old workhouse of the East and West Flegg Union. It dates from 1777, a relic of the past left high and dry above the receding tide of population, which has swept away from its walls to distant towns and cities. The house is in Rollesby parish, and serves a union of twenty parishes. It was built to accommodate 100 inmates, but on the day of our visit there were but 40, including the sick.

The house, with its rough-cast walls and generous overhanging eaves, beneath which the windows look out over the expanse of the Broad, has a somewhat foreign aspect from a distance. Its arrangements are in keeping with the structure, and it lacks all modern conveniences: no water is laid on to any part of the house; all hot water is conveyed from a copper in the laundry. The drainage is carried by pipes into a field at some little distance. The wooden staircases are steep, and, in most instances, lead directly from the lower room to the upper.

THE OLD AND INFIRM

are in the house; none of them were in bed. The old women were in their day room on the ground floor; the sun was flooding the room, and with the open fire, round which they were seated on benches or in armchairs, there was an air of home-like comfort. A flight of stairs from the room led to the dormitory above. There is the same arrangement for the old men, but there was only one inmate, and he was gardening. Commodes are in use in the dormitories.

THE LYING-IN WARD

is in the house, on the first floor, close to the matron's apartments. There were five beds in the room, one of which was occupied by a mother with a fortnight-old baby. The women are kept here a month, until they are quite strong. There is an earth closet in a recess for the use of this ward: it appeared to us to be too close to the ward from a sanitary point of view, but in justice to the management we must say that there has only been one death in twenty-three years. The matron is responsible for the after-care of the women: there is a midwife (not certified) in the village of Rollesby, and the medical officer attends all confinements.

THE INFANTS

are in the able-bodied women's room. There were two of them in the care of an imbecile; their mothers feed them, and have them to sleep with them at night. We asked the matron if she were not afraid of trusting these mites to the uncertain temper of an idiot, but she said that she had never found her unkind to them, and that there was really no choice, as able-bodied labour was very scarce in the house; there were only three women available for the work, including that of kitchen and laundry, and all the men are old. Still the arrangement is not one to be commended. The elder children are in the charge of the schoolmistress.

THE SICK HOUSE

is at some distance from the workhouse, on the other side of a field. It holds sixteen beds, nine male and seven female: these are all occupied in the winter, but there were only six patients when we visited. One man was placed in a separate ward because he was slightly deranged; this ward, holding two beds, opened out of the day-room. The other male patient, an infirm old man, was amusing himself with a little gardening in a nice small garden attached to the sick house. The four female patients were in their day room. The men's rooms are on the ground floor, and the women's upstairs. A nurse (not trained) is placed in charge of this department. We found her at work in her own apartment, which is in the

sick house in the women's side, and a little apart from the "slightly deranged" male patient. The bedding is straw in all parts of the house, and the beds appeared well filled.

THE CHEERLESS APPEARANCE

of these rooms, especially those of the women, with the washed walls and meagre furniture, was very marked, as contrasted with the old peoples' quarters in the house. The women were gathered round a cold fireplace, the nurse having neglected to light the fire, as she had been instructed to do. Little sun seems to come into this room, and the poor creatures had little to divert them.

A PRIMITIVE DRAIN.

On the ground floor, opposite the nurse's room, was a scullery, in which, as the door was opened, we perceived a bad smell coming from a sink pipe, in which, as the matron pointed out, there should have been the wooden stopper. This pipe went into the drain which carried off the waste to the field. A few shillings would be well spent in cutting that pipe, and discharging it over a gully, when the wooden stopper may be forgotten with impunity. At present the sink is quite insanitary. There are no fixed baths, but the long movable baths are in use, for which the hot water is carried from the laundry copper. There is a pump outside the sick-house, and we were informed by the matron that the water supply is good.

THE MEDICAL OFFICER

lives in an adjoining village, scarcely a mile away; he visits the patients twice a week. The sick diets are arranged by him in conjunction with the matron. The food is sent over to the sick-house in portions, in a covered tin, from the house kitchen. We met the tin on its way; it contained boiled meat and potatoes. The cooking is done by an inmate.

RECOMMENDATIONS.

The sick house was quite suitable for its purpose; but there appeared to be a lack of consideration on the part of the nurse, and we thought that more might be done to make the rooms, especially for the women, more cheerful and comfortable. The sink pipe should be disconnected and made sanitary, and we should advise a supply of earth closets for the house and sick house. We would also suggest that some other method of caring for the infants be found than employing the services of an idiot. Again we would urge on the authorities the possibility of making a country union infirmary the centre of the medical relief for the poor of the district.

PLYMOUTH.

THE Plymouth Board of Guardians, at their last meeting, adopted a recommendation of the Visiting Committee for the increase of the nursing staff at the workhouse by the appointment of a superintendent of nursing at £50 per annum, a certificated hospital nurse for the male wards at £25, and also one trained nurse for each set of wards at £20. Dr. Oxland protested against the decision, and handed in a notice of motion to rescind it.

CHESTER.

AT Chester Assizes, on November 2nd, John Tonge, an assistant night nurse at Chester Workhouse, was tried for the manslaughter of Thomas Darlington, an inmate, aged 84. Being annoyed at the man's conduct, the prisoner, it was stated, threw water over him, pulled him out of bed, and afterwards struck him in the side, with the result that two of his ribs were broken and his lungs injured. He died three days later. Mr. Justice Lawrance, in sentencing the prisoner to twelve months' imprisonment, said he was afraid they seldom got to know what happened in places of this kind.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

[FROM A CORRESPONDENT.]

IN St. Bartholomew's Hospital the number of cases of diphtheria which have been treated by the various physicians, Dr. Church, Dr. Gee, and Dr. Hensley, has been very considerable, and the results have been thus far satisfactory. Many of the cases have shown distinctly good results, although in cases in which the disease has been of some duration the results do not appear to have been so satisfactory. In these cases we understand no fluid has been used of home manufacture. In this hospital Aronson's preparation, imported from Germany, has been employed. It is a matter of some concern for the moment whether the preparations as used in Paris from the Institut Pasteur, that obtained from Germany under the name of "Aronson's fluid," or that prepared at the Institute of Preventive Medicine in London are of equal efficacy. This is evidently a point to be determined by clinical observation. In the case of the French hospitals Roux's serum appears to have diminished the mortality by 50 per cent.

Our experience of Aronson's fluid in this country is taken from a considerable series of cases in the hands of private practitioners, already published in the columns of the BRITISH MEDICAL JOURNAL, and from the trial of it at St. Bartholomew's Hospital, where it has stood the test of clinical use satisfactorily for more than three months. Physicians here who have employed the serum are universally of opinion that they have seen valuable results from its use, and we look forward with interest to full publication of the records.

It is to the English preparation that we look with the greatest interest. Unfortunately, the limited amount of the fluid prepared in this country has, up to the present time, necessitated its employment being confined to one only of the Metropolitan Asylums Board Hospitals—a condition of matters to be deplored.

It would be desirable that it should be supplied to all the hospitals under the management of the Board. This is at present impossible. There is no means at present in existence in London capable of supplying serum in sufficient quantities for all the cases of diphtheria even in that hospital which has been favoured above all others by some lucky stroke of fortune, and has been supplied with the serum prepared at the Institute of Preventive Medicine in London. The medical profession will desire to know with as little delay as may be, what is being done in these hospitals and what the results are which are obtained by the use of the English prepared antitoxin. A policy of concealment is not what the medical profession expects in this matter. Secrecy is contrary to all the principles upon which public hospitals ought to be conducted. Hospitals are the granaries from which knowledge is to be scattered abroad, and to fructify for good. It is remarkable, therefore, that the only public hospital to which this medicament has been supplied should so long withhold the results of treatment from the members of the profession. "Wild horses," said one gentleman, "could not draw the name of the hospital from those who are engaged in supplying them with the lymph."

This contrasts strangely with the appeal made to the public to provide the funds necessary to enable the bacteriologists to produce the serum, of which the users are surrounded with such absurd mystery, in quantities sufficient to satisfy the needs of the population. Other medical officers have here a righteous grievance. To them is denied the opportunity for research which is granted to one alone of their more favoured colleagues; and to the public it implies that a research which, being spread over the whole of the metropolitan area, would have taken little more than six weeks to complete, is at the present time being prolonged; and the medical profession can, therefore, not obtain a definite opinion for an indefinite period. Meantime, diphtheria is causing a fearful mortality in our midst, as is shown by the figures recorded in the Metropolitan Asylums Board's report. Forty per cent., 35 per cent., and 30 per cent. are common figures in the various hospitals, and even these figures are based upon the average of all ages. What the mortality may be of the cases of authentic diphtheria under 15 years of age in this country it is not possible to state from any published statistics.

The mortality is not adequately distinguished in the statistics of the Board. The medical officer at the hospital referred to proposes not to publish anything regarding the results of the treatment until it has been tested in 100 cases. After a trial of over three weeks it is impossible to say a great deal. Dr. Roux was able to send his diphtheria patients to their homes after a fortnight in the hospital. This however has not been done in London. Diphtheritic paralysis frequently does not supervene until after six weeks, and it is for the purpose of

observing whether the serum prevents this manifestation of the disease that the patients are retained for observation for the whole of that period. Definite figures therefore are not yet obtainable from the trials made at this hospital.

XXIV.—Mr. C. W. H. Newington (House Physician, *pro tem.*) sends the following notes of four cases of diphtheria treated with antitoxin at the Sussex County Hospital, Brighton:

Case I.—H. C., aged 14, admitted September 11th, 1894. Had complained of headache and sore throat for five days. He was rather a pale boy. He spoke with difficulty, and his voice was hoarse. The glands at the angle of the jaw were swollen on both sides. White diphtheral membrane could be seen on both tonsils, uvula, and on the anterior pillar of the fauces; he could only swallow with difficulty. The pulse, 60, was of low tension; the temperature was 99°; the respiration was not affected. The lungs were healthy. A blowing systolic murmur at pulmonary area. Aronson's antitoxin (1 c.c.) was injected. The temperature an hour afterwards was 99.4°.

On September 12th he was ordered 15 minims of the tincture of perchloride of iron every four hours. The membranous patches had not spread. The pulse was 80. On September 13th the temperature was 98.8°. He was able to swallow better. A boracic gargle was ordered. On September 14th the temperature was 99.4°. The glands in the neck were much reduced in size, and part of the membrane was peeling off. He was able to gargle freely. On September 16th the temperature was normal, and never rose above normal afterwards. On September 25th he was discharged cured.

Case II.—J. F., aged 4, admitted at 7 A.M. on September 27th; first complained of throat on September 25th. He was crying with pain, was cyanosed and breathing rapidly. There was recession of the ribs; the glands of the neck were enlarged; the temperature was 100.5°. He was put into a hot bath and fomentation applied to the throat. At 9 A.M. the dyspnœa and cyanosis were increasing and tracheotomy was performed, chloroform being unnecessary. The urine was acid, specific gravity 1022, and gave a cloud of albumen. The operation gave relief, but the boy continued very bad. At 1 P.M. the temperature was 100°. At 1.30 P.M. antitoxin 0.8 c.c. was injected. At 2 P.M. the temperature was 101°; at 6 P.M. 101.5°; and at 10 P.M. the temperature was 100°, the pulse was 140, and the respiration 50.

On September 28th the temperature in the morning was 99.8° and in the evening 97.8°. He coughed up some membrane through the tube.

On September 29th the temperature was subnormal, the pulse 96 respiration 34.

On September 30th a rubber tube was inserted instead of the silver one. The patient smiles and takes food well now.

On October 2nd the tube was removed; the urine still contains albumen; no membrane can be seen.

On October 7th the tracheotomy wound was healed.

On October 9th the patient was allowed to get up.

On October 17th discharged cured.

Remarks.—On admission this case presented serious laryngeal symptoms, and would probably have died had not tracheotomy been performed, but after the injection of antitoxin improvement was almost immediately marked.

Case III.—F. B., aged 6, admitted 3 P.M., October 3rd. A pale looking boy, pulse 120, respiration 36, temperature 98.2°; tongue much furred; breath very foul; submaxillary glands enlarged and tender. On the hard and soft palate are patches of yellowish white membrane, which if detached leave a raw bleeding surface—also on the inner side of cheeks. At 3.40 P.M., 1 c.c. of antitoxin was injected; mouth washed out with borax and glycerine. At 4.20 P.M. the temperature had risen to 99°. At 5 P.M. it was 99.8°. At 6.30, 99.4°; the pulse being 140, and respiration 30. At 7 the temperature was 99°; at 8, 98.2°.

On October 4th the patient seems better, but the pulse is very low in tension and quick; temperature remains near normal.

On October 6th, the pulse running 140°, heart sounds normal.

October 8th. The membrane is peeling off; breath is very foul. Perchloride mercury, 1 to 6,000, is used to spray the mouth every two hours. The boy is able to wash out his mouth with boracic lotion.

October 10th. The membrane has disappeared, but a number of ulcerating patches are to be seen on the inner sides of cheeks. Urine 1020, acid, albumen.

October 12th. Pulse is still quick, 120, and low in tension. Knee-jerks are present; able to swallow perfectly.

October 22nd. Pulse 80, and volume much improved.

November 7th. Discharged cured.

Case IV.—L. M., aged 3, admitted 12.10 P.M. October 22nd. Has been suffering from a croupy cough for the last two days.

Condition on Admission.—A well nourished girl; the face is flushed, and she cries with pain in the throat and on attempting to swallow. There is white membrane on both tonsils and posterior part of pharynx. Slight recession of ribs. Lungs clear. Urine acid, trace of albumen. Heart sounds faint. Temperature 99.8°, pulse 128, respiration 28. Antitoxin ℥x injected. 1.30 P.M. Temperature 98.8° 4 P.M. Temperature 97.8°, pulse 120, respiration 25; patient seems better than on admission. 11 P.M. Breathing more noisy and brassy; recession of ribs more marked. Antitoxin ℥vi injected.

October 23rd, 12.20 A.M. Temperature 98.2°, Respiration 24, pulse 108. 12 noon. Not so much recession, good air entry both lungs, but now and then a little stridor. Takes food well.

October 24th. Morning temperature 98°, respiration 32, pulse 112. 2 P.M. Antitoxin ℥x injected. 4 P.M. Temperature 98.8°. 10 P.M. Temperature 97°, respiration 20, pulse 108.

October 25th. Morning temperature 98.2°, respiration 17, pulse 115; evening, temperature 97°, respiration 20, pulse 110.

October 29th. Convalescent.

November 8th. Discharged cured.

Remarks.—In this case, as in the last, the pulse for some time remained of low tension and of quick rate.

Professor Bokai has reported to the Royal Medical Society of Buda-Pesth his results in a first series of 35 cases of diphtheria treated in the Children's Hospital there between September 11th and October 25th. These cases comprise all those suffering from diphtheria admitted into the hospital during that period. The serum used was that prepared under the direction of Professor Behring. The number of children who died was 5, a mortality of 14.28 per cent. Of these 35 children 20 were under 4 years of age, and 7 under 2 years. Of the children who died, one was 13 months old, one 2 years old, one 2½, one 4, and one 5 years. Among the fatal cases there were 3 in which septic infection had occurred, in one during the course of scarlet fever. In one death was due to cardiac failure during convalescence, and in the fifth the trachea was involved, and there was also purulent bronchitis. Of the 30 children who recovered intubation was performed in 12. Professor Bokai gives a table showing the number of cases and the mortality during September and October in 1891, 1892, and 1893, to compare with the results obtained in the same months in 1894, when the antitoxin treatment was in use. The death-rate in these months in 1891 was 56.8 per cent.; in 1892, 42.9 per cent.; in 1893, 61.7 per cent. These figures are to be compared with the death-rate already stated for these months in 1894, which was 14.28 per cent. In all the 35 cases treated Loeffler's bacillus was found, except in 2: the failure in these 2 may have been due to a fault in the *technique* of the bacteriological examination; in one of these the patient's sister, attacked about the same time, was proved by the bacteriological examination to be suffering from true diphtheria. The most instructive point in these statistics appears to be the extremely good results of intubation in combination with the antitoxin treatment.

In Germany the literature on antitoxin grows apace. This week has brought, besides the clinical reports in the medical journals, Behring's second and concluding article in the *Zukunft*, a pamphlet, *Immunity, Theory of Infection, and Diphtheria Serum*, by Gottstein and Schleich, and the first of a series of papers on the same subject by Professor Rosenbach, of Breslau, in the *Nation*, a high-class weekly journal for

general news. Behring in his paper hotly defends his serum theory and the therapeutic action of his antitoxin; Schleich and Gottstein vigorously attack not only the theory, but also the hospital statistics of the antitoxin treatment; and Rosenbach points out the uncertainty of action and possible dangers of the treatment as a warning to the general public. It is impossible here to give even a short abstract of the arguments used, or to set forth the different intricate theories for comparison. But it may be stated briefly that Behring considers as "his" remedy every antitoxin produced and sold. He says: "Aronson manufactures my remedy"; and further, "The preparations of my remedy, emanating from different centres of production, may properly be distinguished as the Höchst, the Schering, the French, and the English preparation."

A CIRCULAR note of the Prussian Government, addressed to provincial governors and municipal authorities, recommending that Behring's antitoxin be purchased out of public funds, and placed at the disposal of doctors for their practice amongst the poor, does not meet with undivided approval. The magistrates of Frankfort-on-the-Oder, for instance, have decided to decline the recommendation. The municipal hospital has the antitoxin, they say, and it is a matter for private charity to procure it for and give it to the needy.

AT a recent meeting of the Medical Society of Munich, which was attended by more than 300 practitioners, the serum treatment formed the subject of a prolonged discussion. Professors Buchner, von Ranke, and C. Seitz presented a report on the subject, and resolutions were passed to the effect that the time was not yet ripe for a definitive judgment as to the value of the method, and that trials of the remedy on an extensive scale would be necessary to settle the question. It was considered important that this view should be impressed not only on the profession but on the public. A committee, consisting of Professors Buchner, von Ranke, Bollinger, Oertel, C. Seitz, von Kerschensteiner and Wertheimher, was appointed to study the whole question thoroughly.

IN France the War Minister, acting on the advice of the Technical Health Committee, has authorised the use of the antidiphtheric serum for the treatment of diphtheria in the army.

THE administrative Society of the Sauveteurs de la Seine went to the Pasteur Institute to present M. Roux with the *Grand Diplôme d'Honneur*. M. Roux, in expressing his thanks for the honour, stated that a discovery was attributed to him which he had not made; he had only applied it.

THE Seine Sanitary Council, acting on the proposition of Dr. Dujardin-Beaumetz, has collected among its members £41 13s. for the promotion of M. Roux's work in preparing the antidiphtheric serum.

THE Var General Council has voted £40 for the Pasteur Institute, and £80 towards creating a Pasteur Institute at Marseilles. The Council urged that that Government should ask the Chambers to vote the sum of money necessary for preparing the antidiphtheric serum.

THE Lille Municipal Council has voted that a diphtheria laboratory be created and a subscription opened in order to collect the necessary funds. The city of Lille has subscribed £1 000. The Council also undertakes to furnish from £1,400 to £1,600 for a municipal bacteriological laboratory.

THE Havre municipality, after receiving the report from the commission which they sent to the Pasteur Institute to study the new treatment, has voted 5,000 francs (£200) towards the cost of establishing a laboratory for the preparation of serum. A horse has been purchased and the process of immunisation has already begun. Diphtheria has caused 56 deaths at Havre since the beginning of the present year, this being the highest mortality from the disease recorded in the town during the last ten years.

A "SERO-THERAPEUTIC SERVICE" has been organised in connection with the bacteriological institute founded at Brussels by the late A. Solvay. The staff of the new department consists of Professor Destrée and Drs. Bayet, Jules Bordet, and Funck. The number of cases in which the treatment has been tried in Belgium so far is 34—12 in the Stuyvenberg Hospital at Antwerp, 1 at Verviers, 1 at Louvain, and the rest at Brussels. Of the total number, 29 were cured and 5 died. The diagnosis was established by test cultures in 30 of the cases.

IN Italy the Medical Association of Lombardy has appointed a Committee for the purpose of organising a Sero-therapeutic Service in Milan. The Committee includes the names of Professors Bizzozzero, Golgi, Porro, Mangiagalli, Labus, Lanzilotti, and many other leading members of the profession in Northern Italy.

AT Piacenza a subscription has been set on foot for the establishment of an Antidiphtheria Institute. At Bologna Professor Dioscoride Vitali is rousing public opinion for a similar purpose.

AT Turin a meeting of the Piedmontese Branch of the Reale Società Italiana d'Igiene was held on October 31st to discuss the serum treatment. Professor Bizzozzero opened the discussion, which was continued by Professor Foà and others. It was stated that a subscription had already been opened in Turin for the establishment of a special institute, but the proposal was generally thought to be somewhat premature until the value of the remedy had been verified by adequate experience. A resolution was finally passed that a committee should be appointed to consider the whole question, and that in the meantime a portion of the money subscribed should be devoted to the purchase of serum.

IN Portugal Her Majesty Queen Amelia has taken the initiative in suggesting that an antidiphtheria institute should be established in Lisbon.

MEDICAL MAYORS.

AMONG the list of mayors appointed on November 9th, we find the following members of the medical profession:

Mr. T. D. Harries, Aberystwyth; Mr. R. Langford Jones, Bangor; Mr. T. H. Hills, Cambridge; Mr. R. A. Prichard, Conway; Dr. E. Jepson, Durham; Mr. J. C. Macaulay, Honiton; Dr. J. H. Bartlett, Ipswich; Dr. T. W. Thursfield, Leamington; Mr. R. R. Daglish, New Romney; Mr. R. C. Revell, Saltash; Mr. A. M. Sculthorpe, Tamworth; Dr. J. B. Richardson, Torquay.

Mr. T. Hyde Hills, who has been elected Mayor of Cambridge, is President of the Cambridge Medical Society. It is half a century since the famous old town on the Cam has had a member of the medical profession for its chief magistrate. We congratulate Cambridge on its choice of a mayor, and Mr. Hyde Hills on the honour which his fellow-citizens have conferred upon him.

Dr. Thursfield, the new Mayor of Leamington, has been a resident in that town for twenty-eight years, and is physician to the Warneford Hospital. He was at one time president of the Birmingham and Midland Counties Branch of the British Medical Association. He is a magistrate for the county and borough, and has been for fourteen years chairman of the Public Library Committee.

THE collections for the Liverpool Hospital Sunday Fund for 1894 amounted to £6,264, which was an increase of £53, and the donations to £313, which was an increase of £244. The Hospital Saturday Fund also showed an increase, and the committee had been able to distribute £10,700 among the medical charities of Liverpool.

A cheque for £1,000 has been handed over to the Coventry and Warwickshire Hospital as the result of the Hospital Saturday Fund there.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, NOVEMBER 17th, 1894.

DEPUTATION TO THE HOME SECRETARY.

We publish in another column the report of a deputation of the Parliamentary Bills Committee of the British Medical Association which laid before the Home Secretary certain facts with regard to the excessive mortality of infants born of women employed in factories and also as to the present unsatisfactory mode of the certification of death and of the amendments necessary to prevent crime. The replies given were adequate and satisfactory. Mr. Asquith pointed out, what indeed is obvious, that legislation touching the first matter would not be agreeable either to the women so employed or to their employers. On the one hand, the masters might feel unable to guarantee the return to work of women who had been taken away from it for a period of three months; and on the other hand, the women themselves might object to being debarred from working, even although the cost of the labour implied the sacrifice of the lives of their children. No doubt legislation of this sort must affect some interests. Mr. Asquith is not a novice at legislation, and he has not hitherto hesitated to deal in a manly and adequate manner with problems much more difficult than those which the members of the deputation presented to him for solution.

On the question of the certification and registration of deaths Sir Walter Foster was practically able to assure the deputation that the Government entirely concurred in their views, and used words from which it may be plainly read that a Bill is in fact about to be prepared for the purpose. The only difficulties suggested were those which the deputation had already pointed out—namely, that some cases would arise necessitating inquiry, and would involve some expense. This is a necessity. It was estimated by Sir Walter Foster to cost between £60,000 and £100,000 a year. This is not a very large sum for a nation like ours to expend on a matter so seriously affecting the protection of life and the prevention of crime. Although the Treasury is bound to raise some objections, it is impossible that they should prevail. On the other hand, Dr. Danford Thomas was able to put forward a way by which a good deal of this expense might be obviated, and on that subject further communications will pass between the Coroner for Middlesex, on behalf of the deputation, and the Local Government Board.

On the subject of the massage houses of London Mr. Asquith was of course not taken by surprise, although he expressed some difficulty in dealing with it. He was unable to give any answer which, as we apprehend, seemed at all likely to commend itself to the public mind. He did not for a moment deny the facts alleged in July by the British Medical Journal, and it is sufficiently evident that the information which he had directed the police to procure, and towards obtaining which we gave every possible assistance, had proved that our statements were in all respects correct and authentic. Nor did he in any measure throw any doubts upon the further details which, owing to the inaction of the police and of the Home Office, we have had recently to adduce as reasons for public action in the matter.

We have shown beyond dispute, and we are prepared to offer the most detailed information to the police to prove it, that, under the cloak of a quasi-medical proceeding, a public system of gross immorality is being carried on; that these practices are developing to an alarming extent, and that by reason of the pseudo-medical term "massage," most respectable papers, one of which we have designated by name, do not hesitate to insert advertisements of houses which are nothing less than places for a very gross and elaborate system of immorality, some of the developments of which are particularly odious. In a large number of cases the houses are not, in fact, legitimate houses of massage, although no doubt some are.

Mr. Asquith and Sir Edward Bradford are, of course, far better judges of the law than we can be. Nevertheless, we venture to express a doubt whether the interpretation which is put upon the power of the police is not unnecessarily narrow. At any rate, here is a public danger and a public scandal of a very serious kind. It is hardly befitting that the authorities of Scotland Yard should sit with their hands folded, and say only, "We do not gather that any of these proceedings are illegal, and we can, therefore, take no steps in the matter." We have already stated and proved that in one particular case in the City the mere appearance of the police on the scene was sufficient to close the house, and we cannot doubt that the long arm of the law is not so powerless as up to the present time these eminent authorities are disposed to assume it to be.

It appeared to be indicated that public opinion could act in the matter. We dissent. Public opinion is powerful to put the police in motion; it is not adequate to do their work. And, indeed, as we stated from the first, there are even certain evils which may arise which, in our opinion, make it eminently desirable that the police should take this matter off our hands as speedily as possible. If the police are inadequate to protect public morals means should be taken to confer on them the necessary powers without delay, and meantime the mere fact of police visits to these places with the announced intention to act would of itself suffice to close the greater number of the places in question, leaving those intact which are harmless and properly conducted and which have a really useful object in view.

The first meeting of the Glasgow Dental Students' Society was held on November 7th, when an opening address was given by Mr. J. R. Brownlie, who, after congratulating the members on the success of the Society, proceeded to discuss the proper method of treating disorders of the teeth in children.

MEDICAL ADVICE GRATIS: A NEW DEPARTURE.

THE questions raised by the establishment of pay wards at the Great Northern Central Hospital ought not to be allowed to go to sleep. The proposal has been met by a strong protest, made on behalf of the profession in the north of London, but in reality it is one which affects the whole profession. The full importance of the matter will be perceived when it is understood that the action of the governing body of the Great Northern Central Hospital establishes what is practically a new precedent. At the present time, when hospitals supported, or mainly supported, by voluntary contributions, are feeling the pinch of hard times, there will be, it is to feared, a strong temptation to many treasurers and secretaries, casting about for some plan to make both ends meet, to follow this precedent.

It may be said that the precedent is not entirely new, and in previous articles upon this subject we have mentioned certain other hospitals which, it is claimed, have already adopted similar plans. St. Thomas's Hospital is pointed to as being a striking instance. We have already[1] pointed out some of the objections to which the St. Thomas's scheme is open, but the two plans are by no means parallel. In fact, they differ fundamentally. When they assigned to the use of paying patients one of the blocks erected for the use of gratuitous patients, the governing body of St. Thomas's Hospital intended merely to provide the advantages of a well-appointed hospital and competent nursing for patients who might not be in a position to command in their own homes these necessary parts of a successful method of treatment. It was not contemplated that the medical staff of the hospital should give their services. They, in fact, stood upon exactly the same footing as all other practitioners, and it was understood that the patient should provide for his own medical attendance, and should pay the fees of the physician or surgeon he might himself select. It was, perhaps, inevitable that a resident medical officer should be appointed, and it is not to be wondered at that, a highly-competent officer having been found for the post, many—it is said, indeed, the majority—are content to rely entirely upon his skill. Still, the principle was entirely different from that which underlies the plan adopted by the Great Northern Central Hospital; for at St. Thomas's Home patients were expected to pay and to select their own medical attendant, and the resident medical officer was paid a salary by the hospital. The principle that medical services to patients in a position to pay should be remunerated was thus recognised.

It is true that at Guy's Hospital paying patients have been admitted into the general wards, but this has been done in a tentative manner, and on the plea that the financial position of the hospital had become embarrassed owing to causes which, it is hoped, may be temporary. There is, we believe, a distinct understanding that in the happy time to come, when farmers once more are able to pay rents, all the beds in Guy's Hospital will be again put to their proper uses. So in a few other hospitals, as a matter of grace, patients have been admitted occasionally in order to undergo some special operation on compensating the hospital for the cost to which it might be put for their board and nursing. Such patients were admitted only at the special request of a physician or surgeon of the staff, who might be trusted in his own interest, if on no higher grounds, to see that the system (if so it could be called) was not abused.

At the Great Northern Central Hospital special wards have been set apart for paying patients. As we have already stated, the guarantees intended to assure the fitness of the patient for the receipt of gratuitous medical treatment are twofold: (1) That he must be recommended by a medical practitioner; and (2) that he must be accepted by the House Committee—except in case of urgency—and the form of application involves a statement of "the means" of the patient, his occupation, and number of children. There is too much reason to fear that these safeguards will prove illusory, and the requirement as to a letter of recommendation from a medical practitioner cannot fail in many cases to place members of the medical profession in a very invidious position.

However this may be, the fact remains that the visiting medical and surgical staff will be required to give their services to these patients without remuneration. The resident medical officers will also, it would appear, be required to give their services without remuneration, for we have not heard of any proposal to appoint a special resident medical officer for the paying wards or to increase the remuneration of the present staff.

The fact is, therefore, that the hospital is competing with home hospitals, so-called, and nursing homes, but with the great advantage that it undertakes to provide its patients not only with board and nursing, but with the services of resident and consulting medical officers, for a weekly payment which appears to be estimated on the cost of board and nursing alone. We are assured—and can well believe it to be true—that private enterprise in the north of London already provides private homes and efficient nursing at rates which people of moderate income could afford to pay. If not, we may feel quite confident that when the want made itself felt either in London or in other large towns, private enterprise would very quickly provide the needed facilities. As it is, this new enterprise of the Great Northern Central Hospital extends dangerously the pauperising influence of hospitals, already too extensive. A new social class are to be taught that they need not pay their doctors, a lesson which past experience proves they will only be too ready to learn. Very soon, no doubt, we shall hear of similar schemes in other parts of London and in other towns.

The position of the medical and surgical staff of the hospital is extremely unfortunate. We cannot refrain from saying that it seems to us that they owe some explanation to the profession to which they belong. Either this scheme for robbing the profession has been forced upon them against their will—in which case the maintenance of their connection with the hospital places them in a very undignified position—or they are consenting parties. The profession has a right to know the truth. We understand that one member on the staff has resigned owing to his disapproval of the new plan. Are we to assume that all the remaining members of the staff approve?

As we have said, this new precedent is one which affects the medical profession as a body, but the question has arisen in the metropolis, and it appears to us to be one which ought to be thoroughly investigated and discussed in its

[1] BRITISH MEDICAL JOURNAL, October 13th, 1894, p. 835.

general bearing by the Metropolitan Counties Branch of the British Medical Association. A committee of protest has been formed among medical practitioners in the north of London, but the principle involved is of so much importance that its investigation and discussion ought to rest upon a wider basis. If the Council of the Branch do not feel competent to raise a question which has not yet been formally brought before them, it is open to the members in the north of London, through their representatives on the Council of the Branch, to bring this matter under its consideration, or, if necessary, to requisition a special meeting; and one or other of these courses will, we hope, speedily be decided on.

The citizens of Nagasaki have presented Professor Kitasato with a beautiful gold cup in honour of his discovery of the bacillus of the plague.

We are in a position to state that it is extremely improbable that the report of the Royal Commission on Vaccination will be ready before Easter next.

Dr. Bruce Goff, of Bothwell, Lanarkshire, the representative of the Glasgow and West of Scotland Branch on the Council of the British Medical Association, has been elected President of the Faculty of Physicians and Surgeons of Glasgow. Dr. Goff is, we are informed, the first country Fellow of the Faculty who has been elected President.

SMALL-POX IN DUBLIN.

There has been a distinct increase in the number of cases of small-pox in Dublin. The Hardwicke and Cork Street Hospitals accommodate about 100, and arrangements are being made by which the latter will be able to receive more. In one large establishment fifteen cases have occurred. The sanitary authorities are trying to stamp out the disease, and revaccination is going on everywhere in the city and suburbs.

SMALL-POX IN EDINBURGH.

There was happily a decrease in the number of cases of small-pox reported in Edinburgh last week, the figures being 27 as against 33 for the same period in the former week. Three deaths took place last week, while there were none in the preceding week. Leith, which has been for a long time entirely free from small-pox, now reports one case last week.

"NON-COMBATANTS" IN ACTION.

Doctors, according to the military theory, are "non-combatants," but it is a pity that the privileged character with which they are thus supposed (officially) to be invested, should be such an indifferent protection against the enemy's bullets, or that the latter should so grievously misunderstand the situation. At the great sea fight at Yalu the total Japanese loss is stated by themselves at 100 men. Of these, two, Drs. Miyake and Murakoshi, were medical officers. Colonel-Surgeon Kawamura was severely wounded, and is now under treatment in the Naval Hospital at Sasebo. On the whole, except for the honour and glory of the thing (as the Irishman in the bottomless sedan chair said) one might as well be a combatant.

PAUPER IMBECILES.

We observe that this matter is under discussion by several boards of guardians. We have already said that harmless lunatics are happier and better in workhouses than herded in vast public institutions, often far from their friends and under a regimental discipline. At the same time, proper provision should be made for them if they remain in the unions. Guardians too often wish to see mere senile cases, weak-minded young women, and epileptics classed as insane, in order to save trouble. Thus the alleged "increase of lunacy" is kept up. The natural decay of the faculties in old age should not bring with it the civil consequences of insanity, nor should simple epilepsy. The colonies now being established for epileptics have our hearty good will, for these cases need peculiar vigilance, whether complicated with insanity or not. A foolish young man goes at large; a foolish woman, however, is exposed to peculiar dangers, which, indeed, nearly always come upon her. Such women come back time after time to the house for childbirth, and no wonder guardians are tempted to lock them up in asylums. Perhaps the epileptic colonies may after a time be able to take this class of inmates also.

LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

The Bradshaw lecture will be delivered by Mr. Oliver Pemberton on Wednesday, December 12th next, at 5 P.M., the subject of the lecture being James Syme, Regius Professor of Surgery in the University of Edinburgh, 1833-1869: a study of his influence and authority on the art and science of surgery during that period. Mr. E. Treacher Collins will deliver three lectures at the Royal College of Surgeons on the Anatomy and Pathology of the Eye on Monday, Wednesday, and Friday, December 3rd, 5th, and 7th next, at 5 P.M. on each day. These lectures were postponed from the last collegiate year.

BERI-BERI IN DUBLIN.

We understand that for some time back there have been no fresh cases of beri-beri at the Richmond Lunatic Asylum. Twenty-nine old cases are still under treatment. Very possibly the disappearance of the disease is attributable to the advent of cold weather, and must, therefore, not be interpreted as a sure indication that the causes which led to beri-beri during last summer have been removed for good. It is to be hoped that before next summer effective measures will have been taken to remedy the disgraceful overcrowding and obviously insanitary condition of the institution. The authorities are bound to do all they can to minimise the risk of a recurrence of this most dangerous disease.

THE LATE DR. WOOLDRIDGE.

It will be interesting to our readers to know that in the chapel of the Cranleigh School, where the late Dr. Wooldridge was educated, a brass tablet has recently been placed bearing the following inscription:

IN . PIAM . MEMORIAM
LEONARDI . CAROLI . WOOLDRIDGE . M.D.
ALUMNI . CRANLEIENSIS . ILLUSTRISSIMI
QUI . IN . CHRISTO . OBDORMIVIT
ANNO . AETATIS . XXXII
A.D. . VIII . ID . IUN . MDCCCLXXXIX
AMICI . HANC . TABULAM . POSUERUNT.

ARTE . SALUTIFERA . MORTEM . QUI . DISTULIT . AEGRIS
IPSUM . NUNC . MORTIS . VIS . INOPINA . RAPIT
AT . QUID . FLERE . OPUS . EST? UBINAM . VICTORIA . LETI
VIVIT . ADHUC . VITAM . DAT . SINE . FINE . DEUS.

THE SICK POOR IN PROVINCIAL WORKHOUSES: EAST AND WEST FLEGG.

In a workhouse licensed for 400 inmates, in which the actual number is 40, the common difficulty of insufficient space clearly does not occur, but rather the opposite one of insufficient labour to carry on the necessary work. In the workhouse of East and West Flegg our Commissioner found an idiot in charge of two infants, and was told that there was no choice because able-bodied labour was scarce. This surely points to the desirability of having a paid attendant

for the post. In this union the aged poor seem to be well cared for in home-like surroundings; but the sick are not so well off, though they have their own attendant, who is, however, not trained. Attention to a few matters of detail, such as the providing of earth closets and the disconnecting of a sink pipe, would improve the house: but we would more especially urge the guardians to appoint a trained nurse for the sick, who are nursed in a separate building and require responsible and skilled attention. The slight additional expense would probably very soon be compensated by the greater number of cures and the consequent relief to the rates of the maintenance of the sick person.

COMMITTEE ON QUESTIONS AFFECTING GENERAL PRACTITIONERS.

In the abstract of the Proceedings of Council, which we published in last week's JOURNAL, our readers will have noticed the appointment of an important Committee, at the request of the East Sussex District of the South Eastern Branch of the Association, to inquire in what way, if any, the interests and welfare of general practitioners can be best promoted by the Association. This Committee will soon be at work; meanwhile, any suggestion of subjects to be included within the scope of their inquiry may be addressed to the General Secretary of the British Medical Association, 429, Strand, and will receive due consideration.

THE CHELSEA HOSPITAL FOR WOMEN.

The meeting of the governors of this hospital, convened to receive the resignation of the Board of Management, will be held on November 28th, on which day a new Board of Management will be elected. We had hoped that before this meeting the present medical staff would have retired from the false position in which they find themselves. The notice convening the meeting of November 28th, however, does not contain any intimation to this effect. It states that the first business before the meeting will be "to receive the resignation of the members of the Board of Management;" the second "to elect a new Board of Management:" the third "to receive suggestions from the medical staff." The nature of these suggestions is not stated: but the first should be that the new Board of Management, in the selection of the medical staff of the hospital and in framing rules for the medical administration, should have the assistance of an impartial committee of representative members of the medical profession. In order that this committee should act with perfect freedom it should have before it the resignation of those gentlemen who a few months ago were appointed physicians to the hospital.

INSPECTION OF WORKSHOPS.

Attention has been called by the *Daily Chronicle* (November 1st) to an important paper by Mr. Lakeman, Inspector of Factories, in the *Proceedings* of the British Institute of Public Health, dealing with the new method of inspecting London workshops which the present Home Secretary has initiated. It seems that Mr. Lakeman has made the experiment of a co-operation between the medical officers of health and the factory inspectors: "The medical officer," says Mr. Lakeman, "helps me in my part of the work, and I with my staff help him, so that, by the establishment of a joint system, scientific inspection if necessary is guaranteed by medical men and ordinary inspection is done by laymen." We entertain no doubt that much may be done to remedy the sanitary condition of London workshops, and in this work the help of the medical officers would doubtless be most valuable. We shall look with interest for some expression of opinion from the Society of Medical Officers of Health as to the methods and conditions under which the proposed co-operation can be best organised; for it is obvious that a mere voluntary and accidental co-operation such as is pointed to by the article in the *Daily Chronicle* would be of little use. If the proposed interference with workshops is to form a part of, or rather an addition to, the already onerous duties of the medical officer, it ought to be properly recognised by the central authority and carried out under definite rules. There seems to us to be too great a tendency at present to erect a kind of paternal government of inspectors over us, freed, like other paternal governments, from any definite rules, and only guided by a vague consciousness of good intentions. By all means let unhealthy workshops be liable to medical condemnation, but let this be done not as the result of a private understanding between individuals, but by public officers acting under rules properly settled after due consultation. Another point noticed in Mr. Lakeman's paper is the tracing of outworkers to their homes and the examination of the conditions of those homes. Of the sanitary importance of this also there can be no question, if it can be practically carried out, without the persecution of the smaller fry of officials and all the abuses which this entails.

INDUSTRIAL LEAD POISONING.

The death of a girl at Birmingham from lead poisoning has caused a question to be raised in that town as to how far the medical inspection has been efficient. The girl was employed as a "brusher" at the Imperial Works, and had suffered on and off for a year. Her last illness commenced three weeks before her death; but, although she was told at the hospital that she was suffering from lead poisoning, she continued at her work until the day before she died. Death was caused apparently by the cerebral form of plumbism, which is especially apt to occur in young girls. The jury, in returning a verdict of "Death from lead poisoning," added that there was no doubt that both the foremen and proprietors had neglected to carry out the Factory Act. In regard to this, it is worth while to draw attention to the recommendations of the Committee appointed by the Home Office to investigate dangerous trades. They advise, among other things, that a medical inspection be insisted on once a month, that no girl under 20 years of age should be employed as a brusher, or in a room where any brushing takes place, and that no *employee* who has been absent from work through illness should be re-employed without a medical certificate to the effect that he or she has recovered. While some people pass through much exposure without suffering from lead poisoning, others—either from constitutional defect or habitual carelessness—are extremely prone to plumbism. People, then, who have once suffered, should be urged to take up some other trade; and as under the special rules every person employed in the works complaining of being unwell has to be furnished at the employer's expense with an order on a doctor for professional attendance, medical men should as far as possible endeavour to weed out of the trade these peculiarly susceptible individuals.

THE PERILS AND RESPONSIBILITIES OF PRACTICE.

A curious tale which comes from Leeds not only draws attention to certain dangers to which doctors are especially exposed at the hands of angry and excited people, but suggests the propriety of thinking twice before speaking too openly of the ailments of their patients. Nothing can be easier than to beguile a doctor into a house in which he may be absolutely at the mercy of any ruffians who choose to maltreat him, and whatever may have been the provocation received in this case by the defendant, we are glad that the stipendiary magistrate refused to consider it as an excuse, but imposed a fine of £3 and costs. It appears that a dentist, who was attending a young lady for her teeth, called

upon her doctor and made particular inquiries regarding her health. It further appears that this unfortunate doctor, in response to these inquiries, "made a certain statement concerning her condition." *Hinc illæ lacrymæ!* The young lady's young man straightway beguiled him into her house, and after by threats inducing the doctor to give a written apology, said, "I shall thrash you all the same," and proceeded to do so. This may be a Yorkshire way of doing things, but it strikes us as unfair. We say nothing about the truth of the statement he is said to have made, but it is clear that a doctor often has to say unpleasant things, and the chance of having to risk ordeal by combat for so doing is decidedly one of the perils of practice. As to responsibilities we would seriously ask whether medical men do not often talk far too much about their cases. Doubtless the long hours sometimes spent in sick rooms or the still more dreary hours spent while waiting to be called there tempt men, from mere want of subjects for conversation, to draw on their personal experiences; but it should not be so; patients' cases should never be talked about. Then in regard to consultations, we think that unless one is asked by the patient to consult the greatest reticence should be maintained. It ought not to be difficult to give such advice as may be for the good of the patient without entering into reasons or breaking confidence. Even in case of insurance companies and the extraordinary questions they sometimes ask, it is desirable to find out from the individual concerned that they are asked with his consent before committing oneself. The more strictly medical men put restraint upon their tongues and treat everything that is told them professionally, whether good or evil, as confidential, the more readily will they check that impertinent questioning about other people's affairs which is one of the never-ending nuisances of a doctor's life.

THE ALDERSHOT SEWAGE FARM.

It is regrettable that no definite arrangement seems to have been arrived at between the Treasury and the Aldershot Local Board as regards the sewage farm, owing, it is stated, to financial difficulties. The influences on health of this dangerous "sewage swamp" have already been pointed out by the health officer to the Surrey County Council, whose report has long since become public property. In view of this representation, and the fact that new blocks of barracks and officers' quarters are springing up all over the camp, the disposal of the sewage becomes a subject of surpassing importance. An indefinite postponement of its consideration cannot, therefore, be permitted. It is unfortunate that Parliamentary pressure cannot at present be put on to give an impetus to a conjoint scheme of sewage disposal.

EPIDEMIC ENTERIC FEVER AT NEWPORT, I.W.

We learn that Dr. Theodore Thomson, of the Local Government Board, is investigating the cause of an outbreak of enteric fever at Newport, Isle of Wight. It would seem that for many years Newport has seldom been for long together without one or more cases of enteric fever. During the past twelve months, and especially during the present year, they have increased in number, until in September and October the disease assumed an epidemic form, and at the present time there are probably fully 2 per cent. of the population affected by it. It is also present at the military and convict establishments at Parkhurst and Carisbrooke, and other places in the neighbourhood. The house drainage is said to be universally defective even in new buildings: the water supply is by no means free from the possibility of contamination, as Dr. Groves, the medical officer of health of the Isle of Wight has pointed out in his annual report. The Corporation have persistently refused to adopt the Notification of Infectious Diseases Act. The borough has recently been resewered, and the insanitary and badly drained houses have been connected without any attempt having been made, so it is said, to put them into a better state. The crude untreated sewage is said to be discharged into the river near the town quay, where a considerable deposit has already taken place, at all times of the tide. The shaft ventilators, of low altitude, give egress to sewer gas, but do not appear to afford ingress to fresh air, and the flushing tanks are fed, apparently, by branches from the water mains, the supply of water in which until recently was not constant. To meet the emergency, we understand that the Town Council have made the water supply constant for the present: they have decided to apply the Hermite electrical process to the sewers temporarily; they have advised that water and milk should be boiled; they have adopted voluntary notification: and they have been ill-advised enough to appoint as additional nuisance inspectors, who are directed to make a from house-to-house inspection, a mason and a plumber, and two of the corporation labourers, instead of properly qualified experts. Here we have all the elements of a panic.

NECROPSY ON THE CZAR.

Professor Leyden, of Berlin, in favouring us with the report as to the *post-mortem* examination of the Czar of Russia, which has been in substance already published, observed that the necropsy fully confirmed the diagnosis made by the physicians during the course of the disease, in which the whole of them fully concurred. Contrary to the statements which had been published concerning an alleged divergence of the opinion as to the nature of the disease, as we had the opportunity of stating from week to week on the best medical authority, the symptoms from the first pointed to nephritis with contraction of the kidney, a special form of Bright's disease. To this was superadded, as is customary, and as was diagnosed, hypertrophy of the heart as a secondary disease, and sporadic patches of inflammation in the left lung. Professor Leyden adds only the final observation that the condition of the stomach was normal.

THE UNIVERSITY OF WALES.

The Court of the University of Wales held its fourth meeting in Shrewsbury on November 13th. Regulations for matriculation were adopted, and it was resolved to hold the first matriculation examination on the 11th and following days of June next. The Executive Committee were requested to take steps to obtain recognition of the examination as a preliminary examination in law and medicine. It was resolved to proceed to the appointment of a Chancellor, Deputy Chancellors, and a Registrar at the next meeting, which will be held early in January.

THE CARE OF LUNATICS.

In the *Western Mercury* of October 31st a discussion is reported between the guardians and the justices which is not quite clear to us. It is, however, of primary importance that local authorities should themselves be quite clear about their duties in respect of lunatics at large or not under proper care. The clerk to the guardians complained that such a lunatic, named Hodge, had not been dealt with by the justices; and it seems to be suggested that the justices are the proper persons to see to such cases in the first instance and to take all measures. The law provides that the initiative shall lie with a "constable, relieving officer, or overseer" (Sect. 13), or again with a union medical officer (Sect. 14), and once more with any person laying an information before a justice (Sect. 13, Subsect. 2). It is difficult to see how the provision for taking action could be wider or more definite than this. The relieving officer, constable, or overseer shall (Sect. 20) on his own judgment, where the public interest or that of the lunatic requires it, and the

case is urgent, and no justice at hand, remove the lunatic to the workhouse on the "three days' order;" and in this respect these officers are and must be no doubt "left to their unaided study of the law." We suspect the real difficulty lay in the fact that there was no proper accommodation in the workhouse. We would strongly urge upon guardians the duty of having in all workhouses proper accommodation for a suddenly urgent case of insanity. Without such provision grave difficulty or mischief may arise. In Plymouth, we think, provision for two urgent cases should be made. It is with great pleasure we notice that, in spite of some factious opposition, the Plymouth guardians appointed at the same meeting a superintendent of nursing at £50 a year, a nurse of male wards at £25 a year, and two nurses for the hospital wards each at £20 a year.

DYSENTERY AND AMŒBÆ.

Dr. George Turner's report on the recent outbreak of dysentery and diarrhœal disease at the County Lunatic Asylum, Melton, Suffolk, describes an admirable piece of sanitary investigation. It appears that the diarrhœal disease, which has prevailed more or less in the asylum for a number of years, culminated, in 1893, in a grave epidemic and many deaths. By a process of exclusion, Dr. Turner eliminated, as possible causes, insufficient and bad food, defective drainage, want of proper ventilation, over-crowding, and so forth, and finally traced the source of the epidemic to a particular point near, or rather in the source of, the water supply. The water supplying the asylum is derived from two borings through the chalk, 16 feet apart. The water from one of these was found to be good, but, in that from the second, chemical and microscopical evidence of contamination with surface drainage was obtained. It is interesting to note that among the organisms in the contaminated water, besides bacilli, spirilla, and vegetable *débris*, a large number of very active amœbæ were found. Whether these were the well-known amœba coli the reporter does not seem to have attempted to determine. We would suggest that the discovery of similar amœbæ in the stools of the dysenteric patients, and the experimental production of dysentery in cats and dogs by the introduction of cultures derived from these organisms in the way Kartulis and others have described, would have clenched Dr. Turner's conclusions, and thrown valuable light on the etiological significance of these parasites in dysentery.

LOCAL GOVERNMENT BOARD: FORMATION OF A SANITARY INSPECTORS' EXAMINING BOARD.

The endeavour to form an Examination Board to provide for the adequate examination of sanitary inspectors is likely soon to prove successful, as was pretty clearly indicated by Sir Walter Foster on Wednesday. The only body which at present conducts examinations under the sanction of the Local Government Board is the Sanitary Institute. Some time ago the Local Government Board nominated certain bodies—namely, the Sanitary Institute, the Society of Medical Officers of Health, the Plumbers' Company, the National Health Society, the Institute of Surveyors, and the British Institute of Public Health—and invited them to send representatives to form a conjoint committee to prepare a scheme for a Sanitary Inspectors' Examining Board. The members of this committee, which has been appointed to carry out the proposals, with the exception of those of the Sanitary Institute, met Sir Walter Foster to signify their approval of the amendments which the Local Government Board had suggested in the Articles of Association which this Committee had drawn up. The Articles of Association were finally approved as amended, and in reply to Sir Walter Foster, on Wednesday, the Conjoint Committee gave assurances that the Conjoint Board would be prepared to carry on their examining functions either with or without the co-operation of the Sanitary Institute on and after January 1st, 1895. Dr. Dudfield was anxious that the Society of Medical Officers of Health should have a greater representation on the Board, but Sir Walter Foster indicated that he did not, on general grounds, see his way to open that door any wider, and the proposal was not further urged. The scheme provides that three nominees of the Local Government Board might be added to the Conjoint Board, and Sir Walter Foster informed the Committee that he had intimated to the representatives of the Sanitary Institute his readiness, even at some sacrifice, if it would afford satisfaction, to allow himself to be nominated as a member of the Board. His chief idea, he said, was to create a board in such a form and on such broad lines of generosity that the body who refused to accept the terms of the Conjoint Committee should obviously be in a wrong position before the public.

MEDICAL INSPECTION OF SHIPPING IN THE THAMES.

In the report which Dr. Collingridge has presented on the sanitary administration of the Port of London during the first half of the current year, whilst he has to record a satisfactory condition of things as regards the past, he is by no means satisfied to let the very important matter of the medical inspection of all shipping from foreign ports rest where now it does. His contention is that the system which has been in vogue for the past two years at Gravesend for such inspection, because of the threatened danger of cholera invasion, should be extended to the inspection of all vessels coming from foreign ports, his idea being that a medical man should visit each vessel, and be himself the sole judge as to the health of the ship and her crew. Dr. Collingridge points out that, whilst in the nine years 1883-91, when there was no medical inspection at Gravesend, the annual average of infectious cases removed to hospital was only 5.5, in the half-year under report the number was 35, or much more than ten times the previous annual average. Thus the system inaugurated for purposes of cholera prevention has proved a blessing in other directions also. Trust in the statements of ships' masters as to the nature of disease on board has been proved to be futile, as has also trust in the diagnosis of a non-medical Custom House officer. The question of permanent arrangements at Gravesend is, it appears, now under the consideration of the Government; and Dr. Collingridge expresses the conviction that, in addition to the system of medical inspection to which he looks forward, a legal penalty should be imposed on the master of a ship in the event of a false answer being given. At present such falsity bears no punishment unless yellow fever or plague be in question. The whole matter is one of importance to the health of the metropolis, and indirectly to the country generally.

THE SECRET OF LONG LIFE.

M. Barthélemy Saint-Hilaire, the famous French scholar and politician, who recently entered on his 90th year full of physical and intellectual vigour, has been telling the inevitable interviewer how it is his days have been so long in the land. It is, we are told, the effect of strict adherence to the old precept "early to bed and early to rise," with steady work during waking hours. Every grand old man seems to have a secret of his own. Mr. Gladstone, we believe, attributes his longevity to his habit of taking a daily walk in all weathers, and to his giving thirty-two bites to every morsel of food. Oliver Wendell Holmes pinned his faith on equability of temperature. The late Major Knox Holmes swore by the tricycle, which, in the end, was the cause of his death. Dr. P. H. Van der Weyde, an American octogenarian, not long ago offered himself "as an example of the benign influence of the study and practice of music." Some aged persons give the credit of their long lives to abstinence from tobacco, alcohol, meat, or what not;

others to their indulgence in all these things. One old lady of whom we read not long ago as having reached the age of 120 or thereabouts, maintained that single blessedness is the real *elixir vitæ*, and she ascribed the death of a brother at the tender age of 90 to the fact that he had committed matrimony in early life. M. Ferdinand de Lesseps believes in horse riding. Mr. James Payn complains that in his boyhood he "got a little bored with too much horse." The Grand Français seems to think that one can hardly have "too much horse." In a letter recently published, M. de Lesseps delivered himself on the subject as follows: "I shall always feel deeply grateful to Larine, my riding master, who from my earliest years made me share his keen passion for horses, and I am still convinced that daily horse exercise has in a large measure been the means of enabling me to reach my 84th year in perfect health." Carlyle was also a great rider almost to the end of his long life, and he not only rode, but, we believe, groomed his horse himself. On the whole, it must be concluded that the real secret of longevity is a sound constitution prudently husbanded. The only general rules that can be laid down are those set forth by Adam in *As You Like It*:

> Though I look old, yet I am strong and lusty;
> For in my youth I never did apply
> Hot and rebellious liquors in my blood,
> Nor did not with unbashful forehead woo
> The means of weakness and debility;
> Therefore my age is as a lusty winter,
> Frosty but kindly.

That is the whole secret of long life. Shakspeare knew it as well as anyone, yet he died at 52.

A PHYSICIAN OF THE SEVENTEENTH CENTURY.

In a recent number of *Longman's Magazine* Lady Verney gives a vivid picture of the life of a busy physician in the time of the Stuarts, extracted from the correspondence of Dr. William Denton with his nephew, Sir Ralph Verney, preserved among the Verney manuscripts at Claydon. William Denton was born in 1605; his father, Sir Thomas Denton, of Hillesden, being a wealthy landowner and a member of Parliament; his mother, Dame Susan, was one of the Temples of Stowe, and there was scarcely a county family in Buckinghamshire with which he was not connected by ties of blood or marriage. Dr. Denton was bred up both a Royalist and a strong Protestant. He was educated at Magdalen Hall, Oxford, and in due course was appointed a Court Physician to Charles I, an office in which he had William Harvey as a senior colleague. The most fashionable physician of these days was Sir Theodore Mayerne, whose person was as fat as his fees. There are many references to him in Denton's letters. Thus we learn that in 1647 Sir Edward and Lady Sydenham came to town to be with "Mrs. Murrey's daughter, whoe is shortly to have the allmons of her eares [amygdalæ or tonsils] cutt quite out, which they say is a very dangerous busenes: hear is noebody durst undertake to doe itt butt Mayarne." Excision of tonsils hardly falls within the sphere of a physician, though a President of the Royal College of Physicians of our own day (who now sleeps undisturbed by the clink of guineas), did not, unless he is much belied, disdain to practise this piece of chirurgery. Another physician of great renown in Denton's day was Dr. George Bate, who, unlike Mayerne, was so thin that "as lean as a death's head or Dr. Bate" was a saying among his contemporaries. Denton hints that it was owing to Bate's uncarnal habit of body that he had a largê practice "among precise and puritanical people, he being then taken to be one of their number." He became chief physician to Oliver Cromwell, but like a tactful man, when the flesh and the Devil came into fashion again with the Merry Monarch, he made friends to himself of the mammon of unrighteousness, and flourished as a Court physician. Another medical celebrity who was a friend of the Dentons and Verneys, was Dr. John Craige, one of the family of physicians who had come from Scotland with James I. Dr. (afterwards Sir George) Ent, Harvey's friend, frequently met Denton and Bate in consultation. Sir Ralph Verney describes him as "both an honest man and much a gentleman." Dr. Denton was on friendly terms with the great surgeon, Richard Wiseman, who mentions him in his *Chirurgical Treatises*. Like most of his contemporaries, Denton physicked his patients with a prodigality of pill and potion which must have been highly profitable to the apothecaries. To one of his patients we find him ordering eight pills and four draughts in the twenty-four hours, with a few extra medicinal trifles in the way of a syrup, and "some Epsom waters thrown in," probably to fill up the intervals. The disease would seem to have resisted even this therapeutic bombardment, for a fortnight later the Doctor writes of his refractory patient: "His not mendinge putts me out of all patience, that he should be the first that ever I was foyled with, or indeed could withstand the 20 daies." His surprise was not altogether unnatural, for even in those heroic days there must have been few constitutions which could "withstand" him for three weeks. Let us hear the testimony of some of his patients. William Fall writes under date September 17th, 1663: "I have according to Dr. Denton's directions taken a purging potion . . . . . he prescribed it me for 4 dayes together, but I tooke it but twice. I endeavoured to take it the third time, but could not. The tast of it was soe loathsome unto me that I was forst to cast it out againe." His sister, Mrs. Isham, complains, with a disgust which seems to be reflected in her spelling, that "he rit me worde to take a stinking Balsome as would chocke a Doge to take it." The Doctor's nephew, Tom Verney, when ill with fever, writes to him: "I cannot possibly gett downe what you sent yesterday, notwithstanding I made severall tryealls about it." One curious part of a fashionable physician's practice in those days would seem to have been the personal supervision of important patients when undergoing the periodical therapeutic "spring cleanings," which were then considered indispensable. Dr. Denton records the periodical visits which he pays to persons of quality in the country when "my Lord and my Lady" are put "in physicke" for a week and have to be kept under the immediate eye of the doctor during the process. Dr. Denton appears to have led a busy and successful professional life, the smooth surface of which was scarcely ruffled by the political storms of the time. In 1660 he made an attempt to get into Parliament, but failed to find a seat. At the Restoration Charles II gave him his old office of Court Physician. In 1691 he died within the liberty of Westminster at the age of 86, and was buried in the church at Hillesden, which is still filled with memorials of his family. His epitaph records that he was "blessed with that happy Composition of Body and Mind that preserved him chearfull, easy and agreeable to the last, and endeared him to all that knew him."

MEASLES, GERMAN MEASLES, AND INFECTIOUS ROSE RASH.

The Medical Officers of Schools Association, after discussing Dr. Dukes's paper on Epidemic Roseola, Measles, and Scarlet Fever in February last, instructed the Council to consider the report upon the nomenclature, etc., of German measles and similar infectious disorders. It is now sought to collect the opinion of the members at large upon the conclusions which are here laid before them. (*a*) As regards nomenclature, it appears: 1. That the confusion heretofore subsisting by the interchangeable use of "rubeola" and "rubella" as synonyms for German measles will be reduced to a minimum by the decision to omit the word "rubeola" in the forthcoming edition of the official nomenclature, "rubella" standing, as before, for German measles. 2. That the use of the terms roseola epidemica and epidemic rose rash as equivalents for German measles is—quite apart from obvious

objections to the application of such a term as "epidemic" for the purposes of definition—distinctly undesirable, from considerations set forth below (in paragraph *c*). (*b*) The Council therefore consider that practical advantages will be secured by a general adoption of the following nomenclature of the two diseases: measles, "morbilli;" German measles, "rötheln," "rubella." (*c*) The Council also recognises a growing body of opinion to the effect that, under the term "German measles" there is probably often included yet another infectious exanthem which in some respects resembles, while it is specifically distinct from, true rötheln. For this disease, the terminology "infectious roscola," "infectious rose rash," is tentatively suggested. (*d*) The Council has drawn up descriptive definitions of the three maladies alluded to; and these definitions are now circulated amongst the members of the Association, in order that their collective observation and experience may be brought to bear upon the several points of similarity and contrast.

WOOLLEN OR COTTON UNDERCLOTHING.

In the *New Review* a writer attempts to stem the tide of opinion which of late years has set so steadily in favour of woollen underwear. Admitting some slight advantage so far as regards heat retention on the side of wool, it is maintained that this is hardly worth consideration against the benefits pertaining to vegetable fibre in the way of economy, absence of shrinking, and greater cleanliness in consequence of the ease with which it can be washed. We may, however, point out that the writer of the article hardly seems to appreciate the essential points at issue. He is perfectly right in saying that the warmth of any form of clothing depends more on the air which it will hold in its meshes than upon the material of which its fibres are constructed, but he has not entered sufficiently fully into the action of moisture on these fibres. There can be no doubt that, so long as the body is dry, properly woven cotton stuff can be made almost as protective as wool; the difference comes when the clothes are wet either by perspiration or from outside. It is no doubt interesting to know, as is so often stated, and as the author tells us, that woollen material will absorb a larger quantity of water than cotton, but that is not much to the point. No one wishes to carry about with him a week's perspiration. What is to the point is that wetting the woollen fabric does not materially alter its elasticity, so that even when wet it contains air, and remains a non-conductor, whereas with cotton the moisture is sucked up by capillary attraction between the fibres, expelling the air and turning the whole fabric into a "wet clout" upon the skin. The "coldness" of a wet cotton vest depends, not on greater moisture, but on less air, and until manufacturers can produce a vegetable fabric the fibres of which will stand crisp and apart from their neighbours like the fibres of wool, and will remain full of air and therefore non-conducting, even when wet, we must expect that woollen underclothing will retains its reputation. No doubt a considerable advance in this direction has been made, but the large cellules of air in some of the modern fabrics are a very different thing from the intimate admixture of air in a properly woven woollen material.

THE MEDICAL STAFF OF LUNATIC ASYLUMS.

From an article in the *Westmeath Guardian* we gather that the Mullingar District Lunatic Asylum is much undermanned in respect of its medical staff. If we read the article aright, 650 patients are under the care of a superintendent and one other medical officer. The superintendent's time is necessarily, of course, taken up in great measure by the duties of general administration, so that we are making a liberal estimate when we rate the medical attendance at one to four hundred. We are glad to read that the governors unanimously condemned this state of things when it was brought before them, but they showed no signs of repentance for having allowed it to come about. The fact is that, although medical attendance is better provided in English asylums, as a rule, than in the Irish, yet in both the medical staff is starved both in respect of the numbers of medical residents and their remuneration. The medical work in many asylums is good, in a few it is brilliant, but in the majority it is of the most routine and defective kind. For some reason or other the resident medical men in asylums are outside the current of professional activity; in many cases the asylum is situated far away from the advantages of large towns. Moreover, the prospects held out to asylum medical officers do not improve, and county councils flatter themselves they can still secure candidates for these posts, however they may keep down salaries and tamper with pensions. They would still find candidates, no doubt, if they halved the present emoluments; but there are candidates and candidates. From recent correspondence in our columns and otherwise it is clear that asylum service is no longer attracting the best class of graduates—a serious matter, seeing that of all diseases, those of the mind need the fullest knowledge and the finest tact for their treatment.

TOBACCO AND BLINDNESS.

The Australian papers have recently published accounts of an epidemic of blindness in horses pastured in a district on the banks of the Darling. The horses grew very gradually blind. It was suspected that their infirmity was due to eating the leaves of the Australian tobacco, *Nicotiana suaveolens*. This plant began to grow in the affected district shortly after a flood, and the epizoötic blindness followed. Baron Ferdinand von Müller, who has written on *N. suaveolens*, also discovered that a similar plague of blindness amongst horses in Western Australia arose from the animals feeding on a plant known as the grass lily. The whole question is discussed by Dr. Husemann, of Göttingen, in the *Deutsche medicinische Wochenschrift* of October 25th. An infusion of the native tobacco leaf quickly killed a purblind stallion from the affected district. The chief point of interest in relation to "tobacco amblyopia" in man is the long time which this process of poisoning took to blind the horses. The blindness often took two years to become complete. It appeared to be incurable. The beasts showed no signs of disease elsewhere, a blind mare and a half-blind horse being able to go 600 miles at easy stages to a veterinary station. Thus, as in man, tobacco amblyopia is not incompatible with bodily health.

THE TREATMENT OF CAISSON DISEASE.

An apparatus has recently been constructed, and put into operation at the Blackwall Tunnel Works, for the treatment of the condition known as caisson disease. The men employed in the construction of this tunnel work under a pressure varying up to 23½ lbs. per square inch above that of the atmosphere, and, as is always the case in similar operations, if they come through the air-lock too quickly they are liable to be attacked with lassitude, pain, paralysis, and coma—the group of symptoms which goes by the name of caisson disease. As is well known, this condition is liable to end in death, and, even in the less severe cases, often requires many weeks before complete recovery takes place. In a communication from Mr. Ernest W. Moir, M.I.C.E., of the Blackwall Tunnel Works, he describes the apparatus he has introduced for the treatment of this condition, similar to one which he had previously designed for the same purpose for use at the Hudson River Tunnel. The apparatus is in appearance somewhat like an iron boiler, 6 feet in diameter, and 18 feet long. It is divided into two chambers, each of which is fitted with a couch and with doors opening inwards. Compressed air can be pumped into the inner chamber, and thence into the outer one, which latter serves as an air-lock through which access to

the inner chamber can be obtained. Bullseyes are also provided, so that the patient can be inspected without entering. It is found that when a patient suffering from pain, paralysis, or perhaps unconsciousness, is placed in the chamber and subjected again to a pressure of about two-thirds of that in the tunnel which he had just left, the symptoms rapidly pass away, and then by a very gradual reduction of the pressure it is possible for him to return to the outer air without a recurrence of further trouble. There are many difficulties in deciding exactly what is the manner in which this disease is produced. In those cases in which the symptoms occur immediately on leaving the lock, or even while the pressure is being reduced, it is not difficult to imagine physical causes which might account for a good deal. When, however, the symptoms do not come on until twenty minutes or half an hour afterwards, the matter is different. The discharge of the great quantity of gases, and especially of the disproportionate amount of carbon dioxide, retained in the blood while under the greater pressure accounts well enough for the lassitude and cyanosis often observed on restoration to the outer air, but symptoms coming on later are not so easily explained. Mr. Moir says that it is quite clear that vital processes take place at a greater rate, just as combustion takes place more fiercely, under the higher pressure; and, as this quicker life involves greater waste, he suggests that, as the tissues cannot get rid of their waste products so rapidly when the atmosphere only contains a third as much oxygen as it did in the tunnel, these waste products accumulate and produce a blood poisoning which is the cause of all the symptoms; restoration to a more strongly oxygenated air restoring the balance of internal and external respiration. It is a somewhat complex question, and clearly does not relate to carbonaceous products only. Evidently, however, the disease is not due in the first instance to a physical disruption of tissues, or the compressed air bath would not so immediately remove the symptoms. The long continuance of the paralysis in those cases which are not immediately restored points strongly to the occurrence of some secondary thrombosis, and shows the great importance of having at hand an apparatus by which the conditions leading to such mischief can be cut short at once.

MALLEIN AND THE DIAGNOSIS OF GLANDERS.

An inquest was held recently with regard to the death of a cab proprietor and driver of Paddington from glanders. Two horses belonging to him, it was stated, had been recently affected with glanders. Dr. Alfred Spencer, chief officer of the London County Council, attended and said that, during the past year, owing to the vigilance exercised by the Council, there had been a great diminution in the numbers of cases of glanders within its jurisdiction. Two years ago there were 2,000 affected animals; this year there were less than 1,000. This is a highly favourable statement, and powerful evidence of the good work of the Council and its officers. There is a gain to horse owners and a conservation of the national resources which cannot be reckoned at less than £20,000 per annum, and *pari passu* a decrease of the dangers to human life. Hitherto the great barrier to the eradication of this disease has been the difficulty of diagnosis. Between two and three years since, however, it was discovered that "mallein"—a product of the glanders bacillus—when subcutaneously injected into horses affected with glanders, induced a reaction, local and general, which afforded a basis for diagnosis. In the most obscure as well as the most obvious cases there is a local change at the seat of inoculation, heightened temperature, and systemic disturbance which are characteristic. The comparative rarity of glanders in man and the slight benefit likely to accrue to a proof of infection would lead us to expect that mallein is not likely to be used as a means of diagnosis in the human subject. We are, however, informed that in Belgium the use of tuberculin in the diagnosis of tuberculosis of cattle is obligatory, and in Switzerland, after inquiry by a Commission, the Council of State has made the use of mallein compulsory in the diagnosis of glanders. Mallein is manufactured in large quantities, not only on the Continent, but in the Royal Veterinary College laboratory at Camden Town. In Germany, France, and England mallein is an article of commerce. The experience of such authorities as Professors McFadyean and Penberthy has not been limited to a few applications of the test, but extends over hundreds, and these, among other English veterinarians, are eminently satisfied with the results obtained. Glanders in man is always derived from a lower animal suffering from the disease. The lungs of every horse killed in London are now subjected to examination by an inspector of the Council, and as the source of the lungs is registered, infected stables are easily traced. Such stables may be declared infected places, and such measures adopted as to render the owner very desirous to remove the embargo. The principle of compensation and slaughter has been effectually adopted in other diseases which do not endanger human life. To carry this out successfully with glanders, it should be uniform throughout Great Britain, and provision made against fresh importation of the disease. The failure of the Glanders Order of 1892, which accepted the foregoing principle, lay in the fact that it was permissive. The adoption of measures such as those in force in Switzerland, with rigorous inspection and the testing of all imported horses, favoured by our insular position, would speedily be followed by complete extermination and exclusion of the disease. The Swiss Council of State orders that every horse, mule, and ass in a stable where glanders has existed shall be tested with mallein: that previous to injection the value of each animal shall be assessed: that for every animal found on *post-mortem* examination to be affected with glanders the owner shall receive one-quarter of its value: and that for every animal killed and found not affected the owner shall receive the full value. From the view of national economy and public health, it appears our duty to press this matter on the consideration of those in authority. That the victims of glanders are usually of the poorer classes should be additional incentive to our endeavours to remove this public danger.

BRASSFOUNDERS' AGUE.

The Home Secretary has given notice of his intention to schedule brass casting and mixing as unhealthy industries. Of these two processes the mixing produces the more definitely toxic symptoms, probably owing to the larger development of fumes which takes place. The copper is usually melted first and then the zinc is added, a considerable quantity of it rising in the form of vapour, which is immediately converted into oxide. It is interesting to observe, however, that in the manufacture of zinc the symptoms which occur are somewhat different, being chiefly the result of irritation of the respiratory and digestive tract, although later on various nerve degenerations seem to result. In brass casting, however, there is in addition a group of symptoms spoken of as "brassfounders' ague," which is thought by many to be due to some admixture of copper in the vapour. "The so-called ague fit is ushered in by languor and depression, then prostration with pallor, cold sweats, and chills, that even may amount to rigors, with chattering of the teeth, precordial anxiety, headache, nausea, and muscular pains. The onset of vomiting arrests the symptoms, and usually is followed by sleep, from which the patient arouses almost well" (Arlidge). The symptoms are pretty clearly those of an acute poisoning by an overdose of the metal. If one considers the very different melting points of the two metals, it seems extremely probable that the zinc by boiling in the midst of the copper mechanically carries up in its fumes a certain admixture of copper or its oxides, for whereas copper requires a temperature of about 1,100° to melt it, zinc boils at a temperature between 930°

and 954°. "Over and above the production of the bastard ague described, brassfounding is charged with various other ill consequences to health. Among these Dr. Hogben mentions the development of gout and chronic nephritis with disinclination to active exertion, progressive paresis of legs, tremor, muscular wasting, and not infrequently locomotor ataxy" (Arlidge). The rules proposed by the Home Secretary aim principally at cleanliness both of person and workshop, ventilation, provision of respirators while actually casting, and prohibition of eating where casting or mixing is carried on.

PAY HOSPITALS AND CHEAP DOCTORS.

IN an article under this title in the BRITISH MEDICAL JOURNAL of November 3rd, we referred to the Address on Medical Education and Medical Ethics by Dr. Martin, of Sheffield, an abstract of which, so far as it referred to medical education, was published in the JOURNAL of October 6th. The portion of that address, however, which deals with the "Cheap Doctor" question seems to us so appropriate to the present position of affairs, that, with the consent of the author, we reproduce it textually.

"The honour and dignity of our profession have indeed fallen upon evil times in these latter days, when men are found ready to give their advice and medicine for the sum of sixpence a visit, not alone as a matter of charitable consideration to those who are really poor, but to all comers alike. One cannot view with any feelings of pride the shop windows of these medical hucksters, blazoned, as they are, all over with the hours of attendances in large black letters upon a bilious-looking background of yellow. Such men proclaim themselves failures in the honourable competition of professional work, and one cannot help thinking that their advice and medicine are worth no more than the price they place upon them. I regard it as an evil, and a wrong to the honourable portion of the profession, that those engaged in legitimate practice should in any way countenance or support men of this sort, and I hope the time will soon come when it will be regarded as a disgrace to have anything to do with them; they degrade the status of the profession in the eyes of the public, and cause it to be regarded lightly. Yet a lower level has been reached lately: I allude to those medical aid insurance societies which seek to farm the services of medical men for the profit of their shareholders. I cannot understand how any man who has the smallest conception of the honourable character of the profession to which he belongs, could fall under the temptation to place himself in such a dishonourable position; he is clearly selling his birthright for a mess of pottage. The people who join such insurance societies are people who are in a position to remunerate a medical man properly when in need of his services; the medical man serves but as a decoy duck for the insurance people. I trust that the time is rapidly coming when the powers of the Medical Council will be enlarged, and that they may have both the power and the will to deal sharply with those who, unmindful of the high traditions of our profession, descend to practices which, however lucrative they may be, are disgraceful to themselves and to the profession which has the misfortune to include them in its ranks. I believe the tendency is to secure additional powers in this direction, and to use them with no unsparing hand. I would be the last to wish that the members of our profession should hesitate to render their best services to those who are unable to make them any return; but I grieve to see a feeling abroad amongst a large mass of the public which sees no wrong in abusing the benevolence of the profession, and through the loss of the old English spirit of independence, do not hesitate to accept what is really charity on the part of medical men. Those who are in a position to pay their medical men have no right to accept their services for nothing, or for insufficient remuneration; and certainly, it is the duty of the profession to stand together, and to see that they are not so wronged."

ARCHÆOLOGICA MEDICA.

X.—HOSPITAL RETURNS FOLLOWING WATERLOO.

WE have had the opportunity of perusing three manuscript returns from the General Hospital formed at Brussels after Quatre Bras and Waterloo; all are signed "D. McNeil, Deputy-Inspector of Hospitals," who was the senior medical officer in charge. The first bears date June 16th to August 24th, and shows that the so-called General Hospital was made up of six separate ones, called respectively St. Elizabeth (the largest), Jesuits, Annonciation, Orphelins, Notre Dame, and Gendarmerie. It appears that the number of "surgical cases," that is, wounded, received into these hospitals was 4,086, of which the great majority were naturally British troops, although there were also men of the King's German Legion, Brunswickers, Hanoverians, and a considerable number of French prisoners. Of this great mass of admissions there remained on August 24th 1,569 men, and the 2,500 odd meanwhile disposed of are accounted for as follows—619 dead, 1,241 discharged cured, 577 sent to England, and some of the French prisoners transferred; of those remaining, 1,390 were "doing well" and 179 "doubtful."

The first section of the return discloses the then terrible scourge of surgical hospitals—civil as well as military—namely, the "number of cases in which gangrene supervened with general results." The total was 110, or about 26 per 1,000 of admissions, an issue which, at the time, was doubtless considered comparatively favourable; of these cases 6 died, 3 required amputation, 49 were cured, and 52 still remained, after the lapse of seventy days, under treatment.

The second table is dated August 1st to 31st, and shows the number of "primary" and "secondary" "capital operations" performed during that period; but it begins by showing the number under these heads remaining on August 1st, and that was 258, of which 157 were amputations of the thigh and leg, including 1 hip-joint case; and 99 of the arm and forearm, including 11 shoulder-joints; the 2 remaining were under "carotid artery" and "trephine," so that capital operations then included all amputations of the limbs, ligature of the main arteries, and trephining. The primary operations were 114, with 28 cures, 80 remaining, and 6 deaths. The latter occurred: under shoulder-joint, 1; thigh, 3; leg, 1; arm, 1. The highest proportion of deaths was 1 in 5 under shoulder-joint; 1 in 12 under thigh; 1 in 17 under arm; and 1 in 36 under leg. But the secondary operations were more numerous and serious two months after the battle than the primary: they numbered 156, of which 17 died, 24 were discharged, and 115 remained. The mortality was highest: 1 in 5 thigh; 1 in 6 shoulder; 1 in 12 leg; and 1 in 20 arm amputations.

The third return is dated September 1st to the 30th—three months after the battles, and similarly shows the number and results of capital operations performed within the period. The number remaining, which on August 1st was 258, was now 195. During the month 80 primary operations were performed, with the discharge to England of 66, and not a single death: as usual, two-thirds of the operations were on the lower extremities to one-third on the upper. It is a curious fact, which has long been recognised in military surgery, that it seems much easier to hit a leg than an arm in battle.

The secondary operations in September, as in August, were again more numerous and serious; they numbered 116, chiefly of the thigh and arm, with 1 death to 10 of the former, and 1 to 16 of the latter. About half of the survivors were sent to England, and the others were still unable to be moved. The final figures in this return show that on September 30th, or about 100 days after the battle of Waterloo, 65 of our wounded still remained under treatment in the General Hospital at Brussels. When the last man was fetched away these returns do not disclose.

THE annual general meeting of the Anatomical Society of Great Britain and Ireland will be held on Monday next at 4.30 P.M. at the London Hospital Medical College.

THE annual dinner of the Harveian Society of London will take place on Thursday next, November 22nd, at the Criterion Restaurant, at 6.30 for 7 o'clock, under the chairmanship of the President, Mr. G. Eastes.

PARLIAMENTARY BILLS COMMITTEE.

Infant Mortality: Death Certification: and Massage Houses.

On Wednesday morning, November 14th, a deputation from the Parliamentary Bills Committee of the British Medical Association waited upon Mr. Asquith, Home Secretary, at the Home Office, for the purpose of laying before him statements and representations (1) concerning excessive mortality of infant children due to the employment of married women in factories; (2) concerning the evils of the present system of certifying deaths, and suggestions for its amendment; (3) certain points in connection with the amendments of the factory laws. Mr. Asquith was accompanied by Sir Walter Foster, Parliamentary Secretary to the Local Government Board. Mr. Ernest Hart introduced the deputation, which consisted of Sir Henry Thompson, Sir T. Spencer Wells, Dr. George Reid (Stafford), Dr. Cleveland, Dr. G. E. Shuttleworth, Mr. C. Street, Dr. Hugh R. Jones, Dr. A. G. Bateman, Mr. C. H. Millburn, Mr. G. Eastes, Dr. Mickle, Mr. Swinburne Hanham, Dr. Langdon Down, Dr. J. Holmes, Dr. Hughes, Dr. Danford Thomas, Mr. G. C. Langdon, Mr. Victor Horsley, and Mr. Galton.

Mr. Ernest Hart said that the subjects of the deputation that day were not subjects which were in any respect new. They had already had the opportunity of being in communication with the Office on the subjects, and they had some reason to believe and hope that the views which would be expressed and the facts laid before the Home Secretary would be not only in accordance with his own experience, but also in accordance with his views as to the general method of dealing with them. What they were anxious to do was to give as far as possible some information as to the methods by which they proposed to deal with them and to urge certain circumstantial conditions which they thought made them matters of urgency. The first question they had to bring under the right hon. gentleman's notice was that of the excessive infant mortality due to the employment of married women in factories. That matter was first brought home to them in reference to a special investigation by the medical officer of Stafford as to the rate of mortality in the pottery districts. That attracted a good deal of attention, and after a conference with his Committee he instituted an inquiry throughout the country addressed to medical officers, in which he requested all the information they could offer. That was put in the form of a report, and certain resolutions which they had handed to the Home Secretary were passed by the British Medical Association, asking that it should be made the subject of early legislation. He would now ask Dr. Reid to make a brief statement on that subject.

Dr. Reid said that in presenting their case it would not be necessary for him to go into details, as the Home Secretary was already in possession of the facts and arguments upon which they based their recommendations. It was generally admitted—in fact, it was established beyond doubt—that the substitution of artificial food for mother's milk in the rearing of infants was responsible for an enormous increase in the infant mortality of the country. That this was the case had been proved by hospital statistics, especially in Liverpool; and it had been shown that circumstances which—other things being equal—would undoubtedly tend to increase the infant death-rate, had been instrumental in diminishing it by reason of the consequent substitution of breast milk for artificial food. As an example, he might mention the effect in Coventry of prostration of trade in 1861, which compelled mothers to remain at home, and led to the following remarks by the Registrar-General: "The care of the mothers of Coventry has, it would seem, counteracted some of the effects of privation, so that neglect of their homes by mothers at work in factories is apparently more fatal than starvation." Again, during the Lancashire cotton famine, while privation increased the adult death-rate, the infant death-rate was greatly lessened owing to mothers being compelled to suckle their infants. During the siege of Paris also, while the general mortality was doubled, the infant mortality fell 40 per cent. from a similar cause. In countries, also, in which artificial feeding of infants prevailed, the infant death-rate enormously exceeded that of countries where it was the general practice for mothers to suckle their infants. It seemed clear, then, that any circumstance which prevented mothers from suckling their infants must add to the risks which infant life was exposed to, particularly among the poor inhabitants of towns.

Mr. Asquith asked how long the food should be conveyed by the mother.

Dr. Reid said: During nine months; it was in the early part of a child's life that the greatest danger was caused by improper nutrition, but three months would take it over a dangerous period, and build it up for after life. Five years ago, when it first became his duty to collate the reports of the medical officers of health for Staffordshire for the information of the County Council, he was greatly impressed by the marked difference in the rates of infant mortality between the artisan towns in the north and south of the county. The probable explanation of that was at once apparent; for while the towns in the north and south did not present any difference in their sanitary condition to account for it, they differed in one important aspect—namely, that whereas in the northern towns, where the infant mortality was abnormally high, the pottery industry afforded employment for large numbers of married women; in the southern towns, where comparatively speaking the infant mortality was low, the iron industry carried on in those towns did not admit of the employment of married women. Having seen the worst case, he went to some considerable trouble and obtained ten years' statistics from artisan towns in the county, and an aggregate population of 438,712, and classified the towns in accordance with the nature of the trade carried on. The outcome of the inquiry was in the Home Secretary's hands, and he need not go into details regarding it. Suffice to say that in towns where married women were largely engaged the infant mortality was greater by 28 per cent. than that in the south, where the women were not so engaged. In other words, the employment of married women in factories was responsible for the sacrifice of 300 infant lives annually. Having published his Staffordshire statistics in the paper he read at the annual meeting of the British Medical Association, held in Nottingham in 1892, the question was taken up by the Parliamentary Bills Committee of the Association, and statistics on similar lines were obtained from 101 towns in England, with the total population of three millions and a-half. The result of that extended inquiry was to confirm his conclusions. It was true the figures were not striking, the percentage increase in the infant mortality in artisan towns where married women were largely engaged being 18, as compared with 28 in Staffordshire; but that could be explained by the fact that in the larger inquiry it was not possible to arrive at so correct a classification of the towns in accordance with the number of married women workers, as in the case of the Staffordshire inquiry.

Mr. Asquith: The same would apply to those in shops as in factories.

Dr. Reid said that was so, but it would be difficult to get figures, as the Registrar-General had not published statistics of any town under 50,000.

Mr. Asquith: Your point is that a child is separated from its mother by her working in the factory, and that the child does not get proper food—it is not that physical injury results to the woman from working?

Dr. Reid: Just so.

Mr. Asquith: That suggests another question as to whether anything should be done to prohibit the employment of married women for a month before the birth of the child.

Dr. Reid: I have not gone into that.

Mr. Asquith: A great many think it is more important to prohibit the woman working a month before the child is born than to prohibit her working two months after. You do not agree with that?

Dr. Reid: No: I do not agree.

Mr. Ernest Hart: That is a separate question.

Dr. Reid, continuing his statement, said that he now came to suggested remedies. First of all, the present Factory Act required that a mother should remain a month at home after

her confinement. They suggested that the period should be extended to three months, for the reasons he had mentioned. The present one month did not benefit the child in the least. It benefited the mother, but not the child. No mother who had to start work in a month would start suckling a child, whereas, if she could be at home for three months she would suckle the child and thus tide it over by far the most dangerous period of life. It had been said that that would seriously affect the trades in which women were engaged. But, as regarded Staffordshire, he had the assurance of the late President of the Chamber of Commerce in the pottery district that such a change would be quite practicable from a trade point of view, because there were a certain population of jobbing workers.

Mr. Asquith: But could they keep their places?

Dr. Reid: The places are kept open for them now.

Mr. Asquith: But they might not be kept open for three months.

Dr. Reid said the second suggestion would result in an enormous saving of infant life. He alluded to the passing of an adoptive Act, enabling local authorities to establish *crèches* in towns where married women were largely engaged in work. In such institutions, under the control of the local authorities and supported mainly by the payments of the parents, infants could be properly fed and cared for until they reached an age when they would be better able to assimilate the sort of food which the children of the poorer classes were expected to live upon in their infancy. Although the food would be artificial, it would be proper artificial food.

Mr. Ernest Hart said he would next ask Sir Henry Thompson to speak of death certification.

Sir Henry Thompson said it would be within Mr. Asquith's recollection that he had the honour of addressing him nearly two years ago, in January, 1893, on the need for a more accurate system than at present existed of registering not only the fact of death but the cause thereof in every instance throughout the kingdom. He supported his application by evidence drawn from the Registrar-General's reports, by which it appeared that in England and Wales about 1 death in every 36 was registered without any certificate as to the cause of death, and that among those in which a cause was certified, in at least 4 per cent. the information given was too imperfect to be of any value, while in Scotland and Ireland, where the system of registration was very inadequate, the results were much more defective still. Finally, he adduced evidence to show that this inadequate procedure constituted a very serious defect in our social organisation, leaving as it did an open door to the commission of secret crime of the worst kind. The Home Secretary was pleased on that occasion to express himself satisfied that grounds for inquiry certainly existed, and in less than three months later provided that a Select Committee of the House of Commons should inquire into the working of the laws which "relate to the disposal of the dead, and for securing an accurate record of the causes of death in all cases, especially for detecting them where death may have been due to poison, violence, or criminal neglect." The Committee sat for about three months, examined numerous witnesses, and presented, as the result of its labours, a Blue Book of nearly 400 pages, containing the evidence, with a very complete analysis and a full report thereon. From that report he selected a few extracts to show how completely the Committee had endorsed both the facts and the views he had the honour of submitting on the occasion referred to. These, with Mr. Asquith's permission, he would very briefly cite:

Reports of the Select Committee on Death Certification.

Page 3. So far as affording a record of the true cause of death and the detection of it in cases where death may have been due to violence, poison, or criminal neglect is concerned, the class of certified deaths leaves much to be desired (numerous illustrations of which are given on page 4).

Page 4. Certification is extremely important as a deterrent of crime, and numerous proofs are given at length in support of the statement..... Contrast this class with that of uncertified deaths, when the result is such as to force upon your Committee the conviction that vastly more deaths occur annually from foul play and criminal neglect than the law recognises.

Page 8. Great uncertainty in resorting to the coroner's court and want of system in connection with the practice of it are affirmed to exist. (Of this numerous remarkable examples are quoted.)

Page 10. It is stated that the opportunity for perpetrating crime is great in the considerable class of uncertified cases..... "in short, the existing procedure plays into the hands of the criminal classes."

The Committee are much impressed with the serious possibilities implied in a system which permits death and burial to take place without the production of satisfactory medical evidence of the cause of death.

Page 12. The Committee have arrived at the conclusion that the appointment of medical officials who should investigate all cases of death which are not certified by a medical practitioner in attendance is a proposal which deserves their support.

In considering cremation, the Committee has reported as follows:

Page 22. Your Committee are of opinion that there is only one question in connection with this method of disposing of a dead body to which it is necessary for them to refer. That question is the supposed danger to the community arising from the fact that with the destruction of the body the possibility of obtaining evidence of the cause of death by *post-mortem* examination also disappears.

The modes of proceeding adopted by the Cremation Society of England having been described,

Your Committee are of opinion that with the precautions adopted in connection with cremation as carried out by the Cremation Society there is little probability that cases of crime would escape detection; but inasmuch as these precautions are purely voluntary, your Committee consider that in the interests of public safety such regulations should be enforced by law.

A summary, or recommendation in accordance with the above, and including other details, closed the report.

Mr. Asquith: On the whole, Sir Henry, you are well satisfied with the report of the Select Committee?

Sir Henry Thompson: Yes; we are very well satisfied with it.

Mr. Asquith: For it practically substantiated all that you maintained?

Sir Henry Thompson said that was so. Continuing, he said that he would now ask permission to make a further brief statement in connection with the same subject. He did so on behalf of that great body of the medical men of this country who constituted the British Medical Association, numbering as they did about 16,000 qualified practitioners. At the large annual gathering of the Association held this year at Bristol, in August, the following resolution was discussed and passed unanimously in the Section devoted to Public Health, after the discussion of a paper by himself, the chief object of which, among others, was to call attention to the defects in our system of certifying death, as he had often done in years that were past, and to the medical responsibilities which attached to it at the present day. This resolution, which was drawn up by the Chairman of the Committee was as follows:

That this Section calls the attention of the Council to the defects of the present imperfect system of procedure for the certifying of deaths, a procedure which, in the words of the report of the recent Committee of the House of Commons "plays into the hands of the criminal classes." This Section is impressed with the serious possibilities implied in a system that permits death and burial without the production of satisfactory medical evidence of the cause of death; it urges the Council to press upon the Government the importance of carrying out the recommendation of the Select Committee to which Sir Henry Thompson has called attention—namely, the appointment of medical officers who should investigate all cases of death which are not certified by a medical practitioner in attendance.

That expression of opinion had been adopted by the Council or central executive of the Association with a request that the Home Secretary would receive a deputation from their Parliamentary Bills Committee for the purpose of laying before him the prayer which it contained, an opportunity which Mr. Asquith had graciously complied with that day. Very few words from him would suffice in support of it. He ventured to submit that their views of the inadequacy of the present system of certifying death in this country had been so completely substantiated by the official inquiry that they need only express a hope that in future legislation, and that at no distant period, the principle shall be accepted that no dead body could be buried or otherwise disposed of until the cause of death had been ascertained and certified by the qualified practitioner who attended up to the time of death, or, the last named condition failing, until the cause had been determined by a qualified medical officer after any examination he might deem necessary, so as to leave no doubt of the cause in his mind, when he would certify to that effect. In the great majority of cases the cause was obvious and could easily be determined by the usual attendant. But there were always some instances in which the cause was doubtful. Whatever the circumstances of the deceased, however obscure his station in society might have

been, such inquiry must be pursued—if necessary by necropsy, or even by the skilled analyst—until the cause was ascertained, or, according to the course of events, it might become the subject of inquest by the coroner. All that could be attained by modifications of our present system. It meant simply doing thoroughly and sincerely that which, although hitherto satisfactorily accomplished in most cases, had in many been neglected or carelessly performed—a not unnatural result of the fact that authority had hitherto regarded the obligation to inquire and to certify as too insignificant a matter to merit a slight remunerative acknowledgment. He thought no revolutionary change of the present system would be necessary, and that the extremely important additions to it thus indicated might be made—with some increased cost, of course, still without any serious or extravagant outlay. They might thus obtain an admirable and effective machinery to protect the defenceless from insidious criminal attempts, and to collect and record scientific data regarding the nature and prevalence of disease, which were of extreme value to those who were responsible for the oversight and care of the public health. If the system he had indicated could be made applicable to the whole of the United Kingdom, he did not know any country in Europe which would be so well protected as our own. That brief sketch of the position which this important subject had now attained might, he hoped, be held to have some claim to the favourable consideration of the Home Secretary, inasmuch as he thought he was warranted in saying that, although very imperfectly, it embodied the convictions and conveyed the wishes in regard to the "death certificate" of nearly all, if not the whole of the great profession to which he had the honour to belong.

Mr. Ernest Hart remarked that he had other gentlemen who had come prepared to speak on that subject if necessary, among them Dr. Danford Thomas and Sir Spencer Wells, but as he understood that the Home Secretary's time was very limited, he would not ask those gentlemen to address him unless he wished.

Mr. Asquith said that after the very full and elaborate statement of Sir Henry Thompson, he hardly thought it was necessary for any other gentleman to address him on the subject.

Mr. Ernest Hart said he understood that the other subject which they had intended to deal with—that of factory legislation—had been satisfactorily settled so far, and therefore it would not be necessary for him to speak on the question. But there was one subject he would like to refer to which was of great interest to the British Medical Journal, and which had been taken up by it—he referred to the massage houses in London. If there was any possibility that the police could be usefully employed in this matter, and so take it out of the hands of the Journal, he need hardly say they would be very glad to be relieved of the task. Their object had not been to create a public scandal, or make a sensation, but to produce some definite effect. The state of things to which they called attention at the end of July, in which they gave the outline of a condition of general immorality, they had no desire to deal with as a matter of public immorality, but their especial interest as members of the profession was in the fact that there was at present existing a system which cloaked immorality of the most extreme, grotesque, and hitherto almost unknown character in this country, professing to be countenanced by the medical profession—which, of course, was not the case. By using the word massage, by speaking of medical certificates—which were largely sham certificates—by speaking of hospital certificates which had no weight or value, the proprietors of newspapers and the public were no doubt led to believe that the practice carried on in these houses was some sort of pseudo-medical treatment or methods, and they wished to clear themselves of that. He had with him, and would hand to the Home Secretary specimens of the so-called medical certificates which were hung in the rooms of many of these establishments. If it was merely a question of ordinary immorality, simply cloaking itself under the guise of medicine, they would endeavour to take other steps if the law permitted them, but as a matter of fact the word "medical" was in no way protected by law; neither was the word "hospital." Anybody could set up a "hospital" in a back shop, and the giving of certificates might be a matter of mere mercenary sale. The present mischief was that under this guise and under that nomenclature there existed in London a considerable number of houses, which were really establishments for prostitution, and the advertisements of which were chiefly addressed to clubmen, fashionable men, and society people generally. Usually such institutions shunned the light, and for decency's sake hid themselves, but they were now bringing themselves to the front, and the practices which they carried on, and which were such as no police authorities would willingly tolerate or permit, were on the increase. When they brought the matter to the notice of the Home Secretary in the House of Commons he was good enough to order the police to make investigations. According to Mr. Asquith's directions, the police authorities communicated with him (Mr. Hart) and he gave them all the information he was then possessed of, and they followed up the clues, but they informed him later on that they were powerless to do anything beyond that. He was sure that all the further particulars which the Journal had now given, and many more which might be given if necessary, could be authenticated, and he ventured to place the matter before the Home Secretary, because he felt sure that if the police authorities could have acted effectively under the existing law they would have done so, for he had not the slightest doubt that they were as anxious that the practice should be put a stop to as was the medical profession: but as far as he could gather they were fettered by the present state of the law. He ventured therefore to ask the Home Secretary to consider what could be done to obviate the painful necessity of publicly describing in the Journal what they would much prefer should be quietly suppressed by the action of the police authorities of the metropolis.

Dr. Danford Thomas said that as a coroner for London he generally agreed with the recommendations of the Committee on death certification, but he would respectfully suggest that with a very small addition to the duties and the powers of coroners, and also an addition to the powers given to the various county councils and other local authorities to make a small increase in the expenses, all uncertified deaths could be well and properly investigated. At the present time the only fee paid to the coroner was for the holding of the inquest, so that all the other duties connected with the office, preliminary inquiries, etc., were practically unpaid, and no provision was made for any inquiry except such as might come from the police, and according to the law no one was bound to report to the coroner. He obtained his information from all kinds of sources—from the police, medical practitioners, and others. Coroners were willing to make all these preliminary inquiries, and in many cases he did it himself, probably to the number of between 400 and 500 cases a year in which no inquest was held, and consequently no remuneration was given. But if it could be arranged that coroners should have the power to make preliminary inquiries and if necessary to employ a skilled medical man, the investigation would be complete: it could be done in open court and without a jury, and in that way a large number of natural deaths which were now uncertified could be properly certified and recorded as such. It would involve a small alteration in the law, and would get rid of all those numerous deaths which were registered by the Registrar-General either as uncertified or from causes ill-defined. He was quite prepared to develop that idea, and would be pleased to place his views before Mr. Asquith in writing.

Mr. Asquith, in reply, said: I must first say one word with reference to the subject which was last brought under my notice in the remarks which fell from Mr. Ernest Hart. I think it would be as contrary to usage as to my own inclination to receive a deputation upon such a subject as that described, which in my judgment is better fitted for private consultation than for an occasion such as this. But as Mr. Ernest Hart has thought it fit to refer to the matter—and I know with the very best motives—I will simply say that, speaking on behalf of the Metropolitan Police, I am ready and we were willing, and we shall be grateful for any authenticated information which Mr. Ernest Hart and those who assist him could lay before us which would tend to show there either has been, or

is likely to be, a breach of the law. The police are not guardians of morality; and unless the law has been infringed, and unless there is clear evidence, the police would be travelling outside their proper functions if they took any action at all. Before employing the police we must have a *primâ facie* case of infringement of the law. In the summer, in consequence of some statements which appeared in the JOURNAL to which he refers, the police put themselves into communication with the directors of that JOURNAL. They very properly placed at their disposal all the information which was in their possession; but, after a most careful investigation, it was discovered that no case could be brought into a court of law with a successful or a useful result. It may be the law requires amendment, but upon that point I must suspend my judgment until I am in the fuller possession of the facts such as they are. Meanwhile you may be certain that the co-operation of the police within a proper limit of their functions will be most readily offered. I pass from that to the other subject which is the cause of our meeting to-day. I need not say how glad I am to find myself face to face with so large a representative gathering of expert opinion to hear the views which you, on behalf of the medical profession generally, have expressed in relation to matters as to which the public generally will admit you are of all people most competent to judge. First of all, with reference to the question of the employment of women in factories after childbirth, I listened with interest, and have read with interest before, the statement prepared by Dr. Reid, on which he has devoted a great deal of time and care: and no doubt the facts he there brings together are striking and significant. At the same time, I cannot say that it is as yet established to my satisfaction as a scientific conclusion that the increase in infant mortality, which has undoubtedly taken place, and is one of the most melancholy facts in connection with our vital statistics, is explained by these facts. It is not proved to my satisfaction that the sole cause, or even the chief cause of the increase, is the employment of women—mothers—in factories too early after the birth of the child. I have here the figures which were prepared by the Registrar-General, which give statistics of twenty-eight large towns of England, extending over the last nine years. In almost all these towns there has been, when we compare 1885 with 1893, or if you compare 1885 with the average to 1893, a very considerable increase in infant mortality. Many of them, however, are not large and some of them hardly at all manufacturing towns, and the increase in infant mortality is more striking in towns not manufacturing towns and in which the employment of mothers in factories cannot be regarded as a largely contributing cause. The increase is even more startling than in the manufacturing towns. I will give one or two illustrations. London of course stands rather by itself. In London—you understand in speaking of the deaths of children 1 is compared with 1,000 deaths—in 1885 the figure was 148, in 1893, 164; and the average for the nine years is 154. We find in Wolverhampton—which I suppose is one of the towns included in Dr. Reid's figures—

Dr. REID: That is so.

Mr. ASQUITH: That is one of the most striking in the country. In Wolverhampton the deaths were 140 in 1885, in 1893 they had risen to 208, and the average for the period of nine years was 175.

Dr. REID: Was that not accounted for by diarrhœa?

Mr. ASQUITH: Well, I suppose that is caused by improper feeding. No doubt many of these deaths were due to diarrhœa as the result of improper nutrition.

Dr. REID: In 1892 there was an epidemic.

Mr. ASQUITH: Leaving that and taking the average, there is a large increase. I will take one other case—the case of Hull, where few married women are employed. In 1885 the deaths were 128; in 1893 206, and again, as 1893 was an exceptional year, the average for the nine years is 164. I might multiply illustrations, but those I have given show that the problem is not by any means a simple one. There is in all large towns a considerable increase in infant mortality, and in some it is impossible to ascribe it to the cause to which attention has been properly called. I have had a most careful inquiry made in this matter, and I have here reports from all the factory inspectors practically in the United Kingdom. I may indicate to you in a very brief way some of the results. I need not tell you I am in hearty sympathy with your objects, and in my own mind I go a great deal further, as I hope to see the time when the employment of married women in factories at all will be entirely discontinued. Ultimately, no doubt, that will take place under law or by the operation of public opinion. I think that is the only conclusion consistent with the maintenance of infant life and a high state of civilisation and a proper standard in our working class population. I am glad to see that in some directions there is a great and growing feeling in this way. In the case of Paisley, it is an exceptional thing for a married woman to be employed. Then there are many persons of authority I have consulted who think your period of three months is really insufficient, and that married women ought to be prohibited working for six and even nine months. No doubt you will agree that if that could be done it would be desirable. You suggest three months as a sort of compromise. I think the whole body of evidence tends to show if we could lengthen the period of non-employment after childbirth it would be a good thing, not only for the mother, but the child is enabled to receive natural nutrition for a longer period than at present, and in cases where the artificial food is used entirely, natural nutrition would take its place. But in considering legislation we have to look at practical results. A considerable proportion of the employers of labour, as far as I can gather, are opposed to a change; and, what is more to the point, a very considerable number of those employed, for very natural and obvious reasons. In a large number of these families the mother is as much the bread winner as the father, and it is very difficult for the family to maintain even the comparatively low standard of comfort it at present enjoys if one of the two bread winners is to be compulsorily suspended from work for so long a period as three months. There are not a few cases in Lancashire where the wife persistently brings home more in the week than the husband. Then, again, we must remember that if the woman is to stop at home, and not earn wages—which is too often the case—the family is very little removed from the poorest class; the withdrawal of so much from the weekly wage means a corresponding withdrawal of the small comforts which the family enjoy, and you have the women wasting and emaciated. The nutrition of a child by a mother under these circumstances would be very disadvantageous to it. Then, again, as to the point I called attention to; although I am glad to say the employers generally are ready to take the woman back, it is a question as to whether they would be induced to keep the places open for three months in consequence of the disorganisation which would ensue. Some of our inspectors say the workers are apprehensive that this will mean the substitution of male labour.

Dr. REID: A good thing, too.

Mr. ASQUITH: That may be so, but I do not know that their husbands think so. I think you will agree with me, looking at it from a larger point of view, although a good thing to check improvident marriages, it is a different thing to produce a kind of feeling that the child is somewhat in the way, and that the presence of it, and the responsibilities involved by having it, would make such a substantial diminution to the wage fund as the withdrawal of three months at a time. You must not suppose I am putting these objections forward in a spirit of hostility, but they are things which must be very practically weighed. Your suggestion, however, will receive most careful consideration, which, coming from such a quarter as it does, it is entitled to. One word on the subject of *crèches*. Well, that again is a most desirable thing, but you have got to encounter a feeling, amounting almost to a prejudice, on the part of mothers against letting their children go to these places. They prefer to let their relatives or friends look after their young ones rather than take them to these public institutions. That feeling undoubtedly exists, and you cannot ignore it, and for the present I should be rather disposed to look to voluntary action, especially to the joint action of employers and employed, to provide something in this direction, rather than to the more ambitious scheme which you have put forward, which would necessarily result in a resort to public funds. Gentlemen, the other subject which you have addressed me on is that of the proper certification of death. I had the

pleasure of receiving a deputation on that subject some considerable time ago, and of hearing the views of Sir Henry Thompson and others, and the result was the appointment of a Select Committee, whose report practically endorses all the views and recommendations which you have laid before me. The matter is one which really concerns the Local Government Board rather than the Home Office, because the machinery for the registration of births, marriages, and deaths is under their control. Therefore, on that ground, and in view of the technical character of the question, I asked Sir Walter Foster to be present. He presided over the deliberations of the Select Committee, and I think it will be more satisfactory if I ask him to say a few words on the subject. As I know Sir Walter's views you may take it for granted that I and the other members of the Government agree with what he will say.

Sir Walter Foster said: Gentlemen, I am in a somewhat different position from my right hon. colleague, inasmuch as I endorsed most of your recommendations in another capacity, as Chairman of the Select Committee, and I can assure you that these recommendations have not been lost sight of, but have been under consideration ever since they were made. We have as much desire as you have that the scientific registration of death should be made accurate, or as accurate as it can be made, considering the difficulties in the way. We are also very anxious, with you, that the means by which crime can now escape detection should be as far as possible closed in order that the present facilities of getting rid of bodies that have come to an untimely end by foul means may be absolutely closed against such processes. Well, these are two great objects which we have in mind in reference to this question of death certification, and they are objects which I am sure should receive consideration at the hands of any Government. We are behind other Governments in this respect, and I think it is our duty, as soon as we can see our way, to get, at all events, level with other countries in this respect. However, I cannot disguise from you that there are some difficulties which are at present under consideration of the different departments. It is mainly a matter in connection with the Local Government Board, but as the Home Office has charge of the burial grounds and considerable authority over the interment of the dead, it does touch slightly the functions of the Home Office, but the Local Government Board, to whom the greater part of this matter comes, as a matter of duty have been considering it very carefully, and the one great obstacle—the first obstacle in our way—is the question of expense. We thought as a Select Committee, and I have every ground for believing that it is so, that it is necessary to pay medical men for certificates of death in order to carry out the suggestions of that Committee. We find on making calculations that the payment of the small fee of 2s. 6d. for each certificate would amount to some £64,000 a year. That is a matter which has to be considered by the Treasury, and £64,000 is a considerable sum. There are other incidental expenses connected with the proposals of the Select Committee, which in the opinion of some—I cannot say I share that opinion myself—would raise the cost to nearly £100,000 a year. I think, however, that that is an over-estimate. Then we should see additional expenses which would be thrown upon the local authorities if medical officers of health in various localities were made what we called them—medical certifiers, and we have to consider how far that expense would be popular in various local districts with the parties who are responsible for the rates. I think the suggestion that Dr. Danford Thomas has made may possibly offer a means of getting out of a portion of the difficulty, but there is also another difficulty that naturally suggests itself to the lay mind, namely, that the recommendations, such as you wish carried out, would practically enforce the attendance of a registered medical practitioner on every person at the time of death or immediately afterwards in order to obtain evidence as to death. That is an opinion which the medical profession holds very strongly, but the public rather think that it is an interference with their freedom. I do not consider that the difficulty is a great one, but I have thought it my duty to point out to you that these difficulties are under consideration. I do not think they are insurmountable, and the Government will give their best attention to the recommendations of the Select Committee, and if there is any opportunity of legislation I hope it will be done.

Mr. Ernest Hart briefly thanked Mr. Asquith and Sir Walter Foster for their courtesy, and the deputation withdrew.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

The autumn dinner of the Association took place at the Café Monico on November 10th. The President, Dr. R. Heath (St. Leonards) was in the chair. The Association guests were the President of the College of Surgeons (Mr. Hulke) and Sir John Williams, Bart.

Replying to the toast of the guests, Mr. Hulke paid an eloquent tribute to Irish schools of medicine. He spoke in warm praise of the work of Graves, Stokes, and Corrigan, of Colles, Wilde, and Robert Macdonell. He said that it gave him great pleasure to meet the Irish graduates, who were the inheritors of these glorious traditions and the natural defenders of their rights and privileges. He referred to the disabilities in respect of hospital appointments, of which the diplomates of the Irish colleges justly complained, and, speaking for the great college of which he was the head, he said that he could promise the warmest sympathy and support in the effort which the Association was making for the repeal of the restrictions.

Sir John Williams, in proposing the toast of the Association, referred to the eloquent encomium which they had just heard and desired to add his meed of praise for the admirable achievements of the Irish school of obstetrics. Referring to the rule in force in many English hospitals by which competitors for honorary appointments were required to belong to an English college, he thought it inexpedient and unwarrantable, and trusted to see it repealed. Prior to 1858 this rule was defensible on the ground of common sense, but its continuance could not be defended.

DEATHS UNDER ANÆSTHETICS.

Dr. C. F. Marshall (late Anæsthetist to the Hospital for Sick Children, Great Ormond Street) writes: There appears of late to have been an increase rather than a decrease in the number of deaths under chloroform, cases having from time to time reported in the British Medical Journal, and comments made thereon. The question, however, as to whether it is ever necessary, and if not, whether it is justifiable to give chloroform, does not appear to have had due consideration. I maintain that it is never necessary to use pure chloroform as an anæsthetic, and that when used it should be mixed with ether. The most satisfactory combination, so far as my experience goes, is a mixture of equal parts of chloroform and ether, which can be given on a piece of folded lint, with the same ease as chloroform. The advantages of this mixture are the following: 1. The ether acts as a stimulus, counteracting the depressing effects of the chloroform on the heart. (That chloroform has a depressing effect on the heart is a clinical fact, whatever the results of the Hyderabad experiments may attempt to prove.) 2. During the commencement of the administration and during the struggling stage the patient is chiefly breathing ether, which evaporates more quickly, and so the initial dangerous period of chloroform administration is tided over. 3. During struggling, for the above reason, the anæsthetic can be pushed with much more safety than can chloroform alone. 4. For the same reason there is less shock in those too frequent cases where the surgeon commences to operate before the patient is ready. The only disadvantages are (1) that about two or three times as much anæsthetic is used; (2) sometimes rather profuse salivation is excited. These are, however, trivial points compared with the greater safety of the mixture. I am well aware that mixtures of chloroform and ether in various proportions have been used for some considerable time. The point I wish to urge is that there is never any occasion to use chloroform, except in the form of a mixture with ether; and, therefore, considering the number of fatalities from chloroform, that its employment by itself as an anæsthetic is unjustifiable, and should be abolished.

THE SCANDALS OF MASSAGE.

Report of the Special Commissioners of the "British Medical Journal."

III.

THE question of "certificates"—to which we had occasion to refer in our last article—is one which seriously demands the attention of the medical profession. As we have already observed, the advertisements of the massage houses frequently make reference to some kind of certificate, though there is a notable variety in the terms used. Some of the best operators do not appear to refer to any certificate at all, and, from the result of our investigations, we do not suppose that they are the less competent on that account. One lady describes herself as a "nurse" holding the "highest English medical certificates"—whatever that may mean. Another, who also calls herself a "nurse," is described as "a certificated London hospital masseuse." Another nurse is said to be "hospital trained and certificated," whereas her principal advertises a "medical certificate," and proposes to *teach* massage and give certificates herself when her pupils are proficient. Another lady advertises a "physician's certificate." Another Madame describes herself as "qualified at the Kensington School of Massage and Electricity"—which is, perhaps, the same as an establishment which was advertised in the following terms some time ago:

SOUTH KENSINGTON SCHOOL OF MASSAGE AND ELECTRICITY, ——— ———. Mrs. W—— attends patients by appointment only; qualified assistants attend daily 10—6. Electric, pine, vapour baths. Terms moderate.

An advertisement of another massage house describes the principal and assistant by the magnificent title of "hospital certificated medical and surgical masseuses and electricians." A gentleman calls himself "a masseur and medical electrician (London hospital certificate)." Another lady calls herself "a medical and surgical masseuse (diploma, London, 1886)."

We do not pretend to know exactly what all these titles are supposed to mean, but we find in the same series of advertisements, besides the South Kensington School already referred to, the following, which we insert for what it is worth:

AT the WEST-END SCHOOL of MASSAGE and ELECTRICITY, 4, Weymouth Street, Portland Place, (established 1886), Students are Trained and Hospital Certificated and Masseurs, Masseuses, and Electricians attend private patients. PRIVATE LESSONS also GIVEN, especially in Face Massage.

In the same paper—which we should add is of the early part of the present year—there appeared together the following remarkable notes:

MASSAGE.—ASSISTANT WANTED; must be young, bright, nice manners; certificated preferred, but could be taught at class.—Write Nita, —— Road.

MASSAGE.—Madame NITA, new Staff. Special Days TUESDAY and THURSDAY, Madlle. Alice, eleven till seven. Classes begin on the 2nd.—Apply, by letter. Nurses, £3 3s.; others, £5 5s. Lessons on living subjects; certificate given.— —— Road, —— Street.

Comment on these last advertisements is unnecessary, for in the light of our inquires we decline to regard them as serious.

It is also well known that a series of classes in massage have been carried on for some time past by Dr. Stretch Dowse, and that he signs certificates of proficiency. For the present, however, we prefer to deal with some of the other establishments, and in particular with the establishment referred to in the above advertisements as "The West-End School of Massage and Electricity." This establishment now prefers to describe itself boldly as "The Massage Hospital," and we presume that the phrase "hospital certificate" in the advertisements must refer to this establishment, as we believe there is no real hospital in London where any such certificate is to be had. With this enterprise Dr. Herbert Tibbits is intimately connected; and we have before us a reply which he wrote to a recent application from a lady who was anxious to procure a "certificate" with the least possible expenditure of time and money. The circular and letter written thereon are as follows:

THE MASSAGE HOSPITAL AND WEST END SCHOOL OF MASSAGE AND ELECTRICITY.
(Under Royal Patronage.)
Established 1886.

DEAR MADAM, OR SIR,—We enclose prospectus. You will observe that there is no absolute time rule. The fee is the same whatever may be the length of the course; and the exact time you give in attending is stated in the certificate. Students attend three or four days weekly. We do not receive them as residents; but very moderate terms are accepted in nurses' homes and private lodging and boarding houses in our immediate neighbourhood. Students can enter at any time. Our Lady superintendent is one of the most skilful of masseuses.

Our past students number about 300, resident in various countries, in India, in the Colonies, in London, and elsewhere, and we do all we can to find them patients; but as we never favour one more than another, it is impossible that we can guarantee to find them work; but some of them are earning from £100 to £400 per year from their own exertions. We guarantee to instruct them thoroughly, then they may obtain the certificate of this School and Hospital, which is universally recognised by the medical profession of this country and others, as a guarantee that its possessor is a thoroughly competent operator in massage and electrical treatment.—Yours faithfully,

JOHN SCOTT, Hon. Secretary.
AGNES MACMILLAN, Assist. Secretary.

P.S.—Please acknowledge the receipt of this letter upon a post card. We would point out to you (in reference to several correspondents) that no certificate of training, etc., from any nurse or masseur can be a medical and especially that it cannot be a hospital, certificate: and that although our terms are higher, we suggest that intending students should consider this, and whether a nurses' certificate will be of any possible value, however small the fee may be.

(Letter written on back).

Massage Hospital, 55, Weymouth Street W.,
September 20th, 1894.

Madam,—In reply to your letter just received, and forwarded to me from Craven Terrace, I enclose the usual circular of the school. The terms are £10 10s. for the necessary tuition, lasting generally for from three to six months. In the case of hospital trained nurses the fee is generally reduced according to their knowledge and experience, and they receive their certificates as soon as they pass the necessary examination in massage and anatomy.

We should be willing in your case to accept five guineas, and to grant you the certificate of the school as soon as you can pass your examination.—Yours faithfully,

HERBERT TIBBITS, M.D.,
Hon. Med. Sup.

You had better call here, 55, Weymouth Street, at 11 o'clock to-morrow, as you write that your time is limited.—H. T.

These documents are, we venture to say, sufficiently curious in themselves, and need little comment. We refer to the remarkable observation with which the circular begins, "that there is no absolute time rule, and that the fee is the same whatever may be the length of the course." The guarantee, therefore, for any sort of knowledge or efficiency, however slight, depends entirely upon the unknown and unauthorised standard of the "examination in massage and anatomy." It is notable enough that the "hospital" finds it necessary to warn its pupils that it cannot guarantee to find them work; and we think that it is important to call the special attention of the medical profession to the surprising statement with which the circular ends, that "the certificate of this school and hospital is universally recognised by the medical profession of this country and others as a guarantee that its possessor is a thoroughly competent operator in massage and electrical treatment." The postscript is also curious, and we infer that it is aimed at the rival pretensions of Mrs. W—— and other teachers of the same type. Dr. Tibbits is very angry with these competitors, and, in a note to an extraordinary pamphlet issued in the present year about his "school," he remarks bitterly, but perhaps with truth, that

"Ladies' maids and others, entirely without medical training or any medical supervision, established themselves as 'masseuses,' and advertised that they gave lessons and 'granted' certificates."

Dr. Tibbits refers in various forms to the "Royal patronage" under which he alleges his institution is carried on. We shall be curious to know what justification there is for this statement. The pamphlet which is before us appeals for subscriptions for this institution as an important charity—"Dr. Tibbits's latest venture in benevolent effort"—and we are duly informed that "remittances sent will be gratefully acknowledged by Herbert Tibbits, M.D., Hon. Treasurer." Our readers may be curious to see the form of the certificate, which we append:

West End School of Massage and Electricity.
Established in 1886.

In connection with the Massage and Galvanic Hospital for Diseases of the Nervous System, Paralysis, and Epilepsy.

We certify that ..... whose Signature is subjoined, has attended ..... Course of Practical Instruction in Massage and Electrical Treatment, at this School and Hospital, and having passed a satisfactorily written, verbal, and practical Examination, we consider ..... fully competent to apply these Methods of Treatment under Medical Authority.
Signed on behalf of the School, upon this.....day 18

.....Senior Physician to the Hospital.
.....Lady Superintendent.
.....Hon. Secretary.

Signature and Residence of the Holder of this Certificate.

.....

The contents of the pamphlet are constructed in such a way, by reference to transactions which appear to have taken place in 1886, as to give the impression that various other physicians of some standing are associated with Dr. Tibbits as the examiners and supporters of the school. We are not aware that any physician except Dr. Tibbits is now an examiner or physician to the "hospital," and, if so, it will be observed that the certificate rests on no other medical authority than his own. On the outside of the pamphlet, at the foot of "Appeal upon behalf of the London Massage and Galvanic Hospital," addressed to all who take an interest in relieving disease and suffering, it is alleged that the "hospital patrons" include "the Very Rev. the Dean of Lichfield and many of the clergy of *all* denominations (Church of England, Nonconformists, the Roman Catholic Church, the Hebrew Church, and others)." We should be glad to know who are those numerous clergy, and whether the Dean of Lichfield has authorised the use of his name.

We are unable to speak with accuracy of the training given at the various places to which we have referred, but we regret to say that we cannot ourselves place any confidence in any of the certificates which are in circulation. It may be that some of the persons concerned have had a serious training in massage, but the public has no guarantee that in any individual instance this is to be assumed.

LITERARY NOTES.

Dr. Temistocle Santopadre, as we learn from the *Riforma Medica*, will shortly publish a work entitled *Trattato di Patologia Speciale Medica e di Terapia*, embodying the fruits of his twenty years' experience and the results of much literary research. The work is to be in ten volumes of 3,000 pages each. The learned Themistocles has displayed a heroism worthy of his great namesake in producing such a literary megatherium, but where in these degenerate days is there to be found a student of sufficiently heroic mould to read it?

Mr. W. C. J. Miller, B.A., Registrar of the General Medical Council, has reprinted from *Nature Notes* a pleasant article on "A Bird-loved Suburb of London." The suburb is Richmond, and Mr. Miller not only shows himself a keen lover and observer of birds, but also tells us some facts which are little known even to Londoners best acquainted with the surroundings of the great metropolis. It will be news, for instance, to most people that there is a fine heronry in Richmond Park. He can tell them, also, where the first nightingale is most likely to be heard, and where the cuckoo first raises its monotonous note. He has the art to entwine with his ornithological lore many agreeable reminiscences of the great days of Richmond.

In the *Medical Magazine* for November there is an article entitled, Why the Army Medical Service is not Contented, which is clearly written by someone thoroughly acquainted with the present condition of the Department. The various grievances and official snubs and injustices of which our brethren of the army have to complain are set forth in a spirit of fairness and reasonableness, and with a moderation of tone that cannot fail to win the sympathy of the reader. One of the chief among the causes of the present discontent is, as we gather, the fact that the administration of the Medical Department is largely controlled by a civilian War Office clerk. To this official the most multifarious and most important duties are assigned; he is "the power behind the throne" in the Director-General's office, and it is not too much to say that he holds the entire Department in the hollow of his hand. The officers of the Department resent being governed by a civilian clerk, and it must be admitted that this grievance is something more than a sentimental one. They would feel it to be more in accord with the idea of military discipline and with the general fitness of things to have their career in the service shaped for them by one of themselves rather than by a subordinate official. Everyone who wishes to understand what it is that army doctors really complain of should read the article in the *Medical Magazine*.

The new number (October-December) of Dr. J. W. Ballantyne's *Teratologia* contains an interesting paper from the pen of the editor on the Teratological Records of Chaldea. The early inhabitants of Chaldea regarded teratological phenomena as presages of the future, and the Chaldean priests had an extensive acquaintance with the nature and prophetic meaning of monstrous births. Lenormant, in his work *La Divination et la Science des Présages chez les Chaldéens*, Paris, 1875, devotes a special chapter to the omens derived from monstrous births. Dr. Ballantyne gives an account of the texts (from the brick tablets which formed Asshurbanipal's library) upon which our knowledge of Chaldean teratoscopy is based. One of these tablets has on its obverse and reverse a list of sixty-two teratological cases in the human subject with the prophetical meanings attached to them by the Chaldean diviners. The list shows that the Chaldeans were acquainted with many kinds of congenital deformity, and Dr. Ballantyne is able to identify most of them with anomalies well known at the present time. He says, indeed, that in the tablet literature of ancient Babylonia there are indications of an acquaintance with structural defects and malformation of the human body which will compare favourably with even the writings of the sixteenth century of the Christian era.

All students of anatomy are familiar with the name of Gimbernat, but to most of them it is probable that it designates not so much a man as a ligament. Yet Gimbernat was a man of light and leading in his day. His life has just been written by his countryman, Dr. Siloniz, Professor of Anatomy in the University of Barcelona. Antonio de Gimbernat was born at Cambrils, Tarragona, in 1734, and, after studying medicine for a time in the University of Cervera, he migrated to Cadiz. Here he attracted the notice of his teacher, the anatomist Virgili, who, when the Spanish Government was organising the Medical College of Barcelona, proposed him as one of the professors. Gimbernat's youth, however, for a time prevented the ratification of this appointment. It was not till 1763 that he was able to take possession of the Chair of Anatomy. He soon made a great reputation for himself as a learned anatomist and a skilful operator. The Spanish Government commissioned him to visit the principal European countries in order to study the state of medical science and the methods of teaching. He visited the hospitals and schools of Paris, London, and other cities, and was

everywhere received with the greatest distinction. At a later period he was consulted by the Government relative to the establishment of the Medical College of San Carlos (now the Medical Faculty of the University of Madrid), of which he was appointed first director in 1783. He was recognised in his own country as the leading surgeon of his time; he was honoured with the confidence of his sovereign, and he died full of years and honours in 1816.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1895. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 16th, April 17th, July 10th, and October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely December 27th, 1894; March 28th, June 20th, and October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election. FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST AND WEST KENT DISTRICTS.—A conjoint meeting of these Districts will be held at the Kent and Canterbury Hospital on Thursday, November 22nd, at 3 P.M., Dr. Frederick Eastes, of Folkestone, in the chair. The chairman invites members and visitors to luncheon at the Fountain Hotel from 1.30 to 2.30. Members intending to avail themselves of the chairman's hospitality are requested to send acceptances by Tuesday, the 20th, or they will not be expected. Agenda:—Dr. E. W. White: Psychological Medicine in relation to the General Practitioner. Dr. Thomas Eastes: The Treatment of Diphtheria by Antitoxin. Mr. Biddle will relate a case of Diphtheria treated with Antitoxin, and it is hoped that all members who have notes of such cases will either bring them to the meeting, or forward them to one of the honorary secretaries. Mr. Brian Rigden: Some Points in relation to Life Assurance. Tea and coffee will be served in the Board Room of the hospital after the meeting. All members of the South-Eastern Branch are entitled to attend these meetings, and to introduce professional friends.—THOS. F. RAVEN, Broadstairs, and E. GROUND, Maidstone, Honorary Secretaries.

SOUTH-WESTERN BRANCH.—An intermediate meeting of this Branch will be held at the Devon and Exeter Hospital, Exeter, on Friday, November 23rd, at 3 P.M. Mr. Victor Horsley, F.R.S., will deliver an address on the Differential Diagnosis of Cerebral Tumours, with remarks on Treatment, illustrated by lantern slides. A discussion is invited. Tea will will be provided at 5 P.M. A meeting of the Branch Council will be held at 1 P.M. Invitations have been sent to the West Somerset, the Dorset and West Hants, and the Bath and Bristol Branches. The Honorary Secretary will be much obliged if members intending to come will kindly give him notice of the fact by November 18th, if possible.—WILLIAM GORDON, Honorary Secretary, Barnfield Lodge, Exeter.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting will be held on Thursday, November 29th, at 3.30 P.M., at the Queen's Hotel, Eastbourne. Dinner at 5.30; charge, 6s., exclusive of wine. Dr. Gabbett will preside and will read a short paper. The following communications are also promised:—Mr. H. D. Farnell: Remarks on Anæsthetics. Mr. A. H. Dodd: A Case of Transfusion, with exhibition of apparatus. Dr. A. J. Richardson: The Use of Napthols in Flatulent Dyspepsia. Mr. J. Dodson Hessey: A Case of Inversion of the Uterus. Members are invited to show cases of interest, specimens, etc.—J. W. BATTERHAM, Honorary District Secretary, Bank House, Grand Parade, St. Leonards.

DUNDEE AND DISTRICT BRANCH.—The ordinary meeting of this Branch will be held in University College, Dundee, on Thursday, November 29th, at 4 P.M. Business: (1) Midwives Registration Bill. (2) Proposed Outdoor Maternity Charity for Dundee.—R. C. BUIST, Secretary.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—An ordinary general meeting of this Branch will be held in Milne's Library, 229, Union Street, Aberdeen, on the evening of Wednesday, November 21st, at 8 P.M. Business:—(1) Minutes, Nominations, etc. (2) Ballot for the admission of Dr. Bell, Skene; Dr. Mowat, H.M.S. *Edinburgh*; Dr. Ogston, Rosemount Place, Aberdeen; Dr. Usher, Aberdeen. (3) Case of Trephining for Traumatic Epilepsy, by Professor Ogston. (4) Hospital notes on a Case of Spasmodic Wry Neck, with exhibition of patient, by Dr. Blaikie-Smith.—C. THISELTON URQUHART, J. SCOTT RIDDELL, Honorary Joint Secretaries.

GLOUCESTERSHIRE BRANCH.—The next ordinary meeting will be held at the General Infirmary, Gloucester, on Tuesday, November 20th, at 7 P.M., under the presidency of Mr. O. H. Fowler. Agenda:—(1) Mr. O. H. Fowler, Cirencester: Presidential Address on Circumcision, its Advantages and how best Performed. (2) Mr. E. Bower, Gloucester: Some Interesting Surgical Cases.—S. T. PRUEN, Honorary Secretary, Sherborne Lodge, Cheltenham.

STAFFORDSHIRE BRANCH.—The first general meeting of the present session will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, November 29th. The President (Dr. Charlesworth) will take the chair at 3.30 P.M.—GEORGE REID, Honorary Secretary, Eastgate House, Stafford.

MIDLAND BRANCH: LINCOLNSHIRE DISTRICT.—A meeting will be held at Grantham on Thursday, November 29th. Members desirous of reading papers are requested to communicate with the Honorary Secretary, Dr. CARLINE, Lincoln.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the session was held on October 31st, in the Medical Library of University College, Bristol; NELSON C. DOBSON, F.R.C.S., President, in the chair. There were also present thirty-five members.

Communications.—Dr. J. MICHELL CLARKE related a case of Gastric Cancer presenting unusual difficulty of diagnosis. Mr. PICKERING, Drs. SHINGLETON SMITH, FISHER, and MARKHAM SKERRITT, Messrs. WALKER and MORTON, and the PRESIDENT joined in the discussion which followed.—Dr. WALDO related the sequel to a case of Motor Aphasia.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE first meeting of the thirty-eighth session of this District was held at St. Bartholomew's Hospital, Rochester, on October 26th, Mr. PRIDEAUX SELBY, of Sittingbourne, in the chair, twelve members being present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Next Meeting.—It was decided that the next meeting be held at Maidstone in March, 1895, and that Mr. Clowley be invited to preside.

New Member.—Dr. Jones, of Loose, and Dr. Whitestone, of Hollingbourn, were elected members of the Branch.

Communications.—Mr. ST. G. C. REID read a paper on Tinnitus Aurium, which was fully discussed.—Mr. LIDFORD COOPER read a paper on Excision of the Tongue, in which he advocated ligature of the linguals in the neck as a preliminary step, not only on account of the bloodlessness of the after-operation, but also of the thoroughness with which the surrounding structures could be examined. In the discussion which followed, the members were not unanimously in favour of this procedure.—Mr. PRIDEAUX SELBY related a case of Abdominal Section for Peritoneal Pregnancy in a Woman, aged 34. The peritoneal fœtation was diagnosed at the end of the third month. In opening the abdomen the sac presented, which was turned out at once with the placenta. Very great difficulty was experienced in checking the profuse hæmorrhage from the placental site in Douglas's pouch. Vomiting set in, and the patient died from exhaustion seventy-eight hours after the operation. In the discussion which ensued Mr. HALLOWES related a case in which obstinate vomiting had occurred after the operation, which was controlled by hot coffee, administered at the request of the patient.—Dr. J. DUNDAS GRANT read a paper on Disease of the Antrum and Sinuses in Relation to Purulent Nasal Catarrh. He demonstrated the methods of aspirating these cavities, advocating immediate aspiration for the relief of pain, followed by irrigation, and showed several special instruments, some of which he had designed for carrying out this treatment.

Dinner.—Seven members dined afterwards at the Bull Hotel.

SPECIAL CORRESPONDENCE.

PARIS.

The New Pharmacy Law.—The Suppression of Local Fairs.—Antivaccination Feeling at Mazargues.—The French Congress of Internal Medicine.—The Commission on Unhealthy Dwellings.—General News.

M. Cornil has asked that the debate on the new Bill relative to the practice of pharmacy, which has been on the list for six months, may be deferred for another fortnight, because the Commission has heard evidence from different representatives of the Pharmaceutical School, who suggested certain modifications. The President of the Senate objected because he considers that after six months' interval the request is hardly reasonable. Nevertheless, the discussion is deferred.

Dr. Devillers in 1888 formed a league for the suppression of the local fairs which take place in different quarters of Paris. He states that a fair at Montmartre to celebrate the 14th of July, 1894, lasted six weeks. All the inhabitants of houses near who could do so left them. On the proposal of Dr. Rochard, the Superior Sanitary Council has passed a vote that these fairs be suppressed. At the end of the year 1886 a violent epidemic of small-pox broke out on the Boulevard Clichy after one of those gatherings of gypsies, tramps, and itinerant vendors, called *fêtes foraines*. Dr. Devillers declares that during this fair medical men in its vicinity could not auscultate their patients, the noise was so great. One of his patients was at the point of death whilst a band of music was playing. Delicate patients suffered from nervous complaints brought on by insomnia resulting from the merry-go-rounds, the shouting, the whistling, all the thousand and one noises which made night hideous during a prolonged period.

There is a small-pox epidemic at Mazargues, near Marseilles. The sanitary authorities desired to disinfect contaminated and suspected localities, to vaccinate and revaccinate the population, but all the inhabitants of the infected locality stoutly refused to permit these sanitary measures to be carried out.

The second annual meeting of the Congrès de Médecine Interne will be held at Bordeaux during the months of August and September, 1895. M. Bouchard is elected President and M. Pitres Vice-President. The three following questions will be discussed: (1) Infectious myelitis; (2) the pathological relation between the liver and the intestines; (3) analgesic antipyretics.

M. Fournière considers that there are not sufficient members on the Commission on Unhealthy Dwellings. Thirty men, he says, cannot reform house sanitation. He urges the Municipal Council to name as many Commissions as are required by local conditions. These Commissions are to be composed of nine members, among whom should be a medical man, an architect, a member of the *bureau de bienfaisance*, a member of the *conseils des prud'hommes*, and several *travailleurs syndiqués*.

The President of the Republic has granted a free pardon to Dr. Lafitte, whose hard case has been more than once alluded to.

Dr. Brouardel, Dean of the Paris Medical Faculty, has resigned his post of hospital physician; Dr. Labadie-Lagrave succeeds him at the Charité hospital.

At the Veterinary Congress the question of creating a fund for granting indemnities to owners of animals slaughtered on account of epizootic disease was discussed.

BERLIN.

Return of Professor Leyden.—An Epidemic of Dysentery in Silesia.—Overlying and the German Law.

Professor Leyden's first clinical lecture after his return from Livadia was looked forward to with unusual interest. It was thought that some account of the Czar's illness might be forthcoming, and the lecture room was so crowded that there was hardly standing room. Leyden, on entering, was received with tumultuous applause. He said a few words of thanks for the welcome thus prepared for him, spoke of the grave mission from which he had returned, the agitating time he had spent, and added: "You must forgive me if I do not enter further into the circumstances of the Czar's illness; you will all have learnt what is necessary for you to know." He then proceeded to the subject of his lecture, no doubt to the disappointment of many among the audience.

An epidemic of dysentery has occurred in the barracks in Glogau (Silesia). The town was much alarmed, but there were no fatal cases; nearly all the patients speedily recovered, and calm is now restored.

Mr. Braxton Hicks's statement in an English newspaper that a special law exists in Germany on the subject of mothers who allow young infants to sleep in their bed, is incorrect. The only law that applies to the case is paragraph 222 of the Code for the German Empire, that runs as follows: "Whoever causes the death of another person through carelessness is punishable by imprisonment up to three years."

MELBOURNE.

Presentation to Dr. J. E. Neild.—A Medico-legal Case.—Dr. Wolfe's Ophthalmological Clinic.

On behalf of the Victorian Branch of the British Medical Association, the Council of the Branch presented to Dr. J. E. Neild, on the anniversary of his seventieth birthday, an illuminated address expressive of their recognition of those exceptional qualities with which he is so richly endowed; of their appreciation of his lifelong work for the advancement of the profession of which he has been so long a chief ornament; and also of their acknowledgment of the fact that to him the Branch is largely indebted for its present prosperous condition. The address concluded by wishing Dr. Neild long life and happiness, a continued enjoyment of the love and affection of his wife and family, and a sincere hope that his friendship for the members of the Branch might not cease. Dr. Neild, who was visibly affected by this unexpected and spontaneous demonstration of goodwill to himself, expressed in a few words the great pleasure he felt that his efforts in assisting to establish the Branch in Victoria had been recognised. The presentation, he said, more than recompensed him for the work he had done in assisting to keep up the ethics and standard of the medical profession in this colony to something like the traditions so honoured in Great Britain. It cannot be regarded as unbecoming at such an epoch of a man's life as three score and ten, to refer to the work Dr. Neild has hitherto been engaged in, and which with his activity, energy, and keen and accurate judgment promises to be still long continued. Dr. Neild was born in Doncaster, in Yorkshire, on July 6th, 1824, and his earliest recollections are associated with books and music. There is possibly no more musical part in England than that between the Humber and the Tweed. When 11 years of age his family removed to Leeds, where he became a pupil of Mr. Richard Hiley, and here he was grounded in the elements of drawing by Mr. Richard Lucas. Although he desired to make Art the business of his life, he was induced to join his uncle, Mr. Edward Harrison, a surgeon in large practice in Sheffield, in which town he spent five years attending lectures at the local medical school and hospital practice at the General Infirmary. In 1847 Dr. Neild went to London, where he completed his studies at University College. After becoming a qualified member of the profession he returned to Yorkshire, and at Oulton he practised for two years, and then accepted the position of house-surgeon to the Rochdale General Dispensary. Here among his most cherished friends was John Bright. In 1853 he was appointed surgeon to the *Star of the East*, then sailing from Liverpool to Melbourne. After visiting the gold fields he returned to Melbourne, where he has remained ever since. He was first regularly attached to the press in 1855, and he became a regular contributor to newspapers and magazines both in the old world and in this new country, and afterwards became recognised as the leading dramatic and musical critic to the *Argus*, a position which he accepted on the invitation of the then editor, Mr. George Higinbotham, the late Chief Justice of Victoria. In 1861 Dr. Neild resumed again his regular practice, which he combined felicitously with his literary work, and in 1864 he obtained the degree of M.D. of the Melbourne University, a distinction which he supplemented some time afterwards by the degree of Bachelor of Surgery. In 1865 he was elected

by the Council of the University lecturer on forensic medicine and psychological medicine, a position he has continuously held up to the present time, so that he is now senior lecturer in our great seat of learning. In 1879 he assisted in founding the Victorian Branch of the British Medical Association, and of this—the largest of the colonial Branches—he has been undoubtedly the most enthusiastic worker and mainstay. Of this Branch Dr. Neild has been both Honorary Secretary and President. For many years he has been the sole editor of the *Australian Medical Journal*, which he piloted through very depressed and stormy periods. On three several occasions he has been the recipient of testimonials from the Medical Society of Victoria. On the last occasion the compliment came in the form of a large goblet of Victorian gold, valued at 120 guineas. On Dr. Neild's determination to sever his connection with the lay press he was the recipient of a cheque for £1,000, subscribed by the public as a recognition of his great services in the realm of music, drama, and pictorial art. Closely associated with the subject of his teaching in the University has been the work of making *post-mortem* examinations for medico-legal purposes. Of these he has conducted upwards of two thousand during the last twenty years, so that the record of cases which have in this way come under his notice is probably unique in medico-forensic interest. At this moment it is certain that no member of the medical profession in this colony enjoys more completely the confidence of the medical brotherhood. Dr. Neild founded the St. John Ambulance Association in Victoria, and also assisted in establishing the Health Society. In 1857 Dr. Neild married the daughter of Mr. D. R. Long, and has a family of nine children.

Acting under instructions from the Government, Dr. Neild has within the last few days completed the *post-mortem* examination of a number of bodies of individuals who died under circumstances indicating that they had been poisoned by arsenic. The case, from its peculiar nature, will become of permanent interest from its forensic value. The unusual length of time over which the poisonings extended—a period of over four years—renders it somewhat exceptional. The deaths of four individuals have, as far as the police-court proceedings are concerned, been brought home to a widow, a Mrs. Needle, who now stands committed for trial on the capital charge of murder. First the husband died, then the two children, and lastly the brother of the man, who, it is said, contemplated marriage with the widow. The motive in each case was different. No suspicion of poisoning was entertained by the medical attendants, although as far as can be ascertained the symptoms in each instance pointed to such a conclusion. In the case of the husband and children nothing could be gathered so far as the *post-mortem* appearances relative to the cause of death; but as the Government analyst, Mr. C. R. Blackett, has found toxic quantities of arsenic in each, there is strong presumptive proof of poisoning. The case of Louis Juncken, however, has a special interest, inasmuch as the medical man who attended him during life diagnosed pyorrhœa alveolaris; and although 3½ grains of arsenic have been found in the viscera, he still persists in attributing all the symptoms to that cause. The condition of the mouth is attributed to arsenical ptyalism, and the result of the final inquiry will no doubt depend upon whether the jury believe a statement which is only a mistaken diagnosis, or the very clear account which comprehends both palpable *post-mortem* indications and the tangible presence of the poison itself. To make the necessary examination of this latter case, Dr. Neild had to proceed to South Australia, where the body had been interred; and in the other cases the bodies were exhumed by Dr. Neild, after they had been buried for about four years. The poison administered was in the form of a preparation popularly known as "Rough on rats." The discovery of the poisoning in the first instance was made by Mrs. Needle attempting a similar method of extermination on the other brother Juncken, for whom she was acting as housekeeper, and who consulted Dr. Boyd for his symptoms. Dr. Boyd very quickly became suspicious of an irritative poison having been administered, and immediately communicated his suspicions to the police.

A large number of well-known medical men and prominent citizens assembled at the opening of Dr. J. R. Wolfe's new ophthalmological clinic a few days ago. His Excellency the Governor (the Earl of Hopetoun) presided, supported by the Speaker of the Legislative Assembly, the Solicitor-General, and other members of Parliament. Dr. Wolfe stated that having come from Glasgow to Melbourne on private business he was so much attracted by the geniality of our climate that he decided to make Melbourne his home and to continue the work he had carried out in Glasgow. He was supported in his undertaking by a committee and a medical and surgical staff. Dr. Neild, the President of the Committee and one of the consulting staff, thanked his Excellency for visiting the clinic. He explained that it was also proposed to supply gratuitous treatment to those whose needs render them unable to obtain surgical relief in the ordinary way without entering into rivalry with existing interests. Of Dr. Wolfe's competency for the task he thought it needless to speak. After a few remarks from the Rev. Gordon Mackie, who gave a short history of Dr. Wolfe's career, the ceremony concluded by the Governor congratulating Dr. Wolfe and wishing him every success.

CORRESPONDENCE.

DR. JAMESON, C.B.

SIR,—The suggestion of Dr. A. George Bateman is admirable, and will, I feel sure, meet with the heartiest support from the Council of the British Medical Association. As one who has had the pleasure and honour of serving under Dr. L. S. Jameson, and his great and generous chief, Mr. Cecil Rhodes, perhaps I may be allowed to second the proposal of the appreciative welcome to Dr. Jameson on his return to this country, after a long absence, battling with enormous difficulties, all at last triumphantly conquered; a welcome which, as Dr. Bateman conveys, should also be warmly offered to Mr. Rhodes in a gathering of medical men; for the Premier of Cape Colony and originator of the British South Africa Chartered Company has on every possible occasion shown his great regard for the medical profession, and gratitude for the services rendered him by individual members. In the hope that the welcome to Dr. Jameson by the British Medical Association will be such as to wipe from his memory the calumnies to which he has been subjected in the great Imperial work, which he has so ably given a sound and successful start, I am, etc.,

HERBERT SIEVEKING,
Late Medical Officer, Base Hospital, Fort Tuli.
Manchester Square, W., Nov. 12th.

"THE NEW PHARMACY."

SIR,—The letter advocating the use of tabloids in the BRITISH MEDICAL JOURNAL of November 3rd hardly warrants the writer in calling himself "An Old Fogey," for it shows him to be in advance of most of his professional brethren.

Allowing, however, that in many cases tabloids are more convenient and economical than ordinary mixtures it must, after all, be remembered that the alimentary canal begins at the mouth and not at the stomach. Surely the taste of a bitter contributes to its therapeutic value, and the mental victory achieved in swallowing a mixture containing asafœtida must assist a hysterical patient to exercise self-control. Besides, there are valuable mixtures in daily use which could not be administered in tabloid form, for example, the Edinburgh Mist. Begbie.

Accuracy of dosage is more important than either convenience or economy, and in this respect tabloids are certainly a step in the right direction. Hurried prescribing and dispensing, bottles inaccurate in size and graduation, and the doubtful quantities called tea, dessert, and table spoonfuls afford numerous possibilities of error. A more serious uncertainty, and one which cannot be altogether avoided by the use of tabloids, arises from the fact that the *Pharmacopœia* does not require the standardisation of the alkaloidal strength of even the most powerful drugs, opium and nux vomica alone excepted. Without standardisation the administration of such drugs as aconite, hemlock, colchicum, and belladonna can never be scientifically exact. Belladonna root, for instance, may contain as little as 0.36 per cent. of atropine, or as much as 1.1 per cent. At least one British and

one American firm have coped with this difficulty by making preparations of definite alkaloidal strength, but the use of such is far from general. It should be made so by official action.—I am, etc.,

J. Cuthbertson Walker.

Mevagissey, St. Austell, Nov. 6th.

Sir,—I was much interested in reading the letter from the "Old Fogey." Many practitioners use the tabloids in dispensing and find it saves them the trouble of weighing their drugs. Why should we not have tabloids containing, say, four or eight doses instead of one? These would be extremely useful in dispensing, and would, I am sure, be soon very popular among dispensing doctors.—I am, etc.,

Leeds, Nov. 9th. H. de C. Woodcock, M.R.C.S.

ST. JOHN AMBULANCE WORK.

Sir,—With reference to a letter from Mr. F. B. J. Baldwin, in the British Medical Journal of November 10th, on the subject of St. John Ambulance work in connection with the technical classes of the County Council, may I be allowed to say that in this county the County Council pay their ambulance lecturers five guineas for the course of five lectures given under the rules of the St. John Ambulance Association?—I am, etc.,

Aylesbury, Nov. 10th. T. G. Parrott, M.R.C.S.

Sir,—I have read with pleasure a letter from Mr. F. B. Judge Baldwin in the British Medical Journal of November 10th on the above subject.

I may say I fully concur in all he says, and, considering that the County Council pay their lecturers on gardening, dressmaking, etc., I cannot see why medical men can be expected to give their services, embracing both time and trouble, for nothing.

In this county (Leicester) ambulance lectures are, I believe, the lectures most in request of all approved of by the Technical Education Committee of the County Council. Consequently there are a great number of medical men, in this county alone, lecturing, some of whom receive fees and some who do not. This should not be, since the public will expect one man to give his services gratis if another does. I further know of a case where the local medical man declined to lecture unless he received a fee of five guineas for the course. On his refusal to lecture without the fee, the local secretary said his brother, a medical man from the neighbouring large town, would give his services gratis. This gentleman had no professional connection with the village whatsoever.

When one sees such cases as this occurring, it makes one feel the futility of asking men to insist on receiving their fee for their services, when they know that if they refuse to give their services gratis, even to a class under a rich body like the County Council, in many cases some medical man will be found only too happy to do so.—I am, etc.,

T. Gordon Kelly, B.A., M.D.

Desford, Leicester, Sept. 18th.

MALTA FEVER: A SUGGESTION.

Sir,—In the recent discussion on Malta fever, a summary of which appeared in the British Medical Journal, both Surgeon-Captain Hughes, A.M.S., and Surgeon Burke, R.N., expressed the opinion that digestive troubles play a not unimportant part in the etiology of the disease. If this be true, and I fully believe that it is, I would like to suggest a trial of pepsine in those cases of Malta fever which resist all other treatment. I have lately tried this remedy in a few cases of severe and long-continued intermittent fever in Burmah, which resisted—in fact, which were intensified by—all other forms of treatment, including careful dieting, quinine, arsenic, iodine, etc., with most gratifying results. Pepsine was tried in these cases because it was noted that everything which in the slightest degree interfered with digestion intensified the pyrexia. As soon as the pepsine was commenced all other drugs were stopped. For the first week or ten days milk alone was allowed. To each portion of milk pepsine gr. v was added, and its temperature was then raised to 100° F., and kept at this point for a quarter of an hour before it was given to the patient. The result was as pleasing as it was unexpected. In the severest case so treated there was an immediate improvement, and the temperature became normal on the fourth evening. The cases treated in this way were too few to admit of any definite conclusion being drawn from them, but the results were so satisfactory that this treatment appears to merit a further trial. As the cases improved the diet was cautiously increased, and pepsine gr. v was given after each meal until the patients had so far recovered that all danger of a relapse appeared to have passed.—I am, etc.,

G. Harrison Young, F.R.C.S.I.,
Surgeon-Major A.M.S.

WOOLSORTERS' DISEASE.

Sir,—The suggestion that anthrax may be conveyed through fabrics made out of infected wool is the more serious because well-known facts make it likely. In particular the symptomatic form of this disease is associated with a bacillus of which the spores, when dried, have a higher resistance to disinfection either by heat or by chemical means than any other known pathogenic organism; and it is extremely unlikely that either the treatment with dilute sulphuric acid or any other process to which the wool is subjected in being made into fabric or garments would destroy such spores, did they exist in the raw wool. The exceptional resistance of symptomatic anthrax, distinguished in German as Rauschbrand, is apt to be overlooked through its community of English name with the less resistant ordinary form or Milzbrand. This is the more unfortunate because the symptoms of Rauschbrand are so ill-defined that it would be most unlikely to be diagnosed in any case where the occupation of the patient did not suggest it; and cases may therefore have easily occurred in the way suggested without having attracted notice.—Yours, etc.,

November 12th. Rauschbrand.

SUPERANNUATION ALLOWANCES TO POOR-LAW MEDICAL OFFICERS.

Sir,—As Secretary of the Poor-law Medical Officers' Association, allow me to remind its members through your columns that the chance of getting compulsory superannuation is not yet dead while we have such a Liberal and progressive Government, and such a genuine medical ally and reformer as Sir Walter Foster as Secretary to the Local Government Board. It therefore behoves us to be up and doing, and by meetings, petitions, and deputations to strengthen the hands of the Government in granting us this much-needed and wished-for boon. I shall be glad to receive petitions, suggestions, or any communications relating to the superannuation question prior to holding a general meeting on the subject, the date of which will be dully announced.—I am, etc.,

J. Wickham Barnes,
Honorary Secretary Poor-law Medical Officers Association.
3, Bolt Court, Fleet Street, Nov. 14th.

MIDWIVES' REGISTRATION AND THE LANCASHIRE AND CHESHIRE BRANCH.

Sir,—Be good enough to allow me to point out to your correspondent, Mr. W. Berry, of Wigan, that the vote upon my amendment was taken some time before Dr. Woodcock addressed the meeting, and could not, therefore, have been influenced by his eloquence.

Dr. Woodcock's scathing denunciation of the conduct of the protest party, strengthened by other equally powerful if somewhat less eloquent speeches, had the effect of completely routing that party, who dare not meet a division although challenged to do so.

At Stockport, on June 27th, the protest party were as three to two of their opponents; during the interval between this and October 10th, they lost at least 90 of their supporters, whilst their opponents had gained 67—one striking illustration of the result of the work of the special Committee of this Branch.

Mr. Berry has joined this protest party. I will ask him to refer to questions 61, 146, 148, 145, and 928 in the inquiry before the Committee of the House of Commons in May, 1892, also pages 1207 and 1223 in the British Medical Journal of June 2nd, 1894 (treating the terms scheme and bill as identical, which they assuredly are from the "protest

party's" point of view) and I feel sure he will regret the step he has taken.

Mr. Berry's party will be very angry with him for further exposing their designs and showing the failure of their plans for he now completely crushes the "public demand" theory of the registration party. Manchester and Liverpool have provided his town with three skilled midwives, but the public, he tells us, prefer "Sairey Gamp." His statement is worth repeating, it is: "We have three certificated midwives in our neighbourhood, two Manchester and one Liverpool trained, and I do not find any greater demand for them than there is for those that are self-educated and are of the Mrs. Gamp type."

Truly, Sir, the protest party have no case.—I am, etc.,

Old Trafford, Nov. 12th. JAMES BRASSEY BRIERLEY.

THE MILK TRAFFIC.

SIR,—Having seen your note last week on the paper entitled "The Sanitary Protection of the Milk Traffic," read by Mr. George H. De'Ath at the recent Sanitary Conference at Aylesbury, and having a full report of the proceedings before me, may I be permitted to make a few remarks thereon?

First of all I wish to say that the title of this paper is misleading, since it deals almost altogether with the adulteration of milk, and is quite beside the question of its sanitary protection. In fact, one of the succeeding speakers (Dr. J. C. Thresh) says: "I find that two or three gentlemen who have spoken have drifted on to the question, not so much of the sanitary protection of the milk traffic, as of the detection of adulteration."

All the adulteration in the world of whole milk with separated milk would not cause one single case of scarlatina or typhoid. It is the filthy conditions under which milk is often produced that give rise to danger. Men at muck carts all day coming in to milk the cows without any conveniences for washing their hands; cows wading through a farmyard up to their knees in mire and manure, milked without the slightest attempt at cleaning their teats and udders, and milkers' foul fingers dipped in the milk pail to moisten the cows' teats. All these things are matters of every-day occurrence, and the wonder is that more mischief is not caused, and more disease is not spread broadcast through the land.

I maintain, with all due deference to Mr. De'Ath's opinion, that the problem does lie in these particulars, and not in the question of annatto coloration or separated milk addition, which, however much they are to be deprecated from the point of honesty, have nothing to do with the causation of disease. I also beg to take exception to his closing expression, which is not one to clinch an argument, however it may serve to raise a laugh.

I was also surprised, in fact startled, to find that a so-called Progressive body like the London County Council had taken to sweating their milk contractors. One of their members who was present at the Conference stated that they were constantly complaining of the quality of the milk supplied to Hanwell Asylum, but the reason of this was soon afterwards made clear when the manager of the Aylesbury Dairy Company made the following statement: "I have frequently tendered for milk, but I could not get an order because I found that the price they give for milk is generally below that which we pay our farmers."—I am, etc.,

November 13th. SPERO MELIORA.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A SURGEON-CAPTAIN, who is not likely to go abroad for another two years, wishes to exchange with an officer on the Indian Establishment who has completed at least three years of his tour. Madras or Bengal preferred. State terms, to No. 3,403, BRITISH MEDICAL JOURNAL Office, 429, Strand, W.C.

COMBATANT OR NON-COMBATANT.

THE fighting on the Afghan Frontier and the severe wounding of Surgeon-Major Haig, Indian Medical Service, further exemplify the injustice and incorrectness of dubbing army surgeons as "non-combatants," and, in consequence, depriving them of many rights they should be able to claim with the so-called combatants with whom they are associated in war risks. Surgeon-Major Percy de Haga Haig entered the service in September, 1875, and has already to his credit the Afghan War service of 1878-9-80; Expedition to the Tunk Frontier and action of Jhandola, for which he was "mentioned in despatches." Taking this case with the V.C.'s granted to medical officers in the Burmah War (the only officers who by conspicuous bravery in that campaign gained this distinction), decided point is given to the claim put in by the Department for no longer being styled "Non-combatants."

THE PRESENT POSITION OF THE ARMY MEDICAL STAFF.

THE provisions of the amended Article 347 Promotion Warrant if, correctly interpreted, seem to indicate that the object in view is to grant surgeon-major-generals on promotion such extensions as shall enable them to complete three years in that rank. That is, take a surgeon-colonel promoted at 58 years of age: he would, if selected for advancement, with one year's extension, be able to put in three years in the higher rank. This would seem to point to the fact that any surgeon-colonel who attains 59 years of age stands a very faint chance of advancement, but to supersede such an officer for no other reason than that he has attained this age through circumstances over which he has had no control, would be manifestly unjust, so that the question of the step in rank and pension comes in. This, it will be remembered, we advocated some time ago, but whether it will be granted is a debatable matter. It may almost be assumed as settled that Surgeon-Major-General C. H. Giraud, Principal Medical Officer, Netley, will be the first administrative officer to benefit by the amended article. The next appointment on which there is speculation is the principal medical officership in India, now held by Surgeon-Major-General A. F. Bradshaw.

It is generally rumoured that this officer will have to vacate in March next on completion of three years in his appointment. Such a decision is nothing but just, and will be hailed with satisfaction, although it seems to have been understood, rightly or wrongly, that Surgeon-Major-General Bradshaw was to have had five years at Simla. We gave expression to popular feeling as being adverse to such an arrangement. An Indian contemporary suggests that Surgeon-Major-General Bradshaw's successor should be Surgeon-Major-General Jameson, now "professional assistant" to the director-general at headquarters, who by age is in a position to retain the principal medical officership in India for three years after the vacancy occurs. Surgeon-Major-General T. Walsh, Principal Medical Officer in Madras, is on the spot to relieve Surgeon-Major-General Bradshaw, but the argument advanced against his selection is that it is only a year since he assumed his appointment in Madras, and that the interests of the service would best be advanced by his standing fast. Surgeon-Major-General Walsh, being an officer of long and good service, has certainly very strong claims to the Simla billet, seeing that the professional assistant's berth at headquarters was presumably for a fixed period of five years. However, against this is the paramount interest of the public service, and if this is to be obtained by the removal of either officer, no insurmountable obstacle presents itself. Then comes the disposal of Surgeon-Major-General J. Warren, Principal Medical Officer, Bombay, who will attain 60 years of age on May 26th, 1895. He is scarcely eligible for the principal medical officership at Simla, as even with an extension of two years he could not hold the appointment three years.

It will thus be observed, on a review of the position, that it is difficult to forecast with any approach to certainty probable retirements and appointments. During 1895 five officers in surgeon-major-general's grade are due to retire at 60 years of age, namely, Surgeon-Major-Generals Davis, Warren, Archer, Lewer, and Inkson. It is not within the bounds of probability that all these will get extensions. The

revised Warrant permits of any selected officer being retained beyond 60, either for two years or for any part of that time. In recent years the officers who have benefited by extensions under the old clause are Surgeon-Major-Generals Thomson, Reade, and Bradshaw; the first two have been on the retired list some time. It is from these extensions that the senior officers of surgeon-colonels rank are now so seriously suffering prospects of promotions. A Service paper draws attention to the senior surgeon-colonel being over thirty-six years' service. Until strict selection is exercised there can be no appreciable relief of the present block in promotions.

THE NAVY.

FLEET-SURGEON FREDERICK MCCLEMENT, M.D., H.M.S. *Clyde*, died at Aberdeen on October 30th, aged 49 years. He was appointed Surgeon May 10th, 1857; Staff-Surgeon December 20th, 1878; and Fleet-Surgeon October 25th, 1887. He was Staff-Surgeon of the *Eclipse* during the Egyptian war in 1882, and had the Egyptian medal and the Khedive's bronze star.

The following appointments have been made at the Admiralty: PHILIP N. RANDALL, M.B., Surgeon to the *Beagle*, November 7th; HENRY B. BEATTY, Surgeon to the *Pembroke*, November 7th: THEODORE J. PRESTON, Fleet-Surgeon, for service at the Medical Department, October 19th.

Inspector-General C. H. SLAUGHTER has been placed on the retired list, November 7th. His commissions are dated as follow: Surgeon, October 17th, 1856; Staff-Surgeon, December 7th, 1867; Fleet-Surgeon, August 21st, 1877; Deputy Inspector-General, November 11th, 1885; and Inspector-General, January 2nd, 1894.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN J. FAYRER, M.D., has been selected for duty with the Royal Horse Guards as an attached medical officer, *vice* Surgeon-Captain Forrester, promoted into the 1st Life Guards.

Inspector-General BENJAMIN WILLIAM MARLOW, M.D., C.B., died at Alverstoke, Hants, on November 7th, aged 74. He was the eldest son of the late General Marlow, of the Royal Engineers, and entered the service as Assistant-Surgeon, October 25th, 1842, becoming Surgeon, February 24th, 1854; Surgeon-Major, October 25th, 1862; Deputy Inspector-General, March 9th, 1867; and Honorary Inspector-General on retirement, October 12th, 1870. He served with the 3rd Division throughout the Eastern campaigns of 1854-55, including the battles of Alma and Inkerman, and the siege and fall of Sebastopol. He had received the Crimean medal with three clasps and the Turkish medal, and was appointed a Knight of the Legion of Honour.

Surgeon-Major C. H. SWAYNE is promoted to be Surgeon-Lieutenant-Colonel, October 18th. He was appointed Surgeon, March 1st, 1873; and Surgeon-Major, October 18th, 1886. He served with the Nile expedition in 1884-85 in charge of a field hospital at Dongola (medal with clasp, and Khedive's star), and with the Burmese expedition in 1886-89 (medal with two clasps).

Surgeon-Lieutenant W. P. RYALL has resigned his commission, which was dated July 27th, 1892.

INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON-LIEUTENANT-COLONEL J. B. GAFFNEY, Bengal Establishment, has retired from the service from October 22nd. He was appointed Assistant-Surgeon, October 1st, 1886; attained the rank of Lieutenant-Colonel, October 1st, 1866; and was made Brigade-Surgeon-Lieutenant-Colonel, September 2nd, 1891.

Surgeon-Lieutenant-Colonel A. MCM. PATERSON, Bengal Establishment, 1st Battalion 2nd (Prince of Wales's Own) Goorkha Regiment (Sirmoor Rifles, also retires from the service November 1st. His first commission dates from October 1st, 1866; and that of Surgeon-Lieutenant-Colonel from October 1st, 1886. He was in the Afchan war in 1879-80, was mentioned in despatches, and received the medal granted for the campaign.

The *Times of India* gives some particulars, received by telegram from Simla, of the Indian Army Reorganisation Scheme. It is stated, among other things, that the Principal Medical Officer with Her Majesty's Forces in India, and principal medical officers of commands and districts, if of the Army Medical Staff, will be appointed by H.R.H. the Commander-in-Chief, and officers of the Indian Medical Service by the Government of India.

MILITIA MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL G. MITCHINSON, 3rd Battalion the Lincolnshire Regiment (North Lincoln Militia), has retired from the service, with permission to retain his rank and uniform, November 14th.

THE VOLUNTEERS.

SURGEON-CAPTAIN R. B. SMITH, 1st Volunteer Battalion the Leicestershire Regiment (late the 1st Leicestershire), is promoted to be Surgeon-Major, November 14th.

Surgeon-Lieutenant R. N. JONES, 3rd Glamorgan Rifles, has resigned his commission, November 14th.

Surgeon-Lieutenant J. O. SANKEY, 2nd Volunteer Battalion the Oxford Light Infantry (late the 2nd Oxfordshire), is promoted to be Surgeon-Captain, November 14th.

Surgeon-Captain C. E. ABBOTT, 2nd Volunteer Battalion the Essex Regiment (late the 2nd Essex), is promoted to be Surgeon-Major, November 14th.

Mr. EDWARD PERCIVAL DICKIN, M.D., is appointed Surgeon-Lieutenant to the 1st Volunteer Battalion the Northamptonshire Regiment, November 14th.

VOLUNTEER MEDICAL STAFF CORPS.

SURGEON-LIEUTENANT J. G. GRAHAM, M.B., the Glasgow Companies, is promoted to be Surgeon-Captain, November 14th.

VOLUNTEER MEDICAL ASSOCIATION.

AT the last quarterly meeting of the Council of the Volunteer Medical Association the report of the challenge shield competition was presented, and it was stated that more teams had competed than on any previous occasion, and the marks awarded by the examiners, among whom were officers of the Army and Militia Medical Staff, showed a high state of proficiency all round. The winning team was that of the Civil Service, but they were closely followed by the 1st Bucks, 2nd Liverpool, and 3rd Hampshire V.B. The next competition will take place in July, 1895, when it is hoped that a still larger number of corps will enter teams.

The Treasurer reported that thirty-six new members had joined the Association during the year, and that the finances were in a satisfactory condition. Any volunteer medical officers desiring to join the Association can obtain full particulars on application to Dr. Dundas Grant or Dr. A. Eddowes, the Hon. Secretaries, at 20, Hanover Square.

MEDICO-LEGAL AND MEDICO-ETHICAL.

PRINCIPAL AND ASSISTANT.

"OMEGA" states that his assistant has been in attendance since he entered his service at a sessions court to give evidence, for which he was subpœnaed prior to entering our correspondent's employ. No mention of it being made on terms of employment being agreed, "Omega" inquires to whom the fees belong.

*** We think the fees should be handed over to "Omega," the employer, subject to a reasonable deduction for out-of-pocket expenses. This, we believe, is the usual and proper course. We are not, however, aware of any express authority on the subject, and it might, perhaps, be well for employers to make an express stipulation on such a point when settling the terms of employment.

LUNACY CERTIFICATES.

L.R.C.P.—(1) Lunacy forms may be obtained of Knight and Co., Fleet Street, London; or of Shaw and Son, Fetter Lane, Fleet Street, London. (2) The information given about the case is so defective on many points, that an absolute answer cannot be given to the questions asked about it; but, so far as the information extends, we do not see any reason why "L.R.C.P." should not certify in such cases.

PRACTITIONERS AND BONESETTERS.

PERPLEXED.—Our correspondent's conduct was under the circumstances quite correct; there can be no possible professional co-operation between a medical practitioner and a bonesetter; and, had he acted otherwise, he might have incurred a dangerous liability, as the latter, in the eyes of the law, is incapable of incurring any civil responsibility, the aggrieved patient being considered the author of his own wrong for employing a notoriously unqualified person.

It is further clear, however, in the case of a qualified practitioner; he is undoubtedly liable in damages, and, in the case quoted by our correspondent, if he had attended the patient without supervising the fracture, in event of there having been any malapraxis in the treatment of this by the bonesetter, in all probability the practitioner would have been held liable in a civil action.

UNQUALIFIED ASSISTANTS.

ROSSENDALIAN sends the following: A. B. has an unqualified assistant (fourth year's student) living at a branch surgery, which is in telephonic communication with A. B.'s residence. In the village there resides a qualified gentleman, besides which, it is the "happy hunting ground" of five doctors who have surgeries, who call daily on their rounds. Can A. B. do this without bringing himself under the ban of the General Medical Council? The branch surgery is a mile distant, and in another borough. Would the resident doctor be justified in reporting the facts to the General Medical Council?

*** The fact that the law, as defined by the late Lord Chief Justice Coleridge, in Howarth *v.* Brearley, is that an unqualified man is *de facto* nothing more than "the ministering hand of the directing brain of the qualified man:" the further fact that the practice of an apprentice or unqualified assistant to an apothecary must, as laid down in the case of the Apothecaries' Company *v.* Greenwood, be limited to his master's house; and, lastly, the General Medical Council's emphatic condemnation of the engagement by registered practitioners of unqualified assistants, imperil the position of our correspondent's friend. It is scarcely necessary to add that, if so disposed, the resident practitioner would be justified in reporting the facts to the General Medical Council.

AN INCONSIDERATE PATIENT.

ST. KITTS, W.I.—In responding to "C.S." renewed and, to our mind, ill-advised protest, we deem it well to note that, be the opinion of others what it may on the question at issue, we cannot allow it to influence our own, based as it was on an unbiassed and conscientious consideration of the ethical points involved, and recorded in the BRITISH MEDICAL JOURNAL of July 21st, page 162, and September 22nd, page 678. Nor can we, moreover, after a dispassionate review of the attendant incidents of the case, see any just reason to modify the deliberate opinion therein expressed. With regard to the other matters referred to in "C.S." protesting—but not for publication

—letter, we abstain from offering further comment than that his own admissory reply to the simple but essential question we deemed it judicious to ask testifies to its aptness.

PROFESSIONAL SECRECY.

TARAWERA.—Our correspondent having failed to comply with the essential editorial rule to authenticate his communication by his name, we cannot enter into a discussion of the exceptional question submitted. In view of the apparent urgency of the point involved, we may so far assent to his request as to enjoin him to regard the professional secret entrusted to him by his patient as a sacred trust, be the ultimate consequences what they may.

SOMETIMES A. SOMETIMES B.—If, as we for the moment assume, the series of complex medico-ethical questions which extend over nearly four quarto pages are all based on *de facto* incidents that have occurred in the locality in question and are not merely hypothetical ones, we will endeavour to reply thereto, notwithstanding the ever-increasing pressure on our space and time. We would at the same time note that our correspondent, by a careful perusal of the rules laid down in the *Code* to which we have so often had occasion to refer, may readily acquire the desired information.

A. B. C.—To quote the words of our correspondent, not only would the adoption of his suggested course of proceeding constitute "a straining of professional etiquette," but repudiation of a just and rightful feeling towards a brother practitioner.

ETHICS.—Provided that the use of the professional card in question with the printed *additum* thereon be strictly limited to the specific purpose stated, we see no valid objection thereto, but otherwise it would be ethically inadmissible.

S. U. M.—Personally interesting as the subject matter of our correspondent's letter—exceptionally long and withal difficult to decipher—may be, we fail, after a thrice-repeated perusal thereof, to discover any ethical point on which we can offer a practically useful comment, especially in view of the fact that he declined to follow the sound advice of the eminent consultant whose counsel he sought to courteously but firmly resist the pretentious claim of the "irate doctor" in question to his imaginative vested right in the typical case of the lady patient referred to. Hence our enforced silence on his "loss of a wealthy and fanciful patient!"

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

PATHOLOGY.—Dr. J. Lorrain-Smith has been appointed demonstrator in pathology in place of Mr. L. Cobbett, who has been elected to the John Lucas Walker studentship.

DEGREES.—At the congregation on November 8th, the following were admitted to the degrees of M.B. and B.C.:

J. A. Cameron, B.A., St. John's College; C. Todd, B.A., Clare College.

GENERAL MEDICAL COUNCIL.—On Friday, November 9th, Dr. Donald MacAlister was unanimously elected the representative of the University on the General Medical Council for a further period of five years from November 13th, 1894.

UNIVERSITY OF GLASGOW.

GRADUATION CEREMONY.—At the University on November 8th degrees were conferred in Arts, Science, Divinity, Law, and Medicine. Of the medical graduates, seven received the higher degree of M.D.; one of these, Dr. W. P. Jack, the son of the Professor of Mathematics in the University, received the degree with honours, for a thesis on "Observations on the Analysis of Voluntary Muscular Movements by certain New Instruments." The degrees of Bachelor of Medicine and Master in Surgery were conferred on twenty-two, of whom two were ladies, students of Queen Margaret College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen passed the First Professional Examination for the Diploma of Fellow in Anatomy and Physiology, at a meeting of the Board of Examiners, on Monday, November 12th:

R. K. Howat, M.R.C.S.Eng., Glasgow University; W. J. Woods, Queen's College, Belfast; H. S. Pendlebury and I. L. Tuckett, Cambridge University; J. E. Williams, M.R.C.S.Eng., St. Bartholomew's Hospital; and H. D. Levick, M.R.C.S.Eng., Anderson's College, Glasgow, and St. Thomas's Hospital.

Ten gentlemen were referred for six months.

Tuesday, November 13th:

H. Tanner, M.R.C.S.Eng., and W. C. Wood, M.R.C.S.Eng., of St. Mary's Hospital; W. B. Woodhouse and C. Roberts, of Middlesex Hospital; F. E. Ingall, M.R.C.Eng., of London Hospital; J. Gordon, M.R.C.S.Eng., of Melbourne University and King's College Hospital; G. Rowell, M.R.C.S.Eng., of Durham University and St. Bartholomew's Hospital; E. Ferrand, M.R.C.S.Eng., Surgeon-Major Indian Medical Service, of St. Bartholomew's Hospital; M. Farrant, M.R.C.S.Eng., of Westminster Hospital; and A. W. Ormond, of Guy's Hospital.

Six gentlemen were referred for six months.

Wednesday, November 14th:

G. T. Watson, of Cambridge University and St. George's Hospital; D. Brown, M.R.C.S.Eng., and C. H. Leaf, M.R.C.S.Eng., of London Hospital; J. Howell, of Guy's Hospital; and W. D. Wiggins, of St. Mary's Hospital.

Eleven gentlemen were referred for six months.

The following are the arrangements for the Final Examination for the Fellowship, for which thirty-five gentlemen have entered their names:

Monday, November	19th	...	Written Examination, 1.30 to 5.30 P.M.*
Tuesday	,, 20th	...	Clinical Examination, 2.30 to about 5.30 P.M.*
Wednesday	,, 21st	...	Operations, 1.30 to about 5.30 P.M.*
Thursday	,, 22nd	...	Surgical Anatomy, 2 to 3.45 P.M.*
Friday	,, 23rd	...	Pathology, 5 to about 9.30 P.M., at Royal College of Surgeons.

* At Examination Hall.

Candidates will be required to attend on all the above-mentioned dates.

MR. MORTON SMALE has been re-elected a member of the Board of Examiners in Dental Surgery for the period of five years. Three vacancies in the Court of Examiners occasioned by the expiration of the period of office of Mr. John Langton, Mr. Pickering Pick, and Mr. Edmund Owen, on December 12th, will be filled up at the next meeting of Council.

OBITUARY.

WALTER DICKSON, M.D., R.N.

WE greatly regret to announce the death of Dr. Walter Dickson, which occurred at his residence, Upper Norwood, on November 9th, after an illness of about a fortnight's duration. He had suffered from glycosuria for some time, and the immediate cause of death was a large carbuncle. His father was a medical practitioner in Edinburgh, where young Walter Dickson was educated at the Edinburgh High School and University, and graduated M.D. (being third in honours in his year) 1841. He at once entered the Royal Navy, and was appointed to the *Queen*, flagship, Portsmouth, for service at Haslar. In 1842 he was sent to the flagship at the Cape of Good Hope and Coast of Africa; and in 1844-45 he was selected to be medical officer in charge of, and meteorologist to, the Antarctic Expedition, intended to complete the circle of magnetic observations, two-thirds of which had been done a few years before by Sir James Ross in the *Erebus* and *Terror*. His ship attained 68 degrees south latitude, and was in icy seas during a voyage of 7,300 miles. Dr. Dickson published a graphic account of the voyage in 1850, and contributed tables of observations to the *Transactions* of the Royal Society, 1846. He was for these services promoted to the rank of Staff-Surgeon in 1848. He next served on the flagship on the Lisbon station and in the Mediterranean, and from 1850 to 1853 was on the West Coast of Africa, in the *Firefly*. There was only one death during the commission among eighty Europeans, although they were very actively employed for three years in the Congo and other rivers in suppression of the slave trade, and there was much malarial fever. During the Crimean War he was employed (1854-6) in the Baltic, and during the two years served in the *Archer*, which blockaded the enemy's ports, and had occasional encounters. On the declaration of peace he was transferred to the West Indies and Central America; and the crews under his charge, although stricken with malarial fever, suffered little or no loss by deaths. He was on board the *Chesapeake*, the flagship on the Indian station, the year of the Mutiny; and was afterwards stationed at Ceylon, and for six months in the Red Sea, the sickness and mortality in the crews being singularly low in each case. In the Chinese War (1859-61) he was on board the flagship *Chesapeake*, under Admiral Sir James Hope, and was principal medical officer in the sanguinary repulse from the Taku forts, when one-third of the attacking force was killed or wounded, June 25th, 1859. He received honourable mention in despatches from his Commander-in-Chief, and special thanks for his care of the wounded (300 in number). In addition to the war medals for the Baltic and China, Dr. Dickson was awarded the Blane Gold Medal for the medical history of H.M.S. *Chesapeake* (1857-8), and subsequently an honorary medal from the French Maritime Sanitary Congress for published works on Naval Hygiene. He also received the thanks of the Board of Trade for much work in connection with legislation in 1866-8 for the improvement of the Mercantile Marine, and also special thanks from the Board of Customs on several occasions for services to that department, to which he was appointed as Medical Inspector in 1862, on retirement from the Navy.

Whilst in the service he had been the means of introducing many most useful hygienic measures. He remained in the Customs for nearly thirty years, finally retiring in 1892, when he had the gratification of seeing his post filled by his son, Dr. T. H. Dickson. He was presented shortly after retire-

ment with several pieces of silver plate, subscribed for by 540 officers of the outdoor department of the Customs.

Early in his civil career he joined the Metropolitan Counties Branch of the British Medical Association, was for many years Honorary Treasurer to the Branch, and was President in 1885. He served on many subcommittees of the Branch, and for years took great interest in its proceedings. He was President of the Epidemiological Society in 1885-86, and a Vice-President of the Section of Preventive Medicine at the International Congress of Hygiene, London, 1891. He was also a surgeon-lieutenant-colonel in the rifle volunteer force. He gave evidence to several Admiralty Committees on Enthetic Diseases, Scurvy, Quarantine, etc., and was a voluminous writer on subjects such as "Syphilis in the Royal Navy" (1864), "Scurvy in the Mercantile Navy" (1866), "Sanitation Afloat" (1867), "The Geographical Distribution of Disease" (British Medical Journal, 1885), "Recent Epidemics at Home and Abroad" (1886), and others of which he had had experience during his long and useful career.

Dr. Dickson was a man of immense energy and industry and his knowledge was thorough and deep on many subjects, not alone those of a professional nature but also on general questions connected with history, art, and literature. In his early days in the Navy he kept two private diaries, the one a casebook and the other relating to passing events and daily life, written in full. His journal of the years 1846-8, spent on the Lisbon station, is full of interest, the descriptions of places visited being graphic and concise, while the picture of Anglo-Portuguese life at Lisbon and Oporto is charming. His personal kindness, sympathetic nature, and other excellent qualities made him beloved and respected by the large number of persons who enjoyed his personal friendship, and the loss occasioned by his death is felt far and wide.

The death is reported at the age of 40 of Dr. Thomas William Kyle, of Measham. The deceased took the degree of M.D.Q.U.I. in 1875 and M.Ch. in 1876, and in 1890 became a D.P.H.R.C.S.I. He held the offices of medical officer of health for the Ashby Woulds Urban Sanitary District and Ashby-de-la-Zouch Rural Sanitary District, and was also a certifying factory surgeon. Dr. Kyle had suffered for some time from congestion of the lungs.

M. Louis Figuier, whose name has been known to many generations of "general readers" as that of one of the most successful popularisers of scientific discovery, has just passed away in Paris at the age of 74. He was born at Montpellier, where he took the degree of Doctor of Medicine in 1841. Soon afterwards he was appointed Professor of Chemistry in the School of Pharmacy, Paris. He wrote—and wrote well—on many subjects, but the work by which he was best known to the public was his *Année Scientifique*, in which he gave a summary at once interesting and accurate of the principal scientific discoveries of the year.

We regret to announce the death of Dr. William Goodell, the distinguished American gynæcologist, who died on October 27th, in the 65th year of his age. He was the son of a missionary and was born in Malta. He studied medicine in William's College, Massachusetts, and afterwards at the Jefferson Medical College, Philadelphia, where he graduated in 1854. He began his professional career in Constantinople, returning to America in 1861, and settling in West Chester as a general practitioner. He was appointed Lecturer on Obstetrics and Diseases of Women in the University of Pennsylvania in 1870, and Clinical Professor of the Diseases of Women and Children in 1874; this position he continued to hold till little more than a year ago, when he resigned, and was named Honorary Professor. In Dr. Goodell American medicine loses one of its most commanding figures. He was not only one of the foremost men in his own speciality, but a writer of rare literary endowment. He was revered by all, and beloved by those who had the privilege of knowing him.

We regret to have to report the death of Mr. Christopher Johnson, F.R.C.S.Eng., of Castle Park, Lancaster, which occurred on November 6th. The deceased gentleman, who was 78 years of age, had been in failing health for some years, having suffered from heart disease, but was able till quite recently to discharge the duties of his appointments. On the morning of his decease Mr. Johnson was going through his letters when he was seized with a sudden attack and succumbed almost immediately. The deceased qualified as M.R.C.S.Eng. in 1839, and in 1854 became F.R.C.S.Eng. He was at the time of his death Consulting Surgeon to the Lancaster Infirmary, and Certifying Surgeon under the Factory Act.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are: Dr. Francis Taylor Fuller, Assistant Physician of the North Carolina Insane Asylum, a post which he had held for more than thirty-eight years; Dr. Charles H. Pinnay, Professor of Medicine in the Medical College of Connal Bluffs, Ia., U.S., aged 52; Dr. Peter Swerhanski, of St. Petersburg, a well-known specialist in mental diseases, aged 64; Dr. Giovanni Cristiani, of Florence, a surgeon fast rising into celebrity, when his career was suddenly interrupted by mental disease; and Dr. Francisco Colapinto, Professor of Obstetrics in the University Schools attached to the Liceo of Bari.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

SMALL-POX AND VACCINATION IN 1893.

XIII.—West Ham: The Small-pox Hospital Question.

Dr. Charles Sanders, the health officer of the Borough of West Ham, has recently presented to his council a most valuable and interesting report on the epidemic of small-pox from which the district suffered in the eighteen months ended with June last. Not only is small-pox treated of in relation to vaccination, but the disease is likewise regarded from the point of view of local isolation arrangements.

Vaccination.—Small-pox, having been introduced in January and February of 1893, rapidly spread through the medium of infection disseminated, it is supposed, by a tramp who had been staying in a common lodging house prior to his detection in the workhouse. The condition as to vaccination of those attacked fatally is supplied by Dr. Moir, the superintendent of the hospital, and is clearly set forth in the following table; but we could have wished for fuller details, which even yet we will hope to see furnished. We have added the third column with a view of showing at a glance the relative values of the mortality percentages.

Condition as to Vaccination.	Percentage of Deaths on Cases.	Relative Value of Percentages, the Unvaccinated Class being represented by 1,000.
Unvaccinated ...	35·00	1,000
Said to have been vaccinated, but having no marks ...	29·57	845
Imperfectly vaccinated ...	11·00	314
Showing good marks	5·00	143
,, two ,, ...	2·00	57
,, three ,, ...	1·00	29
,, four ,, ...	0·00	14
Revaccinated	0·00	—

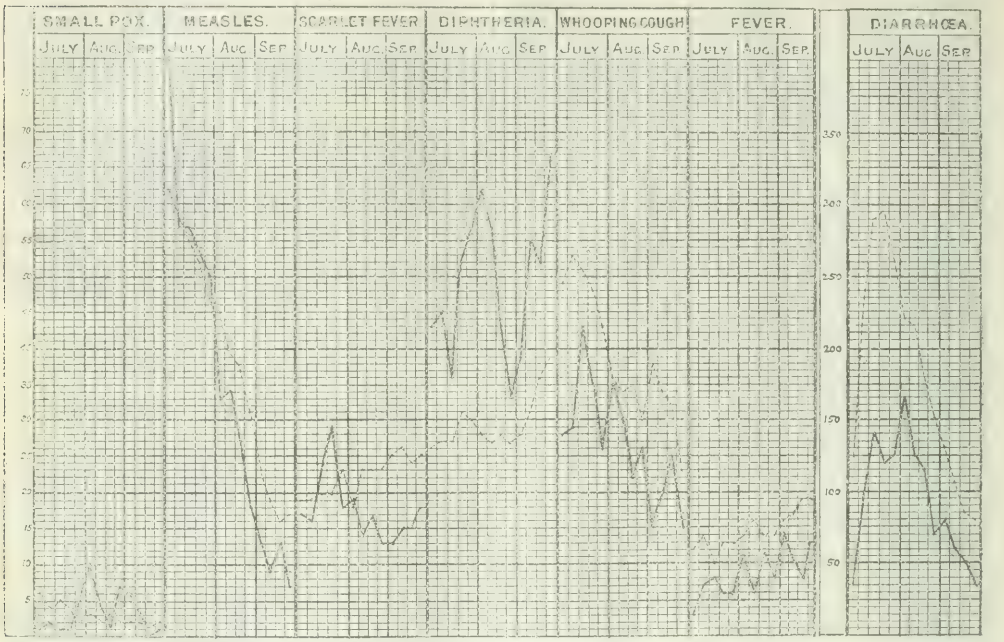
The above table tells its own tale, and we need not dwell on the significance of its data, which have to do with nearly 1,000 cases of small-pox. Suffice it that the death-rate among the unvaccinated was no less than 63 times that of four-scarred vaccinated sufferers.

ZYMOTIC MORTALITY IN LONDON.

The diagram on next page shows the prevalence of the principal zymotic diseases in London during each week of the third quarter of the current year. The fluctuations of each disease during the period under review, and its fatal prevalence as compared with that recorded in the corresponding weeks of recent years, can thus be readily seen.

Small-pox.—The deaths referred to small-pox, which had been 11 and 37 in the first two quarters of the year, further rose to 43 during the three

DEATHS FROM ZYMOTIC DISEASES IN LONDON DURING THE THIRD QUARTER OF 1894.



NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding week of the preceding ten years 1884-93.

months ending September last, and exceeded by eight the corrected average number in the corresponding periods of the preceding ten years 1884-93. Of these 43 deaths, 26 belonged to Marylebone, 4 to St. Pancras, 2 to Fulham, 2 to Hampstead, and 2 to Bethnal Green sanitary areas. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had been 82, 56, and 123 at the end of the preceding three quarters, further rose to 197 during July, but had declined to 93 at the end of September last; 427 new cases were admitted during last quarter, against 289, 169, and 559 in the preceding three quarters.

Measles.—The fatal cases of measles, which had been 446, 788, and 1,745 in the preceding three quarters, declined to 459 during the three months under notice, and were 44 below the corrected average number. Among the various sanitary areas of the metropolis measles showed the highest proportional fatality in Holborn, Clerkenwell, Bethnal Green, Limehouse, Poplar, and Camberwell.

Scarlet Fever.—The deaths referred to this disease, which had been 467, 276, and 286 in the preceding three quarters, declined to 228 during the three months under notice, and were 61 below the corrected average number in the corresponding periods of the preceeding ten years. Among the various sanitary areas this disease showed the highest proportional fatality in St. George-in-the-East, Limehouse, Rotherhithe, and Woolwich. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 2,873, 2,670, and 2,012 at the end of the preceding three quarters, were 2,058 at the end of September. The number of cases admitted into these hospitals, which had been 2,800 and 3,144 in the preceding two quarters, further rose to 3,075 during the three months ending September last.

Diphtheria.—The fatal cases of diphtheria in London, which had been 1,089, 728, and 652 in the preceding three quarters, further declined to 641 during the three months under notice, but were as many as 257 above the corrected average. Among the various sanitary areas this disease showed the highest proportional fatality in Fulham, Bethnal Green, Whitechapel, St. George-in-the-East, Mile End Old Town, St. Saviour Southwark, St. George Southwark, Bermondsey, Rotherhithe, Camberwell, and Greenwich. The cases of diphtheria admitted into the Metropolitan Asylums Hospitals, which had been 821, 839, and 917 in the preceding three quarters, further rose to 1,143 last quarter, and 498 patients remained under treatment at the end of December last.

Whooping-cough.—The deaths referred to this disease, which had been 588, 932, and 608 in the preceding three quarters, further declined to 319 last quarter, and were 157 below the corrected average number. The highest proportional fatality of this disease was recorded in Fulham, Westminster, Strand, Battersea, and Camberwell sanitary areas.

Fever.—Under this heading are included deaths from typhus, enteric fever, and simple and ill-defined forms of fever. The deaths referred to these different forms of "fever," which had been 273, 145, and 131 in the preceding three quarters, further declined to 111 during the three months under notice, and were as many as 80 below the corrected average. Of these 111 deaths from "fever," 3 were certified as typhus, 107 as enteric fever, and 1 as ill-defined fever. There was no marked excess of "fever" mortality last quarter in any of the sanitary areas. The Metropolitan Asylums Hospitals contained 99 enteric fever patients at the end of September last, against 103, 92, and 72 at the end of the preceding three quarters: 172 new cases were admitted into these hospitals, against 230, 169, and 141 in the preceding three quarters.

Diarrhœa.—The 1,215 fatal cases of diarrhœa registered in London during last quarter were little more than half the corrected average; the mortality from this disease was lower than in the corresponding period of any year since 1860. Among the various sanitary areas diarrhœa showed the highest proportional fatality in Fulham, Clerkenwell, St. Luke, Shoreditch, St. George-in-the-East, St. George Southwark, and Rotherhithe.

In conclusion it may be stated that the 3,046 deaths referred to the principal zymotic diseases in London during the third quarter of the current year were 1,225, or nearly 30 per cent. below the corrected average number in the corresponding periods of the preceding ten years, 1884-93, owing principally to the exceptionally low mortality from summer diarrhœa. Among the various sanitary areas the lowest zymotic death-rates were recorded in St. George Hanover Square, St. James Westminster, Stoke Newington, St. Martin-in-the-Fields, London City, St. Olave Southwark, Lee, and Plumstead; the highest rates in Paddington, Clerkenwell, St. George-in-the-East, Limehouse, Mile End Old Town, St. George Southwark, Rotherhithe, Camberwell, and Greenwich.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,531 births and 3,388 deaths were registered during the week ending Saturday, November 10th. The annual rate of mortality in these towns, which had been 18.5 and 17.3 per 1,000 in the preceding two weeks, further declined to 16.9 last week. The rates in the several towns ranged from 11.8 in Birkenhead and 12.7 in Huddersfield to 24.1 in Sunder-

land, 24.3 in Burnley, and 24.8 in Preston. In the thirty-two provincial towns the mean death-rate was 19.3 per 1,000, and was 4.3 above the rate recorded in London, which was only 15.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.8 per 1,000; in London the rate was equal to 1.4, while it averaged 2.1 per 1,000 in the thirty-two provincial towns, and was highest in Leeds, Wolverhampton, and Derby. Measles caused a death-rate of 2.6 in Derby, 2.8 in Leeds, and 4.3 in Portsmouth; scarlet fever of 1.1 in Burnley; whooping-cough of 1.5 in Sunderland; "fever" of 1.5 in Sunderland and 1.8 in Wolverhampton: and diarrhœa of 2.1 in Derby. The 77 deaths from diphtheria in the thirty-three towns included 42 in London, 7 in West Ham, 4 in Wolverhampton, 4 in Liverpool, 4 in Hull, and 3 in Birmingham. Four fatal cases of small-pox were registered in Birmingham, and 1 in London, but not one in any other of the thirty-three large towns. There were 31 cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, November 10th, against 60, 50, and 48 at the end of the preceding three weeks; 12 new cases were admitted during the week, against 11, 8, and 8 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,211, 2,285, and 2,240 at the end of the preceding three weeks, had risen again to 2,258 on Saturday last; 223 new cases were admitted during the week, against 261, 254, and 223 in the preceding three weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, November 10th, 857 births and 578 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 17.5 to 22.2 per 1,000 in the preceding three weeks, declined again to 20.3 last week, but exceeded by 3.4 per 1,000 the mean rate during the same period in thirty-three of the largest English towns. Among these Scotch towns the death-rates ranged from 12.0 in Perth to 25.0 in Greenock. The zymotic death-rate in these towns averaged 2.9 per 1,000, the highest rates being recorded in Glasgow and Perth. The 288 deaths registered in Glasgow included 10 from diphtheria, 11 from measles, 7 from "fever," and 1 from scarlet fever. Three fatal cases of small-pox were registered in Edinburgh, and 3 of scarlet fever in Dundee.

A GOOD PRECEDENT.

At the last meeting of the Lambeth guardians Dr. Partridge, reporting on behalf of the Infirmary and Havill street Workhouse Visiting Committee, recommended that Dr. Chabot, the medical officer, be granted six months' leave of absence on full salary, and that a *locum tenens* be appointed at an inclusive salary of £300. Dr. Partridge stated that Dr. Chabot had been in the service of the guardians for twenty years, and his health had completely broken down under the strain of his duties. The recommendation was carried with one dissentient.

MEDICAL OFFICERS OF HEALTH AND THEIR RIGHT OF ENTRY.

A question of some little interest has arisen at Sedgeley as to the right of a medical officer of health to enter a sick room in which there was a case of enteric fever. In answer to a request for advice, the Assistant Secretary to the Local Government Board states that, while in the majority of instances in which cases of infectious disease are notified there is no need for a medical officer of health to personally inspect the apartment of the invalid, in those cases in which such a visit may become necessary—apart from cases to which Section 102 of the Public Health Act (1875) may be applicable—it can only be made with the consent of those in charge of the patient, and that the co-operation of the medical practitioner in charge of the case should be secured if possible. What is possibly of more importance is that the Board do not regard the existence of every case of notified disease as necessarily involving reasonable cause to suspect the existence of a nuisance on premises, such as is contemplated in Section 102 of the Public Health Act (1875). It will be remembered that this Section says that "the local authority or any of their officers shall be admitted into any premises for the purpose of examining as to the existence of any nuisance thereon . . . at any time between the hours of nine in the forenoon and six in the afternoon," and it is satisfactory to find that this rule is not to be so strained as to allow a medical officer of health to walk into any sick man's bedroom.

THE LAUNDRY EXHIBITION.

The exhibition of laundry appliances which has been open during the past week or so at the Agricultural Hall has served well to illustrate the larger proportions which have been attained by the trade of washing clothes. The Exhibition includes many examples of steam washing machines, hydro-extractors or rotatory wringers, mangling and ironing machines, "iron" heated by electricity and by gas, and many inventions for many purposes. Among them we may especially mention the arrangements shown by the Blackman Ventilating Company and by Messrs. Glover and Hobson, for drying clothes by means of a rapidly moving current of hot air, instead of the more or less stagnant air of the old-fashioned "horses" in a drying closet. It would appear to be a much more sanitary arrangement for the clothes to be blown about by a free current of air than to be dried according to the older method, and the economy in time appears to be considerable.

An electrically driven fan, shown by the Blackman Company, suggests many possibilities in regard to the ventilation of hospital wards in weather when natural ventilation fails, the smallest size of fan being able to move more than the 60,000 cubic feet of air per hour required for a ward of twenty beds.

Although perhaps not directly related to laundry work, we may mention Walford's Combination Turkish Bath, a combination of a lamp bath with a "shower," by which a fair imitation of a Turkish bath may be obtained. The device consists of a hot air chamber, heated by a lamp and furnished externally with a book-rest, so that time may not hang too heavily while the sweating process is in progress, and by the side of this box or chamber stands a shower bath. No doubt the box could be arranged for gas, and the shower could be filled by a tap from the main, but in the specimen exhibited the one was made to work with a lamp and the other to be filled by hand. There can be no question that it must be a great advantage to be able to get a shower bath after undergoing the perspiring part of the performance in the box, and so far the combination of the two is a considerable improvement, and probably the best substitute for a Turkish bath that under many circumstances is attainable; nevertheless, we venture to doubt the appropriateness of the name Turkish bath as applied to any arrangement which involves the drying and the rubbing being done in cold air.

INFECTIOUS DISEASE IN GLASGOW.

At the end of last week an increase in the number of infectious cases to the extent of 67, as compared with the previous week, was reported in Glasgow. The total number of cases is now 1,727, of which 929 are of scarlet fever.

PENSION GRANTED TO A WORKHOUSE MEDICAL OFFICER.

We are very pleased to report that at a recent meeting of the guardians of the [illegible]ats (Yorkshire) Union, it was decided to recommend that a pension of £120 per annum should be [illegible] Dr. Dix, the late medical officer of the workhouse, who had held the appointment for thirty-six years. This subject had been discussed at several previous meetings, and was only decided after con[illegible]ation had been raised against the proposal. Dr. Dix [illegible]ulated on the division which took place when the questio[illegible]n. The resolution passed will have to be confirmed by the Lo[illegible]ment Board, and this will doubtless be done without any unnecessary delay.

MEDICAL CERTIFICATION.

Dr. E. C. Barnes writes to [illegible] local officer of health for Acton recently returned to him [illegible] certificate, on the ground that another practitioner had [illegible]d the same case. Mr. Barnes very properly forwarded the certificate once more, with a letter pointing out that the duty of notification was [illegible] contingent upon the absence of prior notification, even had that fact been known to him, which in this instance it was not. He also intimated his intention of insisting upon the payment of the notification fee.

*** Mr. Barnes's action is quite consistent with the plain letter of the law, and with the views which have repeatedly been expressed in the British Medical Journal. The Act make no exception of such cases either as regards notification or payment of the usual fees.

WHAT IS A PUBLIC BODY OR INSTITUTION?

H. B. V. asks for a definition of "public body or institution" for the purposes of the Notification Act, the reduced fee of one shilling being payable to medical officers of such institutions. He raises the question whether attendance on post-office officials, railway clubs, private clubs, friendly societies of all kinds, dispensaries, [illegible] schools, volunteers, police, soldiers and sailors on [illegible] be regarded as public or private practice—that is, whether notifications should carry the higher or lower fee.

*** We cannot offer any satisfactory definition. Most of the examples cited appear to come fairly within the category of public practice, but in others something would depend upon the terms of appointment. Probably different interpretations are adopted in different districts.

PAYMENT FOR ADMINISTRATION OF ANÆSTHETICS.

Mr. C. C. Clarkmont (Southsea) writes: The circular letter of the Local Government Board, quoted in the British Medical Journal of November 10th, at page 1086, is deserving of some consideration on the part of the profession. On the one hand, it recognises the just claim of the profession to remuneration for assistance rendered to Poor-law medical officers in the capacity of anæsthetist, although making no reference to other but equally essential assistance frequently given at operations to Poor-law officers by their professional brethren. On the other hand, the circular appears to give official sanction to an insidious, but very real and very prevalent, form of hospital abuse.

When the Local Government Board urge boards of guardians to send cases of operation into public hospitals have the subscribers to hospitals a right to ask that the board should at the same time instruct the guardians to make adequate payments to the hospitals on account of such cases, instead of having the expenses incurred by their treatment to be wholly or partly defrayed by the subscribers?

Has not the profession a right to ask that the board should at the same time instruct the guardians to remunerate the members of the hospital staffs for their professional services in these cases?

Boards of guardians are elected for the purpose of making provision for the needs of paupers at the expense of the rates; is there any reason, because the pauper requires an operation, why the guardians should be allowed and urged by a Government department to shift this burden to the subscribers to a charity and to the medical profession?

PERSONAL VISITS BY MEDICAL OFFICER OF HEALTH.

M. O. H. writes: Although my relations with the medical men around me are in no way strained, I have thought it most courteous to them and more convenient to myself to allow them an opportunity of telling me on the notification forms which they send me the time at which it would be most convenient to them for me to visit the case. My visit would often be utterly useless if I did not enter the room where the patient lay, but there can be no possible objection to this when the visit is practically an appointment to meet the gentleman who is attending. I enclose one of the notification forms, having underlined the addition I have made. Perhaps some plan of this sort would tend to diminish the irritation caused in some places by the visits of the medi-

cal officer of health which I occasionally see expressed in the BRITISH MEDICAL JOURNAL.

*** The addition in question consists of the words "I shall visit the patient about.....on the..... day of....." We see no possible objection, but much good, in the medical officer of health visiting the case, when possible, with the notifying practitioner, although many object to any attempt on his part to verify notified diagnoses in general, in the absence of the latter. The addendum will no doubt prove useful in instances where the notifier is able to make an informal appointment and the medical officer of health to keep it, but it ought to be clearly understood that, although grafted on a compulsory return, this item is a voluntary matter.

PARISH COUNCILS AND PAID OFFICERS.

DR. J. E. MORETON (Tarvin, near Chester) writes: Feeling some doubt as to the interpretation of Section 46 of the Local Government Act as applying to parish councillors, I wrote to the Secretary of the Local Government Board on the subject, and have a reply as follows: "That the holding of a paid office under any one of the authorities mentioned disqualifies the holder from being a member of that authority only, and that the holder of a paid office under one of these authorities is not disqualified from being a member of any other of such authorities under which he holds no paid office." The reference you made in the BRITISH MEDICAL JOURNAL a fortnight ago was therefore in every respect correct.

INDIA AND THE COLONIES.

NEW SOUTH WALES.

ADVANCED AUSTRALIA.—The City Council of Sydney propose to inflict a fine of £10 on any person found expectorating on the footpaths of the city.

MISS IZA COCHLAN, M.B., of Sydney, has been appointed Medical Referee for the Australian Mutual Provident Society.

THE MEDICAL BILL.—We learn from the *Australasian Medical Gazette* that the Premier, the Hon. G. H. Reid, referring to the necessity for a new Medical Act, recently stated that he did not go quite so far as to approve of the Bill introduced into the late Parliament for the regulation of medical practice, and he did not see any probability of such a measure becoming law. The only kind of Bill that he would like to see, and the only sort that in his opinion the House would pass, was a measure penalising the wrongful use of titles and diplomas. So long as no false titles were employed there could be no imposition on the public. All that he could say at present was that if the Government were able to pass a Medical Bill of one clause they would certainly do so.

THE Noxious Trades and Cattle Slaughtering Act of 1894 (with regulations made thereunder. Sydney: Charles Potter, Government printer, 1894) has been passed by the Legislative Council and Legislative Assembly of New South Wales. Part I deals with the regulation of noxious trades, Part II with the regulation of cattle slaughtering, and Part III with the incorporation of the Board of Health and other matters. The Act gives very extensive powers to local authorities. Thus Section 5, Subsection 3, enables the authority to refuse or cancel the registration of any person in respect of any noxious trade premises which are on an unsuitable site or in an insanitary condition, or in, on, or about which the provisions of the Act or regulations made thereunder are not carried out; and Section 13, Subsection 3, gives a like power with regard to slaughter-house premises. Under Section 2 of the Act the Governor, on the recommendation of the Board of Health, may declare any trade a noxious trade, and eleven trades have been so scheduled by proclamation in the *Government Gazette* of July 13th, 1894. Regulations dealing with registration, licensing, and the carrying on of noxious trades and of the business of cattle slaughtering have also been framed by the New South Wales Government, and are here printed *in extenso* and appended to the Act. The publication will no doubt be referred to by medical officers of health and members of sanitary authorities desirous of studying the lines upon which matters of the kind are now being dealt with.

INDIA.

SANITATION IN THE BERARS.—The Berars or Hyderabad Assigned Districts occupy a well-raised central position at the northern or basal limit of the Deccan plateau, under the Satpura range of hills, and constitute the watershed of the Mahanadi and Godaveri rivers to the east and the Tapti to the west. The six districts which form the province are under the administration of a commissioner, and subject to the control of the Resident at Hyderabad. The population is nearly three millions. Surgeon-Lieutenant-Colonel C. Little, M.D., is the Sanitary Commissioner, and his report for the year 1893 indicates that the public health of this interesting portion of British India is the subject of keen and practical attention. The registered birth-rate for 1893 was 39.3 per 1,000, and death-rate 32.6. These figures are still below the mark, but they contrast strikingly with the absurd results (9 and 19.4) which were obtained when registration was first started in the year 1868. Continuous endeavours are being made by inspection of registers and comparison of these with data obtained elsewhere, notably by the vaccination department, to perfect vital statistics which are in many parts of the province obviously unreliable. No attempt at refinement in recording death causes is made, but the rough results tabulated indicate that 49.4 per cent. of the mortality was due to fevers, 15.86 to bowel complaints, 1.2 to cholera, 0.1 to small-pox, 1.1 to injuries, and 32.4 to other causes. Rs.4,25,313 were expended on sanitary works during the year. The disposal of this money is entrusted to municipalities for towns, district boards for rural areas, and to the public works department for large undertakings requiring capital and skilled labour. The funds are, very properly, mainly devoted to water supply, drainage, and conservancy. The action of the local bodies is strictly watched and controlled and pointed attention is drawn by the sanitary commissioner to sanitary defects, of which the report presents a painful array, requiring attention and remedy. The sanitation of fairs has commanded a praiseworthy amount of care. Cholera prevailed in the province during the last six months of the year and caused 1,188 deaths, or 4 per 10,000 of population. It seems to have been spread by the agency of pilgrims, but the evidence on this subject is by no means conclusive. The improvement of the water supply appears to have diminished cholera incidence and mortality in the town of Khamgaon, but not so in Amraoti, and this result is attributed to bad drainage and defective conservancy in the latter. Altogether the sanitary administration of the Berars is evidently in good hands and progressive.

A CHEMICAL DEPARTMENT FOR INDIA.—The *Indian Medical Gazette* states that owing to the difficulties experienced in the supply of chemical examiners for the various local governments at short notice for leave vacancies, the question of the formation of a chemical department for the whole of India is now under final consideration, and will be submitted to the Secretary of State for orders during the current season.

SOUTH AFRICA.

SMALL-POX TAX.—We read in *South Africa*: In pursuance with a Volksraad resolution Witwatersrand has to submit to another injustice in the shape of a special tax to meet the expenditure which has been incurred to deal with the small-pox epidemic from which the country has suffered. It is true that most of the expense has been in this district, though simply because it is the most important part of the whole State, but that is no reason why, in a matter of this kind, the burden should fall on a limited community; it is a national responsibility, and should be dealt with accordingly. Each male inhabitant of Witwatersrand above the age of 18 has to pay before the end of September the sum of 10s., and the penalty is, in the case of natives, a fine of £5, with the alternative of one month's imprisonment or twenty-five lashes; and in the case of Europeans or whites the seizure of one's goods and chattels sufficiently to meet the tax, without any other legal process. Further than this, employers are held liable for the payment of the tax by their *employés*, but we do not exactly see how Government is going to enforce this liability.

FIJI.

PERNICIOUS ANÆMIA.—Dr. Charles T. W. Hirsch, District Medical Officer, Fiji, in a report on pernicious anæmia in that colony, states that the disease occurred, apparently in epidemic form, among Indian immigrants working on sugar plantations in a hot and very rainy district. Many of the immigrants were "dirt eaters." Of 126 cases 41 died. Dr. Hirsch's description of clinical and *post-mortem* phenomena are too brief to justify an opinion on the nature of these cases. The dropsy, palpitations, and dyspnœa are suggestive of beri-beri, but there is no mention of paresis; the intense anæmia in conjunction with the dirt-eating habits of the patients are suggestive of ankyostomiasis, but it appears that the parasite was either absent, or, if present, it was so only in very small numbers. We look forward with interest to the fuller and more definite report promised for the end of the current year.

THE average number of medical members of the Japanese House of Commons has hitherto, it appears, been three or four. At the last election, which took place on September 1st, only one (Dr. Wakizaka) was elected. Japanese doctors would seem to have even less taste for the political arena than their English brethren.

PRESENTATION.—On the occasion of his leaving Manchester for the South of England, Dr. Arthur Ransome was presented by his friends with a pair of silver candlesticks, an inkstand, and an afternoon tea service, as a token of their regard and appreciation of the work he has done for a number of years in the cause of public health and for the advancement of sanitary science.

ON November 13th the Colston Societies held their annual dinner, when subscriptions to the amount of £3 306 6s. 4d. were announced. These subscriptions are devoted to charitable ends in Bristol. The President for the years 1894-95 of the Grateful Society is Mr. Hancock Wathen, M.R.C.S., L.R.C.P.Edin. Mr. Wathen, who is a town councillor of Bristol, was Secretary of the Excursions Subcommittee and of the Section of Dermatology at the last annual meeting.

THE ANATOMY SCHOOL OF BARCELONA.—On October 13th an interesting ceremony took place in the amphitheatre of the Medical Faculty of Barcelona. This was the unveiling in the new dissecting room of a gallery of busts of the anatomical teachers who have adorned the Barcelona School in the eighteenth and nineteenth centuries. The ceremony was presided over by the Dean (Dr. Juan Giné Partagás), and was graced by the presence of the civil governor and all the official, academic, and military notabilities of the city. Sonorous and eulogistic oratory flowed in a full tide, and a musical composition by Dr. José de Letamendi, the Dean of the Medical Faculty of the University of Madrid, was performed with great applause. The busts, which are from the chisel of Señor José Montserrat, were then unveiled, and students placed laurel wreaths with appropriate dedicatory inscriptions at the foot of each.

MEDICAL NEWS.

Edinburgh Royal Medical Society.—The following gentlemen have been elected presidents for the ensuing session:—John Orr, M.B., C.M., M.R.C.P.Edin.; J. Purves Stewart, M.A., M.B., C.M.; G. C. Easterbrook, M.A., M.B., C.M.; J. G.Cattanach, M.B., C.M.

The first meeting of the Royal Statistical Society of the present session will be held on Tuesday next at the Museum of Practical Geology at 4.45 P.M., when the President, Lord Farrer, will deliver the inaugural address on the Relations between Morals, Economics, and Statistics.

At a meeting of the Society of Medical Officers of Health at the rooms of the Royal Medical and Chirurgical Society on Monday next at 7.30 P.M., the President, Dr. S. R. Lovett, M.O.H. for St. Giles's, will deliver an inaugural address on The Past, Present, and Future of the Society. The address will be followed by a discussion.

The Decrease of Lunacy.—Our readers will rub their eyes when they see the headline of this paragraph. We observe in the *Bristol Mercury* of November 7th a statement of the Chairman of the Dorset County Council that not only had the increase of lunacy in the county been checked, but there are actually fewer lunatics in the asylum than in previous years. We are delighted to chronicle the event, and trust it may be some sign that the accumulation of insane persons, whatever its causes may be, is reaching a term.

The Dental Hospital of London.—The annual dinner of the staff and past and present students will be held on Saturday, December 1st, at the Hôtel Métropole (Whitehall Salon), under the presidency of Mr. S. J. Hutchinson, M.R.C.S., L.D.S. Gentlemen either now or formerly connected with the hospital or medical school, who may through inadvertence not have received special notice, and who desire to be present, are requested to communicate with the Dean, at the Dental Hospital, 40, Leicester Square.

Cork Ophthalmic Hospital.—Towards the rebuilding of this hospital, which is urgently required, subscriptions have been promised close on £3,000. A bazaar, "Donnybrook Fair," was held in the Municipal Buildings to aid the institution, and a large sum of money—between £3,000 and £4,000, it is estimated—was obtained. Dr. Sandford has also presented the institution with £250, and an anonymous donor has given £1,000. With the total amount the committee have now in hand they have sufficient capital to build and furnish a proper ophthalmic institution sufficient for the requirements of the South of Ireland.

Glasgow Hospital Sunday.—The Hospital Sunday scheme was inaugurated in Glasgow on October 28th, and the first acknowledgment of receipts has now been published. The total sum as yet received is £3,210 14s. 8d., contributed by 265 churches, an average for each of £10 18s. 11d. The average is smaller than might be expected, but many churches had already contributed to the infirmaries, and gave a small collection again to show their good will to the scheme. It is expected that next year the results will show a great improvement. The date fixed for next year is the second Sunday in December.

Lord Sandhurst opened, on November 3rd, a new hospital at the Royal Gunpowder Factory, Waltham Cross. Sufferers in the recent explosions were attended to in the Recreation Hall, but as the works increase, and the danger attending them also increases, the War Department decided to build a hospital to be ready in case of accident. The building contains twelve beds, with the usual dispensing rooms and lavatories. A thoroughly qualified resident nurse will reside at the hospital, who, under the factory surgeon, will be responsible for the efficiency of the establishment. The hospital is to be called the Sandhurst Hospital.

Death Certification.—At a meeting of the Church Sanitary Association on November 13th, Dr. Norman Kerr, who presided, dwelt on the necessity of pressing upon the Government the duty of introducing into Parliament a Bill embodying the recommendation of the Departmental Committee on Death Certification. The Committee had suggested that details as to the cause of death should be given in a confidential certificate addressed to the registrar, and this would secure accurate information on which alone could be based a true science of vital statistics, and by lessening premature mortality would add to national wealth and usefulness.

"Percussing" the Professor.—The increasing severity of examinations is not only weighing down the overtaxed student, but, as the following incident shows, may also be fraught with indirect penalties, and even corporal sufferings, to the examiner. The Italian papers record that: "Lo studente Ettore Ballanti, per vendicarsi dell'insuccesso agli esami, percosse il professore Pasquali" (the student, Hector Ballanti, to revenge himself for his failure at examination, assaulted Professor Pasquali). The council of the medical faculty in the University of Rome has ordered this vindictive youth to spend two years in rustic meditation in the hope that he will see that failure to pass an examination is not to be avenged by "percussing" the examiner. We offer our sympathies to our esteemed colleague, whose graceful presidentship of the Section of Obstetrics will be fresh in the recollection of visitors to the Roman Congress.

MEDICAL VACANCIES.

The following vacancies are announced:

BAWNBOY UNION, Swanlibar Dispensary.—Medical Officer. Salary, £90 per annum, with £15 yearly as Medical Officer of Health, together with vaccination and registration fees. Applications to Mr. Thomas McGovern, Honorary Secretary, Gortmore, Derrynacrieve, Belturbet. Election will take place on November 17th.

BELFAST ROYAL HOSPITAL.—Assistant Staff-Surgeon and a House-Surgeon for the Extern Department, doubly qualified. Applications to the Chairman of the Board of Management by November 17th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £150 per annum. Applications and testimonials to A. Forrest, Secretary, before December 12th.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon. Appointment for two years. Salary, £50 per annum. Applications and testimonials to the Chairman of the Board of Management, Secretary's Office, 29, Eastgate Row, North Chester.

CLOGHER UNION, Ballygawley Dispensary.—Medical Officer. Salary, £75 per annum, with £15 yearly as Medical Officer of Health, together with registration and vaccination fees. Applications to Mr. John Spear Gervan, Honorary Secretary, Stewart Arms, Ballygawley. Election will take place on November 27th.

EAST SUSSEX COUNTY ASYLUM, Hayward's Heath.—Junior Assistant Medical Officer. Salary, £100 per annum, with board and lodging. Applications to the Medical Superintendent by November 20th.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon; must possess surgical qualification. Appointment for six months, but may be held by re-election for a further period of six months. Board, residence, and washing provided. No salary. Applications to the House Governor by December 1st.

GENERAL HOSPITAL, Nottingham.—Assistant House-Physician and Assistant House Surgeon. Appointments for six months. Board, lodging and washing provided. No salary. Applications to the Secretary.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Junior House-Surgeon. Board, lodging, and laundry provided. Applications and testimonials to Lewis H. Glenton Kerr, Secretary, by November 26th.

HOSPITAL OF ST. PETER'S PORT, Guernsey.—Two qualified Surgeons (non-resident) for Hospital and Outdoor Poor. Salary, £50 per annum currency (vaccination included). Applications and testimonials to N. Ferguson, President Poor-law Board, by November 24th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—Resident Medical Officer as House-Physician. Appointment for six months. Salary, £20 per annum, with board and residence; must be unmarried. Applications and testimonials to Adrian Hope, Secretary, before November 21st.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—Resident Medical Officer as House-Surgeon. Appointment for six months. Salary, £20 per annum, with board, and residence; must be unmarried. Applications and testimonials to Adrian Hope, Secretary, before November 21st.

HOSPITAL FOR WOMEN, Soho Square, W.—Registrar. Appointment for twelve months. Honorarium, 25 guineas. Applications to David Cannon, Secretary, by November 20th.

KENT AND CANTERBURY HOSPITAL.—House-Surgeon; must be a registered medical practitioner, unmarried. Salary, £90 the first year, with board, etc., rising to £100 the second year. Applications and testimonials to A. J. Lancaster, Secretary, before November 23rd.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon, doubly qualified. Salary, £30 per annum, with residence and maintenance in the house. Applications to the Chairman by November 24th.

NEW HOSPITAL FOR WOMEN, 144, Euston Road.—Female Resident Medical Officer; fully qualified. Applications to Margaret M. Bagster, Secretary, by November 28th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—House Surgeon. Salary, £120 per annum, increasing £10 a year, at the discretion of the Committee. Applications and testimonials to R. Hordley, Secretary, before November 27th.

PADDINGTON INFIRMARY.—Resident Clinical Assistant. Appointment for six months. Board and residence, and an honorarium of 12 guineas. Applications and testimonials to H. F. Aveling, Clerk to the Guardians, before November 24th.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Registrar and Anæsthetist. Appointment for one year, an honorarium of £30 being voted at expiration of term. Applications to the Secretary by November 21st.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, Strand, W.C.—Clinical Assistants. Applications and testimonials to T. Beattie Campbell, Secretary, before December 1st.

WARNEFORD HOSPITAL, Leamington Spa.—House-Surgeon; single. Salary, £100 per annum, with board, lodging, and washing. Applications and testimonials to J. Warren, Secretary, before December 5th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Anæsthetist (Honorary and Non-Resident). Applications and testimonials to R. J. Gilbert, Secretary Superintendent, before December 12th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House Surgeon; tenable for six months. board and lodging are provided. Applications and testimonials to R. J. Gilbert, Secretary Superintendent, before December 12th.

MEDICAL APPOINTMENTS.

AGNEW, T. H., M.R.C.S., L.R.C.P.Edin., appointed House-Surgeon to the Royal Infirmary, Liverpool.

ARMSTRONG, Hubert, M.B., Ch.B.Vict., appointed House-Physician to the Royal Infirmary, Liverpool.

BARBER, G. T. Congreve, M.R.C.S.Eng., L.R.C.P.Lond., L.S.A., appointed Resident Medical Officer to the Birmingham Workhouse, *vice* G. A. Ferraby, resigned.

COHEN, Abraham, M.A., M.D., B.Ch.Dub., appointed Physician in Charge of Jewish Out-patients to the Metropolitan Hospital of London.

COLES, Dr. C., appointed Medical Officer for the Fifth District of the Leicester Union.

COULSON, G. E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Medical Officer of the Infirmary of the St. George's Union.

EASTERBROOK, Charles Cremhall, M.A., M.B., C.M., appointed Third Assistant-Physician to the Royal Asylum, Morningside, Edinburgh.

EMERY, W. d'E., B.Sc.Lond., M.R.C.S., L.R.C.P., appointed Obstetric and Ophthalmic House-Surgeon to the Queen's Hospital, Birmingham.

FULLERTON, F. W., M.B., B.S.Durh., appointed Medical Officer for the Sculcoates District of the Sculcoates Union.

GALBRAITH, T. H., M.B., C.M.Aberd., appointed Medical Officer of the Workhouse of the Wolverhampton Union.

GUNN, Donald, F.R.C.S., appointed Assistant-Surgeon to the Royal Westminster Ophthalmic Hospital.

HINTON, Hammond T., M.B., C.M.Aberd., appointed Certifying Factory Surgeon for the Heytesbury District.

HUTTON, J., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the High Cross District of the Tottenham Union.

LAMPORT, H. C., M.B., C.M., appointed Certifying Surgeon for Factories and Workshops for the Lancaster Division.

LANG, Gordon A., M.B., C.M.Aberd., appointed Visiting Medical Officer to the Forbes Dispensary, Inverness, *vice* John Wilson Black, M.B., C.M.Edin., resigned.

LIVESEY, W. E., M.B., Ch.B.Vict., M.R.C.S., L.R.C.P., L.S.A., appointed Lock Hospital and Ophthalmological Assistant to the Royal Infirmary, Liverpool.

MCCLELLAND, W., M.B., Ch.B.Vict., appointed Gynæcological Assistant to the Royal Infirmary, Liverpool.

MACLEHOSE, Norman M., M.B., C.M.Glasg., appointed Assistant-Surgeon to the Central London Ophthalmic Hospital.

MASON, Harold, M.B.Lond., M.R.C.S., L.R.C.P., appointed Medical Officer to the Leamington Provident Dispensary, *vice* Miles C. Atkinson, M.D., resigned.

MEDCALF, Ernest Sexton, L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health for Hove.

NIXON, J. P., M.B., Ch.B.Vict., appointed House-Surgeon to the Royal Infirmary, Liverpool.

O'CONNELL, Mr. J., appointed Assistant Medical Officer to the Workhouse of the Parish of Toxteth Park.

PLAISTER, W. H., M.R.C.S.Eng., appointed Medical Officer for the Lower Cross Ward of the Edmonton Union.

ROBINSON, William, M.D., M.S., F.R.C.S.Eng., appointed Honorary Physician to the Sunderland Infirmary, *vice* Professor Brady, M.D., F.R.S., resigned.

ROSS, S. J., M.B., Ch.B.Vict., appointed House-Physician to the Royal Infirmary, Liverpool.

SHAW, A. F., M.R.C.S.Eng., appointed Medical Officer for the Raynham District of the Walsingham Union.

SIMPSON, F. H., M.B., B.S.Durh., M.R.C.S., L.R.C.P., appointed House-Physician to the Queen's Hospital, Birmingham.

SINIGAR, H., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Queen's Hospital, Birmingham.

TOOGOOD, F. S., M.D.Lond., D.P.H.Lond., appointed Medical Superintendent of the New Infirmary, and Principal Medical Officer of the Workhouse at Lewisham, S.E.

VEALE, F. J. de C., M.B., Ch.B.Vict., appointed House-Surgeon to the Royal Infirmary, Liverpool.

WATSON, Henry, M.D.Aberd., appointed Medical Officer for the Fifth District of the Parish of Norwich.

WILSON, H. R., M.R.C.S., L.R.C.P., appointed House-Physician to the Royal Infirmary, Liverpool.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. W. Lang: Corneal Affections. Bacteriological Laboratory, King's College, W.C., 3 to 5 P.M.—Lecture: Erysipelas and Suppuration. Practical Work: Cultivations of Streptococci. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Edward Woakes: Tinnitus and Vertigo.

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH, 20, Hanover Square, 8 P.M.—Introductory Address by the President, Dr. S. R. Lovett.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Stephen Paget: 1. Malignant Disease of the Larynx. 2. Acute Septic Epiphysitis. Mr. C. A. Morton: Malignant Disease in Glands of Groin with Secondary Growths in the Skin. Mr. Anthony Bowlby: Epitheliomatous Cyst of Neck. Mr. F. J. Wallace: Epitheliomatous Cyst of Neck. Mr. J. H. Targett: Encysted Tumour of the Bladder. Mr. S. G. Shattock: Wolffian Adenoma of Kidney. Dr. W. P. Herringham: Subdural Hæmorrhage in Pernicious Anæmia. Dr. Voelcker: Syphilitic Ulceration of Large Intestine; Recto-Vesical Fistula.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Percy Smith: General Paralysis.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. J. E. Pollock: Certain Helps towards Prognosis in Consumption. Royal London Ophthalmic Hospital, 3 P.M.—Mr. A. Stanford Morton: Optic Neuritis.

ROYAL METEOROLOGICAL SOCIETY, 25, Great George Street, Westminster, 7.30 P.M.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, 3 P.M.—Lecture by Dr. Gowers.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover Square, 8 P.M.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Dr. Gowers, F.R.S.: Clinical Cases. Hospital for Sick Children, Great Ormond Street, 3.30 P.M., Medical Registrar: Pathological Demonstrations of Medical Specimens. Central London Sick Asylum, Cleveland Street, W., 5.30 P.M.—Dr. Patrick Manson: Filarial Disease.

THE SANITARY INSTITUTE, Parkes Museum, Margaret Street, W., 8 P.M.—Dr. D. J. O'Neil, Chlorine and Chrome Compounds.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. Percy Kidd: Cases of Special Interest.

CLINICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Golding Bird: A Case of Pulsatile Congenital Cyst simulating Aneurysm. Dr. Herringham and Mr. Bruce Clarke: A Case of Idiopathic Dilatation of the Sigmoid Flexure. Dr. F. Taylor: A Case of Leucocythæmia Treated with Arsenic and Inhalation of Oxygen. Mr. Arbuthnot Lane: A Case of Supernumerary Testis. Dr. E. W. Goodall: An Unusual Case of Tracheal Diphtheria.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 11 A.M.—Dr. Hyslop: Puerperal and Lactational Insanity.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

CANT.—On November 7th, at 3, Lindum Road, Lincoln, the wife of W. J. Cant, M.R.C.S., L.R.C.P., of a daughter.

PENNELL.—On October 5th, at 434, Calle 25 de Mayo, Buenos Aires, the wife of G. Herbert Pennell, M.D.Oxon., F.R.C.S.Eng., of a daughter.

MARRIAGE.

TAYLOR—BUDGE.—At Seafield, Mid Yell, Shetland, on October 30th, by the Rev. J. H. Allen, F.C., North Yell, Henry Pearson Taylor, M.B., C.M., to Sinclair, youngest daughter of the late John Budge, Esq., of Seafield.

DEATH.

JOHNSON.—At 12, Castle Hill, Lancaster, on November 6th, Christopher Johnson, J.P., F.R.C.S., aged 78.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. F., 2.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Ear, Tu. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—M. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9, Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

LONDON TEMPERANCE HOSPITAL. *Hours of Attendance.*—Medical, M. Tu. F., 2; Surgical, M. Th., 2. *Operation Days.*—M. Th., 1.30.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1.30, S., 2; (Obstetrical), Th., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL EYE HOSPITAL, Southwark. *Hours of Attendance.*—Daily, 2. *Operation Days.*—Daily.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. S., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, S., 3; females, W., 9.45. *Operation Days.*—M., 2, Tu. 2.30.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 2; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 5, Th., 2, F. (Women and Children), 2, S., 4. *Operation Days.*—W. and F., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), M., 2.30, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th. 1.30; S., 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 1; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, Tu. F., 9.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MEMBER asks for advice as to the proper sequence of treatment in a severe attack of epistaxis.

ANXIOUS INQUIRER asks for advice as to best treatment, diagnosis, and prognosis, in the case of a man, aged 50, who has occasional attacks of pain in the back. At such times the urine is very frothy and rather oily in appearance. The quantity and colour is normal, the specific gravity 1015, and there is a slight trace of albumen; at other times the urine is healthy; from time to time there is a tendency to uric acid deposit.

MICROPHONE STETHOSCOPE.

W. G. writes: I shall be glad to be informed where I can purchase a binaural stethoscope, with some mechanism for increasing the intensity of sound less expensive than a real microphone, which I understand is a rather costly instrument.

HÆMORRHAGE FROM EAR.

H. S. B. writes: Recently a patient of mine, a lady about 65 years of age, and subject to rheumatic arthritis deformans, lost about ½ oz. of pure bright blood, trickling at night from the right auditory meatus. On examination I could discover nothing abnormal, and there were absolutely no other symptoms pointing to the ear, nor any history of earlier disease. Is not such an occurrence exceedingly rare?

ANSWERS.

R.S.—Our correspondent is probably illegally assessed, and would be well advised to consult the Income Tax Repayment Agency (6, Chichester Road, Paddington, London), to which he refers.

A. B.—M. Roux's paper, published in the *Annales de l'Institut Pasteur* for October, contains data as to the length of time which must elapse between primary inoculation of horses and the use of their serum as antitoxin.

DR. HAUGHTON.—Dr. Schmidt can, we believe, fully justify his own statistics, which appear to be very fairly stated. If he finds it advisable to answer the absurd criticism of Dr. Vogt, no doubt he will do so: our correspondent might communicate with him on the subject.

R. N. J.—The Forty-eighth Report of the Commissioners in Lunacy can be purchased, either directly or through any bookseller, from Eyre and Spottiswoode (East Harding Street, London, E.C.); John Menzies and Co., Edinburgh and Glasgow; and Hodges, Figgis, and Co., Dublin, price 1s. 9d.

HIP-JOINT DISEASE.

MR. FRANK BOXALL, M.R.C.S.E. (Rudgwick) writes: In answer to "Inquirer," I would suggest that he consult Messrs. J. and E. Ferris, 48, Great Russell Street, London, who have supplied me with a foot extension on which can be worn an ordinary boot. It is most comfortable, and effectually conceals the deformity of nearly 4 inches shortening due to hip-joint disease.

POPULAR VACCINATION LITERATURE.

DR. FREDERICK GOURLEY.—There is a brief paper on vaccination issued by the Local Government Board, 1888. A pamphlet entitled *Facts Concerning Vaccination for the Heads of Families*, issued by the National Health Society, to be had from Allman and Son, 67, New Oxford Street, is a very convenient publication for distribution. A more elaborate

but brief, pamphlet is that of Dr. E. J. Edwardes on *Vaccination and Small-pox*, published by J. and A. Churchill, 1s. Mr. Ernest Hart's book, entitled *The Truth about Vaccination* (Smith Elder and Co.), is out of print. *Compulsory Vaccination and Small-pox in Relation to Vaccination* (1s., Smith, Elder, and Co.), by Mr. Ernest Hart, has been reprinted from the BRITISH MEDICAL JOURNAL, and contains much useful information.

GAS COOKING STOVES.

MEDICAL OFFICER OF HEALTH writes: In reply to "Pensioner, M.D.," I can tell him that I about two months ago altered the movable gas lamp in my consulting-room into a "Welsbach patent," and have been so pleased with the result that I have had one put into my dining-room, and it gives sufficient light for the room, whereas before I had always to use two gas-burners. The heat given off by the "Welsbach" is not nearly so great as that from gas. A tradesman in the place I live tells me that he now uses ten of the patents instead of seventeen gas-burners, and that the heat in his shop is very much less in a very marked degree. I have to-day seen a patient, who at my wish has had one "Welsbach" put into his dining-room, and he informs me that this one light is equal to his three gas-burners, and that the room is much cooler. He has ordered one for his drawing-room and also his bedroom.

NOTES, LETTERS, Etc.

CONCURRENT VACCINATION AND MEASLES.

DR. RICHARD NEALE (South Hampstead, N.W.) writes: Dr. Garson (page 964) calls attention to the coexistence of measles and vaccinia, and states that he finds no allusion to such a combination in *Quain's Dictionary* and other works. A glance at section 75:5 of the *Medical Digest* will enable him to refer to several similar cases.

PRIZE ESSAY OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE following subjects have been suggested as subjects for the essay for the bronze medal and prize of ten guineas offered by the Medico-Psychological Association of Great Britain and Ireland to assistant medical officers of asylums: 1. The Relations of Chronic Kidney to Insanity. 2. Acute Paranoia. 3. Heredity and Degeneration. Any other subject may be selected, and full particulars can be obtained from the Registrar, Dr. J. B. Spence, Burntwood, Lichfield.

STRYCHNINE POISONING.

MR. JOHN N. TAYLOR, M.R.C.S. (Bristol) writes: In the very interesting case of strychnine poisoning related in the BRITISH MEDICAL JOURNAL of October 15th, p. 898, the writers say, "about $\frac{1}{2}$-gr. of the alkaloid had to be accounted for. No doubt some must have been wasted, as it seems almost impossible that so large a dose could be recovered from." May I be permitted to mention that *Taylor on Poisons* says, "I have been informed of a case where a patient took a grain of strychnia; vomiting supervened, and in the course of a few hours the patient recovered." Guy and Ferrier's book says "patients have survived doses of 20 grains or more;" and Armand Temple says "recovery has taken place even after as much as 40 grains.

VACCINATING INSTRUMENTS.

L. D. writes: If Dr. Batterbury will try the aseptic method of working in the lymph mentioned by me at p. 794 of the BRITISH MEDICAL JOURNAL, October 6th, I am sure he will be well pleased. The great superiority in my plan over his appears to me to be due to the fact that my pins are aseptic, and as you do all the work while holding the head-end of the pin, you do not foul your hands with lymph, etc. (as reversing the needle may bring to pass), and, therefore, you do not require to wash your hands once while vaccinating any number; besides, the eye end cannot be aseptic if held by septic fingers, and a certain amount of lymph gets lost by lodging in the eye while this end is being used for rubbing in.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(A) Mr. H. W. Aubrey, Bristol; Professor T. C. Allbutt, Cambridge; C. F. M. Althorpe, M.B., Bradford; Amicus; Dr. R. J. Anderson, Galway; Dr. G. E. Anderson, Cape Town; Mr. T. R. Atkinson, Sherborne; Mr. H. Armstrong, Liverpool; Mr. J. G. Alexander, London. **(B)** Mr. F. Boxall, Horsham; Dr. J. I. Bolton, Nottingham; Dr. J. Braithwaite, Leeds; Mr. W. Benham, Oxford; Mr. H. S. Bott, Tring, Mr. J. Le M. Bunch, London; Dr. M. Beverley, Norwich; Mr. L. A. Barrow, London; Dr. J. B. Brierley, Old Trafford; J. W. Batterham, M.B., St. Leonards; Dr. H. Brown, Coventry; Mr. W. E. Burton, Frodsham. **(C)** Messrs. Clayton, Jowett, and Co., London; Mr. A. V. Crossing, Plymouth; Dr. H. Collier, Great Yarmouth; Mr. S. Craddock, Bath; Mr. C. G. Cowen, London; Messrs. J. and A. Churchill, London; Mr. T. Christy, London; T. W. Cole, M.B., Bolsover; Dr. A. E. Cordes, Geneva; Mr. C. C. Claremont, Portsmouth; Dr. J. Carr, London; Mr. G. H. Carrington, Robin Hood's Bay; Dr. A. Cohen, London. **(D)** Dr. C. R. Drysdale, London; Dr. J. Dreschfeld, Manchester; R. Dudfield, M.B., London; Dr. C. Dukes, Rugby; Mr. T. J. Davies, Llanrwst; Dr. F. L. Dixey, Oxford. **(E)** Mr. W. L. E. Emery, Birmingham; Mr. F. Elvy, Eastbourne. **(F)** Mr. C. Forbes, London; Dr. A. Foxwell, Birmingham; F.R.C.S.; Fair Play; Dr. E. L. Fox, Clifton; Dr. J. L. Firth, Bristol; Mr. J. Fryer, Dewsbury; Dr. J. Fielding, Norwich. **(G)** Mr. J. B. Guthrie, Glasgow; P. R. Griffiths, M.B., Cardiff; W. Gordon, M.B., Exeter; Dr. F. Gourlay, Southend-on-Sea; Dr. K. A. Grossman, Liverpool; Mr. E. Goodall, Carmarthen; Dr. J. Galloway, London; Mr. W. J. Goodchild, London; Mr. R. B. Graham, Leven; G.P., M.D.; J. Groves, M.B., Newport, Isle of Wight; Mr. W. Gay, Leeds. **(H)** Mr. H. B. Hewetson, Leeds; Dr. H. Handford, Nottingham; Dr. W. Hunter, London; H. T. Hinton, M.B., Heytesbury; Mr. J. Hutchinson, jun., London. **(I)** Dr. C. R. Illingworth, London; Mr. S. Ingleby-Oddie, Leeds. **(J)** Mr. R. L. Jones, Bangor; Dr. H. R. Jones, Liverpool; Mr. R. Jones, Liverpool; Dr. E. L. Jones, Cambridge; Sir George Johnson, London; Mr. T. V. Jackson, Wolverhampton; W. Jessop, M.B., London; Mr. F. B. Jessett, London. **(K)** Mr. J. Kendall, Coniston; Dr. P. Kidd, London; Dr. J. Keser, London; Dr. T. G. Kelly, Desford. **(L)** Mr. J. Lloyd, Edgbaston; H. C. Lamport, M.B., Lancaster; Mr. R. Lake, London; Mr. W. B. Lewis, Wakefield; Sir Joseph Lister, London; Professor E. Leyden, Berlin; Dr. J. M. Lawrie, Weymouth; Mr. J. Lawrence-Hamilton, Brighton; Mr. S. R. Lovett, London; Dr. J. G. Lock, Denby; Mr. H. Littlewood, London; Dr. A. P. Luff, London; Mr. W. A. Loxton, Edgbaston; Dr. J. L. Livingstone, Winchester. **(M)** Dr. C. F. Marshall, London; Mr. R. T. Manson, Darlington; Mr. T. Moore, Fly; H. Mason, M.B., Leamington; Mr. C. A. Morton, Clifton; Mr. G. Marks, London; M.O.H.; Dr. J. Mackenzie, Burnley; Mr. A. E. May, South Hayling; Member; Dr. J. D. MacDonald, London; Mr. M. M. McHardy, London; Dr. W. Milligan, Manchester; Mr. J. Molony, Dublin; N. M. Maclehose, M.B., London; Mr. J. E. Morton, Chester; Dr. S. Mackenzie, London; D. McKenzie, M.B., Larkhall; W. G. Macpherson, M.B., Bothwell; Dr. G. T. Mockett, Birmingham; C. McCall, M.B., Cardiff. **(N)** Prof. J. L. Notter, Southampton; Mr. C. W. H. Newington, Pinner. **(O)** Dr. T. Oliver, Newcastle-on-Tyne. **(P)** R. Parker, M.B., Liverpool; Dr. A. Parkin, Hull; Sir W. O. Priestley, London; Mr. J. Paxton, Bradford; Mr. B. C. Powell, Roscrea; Mr. T. G. Parrott, Aylesbury. **(R)** Dr. A. J. M. Routh, London; Dr. H. B. Robinson, London; Dr. W. Robinson, Sunderland; Dr. J. S. R. Russell, London; Messrs. M. C. Rutnagur, and Co., Bombay; J. M. Ryan, M.B., Colchester. **(S)** Mr. J. Symons, Penzance; Dr. E. M. Skerritt, Clifton; Dr. J. B. Spence, Burntwood; Dr. J. H. Scott, Dunedin, New Zealand Mr. W. H. Sturge, Penzance; Mr. N. Smith, London; Mr. H. M. Smith, London; Dr. F. Semon, London; Dr. W. T. Stoker, Dublin; W. G. T. Story, M.B., Dublin; Mr. W. H. Sims, Washington; F. P. Sarjant, M.B., Chorley; Dr. T. Sinclair, Belfast; Sir E. H. Sieveking, London; Dr. T. B. Sutton, London; Dr. F. J. Smith, London; A. M. Sheild, M.B., London; Dr. L. G. Smith, London; Mr. C. C. E. Sterbrook, Edinburgh; R. H. Shaw, M.B., New Mills; Dr. A. E. Sansom, London; W. G. Spencer, M.B., London: Dr. R. Somerville, Galashiels; Mr. R. Swan, Dublin. **(T)** A. H. Tubby, M. B., London; Tarawera; Mr. A. T. Todd-White, Lancaster; Dr. T. W. Thursfield, Leamington; Dr. E. S. Thompson, London; Dr. F. S. Toogood, London: Dr. St. C. Thomson, London; Dr. W. M. Taylor, Edinburgh; T. M.: T. P.; Dr. D. F. D. Turner, Edinburgh; Mr. F. Treves, London. **(V)** Mr. F. Verney, London. **(W)** Mr. R. W. Welbank, Edinburgh; Mr. W. K. Walford, London; Messrs. J. Weiss and Son, London; Mr. J. C. Walker, Arlesley; Mr. B. J. E. Wright, Overton; Dr. T. T. Whipham, London; Mr. G. Whitman, London; C. Weldon, M.B., London; W. J. Walsham, M.B., London; Mr. W. Welch, Cranleigh; Mr. R. Wilkinson, London; Mr. H. de C. Woodcock, Leeds, etc.

BOOKS, Etc., RECEIVED.

Beryl: The Story of a Child. By Georgina M. Synge. London: Skeffington and Son. 1894.

Outlines of Biology. By P. C. Mitchell. London: Methuen and Co. 1894. 6s.

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A Monograph on the Diseases of the Breast, their Pathology and Treatment, with special reference to Cancer. By W. R. Williams. London: John Bale and Sons. 1894.

A Clinical Manual. By Dr. A. MacFarlane. London and New York: G. P. Putnam's Sons. 1894.

Aseptic Surgical Technique. By Dr. H. Robb. Philadelphia: J. B. Lippincott Co. 1894.

The Vaccination Question. By A. W. Hutton. London: Methuen and Co. 1894. 1s. 6d.

The Transactions of the Edinburgh Obstetrical Society, vol. xix. Session 1893-94. Edinburgh: Oliver and Boyd. 1894.

Dr. William Smellie and his Contemporaries. By Dr. J. Glaister. Glasgow: J. Maclehose and Sons. 1894. 10s. 6d.

The Disorders of Speech. By Dr. J. Wyllie. Edinburgh: Oliver and Boyd. 18s.

Traité Élémentaire d'Ophtalmologie. Par H. Nimier et F. Despagnet. Paris: Felix Alcan. 1894.

Formulaire des Stations d'Hiver. Par Dr. De la Harpe. Paris: J. B. Baillière et Fils. 1895. Fr. 3.

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*** In forwarding books the publishers are requested to state the selling prices.

SIXTY-SECOND ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION,
Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF LARYNGOLOGY AND OTOLOGY.

P. McBride, M.D., President.

A DISCUSSION ON THE PROGNOSIS OF CHRONIC NON-SUPPURATIVE OTITIS MEDIA, WITH IMPERFORATE MEMBRANE.

I.—George P. Field, M.R.C.S.,
Aural Surgeon to St. Mary's Hospital.

In the first place allow me to thank you for asking me, together with Dr. Barr, to open the discussion on chronic non-suppurative otitis media, with imperforate membrane.

I propose to include under this designation the so-called acute and chronic catarrhs of the Eustachian tube, as well as chronic catarrhs of the tube and middle ear, with and without secretion. I believe that though described under distinctive titles by some authors, they are all, unless we exclude simple mucous obstruction of the Eustachian tube, linked together by intermediate forms, and that chronic catarrh of the tube invariably invades the contiguous mucous lining of the tympanic cavity, after having existed long enough to merit the term chronic.

Our prognosis in these affections must depend upon a great many considerations, and I propose taking them in a definite order, commencing under the heading: History of the Case, with the Duration of the Symptoms. The shorter the length of time the subjective and other symptoms have existed, the more favourable the prognosis. In the secretive forms of catarrh, age and other adverse circumstances must be taken into consideration. We may, I think, fix six months to one year as the limit within which we can reasonably hope (whatever may have been the original cause) to completely restore perfect hearing.

Next as regards the cause: prognosis will depend very much upon whether we trace the middle ear affection to a common cold, to local conditions in the nose, naso-pharynx, or fauces, to past illnesses, or to general diseases of the constitution. The prognosis is extremely favourable in simple catarrhal states of the nasal and naso-pharyngeal mucous membrane of not long standing, and unless there are frequent relapses.

We also may hope for permanent cures from the removal of nasal and naso-pharyngeal polypi, adenoids, and enlarged faucial tonsils, where inflation had procured temporary relief. Speaking generally, in a hypertrophic state of the mucous membrane, we may give a favourable prognosis. On the other hand, chronic deafness due to, or at all events accompanying, dry forms of pharyngitis, are as a rule remarkably intractable. The prospects of improvement when the disease has followed an attack of measles, scarlet fever, influenza, typhus, in which pathogenic organisms may be presumed to have played an important *rôle*, are less favourable.

Hereditary predisposition is an element in the case which, however difficult it may be to explain, is almost universally acknowledged. Before allowing the fact of parents, or other members of the family, being deaf to influence our prognosis, we should bear in mind that what appears like hereditary transmission may be attributable to an exposure on the part of each member who has become deaf to the same climatic or other baneful influences which favour the development of catarrh.

The point to decide in this connection is whether the conduct of inflammatory new formations in the tympanum is influenced prejudicially by heredity in individuals whose parents or whose grandparents have themselves suffered from this disease.

The occupation of the patient is of importance, and must, be considered in conjunction with his climatic and hygienic surroundings and personal habits.

An occupation which exposes the subject continually to the influence of the weather, and to a liability to frequent relapses, such as those who gain their living in the open air all the year round, affords a much smaller prospect of throwing off a catarrh. An employment in the pursuit of which the auditory nerve is liable to undue irritation by loud noises, thereby adding the superaddition of labyrinthine disease upon an existing catarrh, affects the chances of the patient, whilst as regards the ill-effect of damp climate or of bad air little need be said. By lowering the general tone, or by keeping up a chronic catarrh of the pharynx, or even setting up an incurable pharyngitis, abuse of alcohol must of necessity aggravate the middle-ear catarrh.

By the mode of onset of the disease we shall be enabled to form some idea as to its future course. If the chronic affection has had its origin in an acute non-perforating otitis media, in which the inflammatory products have been incompletely absorbed and have become organised, we shall suspect adhesive processes, and an unfavourable termination.

A sudden onset, suggesting syphilis, which, as Bronner states, usually attacks the middle ear first, will justify a guarded prognosis. Politzer mentions that a rapid loss of hearing may especially be predicted in cases where sound perception through the cranial bones has been found wanting soon after the commencement of the attack.

A slow and insidious commencement, such as we are in the habit of attributing to primary sclerosis, is extremely unfavourable; the main symptoms being a normal membrane, permeable Eustachian tube, progressive deafness, and constant tinnitus. Prognosis is largely influenced by the age of the individual. Youth is no saving element in neglected catarrhs of long duration, but after about 50 years of age the chances of getting any result from treatment diminish rapidly. In the first place, the catarrh has probably existed some time, and thus an opportunity has arisen for the labyrinth to have become implicated; whilst if of more recent duration there is the fear that it will assume a sclerotic character, with consequent rigidity of the ossicular joints.

Passing next to the subjective symptoms, one of the most important of these is tinnitus. Its presence will influence our opinion unfavourably if it is loud and continuous, does not disappear after inflation, and is not, therefore, attributable to a temporary occlusion of the Eustachian tube: if, furthermore, it cannot be accounted for under any other hypothesis than that of an existing middle-ear catarrh, with commencing changes in the tympanic cavity or labyrinth. Giddiness or vertigo, accompanied by deafness, being a late symptom, and usually indicating increased labyrinthine pressure, is on the whole unfavourable.

Another subjective symptom is paracusis Willisii. With the exception of Sexton, who has met with instances of it which, from the results of treatment, justified a favourable prognosis, most writers (with whom my experience accords) regard it as an indication of sclerosis, and one that will render treatment useless.

It is true that a favourable condition of the auditory nerve may be diagnosed, but with fixation of the ossicles the most we can hope is that the deafness will remain stationary, and that so long as the symptom continues, it will never be complete.

From an inspection of the membrana tympani we may gather a good deal that will assist in forming a prognosis. A transparent state of this organ, showing through it a hyperæmic condition of the lining membrane, and revealing an early stage of catarrh, is an appearance which points to a favourable termination under treatment. Slight degrees of opacity may mean nothing, but high degrees of this condition are of very grave import. A thin and atrophied membrane, with loss of tension from abuse of inflation or long-continued external atmospheric pressure, is a lesion which can scarcely be remedied. Some assistance will be derived from watching the behaviour of the membrane during the application of the air douche, and also of Siegle's pneumatic

speculum, by which we shall judge of the degree of flaccidity of an atrophied membrane, and of the state of the ossicles.

Fluid secretion in the cavity of the tympanum, as occasionally seen through a transparent membrane in the best marked cases of the secreting form of chronic otitis media, does not carry with it an unfavourable prognosis. We are justified in presuming that the operation of paracentesis followed by inflation, or even inflation without incision of the membrane, will be sufficient to clear away the secretion and restore the hearing.

The next point to be taken up is the degree of the deafness, and the result of hearing tests.

It is a favourable sign if the deafness is variable, but as regards degree, slight deafness may yield no result to treatment, whereas very marked impairment of hearing may disappear altogether, so that, except in extreme degrees, no precise inference can be drawn from the symptom. When one ear is very deaf, there is said to be grave danger of an implication of the sound one.

From the state of the hearing after inflation by any of the recognised methods, we are enabled to judge better than by any other procedure whether we have to deal with a fixed or immovable obstruction to the aërial conduction of sound. If after the first and two or three subsequent applications of Politzer's bag or the catheter perfect hearing is restored, and tinnitus, if present, disappears, we are justified in anticipating a favourable result.

If, on the other hand, but little alteration is effected, or if the improvement is considerable but passes off in the course of a day or two, our conclusion must be that new formation of connective tissue has taken place, and the question becomes—whether the patient will retain what hearing he has got, and for how long; or whether further treatment will be of any avail?

The answer will be found in an investigation of the general health of the patient, the conditions under which he lives, his habits and family history, and the healthy condition of his throat, nose, and fauces as regards existing chronic catarrh.

The state of patency of the Eustachian tubes, as ascertained by the help of auscultation, and if occluded the extent to which they can be rendered pervious by inflation or mechanical dilatation, will also guide our opinion.

Politzer attaches importance to the result of his test for the patency of the tubes in forming a prognosis, especially where the deafness is unilateral. A vibrating tuning fork is held before the patient's nostrils, while he is directed to swallow.

The prognosis is said to be more favourable, if after being previously heard louder in the normal ear, the middle C tuning fork, after inflation, comes to be heard louder in the deafer ear, that is to say, if the result, like Weber's test, is positive for the diseased ear.

The Eustachian tube may, under these circumstances, be presumed to have been rendered patent after having been previously collapsed. If inflation produces no improvement at all in the hearing, and the Eustachian tubes are proved by auscultation to be patent; if, in fact, by these and other signs the diagnosis is clear, prognosis resolves itself practically into the question whether, or to what extent, the auditory nerve and labyrinth are becoming involved in the sclerosing process. We shall form a relatively more unfavourable prognosis if bone conduction is shortened at the mastoid, and if with this sign, hearing for tuning forks of low pitch and for conversation is better than for high tones, the watch tick, and for the upper registers of Galton's whistle. Further corroboration of nerve implication will be found if, in presence of considerable deafness, the patient hears worse in a noise.

From the point of view of the middle ear, our prognosis as guided by the tuning fork will be more unfavourable if Rinne's test is negative for forks of all grades. In the case of old people, owing to the shortening of their bone conduction and gradual loss of appreciation of high tones at the meatus, these tests are of considerably less value.

One word as to the state of the general health, which cannot be left out of consideration. If the hypothesis is correct that the aural lesions in chronic middle-ear catarrh are the last enactments, so to speak, of a long series of faulty and abnormal processes in the organism, it is all the more obvious that the presence of such states as anæmia, cachexia, tubercle and the like, which still further contribute towards a lowering of the general nervous and constitutional tone, will greatly aggravate existing morbid conditions, and will contribute towards the progress of the disease.

In conclusion, a word as to prognosis from the point of view of treatment after removal of every ascertainable local cause in the adjoining regions and after the Eustachian tube has been rendered permeable.

1. From the pilocarpin injections, intratympanic and subcutaneous, I have had many good results. The prospects of benefit from this treatment are especially favourable where there is a history of syphilis, if there are labyrinthine complications.

2. From operations upon the membrane and ossicles. The results obtained by American surgeons after removal of the malleus and incus are so far encouraging as to warrant us in holding out some prospect of relief to certain of the subjective symptoms in patients suffering from advanced sclerosis. That is to say, they will in all probability obtain amelioration of the tinnitus and vertigo, and, perhaps, gain some improvement in their hearing.

Sexton gives a more favourable prognosis if the patient can be induced to go through this particular operation in the early stages of the catarrh, but in any case he believes he can preserve the *status quo* and arrest the progress of disease by removing disorganised parts.

To sum up: 1. Prognosis in chronic middle-ear catarrh is most favourable in children and young adults, in whom the cause is plainly attributable to local and removable obstruction, naso-pharyngeal or faucial abnormalities, or to simple mucous obstruction of the Eustachian tube from a common cold, or other temporary catarrhal condition, the result of inflation and other tests, satisfying us that secondary changes have not yet occurred to impede the functions of the membrane and ossicles.

2. When, from whatever cause arising, or however long or short the duration, or from the age of the patient and other circumstances, the hearing power after inflation is recovered in part only, the inference is that consecutive changes due to organisation of secretions have already commenced, and that slowly or quickly, depending upon a number of conditions already detailed, the disease will continue to develop, no matter what treatment be adopted (Sexton, Roosa). Roosa thinks that about 20 per cent. adult patients are relieved, but none absolutely cured.

3. The prognosis is unfavourable where, with much deafness, there is no improvement whatever after forcible catheterisation, dilatation of the Eustachian tube, removal of secretions, or the intratympanic injection of solvents.

4. The prognosis is absolutely bad (still as regards improvement) when the symptoms point to primary sclerosis; and worst of all (as regards in this case retention of any hearing power) where, with or without sclerosis, the tuning-fork tests point to serious labyrinthine disturbance.

II.—Thomas Barr, M.D.,

Surgeon Glasgow Hospital for Diseases of the Ear.

Varieties of the Affection.

In discussing the prognosis of non-suppurative or non-perforative otitis media, it is essential first to take into account the varied pathological conditions included under this term. We must specially distinguish (1) the exudative form of otitis media, with swelling and hypersecretion of the mucous membrane of the middle ear; (2) the non-exudative class, attended by interstitial change with new formation of connective tissue in the mucous membrane; (3) the mixed class, in which the exudative form of inflammation is superadded to an already existing interstitial form; and (4) the class in which these are complicated with a disturbance in the labyrinth. The prognosis will hang very much upon our ideas of the predominance of one or other of these conditions.

Exudative Form of Non-Perforative Otitis Media.

The consideration of the prognosis of the exudative class need not detain us long, the prognostic problem being here much simpler than in the non-exudative. There are the

simple painless exudations with but slight inflammatory change in the tympanic membrane, and the painful exudations with pronounced inflammatory change in the membrane.

Painless Exudative Inflammation.

With regard to the painless exudative inflammations so common in childhood, we can fortunately predict in the great majority of cases complete recovery, with intact structures and unimpaired function. It may be said, indeed, that with the discovery of post-nasal adenoid growths and their operative treatment, the prospect of effecting a complete cure in this class of affections has attained a degree of certainty seldom reached in any other region of the body. Only very exceptionally do such cases proceed to permanent adhesions or interstitial changes, and very rarely are they complicated with labyrinthine mischief. When occurring in adult life there may be more frequently a less perfect recovery, owing to the affection being then sometimes engrafted upon pre-existing conditions, such as stiffening or adhesive processes in the tympanic structures. If thoroughly effective inflation of the middle ear, especially when accompanied by incision of the membrane and evacuation of the secretion, produce little or no improvement in the hearing, we may suspect that there are permanent organised products in the middle ear, or that there is a concomitant affection of the labyrinth.

Painful Exudative Inflammation.

In the more painful and markedly inflammatory forms of exudation the prospects, in my experience, of leaving behind an intact organ are not quite so favourable. Owing to its usually viscid character the secretion is not so readily absorbed without treatment, while from the greater depth and intensity of the inflammatory process, permanent changes in the mucous membrane are more to be feared. In after years we often find patients tracing their permanent deafness to earaches in childhood, no doubt the expressions of non-perforative inflammations which had initiated the permanent interstitial changes which we may now discover in the ear. That the pathological meaning of these earaches is rarely understood by the physician, and that as a consequence unseen and unsuspected processes are allowed to pursue their course undisturbed by treatment, shows a defect in medical education which we have still to deplore.

It may be truly affirmed that in these exudative forms of otitis media, whether of the more simple or the more inflammatory kind, the cases are few in which improvement cannot be effected by appropriate treatment, while entire recovery is the rule. Only when treatment is completely neglected or imperfect, or where the affection occurs in certain unfavourable states of health which will be referred to further on, may serious and permanent consequences ensue. The inflammatory process may in such circumstances lead (1) to irremediable condensations, contractions, or adhesions; (2) to softening and perforation with all the possible consequences, or (3) to the development of grave labyrinthine changes.

Non-exudative Forms of Otitis Media.

We now come to the more complicated problem of the prognosis of the non-exudative forms of otitis media. Here we have to take into account the existence of structural changes on the inner and outer walls of the tympanic cavity, with stiffening, rigidity, and immobility of the ossicles and the other essential parts of the conducting structures. The prospects here are therefore very different and much less favourable than in the exudative form. Indeed, it is our duty in many cases frankly to explain to the patient that, while it may be possible to improve the hearing or mitigate the subjective sounds, the return to normal function is out of the question.

Importance of Objective Symptoms.

It may be said broadly that in any given case the more marked the objective changes found in the ear the more favourable are the prospects of improvement. If we find manifest signs of catarrhal or inflammatory changes in the middle ear—an indrawn membrane, a prominent posterior fold, an obstructed Eustachian tube, an atrophied membrane; if nasal stenosis, post-nasal catarrh, or adenoid vegetations are present; and especially if, by a single efficient inflation by the catheter or Politzer's method, a measure of improvement in the hearing or a diminution in the intensity of the subjective sounds be observed, the prospects are decidedly favourable. We may anticipate by judicious treatment to effect relative improvement in the condition of the hearing, with mitigation of the subjective sounds, while we may reasonably hope to check or hinder the further development of the stiffening and adhesive processes. If, on the other hand, in a case presenting marked defect of hearing and violent subjective sounds, originating imperceptibly and progressing rapidly, we find no abnormal change in the tympanic membrane; if the naso-pharynx and nasal passages exhibit neither catarrhal nor hypertrophic change; if the Eustachian tube is freely permeable, and especially if no improvement in hearing is produced by a single successful inflation, the likelihood is that very little good will be effected by treatment. The fenestral structures and the ossicular joints are probably permanently stiffened.

Information from Results of Inflation.

I have emphasised the fact that the absence of improvement, or the temporary aggravation in the deafness after a single act of inflation, must be looked upon as, in most cases, an unfavourable omen. This is especially so if the air passes through the Eustachian tube into the cavity of the tympanum with a full clear sound, showing an open, if not abnormally open, Eustachian tube, and yet no improvement in the hearing follows. In cases, on the other hand, where the air enters the tympanum feebly, yielding a thin, shrill, intermittent sound, with slight improvement in hearing, I feel more hopeful of doing good than in the previous case. By a course of inflation, we may reasonably hope to overcome, in some measure the adhesive and stiffening processes, if those are not so completely organised as to resist entirely the mechanical effect of repeated acts of inflation. My experience, however, has taught me that it is unsafe hastily to assume, in all cases where a negative result from inflation is found, that no good will be achieved by a course of treatment. Especially when the mucous membrane of the nasal passages or naso-pharynx is the seat of a catarrhal or hypertrophic process, I have found that real and permanent improvement has sometimes followed treatment.

The Test of Treatment.

It is rare indeed, whatever the pathological conditions found or supposed to exist, that we are justified in definitely excluding the possibility of doing good until we have applied the test of treatment. We must be very careful, however, not to push this experimental treatment too far; we must watch closely that no increase in the deafness, or in the subjective sounds, is produced by it; and that on the first indication of such an untoward result, the experimental efforts be immediately discontinued. I would here protest against exaggerating the *rôle* played in the causation of this affection by deviation of, or ridges on, the nasal septum. To promise to the patient, as is sometimes done, improvement in the hearing if such projections are removed is, I think, quite unjustifiable.

Exudative Element Superadded to the Interstitial.

In the mixed class of cases, where the exudative form of inflammation is superadded to an already existing interstitial form, the prognosis is undoubtedly much more favourable. A patient who has been dull of hearing for many years becomes suddenly worse. This will frequently be found to be due to a fresher process of an exudative nature being added to a previous interstitial affection. Immediate improvement generally follows inflation in such cases, and we are able to relieve the anxieties of the patient, and promise at least a return to the previous condition.

Otitis Media Associated with Labyrinthine Disturbance.

In the class of cases of otitis media supposed to be associated with labyrinthine disturbance, the facts yielded by tests applied to determine the state of the bone conduction of sound in relation to the air conduction are of considerable importance. While there is no doubt that excess of bone conduction, as tested both by Weber's and Rinne's tests, should be regarded as a favourable point in the prognosis, it is by no means a reliable indication that treatment will

prove useful. That incurable stiffening of the ossicles may be attended by relative excess of bone conduction is a familiar clinical fact. In like manner where the bone conduction is found to be relatively weak, we must not hastily give an absolutely unfavourable prognosis. I refer not merely to persons over 60 years of age in whom, as we know, weak conduction by the bone is usual, but to patients in early and middle life, where, notwithstanding the existence of relatively weak bone conduction, improvement sometimes follows a course of treatment. There are no doubt many cases of middle-ear inflammation associated at the same time with a nerve or labyrinthine affection, it may be temporary in character, the latter neutralising, or more than neutralising, the tendency to excess of bone conduction excited by the former. In such cases the treatment of the inflammatory element in the middle ear, or of the labyrinthine disturbance, may lead to appreciable improvement. Still it must be admitted that weak bone conduction has usually a sinister meaning, and nearly always implies, even in the exudative form, that no more than partial improvement need be expected from treatment. In my experience weak bone conduction bears the worst meaning in cases of non-exudative otitis media in children, where repeated inflation produces no impression upon the hearing. In regard, therefore, to the significance of excessive or defective bone conduction, I have learnt to exercise caution in giving a categorical opinion simply upon such a basis. The other features of the case, both subjective and objective, which have been already adverted to, must at the same time be carefully considered.

The Significance of Hearing Better in a Noise.

Does the presence of the phenomenon of hearing better in a noise influence the prognosis in such cases? There is no doubt that this anomaly of hearing is present in a considerable number of the non-exudative cases of otitis media, and it is now generally admitted, I think, that its presence indicates a degree of stiffening of the conducting structures. In so far as this is the case, it is generally regarded as unfavourable in a prognostic point of view. It must not be regarded, however, as necessarily excluding all chance of improvement. As a matter of fact, improvement does occasionally follow the judicious treatment of cases associated with this phenomenon.

The Bearing of Defective States of Health upon Prognosis.

Lastly, I would refer shortly to the bearing on the prognosis of this affection of unhealthy constitutional conditions or tendencies. We all recognise the fact that in both forms of exudative otitis media the tendency to the development of permanent changes, or to suppuration and perforation, is greater in unsound constitutions, especially in the tuberculous or scrofulous or anæmic conditions. Likewise, when we are cognisant of the existence of a marked hereditary tendency to middle-ear disease or nasal catarrh, the prospects in all forms of otitis media must be regarded as thereby rendered more unfavourable. It goes without saying, also, that when the patient's mode of life is such as to be unfavourable to health or such as to expose him to the usual causes of middle-ear inflammation, there is a greater tendency to persistence or recurrence of the disease. The exanthematous diseases, especially measles and scarlet fever, often impress upon the inflammation a marked tendency to the development of permanent changes in the tympanum.

Specific disease seems to engraft upon these cases a serious character. I have frequently seen, in cases of non-exudative otitis media which had been quiescent for a considerable time, a rapid change for the worse, due, I have thought, to involvement of the labyrinth, after the reception into the system of this virus. A sad instance occurring in the person of a medical man came under my observation. After having had a moderate defect of hearing for a length of time, due to the interstitial form of otitis media, he was inoculated with the syphilitic poison. This was done through the medium of a scratch on his finger received whilst conducting the accouchement of a woman suffering from primary syphilis. Not long afterwards the hearing became rapidly worse, and ultimately he was compelled to resort to a conversation tube, with, of course, the most critical effects on his practice. So when the non-exudative otitis media occurs in a constitution already infected with syphilis, the progress must be regarded as much less favourable, owing to the greater tendency to labyrinthine complication, with defective bone conduction.

I have not referred to the bearing upon the prognosis of the statistical statements published from time to time by various authors, professing to show the percentage of improvements or cures in this class of affections. In my opinion, we have not yet at our command sufficiently reliable information in the form of statistics, as to the results of treatment to throw much light upon the prognosis of this affection.

III.—J. Dundas Grant, M.D., F.R.C.S.Eng.,
Surgeon Central London Throat and Ear Hospital.

Dr. Grant was glad to hear the result of Mr. Field's large experience and that of Dr. Barr, with which his own was largely in accord. He had formulated certain rough rules for prognosis, which appeared to contain the gist of what Mr. Field and Dr. Barr had arrived at. He (Dr. Grant) divided the cases of chronic non-suppurative catarrh into three classes:—1. Those in which there was evidence of Eustachian obstruction with improvement on inflation, in which the prognosis was distinctly favourable. 2. Those in which there was no evidence of Eustachian obstruction without improvement on inflation, in which the prognosis was unfavourable. 3. Those in which there was evidence of Eustachian obstruction and little or no immediate improvement on inflation. In these the prognosis was intermediate between the two others. He did not intend to pass in review all the elements Mr. Field had enumerated, but would confine himself to a few with regard to which no remark had been made. The element of sex had forced itself upon Dr. Grant's notice as of great importance. He had been greatly struck by the relative frequency and obstinacy of cases of chronic catarrh of the tympanum occurring in young girls as compared with those in young male patients. He had no doubt as to the fact, but he was not certain as to the cause. It might be: (1) Relative constitutional and nervous debility; (2) the toxic effect of the chronic constipation so habitual in young girls; (3) catarrh acquired and repeated, owing to imperfect drying after washing the long hair; (4) a neurotic or hysterical affection behind the catarrh; (5) the periodical disturbances of physiological balance peculiar to the sex. He asked for further information and suggestion on this point. If the mode of onset was insidious, with tinnitus from the commencement, the prognosis was much more unfavourable than if acute with a well-marked catarrhal origin. He understood Mr. Field to say that the acute origin was unfavourable. A point not referred to was the anæsthesia of the membrana tympani observed in many cases, and attributable to atrophy of the sensory nerves. Dr. Grant had frequently noticed a similar condition in the interior of the tympanum, the patient not perceiving the entrance of air into the tympanum on inflation when auscultation rendered it certain that it had done so. This was an unfavourable omen, and supported the idea that chronic dry catarrh of the middle ear was in many cases a trophoneurosis. In many cases fixation of ossicles revealed by Siegle's speculum accounted for intractability under the ordinary methods of treatment. This was frequently due to arthritic processes, and yielded to mobilisation by means of Siegle's speculum, Delstanche's *rarefacteur*, or Lucae's spring probe. The diminution of bone conduction occurring in later stages might be due to fixation of the stapes, or to secondary affection of the auditory nerve; but, in view of Bezold's studies, it might often be attributed to an affection (thickening or fixation) of the fenestra rotunda. He thought that in reports of results of treatment of syphilitic disease of the labyrinth, more definite statements should be made as to whether the disease had occurred in the relatively tractable secondary stage. He would recommend the employment of Rinne's test with forks of different pitch with a view to prognosis. As a means of treatment which had given him unexpectedly good results, he now made use of Eustachian injections of parolein medicated with menthol and camphor.

IV.—Lennox Browne, F.R.C.S.Ed.,

Senior Surgeon Central London Throat, Nose, and Ear Hospital.

Mr. Browne would only refer to one or two points which had occurred to him as he had listened to the papers of Mr. Field and Dr. Barr. In the first place, he had been pleased to observe that the word "catarrh" or "catarrhal" was omitted from the subject title, and regretted to find it introduced so frequently in the opening remarks. When one talked of a dry pharyngeal catarrh, the term merely represented a condition due to nasal obstruction and consequent mouth breathing, while post-nasal catarrh indicated disease in the naso-pharyngeal vault or in one of the sinuses. Consideration of "catarrh," therefore, as an element of prognosis was misleading. He referred to the fact that neither the appearance of the membrane nor the effect of inflation was always to be relied on; for the former might often be transparent in many cases of considerable middle-ear mischief; and with many other hopeful indications inflation was sometimes followed by no improvement, and even a temporary diminution of hearing power. And the same might be said of tests for auditory nerve implication. He agreed with Dr. Dundas Grant as to a process of nerve dulling in this class of cases, which was frequently overcome on the removal of impediments to normal conduction. The one great indication for treatment was to ensure an absolutely free nostril by the removal of all obstructions to nasal patency, whether hard or soft. He regretted that Dr. Barr should think it quite unjustifiable to offer prospects of improvement in the hearing if such (rigid) projections were removed. It was doubtful whether we were ever justified in holding out bright prospects of relief in any case of chronic middle-ear deafness; but our views as to the degree of hope to be held out must naturally vary with our individual experience; and while one with small experience of the effect of removal of rigid (bony) obstructions in the nose might not feel justified in offering hope, another with larger experience or happier results might feel so justified. As to other points of treatment in relation to prognosis, the speaker considered the constant passage of catheters and long-continued inflation useless in the case of impaired nasal patency unless the cause were removed, and as indeed calculated to increase the nasal obstruction. When relief had been effected in this direction, catheterisation, etc., was often found not to be required. He also deprecated the use of steam inhalations and of aqueous nasal douches in cases of hypertrophic rhinitis as tending only to increase the already "water-soaked" condition of the turbinal coverings.

V.—J. K. Love, M.D.,

Lecturer on Aural Surgery, St. Mungo's College, Glasgow.

Dr. Love said: The chief feature suggested by the discussion is the pessimistic nature of the outlook in the absence of any removable cause in the nose. The chief difficulty is to distinguish between the various forms described by Dr. Barr as interstitial and exudative, etc. In the absence of such a diagnostic test it is important to have some definite rule for procedure. In cases where there is no removable cause in the naso-pharynx, where the patient is over 50 and where no operative procedure is likely to do good, what course are we to follow? Inflation by catheter for a period of three weeks appears to be sufficient for the formation of a definite opinion in the typical case of non-suppurative catarrh. If improvement does not follow the patient should be frankly told that treatment is not likely to do good.

VI.—Walker Downie, M.B.,

Surgeon Throat and Nose Department, Western Infirmary, Glasgow.

Dr. Walker Downie said: Heredity in chronic non-suppurative otitis media, touched upon by Mr. Field, is an important factor, but there may not be a predisposition to a middle-ear sclerosis, but to superficial catarrhal inflammation of the pharynx. In addition I think we have marked differences in the calibre of the Eustachian tubes, just as we have the external auditory meatus varying in length, direction, and diameter. In those cases associated with catarrhal symptoms, that is, of an inflammatory character with formation of discharge, evacuation of the middle ear is of the greatest importance, and where inflation is not sufficient to at once bring about this result paracentesis should be done without delay. Much valuable time is often lost by prolonged dependence on the use of inflation alone. In the use of pilocarpin hypodermically, recommended by Mr. Field, I must say that in middle-ear sclerosis it has been of but little avail, although in the affection of the labyrinth due to recently acquired syphilis, improvement does occasionally follow its use. Then, in regard to Dr. Barr's remarks anent septal hypertrophies and displacements, when those deformities of the nasal septum are sufficient to interfere with respiration or with the evacuation of nasal or naso-pharyngeal discharge, such deformities should be removed and a free airway restored. This is of very great importance in the treatment of chronic pharyngeal as well as tympanic conditions. Where the otitis is of a distinctly catarrhal character prognosis is favourable if appropriate treatment be applied early.

VII.—W. Permewan, M.D., F.R.C.S.,

Liverpool.

Dr. Permewan would like an expression of opinion on the relation of syphilis to otitis media chronica. What hope is there in a case of four years' duration, only slightly improved by inflation, but very much improved by injections of a solution of iodide of potassium, this improvement being, however, only temporary? Dr. Permewan thought that inflation should be continued for a period of six months before forming a hopeless prognosis. It was the long continuance of the treatment which often gave some hope of improvement. He did not think it probable, as stated by some authors, that long-continued inflation was likely to do material harm.

VIII.—William Hill, M.D.,

Assistant Lecturer on Anatomy St. Mary's Hospital.

Dr. W. Hill remarked, in reference to old-standing chronic aural catarrh, that in his experience the presence of soft obstructions in the nose and pharynx influenced prognosis to the extent that in advising operative treatment we were justified in giving the patient more hope of relief in this condition than in the case of hard rigid obstructions, such as spurs and deflections of the septum; but though in neither instance were we justified in actually prognosticating relief after operation, the result being so uncertain, yet, inasmuch as such treatment was occasionally successful, most patients would be well advised to have any obstructive conditions in the nose and naso-pharynx, whether soft or hard, removed. Dr. Hill advocated the use of the Eustachian bougie as a last resource, and alluded to one case in which a catgut fiddle string used by the patient through the catheter as a bougie had produced immediate, though temporary, relief, although a bad prognosis had been given before bougieing was tried.

IX.—R. McKenzie Johnston, M.D.,

Assistant Surgeon for Ear and Throat, Royal Infirmary, Edinburgh.

Dr. McKenzie Johnston wished to know when Mr. Field considered that a middle-ear catarrh became chronic. He thought that if we excluded recent obstructive cases, and when no secondary changes had commenced, we should find the prognosis, generally speaking, to be unfavourable in the remaining chronic cases of old standing. He referred to the statement made in most textbooks that "hearing better in a noise" gave a bad prognosis, and stated that he had seen several exceptions to this. He agreed with Dr. Dundas Grant that many cases of chronic middle-ear catarrh occurred among females, and he stated that these cases in his experience were generally cases of chronic dry catarrh, and that they exhibited evidence of a lowered state of health, and he agreed that the prognosis in these was bad.

X.—H. Knapp, M.D.,

New York.

The prognosis of chronic middle-ear inflammation depends, as many gentlemen have stated, on the conditions which a patient presents when he first calls on the physician. As long as the various causes of deafness, in particular adenoid growths and nasal disease, can be cured or benefited by treatment, the prognosis is proportionately good. When the un-

checked persistence of the causes has produced very marked impairment of hearing, the removal of those causes either by natural termination or treatment, even when cicatricial tissue has, to a large extent, substituted the mucous membrane and interferes with the conduction sound, an improvement of hearing may occur, if the patient is placed under favourable hygienic conditions, so that the hearing organ can adapt itself to the new conditions. In this way the hardness of hearing may at least become stationary for many years. As in the discussion the prognosis has been stated to be more or less influenced by certain modes of treatment, that is, what good these can do, I may say a few words on two modes which have not been mentioned. Both rest on the surgical principle of treating stiff joints by forcible movements. The first is the electric vibrophone, which during the last year has been so much spoken of in America. Some aurists report favourable results from its use; others, of whom I am one, have found that the vibrophone in most cases produces a slight increase of hearing acuteness, but it is transient, and even if longer used, even this improvement is no longer perceptible. The second is the pressure probe of Professor Lucae, of Berlin. Formerly the instrument was stiff, and caused a good deal of pain, and even superficial vulneration with hæmorrhage of the drum membrane. Lately Lucae has obviated these drawbacks by making the probe elastic and dipping its end in a cooling solution (iced water and salt) for a short time. With this he moves the ossicular apparatus by applying from ten to fifteen short successive pressures on the short process. Lucae says that in a certain percentage of cases this treatment has been highly gratifying. Last week I saw him apply this treatment in two cases whose hearing had indeed been very much improved.

XI.—L. H. Pegler, M.D.,
London.

Dr. Pegler remarked with reference to Mr. Browne's observation that deafness was often rendered temporarily worse by Politzerisation or that improvement followed tardily, that this inconvenience might be avoided by the use of the self-inflator now in common employment at the Central Throat Hospital in London, and designed by Dr. Dundas Grant. The air in this little instrument being charged with chloroform vapour gained easy access through the Eustachian tube to the tympanic cavity, and the patient being in a position to use the minimum amount of air pressure the bad results otherwise incurred to the membrana tympani by over-inflation were avoided. He was anxious to supplement Dr. Grant's remarks, which were necessarily cut short by want of time, with a mention of what he was sure that gentleman would wish to have said himself on the subject of Dench's graduated Rinne test as an element in prognosis. By employing the whole scale of forks from C_2 to C_5 one arrived at the conclusion that prognosis was unfavourable if Rinne's test was negative for the whole series but was more hopeful and positive for the high-pitched ones. With regard to prognosis from the point of view of results of certain methods of treatment, to wit intratympanic injections, he had employed several of the usually vaunted remedies, but found, except in one or two cases, but little actual benefit. He had tried solutions of menthol in parolein for about two years, though in rather stronger percentage than had recently been recommended. He thought the results were encouraging and he was glad the remedy was being given a further trial by others.

XII.—W. Milligan, M.D.,
Lecturer on Diseases of the Ear, Owens College, Manchester.

Dr. Milligan said that in considering the prognosis of chronic non-suppurative otitis media with imperforate membrane it was necessary to draw a marked distinction between those cases in which catarrhal and exudative changes predominated, and those in which adhesive and more organised products were formed as the result of the pathological process. In the first class of case the morbid process consisted in a catarrhal inflammation of the tympanic mucous membrane, accompanied by swelling and desquamation, and by the exudation of some form of serous or mucous fluid into the cavity. In such cases one or other of the following changes might take place. The fluid might either be absorbed or be removed by some method of treatment, and the middle ear be left practically intact. On the other hand, however, inflammatory products might develop, leading either to abnormal adhesion of intratympanic structures, or to a marked want of mobility between the ossicular joints, with the result that more or less loss of hearing would ensue. The intensity of the original process and its duration became, therefore, very important elements in the prognosis of the case. The more marked the objective changes seen in the membrana tympani the more difficulty would there be in restoring hearing. Thus very opaque, lustreless, retracted, or adherent membranes offered considerable obstacles to successful treatment. He considered the state of permeability of the Eustachian tube and the changes which took place in the middle ear after inflation most important factors from the prognostic point of view. He had formulated for his own guidance the following hypothesis: "The amount of hearing which can be estimated to exist in any given case after successfully inflating the middle ear either by means of Politzer's bag or the Eustachian catheter can generally be maintained, provided treatment be efficiently carried out." Roughly speaking he had found this a good basis to work upon. On the other hand, if little or no change in the amount of hearing took place after inflation, and the Eustachian tubes were fairly free, he had found little or no benefit result from treatment.

He considered that the state of the Eustachian tubes should always be very carefully investigated, and that in obstructed cases it was essential to procure their permeability if possible, and to treat efficiently any morbid state of the naso-pharyngeal mucous membrane which tended to favour their closure. He laid great stress upon having the nasal passages in proper working order, and upon having the palatal muscles with efficient tone, so that the middle ear might as far as possible be regularly ventilated.

Another important factor to estimate in cases in which cranial perception of the tuning fork was deficient was, how much of this was due to actual change in the labyrinthine structures such as might be caused by an extension of catarrh, and how much was due to increased intralabyrinthine pressure of tympano-mechanical origin. The more inflation improved such cases and the more positive Rinne's test became after this, the better the subsequent outlook. He considered the surroundings of the patient and his occupation were important entities with which to deal. He had seen many cases of middle-ear catarrh which were certainly aggravated, if not actually caused, by working in close, damp, and overheated rooms. Thus among many of the Lancashire cotton operatives, when the work had to be carried on amidst damp and enervating surroundings, the affection was very common. Nasal, post-nasal, and consequent Eustachian catarrh were very common; and when there was added to this some cachectic or anæmic state of the general health it would readily be seen that circumstances were in favour of establishing obstinate middle-ear catarrh. In addition, he was inclined to think that the constant rattle and noise from the machinery was such as to induce slight auditory concussion, which lessened more than ever the hopefulness of the prognosis. He was in the habit of always telling such patients to wear cotton wool in their ears during the time they worked in the mill, so as if possible to diminish the force of the surrounding sonorous vibrations.

The outlook in cases of adhesive catarrh was unfortunately not nearly so good as in the exudative catarrhal form. In adhesive catarrh we had to deal with more highly organised changes, which we could hardly expect to get rid of either by local application to the ear itself or by carefully regulating the state of the general health and the mode of living. In addition, the disease was frequently so insidious in its origin that patients rarely came under observation until the process had made very considerable strides. It was also very difficult in many cases to gauge accurately the extent of the inflammatory deposit and its exact situation. In many cases the Eustachian tube would be found quite permeable, at times even too patent. Here, again, the extent of improvement in the hearing after free inflation must be taken as a gauge of what amount of hearing was likely to be attained from energetic treatment. He had found in adhesive inflam-

mation where the Eustachian tube was free, and where no improvement in the hearing resulted after inflation, that the outlook was very bad indeed. He had noted in many such cases, especially among young females, that the activity of the process was much accelerated by the habit of constantly washing the hair. The difficulty of thoroughly drying long hair was such that he always instructed such patients to wet the head as seldom as was compatible with cleanliness, and when it was washed to see that it was well dried. Climate, hereditary tendency, and impaired general health had much to do with aggravating the complaint; and where possible he advised such patients as could afford it to spend the winter and the early spring abroad in a climate more sunny, dry, and genial than was usually to be found at home.

Speaking generally, he found that in those cases where objective evidences of disease were well marked, where little or no improvement followed free inflation of the middle ear, where tinnitus was constant and severe, where cranial perception of sound was diminished, where the general health of the patient was poor, where a marked hereditary tendency existed, and where the surroundings of the patient were unhygienic, the prognosis was bad.

ON THE CARE OF THE EAR DURING THE COURSE OF THE EXANTHEMATA.

By Walker Downie, M.B.,

Fellow and Examiner in Aural Surgery for the Fellowship of the Faculty of Physicians and Surgeons; Honorary Aurist Royal Hospital for Sick Children; Surgeon Throat and Nose Department, Western Infirmary, Glasgow.

In the presence of so many *confrères* who devote their best energies to the elucidation and treatment of diseases of the organ of hearing, it is unnecessary for me to dwell at length upon the frequency with which the ear is implicated during the currency of certain general diseases.

That the ear is affected in a large proportion of cases of scarlet fever and measles, as well as in many other conditions accompanied by catarrhal symptoms, will I think be granted by all present. The far-reaching nature of the mischief resulting is brought under the observation of the aurist almost daily, and the same story is so oft repeated that he is tempted, like many of the laity, to look upon this sequela as not only a matter of course but a necessity.

Before proceeding with the consideration of preventive measures, I desire to direct your attention to the analysis of the first 600 cases of diseases of the ear treated by me at the dispensary of the Royal Hospital for Sick Children in Glasgow, so that by the help of figures the frequency with which serious tympanic disease results may be emphasised, and the importance of this subject more readily grasped.

The patients on whom those observations are based varied in age from 7 weeks to 12 years.

Of the 600 cases:

45 cases, or 7.5 per cent.,	were due to eczema of the auricle and meatus.		
30	,, 5.0	,,	had impacted cerumen.
12	,, 2.0	,,	were the result of injury.
7	,, 1.0	,,	had furuncular abscess of the meatus.
4	,, 0.6	,,	had foreign bodies in the meatus.

Of the 600 cases, 468 had discharge; but, excluding those in which the discharge was due to eczema, to injury, to the presence of a foreign body, and to abscess of the meatus—that is, where the discharge originated in the external meatus—the total number of which was 64, there remained 404 cases (67.3 per cent.) with discharge originating in the middle ear. These 132 cases were unaccompanied by discharge, of which number 97 were middle-ear cases. Thus, out of the 600 cases, there were 501 cases of middle-ear disease (404 with and 97 without discharge): that is, in 83.5 per cent. of the total number who applied for treatment, the tympanum was affected.

Coming to the cause assigned in those 501 cases of tympanic involvement, we have the following list:

131 cases, or 26.1 per cent.,	originated during an attack of measles.		
63	,, 12.6	,, ,, ,, ,,	scarlet fever.
15	,, 3.0	,, ,, ,, ,,	whooping-cough.
3	,, 0.6	,, ,, ,, ,,	mumps.
147	,, 29.4	,, were catarrhal in origin.	
101	,, 20.0	,, originated during the eruption of teeth.	
	,, 1.6	,, were syphilitic in nature.	

Of the remaining 6.7 per cent. the history obtainable was so indefinite or uncertain in character as to render it unreliable; and I may here say that in considering causation doubtful statements were carefully excluded and every possible care was taken to get reliable data.

The number of cases stated as originating during the course of measles and scarlet fever, though large—forming as they do two-fifths of all the middle-ear cases examined—does not indicate the number of cases in which the ear is affected during the currency of those diseases, but rather points to the proportion of chronic ear affections which follow on them. Many acute cases prove fatal, while others, on account of their acute character, have active treatment applied, by which structural changes are prevented and the ear in many cases is restored to its normal condition.

When a child suffers from measles or scarlet fever, the fauces and pharynx are in almost every case affected to a greater or less degree. Whether the throat is primarily affected, that is, whether the infective material gains entrance to the general circulation by absorption from the fauces and pharynx, is not the question before us at present, but that the throat suffers in a very large proportion of cases is known to all. The angina of both measles and scarlet fever is said to have a very special tendency to extend by continuity of surfaces to the nares and to the Eustachian tubes. As it extends along the latter passages to the tympanum, the walls of the affected tube become swollen, its calibre is diminished in proportion to the degree of tumefaction; frequently it is completely occluded, and the morbid secretions, greatly increased in quantity as a part of the specific inflammation, are pent up within the cavity of the middle ear. This course of events is most frequently met with in those who have enlarged tonsils, and especially if there be, as is so often the case, hypertrophy of the lymphoid tissue in the naso-pharynx as well. Where such swellings are present, the tubes are more readily and more completely blocked at their pharyngeal orifices by the early implication of the gland tissue surrounding them. A similar series of events may follow a naso-pharyngeal catarrh in children who are affected with hypertrophy of the faucial and pharyngeal tonsils. It is much more common than is generally supposed, but as the deafness which accompanies each cold practically disappears as the catarrhal symptoms subside, little attention is paid to the aural disturbances. The earache also which occurs during dentition is usually of this same nature. It is not a neuralgia, as is so frequently supposed, but a tubo-tympanic catarrh, and the pressure of the secretion pent up in the middle ear is the cause of the pain referred to that region.

The local symptoms associated with those conditions are the same, though they may vary considerably in severity; there is pharyngeal discomfort or pain, followed by dull sounds in the ears, by dulness of hearing, and then by pain in the ear. Preceding the more severe aural symptoms there is increased secretion of mucus in the naso-pharynx, which tends to be retained within this cavity, and the presence of this tough mucus is the first item interfering with the patency of the Eustachian tubes. If you take a child suffering from a recent cold in the head, with deafness, and use Politzer's inflation bag, you will force a large collection of tough mucus from the post-nasal space into the mouth, and you will at the same time improve the patient's hearing. The Eustachian tubes had been closed, not from inflammatory swelling of their walls, but by having the pharyngeal orifice of each covered with the tough secretion, which served to seal their lips. The removal of the secretion permitted ready and free inflation, thereby at once restoring the normal air pressure within the tympanum.

When the catarrhal process is more acute the inflammation affects the lining membrane of the tubes along which it extends to the tympanum. The tubes are then not only sealed by the mucus collected in the post-nasal space, but they are narrowed by the swelling of their walls and the inflammatory products found within the tympanum cannot escape, the result being that their presence in the middle ear causes pain by pressure. This stage may be reached hurriedly and without much warning. The child may have gone to sleep, but suddenly he wakes crying, and, if old enough, will direct attention to his ear; and he may continue for a considerable time to cry bitterly or to give other

evidence of suffering severe pain. Hot sedative applications may be made and may afford relief, or the pain may persist for many hours, to disappear as suddenly as it appeared, and this without discharge showing through the external meatus. This latter fact often leads the medical adviser, as it does the parents, to look upon the earache as a neuralgia.

Now the explanation of the sudden relief is that the blob of mucus occupying the post-nasal space has become dislodged, the pressure of the fluids within the tympanum has become sufficient to overcome the resistance met with in the Eustachian tubes, and thus the pent-up secretions have escaped through the tubes into the pharynx. Where the blockage is more complete and not so readily overcome, such cases may, as the secretion within the tympanum increases in quantity, develop symptoms closely resembling those of meningitis, for which it may be, and not infrequently is, mistaken. The implication of the ear in the majority of those slighter cases is recovered from without suppuration and without the integrity of the tympanic membrane being sacrificed. In measles and scarlet fever it is otherwise, though the early stages of the inflammatory process are the same. It is often supposed that the difference is due to the inflammation of the throat being more severe than is met with in simple catarrh; that it is of a suppurative character, and that the streptococcus pyogenes and the staphylococcus aureus, which are present, travel along the Eustachian tubes to excite suppuration in the tympanum. But, as a matter of fact, it is not these cases with extensive suppuration of the fauces and pharynx which most frequently become complicated with suppuration of the middle ear, but it chiefly occurs in those with symptoms of faucial and pharyngeal catarrh. In the 501 cases of middle-ear disease analysed, 131 cases (26.1 per cent.) were due to measles, and 63 (12.6 per cent.) to scarlet fever. The chief point of difference is of a mechanical nature. In simple catarrh the child throughout the day is not confined to bed, but is permitted to run about freely; so, with the patient in the upright position, the increased pharyngeal secretion is prevented from collecting to any extent within the naso-pharynx. It is otherwise while the child is in bed, for then secretion from the nose as well as from the pharynx is retained above and behind the palate, where it accumulates in quantity; and this goes far to explain why earache, associated with simple naso-pharyngeal catarrh, asserts itself most frequently during the night, some little time after the child has assumed the recumbent position.

When a child is suffering from measles or scarlet fever he is confined to bed day and night, and during the greater part of the twenty-four hours he lies in the dorsal position. This position favours the retention of secretions within the hollow of the naso-pharynx, and, in addition, from the altered direction of the Eustachian tubes, the inflammatory products within the middle ear could not readily escape, even supposing the tube to remain patent. The consequences are that the catarrhal inflammation accompanying measles and scarlet fever is soon followed by suppuration, the lining membrane of the tympanum becomes necrosed, the tympanic membrane is ruptured, and the bony cells surrounding and communicating with the tympanum are filled with the products of suppuration.

And this leads up to the consideration of the means for the modification of middle-ear catarrh, and the prevention of its complications during the course of the exanthemata, to which it is my object to draw your attention.

From the very beginning of the illness, where there are any catarrhal symptoms, the patient should be directed to use the handkerchief frequently and strongly, and the nurse in attendance should see this carried out. By this means nasal discharge is got rid of through the anterior nares, and the air, in passing with considerable force from the lungs towards the nose, helps to loosen and dislodge any discharge lying within the naso-pharynx.

If the child is too young to do this efficiently, or if there is enlargement of the faucial tonsils and adenoid vegetations in the naso-pharynx, Politzer's inflation bag should be resorted to. In performing inflation the child may be in the recumbent or sitting position, and he is directed to open his mouth and to breath out strongly or to say "ho!" or "hick!" and while in the act of doing either the air is forced along the nose. The quantity of secretion dislodged and thrown into the mouth by this proceeding will astonish those who have not used the bag under such circumstances, and convince them of the necessity of having the airway cleared. One or other of those methods should be adopted in every case, and without waiting for the appearance of symptoms pointing to implication of the ear. Where, on the other hand, there is dulness of hearing, sounds or pains in the ears, etc., resort to inflation should never be delayed, as those symptoms point to closure of the Eustachian tubes, and to retention of secretion within the middle ear, relief from which may be instantaneously secured in the majority of cases by complete inflation.

Some hesitate to use Politzer's bag while the aural passages are inflamed lest rupture of the membrane should result. This rarely happens, and I speak only after considerable experience, but even when it does occur no harm follows. The resulting perforation is slit-like, and it heals readily, whereas if the condition be left to Nature, as it is termed, the perforation, which only occurs after serious and too often irreparable damage to the structures within the tympanum has occurred, is circular in form, due to the loss of tissue, and healing is therefore exceptional.

When the case does not come under observation till a later stage, and the pain in the ear is acute, and should immediate relief not be obtained from inflation, the tympanic membrane should be examined and incised without delay, especially if there be a sudden rise in temperature without any other explanation. Paracentesis of the membrane, or, myringotomy, as this little operation is termed, is sadly overlooked; it is certainly not had recourse to in anything like the number of cases in which it is called for. And yet it is a very simple and safe operation when done under appropriate conditions. These conditions are (1) to have the head securely held; (2) to have the membrane clearly visible and brightly illuminated: (3) to use an arrow-shaped paracentesis-knife or myringotome with a shoulder; and (4) to puncture the membrane in its lower and posterior part where bulging is usually most marked. The result again is a slit-like opening which, after permitting of the thorough removal of the pent-up secretion, readily heals. This operation performed timeously is of incalculable benefit to the patient, for it not only relieves the immediate pain, but saves the deeper structures of the ear, and prevents the misery of a chronic otorrhœa with its numerous attendant risks.

I have referred to the fact that the ear is affected most readily in those whose tonsils are enlarged and where the adenoid structures in the naso-pharyngeal cavity are hypertrophied. In those cases secretion is increased in quantity, and there is considerable structural obstruction to its free escape. It will thus occur to all that the removal of such hypertrophied tissue is an important preventive measure which should be advised and carried out when such growths are known to exist, and while the child is in good health. The consideration of these and other necessary measures is, however, beyond the scope of this communication, which is intended to deal with prevention during the course of the exanthemata.

I would conclude by impressing upon those in general practice the efficiency of these simple measures, and the great good to be derived from their adoption early in the course of the disease. The application of blisters, of leeches, of Leiter's coil and the like, to relieve pain in the ear occurring during the exanthemata I look upon as an evidence of ignorance of the condition under consideration, and the time spent in hoping for relief from their use as most valuable time irretrievably lost.

Dr. McKenzie Johnston thought the attention and treatment of the nasal catarrh coming on after the exanthems was of great importance. But he thought that this treatment might be of service, not only during the attack, but after convalescence from the exanthemata in removing the local throat conditions, which tended to cause middle-ear affections later on.

Dr. Barr referred to the absence of information regarding the very early stage of purulent disease of the middle ear originating in scarlet fever. The usual view is that rapid purulent formation takes place with pressure upon and

bulging of the membrane, which, if incised, would probably avert the subsequent obstructive process. Dr. Barr thought that in many cases the obstructive process is very rapid and complete, the process being more of the nature of sloughing, which no early paracentesis of the membrane would prevent. Dr. Barr based this opinion upon a case which came under his observation and in which he had the opportunity of closely watching the case.

Dr. Walker Downie, in reply, said that a collection of pus—suppurative otitis media—was, in the majority of cases, secondary to a mucous catarrh, and if the naso-pharyngeal cavity were kept clear during the currency of the fever, fewer cases of such would be met with.

ON A BETTER APPRECIATION OF RINNE'S TEST: THE AËRO-OSTEAL DIFFERENCE.

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[Abstract.]

In 1855 Rinne, of Prague, published the observation that in persons with normal ears a vibrating tuning-fork placed on the skull, and left there till the sound disappeared, was again heard if held opposite the external auditory meatus. When in any given case the tuning-fork acts as described, Rinne's test is said to be "positive," but if the fork is not reheard it is said to be "negative." Air conduction is, in fact, better normally than bone conduction. How much it is better—that is, how many seconds longer the fork is heard by air than by bone conduction, or, in other words, the normal "aëro-osseal" difference, has to be tried by direct experiment with any fork intended to be used for clinical purposes. A fork (Gardiner Browne's), which we shall suppose to be heard 25″ at the meatus after it has ceased to be heard on the mastoid, would then have a normal aëro-osteal difference of 25″ (NAOD=25). Any diminution from this would indicate a departure from the normal.

It is usually assumed that if Rinne is "positive" the conducting apparatus (middle ear) is normal, but we see that Rinne would still be positive as long as the aëro-osseal difference is diminished by anything under 25″: AOD=NAOD−(NAOD−n). This would allow of a certain amount—a slight one—of disease of the conducting apparatus.

If Rinne is "negative," there is a diminution of "aëro-osteal difference" to the amount of 25″ or more: AOD=NAOD−NAOD or AOD=NAOD−(NAOD+n). There is then some definite abnormality of the conducting apparatus. All this is independent of the condition of the sound-perceiving apparatus—labyrinth, auditory nerve, etc.—a point which some practitioners seem to have considerable difficulty in grasping, and to which attention should be carefully directed. It is only indirectly that Rinne's test gives any indication as to the condition of the auditory nerve. If Rinne is "positive" and the aëro-osteal difference is normal (=25 with the supposed tuning fork), all deafness present is due to disease of the nervous apparatus. If Rinne is "positive" but the aëro-osteal difference is distinctly diminished, some of the deafness must be due to the conducting apparatus and the rest to the nerve. The question arises as to how much diminution of hearing power may be ascribed to the conducting apparatus while Rinne remains "positive." Lucae computes it as not more than sufficient to render whispered speech audible at 40 inches at the least. Disease of the conducting apparatus sufficient to reduce hearing power for whispering below this would certainly render Rinne negative. It may therefore be said that with positive Rinne any diminution of hearing power over and above that necessary to reduce the hearing distance for whispered voice to 40 inches, must be due to an affection of the perceiving organs (nerve deafness).

If Rinne is "negative," there may or may not be a disease of the perceiving apparatus superadded. Should "bone conduction" be diminished, in a chronic case, it may be safely assumed there is such an affection, because diseases causing Rinne to be "negative," almost invariably lead to an increase of bone conduction. Should bone conduction not be diminished, but be normal, there is probably a coincident nerve affection. When can we say that there is no nerve affection, and that the middle ear is alone at fault? Theoretically this can probably never be done, but practically when there is very considerable increase or, as I have fairly established in a large number of cases, when the increase of bone conduction is equal to the diminution of air conduction (for example, tuning fork at meatus—10″ and on mastoid + 10″). Of course the results have to be checked by means of the tests with Galton's whistle, comparison between hearing for conversation and for the watch, the presence or absence of paracusis Willisii, the history of the case and the surrounding clinical circumstances.

A not infrequent possible source of fallacy exists in cases of unilateral nerve deafness. The tuning fork is placed on the mastoid of the affected side till no longer audible; it is then held opposite the meatus and is not again heard. This is apparently "negative Rinne," indicating disease of the conducting apparatus. In reality the fork on the mastoid was heard in the opposite ear, hence the necessity of checking this result by means of Weber's test, with the fork on the vertex. In old persons (those, at least, who are over 60) bone conduction is often diminished, and apparently to a greater extent than air conduction. There seems some reason, then, for caution in assuming the absence of middle ear disease in such patients, even if Rinne is "positive." With a series of five forks extending over four octaves, from C with 256 vibrations upwards, it will be found that in the slighter cases Rinne is negative for the lower ones only, and in severe cases for the upper ones as well (Dench). For general purposes a light fork, as devised by the late Gardiner Browne and tuned to 512 vibrations per second, is the most convenient and least exhausting.

As a further source of fallacy the effect of exhaustibility of the auditory nerve has to be reckoned with, because the person to whom the fork is first applied in the comparison is affected by this, and an undue advantage is given to the second. Hence, if the patient hears the fork after we cease to hear it, we must not be too ready to diagnose increase of hearing power; and similarly in comparing air with bone conduction, as in Rinne's test, a "positive" result is unduly favoured by this factor, but with a "negative" one the opposite holds good, and can be depended on.

It will be readily seen that Rinne's and Weber's tests may apparently give opposite results, namely, in unilateral nerve deafness; also, that a "positive" result of Rinne does not exclude a slight degree of obstructive disease, and that "positive" Rinne only enables us to diagnose uncomplicated nerve deafness when we are able by it to exclude disease of the conductory apparatus. In practice this test is constantly of the utmost value; it is essential to understand its true position and the sources of error surrounding it.

DEAF-MUTISM AS A CLINICAL STUDY.

By James Kerr Love, M.D.,
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Most ancient and many modern authorities fail to appreciate the case of the deaf-mute, and even now it is not easy to grasp exactly the essence of deaf-mutism. The absence or loss of hearing so stunts the development of human faculties, so completely detaches its victim from what is common to men, that the claim of the deaf-mute to be human at all has been questioned. He has been said to be on a par with the idiot, to have his place below some of the animals. He has been called ungrateful, cunning, treacherous. All sorts of peculiarities have been ascribed to him, and a serious attempt has been made to show that he is generally left-handed. His absence of speech has been supposed to depend on defective vocal arrangements—a stunted larynx, a tied tongue, badly developed lungs. People who talk like this have never tried to teach the deaf, they have never watched them play, they cannot have thought correctly on the cause of the muteness. It is not necessary here to say much on these absurd views about deaf-mutes, but it is desirable to point out that the average deaf mute is a case of very defective hearing, and nothing more. That is the essence of the case; that is the one fact which must not be lost sight of either by the clinical observer or the teacher

of the deaf. We are studying deafness and its results, the teachers are educating the deaf. All that has happened is this—"the small music room built of ivory, no bigger than a cherry stone, which we call the ear, and in which the performances of the largest orchestras are accurately reproduced," is absent or has got damaged, and the soul waits in vain for any echo from the outer world. But the soul is there all the same; and if your deaf-mute is not as human as his hearing brother, it is because you have failed to reach it, and your educational methods need remodelling.

Stripped of the poetry with which Dr. George Wilson has invested his sketch of the anatomy of the internal ear, and put into plain English, the deaf-mute is usually a case of disease involving the internal ear and nothing more. There are stupid children in every deaf-mute school, just as there are duffers in every board school. Here and there one comes across an idiot, but the schools for the deaf have no monopoly of idiocy, for the officials of our institutions have sometimes to dismiss idiots with perfect hearing. Sometimes the disease which has caused the deafness has also damaged the eyesight or the brain itself, but eight out of every ten deaf-mute children are just like their neighbours in the Board schools minus the sense of hearing.

The recognition of deafness is only difficult in the very young. In nearly all children positive evidence of the presence of hearing is given during the first months of life. The child is awakened by a noise, and one of the chief difficulties most mothers have is to arrange for the quiet consistent with the unbroken sleep of their babies. A mother's assertion that her child did hear at birth is therefore usually reliable. The diagnosis in older children is easy. Sharp, loud sounds are produced behind the back of the child, and the face watched, and if aërial hearing be present some change in expression will be noticed. The amount of this hearing when present can be measured, but as a paper on the subject is promised by Dr. Harsant, I refrain from further discussion of it.

The clinical aspects of deaf-mutism may be studied either in young children who are losing their hearing, or in the finished article as it exists in the deaf and dumb institutions. Neither of these classes have received the attention from the doctors which they deserve. Deaf-mutes have always been regarded as outside medical practice. Our profession has never shaken out those popular fallacies about deaf-mutes: first, that they have all been born so; secondly, that they are all quite deaf; and a third founded to some extent on these two, that they are helpless defective characters not capable of taking any useful place in society. I have discussed and refuted the first two of these fallacies,[1] and will content myself with a restatement of the facts that most deaf-mutes are born hearing, and that few mutes are totally deaf. The third fallacy is being daily refuted by the devoted body of teachers of deaf in America, on the Continent of Europe, and in our own country.

Congenital deafness so often "runs in the blood," and is so markedly hereditary, that its social aspect claims most attention. It has a clinical aspect; but practically the prevention of congenital deafness resolves itself into the discouragement or prohibition of intermarriage between the congenitally deaf.

In the larger class of cases—those of acquired deafness—the practitioner has a better field. A large proportion of these cases of acquired deafness have never had an aural speculum used before they enter the institutions for the deaf and dumb. I make this statement on the authority of the parents of the children, and of the medical men these parents employ. This means that medical men generally cannot use an aural speculum, or are careless about the diseases which cause acquired deafness. I find that cerebral inflammations, convulsions, and fits cause a third of the cases of acquired deafness. Now if all cases of this type ending in deafness were carefully observed and reported by those in charge of them, what a flood of light would be let in on the hazily defined group of ailments embraced by these terms. Not only the deafness, which is the most distressing result of the illness, but the essence of the disease might become clear. It is useless to talk of the treatment of deafness thus resulting; what we want first is more accurate diagnosis of the diseases causing the deafness.

Measles, scarlet fever, and other infectious diseases account for about another third of the cases of acquired deafness. Here the duty of the practitioner is very clearly defined. The application of the principles of surgical cleanliness to the suppurative otitis accompanying these diseases would prevent many cases of deaf-mutism. We have not yet reached the time when a suppurating sore in the tympanic cavity is intelligently treated by the general practitioner. There is supposed to be something special about this sore which takes it out of the range of ordinary surgical principles.

Primary ear affections account for a smaller number of cases of deafness than one would suppose—hardly a tenth. The remarks I have made in connection with the otitis of the exanthemata apply here with equal force.

The only other cause I think worthy of separate mention is hereditary syphilis. Parents never put this down as a cause of deafness in their children, and doctors hardly ever insert this in the admission schedules; nevertheless, I have discovered evidence of syphilis in several children in the Glasgow Institution where no other cause of deafness was stated or ascertainable, and the fact is worth emphasising.

Coming now to the finished article, the deaf-mute at school, we have an enormous field for observation and practice. All children entering a school for deaf-mutes should have their ears carefully examined and their hearing tested. The examination at this stage is much more important than the testing. One's means of communication with an uneducated deaf-mute are so limited, that the result of the test must be accepted with great care. Within a few weeks, too, the teacher will find out any hearing which is worth developing, and then a more careful testing may take place, but the examination of the ear must be done at once and thoroughly. All sorts of foreign bodies will be found in the ears, and many cases of ceruminous collection will be discovered. Now, the removal of these obstructions to aërial vibrations will not restore hearing and let the child attend an ordinary school. It will improve hearing in some cases. But these collections and foreign bodies exist in ears in which suppurative disease is easily set up; and as suppurative disease is not only a danger to the remaining hearing but a menace to life, its occurrence should be anticipated by the removal of every cause. Then a few cases of active suppurative disease will be found, and the suppurative otitis of deaf-mutes is the most obstinate type I have ever treated. This is not to be wondered at when one remembers the antecedents of these children. But it can be controlled and generally cured. Persistent cleanliness with antiseptic insufflations (equal parts of iodoform and boracic acid powders is the best mixture) will heal most cases.

In the great majority of cases inspection will show the middle ear to be altered in both congenital and acquired deafness. But an indrawn or perforated, or even an absent, membrane does not account, as a rule, for the high degrees of deafness which cause mutism. The tuning-fork test will show that the damage is not confined to the middle ear, but that the internal ear has suffered too. It is this, along with the fact that the deafness is usually of long standing, which makes improvement in the hearing of deaf-mute children so hopeless. Here and there one meets a case in which the history and the presence of a good remnant of hearing suggest the use of the air douche. Indeed, were it not for the enormous work involved, one would like to try this method of treatment somewhat largely in our institutions.

The tonsils and naso-pharynx are found notably diseased in about two-thirds of deaf-mute children. Should anything be done for this condition? I do not refer to cases where throat symptoms are present. In these one would apply the same principles as in healthy children. But, in the absence of painful symptoms, what inducement is there to rid a deaf-mute child of enlarged tonsils or adenoid growths? That depends on the kind of education being given to the deaf child. The highest blessing you can confer on him is to give him back his means of converse with the hearing and and speaking world. The best teaching methods aim at this in as large a percentage of children as possible. It is not enough to teach a deaf child to speak with his fellow mutes.

[1] *Archives of Otology*, vol. xxii.

More may in many cases be impossible, but more should in every case be attempted. If, then, the deaf child is to speak well we must rid him of all obstruction in these organs of speech—the throat and nose. This means entering a fresh field of work. In no country, so far as I am aware, has the oral system called in the help of surgery for the improvement of its results. The condition in the throat and nose of many oral pupils would make distinct speech in hearing children impossible. How frightfully, then, is the deaf-mute handicapped by these obstructions. Without the help of the aural surgeon the best results under the oral system are impossible.

The following suggestions arise out of the consideration of this subject:

1. In connection with every deaf and dumb institution in the United Kingdom there should be an aurist, whose duty it would be to examine the ears and test the hearing of every child admitted to the institution. Medical men need not mix in the war about teaching methods, but should supply the information without which the best method cannot be determined. Where the oral system is to be taught surgery can do something to improve the articulation. Any treatment which promises improvement in hearing should be tried.

2. Otologists should continue to direct the attention of the profession and of the public to the more careful treatment of diseases of the ear, and especially to those ear affections which complicate the exanthemata. Local authorities should include measles amongst those diseases to be compulsorily notified, for the disease is one of the most fruitful sources of deaf-mutism.

3. Marriages among the congenitally deaf should be discouraged, or if necessary prohibited.

4. The temporal bones and the brains of deaf-mutes who die from whatever cause should be carefully examined and the reports published.

It is only by careful work on these lines that we can diminish the number of those on whom this terrible calamity of deaf-mutism has fallen or ameliorate the lot of those who neither speak nor hear.

Dr. Dundas Grant: Such an endeavour as Dr. Love has made in his interesting paper cannot be too highly appreciated. In my opinion a new era is dawning in relation to deaf-mutism. We require more men with special attainments ready to take up in Dr. Love's spirit the case of the deaf-mute, and I am ready to support him in all he has said. I would, however, like to call his attention to the results obtained of late by Professor Urbantschitsch, of Vienna, and which are creditable alike to his scientific energy and his self-sacrificing goodness of heart. He finds that in all the supposed totally deaf cases (with deaf mutism) brought before him there is a residuum of hearing power amenable to methodical cultivation. He finds them soon able to appreciate vowels, later consonants and words and sentences. The hearing faculty gradually increases, and the power of speech in those trained in lip-reading is enormously improved. In addition to daily special individual instruction from the professor or his assistant the patients can exercise each other, and the patient can exercise at the same time his speaking and hearing by speaking into the bell of a long flexible speaking tube, the other end of which he places in his own ear. This method of training must be taken up by all those who sympathise with every means of improving the condition of the deaf-mute, indeed by every student of deafness who wishes to keep up with the times. My attention was most strongly drawn to this subject by Dr. Goldstein, of Boston, U.S.A., whose enthusiasm had been fired by personal observation of Dr. Urbantschitsch's methods and results. Dr. Goldstein's demonstration on several deaf-mutes astonished me and those teachers of deaf-mutes who were present.

Dr. Bennett: Among the methods adopted in the training of deaf children the speaking tube can be used with benefit. There is often a certain power of hearing which is not developed because it is not sufficient for ordinary speech. If, however, the speaking tube be used, the slight amount of hearing which exists is developed, and not only is some benefit derived in this way, but further the tone of the voice in those trained in the oral system is improved. With regard to the question of operating when deaf-mutes suffer from obstructed respiration, this should always be done, since it tends to improve health and lessens the tendency so frequently present to chest disease. This may be done with the greater confidence because, in rare cases, the hearing is improved in consequence of the operation, even in apparently hopeless cases.

Dr. Warden, having been a medical officer to the Royal Deaf and Dumb Institution at Edgbaston, had had some experience in the condition of the ears in deaf-mutes; they depended upon such a variety of causes, that although there was some improvement in a few cases treated, the majority were not capable of satisfactory relief, the nerve lesion being so prominent a feature, and unfortunately not yielding easily to remedies. With regard to the systems of teaching, he was of opinion that the combined system was most advantageous—the manual in some, the oral in others.

Mr. Harsant had recently examined the hearing power of 45 deaf mutes in the Bristol institution, and had been struck with the large number of children who had some remaining hearing power. Out of 45 children he had found 3 who could hear and imitate words, and 7 others who could hear and imitate vowel sounds. He suggested that these children might be instructed by the aural or acoustic method, by which their hearing power might be improved.

Dr. McKenzie Johnston (Edinburgh) had listened to Dr. Love's paper on deaf-mutism with the greatest interest. As an aurist to a deaf and dumb institution, he had made a routine examination of a large number of cases, and his experience was quite in accord with that of Dr. Love. The proportion of the children having some slight hearing power he found to be great; and the proportion of cases having throat catarrh, large tonsils, adenoids, etc., was even greater still. Without expecting any benefit to the hearing power, he was inclined, for the sake of the general health, to operate where the nasal respiration was markedly interfered with.

Dr. Love, in reply, said he regarded the great attention paid to his paper to a large-hearted interest which was now waking up in the minds of the members of the profession about the poor deaf-mute. He put much importance on the development of hearing, and thought the method he had called the oro-acoustic method was worth trying in many cases. The greatest practical difficulty in the medical treatment of deaf-mutes and in the adoption of the best methods of education was the apathy of those in charge of the institutions. Directors too often managed these institutions on purely commercial principles, and seldom was any member of the board skilled in the nature or management of deaf-mutes.

EXCISION OF THE MALLEUS AS A PRELIMINARY OPERATION TO OPENING THE ANTRUM IN CASES OF SUPPURATION FROM THE ATTIC AND ANTRUM.

By Thomas Barr, M.D.Glasg.,
Surgeon Glasgow Hospital for Diseases of the Ear.

I have within the past year removed the malleus from seven ears affected with intractable suppuration from the attic and antrum. Six patients (5 males and 1 female) were operated on, as in 1 patient both mallei were excised. In all the cases the purulent disease had existed for a very long period, ranging from seven to twenty-five years, and had been treated at the hands of experts by all the recognised ordinary methods, in no case for a shorter period than six months. In every one the discharge had been persistently offensive in spite of regular antiseptic cleansing. In 3 cases the tympanic membrane was entire with the exception of a small perforation in Shrapnell's membrane. In the other 4 there was larger destruction of membrane, but clear evidence that the source of the discharge was in the attic, or antrum, or both. In regard to anæsthetics chloroform was administered in 4 cases, and in 3 cases cocaine, applied repeatedly during the operation, was used with very satisfactory results.

In the 3 cases having simple perforation of Shrapnell's membrane I removed the upper part of the tympanic mem-

brane so as to include the whole of the malleus. The spade-shaped knife was used for separating the head and neck of the malleus from their connection: afterwards, suitable forceps were employed for extracting it. Sharp scoops, such as I show you here, were used to clear out the attic as thoroughly as possible, as well as in some cases to scrape away the softened bony edge of the Rivinian segment. The incus was in no case found, as probably in these cases it is destroyed by erosion, or so displaced as to be inaccessible by operation through the canal of the ear.

During the first week fine powder of iodoform and boracic acid was insufflated as a dressing; afterwards the attic, and, as far as possible, the antrum, were regularly and daily syringed with a 2 per cent. watery solution of carbolic acid by means of an attic syringe, followed by the injection into the attic of a spirituous solution of carbolic acid or resorcin. The attic syringe which I find most useful has a wider bore than the usual intratympanic syringe, whose narrow lumen I have found of little service in washing away the purulent and cholesteatomatous matter which is so commonly found. It is necessary that the stream should be larger and stronger in order to exert a sufficiently strong mechanical effect upon the purulent *débris* in these spaces. I have rarely found it possible to syringe the attic efficiently previous to the removal of the malleus, the space leading up to the attic being too small for the introduction of the tube of the syringe. After the removal of the malleus, however, there is no such difficulty, the space being amply wide to allow of most effective syringing.

The therapeutic results from these operations have been improvement in all, but in none permanent cure. In all, the discharge was lessened, in some very markedly, and the offensive odour destroyed, at least so long as the attic syringe was employed. The most successful case was that of a young man, 21 years of age, whose left ear had discharged for eight years. There was a very small perforation in Shrapnell's membrane. He had been under treatment for at least two years, without result. About a year ago the malleus and upper part of the membrane were removed. The subsequent use of the attic syringe brought away considerable quantities of desquamative matter. The result has been that, instead of a constant discharge, the ear now remains perfectly dry for several weeks, but it is then found to yield a slight moisture which ceases for the same space of time after a single use of the attic syringe with an antiseptic solution.

In two cases which showed least improvement it was resolved, after some months, to proceed to the larger operation of opening the antrum from behind, and so gain access to the attic, hoping in this way to effect a cure. These two operations were performed by Dr. Macewen, of Glasgow, who operated with the dental burr and gouge. In both cases the incus was found in the antro-tympanic passage. It was removed along with granulation tissue and cholesteatomatous material, while the walls of the antrum and attic were scraped and burred as carefully as possible. Afterwards the spaces were filled with powder of iodoform and boracic acid and stuffed with gauze. The parts remained undisturbed for a fortnight, when the powder and stuffing were removed without syringing, the cavities being looked at and restuffed weekly for a month or thereabouts. The opening behind into the antrum was all along treated on the dry method, but, after six weeks, the ear itself was occasionally syringed. The first case was operated upon on March 16th last, and was that of a lady, aged 28, with a history of twelve years' suppuration, with perforation of Shrapnell's membrane, the discharge having been all along most offensive and copious. I removed the malleus on September 30th, 1893, with the effect of only slightly diminishing the quantity of the discharge, and the major operation was performed on March 16th of this year. The result has been most gratifying. It is now over three months since the operation, and the ear is entirely dry: indeed, there has been no discharge since the first cleansing after the operation. The hearing power of the ear, however, is less acute than previous to the removal of the malleus, but this is considered a small matter compared with the vastly important effects upon the purulent disease.

The second case operated upon by Dr. Macewen was that of a gentleman, aged 32, both of whose ears had been affected since childhood by a fœtid purulent disease. I removed both mallei, the one on June 23rd, 1893, and the other on September 11th, 1893. Large quantities of caseous matter were from time to time removed from both attics with the attic syringe. The hearing improved, and the discharge markedly diminished in the right ear, but in the left it remained pretty much the same. In the left ear, after a time, the opening into the attic contracted, so as to prevent the efficient use of the syringe. The major operation was performed on June 5th last, and so far the result promises to equal the first case. Here the incus was also found in the antrotympanic passage and removed.

In regard to these two cases we cannot, of course, base very much upon so limited an experience, but, so far as this limited experience has gone, I am disposed to think that, when the removal of the malleus and corresponding part of the membrane does not lead to the entire cure of this persistent form of purulent disease of the ear, it may prove a very useful preliminary operation to the more serious one of opening the antrum and attic. I think the latter operation may have a better chance of success after the former. Only larger experience, however, will determine whether the preliminary operation of removing the malleus, and, if possible, the incus may not ensure that a better result will follow the opening of the antrum, and whether we should not in all cases, after finding that only partial success follows the smaller operation, proceed to the major one.

Dr. H. Knapp (New York) said: From the little experience I have in the removal of the hammer alone, I cannot but agree with Dr. Barr's statement that this operation rarely produces a permanent cure. We know that the anvil is more often carious than the malleus. Excellent results are obtained by Stacke's operation, as I have convinced myself by witnessing and watching several cases operated on in my clinic by an assistant of mine, Dr. Vulpius, a former assistant of Stacke. I think, however, that oftener than by any of these operations the cleansing of the middle ear will be successfully accomplished by penetrating into the tympanic cavity and attic through the mastoid antrum and its neck, after the soft posterior wall of the ear canal has been detached and pressed against the anterior. In this way I have operated several times myself. In many cases, however, we have to operate more than once to obtain a permanent recovery.

OBSERVATIONS UPON EXCISION OF THE OSSICULA AUDITUS IN CHRONIC SUPPURATIVE OTITIS MEDIA.

By W. Milligan, M.D.,
Lecture on Aural Surgery Owens College.

Among the various problems which have of late years been occupying the attention of otologists the question of the advisability, or otherwise, of removing the ossicula auditus (*per meatum*) in chronic suppurative affections of the middle ear, has held a prominent place. So far this question has by no means been settled, nor, indeed, have the exact indications or limitations for its performance been definitely agreed upon.

At the present moment, therefore, the surgeon has to rely mainly upon its own individual judgment in any given case without having the benefit of that definite expression of opinion which alone is to be derived from the free discussion of any question about which there is considerable divergence of feeling.

In the Otological Section of this Association last year I had the privilege of reading a short communication upon The Treatment of Chronic Suppuration of the Middle Ear by Excision of the Auditory Ossicles, and of recording several cases in which this procedure had been attended with favourable results.

Since that time my attention has been much given to this subject, and as there are many points connected with the indications for the operation, the actual *modus operandi*, and the necessary lines of after-treatment, I have taken the liberty of again bringing the matter forward, with the hope that the views of some of those here present may be given, and points which appear doubtful be fully discussed.

It may be taken, I think, for granted that any idea of such operative interference is entertained only in those cases in which the more usual, or what one might call the minor, methods of treatment have been carefully and persistently carried out, and have failed to check the purulent discharge. By such minor measures I mean the regular flushing of the middle ear, either *per tubam* or by means of intratympanic cannulæ of one form or another, the local application of astringent, antiseptic, or caustic preparations, the removal of masses of granulation tissue tending to maintain purulency and to retain discharge, the tamponing of the part as suggested by Gruber, and the employment of all those measures, hygienic and tonic, which tend to promote the general well-being of the patient. Notwithstanding, however, all possible care and perseverance, the surgeon will frequently be disappointed with the continuance of the morbid process. This happens not only in those cases in which the focus of the disease is in the tympanic attic, but also in certain cases in which the brunt of the disease is located within the atrium. If we look for the reason why this should be so, we shall, I think, in most cases find it due to one or other, or both, of the following causes:

1. Imperfect drainage.
2. The presence of bone disease.

The first cause is undoubtedly the more important, for I presume that if we could obtain proper surgical drainage from the outset the second cause, the presence of bone disease, would rarely exist. The long-continued suppurative inflammation of the muco-periosteum lining the middle ear causes progressive erosion, with the result that bone is laid bare and carious processes are set up. As the muco-periosteum lines the tympanic cavity and clothes the ossicula auditus, it is obvious that in time we may have parietal or ossicular caries, or the two combined. Bearing this in mind it will readily be seen how essential it is to secure free drainage from the outset, so as to minimise at any rate the chances of secondary bone trouble. In those cases in which the morbid process is situated in the epitympanum everything would appear to be against the attainment of this great principle. The accompanying perforation is high up upon the surface of the membrana tympani, is as a rule small, and frequently surrounded by granulation tissue. The folds of mucous membrane also normally existing in this region form loculi which tend to retain the discharge, thus favouring stagnation and subsequent decomposition. Added to this is the clinical fact that in many such cases inflammatory adhesions shut off the atticus from the atrium. Hence we find a localised purulent collection constantly bathing the head of the malleus, the body of the incus, the crura, and the foot plate of the stapes hemmed in above by the thin and at times dehiscent tegmen tympani, and upon the inner wall by the upper portion of the pars promontoria.

The extent and the situation of these secondary changes is naturally a matter of great moment, and one not by any means always easy to estimate. Where extensive disease has taken place in the parietes of the middle ear, the mastoid antrum and even the mastoid cells no surgeon of any experience would I presume anticipate a cure of the morbid process by the mere removal of the remnants of the membrana tympani and the two larger ossicles. These bonelets play but a small and a secondary *rôle* in the pathology of the disease now under consideration.

Nevertheless they are prone to become diseased from the reasons stated above, and when diseased they naturally become more or less functionless, while at the same time they, from their presence and from their connection with other and adjoining structures, not only form a barrier in the foreground, a barrier which prevents the all necessary local treatment from being satisfactorily carried out, but act also in the capacity of foreign bodies. The primary disease undoubtedly lies deeper, but if the portal be inefficient, how can the purulent exudations find an easy exit or remedial agencies an efficient entrance? It has been said that in these cases the disease is never limited to the soft parts and the ossicula, but that the surrounding bony parietes are eroded, while at the same time the antrum and even the mastoid cells are similarly affected—hence that the mere removal of the membrane and the bonelets could in such cases have no curative effect whatever. Were these premisses always correct, I admit that the operation must of necessity be doomed to failure. It appears to me, however, that clinically we meet with a certain class of case (I admit it is but a small class) in which the morbid process has so far, at any rate, involved only the soft parts lining the atticus and the portions of the ossicula lying in this immediate neighbourhood, while the parietal portions of the bone, if affected at all, are so only to a limited extent. Such cases we know from experience are the very cases in which the morbid process is prone to become chronic, while at the same time it is just in these very cases that good results may be expected from ossicular excision.

It may be contended that in such early cases other and simpler methods of treatment will suffice to arrest the suppurative process, but experience does not, I think, bear this out. Circumstances are decidedly in favour of the process becoming chronic. I can recall but few cases of attic disease which, having passed beyond the acute stage without complete recovery, have been found to yield to any of the minor methods of treatment as previously detailed, while, on the other hand, every aural surgeon knows how troublesome chronic disease in this region is, and how his resources are frequently taxed to the uttermost, to say nothing of the patience of his patient. The presence of the malleus prevents proper access being gained to the epitympanum, hence the necessity of removing it, the more so of course if diseased.

When local treatment should be stopped and when surgical treatment should be commenced is indeed a fine point to decide. I take it that the value of operative procedures in this region lies in the fact that a series of intricate spaces having been opened up, room is gained for drainage, for inspection of the diseased tissues, and for the application of remedial agencies.

The diagnosis of ossicular caries is not by any means always an easy matter. If, however, a slender probe with slightly bulbous extremity be carefully introduced through the perforation and search made, rough and eroded surfaces upon the bone can as a rule be detected when present. Granulations bulging through the perforation are not certain signs of caries, although naturally suspicious. Neither is fœtor of the discharge, for the loculi formed by the folds of mucous membrane in this region may readily retain the secretion until decomposition has set in. Where the perforation occupies the posterior part of Shrapnell's membrane caries of the incus will be found to be more frequent than when it is placed anteriorly.

It has been contended that ossicles have been removed which, on minute examination, have been proved to be quite free from disease. Even if this be so no great harm would ensue. By their removal the recessus epitympanicus is opened up, better drainage is secured, and more space is afforded for manipulation, while at the same time it must be borne in mind that the ossicula are by no means essential for the purpose of good hearing. The indications which have up to the present been taken as necessitating operative interference are:

1. Chronic purulent disease of the recessus epitympanicus with ossicular caries.
2. The presence of cholesteatomatous masses in the tympanic cavity.

It seems to me that, in the light of our present knowledge, these reasons are too vague, and that the main indications will be found to be either the presence of early chronic disease in the epitympanum, where examination reveals the presence of ossicular disease alone or with but slight involvement of the surrounding bony parietes, or chronic disease in the atrium, where proper drainage cannot be maintained, and where ossicular disease is proved to be present. Knowing as we do the marked tendency cholesteatomatous masses have of producing erosion and disintegration of bone, it seems to me that a more radical operation is required when such masses exist.

I would venture to narrow the scope of the operation to these two indications, and would even go a step farther, and say that if attic disease has existed for more than a few months, and has been carefully treated without the desired result having been obtained, the operation should be undertaken. Should the suppuration fail to be arrested, even after this, then we would have an indication that other and more

deep-seated carious areas existed either in the tympanum, the mastoid antrum, or the air cells of the mastoid process. Excision of the drum head permits, at any rate, of a more thorough and more accurate diagnosis by means of the probe, and the possibility of direct irrigation and cauterisation of the diseased areas of bone, while, on the other hand, opening of the mastoid antrum would not in any way be complicated by what had already been done. It may be urged, on the other hand, that it is preferable at once to perform some form of antrectomy, but I think we must bear in mind that opening and draining the mastoid antrum is a much more serious manipulation on account of our uncertainty beforehand as to the course and depth of the lateral sinus, and of the relation of the antrum to the base of the middle cranial fossa. In addition, the after-treatment of an antrectomy is much more troublesome and more tedious, and hence it seems to me that the patient should get the benefit of the minor operation before any idea of the major one is entertained.

If this be accepted it will be seen that the scope of the operation is indeed limited, and such I believe it to be. Great discrimination must be exercised in selecting the cases for this particular line of treatment. In my experience only those cases are suitable where, as before stated, ossicular disease alone (or at any rate with but slight parietal disease) is found. Where more extensive trouble exists, Stacke's modified mastoid operation will be found the surest means of attaining success.

On the other hand, however, it may be said, "Why operate at all under such circumstances?" Should we not rather wait and watch the development of affairs, ready to step in at once if evidences of extension of disease appear or symptoms of retention manifest themselves. As the hearing power in cases of attic disease is frequently hardly appreciably affected, should we by performing an operation run the risk of injuring this delicate sense? Are we justified, however (even supposing the case be kept under close observation), in allowing the patient to run the risk which may quite suddenly ensue from gradual erosion of bone, with consequent absorption and dissemination of pathogenic organisms? Questions such as these are most difficult to answer, but most important to decide definitely.

The question of anæsthesia during the operation becomes an important one. A general anæsthetic may be given, the patient lying upon the table with the head slightly raised, or ether having been administered, the patient may be propped up in a chair and the head held by an assistant. Or, again, local anæsthesia may be induced by the injection of a 4 per cent. solution of cocaine into the middle and external ear. If the patient be placed lying upon an operating table considerable difficulty will be experienced, as the position of the parts appears somewhat altered, and instrumentation becomes difficult. Local anæsthesia with cocaine may in certain cases be sufficient, but at times entirely fails. With the patient propped up in a chair ether may be safely given by a skilled anæsthetist, and as the parts are in much the same position as one is accustomed to, the necessary manipulations may be carried out with comparative ease.

Hæmorrhage becomes at times a real and serious trouble, as with the field of operation flooded it becomes impossible to see what one is doing. This is more especially the case where one has to deal with the presence of small tufts of granulation tissue growing from areas of diseased bone. Instillations of cocaine solution (4 to 10 per cent.) may be used previous to the operation, or the solution may be injected subcutaneously in the region of the tragus or behind the attachment of the auricle, or, again, Ludwig's suggestion to inject subcutaneously solution of secale cornutum may be adopted. I am rather in favour in such cases of dividing the operation into two stages, and upon one day removing under cocaine anæsthesia the granulation tissue and upon another completing the ossicular excision.

As the incus is the bonelet most frequently found diseased, careful search should always be made for it and extraction effected. At times this will be found very difficult, but can usually be accomplished by one or other of the incus hooks now in use. In many cases, however, the incus will be found absent, having been destroyed by the previous suppurative process. When present, both malleus and incus should, I think, always be removed together. Regarding the after-treatment of operation cases, it is important to decide what line of procedure should be adopted. Should the parts be kept quite dry, the secretion being merely mopped away by means of a cotton-armed probe, or should daily irrigation be practised and antiseptic lotions used?

I have endeavoured to present a few of the practical difficulties connected with excision of the auditory ossicles to this meeting in the hope that some definite working basis may be formulated. The success which has attended excision of diseased ossicula in chronic suppurative middle-ear disease has been such that there exists a tendency to extend the indications for its performance to cases not strictly suitable. Disappointment consequently ensues, with the result that there is a danger of the operation falling into discredit. It seems to me that the difficulty lies not so much in the carrying out of the necessary *technique* as in knowing exactly when the operation is indicated and when it is contraindicated.

LARYNGEAL PARALYSIS IN CHRONIC NERVOUS DISEASE.

By W. PERMEWAN, M.D.Lond., F.R.C.S.

[ABSTRACT.]

THAT the bulb is often affected in locomotor ataxy has been known pathologically for some time to nervous physicians; it is to be hoped that in the future that relation will also be recognised clinically, and that physicians will look to the larynx, where the effects of bulbar damage are most easily to be seen. There is one disease, however, which is much more common than tabes, but allied to it in causation, symptoms, and pathology, the connection of which with laryngeal paralyses, has not been fully or systematically investigated—namely, general paralysis of the insane. Of the cases of tabes recorded by Barger in his well-known monograph, it is noteworthy that a considerable proportion were affected either simultaneously or subsequently by general paralysis of the insane, and he quotes several suggestive remarks of various authorities on the relation between these two affections.

The author examined laryngoscopically 34 cases of general paralysis in the County Asylum, Rainhill. Of these only 3 were in the well-marked third stage, 9 were in the first stage, while the remaining 22 were in the varying periods of the second stage, including several said by the medical officers to be in the transition period between the first and second and second and third stages. The results were as follows:

1. *Character of the Voice.*—In some cases it was notably high pitched and monotonous—"sing-song" it might be called; in others it was quite normal. In only one case, where there was almost complete paralysis of one vocal cord, was any characteristic quality noted.

2. *Sensibility of Pharynx and Larynx.*—In the early cases, mostly normal, but in nearly all the second and third stage cases, it was notably diminished. In two cases there was hypersensitiveness of the pharynx.

3. *Paralysis of Palate.*—In only two cases was there any want of power, one with a normal larynx, the other combined with bilateral abductor paralysis of the larynx.

4. *Laryngeal Paralysis.*—In seven there was more or less disturbance of laryngeal movement, namely:—

CASE IV.—E. H., male, aged 39. Stage 3, pupils unequal, inactive to light, knee-jerk exaggerated. Epiglottis very erect; abduction of cords perfect, but paresis of abductors.

CASE VII.—T. H., aged 40. Stage 2, pupils inactive to light; knee-jerks normal. Palate moves well. Abductor paresis of both cords. They move outwards only slightly beyond cadaveric position, on forced inspiration they move inwards.

CASE X.—T. H., aged 37. Stage 2, pupils inactive; knee-jerks exaggerated; no paralysis of palate; abductor paresis of right cord.

CASE XVII.—C. C., aged 45. Stage 2-3, duration of disease two to three years. Pharynx rather insensitive; palate normal; cords do not abduct fully; some paresis of abductors; adduction normal.

CASE XXVI.—E. Q. Pupils active; knee-jerks normal; palate does not move well; both cords in the middle position; do not abduct on inspiration; bilateral abductor paralysis; they adduct well; voice not notably altered; epiglottis flaps to and fro during inspiration.

CASE XXXII.—R. K. Early stage 2, pupils sluggish; knee-jerk weak; cords do not fully abduct; adduction good.

CASE XXXIV.—J. H., late second stage. Formerly a good tenor singers but during preceding twelve months has lost vocal power, and now sing; in a weak and toneless voice. No paralysis of palate; paralysis of left cord almost complete, does not reach the middle line in phonating,

right cord passes across middle line, but does not meet left one completely. No local cause observable for paralysis of left cord.

In all cases where signs of paralysis were noted repeated examinations were made, and in all cases confirmed by the opinion of Dr. Wood, the medical superintendent of Rainhill Asylum.

The author arrives at the following conclusions: (1) That the larynx is not infrequently affected in general paralysis of the insane; (2) that this affects first and chiefly the abductors; (3) that this does not necessarily depend on the association of tabes dorsalis with the more generalised disease; but is the direct result of the degenerative and inflammatory changes which affect the central nervous system in general paralysis.

Disseminated Sclerosis.—In two cases examined the laryngeal muscles were unaffected

Bulbar Paralysis.—The author lately examined one case in which he was able to watch the onset of abductor paralysis becoming absolutely complete, and the supervention on it of affection of the abductors. The other usual symptoms of bulbar paralysis were present in a marked degree.

Dr. Felix Semon (London) congratulated Dr. Permewan upon his paper, which broke quite new ground, and expressed his gratification that his investigations had so fully corroborated the law of the particular susceptibility of the abductors of the vocal cords to succumb to organic disease.

Dr. Dundas Grant (London) cited his case of left vocal cord paralysis associated with left hemiplegia, but in this case the combination turned out to be merely coincident, the hemiplegia having preceded the laryngeal paralysis by eight months.

A SUCCESSFUL METHOD OF EXAMINING THE LARYNX AND REMOVING LARYNGEAL GROWTHS IN VERY YOUNG, NERVOUS, OR UNMANAGEABLE CHILDREN.

By Scanes Spicer, M.D.Lond.

[Abstract.]

About six years ago a case of chronic hoarseness and stridulous breathing in a child aged 8 years, due to multiple papillomata on the vocal cords, led the author to perfect a procedure, by means of which the larynx could be examined without fail, and laryngeal growths removed.

In laryngoscopy in these children the chief difficulties to be overcome are that the patient, from lack of self-control or terror, is unable to give the observer the assistance given by an adult; but that even if it can be so far managed, involuntary spasm of the pharynx and upper orifice of the larynx blocks the view; or even if the child at first admits of examination either without or with cocainisation, and even an introduction of the forceps, it is unable to stand the necessarily repeated moppings and forceps introduction.

On resorting to general anæsthesia with chloroform two difficulties are encountered, in addition to special dangers of chloroform in laryngeal operations. First, unless a very deep degree of narcosis is produced the pharyngeal and laryngeal reflexes are not abolished, and spasm occurs in introducing forceps, etc; secondly, salivation and the secretion of mucus are inconveniently profuse.

To overcome the first difficulty the author suggests the cautious use of a spray of 10 per cent. cocaine solution, and for the second difficulty the free use of a dry mop of cotton wool. Five assistants are required: No. 1 to give the chloroform, maintaining moderate general anæsthesia; No. 2 nurses the child in the usual position for laryngoscopy; No. 3, standing behind the patient keeps the head erect and square to the operator; No. 4 stands behind and to his right, holding the mouth gag; No. 5 holds the tongue out with forceps. In this way the operator can remove the growth piecemeal, first spraying the larynx with cocaine, then mopping, and finally using the forceps in the usual manner. Dr. Spicer has found the method useful both for examination and for operation.

Dr. Felix Semon (London) said that Dr. Scanes Spicer's new method of examining the larynx and removing laryngeal growths in very young or unmanageable children certainly appeared to deserve a fair trial, and, if serviceable, would prove a real boon in a class of cases hitherto hardly accessible to intralaryngeal treatment.

Dr. Dundas Grant (London) thought he saw a new field of usefulness for his safety endolaryngeal forceps for the removal of growths under combined chloroform and cocaine anæsthesia.

Dr. William Hill (London) had successfully used Dr. Spicer's method in two cases.

TURBINAL VARIX.

By Wyatt Wingrave, M.R.C.S.,

Assistant Surgeon Central London Throat and Ear Hospital.

[Abstract.]

Turbinal varix may be defined as a particular form of hypertrophy which involves the posterior half of the inferior turbinated body, and characterised by a permanent distension of the venous sinuses.

Morbid Anatomy and Pathology.—It is expedient to classify the varieties of hypertrophic rhinitis according to the predominating morbid changes. These in their order of frequency are: 1, vascular; 2, mucoid; 3, lymphoid; 4, glandular. In the simple and temporary cases all these features are present, and it is only when, in cases of a chronic or permanent character, that certain features predominate and readily determine their nature on histological examination. It is to the special form of the vascular group that the author invites attention in this paper. Although this variety occurs occasionally in the middle turbinal and even in the septum, it will be found to constitute a disease almost peculiar to the inferior turbinal itself owing to its peculiar structure. Thus serial section cutting shows that, whilst the smooth anterior region is characterised for the most part by the presence of glandular and lymphoid structure, the wrinkled posterior part is mainly occupied by cavernous vascular spaces lined by epithelioid plates. These vascular channels, the "Schwellkörper" of Zuckerkandl, are surrounded by several layers of visceral muscle fibres. Many writers seem to have ignored these muscle fibres entirely. Thus even so high an authority as Greville Macdonald describes the venous sinuses as (1) "consisting of a thin layer of connective tissue apparently not elastic and lined with endothelium." He further states that he failed to find muscular fibres in the trabeculæ. This oversight is probably explained by the fact that specimens were examined whose walls were already the seat of morbid changes.

Your attention is specially directed to these muscular fibres, because in their morbid conditions is to be found an interpretation of the pathology of one form of turbinal disease. Owing to the courtesy of my colleague Mr. Carmalt Jones an abundant supply of material has afforded me an opportunity of tracing the varying degrees of degeneration which this erectile tissue undergoes, and the conditions were so constant in their appearance as to justify the view of a more than merely coincidental connection.

The peculiar villous or brain-like macroscopic appearance of the surface was seen microscopically to correspond with a cystic invagination of the surface epithelium, covering distended loops of vessels with very thin walls, embedded in mucoid tissue, that is, connective tissue in which the matrix mucin was in excess of the fibrous reticulum and cells. The muscular walls of the vascular sinuses presented well-marked atrophy and degeneration, varying from simple thinning to complete disappearance, owing to the fibres apparently sharing the surrounding mucoid changes. In places this intervening mucoid tissue simply formed their boundaries, whilst in other parts the walls seemed to have undergone fibrotic changes. This condition is, therefore, not a mere hypertrophy of the structures, but consists of a true degeneration and infiltration of the walls of these vascular spaces, for the walls gradually losing their power of active recoil, the vessels by degrees become more and more distended, and a permanent enlargement ensues, which is in fact a varix.

Etiology.—These degenerative changes, which develop so gradually, are probably due to some trophoneurotic influences, local or general, and excessive erectile activity of

the parts must play an important *rôle*. Unhygienic conditions of living by keeping up a constant irritation; hereditary tendency, often associated with a highly emotional temperament of the male sex are important predisposing factors, as well as all conditions in which the venous flow is interfered with (hepatic cirrhosis, gout, pulmonary and cardiac diseases, etc.).

Symptoms.—The most notable are chronic nasal stenosis, parosmia, a slimy sanguinolent discharge, occasional epistaxis, and either painful tenesmus of the faucial and pharyngeal muscles or paresis of the palate.

Diagnosis.—If seen from the front, a dull red purple mass may be found at a varying depth, on one or both sides, which does not shrink much under cocaine, but readily yields to the probe, and does not change its position on forcible respiration. Posterior rhinoscopy will reveal a red or purple brain-like mass projecting into the post-nasal space on one or both sides. In all instances, however, digital examination will at once afford by far the most reliable and available evidence. A soft resilient, yet sharply circumscribed, mass will be felt on each side of the nasal septum, free all round except at its attachment to the inferior turbinal bone.

Treatment.—This will be palliative and radical. Palliative remedies, such as alkaline and astringent douches with general depletion, can only afford temporary relief, and must only be considered as preliminaries to a more thorough and permanent treatment, by removal of the obstructions in the anterior regions of the nostrils, afterwards treating the varix itself. Direct treatment will be determined by the size of the varix, its duration, and its response to the action of cocaine. If it contracts under cocaine, the galvano-cautery or fused chromic acid will afford relief. But when the swelling is large and does not shrink under cocaine, caustics are absolutely useless and complete removal is necessary. This may be effected either with a snare or by means of a cutting instrument. Of the former, we may use Krause's snare when only soft structures are to be removed, and Jarvis's or Wilkins's where it is decided to include the bone. But by far the most satisfactory results as far as complete enucleation is concerned are to be obtained by the ring or draw-knife, as introduced by Spencer Watson and greatly improved by Carmalt Jones. It is introduced, after cleansing the nostrils with an antiseptic douche, until the varicose posterior extremity is engaged in the ring, and then it is sharply but firmly withdrawn, cutting its way through the turbinal body. Bleeding is easily controlled by tiny tannin and lint plugs, and these should be followed by plugs of boric lint firmly packed in and left for twelve or twenty-four hours, absolute rest in the recumbent position being insisted upon. The plugs are then removed and the nostrils gently cleansed with Dobell's solution.

Two important complications must be guarded against, namely, septic changes and secondary hæmorrhage.

Results.—Having personally investigated the subsequent history of over 200 cases of turbinotomy at the Central London Hospital, some of which were operated upon as far back as three years, none of the evils that have been advanced as likely to occur have arisen.

Dr. FELIX SEMON (London) expressed his surprise that so large a number of these operations should have been necessary within, comparatively speaking, so short a time, and took this observation as the starting point of some general remarks on the desirability of avoiding operative hyperactivity in connection with theories which often enough did not stand the test of time.

Dr. SCANES SPICER had been in the habit of removing vascular growths from the lower turbinated body, but usually without including any of the bones. His practice was to use the cold snare, and he rather dreaded severe hæmorrhage from the use of the cautery knife. He did not hesitate to operate on the nasal cavity whenever there were symptoms of obstruction or irritation.

Dr. DUNDAS GRANT had used the cutting ring knife in a number of cases with excellent results. He frequently used the snare, but for these posterior hypertrophies he found the ring knife more applicable, as he thought cocaine undesirable, and preferred to operate under nitrous oxide gas, the instrument permitting of the rapidity that nitrous oxide required.

Dr. WILLIAM HILL did not consider that 200 cases of moriform growths in three years at the Central London Hospital was greater in proportion to the number cases met with in the combined clinics of himself and Dr. Spicer.

Dr. GREVILLE MACDONALD thought many specialists were too anxious to produce an artistically correct condition of the nose, irrespective of symptoms: yet, at the same time, he was bound to confess that he numbered among his most successful cases those where chronic laryngitis was ameliorated by restoring nasal respiration. Yet it was always to be remembered that whereas nasal obstruction was of no moment whatever to one individual, it became very serious to another. He thought that the only nasal reflexes to be seriously considered were the physiological—that is, sneezing, etc.; though, perhaps, the cure of asthma by correcting nasal abnormality—one of the most striking instances of the success of rhinology—ought to be included. He believed that although all such cases were built upon a neurotic basis, yet the treatment of slight nasal obstruction, which, in the non-neurotic, were of no importance, did more for the patient than the physician could accomplish. Finally, he objected to complete removal of the inferior turbinated bodies, holding that these structures were of great physiological importance.

Dr. MILLIGAN (Manchester) said that during the last four years he had only seen two cases of turbinal varix necessitating the performance of such an operation as Mr. Wingrave had just described. He was at a loss to explain the great discrepancy between his observations and those of some of the previous speakers. He saw many cases of slight hypertrophy of the posterior ends of the inferior turbinals, but local treatment generally sufficed to relieve.

Mr. WINGRAVE, in reply to the observations that had been made, said that whilst sharing Dr. Felix Semon's deprecation of indiscriminate and wholesale operations on the nose for obscure and purely subjective symptoms, he protested against such an interpretation being applied to the conditions of this particular disease, for the indications were not imaginary, but real, obvious to the surgeon and due to mechanical causes. He further replied severally to other points alluded to in the coure of the discussion.

CORYZA CASEOSA.

By P. MCBRIDE, M.D., F.R.C.P.E., F.R.S.E.,
President of the Section;
Surgeon to the Ear and Throat Department, Royal Infirmary, Edinburgh

IN May, 1892, I was consulted by a gentleman, aged 73, whose case presented the following points of interest. He had been aware of a certain stuffiness in the right nostril since the autumn of the preceding year. The nasal obstruction became worse after influenza, in November, 1891. Examination of the anterior nares revealed nothing of importance on the left side. The right nostril, however, showed an irregular warty looking mass with a good deal of inspissated pus lying about and a marked tendency to bleed on touching it with a probe. In my notes I find it recorded that the right choana, when examined with the rhinoscopic mirror, seemed to be blocked by an angry red mass dotted here and there with pus.

The teeth were perfect, there was no history of pain, but slight enlargement of the nose on the affected side was noted. There were no enlarged glands anywhere. There was, however, a certain amount of fœtor. My provisional diagnosis was that probably malignant disease existed, but that possibly inflammation might account for the condition. I, however, in writing to Dr. McDougall, of Coldingham, the patient's medical adviser, expressed my fears as to malignancy but removed a portion of the growth for microscopic examination. Mr. Alexis Thomson very kindly cut sections and gave his opinion most decidedly that the neoplasm was inflammatory, an opinion which was corroborated by Mr. Stiles.

From the clinical aspect of the case certainly this seemed unlikely, but on the strength of the favourable report I proceeded on June 13th, in the presence of Dr. McDougall, to remove the tumour. At first the presenting growth was snared off, and it was a somewhat noteworthy fact that this did not seem to have increased in size during the month that intervened between the patient's first and second visits.

After this had been removed, a sloughy-looking mass remained which could be taken away with the wire loop. It turned out to be a putty-like substance, having an almost fæcal odour. As much of this *débris* was removed as possible, but masses were still visible high up in the nostril. I suggested the employment of a spray of soda, borax, and carbolic, under the direction of Dr. McDougall. Under this treatment absolute recovery seems to have occurred. The patient has been unable to be in Edinburgh since, but Dr. McDougall, writing in February, 1893, says: "The deformity, which was very marked, has now entirely disappeared. The copious offensive watery and purulent discharge, which was such an annoyance to the patient and his friends, is quite gone. The nostril is in every respect natural, and so far as my examination with an ordinary nasal speculum and lamp light can assist me there does not appear to be the slightest trace of any abnormality of the nose remaining."

It will be observed that Dr. McDougall considered the external deformity of the nose more marked than I did, and there can be no doubt that on this point he was better able to judge, as he was intimately acquainted with the patient, while I saw him only twice.

On May 8th in this year there came under my care H. C., an unmarried cook, aged 36. Her chief complaints were: (1) Pain on the left side of nose, worse at night: (2) swelling of left side of face which was noticeable on inspection under the eye and at the side of the nose, extending to the malar region: (3) Headache, frontal and occipital: (4) discharge of matter from left nostril, worse on lying down: (5) watering of the left eye.

Three and a-half years ago the patient had an attack of influenza, and then suffered from a pain over the bridge of the nose, which continued for some months; there was, however, no other local complaint, and H. C. had no further trouble until the middle of April last, when she began to have pain over the whole left side of the head and nose. The pain was least when going about, aggravated by stooping and in bed. There were some bad teeth, and these were removed, but no benefit followed. When I first examined the patient on May 7th I found a reddish pink mass of firm consistence blocking the left nostril; it was surrounded at its margin by greenish yellow-looking matter. The growth seemed attached to the inferior turbinated body, and a portion of it was extracted. After this masses of greenish-yellow solid cheese-like material with a foul and fæcal odour came away. Some of this was kindly examined by Dr. Muir, who reported: "The material taken from the nose shows broken-down cells, chiefly pus corpuscles, a large amount of granular *débris* and enormous masses of bacteria of various kinds. I examined carefully for tubercle bacilli, but could find no trace of such."

The use of a syringe brought away some more of the caseous substance. On May 9th I again operated, removing with the electric cautery a mass of tissue about as large as a hazel nut from the left (inferior?) turbinated body. This was followed by the escape of a large quantity of very fœtid cheesy matter, the main masses having the shape of very large almonds, and being manifestly casts of the nasal passages. Posterior rhinoscopy showed the presence of some muco-purulent substance in the left choana. The patient's nostril was now sprayed with a solution of bicarbonate of soda, and a considerable quantity of inspissated matter cleared away.

On May 11th the patient felt very much better. There is seldom pain, swelling has almost entirely disappeared, and the eye has ceased to water. On examining the nose on May 12th, hypertrophy of the mucosa covering the inferior turbinated was noticed far back. On June 20th, examination showed the middle turbinated mucosa to be thickened and almost pendulous, while below it there inclines to form a hard crust of secretion, which, however, has no odour. I may add that on June 17th I washed out the left antrum with a Lichtwitz's cannula in order to exclude an empyema, and that the fluid (boracic) flowed off by the nostril quite clear.

On June 8th, Dr. Muir reported as follows on a portion of the polypoid mass removed: "Tissue is chiefly cellular, and is composed in great part of numerous thin-walled vessels, and capillaries with abundant accumulations of leucocytes between. There is, however, some myxomatous tissue under the epithelium covering it, and from the general appearance I think it is a myxoma or myxo-fibroma which has been in a state of inflammation for a long time, the inflammatory process having obscured its structure. It is covered on the surface by the deep layers of stratified epithelium, except at some places where there is ulceration." Another portion of the cheesy material was also examined by Dr. Muir, who reported: "I could find no cholestearin, but there are numerous small needle-like crystals (?) of fatty acids, and there are small granules and globules which give the fat reaction with osmic acid, otherwise the structure is as before—broken-down leucocytes and masses of bacteria."

On June 11th Dr. Noel Paton, at Dr. Muir's request, kindly reported as follows: "I extracted with alcohol and ether, and filtered hot. On evaporation hardly any residue was left. This consisted chiefly of cholestearin. Fats and fatty acids are present only in very small amount if at all." On June 14th, Dr. Noel Paton writes: "By saponifying the alcoholic extract from the cholestearin, I was able to get undoubted traces of fatty acids. These may have been free or combined with glycerine."

I may say that this case is still under observation, and I may possibly have something further to add.

Before seeing either of those typical cases I had, in the spring of 1892, seen a patient in consultation with Dr. Whitelaw, who gave the following history.

In December, 1891, he had toothache and swelling of the face, followed by a nasal discharge. In April, 1892, his complaints were of nasal discharge and stuffing of the left nostril, the former being more marked in the morning. On examination a polypoid growth was found in the left nostril springing from the anterior part of the middle turbinated body. This was removed, and afterwards about a teaspoonful of curdy pus came away. I advised the use of a spray, and on June 7th saw the patient again. There was then found diffuse thickening of the mucosa in the region of the middle turbinated body, and on pressing this aside curdy purulent masses were seen. Illumination of the mouth gave no translucence on either side. On July 6th the discharge was greatly reduced but still reappeared on sitting with the head down. The symptoms seem to have become less and less, and in February, 1893, Dr. Whitelaw reported the nostril to be quite normal.

I have recorded these cases because, whatever interpretation we may put upon them, they illustrate a clinical type of rare occurrence. Obviously the last and at the same time least characteristic presented many features which would make one incline to classify it as a latent empyema of the antrum, and I am even now by no means sure that it was not. Only if it was it ran a most anomalous course, and its spontaneous cure also seems to militate against this view. In my second case the antrum has been proved free from disease, but it is still conceivable that the secretion may have flowed from the frontal, ethmoidal or sphenoidal cells, and have afterwards became inspissated. I do not, however, think this probable. In my first example, too, the whole course of the affection militates against the view of any accessory cavity disease. It seems to me very improbable that fluid pus flowing into the nostrils should be there retained long enough to permit of its drying up into such cheesy masses as have been described. I do not think either that the hypothesis of degenerated nasal polypi can very well be upheld.

It seem to me that the two first cases, at least, must be classed as examples of coryza caseosa. The earliest description of this affection with which I am acquainted is that by Duplay and Follin.[1] These authors define the affection as "an accumulation within the nasal cavities of a cheesy substance analogous to that contained in certain sebaceous cysts which may form in sufficient quantity to deform the face, and lead to loss of smell." They also refer to observations by Maisonneuve, Verneuil, Guyon, and Reverdin.

In Verneuil's case, however, the cheesy masses seem to have resulted from the presence of a nasal calculus, and therefore cannot be considered as illustrating the occurrence of coryza caseosa as a distinct clinical entity.

Nélaton[2] also endorses Duplay's description, and confirms

[1] *Pathologie Externe*, vol. iii, p. 806.
[2] *Pathologie Chirurgicale*, vol. iii, p. 717, 718.

the existence of cheesy rhinitis as an independent affection. Among specialists, Cozzolino[3] was the first authority who called attention to the affection, and he has since elaborated his observations, although in all he has only met with three cases. In the last of these he made a careful examination of the caseous matter, and found (1) fatty material with crystals of margarin and stearin; (2) epithelial cells; (3) circular black bodies (aspergillus niger); (4) white corpuscles; (5) microbes. Cozzolino now proposes to apply the term "cholesteatomatous rhinitis" to the affection. Beausoleil[4] briefly refers to two cases he has met with; according to the short description, I gather that in both there were polypoid projections from the middle turbinated body, and in one the diagnosis pointed to empyema of the antrum, these examples thus proving a very marked parallel to the cases I have recorded here.

In addition to these observations, Strazza[5] and Neumann[6] have recorded cases in both of which masses of cheesy *débris* were found. In both a complete cure seems to have followed removal of the caseous material. In Strazza's case microscopic examination showed the foreign substance to be composed of epithelial cells undergoing fatty degeneration, and white corpuscles which stained with osmic acid. Neumann states that he found the substance removed by him to consist altogether of cholestearin.

I am unwilling, gentlemen, to take up more time than I can help. Besides, I do not know that any great value attaches to speculation and hypothesis. My cases—at least the first two—certainly correspond in their clinical features with the affection as it is described by the majority of the authors quoted. Neumann's case certainly seems unique if, indeed, the mass consisted of cholestearin only.

I may add that I think the history of my cases negatives the idea of any foreign body having having been introduced, nor was any such substance detected.

RECURRENT AND SEVERE HÆMORRHAGE AFTER THE OPERATION FOR CLEFT PALATE.

By D'ARCY POWER, M.A.Oxon., F.R.C.S.Eng.,
Surgeon to the Victoria Hospital for Children; Demonstrator of Surgery at St. Bartholomew's Hospital.

It is always worth while to place on record any unusual event occurring in connection with a common operation, for it is by such means that our knowledge is advanced and the operation itself is thereby rendered safer. As a rule matters go so smoothly after the operation for cleft palate, that our only anxiety is to learn whether any portion of the cleft remains ununited. Serious hæmorrhage does occur occasionally, as in Mr. Howard Marsh's case recorded in the *Transactions of the Clinical Society*, vol. xi, p. 71. This happened before the rise of aseptic surgery, and the bleeding was controlled by the rough but effectual remedy of driving a splinter of match into the posterior palatine canal.

The case which recently occurred under my own care was the following:

R. H. T., a boy, aged 3 years, was admitted into the Victoria Hospital for Children on March 13th, 1894, with a harelip which did not extend into the nose and a complete cleft of both the hard and the soft palate on the left side. The palate was closed throughout its whole extent on March 19th, the edges being brought together with sutures of horsehair and silver wire, after separation of the soft parts through antero-posterior incisions about a third of an inch from the edges of the cleft. There was free bleeding at the time of the operation, but it was not excessive. There is a note on March 23rd stating that the boy is behaving well. He lies quietly in bed and does not attempt to talk. On March 28th, nine days after the operation, the notes record that "the child got his hand into his mouth and picked at its silver sutures, setting up a troublesome hæmorrhage." This was not at first apparent because the blood was swallowed. The child became collapsed and blood then flowed from his mouth, and at the same time he vomited about six ounces of it. His nose and mouth were syringed with very hot water and the bleeding at once stopped. The boy gradually rallied.

The bleeding recurred on April 1st, the thirteenth day after the operation, and again in the evening, when a considerable quantity of blood was again vomited. The bleeding on this occasion came from the nose. Mr. Pantin, the house-surgeon, at once removed all the sutures, and plugged the anterior and posterior nares. The pulse was so rapid and feeble that it was considered wise to inject two pints of salt solution at a temperature of 100° F. into a vena comes of the brachial artery, as the superficial veins of the arm were too small to receive the cannula. There was no subsequent bleeding, and the patient was sent to the Convalescent Home at Broadstairs on April 11th. He was seen again on May 13th, when the note states that he was in good condition, and that "the hard palate is completely united except for a small portion anteriorly; the soft palate has failed to unite." A small subsequent operation has completed the union of both the hard and the soft palates, and the hare-lip was at the same time repaired.

This case presents many points of interest, and it will be sufficient here to indicate them. The bleeding was unusual, on account of its severity and from its occurrence so long after the operation. It came undoubtedly from one of the larger branches of the posterior or descending palatine artery. These branches are very irregularly distributed. In this instance one of the branches presumably ran along the edge of the cleft, and was included in one of the horsehair sutures. This appears to be proved, in the first place, by the fact that the bleeding ceased at once and for ever after these sutures had been removed, whilst so long as they were in place it recurred; and, in the second place, because it commenced nine days after the operation, that is, at the time when recurrent hæmorrhage used to be most frequent after the application of a septic ligature to an artery in its continuity. Hæmorrhage at this stage is rarely or never seen now that aseptic methods are employed.

The bleeding, no doubt, stopped spontaneously on each occasion when the child's heart began to fail. The presence of the sutures, however, was sufficient to start the bleeding afresh when the circulation became restored. It was, therefore, only after their removal that a permanent arrest could be anticipated. It is more likely that this supposition is correct than it is to assume that the bleeding was due to a wound of the artery at the time of the operation, for if such had been the case there would almost certainly have been some hæmorrhage immediately after the operation. The practical point which the case appears to bring out is that it would be well to remove the sutures before resorting to more severe methods for the arrest of this form of hæmorrhage after the operation for cleft palate.

NOTE ON INVERSION AND TAXIS IN INTESTINAL OBSTRUCTION.

By ARTHUR SARGENT, M.R.C.S.Eng.,
Surgeon-Major H.M. 3rd Regiment Bombay Light Infantry.

The two following cases occurred within a few days of each other, and are so typical of what may sometimes be done by means of taxis, inversion of the patient, and large enemata that I deemed them worthy of record.

Case I.—On May 3rd, 1894, I was called to see Sepoy B. P., aged 20. He was a strong muscular man, and gave the following history. He was in his usual health the day previous, being engaged on a working party parade. At about 4 P.M. he lifted a heavy weight, and drank some water fifteen minutes afterwards, from which time he was seized with great pain in the abdomen. He remained at his work till 7 P.M., and reported himself sick at the 3rd Regiment Bombay Infantry hospital at 8 P.M. His case was looked upon as one of ordinary colic. The resident medical subordinate treated him with castor oil and opium internally, and with mustard and fomentations externally. He vomited at 9 P.M., and as he showed no signs of improving I was sent for at 2 A.M. I found him very restless, with good pulse and warm extremities. There was an accumulation of wind in the left hypochondriac region. I gave him 20 minims of laudanum and an enema of an ounce of castor oil and turpentine in a pint of hot water; the enema returned, but only a little scybala came away. He did not sleep at all during the night, and at 7 A.M. I gave him 20 minims of laudanum, and a quarter of an hour afterwards 10 grains of calomel. He vomited at 11 A.M., a quarter of an hour after taking some gruel. As there was no action of the bowels by 1 P.M. I considered the diagnosis of acute obstruction confirmed. His pulse was 130, temperature normal, extremities warm, tongue moist but furred. I passed the stomach pump tube 21 inches up the rectum, at the same time slowly injecting hot water up to 6 pints; this appeared to afford great relief, but no scybala came away when the injection returned.

At 2 P.M., I inverted the patient in the usual way; that is, I made a strong man sit on the foot of the bed and take a leg of the patient over each shoulder and rise. I then kneaded the abdomen with my hands, and particularly the accumulation of wind in the left hypochondriac region. There was some gurgling and the whole abdomen became soft and the tumour disappeared. The operation took about a minute, and the patient said he felt much easier. I gave him 20 minims of laudanum—the third dose he had had in twelve hours. An hour after the inversion

[3] *Bol. delle Malattie dell' Orecchio*, etc., 1884. *Annales des Maladies de l'Oreille*, etc., 1889, p. 649.
[4] *Revue de Laryngologie*, etc., April 15th, 1893.
[5] *Bol. delle Malattie dell' Orecchio*, ix. *Annales des Mal. de l'Oreille*, etc., xvii, p. 1891.
[6] *Virchow's Archiv*, v, 132.

he took some gruel without vomiting, and fell asleep for two hours and awoke free from pain. He had a motion at 10 P.M., and three more during the night, and was discharged to duty eight days afterwards.

A. P., a strong, muscular, healthy-looking Brahmin priest, aged 35, was brought to the Dorabjee Pestomjee Charitable Dispensary, Mhow, on May 16th, 1894. He was collapsed and pulseless, but his extremities were warm, and he spoke with a fairly strong voice. He had been ill four days, with great abdominal pain and stercoraceous vomiting. He had been given purges without effect. He had a swelling of flatus in the right iliac region and his breathing was hurried. I looked upon him as dying, and that if anything could be done to save him it was necessary to do it at once. I inverted him as I had done the former patient and kneaded the abdomen, especially where the local swelling caused by flatus was, but the operation gave no relief. I then slowly and continuously passed the stomach pump 22 inches up the rectum, injecting hot water the while. When I had injected 8 pints without any returning the patient began to vomit stercoraceous fluid freely. I had no doubt this was the fluid I was injecting and that his obstruction was removed. I now tried to bring back his pulse by means of alcoholic stimulants, but he died of exhaustion about an hour afterwards.

Within the last six months I was present at a consultation called upon a case of intestinal obstruction in a young English soldier to decide if the abdomen should be opened. It was determined, however, before proceeding with laparotomy to pass the long tube and give copious enemata. The result was quite successful and the patient was saved a severe operation. This case was diagnosed as one of impacted fæces combined with paralysis of intestine from local inflammation.

If any apology is necessary for publishing the above simple cases, it is that I was induced to do so by reading in one of the most classical textbooks, written by one of the first of living surgeons, that he dismisses the subject of the use of enemata in acute intestinal obstruction thus: "Enemata are useless, and usually injurious, in cases of acute obstruction."[1] I think I may reasonably ask, without, I hope, appearing to pit my opinion against so great an authority, Does not this statement require qualifying? The author quoted admits the use of the long tube in chronic obstruction; and I have no doubt if I had seen the second case recorded some twenty-four hours earlier, before collapse had set in, that his life would have been saved.

Regarding the inversion of patients accompanied by taxis, unless there is some obvious contraindication, such as great obesity accompanied by weak heart or peritonitis, I think it should be resorted to, and doubtless the administration of chloroform helps, but administering the last-named agent too often means a delay of two or three hours or more, especially if the patient be in a private house; valuable time may thus be lost. In my first case, taxis without chloroform apparently was all that was needed; and in the second case the patient, when first seen, was pulseless, so chloroform was contraindicated.

Finally, I consider, in the absence of strong contraindication, these two remedies should be given a fair trial, because in the event of the case terminating fatally, it is always a satisfaction to the deceased's relatives to know that no possible treatment had been overlooked, as the ignorant gossip and the educated read and hear of all possible treatments often months after their relative's death.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

William Pavy, M.D., F.R.S., President, in the Chair.

Tuesday, November 20th, 1894.

Malignant Disease of the Larynx.

Mr. Stephen Paget recounted the case of a man, aged 64, in whom an ulcerated new growth was seen with the laryngoscope and felt with the finger. Relief was afforded by tracheotomy, but no further operation was deemed advisable. After death the upper end of the œsophagus was found filled with a tumour attached to the arytenoid, but extralaryngeal in origin. He thought the microscopic sections indicated it to be a giant-celled sarcoma, though these were unsatisfactory in character. Of 23 cases of sarcoma of the larynx, collected by Mr. Butlin, only 3 were, as this was, "extrinsic."

Mr. S. G. Shattock had seen a growth of equal size, which Dr. Felix Semon had removed, and which was a squamous-celled carcinoma, as he (the speaker) thought that Mr. Paget's also most probably was.

Acute Septic Epiphysitis.

Mr. Stephen Paget exhibited the parts removed by operation from a boy, who fractured his lower jaw in a fall; suppuration ensued, and then swelling of the left thigh and effusion into the knee-joint; pus formed about the lower end of the femur. The course of the case was afterwards one of chronic pyæmia. The leg not healing, amputation was performed three weeks after the accident. Abscesses formed in the left suprascapular region and elsewhere, and death occurred nine weeks after the injury. After death pus was found in the pleural cavity and pyæmic abscesses in the lungs. There did not appear to have been any injury inflicted upon the bone itself, the suppuration arising secondarily from the suppurating fracture of the jaw.

Mr. Golding Bird criticised the use of the term "acute epiphysitis;" he thought this should be used only in those cases where the inflammation of the epiphysis was primary and due to injury; in Mr. Paget's case the epiphysitis was rather part of a pyæmic series of phenomena.

Primary Malignant Disease of the Glands of the Groin, etc.

Mr. C. A. Morton recorded the case of a man who presented at first enlargement of the inguinal glands of both sides. This swelling subsided, but at the same time the skin over the right side became red, and seven months later the mass had again increased and was breaking down; the spleen presented no enlargement, and there was no leukæmia. Partial removal of the breaking down mass was practised, the growth being found to have widely infiltrated the surrounding structures. After death the enlargement on the left side did not infiltrate, whilst on the right it extended far along the iliac vessels. The point of interest was that, in addition to this, there were several growths in the subcutaneous tissue of the abdominal wall and in the lungs. Histologically the primary glandular formations presented the structure of lymphatic gland, though certain of the cells were larger, and there was no reticular stroma: in the other tumour, however, there was spindle-celled tissue. The author thought the case one in which sarcoma had followed upon an inflammation of the lymphatic glands.

Dr. H. D. Rolleston suggested the possibility of the disease being a chronic form of glanders.

Dr. Herbert Snow did not believe that a primary malignant disease of lymphatic glands ever commenced simultaneously in two sets; he did not think there was any real connection between the condition of the glands and the spindle-celled sarcomata elsewhere.

Mr. A. A. Bowlby remarked that malignant disease did not necessarily arise in a single gland. In some of the cases of so-called Hodgkin's disease in which new formations were found in the spleen and liver as well as in lymphatic glands the histology was not that of simple glandular tissue but of sarcoma in addition, and this he held to be true of all cases of fatal disseminated lymphadenoma; so it was in Mr. Morton's case.

Dr. Sims Woodhead observed that much confusion at present existed on the nomenclature of this subject. Some cases of what was described as lymphadenoma were due to specific infections; in the horse the name had been used in the case of rapid tuberculosis affecting the lymphatic glands; the same was true of chronic glanders, and Mr. Morton's case might really be one of the last, for the secondary growths differed so widely from the first.

Dr. Newton Pitt remarked that, taking a considerable number of cases of lymphadenoma, there was little variation in the cells of the different growths. If the tumours fungated, as might happen, into a bronchus, he should regard them as sarcomatous, and no longer strictly belonging to the class of lymphadenoma.

Mr. Morton, in reply, stated that the patient was a bricklayer, and there was no history pointing to glanders, and he thought the subsidence of the glandular enlargement was at variance with such a view.

Epitheliomatous Cyst of Neck.

Mr. A. A. Bowlby showed such a cyst, removed after death

[1] *Science and Art of Surgery.* By John Eric Erichsen, eighth edition.

from a man, aged 58, who presented himself with a swelling of the neck, which occupied both triangles and fluctuated as an abscess; definite hard lumps, however, could be felt in certain parts of the cyst, and this led to the view of its being a cystic new growth. No primary tumour was found in the mouth or larynx, and there were no symptoms pointing to any in the œsophagus. On incision, a blood-stained serum alone escaped; the inside of the cyst was rough and tuberous. After death no primary tumour was discovered. The wall of the cyst was a quarter of an inch in thickness, and of squamous-celled carcinomatous structure. The lymphatic glands of the opposite side and of the thorax were free of lesion; the growth itself infiltrated the cords of the cervical and brachial plexuses, and lay beneath the sterno-mastoid. Similar cases had been recorded at the Society by Mr. Treves and Mr. Silcock; and the author agreed with the latter, that they probably arose in a branchial cleft. The disease suggested an origin in a cyst, rather than the formation of a cyst by the breaking down of carcinomatous lymphatic glands.

Mr. F. C. WALLIS exhibited a similar specimen; the glands were affected below the growth. There was no primary disease discoverable during life. A cannula withdrew clear fluid in which there were a few epithelial cells. The growth subsequently fungated through the skin as a cauliflower projection, and death ensued from hæmorrhage and exhaustion.

Dr. SNOW cited cases of fluctuating glandular swellings in the neck, where a careful search had shown that a small tumour of carcinomatous kind had been removed from the lip, etc.; and he thought that many cases of carcinomatous cysts might have such a secondary origin.

Mr. BLAND SUTTON remarked that German writers had named such malignant cysts branchiogenous carcinoma, but he did not regard them as rare, as he had met with ten during the past five years. He did not think that they really arose in branchial clefts, as their appearance in life was too late, and he held that a primary carcinoma situated in some out-of-the-way position was their source. In one case he had observed a small ulcerated patch in the back of the pharynx, and in one of the cases recorded by Mr. Treves a previous operation had been performed on the lip. In answer to Mr. Bowlby only three of the cases had been under examination after death, and in two of these no primary growth was found.

Mr. S. G. SHATTOCK observed that he had examined portions of the wall of a small branchial cyst arising in the fourth cleft and though the part examined was only a very small distance from the integument he was surprised to find it lined with columnar ciliated epithelium; from the cyst itself a cord-like process extended far along the carotid vessels, whence it appeared that the portion of the cleft arising from epiblastic invagination must be relatively insignificant, the chief portion having its source in the primitive foregut. He questioned how far a deep-seated branchial vestige would be furnished with squamous-celled epithelium, and give rise to a squamous-celled carcinoma. He recalled also the references Mr. Butlin had made to squamous-celled carcinoma of the inguinal glands arising in chimney-sweeps where there was no primary cutaneous lesion that was recognisable.

Mr. TARGETT had seen two instances of glandular infection in which no primary tumour had been recognised.

Dr. C. F. BEADLES referred to a cyst of the thyro-lingual duct that had been exhibited by Mr. Raymond Johnson, and which was lined with squamous-celled epithelium.

Mr. BLAND SUTTON had also observed a case similar to those to which particular attention had been drawn by Mr. Butlin.

Mr. STEPHEN PAGET asked whether such cases had a rapid onset, or whether there was a history of an antecedent cyst.

Mr. BOWLBY, in reply, pointed out that in only one case had Mr. Sutton noticed a primary lesion. He himself was well acquainted with a cystic carcinomatous secondary condition of lymphatic glands: but he thought that the class of cysts he had exhibited differed clinically from such; they were greatly more rapid in course, and attained a much larger size. Too much stress should not be laid on the characters of the epithelium, as its primary form was not invariably maintained. He did not think that there was an antecedent cyst; the carcinoma arose more probably in what was only a minute potential cyst.

(2) WOLFFIAN ADENOMA OF THE KIDNEY.

Mr. S. G. SHATTOCK exhibited microscopic sections of an adenoma of the kidney of a child; the tumour itself was of large size, and was quite distinct from the kidney substance. What the author discussed were the reasons for thinking that such growths arose in the Wolffian body; he did not himself see that any proof had yet been adduced on this question. The first specimens of striped myosarcomata of the kidney recorded in this country were those exhibited at the Pathological Society in 1882 by Mr. Eve and Dr. Dawson Williams. The Morbid Growths Committeee, in reporting upon these, clearly hinted that a columnar character of the glandular epithelium in such tumours would point to its possible origin in the Wolffian body. The author maintained that there was nothing in the epithelium of the Wolffian body, or in its structure generally, which differentiated this from the permanent kidney. In the adenoma which he exhibited the glandular tissue was of the tubular type, and the epithelium of a long columnar kind limiting distinct lumina; mingled with this there were solid cylinders of epithelium in which a glandular lumen had not yet developed; the final result, however, was a columnar-celled tubular gland. By the side of the section he showed one of the Wolffian body and kidney in a human fœtus of six weeks. The Wolffian body, which lay in front of and quite distinct from the kidney—and Professor Schäfer had been kind enough to examine his preparation—presented an early formation of glomeruli, and at one spot tubuli of the convoluted renal type lined with granular epithelium. The tubular structure otherwise was as yet without lumen and of columnar epithelium. What he wished to emphasise, however, was that the kidney in the early stages of its development presented precisely similar appearances; indeed, its structure was absolutely indistinguishable from the tumour in question. He recalled the fact that the ureter was developed as a diverticulum of the Wolffian duct, and that recent observations had shown that the whole of the kidney was developed from this diverticulum. Morphologically and histologically, therefore, no distinction existed between the kidney and the Wolffian body; and such tumours might equally well arise in aberrant portions of embryonic renal tissue or in residues of the Wolffian body. The presence of striped muscle fibre in such adenomata proved nothing; for as these fibres were elements displaced from the muscle plates, they might as well affect the kidney as the Wolffian body. Sabourin had fully discussed the small adenomata of adults; in those the speaker had examined the epithelium was of the cubical kind; but Sabourin had found it in some such to be columnar; such growths were almost invariably associated with chronic interstitial nephritis, to which they bore an obvious etiological relation. In regard to Dr. Snow's proposal of naming such tumours blastomata, the speaker pointed out that it would lead to confusion by introducing what could not be regarded as a histological term conveying any idea of structure; it was not difficult to name any tumour on the principles laid down by Virchow. Were the term used as a prefix, for example, blasto-adenoma, to signify a growth arising in developing as distinguished from merely growing tissue, its introduction would not be open to the same objection, and the speaker was inclined to make this suggestion.

HUNTERIAN SOCIETY.

CHARTERS J. SYMONDS, M.S., F.R.C.S., President, in the Chair.

Wednesday, October 24th, 1894.

PRESIDENT'S ADDRESS.

THE PRESIDENT briefly reviewed the progress made in medical and surgical treatment during the past year.

HYPODERMIC USE OF ARSENIC IN CHOREA.

Dr. FRED. J. SMITH read a paper on this subject. He had tried the method in some three or four cases. The conclusions which he considered established were (1) that arsenic can be administered in very much larger doses by hypodermic injections than by the stomach; (2) that there was no definite positive evidence as to the "specific" effects of arsenic in cases of chorea.

Dr. Woods said he had treated, within the past year, 9 cases of chorea, and of these 7 were now well; of these 5 yielded at once to hypnotic suggestion.

Dr. Davies considered that failure of arsenic and other drugs, not only in chorea but in other diseases, was due to failure to give large doses.

Drs. Hingston Fox, Chaplin, and Cotman also discussed the paper.

Fœtid Expectoration Treated by Inhalations of Coal Tar Creasote Vapour.

Dr. Chaplin read a paper on this subject. Objection was urged to the normal method of inhalation on the ground of its inefficiency. To obviate this he had been treating fœtid expectoration by confining the patient for an hour every day in an atmosphere of the vapour of the common commercial tar creasote. The cases of fœtid expectoration most suitable for this treatment were those arising from bronchiectasis. The method of application of this vapour consisted in placing the patient in a small chamber about 7 feet square, in the centre of which was placed a dish containing the creasote. This dish was heated, and the fumes quickly filled the chamber. By the penetrating odour of the vapour it was capable of reaching the dilated bronchus; by its irritating and antiseptic properties it was able to cause expulsion of the retained phlegm and to render aseptic the dilated bronchus. The effect of the inhalations, which were continued daily for six weeks or more, in 6 cases was to render the phlegm more or less free from odour. In 2 cases the smell was completely removed, and had not returned after a lapse of two months; in 2 others an occasional inhalation has to be used, once or twice a week, by which means the fœtor is controlled. The method is easy of application and inexpensive.

Dr. Kingston Fyffe had found not only diplococci but putrefactive bacteria in the fœtid pus; guinea-pigs injected with this pus died. After creasote inhalations no putrefactive bacteria were found, and guinea-pigs injected now did not die.

Dr. F. J. Smith feared that the cure was temporary only, that the cavities would still secrete, and the secretion would again decompose.

Dr. Chaplin, in answer to the President, said the inhalations had no effect on phthisis. The room in which the inhalations were given should be small and fairly airtight. The creasote was commercial coal tar creasote. In answer to Dr. F. J. Smith, he considered poisoning an impossibility. He could not pronounce any case one of perfect cure, but even temporary benefit was well worth the trouble.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

R. J. Banning, M.D., President, in the Chair.

Friday, November 2nd, 1894.

Diphtheria.

Dr. Campbell Pope opened a discussion on this subject. With regard to the etiology of the disease, he raised the following questions: (1) What is the character of a locality where the disease is endemic? (2) under what circumstances does it become epidemic in such places? and (3) how is it carried to other localities? In answer to the first question, he stated that insanitary conditions, malnutrition, and a moist atmosphere tended to make the disease endemic. The importation of a case of diphtheria, followed by the infection of the drains, would produce an epidemic in such a locality. Under the third heading he considered milk as the most fruitful vehicle for the transmission of the disease, but admitted that it might also be conveyed by other articles of diet, such as groceries; and infection by domestic animals must also be remembered. With regard to diagnosis, he emphasised the importance of careful clinical examination of the cases; and, although not considering the presence of membrane on the tonsils as necessarily diphtheritic, the extension of the membrane to other parts was, in his opinion, pathognomonic of diphtheria. Pyrexia was of doubtful diagnostic value; but albuminuria, intense prostration, and subsequent paralysis were important diagnostic features. After alluding to the varying severities of different epidemics, he described eight forms of diphtheria, which presented more or less different clinical characters. After considering the published reports of cases treated with antitoxin serum, he was still inclined to lay the greatest stress on sanitation.

Dr. Hood referred to the fallacy of statistics in this disease, and mentioned some deductions drawn from 200 cases treated at the West London Hospital. He specially pointed out the decrease in mortality after the age of 7. He had noticed that in some cases where the membrane was specially abundant the prognosis was favourable.

Dr. Drewitt insisted on the necessity of free ventilation and the allowance of abundant cubic area for each patient in the treatment of diphtheria, and referred to an epidemic of diphtheria which occurred at a children's hospital immediately following the closing of the windows and ventilators in order to keep out dust. No epidemic had previously occurred at this hospital, although the cases were transferred from the isolation to the general ward two days after the membrane had disappeared. This freedom from epidemic he attributed to the thorough ventilation which formerly existed.

Dr. Wolfenden referred to those cases of sore throat resembling diphtheria which were due to infection with streptococci, staphylococci, and pneumonococci. Since these cases presented all the clinical features of diphtheria, it was impossible to make a diagnosis except by bacteriological examination. He urged the necessity for Government arrangements for the distribution of cultivation tubes for the bacteriological investigation of suspected cases, and explained the American system.

Dr. Eccles moved the following resolution:

That in view of the necessity for accurate diagnosis at an early stage of throat affections in order to effectually isolate and treat cases of diphtheria, a committee be appointed to draw up a memorial from this Society to the Local Government Board urging the establishment of stations throughout the country for the bacteriological examination of inoculations from suspected cases.

He considered that such a resolution, coming from this Society of general practitioners, would have more weight than that already presented by the British Laryngological Society.

Dr. Jackson, in seconding the motion, referred to the influence of sewer gas in preparing a suitable nidus in the throat for the development of diphtheria. He condemned the action of the vestries in allowing the ventilation of the sewers into the roadways, which he pointed out was directly contravening the Act.

Dr. Atkinson raised an objection to the resolution in that it would increase the work of the parish doctors.

Remarks were also made by Dr. Alderson, Mr. L. Browne, and Dr. Seymour Taylor.

The discussion was adjourned.

MANCHESTER MEDICAL SOCIETY.

J. Dixon Mann, M.D., F.R.C.P., President, in the Chair.

Wednesday, November 7th, 1894.

Recurrent Cancer of Breast.

Mr. Colin Campbell showed a patient, aged 48, whose right mamma he had removed for scirrhus in 1887. A year later the axillary glands were found affected, and were cleared out. In 1892 the disease had returned in the right breast. The axilla contained half a dozen enlarged glands. The old cicatrix was the centre of radiating puckers, and cancerous nodules were freely scattered over the chest. At this period the diagnosis of cancer was strongly confirmed by Dr. Graham Steell. The patient was markedly cachectic, losing flesh and suffering much pain, when in June, 1892, being regarded as hopeless, the administration of "Levico water" was commenced. In three months pain had ceased. She had continued it two years and four months. The nodules and enlarged glands had disappeared. The mamma had diminished to its ordinary size. The patient had recovered her strength and weight, and was healthy in appearance, results which Mr. Campbell suggested were due to the remedy.

Pyoktanin for Malignant Growths.

Dr. Moritz showed a case of sarcoma of the tonsil and upper jaw much improved by injections of pyoktanin. The

patient, a woman aged 49, had first noticed a swelling of the right tonsil about eighteen months ago. When she came under observation about a year ago the right tonsil was considerably enlarged, touching and pressing away the left palatoglossal arch, and there was a second tumour the size of a plum in the roof of the mouth, and a third one in the left parotid region. The tumours were smooth and soft. As a radical operation seemed impossible, it was not thought advisable to remove part of the tumour, and so no microscopic examination was made, but the patient was shown at a meeting of the Medical Society during the last winter session, and those who saw her agreed that the macroscopic appearances were those of sarcoma. The patient took arsenic for some time without any good effects. In April last Dr. Moritz commenced to inject three times weekly a saturated solution of the yellow pyoktanin (auramin) into the tumours; about 5 minims were injected into each tumour at a time. Since then the tumour of the hard palate had entirely disappeared, and there was under the apparently healthy mucous membrane a soft place where the bone had become absorbed. The tonsillar tumour had diminished to half its size, and the patient, who had been suffering greatly from dyspnœa and difficulty in swallowing, now suffered no further discomfort.

Dr. MILLIGAN, who had also observed the patient during the course of treatment, was able to confirm Dr. Moritz's statement.

Scurvy Rickets.

Dr. ASHBY read a paper on the etiology of so-called "scurvy rickets." He referred to upwards of 30 cases which he had seen in which careful notes had been taken of their dietary up to the time of the development of the symptoms. The commonest food employed had been pancreatised milk. Not one of the cases had been fed at the breast; several had had fresh milk with some starchy food. He emphasised the fact that the symptoms had developed while taking fresh boiled milk, in one case while taking raw beef juice, in another a raw egg daily, and in one case boiled mashed potatoes. In all his cases there was marked rickets. He was not convinced that the hæmorrhagic diathesis which sometimes accompanied severe cases of rickets was true scurvy.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

E. MALINS, M.D., in the Chair.

Friday, October 26th, 1894.

Pathological and Clinical Section.

Adhesive Pleurisy following severe Burn.

Dr. FOXWELL showed a man recovering from a severe attack of bronchitis where the right chest over the whole lateral region as high as the fourth cartilage anteriorly and up to the scapular spine posteriorly gave a deficient percussion note with very feeble but otherwise normal breath sounds. Over most of this area stretched the deep scar of a burn he received when 7 years old, and Dr. Foxwell believed the change in percussion note and breath sound was due to adhesive pleurisy set up by this injury.

Epileptiform Convulsions.

Dr. FOXWELL also showed a man, aged 22, who when a child had had his nasal bones injured by a fall, but was otherwise quite healthy. For seven years he had been subject to epileptic attacks, two or three in the year. On November 29th, 1893, in Massachusetts, he was trephined over the middle of Rolando's fissure. The pia was thickened, and there were many enlarged veins. A small trochar was passed twice one inch into the brain substance, but this appeared to be normal. Within six weeks he had three fits, the twitching on the last occasion lasting three days. On January 28th, 1894, almost the whole of the remainder of the left parietal bone was removed and again nothing but enlarged veins were found; these were ligatured. On recovering distinct weakness of the left arm was noticed. This had gone on increasing, and now he was quite unable to follow his employment of gasfitter. There was also considerable wasting of all the muscles except the pectorals with increase of the deep reflexes, also slight deficiency of localising power. The patient suffered from general headache but otherwise was healthy. The discs were normal. He had no attack after the second operation till May, since then he had had four.

Nodular Swelling on each Clavicle.

Mr. GEORGE HEATON showed a child, aged 1½ year, with a symmetrical swelling on each clavicle at the junction of the middle and inner thirds. They had in all probability existed since birth. There was no history of any accident, and labour was natural and easy. The diagnosis lay between an enlarged deltoid tubercle, some congenital malformation of the sternal epiphysis, and a symmetrical ununited fracture. Mr. Heaton adopted the last diagnosis because of the free mobility in the bone itself, and assumed that the swellings were masses of callus which had become cartilaginous around the false joints.

Fleshy Mole.

Dr. THOMAS WILSON showed a fleshy mole expelled from the uterus of a multipara thirteen months after conception. It consisted of the placenta and membranes of about the third month of gestation: the maternal portion wa infiltrated with blood clots, the chorionic villi less vascular and more fibrous than natural.

Absence of Complexus.

Mr. THOMAS exhibited a boy, aged 10, in whom the left complexus muscle was wanting. The left sterno-mastoid was thrown into relief by the depression behind it, so that the patient appeared to have torticollis, but all the movements of the head could be evenly performed. The right complexus was normally developed, and the ligamentum nuchæ tense and well defined.

Vermiform Appendix with Concretion.

Mr. CHRISTOPHER MARTIN showed a diseased vermiform appendix, with its contained concretion, removed by operation from a youth, aged 16. The boy made a splendid recovery from the operation, his temperature never rising above normal, there being not a sign of peritonitis, and the wound healing throughout by first intention. He got up on the fourteenth day, and returned home (a distance of 175 miles) on the twenty-first day. He had since remained perfectly well.

Specimens were also shown by the PRESIDENT, Dr. KAUFFMANN, Mr. MORRISON, Mr. LUCAS, and Mr. HASLAM.

LIVERPOOL MEDICAL INSTITUTION.

CHAUNCY PUZEY, F.R.C.S., President, in the Chair.

Thursday, November 15th, 1894.

Chronic Tetanus Treated by Antitoxin.

Mr. RUSHTON PARKER related the case of a boy, aged 14, who came under treatment on October 19th, suffering from trismus, general muscular rigidity, and severe clonic spasms of six days' duration. A splinter had been embedded in the right thumb for four or five weeks. During the clonic spasms there was opisthotonos and the affected muscles became as hard almost as stone. The first day two injections of carbolic acid were made under the skin (½ ounce of a 1 in 20 solution); next day antitoxin was given subcutaneously (2½ grammes dissolved in 10 parts of boiled distilled water). On six subsequent days a dose of one quarter the first was given. The clonic spasms numbered 70 the first night, then 30, 35, 24, 34, 21, 8, 5, and, finally, 1. After a week's treatment he had so far recovered that nothing further was done except to feed him up. The case was one of chronic tetanus and the antitoxin appeared to have sensibly mitigated the disease and led to its disappearance. About 50 per cent. of such cases appear to get well under various methods of treatment, and, perhaps, under no treatment, but, if the mortality of 50 per cent. were greatly reduced by antitoxin, we might be able to place real confidence in the efficacy of the only scientific remedy yet suggested.

Rabies.

Dr. A. C. E. HARRIS introduced a discussion on this subject by reading two cases which had occurred in his practice, one of the paralytic and the other of the convulsive form.

The paralytic case was that of an officer who was bitten in India and who received his first inoculation in Paris twenty-two days later. Twenty-five days after this he was taken ill, and he died on the eighth day. The convulsive case began twenty-three days after the bite, death supervening in about forty hours. Dr. Harris supported the following propositions: There is such a disease as human rabies; it belongs to the infective order of diseases, the specific virus being transmitted by the nerves and the motor centres of the brain and cord, the period of incubation depending on the tissue inoculated. Clinically a convenient division is into the paralytic and the convulsive form; the paralytic variety is not an outcome of the Pasteur inoculations. For prophylaxis a muzzling order for the entire country, issuing from a central authority. For treatment in the actual disease, Pasteur's inoculations, by far the best, and in this, or some variation thereof, is the hope for the future.

Dr. Barron alluded to "M. Pasteur's Double Hecatomb," a supplement issued with the November number of the *Zoophilist*, which, giving all the deaths after Pasteurian treatment since August, 1885, as 267, shows (no fewer than 20,000 cases having been treated) a mortality of 1.033 per cent. Assuming that the bulk of these deaths were due to the treatment (which he, Dr. Barron, would not admit), he would prefer to undergo the treatment with a 1 per cent. risk rather than the ordinary chance of 18 to 20 per cent., which held good before the inauguration of Pasteur's inoculations.

Professor Boyce showed lantern slides of rabbits in the various stages of paralytic rabies; also slides of the stomach and central nervous system with the pathological changes met with in rabies.

Dr. Glynn said that he thought it was very remarkable that some individuals resisted the virus of rabies altogether; that cases of mild rabies, due to the power of resistance being somewhat less, were not met with. In the allied disease, traumatic tetanus, there was much difference in the severity of various cases. The individual bitten by the "mad dog" either escaped altogether or died of rabies. Some authorities stated that only 15 per cent. of those bitten by rabid dogs acquired hydrophobia; but Proust declared that the disease manifested itself in 82 per cent. of those bitten, unless the wounds had been cauterised with the actual cautery, when the mortality was reduced to 25 per cent. It was desirable, therefore, that in all cases the wounds of the victims of dog bites should be thoroughly cauterised; it was possible that this treatment would lessen the extent of the infection, and render the success of the Pasteurian treatment more certain.

Dr. Robertson (M.O.H. St. Helens) believed that if proper precautions were taken to enforce efficient muzzling over large enough areas the disease could be eradicated. Imported cases would then alone have to be dealt with. The irregular manner in which the muzzling order was carried out at present caused irritation, and "muzzling" was blamed. Although rabies was alarmingly on the increase in Lancashire at the present time, yet there were nearly two millions of people living in towns where the muzzling order was not in force.

Drs. Barr, Buchanan, Carter, Knowles, and Roocroft also took part in the discussion.

West Kent Medico-Chirurgical Society.—At a meeting on November 2nd, Mr. C. H. Hartt, President, in the chair, Mr. Arbuthnot Lane read a paper on the Uses of Sulphur in Surgery. He used it for the destruction of micro-organisms which had effected an entrance into the living body by injury or disease. In the case of recent incisions or wounds made into vascular structures, sulphur should not be left in contact with the part which it was desired to sterilise for a longer period than twenty-four hours. When the circulation of the tissues operated on was impaired, it was frequently necessary to retain the sulphur for two, three, or more days. The application of moist heat assisted the tissues in breaking up the sulphur into sulphuric acid and sulphuretted hydrogen. When the surface to be treated was a granulating or ulcerated one, sulphur might be applied at intervals till the surface healed, or the cavity of which it formed the wall closed.—Dr. George Herschell read a paper on the Mode of Action of Iron and the Relative Value of its Salts in Anæmia. Theoretically the best preparation of iron was the nascent ferrous carbonate formed in the stomach itself by the reaction between sulphate of iron and carbonate of potash, and the worst ones were the albuminates, peptonates, and colloid forms. In these latter preparations contact with the hydrochloric acid of the gastric juice produced a precipitate of insoluble ferric carbonate of iron. The alleged fact that these preparations were better borne in disease was evidently due to the fact that they were almost inert. Dr. Herschell then gave an account of results obtained by administering different forms of iron to 65 out-patients at the National Hospital for Diseases of the Heart; the hæmoglobin was estimated before and after treatment by means of Fleischl's hæmometer. Blaud's pills in tabloid form proved the best, giving an average daily increase of 1.2 per cent. of hæmoglobin.

Nottingham Medico-Chirurgical Society.—At a meeting on November 7th, Dr. J. S. Tew, the President, delivered an introductory address On Some of the Legal Responsibilities of Medical Men. The Oaths Act was considered to meet all ordinary present day requirements. Swearing with the uplifted hand was considered preferable to kissing the book. Any method of judicial swearing should be allowed, which was not ridiculous in performance or repugnant to the feelings religious, racial, or otherwise. The subjects of death certification, and the giving of evidence before the coroner or in the Law Courts were next dealt with. Attention was drawn to the large number of districts to which medical coroners had been appointed. The classification of deaths as "uncertified" was specially condemned as being a by-way for unscrupulous persons to evade the desserts of gross carelessness or crime (more especially with regard to children), and as damaging to the statistical data supplied to the Registrar-General. The latitude allowed to medical witnesses, and the law relating to confidential statements made by patients to medical men were discussed. There need be no fear of an action for libel in consequence of any statement in court made in good faith, and without bias or prejudice. The Sale of Food and Drugs Act, with special reference to the protection of supplies used by the poor; The Factory Act, with regard to infant mortality and the employment of married women in factories; and the Infectious Diseases Notification Act, with regard to ignorance being put forward as a plea for non-compliance with the provisions of the Act, were discussed at some length. Members of the profession were urged to fortify their legal position by joining one or other of those societies whose main object was to provide moral and financial support when legal proceedings were threatened or were brought against its members.—A vote of thanks to the President was carried by acclamation.

Bournemouth Medical Society.—The first ordinary meeting of the session was held on November 16th.—Dr. Ramsay read notes of a case of Spina Bifida in an infant 3 months old, cured by excision, and showed the child and photographs of the condition before operation.—Mr. Heygate Vernon read notes of a case of Impaction of Gall Stone in the ileum leading to acute obstruction, treated by laparotomy and incision of the bowel for the extraction of the stone, with a successful result. The calculus was shown.—The President (Mr. Parkinson) gave an address on the Wants of the General Practitioner, and a discussion followed, which was adjourned to the next meeting.

Sheffield Medico-Chirurgical Society.—At a meeting on October 25th, Mr. Makeig Jones, President, in the chair, Mr. Snell showed: (1) A woman with a Large Defined Swelling in the Conjunctiva, Ulcerated in the Middle, but with little or no Discharge. It was now rapidly subsiding under potassium iodide. It was suggested that the swelling was a gumma. (2) A man, aged 24, with Congenital Amblyopia. Two brothers and two sisters were similarly affected.—Mr. Pye-Smith showed (1) the case of Tumour of the Palate in a Woman, which had been before the Society last February. He had removed the growth, together with the hard palate and the right alveolar process, eight months ago, and there was no sign of recurrence. Sections of the growth were also exhibited under the microscope, and showed it to be a fibro-

cystic sarcoma. (2) A man on whom he had recently performed Anterior Colotomy for Malignant Disease of the Rectum.—Dr. KEELING gave particulars of a case of Oöphorectomy for Uterine Fibroid.—Mr. RICHARD FAVELL related a case of Ruptured Tubal Gestation, in which he had performed abdominal section. The rupture was found in the anterior border of the left tube, close to the uterus, the embryo being recognised in the clot. The abdomen was cleared of blood and clots, and washed out with saline solution. The patient made a good recovery. Mr. Richard Favell also related a case of Hæmatosalpinx. There had been pelvic pains for three months, and a bloody discharge which continued up to the operation. A blood clot the size of a Tangerine orange was found in the right Fallopian tube.—The PRESIDENT read brief notes entitled Kopftetanus treated with Antitoxin: Recovery.—Mr. ATKIN, Dr. MARTIN, Dr. SAMSON MATHERS, and Dr. WILKINSON took part in the discussion.

NORTH-WEST LONDON CLINICAL SOCIETY.—A meeting held recently at the North-West London Hospital for the purpose of founding a clinical society in the district was attended by a large number of representative medical men. Mr. FREDERICK DURHAM took the chair, and Dr. CAGNEY acted as Secretary. A number of resolutions were passed constituting the Society, adopting provisional rules, and regulating the subsequent proceedings. Several speakers bore witness to the need and prospective success of the Society. Over seventy members joined on this occasion, and the number daily increases. It was decided that the meetings of the Society should be held on the second Wednesday of each month in the out-patient room of the North-West London Hospital. A provisional Committee was appointed to hold office until the first general meeting in January. The Committee consists of Dr. Donald Hood, Dr. Strange, Mr. F. Durham, Dr. Godfrey, Dr. Milson, Dr. Wright, Dr. John Shaw, Dr. Waterhouse, Dr. Cook, Dr. Sibley, Dr. Wilbe, Dr. Claremont, Dr. A. T. Scott, Dr. Stowers, and Mr. Mayo Collier. Dr. R. F. Gill and Dr. Cagney have undertaken the duties of Honorary Secretaries.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—A meeting of the Scotch Division of this Association was held in the Royal College of Physicians, Edinburgh, on November 8th. Papers were read by:—Dr. OSWALD: A case of Hæmatoporphyrinuria following the Administration of Sulphonal.—Dr. LEWIS C. BRUCE: The Effect of Thyroid Feeding in some Forms of Insanity.—Dr. FRANK HAY: A Case of Epilepsy, with Impairment of Speech. An interesting discussion took place on the subject of each paper.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on November 14th, Dr. HARRISON in the chair, Mr. MORTON showed a patient with Congenital Deficiency of Junction between Ribs and Sternum.—Dr. WALDO showed a patient with Lichen Ruber Planus et Acuminatus; and Dr. HARRISON a patient with Lichen Planus.—Mr. BARCLAY showed a patient with a very useful Hand, after complete excision of the wrist for disease following an injury.—Mr. GREIG SMITH showed Two Calculi removed by suprapubic operations; a Malignant Growth removed by the operation of pylorectomy; a specimen of Resection of Malignant Stricture of Colon; a Papillomatous Growth in an ovarian cyst; an Ovarian Cyst showing a large number of secondary growths equally distributed over the whole of the cyst wall; and a large Uterine Fibroid that had caused obstruction from pressure on the rectum.—Dr. MICHELL CLARKE read a paper on Aortic Valve Disease, in which ulcerative change supervened, and in which the Pulsus Bisferiens occurred; Mr. MUNRO SMITH, Mr. BARCLAY, Dr. HARRISON, and Dr. ROGERS made remarks on the paper.—Dr. M. CLARKE showed specimens of Hæmorrhages in the Pons Varolii.—Dr. PARKER read a paper on Chloride of Calcium, advocating its use in various cases of hæmorrhage. Dr. SHINGLETON SMITH, Dr. ELLIOTT, Dr. CLARKE, Dr. EDGEWORTH, and Dr. HARRISON discussed the subject.

PATHOLOGICAL SOCIETY OF MANCHESTER.—At the annual general meeting, held at the Owens College Medical School on October 10th, Mr. F. A. SOUTHAM, F.R.C.S., President, in the chair, the following office-bearers were elected for the session 1894-95: *President:* Professor A. S. Delépine, M.B. *Vice-Presidents:* H. R. Hutton, M.B.; T. Harris, M.D. *Honorary Treasurer:* T. N. Kelynack, M.D. *Honorary Secretary:* R. B. Wild, M.D. *Committee:* W. H. Brazil, M.D.; T. A. Helme, M.D.; A. Emrys-Jones, M.D.; E. T. Milnes, M.B.; S. Moritz, M.D.; E. S. Reynolds, M.D.; A. T. Wilkinson, M.D.; J. B. Wolstenholme, F.R.C.V.S. *Auditors:* T. A. Goodfellow, M.D.; Alex. Wilson, F.R.C.S. *Honorary Editor:* E. S. Reynolds, M.D. *Publishing Committee:* The President; the Honorary Secretary; the Honorary Treasurer; the Honorary Editor; J. S. Bury, M.D.; T. Harris, M.D.; T. C. Railton, M.D.; G. A. Wright, M.B., F.R.C.S.

REVIEWS.

A PRACTICAL MANUAL OF MENTAL MEDICINE. By Dr. E. RÉGIS. Second Edition. Translated by Dr. BANNISTER. Utica, N. Y.: Press of *American Journal of Insanity*: London: Baillière, Tindall, and Cox. 1894. (Cr. 8vo, pp. 692.)

THE general plan of this book is shown by the classification constructed by its author; a classification which retains only the absolutely primary conditions of mental alienation: whereas, on the contrary, secondary conditions (associated or symptomatic insanities), are made subsidiary and placed apart. These are considered as morbid associations of forms of primary mental alienation, with as substratum any physiological or pathological process whatever of the organism (insanities of physiological crises, and of various diseases, and intoxications).

The classification proper includes only the primary conditions of mental alienation. These are divided into: 1, the functional; and 2, the constitutional.

1. The functional alienations (*syn.* insanities, vesanias, psychoses) are subdivided into (*a*) the generalised, and (*b*) the partial insanities. The generalised are so termed from involvement therein of the whole being or organism, and general activity; whereas in partial insanity the disorder is limited to the psychic sphere, and the general activity is unaffected. Of the generalised, three genera are made—mania, melancholia, insanity of double form—and each of these has its species: of the partial, there is but one genus—systematised progressive insanity.

2. The constitutional alienations (*syn.* degeneracies, deviations, mental infirmities,) are subdivided into two groups, (*a*) degeneracies of evolution or vices of organisation, with four genera—disharmonies, neurasthenias, phrenasthenias, monstrosities—each with their species; and (*b*) degeneracies of involution, or psychic disorganisation, having one genus—the dementias.

This classification has many good points, although we can only partially accept it; the book built on its lines is able and commendable.

ALLGEMEINE PERKUSSIONSLEHRE. [A Treatise on Percussion]. Von Dr. Med. HENRY HUGHES. With 45 figures. Wiesbaden: J. F. Bergmann. 1894. (Roy. 8vo, pp. 140. M. 4.)

IN the preface the author thus explains his object in writing the book: "Since the time of Skoda the methods of physical examination have made no substantial progress, nor have their fundamental principles been tested. In the last half century, indeed, corrections, emendations, and extensions of these methods have been made, but no one has thoroughly examined the ground on which they are based. Nevertheless, one has become gradually convinced that this huge structure has need of firm foundations, and that the methods of physical examination ought to be clearly placed in connection with physical laws. In the present work, therefore, it is intended to fill up the gaps which lie between our knowledge of acoustics and our doctrine of percussion, and to make their proper connection clear." A great portion, indeed, of the book is devoted to the scientific principles of acoustics; and the explanation of these principles, as far as percussion is concerned, is facilitated by numerous diagrams. After an introduction, including a historical account and a bibliography of the subject, the author enters on the various

methods of obtaining the percussion sound. He then deals with the acoustic laws which have a bearing on the subject of percussion, and examines our perception of sound, and how, both quantitatively and qualitatively, we analyse and appreciate different sounds.

After reading Dr. Hughes's elaborate account of the various pleximeters for mediate percussion, it is reassuring to turn back (p. 18) and see that he approves of the fingers as plessor and pleximeter, according to the usual method in England. We read: "For ordinary practice the finger is quite sufficient, and for testing the resistance is, indeed, indispensable. Hence one should commence by an examination with the finger, even when undertaking a most careful investigation with more exact apparatus."

The author devotes the last portion of his book to estimating the diagnostic use of percussion, and compares its value to that of the philosopher's stone, since it renders the invisible visible, and brings to light what is concealed. Dr. Hughes's book may be recommended to those who wish to add to their scientific and theoretical knowledge of percussion.

Traité des Maladies de la Grossesse et des Suites des Couches [A Treatise on the Diseases of Pregnancy and the Puerperium]. Par le Dr. Ch. Vinay. Paris: J. B. Baillière et Fils. 1894. (Royal octavo, pp. 848, Illustrations 91. Fr. 16.)

There will be differences of opinion upon the question whether it is advisable that a special treatise should be written upon diseases of pregnancy and the puerperium. The diseases which are special to these conditions are treated more or less completely in the ordinary textbooks of midwifery, and the general diseases which may affect the pregnant or lying-in woman will be found fully treated in the textbooks of general medicine. The author, in the work before us, admits the existence of this opinion, but he finds justification for a special work in the importance of the subject, in the inadequate treatment given to it in our obstetrical textbooks, and in the necessity of such a work being written by an obstetrician of large experience, so that a correct view may be obtained of the way in which pregnancy and parturition modify, or are modified by, disease.

The early chapters are devoted to a good summary of the physiology of pregnancy: and as concerns this part of the work we need only call attention to the statement, which we believe to be correct, that the heart only exceptionally undergoes hypertrophy as a result of pregnancy, to the chapters on the blood in pregnancy and to the increase of weight which takes place in the mother during gestation. The author suggests that the weighing machine may thus become a means of diagnosing the death of the fœtus.

Of the influence of tumours (ovarian and uterine) upon the course of pregnancy and the puerperium a good account is given, and the author's industry may be gauged by the fact that he has prepared a table of no fewer than twelve double ovariotomies performed during pregnancy, a longer list than, we believe, is to be found in any previous work. We are surprised to read that English obstetricians believe in the amelioration of pulmonary phthisis by delivery. The full discussion at the Obstetrical Society of London in 1890, which is quoted by the author, shows that most British obstetricians do not accept this view, and consider the induction of premature labour for phthisis to be unjustifiable. We congratulate the author, however, upon the general excellence of his work, which shows on every side the marks of industry and sound judgment. The general practitioner will appreciate the details and the numerous formulæ which are given in relation to treatment, and the obstetrician will find in these pages a valuable summary of the work which has been done in the subjects treated.

At the head of each chapter is given a bibliographical list: in some instances this might with advantage have been made more complete. The illustrations are mostly taken from other works; a few are original and all are good.

In the Edinburgh Royal Infirmary, the cost per bed was in 1892 £64 7s. 6d.; in 1893, £63 13s.; and in 1894, £58 10s.

NOTES ON BOOKS.

A Compend of General Pathology and Morbid Anatomy. By H. Newbery Hall, Ph.G., M.D. (Edinburgh and London: Young J. Pentland. 1894. Cr. 8vo. pp. 204.)—The first 80 pages of this Compend are given to more general pathology, and the remainder to the morbid anatomy of special organs. A short and useful account of bacteriology will be found at the end. The size of the book only permits of short descriptions, but the important diseases receive more attention. As to whether this description is always precise and entirely to the point is open to some doubt. Thus in granular kidney it hardly seems to us that the student would readily grasp the main features of a typical specimen. Diseases of bones and joints receive no separate description. Such an apparently inexact term as "inflammatory conditions," which frequently recurs in this Compend, would be better avoided. Professor Klebs's name is on two occasions curiously written as Krebs. It must be borne in mind that this book is not intended by the author as a substitute for larger works, but rather as an aid to recapitulation. With the exception of the plates at the beginning, the illustrations are far too diagrammatic.

The Treatment of Chronic Diseases of the Heart by Baths and Exercises according to the Method of Dr. Schott. By William Bezly Thorne. M.D., M.R.C.P. (London: J. and A. Churchill. 1894. Cr. 8vo, pp. 24. 1s.).—This little pamphlet gives an account of this method of treatment, together with seven cases illustrating the beneficial results to be obtained. The treatment is carried out under the strict supervision of the physician, and is contraindicated in advanced disease of the myocardium. The exercises consist in certain definite movements of each limb in succession regularly gone through by the patient, and which are resisted by the attendant (*Widerstands gymnastik*). They must not be allowed to give rise to dyspnœa. Increased amount of urine, a strengthening of the pulse, and even a diminution of cardiac dulness are noted. Resting, as it would seem to do, on a rational basis, this method of treatment should be an addition to our resources.

Pathologia Historica e Geographica e Nosologia das Boubas do Maculo e Dracontiase no Brazil. Memoria appresentada ao 3º Congresso Braziliero de Medecina e Cirurgia. By Dr. J. F. da Silva Lima. (Bahia: Imprensa Popular. 1894. Roy. 8vo, pp. 66.)—These remarks by Dr. da Silva Lima on yaws, gangrenous rectitis, and guinea-worm in Brazil are of much interest to the historical and geographical pathologist. Those on epidemic gangrenous rectitis are particularly interesting, dealing, as they do, with a very fatal disease, which, though common enough in certain parts of the tropical world, has not yet received from English writers the attention it deserves. Corney[1] describes the disease as occurring in Fiji and in the South Sea Islands, a fact apparently overlooked by Dr. Silva Lima in his very interesting and otherwise complete memoir.

The Practical Guide to Algiers. By Geo. W. Harris. 5th edition. (London: George Philip and Son. 1895. Fcap. 8vo, pp. 194. 3s. 6d.)—We have so frequently noticed this small and handy guide to Algiers that it is only necessary to say that in this, the fifth edition, the information it contains is kept well up to date. There are some useful maps, showing clearly the various routes to the many places of interest that can be visited from Algiers, such as Biskra, Hammam R'hira, Hammam Meskoutine, etc.

Alpine Climates for Consumption. By H. J. Hardwicke, M.D. (London: J. and A. Churchill. 1894. Fcap. 8vo, pp. 70. 2s. 6d.)—This pamphlet contains an interesting and instructive account of the author's visit, when himself out of health, to the principal winter mountain resorts of Switzerland, namely, Dain, St. Moritz, Wissen, Arosa, Leysin, Les Avants, etc. We cordially endorse Dr. Hardwicke's warning to those medical practitioners who send indiscriminately all cases of phthisis to these altitudes.

[1] *Trans. Epidem. Soc.*, 1887-88.

AN INQUIRY

INTO

THE RELATIVE EFFICIENCY OF WATER FILTERS

IN

THE PREVENTION OF INFECTIVE DISEASE.

A Special Report to the "BRITISH MEDICAL JOURNAL."

BY

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AND

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PART I (CONTINUED).

NON-PRESSURE FILTERS—"TABLE," "POCKET," AND OTHER PORTABLE FORMS.

IV.

THE ATKINS FILTER AND ENGINEERING COMPANY, Limited (*Contractors for Filters to H.M. Government*), *65, Farringdon Road, London, E.C., and Chepstow, Monmouthshire.*—The filtering medium in the filters supplied by this firm consists of a block or plate of compressed charcoal, with or without the addition of an outer layer of coarse granular charcoal. We have examined two of these, namely:

1. Admiralty pattern (Fig. 1). The manufacturers state

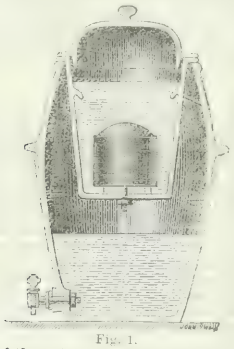


FIG. 1.

that over 5,000 of these have been supplied to Her Majesty's Government for use in military hospitals and barracks.

2. Pocket filter (the official War Office pattern). These are stated to be used largely in the army, no fewer than 17,000 having been supplied. Here also the filtering medium consists of a cake of compressed charcoal in which is embedded a metal tube, to one end of which a piece of india-rubber tubing is attached, the other end having a mouthpiece through which the water is drawn into the mouth.

The manufacturers of these filters insist upon the fact that many cases of blood poisoning, typhoid fever, diphtheria, measles, small-pox, etc., in private families are to be attributed directly to improperly constructed filters, or to what is the same thing (since one is the consequence of the other), the filters being kept not properly cleaned. They point out that in the country, frequently, considerable expense is incurred in obtaining a water supply from a distance where those closer at hand are contaminated, an expense which may be obviated by the application of their system of filtration to the impure water supply, and they state, "In all cases, no matter what the quality of the water, the Company's treatment has always been thoroughly successful, and the most foul, noxious water has been converted into a clear, pure, and wholesome supply." Amongst the waters so treated they mention "pond water full of animalculæ, vegetable matter, and sediment": "land drainage water containing many impurities"; "well water containing animalculæ sewage matter, etc."

(1) ADMIRALTY PATTERN.

TABLE XXIV.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	3,000 to 4,000	800 to 1,000
Cholera bacillus (first day)	5,000 to 6,000	300 to 400
Cholera bacillus (second day)	—	500 to 600
Typhoid bacillus ...	20,000 to 30,000	5,000 to 6,000

TABLE XXV.—*Tap Water.*

		Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample	No. 1	—	Not recorded
" " "	No. 2	50	10
Second day, "	No. 1	60	150
" " "	No. 2		80
Third day, "	No. 1	25	200 to 300
" " "	No. 2		100 to 130
Fourth day, "	No. 1	30	500
" " "	No. 2		200
Fifth day, "	No. 1	—	Not recorded
" " "	No. 2	20	1,000

(2) POCKET FILTER.

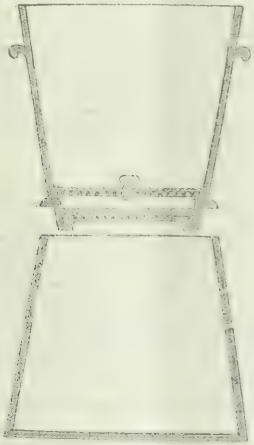
TABLE XXVI.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 15,000	4,000 to 5,000
Cholera bacillus	10,000	1,000
Typhoid bacillus	8,000 to 10,000	200 to 25

As will be seen from the above tables, these filters confer no protection against the direct passage of disease germs into the filtered water, and the danger attendant upon the adoption of such a filter as an army pocket filter, which would be relied upon to render dangerous waters wholesome, is at once obvious. As regards the danger of contaminations being added to the water as a result of the filter itself becoming polluted—a point upon which the manufacturers lay so much stress—although their own types appear to possess the advantage over many of the others which we have investigated, that the parts are readily accessible for the purposes of cleansing, the filter does not confer any protection against the direct passage of disease germs, which ought to be its chief function.

V.

Messrs. The Nibestos Filter Company, *126, Charing Cross Road, W.C.*—This filter consists of two earthenware reservoirs, the upper of which receives the unfiltered water, which first passes through a double asbestos cloth screen, intended to keep back rough particulate impurities; this screen also acts as a protecting breakwater to the delicate filtering layer proper, which consists of a film of purified asbestos, so treated that when the water comes in contact with it, it pulps and forms so fine a medium that it is claimed that no impurities, visible or invisible (microbic) can pass through it. This film is about one-twelfth to one-eighth of an inch thick, and appears to consist of some form of deposited asbestos; it is exceedingly delicate in its texture, as is seen when a small portion is teased out in water. This film rests on a pad of woven asbestos cloth which in turn is supported by the bottom of the upper reservoir, which is perforated with small holes (about one-sixth of an inch in diameter). After being carefully placed in position it is

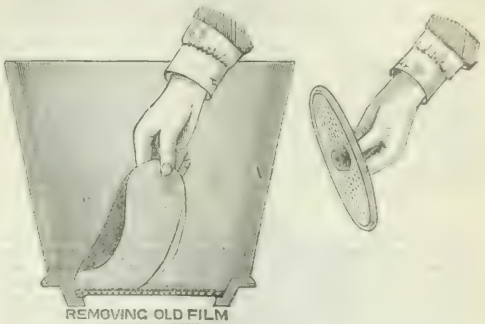


SECTION SHOWING UPPER HALF SLIGHTLY RAISED.

Fig. 2.

damped and pressed home with a soft brush or the back of the flexed fingers. The coarse upper asbestos screen is then fitted in position, where it is supported by a ledge which prevents it from coming into actual contact with the asbestos film. The interval between the two screens which communicates with the outer air is supposed to aid in aërating the water which falls into the lower reservoir.

It is claimed for the Nibestos filter that it is "*adjusted to remove all suspended impurities whether visible or invisible.*" Great stress is laid upon the necessity of frequently renewing the filtering medium, as it becomes clogged up by the impurities in suspension that it is continually abstracting from the passing water. "*The 'Nibestos' filters are constructed so that they can be thoroughly cleaned; the old filtering medium being taken out, thrown away, and replaced by new, with ease, rapidity, and at trifling cost.*"



REMOVING OLD FILM FROM FILTER.

Fig. 3.

From a circular which is issued by this firm (for private distribution only) the filters appear to have undergone an extensive series of tests at the hands of two scientific experts, who report that these filters in every case "perfectly removed all visible suspended matter." Their experiments as regards invisible suspended matter (microbes) were carried out on Thames water, taken from the river at Waterloo Bridge. "Plate cultures were made before and after filtration. The various samples of Thames water before filtration contained from 10 000 to 30 000 microbes in every cubic centimetre. After filtration neither of the samples contained any microbes whatever: no bacteria, no bacilli, no micrococci."

As regards the removal of visible suspended matter, these, with the exception of milk, were all completely removed, as will be seen on reference to the general table (No. 1) already given. This places the filter on a much higher level than most of those already examined. The finest gunpowder charcoal and artificial ultramarine were both apparently completely retained on the surface of the filter, but on the other hand milk (diluted) passed through into the filtrate. This affords evidence that the interstices of the filter are extremely fine. The experts who have reported on the filter seem to have carried out some of their experiments with the Nibestos films alone, using them just as ordinary paper filters are used in chemical laboratories, experiments which we repeated, but we must draw our conclusions only from the results obtained with the film placed in the filter as it is ordinarily used, as this is the only way in which we can form an opinion as regards the manner in which the filter would function. We append tables of results obtained with test organisms and with water from the tap.

It may be mentioned that water that was collected for examination was not taken from the tap of the receiver, but was allowed to drip directly into a sterilised vessel placed underneath the film in the receiver. The whole arrangement of this filter is simple in the extreme, and the mechanical fittings are excellent.

The "Nibestos" Filter.

Table XXVII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	3,000 to 4,000	400 to 500
Cholera bacillus (first day)	5,000 to 6,000	1,500 to 2,000
Cholera bacillus (second day)		
Typhoid bacillus	20,000 to 30,000	

TABLE XXVIII.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	40	Not recorded
" " " No. 2		3
Second day " No. 1	50	30
" " " No. 2		50
Third day " No. 1	60	100 to 200
" " " No. 2		150 to 200
Fourth day " No. 1	25	Innumerable
" " " No. 2		500

It is seen at once that this filter does not keep back either water or pathogenic organisms, and it is evident that we have the same washing down process at work that has been noticed in the other filters. Some experiments that we made with films fused in the same fashion as ordinary filter paper, that is as a funnel-shaped filter) gave somewhat different and more satisfactory results, but these require no further consideration in this report.

It is evident accordingly that this filter does not afford any protection against the communication of infective disease through drinking water. At the same time, as a filter which removes all visible suspended material, it presents patent advantages over any of the other ordinary forms of domestic or household filters which are used for this purpose—none of which, as we shall presently see, afford any protection against infective disease—from the fact that the filtering media can be so readily removed, in consequence of which the most serious risk and objection to the use of such a filter is as far as possible obviated.

VI.

FR. LIPSCOMBE AND CO., *Water Filter Manufacturers to the Queen, the Prince of Wales, the Emperor of Germany, the Viceroy of Egypt. 45, Queen Victoria Street, London, E.C.; and 233, Strand, Temple Bar, W.C.*—The filtering medium adopted by this firm seems to consist of some form of carbon usually associated with a screen of asbestos cloth. We have examined two examples of the filters of their manufacture:—

1. A simple solid block of carbon.

2. The new patent cylinder filter which consists of

(*a*) An outer covering of asbestos cloth, which, it is contended catches the impurities present in the water on its surface, from which they can be easily removed.

(*b*) A perforated earthenware cylinder containing some prepared form of charcoal.

(*c*) A second layer of asbestos cloth, which is also supposed to act as a strainer.

It is claimed that it is "the only filter which removes lead and sewage from water." The makers state that "all Lipscombe and Co.'s filters are made with their new preparation of carbon, wonderfully effective, far surpassing every other," and that the new patent filter "will purify most perfectly river, pond, rain, and spring water." The usual statements as regards the transmission of disease by means of water are made, and the desirability of a good water filter as a household necessary is insisted on.

No. 1.) SOLID CARBON BLOCK.

TABLE XXIX.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes-aureus + yeasts	10,000 to 15,000	4,000 to 5,000
Typhoid bacillus	15,000 to 20,000	6,000 to 8,000

TABLE XXX.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1 ...	—	Not recorded
" " " No. 2 ...	40	18
Fourth day, first sample	50	Innumerable
" " second sample		200 to 500

(No. 2.) NEW PATENT CYLINDER FILTER.

TABLE XXXI.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes-aureus + yeasts	8,000 to 12,000	400 to 500
Typhoid bacillus	6,000 to 8,000	100 to 200

TABLE XXXII.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1 ...	—	Not recorded
" " " No. 2 ...	35	21
Fourth day, sample No. 1	50	Innumerable
" " " No. 2		500 to 600

A very cursory examination of the above tables indicates that these filters provide us with no protection against the passage of disease micro-organisms, and we have been able to detect no special advantages, in this respect, in their new patent form of carbon as regards microbes. Although the reduction in the amount of *soluble* organic matter, which is ceretified to by a well known chemist, is of course quite within the limits of probability, this would certainly not warrant us in looking upon the water as in this way rendered "safe and wholesome."

VII.

THE LIPSCOMBE FILTER COMPANY, Ltd., *146, Oxford Street, London, Manufacturers to the Royal Family, H.M. Office of Works, the Navy, the Military Department, the London Hospitals, most of the Country Hospitals and Infirmaries, etc.*—The filters supplied by this firm appear to have, usually, as the filtering medium some kind of prepared charcoal, used in powder and in a granular form in layers, apparently combined with asbestos. These substances are used in slightly different forms in the different filters, but they exhibit no new principle which distinguishes them from many of the other filters which are at present in general use. This company also sends out a solid carbon block filter. These substances are supplied as domestic, pocket, cistern, and large supply filters.

We have examined an example of each of the following two forms:

1. In which the filtering medium consists of the combined powdered and granular charcoal, and

2. The solid carbon block filter.

The claims put forward for these filters by their manufacturer are more far reaching than are those made for any filter that has as yet been brought under our notice—that is, that it is "the only reliable filter for perfect purification"; that they "for simplicity, efficiency, durability, economy, and for security against typhoid fever, cholera and blood poisoning are unequalled." They state that their patent easily-cleaned filters "are three times more efficient, and seven times more durable, than any other." They assert also that "more than 300,000 are in use."

It is also stated in their circular that "the only possible safeguard against the evil of contaminated water is efficient domestic filtration. You may by this means easily, and at a small cost, totally prevent all danger, from whatever source you derive your supply." They even go so far as to say that

boiling the water is less efficient than the use of one of their filters. "Many housewives think that boiling the water is all that is necessary. This is an erroneous idea. The temperature of boiling water is not sufficient to destroy the vitality of certain species of germs. In fact, it has been proved by scientific research that water which contains much organic matter is even rendered more unwholesome by boiling, because the evaporation of a portion of the water by the heat only serves to concentrate that which remains."

(1) Combined Powdered and Granular Charcoal.

Table XXXIII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	3,000 to 4,000	1,000 to 1,500
Cholera bacillus (first day	5,000 to 6,000	300 to 400
Cholera bacillus (second day	—	5,000 to 6,000
Typhoid bacillus	20,000 to 30,000	9,000 to 10,000

Table XXXIV.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	—	Not [illegible]
,, ,, ,, No. 2	40	12
Second day, ,, No. 1	50	[illegible]
,, ,, ,, No. 2		[illegible]
Third day, ,, No. 1	60	[illegible]
,, ,, ,, No. 2		[illegible]
Fourth day, ,, No. 1	25	[illegible]
,, ,, ,, No. 2		[illegible]

(2) Solid Carbon Block.

Table XXXV.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	[illegible]	[illegible]
Cholera bacillus (first day)	[illegible]	[illegible]
Cholera bacillus (second day)	—	[illegible]
Typhoid bacillus	[illegible]	[illegible]

Table XXXVI.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	—	Not [illegible]
,, ,, ,, No. 2	40	10
Second day, ,, No. 1	50	[illegible]
,, ,, ,, No. 2		[illegible]
Third day, ,, No. 1	60	[illegible]
,, ,, ,, No. 2		[illegible]
Fourth day, ,, No. 1	25	[illegible]
,, ,, ,, No. 2		[illegible]

A mere glance at the tables suffices to show how baseless are the claims put forward by the vendors as regards the action of their filters in safeguarding against the passage of the germs of "typhoid fever, cholera, and blood poisoning." These filters function, indeed, in no way differently from most of the other filters on the market, but we draw special attention to them for the reason that such pretentious claims are put forward on their behalf, which may no doubt have induced the public in many instances to place unwarranted trust in them. This is all the more unfortunate in that the practice of boiling water—the most efficient safeguard known to sanitary science—is discouraged, "as inefficient," whilst the public are encouraged to place implicit reliance on this special filter.

VIII.

The Magnetic Filter Company, *32a, Euston Square, London, N.W., and 17, Water Street, Liverpool.*—The magnetic carbide material which is used by this firm is supplied, not merely for the purposes of domestic filtration, but also for clearing and purifying town water supplies. The action of this filter, as stated by the vendors, is claimed to be both a physical and a chemical one, but more stress appears to be laid on the latter. At the same time it is asserted that this medium acts also bacteriologically (either chemically or physically)



Fig. 4.

in arresting the germs of disease, as is shown by the following quotation: "Further, experiments made have conclusively shown that water containing disease germs bacteria, etc., is rendered completely pure and harmless by being passed through the medium." Our examination was carried out with their domestic filter, style A, three quarts (Fig. 4), the results of which are appended:

Table XXXVII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	[illegible]	[illegible]
Cholera bacillus (first day)	[illegible]	[illegible]
Cholera bacillus (second day)	—	[illegible]
Typhoid bacillus	[illegible]	[illegible]

Table XXXVIII.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	—	No. 1 [illegible]
,, ,, ,, No. 2	40	[illegible]
Second day ,, No. 1	50	[illegible]
,, ,, ,, No. 2		[illegible]
Third day ,, No. 1	60	Innumerable
,, ,, ,, No. 2		[illegible]
Fourth day ,, No. 1	25	Innumerable
,, ,, ,, No. 2		[illegible] to 1,000

As will be seen from the above tables, these filters confer no protection against the passage of disease germs, and their claims in this respect must accordingly be rejected.

The following table shows that the filter, after being once infected with cholera organisms, gave evidence of their presence in the filtrate eight days later:

XXXIX.—*Cholera.*

	1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	8th day.
Filter infected with cholera bacilli.	+	+	+	+	+	+	+	+

(To be continued.)

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XXVI.—BLOFIELD UNION, LINGWOOD, NORFOLK.

This infirmary is attached to a workhouse which represents the union of several sparsely populated agricultural parishes; though licensed for 200, it is rarely, so we were told when visiting the house, that half that number of inmates seek its shelter. It stands in the flat country between Norwich and Yarmouth, which is populated to a great extent by the descendants of immigrants from Flanders and Holland; the dykes, canals, and windmills give to the landscape a very Dutch aspect.

The Infirmary

itself occupies only a small part of the buildings; it accommodates eighteen patients, exclusive of the lying-in beds. The female ward is on the first floor, consisting of two rooms leading out of each other; there are five beds in the first room, in the second also five, but the nurse informed us that the fifth in that room was an extra bed and not in use. The nurse's room opened out of this ward, and beyond again is the labour ward, containing three beds. These wards form part of the workhouse buildings.

The Male Infirmary

stands quite apart, forming a separate building. To reach it the nurse has to cross a court into a garden, out of which opens the yard which gives access to the building. There is no covered way of communication. We have here a single ward of eight beds, out of which opens a day room, in which the wardsman sleeps. This ward contrasts most unfavourably with the female ward: it is dreary, comfortless, and crowded; its size would be about twenty feet square; the walls are colour washed, the windows, semicircular openings, are placed high; there is a fireplace, commodes, and a chair or two; in the day-room there are arm chairs and a table, and a few pictures on the walls. These rooms are on the ground floor, and the door from the yard opens immediately into the day-room. In this ward we saw two old men lying on narrow beds, about two feet six inches wide, not wide enough to permit a full grown man to turn round in, without risk of falling out; one man was crippled with rheumatism, and the other had complete paralysis and was unable to articulate, but there was no trouble with the sphincters. The other occupants of the beds, cases of old age, were at the time in the day-room. The bedding on which these men were lying was long straw beds over matting, and they appeared quite clean in person. We saw a mineral oil lamp against the chimney breast, which the nurse told us was kept alight during the night.

The only convenience attached to this ward was a privy on the far side of the yard.

An inmate was pointed out to us as the wardsman responsible for these old men.

The Female Ward.

Certainly in this house the guardians give all honour to the women in their infirmary appointments. The wards are cheerful; there are windows out of which the patients can look, flowers, and pictures, little bits of carpet, and curtains for the more delicate ones. The wards are small, each room having only one window, but there are shutter ventilators in the wall. The bedsteads are a little wider than those in the male infirmary, the bedding is the same. It seemed to us on feeling the beds that the mattress was over full. A long straw bed may afford a comfortable rest, but there is an art in filling the ticking.

In the first ward there were two patients in bed, one of whom had a wasted, anxious face; the nurse said it was a case of phthisis, but the matron afterwards disagreed with this diagnosis and said she had paralysis. As no temperatures are taken in this infirmary we cannot side either with the matron or with the nurse, though from the woman's aspect we incline to think the nurse was right. She lay near the window, in the bed opposite to her was a rheumatic cripple who had been in bed a year. The other patients were sitting about in armchairs. To get to the second ward we pass through a small lobby used as a scullery, out of which opens the convenience; it was quite clean, and had a good flush of water. In the further ward was an old woman suffering from senile debility; she was lying on a half water mattress, as there was a threatening of a bedsore. Her bed was quite close to the nurse's door, so that the nurse might give her such help as she required in the night.

The Labour Ward

is beyond the nurse's room: there was a woman in it with a baby a week old. The ward is small, and we should say that in the winter the small fire, which is all the grate allows, would hardly warm it. The ward looked as if part of its use were to serve as a lumber room.

There are no Baths

except small hip baths, and no hot water is obtainable except from the main kitchen at some little distance from the wards. There is a cold water tap on the matron's landing, otherwise all water, hot and cold, must be carried by the inmates; this applies to the female wards; in the male infirmary we saw no arrangements for any bathing, nor any supply of water, hot or cold.

The Isolation Hospital

stands at some little distance in the grounds. It has accommodation for four male patients, and presumably for the same number of female cases. The male side is at present occupied by a family isolated for ringworm, a mother and four children; the mother looks after the children. The wards look as if they would require many a day's work to place them in fit condition for the nursing of strictly infectious cases; they were dirty and uncared for, just four walls and a roof, a small fireplace, and four beds of all sizes and conditions, with scullery attached. There is an earth closet in a lobby which would be wholesome if it were kept supplied with earth, but when we saw it the receiver was empty. A supplementary supply of earth, in a box with a shovel, is so much more satisfactory. As this building is quite apart from the house, with no means of communication, it is essential that it should be provided with all the necessaries for nursing.

The Nurse

is untrained, and is not a midwife. She was formerly in a lunatic asylum, and is therefore accustomed to institution work; but, as the medical officer lives at Blofield, four miles from the infirmary, it surely would be better to have a trained nurse on the spot to take the responsibility of the attendance on the sick, and to relieve the doctor of some of the anxiety of the care of patients at that distance. In the male wards the wardsman, an inmate, is practically the nurse, and at night, there being no bell of communication with the

nurse's room, he is alone responsible. In the female ward there was no wardswoman, the one who had been employed in that work being the patient in the labour ward.

The Airing Courts

are the small gardens above referred to, and we were informed that the patients were allowed in these courts at certain times during the day. We should like to see seats placed outside for the use of the infirm patients, and generally a more liberal use of the extensive grounds around the workhouse for those old folks who have no other home, and for whom these places exist.

The Diets

for the sick are under the control of the medical officer, and he orders such extras as he thinks requisite, but the bulk of the food is meat, suet pudding, vegetables, and broth. We wonder, as we see the food served out, whether the guardians are aware of the waste that is consequent on this scheme of dietary. Those toothless old jaws cannot masticate the junks of meat that are put on the plates. Until the rates are chargeable with artificial teeth for the paupers, could not the Board supply a mincing machine for use in the infirmary? We fear that the whole question of the sick dietary requires careful revision.

Married Couples

are allowed to live together in this union. We came across an old man and woman in a room off one of the courts who were ending their days together in the precincts of the workhouse. The old woman had some plants which she tended with much care, and they had decorated their room with some coloured prints.

Recommendations.

We were struck with the inconvenience of the distance between the male and female infirmaries, and by the squalid air of the former. We suggest a rearrangement of the wards, adapting some of the unused parts of the building to infirmary work, and placing all the patients within reach of the nurse; that bath rooms be provided for the use of the sick, and also suitable conveniences, easy of access for the night; that the isolation block be cleaned and made into a complete hospital for infectious nursing, provided with separate offices for male and female side, and with nurse's quarters; that the nursing of the sick be in the hands of a trained nurse, and that a night nurse be on duty during the night, thus superseding pauper help.

THE BEDFORD GUARDIANS AND THEIR MASTER.

The heading to this paragraph may seem to have a double meaning. It is, however, no mere slip of the pen, for in fact one of the evils of workhouse management to which many of the trials of the poor are due is the very point indicated by their *double entente*, the acquisition by the master of a workhouse of a mastership over the board.

We continue to receive complaints from Bedford in regard to the subservient condition to which the board has allowed itself to be reduced, and as to the difficulty of obtaining redress for, or even proper investigation of, abuses in the management of the workhouse, although they have been publicly drawn attention to in the town. Matters seem to have come to a head on October 27th, when the Rev. W. P. Beckett moved that a small committee be appointed to inquire into certain alleged irregularities of the master in the conduct of the house. After much discussion, it was resolved that the board form itself into a committee *in camerâ*, and at once hear the charges. The reporters of course retired, and the nature of the charges could only be gathered from the wording of the report, which was subsequently made to the board. It was as follows:

"This Committee is of opinion no such serious charge of irregularity has been made against the master as to allow the board to appoint a committee to make further investigation, but the committee have to recommend that in future no milk be skimmed without the order of the board or the medical officer, and if fowls or other substitutes for meat be made the reason should be entered in the provision account."

Now we do not wish to speak too strongly about proceedings *in camerâ*. Questions sometimes arise which are best discussed with closed doors, but it is obvious to anyone that when charges against the management of a public rate-supported institution have been publicly made, been bandied about in the press, been common subject of talk in the town, and still have failed to obtain receive investigation by the board responsible for the continuance of the abuses complained of, it is a most unwise thing that, when at last inquiry is granted, it should be made with closed doors. The credit of an institution suffers; and when the public learns, as it has since done through a letter from Mr. Beckett, what these charges are which this board does not think worthy of further investigation, we can easily understand the little confidence felt in the town in the doings of such a board. It will be remembered that this is the workhouse to which certain lady visitors were recently refused admission, and one's desire to know what is really going on in the secret recesses of this institution is only heightened by the levity with which charges of this gravity seem to have been treated. In his letter to the *Bedfordshire Times* Mr. Beckett says: "We then stated (1) that we had found a woman making the most beautiful lace. She, though evidently a very unwilling witness, allowed that she had been making about six yards a month for the matron, and had been doing so for several years. (2) That the creamer was taken from morning milk supplied for the inmates and made into butter. This the master allowed, but declared the butter was used to make pastry for the officers. He would not do it any more. (3) That the master had been accustomed to receive fowls and ducks from the butchers who supplied the meat for the workhouse, for which he did not pay, and which were weighed in with the meat. This also he allowed. The master asserted that these were very small matters, and to make his case better misrepresented some portion of our conversation on Friday evening. The board, though informed by Mr. Hull and myself of the accuracy of these statements, nevertheless accepted the master's explanation without any inquiry whatever, and refused to grant us a committee. Now, Sir, the board expressed themselves as satisfied. I wish to ask the ratepayers are they satisfied? Are they contented that a woman kept out of the rates should make this beautiful lace, presumably for the master's family, and with a view to keeping herself from being a burden on the rates? Are they contented that the inmates should be deprived of a great part of the nutriment of their milk in order to improve the flavour of the pastry of the officials? Are they contented that the butcher should send the master fowls, etc., at, say, 1s a pound, instead of meat at perhaps 9d. merely as a favour? Do they think it is right that the board, by its actions and decisions, should virtually say to Mr. Hull, Mr. Lane-Poole, and myself, and to such ladies as Miss Kelsart, Mr. Lane-Poole, Nurse Harcourt, and others, 'you are all unworthy of credit,' and the master alone is to be believed whenever his statements clash with ours, and this without any further inquiry of any sort?" We do not wish to enter into the subject matter of this letter further than to reiterate the danger which there always is to the good administration of the Poor Law when a board of guardians, instead of holding strictly after their servants, obtains a master. We commend the whole matter to the attention of the Local Government Board.

It must be gratifying to the friends of the Workhouse Infirmary Nursing Association to receive a donation of £10 from Her Grace the Duchess of Bedford, especially as the donation was sent during the time that the Association was engaged in its controversy with the board of guardians concerning the dismissal of Nurse Harcourt, on the ground that she belonged to the Association.

GREAT YARMOUTH!

Dr. Herbert Collier (M.O. Great Yarmouth), writes, under date November 10th: I have but just seen your Commissioner's able report upon the subject of the Great Yarmouth Workhouse, and I hasten to correct a slight error of statement that has found its way, inadvertently I am sure, into a very lucid and otherwise graphic description:

Under the heading "The Patients," and in connection with the female side, I find the following statement: "A case of gumma was being treated with poultices." Will you permit me to supplement this somewhat laconic allusion with the additional information (*a*) that the gummata were suppurating, and (*b*) that the treatment consisted of a highly nutritious diet, including port wine, together with iodide of mercury, ammonia, and cinchona bark, in addition to the "poultices," to which reference is alone made?

In only a very few of the cases to which I had the honour of directing your Commissioner's attention, was treatment discussed, but I did presume to point out that during my short tenure of office I had already introduced a system of prescription cards, upon which were recorded, in all cases, the medicinal treatment; and several of these cards, in use at the moment, were taken down and exhibited for your Commissioner's courteous consideration.

*** We should sincerely regret if the remarks made by our Commissioner had given rise to any misunderstanding as to the treatment of the case mentioned. Our Commissioner, in commenting on the nature of the cases or their treatment, in this infirmary as in others, did so solely to prove that the work in the wards is such as requires the services of trained nurses; hence the reference to the poultices. There was no intention to criticise, or indeed to discuss in any way, the medical treatment. Our Commissioner was also obliged to omit pointing out other facts in connection with the medical work in the infirmary, such as the bed-cards, etc., there being so many defects in structure and administration which had to be brought out and the space for the report being limited.

SWAFFHAM.

The management of Swaffham Workhouse has, says the *Eastern Daily Press*, which publishes our Commissioners' report in full, come in for a little bit of friendly criticism from the Special Commissioner of the British Medical Journal. He finds the space accommodation enormously beyond the demand, forty persons only living under a roof that would shelter 800. This is said to be in consequence of the depopulation of the parishes. While the space accommodation is thus ample the Commissioner finds the attention given to the sick, to speak mildly, somewhat scant. He did not like to see a paralytic woman got up and dressed every day "to avert bedsores." Such a course of treatment he describes as "heroic." He does not like that the responsible official should be an untrained nurse, and that her duties should often have to be supplemented by the labour of the inmates. This system he describes as radically bad. The sick are lodged partly in the main building and partly in an outbuilding. As space is abundant the Commissioner suggests to the Guardians that the sick should all be under one roof. He also suggests that trained nurses should be engaged, pauper services

being limited to the duties of ward maid of a hospital. The recommendations appear to be reasonable, and no doubt the Swaffham Guardians will consider them.

The following letter also appears in the *Eastern Daily Press* with regard to the report of our Commissioner on the Swaffham Workhouse:

"SIR,—Nothing could possibly have been more opportune than the comments of your correspondent 'C. L. P.' founded upon a criticism of the Swaffham Workhouse by the BRITISH MEDICAL JOURNAL. That journal deserves the greatest praise for, at the present crisis, so fearlessly emphasising the gross barbarities of our workhouse system generally, and your correspondent none the less for localising the emphasis. The mismanagement, inhumanity, and wastefulness of our officialdom have long been matters of public comment and condemnation: and the resulting scandals have from time to time aroused our indignation to boiling point. Without, however, converting ourselves into species of amateur detectives, and unattached and unpaid public prosecutors, one has felt the utter helplessness of despair in being entirely in the hands of an all but irresponsible body of men. Occasionally there have been efforts from the outside to bring about a better administration of the Poor Law, but these attempts have been futile. At the same time it would be unfair not to acknowledge the efforts of individual guardians to ameliorate the lot and brighten the lives of our indoor paupers. Mr. Lee Warner, especially, has devoted himself to this charitable work, but, unfortunately, this kind of work does but little, if anything, in bringing about a just and economical administration, and even Mr. Lee Warner has not yet fathomed the abysmal depths of Bumbledom or the peculiar idiosyncrasies of the official mind. We have now, however, come to the parting of the way, and hope soon to see a condition of things inaugurated which, whilst saving the pockets of the ratepayers, will ensure humane and even generous treatment of our poor. The expenses of the house are both enormous and unnecessary, and can, and must, be very considerably reduced. Surely, instead of troubling a clergyman to come in all weathers from a distance, we can get those duties performed gratuitously by the various clergymen in the town. There are many other economies that might be immediately instituted, possibly in being only an earnest of the death and burial of that great dread white elephant itself, namely, 'The Swaffham Union Workhouse.'—Very faithfully yours,

"Swaffham, October 27th, 1894." "F. R. BELL.

WE are glad to find that the *Norfolk Chronicle* and the *Lynn News* of November 3rd have reprinted in full the report of our Commissioner on the nursing and administration of the Swaffham Workhouse and Infirmary.

WORKHOUSE NURSING AT CANTERBURY.

THE Canterbury guardians appear to be well-meaning men. They have erected an admirable infirmary, and in many ways show their desire to study the comfort of those under their care. In one point, however, they fail; for this infirmary, with its 40 to 60 or more patients, is generally left all night without a nurse. In the daytime there are two, the senior of whom is trained and holds a certificate for midwifery, while the junior has only such training as she has obtained in the infirmary. These two do the work between them, and it is arranged that the senior shall get up at night whenever called, and that the junior shall take night duty when required, at which times extra pauper help has to be provided in the daytime. It is interesting to observe what an amount of disturbance of the proper discipline and routine of the house is caused by this endeavour to avoid having a night nurse. Besides her calls for midwifery, the head nurse is, on an average, rung up three times a week—say every other night—to attend to patients. Three times this year the assistant nurse has had to put on night duty for about a fortnight each time, and on each of these occasions the day nursing has been interfered with, the head nurse having to be assisted by paupers from the house. Three other times, as we understood, a nurse has had to be hired from the town to do night nursing for a couple of weeks at a stretch. At all other times a male and a female able-bodied pauper are employed in the useless task of sitting up. These are not always the same individuals; they change about, and thus have no chance of obtaining any experience even in their work, leaving out of question any skill. To arrange this provision has to be made for them to sleep in the day, and the diets have to be altered, the payment for their services being a meat supper, tea, sugar, and tobacco, and, of course, exemption from labour in the day. Can it be worth while? We take it, from what we saw, that the guardians are anxious to do what they can for the poor under their care, but we ask them in all seriousness, can it be worth while to put up with all this dislocation of the proper routine of the house, to pay these extra wages, to find these extra diets, to spoil the nurse's efficiency by constant night calls, to run the risk of hostile verdicts by coroner's juries, and to bear the consciousness that after all the work is badly done, just for the sake of saving the wages of a third nurse?

"HE IS ONLY A PAUPER, WHOM NOBODY OWNS."

AND therefore, though he has typhoid fever, "it was the height of ridiculousness to call in the services of two trained nurses to look after him." We have quoted the words used by Mr. Parkes, a guardian of Kidderminster, lest our readers should think there is some mistake. There is no mistake: in this nineteenth century these words were taken down by a reporter as uttered by the guardian aforesaid. Reading on a little farther we see that a certain Mr. Herring states that "typhoid fever cases did not require special nurses;" and then Mr. Parkes and Mr. Herring mutually weep over the flagrant conduct of the medical man who has so far forgotten his position as "the servant of the board" as to dare to estimate the life of a pauper as worth £13 4s. It may come as a revelation to these guardians that the medical officer holds his appointment under the Local Government Board, and that it is for life; were it otherwise we should not see these posts all up and down the country held by men who stand high in their profession, and are respected in the locality. A little further on, in reading this report, we find the board in hysterics because a trained nurse is engaged to look after a case of measles, "a paltry case of measles," says Mr. Parkes. With so much wisdom on the board we are prepared to hear next that the services of the medical officer are not required. Before that takes place we advise Kidderminster to elect a new board who will safeguard the interests of these helpless paupers.

THE CLUTTON BOARD AND THE PRESS.

THE *North Wilts Guardian*, acting in the interests of independent ratepayers who were dissatisfied with what they had heard of the condition of the sick in the workhouse, sent a representative to see and report to the paper; the representative was refused admittance by the master, whose action was subsequently confirmed by the board. Such a course is open to an obvious interpretation, but we wonder how much longer it will be before boards recognise that the workhouses are public institutions, maintained by public money, and therefore should be open to the inspection of the public or their representative on the press. We learn from a report of the board meeting that the medical officer is drawing the attention of the guardians to the unsatisfactory state of the nursing, an untrained nurse being employed, who also acts as assistant to the matron. The medical officer reports eight serious cases, besides many chronic patients under treatment. This report was read by the chairman on July 12th, and here it is November 3rd before the question is faced. No wonder that the newspaper critic is kept on the outside.

BLACKBURN: REPORT OF LOCAL GOVERNMENT BOARD INQUIRY.

THE result of this inquiry is now given to the public. It appears from it that the workhouse infirmary is a modern and convenient building, well nursed, under the supervision of the trained superintendent; but that for some reason the foul and lock cases are nursed in the old infirmary, which is located in the workhouse. The male cases are under the supervision of the "taskmaster," with pauper help, "an officer whose duties occupy so much of his time as to preclude the possibility of any proper attention being paid to the unfortunate occupants of these wards." The female cases are under the care of a paid female officer, "who did not seem to possess the training and knowledge necessary for her work." We trust that these arrangements having been condemned by the Local Government Board, the guardians will at once place these patients in the infirmary, under the charge of the superintendent nurse, providing a male nurse for the male patients.

We cannot condemn too severely the inhumanity of treating these patients, whose infirmities are a humiliation enough, as though they were outside the pale of proper nursing and skilled attention. Time after time our Commissioner has noticed the miserable wards and insufficient bedding allotted to the "foul" cases, when as a matter of fact they are in greater need than others of skilled nursing. The report also reflects upon the care of the infants, who are in the able-bodied women's room, under the care of a pauper, and are not properly fed. Here, again, we hope to see an improvement; a responsible nurse should be engaged for the nursery, and the infants' dietary revised by the medical officer.

THETFORD.

THE *Local Government Journal* of November 3rd contains the following: Yet another Norfolk board of guardians appears, says the BRITISH MEDICAL JOURNAL, to be content to hand over the care of the sick to an official promoted from the pauper ranks to wear a uniform and the title of "nurse," assisted by other paupers not so promoted. We are not surprised to learn that the doctor declines to recognise this system as nursing, and it is obviously impossible for him to order such treatment for the sick as he would in a hospital, where he could be sure that his instructions would be carried out. Economy is the plea, we may be sure, which is urged in defence of this state of things; for we cannot doubt that the medical officer here, as elsewhere, has brought the matter before his Board and has received the stereotyped answer that trained nursing is costly and unnecessary. Yet it is probable that the increased expenditure would be to some extent balanced at the end of the year by the saving effected by better methods; there would be less waste in food, in nursing appliances; less bed linen would be used; while more rapid cures would relieve the burden on the rates. The fallacy that skilled nursing is less required because the proportion of chronic cases is larger in the workhouse infirmaries than in hospital is obvious to every medical man. The doctor can often do but little in such cases, while the skill and tenderness of the trained nurse can do much to alleviate pain and lessen discomfort. The principle that the sick pauper has a right to be cared for is conceded by the existence of the poor-rate, but such a mockery of nursing sets the principle at nought. At Thetford, too, there appears to be the usual structural difficulty: the sick wards are not concentrated, and some of them are not in communication with the quarters of the responsible attendants. We venture to appeal to the guardians to take these matters under their consideration, begging them to remember that not all outlay is extravagance; it may be a profitable investment, or it may be demanded by common humanity.

We are glad to see that the *Eastern Daily Press* of November 2nd has published in full the report of our Commissioner on the condition of the nursing and administration of the Thetford Workhouse Infirmary.

OVERCROWDING AT LAMBETH.

THE Lambeth guardians are confronted with the fact that the workhouse is overcrowded to the extent of 50 per cent. above their regulated number. This is indeed a problem requiring anxious thought and skilful management on the part of the guardians, and in the face of the immediate approach of winter is most serious.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, NOVEMBER 24th, 1894.

THE BITTER CRY OF LONDON AS A TEACHING CENTRE.

III.—The Public Neglect of Medical Education.

Since the publication a few weeks ago in the British Medical Journal of two articles under the above general heading, an article published in the *Times* on the public neglect of medical education in London has given rise to a prolonged correspondence in its columns. The article is remarkable mainly on account of the place in which it appears, for the facts which it contains are already pretty well known to all who have a general acquaintance with the position of the medical schools in London. These schools are either unendowed, or the endowments they possess are very small when compared with the immense field of work which they are called upon to undertake. The article is remarkable also because it makes a direct appeal to the public to contribute their fair share towards filling up the gap which exists between the actual cost of medical education conducted according to the best modern methods and the fee fund provided by the payments made by students.

The long correspondence to which it has given rise in the columns of our contemporary has shown some tendency to go off on a side issue, but the subject also formed the main topic of the Duke of Devonshire's address, reported in the Journal of November 10th, at the opening of the new buildings of the Medical Faculty of Owens College, Manchester. In Dublin, also, the same subject, as will be seen from the address by Mr. Thornley Stoker, published in the Journal of November 10th, is also exercising men's minds. The whole question, therefore, of the present position of medical education in the United Kingdom has during the past few weeks received an amount of attention from the public very much in excess of the languid amount of interest usually exhibited.

It is right and proper that young men seeking to enter the medical profession should be called upon to pay reasonable fees to their instructors and to the hospital authorities for the opportunity of gaining practical knowledge in the wards. People still speak—though the phrase is heard less often than a few years ago—of "walking the hospitals," as though that were the sum total of a medical education: and the public, always glad to be excused the duty of putting its hand in its pocket, has, not without reason, assumed that a very slender stipend would adequately remunerate the medical staff of the hospital for the duty of instructing the young men during the course of their regulation visits to the hospital. Medical education, however, has now become a very complex structure, at the apex of which stands the hospital and the hospital teachers. The instruction given during the earlier years of the medical curriculum has now become a very much more costly matter than clinical instruction in the hospital wards. There must be teachers of biology in the wide sense, of chemistry, of anatomy, of physiology, of pathology, and of bacteriology. Each of these teachers requires his laboratory, laboratory apparatus, and laboratory staff. As things are, it is hardly possible to provide all that is required out of the students' fees, and, in the endeavour to do so, there can be no doubt that salaries have been cut down to the very lowest point. In France, in Germany, in Switzerland, and in Italy, the State steps in to supply by an annual subvention the necessary funds. In France the fees paid by students are small, even ridiculously small; and the same is true of Italy, and, to a less extent, of Germany. The magnificent institutes for anatomy, physiology, pathology, and hygiene in even the smaller German universities are objects of astonishment to the English visitor and afford examples of the proper application of State funds.

The *Times*, in a leading article on the discussion which had taken place in its columns, throws cold water on the suggestion that public contributions in some form are needed to maintain the efficiency of medical education. An endowed lectureship, it is argued, would take away a powerful incentive to exertion, and, perhaps, "lead to a disastrous separation of the professor from the practitioner," while "an endowment in augmentation of students' fees would probably in some way be made a help to students of a poorer class." While we should be the last to assert that there is no weight in these arguments, we are disposed to think that the criticism founded upon them rather misses the point. We would insist upon the necessity of drawing a distinction between endowing a professor and endowing a chair. It may be all very well for the professor to cultivate the muse on a little oatmeal, and to forego the pleasure of keeping a perambulator—which, according to Mr. Lowe, was the meaning of the endowment of research—but nowadays the most self-denying professor cannot teach such subjects as biology, physiology, or bacteriology, much less carry on independent researches, without good laboratories, costly apparatus, and competent assistants. An endowment or State subsidy to defray the cost of the maintenance of such laboratories is not open to the charge of endowing either the professor or the student, nor would it in any way, so far as we can see, tend to diminish healthy competition. Certain it is, as we have said on previous occasions, that the present position of London as a medical centre is not what it was nor what it should be.

The President and Council of the Royal Society have this year awarded one of the Royal medals to Mr. Victor Horsley, Professor of Pathology at University College, London, for his important investigations relating to the physiology of the nervous system and of the thyroid gland and to their application to the treatment of disease.

STUDIES IN THERAPEUTICS.

V.—Some Modern Diuretics: The Xanthine Derivatives, Caffeine and Theobromine, and their Combinations.

Ever since the foundation of medical science the greatest attention has been given to the performance of the urinary function, and diuretics of one sort or another have been used in all ages. Hippocrates himself looked to the urine for an indication of his patients' disorders, and was in the habit of prescribing several of the diuretics—such as squill, nitre, watery drinks, etc.—which we employ at the present day. Galen, too, recommended vinegar or tincture of squill to increase the flow of urine. Our knowledge of diuretics and their mode of action has, however, made great progress since those days, and the list of substances now used as diuretics is a long one.

The group of bodies known as xanthines has for some time been known to possess diuretic properties, and caffeine, or tri-methyl-xanthine, was at one time somewhat largely used. Possessing as it does a considerable affinity for uric acid, it should be a potent factor in aiding its removal from the body. It was soon found, however, that there were drawbacks to this use of caffeine. In some cases it seems to act as a purgative as well as a diuretic; it produces a copious diuresis at first, but tolerance is too rapidly established, and the drug, therefore, soon loses its diuretic power; again, diuresis is in many cases accompanied by a disagreeable smarting of the urethra; lastly, and most important of all, caffeine has a powerful cardiac stimulating action and an excitant action on the central nervous system, which renders its use undesirable in many cases, unless it be combined with a narcotic.

About three years ago the independent researches of Schroeder and Gram revealed the fact that theobromine, the inferior homologue of caffeine, is a diuretic of greater efficacy and having fewer drawbacks than caffeine. This substance, which as a diuretic was stated to be at least five times as powerful as caffeine, was very insoluble, and much attention was devoted by Gram to the removal of this difficulty. The outcome of Gram's researches was "diuretin," a substance soluble in less than its own weight of water, and containing from 44% to 48% of theobromine in combination with hydrate and salicylate of sodium. Diuretin was found by its discoverer to answer all the therapeutic indications of theobromine, and to be without any special objections as a therapeutic agent. According to Gram, Schroeder, Pomerantz, Babcock, Pfeiffer, and many others, diuretin, while it has but slight and in many cases no action on the heart, is most powerful in exciting the renal epithelium, and inducing a copious flow of urine as long as there is any healthy, or comparatively healthy, renal epithelium to be acted upon. It proved efficacious in numerous cases of cardiac dropsy after other remedies (such as digitalis, squill, etc.) had failed. It also succeeded admirably in cases of chronic nephritis without producing any inflammation of the renal structures. In the dropsy accompanying cirrhosis of the liver, and in pleural effusion, the drug does not however, appear to have yielded brilliant results.

According to the authors above mentioned, it is a little difficult to predict in any given cases the amount of the diuresis which will be evoked by diuretin, or the length of time over which this diuretic action will extend. It seems to have been generally found that the diuresis ceases soon after the drug is withheld, but that it can be readily reproduced by a fresh dose. Pomerantz finds, however, that in many cases the diuresis persists several days after the last dose. Tolerance is not readily produced. In but very few cases have any bad results been chronicled, and these have consisted simply in the production of transitory nausea or vertigo, which ceased on withholding the drug for a time. Possibly even these evils have been due rather to the mode of administration than to the drug itself.

Germain Sée has recently objected to diuretin on the ground of the amount (4 per cent.), of caustic potash contained in it, and advocates a return to theobromine in spite of its insolubility. According to the experience of this writer, and also of Hallopeau, the efficacy of this alkaloid is altogether beyond question. By these authors theobromine was only tried after digitalin, caffeine, strophanthine, and other remedies had proved inefficacious. It was given in cases of dropsy of cardiac origin in the solid form wrapped up in wafer paper. The patients were kept recumbent, and on the first day of treatment received 2 grammes, on the second 3 grammes, on the third 4 grammes, and on the fourth day 5 grammes, in divided doses. In this manner an abundant diuresis was set up, and the dropsy disappeared in proportion as the urine became more abundant. The diuresis continued for several days, but if it were desired to prolong it this could easily be done by giving another dose of 3 grammes. In Hallopeau's cases four equal doses of 1 gramme were given with similar good effects.

It will be interesting, also, in this connection, to notice a recent research by Rummo. This Italian physician conceived the idea of attempting to unite the diuretic and cardio-vascular effects of the alkaloids, caffeine and theobromine, with the well-known cardio-vascular effects of the alkaline iodides. With this object he prepared compounds containing one or other of the alkaloids combined with sodium iodide in the presence of sodium salicylate. These substances are crystallisable compounds, fairly stable when in solid form, but rapidly decomposed if kept in solution. They are fairly easily soluble in water, quite soluble enough to allow of their administration in this way. With regard to their physiological action on the healthy individual, this is practically negative when moderate doses are given. In cases of heart disease with enfeebled systole both compounds exercised an important regulating effect on the pulse rate, a slow pulse being accelerated and a quick one somewhat slowed. The force and amplitude of the pulse wave were at the same time increased. Such effects were producible by a daily dose of 2.5 grammes. The diuretic effects of both iodocaffeine and iodotheobromine seem to be beyond question, being manifest in cases in which there was no œdema or dropsy; and even in cases of polyuria, such as that occurring in the later cases of subacute nephritis. Diuresis was free in all the cases of cardiac dropsy in which the drugs were administered, as well as in a case of pleurisy with effusion. Contrary to what has been observed in the case of theobromine or its compound diuretin, the iodo-sodio-theobromine gave excellent results in a case of hypertrophic cirrhosis of the liver with ascites and anasarca, the diuretic effects lasting several days after the drug had been discontinued. Equally good results followed its use in a case of subacute nephritis. Rummo himself

thinks that the theobromine compound is preferable as a diuretic and strengthener of the systole, while the iodo-caffeine salt is more likely to give good results in cases in which it is desired to prolong the diastole, as in mitral stenosis. Both preparations are readily eliminated by the kidneys, and their use, save in very large doses, is accompanied by no unpleasant effects. Large doses appear, however, likely to cause trouble by reason of the secretion of a certain amount of iodine by the respiratory mucous membrane, and the consequent production of cough. To those who are dissatisfied with theobromine by reason of its insolubility and with diuretine by reason of its percentage of caustic potash, these new preparations appear to recommend themselves.

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"THE BLIND SEEN THROUGH BLIND EYES."[1]

M. de la Sizeranne is a philanthropist who, blind himself has, like Dr. Armitage in England, devoted his life to the amelioration of the lot of the blind. His little book, published under the title at the head of this article, we heartily recommend to our readers as a modest and touching account of the labours in France of such men as Haüy, Braille, and the author. Haüy, the first apostle of the blind, invented relief printing for the blind, and Braille the pricked figures in which more recent books for the blind are printed, and letters written to them and by them.

The author tells us that both hearing and touch are more precious senses than sight, and common experience tells the same truth. We are wont to pity the blind more than the deaf, but generally speaking we find the deaf are by far the more unhappy. Deafness destroys social life, but the blind are more dependent upon social intercourse than those who see. Few persons are born blind, and the memories of natural beauty, says M. de Sizeranne, are rich and precious, feeding the imagination with beautiful visions and enabling the sufferer to enjoy descriptions of scenes before him with peculiar delight. Indeed one lays down M. de la Sizeranne's book with some suspicion that the seeing folks are the less fortunate, so tender and helpful are the ministerings to those deprived of sight. Nay, the author tells us the blind may easily be "overpetted." Prettily as gentle ladies write for us of the current work of the world, is it not for the blind even an advantage to be restricted to a few great books, which opportunity the rest of us are prone to abuse?

Yet even the blind complain that in some respects quite nice people give them occasional cause of offence, as, for example, by talking audibly of them as one would of some family pet animal. Now the blind, the author would have us know, are, when properly educated, quite an adventurous and effective class of persons, a class by no means to be patronised. Under M. de la Sizeranne's pleasant guidance we are led to realise the blind man's feelings and desires, to enter into them with understanding.

[1] By M. de la Sizeranne. Translated from 2nd edition by E. Park Lewis, M.D. Putnams. 1893. Cr. 8vo., pp. 170. 5s.

Dr. Jameson, C.B., and Dr. Harris, of the British South Africa Company, arrived in England on November 16th, from Cape Town. They travelled in company with Mr. Cecil Rhodes and Sir John Willoughby.

Under the London County Council (Improvements) Act, 1894, the Council is authorised to acquire compulsorily sites for coroners' courts and mortuaries. Sites in Paddington, Kensington, Bethnal Green, and Hammersmith have been selected, and the buildings will be proceeded with as soon as the necessary agreements have been made. These are all districts in which the lack of such establishments has long been felt.

VIVISECTION AND THE SCHOOL BOARD.

The utter unscrupulousness of the faddist is well exemplified in a short article signed "M. E. Haweis," which appeared under the above heading in the *Echo* of November 19th. The object of the article in question is to influence the School Board election in the Chelsea district by the introduction of the so-called vivisection question, and the method employed is a very favourite one. At appears that Lord Morpeth and Mrs. Maitland, the Progressive candidates for Chelsea, have very properly refused to join in the ignorant outcry got up by a few notoriety hunters against the British Institute of Preventive Medicine. On the strength of this the writer in the *Echo* artfully insinuates that Lord Morpeth and Mrs. Maitland wish to have vivisection taught to children. Other equally curious assertions occur in the article, but they call for no special comment, being for the most part "stock phrases" from Victoria Street.

THE LATE MR. WALTER ON SUBSCRIBERS' PRIVILEGES.

The late Mr. Walter was one day presiding at a committee meeting of the Hospital for Sick Children, Great Ormond Street, when letters of complaint were mentioned to him by Mr. Whitford, the Secretary, from certain subscribers because some who brought letters signed with their names were refused treatment for their children, the reason being that the parents were in receipt of wages of £5 or more per week. The subscribers were rather indignant at such refusal, and Mr. Whitford was clearly in sympathy with them, or, more correctly, was disposed to take their side, for fear of the subscriptions being withdrawn. Mr. Walter would allow no discussion on this point. He asserted indignantly that the hospital was not intended for such people, and he would be no party to any favours being shown subscribers in such cases as were referred to.

NURSES AND ATTENDANTS.

It is well to remind people of the broad distinction which exists between attendants on the infirm and nurses of the sick. Coincidently with the extending movement for providing the sick poor in the workhouse infirmaries with proper and efficient nursing a movement has arisen, under the auspices of Lady Meath, for extending to the infirm in the workhouses themselves some sort of help and assistance in their weakness. It is a movement which has our best sympathies; it is a matter of the commonest justice that, while trained nursing is being supplied for those who are actually ill, those who are merely weak and feeble should not be left entirely without assistance, and everyone who understands the lot of the feeble creatures who fill our workhouses will be glad that Lady Meath's Association is able to

secure for them some sort of help. But the attendants so provided are not nurses, and are in no way fitted to deal with the sick in the infirmaries. "Attendants" for the assistance of the weak and feeble in the house are supplied by Lady Meath's Association: "nurses," provided by the Workhouse Infirmary Nursing Association and other bodies, are persons who have been carefully and elaborately trained for the very special work of dealing with the sick. Both are useful in their proper place, but no confusion should be made between nurses and attendants.

THE CENTENARY OF THE DISCOVERY OF VACCINATION.

The directors of the German Vaccine Institute are arranging a festal celebration, to be held in 1896, in commemoration of Jenner's discovery of vaccination. It will take place on the occasion of one of the annual meetings of medical men. In connection therewith there is to be an exhibition of old and new vaccine instruments, of apparatus for the preservation of lymph, etc., original manuscripts on small-pox and vaccination, on the inoculation of sheep-pox and cattle plague in pre-Jennerian days, of squibs on vaccination, medals, portraits and autographs of prominent inoculators, vaccinators, and antivaccinationists, etc. Persons willing to lend objects for exhibition are requested to communicate with Geh. Med. Rath. Dr. L. Pfeifer, President of the Vaccine Institute of the Grand Duchy of Saxony, at Weimar.

PROPOSED SCOTTISH UNIVERSITY COURT.

The Commissioners under the Universities (Scotland) Act, 1889, have issued a draft ordinance relating to the establishment of a General University Court of the four Scottish Universities, to consist of a president nominated from time to time by Her Majesty, and a delegate from each University. These are to hold office for seven years. The functions of this Court are to take in review the general interests of the Universities, to report to Her Majesty and to the Secretary for Scotland, and to submit to Parliament from time to time a report of their proceedings. The expenses of the General Court will be borne by the various Courts in the following proportions: Edinburgh 36, Glasgow 29, Aberdeen 20, and St. Andrews 15 per cent.

BAKERS' VIEWS ON THE BAKEHOUSE QUESTION.

At the annual meeting of the London Master Bakers' Protection Society held on November 8th, the condition of London bakehouses was the subject of report. The view was expressed that there was a tendency to over-legislation, and that the baker was threatened with more than his fair share of attention. There were, it was admitted, badly kept and structurally defective bakehouses in London, but it was maintained that if the existing law were adequately enforced there would not be the least need for further legislation. As for underground bakehouses the report insisted upon the unfairness of the proposal to abolish them, and urged the necessity for united action for the purpose of preventing the wholesale closure of well conducted bakeries which happened to be underground. The proposal to limit working hours to forty-eight per week was condemned as unpractical, and as raising difficulties which would make it impossible to carry on business.

THE SICK POOR IN PROVINCIAL WORKHOUSES: BLOFIELD.

Our Commissioner's report on the condition of the sick poor in the Union of Blofield, in Norfolk, shows once more the makeshift arrangements which seem to content most boards of guardians. The male and female infirmaries are nominally both under the supervision of the nurse (untrained), but the men's ward is at some considerable distance from the women's ward; and when it happens, as at the time of our Commissioner's visit, that there is also a patient in the labour ward, the men's share of the nurse's attention can be little more than nominal. The disadvantages of pauper help are illustrated by the remark in the report that the wardswoman was the lying-in patient, and the nurse is presumably obliged to get on as best she can until her assistant shall be convalescent. The squalor of the male ward appears vividly from the few words of description: windows too high to allow of any view of the surrounding country, beds too narrow for comfort, crowded together, two bedridden patients with only such attention as the wardsman could afford them. The women's ward appears to be more cheerful, but nursing conveniences seem to be entirely lacking. There is no water laid on—that first requisite for good nursing. The isolation block was used, at the time of the visit of our representative, for a family with ringworm, but was unprovided with separate offices, a fact which would make its employment for scarlet fever or small-pox a mere farce. The labour ward is, it would seem, but rarely required, since it serves in part as a lumber room; but it would surely be well that the lumber should be stored elsewhere when the ward is wanted for its more legitimate use. But perhaps the most significant fact brought out in the report is that the nurse is untrained, and that the doctor lives at some distance from the infirmary. When will boards of guardians learn that under these circumstances the sick cannot be nursed in any true sense of the word? The cry of economy is never more unwise that when it is raised to prevent the necessary outlay on the comforts of the sick. More speedy cures relieve the rates of a burden, and the educating value of good nursing spreads far and wide from the four walls of the infirmary.

THE INSANE IN WORKHOUSES.

Dr. M. J. Nolan, Medical Superintendent, District Asylum, Downpatrick, in the *Journal of Mental Science*, states his opinion that lunatics cannot be properly treated in workhouses. Quoting from the forty-seventh Report of the English Commissioners in Lunacy, he says: "Some of the latter unions" (that is, in the country) "are still very defective; the accommodation afforded in them is of the poorest kind, and there is in many instances an entire absence of anything beyond the barest necessaries, either for comfort, convenience, or health." In some larger houses, where the accommodation provided for the lunatics by liberal and benevolent boards of guardians—the separate building apart from the workhouse, the staff of attendants, the special medical officer, the generous dietary—is good, still the report of the Commissioners is "that the results attained were not entirely satisfactory." The Commissioners in Lunacy in Scotland say the same thing; and the report of the same body in Ireland, adverse to the detention of the pauper lunatic in the workhouse, is quoted in full by Dr. Nolan. These several reports, reflecting as they do the highest opinions on the subject, go far to prove that these establishments are not adapted to the wants of the lunatic, nor can they receive proper treatment in the workhouse. We commend this paper to those who are interested in this question, endorsing most fully the concluding propositions, "that idiots and epileptic idiots should be provided for in suitable establishments, and that simple lunatics and epileptic lunatics should be removed to asylums, and thereby receive from the State the consideration and support of which they have hitherto been unjustly deprived."

At an inquest held recently at Belfast, the coroner made some strong remarks regarding the practice of detaining lunatics in workhouses. He said that workhouses were never intended for the reception or treatment of dangerous lunatics. As far as restraint was concerned, it was totally illegal, for the simple reason that no person could be detained, whereas in asylums it was necessary to have the sworn evidence of some person and a certificate from a

medical man signed by two magistrates to make the detention legal. The deceased was a violent man, who attacked a neighbour's house; and, strange to say, the neighbour was able to send him to the workhouse instead of having him brought before a medical man and examined. The jury added a rider to their verdict "to condemn the detention of dangerous lunatics in this workhouse; and, further, that such lunatics should be immediately sent to asylums where a proper mode of treatment could be applied, and that the coroner be requested to forward copies of the depositions to the Local Government Board and the Government."

THE SHE WOLF IN SHEEP'S CLOTHING.

The teaching of hygiene is in itself so laudable an object that it is with some reluctance that we draw attention to the fact that this subject is apt to be taken as a text by wandering lecturers, who use it as a means of introducing a great deal of most objectionable teaching. Women who in no other way could get a hearing find that by advertising a course of lectures on hygiene they can draw together a wealthy and influential audience, and, having once caught their ears, can terrify them with sham pathological horrors regarding the reproductive organs. The lady lecturer, armed as she may be with some American diploma or degree, is often only a she wolf in sheep's clothing, whose object is to terrify and then to rob. The trick is ingenious, and unfortunately it pays only too well. A hall is hired, preferably one connected with some scientific institution, a course of lectures is advertised, one or two philanthropically minded ladies are called upon and persuaded as to the urgent need of hygienic facts being taught to women, the thing gets talked about, a good audience is drawn, and then the floodgates are opened and the disgusting twaddle of the popular "physiological" lecture is discharged upon them, and they are finally urged to consult the lecturer at her lodging or hotel as the case may be. For those who accept the invitation various further adventures are open, but unless they have the sense to rush off to their doctor and ask whether it be possible that the terrible things told to them are true, they always end in the same way—much misery and distress, an empty purse, and often fraud upon the husband—theft in fact—to meet the demands of quackery, and nothing to show for it but a wretched pessary, for which, perhaps, five guineas has been paid. We urge upon those who are asked to organise lectures upon "hygiene" or "physiology" to inquire most carefully as to the character of the lecturers proposed.

THE BLESSEDNESS OF BEARDS.

It is to be feared that too many men deprive themselves of what Shakespeare calls "valour's excrement," without counting the possible cost. Whether the beard be an ornament to the masculine countenance we must leave the ladies to decide; it certainly has it uses in hiding a weak chin, and in some cases it seems to be cultivated as a vicarious compensation for a hairless scalp. It is not, however, in its cosmetic so much as in its hygienic aspects that the blessedness of the beard—in which term we include the whole of the harvest usually claimed by the razor—is most apparent. That it is a safeguard to the throat is generally admitted, and writers of authority have insisted on its value as a protection against toothache and facial neuralgia. This is a goodly sum of advantages to the credit of the beard. Dr. Chabbert, of Toulouse, has however yet more to say in its favour. According to this practitioner the beard seems to be a very efficient defence against that form of facial paralysis which is caused by cold. This affection is far more common in women than in men, though the latter are, of course, much more exposed to the cause which produces it. When facial paralysis *a frigore* does occur in men, they are almost invariably individuals to whom Nature has been stepmotherly in the matter of beard, or who have wantonly thrown away the protective covering with which she had clothed their faces. Dr. Chabbert cites the experience of several physicians, in addition to his own, in support of his opinion. Professor André, of Toulouse, has seen several cases of the affection in question in women, but not one in man; he has heard of one, indeed, which would appear to be an excellent example of the exception which proves the rule, for the patient was a "lyric artist," with the *faccia di musico* so distasteful to Lord Byron. Professor Pitres, of Bordeaux, has seen twelve cases in women and only two in men; both the latter shaved, though as one of them underwent that operation only twice a week, his case perhaps does not count for much unless it be held that his face was more vulnerable after these periodical denudations. Similar observations are quoted from Dr. Olivier, of Toulouse and Dr. Sudre, of Carmaux. These facts, though hardly sufficient to found an induction on, seem at least to establish a *primâ facie* case for the utility of the beard against facial paralysis of the kind referred to. In these days when man's traditional privileges are one by one being invaded by the "new woman," he may perhaps be forgiven for making the most of such advantages as may be considered exclusively his own.

THE HISTORICAL CASE OF DIPHTHERIA.

Shortly after Louis Bonaparte had taken up his residence in his new kingdom of Holland his eldest boy was seized with croup—most probably diphtheria—which proved fatal. Napoleon heard the news about a week before the battle of Friedland, and was so much affected by it, that he at once commanded, as we recently noted, that steps should be taken to offer a prize for the best essay on Croup, its Origin, Nature, and Treatment. The prize was 12,000 francs. Eighty-three essays were received. Dr. Cabanès has recently examined some of them, and declares that even the two which divided the prize display how extraordinary was the ignorance in those days of a disease which was certainly common, and well known to be fatal. Yet there were many good clinical observers in France at that date. Two results naturally followed the action of the great conqueror. In the first place nothing new was found out about croup: secondly, all the unsuccessful candidates were indignant. The son of Constant, Napoleon's valet, died of croup shortly after the award. Why, said the defeated essayists, were not the recommendations of the successful writers carried out by the physicians who awarded the prize?

THE POSITION OF GUARDIANS IN REGARD TO VACCINATION.

The Chairman of the Cheltenham Board of Guardians has raised the question of the duty of guardians in reference to the enforcement of the Vaccination Acts in the present state of the controversy arising out of the appointment and long delayed sitting of the Royal Commission. He has argued that prosecutions under the law are regarded as persecutions, and that they defeat the purpose for which they are initiated. The Local Government Board have replied in no uncertain manner to the question by telling the Chairman that boards of guardians are not empowered under the law to exercise any discretionary power, but that under order of that Board it is compulsory on the Poor-law authority to enforce the Vaccination Acts in all cases in which they have been neglected. The Central Board cited cases in which the duty of the guardians had been clearly laid down; but the Chairman of the Cheltenham Board said that since numerous bodies throughout the country had not even been censured for non-enforcement of the law, it were best that in Cheltenham no notice be taken of the matter. This course was agreed to without dissent. In this way is the law openly defied; and meanwhile the Commission drags out its weary length, and vaccination is every day suffering as a consequence of the "go-as-you-please" policy of the country at large. The present general absence of small-pox (thanks to

past vaccination), the apathy of the public in these circumstances, and the energy of professional agitators alike take their part in securing the unmistakable growth in the numbers of children who are being allowed to join the ranks of those unprotected against small-pox.

AN OPTIMISTIC VIEW.

Professor Clifford Allbutt delivered the second of the course of Armitstead Lectures at Dundee on November 16th. The subject of the lecture was Nerves and Modern Life. The lecturer said that official returns failed to prove that insanity was increasing in the classes of persons most likely to be subjected to mental strain or harassed by worldly bustle and cares. On the contrary, they tended to show that insanity was, or appeared to be, more prevalent among the class of agricultural labourers, who were ill fed, who married within a narrow circle, and from out of whose class the best and most intelligent gravitated to the towns. Insanity fell upon persons of insane family who suffered from a vice of constitution, and in whom intemperance was often evidence of a want of balance of mind, tending in any case to insanity, rather than a cause of mental disorder. Professor Allbutt took a most optimistic view of the future development of the English race; physically the young Englishman, he said—and he might have added the young Englishwoman—was, in athletic aptitude, a great advance on the young people of thirty or forty years ago. He described the talk of decadence as "wild absurdity;" and the complaint of overpressure as "fudge."

THE CHARITY ORGANISATION SOCIETY ON THE SICK IN THE PROVINCIAL WORKHOUSES.

The November number of the *Review* of this Society strikes a note of surprise, on learning from the reports published in the British Medical Journal how little has been done in some of the provincial unions to ameliorate the condition of the sick, who are dependent on the guardians of the poor for their cure and care: "It has not been realised by the public that the guardians of some of the smaller unions in England and Wales have continued the old methods, which have been unanimously condemned by all managers of well-conducted modern hospitals and infirmaries." We trust that the public will soon be awake on this question, and aid us in our efforts to arouse the Local Government Board to institute a careful investigation into a condition of things which, as the *Review* says, "is shown to be little less than barbarous." The article is accompanied by a table setting forth the result of our investigations.

PARISH COUNCILLORS.

Considerable doubt appears still to be prevalent as to whether district medical officers are eligible for election as parish councillors. We think it well, therefore, to repeat the opinion which we have already expressed on several occasions. Section 46 of the Local Government Act of 1894 can, it appears, only be interpreted as enacting that a paid officer of the guardians is not debarred from membership of a parish council or an urban district council. The letter from the Secretary of the Local Government Board, addressed to Dr. J. E. Morton, published in the British Medical Journal of November 17th, states distinctly that the view taken by the Board is: "That the holding of a paid office under any one of the authorities mentioned disqualifies the holder from being a member of that authority only, and that the holder of a paid office under one of these authorities is not disqualified from being a member of any other of such authorities under which he holds no paid office." A copy of the Act can be obtained of Messrs. Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C., price 9½d. The portion of the clause governing this matter was published in the British Medical Journal of October 27th, 1894, page 957.

BEER IN ASYLUMS.

Some years ago the dietary at the Worcester City and County Asylum was improved, and a considerable reduction made in the malt liquors consumed at Powick Asylum. Several officers of the staff, male and female, accepted a pecuniary allowance in lieu of their beer ration. The effect may be gathered from the following figures: In the year ending November 1st, 1880, for 850 patients and about 120 attendants, 41,270 gallons of beer and ale were brewed and used. In the year ending November 1st, 1894, the corresponding number was only 12 000, the patients numbering 1,000, and the attendants 150. Deducting the value of the beer allowance to attendants, the reduction of expenditure on malt liquors alone has been equal to £700 per annum, while the number of inmates under treatment and the attendants have been increased one-fifth since 1880. Mr. John Brinton, a member of the Visiting Committee, writes that the managing authorities can attest the maintenance of discipline and efficiency, while the statistics in the reports indicate the sustained health and increased longevity of the patients, a striking testimony to the value of the changes in the dietary.

THE ORIGIN OF THE LATE CZAR'S ILLNESS.

Dr. Zakharin has addressed a letter to the *Moscow Gazette* stating that the attack of influenza the Czar Alexander III had last year was the third from which he had suffered. In January last, when called in to attend the Czar, daily analyses revealed evidence of nephritis. After a short time the albuminuria disappeared. In August, however, Dr. Hirsch noticed the recurrence of symptoms of nephritis, and when Dr. Zakharin saw his patient on August 9th the urine afforded unmistakeable evidence, and there was also cardiac disturbance. Dr. Zakharin adds that the Czar refused to follow the strict *régime* advised or to limit the amount of mental and physical work which he had been accustomed to undertake.

FLOODS AND DISEASE.

The recent large rainfall, and the floods which it has produced, has been compared with the famous November floods of 1852, known as the "Wellington floods," because the Great Duke was then lying in state. It, however, appears that the actual amount of rain this year has been less. According to Mr. Symons, F.R.S., the feature of the recent rains has been persistency rather than intensity, though in some places local thunderstorms have caused very heavy local rains. In the South of England it rained at nearly every meteorological station nearly every day for three weeks; the fall on the last four days of that period was approximately an inch a day. Mr. Symons points out that in this country we take insufficient means for obtaining warning as to river floods. In Paris every bridge has a scale whereby the public can see for themselves the height of the river, and predictions as to the level which the Seine will reach, founded on calculations based on accurate observation, are commonly fulfilled. Since the floods in York in 1892 a similar plan is in process of being carried out there. In this way timely warning is given, precautionary measures can be taken, and if the worst comes to the worst the inhabitants can remove from the districts about to be inundated. With our present haphazard methods a flood, as a rule, comes on the inhabitants of English river valleys as a surprise, with the consequence that there is great loss of property and, what is of more consequence, serious injury to the public health.

PAUPER NURSING IN IRISH WORKHOUSES.

There is one thing to be said for the guardians at Belfast, they are careful of their good name; so careful, in fact, that they have unanimously resolved: "That owing to misrepresentations and suppression of facts at recent inquests held on inmates in this institution, the master be instructed to

ask the attendance of the board's solicitor to cases in which he considers his services necessary." A board so careful of their fair fame as to employ a paid champion to defend it from aspersion would, one would expect, be careful to be in every way above reproach. It is interesting then to see what are the misrepresentations which have so raised their ire. Coroners discharge a very useful function when they show the weak spots of Poor-law administration, and in this case the coroner of Belfast has instructed his clerk to explain that it was no misrepresentation of the evidence given at the inquest to state that there were only two nurses in charge of 112 patients in the infirmary when a man threw himself out of the window and was killed. At the inquest the two nurses deposed that they alone were in charge; that they had to nurse and dispense medicine to the 112 patients, and that they worked fourteen hours a day. This the guardians think a most unfair misrepresentation, for were there not also four pauper attendants? Here we have the old excuse for neglected work. Let us see from this instance what trust can be placed in such pauper help. Not one of the four missed the unfortunate man from his bed, nor did any one of them see him get out of his bed, walk along the ward, and throw himself out of the window, although it must have taken a man of twelve stone weight a considerable time to mount to it and squeeze himself out through an aperture 15 inches square. The first intimation the four pauper attendants had of the man's death was his dead body being carried into the ward by persons outside. So much for the value of the free cheap labour of the four pauper attendants. The jury acquitted the nurses of all blame on the ground of their physical inability to discharge the responsible duties put upon them, and they condemned the system exposed; yet, in the face of this, the guardians at their meeting reaffirmed the system and supported it. They may well want a solicitor to defend their credit at the next inquest that comes on.

PAYMENT FOR ADMINISTRATION OF ANÆSTHETICS IN POOR-LAW PRACTICE.

We regret to find from the circular letter of the Local Government Board, dated November 1st, 1894, addressed to the clerks to the guardians of the different unions of England and Wales (published in the British Medical Journal of November 10th, 1894, page 1086), that the Central Board still advises that all cases in which a serious operation is required should, when possible, be sent to a public hospital. We ourselves seriously doubt whether any such recommendation ought to have been given by the Local Government Board, as, if the medical officers of the Poor-law Service are discouraged from operating on those cases which can be removed to a hospital, we fail to see how they are likely to be at all times competent to operate on cases of extreme emergency, or in others of still more serious character which cannot be removed to a hospital; and as all holders of Poor-law appointments, with very few exceptions (if any), now hold one or more surgical diplomas, we consider a very poor compliment has been paid to them by the issue of this letter. Many boards of guardians will at once assume that the Poor-law medical officers are not competent to perform surgical operations, and that they, as guardians, ought never to be called upon to pay any extra fees for such. As to the administration of anæsthetics, the letter in question simply leaves this matter just where it was before. No doubt, previous to its issue, if any board of guardians had applied to the Local Government Board for permission to allow a special fee to be granted for the administration of an anæsthetic by a second practitioner, such permission would have been given, and this is all that is conceded by the recent letter. It still rests with the medical officer to appeal to his board for a fee, and it also rests with the same board to refuse the application, however reasonable it may be. No amount of fee is fixed, and it is not probable that boards of guardians would under any circumstances award a fee sufficiently remunerative for the responsibility incurred. It is, moreover, almost certain that in cases where the medical officer has the assistance of his own qualified assistant, or even of his partner, an application for a fee for their assistance would be at once refused. Some fresh regulation is urgently required to compel those boards who habitually pay for nothing whatever except when compelled by law or regulation to do so to pay extra for the administration of an anæsthetic.

PRACTICAL PHYSIOLOGY IN THE UNIVERSITY OF GLASGOW.

With the aid of a munificent grant from the Bellahouston trustees, who have funds for the promotion chiefly of the higher education in science in Glasgow, a room in the physiological department has now been fitted up for advanced teaching largely upon the model of that in the Physiological Laboratory of the University of Oxford. The apparatus includes a water motor, which drives a horizontal steel spindle capable of being connected with a number of recording cylinders. There are ten complete sets of electrical and recording apparatus, so arranged that two students working together at each set can study experimentally the physiology of muscular contraction, nervous action, and the mechanism of the heart and circulation. Special sets of apparatus for the physiology of the senses and of voice will also be provided. The class of advanced practical physiology is specially designed for students preparing to graduate in science, whether taking the pass or the honours degree of B.Sc. There seems every probability of the new ordinances, as regards science, increasing the number of candidates in the Scottish universities for the degree of B.Sc., the standard of which is comparable with that of the Honours School in Physiology in Oxford, and with Part II of the Natural Science Tripos in Cambridge. This installation may be said to complete the equipment of the University of Glasgow, both as regards physiological teaching and the prosecution of research. The advanced class, which will meet during the winter session only, is conducted by Dr. D. Fraser Harris, B.Sc.Lond., the second assistant, under the superintendence of Professor McKendrick.

THE BRISTOL MEDICAL SCHOOL.

At the annual prize day of the Medical Faculty of the Bristol University College, held on November 21st, Mr. Thomas Bryant occupied the chair, and having handed the awards to the students, gave an address upon Professional Education, in the course of which he expressed the opinion that teaching had become far too grandmotherly, and urged students not to be mere passive recipients of information, but to make individual exertion and individual thought the solid foundation of all their knowledge, so that when they left the College they would have acquired the habits of life and thought which would never leave them, but which would help them to remain students all their lives, and thus become wiser and better men. He asked them to cultivate the full use of their special senses, but more particularly that of sight. From the ordinary ways of students at examination halls, it might be thought that the use of the eyes was of quite secondary importance, since it was usual to begin by means of the sense of touch. He therefore cried "Hands off" in every case before the visual examination had been made. In exercising the sense of touch, he urged the need of gentleness, by which harm to the patient was avoided and better knowledge gained. There had been and still was in the minds of the less educated classes of society some confusion of ideas as to the differences between an educated professional man and all uneducated practitioners, whether called unqualified assistants, prescribing chemists, tradesmen, or quacks, for where the principle of practice was not made clear to the public mind the practice of medicine seemed to the uneducated observer to be but a system of drug giving or mere treatment of symptoms quite regard-

less of the pathological conditions upon which these symptoms depended, and under these circumstances could it be a matter of surprise that unqualified men were now found to rub shoulders against and compete with qualified men, much to the latter's detriment and the serious injury of the public. During the meeting reference was made by the Chairman of the Council of the University College to the resignation of Dr. Joseph Swayne as Professor of Obstetric Medicine. He had been lecturer in the medical school, and, since the amalgamation of that institution with the University College, Professor of the College for more than fifty years, and both the College and the public owed him much for his long and active service. It was mentioned that Professor Dobson had been obliged by ill-health to relinquish the Joint Professorship of Surgery, and Professor J. Greig Smith had undertaken the whole of the duties of the chair. The Medical Faculty, in their report, read by the Dean (Dr. Markham Skerritt), stated that their department of the College was in a thoroughly satisfactory condition and they had 94 students on the books.

THE DUBLIN ASYLUM.

The crowded condition of the Richmond District Asylum, Dublin, has been again the subject of discussion. Mr. Clancy, one of the Governors, in a long letter to the press, arraigns the Board of Control for its apathy and fixes the responsibility of delay in reform upon that body. We have proof that the asylum contains about 500 more persons than it was built to accommodate. Mr. Clancy shows that Dr. Norman has persistently called attention to the defects in his reports to the Board since his appointment. Mr. Clancy states that "Out of all the recommendations submitted to them by their medical superintendent since 1886 up to the present moment the sum total of their attempts to relieve the overcrowding were the erection of three sheds capable of holding some two hundred patients during daytime, together with a contagious diseases hospital to hold thirty patients. In the face of the urgent and oft-repeated complaints about the kitchen accommodation the self-same apparatus that was erected for 250 patients has been and is doing duty for 1,500. No wonder that Dr. Norman publicly declared that in the event of an epidemic breaking out in Richmond he would lose by death over 600 of the inmates." The Board of Control ought to have the opportunity of answering these grave charges. It is entrusted with great powers but they are not intended to be obstructive nor yet inoperative, If the statements now made are true we think that serious blame lies at the door of this body and that the Chief Secretary for Ireland ought to inquire at once into the matter.

COMPULSORY IDLENESS.

The new cry of "one man, one job," which has been brought into prominence by a vote of the London County Council, has in it, from the medical point of view, much that is absurd. Economics we do not touch on; whether man is becoming so enormously productive, and the reward of a whole day's work so great, that it is economically wrong to work "out of hours," we must leave to those who make economic studies their special work; but, from the purely medical point of view, we venture to doubt whether any good will come from attempts to tie men down to the particular groove in which the main work of their lives is done. Much as the productiveness of human labour may be increased by subdivision, by restricting each man to his own job, it cannot be doubted that it is bad for the worker. It must not be imagined that the constant repetition of the same act only does harm when it has gone to such extreme that hammerman's palsy, or writer's cramp, or telegraphist's cramp is actually produced. When we find people exhausted by eight hours of monotonous work, and yet, after a meal, perfectly fit both as regards the muscular and nervous systems for hard labour, as, for example, in the garden, the football field, or the cycle path, so only that it be something different, we may be sure that the monotony of their work has done harm, and that the exclusive employment of certain areas, be they of muscle, or nerve, or mind, is an exhaustive and injurious process. From the productive point of view minute division of labour has been followed by the Nemesis of a demand and a necessity for shorter hours. We cannot, however, fail to see that the balance of exercise is not restored by passing in idleness the hours saved from compulsory work. So long as we are young games and athletics may make up the difference; but man is naturally a working animal, and so long as he has variety he is healthiest, and probably happiest, when he is in full activity—in other words, while working; and for men past the age when games are attractive, it is not only a dull but an unhealthy prospect which is held out when they are told that they are to be debarred from variety of effort, and that each must have "one job" to which he must be tied for life. To a medical man, for all his long hours and broken rest, such a prospect seems like slavery, for at least amid his toil and weariness he has variety.

THE EPILEPTIC COLONY AT CHALFONT.

The foundation stone of the permanent buildings of this institution has now been laid, the ceremony having been performed by Mr. Passmore Edwards, to whom the Committee are indebted, among other things, for the admirable site which they have obtained. The place stands high, the soil is well adapted for agricultural purposes, and water is obtained on the spot by boring into the underlying chalk. In the temporary home there are now about fifteen patients, but in a few days they will be increased to eighteen, which is the number the present buildings are arranged to accommodate. A report will shortly be issued by the staff in regard to the medical aspect of the patients, but we may say that they not only appear to have improved greatly in general health, but that a considerable decrease in the frequency of the fits has already been observed. The object of the institution is not merely to provide a refuge in which sufferers from epilepsy, who by the nature of their illness are often cut off from useful occupation, may find a home, but to give them such active work as may make them useful members of society, and in some cases may lead to cure, or at least to cessation of their attacks. The diet is plain but sufficient, the hours are regular, the work is not laborious and is mostly in the open air, and help is always at hand when fits occur. The institution is one which deserves every encouragement, for nothing can be more sad than the position of epileptics, who are debarred from employment by the occasional occurrence of attacks, in the intervals between which they are perfectly able to work.

TUBERCULOSIS AND CATTLE.

In some notes on Spiroptera associated with Tuberculosis in Cattle, read by Dr. C. E. Barnard and Mr. Archibald Park at the Adelaide meeting of the Australian Association for the Advancement of Science, these gentlemen call attention to the frequent presence of tubercle bacilli in verminous tumours in cattle coming from certain districts of Queensland. The parasite producing these tumours resembles the *spiroptera reticulata* of the horse. They point out that the tumour may break down, form an abscess, and so may become a focus for general tuberculosis. It appears that in these districts human beings are subject to a form of abscess resembling those of cattle just referred to: the authors suggest that similarly these abscesses may be a starting point for tuberculous infection in man. They strongly urge rigid inspection of all cattle intended for human food.

Dr. T. R. Ronaldson, of Edinburgh, has been added to the Commission of the Peace for Edinburgh.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

We understand that considerable progress has recently been made by the British Institute for Preventive Medicine in the preparation of the antitoxin serum for the treatment of diphtheria. The preparation of the serum is necessarily a work of time, for the interval between the first inoculation and the time at which the horse can be used for the purpose of supplying serum is two and a-half or three months. It was thought that as the quantity was limited, the best use to which the serum could be put was to supply it for use in certain hospitals where it could be employed under satisfactory test conditions, so that an impartial opinion might be formed as to the therapeutic value of the method. We understand that at the present time three hospitals are thus being supplied, but that at the special desire of the Council of the Institute the results will not be published until the number of cases is considered to be sufficient to warrant a final judgment.

The evidence, however, afforded by foreign statistics is felt to make so strong a case that the number of horses now undergoing preparation has been raised to twelve, and the President of the Institute, Sir Joseph Lister, and the Director, Dr. Armand Ruffer, expect that in the course of a few months it may be possible to place the serum on sale for the use of the profession generally. Before this can be done, however, many details will have to be settled, and it will be desirable to obtain further information as to the length of time the serum will retain its properties. It is already known that it does not deteriorate after keeping for two or three months.

A further source of delay has been the difficulty of obtaining horses suitable for the purpose. It is, of course, essential that the animals employed should be perfectly sound in constitution, and we may take this opportunity of giving the most absolute denial to the scandalous statement that it has been "discovered that the horses from which it is taken have been seized with glanders." The story is absolutely without foundation. As a matter of precaution, every animal, before being submitted to the inoculation with a view to yielding diphtheria antitoxin, is tested with mallein, and only animals thus proved by the severest test known to science—a test which has already been shown by extended veterinary experience to be thoroughly trustworthy—are used for the preparation of the antitoxin.

From certain letters which have been addressed to us it would appear that there is an impression that one of the reasons that the serum is not yet available for general use is that the Institute is not in possession of the necessary funds. We are glad to learn that this is not the reason for the delay. At the same time the undertaking is an extremely costly one, and we trust that the Institute may have the fullest support of the medical profession in obtaining the necessary funds for this special purpose in order that the excellent work which is being done by it in other directions may not be checked.

St. Bartholomew's Hospital.

We are indebted to Mr. R. A. Walter and Mr. L. C. Thorne Thorne, House-Physicians to St. Bartholomew's Hospital, for the following abstracts of cases of diphtheria under the care of Dr. Gee and of Dr. Hensley, treated by Aronson's diphtheria antitoxin.

It will be observed that the reports as furnished to us consist of recitals of the cases without the expression of any opinion as to the efficacy of the treatment, as it is felt that any such expression founded upon the experience of the cases as yet treated would be premature. We may note, however, that the number of cases is eleven, the ages varying from 8 months to 16 years. Two patients have died. One of these deaths occurred in a child aged 2½ years, who seemed to be in a fair way to recovery after tracheotomy, when it was attacked by pneumonia, to which it succumbed in a short time. The other fatal case was a child aged 8 months, who died the day after admission, and about twenty-four hours after tracheotomy. Tracheotomy was performed in four other cases, all of whom recovered. The ages of these children who recovered after tracheotomy ranged between 11 months and 4 years.

XXV.—*Cases of Diphtheria under Dr. Gee's Care Treated by Aronson's Diphtheria Antitoxin.*

Case I.—C. S., aged 16, was admitted on August 4th, 1894. [His brother was removed to one of the fever hospitals, and tracheotomy was performed on him on this day.] The patient looked ill. The temperature was 102.2°, the respirations 32. There were no signs of laryngeal obstruction. Both tonsils and the soft palate were reddened and inflamed, and the right tonsil was covered with membrane; mxviij of Aronson's antitoxin were injected deep into the buttock. On August 7th the patient had erythema on the chest, face, and hands. On August 9th there was a patch of membrane on the left tonsil. On August 13th the throat was clear. On September 2nd the patient was discharged quite well. The temperature came down to normal on August 6th, and did not again rise above normal except for a few hours on August 9th, when it went up to 100.2°. This rise was concurrent with the appearance of membrane on the left tonsil. No bacteriological examination was made.

Case II.—E. H., aged 2½ years, was admitted on September 29th, 1894, suffering from diphtheria and laryngeal obstruction. The patient was first taken ill with sore throat on September 27th, and was brought to the hospital on September 29th, in a moribund condition, with great dyspnœa, recession, and cyanosis. Tracheotomy was immediately performed. During the operation the breathing became very bad, and an injection of strychnine was given. Some bits of membrane were coughed up, and breathing improved. mx of Aronson's antitoxin were injected into the buttock. Several small pieces of membrane were coughed up after the operation. There was a large patch of membrane on the left tonsil, and some on the posterior wall of the pharynx. On September 30th the patient was doing well. There was no recession and very little cough, but some discharge from both nostrils. On October 1st he was still doing well. A patch of membrane still persisted on the left tonsil. The child was to have been taken home on this day, but a small patch of membrane appeared on the left tonsil. On October 2nd the child looked worse, was breathing faster, and was flushed. There was bronchial breathing and impaired percussion note over the upper part of the left back, and crepitations were heard all over. On October 3rd the child died, undoubtedly from pneumonia, though unfortunately no *post-mortem* examination could be obtained. The temperature never came down to normal, rising to 103.6° F. on the day of death.

Case III.—E. C., aged 11½ years, was admitted on July 23rd, 1894. The patient had had sore throat three days. The lips were rather blue, and the respirations were 28. There was no recession. The tonsils and soft palate were red and inflamed. The right tonsil was covered with membrane, and there was a small patch on the left; m xviij of Aronson's antitoxin were injected into the buttock. The patient vomited six times during the night. On July 24th there was only a small patch of membrane on the right tonsil. On July 28th there was still a small patch of membrane on the right tonsil, but the child was doing well. On July 30th there was no membrane, and on August 8th the child was quite well, and on August 15th it was discharged. No bacteriological examination was made.

Case IV.—M. P., aged 18, was admitted on August 11th, 1894, suffering from faucial diphtheria. On August 7th she complained of sore throat, headache, and sickness. Patient's younger sister had had diphtheria five weeks earlier. On August 11th there was no dyspnœa nor recession. The right tonsil and the right side of the uvula were covered with membrane, and there was a small patch on the left tonsil. mxviij of Aronson's antitoxin were injected into the buttock. On August 14th the throat was better, but there was still some membrane. On August 16th there was no membrane, and on August 27th the throat was natural. The patient was discharged on September 7th. No bacteriological examination was made. The temperature was only above normal (99.8°) on the night of admission.

Case V.—S. M., aged 3, was admitted on August 22nd, 1894, suffering from diphtheria. On admission the child had slight recession, but the colour was good. The temperature was 101°. There was a patch of membrane on the right tonsil. mviij of Aronson's antitoxin were injected into buttock. On

August 23rd the child much better, the temperature was down. There was no membrane in the fauces, which were reddened. On August 27th the fauces were natural, and the child was practically well. The patient was discharged on September 1st. No bacteriological examination was made.

Case VI.—G. B., aged 8 months, was admitted on October 30th. It began to have cough and recession on the 30th. There was great recession, the face was very blue. Respiration 80. Temperature 101.6. There were patches of membrane on each tonsil. Tracheotomy was performed at 6.15 P.M., there was great difficulty in getting the tube in. Eight minims of Aronson's antitoxin were injected into the buttock. The child improved a good deal after tracheotomy, the recession disappearing and the colour improving. On October 31st, the child was much worse, the recession had returned, the colour was bad. There was some surgical emphysema of the neck. In the evening the child died. A *post-mortem* examination was made at which it was found that the anterior mediastinum was full of air and both lungs were collapsed. There was no membrane below the larynx though there was a continuous layer from the tonsils to the vocal cords. The Loeffler bacillus was found in the membrane.

Case VII.—C. P., aged 11. Admitted July 11th, 1894. Diphtheria. July 11th sore throat began with sickness and shivering and pain in the limbs. Patient had no recession or dyspnœa. Temperature 100.8. The tonsils and soft palate were inflamed, there was a large patch of membrane on the right tonsil. Eighteen minims of Aronson's antitoxin were injected into the arm. On July 13th the child was very well. There was a little secretion on the left tonsil. Temperature 98°; remained down. On July 14th the child was quite well, the throat was natural. On July 16th the pulse was irregular; otherwise the child was well. On July 19th the pulse was still irregular, varying from 56 to 30 a minute. On July 21st it was regular. On August 4th the patient was quite strong, and was discharged. No bacteriological examination was made.

Case VIII.—C. F., aged 1 year 8 months, admitted on July 8th, 1894, with laryngeal diphtheria. On July 7th the voice was hoarse, and shivering occurred. On July 8th it was worse. There was some recession of the lower part of the sternum and lower intercostal spaces, with great difficulty in breathing. The tonsils and uvula were swollen and red; there was a patch of membrane on the right tonsil. Temperature 100°; ♏ x Aronson's antitoxin were injected into the buttock at 9.10 P.M. Tracheotomy was performed at 12.30 A.M. on July 9th. Respiration was greatly relieved, but the recession did not entirely disappear. On July 9th there was no recession. A good deal of healthy mucus came from the tube; there was a patch of membrane just inside the right cheek. The tonsils and palate were less red. There was some nasal discharge. On July 11th the patch of membrane on the cheek was small; there was none on the tonsils. On July 12th there was a good deal of bronchitis, with diarrhœa. On July 14th the child was not so well; it vomited eight times in the course of the day. The diarrhœa still continued. On July 16th it was very feeble, but there was less diarrhœa. On July 24th the child was very much better, and on August 7th it was strong and well, and was discharged. The temperature was somewhat above the normal until July 20th, after which it remained about 98°, except on the 23rd, when it went up to 100°. No bacteriological examination was made.

Case IX.—J. G., aged 11 months 1 week. Was admitted on October 3rd, suffering from laryngeal diphtheria. The cough began on October 3rd. On October 3rd the child was cyanosed. The alæ nasi were dilating, and there was much recession. Respiration 48, temperature 99.8.°. There was a small patch of membrane on the right tonsil. At 8.45 P.M. ♏viii of Aronson's antitoxin were injected into the buttock, and directly after this tracheotomy was performed. After this the colour improved and the recession disappeared. On October 5th there was a great deal of discharge from the nose; the child did not look so well as it did directly after tracheotomy. The tube was removed. On October 6th, there was general bronchitis. On October 7th Loeffler's bacillus was cultivated from the membrane. On October 17th the fauces were natural, and the patient was doing well. On October 27th the bronchitis was much better. On November 8th the child was doing well; it was kept in hospital because of an offensive discharge from the left ear, and slight bronchitis. On November 14th nothing abnormal could be found in the chest. The throat was clear; the wound had been healed up for some weeks.

XXVI.—*Cases admitted to St. Bartholomew's Hospital under Dr. Hensley's care since October 1st suffering from Diphtheria and Treated with Aronson's Antitoxin.*

Case I.—W. Q., aged 4, was taken ill October 11th and admitted October 13th. The child was well nourished and in good condition. There was membrane on the fauces, with laryngeal stridor and recession. A culture was taken from the patch on the fauces (from which the Loeffler's bacillus was afterwards isolated); antitoxin ♏xj injected into the gluteal muscles. The child was better till midday on October 14th, on which day the breathing became worse at 5.45 P.M. The child's colour was worse; there was more recession; antitoxin ♏v injected. At 8 P.M. it was worse; there was more recession, and tracheotomy was performed. The child went on well and made a good recovery.

Case II.—F. H. S., aged 2½, was admitted on October 17th. The onset of the illness was indefinite. It followed close on varicella. The child looked pale and ill; the face was dusky, and there was a foul discharge from the nose. The fauces were congested, but no membrane could be seen. There was considerable stridor and recession. Tracheotomy was performed shortly after admission. No membrane was coughed up. On October 18th the child was not much improved; some membrane was coughed up (from which Loeffler's bacillus was cultivated); ♏x of antitoxin were injected. On October 19th, at 10 A.M., antitoxin ♏v injected. On October 20th the tube was removed. Temperature 103°. Antitoxin ♏x injected. Evening temperature 99.6°. From this time the child went on well, with the exception of some difficulty in swallowing fluids and some recession at night. The latter has now disappeared and the child is doing well.

Mr. W. J. Horne, in the *St. Bartholomew's Hospital Journal* for November, gives particulars of 3 cases (under the care of Drs. Church and Brunton) treated with antitoxin in St. Bartholomew's Hospital during August and September: (1) A girl, aged 9, with well-marked diphtheria, temperature 102°, trace of albumen in urine: 10 minims of antitoxin injected. The constitutional condition rapidly improved, but the condition of the throat showed but little change for twenty-four hours. On the second day the membrane began to disappear, and in a few days no trace was left. No toxic symptoms, local or general, followed the injection, and the child made a good recovery. The membrane contained the Klebs-Loeffler bacillus. (2) Boy, aged 1 year and 9 months, so ill when admitted that tracheotomy appeared to be imminent; 3½ minims of antitoxin were injected, hot fomentations were applied to the neck and throat, and the steam kettle was used. The child quickly responded to treatment and made a good recovery. No bacteriological diagnosis was made. (3) Boy aged 3 years, admitted with great dyspnœa, voice husky, almost aphonic, and "a poisoned aspect"; 15 minims of antitoxin were injected. The dyspnœa becoming worse tracheotomy was performed. The tube was taken out on the fourth day after operation, and the child ultimately made a good recovery. The case was proved to be one of true diphtheria by bacteriological diagnosis. In all 3 cases the injection was given very soon after admission. Mr. Horne, speaking of the effects of the treatment, points out that in none of the cases did the faucial membrane show any naked-eye change within the first twenty-four hours after injection; after that it began to disappear, not shrivelling up and coming away in masses, but gradually melting away. When the temperature was raised on admission it reached normal within twelve hours; the pulse-rate also fell, but the normal was not so soon reached. Albumen was present in the urine in all 3 cases when first seen; it diminished early in the disease. No evidence of paralysis developed whilst the cases were under observation. The general health of these patients from the very first rapidly improved, and this was perhaps the most noticeable feature; the children became brighter and more cheerful. The disease certainly seemed to lose its malignant character at an earlier period.

On October 10th the Director of Health for the Kingdom of Italy announced that the Minister of the Interior would permit the introduction of the antidiphtheritic serum provided it was obtained from the Pasteur Institute, or from the house of Lucius and Brunig, under the control of Behring. According to Professor Blasi, the first supply reached Rome on October 15th. Since that time it has been tried in only one case, which recovered, owing to the happy state of things—want of diphtheria cases in Rome. The disease is not endemic there, and is usually of a benign nature.

A Sero-therapeutic Institute for the east of France is in process of foundation. The Organising Committee includes the names of MM. Bichat, Dean of the Faculty of Science; Bloch, Chief Rabbi; Lederlin, Dean of the Faculty of Law; Krantz, Dean of the Faculty of Letters: Heydenreich, Dean of the Faculty of Medicine; Rousselot, President of the Tribunal of Commerce; Voinot, Vicar-General; besides the leading members of the medical profession and a number of General Councillors, professors, military officers, and local notabilities.

The Committee for the foundation of the Sero-therapeutic Institute of Milan has chosen Senator G. Negri as its President, and has co-opted the following to be additional members: Professors Perroncito and Foà, of the University of Turin, Professor Tizzoni, of Bologna, Professor Canalis, of Genoa, and Professor Bonome, of Padua. The preparation of the serum will be entrusted to Dr. Serafino Belfanti, with the assistance of Dr. Luigi Villa. Horses have been purchased and it is hoped that the institute may be in a position to supply the serum in three months. Although a considerable sum of money has already been subscribed a good deal more will be required to ensure the institute its full measure of usefulness. It is hoped that sufficient funds will be forthcoming to enable a stable of ten horses to be maintained. The Committee hope to found a great institution which will become a centre for the prosecution of bacteriological research and for the combating not only of diphtheria but of other infectious diseases.

At Amsterdam serum is being prepared by Professor Forster. Various journals, both political and medical, are collecting subscriptions and considerable sums have already been obtained.

In Spain the preparation of serum has been begun in the Municipal Laboratory of Barcelona under the direction of Dr. Jaime Ferrán. Two horses are being immunised by Drs. Robert and Llorente.

The Universities of Germany.—According to Ascherson's *Universitäts-Kalender*, the number of students at present on the roll of the twenty universities of the German Empire, of the Münster Academy, and the Lyceum Hosianum at Braunsberg, is 28,418. Of these 8,684 are students of medicine; 7,776 of law; 3,336 of Protestant, and 1,469 of Catholic, theology. Berlin heads the list with a total of 4,265 students; next comes Munich, with 3,744; Leipzig being third with 2,764. Then come Bonn, with 1,634; Halle, with 1,528; Freiburg, with 1,477; Würzburg, with 1,292; Breslau, with 1,280; Tübingen, with 1,210; and Heidelberg, with 1,206. Of the universities with fewer than 1,000 students, Strassburg comes first, with 913; then come Marburg, with 866; Griefswald, with 824; Göttingen, with 786; Königsberg, with 712; Jena, with 674; Kiel, with 610; Giessen, with 576; and Rostock, with 436. The Münster Academy has 426 students, and the Lyceum Hosianum 43.

The Obstetrical Society of Leipzig has conferred its Honorary Fellowship on Sir William Priestley at the commemoration of the 40th anniversary. Sir William Priestley has also within the present year been elected an Honorary Fellow of the Edinburgh Obstetrical Society, and an Honorary Member of the Berlin Gynæcological Society when it celebrated its jubilee.

Small-Pox in Edinburgh.—The epidemic of small-pox in Edinburgh appears to be declining; 14 new cases and 1 death were reported last week as against 27 and 4 of the previous week. In Leith there was 1 fresh case.

THE SCANDALS OF MASSAGE.

Report of the Special Commissioners of the "British Medical Journal."

IV.

We do not propose for the present to pursue the question of certificates, as to which it is possible that other action may be taken in connection with the statements we have already made. It is necessary, however, in reference to this part of the subject, to insist upon a point of great importance to which we have already alluded, namely, that an enormous number of young women, many of whom are persons of excellent character, and in no way implicated with the less creditable phases of the subject, have been led, and are constantly being led, to take up massage as a career by expectations of employment which are altogether fallacious. It is within our knowledge that large numbers of such girls have, in the desperate hope of obtaining a respectable living, scraped together a fee of, say 10 guineas, and attended a course, and taken out a certificate, only to find in the end that there was no opening for them whatever, unless they were prepared to accept the repulsive conditions of such establishments as we have already described. It is, in fact, this monstrous overcrowding of the market which has made it so easy for the proprietors of undesirable establishments to carry on their trade, and we could publish, if it were worth while, bitter complaints from women who have been induced to part with their money and to waste their time. It cannot be too widely known that although there is, of course, a perfectly legitimate range of employment in massage treatment, it is not at present by any means of great extent, and there cannot be said to be any opening for new operators unless they bring to the task exceptional skill and training.

Our readers may inquire, however, how the clients of such establishments as we have described are found. The answer is very simple. In the first place they are attracted by the advertisements. But this is not the most paying line. Many of these houses, as we have said, are to be found in clubland or in the immediate vicinity, and our inquiries have made it perfectly clear that a system of touting is carried on, so that certain of these enterprising ladies bring their establishments directly under the notice of members of the club, who would never hear of them otherwise. We have in our possession an invitation which one of these ladies had the audacity to send to a relative of one of the most eminent physicians in London who chanced to call one day for a few minutes at a club he seldom uses. From the circumstances, it was evident that she had been provided with his name for the purpose. It also commonly happens that when two or three gentlemen in the club become *habitués* of one of these places they introduce their friends, and in at least one case we are informed that a responsible official of one of the clubs performs this office for the massage house.

Returning to the main question of the conduct of the establishments themselves and the scandalous character of many among them, we had proposed at this point to set out, so far as that is possible in a public journal, certain samples of the detailed evidence which is contained in the original documents and reports in our hands. The fact is, however, that these statements made, not merely by report but in some cases by the principals concerned, are of such a character that

we are most reluctant to take the responsibility of publishing them in a journal which, although primarily professional, is open to all eyes. If it is possible, it will evidently be in the public interest to avoid that course.

We have already stated at the commencement of these articles that we conceive ourselves to have some reason to complain that the Home Office, or rather the officials of Scotland Yard, have done absolutely nothing to remedy this gross mischief since the publication of our first articles on the subject. Our readers are, however, aware that the matter was expressly brought to the notice of the Home Secretary by Mr. Ernest Hart on the occasion of the deputation from the Parliamentary Bills Committee, which he received on November 14th. Mr. Asquith appeared to defend the action, or inaction, of Scotland Yard by declaring that he had no official knowledge of any facts upon which police proceedings could have been initiated, and he suggested that the matter was one for private consultation. We have every desire to fall in with the spirit of this intimation; and as our whole object in the matter is to see that effective steps are taken to remedy what is both a public and a professional scandal, we have decided to suspend at this point the present series of articles, and to place at the disposal of the Home Office the whole of the materials which we possess, in the hope that Mr. Asquith will now be willing to deal with the matter effectively without further publicity. If he is prepared to act, we have every reason to know that he will be cordially supported by the opinion of the profession and the public.

We are advised that upon the facts which we have collected it would be perfectly possible in several, and probably in all serious cases, for the police to prosecute under the Criminal Law Amendment Act and the common law without the necessity of any fresh legislation. It is obviously not in the public interest, however, that we should discuss here the exact legal position, and thereby furnish the astute persons concerned with hints as to what particular devices it would be safer in future to avoid. We content ourselves with saying that if Mr. Asquith's legal advisers were professionally instructed to advise upon the facts in our possession as to what criminal proceedings would lie, they would not, we are assured, have any great difficulty in framing an indictment and securing a conviction.

In view of our decision to suspend for the present any further publication, we feel bound, for the sake of avoiding confusion, to add a final observation. The establishments with which we are dealing are, according to the information before us, by no means of one class; on the contrary, their methods and their mischiefs are protean. Some, as we have throughout acknowledged, are honest houses, kept by competent and hard-working operators, male or female. These, as a rule, do not pay. Others are establishments where an honest practice is carried on, although there are circumstances of suspicion and elements of danger. In yet another class the principal is probably a competent person who is philosophically prepared for either legitimate or illegitimate practice, as the case may be. She employs her "assistants," who may by preference have some slight knowledge of massage, but who must in any case be good-looking. She pays them next to nothing, and leaves them to make their own arrangements with the gentleman patients in the way of tips, while she reaps a rich harvest from the stated fees. As regards this class we add, merely in illustration of the items of corroborative evidence which reach us every day, a letter dated as recently as October 28th, and written by a very well-known and apparently respectable lady in the trade to a nurse who had answered an anonymous advertisement:

> Replying to your answer to "A. B.," I write to ask you if you have been accustomed to both ladies and gentlemen, and if you have treated patients who are not really ill. Send photo by return of post. The assistants here make a great deal by gratuities. I pay £20 per annum to a resident, and board all found.

When we pass beyond this class of house we come to others of which all that we can say is that they appear to be carried on deliberately for immoral purposes, and to be used practically for nothing else. But in these the malpractices are very various, and the ways of one house are not necessarily a guide to the rest. It must not be supposed that we are merely alleging that some of these places become houses of assignation. We regret to say that we have good reason to believe that not a few are worse than that.

If, then, the Home Office should, after considering the evidence and investigating the facts on its own account, entertain the smallest suspicion that the arm of the English law is not long enough to reach these scoundrels, we venture to say that it is quite obvious that in the most crowded session of Parliament, Mr. Asquith would find it a simple matter to carry any clause that would place the question beyond dispute.

In conclusion, we ought, in justice to many who are doing excellent work in this field, to say that, in our opinion, an important part of the mischief, from a purely medical point of view, of these unfortunate developments, is the injury which they are doing to the legitimate study and practice of a therapeutic method. The value of genuine massage in appropriate cases is now recognised, both on the Continent and here. But it is idle to pretend that every young woman who has learnt a little rubbing can officiate seriously as a "masseuse."

A Disclaimer.

Surrey House, Victoria Embankment, W.C.,
November 20th, 1894.

SIR,—The attention of our client, Dr. T. Stretch Dowse, has been called to a series of articles in your JOURNAL headed the "Scandals of Massage" in which you make reference to classes carried on by him for the teaching of massage, and to the issue by him of certificates to practitioners of that art, and in which you intimate your intention to "deal" hereafter with his "establishment." This insinuation that he carries on a massage establishment, and this coupling of his name with scandals which you allege to arise from the abuse of massage is not only unjust to him as a physician, but is calculated to injure him most seriously in the eyes of his fellow practitioners and the public. We request, therefore, that you will abstain from any future mention of him in your threatened series of articles.

If you or your readers will refer to his book *On Electricity and Massage*, published so recently as 1891, you will find stated (as the fact is) in the Preface as follows:

"He has no connection with advertising schools of massage, institutes of massage, agencies for massage, or homes for massage;" and in the Introduction the following: "I am sorry to say that facts are coming to my knowledge which are detrimental in the highest degree to the best interests of massage. I refer specially to the growing practice of masseuses operating upon male patients. This is very wrong in every way, and should be discountenanced in the most determined and positive manner by all members of the profession: it is immoral, disgusting, degrading, and utterly unjustifiable."

We rely on your sense of justice to insert this letter in your next issue, immediately after your next forthcoming article on the subject.

Yours obediently,
ROBBINS, BILLING AND CO.

To the EDITOR,
BRITISH MEDICAL JOURNAL,
429, Strand, W.C.

We have received the following letter from Dr. Herbert Tibbits:

Sir,—Your article in to-day's Journal upon "Massage Scandals" contains grave strictures upon this hospital and the school of massage and electricity associated with it. As the whole matter will be investigated by the General Medical Council upon the 30th of this month, I beg your readers to suspend their judgment until that investigation has taken place, and I content myself now with saying that the two institutions—(1) the hospital, (2) the school—are distinct though associated, the one being a charitable, the other a self-supporting, institution; that I and the Secretary are prepared to justify as entirely true everything that we have stated about either or both; that the exact time of study of each student is written in words, not figures, in the certificate; and that ten out of twelve students attend for three months and upwards, and that no student has ever passed under one month. As you write that you would be glad to know whether the Dean of Lichfield has authorised the use of his name as patron, I beg to inform you that he wrote as follows:

The Close, Lichfield, November 4th, 1892.

The Dean of Lichfield presents his compliments to the Secretary, and has pleasure in allowing his name to be used as patron of the London Massage Hospital.

I am, etc., Herbert Tibbits, M.D.

"Massage Hospital, Nov. 17th.

THE PAY WARDS AT THE GREAT NORTHERN CENTRAL HOSPITAL.

We have received from Dr. R. W. Burnet and Mr. J. Macready a copy of the following letter addressed, on November 20th, to the Chairman of a committee appointed by 201 medical practitioners in North London by the medical staff of the Great Northern Central Hospital:—

Dear Sir,—We desire to acknowledge on the part of our colleagues your courtesy in submitting to the medical staff of the hospital a copy of the protest recently addressed to the Committee of Management.

The reply given by the Chairman of that committee to the deputation on October 19th ultimo, will already have made it clear that some sections of the protest were drawn up without a full knowledge of the circumstances attending the establishment of pay wards at the Great Northern Central Hospital. In order that no misapprehension may remain as to the facts of the case, we have been asked by our colleagues to explain them once more, and especially from the point of view of the medical staff.

It must be clearly understood that the demand for pay wards came entirely from the supporters of a proposed new hospital in North London in the year 1883, and that the idea was warmly advocated at that time by several medical practitioners in the district. It was one of the conditions of the establishment of the hospital that there should be pay wards in the future, and the then medical staff of the old Great Northern Hospital in the Caledonian Road was appointed to the new hospital on that understanding.

But this innovation was considered so hazardous that a special meeting of the staff was at once called, and a definite resolution was passed to the effect that the medical staff would refuse to have anything to do with any scheme that might be thereafter proposed which should involve the making of a pecuniary profit by the hospital.

It has been frequently stated at meetings of the Governors and subscribers, and duly reported in the press, that these pay wards were intended for the reception of patients a little above the poorest class, in fact, for the very class of patients who are so constantly recommended by medical men for admission into the free wards, although able to contribute towards their maintenance.

So long as admission to the pay wards was to be restricted to such cases, the present staff felt that they could not refuse their services, but they stipulated for and obtained the following conditions:

1. That no patient should be admitted without the consent, in writing, of his or her own medical attendant.

2. That the medical staff should have control with the House Committee of the admission of such patients.

With these safeguards it was hoped that abuse of the pay wards would be almost impossible, and already a large proportion of the applications have been rejected.

It will thus be seen that this system differs entirely from any others which have been hitherto tried. The staff, when asked by the Committee of Management to frame rules for the proposed scheme, was opposed to the adoption of any of the existing methods of working pay wards. They endeavoured, therefore, to devise a new plan, which might, as nearly as possible, fulfil the intentions expressed by the governors in 1883, and which should be without prejudice to the interests of the profession or of the nursing homes in the district.

The working of this experiment will be closely watched, and prompt action will be taken by the staff if it can be shown that these interests are endangered.

The abolition of the whole system, asked for by the deputation, can only be effected by those who instituted it, namely, the professional and lay governors of the hospital.—We remain, dear Sir, yours faithfully,

(Signed on behalf of the whole staff)

Robert W. Burnet, Senior Physician.
J. Macready, Senior Surgeon.

Great Northern Central Hospital, Nov. 20th, 1894.

We have also received a letter from Dr. Hugh Woods, Member of the Medical Charities Committee of the British Medical Association, in the course of which he says:

"The medical profession in North London have, no doubt, one and all, read with satisfaction the plain words of the leading article in the British Medical Journal of November 17th, on the opening of the 'pay wards' in the Great Northern Central Hospital. I hope that the excellent suggestion therein contained as to the discussion of the question by the Metropolitan Counties Branch may be acted upon at no distant date. In the meantime, however, I am pleased to hear on all sides firm resolves to abstain from calling into consultation any member of the staff who gives his services gratuitously in these 'pay wards.' Neither will the matter rest here: for although a hospital committee is deficient, like other corporations, in those spiritual and physical conformations which lend themselves to chastisement; yet it has a vulnerable point in its pocket. I shall, for my part, do all in my power to check subscriptions to the Great Northern Central Hospital, so long as these 'pay wards' continue, and I feel sure that other medical men will do the same. We have elaborated recommendations, and evolved resolutions, and the Governors of the Great Northern Central Hospital snap their fingers contemptuously at the 'sixpenny doctors' of the British Medical Association. Yet, forsooth, we are still expected to contribute to these lordly institutions, lest they should no longer be able to bribe, by the gratuitous attendance of philanthropic West End consultants, niggardly persons to fill their wards and out-patient rooms."

SUPERANNUATION ALLOWANCE TO POOR-LAW MEDICAL OFFICERS.

We would draw the special attention of Poor-law medical officers to the letter of Mr. J. Wickham Barnes, F.R.C.S., Hon. Secretary of the Poor-law Medical Officers' Association, published in the British Medical Journal of November 17th, p. 1145. Mr. Barnes believes that the present juncture affords a favourable opportunity for bringing once more under the notice of the Local Government Board the claim of Poor-law medical officers to superannuation allowances.

The present position of medical officers in this respect is exceedingly unsatisfactory and disheartening. In a limited number of cases boards of guardians had seen the justice of recommending the payment of superannuation allowances to their medical officers, and in certain instances this recommendation has received the sanction of the Local Government Board, which is necessary before the recommendation of the guardians can become operative. In other instances, however, the Local Government Board has refused its sanction, and the proposal has necessarily fallen through. The question

has been agitated for more than twenty years, and deputation after deputation has waited upon successive Presidents of the Board, but without result. There is, we believe, at the present time a movement on foot among other officers of the Poor-law Service, to bring to the notice of the President of the Local Government Board the desirability of rendering the granting of superannuation allowances under proper conditions compulsory, and it should require no argument to convince the medical officers of the service that they ought to take steps without delay to bring their claims before the notice of Mr. Shaw Lefevre and his colleagues at the present time. They may do so with the better hope since they may feel assured that the influence of Sir Walter Foster, the Parliamentary Secretary to the Board, will be used to ensure that any representations made on their behalf will receive the fullest and most friendly consideration.

Mr. Wickham Barnes requests us to state that he will be glad to receive petitions from Poor-law medical officers, and the following form is suggested for general use. The petition should be copied out on a single sheet of paper, and signed by the medical officer. It would be convenient if several medical officers residing in the same union would append their names to a single form, in which case, instead of the words "Great Britain," the name of the union might be inserted. The petitions should be forwarded to Mr. J. Wickham Barnes, F.R.C.S., Hon. Secretary, Poor-law Medical Officers' Association, 3, Bolt Court, Fleet Street, London, E.C., for presentation:

To the Right Hon. G. Shaw Lefevre, M.P.,
President of the Local Government Board.

We, the undersigned, being Poor-Law Medical Officers in Great Britain, desire to lay before you our prayer that Medical Officers of the Poor-Law Service may receive superannuation allowance after forty years' service, or after attaining the age of 60 years when retirement is rendered desirable by failing health. At the present time the principle of such superannuation has been recognised by many boards of guardians, and in some cases payment of such superannuation allowance has been allowed by your honourable Board, but in other cases such payments have not been sanctioned.

We would therefore pray your favourable consideration to the proposal to make the granting of superannuation allowance compulsory, subject to such provisions as the Local Government may consider necessary.

LITERARY NOTES.

A new edition of Mr. Howard Marsh's *Diseases of the Joints* will shortly be published.

The first volume of the *Transactions* of the XI International Medical Congress, held in Rome last Easter, is, we learn, almost ready for distribution.

The *St. Bartholomew's Hospital Journal* states that Mr. W. J. Walsham is now engaged on a monograph to be entitled *Deformities of the Human Foot*.

Messrs. J. and A. Churchill have nearly ready a new work entitled *The Prevention of Epidemics and the Construction and Management of Isolation Hospitals*, by Dr. Roger McNeill, medical officer of health of the County of Argyll. The work, which is thoroughly practical in scope, will contain numerous plans.

Dr. John William Moore, of Dublin, is about to publish, with Mr. F. J. Rebman (London), a work on *Meteorology*. The first part of the work will deal with Meteorology in general, the second with Weather and Climate, and the third with the influence of Weather and Season on Disease. It will be illustrated by drawings of instruments and appliances.

A work by Dr. M. Bra, entitled *La Méthode Brown-Séquard: Traité de la Thérapeutique des Tissus*, will shortly be published by J. Rothschild, of Paris. The book contains a summary of all the therapeutic results that have been obtained in France and in other countries by Brown-Séquard's method, with a discussion of the mode of action of organic extracts of all kinds.

The first number of the new weekly, *The Realm*, which has just appeared, gives promise of a bright and prosperous career. The contents are varied and attractive. Among others may be mentioned an article which should be specially interesting to the medical profession on "Death Certificates and Crime," strongly supporting the views on this subject recently urged on the attention of the Home Secretary by a deputation of the Parliamentary Bills Committee. If our new contemporary always deals with subjects within the province of medicine and public health in the same spirit, it will be a useful ally in the struggle against prejudice, fanaticism, and obscurantism. Another feature which many of our periodicals, daily as well as weekly, might with advantage imitate is that, as stated on the front page, "the advertisements in *The Realm* are subject to strict censorship."

We have received fasc. 1 and 2 of the first volume of *Travaux d'Electrothérapie Gynécologique*, a half-yearly publication issued under the direction of Dr. G. Apostoli. The present instalment contains a French translation of the work of Thomas and Skene Keith on the Treatment of Uterine Tumours by Electricity, by Drs. Agnes Maclaren and Gertrude W. Van Pelt; of papers by Dr. Thomas Keith and Sir Spencer Wells; and reports of discussions on the Apostoli treatment at the Medico-Chirurgical Society of Brighton, the meeting of the British Medical Association at Leeds in 1889, the Obstetrical Society of Edinburgh, etc. Translations of papers on the same subject by American, Russian, Italian, German, Belgian, Danish, and Polish writers are also given. A bibliography of gynæcological electro-therapeutics is appended. The publication forms a solid volume of 718 pages.

The *Guy's Hospital Gazette*, of November 17th contains a thrilling account, by Dr. Peter Horrocks, of the Alpine climb in which a guide was killed and Dr. Horrocks himself was only saved from destruction by the rope fortunately catching in a chink, from which he hung for some time looking down on to the Durand Glacier over 2,000 feet below. From this perilous position he was rescued with some difficulty, having suffered no more serious injury than a scalp wound over the middle of the left parietal bone (which he says acted as "a friendly anæsthetic"), some bruises on the left leg, and a few cuts on the left hand. While suspended from the face of the precipice he could see, far away below him, a huge eagle poised with outspread wings. The account is illustrated by a series of sketches from the *Daily Graphic*, which, if not particularly artistic, give a vivid idea of the adventure. We congratulate Dr. Horrocks on his providential escape, and also on the coolness with which, when he recovered consciousness, he was able to feel that his pulse was beating at its usual rate (70) when he was, in literal truth, hanging over the open jaws of death.

Dr. Batty Tuke is, we are informed, engaged, in conjunction with Dr. Lloyd Andriezen, of the West Riding Asylum, in the preparation of a work to be entitled *The Natural History of the Insanities*, which will be published by the Cambridge Press next year.

The *Broad Arrow*, which is, we believe, the oldest of the Service journals, now appears in a much enlarged and, may we add, "smarter" form. Our contemporary is entitled to the credit that it has for years past consistently and perseveringly advocated reforms in the military medical services. In dealing with the Army Medical Department, the *Broad Arrow* has generally spoken in a liberal and independent tone in marked contrast to that of some of the other service papers. It may be added that in its comments on matters connected with the health of the soldier and the care of the wounded in war, etc., it speaks with knowledge, and always from the medical rather than the merely "combatant" point of view. We can therefore honestly congratulate our contemporary on the evidence of continued success which is afforded by the enlarged and improved form in which it now appears.

Dr. F. Spät writes to the *Münchener medicinische Wochenschrift* to point out that the germ of "serotherapy" is to be found in a passage of Pliny which has been overlooked by Sprengel, Haeser, and other historians of medicine. It is well known that Mithridates, the famous King of Pontus (B.C. 124-64) was believed to have made himself proof against poisons, apparently by a system of graduated dosage till tolerance was established. As the result of his experiments on himself, he is said to have hit upon a kind of universal antidote which was famous in the ancient world under the name of *mithridaticum*. One ingredient in this antidote seems to have been the blood of the Pontic duck, which the King added because that fowl *lived on poison (sanguinem anatum Ponticorum antidotis miscere quoniam veneno vivrent.* Pliny, *Natur. Hist.*, Lib. xxv. S. iii, Ed. Harduin. p. 210).

The *Revue de Thérapeutique*, which was founded by Trousseau sixty years ago, has just undergone a considerable transformation. It now appears in a greatly enlarged form, and it will henceforth aim at presenting a summary of "all the therapeutic work published in the whole world." In its new form it may, in fact, be called a glorified Epitome, with the same character of "up-to-dateness" but, of course, with a larger supply of material. In addition to the abstracts which will form the bulk of each issue, it will contain some original papers on therapeutic subjects, reviews of books, etc.

In the *Riforma Medica* of October 30th Dr Riccardo Agostini calls attention to some experiments on the preventive and curative inoculation of the diphtheria poison made some thirty-five years ago by Dr. Guiseppe Babola, of Santa Margherita di Montagnana. In 1859 that practitioner referred, in the *Gazzetta Medica Italiana*, to two such experiments which might serve as the basis of future researches. He states that he inoculated two healthy girls with membrane taken from the throat of a sister who was seriously ill with the disease, the result being a very mild attack in each case. Some years later he returns to the subject in the same journal (March 7th, 1863). In the same periodical for February 13th, 1864, he reported a further series of experiments, for which he claimed fairly successful results, especially as regards the prophylactic effect of the inoculation. His method was to make two or three punctures on the arm with the point of a lancet that had been dipped in diphtheria products removed from a patient's throat with forceps. Babola compares his method with vaccination and the inoculation of syphilis, and attempts to explain its mode of action. In the same periodical for October 29th, 1864, Dr. Jacopo Masatto, of Nocenta Vicentina, made some further attempts on the lines traced out by Babola. Of 20 cases in which diphtheria was inoculated with a prophylactic purpose, only 2 contracted the disease in a mild form, twenty and twenty-two days respectively after the inoculation. Of 75 cases of the disease treated by inoculation, 15 were cured, a result which does not seem very brilliant, unless, as is not unlikely, the printer has had a disturbing influence on the figures.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1895. ELECTION OF MEMBERS.

Meetings of the Council will be held on January 16th, April 17th, July 10th, and October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely December 27th, 1894; March 28th, June 20th, and October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election. Francis Fowke, *General Secretary*.

BRANCH MEETINGS TO BE HELD.

Staffordshire Branch.—The first general meeting of the present session will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, November 29th. The President (Dr. Charlesworth) will take the chair at 3.30 P.M.—George Reid, Honorary Secretary, Eastgate House, Stafford.

Metropolitan Counties Branch: South London District.—A meeting will be held at Guy's Hospital on December 7th, at 8.30 P.M. Dr. Newton Pitt will read a paper on Some Cases of Aphasia. Cases of clinical interest from the wards of the Hospital will be shown. All practitioners, whether members of the Association or not, will be heartily welcomed.—H. Betham Robinson, Honorary Secretary, 1, Upper Wimpole Street, W.

Midland Branch: Lincolnshire District.—A meeting of this District will be held at the Guildhall, Grantham, on Thursday, November 29th, at 2 P.M., when the following cases will be read and discussed: Dr. W. Newman: (1) Trephining in Idiotic Boy of 17, Epileptic since Early Childhood, Head Injury; (2) Amputation of the Thigh in Commencing Septicæmia, Male, 43; Large Necrosis of both Femora in Lower and Posterior Thirds; specimen. Dr. C. H. Cattle: Notes on a Case of Pernicious Anæmia. Mr. W. J. Grant: A Case of Fractured Patella treated by Wire Suture passed through the Knee Joint. Dr. Handford: (1) Two Cases of Cerebral Hæmorrhage in Young Persons; (2) Specimen of Miliary Aneurysms and Leucocythæmic Blood. Dr. Elder: Some Abdominal Cases. Dr. Carline: Two Cases of Severe Injury in the Frontal Region without Marked Cerebral Symptoms. Lunch at 1 o'clock at the George Hotel, 3s. 6d.—W. A. Carline, Honorary Secretary, Lincoln.

South-Eastern Branch: East Sussex District.—The next meeting will be held on Thursday, November 29th, at 3.30 P.M., at the Queen's Hotel, Eastbourne. Dinner at 5.30: charge, 6s., exclusive of wine. Dr. Gabbett will preside and will read a short paper. The following communications are also promised:—Mr. H. D. Farnell: Remarks on Anæsthetics. Mr. A. H. Dodd: A Case of Transfusion, with exhibition of apparatus. Dr. A. J. Richardson: The Use of Naphthols in Flatulent Dyspepsia. Mr. J. Dodson Hessey: A Case of Inversion of the Uterus. Members are invited to show cases of interest, specimens, etc.—J. W. Batterham, Honorary District Secretary, Bank House, Grand Parade, St. Leonards.

Dundee and District Branch.—The ordinary meeting of this Branch will be held in University College, Dundee, on Thursday, November 29th, at 4 P.M. Business: (1) Midwives Registration Bill. (2) Proposed Outdoor Maternity Charity for Dundee.—K. C. Bost, Secretary.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.

A meeting of this District was held at the Portsmouth Medical Library on November 6th, Mr. C. Knott, President, in the chair.

Communications.—The President exhibited a case of Multiple Lipomata.—Dr. J. Ward Cousins exhibited a female child with Ectopia Vesicæ and a boy on whom he had operated for the radical cure of Hernia.—Mr. E. Willmer Phillips exhibited a Vermiform Appendix removed by operation for recurrent appendicitis. The cavity was partly obliterated, and there was a well-marked fibrous stricture attributed to torsion.—The Honorary Secretary read for Dr. J. G. Blackman notes of a Case of Swallowing a Dental Plate and its subsequent passage through the Alimentary Canal. The plate was exhibited.

The Civil Rights Defence Committee.—A communication from the Civil Rights Defence Committee was read.

Presentation to Dr. Ward Cousins.—The President presented, on behalf of the members, an album of photographs to Dr. J. Ward Cousins, as a mark of appreciation of his services in founding the Branch and acting as honorary secretary for twenty years.

Resolutions.—Resolutions were carried having the effect of amalgamating the Portsmouth Medical Library with the South-East Hants District Medical Society, and of raising the annual subscription to the latter to 16s. 6d. for residents in Portsmouth, and to 8s. for non-resident members.

NORTHERN COUNTIES OF SCOTLAND BRANCH.

The autumn meeting of this Branch was held at Nairn on October 17th, 1894, Dr. Cruickshank, of Nairn, President, in the chair.

President-Elect.—A letter from Dr. Sutherland, Invergordon, was read in which, on account of ill-health, he declined the office of President-elect to which he had been appointed in June last. Dr. Sutherland's declination was received with sympathy and regret, and Dr. Simpson, of Buckie, was elected in his room.

President's Address.—The President delivered an address on Epidemic Pneumonia, which will be published. A lengthened discussion followed, and the President was cordially thanked for his paper.

Notification of Phthisis.—The meeting being of opinion that phthisis is a communicable disease, and ought as such to be included among the diseases to be notified under the Infectious Disease (Notification) Act, requested Dr. Ogilvie Grant,

their representative on the Parliamentary Bills Committee, to bring this matter before that Committee.

Dinner.—The Branch afterwards dined in King's Royal Hotel.

CORK AND SOUTH OF IRELAND BRANCH.

THE annual general meeting of this Branch was held on November 10th, 1894; the PRESIDENT, Dr. E. R. Townsend, in the chair.

Poor-law Superannuation, etc.—The question of Poor-law superannuation was discussed. Hospital abuse was to be brought forward again at an early date. The present struggle with benefit associations and medical clubs was discussed at length.

Election of Officers.—The following officers were elected for 1895: *President:* Professor E. R. Townsend. *Vice-President:* Dr. Oscar T. Woods. *Representative on Council:* Arthur W. Sandford, M.D. *Representative on Parliamentary Bills Committee:* Professor E. R. Townsend. *Council:* T. G. Atkins, M.D.; Professor H. Corby, M.D.; Professor S. O'Sullivan, M.D.; W. Ashley Cummins, M.D.; Professor C. Y. Pearson, M.D.; A. W. Sandford, M.D.; J. Guisani, M.D.; T. B. Moriarty, M.D.; P. J. Macnamara, M.D. (Kilmallock); J. Curran, M.D. (Killeagh); D. B. O'Flynn, M.D. (Glanmire); J. Cotter, M.D.

HALIFAX, NOVA SCOTIA, BRANCH.

THE regular fortnightly meeting of this Branch was held on October 25th, the PRESIDENT, DR. Milsom, in the chair.

New Member.—The SECRETARY reported that Dr. Putnam, of Yarmouth, N.S., had been elected a member by the Council.

Civil Rights Defence Committee.—A letter from Lord Stamford *in re* the Civil Rights Defence Committee was read and ordered to be acknowledged.

Communications.—Dr. JOHN BLACK showed the following specimens: (1) Cyst removed from Palm of Hand; (2) Bullet Wound in Spinal Column.—Dr. FARRELL reported a case of Goitre, treated by desiccated thyroid extract (Armour) with the best of results. He also reported a case of Prostatectomy for enlarged middle lobe on a patient who had had suprapubic lithotomy performed. A lengthy discussion followed in which Drs. BLACK, CAMPBELL, CARLETON JONES, SILVER, Surgeon-Captain BAREFOOT, and others took part.—Dr. CAMPBELL reported a case of Syphilitic Enlargement of the Liver, in which diagnosis of malignant disease had been given. This patient had been shown to the Branch a year ago.

Diphtheria Antitoxin.—Drs. Campbell, Farrell, and Black were appointed a Committee to report at the next meeting on the best means of obtaining a sufficient supply of diphtheria antitoxin and of making some arrangements with the city authorities.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE 121st general meeting of the Branch was held on September 7th, at the Royal Society's Rooms, Sydney; Dr. CRAGO, President, in the chair. The following were present: Drs. Fiaschi, Thomas Dixson, Jenkins, W. Chisholm, Clubbe, Worrall, Paton, A. Parker, Mullins, E. F. Ross, Tidswell, Quaife, O'Reilly, Cummings, Ellis, W. H. Goode, Lyden, Collins, Todd, M. A. Gill, Thomas Gordon, Macleod, Sydney Jones, T. M. Kendall, James Macleod, Neill, Frizell, McCulloch, James Dick, Schwartzbach, Lichfield, and Chenhall. Dr. Dumbleton, of Straits Settlement, and Dr. Orr, were present as visitors.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Deaths of Members.—The PRESIDENT stated that it was with extreme regret he had to announce the deaths of three members of the Branch—namely, Dr. Lyon, Dr. Douglas, and Dr. Craig Dixson. It was resolved that letters of condolence be forwarded to the friends of the deceased gentlemen.

New Buildings of Sydney Hospital.—The PRESIDENT stated that since the last meeting of the Branch the new buildings in connection with the Sydney Hospital had been opened; and that the President of the hospital (the Hon. Sir Arthur Renwick, M.L.C.) had referred, in pleasing terms, to the action of this Branch in advocating the finishing of the hospital.

Medical Bill.—The PRESIDENT also stated that the Government had announced that a Medical Bill of one clause would be passed during the present session of Parliament.

New Members.—The following new members were announced: Dr. Bott, of Balmain; Dr. Macky, of the Glebe; Dr. Service, of Newtown; and Dr. Weekes, of College Street, Sydney.

New Councillor.—Dr. S. Knaggs was elected a member of the Council in place of Dr. Angel Money, resigned.

Communications.—The PRESIDENT read for Dr. HUXTABLE notes on a case of Myxœdema in the Male, treated by Thyroid Extract.—Dr. DIXSON read notes of a Severe case of Typhoid Fever: its Symptoms and Treatment.—Dr. MULLINS read a paper on some points in Medical Ethics. Drs. CHISHOLM, WORRALL, CRAGO, and TODD discussed the paper, and Dr. MULLINS replied.—Dr. PATON read a paper on Beri-Beri in New South Wales. Drs. DUMBLETON, ELLIS, THOS. DIXSON, FRIZELL, WORRALL, CRAGO, and GOODE discussed the paper, and Dr. PATON replied.—Dr. KENDALL read a paper on the Notification of Disease (Infectious).

SPECIAL CORRESPONDENCE.

PARIS.

First Aid in French Towns.—Extra-Academic Teaching in Paris.—Sterilised Milk and Long Voyages.—General News.

PROFESSOR TERRIER, in his opening lecture on operative surgery at the Paris Medical Faculty, dealt with the question of the treatment of injured persons in large towns. He said doctors, both military and civilian, were well trained for their duties to the wounded in war time: but the claims of the civil population, who might suffer from accident in time of peace, were somewhat neglected. The organisation for giving medical aid to the victims of accidents in Paris was very defective. In the case of street accidents, the means of transport were slowly found, and often the sufferer had to be carried by volunteers from among the passers by. When the *brancard* did come, it was almost invariably in a very dirty condition. Another important question was where the patient was to be taken to. If, as was often the case, to the nearest chemist's shop, it was illegal for the pharmacist to give medical treatment, whilst valuable time was lost in fetching a doctor. At night the chemists' shops were closed, and injured persons were taken to the *Poste de Police*, over the door of which *Secours aux blessés* was inscribed in large letters. At every police station there was a *boite de secours*, according to the new model. Dr. Terrier asks what the old one was like? One of the bottles in the "new model," containing boric acid in solution, was labelled "Poison." Cotton wool was conspicuous by its absence. A policeman had informed Dr. Terrier that one of the ordinary sponges in use at the station served to wash the wounds when accidents were brought in. On the wall of the police station the following directions were posted up: When there is hæmorrhage it must be stopped by applying a finger to the wound: amadou may be substituted, or lint, or linen (fortunately neither "lint" nor "linen" is at hand as a rule) impregnated with a solution of iron perchloride. Medical men who know how to interpret the "Help for the Wounded" at the police station, when sent for take with them cotton wool and antiseptic solutions. Dr. Terrier urges that a special accident service should be organised at each hospital. In winter a ward should always be kept where the patient can be undressed, washed, and operated on if necessary. In France the arrangements are still the same as those existing in 1862, when M. Terrier was *interne* in Chassaignac's service.

No organised practical clinical teaching for special departments of medical science is provided by the Faculty; almost all the teaching in these subjects is given by extra-academic lecturers. The *Enseignement Médical Libre* for the present session includes six different courses of lectures on otology, rhinology, and laryngology; seven on ophthalmology; three on gynæcology and women's diseases; one on skin diseases; one on nervous diseases and psychiatry; one on psycho-

logical chemistry; one on experimental bacteriology, and a special course for the Fourth Doctorate Examination. The two dental schools of Paris owe their existence to private initiative. According to the *Union Médicale*, the clinical services, which it was decreed should be annexed to the Paris Medical Faculty, in order to provide good systematic teaching for the medical students, will never come into existence. The money voted for the purpose has, by some means difficult to understand, been handed over to the Faculty sciences in order to organise preparatory teaching on medical physics and chemistry for the benefit of medical students.

Dr. Dujardin Beaumetz, at the Therapeutical Society, has recently expressed his misgivings about providing the soldiers about to start for Madagascar with sterilised milk, fearing that it may deteriorate during so long a voyage. M. Weber declared that sterilised milk is satisfactory if the bottles are thoroughly filled; otherwise a sort of churning goes on. Sterilised milk, which had been taken from Havre to Montevideo and back, was examined by him and found to be satisfactory. M. Maurel considers the results obtained in the navy and the Saigon Hospital by concentrated milk to be so satisfactory that sterilised milk may be left aside.

The second International Congress of Gynæcology and Obstetrics will be held at Geneva in September, 1895. The following questions will be discussed: The treatment of eclampsia; the surgical treatment of retrodeviations; the relative frequency of contracted pelvis in different races; the best method of abdominal suture for preventing rupture of the walls; the treatment of pelvic suppurations.

ST. PETERSBURG.

The late Emperor Alexander; Result of the Necropsy.

An impression prevailed during the illness of the late Emperor that the official bulletins were not so explicit as could have been wished as to the true nature of the illness from which he suffered. No such impression will be left by the report of the necropsy, now published as an official paper or "Act." The exact pathological condition of all the important organs is given to the public with a minuteness generally reserved for the ledger in the *post-mortem* room. It will suffice here to give a summary of the conditions found. It will be seen that they fully confirmed the diagnosis of the physicians in attendance on the Czar. This diagnosis forms a second document signed by the physicians the day after his death, in which death is ascribed to "chronic interstitial nephritis, with consequent affection of the heart and vessels, hæmorrhagic infarct of the left lung, with consequent inflammation."

The necropsy was held fifty-three hours after death. The kidneys were found to be greatly enlarged; the left measured 16 cm. in length, 7 in breadth, and 4 in thickness; the right 15 cm. in length, 6.5 in breadth, and 4 in thickness. The capsule was not thickened, and separated easily. The outer surface of the kidneys was finely granular, and of a dark red colour. The cortical substance was thinned, measuring only 6 or 7 mm., and was yellowish in colour; the medullary substance was dark red. In addition, in the left kidney was a small serous cyst 3 mm. in diameter. The condition of the kidneys is described as ("nephritis interstitialis cum atrophia substantiæ corticalis renum granulosa"). The heart was found enlarged, measuring 17 cm. by 18 cm.; there was much deposit of fat under the pericardium ("lipomatosis cordis"). The left ventricle was considerably hypertrophied, the thickness of its wall being 2.5 cm; the muscle was pale, flabby, and yellowish in colour ("degeneratio adiposa myocardii"). In the right ventricle the wall was thinned, measuring only 6 mm. in thickness; it was of the same yellow colour. The valves were quite healthy.

There was considerable effusion into the left pleural cavity, in which 200 c.cm. of a blood stained fluid were found; the right cavity contained 50 c.cm. of a similar fluid. The right lung was œdematous, and at its apex was a fibrous cicatrix of old standing. In the left lung the upper lobe was œdematous, the lower lobe deeply congested, and at the upper border of the lower lobe was found a hæmorrhagic infarct of a triangular shape, measuring 1½ by 1 centimetre.

As a result of the conditions found death is ascribed to "paralysis of the heart consequent on degeneration of the muscular tissue of a hypertrophied heart and interstitial nephritis (granular atrophy of the kidneys)." The document is signed by Professors Klein and Zernoff, Professors respectively of Pathological and of Normal Anatomy in Moscow University; Professor Popoff, Professor of Normal Anatomy in Kharkof University; and Prosectors Altukhof and Bidlöusof.

CHICAGO.

Opening of the Medical Session.—The Public Health in August.—Food Exhibition.—Bone Marrow in Pernicious Anæmia.

The medical schools at their Fall opening had large classes—in some instances a larger enrolment than ever before—and this despite the increased requirements and the general industrial depression which has existed for months. The increased requirements are in the way of a lengthened college year, and the whole course for a degree now being four years instead of three as formerly. There is a very healthy disposition and firmness to strengthen the standard of medical education all along the line, not with one or two colleges, but with all. The College of Physicians and Surgeons Commencement occurred early in September, while the opening of Rush and the North-Western University Medical School took place almost a month later. The terms of the latter institutions continue later in the spring, however. At Rush Medical College, Professor A. D. Bevan gave the opening address, while Professor Chr. Fenger read an essay on Benign Tumours of the Small Intestines at the North-Western University Medical School Commencement. There was much enthusiasm and large crowds in both instances.

The report on Vital Statistics issued by the Health Department for the month of August—generally the most trying summer month—contains some interesting figures. There were 2,252 deaths during the month, an average of 1.40 to the 1,000. Of the number of deaths 1,220 were males and 1,032 females; 1,207 of them were natives of Chicago, 370 from other points in the United States, and the remainder foreigners; 1,232 of the deaths were persons under 5 years of age, and 819 were under 1 year; there were 243 deaths in public institutions, and 173 from violence; there were 53 deaths from small-pox, which shows quite a decrease from the month before. The greater number of deaths was from among children, 662 dying. There were 131 cases of accidental death, 29 of them from railroad accidents, and 28 from drowning. There were also 30 suicides during the month. Poisoning was the most popular mode, 13 cases being reported. Nine persons shot themselves, 3 hanged themselves, and 3 others cut their throats. There was but one case of suicide by drowning. The Sixteenth Ward heads the list with the greatest number of deaths, 131 cases being reported. There were 120 in the Tenth, and 107 in the Thirtieth.

On October 1st, a so-called Pure Food Exposition opened at Battery D, on the lake front. The arrangement and entire scheme remind one of the food exhibits at the World's Fair. Booths are fitted for the exhibition of flour, cereal products, wines, cocoas, milk foods, meat extracts, soups, flavourings, bakery products, general breadstuffs, and cooking utensils. Lectures are given daily upon the various phases of household cookery, and altogether the idea promises to be both interesting and profitable. The profession may find some items of worth in the display, though one is led to the conviction that there is more of private interest than philanthrophy in the undertaking. Wares are freely sold, samples urged upon all, and there is a flood of picture cards.

Dr. I. N. Danforth makes a recent report of the use of bone-marrow in pernicious anæmia. The report excites unusual interest from the fact that the patient was the doctor's wife, who suffered from the unmistakable evidences of the disease and was deemed beyond cure. The suggestion as to treatment came from Professor Fraser, of Edinburgh,[1] though really as a mere hint, the detail being evolved and applied by Dr. Danforth. The result thus far has been marvellous, the patient being quite restored to health.

[1] Professor Fraser's paper, read at the International Medical Congress at Rome, was published in the British Medical Journal of June 2nd, 1894, p. 1172.

CORRESPONDENCE.

DR. JAMESON, C.B.

SIR,—As Dr. Bateman has suggested, I feel sure that a large number of the medical profession would be glad of an opportunity of showing their appreciation of Dr. Jameson's courage and ability. After a brilliant student's career he went to South Africa, where his keen observation, sound judgment, and prompt action—qualities which have since so signally distinguished him in a very different sphere—soon placed him at the head of his profession in that country. He relinquished this position for another field of action, with the success which has since made him known to the whole world, but he has always been ready to assist a professional brother, or to minister to the relief of any sufferer with whom he may have come in contact during the journeys undertaken in his official capacity.

It is not only as the administrator that Dr. Jameson has distinguished himself: he was equally distinguished in his profession before he gave up the active practice of it, and his return to England appears to be a fitting occasion for the members of the profession, together with his friends and admirers, to show their appreciation of his sterling qualities.—I am, etc.,

Bishop's Lydeard, Taunton, Nov. 14th. WILLIAM FLIGG.

THE TREATMENT OF CAISSON DISEASE.

SIR,—In the article on the above subject, which appeared in the BRITISH MEDICAL JOURNAL of November 17th, Mr. Ernest W. Moir, M.I.C.E., lays stress on the following points towards the explanation of the cause of the disease:

"1. That the vital processes take place at a greater rate, just as combustion takes place more fiercely, under higher pressure.

"2. The amount of oxygen present under the varying conditions."

Now, we must first be certain that the vital processes do take place at a greater rate. No doubt they take place more easily, since the amount of oxygen per unit volume is greater, and therefore the respiratory activity is necessarily less, as is shown by the diminished number of respirations per minute; but the amount of oxygen actually absorbed by the blood under these conditions is practically unaltered, which latter point has been proved experimentally. The symptoms experienced by aëronauts, when subjected to rapidly reduced pressure (that is, corresponding to 26 000 feet) are practically the same as those which the men, working under increased pressure, suffer from when the pressure is reduced too rapidly in the pneumatic chambers, or when they do not pass through the chambers at all; and, in the case of aëronauts, the amount of oxygen per unit volume is very much diminished. It seems to me that the amount of oxygen may be disregarded as a factor in producing the symptoms, especially as, in the case of aëronauts, inhalation of oxygen does not remove the symptoms.

I think the whole disease can be explained on physical grounds—namely, the too rapid diminution of the atmospheric pressure. This would cause the hæmorrhage from the vessels, more especially those which are least supported; amongst other places, therefore, in the spinal cord (and in some cases the brain, too), leading to paralysis, etc., twenty minutes to half an hour after the men have come to the surface.—I am, etc.,

MALCOLM L. HEPBURN, M.B., F.R.C.S.

St. Bartholomew's Hospital, Nov. 19th.

PAUPER IMBECILES.

SIR,—All who have to do with country workhouses are glad to know that these classes of inmates are beginning to be considered and more carefully provided for. But, may I allude to the most important branch of the subject, which urgently calls for attention, namely, the class of idiot and imbecile children? To those who have only known the metropolitan district it is a surprise to find that idiot children are retained in the country workhouses with no effort at training or education, and are thus deprived of all chance of improvement. Here and there one or two may be sent to one of the few institutions which admit pauper cases, but these are the exception. The only remedy to meet this obvious want in our Poor-law arrangements is to provide asylums in which three or four counties may combine to educate and train the idiot children of both sexes, which can only be done efficiently when numbers are collected together and kept apart from adults. As the Local Government Board has ordered returns from all unions, it is to be hoped that results may shortly follow and the county councils be induced to take action.

Schools and smaller homes are equally required for those feeble-minded children who cannot possibly be educated in the ordinary schools.—I am, etc.,

Tunbridge Wells, Nov. 19th. LOUISA TWINING.

THE NEW PHARMACY.

SIR,—Perhaps you will allow a country practitioner a few words in answer to the letter in the BRITISH MEDICAL JOURNAL of November 3rd, under the above heading.

Pleasant medicines have advantages which are duly appreciated in many cases, but which would none the less be useless to some and despised by others; it is not alone the active principle of valerian, but its odour, which effects the cure.

What would be thought in an isolated country district of the doctor who, in place of the time-honoured six- or eight-ounce bottle, presented his rustic patient "with an envelope containing a few tabloids, which he could put in his waistcoat pocket"—if he wore one? He (the yokel) would, I venture to say, think little more of the enveloped tabloids than he would of the same doctor's advice if unaccompanied by a bottle of his stuff. What, again, would be thought in these districts of the doctor who had no "shop" (surgery)? Even educated and refined people are not above noticing whether the surgery is well filled and fitted.

It may satisfy your correspondent to provide a week's medicine for a shilling, and thereby accept 200 per cent. (though he cannot often manage this, I fancy); but is he not "cutting down" his professional but old-fashioned dispensing neighbours, whose usual charge for a week's medicine would be considerably higher?

Your correspondent may do away with his surgery and dispenser; were I to adopt his tabloids to the exclusion of my liquors, I should have need of neither very long. Every case requires its special treatment, and until the whole of the public have had the twenty years' training seemingly necessary to make them realise and prefer the advantages of "lozenges over liquids" in the wholesale treatment of disease, the preparation of drugs as explained in the *British Pharmacopœia* must be taught.—I am, etc.,

Brightwalton, Wantage, Nov. 17th. GEORGE C. PEACHEY.

SIR,—Your correspondent's plan of giving medicines entirely by tabloids, pellets, etc., would not be an unmixed blessing to the medical profession if it were universally adopted. Some of these pellets are quite distinctive in colour, taste, size, etc., and the patients would soon discover which they were taking, and get them from the chemists or stores, and also prescribe them for their friends whenever they had an opportunity. During the last week I have been asked by three people what their tabloids were, and in every case recognised and supplied them: they were cascara sagrada, phenacetin, and pulv. rhei co., and I have no doubt there are plenty of other pharmacists who have had the same experience.—I am, etc., A. A. BONES.

Messrs. Loveitt and Bones, Chemists, Coventry, Nov. 17th.

SIR,—Many medical men will, no doubt, agree with your correspondent signing himself "An Old Fogey," as to the policy of giving nasty drugs in the form of tabloids or pills. I should say very few practitioners can be found who make their 6, 12, or 2 dozen pills as they are wanted. But it will be very interesting if your correspondent will give us some additional particulars. How does he act, for instance, when he wishes to give 30 minims of sp. æth. sulph. co., or a similar quantity combined with a like dose of sp. ammon. co. and tr. lavandulæ; a few drachms of Epsom or Rochelle salts; a dose (say) 15 grs. of bismuthi carb., with a like quantity of sodæ carb., a diuretic of acetate of potash with brom. and

spirits of juniper, 2 or 3 minims of hydrocyanic acid each dose, and many others that might be named?

Perhaps he will name some of his combinations, and the firms that manufacture them.—I am, etc.,

November 20th. MEDICUS.

MEDICAL INSPECTION OF SHIPPING IN THE THAMES.

SIR,—I have read with much interest your article on medical inspection of shipping in the Thames, and feel that the thanks of the medical profession and the public generally are due to Dr. Collingridge for his outspoken protest against the system of medical inspection by a non-medical Custom House officer, a system at once futile, dangerous, and ridiculous, which was instituted in ignorance during the dark ages at the beginning of the present century, which is now rendered farcical by our extended knowledge, and which is well worthy to be consigned with other anachronisms to the well-merited limbo of oblivion.

Sometime since I was temporarily appointed by one of our largest port sanitary authorities to inspect ships arriving from cholera infected ports. My usual practice was to go on board after the Custom House officer had finished. I not infrequently arrived alongside the vessel simultaneously with the Custom House launch, and consequently had opportunity of observing the method of procedure. After giving details as to name of ship, port of registry, etc., the captain was asked whether there had been any cases of sickness or any deaths during the voyage.

The answer was truthful or otherwise, according to the captain's standard of ethics, for most of them know that except in dealing with plague and yellow fever, there is no legal obligation on their part to report anything amiss. In the event of the captain reporting anything, he is requested to say the nature of the disease: should he be unable to do so from ignorance or other cause, he is directed to anchor the ship until a medical man is fetched from the town. A vessel was rarely detained under these circumstances for obvious reasons, but should the Custom House officer still be in doubt, he has instructions to take the captain's statement on oath. This ceremony over, he is bound to allow the vessel to proceed.

During my period of service I, on more than one occasion, removed a case of cholera after the captain had answered to the satisfaction of the Custom House officer, and had received from him "free *pratique*," on other occasions I have ordered to be disinfected ships arriving which had traded from port to port along the Persian Gulf, and had carried cholera-infected Mecca pilgrims before starting for the homeward journey. In these cases the captain was able to truthfully report the absence of sickness or death during the last voyage. Among other diseases I remember passed in this way I may instance several cases of enterica "sworn" as "cold," "inflammation of lungs," and "overwork" respectively; two cases of small-pox—one showing the second day of rash "sworn" as "eczema," the other with symptoms of high temperature, persistent vomiting, and marked sacral pain, and in which the rash came out in hospital on the following day, "sworn" as "cold."—I am, etc.,

November 19th. SICK BAY.

WOOLSORTERS' DISEASE.

SIR,—Under the above heading, your correspondent "Rauschbrand" draws attention to dangers which he implies may arise from the existence of the spores of the symptomatic form of anthrax not destroyed by the process to which wool is subjected in being made into fabric or garments. In these days, when a portion of the public is not indisposed to make capital out of any unfounded alarm credited to medicine and science, there would appear some necessity for caution in making statements concerning a matter so essential to human comfort as woollen fabrics. There can be no question that anthrax may be conveyed to the human subject, and induce serious and mortal disease, or that "Woolsorters' disease" is an example of anthrax conveyed from the lower animals to man. It is true that the name 'charbon symptomatique" has been applied to a disease of cattle by the French. Happily, the literal translation, "symptomatic anthrax" has not been generally adopted in this country or in Germany. We call the disease "Black Quarter," "Quarter Ill," "Black Leg," and other simple English names, many of which are very significant. The Germans know it as "Rauschbrand." It is, however, known very generally that "Rauschbrand" or "Black Quarter" is not anthrax in any form, but a disease as distinct as is small-pox from syphilis. Black Quarter depends for its existence on a micro-organism, by nature anaërobic, which is rarely found in the blood, but swarms in the affected tissues of its host. The disease exists very commonly throughout Great Britain, and has many victims, principally among young horned cattle, in which its symptoms are so remarkable and well defined as to make an error in diagnosis almost impossible. The disease has been the subject of much operative interference and experimental research. Carcasses of the affected are not usually regarded as dangerous to human beings, and in dealing with them there has been consequent carelessness. Up to this I have never observed any evidence nor seen any record of the disease being communicated to man. The local effect on animals known to be susceptible is so marked that similar changes in man could scarcely have been overlooked. I do not suggest that this is absolute proof of the immunity of man, but I think it important that there should be some evidence of the danger before an alarm is made, and that, should such evidence be forthcoming, the cause of that danger shall be known by its own name, and certainly not as any form of anthrax, to which it is in no way allied.—I am, etc.,

Royal Veterinary College, N.W., Nov. 20th. JOHN PENBERTHY.

ST. JOHN AMBULANCE WORK.

SIR,—I have noticed some correspondence in your columns recently upon the gratuitous giving of lectures upon ambulance work for county councils under the technical education scheme. Such a practice is certainly not to be commended, and will in most cases be found to be quite unnecessary. The members of county councils and the members of their subordinate local boards are in most cases willing to deal with the medical lecturer upon ambulance work as fairly as with the instructors in the other sections of the technical education scheme, if he be firm enough to require a fair remuneration. In my own case—and I am just completing my second annual course—I agreed to give some ten or twelve lectures, and my request for £10 as remuneration was at once conceded.—I am, etc.,

Great Crosby, Nov. 19th. EDWARD BUXTON, F.R.C.S.E.

SIR,—In the BRITISH MEDICAL JOURNAL of November 17th Dr. Kelly of Desford, makes charges which many living in this neighbourhood will perceive refer to me, although my name is not mentioned. I did not reply to a former letter on this subject, because it had no name attached to it. Dr. Kelly accuses me of not supporting the doctors in their just demands for payment for their services, and for not treating a colleague in a courteous manner. Perhaps the value of Dr. Kelly's remarks will best be shown by the fact that he is at the present time giving similar ambulance lectures gratuitously at a neighbouring village. Lest, however, any other medical man thinks that I have acted discourteously, I beg that you will publish the following brief statement of the facts. I have been closely connected with this village for twenty-five years, and, indeed, lived there for eight years. I had professional relationships with this village for several years before the present doctor started practice there. My brother, who lives in the village, takes great interest in the local affairs. Two years ago he asked me to give some free lectures there, to which I gladly assented. When I was asked to give the ambulance lectures I thought it was in pursuance of this scheme, and did not think for one moment of recompense, nor did I know that anyone else had been spoken to in connection with the course of lectures. Had I been communicated with then, I should certainly have taken every care not to clash with the interests of any other medical man. The anonymous letter was the first intimation I had that anyone felt aggrieved. I at once made inquiries into the facts of the case, but I did not, and will not, alter my action for any anonymous attacks. The County

Council do not pay for the course, but they give a grant which only partly covers the expenses, and if I received a fee it would have to be raised by subscription among personal friends and members of the committee residing in the neighbourhood, and that I do not desire. Perhaps the Council ought to pay the full cost, and I intend to make inquiries into the matter, but as far as I have at present ascertained, the funds of the County Council of Leicestershire do not seem to justify such a course. When this class was first started an official of the St. John Ambulance Association stated to the Secretary that in nine cases out of ten the medical men gave their services gratuitously, but that if the committee had to pay for the lecturer's services he should recommend them to try to procure the services of a gentleman living in this town who has been very successful with previous courses, and not choose either the local doctor or myself, since neither of us has conducted a previous course. I do not know the local doctor, but I understand that in any case he would be debarred from accepting a fee, since he is a member of the committee which controls the technical education of the village.—I am, etc.,

Leicester, Nov. 20th. F. W. BENNETT, M.D.Lond.

THE BEAVEN RAKE MEMORIAL.

SIR,—At a meeting of some friends of the late Dr. Beaven Neave Rake, of Trinidad, which was recently held, it was decided that subscriptions be invited for the erection of a memorial in Guy's Hospital, and for assisting his widow in establishing a nursing home in London and in the education of his children.

It is hardly necessary to remind the profession of the eminent services of the late Dr. Rake to scientific medicine. His work as medical superintendent of the Trinidad Leper Asylum, his able reports and papers on leprosy and other tropical diseases, and his conscientious labours on the Indian Leprosy Commission, all stamp him as a man of true scientific spirit; and his premature death in the discharge of his duties has given rise to a widespread feeling that there should be some tangible recognition of his services.

Dr. Rake, though desirous of doing so, was unable to effect an insurance on his life, and his friends, therefore, feel that the most fitting memorial to him should take the form, in part, of substantial assistance to his widow and children.

Dr. Pye-Smith, of 48, Brook Street, W., has consented to act as treasurer to the fund. Dr. P. S. Abraham, 2, Henrietta Street, Cavendish Square; Dr. G. A. Buckmaster, St. George's Hospital; and Mr. Alfred Rake, will act as Honorary Secretaries; and an influential committee is being formed to carry out the objects in view.

We shall be obliged, Sir, if you will insert this appeal in the columns of the BRITISH MEDICAL JOURNAL, and allow us to express the hope that it will be generously responded to.—We are, etc.,

SAMUEL WILKS.
THOMAS BRYANT.
F. W. PAVY.
JAMES PAGET.
J. FAYRER.

London, Nov. 20th. JONATHAN HUTCHINSON.

THE MILK TRAFFIC.

SIR,—I am afraid, if I left the letter of "Spero Meliora" without any reply, that I might appear to be discourteous to him. In the first place, is not the question of "the detection of adulteration" to find a place in "the sanitary protection of the milk traffic?" Are we to conclude that adulteration has nothing to do with health?

Your correspondent says that "all the adulteration in the world of whole milk with separated milk would not cause one single case of scarlatina or typhoid." Whoever thought it could? I would also submit that unwashed hands, filthy farmyards, etc., would not "cause one single case of scarlatina or typhoid" without the specific causes of those maladies. Cleanliness, for its own sake, and as a general sanitary law, is very necessary everywhere, especially where food is, and so of course in farms, farmyards, dairies, but scarlatina or typhoid might be "caused" (or conveyed) from the cleanest dairy if the milk was allowed to receive the specific causes of those diseases in its transit from the cow to man.

Your correspondent knows quite well that I do not believe that "anatto coloration or separated milk addition" causes disease, and he also knows that filth must contain the causes of disease to produce disease, and that such causes do not lie only in filth, and are not themselves produced by it. I want the public to realise that this colouring and mixing (to which I alluded in my paper) removes the responsibility of taking the first step in the sanitary protection of the milk traffic from the milk producers to the milk consumers, because the existing system allows the middlemen to intercept the legitimate profits of the farmer, and thus deprive him of the means to carry out sanitary requirements. What right have the public to ask for the sanitary protection of a swindling system of trading? If the people of England call the sanitary tune, they must at least protect the piper from robbery.

"Spero Meliora" takes exception to the concluding sentence of my paper, and perhaps he is right; I submit, however, that it is often wise to make a mistake.—I am, etc.,

Buckingham, Nov. 21st. GEORGE H. DE'ATH.

HOSPITAL ADVERTISEMENTS.

SIR,—I am requested by the Medical Board of the National Orthopædic Hospital to state that the pamphlet recently issued by the Committee, and which was the subject of comment in the BRITISH MEDICAL JOURNAL of November 10th, was issued without the knowledge of the Medical Board, and further to inform you that the Medical Board is at present in correspondence with the Board of Management on the subject.—I am, etc.,

T. H. OPENSHAW,
Hon. Secretary Medical Board.

Wimpole Street, W., Nov. 20th.

MIDWIVES' REGISTRATION AND THE LANCASHIRE AND CHESHIRE BRANCH.

SIR,—I am no believer in the utility of a newspaper war, but the letters of Mr. Colin Campbell and Dr. John Brown make a reply necessary.

The protest party have never defended "bogus diplomas," being opposed to them as much as the Committee are; we differ as to treatment. That midwives exist is a fact, that they can be abolished is an impossibility; therefore we desire to educate and control them. The grantors of these diplomas can be left to fight their own battle; what we were concerned with was that the Branch was pledged to the opinion that men were "infamous," and their position in the Branch was "anomalous," whose only fault was the carrying out of an established mode of supplying trained midwives. That seemed to us manifestly unfair.

A curious instance of the *impasse* in which such action would land us is that only six or eight weeks ago Dr. Rentoul himself wrote to one of the staff of the Liverpool Lying-in Hospital, recommending a nurse for examination. The request was not acceded to, being looked upon with suspicion, but had it been, would the grantor have become "infamous"?

Mr. Campbell ingenuously says that the majority at Liverpool was 17, not 3 as I wrote. I allow his figures, but he is well aware of how his majority was composed. The enthusiasm of our new members was quite astonishing; 92 (up till June) entered our ranks when midwives came on the carpet, and they have been in evidence ever since.

Their interest seems to be entirely in the midwife question, but ours is in the welfare of the Branch. Hence we were able to prevent (at Stockport) Dr. Rentoul from upsetting the government. Our voting power is not so strong in the nursing controversy, as we are with the Committee in regard to the abuse of diplomas, but entirely disagree with that body as to the best method of reform.

Again, we are not a small party: 340 protesters in a Branch of 900 members is a very respectable minority, and not one to be sneered down. We protested against the voting at Liverpool, and we shall continue to protest against the grant (by that vote) of £250 to carry on this agitation. With that sum the Committee will probably circularise for a year or two, and issue edited reports of meetings, with the only result of making a *modus vivendi* impossible.

I cannot plead guilty to confusing the issue—which is plain—is a minority to submit to have its money wasted and its opinions misrepresented, and have no right to protest?

The proposition of a two-thirds majority for money grants,

a rule common to many institutions, was framed to save the Branch from another attack upon its funds. Though unfortunate ourselves, it may be hoped that other Branches will take care to have their rules so drawn up as to prevent a similar catastrophe, as well as to secure that only members vote at their meetings.

With regard to the incidents of the Manchester meeting, reported in my last letter, I have nothing to correct or withdraw—I was there myself.—I am, etc.,

Liverpool, Nov. 19th. W. Macfie Campbell.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A Surgeon-Captain who will have to proceed to India (Bengal) in February next to complete about three years and a-half of unexpired tour, wishes to exchange with an officer who can reckon on at least a year on the Home Establishment from that time. Apply with particulars to No. 3,262, British Medical Journal Office, 429, Strand, W.C.

A Surgeon-Captain, who is likely to go abroad next February or March, wishes an exchange. Is willing to pay a liberal bonus. Address Surg.-Capt., Messrs. Holt and Co.

A Surgeon-Major serving at home, and who will not be required for abroad until late next trooping season, is open for an exchange to one of the Colonies. Terms very reasonable. Apply "Senex," c.o. Messrs. Holt and Co., 17, Whitehall Place.

THE NAVY.

The undermentioned gentlemen, who competed on November 5th and following days at the Examination Hall, Victoria Embankment, for appointment as Surgeons in the Royal Navy, have been granted commissions:

	Marks.		Marks.
C. F. S. Sichel, F.R.C.S.Eng. ...	2,920	J. A. L. Campbell	2,396
W. B. Macleod, M.B.	2,701	B. Ley	2,286
W. G. Peck, B.A., M.B. ...	2,649	H. P. Jones	2,283
A. H. H. Vizard, M.B.	2,559	F. P. Mahon	2,272
H. Spicer, M.B.	2,483	R. H. Way	2,262
E. T. P. Eames	2,424	A. O. Bobardt, M.B.	2,211

Surgeon Walter H. S. Stalkartt, M.B., has been appointed to the *Victory*, additional, December 11th.

ARMY MEDICAL STAFF.

Surgeon-Captain J. R Forrest is placed on temporary half-pay on account of ill-health, November 15th. His commission dates from January 31st, 1885. He was in the Soudan campaign in 1885, receiving the Egyptian medal with clasp and the Khedive's bronze star.

ARMY MEDICAL RESERVE.

Surgeon-Captain J. Y. W. Rutherford, M.B., 1st Northumberland Volunteer Artillery (Western Division Royal Artillery), is appointed Surgeon-Captain, November 21st.

THE INDIAN ARMY REORGANISATION SCHEME.

The official notification respecting the Indian Army Reorganisation Scheme has been published in the *Gazette of India*. It presents few features of special interest to the Medical Department of the Army. Briefly, it rearranges the existing troops and commands into four divisions instead of three. The army of India will consist of the following commands: Punjab, Bengal, Madras, and Bombay, each with its separate staff and each with its respective principal medical officer. All appointments in the Medical Department will be made under existing rules, except where otherwise specified. Promotion will be notified in the *Gazette of India* or *London Gazette* in accordance with existing rules.

As we announced last week, the principal medical officer, Her Majesty's forces in India, and the principal medical officers of the several commands and districts, if of the Army Medical Staff, will be appointed as at present by His Royal Highness the Commander-in-Chief, with the concurrence of the Secretary of State for India; officers belonging to the Indian Medical Service will be appointed by the Government of India.

THE YEOMANRY AND VOLUNTEERS.

Surgeon-Lieutenant J. E. Bowser, M.B., Westmoreland and Cumberland Yeomanry Cavalry, is promoted to be Surgeon-Captain, November 21st.

Surgeon-Lieutenant-Colonel T. Thyne, M.D., 2nd Middlesex Artillery, has resigned his commission, with permission to retain his rank and uniform, November 21st.

Surgeon-Lieutenant A. L. Cerror, 1st Forfarshire Artillery, and Surgeon-Captain W. Thursfield, M.D., 1st Volunteer Battalion the King's Shropshire Light Infantry (late the 1st Shropshire), have also resigned their commissions from November 2nd.

Messrs. James Philip Stephens Ward, and Edgar Reid are appointed Surgeon-Lieutenants to the 2nd Devonshire Artillery (Western Division Royal Artillery) and the 3rd Glamorgan Rifles respectively, November 21st.

THE SECRETARY TO PRINCIPAL MEDICAL OFFICER, INDIA.

The reorganisation scheme for the Indian Army is promulgated, and the abolition of one secretary to the Principal Medical Officer is noted. There is much fear that the officer to be sacrificed is Surgeon-Lieutenant-Colonel R. Exham, Army Medical Staff, and that the Secretary of the Indian Medical Service will be retained. We commented on the probability of the loss of two appointments in July last, and stated that it was the only post held by an Army Medical Staff officer that carried extra pay. The only link of connection between the Army Medical Service and the Principal Medical Officer, Simla, who belongs to the Imperial Service, is now to be severed, to the serious detriment of the former, and the disadvantage of the latter.

THE PRINCIPAL MEDICAL OFFICER, INDIA.

The *Homeward Mail* of November 19th states that the proposal has been sanctioned by which Surgeon-Major-General A. F. Bradshaw, C.B., will be granted a two years' extension of his appointment as Principal Medical Officer in India from December next. We have good reason to believe that Surgeon-Major-General Bradshaw will be brought home after three years (that is, in March next) in his appointment. In the case of Surgeon-Major-General Bradshaw's predecessor, Surgeon-Major-General Thomson, an extension was granted merely to permit of the latter officer putting in three years in the billet, after which he was retired. A similar proceeding, therefore, in the case of the present Principal Medical Officer in India would be the fairest and most just to all the officers in the rank of Surgeon-Major-General, who naturally desire a share in appointments with augmented emoluments.

ATTENDANCE ON A DECEASED OFFICER.

Cleasby is informed that, according to the letter of the regulations, he has no claim against public funds for the attendance he details. Yet there may be circumstances which might induce the War Office to consider his claim specially. He should therefore apply to the Secretary of State for War, setting forth the very special circumstances under which the claim arose; also that the deceased officer died absolutely impecunious.

THE MEDICAL STAFF IN INDIA.

In reply to "Inquirer" we would draw his attention to our article, "Changes in the Medical Department," on April 28th, in which the matters on which he animadverts are dealt with. The reorganisation scheme of the Indian army doubtless hits the Army Medical Staff officers hard. The influence at work as to the medical changes is pretty well known.

THE DEPOT MEDICAL STAFF CORPS, ALDERSHOT.

"Observer's" remarks are to be met by stating that the depôt at Aldershot is overgrown, and fails because it is too large and not in touch with Army hospitals; it would therefore be well, as we have advocated, to institute branch depôts at Woolwich and Netley, etc., leaving perhaps a small depôt company at Aldershot also; the men could then see hospital work. In short, the requirement is small depôts in touch with hospitals, where military and medical duties could go hand-in-hand. We ask was not discipline acquired by medical officers entering the service before Aldershot depôt was established? Among the officers who are strict disciplinarians now are there not some (or many) who never get the Aldershot training at all?

MEDICO-LEGAL AND MEDICO-ETHICAL.

CONTRACTS IN RESTRAINT OF PRACTICE.

Barrow *v.* Ryan.

This action was heard in the Queen's Bench Division before Mr. Justice Wright and a common jury on October 26th, both plaintiff and defendant being medical men. The action was brought to recover damages for alleged breach of covenant contained in an agreement of March 22nd, 1893, being a contract for the purchase by the plaintiff of the defendant's practice. The covenant was to the effect that the defendant would not practise within a prescribed area for a period of two years. The plaintiff claimed that the defendant had practised in violation of the agreement. The breaches were admitted by the defendant, who pleaded that he was willing to give the plaintiff the amounts he had earned by so doing, which, however, were stated to be small sums. The plaintiff was awarded £125 damages and costs.

SUBSTITUTE MIDWIFERY FEES.

In relation to the comments which appeared in the British Medical Journal of October 13th, p. 846, under the above heading, Dr. R. Miller has forwarded a long self-vindicating letter with a copy of the original correspondence that passed between himself and Dr. C. Moon on the subject. A dispassionate consideration of documents, we regret to add, tends only to deepen our conviction of the justness of the criticism originally expressed.

MIDWIFERY FEES.

WE are informed that in a case recently heard at the county court at Newtownards, County Down, Ireland, in which Dr. Henry Bingham, of Mountpottinger, Belfast, sued for a fee of one guinea, to be paid by the husband of a woman who, in November, 1893, had engaged Dr. Bingham, to attend her at her approaching confinement in December, 1893; the judge, in granting a decree for the amount with expenses, said that in his opinion if ever there was a case of an agent binding a a principal it was the case of a man's wife being able to bind her husband in a matter of this sort. The facts were not in dispute, and Dr. Bingham's case was that after having made arrangements to be within call when the time came, another medical man was called in by the defendant. The defendant's defence was that no contract had been entered into by him, or with his knowledge or consent.

A NEW KIND OF CARD.

IF the issuer (who is described by a local practitioner as an M.B. Durham 1886, M.D. and B.S. 1890, and D.P.H. Dub. 1890) of the following card folded as a small note, and left at every house in the district, hopes to escape exposure and condemnation for so unprofessional a proceeding by omitting the name, we feel impelled to undeceive him:

SURGERY AND PRIVATE DISPENSARY,
1, Filmer Road,
Salisbury Estate,
Fulham, S.W.

Hours:—10.30 to 12 A.M.; 7 to 9 P.M.

Messages may be left at any time.

[On the back of the card]: With compliments.

THE HOLDING OF INQUESTS.

Z. writes to ask if a coroner has a right to hold an inquest in any room or building in connection with a hospital without first obtaining the consent or permission of the hospital authorities, and, further, what are the legal powers of coroners with regard to holding inquests in cases of death occurring after an operation, but not necessarily preceded by injury or violence.

*** The coroner has no legal right to hold an inquest in any hospital or other place except by previous consent of the owners. The county councils provide funds for the hire of rooms for inquest purposes, and if the hospital authorities decline to place a room at the disposal of the court, the coroner must find a room elsewhere. Usually an amicable arrangement prevents friction in these matters. The coroner can hold an inquest in any case of death in which he deems an inquiry necessary, but his action in regard to them has to be regulated by the exercise of a sound discretion, otherwise complaints might be made to the Lord Chancellor, to whom the conduct of coroners is amenable. The coroner can give what instructions he likes to the registrars, but it is quite another question whether such instructions are carried out by them. There is no legal compulsion in the matter.

CONTRACTS NOT TO PRACTISE.

PERPLEXED asks for a reply to the following query: A. sells a country practice to B., and in the agreement promises not to practise within ten miles of the village for a period of ten years. After five years B. sells the practice to C. Is it right, fair, and honest and legal that A. should come back and commence practising again after promising B. that he would not do so for ten years?

*** On the facts stated it is undoubtedly neither right, fair, nor honest on the part of A. to commence practice again within the given radius within the ten years. Whether or not A. could be prevented from so doing by legal proceedings depends on the terms of the contract between A. and B. and the contract between B. and the purchaser from him, and without seeing these documents or having a full statement of their terms it is impossible to express any reliable opinion.

UNQUALIFIED ASSISTANTS.

M.O.H. writes: In a rural district a medical man doing a very extensive practice employs an unqualified assistant ostensibly as dispenser. Amongst the poorer classes, however, he is known as "Doctor," and has the reputation of being very clever at confinements and children. He is at times, in preference to his principal, engaged for midwifery cases, and if the case goes on right attends the case entirely; if the case goes wrong the qualified man comes in and does the requisite. Does such conduct as that constitute "covering"? It is certain that in some cases, if it were not for this unqualified man, much of their midwifery would go to the other medical men in the district. In a town such cases would be taken up by the other medical men; but in country districts it is difficult to get satisfactory and trustworthy evidence. The system of death registration is no check on unqualified practice, as the registrar is often a man of little education and intelligence. The plan of registration of deaths put forward by Mr. Ernest Hart and his deputation to the Home Secretary, seems the only means of effectually putting a stop to practices which are eminently unfair to the profession, and still more unfair to an uneducated public.

*** M.O.H. should communicate with the President of the General Medical Council, proffering such evidence in support of his statement as he is able to obtain.

G. M. F.—We cannot undertake to offer any opinion upon the diagnosis of the case described. We would suggest to our correspondent the necessity of exercising the greatest care in accepting the statements of patients as to the conduct of professional friends.

PRESCRIBING CHEMISTS.

MCC.—We may refer our correspondent who has sent us a number of instances which have come under his notice of chemists and druggists prescribing for patients, to the following report: At Cardiff County Court, on November 7th, before His Honour Judge Owen, the Apothecaries' Company brought an action against Mr. G. Muxworthy to recover the sum of £20, for that he did act and practise as an apothecary at Cardiff, and for attending, advising, furnishing, and supplying medicine for the use of Elizabeth Ryan, without having obtained certificates under the Act. Mr. Harry Cousins was for the plaintiffs, and Mr. Ivor Bowen for the defendant. Patrick Ryan, of Duffryn Street, Cardiff, said in Whitsun week he went to the Institute of Jubilee Nurses. The Institute was in St. Andrew's Crescent but he made a mistake, and called at the next house. Defendant was there, and, after hearing him, advised him to rub oil and hot vinegar on his wife's breast. Witness bought a bottle of oil, paying for it 1s. 1½d. The name "Dr. Hall" was on the front of the house. In cross-examination Mr. Bowen elicited that witness was unaware that No. 10, St. Andrew's Crescent was Dr. Hall's Hygienic Company's establishment. His wife was not attended by defendant, whose only advice was to rub in the oil and vinegar. One of the Jubilee nurses told him not to use the oil. Mr. Bowen said he would submit, under the decision in the case of Davies *v.* Makuna, *Law Reports*, Chancery Division, 29, that defendant was able to sell patent medicines that were not poisonous. The Judge remarked that there was in this case something more than selling. Defendant was called, and in examination said that Dr. Hall's Hygienic Company was composed of himself and his son. They had made an arrangement with Dr. Hall and some Americans, and they sold pamphlets, specifics, and instruments for the cure of disease. His Honour asked if the remedies were for all the evils under the sun, and witness replied that they were for a considerable number of them. The charge which the Company made for the pamphlet and instrument used was one guinea. Nevertheless, ingredients of a poisonous nature in the medicine. He did not advise Ryan, but sold the medicine on application. Cross-examined: The house was a private one, but there was a card stating that it was Dr. Hall's Hygienic Establishment. His Honour held that the case had been abundantly made out. The action was brought for a penalty of £20, under a known Act of Parliament passed in the time of George III. He believed defendant did practise as an apothecary, and found for the plaintiffs for £20 and costs.

VISITS OF CEREMONY.

PROSPERITY.—To our correspondent's three several questions our replies are as follows: (1) It will devolve on our correspondent to call on the resident practitioner. (2) Especially relates to social and not to medical etiquette. Nevertheless, we may intimate that, in the event of cards being received, it will entail an early visit in response, but otherwise the first call would more or less depend on the degree of intimacy existing between the bachelor practitioner and the prospective benedict. (3) For an answer *re* the remedial agent in question we would refer him to a paragraph in the BRITISH MEDICAL JOURNAL of November 10th, p. 1093, etc.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

INDIAN MEDICAL CONGRESS.—Professor E. H. Hankin, Fellow of St. John's College, has been appointed to represent the University at the Indian Medical Congress to be held at Calcutta in December.

UNIVERSITY OF LONDON.

M.B. EXAMINATION: Pass List.

First Division.—Lizzie Bennett, London School of Medicine for Women; J. S. Bolton, B.Sc., University College; J. S. Collier, B.Sc., St. Mary's Hospital; H. Davies, Guy's Hospital; J. H. Fisher, St. Thomas's Hospital; E. M. Hainworth, B.Sc., St. Thomas's Hospital; W. E. Lee, St. Bartholomew's Hospital; A. H. Lilley, B.Sc., Guy's Hospital; G. E. Manning, Guy's Hospital; H. B. Meakin, St. Bartholomew's Hospital; F. J. Poynton, St. Mary's Hospital; M. H. Raper, Middlesex Hospital; A. E. Russell, St. Thomas's Hospital; J. S. Sloane, B.Sc., St. Bartholomew's Hospital; E. Smith, St. Thomas's Hospital; A. Stanley, St. Mary's Hospital; J. Stephenson, B.Sc., Owens College and Manchester Royal Infirmary; F. J. Steward, Guy's Hospital; E. C. Taylor, Guy's Hospital; T. Warner, King's College; R. A. Young, B.Sc., Middlesex Hospital.

Second Division.—H. R. Andrews, London Hospital; Elizabeth L. Catherine Appel, B.Sc., London School of Medicine and Royal Free Hospital; A. Armer, Guy's Hospital; Dorothea Caine, London School of Medicine and Royal Free Hospital; C. E. Carpmael, Guy's Hospital; Maud Mary Chadburn, London School of Medicine and Royal Free Hospital; E. Chichester, London Hospital; F. Chown, St. Mary's Hospital; H. W. Collier, Guy's Hospital; F. N. Cookson, Middlesex Hospital; R. Corfe, St. Mary's Hospital; Alice Mary Corthon, London School of Medicine for Women; G. H. Cowen, London Hospital; T. V. Crosby, University College; J. Currie, St. Bartholomew's Hospital; H. G. Dain, Mason College, and Queen's and General Hospital, Birmingham; D. E. Evans, St. Mary's Hospital; F. J. Fielder, King's College; D. Fraser-Luckie, St. Bartholomew's Hospital; J. A. Gray, St. Bartholomew's Hospital; J. W. Haines, St. Bartholomew's Hospital; F. D. Harris, St. Mary's Hospital; F. G. Hopkins, B.Sc., Guy's Hospital; E. H. Houlton, Yorkshire College; A. C. Hovenden, Guy's Hospital; G. S. Hovenden, Guy's Hospital; Susan Anne Hughes, London School of Medicine and Royal Free Hospital; G. B. Hunt, University College; W. D. Jones, University College; J. P. Kitson, University College; F. S. Locke, St. Bartholomew's Hospital; T. D. Manning, Guy's Hospital; Y. H. Mills, London Hospital; Elizabeth Jane Moffett, B.Sc., London School of

Medicine and Royal Free Hospital; D. Morrison, University College; E. E. Murray, University College; M. J. O'Flanagan, B.Sc., Owens College and Manchester Royal Infirmary; J. D. Rawlings, St. Bartholomew's Hospital; S. W. F. Richardson, B.Sc., St. Thomas's Hospital; W. S. H. Sequeira, London Hospital; W. Shears, St. Bartholomew's Hospital; E. W. Spink, Yorkshire College; R. H. Steen, Queen's College, Belfast, and St. Mary's; A. C. Stevenson, University College; W. H. B. Stoddart, University College; W. Stokes, St. Thomas's Hospital; C. S. Wallace, St. Thomas's Hospital; W. Watkins-Pitchford, St. Thomas's Hospital; G. H. C. Way, University College; A. N. Weir, B.Sc., St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen passed the First Professional Examination for the diploma of Fellow, in Anatomy and Physiology, at a meeting of the Board of Examiners on Thursday, November 15th:

A. M. Sheppard, of Prince Alfred Hospital and Sydney University, and St. Bartholomew's Hospital; and J. C. H. Leicester, of University College, London.

Thirteen gentlemen were referred for six months. Sixty-three gentlemen presented themselves for this examination, of whom 23 passed and 40 were referred.

The following gentlemen having passed the necessary examinations and having conformed to the by-laws and regulations, have been admitted Members of the College, namely:

Abcarius, J. J., L.R.C.P.Lond.
Abrahams, B. L., L.R.C.P.Lond.
Allport, A., L.R.C.P.Lond.
Armer, A., L.R.C.P.Lond.
Balchin, C. R., L.R.C.P.Lond.
Baly, C. F. P., L.R.C.P.Lond.
Barr, V. H., L.R.C.P.Lond.
Bates, J. E., L.R.C.P.Lond.
Battle, E. W., L.R.C.P.Lond.
Bayfield, J. B., L.R.C.P.Lond.
Best, P., L.R.C.P.Lond.
Blewitt, W. F., L.R.C.P.Lond.
Boden, J. S., L.R.C.P.Lond.
Bond, C. S., L.R.C.P.Lond.
Bower, E., L.R.C.P.Lond.
Breen, A. L., L.R.C.P.Lond.
Brennan, J. R. M., L.S.A.
Brereton, F. S., L.R.C.P.Lond.
Brice, A. P., L.R.C.P.Lond.
Brierley, T. B., L.R.C.P.Lond.
Brooke, F. A. J. R., L.R.C.P.Lond.
Brown, D. D., L.R.C.P.Lond.
Brown, D. W., M.D.Edin.
Budd, W. H., L.R.C.P.Lond.
Burditt, R. A., L.R.C.P.Lond.
Burroughs, W. J., L.R.C.P.Lond.
Burton, A., L.R.C.P.Lond.
Butler, W. B., L.R.C.P.Lond.
Calverley, J. E. G., L.R.C.P.Lond.
Carter, F. J., L.R.C.P.Lond.
Clark, H. J., L.R.C.P.Lond.
Clarke, A. H., L.R.C.P.Lond.
Clarke, F. L., L.R.C.P.Lond.
Cochrane, A. W. R., L.R.C.P.Lond.
Collard, F. S., L.R.C.P.Lond.
Colley, C. R., L.R.C.P.Lond.
Collier, W. E., L.R.C.P.Lond.
Cooke, F. A., L.R.C.P.Lond.
Copeland, F., L.R.C.P.Lond.
Copley, S., L.R.C.P.Lond.
Corfe, R., L.R.C.P.Lond.
Crossman, F. W., L.R.C.P.Lond.
Currie, J., L.R.C.P.Lond.
Davies, J. E. H., L.R.C.P.Lond.
Dickinson, H. B., L.R.C.P.Lond.
Dobie, E. C., L.R.C.P.Lond.
Dorrell, E. A., L.R.C.P.Lond.
Drake, C. H., L.R.C.P.Lond.
Drake, E. H., L.R.C.P.Lond.
Drew, E. H., L.R.C.P.Lond.
Eastes, G. L., L.R.C.P.Lond.
Edgar, J. C., L.R.C.P.Lond.
Evison, F. A., L.R.C.P.Lond.
Firth, H. E., L.R.C.P.Lond.
Flegg, F. A. M., L.R.C.P.Lond.
Flemming, A. L., L.R.C.P.Lond.
Forsayeth, J. R. M., L.R.C.P.Lond.
Fraser, D. H., L.R.C.P.Lond.
Fricke, E. H., L.R.C.P.Lond.
Fry, W. H., L.R.C.P.Lond.
Gaman, F. R. S., L.R.C.P.Lond.
Genge, G. G., L.R.C.P.Lond.
Gerrard, A. H., L.R.C.P.Lond.
Gooding, A., L.R.C.P.Lond.
Grattan, H. W., L.R.C.P.Lond.
Gregor, E. W., L.R.C.P.Lond.
Griffith, A. D., L.R.C.P.Lond.
Gullan, A. G., L.R.C.P.Lond.
Haines, A., L.R.C.P.Lond.
Hale, L. H. D., L.R.C.P.Lond.
Hanbury, W. R., L.R.C.P.Lond.
Harding, W. H., L.R.C.P.Lond.
Harman, L., L.R.C.P.Lond.
Hayles, A. W., L.S.A.
Helme, T. A., M.B.Edin.
Hopkins, F. G., L.R.C.P.Lond.
Howard, V., L.R.C.P.Lond.
Husband, F., L.R.C.P.Lond.
James, G. P. W., L.R.C.P.Lond.
Jenkins, A. W., L.R.C.P.Lond.
Job, H., L.R.C.P.Lond.
Jones, R., L.R.C.P.Lond.
Joynson, G. G., L.R.C.P.Lond.
Kitson, J. P., L.R.C.P.Lond.
Lambert, P., L.R.C.P.Lond.
Latham, A. C., L.R.C.P.Lond.
Layton, F. G., L.R.C.P.Lond.
Lewis, F. W., L.R.C.P.Lond.
Lowe, G. J. R., L.R.C.P.Lond.
Lowe, L., L.R.C.P.Lond.
Loy, M. W., L.R.C.P.Lond.
McDonald, G. M., L.R.C.P.Lond.
Mason, F. W., L.R.C.P.Lond.
Matthews, A. K., L.R.C.P.Lond.
Moon, R. H., L.R.C.P.Lond.
Morgan, J. A., L.R.C.P.Lond.
Morris, A. H., L.R.C.P.Lond.
Morris, T. H. P., L.R.C.P.Lond.
Moses, J., L.R.C.P.Lond.
Nichols, H. G., L.R.C.P.Lond.
Norman, R. L., L.R.C.P.Lond.
O'Leary, E. G. E., L.R.C.P.Lond.
Ormerod, E. W., L.R.C.P.Lond.
Packer, H. D., L.R.C.P.Lond.
Pain, A., L.R.C.P.Lond.
Palmer, M. H. C., L.R.C.P.Lond.
Penny, F. S., L.R.C.P.Lond.
Peters, E. A., L.R.C.P.Lond.
Phillips, G., L.R.C.P.Lond.
Prain, J. L., L.R.C.P.Lond.
Prior, J., L.R.C.P.Lond.
Reid, S. T., L.R.C.P.Lond.
Reynolds, B. G., L.R.C.P.Lond.
Rhind, T., L.R.C.P.Lond.
Riddick, G. B., L.R.C.P.Lond.
Robinson, W. R., L.R.C.P.Lond.
Sames, J. W., L.R.C.P.Lond.
Saunders, A. L., L.R.C.P.Lond.
Savage, W. A., L.R.C.P.Lond.
Smith, E. H., L.R.C.P.Lond.
Smith, R. B., L.S.A.
Spaull, P. W., L.R.C.P.Lond.
Stanley, A., L.R.C.P.Lond.
Stone, W. G., L.R.C.P.Lond.
Summerhayes, J. W., L.R.C.P.Lond.
Symonds, W. A., L.R.C.P.Lond.
Taylor, M. R., L.R.C.P.Lond.
Thurston, E. O., L.R.C.P.Lond.
Toombs, H. G., L.R.C.P.Lond.
Trythall, W. R., L.R.C.P.Lond.
Turner, E. P., L.R.C.P.Lond.
Watkin-Williams, P. L., L.R.C.P.L.
Whitehead, A.M., M.B., C.M.Aberd.
Wiggin, H. P. V., L.R.C.P.Lond.
Willis, P. G., L.R.C.P.Lond.
Wilmot, H. B., L.R.C.P.Lond.
Wilson, H. R., L.R.C.P.Lond.

At the first sessional meeting of the Royal British Nurses' Association, under the presidency of Dr. Gage Brown, C.M.G., Mrs. Hughes read a paper entitled Why Trained Nurses break down in Health, which was followed by a discussion.

OBITUARY.

ALBERT NAPPER, M.R.C.S., L.S.A.,

The Originator of Cottage Hospitals.

WE regret to have to record the death on November 16th of Mr. Albert Napper, the originator of cottage hospitals. Mr. Napper, who appeared to be in his usual health a few weeks ago, had been for long the subject of mitral disease, but suffered very little from it beyond occasional dyspnœa until the evening of November 15th, when, after a fatiguing day, he had an attack of angina pectoris: this passed off, but he died suddenly the following evening.

Albert Napper was the third son of the late Mr. H. F. Napper, and was born at Loxwood, Sussex, on December 16th, 1815. He was educated at Mr. Stedman's school at West Hill, Wandsworth, and on leaving was articled to his maternal uncle, Mr. George Harries of Godalming. After two years he proceeded to St. Thomas's Hospital, and in due course acted as senior dresser to Mr. Benjamin Travers and Mr. South. After obtaining the qualifications of M.R.C.S.Eng. and L.S.A. he proceeded to Edinburgh for a year, and subsequently to Bonn. His intention was to spend some time in Germany, but he was recalled after a few months to take over the practice of the late Mr. Frank Jackson of Guildford. In Guildford he practised for sixteen years, until in 1854 he acquired a practice at Cranleigh, where he continued until 1881, when he resigned active work to his son.

Mr. Napper was an excellent surgeon, and had remarkable success in both his major and minor operations. On retiring the parishioners of Cranleigh presented him with a cheque and a testimonial signed by 145 persons, and the medical profession presented him with a silver salver "as a slight recognition of his services in connection with the cottage hospital movement." He had established the first cottage hospital in 1859 in an old house lent for the purpose by the rector, the present Archdeacon of Surrey. In recognition of his services in this connection he was, in 1869, elected an Associate of the Order of St. John of Jerusalem, and at the time of his death he was the Senior Honorary Associate of that Order.

Mr. Napper was Honorary Secretary of the Society for the Prevention of Cruelty to Animals, and the Meath Home for Epileptics owed much to his power of organisation and practical sympathy. He was a keen sportsman, and in his time an excellent cricketer. He married in 1841 the only child of the late Mr. Arthur Winckworth, and leaves two sons and three daughters, of whom the youngest is Lady Superintendent of the Surrey Convalescent Home for Men at East Blatchington. Mr. Napper published in 1864 a short book on the establishment of village hospitals, and contributed many articles on the subject to the press. He took much interest in sanitary questions, and only recently we described a simple and ingenious method of ventilation which he had devised.

Mr. Napper was for many years an active member of the British Medical Association, and took a warm interest in the work of the South-Eastern Branch. He was instrumental in forming the system of districts within branches which in branches covering a great extent of country afford additional opportunities to members of the Association of meeting for discussion and friendly intercourse.

We are indebted to Mr. Henry C. Burdett, the author of *The Hospitals and Asylums of the World* for the following estimate of the value of his services in connection with the origination of cottage hospitals:

The late Mr. Albert Napper was undoubtedly the founder of cottage hospitals. It is true that the credit has been claimed for one of the sisters of the Holy Rood, who started a hospital with twenty-eight beds in North Ormesby, Middlesbrough, in 1859. The Middlesbrough institution was in no sense a cottage hospital; it was never heard of in connection with the cottage hospital movement: it was established in close contiguity to a large urban population, was too large originally to embody the real idea of a cottage hospital, and has now sixty beds. We may therefore dismiss this claim as untenable. In 1859 Mr. Albert Napper organised the Cranleigh Village Hospital for the accommodation of the poor when suffering from sickness or from accident. What Mr. Napper meant by the poor is clearly deducible from the

fourth rule, which provides that patients shall be received on the payment of a weekly sum, the amount of which, dependent on their circumstances, is to be fixed by their employer, in conjunction with the manager of the hospital. The admission of patients was granted by the manager on consultation with the medical officer. In his statement of the advantages derivable by the public and the medical profession from the establishment of village hospitals, which Mr. Albert Napper published in 1864, he gives an account of the first 100 patients treated. Of these 67 were parish paupers, 7 were incapable of remunerating the surgeon, 16 were in humble circumstances, and for the remaining 10 cases fees were paid by the guardians for operations, fractures, etc., to the extent of £36 in all.

It is important to state these facts, because they bear eloquent testimony to the character of the man and the value of the work he did as the founder of cottage hospitals. It will be seen that the scheme which he originated provided against the evils of indiscriminate medical relief; secured justice to the medical profession, as every member was allowed to follow his patient into the cottage hospital wards; and, for the first time in England, put the hospital patient in the position of having the privilege of being able to pay something, however small, according to his means, for the treatment he received. In consequence of the wisdom Mr. Napper thus displayed, although there are at the present time at least 500 cottage hospitals scattered up and down the country, in every one of them patients have the privilege of paying according to their means, and from 12 to 15 per cent. of the total income of these hospitals is derived from patients' payments. Had the same system been followed by the larger hospitals, we should not hear the universal complaint so justly urged against them in regard to the abuse of their funds by the treatment of well-to-do patients. But the scheme effected more than this. It created a revolution for good throughout the whole of rural England. By means of the cottage hospital the permanent services of a good nurse were secured for the agricultural districts: for the sick poor it provided, for the first time in their experience, adequate accommodation, a sufficient supply of food and its due regulation, constant and regular medical supervision, and the removal of the dangers attending a long and wearisome journey, often to the imminent risk of life or limb, with the prospect of facing further and greater perils in the big town hospital if the patient survived the journey. To the country medical practitioner the cottage hospital was a boon for many reasons. It raised his professional status: it enabled him to treat serious surgical cases under the most favourable circumstances, which, before its institution, had to be transferred to the nearest county hospital; it established good feeling and friendly professional intercourse between the medical men of each district, for all had the right to use the cottage hospital, and to retain any fee for an operation performed within its walls which the union might pay. The rich were not slow to recognise the value to themselves of this increased experience and consequent skill on the part of the local practitioner. The lessons learnt day by day in the cottage hospital became in time of need of real value in the ancestral hall. Thus, as one writer has well put it, "the peasants' misfortune became the means of saving the life of the squire."

Last, but not least, the cottage hospital supplied a new source of interest for the inhabitants of the villages, and united all classes in caring for the sick under the most favourable circumstances. It follows that Mr. Napper's work, as the founder of cottage hospitals, has a permanent value, for it has resulted in great reforms of many kinds, and has secured to the great body of general practitioners a means of improving their experience, conserving their knowledge, and increasing their popularity and reputation with the population to whom they minister. We have not space to do justice to the movement on the present occasion, but we have said enough to show that it has been fruitful for good, and that its founder deserves a high place in the annals of the profession. Albert Napper was a signally modest and retiring man. He had all the characteristics of the country gentleman. His courtesy, readiness to give information, and whole-hearted desire to do his best for his patients won for him a reputation and popularity which the most ambitious might envy. We know from what he himself told us one occasion that the testimonial which was presented to him, as the founder of cottage hospitals, when he retired from practice some years ago, gave him greater pleasure than anything which happened to him in his long and useful life.

Surgeon-General John Fraser, M.D., C.B.

We regret to announce the death of Surgeon-General Fraser, which occurred at 21, Chalmers Street, Edinburgh, on November 14th. He had an attack of cerebral hæmorrhage as far back as July 31st, 1893. This attack was followed by partial paralysis, from which he recovered sufficiently to enable him to take some exercise, but latterly he became weaker, and it was not surprising that he succumbed to a second attack of the cerebral hæmorrhage.

Dr. Fraser was the son of the late Rev. Simon Fraser, of Stornoway, and was born in 1819. He was educated at Aberdeen, Glasgow, and Edinburgh Universities, obtaining the degree of M.D. at Edinburgh in 1840. He entered the Medical Department of the army in the following year, but was not gazetted as full surgeon until 1852. Six years later, however, he was made Deputy Inspector-General. These six years were the most active in his long and honourable career. In them he served with the 2nd Battalion of the Rifle Brigade throughout the Crimean campaign, rendering valuable aid at Alma, Inkermann, and Sebastopool. For this he received the Crimean medal with three clasps, the Legion of Honour, and the Turkish medal. He also was in active service during the Indian Mutiny, and was employed in Bengal and the North-West Provinces; he was present at the capture of Lucknow, and in several other decisive engagements. He was twice mentioned in despatches by General Sir Hope Grant, whilst serving with him in the Oude as senior medical officer. He received the Indian medal with clasp, and in 1859 was created a Companion of the Bath. For twenty years afterwards he served in various capacities under the Army Medical Department. In 1872 he was appointed Surgeon-General, and on his retirement in 1879 he was made an honorary physician to the Queen. In 1892 he received the Distinguished Service Pension.

Surgeon-General Fraser was a man of extreme simplicity of character, reticent about himself, but ever thoughtful of others, always anxious and willing to give a helping hand in every good work. Since his retirement in 1879 he has resided in Edinburgh, where he has been prominent in many philanthropic and benevolent works. Whether as an Elder of the Free Church of Scotland, or as a director of one of the many charities to which he was attached, or in his capacity as a private individual, Dr. Fraser carried with him a peculiar and indefinable influence for good, which was bound to impress itself upon everyone with whom he came in contact.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are: Dr. T. Grey Jewell, Ex-President of the San Francisco County Medical Society, some time U.S. Consul-General at Singapore, and afterwards superintendent of the Home for Inebriates, San Francisco, aged 64; and Dr. E. Berchon, *Médecin Principal* of the French navy, formerly President of the Bordeaux Academy of Medicine, and founder (in conjunction with Dr. Périer and M. de Folin) of the periodical entitled *Les Fonds de la Mer*, aged 69.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

SMALL-POX AND VACCINATION IN 1893.

XIII (*continued*).—West Ham: The Small-pox Hospital Question.

Aërial Dissemination.—The Plaistow ward of the borough was the only one into which the disease was not introduced from outside the borough, but it was not long before this ward was invaded, and up to nearly the close of the epidemic it suffered out of all proportion to its population, though differing in no material respect in its circumstances from the

remaining wards save that it contained the small-pox hospital. As much as three-fifths of the total cases occurred in this ward within a radius of half a mile of the hospital as a centre. Of the 935 cases arising in the epidemic period, 557, or 59 per cent., were notified from this Plaistow ward. Put into simple tabular form, the facts arrange themselves as follows:

Ward.	Actual Cases.	Percentage of Borough Cases.	Percentage of Borough Population in Ward.	Expected Cases *pro ratâ* of Population.
Stratford	101	11	18.8	176
Forest Gate.....	116	12	26.0	243
Canning Town ...	161	17	26.4	247
Plaistow	557	59	28.5	269

The above is very telling in respect of the potency of the hospital for harm to the neighbourhood in which it chanced to be placed. Having only a population of 28.8 per cent. of the whole in its ward, the hospital had nevertheless 30 per cent. over and above the share of small-pox cases which upon equal distribution of the disease was to be anticipated. The hospital is situate on the boundary of the borough, which has an area of seven square miles, the area around the institution being populated only on three sides. As we have already stated, nearly three-fifths of the whole epidemic sprang up within half a mile radius of the hospital, the percentage of houses within this zone attacked being 2.87, in the next half a mile zone 0.79, and in the rest of the borough 0.36. The relative value of these figures is seen when we state that the rate in the hospital area was over three times that of the next zone, and eight times that of the rest of the borough. The incidence on the special area was heaviest in the third quarter of 1893, when the influence of raising the bed accommodation from 50 to 95 was in operation, the havoc played in the borough generally thereafter being due to broadcast dissemination of infection, and the inability to secure removal to the hospital consequent on scandals raised as to its administration. In April patients were first taken to the hospital ships at Long Reach, and by the end of June the disease was practically extinct. We think that Dr. Sanders has established the potency for harm of the cottage hospital for small-pox (which has been once and for all closed as a result of the recent experience), just as Mr. Power showed this same potentiality in his report on this hospital to the Medical Department at Whitehall in 1886. It seems to be a case of twice bitten for ever shy. The report is a useful addition to the accumulating evidence as to the danger of "isolating" small-pox in the vicinity of dwellings.

THE GERMAN VACCINATION LAW OF 1874.

THIS important law, which ordains not only the primary vaccination of all infants, but also the revaccination of all school children at the age of 10, has almost abolished small-pox from the interior of Germany. The few deaths which now occur are mainly near the frontiers of neighbouring States. Accordingly, the main efforts of antivaccinationists have been directed towards an attempt to prove, or rather to bolster up by mere repeated assertion, their statement that this law made no great difference in the vaccination of Germany since 1874 as compared with the vaccination before 1874. The beneficent action of the law cannot be gainsaid, so the law itself is minimised. An old law of 1835, in Prussia, against infectious diseases generally, and containing provisions against small-pox chiefly when occurring as an epidemic, is put forward as being identical in substance with the radically different law of 1874, and in particular as ordaining the revaccination of school children. That no excuse may be left for future prevarication on the subject, the law of 1835 will now be given in literal translation, so far as it deals with small-pox:

THE PRUSSIAN VACCINATION LAW OF 1835.

(*Italics are added.*)

Section 50. Vaccination is shown by experience to be the most certain preventive against small-pox. Everyone is, therefore, *urgently recommended* not to withdraw himself, his children, his servants, and all who belong to him, from vaccination, without sufficient reasons acquiesced in by the authorities in the subject.

Officials, especially councillors and district surgeons and all who are charged with the execution of the public health laws (*Medizinalpolizei*), must make it their duty on all occasions *to further* the extension and general adoption of this protective means, as certain as it is harmless.

Section 51. Vaccination is under the care and control of the various police divisions, and is permitted in civil practice only to approved physicians and surgeons, under condition that they follow exactly the prescribed regulations, which especially bind them to take lymph from those persons only who are perfectly healthy. Medical men must send to the police every quarter accurate lists of the vaccinations done in private practice.

Section 52. As regards the vaccination of those persons who are shown hereafter to be unvaccinated, public vaccinations shall take place yearly—or oftener if circumstances require it—in the various districts, especially where such are not already instituted, and the regulations of the departmental authorities are to be carefully followed.

Section 53. After each vaccination the vaccinating doctor shall give a certificate stating the result.

Section 54. If, notwithstanding this, children remain unvaccinated without a satisfactory reason to the end of the 1st year of age, *and in consequence become attacked by natural small-pox, the parents or sponsors shall be punished* for the delay of vaccination on account of the danger of infection thus brought about.

Schoolmasters and all employers of human labour will *do well* to make certain that persons taught or employed by them are vaccinated. Persons who seek admission into public de[illegible] of the State, or stipends, or other benefices for their children, or for persons for whom they are responsible, shall be refused if they cannot bring forward evidence of their being vaccinated. See also Section 56.

Section 55. *If small-pox breaks out* in any house, careful inquiry must be made whether any still susceptible individuals are present therein, and their vaccination must be proceeded with at once.

On further extension of the disease, all remaining inhabitants must be warned of the threatening danger, *and be required* to have any still susceptible persons belonging to them vaccinated as soon as possible: for this purpose the local health department (*Medizinalpolizei*) must make the necessary dispositions, and in case of necessity must effect compulsory vaccinations.

Section 56. *Revaccination* also is generally, and especially under the circumstances just named, *to be recommended* to individuals when a long interval has elapsed since their vaccination, even when successful, on account of the greater security thus effected.

Reception into a pension institution connected with public instruction must not take place until the pupil has shown that he has been effectively vaccinated or revaccinated within two years previous.

Section 57. As regards the *military service*, not only soldiers of the standing army, but those belonging to the "landwehr" and reserve must be carefully examined on entrance as to their vaccination. Those who are shown to be unvaccinated shall, if they belong to the standing army, be vaccinated forthwith (in accordance with the Cabinet Decree of May 30th, 1826, see Collection of Laws, 1826, No. 18), if they belong to the "landwehr" or reserve, they shall be indicated to the civil authorities, so that they may be vaccinated without delay, and, in case of resistance, compulsorily. On their next being called out, they must produce a certificate that vaccination has really been done.

Those recruits who do not show unmistakable marks of small-pox, and who, though already vaccinated, cannot bring forward a certificate that they have been revaccinated within two years previous, shall be revaccinated within six months

in accordance with the Decree of April 6th, 1834, confirmed by the Cabinet Decree of June 16th, 1834.

Section 58. The inoculation of human small-pox is forbidden under penalty of three months' imprisonment.

The comment on the above law which now follows is from a work prepared a few years ago in the Imperial Board of Health Department, Berlin (*Beiträge zur Beurtheilung des Nutzens der Schutzpockenimpfung*, etc. Bearbeitet in Kaiserlichen Gesundheitsamte, mit 6 Tafeln. Berlin: 1888).

"A comparison of these regulations with those of the Imperial Vaccination Law shows that the assertion that the vaccinatory relations of Prussia have not been essentially altered by the coming into force of the Imperial Vaccination Law of April 8th, 1874, is quite unsupported. This assertion has been made by opponents of vaccination, in order to show that presumably in former times severe small-pox epidemics (for example, 1871-2) occurred, in spite of vaccination and revaccination.

"It is established that, apart from the army, according to this decree of 1835, when no small-pox was present, no one was legally obliged to have himself or his children vaccinated. True the regulation urgently recommended vaccination to every one, and all sensible people are expected to further it by example and precept, especially public officials. *Compulsory* vaccination is ordered when small-pox occurs, and at first only for the susceptible inhabitants of the particular house affected. After this, *on further extension of the disease*, compulsory vaccination is ordered for the remaining inhabitants of the place. When there was no small-pox about, there was no legal or police punishment for the neglect of vaccination, punishment awaited only those whose children were attacked by small-pox, and were still unvaccinated without sufficient reason. The indirect compulsion existed in so far that admission into public offices and the enjoyment of certain benefices—also reception into boarding establishments connected with institutions for public teaching—were made dependent on the proof that vaccination, or revaccination, had taken place.

"This last regulation did not extend to schools generally, for schoolmasters as a body are merely told that they will *do well* to make sure that their pupils are vaccinated" (Section 54). "As to revaccination, it is simply *recommended* on account of the greater security thus afforded."

Subsequent "ministerial" despatches (from the provinces) put the case still more clearly. Two of these (July 9th, 1840, and February 28th, 1841) speak of the general reports on vaccination, and it is stated that universality in the vaccination lists was out of the question, while the extension of the vaccination laws was as general, and their execution as perfect, as could be attained "*in the absence of legal compulsion.*" The despatch of 1841 complains that various local authorities in subdistricts do not carry out the law in harmony with the rest, and that local outbreaks of small-pox were the consequence. Endeavours to overcome this difficulty were unavailing "*because no direct compulsion to vaccination existed.*" *Ordinary* public schools were not affected by the regulation of 1835. This is shown by paragraph 2 of Section 54. Public schools, where attendance was not obligatory, were first affected as to vaccination by the ministerial degree of 1871, which made admission thereto, both for boys and girls, dependent on evidence of revaccination.

A despatch dated August 13th, 1856, runs thus: "My answer to the Royal Government upon the reports from ..... is that, desirable as it may be to further as much as possible the protective inoculations in the community of N——, which never shows a satisfactory result, the existing regulations are not fitted to put a satisfactory means of doing so in our hands, *so long as no small-pox epidemic breaks out*. Should this occur in N——, then the regulation of 1835 shall be put in force at once and energetically, according to Sections 54 and 55."

It is clear that in the nine old provinces of Prussia no direct compulsion to vaccination existed before the Imperial Vaccination Law of 1874. Only when small-pox broke out in any locality were compulsory measures resorted to. There was no direct compulsion in ordinary times even as to primary vaccination, and a general obligation of all children of school age to be revaccinated did not exist in the nine old provinces of Prussia before 1874. It was the want of this compulsion which led to the law of 1874.

As to the army, this law made no difference to it as regards vaccination. The revaccination of all recruits was already compulsory (Section 57), since 1834 at least. But a striking change in the small-pox mortality of the army followed the law of 1874, this mortality being virtually abolished. From 1875 onwards no death occurred, except 1 in 1884-5, and in this case the man had been twice vaccinated on joining the army, without result. This virtual abolition of small-pox from the army is due to the fact that the surrounding community, the general population, was far less susceptible to small-pox after 1874, and it furnishes a strong argument for the compulsory vaccination and revaccination of all.

An opponent of compulsory vaccination on the German Commission of 1884 spoke thus: "We had no vaccination law in Prussia before 1874." Meaning thereby no compulsory vaccination law. This was said ten years ago, but in this country the old statement is still made by unscrupulous opponents of vaccination that the law of 1874 made no essential difference.

As to the schools, it comes to this that where the pupils paid, that is in the voluntary schools, there was practically no compulsion till 1871, but where no money was paid and attendance was compulsory there vaccination was compulsory, according to the law, which mentions no penalty.

LONDON CORONERS.

DR. GEO. DANFORD THOMAS (Coroner's Office, 21A, Euston Road, King's Cross, N.W.) writes: I enclose you herewith copy of a letter forwarded to-day to the London County Council for insertion in your next issue. It is *apropos* of the report of the Control Committee of the London County Council, upon which you commented last week.

(COPY.)

"Coroner's Office,
"21A, Euston Road, N.W.,
"November 12th, 1894.

"CORONERS' INQUESTS.

"GENTLEMEN,—At a meeting of the Coroners for the County of London, held November 7th, 1894 (all of whom were present with one exception), convened to consider the report of the Chief Officer of the Public Control Department made to your Committee, and revised in accordance with the suggestions of your Subcommittee, the observations made therein, and the 'summary of conclusions and suggestions' were carefully considered; and the following resolution was unanimously adopted:

"'The Coroners of the County of London in committee assembled, having carefully considered the report of the Public Control Committee of the London County Council respecting coroners' inquests, and finding that the said report contains so much controversial matter, and involves such important changes in the law, many of them, in the opinion of this meeting, detrimental to the public interests, have decided that at the present stage it is not advisable for the coroners to make any further observations, or to offer suggestions thereon.'

"It may further interest your Committee to know that at a meeting of the Council of the Coroners' Society of England and Wales, held in London on October 31st last, the Bill introduced last session into Parliament with the object of dispensing with the view of the body on the holding of an inquest was carefully considered, and the following resolution was unanimously adopted:

"'That this Council is decidedly of opinion that no alterations in the existing law on this subject is required, or is desirable, and that any attempt to do away by law of the view of the body by the coroner and jury, would be prejudicial to public interest and policy, and detrimental to public confidence in the Court.'

"I am, Gentlemen, your obedient servant,
"GEO. DANFORD THOMAS, M.D.,
"H.M. Coroner for Central London, President of the Coroners' Society, and Chairman of the London Coroners' Association.

"To the Chairman and Members of the Public Control Committee of the London County Council."

SOILED LINEN IN A BAKEHOUSE.

THE wife of a baker, carrying on business in Bethnal Green, appeared before the magistrate at Worship Street recently to answer a summons from the vestry for exposure of infected linen in a bakehouse. The medical officer of health received a notification of a case of scarlet fever in a child living at the premises in question, and, on visiting, found the mother, who was in attendance on the patient, passing through the bakehouse with an armful of soiled linen. The vestry desired to withdraw the original summons taken out under Section 68 of the Public Health Act, and it transpired that the child was said not to be suffering from scarlet fever, and defendant was awarded costs. Another summons was then heard for allowing the bakehouse to be unfit for use on sanitary grounds. It appeared that the only passage from the house to the yard was by way of the bakehouse. This summons was adjourned, to enable the occupier to make a separate entrance from the house to the bakehouse, so as to avoid future danger in the event of a case of infectious disease occuring on the premises.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,261 births and 3,427 deaths were registered during the week ending Saturday, November 17th. The annual rate of mortality in these towns, which had declined from 18.5 to 16.9 per 1,000 in the preceding three weeks, rose again to 17.1 last week. The rates in the several towns ranged from 10.7 in Croydon and 11.0 in Leicester to 23.8 in Sunderland, 24.6 in Gateshead, and 26.3 in Newcastle-upon-Tyne. In the thirty-two provincial towns the mean death-rate was 18.4 per 1,000, and was 3.1 above the rate recorded in London, which was only 15.3 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London the rate was equal to 1.5, while it averaged 2.1 per 1,000 in the thirty-two provincial towns, and was highest in Newcastle-upon-Tyne, Derby, and Gateshead. Measles caused a death-rate of 2.3 in Leeds, 2.7 in Portsmouth, 4.5 in Gateshead, and 4.8 in Derby; scarlet fever of 1.2 in Nottingham; whooping-cough of 1.7 in Gateshead; and "fever" of 1.2 in Plymouth. The 73 deaths from diphtheria in the thirty-three towns included 44 in London, 5 in West Ham, 3 in Birmingham, and 3 in Manchester. Two fatal cases of small-pox were registered in Birmingham, and 2 in Liverpool, but not one in London or in any other of the thirty-three large towns. There were 42 cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, November 17th, against 50, 43, and 51 at the end of the preceding three weeks; 3 new cases were admitted during the week, against 8 and 12 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,235, 2,240, and 2,258 at the end of the preceding three weeks, were 2,251 on Saturday last; 215 new cases were admitted during the week, against 223 in each of the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, November 17th, 974 births and 579 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 22.2 and 20.3 per 1,000 in the preceding two weeks, was again 20.3 last week, and exceeded by 3.2 per 1,000 the mean rate during the same period in thirty-three of the largest English towns, which was only 17.1 per 1,000. Among these Scotch towns the death-rates ranged from 14.0 in Paisley to 24.2 in Greenock. The zymotic death-rate in these towns averaged 2.1 per 1,000, the highest rates being recorded in Greenock and Glasgow. The 208 deaths registered in Glasgow included 10 from measles, 6 from diphtheria, 6 from whooping-cough, and 5 from scarlet fever. A fatal case of small-pox was recorded in Edinburgh.

Sanitas asks if there is any risk of infection in using a pit-system privy or closet, known to contain the fæces of a patient suffering from typhoid fever.

*** Certainly there is.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE COVENTRY PROVIDENT DISPENSARY.

We have received the following further letter on this subject:

Sir,—In reference to the letter from the medical staff of the Coventry Dispensary appearing in the British Medical Journal of November 3rd, it appears incumbent upon us to send a plain statement of facts in reply, and then to leave the matters in dispute in your hands in the hope that some means may be found of settling our differences by arbitration.

The Coventry Provident Dispensary was a charity as well as a provident institution for about fifty years, having been founded by the subscriptions of benevolent persons, which were continued until the last four or five years. Our contention is—and the matter has been proved again and again—that the rule "that members should consist of working men, their wives, and families" has not been "fairly" observed. On the contrary, many publicans, shopkeepers, and manufacturers, as well as their wives and families, have been and are members, in addition to those who join by virtue of being members of a club or other society incorporated with the dispensary.

But whatever may be the rights and wrongs of our dispute with the dispensary staff the broad fact remains, that we have now in Coventry a so-called provident dispensary, with what you rightly term the "unjust and intolerable" rule of membership that the "pecuniary position of the applicant be no bar to admission;" and as a consequence of this any inhabitant of Coventry, from the wealthiest manufacturer downwards, can now, if he so please, by entering his name on the dispensary books, compel the staff to attend him for a subscription of one penny a week.

The deputation was sent to the committee of the dispensary because the medical staff declined to openly assist us in our endeavours to reform the abuses of the institution, and that our "demands" were not "offensive" is sufficiently proved by the comments of the medical press, which noted at the time the moderate and careful way in which the claims of the profession were placed before the committee.

The vacancy alluded to by the dispensary staff occurred in 1891, before the serious abuses we have sought to remedy were so well understood as they now are, and in the recent election of a medical officer in September last no member of the reform party applied. Through our influence the appointments held in medical aid associations have been given up and already the Star Benefit Society, which is of the nature of a medical aid, and had been held by four members of our party, has been absorbed by the provident dispensary.

In conclusion we desire to emphasise the fact that we have twice before this invited the dispensary staff to submit the question in dispute between us to the judgment of an unprejudiced arbitrator with a view to the final settlement of our differences. On each occasion they have decidedly refused. We now once more, through your columns, renew our invitation. If, for the third time, they decline there is only one interpretation to be placed on their refusal. In this event we venture to submit that this matter of the provident dispensary, as carried on in Coventry at the present time, is one of such vital interest to the profession generally that it might well occupy the attention of a committee of inquiry, and we trust that you will see your way to obtaining this for us.—We are, etc.,

Milner Moore.
Charles Webb Iliffe.
F. M. Haig.
Edward Phillips.
F. Faulder White.
W. Richardson Rice.
F. L. Harman Brown.
A. Hawley.
T. A. B. Soden.
E. Irving Day.
Percy S. Overton.

Coventry, Nov. 14th.

*** This matter is, we think, well worth the attention of our readers. A perusal of the letter from the medical staff of the dispensary, published in the British Medical Journal of November 3rd, and of the letter printed above, will show that the essential question in dispute is this: Ought a provident dispensary to admit members at very low fees under a rule specifying that "the pecuniary position of the applicants is to be no bar to admission?" The allegations as to the "offensiveness" of the demands made by the party opposed to the dispensary, and all other personal questions, are of no importance to the discussion, and of no interest either to the profession or the public. As far as we can see at present, the dispensary authorities have put themselves wholly in the wrong; but we should be sorry to prejudge the question before they have had the opportunity of offering some more rational defence of their conduct than that contained in their former letter; and therefore we would earnestly urge their acceptance of the offer of a committee of inquiry—that is, to refer the whole subject to two, or at the most three, arbitrators—medical and lay—and agree to follow their decision.

MEDICAL NEWS.

Sir Walter Foster, M.P., will preside at the annual dinner of past and present students of the National Dental Hospital, to be held at the Holborn Restaurant on November 30th.

Medical Mayors.—Mr. Alderman Alfred Steele Perkins, surgeon, Exeter, was elected Mayor of Exeter on November 9th in succession to Mr. Alderman E. Domville, also a medical man.

Royal Infirmary, Newcastle-on-Tyne.—Mr. Ridley and Mr. Martin were elected assistant surgeons to the Royal Infirmary, Newcastle-on-Tyne, on November 15th. The post of Surgical Registrar becomes vacant in consequence of Mr. Martin's promotion.

The Alvarenga prize of the College of Physicians of Philadelphia for 1894 has been awarded to Dr. G. E. de Schweinitz of Philadelphia for his essay on Toxic Amblyopias. The next award of this prize, which is of the value of 180 dollars, will be made on July 14th, 1895.

The London County Council will receive a deputation o the Church Society for the Promotion of Kindness to Animals on November 29th, when a memorial will be presented praying for the institution of public abattoirs in place of the existing private slaughter houses.

It is stated in a *Times* telegram that the Canadian Government are strictly enforcing a regulation requiring all cattle imported to be subjected to injection of tuberculin. If the animals are found to react to the injection the owner is given the alternative of having them destroyed, or of returning them to the place from which they came.

Proposed Association of Assistants.—"An Assistant" writes to suggest the desirability of forming an association to defend the interests of persons holding the office of assistant or *locum tenens*. Such an association, he suggests, might include all persons holding junior or assistant appointments throughout the United Kingdom.

The New Glanders Order.—The new Glanders or Farcy Order issued by the Board of Agriculture revokes the Order of 1892, and confers on local authorities the following powers: (1) Compulsory power to slaughter diseased animals, subject to the owners being secured a minimum compensation, in the case of a horse of £2, and in the case of an ass or mule of 10s., leaving to local authorities the option of compensating up to a maximum not exceeding a quarter of the value of the animal; (2) power to slaughter suspected animals with the consent of owners, subject to payment of full as valu

compensation if on *post-mortem* examination the animals be found not to have been diseased; (3) power to destroy the carcasses at places other than knackers' yards.

Asylums and Politics.—Politics enter so largely into every detail of American life, that it is very difficult to disentangle the truth out of statements which may be but a shot in a "local campaign," but if a quarter of the charges brought by the *New York Herald* against the management of the asylums under the care of the Department of Charities and Correction be true, there is large scope for reformation. What, however, is plain is that, whether there or here, if the care of the sick and helpless and insane is to be undertaken by popularly-elected bodies, there is but small security that they will be properly treated, unless the care of sick be made a "plank" in party politics. The immense and inert mass of indifference on such matters among the electors tends to become an insurmountable buffer between temporary and evanescent popular indignation and that serene element of officialism which goes on for ever. Unless each voter will feel his responsibility, popular government gives little security for the good treatment of those who fall in the race.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to the Chairman of the Medical Board by December 13th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £150 per annum. Applications and testimonials to A. Forrest, Secretary before December 12th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Appointment for six months. Board, residence, and allowance for washing provided. Applications to the Secretary at the Office, 24, Finsbury Circus, E.C., by December 15th.

CLAYTON HOSPITAL AND WAKEFIELD PROVIDENT DISPENSARY.—House-Surgeon and Junior House-Surgeon; unmarried. Salary, £90 and £40 per annum respectively, with board, lodging, and washing. Applications to the Secretary for the former appointment by November 28th, and for the latter by December 1st.

CLOGHER UNION, Ballygawley Dispensary.—Medical Officer. Salary, £75 per annum, with £15 yearly as Medical Officer of Health, together with registration and vaccination fees. Applications to Mr. John Spear Gervan, Honorary Secretary, Stewart Arms, Ballygawley. Election will take place on November 27th.

DOVER HOSPITAL.—House-Surgeon; unmarried and doubly qualified. Salary, £100 per annum, with board and lodging. Applications to the Honorary Secretary, Mr. E. Elwin, 13, Castle Street, Dover, by November 27th.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon: must possess surgical qualification. Appointment for six months, but may be held by re-election for a further period of six months. Board, residence, and washing provided. No salary. Applications to the House-Governor by December 1st.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Junior House-Surgeon. Board, lodging, and laundry provided. Applications and testimonials to Lewis H. Glenton Kerr, Secretary, by November 26th.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to Joseph Smethurst, Secretary, by November 30th.

HACKNEY UNION.—District Medical Officer; doubly qualified. Salary, £80 per annum, with such extra fees as are allowed. Applications to J. Owen Parry, Clerk to the Guardians, Clerk's Office, Hackney Union, Sidney Road, Homerton, N.E., by November 27th.

HOSPITAL OF ST. PETER PORT, Guernsey.—Two qualified Surgeons (non-resident) for Hospital and Outdoor Poor. Salary, £50 per annum currency (vaccination included). Applications and testimonials to N. Ferguson, President Poor-law Board, by November 28th.

KENSINGTON DISPENSARY.—Honorary Medical Officer. Applications to the Honorary Secretary, Mr. Frederick Leach, 7, Stanford Road, Kensington Square, by November 30th.

KING'S COLLEGE, London.—Sambrooke Medical Registrarship. Applications to the Council by November 30th.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for the Fever Hospital at Monsall; doubly qualified, not less than 25 years of age. Salary, £250 per annum, with board and residence. Applications to the Chairman of the Board by December 15th.

NEW HOSPITAL FOR WOMEN, 144, Euston Road.—Female Resident Medical Officer; fully qualified. Applications to Margaret M. Bagster, Secretary, by November 28th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—House-Surgeon. Salary, £120 per annum, increasing £10 a year, at the discretion of the Committee. Applications and testimonials to R. Hordley, Secretary, before November 27th.

ROYAL BERKS HOSPITAL, Reading.—House-Physician, House-Surgeon, and Assistant Medical Officer. Salary, £60 per annum each for the first two appointments, with board and lodging. For the third appointment board and lodging will be provided, but no salary. Applications to the Secretary before December 11th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Three Members of the Court of Examiners; must be F.R.C.S. Applications to the Secretary, by December 5th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Appointment for six months. Salary at the rate of £50 per annum, with board and lodging. Applications to the Secretary by December 5th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, Strand, W.C.—Clinical Assistants. Applications and testimonials to T. Beattie Campbell, Secretary, before December 1st.

SHEFFIELD GENERAL DISPENSARY.—Assistant House-Surgeon; doubly qualified. Salary, £80 per annum, with board, lodging, and washing. Appointment for three years. Applications to the Medical Staff of the Sheffield General Infirmary to the care of the Secretary by December 8th.

WARNEFORD HOSPITAL, Leamington Spa.—House-Surgeon; single. Salary, £100 per annum, with board, lodging, and washing. Applications and testimonials to J. Warren, Secretary, before December 5th.

WEST KENT GENERAL HOSPITAL, Maidstone.—House-Surgeon, unmarried. Salary, £120 per annum, with board, furnished apartments, coal, gas, and attendance in the hospital. Applications to the Secretary by December 1st.

WESTERN DISPENSARY, Rochester Row, Westminster, S.W.—Four Attending Medical Officers, doubly qualified. Applications, with three original testimonials, to the Secretary by November 26th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Anæsthetist (Honorary and Non-Resident). Applications and testimonials to R. J. Gilbert, Secretary Superintendent, before December 12th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon; tenable for six months, board and lodging are provided. Applications and testimonials to R. J. Gilbert, Secretary Superintendent, before December 12th.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Physician; must be F. or M.R.C.P.Lond. Applications to the House Committee by November 27th.

MEDICAL APPOINTMENTS.

Boake, Mr., appointed Medical Officer of the East Flegg District of the East and West Flegg Incorporation.

Boden, J. S., L.R.C.P., M.R.C.S., appointed Assistant House-Accoucheur to King's College Hospital.

Bond, Dr., appointed Medical Officer of Health for Southwark.

Bradley, M. McWilliam, M.D.Glasg., L.R.C.P.Edin., appointed Medical Officer for the Jarrow (East) District of the South Shields Union.

Carson, Surgeon-Major W. P., M.B., I.M.S., appointed Port Surgeon at Aden, *vice* Surgeon-Major C. Monks.

Coles, Dr. Charles, appointed Medical Officer to the Leicester Dispensary, *vice* A. E. Hindle, L.R.C.P.Edin., L.F.P.S.Glasg., resigned.

Cooper, T. W. Astley, L.S.A., appointed House-Surgeon to King's College Hospital.

Crawfurd, Raymond, M.A.Oxon., M.B., B.Ch., M.R.C.P., appointed Assistant House-Physician to King's College Hospital.

Duffus, I. C. G., M.A.Aberd., M.B., C.M., appointed Medical Officer, under the Barony Parochial Board, for Springham and Possilpark District, Glasgow, *vice* Dr. Smith, deceased.

Fox, Edwards N., M.B.Vict., B.Ch., appointed Resident Medical Officer to the Manchester Hospital for Diseases of the Chest.

Gamgee, Leonard Parker, F.R.C.S.Eng., appointed Surgeon to the Children's Hospital, Birmingham.

Griffith, John, F.R.C.S., appointed Assistant Surgeon to the Royal Westminster Ophthalmic Hospital.

Jacob, E. L., B.A.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health to the Chertsey Rural Sanitary Authority.

Keiffenheim-Trubridge, L. W. A., M.B.Durh., appointed District Medical Officer and Medical Officer of the Workhouse of the Hoo Union.

Logan, Mr., appointed Medical Officer for the No. 2 (Measham) District of the Ashby Union, *vice* T. W. Kyle, M.D., deceased.

Macdonald, G. M., B.A.Cantab., M.R.C.S., L.R.C.P., appointed House-Surgeon to King's College Hospital.

Maclean, Ewan J., M.B., C.M.Edin., appointed Physician-Accoucheur to the St. Pancras and Northern Dispensary, *vice* A. E. Giles, M.D., M.R.C.P., resigned.

Mill, George Symers, M.B., C.M.Edin., appointed Honorary Surgeon to the Dewsbury Infirmary, *vice* John Shives, M.D., resigned.

Moon, Mr. Ernest F., appointed Assistant Medical Officer to the Derby Borough Lunatic Asylum, *vice* L. C. Bruce, M.B., C.M.Edin., resigned.

O'Sullivan, Patrick Thomas, M.B., Ch., B.A.O.R.U.I., appointed Extern Surgeon to the South Charitable Infirmary and County Hospital, Cork.

Philip, Andrew, M.B., C.M.Edin., appointed Junior House-Surgeon to the London Temperance Hospital, Hampstead Road, N.W.

Pitt, C. W., M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Malmesbury Town Council.

Ridley, Walter, M.B., M.S., F.R.C.S.Eng., appointed Assistant Surgeon to the Royal Infirmary, Newcastle-on-Tyne.

Royden, W., M.R.C.S.Eng, appointed Medical Officer to the Workhouse of the East and West Flegg Incorporation.

Sprawson, F. C., M.R.C.S., L.R.C.P., appointed House-Surgeon to King's College Hospital.

Toogood, Frederick Sherman, M.D.Lond., D.P.H., appointed Medical Superintendent of the New Infirmary at Lewisham.

Wace, C., L.R.C.P., M.R.C.S., appointed House-Physician to King's College Hospital.

Wadd, H. Randall, M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Physician to the Great Northern Central Hospital.

Webb, T. Curtis, B.A.Cantab., M.R.C.S., L.R.C.P., appointed House-Accoucheur to King's College Hospital.

Wells, S. Russell, M.B., B.Sc.Lond., appointed Assistant Curator to St. George's Hospital.

DIARY FOR NEXT WEEK.

MONDAY.

London Post-Graduate Course, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. W. Lang: Iritis. Bacteriological Laboratory, King's College, W.C., 3 to 5 P.M.—Lecture: Tetanus, Rabies, and Cholera. Practical Work: Examination of Comma Bacilli—Chemical and other Tests. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Edward Woakes: Tinnitus and Vertigo.

Medical Society of London, 8.30 P.M.—Dr. C. E. Beevor and Mr. C. A. Ballance: A Case of Subcortical Cerebral Tumour Treated by Operation. (Patient will be shown.) Mr. J. D. Malcolm: Illustrations of Some Modes of Death from Ovariotomy.

TUESDAY.

London Post-Graduate Course, Bethlem Royal Hospital, 2 P.M.—Dr. Craig: Insanity with Cardiac Disease, Phthisis, Gout, etc.

The Clinical Museum, 211, Great Portland Street.—Open at 2, Lecture at 4.

Royal Medical and Chirurgical Society, 8.30 P.M.—Mr. Colin Campbell (Saddleworth): The Treatment of Respiratory Affections by means of Large Medicinal Injections through the Larynx. Communicated by Mr. Walter Whitehead. Mr. W. Arbuthnot Lane: A Year's Experience of the Use of Sulphur in Surgery.

WEDNESDAY.

London Post-Graduate Course, Hospital for Consumption, Brompton, 4 P.M.—Dr. C. Y. Biss: Cases of Special Interest. Royal London Ophthalmic Hospital, 8 P.M.—Mr. W. Lang: Iritis.

Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Dr. Turner: Neuralgia of Limbs.

National Hospital for the Paralysed and Epileptic, Queen Square, 3 P.M.—Lecture by Dr. Beevor.

Hunterian Society, 8.30 P.M.—The President (Mr. C. J. Symonds): The Surgical Aspects of Typhlitis. Dr. Arthur Davies: Photographs illustrating the Thyroid Gland Treatment.

THURSDAY.

London Post-Graduate Course, National Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Mr. Victor Horsley, F.R.S.: Surgery of the Nervous System. Hospital for Sick Children, Great Ormond Street, 3.30 P.M.—Dr. Lubbock: Clinical Lecture. Central London Sick Asylum, Cleveland Street, W., 5.30 P.M.—Mr. John Hopkins: Cases in the Wards.

The Sanitary Institute, Parkes Museum, Margaret Street, W., 8 P.M.—Dr. R. M. Simon: Workers in Copper, Zinc, Brass, and Tin.

FRIDAY.

London Post-Graduate Course, Hospital for Consumption, Brompton, 4 P.M.—Dr. C. Y. Biss: Cases of Special Interest.

SATURDAY.

London Post-Graduate Course, Bethlem Royal Hospital, 11 A.M.—Dr. Percy Smith: Lunacy Law.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

Batterham.—On November 18th, at Grand Parade, St. Leonards-on-Sea, the wife of J. W. Batterham, M.B., F.R.C.S., of a son.

Ferguson.—On November 20th, at Lozells Road, Birmingham, the wife of Surgeon-Major J. E. Ferguson, of a son.

MARRIAGES.

Beveridge—Strachan.—At St. James' Episcopal Church, Dollar, on the 14th inst., by the Rev. Henry Maskew, Arthur Beveridge, M.B., C.M., Lochinver, Sutherlandshire, youngest son of James S. Beveridge, F.R.C.S., M.R.C.P., to Edith, eldest daughter of John Strachan, M.D., Dollar.

Millar—Mackay.—At 39, Scotland Street, Edinburgh, on the 16th inst., by the Rev. Andrew Thomson, D.D., William Millar, M.B., C.M., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glas., Stamford Bridge, York, to Jessie Bews, daughter of the late William H. Mackay, Edinburgh.

DEATH.

Fraser.—At 21, Chalmers Street, Edinburgh, on the 14th inst., John Fraser, M.D., C.B., Surgeon-General Army Medical Department, and Honorary Physician to the Queen, aged 75 years.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

Cancer, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. F. S., 2.

Central London Ophthalmic. *Operation Days.*—Daily, 2.

Charing Cross. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

Chelsea Hospital for Women. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. F., 2.

East London Hospital for Children. *Operation Day.*—F., 2.

Great Northern Central. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Ear, Tu. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

Guy's. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—Ophthalmic, M. Th., 1.30; Tu. F., 1.30.

Hospital for Women, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

King's College. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—M. F. S., 2.

London. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

London Temperance Hospital. *Hours of Attendance.*—Medical, M. Tu. F. 2; Surgical, M. Th., 2. *Operation Days.*—M. Th., 4.30.

Metropolitan. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2. *Operation Day.*—F., 9.

Middlesex. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1.30, S., 2. (Obstetrical), Th., 2.

National Orthopædic. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

North-West London. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

Royal Eye Hospital, Southwark. *Hours of Attendance.*—Daily, 2. *Operation Days.*—Daily.

Royal Free. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 2; Eye, M. F., 9; Dental, Th., 9. [illegible] W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases [illegible]

Royal London Ophthalmic. *Hours of Attendance.*—Daily, 9. *Operation* [illegible]

Royal Orthopædic. *Hours of Attendance.*—Daily, 1. *Operation Day.*—[illegible]

Royal Westminster Ophthalmic. *Hours of Attendance.*—Daily, 1. [illegible] Daily.

St. Bartholomew's. [illegible]s of Attendance.—Medical and Surgical, daily, [illegible] Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., [illegible] L[illegible] Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. [illegible] Tu. Th., 2.

St. George's. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., [illegible] Th., 2.30; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., [illegible]; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

St. Mark's. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, S., 3; females, W., 9.45. *Operation Days.*—M., 2., Tu. 2.30.

St. Mary's. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultation [illegible] M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 2.

St. Peter's. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 5, Th., 2, F. (Women and Children), 2, S., 4. *Operation Days.*—W. and F., 2.

St. Thomas's. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), M., 2.30, F., 2; (Gynæcologi[illegible]

Samaritan Free for Women and Children. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

Throat, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., [illegible]

University [illegible]—Medical and Surgical, daily, [illegible] Eye, M. Th., 2; Ear, M. Th., 9; [illegible]. M. Th., 9; Dental, W., 9.30; [illegible] W. [illegible]

West London. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. [illegible]

Westminster. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, Tu. F., 9.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Day.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

DR. PERCY NEWELL (Crowborough, via Tunbridge Wells) asks for information as to milk sterilisers—which is the best kind, and where obtainable?

A. P. S. asks by what process was the body of the late Czar embalmed and how long the body so treated would remain recognisable.

MEMBER B. M. A. writes: I have a patient, aged 45, who has been operated on for piles some years ago; since then he has suffered from irritation about the anus. Most applications give temporary relief. I would be glad to hear of any remedy likely to give permanent relief.

THE NEW PHARMACY.

A GENERAL PRACTITIONER will thank "An Old Fogey but not a Fossil," who writes in the BRITISH MEDICAL JOURNAL of November 3rd on "The New Pharmacy" for the name of the chemists who supply his drugs.

WELSBACH BURNERS.

M.R.C.P. writes: In reply to "Pensioner M.D." I tried several Welsbach burners. One or two only in my hands gave a brilliant effect like that of the electric light, but their fragile "mantles" were soon destroyed. On inquiring in a shop where they appeared to great advantage, I was informed that they were regularly kept in order by the firm who supplied them.

COCAINE IN TOOTH EXTRACTION.

G. M. writes: I shall be glad to be informed, in reference to the use of cocaine in dental surgery, (1) the quantity required to be injected for the extraction of a single tooth; (2) the time required to produce anæsthesia; (3) the maximum number of teeth that can be extracted at one operation.

CLINE'S SPLINT.

CYMRO writes: Will any member kindly tell me whether on the inside or outside of the leg should be placed that section of Cline's splints having a footpiece? For a quarter of a century I have acted in one way which to my mind is the rational, but recently I was corrected by a man "not long through the mill." The surgical works I have do not definitely say, and I am anxious for an authority on the subject.

PRURITUS AFTER ERYSIPELAS.

MEDICO writes: I have at present under my treatment a lady suffering from chronic ulceration of leg (hereditary). Erysipelas set in some weeks ago, but subsided under treatment. She suffers, particularly at night, from intense itching, which has resisted all treatment. Perhaps some of your readers would kindly suggest a remedy.

BOOKS FOR THE M.D. BRUX.

H. L. H. writes: Would any of your readers who have been up for the M.D. degree of Brussels be so good as to tell me, either privately or through the BRITISH MEDICAL JOURNAL, what are the best books on all the subjects to read for the examination? I am a busy general practitioner, and have no time to read larger works than necessary. Any information will be gratefully received.

THE CLIMATE OF CEYLON.

DEVON writes: A patient, aged 60, the subject of chronic phthisis, is in a fairly good state of health and able to take a considerable amount of exercise, he suffers a good deal from winter cough when in England. He is desirous of spending the remainder of his life in Ceylon; perhaps some of your numerous readers could tell me if the climate in the neighbourhood of Kandy is suitable for such a case.

**** The mean temperature at Kandy is 75.4° F., the rainfall is moderate, the population appears healthy, and malarious affections are neither common nor severe. Nuwara Eliya—6,000 feet above the sea—is easily accessible from Kandy, it is much cooler, 57.6° F. being the average temperature. Probably the former would suit our correspondent's patient better than the latter. Our correspondent ought to consult Davidson's *Geographical Pathology*, vol. i, p. 465, for full details about the climate and pathology of Ceylon.

ANSWERS.

IN reply to "Anxious Enquirer's" query, published on November 17th, Dr. W. Lattey states that the case may be prostatic; prostatic secretion causes the urine to be frothy.

MICROPHONE STETHOSCOPE.

DR. W. LATTEY (Warwickshire), in reply to "W. G.," writes: I obtained an india-rubber tympanum from Messrs. Maw for my binaural stethoscope, similar to what is used on Sir Andrew Clark's single tube, and found a considerable increase in its acoustic powers. I consider Sir Andrew Clark's to be one of the best stethoscopes for general purposes.

PARTNERSHIP ARRANGEMENTS.

W. R. H.—So far as can be gathered from our correspondent's statement it would appear that there is: 1st, a dissolution of partnership; 2ndly, admission of a new partner (3 parties). Each of these is a distinct transaction, and in such case each party should pay his own solicitor's costs.

LATE PREGNANCY.

DR. A. CORDES, M.R.C.P. Lond. (Geneva) writes: With regard to this subject mentioned in the BRITISH MEDICAL JOURNAL of November 10th, page 1090, I may say that R. and F. Barnes, in their *System of Obstetrics*, give a well authenticated case of pregnancy at 55 (Davis Hertford, *London Med. Gazette*, vol. xxxix). Another case will be found in the *Gazette de Gynécologie*, 1891, page 241. The woman was 59 years old. She weaned her child the day she was 60 years old.

THE NEW PHARMACY.

IN reply to the inquiry of a correspondent as to whether liquid prescriptions can be reduced to a dry state and compressed without injury, it may be stated that there is no difficulty in accomplishing this with tincture and fluid or solid extracts, also that tar, turpentine, and essential and other oils may be made into tabloids by mixing the liquid with a powder and compressing. The tabloid form would be unsuitable, however, for liquid preparations of a very volatile nature, as ammonia, chloroform, etc. By examining any of the lists issued by the manufacturers of compressed drugs, our correspondent will find that the variety is so great as practically to enable the physician to meet almost any indication, with the above suggested exceptions.

LIFE ASSURANCE AND MEDICAL AID.

H. DE B. D.—Our correspondent's views as to the character of medical aid associations are no doubt correct, but he should not forget that the London and Manchester Assurance Society differs in some important points very considerably from these former associations. As has been frequently pointed out the latter society is a life assurance society, which has attached to it a medical aid department for the use of its policy holders only, and none can avail themselves of this department without first taking out a life policy. This alone would serve to differentiate the society from those referred to by Dr. Martin. It is to be regretted that the rate of remuneration to the medical referees is so low, but in London at least the London and Manchester Assurance Society would seem to pay the ordinary club rate, that is, 1s. per quarter per member.

NOTES, LETTERS, Etc.

DIPHTHERIA ANTITOXIN SERUM.

MESSRS. BURROUGHS AND WELLCOME request us to state that they expect to receive a supply of the diphtheria antitoxin serum during the course of next week.

EMIN PASHA.

AT the last meeting of the Zoological Society of London, the President, Sir W. H. Flower, read a letter addressed to him by the late Emin Pasha, containing a diary made during the last part of his journey towards the Congo. The document had been taken from Arabs on the Upper Congo, by officers of the Congo Free State.

LEMON JUICE AS A HÆMOSTATIC.

DR. R. NEALE (Boundary Road, N.W.) writes: A glance at Section 146: 4, of the *Medical Digest* will show that in the BRITISH MEDICAL JOURNAL of 1888 the injection of lemon juice up the nostrils was stated to be specific, so that Mr. Burton (p. 1048) is not original in his observation. The asserted value of vinegar in various hæmorrhages will be traced by a reference to Section 448: 4, of the work mentioned above.

SCARLATINA AND MEASLES CO-EXISTING IN THE SAME PERSON.

DR. J. JOHNSTON (Honorary Surgeon to the Bolton Infirmary) writes: Dr. Ferguson's case, reported in the BRITISH MEDICAL JOURNAL for October 20th, recalls a precisely similar case which occurred in my practice. On January 7th, 1893, V. M., a boy 7 years old, had all the symptoms of scarlet fever, including a well-developed and uniformly distributed rash, which was followed by commencing desquamation on January 12th. On January 15th and 16th he had severe coryza and cough, and on January 17th his body was covered all over with the rash of measles, which stayed out three days and then declined. The subsequent desquamation was very profuse and rapid. It is curious to note that the intervals between the eruptions in this case and in Dr. Ferguson's were exactly similar—namely, ten days.

CONCURRENT VACCINATION AND MEASLES.

DR. J. WALTERS (Reigate) writes: I agree with "Durham" that the rash in the case described by Dr. Garson was probably one that frequently follows vaccination. Except the rash there is no other resemblance to measles. I have seen many such cases, especially since I have used calf lymph pretty freely.

MEDICAL DEFENCE UNION (LIMITED).

DR. GEO. GRANVILLE BANTOCK (Honorary Treasurer) writes: Kindly allow me, through the medium of the BRITISH MEDICAL JOURNAL, publicly to acknowledge on behalf of the Medical Defence Union (Limited) the receipt of £14 3s. 10d. towards its funds from the South Wales and Monmouth Branch of the British Medical Association per Dr. Hancocke Wathen, and to express the thanks of the executive of the Union to the members of the Branch for their generous contribution.

MEDICAL MONKS IN NEW YORK.

AN Order of Medical Monks has, according to the *Medical Record*, been founded in New York, in connection with the Episcopal Church. The object of the Order is expressed by the following text, taken from the Gospel of St. Luke (x—9), which it has chosen as its motto: "Heal the the sick and say unto them, The Kingdom of God has come nigh unto them." The Order will be connected strictly with the Church, and the members will devote their time to the poor and sick of the parish. The only compensation which they will receive will be what the parishioners can afford to give them. The members of the Order will rank as deacons of the Church. There are at present two novices, one of whom is a medical student, the other a trained nurse. No information is vouchsafed as to the number, professional status, etc., of the professed "monks."

"A WARNING" HEEDED.

A CORRESPONDENT at Leeds informs us that the career of the individual of whom a description was published in the BRITISH MEDICAL JOURNAL of November 10th, under the heading "A Warning," has been brought to a temporary close. Our correspondent states that he recognised him from the description published in the JOURNAL, and immediately gave information to the police. He had only been in Leeds a few weeks, but had already issued the prospectus of the Leeds Medical and Mercantile Society. He not only, according to the report before us, undertook to collect accounts, but also advertised that he had a thousand pounds to lend on good security on easy terms.

INCOME TAX ASSESSMENTS.

D. M. writes: With reference to "M.D.'s" letter in the BRITISH MEDICAL JOURNAL of November 10th, in law the actual amount expended (provided the horse and carriage are used exclusively for professional purposes) is allowable by the Commissioners. The extent of practice and amount of receipts determine in a large measure the amount of the allowance, which in England lies absolutely with the Commissioners. The law only allows an appeal from the Commissioners Court, on a point of law to the Superior Courts in London, but in Ireland an appeal can be had to the Recorder or county court judge. The allowance to an Irish dispensary doctor for horse is £30. Personally, I always elect to be assessed by the Special Commissioners under a number or letter, the General Commissioners being frequently local men, which makes the tax still more obnoxious and inquisitorial. I think the only course now would be for "M.D." to appeal again at the end of the year to the Special Commissioners.

LOWER MOLAR ABSCESS.

MR. ROBERT WILKINSON (Aberley Hill, S.E.) writes: The importance of this condition and its dangerous sequelæ, as emphasised by Dr. Maclaren in the BRITISH MEDICAL JOURNAL of October 20th will be acknowledged by most members of the profession who have had much surgical experience.

I well remember a case in my own practice in which, owing to the obstinacy of the patient, a fatal result nearly ensued. The patient, a young girl aged 14, came to me with a small lower alveolar abscess in connection with a carious second molar. Extraction was advised, but, as is very common in these cases, the advice was not accepted, and poulticing preferred. The patient became rapidly worse, and when I was again consulted the jaw had become fixed from inflammatory infiltration, pus had burrowed along the intermuscular spaces in the neck, septic symptoms were marked, and strength was failing from want of food and sleep. After urgently advising operation consent was at last obtained; the jaw was opened by graduated cork pressure, the molar extracted, and an incision made over the external surface of the abscess by Hilton's method, and the patient quickly recovered.

These cases, as we know, are very common, and I cannot help thinking the more I see of these cases that it is the duty of all surgeons to warn patients of the fatal danger of going about with a mouthful of "bad teeth;" it is in a sense a veritable "powder magazine."

THE PRODROMAL RASH OF SMALL-POX.

DR. ARTHUR H. REINHARDT (Dulwich, S.E.) writes: On February 5th I was called to see Mrs. A., and found her suffering from a fairly severe attack of small-pox. There was a large crop of papules, becoming vesicular, spread over trunk and limbs. She progressed well, being nursed by her sister and her mother; the latter had well-marked scars of an old attack; the sister refused vaccination and had not previously had the disease. This sister asked me to look at her thigh on February 10th. She did not complain of feeling ill, nor out of sorts, beyond having a headache, but simply of a rash accompanied by severe tingling and itching. I found a most acute eruption of herpes, exactly and completely covering Scarpa's triangle, consisting of closely-set vesicles with very acutely-inflamed bases, which were confluent. There was no erythema or other rash on the abdomen or elsewhere. The temperature was 99°, and beyond the headache there were no further symptoms. I had her put to bed, and, as I expected, on the second day from that (February 12th) she developed the variola papules. I considered this case worth recording on account of the very unusual and severe prodromal rash, its strict localisation, and the absence of much contemporary constitutional disturbance, and, lastly, on account of its being followed by an attack of small-pox of ordinary severity only, though the situation of the rash is that usually occupied by the hæmorrhagic varieties.

OIL STOVES.

DR. THOMAS FAGGE writes from Monte Carlo, stating that he was never able to burn oil satisfactorily for warming purposes until he used a proper glass chimney as in an ordinary duplex lamp. He now finds that the most modern oil stoves are in fact constructed as he describes. Of course this is so. The new stoves consist of a good oil lamp, commonly with a circular wick, placed within some ornamental structure of metal or faience. They are as easily kept in order as a lamp. The object of the outer ornamental casing is partly to protect the lamp from being upset or injured, and partly to diffuse the heat by breaking the upward current of the hot air towards the ceiling. The lower part of this casing should be as open as possible to allow direct radiation of heat from the flame; the upper part and top should be comparatively closed in, so as to catch as much of the heat as possible before it flies up to the ceiling, where it is lost for all useful purposes. But for a certain lack of elegance the most useful top for such a stove, in a breakfast room for example, would be a flat plate on which various comforts for the inner man could be kept warm. Dr. Fagge says that he is able in half an hour to raise the temperature of an ordinary room to 65° or 70° in mid-winter, the stove in this case consisting of three duplex burners fitted to a large square oil reservoir, and the whole enclosed in a tin box, one side of which is of corrugated glass.

MEDICAL PRACTICE IN THE TRANSVAAL

BY a resolution of the Executive Council passed in April, and since ratified by the Volksraad, every medical practitioner, dentist, and apothecary must be registered and licensed before he can be permitted to practise within the limits of the South African Republic. The section of the Act which applies is stringent, and runs as follows: "It shall not be allowed to any person in this Republic to have himself advertised as Medical Practitioner, Surgeon, Dentist, Apothecary, Chemist or Druggist unless his name appears in the Register of the Medical Board and his admission fee has been paid. Contravention of this rule will be punished with a fine of from £10 to £100, or in case of non-payment with imprisonment with or without hard labour for a period of from one to six months." Also, "Any admitted Medical Doctor, Surgeon or Dentist, Apothecary, Chemist or Druggist shall pay the following licence during the time they carry on their profession within the Republic: Doctor for a year £25, for nine months £20, for six months £15, and for three months £10; Apothecaries, for a year £10, for nine months £8, for six months £6, and for three months £5."

THE EDUCATION OF THE DEAF.

DR. SYMES THOMPSON (Cavendish Square) writes: As the education of the deaf has at last, after many years of patient effort, been recognised as a national duty, and all school authorities are required to make the arrangements that are necessary to carry out the intentions and provisions of the Act of 1893, I venture to think that it is of urgent importance that all who have worked so hard in the past to bring about the change now happily accomplished should not now relax their efforts, but should exert their utmost influence to ensure that all steps taken under the Act shall be of the greatest possible benefit to the deaf. One cannot be mistaken in assuming that all interested in this important question will be unanimous in the demand that all teaching given to the deaf in the future shall be the very best of its kind attainable. It cannot, unfortunately, be denied that up to the present time the position of a teacher of the deaf has been considered in this country of less importance than that of one who teaches ordinary children. Those who have studied the question know, though the public does not yet, that the qualifications required in a teacher of the deaf are not only as high as, but in some respects far higher than, those necessary for a teacher of hearing children; and this fact will be more generally recognised as the influence of the efficient Government inspection, which will shortly come into force, begins to be felt. I do not anticipate that there will be any, even remote, interference on the part of the Government with the position or prospects of anyone now engaged in the education of the deaf, but it may be taken as certain that at no very distant date the Education Department will, as a preliminary to a grant in aid of any school, insist that recognised teachers should have undergone: first, the training necessary to qualify as a teacher in an ordinary school, and, in addition, a year's special instruction at a training college for teachers of the deaf. I therefore trust that all employers of teachers of the deaf will, in order to meet the present emergency, not only encourage all their *employés* to embrace every opportunity of improving their knowledge of, and practice in, special teaching, but that they will, whenever possible, make it easy for them to do so by financial and other assistance. And I further earnestly appeal to all school authorities, heads of institutions, etc., to reconsider the status and emoluments of their special teachers in a liberal spirit, and to impress upon the Government the justice of making an increased grant to schools where such teachers are employed, so that eventually the most capable instructors may be attracted into what ought to be one of the highest branches of the educational profession.

MENTAL DISTRESS AS A CAUSE OF GRANULAR KIDNEY.

MR. FRANK ELVY, M.R.C.S. (Eastbourne), writes: We have heard much of late of the influence of mental distress as a cause of granular kidney. Before accepting this as an established fact in clinical medicine, it might be well to consider: (1) That few of our race have reached middle age exempt from years of mental strain and anxiety; hence it is, perhaps, that another has been added to the list of diseases (including cancer and insanity) to whose etiology mental anxiety has been quoted as a factor. (2) That the amount of nervous tension may depend more upon the temperament and disposition of the individual than upon the actual circumstances of his life, which are often considered to be the exciting cause.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) Dr. P. S. Abraham, London; Mr. R. L. Abraham, London; Anxious Inquirer; Alpha; A. M.; Mr. H. W. Allingham, London; Dr. T. McC. Anderson, Glasgow; Professor W. Anderson, London; Dr. W. L. Andriezen, Wakefield; Dr. L. Atthill, Dublin; Mr. A. W. Aird, Newmilns. **(B)** Mr. T. M. Butler, Guildford; Dr. R. W. Burnet, London; Messrs. R. Billinge and Co., London; Mr. L. A. Bidwell, London; Dr. T. L. Brunton, London; Dr. J. R. N. Brennan, Newton Heath; Brig.-Surg.-Lt.-Col.; Dr. J. M. Booth, Aberdeen; Dr. G. Buchanan, Glasgow; Mr. C. J. Bond, Leicester; T. Bond, M.B., London; Mr. H. T. Butlin, London; S. H. Burton, M.B., Norwich; Dr. H. C. Bastian, London; Mr. A. A. Bones, Coventry; Mr. A. T. Beatty, London; Dr. F. W. Bennett, Leicester; Dr. H. Bingham, Belfast; Dr. C. E. Beevor, London; Mr. G. B. Browne, London; Dr. A. Bronner, Bradford; Mr. P. Bush, Clifton; Bournemouth Medical Society, Secretary of, Bournemouth. **(C)** Dr. E. Collins, London; Dr. M. Charteris, Glasgow; Dr. J. Cagney, London; Mr. A. Cooper, London; C. W. Cathcart, M.B., Edinburgh; Cymro; Mr. B. C. Clarke, London; Dr. W. Collingridge, London; Dr. H. Campbell, London; Mr. E. T. Collins, Cardiff; Dr. J. M. Clarke, Clifton; Dr. H. J. Campbell, London; Mr. G. A. Critchett, London; Dr. T. K. Clarke, Huddersfield; Dr. W. Collier, Oxford; Dr. H. Collier, Yarmouth; Dr. W. A. Carline, Lincoln; Dr. W. M. Campbell, Liverpool; Mr. J. C. Coates, Clifton; Mr. B. F. C. Costelloe, London; Mr. G. Coombes, Southminster. **(D)** G. H. Doman, M.B., Bolton-le-Moors; Mr. C. T. Dent, London; Devon; Mr. W. E. Dawson, Walton-on-the-Naze; Disgusted; Delta; Dr. C. Dukes, Rugby; D. M.; Miss D'Orsey, Teddington; Dr. A. Douglas, Buckfield; Dr. W. R. Dakin, London; J. C. G. Duffus, M.B., Glasgow; Dr. G. H. R. Dabbs, Shanklin; Mr. E. Duke, St. Leonards-on-Sea; Mr. A. Doran, London. **(E)** Mr. F. S. Edwards, London; Dr. W. Ewart, London; Mr. E. Edkine, Parkstone E. Edwards, M.B., Manchester. **(F)** W. Fligg, M.B., Taunton; Dr. J. Fishbourne, Sheffield; Dr. T. H. Fagge, Monte Carlo; Mrs. M. J. Fleischman, Haarlem; Mr. G. P. Field, London; Mr. C. E. S. Fleming, Freshford; Messrs. C. W. Faulkner, London; Dr. A. Foxwell, Birmingham; Dr. C. Forsythe, Coleraine; Mr. R. Faulkner, London. **(G)** Mr. L. P. Gamgee, Birmingham; Dr. T. W. Griffith, Leeds; G. M.; G. Y. P.; Dr. J. Glaister, Glasgow; Mr. J. Griffith, London; G. M.; L. Guthrie, M.B., London; J. Gardner, M.B., Oldham; Mr. G. Griffith, Milford Haven; Messrs. Charles Griffin and Co., London; Mr. T. M. Giffen, Burnley. **(H)** Mr. W. Habgood, Battle; H. S. H.; Mr. F. A. Hill, Reading; Dr. W. P. Herringham, London; Mr. G. Hartridge, London; Mr. H. Hope-Hoskins, London; Mr. W. F. Haslam, Birmingham; Dr. G. Harley, London; Dr. M. Handfield-Jones, London; Dr. A. Haig, London; Dr. D. Hardie, Brisbane; Mr. A. C. Houston, Settle; Dr. P. Horrocks, London; M. L. Hepburn, M.B., London; Mr. R. Harrison, London. **(I)** Inquirer; Dr. R. A. Ironside, London. **(J)** Mr. J. E. M. Jenkins, Hadleigh. **(K)** Dr. T. N. Kelynack, Manchester; Mr. R. H. E. Knaggs, Port of Spain; Dr. P. King, Bath; Dr. James Kerr, Bradford. **(L)** Dr. R. Lee, London; L.R.C.P.; Mr. C. Legg, Bexhill; W. H. Lang, M.B., New South Wales; Dr. Leet, Liverpool. **(M)** Sir W. J. Moore, London; Dr. E. J. Maclean, London; Dr. McNaught, Waterfoot; Dr. E. D. Mapother, London; M.R.C.P.; Dr. C. A. Mac-Munn, Wolverhampton; Dr. P. McBride, Edinburgh; Dr. C. M. Moullin, London; Mr. J. Marshall, St. Petersburg; Member; M. O. H.; M.B., M.A.; Medical Officer; Mickleton; W. G. Macpherson, M.B., Bothwell; Mr. G. H. Makins, London; Mr. H. Marsh, London; S. Mills, M.B., Ossett; Dr. G. Macdonald, London; Mr. M. Morris, London; Mr. P. Morris, Colwyn; Dr. W. J. Mickle, London; Dr. J. Murphy, Sunderland; Dr. C. A. Mercier, London; Member, M.B., M.A.; W. Millar, M.B., York; Mr. R. B. Macbean, Lancaster; Mr. E. H. Moore, Falmouth; Dr. Patrick Manson, London. **(N)** Dr. R. Neale, London; Nautilus; Mr. P. Newell, Crowborough; Mr. Newland-Pedley, London. **(O)** Mr. H. H. Orr, London; Mr. Openshaw, London. **(P)** B. C. Powell, M.B., Roscrea; Mr. G. C. Peachey, Wantage; A. Philip, M.B., London; Dr. G. V. Poore, London; F. L. Pochin, M.B., London; Mr. J. Priestley, London; Mr. C. Penruddocke, Bath; Dr. Pollard, Blackburn; Professor J. Penberthy, London; Sir James Paget, London. **(R)** R. J.; Dr. B. M. H. Rogers, Clifton; Mr. E. J. Rambotham, London; R. H. S; Dr. E. S. Reynolds, Manchester; Mr. A. Ravenhill, London; Dr. F. T. Roberts, London; R. H. S.; Mr. J. Rogerson, London; Dr. H. B. Robinson, London; Mr. S. K. F. Ralph, Margate; Mr. R. Rhodes, Northenden; Mr. C. Roberts, Eastbourne. **(S)** Mr. A. P. Stevenson, Nottingham; W. R. Smith, M.B., Rhyl; J. R. Steen, M.B., London; Spero Meliora; Mr. J. Startin, London; Sanitas; Sir William Stokes, Dublin; S. S. Sprigge, M.B., London; Sick Boy; J. B. Story, M.B., Dublin; Mr. R. Sturge, Boston; Mr. N. 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Will, Aberdeen; Mr. R. W. Welbank, Banbury; Mr. H. Whitehead, London; Mr. J. C. Woods, Preston; S. R. Wells, M.B., London: etc.

BOOKS, ETC., RECEIVED.

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On the Principles and Exact Conditions to be observed in the Artificial Feeding of Infants, the Properties of Artificial Foods, and the Diseases which arise from Faults of Diet in Early Life. By Dr. W. B. Cheadle. Third Edition. London: Smith, Elder, and Co. 1894. 5s.

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In the Heart of the Rockies: A Story of Adventure in Colorado. By G. A. Henty. London: Blackie and Son. 1895. 5s.

Olaf, the Glorious: A Historical Story of the Viking Age. By Robert Leighton. London: Blackie and Son. 1895. 5s.

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*** In forwarding books the publishers are requested to state the selling prices.

A CLINICAL LECTURE
ON
SILVER AND SYPHILIS.

Delivered at the National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury.

By W. R. GOWERS, M.D., F.R.S.,
Physician to the Hospital; and Consulting Physician to University College Hospital.

GENTLEMEN.—It is the duty of a clinical teacher to bring out of his treasury things old and new. He is constantly under some temptation to present ideas that are new because they possess more intrinsic interest, although it is generally more useful to give those that are old. Truth and novelty are by no means necessarily associated, although a familiar phrase which suggests mutual exclusiveness goes too far. Nevertheless, it is well for a teacher, if he can, to resist the attraction of the new, and it is always unwise for him to hesitate to inculcate that which is old merely because it is old. Years ago, when I was engaged in giving the elements of clinical instruction to students who were beginning their practical studies, I used to paraphrase the saying of Demosthenes regarding oratory and maintain that the first thing in learning is repetition, the second repetition, and the third repetition. A teacher should remember that to neglect to repeat is his unpardonable sin. There is an unpardonable sin of the student: in fact, it was the remembrance of this that made me use the term. It is not my own idea. Years ago Sir William Jenner used to say to us (and whatever Sir William Jenner said may be *a priori* regarded as certain) that the unpardonable sin of the student was to say "Yes" when he ought to say "No,"—to say that he heard a thing, that he felt a thing, that he understood a thing—when he did not.

For you this lesson is probably useless, because you have all passed the stage at which it is needed. But it may not be too late to remember that it is a mistake to shrink from unattractive repetition. Consider—what are we all learning, or should be learning, on this point, from our great Teacher? What does Disease impress on us? Disease is for ever repeating to us the same things. All the more important laws and rules are ever being pressed upon us, in varied tone, by varied emphasis, or in varying language, but ever repeated. No repetition should be, or will be, useless to us if we take the requisite pains, and are not deterred by weariness from striving to discern the lessons that seem the same, but present always an important difference; and no repetition of fact to us by disease is ever superfluous, unless we will to make it so.

Yet the teacher is, as a rule, compelled to take as a subject for his instruction some fresh illustration of disease. It is seldom that he has an opportunity of taking that which is old. When he can it is well for him to do so, for more than one reason. All old cases afford an opportunity of observing the changes in disease, and the effects that time permits. The question which ever presses on us when we meet with disease in its active stage is this: What will be the future: what will be the result? We can only learn to look forward by taking every opportunity of looking back. We cannot combine in our observation the future and the present. Our own experience and that of others may enable us to guess something of the future from the present; but every personal observation that increases our ability to forecast, everything that helps to make the guess more than a guess, is important. This help can only be obtained when the future has changed to the present. We can realise the past, and discern its relation to the future when that which was future has come. We cannot, with the same confidence, realise the unknown future and apply it to the present. Some of you may remember the lines which come to my mind—lines by a poet who is almost forgotten now, although his name should live in the memory of medical readers. Sidney Dobell wrote in one of his sonnets, in which sadness touches softly:

> And when the now is then,
> And when the then is now.

If the "then" is in the past, we can, by fancy, make it "now," the "then" is clearly seen, for it is now a fact, and we can thus gain some secure experience in prognosis.

I show you to-day a patient who presents an opportunity of illustrating the present by the past, and by a past in itself most instructive, such as seldom occurs to a teacher. I imagine it is almost a unique opportunity for a teacher to be able to take, as a subject, a patient who has been under his observation for a quarter of a century. That is the case here, and I am glad to have so unusual an opportunity in beginning again the series of our Wednesday lectures. It is nearly, if not quite, twenty-five years since this patient was under treatment in the wards of the hospital in the acute stage of his affection.

Did you notice him as he came into the room? If you did not, you should have done so. One of the habits to be acquired, and never omitted, is to observe a patient as he enters the room: to note his aspect and his gait. If you did so, you would have seen that he seemed lame, and you may have been struck by that which must strike you now—an unusual tint of his face. Those two things are important. They are, indeed, connected, but in a way that is rather curious than instructive. It is, indeed, so curious that I cannot resist the temptation of telling you the story it involves.

The patient came here in 1870, with symptoms of a cerebral tumour, of rather rapid onset for such a morbid process. The symptoms had reached to a considerable degree in about two months. The patient presented indications of a subchronic local cerebral lesion, with headache and optic neuritis. These two general cerebral symptoms with the onset indicate that the local process is a growth. Moreover, there was a history of active syphilis; and we know that whenever we have evidence of a local growth of rather rapid course in the subject of syphilis the probability is very great that the growth is syphilitic. They are much less if the growth is very chronic, and this point is important.

The patient was treated according to the diagnosis. He was not under my care, although he was under my constant observation: I was then Medical Registrar to the Hospital, and he was under the care of Dr. Hughlings Jackson, from whom it was my privilege to learn many lessons of ever increasing value, and not the least important were connected with this case. After the patient's discharge from the hospital he was under my care as an out-patient, of late years only seen occasionally, chiefly for the benefit he is always ready to give to others as an illustration.

When he first came to the hospital he was lame, as he is now, and he presented the complexion aspect you see, but in a greater degree. An inquiry into his history showed that two years previously he had been an in-patient at a general hospital, under the care of a physician then well known, who has now been dead many years. The symptoms he then presented were those of a small syphilitic growth pressing on one side of the spinal cord, and causing effects that we now know to be very characteristic. For those symptoms he was treated with nitrate of silver, and his skin acquired the aspect which it has never lost. When he came here he had improved, and I think, for several reasons: it is exceedingly likely that after the nitrate of silver had been given for a considerable time, without other result, mercury was substituted. At any rate, the affection of the leg ceased to increase, improved somewhat, and then became stationary, and when he came to this hospital its state was much as it is now, with due allowance for the effect of the fresh trouble which brought him to us.

In connection with his case there is a little story which I cannot resist the temptation of telling you, especially since the patient here can correct me if I am wrong. Perhaps it is a little beyond the proper subject of a lecture, but I dare say, gentlemen, you will not be strict. The patient suffered from severe headache, optic neuritis, and signs of a local cerebral lesion in one cerebral hemisphere of subacute onset. It was certainly a quickly growing tumour, and almost certainly syphilitic. Thus the case was most instructive. In 1870, as you know, not quite so much was known of optic neuritis as is now known, and he was shown to a good many visitors. The interest, too, was not lessened by the indications of argyria—the staining of the face from nitrate of silver for a morbid process in the

spinal cord similar to that which in the brain lessened with extreme rapidity under iodide of potassium.

Great care and caution were taken in all that was said in his presence. I can even now remember the scrupulous circumlocutory care adopted to guard against any perception, on his part, of what was thought about his previous treatment. But the man possesses a considerable amount of intelligence, and he picked up too much information, although he gave us no indication of the fact. The symptoms rapidly subsided. On the morning after his discharge he paid a visit to the physician under whose care he had been, and from whom he had received the silver. He obtained an interview with the doctor. The result of that visit was, I am certain, to improve the therapeutical knowledge of the physician, and I have also no doubt that the result was very much to the advantage of any other patient who subsequently came under the care of that physician for a similar affection. But the immediate result was a considerable disturbance of equanimity. The patient was wise enough to content himself with thus conveying instruction. He might, I think, have gone further; but I doubt whether even a speculative lawyer would have induced him to do so for he is, after all, a reasonable fellow. I think one cannot find very much fault with the lesson, or even, considering all things, with the way in which it was given.

[Dr Gowers here turned to the patient and asked if the account given was substantially correct. The reply was: "Yes, Sir; it 's all right. I *jacketted* him."]

I imagine that it is very likely that some of you have never seen the tint of argyria. It is less commonly met with now than formerly, because nitrate of silver is less frequently given, and when it is given, it is given with more care. It will therefore be wise for you to note very carefully the aspect of this patient. The tint is rather less than it was, but it persists, and it will persist as long as he lives. There is not now a black line at the edge of the gums: I think it was there formerly. We have been unable to find the old notes of the case, but all the essential facts are adequately impressed upon my memory. I have only myself seen about four cases of staining from nitrate of silver. This is one. Two were in cases of epileptics, for which it was, as you know, once a reputed specific. It was held in very high esteem by some persons in what have been called the "pre-bromidic days." Both the patients I saw, who had been stained with nitrate of silver for epilepsy, were still patients here for the persisting disease, and therefore my own observation did not lead me to entertain a very high opinion of its value.

The fourth case is instructive because it was due to the use of nitrate of silver for the good it can unquestionably do in gastric affections, especially when pain occurs before meals, that is, when it coincides with the absence of food. Although in cocaine we have an agent which seldom fails under these conditions, it is not unlikely that this use of silver will again increase. It may be then that the lesson this case gives may be again needed. A doctor, an esteemed practitioner in a suburb of London, gave his brother, who suffered much gastric pain, a "dinner pill," to be taken before food every day; it contained some oxide of silver. A year or two after, when shooting together in Scotland, the doctor become uneasy at his brother's cyanotic aspect. He watched him closely, and at last asked him: "Do not you get short of breath as you go uphill?" But there was no shortness of breath, and the doctor did not think anything more about it. Six months later, the tint had increased and it suddenly flashed across the doctor's mind, "Why, it must be silver; there is that pill!" He turned to his brother and said, "Have you been taking those pills ever since I first gave them?" "Yes," was the answer. "I have been taking them ever since, and am still." By this time his face had become deeply tinted. The line on the gums was most distinct. Although they were at once stopped, other remarkable troubles came on. There were no signs of lead poisoning, no colic, and no conceivable source of saturnism, but the patient developed wrist-drop, just like the wrist-drop of lead poisoning and also developed the gout that is so often due to lead, and he developed the albuminuria associated with it. Silver does cause palsy in animals; we know how many metals may cause the symmetrical extensor palsy, and I think there can be no doubt that in this case the palsy of the extensors of the arms was due to the silver, although the case as far, as I know, in that respect, is unique. The sequel of the symptom, I may add incidentally, was most illogical. The patient died two years later, but he died from cancer. With adequate mischief to terminate life by intelligible effects, he died from something altogether different, which is an illustration of the limits there are to our power of inference and forecast.

Let us turn to the patient before us. He left the hospital with some symptoms remaining from the disease in the brain; these had become stationary, and they have persisted ever since. I said he had symptoms of a local cerebral lesion. Those symptoms were slight left-sided weakness, left hemianæsthesia to all forms of sensation up to the middle line, head, limbs, and trunk; considerable diminution of the special senses on that side—taste and hearing, while vision was affected as hemianopia. Of smell I am not sure. If impaired, the defect did not persist, and his present recollection is that it was normal. The hemianopia was at first complete.

Leaving smell out of consideration for the moment, you know that left side hemianæsthesia, involving the skin and the special sensories, is the characteristic of what is called hysterical hemianæsthesia, a functional condition of the existence and reality of which there can be no doubt. Nor can there be any doubt of its practical independence of the patient's will. There was the difference, however, in this condition from the hysterical form—that in the latter the affection of vision is a diminution in the whole field of vision. There is a considerable general diminution in the field of the opposite eye, and a slighter similar diminution in the field on the other side—that is, the side of the central hemisphere involved. In this case, however, there was hemianopia on the opposite side. That is the great difference between this form of hemianæsthesia, that which is due to organic disease, and that due to a functional affection. Nevertheless, there is evidence to show that "crossed amblyopia," dimness of vision, with general restriction of the field, greater on the opposite or "crossed" side to the affected hemisphere, may occur from organic disease as it does from hysteria. But the reason why an organic lesion generally causes hemianopia is this. The lesion is generally at one place, at the region which Charcot has called the "sensory crossway," at the posterior extremity of the internal capsule between the optic thalamus and the end of the lenticular nucleus.

The sensory fibres from the skin, from the head, and limbs run in the posterior third of the hinder limb of the capsule. The optic tract conveys impressions to that region, the fibres from the same-named half of each retina conducting impressions from the opposite half of each field of vision pass to it. Thus the impressions passing to this hemisphere are those from the side on which the motor processes act on the limb. Each half of the brain receives impressions from the side on which it moves the limbs.

The fibres from the optic tract that subserve vision pass into the white substance of the occipital lobe. They probably have an intermediate station in the posterior extremity of the optic thalamus. But I need not now dwell on this. Whether they pass from the thalamus or directly from the tract they must pass close to the extremity of the capsule, close to the sensory fibres from the skin. Thus disease here causes hemianopia and cutaneous anæsthesia. But it also causes loss of taste and hearing. This is so well established that we are sure that the paths for these sensory impressions pass by this region. Moreover, there are cases on record of an affection of smell from disease of this region, but the point needs further evidence, and as this case has no definite bearing on it, I will pass it by. But I must emphasise the fact that cases of organic disease have been met with which cause symptoms resembling closely the hysterical form of hemianæsthesia. The latter we must ascribe to an inhibition of the sensory structures in one hemisphere. In the cases of organic disease that cause similar symptoms, extensive disease has existed on the convexity of the hemisphere, so extensive that we cannot infer more than that it is in the convexity of each hemisphere that the impres-

sions are represented which come from all the special senses of the opposite side, including smell. In these cases there is "crossed amblyopia." But, beyond recognising the fact, you need not now consider the condition. Our subject is the sensory effect of disease that causes vision to suffer as "hemianopia." Half-sight is lost with the other senses if the disease is in the tract, the sensory crossway, or the half-vision centre in the occipital lobe. This was the combination the patient presented. The association of hemianopia and impairment of the general and special senses on the same side proved that the disease was situated where all the paths are in contiguity—that is, at the place I have mentioned. Beyond this the paths diverge, so that the combination can be produced only by disease invading the whole cortex of the convex surface, including the occipital lobe, and then there is the crossed amblyopia as well as the hemianopia. There is restriction of the field as well as half loss. We may now turn to the symptoms the patient still presents, the permanent residue of those caused by the active disease. Persisting as it has for the past quarter of a century, we may actually expect it to persist for the next quarter of a century, which is probably about as long as the patient may be expected to live. A slight defect of taste and of hearing is still distinct. In the limbs there is still imperfect sensation.

The defect in vision that still persists is particularly instructive. You can easily verify it for yourselves. In one pair of charts before you, you see first the fields of vision, as they were nine and a-half years ago—that is to say, about fifteen years after he came for treatment—and the others present the condition that exists at present. The two are practically identical. In each there is a loss of the left lower quadrant. At first the whole half field was lost, up to the middle line: but the upper part recovered slowly, so as to leave the loss confined to the area you see. In it there are points that it will be instructive to you to note. The loss stops short of the fixing point. That, as you may know, is a characteristic of all forms of hemianopia, at any rate of lateral hemianopia. I show you another diagram, in which the loss is of the whole half field, in which the feature is well shown. The blind area reaches the middle line, above and also below: but the dividing line between sight and blindness curves round the fixing point, so as to leave an area of vision. This is the rule—I believe invariable. Around the fixing point there is vision on the blind as well as the seeing side. I believe that apparent exceptions are due to imperfect observation—imperfect almost of necessity, because the area of sight around the fixing point varies, and special means are needed to ascertain it when it is small in extent. The explanation of it is that from the region just around the macula lutea fibres pass by each optic tract to each hemisphere. Hence, disease of either optic tract, while causing hemianopia, does not cause loss in that small region from which the fibres go to each tract. It may have occurred to you that if fibres pass to each optic tract, disease of either should lessen the function of the whole of the region, although causing no absolute loss on either side. It is so. If you test minutely the central area of vision of a patient with hemianopia you will find that, although the region round about the fixing point is spared, the acuity of vision in it is definitely reduced.

Note also another point of significance. There is but little restriction in the general field of vision. The very slight diminution in the general area of the peripheral parts of the fields is not greater than can be accounted for by a dark day, or even by an individual variation; yet note how different is the extent of the remaining half fields in the other chart I show you. Notice the remarkable restriction of field, and that it is much greater in the eye on the side of the half loss—that is, the right half of each field being lost, the remaining part of the right field is much smaller than the left. I must not, however, allude to this to-day beyond asking you to remember it in connection with "crossed amblyopia."

And now, gentlemen, in conclusion, I have to impress upon you one practical lesson which this patient gives us, and which he gives as an old patient. It is the persistence, in some degree, of the effects of syphilitic disease, and that in spite of the fact that the patient was treated thoroughly, a few weeks after the development of the symptoms—which is as promptly as most patients are treated. It was manifestly adequate, for the urgent general symptoms, headache and optic neuritis, began to lessen within a week, and in the course of a few weeks all the acute symptoms had passed away, and the local symptoms were rapidly improving, the loss of power had become trifling, the hemianæsthesia gradually became partial instead of complete. Yet some of these symptoms have never quite passed away.

The optic neuritis when he came in was considerable but not extreme. The whole disc was obscured by a swelling of moderate prominence and considerable vascularity, yet the acuity of vision was perfect. The inflammation was not sufficient in itself to have involved the nerve fibres so as to impair sight by the process of inflammation in them, nor was it sufficient to produce new inflammatory products sufficient to damage the fibres by their cicatricial contraction. Those are the two ways in which sight suffers from the neuritis. In those days ophthalmic surgeons generally refused to believe that considerable neuritis could exist with perfect vision. The scepticism was chiefly dispelled by Dr. Hughlings Jackson, and I think that this patient was one of the cases by which the dissipation was effected. Fortunately the treatment was early enough to remove the neuritis before grave damage was done to the fibres. His sight has remained good so far as acuity of vision is concerned, and his optic discs now present such a perfectly normal aspect that you would not suspect they had ever been inflamed. I should advise you to examine them carefully, because it is very seldom that you have an opportunity of seeing optic discs which are known to have been the seat of inflammation, and which now present no indication of it, and especially discs that were inflamed long ago.

The practical lesson that I mentioned, and which I should like you to take away, is this: The idea is not yet extinct that all syphilitic disease will yield to treatment, and that if only the symptoms are certainly due to syphilis they can be cured. Probably you know well as regards the nervous system how erroneous that idea is. You know that a syphilitic ulcer of the skin will, and must, leave a scar which nothing can remove. It destroys the tissue of the skin, and that tissue of the skin being destroyed is never replaced by structure which is like the old skin in aspect and function. So it is with the brain. If there is absolute destruction of tissue by a syphilitic process, that tissue cannot be renewed, and is not renewed; the symptoms dependent on its destruction will not pass away unless other parts of the brain can compensate for their loss. Remember that, as I have often said, the symptoms of a local lesion are never due directly to the syphilitic process. In true syphilitic affections, those which can be removed by iodide of potassium and by mercury, the syphilitic process is altogether outside the nerve elements themselves. These suffer secondarily, as they would from any other process of a similar general character. They suffer from compression by such a syphilitic gumma as this patient had, as they would from any other tumour. They suffer somewhat from the inflammation adjacent to any rapid growth, but this is usually simple inflammation with no necessary specific element. Through these processes they undergo damage and destruction, and no removal of the growth can do more than permit the recovery of those structures which are so little damaged that their recovery is possible. In the patient before you the damaged structures recovered. Destruction, of necessity, persisted, and the effects of the loss of tissue remain, where no compensation could be effected. That is the case with the half-vision centre and the fibres that carry impulses to it. Destruction of these causes destruction of the function and lasting loss. We have in the quadrantic loss of the fields of vision a proof of this fact. We have in it also evidence of the equally important fact that the effects of syphilis are often far more than that to which the term "syphilitic" can be applied. If you learn from this to look at a process with the imagination that is as important in practice as in science; if you learn to discern the elements on which symptoms depend, and to be cautious in your prognosis in such cases of syphilitic disease; if you learn also the lessons the patient teaches regarding silver as well as syphilis, you will not have wasted your hour here to-day.

REMARKS ON FLAT FOOT.

Made in the Section of Surgery at the Annual Meeting of the British Medical Association held at Bristol, August, 1894.

BY SIR WILLIAM STOKES, CH.M.UNIV. DUBL., F.R.C.S.I.,

Surgeon in Ordinary to H.M. the Queen in Ireland; Member of the German Surgical Society, etc.

IT is only within the last few years that any methodical attempt has been made to place on a scientific basis the etiology, mechanism, and treatment of flat foot. Previously to 1882 all speculations on the subject were based on mere clinical observation. As a very typical example of this deformity has recently come into my possession I have deemed it not unlikely that its exhibition would be attended with interest on the present occasion, and perhaps make some points clear about the condition that were previously involved in obscurity. The only authorities who have dealt with the subject in any exhaustive manner have, so far as I am aware, been Hueter, von Meyer, Trendelenburg, Sir George Humphry, and Professors Symington, Ogston, and Sayre. As the deformity is by no means of infrequent occurrence, the limited amount of research that has been devoted to it is somewhat remarkable.

As regards the etiology of this condition the theories that have been held by those who have specially interested themselves on this subject have been three in number:—

1. That it is due to ligamentous relaxation.
2. To paralysis of certain muscles, notably the tibiales anticus, and posticus.
3. To congenital malformation.

Hueter points out that in the early periods of infant life the foot is first in a position of supination, but that as the power of walking commences this position is changed to one of pronation, and that when this is excessive and the position of the foot becomes one of hyperpronation, changes are apt to occur in the tarsal bones, resulting from the effects of alteration in pressure; but whether the excessive pronation has its origin in an abnormal condition of ligaments or muscles does not appear. The theory which attributes the changes to ligamentous relaxation, more particularly of the inferior calcaneo-scaphoid ligament, is the one generally held, but this I may mention is not only questioned but distinctly disbelieved in by von Meyer.

Professor Sayre is of opinion that an important etiological factor in the production of flat foot is paralysis of the tibialis anticus—a condition which, as I have learned in Professor Symington's classical paper, Mr. Golding-Bird failed to find in any of his cases, which were fifty in number.

In the case from which this specimen was taken—a powerfully built muscular individual—there was no evidence of any atrophy, at all events of that, or in truth of any other muscle.

The theory based on muscular debility is to a great extent held by Sir George Humphry, who considers that the deformity mainly depends on "a persistent over-extended and incurved condition of the middle and chief joint of the tarsus, and is due to a wearying of the muscles, more particularly of the tibialis posticus and a stretching of the ligaments, more particularly of the inner part of the calcaneo-scaphoid, with the confluent forepart of the deltoid and calcaneo-cuboid."

Lastly, there is the theory of congenital malformation. Tamplin held that the defect was due to or the result of position, presumably a faulty one, of the foot during embryotic existence up to birth: and Eschricht that it was caused by an imperfect unfolding or unrolling of the limb during the fœtal state.

It seems to me that probably all three alleged determining factors in the production of this condition may act either singly or together. Certain it is that it is hard to understand how a mere relaxation of ligaments or weakness of one or more muscles could bring about the remarkable alterations in form of some of the tarsal bones which are observed in so many of these cases—conditions which necessitate so much variation in their operative treatment. The two bones which more than any others of the tarsus are specially liable to these changes are the astragalus and the os calcis.

The first thing noticeable in the specimen, of which the accompanying drawing, taken from a photograph, gives some

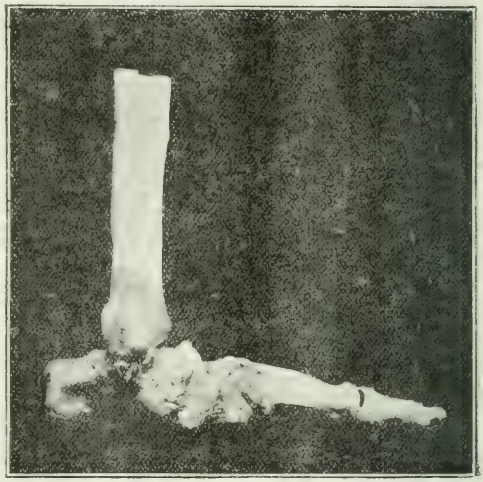


Fig. 1.

idea, illustrates the way in which the astragalus is displaced to the inner side of the foot. This is clearly shown by observing the relation of the trochlear surface of the astragalus to the inner side of von Meyer's triangle. This indicates the

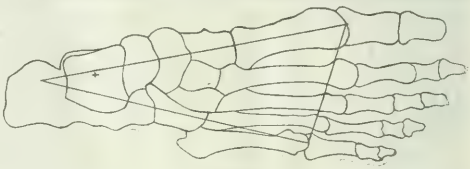


Fig. 2

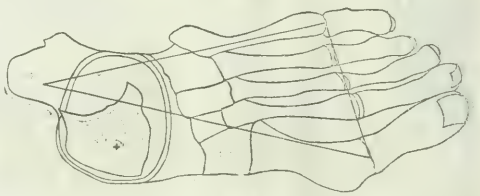


Fig. 3.

sole of the foot, and is made by uniting three points—the centre of the heel and the heads of the first and fifth metatarsal bones. Professor Symington thinks it would be more accurate to make the apex of the triangle correspond to the internal tubercle of the os calcis. He has shown that in the normal condition the "astragalus point" by which he designates one which represents the centre of gravity of the astragalus, and is the highest spot on the axis of its trochlear

surface, lies on the inside and not within the triangle, as it usually does in the normal state. This is of importance to note, as it indicates a condition which should, if possible, be fulfilled in any operative measure that may be undertaken to remedy the deformity.

The changes in the astragalus are chiefly observable in the head, which is much hypertrophied and modified in shape. It has in front and below two facets, the longer articulating with the calcaneo-scaphoid ligament, and the other with the scaphoid. The head is twisted downwards, the axis of curvature passing through the neck, which is directed almost directly inwards. There is no gaping of the astragalo-scaphoid joint. A great distance is to be noted between the sustentaculum tali and the scaphoid, and the groove behind it looking backwards instead of downwards.

In the os calcis what is chiefly noticeable is its axis being directed towards the great toe, the lowering of its anterior extremity, and the anterior tubercle resting on the base. Both anterior and posterior piers of the plantar arch have sunk so low as to lie on the same plane, the loss of obliquity being most marked in the posterior segment formed by the os calcis.

As regards the surgical treatment of these cases, everything will, I think, depend on whether the deformity is reducible by manipulation or not; if it is, the probability is that there is no marked alteration in form of the bony structures, and the case will probably be benefited, if not cured, by supporting the arch by mechanical means, by douching, massage, and constitutional tonic treatment. For the more aggravated cases, however, surgical ingenuity has been much exercised in devising means of restoring the arch of the foot by operative measures. First among these I would mention Professor Ogston's ingenious operation, which consists in a resection of the astragalo scaphoid joint, and, after restoring the arch, bringing about a firm osseous ankylosis between these two bones. Mr. Kendal Franks, in an able paper on this subject which he read some years ago in the Surgical Section of the Academy of Medicine, discussed the merits of the procedure, and fully endorsed all that was said or written in its favour by Professor Ogston. Trendelenburg has suggested that in order to avoid the risks of involving the tarsal articulations, a supramalleolar osteotomy should be made; the foot being then forcibly adducted, the centre of gravity would be shifted more to a point on the long axis of the foot. It may have the effect of throwing the weight of the body more on the centre and outside of the foot, but cannot to any extent restore the arch. To do this a proposal has recently been made by Gleich which consists in making an oblique section through the heel of the os calcis after tenotomy of the tendo Achillis, and then transplanting the posterior fragment forwards and downwards, and fixing it in that position. The accompanying illustrations, taken from Professor Gleich's paper, explain the principle of his operation.

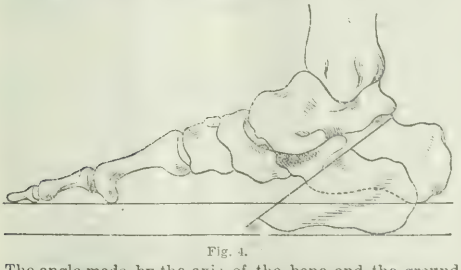


Fig. 4.

The angle made by the axis of the bone and the ground, which is almost lost in an aggravated case of flat foot, can be materially increased, more particularly when, in addition to the oblique section already mentioned, a wedge shaped piece of the bone is removed, which enables you to rotate the fragment still more forwards and downwards, and increase the angle already spoken of.

The incision made for reaching the os calcis is similar to that made in Pirogoff's amputation. I have tested the operation on the dead subject, and although the *technique* of the procedure does not present any elements of exceptional difficulty, yet I would apprehend great difficulty in maintaining in its new position the displaced fragment of the bone, and unless that were effectually done there would be considerable danger of non-union; in the event of which calamity the last state of the patient would be worse than the first.

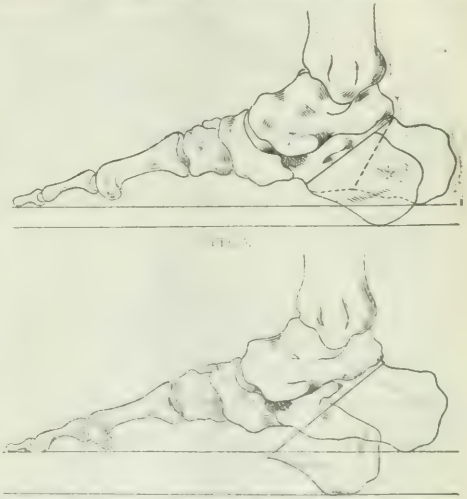


Fig. 5.

Fig. 6.

I should say that in a large proportion of cases—those, namely, occurring in debilitated anæmic individuals—this contingency would not be improbable. But assuming that this mishap does not occur, we must then admit that the method will no doubt increase the distance between the ground and the astragalo-scaphoid joint, and elevate the posterior pier of the arch, but there is no provision for restoring the "astragalus point" to its normal position within or even close to the inner side of von Meyer's triangle, and it will undoubtedly have an effect similar to what is produced by the high-heeled boots which are patronised by fashionable young females, namely, throwing the weight on the anterior part of the arch; under which circumstances, if there be much ligamentous relaxation, a collapse in that situation might confidently be anticipated.

On the occasion to which I have already alluded—when, namely, Mr. Franks discussed the merits of Professor Ogston's operation, and gave the details of a case in which he had performed it—I drew attention to a method of operating which I think is an improvement on this and the other procedures I have alluded to. In Ogston's operation, one can, no doubt, restore the arch, but to do so it is necessary to sacrifice the medio-tarsal joint, the duties of which must henceforward be discharged by the articulations in the anterior portion of the arch. Then again, as in Gleich's operation, there is no provision for bringing the "astragalus point" towards or within von Meyer's triangle.

In order to fulfil what I deemed were the required conditions I have ventured to propose an astragaloid osteotomy, removing the greater part of the head of the bone, the apex of the wedge extending to the body of the bone. By forcibly adducting the foot, which the removal of the wedge makes possible, the two cut surfaces of the bone are brought together, the arch is raised, the centre of gravity at the "astragalus point" is made to approximate the inner side of the von Meyer triangle, and the medio-tarsal joint remains intact

The effects of removing the wedge-shaped piece of bone from the hypertrophied head and neck of the astragalus can well be appreciated by reference to the annexed drawings of an

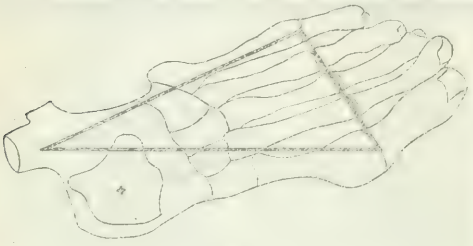


Fig. 7.

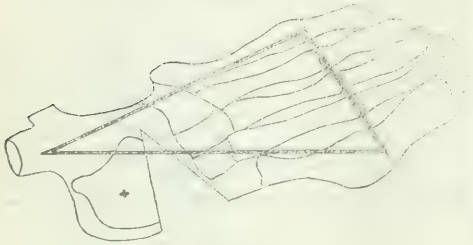


Fig. 8.

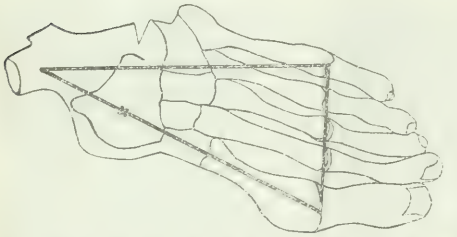


Fig. 9.



Fig. 10.—Before operation.

ingenious diagram or model, designed, made, and kindly furnished to me by Mr. Tenison Lyons, of the Meath Hospital. The first (Fig. 7) shows the situation of the "astragalus point" lying outside von Meyer's triangle. The second (Fig. 8) the foot after removal of the wedge-shaped piece of bone; and the third (Fig. 9) the foot adducted and the astragalus point on the inner side of von Myer's triangle. The accompanying drawings (Figs. 10 and 11), from casts taken before and subsequent to operative interference, illustrate the satisfactory result that may be anticipated by the adoption of this procedure. The case was operated on by me some years ago in the Richmond Hospital.



Fig. 11.—After operation.

Mr. KEETLEY supported Sir Wm. Stokes's view of the pathology of flat foot, but adhered to Ogston's operation. Though commonly regarded as simple, flat foot was really a most complex deformity, as was proved by the beautiful specimen shown. The astragalo-scaphoid joint was locked by osteophytic growths in such a case. Unless these growths were chiselled off this joint was useless, and the deformity could not be remedied by merely taking a wedge out of the astragalus unless the calcaneo-cuboid joint was wrenched open, which would weaken the important outer arch of the foot. He thought that all who wrote about flat foot took too narrow a view of it, each observer looking only at one aspect of a many-sided subject. Cases of a certain grade of severity could not be prevented from ending with a considerable degree of rigidity, and it did not matter much whether this was produced by the surgeon or by Nature as regarded function, but as regarded appearance the final results of the surgeon were the best.

SHORTHAND IN MEDICINE.—There has been formed a Society of Medical Phonographers, having in view the following objects: 1. To promote the use of shorthand in medicine. With this object the Society will continue the issue of the *Phonographic Record of Clinical Teaching*. There will also be produced a list of the phonographic outlines of medical terms, examples of the use of shorthand in medicine, and other useful publications, including a leaflet setting forth the time needed to learn phonography and its advantages to students and practitioners of medicine. 2. To form a bond of union among medical men who use phonetic shorthand. A list of the members of the Society, with their addresses, will be published. This list will enable advantage to be taken of the great ease with which correspondence can be conducted in phonography. The Society is managed by a committee, consisting of Dr. Gowers, of London; Dr. Gray, of Oxford, Honorary Treasurer; Dr. Martin, of Sheffield; Dr. James Taylor, of London; and Dr. Neil, Warneford Asylum, Oxford, Honorary Secretary. The Honorary Secretary will supply information regarding the Society and copies of the leaflet above alluded to.

ON THE USE OF ANTIPYRIN IN LARGE DOSES.

By T. McCALL ANDERSON, M.D.,
Professor of Clinical Medicine in the University of Glasgow.

Amongst the coal tar derivatives recently introduced into practice none can compare in value with antipyrin, whether regard be had to the certainty of its action when appropriately administered, or to the manifold conditions with which it is capable of grappling.

Personally I have had hardly any experience of its deleterious effects—at least of a serious nature—when employed with due precautions. Once or twice it made the patients "feel very ill," and, when pushed, vomiting was occasionally induced. In certain cases, too, a rash appeared upon the skin, generally of a measly or erythematous character, but this rapidly disappeared when the use of the drug was suspended, and was never a source of any uneasiness. In this opinion I am confirmed by the report of the Therapeutic Committee of the British Medical Association, appointed to make "an inquiry regarding the importance of the ill-effects following the use of antipyrin, antifebrin, and phenacetin."[1] "Out of 189 observers who report on antipyrin, no fewer than 138, or 73 per cent., have never observed any ill-effects at all worth mentioning. Considering how large is the experience of the action of this drug represented in these reports, this large proportion of observers who have no ill-effects to record is very remarkable. Almost more than any fact could do, it seems to testify to the comparative harmlessness of this drug when properly administered. . . . It is clear, then, if one may be allowed to judge from these reports, that ill-effects following the use of antipyrin are not only relatively but absolutely infrequent in their occurrence. One observer expresses his opinion that they are 'rarer than the idiosyncrasies of the iodides or quinine;' and certainly, so far as the above reports go, this would appear to be the case."

But it must be admitted that this is contrary to the opinion of many, and I can only suppose that the drug has been impure, or the initial dose too large, or they have been unfortunate in giving it to patients with whom it disagreed in virtue of a peculiar idiosyncrasy, which it shares with many other valuable medicines. But if we are to fight shy of everything which disagrees with isolated individuals, we would not only have to deny ourselves the use of many valuable remedies, but also of almost every species of food and drink.

The following cases are good illustrations of the benefits which may be derived from the use of antipyrin in large doses, and the comparative safety with which it may be given, although such cases must be carefully watched, and the initial dose should not exceed 10 or at most 15 grains.

Case I.[2]—J. M., aged 9 years, was admitted to Ward 2 of the Western Infirmary on December 12th, 1889, suffering from fits of two and a-half years' duration. His father stated that he had previously been perfectly healthy. In both father and grandfather there was a history of so-called "hysterical fits;" in the father between the ages of 2 and 4, and in the grandfather between those of 45 and 57. An aunt had a "stroke" twenty years ago, from which she recovered, and is still alive. Six weeks before the first fit the boy had a fall, bruising his head just above the right ear, but there was apparently no injury to the bone. He recovered from this in about three days, and remained well until the first fit occurred, for which the parents can think of no other cause but the fall. At the beginning of the illness he had only about 4 to 6 fits daily, but they gradually increased in number until he had as many as 30 or 40. At the same time he complained of gradually increasing weakness in the right arm, but this after a time disappeared, when the left became similarly affected. Three months afterwards the fits entirely ceased after the application of blisters to the head. An interval of fifteen months ensued during which there were none, and throughout this time the general health remained perfectly good. About seven months before admission, with no apparent cause, they began again, at first only one occurring in twenty-four hours, but gradually they increased until they amounted to 40 or 50, the largest number in one day having been 57. There was no improvement until a few days before admission, during which time he had only 12 daily. The fits occur in sleep as well as while he is awake. They are sometimes preceded by pain in the left elbow, sometimes by headache, now frontal, and now situated on the side of the head, over the right ear. The headache sometimes only occurs immediately before the fits, and is sometimes of longer duration. Occasionally three or more fits occur together with very little interval, but there appears to be no status epilepticus. Drowsiness, lasting for a few minutes only, often succeeds the convulsion. The right side was at first the more severely affected, but now is considerably less so than the left. The patient is perfectly intelligent. Numerous fits were seen, both by the house physician and by the nurses, and all presented similar characters, their duration being from one and a-half to two minutes. In all, with the commencement of the tonic spasm, the arms were thrown over to the right side, and either both rigidly extended, or the right flexed at the elbow and the left extended. The thumbs were bent into the palms; at the same time the head was violently twisted to the right, so as to look over the shoulder, and the eyes were rolled upward and to the right. Clonic convulsions followed, especially violent upon the left side, except in the face, where they occurred upon the right, and involved chiefly the zygomatici and the lower half of the orbicularis palpebrarum. The mouth was kept half open, and there was no foaming; the tongue was not bitten. Nearly all the fits were preceded by the epileptic cry. As consciousness was recovered, the patient sometimes burst into tears. There was occasionally incontinence of urine during the fits.

On examination all the organs were found normal. The gait was awkward and unsteady. Shortly after a fit there was slight exaggeration of the left patellar tendon reflex, and an approach to ankle clonus on the right side. There was a continuous dilatation of both pupils, which responded normally to light. Examined again on December 22nd, an hour and a-half after a fit, there seemed to be slight paresis of both upper and lower limbs, the left side being apparently a little weaker than the right. The dynamometer in the left hand registered 32, in the right 30 K.

The treatment, which was commenced on December 20th, consisted of rest in bed, regulation of the bowels, and the exhibition of antipyrin, commencing with 5 grains thrice daily, and increasing by 1 grain in every dose each day. On January 9th, 1890, 25 grains thrice daily were reached, and this dose was continued till January 16th, when it was diminished to 20 grains thrice daily. From the date of entrance till December 20th the average number of fits daily was 18·5; from then till December 30th, 13·2. On December 31st and January 1st there were 9 fits; on January 2nd and 3rd, 10 fits; and on January 4th, 3. They then ceased till January 28th, when the dose of antipyrin had been lowered for twelve days. There was then one slight fit, and the dose was again increased to 25 grains thrice daily. From that time there were no more, and the patient was dismissed on March 1st quite well. He continued the antipyrin at home, and a letter from his father, dated March 12th, stated that there had, up till then, been no recurrence.

Case II.—L. E., aged 13, schoolboy, was admitted to the Western Infirmary on October 16th, 1892, complaining of twitching of the right hand and foot of four months' duration. The family history has no special interest, except that his mother is subject to rheumatism. He has never had scarlet fever or rheumatism, and there is no history of fright. In March, 1891, he had his first attack of twitching. It was confined to the right side, and both hand and foot, which would not be kept still, nor could anything be held in the hand. Swallowing was not interfered with, but speech was slightly affected. He attended the infirmary dispensary, and by the month of July had quite recovered. He remained well until June of the present year, when the twitching gradually returned, being confined, as before, to the right side. The attack is more severe than its predecessor. He has attended the dispensary for some time, but without material improvement. On examination typical choreic movements are seen in the right arm and leg, which cannot be held in any one position even for a moment. Anything placed upon the palm is at once jerked off. He spills at least part of any water he attempts to swallow, and so on. There is an occasional tendency to stammering. The right eyelid is affected, and the right pupil is much larger than the left. The pulse varies between 110 and 120. There is a faint apical systolic murmur. The temperature and the urine are normal. The case was treated by antipyrin. On October 18th he received 15 grains in three doses, and as the drug agreed perfectly it was rapidly pushed. On the 18th he had 30 grains, on the 19th 45 grains, on the 17th 60 grains, and so on, until on November 14th he was taking 80 grains thrice daily. He was about a fortnight under treatment before the symptoms began to abate, when he was getting 80 grains twice daily, but from that time improvement was continuous, and he left the infirmary perfectly well on November 25th, the dose of antipyrin having been maintained until his dismissal at 70 grains thrice daily. On leaving he was instructed very gradually to diminish the dose, and up till the date of writing (December 6th) he has remained in perfect health.

Case III.—M. W., female, aged 12, was readmitted to Ward 7 on December 17th, 1892, suffering from a violent attack of chorea of a month's duration. The family history is unimportant. About twenty-one months ago she had an attack of rheumatic fever, which confined her to bed for five or six weeks. She had not long recovered, when her mother noticed that she could not maintain any one position for any length of time. She was always fidgetting, and "strange movements were observed." There was no history of fright. She was treated by a medical man, and the movements were changed, and then disappeared, but returned. After about four months she began to lose strength, and could not do anything requiring exertion. She attended the dispensary for some time, and was finally sent into the infirmary by Dr. Dickson on December 21st, 1891. At that time the attack was a slight one. The movements consisted in a constant jerking of the head from side to side, and "fidgetting" with the hands. The left hand was most affected, but even there the movements were slight. The tongue was unaffected. All motion ceased during sleep. The treatment consisted in rest in bed, regulation of the bowels, and the administration of extract of malt with cod liver oil. She was dismissed well on January 26th, 1892. She was readmitted on December 17th, 1892, with a violent attack of a month's duration. On this occasion the movements were so violent that she could not walk without falling, nor sit without being dashed about so as to injure herself. On admission she had several bruises upon her head and body, and it was necessary to tie her down in bed. A special nurse was required to watch her at night. All four limbs were attacked. She was treated on this occasion by rapidly increasing doses of antipyrin. On December 16th she took in all 12 grains; on December 18th she took 10 grains thrice daily: December 19th, 15 grains; December 21st, 20 grains; December 23rd, 25 grains. January 6th, 1893, 30 grains; January 12th, 35 grains; January 14th, 40 grains; January 16th, 45 grains. The doses were not in-

[1] British Medical Journal, January 13th, 1894, p. 85.
[2] The cases were reported by Wm. R. Jack, M.B.

creased beyond this point, as the drug then produced sickness. Since 30 grains were given it had caused slight headache. Improvement was very rapid. The special nurse was not required after forty-eight hours. By January 7th the patient was so far recovered as to be able to sit by the fire. Movements still persisted, but they became very slight, and were confined to the right hand and leg. After January 16th the drug was twice stopped for a day owing to sickness, and on January 23rd the dose was reduced to 40 grains thrice daily, and Easton's syrup was given. The dose of antipyrin was then gradually further reduced. Slight movement of the right hand persisted for some time, but this also finally disappeared. She was dismissed quite well on March 7th, 1893.

Did space permit many other similar cases, in which equally good results were obtained, might be quoted, but the above may be taken as fair samples of the whole; and I may sum up my experience in the following aphorisms:

1. Antipyrin is not the dangerous drug which some observers have led us to suppose.

2. It may be given with safety in large doses, even in the case of children, in most cases, although the initial dose must be small, and it must be slowly and cautiously increased, the patient always being carefully supervised.

3. In large doses it often yields surprisingly good results, and in chorea it is the only medicine from which cures may confidently be anticipated.

FORMATION OF A NEW SOCKET FOR AN ARTIFICIAL EYE.

By ALEX. OGSTON, C.M.,
Professor of Surgery, University of Aberdeen.

The following unusual case, where after enucleation of the bulbus oculi, no socket remained to contain an artificial eye, and a new one was made by operation with satisfactory results, may prove of interest to those engaged in the practice of operative surgery.

The lady, B. W., who was the subject of treatment, describes the commencement of the deformity as follows: "When about 2 years of age, I had a violent attack of whooping-cough, after which my left eye was found to be so much injured, that immediate removal was deemed necessary. The operation was performed by ——— in April, 1870. For fifteen years my socket was left quite empty. In 1885 I went to Dr. Mackenzie Davidson, who, on examining my socket, said that unless it could be enlarged it would be impossible for me to wear an artificial eye."

Dr. Davidson enlarged the socket on several occasions by making incisions into the orbit, and keeping up dilatation of the space thus gained by tampons of various kinds, so that the patient was enabled to wear an artificial eye, and was for a time "exceedingly comfortable," while the eye "looked fairly well."

In the year 1890, however, the contraction of the socket had returned to such a degree that some further operations had to be done by Dr. Davidson, but these were unfortunately not successful in maintaining the required space, and the "socket closed up so that it was only with the utmost difficulty" she "could insert the tip of" her "little finger."[1]

At this stage, in April, 1892, Dr. Davidson requested me to see the patient. There was no detectable diminution of the size of the bony orbital cavity, and I suggested the plan of operation which was subsequently carried into effect. Dr. Davidson was kind enough to transfer her to the wards of the Aberdeen Royal Infirmary, under my charge, and, on April 13th, 1891, the operation agreed on was performed as follows: A skin flap, A B C, Fig. 1, including the subcutaneous tissue and nutrient skin vessels, was dissected up from the temporal region, remaining attached by its base A C. The flap, which was about 3 inches long and 2 broad, was next divided into two tongues for about three-fourths of its length by an incision B D. Through the base of the flap an incision, shown at the line A C, was next carried, but so as to divide only the skin, the vitality of the flap being maintained by the vessels of its subcutaneous tissue, which remained undivided at its base. From the base A C a scalpel was carried beneath the skin and subcutaneous tissue into the shrunk socket, that barely held a pea, and the lids were freed and the socket enlarged by cutting upwards and downwards, parallel to the surface, to an extent corresponding to the shaded area in Fig. 1.

After the bleeding, which was quite moderate, had been arrested by a few fine catgut ligatures and pressure, the flap was turned inwards behind the freed lids until it lay with its raw surface looking forwards and its cutaneous surface backwards towards the orbit, one tongue of the flap lining each lid within, and in this situation, having been adjusted in as natural a fashion as possible to the lids, it was secured by a number of fine catgut sutures in the position shown by the vertical shading in Fig. 2. There was so little of the natural conjunctiva remaining that none of it was seen in doing so save over the caruncula lacrymalis, where it formed a small portion of the covering of the new socket. The temporal wound, now left raw by the turning in of the flap, as seen in Fig. 2 on the area shaded with horizontal lines, was next drawn together as far as practicable by sutures that approximated its edges.

FIG. I.



FIG. II.



In the new socket was placed a disinfected marble, Fig. 2A, of about the size of a normal bulbus, and the temporal wound was dressed with iodoform vaseline. All the steps of the operation were carried out under antiseptic measures, sublimate lotion of the strength of 1 to 1,000 being chiefly used.

The healing proceeded to a wish, and soon the temporal wound had cicatrised, leaving a scarcely visible mark. The

[1] The quotations in this paper are taken from notes of her case written out by the patient herself.

socket was found to be completely lined with a moist white skin and the marble was easily and perfectly retained in it, leaving just the proper amount of its surface visible, so that the palpebral opening corresponded in size with that of the sound side. But the socket lay too far outwards towards the temple, and, when the marble was in its place, looked like a tumour just within the outer margin of the orbit.

To remedy this the patient, when the healing of the socket was complete and had reached a state of permanent quiescence, was again put under chloroform on October 26th, 1891. The marble was removed, and the index finger of the left hand passed into the socket. Guided by this finger within, the outer, lower, upper, and, to some extent, the back parts of the socket were subcutaneously detached from their connection by a slender tenotome entered from the facial aspect of the lids at convenient punctures, and the detachment was proceeded with until the new socket came, as it readily did, to occupy its just position in the centre of the orbit, and lie symmetrically with that of the normal right eye. The marble was then reintroduced, and the dressing continued on the same lines as after the former operation. The marble, which had a circumference of almost 2½ inches, remained in position save when it was frequently removed and washed, until it was certain no further changes were to be anticipated in the socket. From the first the result was satisfactory, and it became clear that a good and symmetrical socket had now been obtained, which harmonised with the healthy side, and was neither too prominent nor too sunk. The socket now showed when the marble was removed a smooth, moist, white, spherical cavity, lined with skin, while the remnants of the former conjunctival sac had shrunk to a small pit or dimple, just large enough to contain a grain of barley, and lying behind the caruncula lacrymalis.

In November, 1892, a year after the second operation, wax models of an artificial eye, and a Mules's artificial vitreous of suitable size, fitted with a projecting point of wax to lie in the old conjunctival sac, and thus steady the eye, were introduced in place of the marble, and it was decided that all was now ready for the fitting in of an artificial eye.

By Dr. Davidson's advice, the patient was sent to Mr. Atkinson, London, with instructions and her models. Mr. Atkinson took great pains to supply her with a suitable prothesis, and succeeded in doing so without requiring to utilise the old conjunctival pit for steadying it. On her return home the result was found to be very satisfactory indeed, as is shown by the photographic likeness (Fig. 3), from which it



Fig. III.

is clear that, while further experience of the operation will doubtless lead to even better results, the plan adopted has resulted in a distinct success.

EXTRACT FROM

A CLINICAL LECTURE

ON

INFANTILE SCURVY IN SURGICAL PRACTICE.

By HOWARD MARSH, F.R.C.S.,

Surgeon to St. Bartholomew's Hospital, and Lecturer on Surgery in the Medical School.

In his very able and instructive Bradshaw Lecture recently delivered before the College of Physicians, Dr. Barlow has given a full and clear account of all that is at present known of infantile scurvy, or, as it has been termed, scurvy rickets. As the medical aspect of the affection has been thus completely dealt with, it may be useful, while Dr. Barlow's essay is still fresh in the memory, to direct attention to infantile scurvy as it presents itself in surgical practice. The ground for doing so lies mainly in the fact that, unless great care is exercised there is considerable danger that this condition may be mistaken for something entirely different, and that thus serious errors of treatment may occur. That this should be the case will excite no surprise when it is remembered:

1. That the disease is rare, and that many practitioners have had no opportunity of seeing it.

2. That the circumstances under which it occurs are apt to be misleading, for, as Dr. Barlow and others have pointed out, it is not amongst the poor who generally nurse their infants at the breast, and, later supply them with a mixed, though not in all ways a very suitable, diet, that infantile scurvy is most often met with. It is most frequently seen (where, *primâ facie*, it would be least expected) in the families of the well-to-do, for in this class some mothers, unable to nurse their offspring, or anxious to escape from the drudgery of doing so, and believing that the various proprietary foods are a complete substitute for breast milk and fresh foods, feed their children for months together entirely on the former set of preparations.

3. That the likeness which cases of infantile scurvy often present to other forms of disease may be, at least at first sight, very deceptive. The following, so far as I have seen, are the surgical affections between which and infantile scurvy diagnosis may be at fault:

1. *Fracture of the Femur.*—A male infant, aged 13 months, was reported to have fracture of the left femur, for which a long splint had been applied. A large bruise on the hip was regarded as evidence, along with suddenly developed and severe pain in the thigh, that the nurse had let the child fall. There was, however, no fracture, but the child, as indicated by its pale and waxy appearance and spongy gums, was evidently the subject of scurvy. A considerable firm swelling, such as might result from the presence of callus, surrounded the lower end of the femur. This swelling was no doubt produced in the manner described by Dr. Barlow. It was due to the osseous material which had been thrown out by the periosteum after that membrane had been raised by hæmorrhage between it and the shaft of the bone, and was "analogous to what is found round the base of a recovering cephalhæmatoma."

Although the diagnosis of fracture in this case was erroneous, it must not be forgotten that spontaneous fracture of the shafts of the long bones, though it is rare, is yet one of the most striking results of infantile scurvy. In a very remarkable instance recorded by Dr. Colcott Fox, several of the long bones presented one or more fractures through their shafts. The preparations from this well-known case are in the museum of the Westminster Hospital. Fracture depends on the weakening of the shaft as the result of hæmorrhage into the medullary canal, and the consequent rarefaction or excavation of the bony tissue. In Dr. Colcott Fox's case the bones looked as if they had been "broken up by being run over." This form of fracture involving the shaft of a long bone, must not be confounded with the separation of the epiphyses, which is much more frequently seen.

2. *Infantile Paralysis.*—A child, 11 months old, was believed to have severe infantile paralysis. Both the lower limbs

were so powerless that when the patient was held up they dangled as if completely paralysed. When the child was in bed they remained motionless in a flexed and abducted position. This condition had been suddenly developed about a week previously. The patient was easy when at rest, but when the limbs were moved he screamed with pain. He was pale and cachectic, and had had free nose bleeding twice in the previous fortnight. On examination there was found considerable swelling around both femora and one tibia, the result of subperiosteal hæmorrhage.

3. *Sarcoma of the Femur.*—A child, 18 months old, was suddenly attacked with severe pain in the right thigh. A surgeon who was called in diagnosed a periosteal sarcoma, which he believed must have been growing for some weeks, but had been overlooked. The view was also formed that the sudden pain and the development of swelling were due to injury, perhaps producing fracture through the growth accompanied by hæmorrhage into its substance.[1] Two days later, however, examination brought out the following conclusive evidences of infantile scurvy: spongy condition of the gums, multiple "bruises" under the skin, and hæmorrhage under periosteum of the opposite femur and of both tibiæ.

4. *Sarcoma of the Eyeball.*—An infant, nine months old, had what was regarded as a malignant growth, producing marked proptosis, a condition which it was feared would necessitate extirpation of the globe, and the removal of any growth that might be found at the back of the orbit. On examination, however, all the structures of the eye were found to be normal; and, on widely separating the lids, extravasated blood was to be seen behind the conjunctiva, indicating that hæmorrhage had occurred into the orbit behind the globe in the manner described by Dr. Barlow. The child was pale and waxy in appearance, and had a "black eye"[2] on the opposite side, of which the mother could give no account; while a week before she had been alarmed to find a considerable amount of blood upon the pillow, which she thought had come from the child's throat. The patient was markedly rickety. No teeth had come through, and the gums were free from spongy swelling. In a second case of proptosis and subconjunctival hæmorrhage in an infant in whom new growth was at first suspected, the opinion formed by Dr. Wyatt, of Clapton, that the case was one of infantile scurvy, was confirmed by the result; for under treatment the patient, as in the preceding case, rapidly and completely recovered.

5. *Sarcoma of the Gums.*—Mr. Pick gives me permission to refer to a remarkable instance of infantile scurvy, chiefly involving the gums, which he related in his College lectures of the present year. The case occurred some years ago, and before the publications of Dr. Cheadle and Dr. Barlow on the subject. The patient, a male infant aged about 12 months, was suffering from an illness the exact nature of which was obscure. He was so anæmic and emaciated that he appeared to be dying. "The most remarkable feature in the case was the appearance of the child's mouth. Dark red firm masses, evidently projecting from the gums, protruded from the mouth between the lips. These were very vascular, and bled freely when touched. The firmness and vascularity of the growth rather suggested that it might be a case of sarcoma, but the child was in such an extremely exhausted condition that no protracted examination could be made." Nothing in the way of operative interference could be undertaken, and only palliative measures were suggested. The subsequent history of the case, which, as it is now easy to see, was one of infantile scurvy, is well worthy of being recorded. That same afternoon the mother by chance left a bunch of grapes on the child's bed. The patient ate one with evident relish; and as it was thought that he was dying, and the grapes therefore could do him no harm, and as he took them with avidity, he was allowed to suck several others. Next day he was better, and his mother, convinced that the improvement was due to the grapes, continued the treatment. The child now began to take food, and soon completely recovered. Heubner[3] alludes to a similar condition of the gums, and remarks that in some cases hæmorrhagic tumours of the gums are so large that they hang out the mouth.

Should the symptoms which are observed, and which will all be found in Dr. Barlow's lecture, raise the suspicion that the case is one of infantile scurvy, an inquiry as to the diet which has been employed will throw valuable light upon the diagnosis. If it is found that the infant is being fed at the breast, or is taking a good amount of fresh cow's milk, the suspicion of scurvy is, in all probability, indeed almost certainly, erroneous. But if proprietary foods have been exclusively or even largely used, the probability that the child has scurvy will become very strong. The effect produced by the administration of an appropriate diet is very striking. In a single day, in some instances, improvement can be observed, and in the course of three or four days the child is obviously well on the road towards convalescence, so that all doubt as to the nature of the illness is at an end.

A case which came under notice in the course of the present year seemed to indicate that infantile scurvy may lead to the development of angular curvature of the spine. In the instance referred to, a child aged 10 months, who had apparently been suffering with scurvy for nearly twelve weeks, was extremely weak and cachectic. Under the periosteum of both femora and both tibiæ very large hæmorrhages had occurred. The lower third of the right thigh was, as the result, so much swollen that it appeared at first sight to be occupied by a large sarcomatous growth. There was considerable swelling of the right leg, and swelling also, though much more limited, of the left thigh and leg. On examining the spine, there was found a very distinct angular curvature low down in the dorsal region. This had appeared in the course of the illness, though at what precise date was not known. The patient died a few days later, but no *post-mortem* examination was obtained. It is therefore impossible to be sure on what the angular curvature depended. It seems, however, not improbable that it was the result of changes going on in the body of one or more of the vertebræ. In the long bones it is well known that the hæmorrhage which collects beneath and widely separates the periosteum takes place mainly from the rapidly-growing tissue of the diaphysis, which lies beneath the epiphysial cartilage. This was very clearly stated by Mr. Pick in his lectures at the College of Surgeons. He says "the growing tissue at the ends of the shafts of the long bones is in most cases the principal, as well as the primary, seat of extravasation of blood in scurvy rickets in infants and quite young children." This vascular tissue is often entirely broken down, with the result that the epiphysis is completely detached from the shaft. It seems reasonable to believe that hæmorrhage may have occurred into the cancellous tissue of the body of a vertebra immediately beneath one of the epiphysial plates, and have broken up the bone tissue in a manner similar to that just described as occurring in the ends of the long bones.

It would appear that surgical interference can very seldom be either necessary or advisable in the treatment of infantile scurvy. It is true the periosteum is often widely separated from the bones by a large quantity of extravasated blood. To some it may seem right that this should be at once removed by free incision and irrigation, or other means. Such a proceeding was, indeed, undertaken in an extreme case by Mr. Herbert Page, and the patient recovered. As a rule, however, to which there are probably very few exceptions, no operative treatment should be adopted: for, when the diet of the patient is corrected in the manner described by Dr. Barlow, the lesions produced by infantile scurvy are repaired with a rapidity which leaves nothing to be desired. In many cases in which the epiphysis has become separated from the shaft it has, as recovery under a corrected diet advanced, become reattached, and complete reunion has occurred.

[1] Northrup and Crandall met with a case in which swelling, due to infantile scurvy, was mistaken for sarcoma of the lower end of the femur.

[2] Oppenheimer mentions a case in which enormous swelling (hæmatoma) of both eyelids was present. *Deut. Archiv f. d. Med.*, Band xxx, 1882.

[3] *Jahrbuch für Kinderheilk*, vol xxxiv, p. 381.

A Minister of Health for France.—On October 31st M. Vaillant introduced into the French Chamber of Deputies a Bill providing for the creation of a Ministry of Labour, Hygiene, and Public Assistance. It will probably, however, be some time before France has actually such a Minister. There are several obstacles in the way, the most formidable of which appears to be a difficulty in respect of money.

CYST IN THE THYROID GLAND: REMOVAL: CURE.[1]

By W. THELWALL THOMAS, F.R.C.S.,
Assistant Surgeon, Royal Infirmary, Liverpool: Demonstrator of Surgery, University College, Liverpool.

In July, 1894, Dr. Barlow, of Prescott, sent Mrs. S. T., aged 30, to the infirmary, on account of a swelling in the neck which resisted local treatment. She was very anæmic, and had noticed the lump for two years; it steadily increased in size, and for twelve months caused severe pain during the swallowing of solid food. There was no history of any tumour in her family.

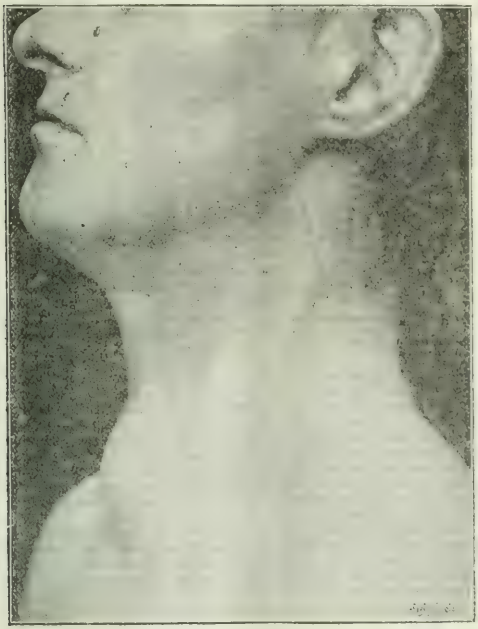


Fig. 1.—Cyst of the Thyroid.

On July 27th, the day of her admission to the infirmary, the swelling occupied the lowest part of the neck, chiefly between the two sterno-mastoid muscles, but lifting slightly the muscle of the left side. It was about two inches in diameter, firmly attached to the trachea, moving with it during deglutition. Fluctuation was distinct. The diagnosis of cyst in the thyroid isthmus, encroaching on the left lateral lobe, was made out, and removal decided upon. There were no signs of Graves's disease.

The next day an incision, three inches long, was made in the middle line over the tumour, and the sterno-thyroid muscles separated. After a little scratching through cellular tissue and a thin layer of pinkish thyroid material, the bluish-white wall of a cyst was exposed. This was freed from its surroundings by means of the finger and closed dissecting forceps, and removed whole. Only two small vessels required ligature. A few sutures were placed in the upper part of the wound, but the lowest inch was left open and some loose cyanide gauze inserted as a capillary drain, under a cyanide dressing. The wound healed by first intention, in the upper part; in the lower, by granulation. She was discharged on the tenth day.

[1] Case shown in Liverpool Medical Institution.

The patient was shown at the Liverpool Medical Institute on October 18th, 1894. The scar was slightly keloid. The cyst was a perfect sphere (the walls one-eighth of an inch thick), filled with brownish fluid, in which floated large flakes of cholesterin. On allowing the sediment to settle in a glass vessel, it occupied quite one-fourth of the whole. On section, the wall appeared fibrous, no lining epithelium could be found.

The case illustrates what has been recently made out, namely, that all local swellings in the thyroid gland, be they in the lateral lobes or in the isthmus, are composed of adenomata, simple or cystic, and are encapsuled, like an adenoma of the breast; and further that in the cystic



Fig. 2.—Neck after removal of Thyroid Cyst.

variety the wall is not vascular. In the non-cystic adenomata the wall is very vascular, so that by carefully working around the capsule no serious hæmorrhage need be feared: they thus differ from the true parenchymatous goitre, in which the vessels are greatly enlarged and very thin, bleeding very readily on slight interference.

Mechanical Aids to Bath Treatment.—Electricity is much more used as a motive power in America than in this country. Among other unique things in the new House of Relief just opened in New York is a ward for sunstroke patients, which has been fitted up with electric appliances found in no other hospital even in that country, by means of which the patient, placed in a hammock-like net, can be hoisted from his bed and conveyed to the bath in the centre of the room, and then back again to any bed in the ward.

On the recommendation of Dr. R. W. Philip, the Acting Committee of the Victoria Hospital for Consumption and Diseases of the Chest, Edinburgh, have appointed Dr. Ralph Stockman, Assistant-Physician to the Royal Infirmary, to be Assistant-Physician to the out-door department of the hospital.

A CASE OF CARIES OF THE SPINE CAUSING COMPRESSION OF THE CORD, RELIEVED BY LAMINECTOMY.

By NOBLE SMITH, F.R.C.S.Edin.,
Surgeon to the City Orthopædic Hospital and All Saints Children's Hospital, London.

The object of operation in this case was the relief of interference with the nerve functions. The operation was successful, the desired result being attained.

Miss M., aged 31, was seen on September 19th, 1890. About four years previously the spine had been injured in lifting a patient, and subsequently pain and weakness, not only in the back, but in the lower limbs, came on. Three years before the above date the patient suffered so much that a felt jacket was applied, which, however, gave very little comfort.

The case seems to have progressed in a chronic manner, and the walking powers were gradually affected. There was distinct angular projection centred in the tenth dorsal vertebra, as shown in the figure. By means of more efficient mechanical support than she had previously had, the pain in the back had been reduced, and a few months later the patient was decidedly better as regards general health, and the weakness in the back. The vertebræ then seemed to be consolidated. A feeling of coldness in the lower extremities, and great difficulty in walking, however, remained. A course of massage (Weir-Mitchell system) and special feeding relieved the symptoms to some extent, but for a very short period. The difficulty of walking after this became more permanent, and in January, 1894, I noted that she was unable to lift the legs forward in walking, and she described her sensations as if weights were attached to the legs. The patient had been obliged to use crutches for the last year, having used a stick before this.



Fig. 1.—Appearance of Patient, September, 1890.



Fig. 2.—Appearance of Patient, September, 1894.

Pain.

There had been pain of a neuralgic character in the region of the sacrum for several years, gradually increasing in acuteness with periodical attacks of greater severity. When quite quiet the neuralgic attacks were less, but any attempts at walking brought them on. The patient—standing between two chairs, supporting herself on them—could only lift the knee of each leg up about 4 inches, and backward to about the same extent. The knee-jerk was natural, and there was no ankle clonus.

Anæsthesia.

There was dulness of sensation, as shown by the diagonal shade in the drawing (Fig. 3), and hyperæsthesia, as shown by the dotted lines.

On May 24th, 1894, with the assistance of Mr. Ernest Lane, I performed laminectomy by removal of the neural arches of the eighth and ninth dorsal vertebræ. There was no fat over the dura mater, which was congested; and in the upper part of the opening, in the position beneath the removed arch of the eighth vertebra, was found a spongy material like granulation tissue. This was producing some pressure on the cord, and was removed. It covered the dura mater as far as it was exposed transversely, being rather thicker on the right than on the left side. The amount removed was about equal to the contents of an ordinary hazel nut; but, as it could only be taken away in small pieces, this was rather difficult to determine.

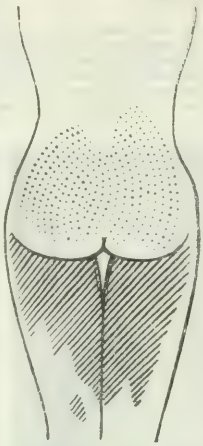


Fig. 3.—Dotted lines on buttocks show area of hyperæsthesia; shading on thigh shows area of anæsthesia.

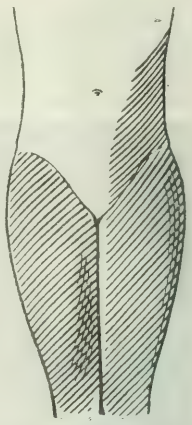


Fig. 4.—Shading shows area of anæsthesia on front surface.

The patient made a rapid recovery from the operation. The wound appeared quite healed from the third day after operation, except at the lower part, where a drainage tube had been left in for twenty-four hours. The day following the operation the patient remarked upon the great difference in her sensations, having lost the cold feeling which she had suffered from for several years. She gradually recovered strength, and, with a supporting apparatus, began to walk about three weeks after the operation.



Fig. 5.—Area of anæsthesia shown by lines of shading, hyperæsthesia shown by dotted line.

A letter from her, dated November 7th, 1894, five months after the operation, states in a graphic way her present condition in comparison with what it had been formerly. She describes the coldness in her lower limbs, which had existed for years, as "deadly coldness." She used to be obliged to have hot bottles at night, summer and winter, and these only gave her very local relief. She states, "Almost directly after the operation I felt warm again, and this has continued since. My digestion, which had been getting steadily worse, improved wonderfully, and I now eat very fairly and feel no

discomfort after meals." She further states that the severe headaches which she had been so constantly troubled with had disappeared. The spasmodic jerking of the limbs, from which she also suffered very frequently, had also gone. The walking powers had been practically quite regained. She can now walk at least two miles without stick or crutch, and with comfort.

A PRELIMINARY NOTE ON AN EPIDEMIC OF PARALYSIS IN CHILDREN

(ONE HUNDRED AND TWENTY CASES).

By ANDREW MACPHAIL, B.A., M.D., M.R.C.S.Eng., L.R.C.P.Lond.,

Professor of Pathology and Diseases of Children, University of Bishop's College, Montreal, Canada.

During the past two months, through the intervention of Dr. C. S. Caverley, President of the Board of Health, and his colleague Dr. H. H. Swift, I was able to make some observations upon an epidemic of paralysis in children, which occurred in the State of Vermont. The epidemic commenced late in June, increased in July, and culminated in August, and though new cases are cropping up the malady has now almost abated. I obtained the notes of 91 cases out of 120 which were affected.

At first the belief was held that the outbreak was one of cerebro-spinal meningitis, and there were several cases presenting the characteristics of this disease. But on examination it appeared that such cases were very few, and in many there were no symptoms at all beyond paralysis. There was a general absence of retraction of the head, and flexing of the trunk. The sensory symptoms were not prominent, the headache was chiefly frontal, and, beyond some slight delirium of the ordinary febrile type, there were no psychical manifestations. The cutaneous symptoms were absent or unimportant. While in many cases there were indefinite rashes, in only one were there petechiæ, in none herpes labialis, mottling, purple spots, or the other undoubted cutaneous manifestations of "spotted fever."

The sequelæ and complications were also different. There was no account of pleurisy or pericarditis, and only in one case pneumonia. Neither the auditory nor any of the cranial nerves were permanently affected. The eye symptoms were wholly of central origin: no ophthalmia, no conjunctivitis, no keratitis, no permanent impairment of vision. From an examination of the records of all the epidemics of cerebro-spinal meningitis, and an estimate of such authorities as Randolph, Wilson, Niemeyer, Knapp, and Kreitmair, it would appear that the eye symptoms alone are sufficient to differentiate the present malady from cerebro-spinal meningitis. Indeed, Hirsch affirms that "conjunctivitis is almost always a constant condition."

I will set down brief notes of a few cases typical of groups into which the series seemed to fall.

Case I.—S.C., a boy, aged 5 years, complained on June 17th of headache, chiefly frontal, with nausea and vomiting. The temperature was 102° F., and the pulse 115. This continued for twenty-two hours, and was succeeded by a soreness in the arms and legs, loss of reflexes, with gradually increasing paralysis, culminating after twenty-four hours in complete powerless condition of both lower and both upper extremities, which still persists.

Case II.—A. B., a delicate girl, aged 12 years, with a slight left lateral spinal curvature, fell sick of an attack resembling indigestion, with coated tongue and marked constipation. Gradually, without alarming symptoms, paralysis supervened, and in two days both arms and legs were useless. After five weeks there is no sign of improvement. In this case there was a real arthritis, quite as intense as in an ordinary attack of acute rheumatism, the pain not merely "supposed to be in the joints." (Gowers.)

Case III.—A boy, aged 7 years, on July 4th, had a temperature of 103° F., and a pulse of 120. After three weeks the temperature suddenly dropped to 97°, and the pulse to 50. The knee-joints now became painful and swollen, as well as the elbow and shoulder. Paralysis of the left upper and left lower extremities followed, and still persists.

Case IV.—In this case the preliminary symptom was double vision. A girl, aged 11 years, suddenly developed this condition, and for three days was slightly unwell. Next morning she was unable to get out of bed on account of complete paralysis of the left arm and leg. Fever, with delirium, followed for four days, when the symptoms abated, and now the limbs show some improvement. In this case the menstrual function was established during the progress of the disease.

In other instances there were no premonitory symptoms, and, without warning, the children would "stumble," and, on examination, one or other of the limbs would be discovered in a paralytic condition.

The following may be taken as types of the fatal cases:

Case V.—S. O., an Italian boy, aged 4, on July 21st became sleepy and complained of headache. He was found to have no fever, but a pulse of 45, slow, hobbling in character, and intermitting every fifth beat. This continued for four days, when a slight improvement was noticed. Internal strabismus occurred, but the child made a complete recovery, so far as symptoms were concerned, on the seventh day. He was then allowed to divert himself in the hot sun, when all the original symptoms returned—headache, squint, halting pulse, and drowsiness. This was on August 31st; by September 1st he was worse than at any previous time, but yet had no fever. Next day the knee-jerk was abolished, but the plantar reflex was retained, as well as the cremasteric. The legs now became paralysed, and by September 3rd the paralysis was general, the eyes half closed, the pupils dilated and unequal; the temperature was 105° F. The child died at 3 o'clock the same afternoon.

Case VI.—H. A., a Swedish child, aged 20 months. On August 31st it was stricken with fever, 103°, and the pulse rose to 120. The restlessness was extreme, the child moaning and tossing its limbs, but quite conscious. The head was slightly retracted, and the pupils contracted unevenly. Next day the general symptoms were improved, but the child continued restless and in a highly excitable condition. On September 2nd the fever had disappeared, but the restlessness increased, with chronic spasm, strong grinding of the teeth, and paralysis of the left leg. Next day the temperature rose to 104°, the spasm increased, and general paralysis supervened. The child died in the afternoon.

In view of the fact that in many cases of cerebro-spinal meningitis the lance-shaped coccus, similar in all respects to the pneumococcus which Cornil and Babes regard as the cause of both diseases, has been found, it is worth remarking that pneumonia was present in only one case.

Case VII.—E. F., a boy aged 4, was affected on August 8th, after a slight preliminary illness, with paralysis of both legs, and two days later developed pneumonia. Both conditions subsided, and now the child is in a fair way of recovery.

In a few the onset was accompanied by symptoms of transient spinal meningitis. Gowers believes that such condition must be regarded as a coincident effect of a common cause. I have also notes of six cases in adults, of which three were fatal, in two the paralysis persists, the other, a man aged 70, recovered. The ages were 19, 24, 27, 35, 36, and 70 years.

Case VIII.—B. J., a lad, aged 19, complained of pain in the head and back. The pulse was 100, and the temperature 102° F. The fever subsided on the fourth day, the pulse fell to 56, and all pain had disappeared. The right arm now became paralysed, and by next morning the pulse was at 38, and the temperature 97°; the extremities were cold. Complete paralysis developed during the day, and in the afternoon the young man died.

The muscles in every marked case showed the degenerative reaction in a characteristic manner. The loss of faradic irritability was observed, and in many cases absolute, while the reaction to the constant current was increased. The muscles were variously affected. In some cases the whole arm was paralysed, in some only the intrinsic muscles of the palm, but the combinations of the different groups affected were endless. After an exhaustive tabulation of the muscles and groups affected, I was unable to discover any combinations which seemed to preserve any definite order. In the legs the extensor group was injured most frequently, and sometimes there was a functional association. The paralysis in every case was motor, and the only disturbance of sensation was hyperæsthesia.

The distribution of the paralysis was as follows, reduced to percentage:

Left arm alone	2.0 per cent.
Right arm alone	4.0 "
Both arms alone	2.0 "
Right leg alone	7.0 "
Left leg alone	20.0 "
Both legs alone	45.0 "
Left leg and left arm	8.0 "
Right leg and right arm	3.0 "
Both legs and left arm	2.0 "
Both legs and both arms	4.0 "
Right thigh	1.0 "

The infection was confined to a definite area, fifteen miles long and twelve in breath, with the range of the Green Mountains on the East, but no natural boundary on the other sides. The city of Rutland is in the centre of the area. It would be hard to discover a region in which a disorder had less licence to become epidemic: the whole district lies upon a series of terraces, and increased safety did not come with elevation. Indeed, four cases occurred on the very ridge of the Green Mountains, at an elevation of 1,500 feet, and the line of the four dwellings extended over half a mile. The water supply was different in each of the four cases, namely, from springs out of the mountains. The range referred to

definitely limited the infected area, which occurred in a region with faults and dislocations in the earth's crust and profound breaks in the whole strata, while on the other side of the mountains the country is level and unfaulted. Neither overcrowding of habitations nor any of the evils usually accompanying or flowing from this condition were factors in the present case, since only in four families was more than one member affected.

It was quite usual for children to sleep with those who were affected and themselves remain entirely free from the disease. No isolation was practised, nor did such precaution appear to be of the slightest value. Indeed, the brunt of the disease fell upon the purely rural portion of the community. No clue was discoverable in the domestic and personal hygiene of those attacked. The houses were all detached, and in most cases there was nothing in the nature of privy or cesspool. Nor had penury any part in the epidemic. The district is one of the most thriving in the United States, and has been settled for a century and a-half. The food, water, and milk supply were examined, and were found above reproach. The food and milk are drawn from the neighbouring farms or from the farms in which the patients lived. The veterinary surgeons have remarked no unusual occurrence amongst the cattle, but twelve horses died of what was called cerebro-spinal meningitis. I was unable to procure any reliable account of these cases. A few cases of "paralysis" in fowls were observed. The summer was dry and hot, the springs scanty, and the surface water low. The rainfall for the three months was only 6.58 inches, against 11.95 last year and 15.04 the year before, on an average of 11.2 for the last forty-seven years. The average temperature was 64.3°, last year 64.4°, the year before 65.2°, and 65.4° on an average for the last forty-seven years. Cases were found amongst children of American, Swedish, Italian, French, Irish, and Jewish parentage, so that nationality appeared to have no bearing. There is in one place a colony of 1,000 Italian marble cutters, but amongst them there were only two cases.

The following table shows the results reduced to percentages:

Fatal cases	13.0 per cent.
Recovered	25.0 ,,
Improved	39.0 ,,
Unimproved	22.0 ,,

I have purposely refrained from giving further expression to any views or theories, since that can be done more adequately when the work in hand is at an end and the positive or negative value of the pathological and bacteriological results is ascertained.

NOTES ON A CASE OF ACCESSORY THYROID GLAND PROJECTING INTO THE MOUTH.

By C. H. McILRAITH, M.A., M.B., C.M.Glasg.,
Resident Medical Officer, Throat Hospital, Golden Square, W.

A. S., a girl 17 years of age, was admitted to the Golden Square Throat Hospital, under the care of Dr. J. W. Bond—by whose kind permission I am allowed to publish these notes—on June 2nd, 1894. She complained of a lump at the back of the tongue. It was giving no trouble, and had only been discovered two months previously, when her singing master examined her throat and noticed the lump there. Her speech was somewhat thick. She was an undersized but well-nourished girl. Situated at the base of the tongue, close to the position of the foramen cæcum, was a tumour about the size of a small walnut. The larger half of it was to the right side. It felt semi-elastic, and was immovable on the deep tissues of the tongue. It pressed backwards on the epiglottis, and when the tongue was pulled out it almost touched the base of the uvula and the soft palate (as in Fig. 1). The thyroid was normal. Under chloroform Dr. Bond cut the mucous membrane round about it with a pair of curved scissors. The tumour was fixed with a pair of tenaculum forceps and removed with the aid of a raspatory and a Mackenzie's polypus snare. Bleeding was profuse, but was controlled by pressure on the base with a finger round which a piece of lint steeped in turpentine was wrapped, whilst the girl was turned almost on her face to allow blood to run out of the mouth. There was no recurrence of hæmorrhage, and the patient made an uninterrupted recovery, the wound being healed in ten days. Microscopical examination showed the tumour to present the ordinary appearances of thyroid gland structure.



Fig. 1.

Remarks. — Tumours which structurally resemble the thyroid gland are not infrequently met with in this region. They originate in connection with the lingual duct, a structure of embryonic significance. In the embryo a diverticulum takes place from the anterior wall of the pharynx, forming what is known as the thyreo-glossal duct, and about this the thyroid gland is developed. This duct opens at the base



Fig. 2.—Microscopic appearance of a portion from the centre of the tumour.

of the tongue at a spot represented in the adult by the foramen cæcum, and, passing downwards, bifurcates to form the isthmus of the thyroid, the branches uniting with the embryonic gland structure to form the lateral lobes. As development goes on the hyoid bone is formed, and in its growth divides the duct into an upper (lingual) and a lower (thyroid) portion. Both of these are obliterated, as a rule, when development is complete; but sometimes, in the newly-born child, a fine probe or bristle can be passed for a short distance along the lingual part from the foramen cæcum, between the genio-hyo-glossi muscles to the body of the hyoid bone, where it is continuous with a fibrous cord passing in front of it over the thyro-hyoid membrane and down towards the thyroid isthmus. Occasionally either of the two portions persists—closed at both ends—and gives rise to a dermoid cyst. It is in connection with this lingual portion of the thyreo-glossal

duct that a tumour such as above noted is developed. A full account of these is given in J. Bland Sutton's recent work on *Tumours*. So large a tumour of the kind projecting into the mouth is almost unknown.

A CASE OF CHARCOT'S JOINT DISEASE, WITH PERFORATING ULCER OF THE FOOT IN A TABETIC PATIENT.

By HENRY WALDO, M.D., M.R.C.P.,
Physician to the Bristol Royal Infirmary.

A QUARRYMAN, aged 48 single, was admitted to infirmary in the spring of 1894, and transferred to me by Mr. Greig Smith, under whom he was first admitted as a surgical case.

He was a thick-set, strong, healthy-looking man, with a good family history, and no record of ill health excepting that twenty-eight years ago he had two attacks of gonorrhœa. He had been in the habit of drinking a gallon of beer a day. Five years ago he met with an accident, in which his left heel was crushed between two stones; some dead bone was removed, and after this the wound healed up, leaving a



cavity, which shows in the photograph. Three months before admission he first noticed a swelling of the right knee, which was not painful till three weeks had elapsed, and then darting pains shot up and down for a few inches above and below the knee, and became so severe that he applied for admission. Two months before he noticed the swollen knee he had been working in water, having to lie upon the affected side for most of the day.

After resting these pains passed off, and he says the feeling is now more one of weakness than pain, with occasional shooting pain limited to the knee. The pain appears to have been controlled by phenazone upon one occasion. The right knee-joint is full of fluid, and feels somewhat hotter than the other. The joint is movable in all directions, including lateral movements, and rather flail-like. He says the knee-joint "goes out" when he attempts to walk. The knee-jerk is absent on the affected limb, and difficult to get, even with Jendrassik's method, and then only slightly marked on the left.

In the early part of June a small black slough formed on the sole of the left foot (the patient had been in bed night and day for some weeks). The slough was removed by poulticing, leaving a small ulcer which shows no inclination to heal. The epidermis is thick on the soles of both feet.

The pupils are a little unequal, rather dilated; the right does not act to light at all, and the left only very slightly. They both act to accommodation. Neither pupil dilates on painful stimulation of the skin of the neck.

Upon one occasion since admission this patient was faint and giddy, and nauseated; and although he did not vomit, could not take any food for forty-eight hours. Buzzard has noticed that gastric crises are frequent when this articular lesion is present. He found them present 12 times in 16 cases.

When Charcot's disease of the knee-joint occurs in tabes,



it is nearly always an early accompaniment, and although in this case many of the symptoms are absent, I think those I have mentioned justify me in considering it a case of early tabes dorsalis.

[The patient was shown in the Section of Medicine at the annual meeting held at Bristol, August, 1894.]

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.—Miss Mary E. F. Piggott, at present Matron to the Victoria Hospital, Burnley, has been appointed Matron to the Royal Edinburgh Hospital for Sick Children, in the room of Miss Bird, who had resigned.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

FRACTURE OF THE SKULL AND LIGHTNING STROKE.

ON October 17th, 1894, a coolie at work in an open cane field was killed by a flash of lightning. I was within 500 yards of the spot at the time and saw the flash, which was a multiple discharge descending and returning several times. I saw the man about fifteen minutes after the occurrence; he was quite dead, and there was no rigidity. There was a lacerated wound of the right ear, which had been almost torn off in an upward direction, and the hair of the head, worn long after the coolie custom, appeared to have been shaved off the right side in a vertical direction for a space of about 6 inches by 2 inches. There was a small abrasion on the right shoulder over the acromion process. These were all the external wounds found on a minute examination of the body, but the interest of the case appeared when, at a later stage, I opened the head. Sanious fluid was then observed running from the dependent nostril, and rigor mortis, sixteen hours after death, was very marked.

A large hæmatoma had developed over the right parietal region, and on reflecting the scalp an extensive fracture of the skull was found. It started as a fine fissure from the left side near the parietal eminence, crossing transversely to the right side, and extending into the base. On removing the calvarium and viewing it by transmitted light fine fissures were seen radiating from the main fracture across the right parietal bone. There was an excess of cerebro-spinal fluid. The surface of the brain was injected a bright pink, and the vessels of the meninges were gorged with fluid blood.

The staining was most marked in the arachnoid in the neighbourhood of the fissures. The brain itself was abnormally soft, not from decomposition, but there was no laceration of its substance, nor was there any staining of the deeper tissues. Having removed the brain, the fracture could be traced running across the middle fossa, then through the orbital plate of the frontal and the cribriform plate of the ethmoid, hence the bleeding from the nose. All the other organs of the body were healthy, nor was there any thoracic or abdominal injury. The heart was stopped in diastole and the blood fluid, but a few *post-mortem* clots had begun to form. The nature of the injuries, and the fact that a felt hat which he had on at the time was blown several feet away and badly torn, point to the conclusion that an upward discharge passed through his body, and as these upward discharges usually cause most damage to buildings, so the unusual and extensive head injuries may be accounted for. Notwithstanding our frequent and violent storms, death by lightning-stroke is comparatively rare.

A fellow labourer a few yards off received a severe shock; his senses were blunted, and there was left external strabismus, dilatation, and insensibility of pupil. Acute conjunctivitis (of the left eye only) followed. Under treatment by cocaine, exclusion of light, and bromide, these symptoms passed off, and he was none the worse for his close shave.

ROBERT H. E. KNAGGS, J.P.,
Government Medical Officer, Trinidad, West Indies.

FOUR CASES OF LABYRINTHINE DISEASE TREATED BY INJECTIONS OF PILOCARPIN.

CASE I.—A gentleman in good health, just over 30 years of age. Before treatment his hearing distance in the right ear was 3 inches for a watch, and 2 feet for the whispered voice. There was a great deal of tinnitus, and such vertigo that he had fallen in the street, and had usually several more or less severe attacks every day. This was of one year's duration. I injected pilocarpin thirty-five times. He then heard a watch at 20 inches, and the whispered voice at 9 feet, the tinnitus was just as bad as ever, but the giddiness was quite gone. This was done four years ago, and there is no lessening of the improvement then gained. Altogether the result was most gratifying.

CASE II.—A lady about 30 years of age, anæmic and badly nourished. The deafness in this case was of many years' standing, and was very extreme, a watch being heard only badly when applied to the ear, and not at all by aërial conduction. The deafness was evidently labyrinthine. I injected her with pilocarpin in suitable doses forty times, but do not believe that it was of the slightest service to her; she also took tonics and improved in health a good deal, but her hearing remains *in statu quo*.

CASE III.—A gentleman, aged 23 years, in good health. He had suffered from deafness subsequent to an attack of scarlatina in early childhood. In this case there was neither tinnitus nor vertigo, but considerable impairment of hearing due to labyrinthine disease. Pilocarpin appeared to have a cumulative action since I was obliged to stop the injections after a few had been given, owing to the sickness and faintness that occurred. After stopping the injections for some weeks I was able to begin them again, and administering the smallest doses that would produce profuse sweating. I gave him forty injections. There appeared to be a little improvement just at the termination of the treatment, which did not persist. I have, however, just heard from my patient, and he gives a most satisfactory account of his hearing, in which considerable improvement has taken place within the past few months. I should like to know if other aurists have noticed any such deferred action of pilocarpin, if such it be, seeing that several months elapsed after treatment was stopped before the present progressive improvement began. Or is it rather to be ascribed to some other fortuitous circumstance?

CASE IV.—A gentleman, aged 34 years, not a strong man. Here, both considerable impairment of hearing and tinnitus of labyrinthine origin were present. He received thirty-five injections of pilocarpin, but I cannot report any improvement either as regards tinnitus or deafness.

It appears to be quite impossible to say what case of labyrinthine disease, apart from the syphilitic cases—and all of mine were free from any such taint—will benefit from this treatment. It is, therefore, quite possible that one may have several consecutive disappointments; on the other hand my limited experience shows that it is of great value in one case and perhaps in two out of four. This proportion in such a hopeless condition as internal ear deafness is by no means bad, and I think it is justifiable and right to give patients the option of accepting or rejecting the treatment, always being careful to promise nothing, inasmuch as each individual case is a law unto itself.

B. J. BARON, M.B.Edin.,
Physician to the Throat and Nose Department
Bristol General Hospital.

GASEOUS APPLICATIONS TO WOUNDS.

I WISH to bring under the notice of the profession a new method I have devised for the treatment of wounds. It consists in the continuous exposure of the injured part to the action of gases and medicated vapours; of these, oxygen is the most important. The wounded part is enclosed in a receptacle through which is passed a current of the gas or vapour employed. The receptacle is made either entirely of india-rubber, or of wood with glass top and india-rubber ends. I shall be happy to give further details to those interested in the method, and grateful to anyone who will put it to the test.

Mayfair, W. GEORGE STOKER.

A MOTHER INFECTED WITH PRIMARY SYPHILIS FROM HER OWN SYPHILITIC CHILD.

A WOMAN came to my out-patient room last August with three ulcers on her breast. Each of the ulcers presented the characteristic signs of hard sores. The sores were situated about an inch from the nipple, and extended nearly two-thirds round the breast. On examining the baby which she was nursing I found that it had ulcers on the mouth, the snuffles, and condylomata on the anus, with the well-marked *café au lait* complexion. The baby was 8 months old; the mouth had been sore for two months. The ulcers on the mother's breast had appeared one month later. She was 31 years of age, had been married thirteen years, had had eight children, of which three had died at the ages of 4½ years, 1 year, and 9 months. The five living were quite healthy, and

she had had no miscarriages. She had always had good health herself. Her husband (a labourer) she stated had nothing the matter with him. She was treated with lotio nigra and hydrarg. c. creta gr. ij three times a day.

On examination the next week I found the chancres cleaner and more typical. On the arms and chest a secondary rash was appearing, and she had some pharyngitis. Unfortunately she did not attend again.

This case, I think deserves publication as an exception to the recognised law of Colles, that a mother cannot be infected by her own syphilitic child.

Albert Lucas, F.R.C.S.Eng.,
Senior Assistant-Surgeon, General Hospital, Birmingham.

EXHUMATION AFTER FOURTEEN YEARS' BURIAL.

On November 13th, by licence of the Home Secretary, I inspected the contents of a coffin which had been buried in April, 1880. The reasons for the licence are not material. The man was 23 years of age at the time of his decease: the cause of death was "peritonitis," and he was buried in an iron coffin, and in a stratum of clay. On loosening the lid of the coffin it was found to be full of water. It was placed upon a bier, and a hole driven through it to drain it. The name-plate on the lid was still quite legible. On removing the lid a powerful nauseous odour came from the remains. The linen was discoloured, but in a fair state of preservation. The features were obliterated; the hair and teeth still recognisable. The skin and the whole of the soft tissues were converted into a soft, greasy, yellow-white, soapy or putty-like material, crumbling upon the slightest touch, and exhaling a loathsome odour. The skull was dislocated from the spinal column, the vertebræ of which were scattered about in various parts of the coffin; the lower jaw was dislocated from the skull; the other bones were dark-coloured, perfectly smooth, and without a vestige of periosteum, appearing as if macerated, and were easily removed from one another and from the slimy mass of adipocere surrounding them. The lid had been soldered on to the coffin at the time of interment, and the period of entrance of the water is conjectural. The result, apparently, was that circumstances were here combined to retard decomposition to the ultimate extent possible, so that after fourteen and a-half years' burial the corpse was, even to an "acclimatised" dissecting-room curator, abnormally repulsive.

J. R. M. Brennan, M.R.C.S., L.S.A.
Newton Heath, Manchester.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

UNIVERSITY COLLEGE HOSPITAL.

THREE CASES OF ACUTE INTUSSUSCEPTION TREATED BY ABDOMINAL SECTION.

[Under the care of Mr. A. E. Barker.]

(For the notes of these cases we are indebted to the late Mr. J. L. Bunch, F.R.C.S., Surgical Registrar.)

Case I. *Laparotomy: Reduction by Manipulation: Hyperpyrexia: Death.*—A male, aged 5 months, was taken suddenly ill on the morning of May 13th. The illness commenced with screaming, and shortly afterwards blood and mucus were passed by the bowel. He was brought to the casualty department in the evening, and the abdomen and rectum were examined, but nothing was found. The screaming and passage of blood and mucus continued, and he was again brought on May 14th, when a sausage-shaped tumour, about 3 inches long, was felt lying obliquely on the left side of the abdomen. *Per rectum* the intussusception was felt about an inch and a half above the anus. The child passed blood and mucus after examination, but, except for occasional screaming, did not seem very ill. Chloroform was at once administered, and Mr. Barker ran warm water into the anus at a pressure of 3 feet; after 5 ounces had been injected it was returned, and, on examining the abdomen, no trace of the tumour could be found. The child was therefore put to bed, and half a minim of tincture of opium administered. He slept quietly until about 6 A.M. (May 15th), when he had an attack of screaming. Soon after, blood and mucus were again passed. On examining the abdomen and rectum later in the morning the intussusception was found to have returned, and to be as it was before the apparent reduction. The temperature was 99.4° F., and the child seemed in a good deal of pain. Chloroform was administered, and Mr. Barker opened the abdomen in the middle line. The intussusception was easily reduced by squeezing the intussuscipiens upon the apex of the intussusceptum gradually as far as the cæcum. After reduction, which was completed in 7½ minutes, the intestine last returned was seen to be congested, but the peritoneal surface looked healthy. The abdomen was closed, and the child returned to bed. In the evening he was suffering from a good deal of shock; 10 drops of brandy were ordered every two hours. The temperature rose to 105.4° F. at 4 A.M. on May 16th; he was sponged with tepid water, but this only reduced it 1°, and it rose again to 105.8° at 10 A.M. Sponging brought it down to 104°, but in the afternoon it reached 107.8°; the child became livid, the pulse failed, and he died at 5 P.M. At the necropsy the general peritoneum was found to be healthy. The cæcum and lower half of the ascending colon were covered with recent lymph, and the serous and mucous coats were congested. There was, however, no ulceration or sloughing.

Case II. *Intussusception in an Adult: Reduction after Laparotomy: Pneumonia: Recovery.*—A woman, aged 32, was taken ill on the morning of May 16th with slight abdominal pain, which continued until the evening, when it suddenly became very severe; soon after this she vomited. She continued in pain during the night, and frequently went to stool, passing only small quantities with straining. On the morning of May 17th she noticed that what she passed was blood and slime. She continued in severe pain until admission into the hospital in the afternoon. A tumour was easily felt crossing the abdomen from side to side at about the level of the umbilicus, and was diagnosed as an intussusception. It was slightly tender, and freely movable from above down, though not much from side to side; no tumour was felt *per rectum*: the temperature was 100° F. Ether was administered, and Mr. Barker opened the abdomen at 2 P.M. by a median incision below the umbilicus. The transverse colon was drawn out through the wound, and the apex of the intussusception was at once found near the splenic flexure. It was unravelled by drawing the intussuscipiens over the intussusceptum and pressing on the apex. By this means the apex was made to travel round to the right iliac fossa. The cæcum was drawn into the wound, and it was found that the ileum was liberated, but the caput cæci was still invaginated; this was released in a similar manner. The first few inches of large intestine were œdematous and congested, the cæcum being especially so, but the peritoneal surface had not lost its polish. The abdomen was closed, and the wound dressed with dry salicylic wool. There was no return of pain or vomiting after the operation. The patient was at first nourished by nutrient enemata and suppositories. A little milk was given by the mouth after the second day. The bowels were opened on the seventh day. The incision healed throughout by first intention, and the stitches were removed on the fourteenth day.

Recovery was complicated by an attack of pneumonia commencing a few days after the operation. On May 22nd the temperature rose to 102.8° F., and extensive consolidation of the left lung was found. The right lung was affected on May 26th, and the temperature reached 104.2° F., with a pulse of 132 and respirations 40 in the minute. The temperature fell to 101.4° on May 31st, and to normal on the next day. After this recovery was unimpeded, and the patient left the hospital on June 27th, forty-three days after admission.

Case III. *Laparotomy: Difficult Reduction: Pyrexia: Recovery.*—A male aged 4 months, suddenly began to scream and draw his legs up as if in pain, at 3 P.M. on July 19th. At 4.30 P.M. the bowels were opened, only blood and slime passing. After the onset the screaming continued at intervals, and he was sick after food. Passage of blood and slime was

repeated on the morning of July 20th. He was admitted to the hospital on the afternoon of that day, and was found to be suffering from varicella, and to have an elongated tumour on the right side of the abdomen, curving towards the middle line at its upper end; it was freely movable from side to side, and was somewhat tender. Nothing could be felt *per rectum*. The temperature on admission was 100.8°, pulse 168 a minute. Mr. Barker decided not to use any injection in this case, the child's general condition being bad. Chloroform was therefore at once administered, and the abdomen opened by an incision in the middle line below the umbilicus. The affected bowel was drawn out through the wound, and the intussusceptum pressed out of the intussuscipiens. This was quite easy until the last two inches were reached, when very great difficulty was met with, the peritoneal coat cracking here and there as reduction proceeded. After a good deal of manipulation this last part was reduced, the caput cæcum coli being the last part to be unravelled. The end of the cæcum was darkly congested, swollen, and devoid of polish. There were two or three cracks in its peritoneal coat resulting from the manipulation of the damaged intestine. The wound was closed, and a dry salicylic wool dressing applied. The child suffered from no shock, but in the evening the temperature rose to 104.4° F. This was reduced to 102.4° by cold sponging. The bowels were opened three times during the night, the motions containing decreasing quantities of blood. The child took the breast regularly after 8 P.M., and there was no further sickness; ½ m doses of tinctura opii were given during the first three days, and brandy in 10 m doses every hour for the first day, and every two hours for the next two days. The temperature fell to normal on the second day, and did not rise again above 99.6°. The bowels were opened regularly on the third and fourth days, natural motions being passed unmixed with blood.

GENERAL HOSPITAL, MADRAS.[1]

RESECTION OF RIGHT UPPER JAW, WITH LIGATURE OF BOTH COMMON CAROTIDS.

(Under the care of Surgeon-Captain D. Simpson, M.B., C.M.).

This was a case of sarcoma confined to the right upper jaw, and especially prominent in the palate, where it was pressing downward. Prior to operation for removal of the jaw the right common carotid was tied with the idea of diminishing the hæmorrhage at the operation. A week elapsed after ligature of this artery before the operation was undertaken. During that interval Surgeon-Captain Smyth and myself came to the conclusion that there would be no immediate danger now in occluding the other common carotid if need be. I began the operation therefore by exposing the remaining common carotid at the level of the cricoid, and then passed a piece of elastic tubing round it. This was compressed gently and produced no visible effect upon the patient, who was well under the influence of chloroform. Surgeon-Captain Smyth now assisted me in removing the jaw, which was done almost bloodlessly. The elastic tubing holding the carotid was now relaxed, upon which sharp hæmorrhage ensued. In preference to attempting to arrest the hæmorrhage at the wound and causing great delay, a ligature was substituted for the tubing and the remaining carotid tied. It is now six months since the operation was performed. The patient made an uninterrupted recovery without any head symptoms, except a slight dimness of vision which gradually disappeared.

Both common carotids were ligatured within six days of each other to stop hæmorrhage in a case of gunshot wound through the larynx by Dr. Semmes, Confederate States Army, in 1863. The patient lived 38 hours; there were no brain symptoms.

In Chelius's *Surgery*, translated by South, three cases are mentioned of ligature of both common carotids. First, for pulsating aneurysmal tumour of scalp (Kukl, Leipzig)[2] the interval between the operations being 27 days. Secondly, for tumour of both eyes (McGill)[3] the interval being one month. Thirdly, for inoculating arterial swellings (Mussey).[4] All these patients recovered.

[1] Communicated to the South Indian and Madras Branch of the British Medical Association.
[2] *Lancet*, 1861 vol. p. 90.
[3] *New York Medical and Physical Journal*, vol. iv, p. 576.
[4] *American Journal of Medical Sciences*, vol. v, p. 316.

WEYMOUTH SANATORIUM FOR THE TREATMENT OF DISEASES OF WOMEN AND CHILDREN.

CASE OF SPLENIC LEUCOCYTHÆMIA TREATED WITH BONE MARROW.

(Under the care of Dr. Macpherson Lawrie, Physician to the Sanatorium.)

V. H., aged 17 months, a peevish, miserable child, was brought to me some months ago in an advanced state of emaciation, and with a greatly distended abdomen. Appetite was entirely lost. Sickness and diarrhœa were constant and severe. The skin was harsh and dry, and the pallor of skin and mucous membranes was extreme. Respiration was rapid and shallow; the pulse was about 120. There was a daily rise of temperature, followed by exhausting perspirations. There was no albumen or sugar in the urine.

Abdominal examination revealed the existence of an enormously enlarged spleen, which occupied two-thirds of the cavity. The anterior edge, easily defined, was indicated by a curved line extending from the ensiform cartilage to the middle of Poupart's ligament on the left side, and passing well to the right of the umbilicus. The surface was smooth and free from tenderness. A slight amount of fluid existed in the peritoneal cavity: there was no evidence of effusion elsewhere.

Inquiry failed to elicit any history of syphilis or malaria. A teaspoonful of bone marrow thrice daily was prescribed with appropriate nourishment, and no other treatment.

Although the case seemed somewhat hopeless, improvement rapidly followed: appetite soon returned, sickness and diarrhœa ceased, and fever disappeared. The skin and mucous membrane assumed a healthy colour, and the child put on flesh.

The most striking alteration was the steady diminution in the size of the spleen, which can now only be felt in its normal position, under the ribs. After four months' treatment the patient has been restored to health and strength.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Jonathan Hutchinson, F.R.S., President, in the Chair.

Tuesday, November 27th, 1894.

The Treatment of Respiratory Affections by Means of Large Medicinal Injections through the Larynx.

This paper, by Mr. Colin Campbell (Saddleworth), was communicated by Mr. Walter Whitehead. The objects of the paper were first to call attention to what had already been done by Rosenberg and others, demonstrating the reasonableness, practicability, and utility of intratracheal treatment; and secondly, to advocate the more extensive application of this method, not to phthisis only, but to many other pulmonary affections, including hæmoptysis. In support of the author's conclusions numerous cases were described. A number of available medicinal agents were mentioned, and the exact combinations and best methods of using them were fully described. The solution employed by Rosenberg and Grainger Stewart was composed of guaiacol 2 per cent., menthol 10 per cent., and olive oil 88 per cent. The author had employed menthol in glycerine, but added a caution against the use of ordinary glycerine, which irritated the bronchial tubes, and advised the use of Price's glycerine, which had no such disagreeable effect. Glycerine, being possessed of considerable expectorant properties, was a better medium than olive oil. The author had employed other drugs with a view of exerting a direct antiseptic action on the laryngeal, bronchial, and pulmonary tissue. In cases of hæmoptysis he had used turpentine in olive oil. A drachm or a drachm and a-half was the quantity injected by a syringe specially modified by the writer. The injection was made rapidly during inspiration, and might be performed twice, or even more frequently, at the same sitting. The instruments employed and microscopic specimens bearing on the subject were exhibited.

Appendix to Mr. Colin Campbell's Paper.

No.	Age and Sex.	Disease.	Duration of treatment.	No. of injections given.	Benefit perceived.	Result.
			Days			
1	24, F.	Phthisis (cavity)	480	1,450	Yes	Symptoms relieved; cavity undiminished.
2	25, F.	,, ,,	120	370	,,	Much improved in every way.
3	45, M.	,, ,,	240	400	,,	Dead.
4	43, F.	,, ,,	30	30	—	,,
5	28, M.	,, ,,	30	40	Yes	,,
6	51, M.	Abscess of lung	180	370	No	Recovered.
7	27, M.	Phthisis (cavity)	60	20	Yes	Dead.
8	26, F.	,,	420	370	,,	Improved.
9	3, M.	,, ?	30	25	—	Recovered.
10	24, F.	,,	30	25	Yes	Recovered (?).
10A	27, M.	,,	4	4	,,	Discontinued treatment.
11	27, M.	Asthma	—	30	—	Improved.
12	64, M.	Bronchiectasis	300	250	—	No improvement.
13	15, M.	Ch. bronchitis	150	250	—	Recovered.
14	57, M.	Asthma	24	24	—	,,
15	F.	,,	24	24	—	,,
16	M.	,,	30	30	—	,,
17	62, M.	Ch. bronchitis	7	6	—	,,
18	37, M.	Laryngitis	6	6	—	,,
19	30, F.	Aphonia and laryngitis	6	6	—	,,
20	38, M.	Laryngitis, aphonia	6	6	—	,,
21	38, M.	Phthisis (cavity), ulceration of larynx	14	24	Yes	Symptoms much relieved.
22	M.	Phthisis, hæmoptysis	3	3	,,	Hæmoptysis ceased immediately.
23	23, M.	Hæmoptysis	3	3	,,	,,
24	56, M.	Ch. bronchitis	12	12	—	Much improved.
25	48, M.	Hæmoptysis	4	4	—	Hæmoptysis ceased immediately.

The President, in congratulating the author on his valuable paper, remarked that these injections could evidently be made without any inconvenience to the patient, and that many details with regard to the method of this form of treatment still required working out.

Dr. Theodore Williams had not employed intralaryngeal injections in the cases described by the writer of the paper, as he had found the results of inhalations and sprays on such cases unsuccessful and disappointing. He did not consider the operation of intratracheal injection difficult, but he wished to ask the writer of the paper how he could direct the injection specially to the diseased part of one lung, and thus concentrate its action at the desired spot. He himself had practised injecting antiseptic fluids through the chest wall into pulmonary tissue or into a vomica, but the results had not been satisfactory, inasmuch as the injections gave rise to so much pain and coughing that the patients would not continue the treatment. He had seen good results follow the treatment of hæmoptysis by turpentine spray.

Dr. J. K. Fowler had had some experience of this method of treatment. Two drachms of the antiseptic fluid could be injected through the glottis without any discomfort to the patient. If the injection was made on to the vocal cords, coughing resulted; but this could be avoided by passing the nozzle of the syringe through the rima glottidis and then driving the contents into the trachea. He had used the solution of guaiacol, menthol, and olive oil employed by Rosenberg and Grainger Stewart, in doses of 1 drachm twice a day, in order to diminish the amount of expectoration and remove fœtor. He had employed it with success in three cases: (1) A woman, aged 33 years, the subject of syphilitic disease of the lungs, who brought up daily 16 ounces of fœtid sputum, was greatly improved by the treatment: the expectoration was greatly diminished in amount and the fœtor disappeared. (2) A boy, aged 17, with bronchial catarrh, brought up daily seven or eight ounces of offensive sputum. By treatment the amount of expectoration was brought down to three ounces. (3) A boy, aged 19, as a result of gangrene of the lung following pneumonia four years before, had a cavity at the base of the left lung, with copious and fœtid expectoration. After treatment the fœtor disappeared, the amount of sputum was diminished, and the patient was much improved in every way. He thought it was necessary to wait before drawing definite conclusions, but considered the method worthy of more extended trial.

Dr. Kenneth McLeod mentioned that in 1860 Dr. Hughes Bennett had employed strong injections of nitrate of silver for laryngeal affections.

Dr. Routh referred to the large quantities of fluid which could be injected into the bronchi and lungs, and absorbed in a few hours without producing any bad effect.

Dr. Mitchell Bruce had employed this method of treatment with good results in two cases: (1) A man, aged 34, was under treatment for bronchiectasis in the Brompton Hospital. After remaining stationary for some time he was treated with injections twice a day of the mixture employed by Rosenberg and Grainger Stewart. The expectoration, which had been extremely offensive and had averaged 15 ounces daily, almost lost its fœtor and was reduced to 5 ounces per diem, while the patient was improved both in general health and also as regards physical signs. (2) A potman, aged 24, who had a remittent temperature and foul expectoration. The nature of his disease, however, was obscure, and was possibly connected with suppuration spreading from the abdomen to the right pleural cavity and lung. Directly the injections were given the temperature fell and the patient improved very rapidly for a time. This patient, however, had relapsed, and this time the treatment by intratracheal injections had failed to benefit him.

Mr. Colin Campbell, in reply, said that he tried to direct the fluid injected to the affected part by making the patient lie on that side after the injection. He laid stress on the importance of passing the syringe rapidly through the glottis, and by thus surprising the larynx, obviating its irritability.

A Year's Experience of the Use of Sulphur in Surgery.

Mr. W. Arbuthnot Lane, in this paper, stated that in consequence of his losing a patient by iodoform poisoning last year, he looked about for some material which, like iodoform, would act, under the influence of living tissues, by the production of powerful germicidal or inhibitory agents without possessing the poisonous elements which that drug occasionally exhibits. It occurred to him that sulphur, which when applied to cutaneous surfaces is able to destroy the organisms which cause such diseases as acne, scabies, eczema, tinea tonsurans, etc. (probably by the formation of sulphurous acid), might also, if placed in the tissues of the living body, result in the development of a germicidal agent in a quantity sufficient to destroy, or at least influence prejudicially, the growth of any organism with which it might come in contact. He first applied sulphur in September, 1893, and most successfully, in a case of very extensive and destructive disease of the hip-joint, when he found that it produced a powerful caustic action upon the living tissues, associated with the escape of what appeared to be sulphuretted hydrogen. Since that period he had used it constantly for the treatment, not only of cases of tuberculous disease, which up to that time had resisted, too often successfully, every attempt of the surgeon, but also of disease resulting from the presence in the tissues of any form of organism. The paper was illustrated by details of cases of extensive tuberculous disease of the elbow, knee, tarsus, prostate, and spine, of acute septic spreading gangrene of the leg, of traumatic infection of the forearm, of lupus, and of carbuncle. Mr. Lane had arrived at the following conclusions as to the effect of sulphur: (1) Neither sulphur nor the products generated by its decomposition act prejudicially upon the life or health of the individual into whose body it is introduced. (2) If placed in contact with recently incised healthy tissues, twenty-four hours suffice to render the parts sterile as far as organisms are concerned. (3) If the recently incised or scraped surface be but poorly supplied with blood, as, for example, the brawny edge of a carbuncle or the spreading gangrene of a limb, sulphur may be left in contact with the tissues advantageously for a considerably longer period. This also applies to the granulating surface. (4) The entry of other organisms into a tuberculous cavity does not influence the action of the drug, since it destroys all organisms, whether free in the cavity or intruding into the surrounding living tissues forming its wall. (5) The action exerted by sulphur is a painless one. Some observations by Mr. Pakes on the resultant chemical

changes were appended, and a paper by Dr. de Ray Pailhade was referred to.

Sir SPENCER WELLS asked what advantages sulphur, in the form of powder, had over sulphurous acid. In the Franco-Prussian war 500 cases of surgical injury were treated with sulphurous acid at Metz; there were 50 deaths, which, though apparently a high mortality, was in reality, from the very depressing and adverse surroundings, a satisfactory result.

Mr. BARWELL had found sulphurous acid very useful in tuberculous disease of bone and of the skin.

Mr. ARBUTHNOT LANE, in reply, said that the advantage of the use of sulphur over sulphurous acid was analogous to that of iodoform over iodine. Sulphurous acid was at once neutralised and its action brought to an end, while in the case of sulphur the material was gradually acted upon, and the sulphurous acid produced was changed into sulphuric acid.

CLINICAL SOCIETY OF LONDON.

J. W. HULKE, F.R.C.S., F.R.S., President, in the Chair.

Friday, November 23rd, 1894.

PULSATILE CONGENITAL CYST SIMULATING ANEURYSM.

MR. GOLDING-BIRD described the case. The patient was an adult, with a cyst near the carotid artery, which exhibited both antero-posterior and lateral pulsation. It proved on excision to be a flaccid, thin-walled, congenital cyst of the neck, which in all but *bruit* gave the clinical characteristics of an aneurysm. The author remarked on the rarity of a congenital cyst exhibiting pulsation, and after describing the particularly flaccid state of the tumour, expressed the opinion that lateral as well as forward pulsation of a cyst lying over an artery, but unconnected with it, could occur only when either the flaccidity of the cyst permitted it to mould itself round the artery, or when (which amounted to the same thing) the artery with powerful pulsation was large enough to compress itself deeply into the contour of the cyst. Inflammatory cysts—for example, abscess—though often near arteries, were strong-walled enough to resist the impress of the artery.

The PRESIDENT remarked on the difficulty of diagnosis occasioned by the expansile pulsation. The nature of the epithelial lining of the cyst and its oily fluid contents left no doubt as to its congenital dermoid nature. The locality of this cyst was that in which were found congenital cysts prolonged between the external and internal carotid arteries, toward the pharynx. Those cysts and dermoids probably originated in partially closed branchial clefts.

DR. SANSOM asked if there were any pressure symptoms. The explanation given by the author would explain pulsating empyema and similar conditions.

Mr. PEARCE GOULD asked if, after removal of the cyst, the carotid was much exposed; sufficiently, in fact, to justify the suggestion that the growth wrapped around it. The lateral pulsation might be due to the flaccidity of the tumour; as no tumour, if tense, could pulsate laterally, however intimate its contact with the artery.

Mr. GOLDING-BIRD, in reply, said the artery was really much exposed after removal of the tumour. Mr. Gould's contention was correct in the sense that a tense tumour could not very well be wrapped round an artery, and so could not have lateral pulsation communicated to it, as in this case.

IDIOPATHIC DILATATION OF THE SIGMOID FLEXURE.

Dr. W. P. HERRINGHAM read for himself and Mr. BRUCE CLARKE the notes of this case. The patient, an old gentleman aged 78, had been suffering for eight days from want of action of the bowels. His symptoms at the end of this time were those of chronic obstruction. The points to be settled were the cause and the site of the obstruction. There was a history of lifelong constipation, and of one attack five years ago similar to the present, which was cured by a strong purgative. For the last six months the general health had been excellent, and the constipation, which had up to that time been the rule, had given place to regular action of the bowels. No stricture could be felt *per rectum* nor any tumour in the abdomen. There was considerable distension, and this seemed to involve the transverse colon. In the absence of any evidence of malignant disease, the diagnosis made was either faecal impaction or some non-malignant stricture above the rectum. Attempts were made for two days—the patient's condition seeming to allow of this delay, and the cure of the previous attack influencing the authors in this direction—to relieve the obstruction by purges and enemata. On the third day the patient was considerably worse, and it was necessary to operate. At the operation faeces were found in the peritoneal cavity, and the patient died a few hours later. The disease was found to consist in an enormous dilatation of the sigmoid flexure, which covered almost all the front of the abdomen. The inner surface was extensively ulcerated. In several places it was black and gangrenous, and in more than one had given way, allowing faecal extravasation into the peritoneal cavity. There were old adhesions to the liver and to the omentum and recent peritonitis. There was no stricture, nor could any mechanical cause be discovered for the dilatation, which the old adhesions showed to have been of long standing. The intestine above and below the sigmoid was natural. These cases are of extreme rarity. Only eleven similar could be found, three of which were in elderly men, and were due to sigmoid dilatation, whereas in the other eight the patients were much younger, and a much greater length of bowel was affected. In one case a faecal impaction explained the condition. In none of the others was sufficient cause found. Dr. Angel Money suggested that in the case reported by him the distension was due to kinking of the sigmoid flexure. For the younger cases, Dr. Gee's opinion that mere constipation and retention of wind are the cause of the dilatation seemed borne out by Osler's description of a baby long under his treatment.

Mr. CROFT asked if there was any obvious cause for the contraction of the colon above the distension, and what was the pathological condition of the wall of the distended bowel. Was its thickness due to hypertrophy of the muscular coat, or to inflammatory thickening of the coats? If due to hypertrophy of the muscular coat, it clearly was not a case of paralysis of the bowel. Finally, was there any kinking of the sigmoid flexure below the dilated portion?

Dr. COUPLAND suggested that the hypertrophy and distension of the bowel might be due to constipation, and kinking be due to such hypertrophy.

Mr. BRUCE CLARKE believed Dr. Coupland's suggestion to be correct in this case. The constipation produced hypertrophy, and hypertrophy led to kinking, and the kinking to further constipation and distension of the bowel.

The PRESIDENT said that, as to aged persons, he believed the hypertrophy was not so very uncommon. What was the nature of the operation performed?

Dr. HERRINGHAM, in reply, said that the small diameter of the bowel above the distension was not pathological, but was such as was found in healthy persons. Mr. Croft had said that hypertrophy of the muscular coat disproved the paralytic nature of the distension. He (the speaker) had suggested paralysis as a cause of the condition in young people only; in old persons he had ascribed it to chronic constipation. All the patients were not constipated; in one of the cases he had mentioned the bowels were open daily before the distension came on. A distended bowel pressed on the adjoining healthy bowel and so kinked it.

Mr. BRUCE CLARKE said that the operation was an ordinary inguinal colotomy on that side.

SPLENIC LEUCOCYTHÆMIA TREATED WITH ARSENIC AND INHALATION OF OXYGEN.

Dr. FREDERICK TAYLOR described this case. The patient was aged 25, and was admitted into Guy's Hospital on November 2nd, 1892. He noticed about five months previously that his abdomen was hard all over, and he had been losing strength and colour for about a year. He had continued at work as a policeman, and had had good appetite, but he had been short of breath, and had had attacks of epistaxis. On admission, he presented the characteristic features of a case of splenic leukæmia. The left half of the abdomen was occupied by the spleen, which projected 2½ inches to the right of the middle line at a point 1¾ inch above the umbilicus. The blood contained a large excess of leucocytes. They were estimated at 1,000,000 in the cubic millimetre, while the red corpuscles were 1,880,000. The hæmoglobin was 40 per cent. of the normal. The lymphatic glands were normal, the optic discs normal, and the urine free from

albumen. He was ordered 5 minims of liq. arsenicalis three times a day, and 30 litres of oxygen by inhalation daily. The dose of liq. arsenicalis was increased by 2 minims every four or five days until it reached 45 on November 27th. On November 19th the red corpuscles had increased to 3,080,000 per cubic millimetre, the leucocytes had fallen to 470,000. A decided diminution in the size of the spleen was noted on November 28th. On December 5th, the red corpuscles were about the same, but the leucocytes were only 10 000 per cubic millimetre. A fortnight later the red corpuscles had increased to 3,620,000, or 72 6 per cent.; the leucocytes had risen again to 20,000, which might be regarded as about 2½ times the normal number for a cubic millimetre. He was discharged in January, 1893, when the anterior margin of the spleen was 2 inches to the left of the umbilicus, that is, had receded nearly 5 inches from its first position, while all the other measurements showed marked decrease. Since leaving the hospital he had been in the country, with varying conditions of health. In August, 1894, his spleen was said to be extremely enlarged. Dr. Taylor stated that he had never before in a case of leukæmia seen such rapid improvement, both as regards the leucocytes and the spleen, from any treatment as occurred in this case, though it must be admitted that the man was not cured. Still, it was likely that the disease was delayed. The author referred to cases treated with oxygen inhalations by Kirnberger, Sticker, and others, and pointed out the small proportion that the dose of oxygen, 30 litres daily, held to the total amount normally breathed; in other cases he should certainly try more.

Dr. Coupland was sorry that two drugs were tried together, though there would be so much reluctance to give up arsenic that in giving oxygen one would probably continue the arsenic also. But if there were too few red corpuscles, how was the oxygen to be conveyed to the tissues? However much oxygen might be put into the lungs it could not be conveyed elsewhere without the red corpuscles. He had recently noted a case under Schultze reported as a failure under the oxygen treatment. He had tried oxygen in one patient with about 1 white to 9 or 10 red corpuscles. The man improved morally, but not physically, for he left with his spleen as large as when he had entered the hospital.

Mr. W. G. Spencer inquired if there was any increase in the respiratory movements whilst the patient was taking oxygen. If so, that would improve the venous circulation and so relieve the spleen.

Dr. Bradford thought the diminution in the size of the spleen more due to the arsenic than the oxygen. In a case where 100 minims were given daily there was great diminution in the size of the spleen. In a case of pneumonia or emphysema the extra dose of oxygen might produce improvement. If extra oxygen was given to a patient with few red corpuscles it might be absorbed into the blood plasma, as in the case of blood replaced by the injection of saline solution.

Dr. Joll mentioned the case of a lady suffering from leucocythæmia who developed symptoms of irritant poisoning from accidentally taking arsenic.

Dr. Herringham referred to a case which eight or nine years ago had leucocythæmia and enlarged spleen, and was then in the Middlesex Hospital. He was now in St. Bartholomew's, and had no leucocythæmia nor enlarged spleen.

Dr. Hale White referred to a case treated in Guy's Hospital eighteen months ago with arsenic for leucocythæmia, and much benefited. Since leaving the hospital he had ceased to take arsenic, but the improvement in his health had nevertheless been maintained.

Dr. Taylor, in reply, said that results in his case were so pronounced that he believed the small amount of arsenic given was not sufficient to account for the effects observed. There were difficulties as to the treatment by oxygen, but Dr. Bradford had suggested another way in which oxygen might be conveyed to the tissues in cases of great diminution of the red corpuscles.

Supernumerary Testis.

Mr. Arbuthnot Lane showed a boy, aged 15, from whom a small supernumerary testicle was removed from the right half of the scrotum. This organ had a separate tunica vaginalis, and was normal in appearance, the vas running up in company with that of the normal testis on the same side. Both right and left testicles were absolutely normal, the right one being brought out through the incision and carefully examined at the time of the operation. Manipulation of the supernumerary testis, which was as large as an ordinary marble, produced no testicular sensation. The specimen with microscopical sections was shown.

The President had never seen a case of the kind, nor heard of one in modern surgical literature. The cases mentioned by old authors were probably cases of cyst of the cord.

Dr. Glover inquired as to the right of the surgeon to deprive a patient of supernumerary organs with which he had been endowed by Nature.

Mr. Lane, in reply, said he had removed the supernumerary organ at the patient's urgent request.

MEDICAL SOCIETY OF LONDON.

Sir William Dalby, M.B., F.R.C.S., President, in the Chair.

Monday, November 26th, 1894.

Subcortical Central Cerebral Tumour Treated by Operation.

Dr. Beevor and Mr. Ballance read notes of a case, and showed a patient. The case will be published shortly.

Sir William Mac Cormac congratulated the authors on their skill in diagnosis and their courage in acting on their conclusions. He observed that unfortunately a sarcoma of the brain did not admit of the surgeon acting as he would like to do—as he would, in fact, were the growth situated elsewhere, in a limb for instance, by amputation at the next joint above.

Dr. Taylor thought, judging from the fact that the former depression was now flush with the rest of the scalp, that recurrence of the growth had taken place, but he insisted strongly on the benefit derived from even the partial removal of such a tumour. The paper raised the question of the proper and justifiable course under circumstances such as these, and he maintained that surgery had a sphere of usefulness even if it could only render the patient's life more endurable. Passing on to the consideration of the effects of the relief of intracranial pressure in causing the disappearance of the optic neuritis and other symptoms associated with cerebral tumour, he asked whether this relief of intracranial pressure could not be obtained by mere removal of bone. In all the cases he had seen incision of the dura mater had been done at the same time with very satisfactory results. When one removed the skullcap in patients who presented a cerebral tumour which had not been operated upon, the signs of pressure on the dura mater were very evident, the dura mater bulging and tearing spontaneously when a small incision was made into it. This bore out the view that the pressure was less within the skull than within the dura mater.

Dr. Hale White urged that a distinction must be drawn between cases in which the tumour could be removed as a whole and those in which all one could promise was relief from pressing symptoms. An examination of 100 consecutive *post-mortem* records of cases of cerebral tumour not operated upon went to show that only about 10 per cent. fell within the scope of surgical interference, the tumour in most of the other cases being too deeply seated, multiple, or situated in the cerebellum. He referred to several cases under his own observation, one of them being the case of a woman who, some months after the removal of a breast for sarcoma, developed Jacksonian epilepsy commencing in the arm. On cutting down on the cortex, however, Mr. Lane was of opinion that it was healthy, and only consented to remove the portion corresponding to the arm centre in deference to his urgent solicitation. On microscopical examination, the portion of cortex removed, though apparently healthy, proved to be sarcomatous. It was a fact that it was often difficult macroscopically to distinguish between healthy and diseased brain tissue. Under these circumstances, he thought surgeons would be justified in removing particular portions of the cortex, even though they might be apparently healthy. He mentioned that in his case the temperature on the paralysed side after the operation was persistently higher than on the other side. He doubted whether they knew enough about cerebellar tumours to be able to affirm that the same relief would follow the treatment which gave such relief in the case

of cerebral tumours, and he expressed pleasure that in a case of cerebellar tumour at present under his care the parents declined to authorise an operation. He added that such patients usually took the anæsthetic very badly.

Dr. MOTT asked how the authors explained the prompt restoration of tactile sensation and movement after removal of so large a portion of brain.

Dr. ORMEROD related the case of a man who at first suffered from ordinary epilepsy, but who later on developed typical Jacksonian epilepsy with involvement of the arm centre. Mr. Horsley had removed a great part of a large tumour of the cortex with immediate relief, but a month or so later the scalp over the seat of operation began to bulge, and, though some fluid was withdrawn, the patient became insane and died. *Post mortem* they found a large cerebral tumour infiltrating the brain substance, reaching to the base.

Mr. BALLANCE declined to admit that the filling up of the depressed area of the cranium was sufficient proof of recurrence having actually taken place. He discussed the question whether the patient might have derived the same amount of benefit by mere incision of the dura mater and drainage, and expressed his opinion that the removal, even partial, of the tumour had been attended with benefit, if only as allowing space within which the tumour could grow without invading and destroying brain substance. He pointed out that cerebellar tumours had already been operated upon, and insisted on the fact that, the conditions being identical, there was no reason why treatment which relieved the symptoms in cerebral tumour should not do as much for cerebellar tumours. He had not remarked that such patients took the anæsthetic badly, but pointed out that the abolition of the conjunctival reflex was not necessary except while actually dividing the dura mater. He admitted inability to explain the rapid recovery of tactile sensation and power after the operation.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on November 21st, Dr. J. S. TEW, President, in the chair, Dr. HANDFORD read a paper on Endocarditis, and showed several specimens of the malignant form, in all of which signs of embolism, which are said to be so common, were absent. A purpuric rash was present in only one case, and then only a few hours before death. As to the diagnostic value of murmurs in endocarditis, the opinion was expressed that their importance was generally overestimated and their significance often misinterpreted. A great many of the systolic apex murmurs arising during the course of acute rheumatism or other febrile diseases, which were generally considered to be sufficient evidence of endocarditis, were really due to dilatation of the left ventricle and of the fibrous ring at the auriculo-ventricular opening. This was especially true of those murmurs which disappeared early in convalescence. Dr. Handford believed that when a valve had been sufficiently damaged by endocarditis to lead to free regurgitation the valve never completely recovered, although the regurgitation might be diminished or prevented by gradual contraction of the orifice. But many cases of endocarditis were quite latent, or could only be suspected by indistinctness and prolongation of the first sound, by disturbances of rhythm, and rise of temperature. Even in the absence of all symptoms one was not justified in saying that the cardiac valves had not been damaged in an attack of rheumatism unless a careful examination six months or a year later revealed no abnormality. Hence great caution should be exercised in allowing exertion until a considerable time after an attack of acute rheumatism. The subject was discussed by the PRESIDENT and Messrs. WATSON, TOMPSETT, and CATTLE.—Dr. ELDER showed Gall Stones removed by cholecystotomy from a woman, aged 33. Mulberry Calculus removed by nephrotomy; and Fibro-cystic Tumour removed by myomectomy.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At a meeting on November 19th, Dr. S. R. LOVETT, the new President, delivered his presidential address. He gave a retrospect of sanitary legislation and administration in England from the report of the first Commission, which led to the first Public Health Act of 1848, and the creation of the General Board of Health and the Metropolitan Commissioners of Sewers. A further Sanitary Act was passed in 1866, and in the following year the Asylums Board was formed to provide hospital accommodation for pauper cases of small-pox. At the close of the epidemic of 1871-2 the hospitals of the Board were opened to fever cases, and in 1883, thanks mainly to the exertions of Dr. Dudfield, admission to these hospitals ceased to carry with it the disabilities of pauperism. Since 1888 diphtheria had been added to the fevers for which the Board already provided five thousand beds, while three new hospitals were in course of construction. Acts dealing with insanitary dwellings and areas were passed in 1868 (Torrens's) and in 1875 (Cross's), but both had been superseded by (Ritchie's) Housing of the Working Classes Act of 1890. The Public Health Acts now in force were those of 1875 in the provinces and of 1891 in London, together with amending Acts and others in special departments. The Society, formed in 1855 among the original medical officers of the metropolis, was thrown open to those of the provinces when, under the Public Health Act of 1872, they began to be appointed in all large towns. The journal of the Society, *Public Health*, was first published in 1888 under the editorship of Professor Wynter Blyth, who in 1892 was succeeded by Dr. Newsholme. The year 1892 was an important one to the sanitary service, for henceforth all medical officers in London and those in the provinces having districts with populations of 50,000 were, with certain reservations in respect of existing officers, required to possess diplomas in Public Health, and the former were granted fixity of tenure. In view of the requirement under the same Acts of a certificate recognised by the Local Government Board of all sanitary inspectors appointed after January 1st, 1895, and the constitution of a Conjoint Examining Board, the Society had been incorporated to give it a legal status.

EDINBURGH OBSTETRICAL SOCIETY.—The following office-bearers have been elected for the ensuing session:—*President:* Dr. A. H. Freeland Barbour. *Vice-Presidents, Senior:* Dr. James Ritchie. *Junior:* Dr. Halliday Croom. *Treasurer:* Dr. Craig. *Secretaries:* Dr. J. W. Ballantyne, Dr. F. W. N. Haultain. *Librarian:* Dr. Milne Murray. *Members of Council:* Professor A. R. Simpson, Dr. Haig Ferguson, Dr. Felkin, Dr. Brewis, Dr. Lucas, Dr. Menzies, Dr. Stewart Stirling, Dr. Keppie Paterson.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on November 8th, Mr. MAKEIG JONES, President, in the chair, Mr. SNELL showed two men, one with a Chancre on the inner surface of the lower eyelid, the other with a Chancre (healed) on the outer surface of the lower eyelid. He also showed a woman with Ophthalmoplegia Externa and Palsy of the right lateral Rectus, and a boy with right Congenital Ptosis of and Palsy of the Elevators.—Mr. DALE JAMES showed a child, aged 2½, the subject of Xanthoma Multiplex Congenitale.—Dr. T. H. MORTON (Brightside) read the notes and showed photographs of a case of Bell's Paralysis in a millwright, aged 75, with a history of rheumatism.—Mr. RICHARD FAVELL showed a Dermoid Cyst with air and a nipple-like process on the skin lining the internal surface, and a specimen of Glandular Proliferating Cystic Disease of the Ovary, weighing 10 pounds.—The PRESIDENT showed a large stone removed by the suprapubic operation.—Mr. COOMBE read notes of a case of plastic operation for Ectopia Vesicæ in a girl aged 10. A sound covering, firmly united, was secured by the skin from the sides being dissected up, and united in the middle line with the raw surface towards the bladder. Drainage of urine was provided for by an instrument specially designed by Mr. Coombe for the purpose. The case terminated fatally a few days after the wound had completely healed. Both kidneys were degenerated, and the pelves and ureters dilated and blocked by numerous small stones and masses of cretaceous-looking phosphatic material.—Mr. PYE SMITH read a paper on Antrectomy for Persistent Suppuration of the Middle Ear and its Complications. He showed four cases and gave the results of five others. There had been no fatality among those uncomplicated cases. The otorrhœa had existed for from six to twenty-one years. It was cured after the operation in four cases, diminished in four others, and unaffected in one. Hearing was improved in five cases, deteriorated in

two, and unaffected in two. The general health was improved in eight out of the nine cases. He maintained (1) that the chief cause of chronicity and intractability of suppurative disease of the middle ear was generally the involvement of the antrum; (2) that the implicated antrum was the usual channel for the extension of septic inflammation to the brain, cerebellum, meninges, and lateral sinus; (3) that antrectomy was therefore indicated both for intractable otorrhœa and as a first step in operations for the various encephalic complications of middle-ear disease; (4) that the operation was free from any great risk to life, and offered the best-known means of curing most cases of chronic otorrhœa and of preventing its dangerous complications; and that it also formed the first essential step in the efficient treatment of those complications when they arose.—The President, Dr. Wardrop Griffith (Leeds), Mr. Atkin, Dr. Porter, Mr. Snell, and Dr. Dyson took part in the discussions.

REVIEWS.

Dr. William Smellie and his Contemporaries: A Contribution to the History of Midwifery in the Eighteenth Century. By John Glaister, M.D. Glasgow: James Maclehose and Sons. 1894. (Demy 8vo, pp. 386. Plate and figs 10s. 6d.)

A carefully written biography is on the whole of greater value to the student of history than an autobiography. It lacks, indeed, the personal interest attaching to such a document, but it gains in finality. The value of the work is enhanced when the biographer takes as his subject the central figure of an epoch, and weaves round it the story which culminates in his hero's life-work. The life of William Smellie provides all the materials necessary for a successful biography, and Dr. Glaister has availed himself of the opportunity to write a work which will be of lasting value, for it tells of the rise of modern midwifery. It explains how qualified practitioners replaced the ignorant women who had a monopoly of the straightforward cases until the middle of the eighteenth century. It explains too the much more important question as to the gradual diffusion of a correct knowledge of the mechanism of labour.

Smellie was the first of the remarkable band of men who emerged from Lanark about 1740. He was followed by Cullen, by William Hunter, and by John Hunter. For some years he seems to have practised all branches of medicine in his native country, but without any legal qualification. As his circumstances improved, he first obtained the licence of the Glasgow Faculty, and afterwards the degree of M.D. from the University. He was a man of genius in the truest sense of the term, for he observed, reasoned, and eventually drew conclusions of the most far-reaching character; above all he was methodical. Midwifery seems early to have won his affections to the exclusion of medicine and surgery, and in pursuit of knowledge he travelled to Paris, then the great seat of obstetric teaching. He subsequently settled in London, where he rapidly attained the leading position, though he had to endure a lifelong struggle against his detractors, who were opposed to the ousting of midwives by men. He eventually returned to Lanark, and died on March 5th, 1763, at the age of 66.

Smellie was throughout his life a simple, God-fearing man; charitable, and disposed to live in harmony with his fellows; not polemical, though by ill fortune he was made the central figure round which a great struggle raged. He appears to have been singularly modest, for he knew his own defects. A practical rather than a literary man, he obtained skilled assistance in his writings, and Dr. Glaister has shown that at least one volume of his great work on midwifery was polished by Tobias Smollett.

Dr. Glaister has done his work well, and in a most scholarly fashion. He has gone to original authorities for his information, and he has obtained many new and important facts and dates. He gives much interesting information upon the condition of midwifery in London, and the progress which it had made before the death of Smellie. He analyses the literature of midwifery, from the publication of Roesslin's *Byrthe of Mankynde* to the year 1760. In this section he might have drawn attention to the work attributed to his illustrious and learned countryman, Alexander Rhead (or Reid), M.A., of Aberdeen, and M.D. of Oxford. It is published in Part III of the *Whole Practice of Surgery*, issued in 1687, more than forty years after his death, under the strange title "Of Taking away Things Superfluous." It is interesting, as it gives a tolerably correct summary of theoretical and practical midwifery at an uneventful period in its history. Finally, Dr. Glaister's work gives an excellent critical digest of Smellie's treatise, and of the arguments for and against his claim to the invention of the curved forceps.

The biography is so good that we hope Dr. Glaister will not consider us pedantic if we point out that harelip is not spelt "hair-lip" (p. 61), that Leipzig is not spelt "Liepzig" (p. 222), and that the reference in the footnote on p. 31 should be to the second volume of Pettigrew's *Medical Portrait Gallery* instead of the first. The photogravure of William Smellie, which forms the frontispiece, is excellently reproduced, and the figures throughout the work are well selected and clearly printed. We cordially wish that Dr. Glaister's book, which is one of the most interesting and well executed medical biographies which it has been our lot to read, may be as successful as it deserves to be.

Physiology for Beginners. By M. Foster, M.A., M.D., F.R.S., Professor of Physiology in the University of Cambridge, and Lewis E. Shore, M.A., M.D., Senior Demonstrator of Physiology in the University of Cambridge. London: Macmillan and Co. 1894. (Cr. 8vo, pp. 250, 111 figures. 2s. 6d.)

"This little work is intended for those who, without any previous knowledge of the subject, desire to begin the serious study of physiology. It is written in a more elementary and didactic manner than the *Elementary Lessons* of Professor Huxley, and it is hoped may serve as an introduction to that volume. Though the whole has been supervised by Professor Foster, who therefore holds himself equally with Dr. Shore responsible for its contents, the work belongs to the latter since he has written it."

So runs the preface; and here are sufficiently indicated the scope and purport of the book. We are inclined to think it will very largely replace Professor Huxley's well-known elementary textbook, which has served its time so well for many years. Students can hardly be expected to read this as an introduction to Huxley, and then Huxley as an introduction to something else; most will fancy that one introductory volume is sufficient.

For the book itself, however, we have nothing but praise; both text and illustrations are excellent. When so many elementary textbooks of an inferior kind are about, it is refreshing to come across one written in the truly scientific spirit, and one that can be confidently recommended to all students. It has nothing of the cram book about it, and though it will appeal largely to others than medical students, we have no hesitation in advising these latter to study it in their first year, and so make themselves ready for the classes of physiology which the Royal Colleges now decree are to be attended during their second year of study.

Lectures on Human and Animal Psychology. By Wilhelm Wundt. Translated from the second German edition by J. E. Creighton and E. B. Titchener. London: Swan Sonnenschein. 1894. (Demy 8vo, pp. 464. 15s.)

The translators observe that this is the first work of the distinguished Professor which has been rendered generally accessible to the English-speaking public. Since the first edition of his lectures was published thirty years ago—psychology has made great strides. The author warns his readers that he no longer recognises as his own any view formulated in the earlier edition but not admitted into the present one. The book is made up of thirty lectures, beginning with the analysis of the simplest sensations and ideas, then dealing with special sensations passing from the con-

sid ration of the feelings to the will, the development of the attention, consciousness, and the association of ideas till we come to concepts and judgments.

A noteworthy feature of the book is the use made of such processes as dreams, sleep walking, and mental disturbance to explain the phenomenon of normal mental activity. His lectures upon the problems of animal psychology and the relation of animal to human mentality and instinct show great power of analysis. In his anxiety to deny any higher mental process to animals Professor Wundt pushes his theory that what appears intelligence in the higher animals is resolvable into associations so far that one begins to wonder if a similar method of accounting for manifestations of intelligence could not be applied to human beings. In reading on we find that the professor has anticipated our objection by the naïve remark: "I myself am inclined to hold that man really thinks very little and very seldom."

In the concluding lecture he discusses the question of immortality and the nature of mind, subjects which cannot be touched without raising an emotional interest.

The book bears the impress of a thorough acquaintance with the subject through all its difficulties and obscurities. Even when he accepts other men's observations and opinions, Wundt shows that he has examined them carefully and not without misgiving. The critical faculty seems always awake, and as the judgment appears correct the reader becomes more disposed to trust the author the further he reads.

NOTES ON BOOKS.

Primer of Hygiene. By Ernest S. Reynolds, M.D.Lond. (London: Macmillan and Co. 1894. Fcap. 8vo, pp. 176, 50 Woodcuts. 1s.)—This little work is chiefly for the use of school children, or for persons whose knowledge of the principles of hygiene may be considered extremely limited. Parasites large and small, the atmosphere, water, food, personal health, the essentials of a healthy home, and the prevention of infectious diseases are treated of in simple language, and at the end of each chapter there are a few questions. It may be confidently recommended for the purpose it is intended.

Ueber Bilharziakrankheit. Von Dr. L. Rutimeyer. (Reprinted from *Annales Suisses des Sciences Médicales*, No. 12, 1894.)—This is an excellent summary of our knowledge of bilharzia disease. The pathological anatomy is gone into in great detail, the author's own observations on a fatal case forming the basis of a very complete description of the lesions produced by this troublesome African parasite. Some of the illustrations are poor; one or two are of real value.

A Practical Treatise on Medical Diagnosis. By John H. Musser, M.D. Illustrated with 162 woodcuts and 2 coloured plates. (Edinburgh and London: Young J. Pentland. 1894. Imp. 8vo, pp. 881.)—This volume is divided into two parts, the first dealing with general, and the second with special diagnosis. In the former there will be found an excellent short chapter on bacteriological diagnosis, as well as another on morbid processes and their symptomatology. A section is also devoted to pain and its significance, which will repay careful perusal. In the special diagnosis of the various visceral diseases the subject matter is arranged under facts to be learnt by (1) inquiry and (2) observation (physical examination, etc.), a short account of the organ preceding. Under diseases of the kidney the classification proposed by Delafield[1] is adopted. Under nervous diseases a useful summary is given of cerebral and spinal localisation. A short account of cranial topography might have been included as being a matter of much interest to the physician. The author divides the abdomen, for purposes of examination, into four quadrants only by a circle passing through the umbilicus. We can commend this book as containing a very complete, accurate, and well-arranged account of the subject by one who is well versed in all the advances made of recent times.

[1] Supplement, British Medical Journal, December 12th, 1891, par. 522.

CHRISTMAS BOOKS, CHRISTMAS CARDS, AND DIARIES.

In pursuance of an annual custom, we propose to notice in this number of the British Medical Journal a few of the immense number of elegant books with which the publishers at this season of the year tempt the public. We shall mention also some of the most elegant specimens of the industry of the maker of Christmas cards, and indicate some of the series of diaries and desk tablets and visiting lists with which everybody must provide himself during the next month.

Christmas Books.

It is long since we have read a short story more full of humour, and of good humour, than *Vernon's Aunt*, by Sara Jeannette Duncan (Mrs. Everard Cotes), published by Chatto and Windus (3s. 6d.). The adventures of Miss Lavinia Moffatt, the maiden aunt in question, are related with a light hand, and much skill is shown in the delineation of the natives of India, with whom she comes into contact during the course of her journey to make a surprise visit to her nephew in the Forest Department. The book contains forty-seven admirable illustrations by Hal Hurst. From the same publishers we have received *Renshaw Fanning's Quest* (3s. 6d.), a tale of the high veldt, by Bertram Mitford, an excellent story of adventure, which will be highly appreciated by boys. It contains a spirited frontispiece by Mr. Stanley L. Wood. Messrs. Chatto and Windus are also publishers of *Scenes from the Show* (2s. 6d.), a collection of short stories by Mr. George R. Sims, whose name will be sufficient to recommend his volume to the attention of the discriminating reader. The *Gentleman's Annual* for Christmas, 1894 (Chatto and Windus, 1s.) consists of a novel by Mr. T. W. Speight, entitled *Quittance in Full*, a domestic story with a thrilling plot.

In the long list of excellent gift books issued this year by the Religious Tract Society we would put first *Pictures from Bohemia*, drawn with pen and pencil by James Baker, F.R.G.S. (8s.). Mr. Baker appears to have paid many visits to that romantic country, which is so little known to English travellers that in one of the most interesting towns, when a message was sent to the editor of the local paper, informing him that four Englishmen desired his guidance and information, he thought the messenger had been instigated to play a practical joke upon him. The book is illustrated by 108 drawings, some of them by Mr. Walter Crane, whose uncompromising pencil contrasts strongly with the softer grace of his colleague, Mr. H. Whatley. The same Society publishes a very interesting volume by Sir J. William Dawson, LL.D., F.R.S., the veteran Canadian geologist. It is entitled *The Meeting Place of Geology and History* (5s.), and deals with great skill and clearness with the many disputed points in connection with the first appearance of man on the earth. Sir William Dawson is well known as an opponent of the Darwinian hypothesis, and in this volume, while writing on the whole with conspicuous fairness, he does not hesitate to let the reader perceive that he has not been converted to the theory of evolution. The annual volumes of well-known periodicals published by the Religious Tract Society—the *Sunday at Home* (7s. 6d.), the *Leisure Hour* (7s. 6d.), the *Boys' Own* (8s.), and the *Girls' Own* (8s.), make excellent gift books, being copiously illustrated both in black and white and in colours, and containing an enormous amount of interesting reading matter.

Messrs. Blackie and Son, of London, Edinburgh, and Dublin, offer to the father or uncle bound to find a gift for a son or nephew a bewildering choice of books of adventure dealing with almost every age and kind. First we may mention Mr. G. A. Henty's tale, entitled *When London Burned* (6s.), a story of Restoration times, and the great fire relating the career of a boy of royalist birth brought up by Cromwellian foster parents. It contains twelve page illustrations by J. Finnemore, and, like all the works by this author with which we are acquainted, is thoroughly manly and healthy in tone. *In the Heart of the Rockies* (5s.), a story of adventure in Colorado, the same author takes his readers to the Wild West, and introduces him to the great cañons, and to the Indians, who were once their undisputed masters. The book is cleverly illustrated by Mr. G. C. Hindley.

In yet a third volume, *Wulf the Saxon* (6s.), Mr. G. A. Henty tells again the story of the Norman Conquest from the side of the conquered, and in this, as in his other stories, he has gone to the best sources of information for his historical details. Mr. Ralph Peacock has designed a stirring frontispiece and twelve other illustrations, in which he shows great command of black and white methods. In *Olaf the Glorious* (5s.), also issued by Messrs. Blackie and Sons, Limited, Mr. Robert Leighton has gone still further back into history, and has founded an enthralling story on the life of Olaf, King of Norway, whose adventurous career lends itself well to this purpose. This volume also is well illustrated by Mr. Ralph Peacock, and contains also a map of North-Western Europe at the end of the tenth century, so that ingenuous youth may be induced to combine instruction with amusement. *To Greenland and the Pole* (5s.) (Blackie and Sons, Limited), by Dr. Gordon Stables, is appropriately dedicated to Fridjof Nansen. The author confesses that the hero of the book had for his prototype the brave Norwegian. The book is full of ice and ice adventures, and of the peculiar methods of progression over snow by the use of *skis*, with which the British public first became acquainted through their adoption by Nansen for his journey. The volume is in every way appropriate to the season. Yet another story of adventure, published by Blackie and Sons, is *In Press Gang Days* (3s. 6d.), by Edgar Bickering, illustrated by W. S. Stacey. The hero, after his impressment, becomes as good a sailor as the rest of them, and the boy must be hard to please who is not entranced by the adventurous career described. Messrs. Blackie and Son also make provision for girls at this season. *Banshee Castle*, by Rosa Mulholland (6s.), is an agreeable story, which introduces the reader to some very pleasant and some very wild inhabitants of the sister isle. A very simple, touching story and one, as we have ascertained by experiment, highly appreciated by children, is Miss Beatrice Harraden's *Things will Take a Turn* (2s. 6d.). The pleasure with which the volume may be perused is much increased by a series of forty-six illustrations by Mr. J. H. Bacon.

From Messrs. Cassell and Co. we welcome the annual volume of their *Family Magazine* (9s.), copiously illustrated, and containing, in addition to numerous stories, a great deal of information useful to the amateur carpenter and the domestic manager.

The Christmas number of the *English Illustrated Magazine* appears in a gorgeous cover, the promise of which is not belied by the literary and artistic contents. There are interesting short stories by Mrs. Burnett, Anthony Hope, George Gissing, Mrs. F. A. Steel, Grant Allen, Stanley Weyman, Dr. Richard Garnett, and other well-known writers. The illustrations are of a degree of excellence even beyond the high standard to which this favourite magazine has accustomed us.

Christmas Cards.

The custom of exchanging Christmas cards, in spite of the jeers of certain cynics, would seem to be by no means on the decline. Messrs. Raphael Tuck and Sons, 72, Coleman Street, E.C., inform us that last year they sold more Christmas and New Year cards than in any previous season. Fortified by this sign of public approval and by the receipt of numerous prizes at the Chicago Exhibition, they have this year prepared a still larger list than usual of the cards, booklets, and calendars for which they are famous. Among the cards it is, as the experience of most persons who set out to purchase them proves almost impossible to make a selection. All possess special titles to approval, and some of them are artistic works of great elegance. We may mention in particular a black and white series, including etchings, photogravures and phototypes, many of which are worthy of permanent preservation. A special feature among many of the cards is the use of gold and silver dust for ornamentation, and we notice others which are made of celluloid, others, again, which contain a calendar in some dainty mounting, and one which is a perpetual calendar with ribbons to carry the dates. In addition to these *articles de luxe* there are others of simpler material and elegant design, which are sold at a smaller price. There are also cards which unfold to form calendars for suspension, and numerous small booklets containing poetical selections suitable to the season.

Messrs. C. W. Faulkner and Co., 41, Jewin Street, also send us a number of Christmas cards, some of the most elegant of which are printed in monochrome. They also send us large coloured reproductions of pictures of dogs and cats, suitable for suspension in the nursery. This firm is supposed to make a speciality of the issue of calendars and date blocks in various forms, many of them of great elegance, and some may claim to be not only elegant, but novel. Messrs. Faulkner also issue a game for the table, "Malletins" (1s.), which appears to be a kind of cross between croquet and golf, which is likely to be extremely popular with children.

Diaries.

Messrs. Charles Letts and Co., 3, Royal Exchange, have issued again this year the large series of diaries, desk tablets, and wall almanacks for the excellence with which they are so well known. A novelty this year appears to be that the owners of certain of the diaries are insured for one year against railway accident. Among the diaries which carry this privilege is Charles Letts's *Improved Scribbling Diary*, interleaved one week in the opening (2s.); Charles Letts's *Office Diary and Notebook*, one day on a page, and his *Thin Pocket Diary and Notebook*, with one week on an opening, the opposite page being arranged for cash account. Charles Letts's *A.B.C. Medical Diary and Visiting List* is issued in two forms, the one in leather cover with tuck flap (5s.), the other with silk cover to fit into a pocketbook (2s. 6d.). This visiting list has gained a high reputation and is eminently portable and practical. In its publication, Messrs. Charles Letts and Co. are associated with Messrs. Burroughs and Wellcome, whose useful compilation *Excerpta Therapeutica*, consisting of recent notes drawn from various sources upon therapeutics of drugs in general use, is bound up with the lists. Charles Letts's thin *Two Day Pocket Diary and Notebook* (1s. 6d.) is a convenient notebook for the waistcoat pocket, and as it shows only two days on each page, allows ample room for entering social appointments. Those whose engagements are less numerous, or pockets less capacious, will find what they want in the *Thumb Diary*, published in leather (at 1s.). *The Pocket Diary and Cashbook*, one day on a page printed on good thin paper, is a model of cheapness (in leather 2s. 6d.) and elegance. Charles Letts and Co. also issue convenient desk blotting pads; one is provided with a diary (1s.), the other with a revolving date case and folios for entering appointments, ingeniously enclosed in the cover (2s.). The same firm issue several kinds of date indicators for hanging on the wall (at 1s.), of an improved pattern, and a tablet diary also intended for suspension (1s.). The amount of thought and ingenuity given to the preparation of these minor conveniences of life is remarkable, and reflects the greatest credit upon this well-known firm.

From the Religious Tract Society we have received the new issue of the *Scripture Pocketbook*, which contains a great amount of information. Mr. James Glaisher, F.R.S., contributes the astronomical notes to it. The book, from its arrangement and general character, appears to be particularly well adapted to ladies' use.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

PHARMACEUTICAL SPECIALITIES.

We have received from Messrs. Ferris and Co., Bristol, a number of pharmaceutical preparations which certainly carry out the aim of modern pharmacy, that of preparing medicines in a definite, portable, and palatable form.

Cascara Chocolate Bon-Bons contain an active extract of cascara sagrada; the taste of the drug is entirely covered by the chocolate, so that they can be taken by the most fastidious patient without any difficulty.

The thyroid gland of the sheep is prepared in the form of a sterilised glycerine extract, and a powder obtained by carefully drying the glands at a low temperature. The Thyroid

Powder is made into pills, compressed tablets, or enclosed in a flexible gelatine capsule.

Lactated Pepsine, a combination essentially of pepsine and sugar of milk, possesses considerable digestive power.

Antiseptic Sublimate Powders are very convenient for preparing solutions of corrosive sublimate. The contents of each packet readily dissolve in a pint of water, and form a pink solution of the strength of 1 in 1,000.

Granular Effervescing Piperazine contains 5 grains of piperazine in each drachm. This preparation is a very pleasant form for the administration of this new uric acid solvent.

"Hay Asthma Powder" is prepared in accordance with the suggestion of Mr. W. Beverly, of Scarborough. It contains datura tatula, stramonium, cannabis indica, lobelia inflata, and oil of eucalyptus.

Double Cyanide Antiseptic Powder contains the well-known double cyanide of mercury and zinc. It is packed in a tin box with a perforated lid, and is intended to be used as a dusting powder.

"HÆMOFERRUM."

IT is claimed that this preparation contains the ferruginous constituent of blood in which the iron exists in a state of organic combination, and is more susceptible of assimilation than in the ordinary saline compounds of iron. "Hæmoferrum" is described as being prepared aseptically from fresh defibrinated bullock's blood. It is supplied in the form of lenticular tablets coated with gelatine, the average weight of which is 5 grains each. When immersed in lukewarm water a deep blood red solution is formed, leaving an insoluble residue amounting to about two-fifths of the whole mass, and consisting of a siliceous material resembling kaolin. The portion soluble in water was found to contain 0.526 per cent. of ferric oxide, equal to 0.368 per cent. iron, and the actual quantity of iron in each tablet was 0.011 grain. The advantages claimed for "Hæmoferrum" are that it is not astringent and does not constipate or disturb the digestive organs, is not styptic, and does not colour or corrode the teeth, and being non-poisonous is free from danger. It is prepared by Messrs. Frederick Stearns and Co., Manufacturing Pharmacists, Detroit, Michigan, U.S.A., and the agents for the United Kingdom are Messrs. Thos. Christy and Co., 25, Lime Street, E.C.

UNSWEETENED CONDENSED MILK.

THE preparation manufactured at Romanshorn, in Switzerland, and distinguished as the "First Swiss Brand," is described as consisting simply of pure fresh milk, sterilised and condensed to one-fourth of its original bulk, without the addition of any sugar or preservative agent.

Analysis of a sample showed that it contained 27 per cent. of solids not fat, and 10.5 per cent. of fat, or 30 per cent. of cream, and was quite free from cane sugar, results which agree very closely with the statements in the prospectus. When mixed with three parts of water it gave a rich sweet milk.

It is stated that the "First Swiss Brand" will keep good for years in any climate, and is, therefore, specially suited for use in passenger steamers and in the navy, as well as adapted for feeding infants and invalids. It is supplied by the First Swiss Alpine Milk Exporting Company, Limited, and the milk is obtainable from all chemists or grocers; or at the office of the Company, 17 and 18, St. Dunstan's Hill, E.C.

COMBINATION POCKET SCISSORS.



WE have received from Messrs. J. Foote and Sons (62, and 63, New Bond Street) a combination pocket scissors, which they describe, not unjustly, as a veritable *multum in parvo*. It is not only a pair of scissors, but it is a 3-inch measure, a pair of pliers, a wire cutter, and coin tester, a screwdriver, and railway-carriage key; and may also be put to several other more obvious uses. The tool appears to be well made by a Sheffield firm, and is likely to be extremely useful in many common emergencies.

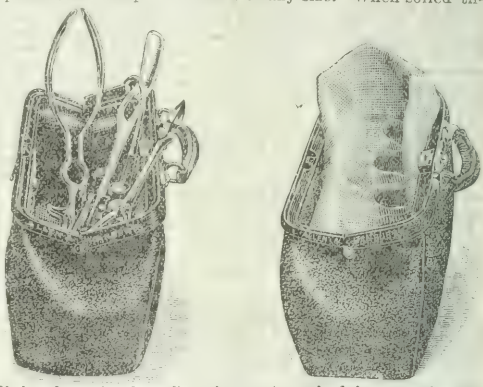
SELF-RETAINING AURAL POLYPUS FORCEPS.

Mr. WYATT WINGRAVE (Assistant Surgeon to the Central London Throat and Ear Hospital) has devised a self-retaining aural polypus forceps, in which a strong cross-acting spring is applied as a substitute for the slide used for clamping ordinary polypus forceps. Surgeons who prefer forceps to the snare will, it is thought, appreciate the stability of this instrument and the ease with which it is manipulated. Messrs. Down Brothers are the makers.



ASEPTIC MIDWIFERY BAGS.

MESSRS. ALLEN AND HANBURYS have submitted to us a midwifery bag with movable aseptic lining which seems to us to combine the advantages of safety to the patient and convenience to the practitioner. The lining is fitted with pockets and loops for bottles of any size. When soiled the



lining has simply to be taken out, washed in an antiseptic solution, and replaced; when worn out a new lining can be inserted at a trifling cost. The bag is so constructed as to remain open, an advantage which will be appreciated by practitioners. The bag is supplied empty or completely fitted with instruments made at Messrs. Allen and Hanburys' own works, and can be obtained at the establishment they have opened at 48, Wigmore Street.

COCA WINES.

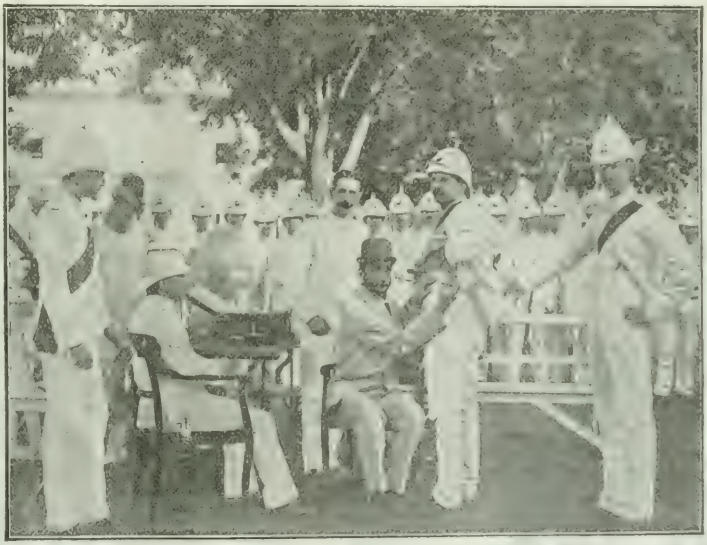
WE are asked to state that the tonic coca champagne, referred to as No. 1 in the analyses published in the BRITISH MEDICAL JOURNAL of November 10th, is known as the "coca tonic champagne" (Laurent-Perrier).

THE *Osservatore Romano*, which is the recognised organ of the Vatican, suggests that, now that Professor Baccelli is about to place the universities of Italy on an autonomous basis, the time has come for the establishment of a Catholic University in Italy.

THE MEDICAL FACULTY OF MONTPELLIER.—The town of Montpellier has voted an annual grant of 6,000 francs (£240) towards the foundation of a Chair of Microbiology in the Medical Faculty. A Chair of Histology is also to be founded. The Bouisson-Bertrand legacy, amounting in all to some £40,000, will probably be applied to the creation or rather the restoration of the Chair of General Pathology and Experimental Medicine. Extensive laboratories will also be established in connection with the Chairs of Microbiology and Experimental Pathology. Among the other projected additions to the medical school are wards for chronic diseases and an institute on the lines of the Institut Pasteur of Paris.

ANTICHOLERA INOCULATION IN INDIA.

We have already on various occasions mentioned the pilgrimage which M. Haffkine is making in India for the purpose of putting to the test the value of the method of preventive inoculation against cholera which he had worked out in the laboratory of the Pasteur Institute in Paris. It will be remembered that before proceeding to India M. Haffkine visited this country, and demonstrated his method and fully described the theory on which it rested in lectures published in our columns at the time. Since his arrival in India M. Haffkine, with the cordial co-operation of Professor Hankin, has been able to prepare his inoculating fluid, and has visited many parts of India and has inoculated a large number of people. The readiness with which English officers have come forward to submit themselves to this preventive treatment has encouraged the rank and file, and in many cases also natives of India, to undergo it.



The conditions under which the inoculations are made in a regiment are well illustrated in the accompanying picture, which is a reproduction of a photograph for which we are indebted to Surgeon-Captain C. J. Healy. The photograph, which was taken by Veterinary Captain W. D. Gunn, shows the regiment paraded, and M. Haffkine in the act of inoculating an officer of the 2nd Royal Sussex at Dum Dum, near Calcutta, on August 19th. On this occasion 300 persons belonging to the regiment were inoculated, and the commanding officer, Lieutenant-Colonel F. Dorling, was the first to volunteer.

The evidence as to the efficacy of the method as a preventive of cholera is not yet sufficient to warrant a definite opinion. Down to June last about 25,000 persons had been inoculated in India, but the occasions upon which the value of the inoculations have actually been put to the test are not very numerous. Dr. Simpson, health officer for Calcutta has reported the history of a limited epidemic in a village close to Calcutta.[1] An outbreak of cholera commenced in this village, and 116 out of the 200 inhabitants were inoculated. Subsequently 10 fresh cases of cholera appeared, but not one of these had been inoculated.

In the Journal, of September 22nd, 1894, p. 653, Surgeon-Major R. Macrae, of the Indian Medical Service, reported the result of a trial of the method in Gaya Gaol. In this case all the prisoners were living under the same general conditions, but certain of their number submitted voluntarily to the preventive inoculation. Without recapitulating the statistical facts already published, we may note that Surgeon-Major Macrae considers that his observations justify the conclusion that the inoculations do afford a real protection, but that this protective influence does not begin to be exerted until several days have elapsed, and that then the protection increases from day to day. Sufficient time has not yet elapsed to afford data for any definite conclusion as to how long the protective influence continues. M. Haffkine hopes that by a modification of the method at present in use he may be able to bring about a condition of immunity at an earlier date. In the case of the epidemic which attacked the East Lancashire Regiment at Lucknow, the protective influence of the inoculations was not so clearly exercised, and the occurrence there has been spoken of as a proof of the failure of anticholera inoculation. The incident is to be made the subject of a special report to the Government of India, and until this is published it does not appear to us to be possible to form an opinion as to the real significance of the occurrence. The facts at present available do not disclose essential facts as to the date of inoculation, and the number and date of subsequent attacks of the disease.

The Neurological Society.—The next meeting of the Neurological Society will be held at the National Hospital, Queen Square, on Thursday, December 6th, at 8.30, under the presidency of Dr. Ferrier. The meeting will be devoted to the exhibition and demonstration of clinical cases illustrating in particular the results of cerebral surgery. Among these will be cases of Intracranial Tumour benefited by Operation by Mr. Victor Horsley, a case of Cerebellar Abscess 2½ years after Successful Operation by Mr. Dean, and two cases of Recovery after Trephining for Cerebral Abscess by Mr. Openshaw. Other rare and interesting nervous cases will be shown by Drs. Cagney, S. Mackenzie, Ogilvie, Beevor, Taylor, Whiting, and Bastian, and by Mr. Stoddart and Dr. Bradford.

We are asked to state that the Association for the Promotion of Home and Foreign Travel, of which Mr. Percy C. Webb is managing director (41, Gracechurch Street, London, E.C.), have made arrangements for a series of tours to India in connection with the Medical Congress to be held in Calcutta on December 24th and following days.

Medical Legislators in Belgium.—The medical profession has now eight representatives in the Belgian Legislature. Of these, five—Drs. Thiriar and Van der Corput of Brussels, Lefèbvre of Louvain, Charles of Liége, and Wittmann of Malins—are in the Senate; and three—Drs. Heynen of Bertrix, and Gillard and Ronvaux, of Namur—are members of the Chamber of Representatives.

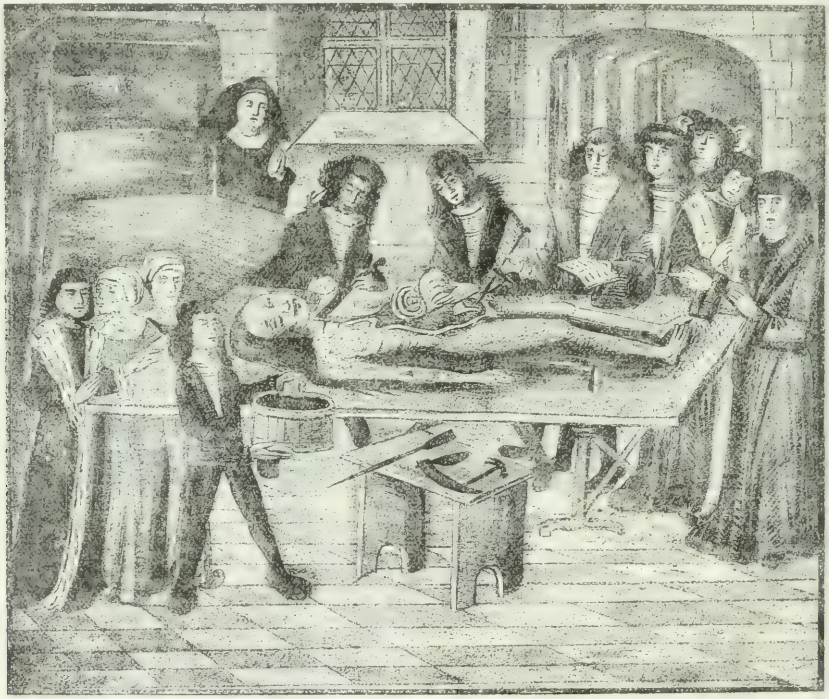
[1] British Medical Journal, July 7th, 1894, p. 25.

ANATOMY AND PHYSIOLOGY IN THE MIDDLE AGES.

A QUARTER of a century ago Mr. Huxley said that the man who should add anything not absolutely essential to the medical curriculum would be guilty of a crime. The words are much more true at the present day than when they were uttered. We have no idea, therefore, of proposing that the history of medicine should be added to the burden which, like an Old Man of the Sea, weighs down the medical Sinbad. Yet it can hardly be denied that the history of medicine is too much neglected by the "young lions" who roar with such conscious dignity in our societies. By the history of medicine we do not mean medical antiquarianism or the dusty delights of the bibliomaniac, but the history of medical concepts. The study of the genesis and evolution of ideas is always interesting and often most instructive; dead seeds of thought may be found in those intellectual tombs lining the walls of libraries, which may haply under favourable influences be quickened into new fruitfulness.

It must be admitted, however, that the history of medicine is not an easy, nor at first sight an attractive, study. The student is apt to be repelled by the difficulty of knowing what old writers are driving at; he finds many of their "facts" impossible of belief, and he is perhaps a little too ready in dismissing their absurd theories with the superior modern smile. There is doubtless absurdity enough and to spare in old writers on medicine, but is it quite certain that two or three centuries hence the views of our "most advanced thinkers," and the results of the "most recent research," will not be read with something of the feeling we now have in reading Avicenna and Albucasis? These men, as Carlyle would say, really lived and did their work in this world of ours just as we do; and they had the same material to work upon. They strove in their own way to read the riddle of life, and there is really very little evidence to show that, except in the domain of surgery in its widest sense, their practice was much less successful than our own.

The most enthusiastic admirer of the "Ages of Faith" must, however, allow that as far as knowledge of the structure and working of our bodily frame is concerned they fully deserved the name of "Dark." So strange do the notions of mediæval writers on medicine seem to us that it is difficult for a modern to place himself at their point of view. Yet they cannot be studied with any profit unless we try to project our minds into theirs, and, in the words of Goethe, imitate their manner of conceiving. Every help towards this should be welcomed by the student, and a tribute of thanks is therefore due to M. Nicaise for his excellent editions of Guy de Chauliac and Henri de Mondeville,[1] in which he makes us, as far as is possible for a modern, see eye to eye in anatomy and physiology with the scientific teachers of the fourteenth century. The state of knowledge on these subjects at that period may be taken as representing the scientific foundations of medicine till it was set on a new basis by Harvey.



An Anatomical Demonstration in the fourteenth century. From a fourteenth century MS. in the Library of the Faculty of Medicine of Montpellier. (Reproduced from *La Grande Chirurgie de Guyde Chauliac*, edited by E. Nicaise. Paris, 1890. Alcan.)

In the fourteenth century Galen was the source of such anatomical knowledge as was possessed. Dissection of the human subject was so hedged about with difficulties of

[1] *La Grande Chirurgie de Guy de Chauliac*, Paris, 1890, Alcan. *Chirurgie de H. de Mondeville*, Traduction, etc., par E. Nicaise, Paris, 1893. Alcan.

one kind or another that it was seldom practised, and though the teacher's lessons were sometimes supplemented by—

> Dissections made on the bodies of swine
> As likest the human form divine,

everything was seen through the spectacles of Galen, and no one was bold enough to trust his own eyesight rather than the dictum of the master. An anatomical demonstration in those days was an important event—indeed, a kind of "function" to which all the official dignitaries and social notabilities of the neighbourhood were invited. The accompanying illustration, which is taken from a contemporary manuscript, gives an idea of what such a ceremony was in the days of Guy de Chauliac, whose *Grande Chirurgie* was written in 1363.

Let us take a rapid glance at the state of anatomical and physiological knowledge in the fourteenth century as it is to be gathered from Guy de Chauliac and Henry de Mondeville, who, it must be remembered, were the leading anatomists and surgeons of their time.

It was known that the nerves took origin from the brain or spinal cord. Mondeville calls those arising from the brain "sensory" and those from the cord "motor," but he held that all nerves combined both characters, though in some the sensory in others the motor element was predominant. Galen seems to have believed that certain nerves served one or other purpose, while some had mixed functions. Guy de Chauliac is undecided on this point, and finds it still more difficult to pronounce whether nerve action is conveyed "substantially or by irradiation." The "white tissues"—which included tendons, ligaments, and aponeuroses as well as nerves—were believed to be of the nature of nerves, and to be highly sensitive. Of nervous centres nothing seems to have been known; nevertheless, there was a rude kind of localisation of function in the brain. Each faculty was supposed to have its organ in the brain, Thus the first part of the "anterior ventricle" was the seat of the *sensus communis;* in the second fancy was supposed to be bred. In the "middle ventricle" thought, reason, and judgment had their place; in the "posterior ventricle" dwelt memory. Between the ventricles were channels of communication by which the spirits passed from one to the other; and, according to Mondeville perceptions—or, to use his own expression, the things perceived—go from one ventricle to the other, receiving in each the impression of the faculty residing therein.

The blood was believed to be formed in the liver, and was composed of four "humours"—the blood proper, the bile, the melancholy or black bile, and the phlegm. The blood was purified in the liver to make it suitable for the nourishment of the body; any excess of yellow bile was strained off into the gall bladder, and any excess of black bile to the spleen; excess of phlegm went to the joints, and superfluous water to the kidneys. In healthy blood the four humours were present in harmonious proportion. A certain part of the humours was eliminated through the skin in the form of sweat, or, if "depraved," in pustules, eruptions, or abscesses. Besides the nutritive blood, which was conveyed by the veins, there was the life blood, which was carried by the arteries. From the blood brought to the heart from the liver was formed the "spirit," which was believed to form the link between the body and the soul, of which latter it was the immediate instrument. The "spirits" were the vehicles of the faculties, which they conveyed to every part of the body; they were also the principle of action of every organ. The "spirit" formed in the heart was transformed in the brain into the "spirit of the soul" (animal spirit), in the liver into the "nutritive spirit," in the testicles into the "generative spirit," and so forth.

It was taught that the heart had two ventricles and an intermediate cavity, or third "ventricle." In these cavities the thick nutritive blood was by mixture of air brought from the lungs refined into "vital blood," which was carried by the arteries, bringing life and activity to every part. The *grandis arteria*, or aorta, distributed branches to the whole body; one of these, the *arteria venalis*, conveyed smoky vapours to the lungs, from which it brought back air to refresh the heart. The circulation of the blood was, of course, undreamed of, but both Mondeville and Guy de Chauliac seem to have had some glimmer of a portal circulation.

The notions as to the function of the lungs seem to have been extremely vague: in fact, beyond the fact that they served for the escape of the smoky vapours (which could be seen issuing as breath) brought to them from the heart by the *arteria venalis*, and also for the expulsion of superfluous and cold, humid, and catarrhal matters received from the brain through the naso-pharynx (whence a "cold" was believed to be *purgamentum cerebri*), nothing was known or conjectured about them.

It was believed that the air taken into the lungs was first subjected to some process of purification by the uvula; this little appendage was, indeed, looked upon as a kind of antiseptic sentinel, and was accordingly treated with great consideration.

The drama of digestion, as conceived by the fourteenth-century physiologist, was in two acts. The first was played in the stomach, which digested the food by means of its own heat reinforced by that of the neighbouring organs, notably the liver and spleen. The process was assisted by the bile, which was poured into the stomach. The result of this first digestion was the formation of chyle which passed into the intestine, and thence through the mesenteric veins into the liver. Here the second part of the process of digestion was enacted, the four humours already referred to being manufactured from the chyle. The function of the yellow bile was to assist the first digestion, and cleanse the stomach and intestines; the black bile was sent to the spleen, and thence to the stomach, where it excited appetite; the water went to the kidneys through a channel leading from the vena cava. The nutritive blood formed in the liver was distributed to the body through the *vena kylis*, which divided into an ascending and a descending branch, besides sending a branch to the right ventricle of the heart.

Muscle was looked upon as one of the three varieties of flesh, the other two being gland substance and the tissue of the glans penis. Some made a distinction between "musculi" (from *mus*, a mouse) and "lacerti" (from *lacertus*, a lizard). There seems to have been a good deal of uncertainty in the use of these terms; Mondeville reserved the name of "muscle" for those which were slender at each end with a belly in the middle, and gave the name of "lacerti" to broad muscles formed of three layers of fibres: Guy de Chauliac, on the other hand, called long muscles *lacerti*.

The *emunctories* were special organs, the function of which was to deal with morbid humours. They were formed of the glandular variety of flesh, and were arranged in three principal groups—those of the brain situated under the ear and behind the jaw; those of the heart in the axilla; and those of the liver and testicle in the groin.

In bringing this hasty sketch to a close we venture to deprecate the wrath of the critical student of the history of medicine. We have aimed only at giving a bird's-eye view of the state of anatomical and physiological knowledge in the fourteenth century, and have therefore confined our attention to the prominent features of the landscape. For the details of the subject the reader cannot do better than consult the works of Guy de Chauliac and Henri de Mondeville in the fine editions which we owe to the erudition and industry of M. Nicaise.

GOVERNMENT HOSPITALS AND PAY HOSPITALS IN THE COLONIES.

The *Western Australian* for September 27th, published at Perth, W.A., contains an interesting account of a debate in the Legislative Assembly on a Hospitals Bill introduced by the Government. In these new countries the institution and maintenance of hospitals necessarily falls on the Government, because there is no moneyed class which can organise a voluntary system such as we are happy enough to possess in the old country. But even in so new a community as Western Australia a movement is already on foot for the purpose of introducing, if possible, the voluntary principle; and this is the scope of the Government Bill which at present is intended to apply to the hospital at Perth only, though "when the public took an interest in the country hospitals they might be brought under the Act." The principle of the Bill (the second reading of which was carried) is that the Government should appoint a board of management, and after the expira-

tion of three years the public, if they subscribe one-sixth of the funds, shall have the right to appoint one-third of the board; the qualification of life subscribers being fixed at a minimum of £10, and of yearly subscribers at £1. Pay wards, it seems, form a portion of the present hospital at Perth, but a very unsatisfactory portion, for the Colonial Secretary says that "the inmates, after receiving the benefit of the attendance of the hospital medical and nursing staff, went away without paying, and there was a considerable sum due now from these people, which he did not think the Government would recover." It has been decided, therefore, to close the "private ward," and to admit paupers only.

The efforts which are being made in this distant and newly-organised colony to introduce the vitalising principle of self-help into medical charity will commend themselves to us in this country, who have such ample experience of the benefits of that system as contrasted with the system of State-aid or State-controlled hospitals in neighbouring countries. And to those who advocate the mixing up of pay and charitable hospitals here in London we would recommend a wider study of the question in countries where the plan has been tried. In Western Australia, at any rate, it seems to have worked so badly as to have been perforce abandoned.

Meanwhile, we are not surprised to find that the proposal to change the status of our own voluntary hospitals and to put them all under public control is finding favour with the least instructed portion (in medical matters) of our daily press. This sagacious idea is called by its advocates the "nationalisation of hospitals." Our readers will find it recommended in the *Weekly Times and Echo* of November 4th. The controversy about pay wards at the Great Northern Hospital has, of course, excited the interest of the newspapers, and is represented by those whom we ventured to describe as the least instructed in medical matters as a mere "trade union" question—that is, as a matter of fees only. For our own part we are quite unable to see what harm there is in a medical man wishing to be adequately paid any more than a workman; however, all who know anything about the matter know that the question has many other aspects besides its mere effect on the income of the medical men near the hospital—for instance, its effect on the character of the poorer middle classes, on medical education, on the hospital system, and on the finances of the voluntary hospitals. We are glad to see that the protest made has had the effect of inducing the governors of the Great Northern Hospital to pause, and to promise a reconsideration of their scheme and a rediscussion of it at the next annual meeting.

The proposal of changes such as this on the part of individual hospitals seems to us to show the great necessity of some such scheme for an advising board, as was set out in the report of the Lords' Committee on Hospitals. But to rush from such premisses to a system of hospitals managed by the Metropolitan Asylums Board or the County Council is a proof that the critic is talking of what he does not understand.

SELECT PRESCRIPTIONS AND PHARMACEUTICAL NOTES.

IV.

Balsam of Peru in Diarrhœa.—Nuggia (*Rev. des Mal. de l'Enf.*, 1894) recommends the following method of prescribing balsam of Peru in the treatment of gastro-intestinal diseases in children. Trousseau, Pidoux, and others have found the balsam useful in chronic intestinal catarrh, especially in diarrhœa with or without tenesmus, in dysentery, and in typhoid fever.

Balsam of Peru gr. 3.
Alcohol 5j.
Syrup of lemons 5iv.
Water 5iij.

Coryza.—Hayem (*Therap. Leist.*) recommends the following in the early stage of coryza:

Pure carbolic acid, 5 parts.
Liquor ammonicæ, 5 parts.
Alcohol, 10 parts.
Distilled water, 10 parts.

A few drops are poured on to blotting paper, and the vapour inhaled for a few seconds.

Botkin's Cholera Drops.—The following prescription for Botkin's drops, said to be of much value in the milder cases of cholera, is given in Pollotschek's *Therapeutischen Leistungen:*

℞ Compound tincture of cinchona, compound spirit of ether, of each 15 parts.
Hydrochlorate of quinine, 4 parts.
Dilute hydrochloric acid, 2 parts.
Tincture of opium, 4 parts.
Oil of peppermint, 1 part.

Dose: Fifteen drops every two hours.

Gonorrhœa.—Vatier (*Therap. Leistung*) recommends a combination of antipyrin and corrosive sublimate as an injection in gonorrhœa:

Perchloride of mercury, 1 part.
Antipyrin, 100 parts.
Distilled water, 10,000 parts.

The injection should be used four times a day, and retained as long as possible. The addition of antipyrin prevents smarting.

BRITISH MEDICAL ASSOCIATION.

SIXTY-THIRD ANNUAL MEETING.

The sixty-third Annual Meeting of the British Medical Association will be held in London on Tuesday, Wednesday, Thursday, and Friday, July 30th, 31st, August 1st and 2nd, 1895.

President: E. Long Fox, M.D.Oxon., F.R.C.P., Consulting Physician to the Bristol Royal Infirmary.

President-Elect: J. Russell Reynolds, M.D., F.R.C.P., F.R.S., President of the Royal College of Physicians.

President of the Council: J. Ward Cousins, M.D.Lond., F.R.C.S., Senior Surgeon to the Royal Portsmouth Hospital.

Treasurer: Henry Trentham Butlin, F.R.C.S., D.C.L., Surgeon to St. Bartholomew's Hospital, E.C.

An Address in Medicine will be delivered by Sir William Broadbent, Bart., M.D., F.R.C.P., Physician-in-Ordinary to H.R.H. the Prince of Wales.

An Address in Surgery will be delivered by Arthur Edward Durham, F.R.C.S.Eng., Surgeon to Guy's Hospital.

An Address in Physiology will be delivered by Edward Albert Schäfer, F.R.S., Jodrell Professor of Physiology, University College.

The Scientific Business of the Meeting will be conducted in Fifteen Sections, as follows, namely:

A. Medicine.—*President:* F. W. Pavy, M.D., F.R.S. *Vice-Presidents:* Sir Frederic Bateman, M.D.; D. W. Finlay, M.D.; W. S. Church, M.D.; J. W. Moore, M.D.; Stephen Mackenzie, M.D.; E. Markham Skerritt, M.D. *Honorary Secretaries:* William Collier, M.D., St. Mary's Entry, High Street, Oxford; W. P. Herringham, M.D., 13, Upper Wimpole Street, W.; Sir Hugh R. Beevor, M.D., 18, Serjeant's Inn, Fleet Street, E.C.

B. Surgery.—*President:* Sir Wm. Mac Cormac, F.R.C.S. *Vice-Presidents:* T. Bryant, F.R.C.S.; C. N. Macnamara, F.R.C.S.; Reginald Harrison, F.R.C.S.; A. Willett, F.R.C.S.; Sir W. Stokes, M.D.; Mayo Robson, F.R.C.S. *Honorary Secretaries:* J. D. Harris, M.R.C.S., 45, Southernhay, Exeter; J. Bland Sutton, F.R.C.S., 48, Queen Anne Street, W.; A. Marmaduke Sheild, F.R.C.S., 4, Cavendish Place, Cavendish Square, W.

C. Obstetrics and Gynæcology.—*President:* Sir Wm. Priestley, M.D. *Vice-Presidents:* A. R. Simpson, M.D.; J. Watt Black, M.D.; Sir Francis Laking, M.D.; J. Knowsley Thornton, M.B.; W. J. Sinclair, M.D.; M. Handfield-Jones, M.D. *Honorary Secretaries:* W. S. A. Griffith, M.D., 114, Harley Street, W.; A. H. F. Barbour, M.D., 4, Charlotte Square, Edinburgh; W. R. Dakin, M.D., 57, Welbeck Street, W.

D. Public Medicine.—*President:* Ernest Hart, D.C.L. *Vice-Presidents:* J. Spottiswoode Cameron, M.D.; C. H. W. Parkinson, M.R.C.S.; Wm. Collingridge, M.D.; Louis C. Parkes, M.D.; P. Boobbyer, M.D.; John C. Thresh, M.D. *Honorary Secretaries:* C. E. Paget, M.R.C.S., Town Hall, Salford; Reginald Dudfield, M.B., Sanitary Department, Vestry Hall, Harrow Road, Paddington, W.; F. W. Clark, M.B., Lowestoft.

E. Psychology.—*President:* W. J. Mickle, M.D. *Vice-Presidents:* G. H. Savage, M.D.; T. Claye Shaw, M.D.; Henry Rayner, M.D.; J. G. McDowall, M.D.; Lionel A. Weatherly, M.D. *Honorary Secretaries:* James Chambers, M.D., 99, Harley Street, W.; T. Seymour Tuke, M.B., 37, Albemarle Street, W.; James Taylor, M.D., 34, Welbeck Street, W.

F. Physiology.—*President:* David Ferrier, M.D., F.R.S. *Vice-Presidents:* E. E. Klein, M.D., F.R.S.; Wm. Stirling, M.D.; J. Berry Haycraft, M.D. *Honorary Secretaries:* C. S. Sherrington, M.D., F.R.S., Brown Institution, Wandsworth Road, S.W.; E. H. Starling, M.D., 14, Grosvenor Road, S.W.

G. Anatomy and Histology.—*President:* Henry Morris, F.R.C.S. *Vice-Presidents:* A. Macalister, M.D., F.R.S.; W. J. Walsham, F.R.C.S.; A. H. Young, F.R.C.S.; B. C. A. Windle, M.D.; G. H. Makins, F.R.C.S.; A. W. Hughes, F.R.C.S. *Honorary Secretaries:* F. G. Parsons, F.R.C.S., St. Thomas's Hospital, S.E.; C. B. Lockwood, F.R.C.S., 19, Upper Berkeley Street, W.

H. Pathology and Bacteriology.—*President:* Samuel Wilks, M.D., F.R.S. *Vice-Presidents:* J. M. Purser, M.D.; J. F. Goodhart, M.D.; Sidney Coupland, M.D.; R. Saundby, M.D.; W. Watson Cheyne, F.R.C.S.; Anthony A. Bowlby, F.R.C.S. *Honorary Secretaries:* S. G. Shattock, F.R.C.S., St. Thomas's Hospital, S.E.; H. D. Rolleston, M.D., 13, Upper Wimpole Street, W.

I. Ophthalmology.—*President:* H. Power, F.R.C.S. *Vice-Presidents:* D. Argyll Robertson, M.D.; W. A. Brailey, M.D.; G. Anderson Critchett, M.R.C.S.; W. Adams Frost, F.R.C.S.; A. Embrys Jones, M.D.; A. H. Benson, M.B. *Honorary Secretaries:* R. W. Doyne, F.R.C.S., Kilcrone, Oxford; E. Treacher Collins, F.R.C.S., 84, Wimpole Street, W.; W. T. Holmes Spicer, F.R.C.S., 47, Welbeck Street, W.

J. Diseases of Children.—*President:* J. H. Morgan, F.R.C.S. *Vice-Presidents:* W. B. Cheadle, M.D.; F. A. Southam, F.R.C.S.; H. Handford, M.D.; W. Arbuthnot Lane, F.R.C.S.; A. Foxwell, M.D.; D'Arcy Power, F.R.C.S. *Honorary Secretaries:* J. Abercrombie, M.D., 23, Upper Wimpole Street, W.; H. R. Jones, M.D., 58A, Grove Street, Liverpool.

K. Otology.—*President:* Sir W. Dalby, F.R.C.S. *Vice-Presidents:* Charles Warden, M.D.; G. P. Field, M.R.C.S.; E. Cresswell Baber, M.B.; J. Dundas Grant, M.D.; Edward Law, M.B.; C. A. Ballance, F.R.C.S. *Honorary Secretaries:* C. E. L. B. Hudson, F.R.C.S., 16, Harley Street, W.; G. C. Wilkin, L.R.C.P., 39, Weymouth Street, W.

L. Pharmacology and Therapeutics.—*President:* Sir William Roberts, M.D., F.R.S. *Vice-Presidents:* J. Talfourd Jones, M.B.; T. Lauder Brunton, M.D., F.R.S.; J. Mitchell Bruce, M.B.; W. Hale White, M.D.; Donald Mac Alister, M.D.; M. McHugh, M.B. *Honorary Secretaries:* Vaughan Harley, M.D., 25, Harley Street, W.; W. Soltau Fenwick, M.D., 10, Devonshire Street, W.

M. Laryngology.—*President:* Felix Semon, M.D. *Vice-Presidents:* Sir Philip Smyly, M.D.; W. Macneill Whistler, M.D.; F. de Havilland Hall, M.D.; Greville Macdonald, M.D.; Scanes Spicer, M.D.; A. W. Sandford, M.D. *Honorary Secretaries:* J. Middlemass Hunt, M.B., 55, Rodney Street, Liverpool; St. Clair Thomson, M.D., 28, Queen Anne Street, W.; E. B. Waggett, M.B., 66, Park Street, Grosvenor Square, W.

N. Dermatology.—*President:* H. Radcliffe Crocker, M.D. *Vice-Presidents:* McCall Anderson, M.D.; Malcolm Morris, M.R.C.S.; J. J. Pringle, M.B.; Wm. Anderson, F.R.C.S.; H. A. G. Brooke, M.R. *Honorary Secretaries:* J. Herbert Stowers, M.D., 41, Finsbury Square, E.C.; Jonathan Hutchinson, Jun., F.R.C.S., 15, Cavendish Square, W.

O. Ethics.—*President:* W. F. Cleveland, M.D. *Vice-President:* Thomas Bridgwater, M.B.; J. Hughes Hemming; D. B. Balding, F.R.C.S.; C. Parsons, M.D.; A. Dempsey, M.D. *Honorary Secretaries:* Major Greenwood, M.D., 243, Hackney Road, N.E.; T. F. Pearse, M.D., 12, Norfolk Street, Southsea; Hugh Woods, M.D., 11, Archway Road, Highgate, N.

Honorary Local Secretaries:
Andrew Clark, F.R.C.S., 71, Harley Street, W.
Isambard Owen, M.D., 40, Curzon Street, W.

Honorary Local Treasurer:
George Eastes, M.B., F.R.C.S., 35, Gloucester Place, Hyde Park, W.

Programme of Proceedings.

Tuesday, July 30th, 1895.

9.30 A.M.—Meeting of 1894-95 Council.
2.30 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business.
9.0 P.M.—Adjourned General Meeting from 2.30 P.M. President's Address.

Wednesday, July 31st, 1895.

9.30 A.M.—Meeting of 1895-96 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine. Any business adjourned from First General Meeting at 2.30 previous day.

Thursday, August 1st, 1895.

9.30 A.M.—Meeting of Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery.
7.30 P.M.—Dinner of the Association.

Friday, August 2nd, 1895.

10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Physiology.

DIPHTHERIA ANTITOXIN.

A Supply for British Provincial Hospitals.

We are glad to be able to state that Dr. Klein, F.R.S., has been successful in preparing a considerable quantity of the diphtheria antitoxin serum of satisfactory efficiency. The preparation of the serum has been carried out at the Brown Animal Sanatory Institution. The animals used have been horses.

Dr. Klein is sending supplies to the chief London hospitals, but a considerable quantity of the serum will remain in his hands after supplying the immediate needs of these hospitals.

Dr. Klein has been good enough to authorise us to state that he will place a certain quantity of the serum at our disposal for immediate distribution to provincial hospitals. The serum is of considerable strength, and the dose which should be injected in a case of diphtheria is one drachm. The serum will be sent out to hospitals in bottles containing one ounce. It must be clearly understood that the serum, being in bulk, can only be supplied to hospitals, and not to private practitioners.

Applications for the supplies of the serum should be addressed to the Editor of the British Medical Journal, 1, Agar Street, Strand, London, W.C. It will, of course, be understood that the supply is limited. We shall hope that those hospitals which make application will at the same time undertake to supply, for publication in the Journal, reports of all the cases treated.

Dr. Klein particularly requests that the use of the serum may be confined to cases in which the diagnosis is confirmed by bacteriological examination.

Practical Charity.—Recently there has been opened in Glasgow an industrial shelter for homeless men, where, in exchange for work, food and lodging will be provided, and where endeavours will be made as far as possible to put the men into a position to maintain themselves. The work provided in the meantime is in the making of firewood, in carpet beating, and stone breaking. This step has been taken by the Charity Organisation Society, because they found so many men represented themselves as unable to get work, when they made no strenuous endeavours to do so, but were content to live on charity. In the shelter there is accommodation for 150 men, though meantime preparations for the reception of only 50 have been made. In connection with the shelter, it is intended to have reading and recreation rooms, and to hold a social evening once a week.

A MALARIA CHART.

[With Coloured Plate.]

By PATRICK MANSON, M.D., M.R.C.P., LL.D.,

Physician, Seamen's Hospital, Greenwich.

The value of the temperature chart and of similar graphic methods of projecting clinical observations is universally admitted. Such methods greatly facilitate the recording, and still more the comprehension and comparison of the facts in the clinical tableau. The "malaria chart" is an attempt to apply the same principle, so far as the nature of the subject will permit, to the recording in cases of malarial fever of the types and varying phases of the malaria organism along with, and in comparison with, the fluctuations of body temperature. The scientific and practical value of such a chart is obvious. It is believed that after a little practice these combined records will be as easily made and read as those of temperature alone, and it is hoped that they will be of assistance in unravelling some of the many difficulties and obscurities at present connected with the malaria question.

So far as concerns the figures of the malaria parasite given in the coloured plate, the compiler lays no claim to originality. These are taken from the works of Laveran, Golgi, Marchiafava, Bignami, and Mannaberg, and were selected as being probably the best illustrations of the malaria parasite we possess.

In the plate the various forms of the malaria organism have been to a certain extent classified, grouped, and graduated according to their appearances, not necessarily according to their assumed biological relationship. This has been done in such a way that a figure may be easily found corresponding very closely, in type if not in detail, to any parasitic form which may be encountered in blood under examination. Provision by letter and number is made for rapidly and accurately indicating this on the chart, and afterwards of re-identifying it in the plate. These letters and numbers, written in their appropriate place on the temperature chart, constitute the record.

It may be objected to the plate that there is a useless multiplication of certain of the forms of the malaria organism. The compiler thinks, however, that in the present state of our knowledge about this parasite it would have been unwise to leave out unnecessarily, and at the risk of missing what may prove useful even in a small degree, one faithfully drawn figure. Should the observer, as is probable, desire to add to the number of figures, there are several unoccupied spaces which may be used for this purpose. The figures are classified as follows:

Columns A and B contain simple forms of unpigmented intra-corpuscular bodies; columns C and D, the ringed forms of intra-corpuscular bodies; E and F, principally the pigmented and larger forms of the latter; G and H, pigmented forms of the simple intra-corpuscular bodies; I and J, larger forms of the latter graduated according to size; K and L, intra-corpuscular, segmented sporulating forms; M, the latter free and breaking up; N, O, P, Q, include the crescent and flagellated forms and the bodies supposed to be connected with these, besides others which cannot be easily classified with the foregoing. The three figures at the foot of B column are somewhat diagrammatic representations of pigmented leucocytes; those at the bottom of D are extra-corpuscular forms, the central one, D 11, representing the "swarming" corpuscle; those at the bottom of F represent, according to Laveran, dead forms. L 11, M 8, 9, 10, represent free forms perhaps in a degenerated condition; M 11 and 12 are free parasites; and O 11 and 12, degenerated forms.

It is not supposed that under ordinary conditions of practice the medical observer could afford the time to make microscopical examinations of the blood every four or six hours, but he may be able, at all events in hospital practice, to make a daily or occasional examination. Such a series of fragmentary and more or less irregular examinations need not be wasted if systematically recorded in the "malaria chart."

Directions.

Preparation and Examination of Blood for the Malarial Organism.—Cleanse very carefully with alcohol and ether several slips and thin cover glasses, and cover them up from the dust. Wash one of the patient's finger tips with soap and water, and afterwards with ether, and dry carefully. Ligature the end of the finger in the usual way, and prick the congested pad with a fine, clean needle. Wipe off the first drop of blood which exudes, being careful to leave the skin quite dry, so that subsequent drops shall not "run." Squeezing the pricked finger pad gently between finger and thumb, express a second and smaller droplet of blood from the puncture. This droplet ought not to exceed in size the head of a large pin. Touch the apex of the droplet with the centre of a cover glass, and immediately lay this on a slip. The blood will now run out between slip and cover glass in an exceedingly delicate film, in which, after a few minutes, the red corpuscles will be found to be each of them perfectly isolated, and lying flat on their sides. Prepare several such slides. Reject all slides in which the corpuscles in any considerable proportion are disposed in rouleaux, or are heaped up upon each other.

Perfect cleanliness of finger and slides, minuteness of the droplet of blood, thinness of cover glass, and a certain quickness of manipulation, are the best guarantees for success in obtaining the flat disposition of the blood corpuscles *absolutely* indispensable.

Examine the slides so prepared with a twelfth immersion lens, and in not too bright an illumination. Scrutinise the interior of every corpuscle in the field, looking in them for specks of black pigment surrounded by a pale, hyaline, slightly or markedly amœboid substance; also for smaller, pale, unpigmented, hyaline, and more actively amœboid bodies in the same situation. These are the intra-corpuscular and commoner forms of the malaria parasite, and are always present in malarial fevers which have not been treated by quinine. The crescent and flagellated forms and the pigmented leucocyte—although the two former are more rarely encountered, and only in certain cases—are much more easily recognised.

If no parasitic form be found in the first field pass to a second, a third, and so on, devoting at least half an hour to the examination of the slide before pronouncing definitely in a negative sense on the presence of the parasite.

Registration of Malaria Organisms.—When a parasite or pigmented leucocyte is found search in the coloured plate for a corresponding form, and ascertain the letter and figure indicating the vertical and horizontal lines in which it occurs. Note these on the temperature chart (for example, thus—A 1, or B 7, or G 3, etc., as the case may be) in the highest compartment of the column corresponding to the day and hour at which the examination is made. This done, search for a second parasite; a second being found, identify, and note it also, in the same way on the second space of the same column, and so on until ten or more parasites have been found and recorded. It is important that every parasite found should be noted; there must be no selection of parasites, otherwise the proportion in which the different forms occur will not be accurately represented. A note of the number of fields examined should also be made in the space provided for the purpose at the head of the column.

It is recommended not to register more than fifteen or twenty consecutively-found parasites, as this number is sufficient to convey a fair idea of the proportions in which the prevailing forms occur. It is also recommended that that part of the column which is above the 98·4° line be devoted to the noting of these, space being saved by a tally mark of some sort below the registration of any form which is found two or more times. When an idea of the prevailing forms has been arrived at, and the types noted, the observer may proceed to hunt for rarer forms; these might be registered in the spaces below the 98.4° line in the appropriate column.

Temperature, etc., are to be recorded in the chart in the usual way.

In the absence of the special form of chart the ordinary temperature chart may be used for the registration of parasites.

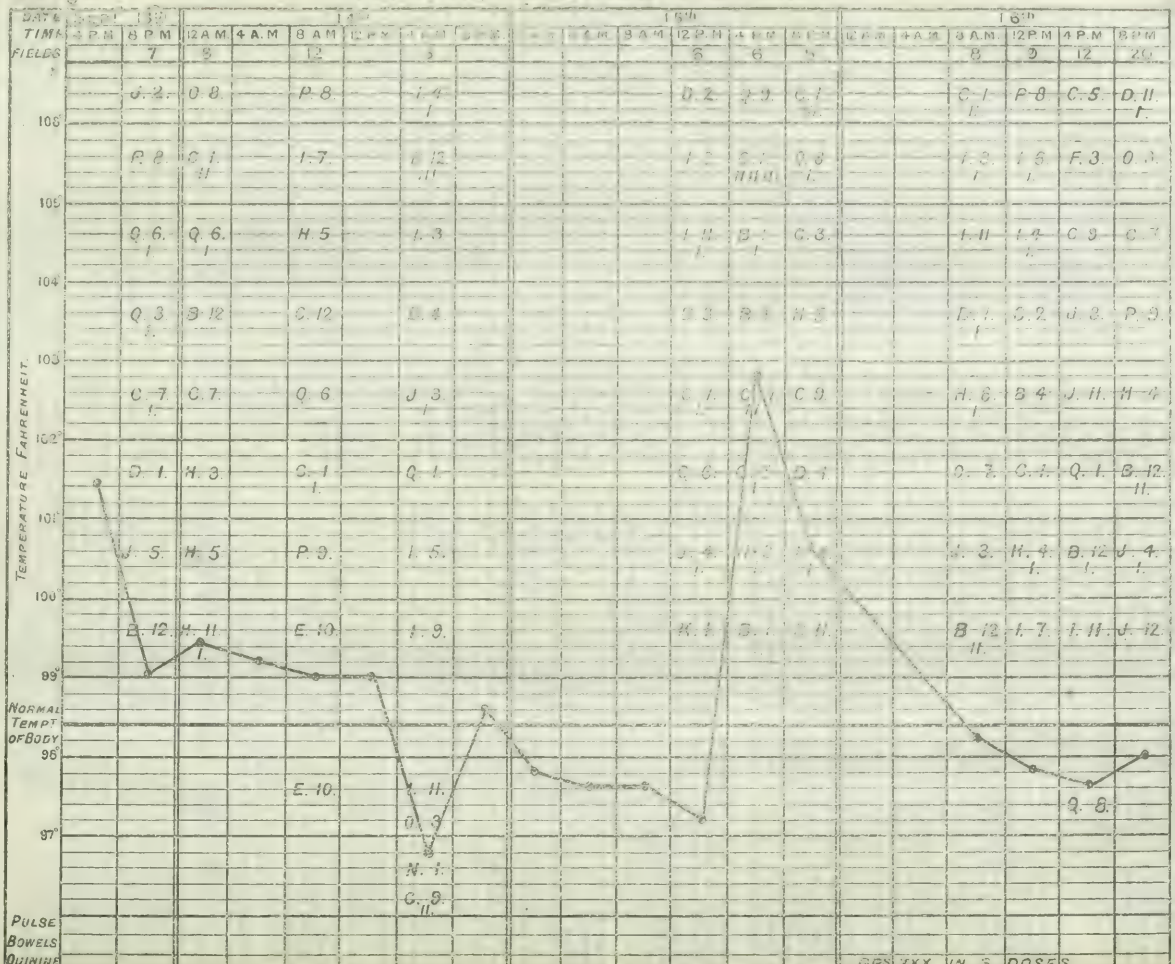
The charts accompanying the plate are not divided into days, as is usual in temperature charts. This is left for the observer himself to do, so that he can adapt his charts to a four, six, or twelve-hour record, as may suit his purpose and convenience.

The object of registering the number of fields examined is to find out approximately the proportion of parasites to cor-

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Q

A.B. aged 19.

TERTIAN MALARIAL CACHEXIA.



puscles. This implies that the observer has already ascertained the number of corpuscles which in properly-prepared slides an average field of his particular microscope contains; and that in looking for the malaria organism he selects average fields for observation.

Great amœboid activity of the parasites or other striking and unusual phenomena in connection with them can be indicated on the chart by appropriate signs.

CLUBS AND FRIENDLY SOCIETIES IN THE SOUTH OF IRELAND.

A very serious difference has arisen between the medical practitioners of Cork and the various clubs and friendly societies of that district. It would appear that the medical men in Cork have drafted a series of rules by which the tenure of club appointments is to be regulated, and that they have unanimously pledged themselves to accept such appointments under no other conditions.

The matter had been referred to the Medical Society and then to the South of Ireland Branch of the British Medical Association, and finally the entire profession unanimously adopted the present rules. These have been submitted by the Branch to the various friendly societies of the district, who have as unanimously repudiated them, so that a very critical state of affairs is likely to arise.

It would appear that the main complaints of the medical men arise from (1) the smallness of the fee at present paid in some of the societies; (2) the absence of a wage limit. But there are several other points on which differences have arisen. The first of the suggested rules runs as follows: Scale of remuneration to be in proportion to member's income, and, when this cannot be ascertained, to valuation of dwelling house. The second is: Minimum yearly fee 7s. 6d., if member's income is under £100 per annum, or valuation of dwelling house under £7 10s. per annum; minimum yearly fee, 15s., if member's income is under £200 per annum, or valuation of dwelling-house under £15 per annum. No one with an income above £200 per annum to be admitted. This scale is for medical attendance only. There are other rules regulating the maximum distance of attendance, fees for midwifery, operations, consultations, etc. The above scale of remuneration seems to include attendance upon wives and families so long as they are dependent on the member.

There seems little in these rules of which working men can properly complain. They seem, in fact, very moderate, and are such as might with advantage be adopted throughout the greater part of the United Kingdom. Few will be ready to believe that a working man in the receipt of a pound a week is unable to pay twopence per week for his medical attendance, and fewer, we should imagine, will contend that those earning higher wages ought not to pay proportionately higher rates. Operations, again, requiring anæsthetics, and midwifery have always been considered extras, so that it is difficult to see what there is unreasonable in the demands of the South of Ireland Branch of the Association. Probably the violent opposition which seems to have been aroused has been caused chiefly by fear engendered by the business-like and well-organised action of the profession in Cork. These associations have so long had their medical officers in complete subjection to them, that such evidence of a determination to put an end to this unseemly condition of affairs is doubly displeasing, especially when they dread very much the possibility of its success.

Surely it is high time to put an end to the present disgracefully low rate of club payments. When the cost of medical education is considered, and compared with what it was in the past, and when it is further noted that in spite of the enormous increase of wages during the last twenty years, the ordinary club rate of remuneration has been quite stationary, if it has not in some cases even retrograded, can any argue that some reform is not urgently needed? And as to the wage limit, it certainly is a scandal and disgrace that people in comfortable circumstances should be permitted to rush into these clubs and get medical attendance at such a rate.

We quite understand the feeling of the friendly societies, which seem to consider that any wage limit in regard to their members would tend to cut out of their associations their best, their most thrifty, and their most successful members. It is no doubt a subject of satisfaction, and even pride, to retain among their members those who have got on well and risen to better positions, and it clearly is a matter of profit, seeing that these members rarely claim sick pay. If they rarely asked for the doctor's attendance, it would not matter, but unfortunately that is not the case. These better-class subscribers, it would appear, are a cause of a great part of the friction, and we cannot but feel that the most equitable compromise would be that while they should retain all other rights of membership, medical attendance should not be claimable by those whose income is above a certain limit. No exception can fairly be taken to the limit suggested. By this plan no member need ever be turned out of a club; the only change would be that, when sufficiently prosperous not to require it, medical attendance would cease.

On the whole, the scheme, as proposed by the Cork Branch, is an exceedingly moderate one, and in no way threatens, as loudly declaimed by its opponents, the existence of genuine friendly societies; nevertheless, there can be little doubt the Cork friendly societies will fight the matter to the end; and, to do this, will endeavour to attract other medical men from a distance to take the place of the local practitioners.

If this should be so, we would advise the friendly societies to think well before adopting so suicidal a course. Accustomed as they have been to the professional assistance of doctors of good standing, they probably fail to recognise the advantage which they derive from being attended by such men, and do not at once see the grave evils which are apt to follow when large numbers are put under the care of those who are exclusively engaged in cheap work. We would also advise all members of the profession to think carefully over the situation before accepting such seductive offers as may be made to tempt them to undersell their brethren. Fees are not everything. Position and independence counts for much in the happiness of life, and if practitioners whose work only partly lies among these clubs find their position under present circumstances intolerable, what will it be to those who will be bound to them exclusively?

We should then advise the Cork friendly societies to come to terms with their ordinary medical advisers rather than import strangers. Even doctors are wary nowadays; whatever salaries are offered, they will naturally inquire about the work, and when they find that their future masters consider twopence per week far too much for attendance on a family, most of them will, we hope, hesitate to accept such a position.

There can be little doubt that few reputable practitioners will be likely to present themselves at Cork in the teeth of the whole body of the local profession. The class of practitioner they will obtain, even if successful, will be very inferior to those they have been accustomed to, and they might with advantage consider in the doctor's behalf an aphorism they are ready enough to consider on their own—namely, a fair day's work is worth a fair day's wage.

There can be little doubt that most members of the Association, and of the profession generally, will thoroughly sympathise with the bold efforts of this Irish Branch to inaugurate an important reform, and one which vitally affects the interests of the mass of the profession.

Medico-Psychological Association of Great Britain and Ireland.—Examinations for the certificates in psychological medicine of this Association will be held in London, Edinburgh, Glasgow, Aberdeen, and Dublin on December 20th. Candidates intending to present themselves for the examination should give fourteen days' notice to the Registrar, Dr. Spence, Burntwood Asylum, Lichfield.

The Scottish Commission on Inebriates.—The Departmental Commission on the treatment of habitual offenders, vagrants, beggars, and inebriates, has, under the chairmanship of Sir Charles Cameron, held sittings in Glasgow and Edinburgh. Dr. Farquharson, M.P., a Commissioner, and Dr. J. F. Sutherland, the Secretary, have been also present. Among the witnesses, whose evidence has been given in private, have been Dr. Yellowlees, Professor W. T. Gairdner, and Dr. Alexander Peddie.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, DECEMBER 1st, 1894.

THE BRITISH MEDICAL ASSOCIATION AND THE JOURNAL, 1895.

The present issue of the British Medical Journal will be placed in the hands of many members of the medical profession who are not already reckoned among those who habitually consult its pages. They are, we may fairly assert, a minority of the medical profession in the United Kingdom, and a minority which is decreasing, for we have again to record this year a continuance of that steady increase in the circulation of the Journal which it has been our pleasure and our pride to record in previous years. The growth in the numbers and influence of the Association and its Journal has indeed been for many years as steady and continuous as that of a robust and vigorous living organism.

The annual meeting of the Association will be held this year in London, and we publish on another page some account of the arrangements already made. It will be seen that they are on a most extensive scale, as it is confidently expected that the number of members and foreign visitors attending the meeting will be very large.

The last occasion upon which the Association met in London was in 1873, when the presidential chair was occupied by the late Sir William Ferguson, and the principal addresses were delivered by Dr. E. A. Parkes, Professor Burdon Sanderson, and the late Mr. John Wood. Eleven years before this, in 1862, the Association had met in London under the presidency of the late Sir George Burrows, and the principal addresses were delivered by Dr. Walshe, Sir James Paget, and the late Professor Sharpey. On the present occasion the Association will be not less fortunate, having for its President Dr. Russell Reynolds, the President of the Royal College of Physicians, and receiving general Addresses in Medicine from Sir William Broadbent; in Surgery, from Mr. Arthur Durham; and in Physiology, from Professor Schäfer, the successor of Professor Burdon Sanderson and Professor Sharpey in the Chair of Physiology at University College. The enormous increase in the complexity of modern medicine is shown by the fact that on the present occasion it has been found necessary to divide the business of the meeting between no fewer than fifteen sections. For the first time, in response to suggestions from many quarters, a Section of Ethics has been organised, and we trust that under the experienced guidance of Dr. Cleveland a thoroughly practical trend may be given to the debates.

During the past six months the Council of the Association has had the satisfaction of recognising, subject to certain slight technical modifications of their by-laws, three new Branches—the Malaya Branch at Singapore, a Branch at Gibraltar, and a Deccan Branch at Secunderabad. The advantages offered by the local Branches of the Association for the discussion of scientific matters, and also of questions affecting the material interests of the profession, are not among the least important offered by the Association to its members; and we anticipate receiving, not only from those at home, but also from many scattered throughout the Empire, much instructive and valuable material of general interest.

During 1894 the claims upon the space of the Journal have been varied and numerous. In addition to the publication, in the ordinary course, of clinical lectures, commentaries, and reports and of the work of the Sections of the annual meeting, which were more than usually important, we have reported the proceedings of the International Congresses in Rome and in Buda-Pesth, of the Branches of the Association, and of numerous medical societies in the United Kingdom. But, over and above matters of clinical concern, numerous questions affecting the profession have called for study during the year. In particular, we may refer to the long series of reports prepared by our special commissioner on the Nursing and Administration of Provincial Workhouse Infirmaries. We are glad to know that this important piece of work on a question so nearly affecting the Poor-law medical service in its public relations has already aroused boards of guardians in many parts of the country from the indifference which had previously reigned. We desire to acknowledge the great assistance received from the medical profession in the provinces, and we intend to continue our reports.[1] The attention drawn to a cognate subject, the conditions under which pauper children are housed and fed in pauper schools, and the facts which we have been enabled to bring out have led to the appointment by the President of the Local Government Board of a committee to inquire into the subject.

The conviction that drinking water is the most important vehicle for the dissemination of typhoid fever, cholera, and certain parasitic diseases has led us to institute an inquiry into the practical working of the numerous forms of filter which are so largely in use. The first instalments of the minute and thoroughly scientific report made for us by Dr. Sims Woodhead and Dr. Cartwright Wood show that in relying upon many filters to protect our drinking water from the entrance of specific pathogenic organisms, the public has been resting upon a broken reed. In the course of the coming year we hope to continue and conclude this important series of reports. During the past year we have felt ourselves compelled, much against the grain, to call public attention to certain scandalous practices which have grown up in connection with certain so-called "massage" establishments. The matter has been brought also directly under the notice of the Home Secretary, and we have reason to hope that some steps may be taken to deal with the abuse, and so relieve us from the unpleasant necessity of again referring to a most disagreeable subject.

The reports of the work of the Parliamentary Bills Com

[1] A first series has been collected under the title, *The Sick in Workhouses* London: Smith, Elder, and Co. Price 1s. (Shortly.)

mittee have occupied much space, for the subjects with which this Committee deal are of so much public importance and touch professional interests at so many points that it is essential that the facts brought out by elaborate investigations regarding these matters should be placed fully before the medical profession. We have thus during the past year published essays prepared by Mr. Ernest Hart, in the first place for the information of the Committee, of which he is Chairman. Of these, among the most important have been (1) *Compulsory Vaccination and Small-pox in Relation to Vaccination*;[2] (2 and 3) *Compulsory Notification in England and Wales in 1892: State Aid in Relation to Port Cholera Expenses*,[2] which have been reprinted in two volumes.

During the coming year we have arranged to publish detailed reports upon other subjects connected with public health, which, at the present time, appear to require special investigation. Among these we may mention a further report on vaccination and small-pox, dealing with the question of the degree of immunity which vaccination and re-vaccination afford. The report will be founded upon a study of local epidemics during the past three years. We propose, also, to institute a special inquiry with regard to the methods of public and private disinfection now in use; and in relation to the investigation already on foot with regard to workhouse infirmaries, we purpose to inquire into the character of the milk supplied to institutions of the pauper and benevolent class in which children are brought up. Recent evidence afforded by various local epidemics in Great Britain and Ireland with regard to the dissemination of typhoid fever by water will also be the subject of a special series of reports.

THE UNIVERSITY OF WALES.

Yesterday was the first birthday of the latest founded University in these realms. On November 30th, 1893, the great seal was affixed to a charter constituting a University in and for Wales, under the name of the University of Wales. A short summary of the movement which led to the granting of this charter may not be without interest at the present moment. The idea of a University in Wales had been before the minds of Welsh educationists from the middle of the present century, and the University College of Wales at Aberystwyth, founded in 1873, was originally intended to be the nucleus and the seat of the University. Both the demand for and the prospect of the University were necessarily greatly strengthened by the establishment in 1883 and 1884 of the University College of South Wales in Cardiff, and the University College of North Wales in Bangor, and by the success which these two colleges, as well as their original compeer at Aberystwyth, speedily attained. But the actual movement for the establishment of the University may be said to have begun in a series of open public meetings held in Kensington in the year 1887 under the auspices of a Welsh literary society which has existed in London, with occasional intervals, for over a century past, under the name of the *Cymmrodorion*, or "Confraternity." For many years past this Society has been in the habit of holding meetings yearly in connection with the National Welsh Eisteddfod, for the purpose of discussion on literary and social matters, the Eisteddfod being an occasion which brings together Welsh public men from all parts; and it is in these meetings that the educational policy of the Principality has been to a large extent shaped.

The society's meetings held in Kensington in connection with the London Eisteddfod of 1887 traversed more or less the whole field of public education; but in the first place they formulated a demand for a Welsh University charter. In the following January the Cymmrodorion convened an academic conference in Shrewsbury, to which only professional or professed educationists were invited. In this conference a more detailed programme was laid down, which was adopted a few months later by the Welsh members and a contingent of Welsh peers who received a deputation from the conference at the House of Commons.

At a third Cymmrodorion meeting—an open one again this time—held in Wrexham in August of the same year, the official programme as regarded the University was adopted with enthusiasm, and in 1889 a deputation from the three public University Colleges waited upon Lord Cranbrook—then Lord President of the Council—and were invited by him to prepare a scheme and lay it before the Privy Council. In the course of the next year the number of public educational authorities in Wales had been increased by the establishment of joint county education committees under the Intermediate Education Act of 1889, and in 1891 a representative conference of members nominated by the three Colleges and by the above-mentioned county committees was formally empanelled, under Lord Aberdare's presidency, to consider the form that the university should take.

The first meeting of the conference was held at Shrewsbury in November, 1891, when the leading outlines were determined on, and the preparation of a complete scheme referred to a smaller committee, to be elected by the same constituencies as the conference. This committee, in a series of meetings held during 1892, prepared a scheme in full detail, which was accepted by the entire conference at a second meeting in January, 1893. The conference then boldly referred the whole scheme to the country at large for consideration; copies being formally sent to all members of the various authorities of the three public Colleges, to all members of the joint county education committees, and to all members of County Councils, and also freely supplied to the press and to anyone who chose to ask for them. It was made the subject of formal consideration, not only by the authorities and corporations above mentioned, but by a large number of other public bodies throughout Wales, besides being discussed at length in the papers; and it is no small testimony to the sagacity of the drafters of the scheme that it came out of so trying an ordeal with scarcely a detail changed; all its provisions, with but few and unimportant exceptions, having been approved by a large majority of the bodies which had considered and reported on it.

In the meantime the scheme had been redrafted in the form of a charter by Mr. Brynmôr Jones, Q.C., M.P., instructed by Messrs. Faithfull and Owen, of Westminster; and in May, 1893, the completed draft having been accepted at a final meeting of the conference, the three public Colleges petitioned the Crown to grant a charter in its terms. In July of the same year a Committee of the Privy Council approved the draft, with some trifling modifications of detail, and it was laid before

[2] London: Smith, Elder and Co. 1894. Price 1s.

Parliament. Hostile resolutions were moved by small parties in both Houses, and were considered, by an accidental coincidence, on the same day in August, 1893. In the afternoon the Lords passed a condemnatory resolution, by a majority of nine, on the ground that the theological college of St. David, at Lampeter, should have been included in the scope of the University; but at midnight a double attack upon the charter in the House of Commons on this and on other grounds was negatived without a division, and the Government, in consequence, felt justified in recommending Her Majesty to grant it. As we have said, it finally passed into law on November 30th. The whole sequence of proceedings in the matter exhibits a course of orderly progress in a piece of public business executed without a break or a serious hitch. The difficulties, it must be said, in the way of framing a scheme were not inconsiderable, as wide differences both of interest and of opinion existed at the outset, and several questions involving matters of serious controversy had to be faced; but, thanks to the public manner in which the proceedings were from first to last conducted, all these difficulties were successfully surmounted, and the charter was at last issued amidst general approval.

In the charter itself one or two special points demand notice. The scheme of the University, as is generally known, is a federal one, of the type of the Victoria University, the three public University Colleges at Aberystwith, Bangor, and Cardiff being its constituent colleges; and a "university court," or supreme governing body, with an advisory professorial committee or "senate," corresponding to the academic board in the Victoria University, being constituted. Except in theology, the University is empowered to confer degrees only after a regular course of study in one or other of the three constituent Colleges. The frankest recognition of the principle of public control of educational institutions is made in the charter. In the supreme governing body of the University representation is not only accorded to the lay as well as the academic authorities of the constituent Colleges, but 36 per cent. of the members are actually nominated by the County Council, of the Principality, while, moreover, the whole power of the University is left unreservedly in the hands of this public body, the constitution of an executive being a matter of statute, and not specified in the charter. The academic body or senate possesses no executive powers, but a right of review of all proposals for statutes, by-laws, or regulations concerning schemes of study and examination. The name of Guild of Graduates applied to the body elsewhere termed "Convocation" indicates an intention, which is being followed out, of making it something more than a mere occasional assemblage. A somewhat bold experiment has been made in establishing a Faculty of Theology, which it is needless to say must in Wales be entirely undenominational. Degrees in theology are only to be obtained by persons who are already graduates in arts of some British university, and, if they are not already graduates of the University of Wales they are required to have pursued a course of theological study in a theological college in Wales. But perhaps the most progressive feature of the charter is the absolute recognition of women's rights which it contains. Women, it is stated in the first article, "shall be eligible, equally with men, for admittance to any degree which the University is by this our charter authorised to confer. Every office hereby created in the University, and the membership of every authority hereby constituted, shall be open to women equally to men." A university in which a woman is eligible to become chancellor, or a doctor of divinity, is decidedly a new departure.

As we mentioned in a recent number, the enactment of the statutes and regulations of the University is being rapidly proceeded with, and the first matriculation examination is to be held in June next. It is proposed to proceed in the month of January to the appointment of the first chancellor, when it may be presumed that Lord Aberdare, who ably presided over the University Conference, and who has presided hitherto over the university meetings, will be elected to that office. The first Vice-Chancellor (Principal Viriamu Jones, F.R.S., of Cardiff) is already appointed, and will enter upon office on April 6th, the anniversary of the first meeting of the University Court. In January, also, it is proposed to appoint a Registrar, who will receive a salary of £400 a year, with travelling allowances. Hitherto the secretarial work of the University has been carried on in Messrs. Faithfull and Owen's offices, under honorary supervision.

SHORTHAND IN MEDICINE.

If persistent earnestness in advocacy and effort is evidence of worth, the use of shorthand in medical work possesses it. Our readers may have noted from time to time announcements of various efforts to promote its use, efforts which, although modest, are not without significance. As we announce in another column, a "Society of Medical Phonographers" has now been formed to place the movement on a permanent basis. The object of the Society is to make known the service which shorthand can render, and to promote its use, by the publication, in lithographed shorthand, of that which will at once add to the professional knowledge of the practitioner and the student, and at the same time increase his familiarity with the art, alike in reading and in writing shorthand. Besides other intended publications, a small periodical of sixteen pages, to which we referred recently, is to be continued as the *Phonographic Medical Record*.

The two numbers already issued contain records of clinical teaching, and have been, it appears, produced as a tentative effort by Dr. Gowers, in whom the use of shorthand has a strenuous advocate. He has asserted that to its constant use, during thirty years, one-half of the value of all his work is due. His testimony of its utility does not stand alone. Men who are well known, at least in their own districts, like Dr. Gray of Oxford, Mr. Stone of Liverpool, and Mr. Norman Pritt of Huddersfield, appeal to their own experience during many years as evidence of the peculiar help which it can render.

The advantages have been tersely stated in a leaflet issued by the Society. The chief claim is that when written at three times the speed of longhand, phonetic shorthand has a greater average legibility, not only to the writer, after any lapse of time, but to another person. This is only alleged of Pitman's system, in which alone experience has been gained, and which is now used, it is said, by 90 per cent. of all writers. It is, we may remark in passing, a remarkable fact that a system founded on a simple scientific

basis, with symbols in curious harmony with the processes of articulation, should yet, by its ulterior development, furnish the means for swifter writing than ever before has been achieved. By practised writers a speed of more than four words a second has been not only obtained but maintained. For medical use its chief value lies in its ease, its remarkable legibility, and wide application, so that a writer can take down an unknown language in it and read the note with precision.

The services which the use of shorthand can render in medical work, according to the testimony of those who have experienced it, are these. In the first place it permits notes of cases to be kept, throughout even a busy life, when the impossibility of securing records in longhand is only too familiar. To those who must keep notes of facts, to physicians especially, it offers the means of taking twice the amount of notes in less than half the time. This is, indeed, the secret of its value to all workers whose results rest on recorded observation. In a given time double the amount of record is compatible with double the time for observation, which must be more minute and exact to furnish material for the greater record. Thus its chief influence is to increase the precision and value of scientific medical work, as well as of all scientific work that rests on observation.

Lastly, it is urged that the student can by its means take a perfect epitome of his lectures, and yet give more attention to the subject than if he took no notes. Verbatim reports of lectures are reprehended. In the wards, it enables the student to secure notes of the bedside teaching, which is the most precious he receives, and for the most part, now, leaves but a vanishing impression on his memory. He can do this, and yet observe all that he needs to see.

Such advantages are not lightly to be passed by, and we cannot regard as unimportant the efforts that are being made to promote the use of this lever. It is a lever the effect of which depends on that which is behind it, but it differs from the mechanical powers in multiplying at once time and force. Moreover, its acquisition involves a limited and brief sacrifice of time and effort, since, once acquired, it is retained permanently. Those who are most proficient urge that its previous study should be encouraged by making it an extra mark-bearing subject in the preliminary examination.

THE CHELSEA HOSPITAL FOR WOMEN.

In another column we publish a report of the proceedings at the meeting of governors of the Chelsea Hospital for Women on Wednesday last. Whether they foreshadow an attempt to reorganise the management of the hospital on a satisfactory footing or merely the continuance of the old *régime* under fresh auspices is a question which time will answer. The Chairman, in his opening speech, seemed rather disposed to resent the interference of public opinion in the conduct of the hospital than anxious to satisfy it, and evinced little appreciation of the salient fact of the situation, very properly stated by Lord Cadogan at a later stage, that the management of the institution has for the time being lost the measure of public confidence which is necessary to the successful carrying on of a voluntary hospital. To the election of a new board of management, which took place at the meeting, we should attach more importance did the new board not contain so many members who had been prominent upon the old, including, we believe, the members of the late "Committee of Selection," whose proceedings have given rise to such general dissatisfaction. Still, we trust that they will have learned from experience, and will frankly co-operate with their new colleagues in the endeavour to reinstate the hospital in the public eye. One of the first acts of the new board will presumably be the election of a fresh staff; the present staff have, we are glad to see, recognised their position to be an invidious and untenable one, and have acted on our advice in resigning their offices, and in recommending that the Board should seek the co-operation of eminent obstetric physicians and surgeons in the task of making a new selection. They could not with self-respect have done less, and could hardly be expected to do more. We trust that the board will adopt this suggestion, and will take every means to show that its one aim is to procure, without fear or favour, the best and most trustworthy professional services that may be available for the benefit of the patients treated at the hospital.

A lady student has been returned as a member of the Students' Representative Council of the University of Edinburgh.

Professor Zakharin has been presented by the Czar with a valuable snuff box bearing a portrait of the late Czar Alexander III.

At a special court held on November 26th Dr. Joseph Griffiths, M.A., of King's College, was unanimously elected Assistant-Surgeon to Addenbrooke's Hospital, Cambridge. Dr. Griffiths is Assistant to the Professor of Surgery and Hunterian Professor at the Royal College of Surgeons.

The Harveian Lectures will be delivered before the Harveian Society of London at the Stafford Rooms, Tichborne Street, Edgware Road, on Thursdays, December 6th, 13th, and 20th, at 8.30 P.M., by Mr. Herbert W. Page, M.B., F.R.C.S., the subject being Some Disorders of Nervous Function due to Injury and Shock.

Sir Arthur Mitchell, M.D., K.C.B., will retire at the beginning of next year from the Scottish Lunacy Board, with which he has been connected since the passing of the Lunacy Act in 1867. The services which Sir Arthur Mitchell has rendered during his long tenure of office have been conspicuously successful, and his retirement is a distinct loss to the public service.

We are happy to be able to state on the best authority that the rumours as to the health of the King of Italy which have found their way into some English newspapers from the foreign press are quite unfounded, and that His Majesty is in perfect health. He has not at any time suffered from symptoms indicating the existence of cancer, as appeared to be suggested by the rumour referred to.

The Sultan has conferred the honour of Grand Officer of the Medjidieh Order on M. Monod, Director of the Assistance Publique of France; Professor Grancher and M. Roux, of the Pasteur Institute; and M. Pozzi, the well-known gynæcologist. M. Martin, of the Pasteur Institute, has received the decoration of a Commander of the same Order.

Another name to be added to the roll of medical martyrs is that of Dr. Bonafoux, of Salindras, France, who has just died of diphtheria, contracted from a child whom he was attending. His skill saved the little patient, but he himself died before a supply of antitoxin could be procured from Paris.

THE SHE-WOLF IN SHEEP'S CLOTHING.

F.R.C.S. writes: Will you kindly publish the following illustration of the evils mentioned in your paragraph under this heading. A lady consulted me a few days ago who had attended the "physiological lecture" of the lady doctor "armed with an American diploma." She brought with her the "wretched pessary," which had caused her considerable pain and cost her five guineas. I recommended her at once to consult her solicitor.

THE LATE MR. JOHN MARSHALL.

The General Medical Council had the pleasure of receiving, as a gift from Mrs. Marshall, a very life-like bust of its late President, Mr. John Marshall. The bust, which is a beautiful work of art from the chisel of Mr. Brock, R.A., has been placed in a prominent position in the room in which the Council meets, and with the busts of two other former Presidents, Sir Henry Acland and Sir George Paget, contributes much to the embellishment of its walls. In announcing the gift to the Council, Sir Richard Quain made a graceful reference to the high character and important public services of Mr. Marshall.

SIR JOSEPH FAYRER.

We understand that the successor of Sir Joseph Fayrer as President of the Medical Board of the India Office has not yet been nominated. The names of possible successors are now under the consideration of the Secretary of State. We are glad to learn that Sir Joseph Fayrer's retirement, which takes effect on January 11th next, is not due to ill-health and does not indicate any diminution of his activities in other directions, but is brought about solely by the regulations of the service with regard to age, which have already been relaxed in his favour on previous occasions owing to the high value attached to his services by the India Office.

WOMEN AND THE UNIVERSITY OF DURHAM.

Notices have been issued by Dr. Kitchin, the new Dean of Durham and Warden of the University, calling Convocation together on December 11th, for the purpose, amongst other business, of affixing the seal of the University "to a petition to Her Majesty the Queen for a supplementary charter to enable the University to confer degrees upon women, and to hold convocations elsewhere than in Durham." The professors and lecturers in arts, medicine, and science wish the University to have the power of granting degrees to women in these faculties, but if the power is obtained it remains to be seen how far it will be exercised. Convocations elsewhere than in Durham will probably be held in Newcastle for the purpose of conferring degrees there in medicine and science.

FEATS OF PERIL *v.* FEATS OF DARING.

The death of an unhappy man by diving into the Thames from one of the highest points of the Tower Bridge again calls attention to the curious perversion of taste in a large section of the British public which leads them to put a high and fictitious value upon the performance of feats of peril, whilst it often allows true heroism to be its own reward. There appears to be little doubt that in the present instance the repetition of the high dive had literally turned the brain of the performer, and it would be interesting to know the effects of such repeated shocks upon the central nervous system as must have been experienced by this man. He had been engaged as a respectable and hard-working assistant in the wholesale fish trade for a period of twenty years, until during the last year he has jumped twice a day into a tank filled with water from a height of 130 feet. He gradually came to believe himself capable of diving from the greatest heights, and the police were so much on the alert to prevent his folly that he found it necessary to disguise himself on the last occasion, as two previous attempts had been frustrated. He was an ardent spiritualist, too, and there is reason to suppose that he believed himself to be under the especial protection of certain spirits with whom he was acquainted. It is surely time after such a catastrophe that exhibitions of crazy people should be put a stop to by the responsible authorities, for so long as they are a commercial success it cannot be expected that the managers of places of public entertainment will exercise much self-control in the matter. The taste is a degrading one, and the exhibitions subserve no good purpose. They do not even encourage hardihood.

CHEMISTRY AND THE AUTHENTICITY OF RELICS.

The present age takes nothing on trust, unless it be "spooks" and speculators. Legends are subjected to the "higher criticism" of the measuring tape, and traditions are tested in the laboratory with the "usual reagents." So strong is the stream of tendency in this direction that even theology, which used to look askance at science, is now often fain to invoke its assistance. A curious manifestation of the *zeitgeist* in this respect is afforded by the action taken some time ago by the Bishop of Versailles, Monseigneur Goux, in submitting the famous seamless coat which is preserved as a relic in the Church of Argenteuil, and which, according to tradition, is stained with the blood of Christ, to examination by scientific experts. For this purpose he chose M. Philippe Lafon and M. J. Roussel, who were asked to furnish an answer to the following question: "What is the exact nature of the spots on the garment known as the Holy Coat of Argenteuil?" These experts in due course certified that they had made a chemical and microscopical examination of the "Holy Coat." After describing, in the ordinary way, the tests employed, they sum up as follows: "From the portion of the Coat marked with rust-coloured spots we obtained: 1. A faint green coloration, with the tincture of guaiacum and the essence of turpentine. 2. The revival of the red globules of blood, with the artificial serum. 3 The formation of crystals of hæmin, or of chlorohydrate of hæmatin. These indications are sufficient to enable us to affirm that the spots examined are actually due to blood—and to human blood. Judging by the whole of our analysis, we presume that this blood is very old."

PUNISHMENT REMEDIAL OR PENAL?

A schoolboy, aged 16, was on Saturday last, in the Edinburgh High Court of Justice, sentenced to twelve months' imprisonment for "wilful" fire-raising. Whether the facts disclosed necessitated in law such a sentence, we do not in these columns presume to say. What we are concerned with is that evidence was given to show that the boy had suffered from meningitis, was afterwards in such physical condition that it was doubted whether he would ever be able to go to school, that he did ultimately go to a private school, and afterwards to Rugby, from which he ran away. Later he went to another public school, where he played football, a game he much disliked; and on October 4th last he had during a game a bad fall, for nearly a fortnight after which he complained of pain in the head. Further, his master said that from the date of the fall to the date of the fire "his work had gone all to pieces, that he could get nothing into or out of him." There was absolutely no motive for the so-called crime. Drs. Clouston and Littlejohn gave evidence to the effect that the boy's condition was one of arrested or

imperfect mental development, which often manifested itself in erratic and ill-co-ordinated acts like this, and that solitary confinement would be extremely prejudicial to his health. Yet the Lord Justice Clerk, who pronounced sentence, is reported in the public prints to have said that "the effect of imprisonment was not for his consideration at all. He would therefore not take it into account." This seems to us an amazing dictum for any judge to lay down. It may in the abstract be good law, but it is bad common sense and doubtful jurisprudence. The clearest and most convincing medical evidence is given by men whose judgment is beyond question, and on this point it goes for nothing. Who, may we ask, if not a judge, is to consider the effects of imprisonment? What is the object of imprisonment? Is it remedial or purely penal? If our judges are to take up this extraordinary position, then indeed in a double sense is justice blind. It is the business of the executive authorities to determine effects, we may be told. But we demur. Grave injury may have been done meanwhile. As Salilas has well said, "All progress in penal jurisprudence lies in giving consideration to the man": and, again, Mr. Justice Stephen has written: "It ought to be the law of England that no act is a crime if the person who does it is at the time when it is done prevented by defective mental power, or by any disease affecting his mind, from controlling his conduct, unless the absence of the power of self-control has been produced by his own default."

CORONERS' FEES.

A correspondent calls our attention to the fact that in many parts of the country the fee of a guinea which used to be paid when medical officers were summoned to attend a coroner has been stopped, and that in certain instances, as, for example, in the case of the honorary staff of a hospital where there is no resident medical officer, this involves a very unfair tax upon the profession. The authorities responsible for these recent changes in fees allowed at coroners' courts are the county councils; and we would advise our correspondents to bring local pressure to bear upon their county council representatives, in order that the injustice may be removed. It is a well-established principle in all courts that a professional witness is absolutely entitled to a proper fee for his attendance; and although there might be a technical difficulty in enforcing such a claim, either against the coroner or the county council, we feel certain that proper arrangements can be made if the attention of the proper authorities is directed to the matter. Our correspondent suggests that the Parliamentary Bills Committee of the Association might take action; but it appears to be very desirable that local representation should be first made, and if this should be unavailing the correspondence can then be laid before the Parliamentary Bills Committee.

THE MEDICAL SCHOOL OF CARDIFF.

The present year has seen the opening of the new Medical School. The project of establishing a School of Medicine in connection with the University College of South Wales and Monmouthshire has been entertained almost since the foundation of the College. The first practical step towards its realisation was taken in 1886, when Dr. William Edwards, of Cardiff, ex-President of the British Medical Association, offered a sum of £1 000 towards the foundation. Further steps were taken in 1890, meetings being held in South Wales, and a meeting in London, under the chairmanship of Lord Aberdare. Dr. Edwards's offer was followed by a similar offer of £1 000 from Dr. Price, of Cardiff; and amongst other members of the profession who contributed were Dr. T. Griffiths (of Swansea), Drs. Sheen, Theodore Williams, Fredk. Roberts, Taylor, and Fiddian (of Cardiff), Sir William Roberts, Dr. Isambard Owen, Mr. Edmund Owen, and Miss Ellaby, M.D. Liberal support was also given by Miss Caroline Williams, of Kensington. The Council of the College were thus enabled in the course of last year to endow two new Professorships, in Anatomy and Physiology, with a Lectureship in Materia Medica; and also to provide accommodation for classes in these subjects. The accommodation was provided upon an ample scale, a new storey being placed for the purpose over the entire main College building, providing spacious lecture rooms in anatomy and physiology, an airy dissecting room, excellent physiological laboratories, and a museum of anatomy. Dr. Haycraft was appointed to the Professorship in Physiology; Dr. Hughes, of Edinburgh, to the Professorship of Anatomy; and Dr. Paterson, of Cardiff, to the Lectureship in Materia Medica. Arrangements were entered into with the County Infirmary, which is within five minutes' walk of the College, to allow the students to attend medical and surgical practice within its walls. Classes in the new School were actually begun in November, 1893, but the School was not formally opened until February of the present year, when its inauguration was celebrated by an address from Sir Richard Quain, published in our columns at the time, by a reception at the College, and a public banquet in the Town Hall. The first entry of students in 1893 was naturally but a scanty one; but this year 20 students have commenced their professional career in the College, and it is probable that the number will steadily increase for several years to come. Under the "public neglect of medical education in London," of which we have heard something of late, there is no doubt that the student commencing his career in the fully equipped University College of South Wales and Monmouthshire, and proceeding to a London school after he has passed in anatomy and physiology, enjoys certain advantages over his fellow who pursues his entire course in a metropolitan school, and we wish cordial success to the enterprise of Cardiff.

ABERDEEN UNIVERSITY CLUB, LONDON.

The half-yearly dinner of the Aberdeen University Club was held in the Holborn Restaurant on November 21st; Professor Alexander Ogston occupied the chair. Professor Ogston proposed the toast of "The University and the University Club." He pointed out that their University had reached a memorable epoch in its history. King's College had attained an age of 400 years, and Marischal College 300 years. He regretted that the celebrations, which it was anticipated were to be held in 1895, were likely to be postponed. Many changes had taken place this year at Marischal College; the old narrow gate through which all had been wont to enter had been demolished, and a wide breach had meanwhile taken its place—symbolical of a freer entrance for years to come. The well-known four-pinnacled tower had been altered, and in its place now stood a fairy-like pillar towering into the skies beyond all the city's spires. A noble hall, bearing the name of its munificent donor—Mr. Mitchell—stood aloft as high as the loftiest roofs of the University. The essence of the University had remained untouched, had even been strengthened. He deprecated the idea that any special epoch had been more prominent than another in producing the famous men that adorn their old Alma Mater. It had produced men of the greatest distinction who had moved the world to its advantage in many ways, who had altered the face of science by discoveries based on foundations so stable that would never be overthrown; and the best wish that could be uttered for the University was that it might send some forth to emulate—perhaps equal—those who had gone before.

AN OBSTETRICAL PROBLEM.

What manner of man physically should your obstetrician be? One is tempted to answer offhand "A ladies' man," one with a good presence, a soft voice, a gentle hand, or rather with *main de fer en gant de velours*. An old French writer, Dionis, says the accoucheur must have no bodily defect, at least nothing that can shock the eye of a lady. He

must be neither too young nor too old, but in the full vigour of manhood, with a frame that can withstand fatigue, and strength for "a laborious confinement which sometimes puts him all in a sweat." On the other hand, it has been urged that a man who attends ladies in so delicate a situation should be the reverse of attractive in appearance, so that he may not excite the jealousy of husbands. The supporters of this view go the length of saying that the obstetrician should be untidy in his dress and dirty in his person; if he can grow a long beard and wear his hair unkempt like prehistoric man so much the better. We gather from another old writer, Mauriceau, that this plan was adopted, at least in France, by some of those whom our rude forefathers called "men midwives," as a deliberate line of policy in the belief that it engendered confidence and brought them patients. Mauriceau thinks it a mistake for a surgeon of whom women are sufficiently afraid by nature to make himself more feared by such expedients. We are not aware that anyone at the present day thinks it necessary to go unshaven in order to attract practice, though the cultivation of a bearish manner has sometimes been thought to be an element in the successful practice of gynæcology. Perhaps it is as well that an obstetrician should not be too handsome. Nature, however, may be trusted to provide against this difficulty to a very large extent. If we were asked to name the three qualities (apart from professional skill) most necessary in an accoucheur, we should answer by parodying Danton: Cleanliness, cleanliness, and yet again cleanliness. Let him wear a beard if he will, but let his nails never be "in mourning," as the French say, and let him be neither sparing nor infrequent in his ablutions.

QUALIFICATION BY RED LAMP.

An inquest recently held at Poplar shows how willing uneducated people are to accept the red lamp as a medical qualification. Herein lies one of the great difficulties of dealing with unqualified practice. The duty of the General Medical Council is to keep the *Register* accurate, and the object of the *Register* is to give people a means of knowing who is qualified and who is not; but when the people—the great populace at large—care not one fig whether a man be qualified or not the whole machinery falls to the ground. In framing any attempt to suppress quackery the fact must be recognised that great numbers of the masses are quite willing to accept the red lamp as sufficient, while many of the classes, it is to be feared, take a certain sceptical pleasure in believing that non-qualification is at least one index of an open mind and a thing therefore rather worthy of encouragement. Qualification by red lamp is only an example how education, knowledge, training, and veracity all go down before "bounce." While that remains the case there is but little likelihood that quackery will either die out or be put down. But at least we can enforce the existing law until such time as it be amended, and keep the *Register* pure so as to show that there is a sharp line of distinction between quackery and legitimate practice, between knavery and knowledge.

SMALL-POX AND REVACCINATION IN DUBLIN.

The outbreak of small-pox in Dublin, which has now existed for about six months, does not show any indication of exceeding manageable limits. Two hospitals are able to supply all the accommodation which has so far been required. The northern side of the city, where the disease first made its appearance, is now practically free from it; still, we find that the cases have run into the hundreds, and that 112 were reported, with some 13 deaths, for the five weeks ending November 3rd. The sanitary authorities are aided in their efforts by the fact that there is no insane hostility of the people to vaccination. The faddists in England are trying their best to stay the revaccination, but without effect. One excellent proof of the value of revaccination is shown at the Hardwicke Hospital. When the first case was brought there every one of the staff was revaccinated. After six months, during which a large number of patients have been treated, it is found that no physician, student, nurse, or servant has been attacked. Two gentlemen, one a hospital physician, the other a student from a distance, visited the wards on the same day in order to see the first cases. Unhappily they were both without protection, and in a fortnight they were themselves patients in the institution, suffering from severe small-pox. The Board at once issued orders that no one should visit the wards unless he had been revaccinated; and, as we have said, no one so prepared has been attacked.

THE SALARIES OF MEDICAL OFFICERS OF HEALTH.

We are glad to record that the admirable services rendered by Dr. Dudfield as Medical Officer of Health for Kensington have been recognised in the most practical manner by the Vestry. At their meeting last week they resolved to raise the annual honorarium paid to him from £600 to £800. This action of the Vestry is not only a matter of personal congratulation to Dr. Dudfield but is of importance to the whole body of medical men engaged in the public health service. As a rule, to which there are very few (if any) exceptions, the salaries paid to medical officers of health are by no means in proportion to the importance to the community of the duties which they are called upon to discharge, or, to put the matter on the lowest footing, to the magnitude of the pecuniary interests involved in the due discharge of those duties.

WOMEN GUARDIANS.

The first election of Poor-law Guardians for Liverpool under the Parish Councils Act will take place on December 15th. Among the candidates are three ladies—Miss Mary Bingham, Miss Mary Stanistreet, and Miss Josephine S. Thorburn. Hitherto no women have been appointed guardians for the parish of Liverpool, but they have for some time sat on the boards of the neighbouring parishes of West Derby and Toxteth Park, where their presence has been found to be decidedly advantageous. The views enunciated by the Society for Promoting the Return of Women as Poor-law Guardians will probably be known to many of our readers. There is a strong feeling in Liverpool that a body which maintains a large number of women and children, and is expected to educate and train the latter so that they may become useful citizens, would be more efficient if a certain proportion of ladies had a share in its management. A board entirely composed of men must be largely governed by its permanent officials in providing such matters as clothing and bedding, and in domestic arrangements generally, and it is natural to suppose that the co-operation of a few capable women on the board would promote the interests alike of the inmates and the ratepayers. That the management and accommodation in many workhouses are very far from what they ought to be is only too apparent from the reports on the nursing and administration of provincial workhouses and infirmaries, now in course of publication in the British Medical Journal, and the presence of a few ladies, who would give their time and special knowledge to the work, would be the best guarantee to the ratepayers that needful reforms would be carried out with due regard to efficiency and economy.

WATERCRESS AND ENTERIC FEVER.

Dr. Verdon, Medical Officer of Health for Lambeth, has drawn attention afresh to the suspicion which lies upon watercress as a cause of typhoid fever. In several cases of this disease which had occurred in his district he had failed, after careful investigation, to discover any probable cause except that in each case the patients had partaken of watercress, and, on tracing the origin of the cress taken by one of these patients, he found it growing in beds, situated on the

outskirts of London, which were supplied with water described by a public analyst as bearing all the characters of being little else than a sewage effluent, and which he found pervaded by innumerable colonies of microbes. From the inquiries which he has made, Dr. Verdon thinks that the practice of growing cress in sewage-polluted water, on account of the luxuriant crop it produces, is a very prevalent one; and that as watercress is a common article of diet, its growth amid such conditions constitutes a danger to public health. Under these circumstances, Dr. Verdon very rightly suggests that the attention of the Local Government Board should be called to the matter, and that they should be requested to institute an inquiry into the whole subject of the cultivation of watercress in the vicinity of the metropolis. In the meantime, it may be as well to withhold any definite expression of opinion on the subject. On the one hand, it is abundantly obvious that cress grown in typhoid-polluted water would be a very probable cause of typhoid in the consumer; on the other hand, seeing the enormous consumption of this green stuff, and seeing that the particular watercress beds of which mention is made cover an area of about 25,000 square yards, and appear capable of providing "a large and continuous supply for the market," one would expect that any typhoid pollution of such a popular comestible would be followed not by a few cases, but by an outbreak comparable only with the water or milk epidemics with which we are all familiar. Still, the matter is fully worth a complete investigation, for even in the trade there is evidently some suspicion as to the article produced in the neighbourhood of London. We are told that the bulk of what is sold comes from a considerable distance, real country places where the risk of infection, at any rate, is but small, but that the conditions of watercress cultivation are very different in the neighbourhood of London, and it is obviously unfair that a succulent and tasty luxury, accepted by the masses all the more readily as being a product of the country, should really be nothing more than a sewage-fed weed, tainted with the infection of typhoid fever.

THE FIFTIETH VOLUME OF "NATURE."

The completion of the first fifty volumes of *Nature* was celebrated on November 22nd by a dinner given at the Savoy Hotel by Messrs. Macmillan and Co., the proprietors, "to meet the Editor, Mr. Norman Lockyer." About fifty past and present contributors to the journal accepted invitations, the medical profession being represented by the Right Hon. T. H. Huxley, Professor Burdon Sanderson, Professor Allbutt, Dr. Thorne Thorne, Dr. Lauder Brunton, Sir James Crichton Browne, Dr. Donald MacAlister, Dr. Mitchell Bruce, Dr. Wharton Hood, Dr. Klein, Dr. Michael Foster, and Dr. Ferrier. Mr. G. L. Craik, for the senior partner of the firm, proposed "The Health of the Editor," who had planned the journal and shaped its course, until now it was the most influential journal of science in Europe. The toast was cordially honoured, and, in returning thanks, Mr. Lockyer gave many interesting reminiscences of his twenty-five years' editorship. It was not to him, but to the 800 or more contributors to *Nature*, that its present position was due. Science had become so widened and so specialised that no editor could be conversant with all its branches. As the American phrase ran, what he himself didn't know would fill many volumes of *Nature*. One of his first contributors and one of his staunchest friends in the conduct of the journal was Professor Huxley, and, in proposing the health of "The Contributors," he would ask the company to couple with it that honoured name. Professor Huxley said that on the sad ground of seniority alone he had an indisputable qualification to speak for the contributors. It was some fifty years since he had made his first contribution to science. With regard to the Editor, he was reminded of the remark of a poor woman who once came to hospital with two black eyes and a damaged nose. "Your husband, I suppose?" said the sympathetic house-surgeon. "No, bless you, my husband ain't like a husband, he's like a friend." Mr. Lockyer was to his contributors not so much the Editor as the friend. This was no easy task; it was often better to be an architect building a house under the dual control of a husband and wife, or a member of the London School Board, than an editor. On the part of contributors he would confess (it was easy to confess the faults of others) that they might often be briefer, more perspicuous, more self-controlled. They ought to remember that though the dictum of some latter-day poets, "form is everything and substance nothing," was disputable, the converse was a pestilent error. Scientific contributions were often offered which were made up of little more than cuttings from the laboratory book. Let them take it to heart as contributors that a fine work of science should at the same time be a work of art and a work of literature. In proposing the toast of "The Publishers," to which Mr. Frederick Macmillan very happily replied, Professor Huxley said that publishers were generally regarded as *feræ naturæ*, to be preyed upon by authors when they got the chance. But, as in the case of Mr. Lockyer, all who had to do with Messrs. Macmillan would agree that they weren't so much publishers as friends.

WHAT IS A PERMANENT OFFICIAL?

Some discussion has taken place recently as to the appointment of a permanent assistant medical officer to the St. Pancras Workhouse Infirmary. It was proposed by the Visiting Committee that the officer should be appointed for three years, but be eligible for re-election, the Local Government Board having objected to the system hitherto in vogue of engaging temporary assistant medical officers. Complaints had often been made that the young men who filled that post were somewhat reckless in ordering stimulants and not careful in taking them off, and it was therefore thought best to have a permanent officer, who, however, would vacate the office at the end of three years. To this term of years, however, some exception was taken, it being stated that the wish of the Board was that they should have a succession of young men fresh from the hospitals well up in all the latest ideas and practice in preference to having an officer who would become stereotyped and without ambition. To this we quite agree, but surely a man does not become stereotyped and without ambition in three years. The art of being a good medical officer to an infirmary requires learning like everything else, and, so that one can avoid rustiness, it is an advantage both to the patients and to the officials that changes should not take place too often; on the other hand, it is distinctly bad for all parties that men should stagnate in subordinate positions. We think the three-year limit is a good one, but it should be a limit and re-elections should certainly be very rare.

COTTAGE HOMES FOR PAUPER CHILDREN.

On Saturday last Sir Walter Foster, M.P., formally opened the new receiving house in connection with the system of isolated cottage homes for pauper children, which has been established throughout the city. This is the keystone of the scheme by which the Sheffield guardians hope to entirely separate the pauper children from all workhouse influence. As Sir Walter Foster said, it is as yet to a large extent an experiment, but it is clearly a step in the right direction. The plan is a combination of the boarding out and the village home. The point aimed at by all reformers in the education and rearing of the pauper child is that it should be brought up, if possible, apart from the contaminations of the workhouse life. First, we had the separate school, the child living within the workhouse, but apart from the adult quarters; then we had the school within the walls changed for the national school, the child returning to the workhouse

as to its home; then there was the boarding out, the child being transplanted into the home of the cottager and becoming one of the family, while the guardians insisted on certain conditions, and paid for its maintenance; then, as another experiment, came the village home, a group of specially erected cottages, each accommodating so many children, and each home having a matron over it. The boarding-out system has failed in some cases through the dishonest treatment of the child by its foster parents, a point that can escape the eyes of the most vigilant inspector. The village home is viewed with the suspicion that attaches to all homes managed like institutions; and the other alternative, the barrack school, although entirely separate from the workhouse, has also failed entirely from causes inherent in the system. Under these circumstances the Sheffield guardians have devised a new scheme, the progress of which will be watched with the greatest interest. They have endeavoured to get the advantages of boarding out without removing the children beyond their own authority and supervision. The board has become the owner of cottages scattered up and down the city, chiefly in the suburbs, and in each cottage there is a foster parent and some fifteen children; these children are to live the life of their own class, to mingle with them in school and in play, and to be brought up without entering the workhouse, or indeed knowing that they are pauper children. In addition to these cottages, there is a headquarter building, to which and from which the children are drafted, and a hospital. The corner stone of this scheme will be the selection of the foster parent, on whose uprightness the child's well-being will depend; but we trust that with the exceptional means at the disposal of every board for knowing the career of the many applicants for the post, a wise choice will be made. This departure from the beaten path will be watched with great interest by all who believe that there is a future for the workhouse child if only it is given a fair start, and it certainly appears a common-sense method of separating the little pauper from its unhappy surroundings.

SOUTH AFRICA AS A HEALTH RESORT.

The eulogy of the climate of South Africa by Max O'Rell in his recent book, *John Bull and Co.*, has led the *Cape Times* to draw attention again to the great variety of climate which exists in the colony, and to the special difficulties which beset invalids in gaining the undoubtedly great benefits of climatic treatment in those regions. In the seaboard towns luxuries and comforts can be had in plenty, but the climate is most unsuitable to pulmonary disease. Neither the cold and humidity of the winter, nor the heat, the dust-bearing south-easters, and the moist relaxing air of the summer in Cape Town are an improvement for this class of patient upon the climate they leave behind in Great Britain. If they want to reach the really beneficial districts they must journey north to the high altitude of the interior, where the air is pure, dry, and rarefied. Here, however, unfortunately, invalids will miss many of the conveniences and comforts to which they have been accustomed, and which have in many cases become almost necessities. While it is true that in South Africa, as in most places, money will procure almost anything, it also is the fact that in South Africa a great deal of it is required to obtain a very little in the way of comfort and good food. It must be remembered that in a new country the good things go to the strong, and that for those who cannot either work hard or pay heavily there is but small opening.

THE DOMESTIC CISTERN AS A PLACE OF BURIAL.

How long will it be necessary to go on proclaiming the necessity for all cisterns being provided with proper covers and being frequently cleaned out? It sounds strange for people who boast of cleanliness as a national virtue, and who assert that it is, next to godliness, another national peculiarity, to allow their drinking water to be stored in the foul tanks so commonly in use. The last story about cisterns comes from a village in the neighbourhood of Bridgnorth. A new rector being appointed, a general cleaning up of the rectory took place, in the course of which the remains of three infants were discovered. One, apparently the most recent, was found wrapped in a cloth in a soil pit; another in a box in one of the rooms; and the third in the cistern! In a tank above the ceiling of a bedroom a box was found, and in it the skeleton of a baby. We need not enter into details. We know what is meant by macerating bones; and the baby had been macerated and dissolved away in the water till nothing but the skeleton was left. But of such stories there is no end. It is not so very long since a lecturer on hygiene described how, on making a sanitary inspection of a house in which there had been an outbreak of typhoid fever, a pair of trousers was found in the cistern, into which, doubtless, they had fallen after having been hung up in the attic to dry. It is impossible to exaggerate the filthiness of unprotected cisterns, or to speak too strongly as to the necessity of their being properly covered and frequently cleaned.

THE ERA OF DISPENSARIES.

The history of English dispensaries has still to be written. It will form as interesting a volume as the story of the rise and fall of the private medical schools. Sir Samuel Garth may be looked upon as the first founder of dispensaries, for he promoted the erection of an apartment in the College of Physicians for the relief of the poor, by giving them advice gratis and dispensing medicines to them at low rates, as early as 1699. It was not until the last third of the eighteenth century, however, that they became really fashionable under the influence of Dr. Lettsom, physician and philanthropist in the truest sense. They were established for the relief of those who were too poor to pay for ordinary medical advice, and were yet not poor enough to accept gratuitous hospital treatment. The example set in London soon spread far and wide, so that the latter years of the eighteenth century may be known as the dispensary epoch in medicine, just as the present time is the special hospital epoch. Similar motives, no doubt, contributed to the foundation of both sets of institutions. In many cases it was a sincere desire to benefit the more deserving of the poorer class, but in many cases they were founded to the glory of an individual. The more worthy in each case have survived, but, by a process of natural selection, even they are becoming reduced in numbers. The records of one of the best of these institutions has just been written by Mr. Poland, with the laudable object of adding to its funds:[1] and it would be well if the officers of other dispensaries would act upon the hint, and devote such leisure as they may have to a furtherance of the charity with which they are connected, by adding to its funds and writing its history.

PILULES AND POLITICS.

At the present time, when "corrupt humours" of various kinds are poisoning the constitution of the body politic and the red spectre of Anarchy walks more and more defiantly in our midst, refusing to be "laid" by Labour Commissions and Blue Books, the discovery of a sure remedy for Anarchism and the revolutionary spirit generally is specially opportune. It is to a homœopathic practitioner of Lyons that we owe this discovery which is to save society from destruction, and we think it a duty to communicate it to the world without delay. Like all great discoveries it is simple—as simple as your honest homœopath. The pill to purge our social melancholy is "causticum." This, if we are to believe our authority, will subdue the most violent revolutionary fever; he mentions two cases in which by their medication

[1] *The Miller Hospital and Royal Kent Dispensary.* By J. Poland. Greenwich: H. Richardson. 1893. (Demy 4to, pp. 340. 12s. 6d.)

rabid Anarchists were made as meek as lambs. We are not prepared to deny the virtues of "causticum," (though on strict homœopathic principles we should have thought nitroglycerine indicated as a cure for bomb throwing), and, indeed, in the form of the hot iron, it in less squeamish times played a very considerable part in the suppression of political and religious revolutions. We should be glad, however, to learn a little more in detail how the discoverer applies his remedy. For less virulent disorders, such as discontent with the Government and the spirit of faction, this amiable philanthropist has a remedy in "mercurius," a drug which is also, we are told, a specific for drunkenness and gambling. "Mercurius" has evidently a political future before it: by the judicious administration of it to the members of the Opposition and to voters at election time Governments will be able to keep in power indefinitely. With "causticum" to tame the wild Anarchist, and "mercurius" to keep the taxpayer in a proper frame of mind, we need no longer go in fear of "red ruin and the breaking up of laws." Thus will Mercury restore the reign of Saturn, and society be saved by homœopathy.

CONSUMPTION HOSPITALS IN SCOTLAND.

Steps have recently been taken to supply the deficiency of accommodation in Scotland for patients suffering from consumption. In September we recorded the foundation of a consumption hospital for Scotland at Bridge of Weir, Renfrewshire, and now we have to report that last week Lord Stormonth Darling inaugurated in Edinburgh a small consumption hospital for fifteen patients. Craigleith House (the new hospital) lies to the north-west of the city of Edinburgh, is surrounded by 7½ acres of wooded park, is well sheltered, and faces south. There are on the ground floor two male wards, each for three patients; on the first floor three wards for female patients. Fifteen beds! but what are they among so many? During a large part of the year something like half the deaths of Edinburgh are due to consumption and diseases of the chest. Why, then, should a greater effort not be made? Already Edinburgh has one of the finest general hospitals in the kingdom, soon there will be a first-rate children's hospital, and a hospital for fevers, why not a large and well-equipped consumption hospital to meet most urgent needs? The hospital at Bridge of Weir is the first of a series of eight or ten which Mr. Quarrier hopes to get funds for in the immediate future at a cost of £60,000. He is associated in his good work with Professor W. T. Gairdner, Professor J. G. McKendrick, Professor Joseph Coats, Dr. Yellowlees, Dr. James B. Russell, and Dr. Ebenezer Duncan, all of Glasgow. This first consumption hospital is to consist of 30 bedrooms (all for females), with the necessary adjuncts to these, and acting on the principle that consumption is an infectious disease, and that it is curable, each patient will have a separate bedroom. Mr. Quarrier can in a very brief time find £7,000 for the first of his series of consumption homes in the west of Scotland, why not Edinburgh?

THE INSTINCTS AND HABITS OF BABIES.

The study of the manners and instinctive habits of infants, and, though to a less extent, the customs and traditions of mothers and nurses, would afford a wide and interesting field for systematic study. There is some prehistoric insight also to be obtained from nursery rhymes, foolish as they often seem, and corrupt as their text has in some cases become. For instance, there is the famous "Hush-a-by baby, on a tree-top." Why on a tree-top? the last place in the world where a baby is commonly placed nowadays. The ordinary explanation is that the lullaby dates back to the time when wild in wood our noble ancestors ran, and hung their babies in bark baskets to the bough of the tree under which they camped. A writer (S. S. Buckman) in the November number of the *Nineteenth Century*, would put back not indeed the lullaby, but the association of the ideas of putting a baby to sleep and the swinging boughs of a tree further still. The motion of rocking to sleep is claimed as evidence of an arboreal habit in our long-ago ancestors, who were decidedly prognathous, had long tails, were arboreal in their habits, and used both the *pedes* and *manus* as hands, the former more than the latter. The writer adds that "could he see them at the present day, an unzoological critic would probably call them 'monkeys' without much cavil." On the whole it would seem pretty certain that even the zoological critic would be indisposed to recognise in such a being a man and a brother. But a study of infants and children from this point of view reveals many curious facts and suggests various theories which are well set forth in the article. The human infant, says the writer, is an interesting object of scientific research, and even a cross baby should be contemplated calmly by the philosophic mind. Few persons have better opportunities of adding to the store of knowledge on these points than medical men.

THE BORDERLAND OF IMBECILITY.

The feeble-minded are perhaps more to be pitied, and certainly are a greater danger to the State, than the absolutely idiotic; these at least have the care and comfort of the asylum. Those on the borderland of imbecility do work, if proper work is set them, but they cannot obtain it for themselves; they can feel the hardship of their position, but they are unable to escape into the ranks either of the insane or the sane; they are but feeble-minded. Yet if properly cared for, if properly trained in habits of discipline and obedience, they are capable of happiness, and can be made almost to support themselves. The urgency of the necessity of some care and supervision over this class is most felt in regard to girls. Boys may be troublesome, but feeble-minded girls become the prey of men, and return again and again to the lying-in wards of our workhouses to become the mothers of imbeciles. Hence it is but natural that the first care should have been to provide for these weak-minded girls, and already six "homes" for the purpose have been opened, and have proved a great success. No similar homes, however, for feeble-minded boys and youths (as distinguished from imbeciles and idiots) as yet exist in England, and it is proposed to establish one if the funds for the purpose can be raised. The object is to provide maintenance, protection, training, and employment for boys and youths who are mentally incapacitated from earning their own living and who are yet so far intelligent as not to be eligible for any asylum for the imbecile or insane. If, as we know is the case, the asylums for idiots and imbeciles, as at Lancaster, are able so to train their inmates that a considerable proportion even of such degenerates can become wholly or partially self-supporting, it is fair to assume that the percentage of successes among those who are only on the borderland will be considerably higher. The scheme is put forward by the Earl of Meath, Lady Jeune, the Bishop of Wakefield, Mr. John T. Hibbert, M.P., Chairman of the Royal Albert Asylum; General Moberly, Vice-Chairman of the London School Board; Dr. Shuttleworth, late Medical Superintendent of the Royal Albert Asylum; and Dr. Fletcher Beach, late Medical Superintendent of the Darenth Schools for Imbecile Children; and, as they say, it "seems to ask for support, not only from the point of view of philanthropy, but from that of social economy, for the segregation of those afflicted with feeble-mindedness in special homes would tend to diminish the evil in the next generation, while they would themselves earn something towards their support, and so be less of a burden to the community."

We are asked to state that a new "Society of Members of the Royal College of Surgeons" has just been inaugurated in London to replace the old Association, and that a full programme will shortly be issued.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

WINTER SESSION, 1894.

Sir Richard Quain, Bart., President, in the Chair.
Tuesday, November 27th.

The General Medical Council commenced its winter session on Tuesday, November 27th, Sir Richard Quain, Bart., presiding.

President's Address.

In his opening address the President expressed the great satisfaction with which he met the members of the Council assembled for their fifty-seventh session, for he could not remember any session at which business of greater importance and interest had awaited their consideration. He called attention to a marble bust of their late President, Mr. Marshall, which had been presented to the Council by Mr. Marshall's widow. It was the work of Mr. Brock, R.A., and was a replica of the bust which had been placed in the College of Surgeons, where Mr. Marshall held also the distinguished rank of President. He was sure the Council would convey to Mrs. Marshall their sincere and grateful thanks for her gift, valuable as a work of art and valuable also as a lasting memorial of their late President. Referring to the immediate business before the Council, the cycle of the visitation and inspection of Final Examinations, commenced in April, 1892, was now complete, and the reports of the visitors were before them. The reports that had been already considered by the Council were those on the Final Examinations of the Universities of Glasgow, Aberdeen, Edinburgh, and of the English Conjoint Board for the Licence of the Royal College of Physicians of London. A special visitation, including all the examinations of the Conjoint Board in Ireland, of the College of Surgeons, and the Apothecaries' Hall. The visitors had been received with the greatest courtesy by the various Licensing Bodies, and every facility afforded for their inquiries. The Council, having considered these reports, would probably come to some determination as to the course to be adopted in dealing with them as a whole. Very valuable reports were to be presented by the Education Committee dealing with the preliminary examinations conducted by Indian, colonial, and foreign universities and colleges: the registration of students as pupils of medical practitioners; the recognition of ordinary schools as places where chemistry, physics, and biology may be taught; and a correspondence that had taken place with the Secretary of the Scottish Universities' Commission and the Registrar of the Scottish Branch Council with reference to the requirements of the Council. The two reports, if adopted, would greatly facilitate the registration of students. In connection with reports by the Examination and Education Committees, and the subject of the registration of students and practitioners, Sir Richard Quain said: "I have thought it would be a matter of interest to investigate what has been the influence of the various requirements and recommendations of the Council on the number of students entering on their professional studies, and on the number of persons registered as duly qualified practitioners. With that view I have obtained from the Registrar's office the following statistics, which I have put into the form of tables:

(A) *Table showing the number of Medical Students registered in the three divisions of the United Kingdom respectively in the four quinquennial periods 1874-78, 1879-83, 1884-88, 1889-93:*

Period.	Number registered in			Total	Percentage.		
	England.	Scotland.	Ireland.		England.	Scotland.	Ireland.
1874-1878	3,600	2,138	1,802	7,540	47.75	28.36	23.89
1879-1883	4,726	2,853	2,352	9,931	47.59	28.73	23.68
1884-1888	4,606	3,268	1,670	9,644	48.58	34.03	17.39
1889-1893	4,246	3,212	1,238	8,696	48.82	36.94	14.24

(B) *Table showing the number of Medical Practitioners registered in the three divisions of the United Kingdom respectively during the three quinquennial periods 1879-83, 1884-88, and 1889-93.*

Period.	Number registered in			Total.	Percentage.		
	England.	Scotland.	Ireland.		England.	Scotland.	Ireland.
1879-1883	3,233	1,389	1,015	5,647	57.25	24.24	18.51
1884-1888	3,753	2,009	1,149	6,911	54.30	29.07	16.63
1889-1893	3,496	2,627	885	7,008	49.88	37.49	12.63

The (A) Table has reference to a period of twenty years extending from 1874 to 1893 inclusive, divided into four quinquennial periods. In the whole period the number of students registered as commencing their professional studies has been 35,771. Taking the first of the quinquennial periods (1874 to 1878 inclusive) above referred to, we observe that the total number of students registered was 7,540, while in the last period, extending from 1889 to 1893, the number was 8,696; thus, comparing the first period with the last, we find an increase of 1,156 students. When we come to analyse the places in which these students commenced their education, we find that in England 3,600 were registered during the first period (1874 to 1878 inclusive), and in the last period (1889 to 1893 inclusive) 4,246, showing an increase of 646; in Scotland during the first period 2,138 were registered, in the last period 3,212, showing an increase of 1,074; while in Ireland 1,802 students were registered in the first period and 1,238 in the last, showing a diminution of 564. In other words, during the first period of five years, the number of students registered in England was 47.75 per cent. of the whole, and in the last period 48.82 per cent. In Scotland, in the first period, 28.36 per cent. of the whole number were registered, and in the last period 36.94 per cent.: while in Ireland, during the first period, 23.89 per cent. of the whole were registered, but in the last period the percentage had fallen to 14.24. Following the progress of these students in relation to their qualification as registered practitioners, we find that the whole number of practitioners registered in three quinquennial periods extending from 1879 to 1893 inclusive was 19,566. Taking the first quinquennial period above referred to (1879 to 1883), we find the total number of practitioners registered was 5,647, and in the last period (1889 to 1893) 7,008, showing an increase of 1,361. Of these numbers, 3,233 were registered during the first period (1879 to 1883) in England, and in the last period (1889 to 1893) 3,496, showing an increase of 263: in Scotland during the first period the number registered was 1,389, and in the last period 2,627, showing an increase of 1,258: whereas in Ireland the number registered in the first period was 1,045, and in the last 885, showing a diminution of 160. In other words, in England the percentage of registrations to the whole number has declined from 57.25 per cent. in the first period to 49.88 per cent. in the last: in Scotland it has increased from 24.24 per cent. in the first period to 37.49 per cent. in the last; and in Ireland

it has diminished from 18.51 per cent. in the first period to 12.63 per cent. in the last. Facts such as these, showing such a remarkable increase of students and practitioners in Scotland, and such a marked diminution of both classes in Ireland, claim most serious attention, with a view of tracing the source of such an extraordinary difference, but I do not propose to do more here than to submit the facts to the Council." Referring to the reciprocity of medical practice with foreign countries, the President said a report on this question had been submitted to the Foreign Office. It made particular allusion to the difficulties existing in regard to the practice of qualified English practitioners, more particularly in Switzerland. Attention had been called to this matter by one highly qualified practitioner who, being desirous to practise at the health resorts in Switzerland, on communicating with the Minister of the Interior, received the reply that the Minister was powerless in the matter, "as the Medical Board had expressed their determination to reserve all practice in the health resorts to themselves." This statement, indicating a course of action alike selfish and all but heartless, should be borne in mind by British practitioners when deciding on the health resorts to which they should send their patients, with reference to the welfare and interests of those patients. The Council would have, as on former occasions, to deal with penal cases. In all, 34 cases had been brought forward since the last meeting. These had been considered by the committee, who recommended that nine only should be submitted to the Council for decision. Of the others, ten were found to be of a character which did not fall within the statutory powers; for example, cases of ignorant and improper treatment, and irregularities of professional practice. In fourteen other cases, after consultation with the solicitor, the committee decided that no further steps should be taken. The Education Committee had prepared and would submit a report on the codification of the existing regulations applicable to dental qualifications.

On the motion of Mr. Wheelhouse, seconded by Mr. Brudenell Carter, it was resolved that the President's address be entered on the minutes. In doing this, Mr. Wheelhouse expressed the warm congratulations of the Council to Sir Richard Quain on his recovery from his recent illness.

On the motion of Mr. Wheelhouse, it was agreed that after the adjournment at 4 o'clock, the Council should resolve itself into its individual committees for the consideration of the various reports which those committees have to present at this session.

It was moved by Sir Dyce Duckworth, and seconded by Mr. Wheelhouse:

That it is desirable to enlarge the Students' Registration Committee, and that for that purpose the names of the following members of the Council be added thereto: Dr. Tuke, Dr. MacAlister, Rev. Dr. Haughton.

Dr. Bruce said the Committee had functions of a distinctly inquisitive kind, and thought they had better revert to the old system, each Branch Council investigating its own cases.

Sir Wm. Turner thought that the Branch Councils possessed enough knowledge to be able to go minutely and carefully into the various cases, and preferred that they should resume their old functions. If an amendment to that effect were proposed he should support it.

Dr. Heron Watson reminded the Council of the reasons for which that practice had been departed from—namely, that it had been found there were three different Branch Councils, and if the decision of one or two was unfavourable the third might be appealed to, with perhaps a different result, thus causing a lack of uniformity and continuity.

Dr. MacAlister supported Dr. Heron Watson's views. He also thought that a much closer scrutiny might be made by the Committee than by such a large body as the Branch Council.

The motion was then carried.

Tables were placed before the Council showing results of competitions for commissions in the Medical Staff of the army held on August 16th, 1894, for commissions in the Indian Medical Service, held on August 10th, 1894, and for commissions in the Medical Department of the Royal Navy held on November 5th. The first of these tables showed that 24 candidates came up for examination, of these 12 passed for vacancies, 9 were qualified but unsuccessful and 3 were rejected. The second table showed that out of 30 candidates 24 were reported as qualified; and the third that 31 candidates competed, of whom 3 were physically unfit, 1 withdrew, 12 obtained commissions, 14 failed to obtain a place though qualified, and 4 were rejected.

Mr. Wheelhouse moved and Dr. Heron Watson seconded:

That the tables be received and entered on the minutes,

which was agreed to.

Dr. Heron Watson moved and Dr. McVail seconded:

That the thanks of the General Medical Council be conveyed to the Director-General of the Army Medical Department, the Director-General of the Navy, and the Medical Board of the India Office for the statements furnished to the Council.

This was carried.

Moved by Dr. Heron Watson, seconded by Dr. McVail, and agreed to:

That further communications be remitted to a committee (the Examination Committee) for the purpose of being considered with the view of communicating with the Director-General of the Army Medical Department, the Director-General of the Navy, and the Medical Board of the India Office, seeking from them some such modification of the returns as might enable the Council better to apprehend the various figures represented in those returns.

The next business was an amendment in the Standing Orders in regard to the restoration of erased names to the *Medical Register*, submitted by the Executive Committee to the General Council for its approval, pursuant to the following resolution passed by the Council on May 25th, 1894:

That it be remitted to the Executive Committee to prepare standing orders for the regulation of procedure to be observed when a person whose name has been removed from the *Medical Register* on account of conduct infamous in a professional respect, under Clause xxix of the Medical Act (1858), shall at any time make application to the Council to restore his name to the *Register*.

Mr. Wheelhouse moved, and Sir William Turner seconded:

That the Standing Order, as recommended by the Council's legal adviser, be received and entered upon the minutes,

which was agreed to.

The Council then went into Committee and considered the standing order paragraph by paragraph.

It was resolved, on the motion of Dr. Tuke, seconded by Dr. MacAlister:

That it is desirable that the licensing bodies whose qualifications were originally held by the applicant when his name was erased should be informed of the application before it is dealt with by the Council.

The Council having resumed, the report of the Committee was brought up recommending that the standing order as amended be submitted to Mr. Muir Mackenzie for approval:

(1) If any person whose name has been erased from the *Medical Register* by direction of the General Medical Council and who still possesses a qualification entitling him to be registered makes application to the Council for the restoration of his name to the *Register* the following shall be the method of procedure:

(2) The application shall be in writing addressed to the General Medical Council and signed by the applicant, and must state the grounds on which the application is made.

(3) The statements in the application must be verified by a certificate in writing, to be given either by a justice of the peace or by a registered medical practitioner resident in the neighbourhood where the applicant is residing at the time when he makes the application.

(4) On receipt of the application it shall be referred by the Registrar to the Executive Committee for consideration and report. Before the application is considered by the Executive Committee the Registrar shall notify the same to the licensing bodies whose qualifications were held by the applicant at the time his name was erased; and shall further, by letter addressed to the person or body (if any) on whose complaint the applicant's name has been erased, give notice of the application and of the time when the Executive Committee intend to consider the same, and invite such person or body to transmit for the consideration of the Executive Committee information or observations in reference to the application.

It further provided that the Executive Committee should report upon the application to the General Medical Council, embodying its recommendations and reasons.

A form of application to be obtained from the Registrar was also agreed to.

Mr. Marshall's Bust.

On the motion of the President, it was resolved that the best thanks of the Council be presented to Mrs. Marshall for her valuable and most acceptable present of the bust in marble of their late esteemed and lamented President.

The remainder of the sitting was given up to committees.

Wednesday, November 28th.

Bacteriology and Professional Study.

Dr. Philipson moved:

That in every course of professional study and examination bacteriology be contained.

He pointed out the great advances that had been made in this subject and said the time had arrived when it might be very properly added to the course of professional study, so that students in medicine should have the opportunity of supplementing that branch by a course of practical instruction in bacteriology. To the practitioner such a course of study would be of the greatest importance, for without a knowledge of bacteria and their influence on disease there were many problems, both of medicine and surgery, that could not be grappled with. There were also important matters arising from the relations between specific germs and specific forms of disease. The subject would be one of a highly interesting nature to students, and no doubt they would readily avail themselves of the opportunity placed at their disposal.

Dr. McVail seconded.

Mr. Teale thought it most undesirable at present to add anything to the medical curriculum, which was already very much overloaded. The Council had recently established a five years' course, and they did not yet know what the effect would be on the student. He was afraid that if further subjects were added even the five years would not be sufficient. With regard to bacteriology, whatever it was necessary for the ordinary student to know would be taught in his regular medicine; but to expect that an average student should be made a bacteriologist was simply to impose upon him a burden that would lead to a great abstraction of the time that should be devoted to other subjects.

Dr. Kidd also thought the introduction of a new course of instruction would be to throw a load upon the students that they could not bear, and one that would interiere greatly with their practical studies. He could not conceive of any course of practical medicine or surgery, with regard to histology and pathology, in which bacteriology was not sufficiently considered. To add this suggested course would be adding unnecessarily to the burdens already borne by the students. He moved the previous question.

Dr. Glover rose to support the motion, when

The President ruled that the previous question having been moved, it must be put without discussion.

The previous question was then put and carried.

Apothecaries' Hall of Ireland.

Communications had been received from the Apothecaries' Hall of Ireland, asking for power to conduct their examinations independently, and to this end asking the Council to appoint two examiners in surgery under the provisions of the Medical Act, as their conjunction with the Royal College of Surgeons would cease in July, 1895.

Sir Wm. Turner said the question was one of very great importance seeing that the Apothecaries' Hall were practically asking the Council to bring into operation one section of the Medical Act, 1886, which provided that if a body granting only a partial qualification could not form a combination with another body so as to make the examination complete that the Council was to have the power of appointing examiners so as to make the examination complete. That was done some years ago in the case of the Apothecaries' Society of London and the Apothecaries' Hall of Dublin were asking for the same thing. The question arose whether the Council was at this moment in a position really to consider that request because this was one of those cases in which the Council had thought it necessary to reinspect. The reinspection took place a short time since. They had the report of the inspectors, but not the answer of the body visited, and therefore the Examination Committee was not at present in a position to bring the report before the Council. He therefore moved that the subject be postponed till May.

Mr. Wheelhouse seconded.

Dr. MacAlister said there was a further step for the Apothecaries' Hall yet to take, namely, to endeavour to enter into combination with some other bodies. The Council was not empowered to appoint examiners until it was satisfied that the body had itself failed to obtain combination; so that even in May the Council would not be able to act without that assurance.

The motion was agreed to.

Illegal Use of Diplomas.

In May last the Council referred it to the Executive Committee to obtain legal advice as to what means could be adopted to stop the practice of persons continuing to use titles attached to diplomas of which they had been deprived, and which no longer appeared on the *Register*.

The Solicitor reported that if a person wilfully used the title of a medical diploma which he did not possess he could be prosecuted under Section 40 of the Medical Act (1858); that such a person might also in some instances be prosecuted under the laws against false pretences and false statements; and also that the body which originally conferred and afterwards cancelled the diploma might take proceedings in a civil court to prevent the person continuing to use the diplomas. The Executive Committee recommended the Council to authorise the solicitor to take proceedings against persons assuming qualifications of which they had been deprived by the licensing authorities, and whose names had been erased from the *Register*.

The report was adopted.

Amendment of the Medical Act.

In consequence of a representation made from the British Medical Association, the Council, on May 25th last, requested the Executive Committee to consider and report on the proposals for the amendment of the Medical Act, 1858, contained in the communication so received.

The Solicitor reported in the following terms: "The usual course where a public body desires amendments in the Acts under which it is constituted, or from which it derives its powers, is to communicate with the Minister by whose department the legislation was submitted to Parliament. It is undesirable for the public body itself to apply to Parliament. It should submit its recommendations to the Government first. The amendments for which the Council desire consideration should therefore be submitted to the Lord President of the Council."

Dr. Glover moved that the matter be referred back to the Executive Committee for further consideration and report. All the Council had at present was the report of the Solicitor.

Mr. Wheelhouse seconded.

The motion was agreed to.

Foreign Preliminary Examinations.

The report of the Education Committee on the Preliminary examinations conducted by Indian, Colonial, and Foreign universities and colleges was then considered.

Dr. Batty Tuke read the report, which stated that the Committee, having carefully considered the regulations of the various bodies, found that in the majority of instances they appeared to be satisfactory. In certain cases examinations in general knowledge were provided in excess of the requirements of the Council so far as the number and extent of the subjects was concerned, whilst in others there were defects. The requirement which was not complied with by the large majority of the bodies was that demanding that all the subjects of examination should be passed in at the same time. The Committee recommended a list of Indian, Colonial, and foreign examining bodies whose examinations in general education should be recognised as qualifying for registration as medical or dental students; also that it should be intimated to those bodies that, after October 1st, 1895, no certificate would be accepted by the Registrar unless it showed that the examination had been conducted by or under the authority of the body granting it, included all the subjects required by the Council, and stated that all the subjects of examination had been passed in at the same time.

The recommendations were agreed to.

Dental Regulations.

Dr. Batty Tuke said the Education Committee, having to consider the various regulations applicable to dental qualifications, and finding considerable difficulty in picking them out from the various volumes, had asked permission to codify them. This permission was granted by the Council, and the Committee now reported that they had codified the existing resolutions of the Council. The Committee called attention to the fact that, whereas the Council required twelve months' attendance on the practice of surgery at a recognised hospital, the Royal College of Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow only required six months. The Committee recommended that the attention of these Colleges should be called to this fact. He moved the adoption of the report.

Dr. MacAlister seconded.

Sir Walter Foster moved as a rider the addition of the following words:

And that these bodies be requested to bring their regulations into harmony with the recommendations of the Council.

Dr. Cameron said the Faculty of Physicians and Surgeons were absolutely unaware that the Council required twelve months. They would at once alter their practice, for they had no object to serve in making it six months.

The recommendations of the Committee were adopted, together with the additional words suggested by Sir Walter Foster.

The Conjoint Board's Examination.

Sir Dyce Duckworth brought up the Report of the Examination Committee on the Final Conjoint Examination of the Examining Board in England and on the Examination in Surgery of the Royal College of Physicians of London. The report of the visitor and inspector on the Final Conjoint Examination stated that the examination was a good and sufficient one, but the time devoted to the examination in Clinical Medicine was much too short, ten minutes for each patient being hardly a sufficient time in which to investigate many medical cases. Candidates should be required to furnish a written report of at least one case. The same remarks applied to the examination in clinical surgery. It was possible for a candidate to recover ground lost by bad answering at the clinical examination, and the attention of the Committee of Management was directed to that as being contrary to a resolution of the Council, which declared that the marks for the written and oral examinations in medicine and surgery should not exceed those for the clinical and practical portions of the examination. The absence of any examination in operative surgery and of a special examination in ophthalmic and aural surgery was noted. The system of marking was condemned, and it was recommended that all the marks should be raised and that those for the clinical examination should equal those for the practical and for the oral examinations taken together. The examination left much to be desired in the way of adequate protection for the public, and the system of marking was decidedly too indulgent. In some instances great deficiencies of intellect and moral sense were noted, and the visitor advised that all such candidates should be weeded out. The Committee of Management, in reply, stated that they had no observations to offer. The visitor and inspector reported that the examination in Surgery of the Royal College of Physicians of London was not by itself sufficient to guarantee the knowledge and skill requisite for the efficient practice of surgery. It was recommended that written reports of clinical cases should be required, and the absence of examination in operative surgery and of special examination in ophthalmic and aural surgery was noted, as also the absence of any separate oral examination in surgery or in surgical pathology. For that examination only three candidates appeared, of whom two were rejected. In reply, the Royal College of Physicians intimated that whereinsoever the examination may have hitherto differed from the Conjoint Examination in Surgery, it would in future be made precisely similar. The Examination Committee reserved consideration of the suggestions made until they presented their complete report on the whole series of final examinations.

Dr. Gairdner stated that he had had no opportunity of reading the reports.

Sir William Turner suggested that the interim report should be simply accepted without being adopted as the members of the Council had not had time to examine it.

Sir Dyce Duckworth moved that the Council should go into committee to consider the report.

Dr. Glover moved that the subject should be adjourned till to-morrow.

Dr. Heron Watson seconded the amendment.

Sir Walter Foster considered that the reports of Committee ought to be in the hands of members of Council a week before they were called upon to discuss them.

The amendment was then carried.

The reports on the Universities of Edinburgh, Glasgow, and Aberdeen were received and entered on the minutes. It was agreed that the discussion upon them should be adjourned.

Registrars and the "Medical Register."

Sir Walter Foster then moved:

That the General Medical Council feels obliged to reiterate its opinion that it is most desirable that every registrar of birth and deaths should be supplied by the Treasury with a copy of the *Medical Register*, in order that the registrar may be able to ascertain whether the person certifying the cause of death is a registered medical practioner.

Mr. Wheelhouse seconded the motion.

The President said there was no doubt the Government ought to accede to the request of the Council. He thought they should pass the resolution and consign it into the hands of Sir Walter Foster to take what steps he thought fit.

The motion was agreed to.

Disciplinary Powers of Universities.

Dr. Glover then moved:

To direct the attention of the General Medical Council to the inadequate state of the law in regard to medical graduates who may have been guilty of infamous conduct in a professional respect; and to move that it be an instruction to the Executive Committee to bring this subject to the notice of the Lord President.

He said it was within the knowledge of the Council that graduates of the universities when found guilty of infamous conduct were in a very different position to others—retaining their degrees even when erased from the *Register*: and the present motion was brought forward with a view to altering the law in that respect. He thought they had a sufficient case made out to put the matter strongly upon the consciences of the universities to see if they had the power, and if they found they had not, to make application for it with all possible speed.

Dr. Angus Fraser seconded the motion.

Sir William Turner said that the universities had no machinery for making any inquiries, but they could accept a decision arrived at in a criminal court or by that court.

Dr. Heron Watson said that in the event of a name being taken off the *Register*, a man might after a year or two come before the Council and beg to have his name restored. What was it to be restored upon if he had nothing but a University degree, and that had been removed? That remark also applied to the Corporations.

Sir John Banks said that the University of Dublin had not the power to remove a man's name from its *Register* for infamous conduct, but they were most anxious to have it. The decision of the Council that a man had been guilty of infamous conduct ought to be sufficient to enable the universities to do so.

Dr. Atthill said he thought in many cases removal from the *Register* for a period was sufficient punishment, and he should not like to bind himself always to vote in his College to erase the diplomas of such offenders.

Sir William Turner asked whether, after the discussion which had taken place and the information which had been elicited, Dr. Glover would not withdraw his motion.

Dr. Glover said he was perfectly satisfied with the discussion, and was quite willing to adopt Sir William Turner's suggestion.

The motion was then withdrawn, and the Council adjourned.

Mr. T. H. White, Honorary Dental Surgeon to the Lincoln General Dispensary, has been elected Sheriff of Lincoln.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

The investigations which have for some time past been in progress regarding the diagnosis of diphtheria and its treatment by antitoxins have received great impetus during the past week, on the one hand by a munificent offer of £1,000 for the latter purpose by the Goldsmiths' Company, and on the other by the arrangement made according to which the bacteriological verification of the diagnosis in regard to all diphtheria cases admitted into the hospitals of the Metropolitan Asylums Board will be undertaken by the Royal Colleges of Physicians and Surgeons.

In regard to the first, Sir Walter Prideaux, in communicating the offer to the Royal Colleges, after commenting on the importance of the inquiry, says: "Under these circumstances the Company have decided to make a grant of £1,000 for the purpose of prosecuting research work in connection with this treatment, with which they desire to combine, if possible, the supply of serum for use amongst the poorer classes of the community. I am desired to inquire whether the Conjoint Board of the Royal College of Physicians and Surgeons will undertake the administration of this grant; and I am to add that the acceptance by the Board of this proposal will be received with much satisfaction by the Goldsmiths' Company."

It is extremely fortunate that the bacteriological investigations dealing with both diagnosis and treatment should at the same time fall into the same hands as the complete investigation of the whole subject will be thereby greatly facilitated.

There seems to have been some discussion at the meeting of the Asylums Board as to whether the inquiry should be restricted to doubtful cases or should extend to all. The Board are to be congratulated on their decision. An investigation of doubtful cases only would have left undecided the very essence of the question, but now we may hope to find out definitely whether, amid English conditions, the bacteriological test holds the same position as has been claimed for it in America. If this should prove to be the case it is obvious what a saving to the public purse may result from restricting hospital treatment to cases of true diphtheria, instead of crowding the wards with pseudo-diphtheritic patients.

As regards the money given by the Goldsmiths' Company, it is to be expected that the first object named in Sir Walter Prideaux's letter will be the first undertaken—namely, research. In view of the long time necessary to bring serum up to the required standard of antitoxic efficacy, and of the statements of Sir Joseph Lister and Professor McFadyean as to the large supply which will shortly be available, it probably will be considered more important to discover what is the real condition or constitution of the serum on which its antitoxic properties depend than merely to increase the supply, for it must be confessed that, efficacious as it seems to be, "serum" is a vague term.

XXVII.—Dr Bertram M. H. Rogers, Physician to the Bristol Hospital for Sick Children and Women, sends us the following notes of a case of diphtheria treated with antitoxin:

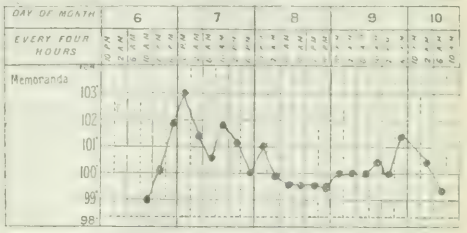
W. G., aged 5, was admitted to the Bristol Children's Hospital on November 4th, having been ill about six days with a sore throat, under the care of Mr. F. Chalmers Norton, surgeon to the hospital. The diagnosis of the disease was a little uncertain at first, as no membrane could be seen on examining the throat. On November 5th, however, membrane was seen, and from a piece removed Mr. F. W. Stoddart, the public analyst for Bristol, and Lecturer on Bacteriology to the Faculty of Medicine of University College, Bristol, was able to grow Loeffler's bacillus and a few streptococci. There was considerable nasal discharge, swelling of the glands in the neck, and albumen was present in the urine. The temperature was 100.2° F. Some retraction of the lower part of the chest was noticed.

On November 6th the retraction of the chest wall had considerably increased, and the child, though not cyanosed, experienced considerable difficulty in breathing. The temperature at 10 A.M. was 101.8°, the pulse 158, and the respirations 30. The throat was swabbed out with perchloride of iron and the nose washed with a douche of boracic acid. Several pieces of membrane were removed during the night and morning. At 11 A.M. 6 c.cm. of antitoxin were injected into the back of the thigh, the supply being the same as that used by my colleague, Dr. Roué in his successful case reported in the British Medical Journal of November 10th. At midday the breathing became suddenly much embarrassed, and tracheotomy had to be done with the greatest despatch—in fact, respiration had ceased and the child was black in the face when laid on the table for operation.

Dr. Christie, the house surgeon, opened the trachea below the isthmus of the thyroid, and with artificial respiration the child came round again. The breathing, however, was not free, nor was the cyanosis relieved with any ordinary tracheotomy tube, so that a long piece of india-rubber drainage tube was finally inserted. This answered satisfactorily and the child was much better. In the evening the patient's condition was satisfactory; his breathing was not so rapid, and air entered the chest well. Soon after the operation, during which he had a slight convulsion, subcutaneous emphysema was noticed in the neck, which subsequently spread all over the face and the upper part of his chest. He passed a good night and took food well.

On November 7th several pieces of membrane were removed. The temperature rose during the night to 103°, the pulse to 152, and the respiration to 36. The emphysema had increased slightly. The tube answered well; no attempt was made to change it for a metal one.

On November 8th the condition was unaltered, and there seemed every prospect of recovery.



On November 9th small pieces of membrane were several times removed on feathers or coughed up. The emphysema was unchanged, perhaps slightly less on the face, as he was able to open his left eye, which had been quite closed. In the afternoon, evidence of further respiratory obstruction became manifest. The tube was removed, but not the obstruction which increased during the night, and in spite of all attempts the child died at 8 A.M. on November 10th. Albumen was present in the urine daily, and from the first the nasal discharge was very free and bloody.

The *post-mortem* examination was made by myself four hours after death. On opening the chest, a pneumothorax was discovered on the right side, and the subcutaneous tissue was full of air, but the opening from the lung could not be found. The tonsils were deeply excavated, but no membrane was found on them or in the larynx, pharynx, or upper part of the trachea. In the lower part, extending down the bronchial tubes as far as could be opened, there was thin, loosely-attached membrane. The other organs were healthy except the kidneys, which showed the usual congested pyramids seen in diphtheria.

It is only fair, I think, when so many cases of diphtheria have been reported cured by the use of antitoxin to record one terminating fatally. I should, had I a larger quantity of the antitoxin, have injected more on a subsequent occasion, but the small quantity which remained appeared to have a fungus growing in it, and I was afraid to use it for fear of bad consequences. To the possible insufficient quantity used the fatal result may be due. The case was a severe one from the

first, but until the afternoon of November 9th I hoped the child would pull through. The *post-mortem* examination showed that the antitoxin had only partially done its work. The membrane, though extensive, was thin, and very slightly adherent. My best thanks are due to my friend Dr. Ruffer for kindly supplying the antitoxin, and to Mr. F. W. Stoddart for the examination of the membrane and the report he sent me. I may add that Mr. Stoddart was able to find the diphtheria bacillus in a piece of membrane from Dr. Roux's case.

At the last meeting of the Metropolitan Asylums Board it was resolved to accept, as a temporary arrangement, the offer made on behalf of the Conjoint Board Laboratories to undertake the bacteriological investigations of cases of diphtheria admitted into the hospitals of the Board for a period of six months, at a cost of £375, it being understood that this sum should include an examination of, and a report on, a daily average number of twenty cases. A member, with the appropriate name of Brass, protested strongly against the recommendation, "if it meant the vaccination or inoculation of the patients with the new virus." It would perhaps be difficult to show in as few words a more complete ignorance of the nature and purpose of the antitoxin treatment, if it be that, indeed, to which Mr. Brass referred.

At the request of the Prussian Cultus-Minister Surgeon-General Schaper and Professor Carl Fraenkel have gone to France for a few weeks to visit and report on the chief centres of clinical instruction in that country, and especially to study the arrangements made by the Government for the preparation and distribution of the diphtheria antitoxin.

In the Mecklenburg Diet a rescript of the Government was read, which recommends that funds be voted for the regular purchase of Höchst diphtheria antitoxin. In spite of some opposition the rescript was accepted, and passed on to a committee of police, the body, which in Mecklenburg-Schwerin, it seems, deals with such matters.

In the *Deutsche med. Wochenschrift* (No. 45), Dr. Lublinski, of Berlin, reports the case of a child, aged 8 years, in which after the injection of serum (10 c.cm. of Behring's No. I) had had an extraordinarily good effect, a measly eruption came out nine days later on the extensor surfaces of the limbs, with pains in the knees, elbows, and ankles, and high temperature. The eruption, which had the characters of erythema exsudativum multiforme, lasted six days.—Scholz, of Hirschberg reports (*ibid.*) an exactly similar case.

In France, the municipalities of Alençon and Flers have each voted £20 for the Pasteur Institute; the town of Domfront has voted £8. The subscription list of the *Avenir de l'Orne* exceeds £40. The Allier Municipal Council has voted £12, and a certain sum will be paid to the Pasteur Institute in order to be sure of a supply.

The Provincial Councils of Belgium have, without exception, voted considerable sums of money to be applied to placing the new treatment of diphtheria within reach of the poor. The Minister of Agriculture, Public Works, and Labour has been asked what steps the Government intend to take in the matter, but a definitive reply has not yet been given to the question. Brussels, Antwerp, and Louvain will soon each have a serotherapeutic institute. Delegates from the University of Liége have gone to Paris to obtain serum from M. Roux till a supply can be prepared in Belgium. A commission of medical men has gone to Berlin at the request of the municipality of Ghent to study the method in operation. A serotherapeutic service is in course of organisation in connection with the Laboratory of Hygiene and Bacteriology of the University of Ghent, and it is hoped that it will soon be possible to supply the serum gratuitously to all the medical practitioners of the province who may wish to try it. The laboratory also undertakes to make the bacteriological diagnosis in cases in which the serum treatment seems to be indicated.

The Hungarian Minister of the Interior, M. Hieronymi, has sent Professor H. Preysz, Director of the State Bacteriological Institute, to Paris, to study the methods of preparing the diphtheria antitoxin at the Pasteur Institute. It is intended that the serum shall then be prepared in sufficient quantity in Buda-Pesth, and if an adequate clinical trial of the remedy justifies what is claimed for it, it will be distributed to the medical profession throughout Hungary as required.

In Holland the serum is being prepared by the well-known bacteriologist, Dr. Spronck. It will be supplied to the medical profession free of cost.

Dr. Nicolls, Director of the Bacteriological Institute of Constantinople, has been requested by the Ottoman Government to give a special course of serotherapy in the Military Hospital of Haïdar Pasha.

Thanks to the enlightened public spirit of the proprietors of the Philadelphia *Medical News*, the serum treatment has been tried in the Municipal Hospital of that city in five cases of diphtheria which were injected with Behring's antitoxin by Dr. Louis Fischer, of New York, and Dr. W. M. Welch, of Philadelphia. One of these ended in death, but the other four appear, from the report published in the *Medical News* of November 17th, to be doing well. In four of them, the Klebs-Loeffler bacillus was found. A complete report of the cases will appear in the January number of the *American Journal of the Medical Sciences*.

On November 9th, Dr. Muchleck presented to the Surgical Section of the College of Physicians of Philadelphia a report of five cases occurring in the same family in children from 11 months to 6 years of age. All the injections were made in from twenty-four to thirty-six hours after the beginning of the attack. For immunisation 1 c.cm., and for therapeutic purposes from 1½ c.cm. of Aronson's serum was used. Of the five children, four were attacked. Two of these (one 11 months, one 6 years of age) were not treated with the antitoxin, owing to the impossibility of procuring it, and these two, although treated by the hitherto generally accepted rules of practice, died. One child, that had mingled freely with the other cases, and in whose throat typical bacilli were found, was inoculated with the antitoxin as a prophylactic measure, and was not attacked by the disease. In all of the cases except one the bacteriological tests proved the presence of the Klebs-Loeffler bacillus. Of the two cases injected with the antitoxin, both recovered; in one tracheotomy was indicated, owing to the involvement of the larynx, but the stenosis was markedly ameliorated within twenty-four hours after the injection; in the other the mucous membrane of the tonsils, the soft palate, and the pharynx was involved, but without stenosis. After the injections there was a rapid fall of the temperature within twenty-four hours. The membrane became fatty and pultaceous, and came away in four or five days.

In the Section of Pediatrics of the New York Academy of Medicine on November 8th, Dr. A. Campbell White reported a series of cases treated in the Willard Parker Hospital. In that institution the mortality among adults suffering from diphtheria has been less than 3 per cent.; in children between the ages of 5 and 16 years, 13.6 per cent.; and in children under 5 years, 42.7 per cent. Twenty especially severe cases were selected for the antitoxin treatment, no other therapeutic measure being employed with the exception of a single irrigation of the nose and throat with normal salt solution just after admission. The average age of the patients was 3½ years, and the average dose of antitoxin was 11.3 c.cm. Fourteen of this series of cases had also laryngeal diphtheria; 4 of these were intubated and 1 tracheotomised. One intubation case, in a child of 3 years, died on the twenty-fourth day of lobar pneumonia. The tracheotomy case unexpectedly developed a broncho-pneumonia from exposure to cold on the thirty-fourth day. Of the 6 cases in which there was no laryngeal complication, only 1 died, and that was a child that was apparently on the road to con-

valescence from the diphtheria when it developed scarlatina. In these latter cases, then, the mortality was 16.6 per cent., while in the laryngeal cases, instead of the usual mortality-rate of 50 per cent. or over, it was 28.5 per cent. The injection of the antitoxin caused no local irritation or reaction of any kind, with the exception of an occasional slight eruption. The temperature was not markedly affected, but the pulse was decidedly improved after the first few hours. The anti-toxin treatment did not hasten the disappearance of the diphtheria bacilli, and it did not markedly hasten the disappearance of the membrane.

The following table shows the general results obtained, the amount of antitoxin injected, and, as far as possible, describes the local condition of the different cases:

Day of Disease on which Patient first came under Treatment.	Number of Patients.	Average Age in Years.	Number of Cases in which Nares, Tonsils, and Pharynx were involved.	Number of Cases in which Tonsils or Pharynx were involved together with Larynx.	Number of Cases in which Tonsils, Pharynx, Nares, and Larynx were all involved.	Number of Injections of Antitoxin.	Average Amount of Antitoxin per Patient.	Rash following Injection.	Intubation.	Tracheotomy.	Albuminuria.	Paralysis.	Number of Deaths	Mortality.
							c.cm.							p.c.
3rd ...	7	3.5	4	2	1	10	11.3	3*	2	—	1	1	2	28.5
4th ...	4	2.8	1	2	1	7	8.0	—	1	—	1	1	—	—
5th ...	5	3.1	1	1	3	7	9.4	—	—	—	1	1	1	20
6th ...	1	2.0	—	—	1	1	5.0	—	—	—	—	—	—	—
7th ...	2	1.5	—	1	1	3	6.5	—	1	—	1	1	—	50
8th ...	1	2.0	—	1	—	2	12.0	—	—	1	—	1	1	100
	20	3.0	6	7	7	30	188.0	3	4	1	3	4	5	25

* One of these cases was undoubtedly true scarlatina, and another was diagnosed as a doubtful case of measles. In the third case the rash disappeared in a few hours without further symptoms.

Twelve other cases, all under 5 years of age, were treated with the weaker "immunisation solution" of Aronson, and among these the mortality was 25 per cent.

Dr. Campbell White's paper is published in full in the *New York Medical Record* of November 17th.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

The ordinary monthly meeting of the Executive Committee of this Society was held on November 15th at the offices of the British Medical Association. There were present the Chairman (Dr. de Havilland Hall) in the chair, Mr. F. Swinford Edwards, Dr. Walter Smith, Dr. Alfred S. Gubb, Dr. J. Pickett, Mr. Edward Bartlett, Mr. J. Brindley James, Dr. W. Knowsley Sibley, and Mr. H. H. Clutton, one of the Treasurers.

The usual accounts were presented, and showed a very favourable sickness experience for the previous month. The Secretary reported that bonus cheques amounting in all to £4,956 10s. had been sent out to the members, and that a large number of letters had been received congratulating the management on the success which the Society had achieved. A special circular has been sent out with the bonus cheques asking the members to bring under the notice of their professional friends the advantages which this Society offers to medical men, and a considerable number of offers of co-operation and assistance have resulted. The management, therefore, have every reason to hope that the evidence of the soundness of the Society which the distribution of the bonus affords will shortly lead to a considerable increase in its sphere of usefulness. Prospectuses and all particulars may be obtained on application to Mr. F. Addiscott, Secretary, Medical Assurance Society, 33, Chancery Lane, London, W.C.

The Local Government Board has consented, with certain stipulations as to the purifications of the sewage, to the erection, near Banstead Downs, of a hospital for the isolation of patients suffering from infectious diseases.

THE PROPOSED AMENDMENT OF THE MEDICAL ACTS.

Collective Investigation.

The Chairman of the Parliamentary Bills Committee last July published a proposal, made known his willingness to receive from medical men particulars of cases of unqualified practice and of practice conducted by persons who come under the denomination of "quacks." The number of replies hitherto received has not been very large, but it is clear that if any action is to be taken by the Parliamentary Bills Committee, its Chairman must have in his hands a considerable mass of reliable and well digested information. The suggestion is that for this purpose every Branch should divide itself into districts, the members practising in each district dealing with different localities. The information supplied must deal with each one of the following heads:

(1) The name and address of the quack.

(2) The description of his premises.

(3) One of his advertisements, including a copy of each book and pamphlet, and cuttings from the local papers with dates.

(4) A memorandum must also be made of the date on which the name, address, and description of the premises is taken down.

(5) The member must do this himself, and preserve his original notes. It would also be necessary to note the nature and condition of the neighbourhood where the quack purports to practise, and his hours of attendance.

(6) The results of the observations should then be catalogued and arranged by the different Branches.

Our attention has been called recently to an advertisement in a local paper, which we believe to be already within the reach of the law, but which certainly ought to be prevented in future. The particular advertisement we refer to appeared some weeks ago, and is as follows:

CANCER! CANCER!
CANCER!!!
TUMOR! TUMOR!
TUMOR!!!
POSITIVELY CURES without Surgical Operation.
For terms and particulars apply to
DR. ————, U.S.A.,
Qualified Practitioner as a Medical Herbalist and Bonesetter,
WORMGATE, BOSTON, LINCS.

Members of the Association in different parts of the country will render us a service if they will send us from time to time any advertisements of a similar kind which may come under their notice. It has been already decided that the use of the title "Dr." even with any qualifying addition such as the letters "U.S.A." in the advertisement referred to, is an offence under the Act. It is, however, desirable to make it quite clear, if there is any doubt, that the use of the words "qualified practitioner," with or without the addition of such phrases as "medical herbalist and bonesetter," is equally illegal.

We have also recently received from a correspondent a card advertising what is called a "Cure Company, Limited," for eczema and anæmia. The only name which is mentioned in connection with this peculiar institution is not to be found in the *Medical Directory*, and the business is said to be carried on upon the enticing basis of "no cure, no pay." It is very necessary, in any amendment of the law, that provisions may be inserted which will enable establishments of this kind to be dealt with wherever it can be fairly said that they hold themselves out to the public as being conducted by persons qualified to give medical treatment. If every quack has only to turn himself into a limited company, or call himself an "establishment," to evade the law, that class of the public which unfortunately requires to be protected against advertising incompetence or audacious fraud will continue to be victimised with too much success.

THE ANNUAL MEETING OF 1895 IN LONDON.

The annual meeting of 1895, it is generally anticipated, will prove a great success. It has been warmly taken up, not only by the members of the Metropolitan Counties Branch, but by the unattached members of the Association resident in the metropolis. Up to the present date, 1,183 members have joined the General Committee formed to carry out the arrangements, and of this number some 700 attended the meeting recently held in the Marlborough Rooms for the purpose of appointing the various committees.

The Committee of Arrangement appointed by the Council at the annual meeting in Bristol consisted of the following members: The President of the Association, Dr. Long Fox; the President-elect, Dr. Russell Reynolds; the President of the Council, Dr. Ward Cousins; the Treasurer of the Association, Mr. Butlin; the President of the Metropolitan Counties Branch, Dr. Leonard Sedgwick; the President-elect, Sir Wm. Priestley; the Treasurer, Mr. Eastes; the Honorary Secretaries, Mr. Andrew Clark and Dr. Isambard Owen; and Dr. Markham Skerritt and Dr. Saundby.

The arrangements for the meeting have been divided by the General Committee among ten special Committees, co-ordinated by a General Executive Committee. The following is a list of the Committees, with their respective Chairmen and Secretaries:

1. Reception Committee: Chairman, Sir Dyce Duckworth; Secretary, Mr. Ballance.
2. Ladies' Reception Committee: President, Lady Priestley.
3. Foreign Reception Committee: Chairman, Mr. Ernest Hart; Secretary, Mr. Makins.
4. Finance Committee: Chairman, Mr. George Eastes; Secretary, Dr. Knowsley Sibley.
5. Museum Committee: Chairman, Dr. Tirard; Secretary, Dr. Oswald.
6. Pathological Museum Committee: Chairman, Mr. Jonathan Hutchinson; Secretary, Mr. Willett.
7. Local Entertainment and Excursions Committee: Chairman, Dr. Radcliffe Crocker; Secretary, Dr. Boxall.
8. Dinner and Luncheon Committee: Chairman, Dr. Ord; Secretary, Dr. Dundas Grant.
9. Soirée Committee: Chairman, Mr. Walsham; Secretary, Mr. E. Lloyd-Williams.
10. Printing and Publishing Committee: Chairman, Dr. Isambard Owen; Secretary, Dr. Parkes Weber.

The Executive Committee consists of the Chairman and Secretary of each of the above Subcommittees, together with the local members of the Arrangement Committee, namely: Dr. Russell Reynolds, Dr. Sedgwick, Sir William Priestley, Mr. Butlin, Mr. Eastes, Mr. Henry Power, Mr. Andrew Clark, and Dr. Isambard Owen. Dr. Sedgwick is Chairman of the Executive Committee, and Mr. Clark and Dr. Owen its Secretaries, while Mr. Eastes, the Treasurer of the Branch, will act as Treasurer of the Annual Meeting.

The general meetings of the Association will be held in Exeter Hall; the meetings of most of the Sections in the Examination Hall of the Conjoint Board, which the Royal Colleges of Physicians and Surgeons have courteously placed at the disposal of the Association without charge. For the remaining Sections it is understood that King's College will place accommodation at the disposal of the Association. The President's address will in all probability be given in the Imperial Institute, and will be followed by a reception and *conversazione* in the same building. Evening entertainments will also be given by the Royal Colleges of Physicians and Surgeons. The Executive Committee has unanimously resolved to ask the Bishop of London to preach the Association sermon in St. Paul's cathedral.

The offices of the Annual Meeting are at the House of the Medical Society of London, No. 11, Chandos Street, Cavendish Square. All letters concerning the general arrangements of the meeting should be sent to this address.

The late Professor Romanes, of Oxford, is said to have left behind him a work of considerable interest which will shortly be published by Messrs. Longmans. It will be edited by the Rev. Charles Gore, Vicar of Radley.

CHELSEA HOSPITAL FOR WOMEN.

A special meeting of the governors of the Chelsea Hospital for Women, Fulham Road, was held on Wednesday last, under the presidency of Sir Algernon Borthwick, Bart., M.P., "to receive the resignations of the members of the Board of Management, to elect a new board of management, and to receive suggestions from the medical staff." There was a very large attendance comprising many ladies.

The Chairman, in opening the proceedings, said that the whole present awkward position of the hospital arose from the steps taken by the Medical Officer of Health for Chelsea—taken no doubt according to his strict notions of his duty. But unfortunately throughout the whole business there had been a series of misunderstandings. First, Dr. Parkes imagined the hospital was open when it was shut, and then he imported into his report a word which he afterwards retracted. The Board had carried out the whole of the recommendations of the Committee of Inquiry. One of the motions complained of by that committee was that there was a mixed Board for the hospital, and that was to be remedied in the future, he hoped, by the decision of the meeting. It was rather anomalous that by a blunder there were physicians for both in- and out-patients, and no allowance was made for a surgeon. It was simply owing to another misunderstanding that the present crisis had arisen as to the appointment of the new medical staff. The British Medical Journal had taken umbrage and complained as to the election of staff, but the complaints were not altogether well founded. The Board, who had agreed to the verdict of the famous Committee of Inquiry, had conducted affairs in a manner which would do credit to the managers of any other hospital. The meeting had a great duty to perform, and that was to try to reconstruct the charity on a surer foundation. The old Board would disappear, and with it the five medical men who were on it. He was sorry that Lord Cadogan had written a letter of resignation, as had the Rev. H. W. Webb-Peploe. The Chairman then read a list, which it was proposed should form the new board. That board would be able to carry out the desirable reforms and provide the governors with a high medical staff, and redeem the fortunes of the hospital, and bring it to the highest state of efficiency for the benefit of those for whom it existed. The list read out was as follows: Sir Algernon Borthwick, Bart., M.P.; Mr. W. L. A. Burdett-Coutts, M.P.; Mr. Thomas W. Brookes, Mr. A. J. Wright-Biddulph, J.P., D.L.; Mr. James Bailey, Mr. Robert J. Beadon, Colonel the Hon. Wm. Colville, Mr. T. Dyer Edwards, J.P.; Mr. Charles Fish, Mr. George Hilditch, Mr. J. L. Langman, Mr. Saml. Lithgow, Sir Oswald Moseley, Mr. J. Cumming Macdona, M.P.; Mr. Ernest Oppenheim, Major Probyn, L.C.C.; Mr. Holmes Stone, Colonel Shipway, Mr. J. G. Woodroffe, Mr. J. S. Wood.

Mr. H. D. Fergusson moved and Mr. King seconded the election *en bloc* of the Board as read out.

Dr. Travers took objection, and said that among the list were the names of the old Board, who were to blame; and he moved as an amendment that the names be submitted for the meeting to vote upon them *seriatim*. For the first time in the annals of the hospital there was to be a plural vote taken.

The Chairman stated that this was not an ordinary meeting. It was necessary in such meetings, by way of protection, to use the votes as suggested, for the votes represented absolute interest in the hospital.

The amendment was lost by 20 to 10.

The Chairman said there was no stigma on the present medical staff, who had done their duty. It would be for the meeting to elect a new staff in conjunction with the best heads of the profession. He hoped they would let bygones be bygones.

Mr. H. Wright, late Treasurer, read a statement as to the financial position of the hospital, which he said was showing great improvement, and he had received a number of most generous contributions.

The Chairman then announced the result of the voting as to the election of the suggested new board *en bloc*, which were carried by 71 to 9.

Dr. W. Duncan, on behalf of the medical staff, stated that as the consulting medical officers and the Board of Management who nominated the staff a few months ago had all re-

signed, and taking into consideration the views expressed in the medical papers that the nominations were somewhat hurriedly made, he now suggested that the new Board should not ask the governors to confirm the election of the medical staff. In other words, they tendered their resignations so as to leave the Board free to elect a new staff. He also suggested that the advertisements inviting applicants for appointment to the new staff should clearly state not only the qualifications necessary, but also any conditions disqualifying gentlemen for election. Further, that seeing that, in appointing a new staff, the Board had at present no consulting or acting medical staff to help and advise them in the elections, in order to obtain help and advice they should seek the co-operation of several eminent consulting obstetric physicians and surgeons. He added that he and his colleagues would seek re-election, and meanwhile would continue to carry out the work of the hospital.

Lord Cadogan then detailed the circumstances under which he tendered his resignation, which he did because he said he felt the hospital had not sufficient public confidence. He wished, however, to state that it was a mistake to suppose that the new medical staff had been elected without the consulting staff of the hospital having been consulted by the Board.

After further discussion, a vote of thanks to the Chairman closed the meeting.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS FOR 1895. ELECTION OF MEMBERS.

Meetings of the Council will be held on January 16th, April 17th, July 10th, and October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely December 27th, 1894; March 28th, June 20th, and October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election. Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

East Anglian Branch.—A special meeting of this Branch will be held at the Norfolk and Norwich Hospital on Tuesday, December 4th, at 3 P.M., at the request of the Parliamentary Bills Committee, to consider the "Draft of a Bill to Amend the Medical Acts."—Edgar G. Barnes, Eye; Michael Beverley, Norwich; and Thomas Carr, Braintree, Honorary Secretaries.

South Midland Branch.—A special meeting of the above Branch will be held at Bletchley on Thursday, December 6th, to take into consideration the "Draft of a Bill to Amend the Medical Acts."—C. J. Evans, Honorary Secretary, Northampton.

Metropolitan Counties Branch: South London District.—A meeting will be held at Guy's Hospital on December 5th, at 8.30 P.M. Dr Newton Pitt will read a paper on Some Cases of Aphasia. Cases of clinical interest from the wards of the Hospital will be shown. All practitioners, whether members of the Association or not, will be heartily welcomed.—H. Betham Robinson, Honorary Secretary, 1, Upper Wimpole Street, W.

THAMES VALLEY BRANCH.

A meeting of this Branch was held on November 14th at Kingston-on-Thames, the President (Dr. Viney), of Chertsey, being in the chair.

New Members.—Drs. Ackerley, Cooper, Daldy, and Wallis were elected members.

Communications.—Dr. Schorstein read a paper on the Influence of Heredity on Phthisis. He showed that certain factors—occupation, impurity of air, dampness, infected milk, and national tendencies—were admittedly important factors in producing phthisis; that direct infection did occur, though rarely; but that great difference existed in the estimate of the influence of heredity. An analysis of 613 cases which had come under his observation showed tuberculosis in the parents of 24.1 per cent., which was less than the proportions of some records, though about those of the first Brompton Hospital Report. He also drew the following deductions: (1) That women were more subject to hereditary influences than men; (2) that the existence of heredity does not appreciably diminish the duration of the disease; (3) that its influence causes an anticipation of the attack to a small extent (about two years) in men, and to a much larger extent (ten years) in women, this last figure being probably excessive; (4) that his statistics do not support the views which have been expressed as to the sex affected by heredity from male or female parent, or the less amount of hæmoptysis in cases which inherit from the father.—Professor Barker, of University College, read a paper on the Various Operations for the Radical Cure of Inguinal Hernia, with lantern illustrations.—Both papers were discussed.

SOUTH-EASTERN BRANCH: EAST AND WEST KENT DISTRICTS.

A conjoint meeting of these Districts was held at the Kent and Canterbury Hospital on November 22nd; Dr. Frederick Eastes (Folkestone) in the chair. Forty-two members and visitors were present.

Confirmation of Minutes.—The minutes of the last meeting of the East Kent District were read and confirmed.

The British Medical Association and Abuses affecting the Medical Profession.—A letter was read from the Honorary Secretary of the Branch announcing that the Council of the Association had, on the resolution of Dr. Withers Moore, appointed a Committee to consider how the various abuses affecting the profession could be dealt with by the Association, and to issue a report.—The Chairman gave an account of the action that had been taken in this matter by the East Kent District. The initial step was a paper read at Ramsgate in March last by Dr. Welsford. This paper was published in the British Medical Journal of May 5th, and in the same issue appeared a very sympathetic leading article on the subject. A small self-appointed Committee was then formed to push the question, and they succeeded in carrying, at the annual meeting of the Branch held in June, the following resolution:

> It would be to the advantage, both of the medical profession and public, if the Council of the British Medical Association were to take power to proceed against unqualified practice and quackery, and in other ways to protect the interests of the profession, and to promote union and combination among medical men.

The Secretaries of the various Branches and Districts were then communicated with and urged to bring the question forward at their meetings. Dr. Eastes thought that it was a subject for congratulation that the matter was already in so forward a condition.

Appointment of Chairman for the Meeting to be held in March, 1895, at Faversham.—Dr. Selby (Teynham) was appointed chairman of this meeting.

Communications.—Dr. Ernest White (Professor of Psychological Medicine, King's College, London, and Resident Physician at the City of London Asylum at Dartford) gave an address on Psychological Medicine in Relation to the General Practitioner. He referred to the increase of insanity, to the requirements of the Lunacy Acts of 1890-92, more especially in regard to the certification of the insane. He alluded to the importance of the inclusion of psychological studies in the medical curriculum, and to the facilities now afforded by the various asylums as educational centres, and to the importance of the establishment of out-patient departments for the treatment of borderland cases. The difficulty attending the treatment of acute cases at their homes was contrasted with the advantages of moral treatment as practised in the asylums of to-day, provided, as they are, with trained nurses and attendants. Dr. White urged the substitution of the term "hospital" for "asylum." A discussion followed, and Dr. White replied.—Dr. Thomas Eastes (Folkestone) read a paper on The Treatment of Diphtheria by Antitoxin. After describing a typical case of severity, the first published in England, he gave a summary of 54 cases, collected from the British Medical Journal and from his own experience.

Seven died, making a mortality of 13 per cent., but in 3 of these there was scarcely any opportunity for the antitoxin to have any effect. Another was a laryngeal case already requiring tracheotomy; another was not injected until the sixth day; another was not under the treatment until the fourth day, and after apparent recovery died of heart failure on the thirteenth day; and the last had a badly sloughing throat and a pulse of 132, with a subnormal temperature before the antitoxin was injected. Of 17 cases injected on the first and second days, only 1 died, and that was a laryngeal case requiring tracheotomy. Dr. Eastes showed that, although the antitoxin had a marvellous effect on the local disease, it was not nearly so effectual against the sequelæ, and therefore he especially urged early treatment to prevent the after-consequences of the disease. In the 54 cases there had been no local ill effects except urticaria and erythema. The mortality of cases of diphtheria admitted into the Folkestone Sanatorium in twenty months, for comparison, had been 22.9 per cent. Dr. Biddle related a case of diphtheria treated with antitoxin, which recovered. Dr. Eastes's paper was discussed by several members, and he replied.—Mr. Whitehead Reid and Mr. Schön showed surgical cases.

After the meeting tea and coffee were served in the boardroom of the hospital.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

The second meeting of the session 1894-5 was held at the Birmingham Medical Institute on November 8th, 1894: Mr. H. Langley Browne (President) in the chair. Eighty-three members and nine visitors were present.

New Members.—The following were elected members of the Branch: Surgeon-Major Burton: J. H. Brice, L.R.C.P.; John Stead, M.B.; Sydney Legge, M.R.C.S.

Communications.—Dr. Short showed a case of Tumour of the Mediastinum in a man, aged 34. The main points were: (1) That the condition commenced fourteen months ago, and that the man was still able to walk about with care; (2) that the superior vena cava was compressed by the growth; and (3) that the collateral circulation could be very plainly seen by way of the internal mammary and epigastric veins, the blood flowing downwards from the former veins by means of a large branch dilated to the size of the little finger to reach the iliac veins through the epigastric.—Mr. J. T. J. Morrison showed a girl, aged 4, after operation for Double Genu Valgum. The operations performed were on the left limb, osteotomy of femur and removal of a wedge of bone from the tibia; and, on the right limb, forcible fracture (osteoclasm). The result was very satisfactory, the limbs being now symmetrical and in a normal line.—Mr. F. Marsh showed (1) a man, aged 25, with a history of Purulent Discharge from Both Nostrils (chiefly the left), with frontal pain for ten years. The left sinus was trephined on September 21st, and the right one on October 26th. The patient was now completely cured. (2) A man, aged 23, with a history of Purulent Discharge from the Right Nostril and Pain over the Right Frontal Region for five years. The right sinus was trephined on October 26th; the drainage tube had not yet been removed. In both cases the bone was exposed by a median incision, a ½-inch trephine was used, and a rubber drainage tube passed through the sinus and brought out through the nostril.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

An ordinary general meeting of this Branch was held at Aberdeen on November 21st, 1894, Professor Stephenson, the President, in the chair.

New Members.—Drs. Bell, Skene; Mowat, H.M.S. *Edinburgh*: Ogston, Rosemount; and Usher, Aberdeen, were admitted members of the Branch.

Communications.—Dr. Blaikie Smith read an account of a case of Spasmodic Wry Neck, and afterwards exhibited the patient, a man aged 41. The paroxysms were extremely severe, occurring three or four times a minute, and lasting from five to fifteen seconds. They were chiefly the result of tonic contractions of the right sterno-mastoid and trapezius muscles, and produced marked twisting of the head to the left along with retrocollis. Mental emotion and the erect posture were powerful excitants to the attacks; sleep abolished them. Considerable improvement had taken place under large doses of sodium bromide. The paper was discussed by the President, Drs. Booth, Edmond, and Riddell.—Dr. J. Scott Riddell read a paper on the Pathology and Treatment of Appendicitis, indicating the cases in which surgical interference was called for. He described the methods of treating relapsing appendicitis by excision of the vermiform appendix, and gave details of a case on which he had successfully operated for this condition. An interesting discussion followed, in which the President, Drs. Blaikie Smith, Edmond, Booth, McKerrow, Rose, and Dean took part.

HALIFAX, NOVA SCOTIA, BRANCH.

A regular meeting was held at Halifax on November 8th; Dr. Thomas Milson (President) in the chair.

New Member.—The Council reported that John Stewart, M.B., had been elected a member of the Branch.

Anderson Appeal Fund.—Surgeon-Captain Barefoot moved, and Dr. M. Chisholm seconded, that the sum of 2 guineas be forwarded from the Branch to the Anderson Appeal Fund. The motion, being put, was carried.

Proposed Alteration of Day of Meeting.—Surgeon-Captain Barefoot gave notice that at the next meeting he would move that the day of meeting be altered from Thursday.

The Antitoxin Committee.—The report of the Committee on Antitoxin was received and considered, and the Committee was continued to report at the next meeting.

Communications.—Dr. Farrell showed a specimen of Osteo-sarcoma of the Tibia, removed that day by amputation.—The discussion on Cancer was opened by Dr. Farrell, and continued by Drs. G. M. Campbell, D. A. Campbell, Goodwin, Black, Surgeon-Colonel Archer, Drs. Chisholm, Mader, and others. The discussion was adjourned at a late hour.

SPECIAL CORRESPONDENCE.

PARIS.

Professor Raymond at the Salpêtrière.—Paying Patients in Paris Hospitals.—The Association Médicale Mutuelle de la Seine.—Medical Assistance in Rural Districts.—Changes in the Staff of Paris Hospitals.—General News.

Professor Raymond, Charcot's successor, in his opening lecture at the Salpêtrière, sketched the career of his distinguished predecessor and the development of his service at the Salpêtrière. Charcot felt a glow of pride when he announced to his pupils that his service could boast of an anatomo-pathological museum with a studio for taking casts and photographs of pathological specimens, limbs, etc. M. Raymond made a slight digression to tell his listeners that this laboratory so vaunted by Charcot was in reality only an ill-lighted narrow passage insufficient to meet the wants of the service. Dr. Raymond has, with the co-operation of the Dean of the Medical Faculty, the Director of the Public Assistance, and the Director of the Salpêtrière, succeeded in organising a fresh laboratory, which does not realise his ideal, but nevertheless is spacious and well lighted. Dr. Raymond looks forward to the establishment of laboratories of applied psychology and therapeutics, and to the thorough reorganisation of the laboratory of electrotherapy.

The Municipal Council has requested the Hospital Administration to send in a statement of the number of patients treated in each hospital, especially paying patients, from January 1st to November 1st, 1894; also the number of days each patient remained under treatment. It is probable that it is contemplated to raise the fees paid by patients.

L'Association Médicale Mutuelle of the Seine Department numbers 320 members. A yearly subscription of 8s. entitles its members to receive 8s. a day when unable to practise either temporarily or permanently. In case of death the widow or children receive an indemnity.

The Var Conseil Général has voted a tax of half a centime for gratuitous medical assistance in rural districts. The fees for the visits are fixed at 1s. 0½d. in the daytime, and 2s. 6d. at night; a further fee of 3½d. for every kilometre is to be

paid. The communes where the patients are to be treated in hospitals are also indicated by the Council. Fees for operations range from 2s. 8d. upwards.

On January 1st the following changes will take place in the staff of the Paris hospitals: MM. Audhoui and Strauss will be attached to the Hôtel Dieu; MM. Labadie-Lagrave and Moutard-Martin to the Charité; M. Chauffard to the Cochin; M. Moizard to the Enfants Malades; MM. Comby and Josias to the Trousseau; M. Danlos to the Saint Louis Hospital; M. Déjerine to the Salpêtrière; M. Muselier, M. A. Petit, and M. Netter to the Pitié; M. Charrin to the Maternité; M. Marie to the Bicêtre; M. Merklen to the Laënnec; M. Babinski to the Broussais: M. Siredey to the St. Antoine; MM. Galliard and Richardière to the Tenon.

M. D'Arsonval has been elected by the professors of the College of France to the chair occupied by the late Professor Brown-Séquard.

BERLIN.

Doctors and the Right of Way in the Streets.—Death from Tattooing.

On days of certain Court and military ceremonials important Berlin thoroughfares—generally the Unter den Linden and some of its approaches—are closed to public traffic, sometimes for hours. An agitation has been going on for some time to obtain leave for medical practitioners, in the exercise of their profession, to pass through the barrier of policemen, and has at last ended in a compromise. Doctors furnished with a proper pass are to be allowed to go though the closed streets henceforth; but they will have to get out of their carriages to do so, their pass only admitting them on foot.

A death from tattooing has occurred in a suburb of Berlin. Common red paint had been used to rub in the design; blood poisoning set in, and the victim, a lad of 18, died after great suffering.

CHICAGO.

New Isolation Hospital: Arrangements and Cost.—A Low General Death-rate and High Infant Mortality.—Factory Inspection.

If arrangements are carried out according to plans now made Chicago will soon have an isolation hospital sufficiently appointed to meet most reasonable demands. From authoritative source we gather the following items in this connection. The plans are for a building to occupy a site facing Thirty-Fourth Street, between Hamlin and Lawndale Avenues, recently purchased by the city real estate agent for the purpose. There are to be two small buildings detached from the main building. One of these is for a temporary detention hospital for all suspected cases of contagion, and cases in which a complete and satisfactory examination cannot be made at once. This building is to contain three wards, with requisite bath and dressing rooms. Across the walk from the detention wards is shown a small house or lodge for the keeper, with appropriate living apartments. In the rear of these two buildings is shown the administration building, with receiving rooms, superintendent's rooms, dining-room, offices, baths, closets, kitchen, and extra dining-room. The main corridor leads to the doctors' quarters and offices, the steward's office and rooms, drug store, and store rooms. Back of this are the servants' quarters, and still further back is a garbage crematory for all animal and vegetable matter. Still in the rear is shown the morgue and crematory for human bodies, as it is the intention to cremate the bodies of all small-pox patients, and thus do away with all danger of spreading the pest from that source. The ambulance sheds and stables are to the left of the morgue and crematory.

The centre line of these buildings divides them into two parts or sections, making the male and female wards separate. Running from the front line of the administration building to the right is the receiving room, practically detached from the main building. The receiving apartment contains a series of bath and dressing rooms. After patients are stripped, their cases diagnosed thoroughly, and they are assigned to wards, it is so arranged that their clothing may be sent direct to the disinfecting room. Patients are then sent to the proper wards and are given proper treatment. There are two wards in each of the two wings, and sixteen beds to each ward. This is in addition to the detention wards. The rooms are so arranged that when a patient enters he is sent to the proper ward for treatment, and is changed to other rooms as his case improves, until he finally leaves at the other end of the building when cured. In this way patients in various stages of the diseases are not thrown together, but violent cases are kept in one place together, those less violent in another, and the convalescents in another. Altogether the plan is as complete as it is possible to make it for the money.

Health Officer Reynolds will ask for 200,000 dollars, the amount deemed absolutely necessary for the institution. This amount will furnish Chicago with a new and modern small-pox hospital with all known improvements. It is thought with such a hospital the health department may feel prepared to meet any sort of epidemic, even cholera, without fear. All provision is made for humane and proper handling of patients and with the best methods for the protection of the community. As the department is now equipped many persons have the idea that they may as well go to the morgue as to the small-pox hospital; but with a modern hospital, properly arranged for the care of patients, it will be far safer than one's own home, not only to the patient's friends and associates but to the patient himself.

According to the report of the Health Bureau covering the year 1893, the death-rate for Chicago was 16.9 per 1,000, thus rating it, next to Berlin, the healthiest of the great cities. There are some very interesting figures in this report, among which we note that more than half the deaths for the period covered were of infants and children under 6 years of age: in other words, there was a total of 22,083 deaths and 13,664 were infants or children under the age above specified. Of these 13,664 deaths, 1,613 resulted from cholera infantum, 975 from scarlet fever, 234 from measles, 210 from whooping-cough, 1,326 from convulsions, and 1,029 from malnutrition. Of the causes of death at all ages during the year, the most important from a sanitary point of view were the diseases of the respiratory apparatus, pneumonia, and bronchitis, causing 3,710 deaths: tuberculous diseases, consumption, 2,315 deaths: typhoid fever, 670 deaths in 1893, against 1,489 in 1892 and 1,997 in 1891. In addition to these, there were 3,369 deaths from diseases of the digestive apparatus and alimentary canal, a large proportion of which were due to preventable causes. There were 140 cases of small-pox during the year, and there resulted 23 deaths. The percentage of deaths among the unvaccinated was 23.4, while every one of those who were vaccinated recovered.

An interesting branch of the work of the Bureau is hinted at in the statement that the factory inspectors visited 17,649 work places, which employed 306,432 persons. They examined 17,177 houses complained of on account of insanitary conditions, and secured the abatement of 25,000 nuisances, such as defects in plumbing and drainage.

CORRESPONDENCE.

THE PAY WARDS OF THE GREAT NORTHERN CENTRAL HOSPITAL.

Sir,—Dr. R. W. Burnet and Mr. Macready, in their letter published in the British Medical Journal of November 24th, very properly go back upon the original constitution of the Great Northern Central Hospital, and find in it a justification for the pay system recently adopted by the hospital. As one of the framers of that constitution, may I be permitted to put your readers in possession of one or two facts?

In the first place, the scheme for the founding of a new hospital was initiated by the North London Branch of the British Medical Association. I was invited to read a paper on the subject at the rooms of the Medical Society, Chandos Street. The paper was read, and a scheme was outlined which was generally approved by the members of the Northern Branch of the Association, of whom a good number were present, and by others concerned. That scheme included a system of pay wards.

It may be asked: How came the general practitioners who

constituted the bulk of the meeting to approve of a pay system then, whilst the very same class are, almost to a man, up in arms against it now? The answer is very simple. In the scheme as propounded by me, the proposed pay wards were designed for the use of those patients who needed the healthy surroundings, the good nursing, and other conveniences of a hospital, but who could afford to pay moderately for them. Especial mention was made of city clerks, shopmen, shopwomen, and others who lived in lodgings, and whose risks, when they were attacked by illness, were believed to be seriously increased by the incompetence and often indifference of their somewhat poorly paid and overworked landladies. Pay wards of a strictly moderate degree of costliness would, it was contended, prove a very great boon to this class of people, and would thus increase both the usefulness and the popularity of the hospital.

But then arose the medical difficulty. That difficulty, however, proved to be no difficulty at all at the time. It was solved to everybody's satisfaction by the proposal that paying patients should, in every instance when they desired it, be attended in the hospital by their own private medical attendants. That did not then, nor does it now, seem to me to be either an unreasonable or an unworkable proposal. If that were agreed to would not the problem be solved? Why is it not agreed to? The profession in North London is entitled to have this latter question authoritatively answered by the president of the governing body.—I am, etc.,

King Street, E.C., Nov. 23rd. Geo. W. Potter.

Sir,—It appears to me that the disagreement between the medical practitioners of North London and the staff of the Great Northern Central Hospital is of more than local interest. I do not refer so much to the main point of disagreement, namely, the question whether pay wards shall or shall not be established in the hospital; that has been already discussed and yet admits of further argument. I would rather draw attention to the means which the practitioners propose to adopt to bring the medical profession to their way of looking at the question. I mean the threat of "boycotting" the members of the said staff. This threat of boycotting is expressed in Dr. Hugh Woods's letter in the British Medical Journal of November 24th in the following way: He says: "I am pleased to hear on all sides firm resolves to abstain from calling into consultation any member of the staff who gives his services gratuitously in these pay wards."

I submit, Sir, that this method of boycotting in the medical profession has never been up to the present time so openly advocated, and I would put it to the practitioners themselves whether by the use of this weapon they are not in danger of alienating from their side the sympathies of many, who, like myself, are opposed to the pay wards in hospitals, whether at the Great Northern or at Guy's or St. Thomas's?

From another point of view it seems difficult to understand how the threat can be carried out if the theory of consultation of one medical man with another in a difficult case is that the medical man in charge of the case endeavours to obtain as a consultant one who is likely to give the very best possible advice in the case. For if in the past the medical practitioners in the North of London have done what they have considered to be to the best interests of their patients in calling into consultation members of the Great Northern staff, how can they in the future refrain from continuing to do so without sacrificing those interests? The skill of the various members of the staff is not altered because they (the various members of the staff) are in disagreement with the practitioners, and it is very unlikely that the type of case in which their services have so far been found valuable will be suddenly changed.—I am, etc.,

November 27th. A Consultant.

Sir,—Enclosed I send you a copy of circular letter to be sent this week to the medical practitioners of North London, with a request from the Committee that you will find space for it in next Saturday's edition of the British Medical Journal.—I am, etc.,

Holloway Road, London, N., Nov. 28th. James Crabb.

"Very Important. "409, Holloway Road, N., 29th Nov., 1894.

"Dear Sir,—At a meeting of medical practitioners held in the Athenæum, Camden Road, on Monday, November 26th, the history of the agitation against the pay wards in the Great Northern Central Hospital was detailed, and the replies of the staff and of the committee of the hospital to our protest were read. A resolution to the effect that these replies were highly unsatisfactory was carried unanimously. A resolution was then proposed, and received much support, that we as a body should abstain from calling in consultation members of the staff of any charitable hospital admitting pay patients. This was opposed by some of the gentlemen present, and as it was thought that any action we take to be thoroughly effective must be unanimous, it was agreed that the meeting should be postponed until December 6th, at 4 P.M., in the Athenæum, Camden Road, and that in the interim a circular should be sent to all those that signed the protest, advising them of what was proposed, so as to give each one an opportunity of thinking over it and expressing a mature opinion upon it.

"As it appears to the Committee to be possible that absolute unanimity may not be attained upon this resolution, it is proposed to substitute for it the following:

"'That this meeting of medical practitioners of the North of London, whilst regretting the rupture of amicable professional relations with the staff of the Great Northern Central Hospital, affirms its position that the action of the staff is ethically indefensible and contrary to the interests of the profession at large.'

"A proposition will also be laid before the meeting to form a society with the object of keeping the question to the front, and also of ventilating the whole question of hospital abuse, and of suggesting remedies.

"The importance of this meeting is obvious, and it is earnestly hoped that you will be able to attend, as the Committee desire to have a full expression of opinion upon the subjects of this circular. Please induce as many as possible to attend, whether they have had an opportunity or not of signing the protest.—I am, yours faithfully,

"Jas. Crabb, Secretary to Committee."

THE TENURE OF POOR-LAW MEDICAL APPOINTMENTS.

Sir,—I find in the British Medical Journal of November 24th, page 1188, the following: "It may come as a revelation to guardians that the medical officer holds his appointment under the Local Government Board, and that it is for life." Will you permit me to warn Poor-law medical officers in all parts of the kingdom that, though this is the law now, it may not be so very long, at least if the Local Government Board for Ireland has its way. That Board has been covertly engaged for years past in the effort to relieve itself of responsibility by transferring its dismissal power to the guardians. With that object it has assumed to make a rule which specifically authorises the guardians to suspend or dismiss a medical officer. The Irish Medical Association has been advised by the best legal authorities that this rule is waste paper, but no opportunity has yet arisen to test the question at law. The time is, however, close at hand, and, when it arrives, I have no doubt that the Poor-law medical officers of Ireland may confidently calculate upon your potent help to enable the Irish Medical Association to crush out the time-serving attempt of the Local Government Board. If that Board carries its point, a most dangerous precedent will be created for the English Board to do the same.—I am, etc.,

Archibald Hamilton Jacob, M.D., F.R.C.S.I.

Dublin, Nov. 24th.

EXAMINATION OF THE LARYNX AND REMOVAL OF LARYNGEAL GROWTHS IN CHILDREN.

Sir,—With reference to the abstract of my communication to the Section of Laryngology at Bristol published on page 1171 of the British Medical Journal of November 24th, I fear that its perusal will not suffice to enable my method to be used with safety and success by others. The following extract from my paper will supply the deficiency to some extent. [The child being in the nurse's lap in the position described under chloroform, the gag held in, and the tongue held out.]

"On attempting laryngoscopy now in the usual way, the pharyngeal and laryngeal spasm, swallowing movements and excess of secretion will usually prevent a view of the larynx. The observer, therefore, now cautiously sprays the cocaine solution on the palate, pharynx, and epiglottis, following it up immediately with a dry cotton-wool mop, to prevent its being swallowed. If this is repeated once or twice, the spasm ceases, hypersecretion remaining. The pharynx is now repeatedly and rapidly mopped out with dry cotton-wool mops (two or three score may be necessary) until secretion is exhausted and ceases temporarily. The larynx can then be seen, and as soon as the field of view is clear, any growth

present can be removed piecemeal. In this way considerable progress can be made at each sitting in removal of growths, although, owing to repeated delays necessary to re-exhaust secretions and clear the field, the operation is prolonged. Sittings are repeated at intervals of one or two weeks, until removal is complete."

It is, however, probable that the method will be used with far greater frequency for the simple examination of the larynx in children, otherwise impossible for such conditions as loss of voice, hoarseness, noisy or difficult breathing referred to laryngeal obstruction, whether acute or chronic. At the throat department of St. Mary's Hospital the method has been used for six years past, and definite differential diagnosis has been made by the laryngoscope in obscure cases between chronic catarrh, œdema, new growths, membranous adhesions, and spasm, when examination was quite impossible by ordinary means.—I am, etc.,

Welbeck Street, W., Nov. 26th. SCANES SPICER.

ST. JOHN AMBULANCE WORK.

SIR,—I have no wish to make a further demand on your space, but the letter of Dr. Bennett, of Leicester, makes a reply from me a necessity. I purposely omitted mentioning Dr. Bennett's name, but since he himself has thought well not only to do so, but also to make a public personal attack on me, I must say he should not make statements without first satisfying himself as to their correctness.

In the first place he imputes that I have written anonymous letters to the BRITISH MEDICAL JOURNAL, notwithstanding that I have privately and ineffectually called upon him to withdraw or substantiate this statement. I now take this opportunity of emphatically denying it. He pleads ignorance as his excuse for clashing with the interests of the local practitioner, endeavouring to attribute his having accepted the position of lecturer to the ambulance class to his brother, who is local secretary of the Technical Education Committee, having omitted to inform him that Dr. O'Connor had offered his services as lecturer at the usual fee. He also informs us that he did not know under what scheme the lectures were to be given. His apathy does not suggest he "should certainly have taken every care" not to clash with the interests of the local doctor. His letter may induce your readers to imagine that in this county it is customary to give such a course of lecturers gratuitously, but I can unhesitatingly state that at least among my own acquaintances a fee has been given in every case. In conclusion, he informs us as follows: "Perhaps the value of Dr. Kelly's remarks may be best shown by the fact that he is at the present time giving similar ambulance lectures gratuitously in a neighbouring village." Perhaps the value of Dr. Bennett's remarks may be best shown by the fact that I am not at the present time giving similar ambulance lectures gratuitously in any neighbouring village, and never did.—I am, etc.,

Desford, Leicester, Nov. 26th. T. GORDEN KELLY, B.A., M.D.

WOOLSORTERS' DISEASE.

SIR,—I do not question Professor Pemberthy's statement that the terms "Rauschbrand" and "symptomatic anthrax" are used to denote a disease which has not yet been shown to be communicable or to have been communicated to man. At the same time the fact remains that, rightly or wrongly, the same terms are used to denote the disease to which my letter referred, which, in common with cutaneous anthrax, is communicated to the human subject through wool, though its seat of inoculation is different. In Dr. Spear's well-known report of 1880 to the Local Government Board, it was shown to be quite the commonest form of anthrax. The disease begins not in the skin but in the internal organs: and whatever it may be in animals, it is extremely difficult of recognition in man, and is probably seldom diagnosed except during an epidemic, or when suggested by the occupation of the patient. At other times or in other persons cases would possibly get classed as pneumonia, meningitis, etc.; and it is probably the experience of most general practitioners to have had to give some such name to cases which might just as well have been internal anthrax.

The resistance of anthrax organisms of both classes, by whatever name the disease may be known, to the ordinary processes of wool preparation is shown by the occurrence of cases among the "combers," who have only to do with wool which has been previously scoured and chemically treated.

This discussion arose, not on occasion of my letter to which Professor Penberthy replies, but of your own note of November 3rd on Mr. Bell's statement that infected wool made up into garments was liable to communicate anthrax or other heteronymous disease to the wearers. The facts which I quote above show that at least *primâ facie* evidence supports Mr. Bell's suggestions; and if the matter be left where it is such evidence must naturally prevail, and the danger be recognised as actually existing. The question seems, however, to be of too great public importance to be properly left to *primâ facie* evidence; and I can see nothing in Professor Penberthy's letter to qualify your view that Mr. Bell's statement calls for careful investigation.—I am, etc.,

November 28th. RAUSCHBRAND.

INFANT MORTALITY: A DISAPPOINTMENT.

SIR,—I cannot at all agree that Mr. Asquith's reply to the deputation on the subject of infant mortality was quite satisfactory. On the other hand, I think it was gravely disappointing. The general indifference of the community to the sacrifice of infant life under the *régime* of competitive industrialism has always seemed to me one of the most conspicuous signs of the moral degradation that system has wrought. But we expected something better than a *non possumus* from the present Home Secretary.

It is astonishing at this time of day to find Mr. Asquith expressing doubt as to whether the industrial employment of mothers is really responsible for this evil. "He could not say that it had as yet been established to his satisfaction as a scientific conclusion that the increase of infant mortality was due solely, or even chiefly, to the employment of women in factories too soon after childbirth."

Of course it is not in factories alone that this practice exists. But the condition of the factory towns has come to present a specially aggravated problem by the very large number of women regularly employed at the tending of machinery, and the absolutely direct and clear connection between this fact and the death-rates. It is as fully demonstrated, as such a thing can be, both by the vital statistics and by the personal testimony of doctors, employers, and others concerned. As to the statistical proof, I need merely refer to the annual reports of the Registrar-General for England and Wales, where the connection has been shown by a series of tables which Mr. Asquith curiously ignored: the annual reports of the medical officers of health of Preston, Blackburn, and other factory towns; and the Howard Medal Prize Essay, by Dr. Hugh Jones, published in the Statistical Society's *Journal* in March last. The matter was rather minimised in the last Registrar-General's report; but now that Dr. Tatham (who gave his very positive opinions on the subject to the Labour Commission) is established at Somerset House, its consideration should be resumed—at least, until such time as Mr. Asquith is convinced. When I placed the familiar statistics before the Preventive Medicine Section of the Public Health Congress this summer several medical and sanitary officers volunteered confirmatory details out of their own experience, and there was but one dissentient voice. Earlier in the year I had visited the chief factory towns of Lancashire to inquire into the industrial health conditions now prevalent. Of the health officers, factory surgeons, employers, and mill managers I saw in Preston, Blackburn, and Bolton I do not recall one who was doubtful as to the prime responsibility of the employment of married women for the extraordinary infantile mortality in those towns. Some shocking stories were told to me about women coming home from the mill for breakfast and being confined on the doormat and the like; but the normal consequences excite no public remark beyond the bland regret which Mr. Asquith re-echoed. It is no longer easy to choke a whole generation of workers with china-clay and cotton fibre, because they have their unions and their members of Parliament, and they will not stand it any longer. But this massacre of innocent babes—well, after all, does it not act as a useful check upon the increase of population? That is the cynical consideration which alone gives real strength to Mr. Asquith's position.

Dr. Reid, who spoke on behalf of the British Medical Association deputation, and other medical officers who have made this subject their own—I may specially name Dr. Wheatley, of Blackburn, and Dr. Pilkington, of Preston—will have to peg away till the public conscience is aroused. The "practical difficulties" of which Mr. Asquith made so much are just those which the administrators of the first Factory Acts had to meet, and which they did meet with complete success, fifty years ago. Only it was not a few women, but a very large part of the whole working class which was then affected; and the restriction acted more cruelly in proportion, as they were poorer then than now. Over and over again during the last half century these "practical difficulties" have been discussed by factory inspectors and other responsible persons, only to be set aside as of quite secondary importance. Mr. Asquith cannot seriously mean to take refuge behind them to-day. If—which is more likely—he meant that the Government had more in hand already than it could get through, it would have been better for him to plainly say so.—I am, etc.,

Chiswick, Nov. 28th. GEO. HERBERT PERRIS.

THE DEPUTATION ON INFANT MORTALITY AND UNCERTIFIED DEATH CERTIFICATES.

SIR,—The arguments put forward by the recent deputation of the Parliamentary Bills Committee seem conclusive, and good results might fairly be expected from the adoption of the measures proposed; nevertheless, I think the proposals smack too much of the Socialistic and centralising spirit of the day, and they would not meet all the requirements of the cases referred to. If the ill consequences of the artificial feeding of infants were confined to the families of factory and workshop hands no comment would be necessary, but we all know that artificial feeding prevails in all classes, and is the more prevalent the higher we go in the social scale. It is a question, therefore, how far the profession is responsible, directly or indirectly, for these ever-growing evils, and what can be done to control or stop them. In my efforts to arrive at the causes of the various physical imperfections of our population, I have come to the conclusion that the employment of artificial foods during infancy and early childhood is the chief, and that the untimely death of the child is not a greater evil than the deformities and diseases found among the survivors, many of which entail a life-long dependence on the parents or the State for support, and various forms of discomfort and misery to the children themselves. I think that medical men are not, as a body, sufficiently alive to these evils, and that they are too tolerant of, or submissive to, the whims and fancies of mothers in this respect; and it is very certain that the family doctor, whether he deserves it or not, is invariably blamed for any ill effects which result from artificial feeding. For the purpose of supporting the weak-kneed members and removing the charge of carelessness, as well as to support the Parliamentary Bills Committee in its efforts to diminish the evils, I think it is desirable that a formal, and as far as possible a unanimous, protest of the profession (as represented by the Association) should be made against the artificial rearing of infants in all classes.

With regard to the reforms proposed in the registration of deaths, their tendency would be to remove the registration from the profession to semi-professional persons. The coroner is not necessarily a medical man, and the medical officer of health is very often not a medical practitioner. Would it not be sufficient to prohibit the registration of deaths without a medical certificate, and to throw the responsibility of certifying uncertified deaths on the guardians and their medical officers? The great majority of uncertified deaths occur among the poorer classes, who, when they are ill, apply to the parish medical officer, and such a member of the profession would be more familiar with the conditions which cause sudden deaths and accidents than any other branch of the public service. Fees for making the necessary examinations would be a welcome addition to the pay of a badly-paid, hard-worked, but well-qualified section of the profession.

I cannot close my letter without entering my protest, as a much-oppressed rate and taxpayer, against the ever-growing demand of medical men for fees for signing medical certificates of all kinds, and especially the recent one demanded for signing death certificates. The sanitary rates, for which our profession is at bottom responsible, are becoming intolerably heavy all over the country, and we have been playing into the hands of engineers and patentees of all sorts, of fantastic and ephemeral inventors of sanitary appliances, and not into our own; while, on the other hand, we are breaking down that old trustful feeling which existed between patient and doctor, and at the same time piling up taxes which, in their incidence, fall as heavily, or indeed heavier, on our own shoulders, as the medical is among the highest taxed class in the country.—I am, etc.,

Eastbourne, Nov. 20th. CHARLES ROBERTS, F.R.C.S.

QUALIFIED ASSISTANTS AND DISPENSARIES.

SIR,—After reading with much interest the extract from Dr. Martin's address on "Pay Hospitals and Cheap Doctors," which you published in the BRITISH MEDICAL JOURNAL of November 17th, a question suggested itself to me as one which might with all fairness be put to Dr. M. and others who hold the same views regarding dispensary practice. The question is: "What salary would Dr. M. pay for the services of a duly qualified medical man acting as his assistant?"

One is prompted to ask the question on the following grounds, namely, that there are many men who, by dint of stolid perseverance and strict economy, have succeeded in obtaining qualifications enabling them to be put on the *Register*, but have no capital with which to purchase a footing in their profession.

Now, are these men to be relegated to the position of assistants during their whole career, a position irksome and unenviable enough in all conscience, held in the majority of instances on a beggarly pittance, a wage which many a flunkey would turn his nose up at.

My humble opinion is that many a man who opens a dispensary does it to enable him to get by work what his luckier professional brother has become possessed of by easier means, and that is the wherewithal to purchase a position.—I am, etc.,

Queen's Road, Sheffield, Nov. 20th. A. G. THOMPSON.

*** We print this letter as coming from a correspondent who gives his name, and as a contribution to the discussion of an important question. But we cannot see how the amount of salary which Dr. Martin gives to his assistant, if he has one, is pertinent to the matter. Dr. Martin does not object to a qualified man opening a dispensary, but to his doing so on terms and in a way which seem to him dishonest. No doubt men must live, and many young medical men find it hard to do so, but that does not justify disgraceful practices. What Mr. Thompson has to prove is not the necessity which drives, or may drive, medical men to do these things, but the honourable character of the things themselves.

THE NEW PHARMACY.

SIR,—A letter appeared in the BRITISH MEDICAL JOURNAL of November 3rd, entitled "The New Pharmacy," which must have brought joy to the heart of every dispensing doctor who read it. It tells us that assistants, surgery boys, and even surgeries are quite unnecessary if we use compressed drugs in tabloids; that by so doing we shall diminish our drug bills by 30 per cent. and please our patients better.

On the strength of this letter I have communicated with two well-known firms who make a specialty of compressed drugs and sent them each six simple prescriptions which I frequently use. Their answers were not encouraging: three prescriptions out of the six, they say, are impossible to reduce to tabloid form, and, further, on comparing their prices for tabloids and uncompressed drugs, I find in every case the tabloids are more expensive.

I should very much like to hear how the writer of the article gets some common drugs, such as glycerine or the mineral acids, reduced to tabloids.

Hoping that such a boon will some day be rendered more practicable and that pharmacists will endeavour to render dispensing less troublesome and costly than it is at present, I am, etc.,

November 26th. A DISPENSING DOCTOR.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

Sir,—My attention having been called to a paragragh in the British Medical Journal of November 17th, in which I am reported to have made, at the annual dinner of the Irish Medical Schools' and Graduates' Association, certain comments respecting qualifications for hospital appointments, I shall feel obliged if you will allow me state in your columns that such comments are wrongly attributed to me, as I did not make any allusion to the subject.—I am, etc.,

J. W. Hulke, President.

Royal College of Surgeons of England.
Nov. 20th.

*** The report was received by us in the ordinary course, and published without alteration.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

Surgeon Edward Miall Dobinson, H.M.S. *Imogene*, died at Malta on November 17th, aged 30. His commission dated from November 11th, 1891.

Inspector-General Richard Denton Mason, C.B., died at Ipswich on November 23rd, in his 81st year. He was appointed Surgeon, November 25th, 1837; Fleet Surgeon, February 22nd, 1841; Deputy-Inspector-General, September 21st, 1861; and Inspector General, November 3rd, 1874. He retired from the service, February 4th, 1875. He was a Knight of the Legion of Honour, nominated Companion of the Bath, June 17th, 1871; appointed Honorary Surgeon to the Queen, December 13th, 1879; and awarded a good service pension, December 3rd, 1887.

Surgeon Joseph C. Wood has been appointed to the *Victory*, additional, November 27th.

INDIAN MEDICAL SERVICE.

The promotion of Surgeon-Lieutenant-Colonel W. H. Gregg, Bengal Establishment, to be Brigade-Surgeon-Lieutenant-Colonel, and which has been already announced in the British Medical Journal, has received the approval of the Queen.

Surgeon-Lieutenant-Colonel Joseph Wilson, M.D., Bengal Establishment, has retired from the service, which he entered as Assistant-Surgeon, March 30th, 1872.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel Henry Stannard is promoted to be Brigade-Surgeon Lieutenant-Colonel, *vice* W. W. Tomlinson, retired, October 31st. His previous commissions are dated as follow: Assistant-Surgeon, October 1st, 1868; Surgeon, March 1st, 1873; Surgeon-Major, October 1st, 1880; and Surgeon-Lieutenant-Colonel, October 1st, 1888. He has no war record in the Army Lists.

THE VOLUNTEERS.

Surgeon-Lieutenant J. W. T. Gilbert 1st London (City of London) Artillery, is promoted to be Surgeon-Captain, November 28th.

Surgeon-Captain E. B. Reckitt, 1st Lincolnshire Artillery (Western Division Royal Artillery), is promoted to be Surgeon-Major, November 28th.

The under-mentioned officers have resigned their commissions from November 28th: Surgeon-Captain G. A. Gloag, 2nd Gloucestershire (the Bristol) Artillery; Surgeon-Lieutenant J. P. Bush, 1st Volunteer Battalion the Gloucestershire Regiment; Surgeon-Captain L. Thelwall, 4th Volunteer Battalion the Essex Regiment.

Captain G. W. Dickson is appointed Surgeon-Lieutenant to the 5th (Perthshire Highland) Volunteer Battalion the Royal Highlanders; and Mr. William Little, M.D., to the 1st Dumbartonshire Rifles, November 28th.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE LAW OF CHARITABLE USES IN THE COLONIES.

An interesting and important Privy Council appeal from the Supreme Court of Victoria has just been decided in such a manner as to set at rest an important doubt which has arisen as to whether gifts to charitable uses made by Colonial testators were or were not subject to the peculiar restrictions of the English law. The matter is of so much importance to hospitals and medical institutions that we think it desirable to give a summary of the case. The title of it was: "The Mayor, Aldermen, and Citizens of the City of Canterbury *v.* Wyburn and others, and the Melbourne Hospital," and the judgment of the Judicial Committee was delivered by Lord Hobhouse. The original judgment of the Colonial Supreme Court was delivered in May, 1893. The facts were as follows: A domiciled Victorian, who was himself a medical man, died, having bequeathed a sum of £10 000 to trustee in trust for the Mayor and Corporation of the City of Canterbury for the purpose of buying a suitable piece of ground at Canterbury, and erecting thereon a free library and reading room for the working classes. The respondents contended that the gift must fail by reason of the English statute law, which restricts gifts to charitable uses. Mr. Justice A Beckett, who originally heard the case, maintained the validity of the gifts, and directed the executors to comply with the directions of the testator. The residuary legatees appealed, and the Supreme Court considered that, as the £10,000 is given for the purchase of land in England, the case is the same as if the testator had actually devised land of his own in England. They argued that, although the Victorian testator is quite free to make such a gift, as nobody can so operate on English land the bequest of the £10,000 was invalid. From this order the city of Canterbury appealed.

The judgment of the Privy Council pointed out that the English statute law does not prohibit all gifts of lands for charitable uses. The policy of the Legislature was to restrain the mischief caused by the increase of land held in mortmain by gifts from "languishing or dying persons on their deathbeds to the disherison of their lawful heirs." The mode taken to restrain this mischief was to enact that gifts of land, or of money to be laid out in the purchase of land, should be void if they were intended to be for charitable uses unless certain special provisions were complied with. But both the mischief struck at and the methods prescribed for lawful gifts were of a local character peculiar to England, and it was impossible to suppose that the English Legislature had intended to affect a will subject to the law of Victoria, seeing that the Mortmain Acts did not apply to the Colonies, and that Scotland and Ireland were expressly exempted. Their lordships said they could hardly suppose that anyone would feel alarm at the ideas of foreigners giving large sums of money to English purposes. If it be true, as their lordships were inclined to think, that this was the first case of its kind to come into Court, the experience of a century and a half tended to prove that there was no reason to suppose that such gifts would ever become too common. In their view, therefore, the will was a valid will binding on the testator's executors, and a Victorian Court of Justice should direct them to perform their obligation. The effect of this judgment, oddly enough, is to deprive the Melbourne Hospital and other Colonial charities of an interest under the residuary bequests, but the result of the decision is favourable to hospitals in this country, for the contingency that a wealthy colonist may make a will in favour of some of the great English charities is by no means an improbable one.

UNQUALIFIED ASSISTANTS.

Lexa writes: I read with interest the letter of "M.O.H." in the British Medical Journal of November 24th, as it so accurately describes the situation in the country town where I am in practice. The assistant is unqualified, and to the best of my belief has not even attended a medical class, and therefore may not be described as even a student. He has been with his present employer many years, gets the title of "doctor" from the more ignorant, attends confinements, and does a general practitioner's work till the patient seems in a serious condition, and then the qualified man comes to the rescue, and if necessary the death certificate is signed. If the subject is mentioned to his employer he would probably say he is a dispenser. Does the case warrant bringing to the notice of the General Medical Council? There are other medical men, properly qualified, resident in the town who would doubtless be glad of a share of the work done by this "doctor." It seems very hard that men should spend time, brains, and money to become qualified, and then find themselves ousted from the field of competition by a man who has little beyond a suave manner and his employer's name to trade upon, and that an unqualified, uneducated person should prevent a qualified and educated man the privilege of earning a livelihood. Should "M.O.H." be able to move or get any advice or redress in the matter I will be pleased to hear from him, and compare notes as to the best means of rectifying this abuse.

Qualified writes: In reference to the letter of "M.O.H.," in the British Medical Journal of November 24th, and owing to a similar state of affairs existing in this neighbourhood, a thickly populated mining district, I sympathise with him. Here the principal keeps two assistants, one qualified the other not, living together a mile and a-half from his residence. These work a large branch practice, private club, and union. The unqualified man visits and attends midwifery, and is regarded by the patients as the principal, and is called "Doctor," though he has never attended a hospital as a medical student. He has been a fixture in the practice for over twenty years, and within the last three, through the death of his late principal, has been dishonourably taken over with the practice by his present one, no purchase money being paid. The attention of the General Medical Council has been drawn to this by a resident medical man, with the result that "their inquiries were perfectly satisfactory." A more flagrant case of covering could not exist, and yet there seems no remedy.

In response to the restrictive comments in the British Medical Journal of November 17th, p. 1147, under the above heading, the practitioner therein alluded to has forwarded a vindicating letter, the undue length of which, with the limited space at our disposal, precludes its insertion. We simply rejoin that if, as averred, "he keeps within legal bounds," he has nothing to fear from any investigation by the General Medical Council in the event of the question at issue being submitted for their consideration. Nevertheless, we feel constrained to note that the *tu quoque* argument and the specific admission that "he had lent an unqualified man" to [illegible] tends rather to self-condemnation than exculpation from the allegations referred to by "Rossendalian."

CONSULTATION WITH QUALIFIED ASSISTANT.

R.H.S. writes: I would feel extremely obliged by your kindly expressing your opinion on the following particulars:

A. was attending a child whose parents, for some reason of their own, wished B., another resident practitioner, to be called in by A. in consultation. At the time B. was away from home, whereupon the parents asked A. to meet me (C), B.'s assistant. This latter proposal A. refused to comply with, stating, at the same time, that he was as good as any assistant, and qualifying his objection on the grounds that it would be *infra dig.* for him, a man with a practice, to meet an assistant, and he actually preferred to throw up the case rather than meet me.

A. and B. are on fairly good terms of friendship; A. and I are not, nor ever have been, personally acquainted with each other, and knowingly I have not during my short sojourn here done anything to deserve A.'s

unfriendly act, as it appears to my mind. A. is a L.R.C.P. and L.R.C.S. (1881) Edin., L.S.A., etc., and I am a M.B., B.Ch., etc., Univ. Dub. (1892).

Was A. justified in refusing to meet me under the circumstances, and was I right in taking up the case after A. had thrown it up in preference to meeting me? A. the matter has given rise to a good deal of talk, and has not helped to strengthen the harmony which exists between the medical men in the neighbourhood, I would deem it a favour by your saying what the proper course was for B. and me to have followed respectively.

*** To the above very exceptional case we are of opinion that the principle laid down in the rule appended equally applies to a registered qualified assistant as to a practitioner in practice for himself. Further, inasmuch as A. resigned the case rather than meet C. in consultation, the latter would be justified in taking charge of the patient on behalf of his principal B. "When a senior practitioner is called upon to meet a relatively young and less practised junior in consultation for a second opinion, it will be competent for the former to represent the propriety and advantage of obtaining the assistance of a more experienced practitioner; but if the patient specially desire to have the opinion of any qualified member of the profession, even though a comparatively youthful junior, it will be at the option of the practitioner in attendance to acquiesce or withdraw. As a rule, however, a practitioner should never decline to meet another merely because he is his junior; and he will best consult his own interest and that of the profession by a ready and courteous assent to meet any junior of good repute; a contrary course would reflect discredit on himself and the faculty."

PARTNERSHIP AGREEMENTS.

G.Y.P. writes: I have lately bought a medical practice, and the vendor employed his solicitor to sell his practice, there being no agreement between self and vendor as to who was to pay.

*** Our correspondent inquires whether he can be made to pay the whole or any part of the legal expenses. In the absence of any agreement, and our correspondent not having instructed the solicitor to act for him, he is not liable for any part of the legal expenses.

CONSULTATIONS.

M.A., M.D.—Assuming that our correspondent has not been unintentionally misled by the representations of C., and that B. was made fully aware that he (C.) was a patient of A., the alleged unethical procedure in ignoring the attendant practitioner was reprehensible. Though we can quite understand that C. was personally satisfied with the progress made under A.'s treatment, it was not unnatural that his friends should wish to have a second opinion; nor can we see any valid objection to the senior surgeon of the local hospital (himself, if we mistake not, an M.D.Lond.) being consulted in a medical case, seeing that in these days hospital surgeons do not limit their practice to surgery any more than do the majority of physicians to provincial hospitals confine themselves to purely medical cases.

With regard to the contrast afforded by the relative course of action of A. and B., in the concurring cases referred to, comment is unnecessary.

CONTRACTS WITH PATIENTS.

PERPLEXED writes: Is there anything unprofessional or derogatory to the true interests of our profession in attending cases of sickness occurring among the working classes on the following terms: 7s 6d. for one week's attendance, including visits and medicines? I may say in many instances if this plan were not adopted, the medical man would run the risk of not being paid; or if he charged in the ordinary way, would have to wait a very long time for his money. Under these circumstances, would one be justified in carrying on this style of practice?

*** There is nothing derogatory in attending patients at the rate mentioned by our correspondent. There is nothing to prevent a medical practitioner from contracting with his patient to attend him for fixed weekly payments, and it is only when these are of so low a character as to degrade the profession in the eyes of the public, that any exception can be taken to them. To pay 7s. 6d. per week is doubtless quite as much as many working men can afford, and if all the working classes in the country paid as much as this for their medical attendance, the medical profession generally would be much better paid than it is.

NON-EXISTENT PROFITS.

P. Q. X.—If the facts are as stated by our correspondent, he has reason to complain of his treatment, but it is to be feared he has no legal remedy. The agreement appears to have been £1 per week with board and lodging, and a percentage of profits, which were non-existent; much, therefore, as we may condemn the action of a principal who by means of a ruse of this description gets a qualified assistant at less than the market value, and although it is possible that by an action at law the assistant might recover damages for the deception practised upon him, the latter can hardly be recommended to try the doubtful chances of a lawsuit. It is a little surprising our correspondent did not, when he first entered upon his duties, discover the state of affairs, and at once demand an alteration in the terms of the agreement.

A LONG BILL.

L.R.C.P. writes that Dr. X. has recently sent in to a patient whom he formerly attended a bill for a large sum, which is stated to be the amount due for professional attendance and medicine during thirty-five years. Dr. X. was repeatedly asked for his bill, but never sent it in. The gentleman who has now received it has asked our correspondent for his advice.

*** If no bill has ever been sent in by Dr. X., and nothing has been paid on account by the patient during the last six years, it is obvious that no fees for professional services rendered anterior to that time can be legally recovered. While there can be no doubt as to the law on this subject, circumstances could be readily imagined which might make it grossly inequitable for a patient to avail himself of the Statute of Limitations against his family medical attendant, but according to the facts detailed in our correspondent's letter there do not seem to be any such in this case.

CLUB ARREARS.

G. W. writes that some time after his appointment to a Court of Oddfellows, the members passed a rule making the payment to the surgeon optional. After two years it was found that this rule was beyond their powers, and since then he has been paid in full. He has claimed for the period during which the illegal rule in force; but the members do not consider themselves liable.

*** It is very doubtful whether our correspondent could recover these arrears, and it would scarcely be politic to try to do so. It is to be presumed from his letter that he was not called upon to attend any of these members during the interval they had ceased to subscribe to the medical fund, so that the claim, if pressed, would appear, to the Court at least, a very inequitable one

Under a strict interpretation of the contract it is not to be denied that our correspondent might have a case, but it is by no means certain he would win the day, if he were unwise enough to litigate on it.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

In the recent class list of the University of London for the M.B. Degree, the London Medical Schools are represented as below:

	First Division.	Second Division.	Total.
Guy's	5	7	12
St. Bartholomew's	3	8	11
University College... ...	1	9	10
St. Thomas's	4	4	8
St. Mary's	3	5	8
London School of Medicine for Women	1	6	7
London	0	5	5
Middlesex	2	1	3
King's College	1	1	2
St. George's	0	0	0
Westminster			
Charing Cross			

Of the larger schools Guy's, and of the smaller ones St. Mary's, show the best record. The success of the Women's School speaks well for the clinical teaching at the Royal Free Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

FELLOWSHIP EXAMINATION.—The following gentlemen having passed the necessary examination have been admitted Fellows of the College:

Grade II.—A. W. Bate, L.R.C.S.I., 1880, etc.; M. R. Cleary, L.R.C.S.I., 1882, etc.; J. Cotter, M.Ch. Q. Univ. Ireland, 1880, etc.; J. H. Fergusson, L.F.P. and S. Glasg., 1881, etc.; R. L. Joynt, B.Ch. Univ. Dublin, 1890; G. R. Lawless, L.R.C.S.I., 1879, etc.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates passed in:

Surgery.—W. Allingham, St. George's Hospital; M. Carter, Charing Cross Hospital; R. W. S. Christmas, Charing Cross Hospital; E. E. Dufty, Sheffield; G. W. Gosthng, University College Hospital; G. Lowsley, London Hospital; H. A. Julius, St. Thomas's Hospital; R. W. Middleton, Leeds; H. W. Ramsay, St. Bartholomew's Hospital; R. W. Roberts, St. Mary's Hospital; F. E. Saunders, St. Mary's Hospital; G. A. Simpson, London Hospital; A. M. Thornett, Royal Free Hospital; E. A. Tudman, University College Hospital.

Medicine, Forensic Medicine, and Midwifery.—T. D. Bell, University College Hospital; A. K. Gordon, St. Mary's Hospital; G. W. Gostling, University College Hospital; A. W. Haines, Birmingham; T. S. F. Hudson, Birmingham; A. E. Lovett, London Hospital; W. E. Stanton, London Hospital; F. H. P. J. U. Walker, St. George's Hospital.

Medicine and Midwifery.—R. G. Worger, Guy's Hospital.

Medicine.—A. L. M. Churchill, Westminster Hospital.

Forensic Medicine and Midwifery.—W. Sutcliffe, Birmingham.

Midwifery.—F. W. Mawby, Guy's Hospital.; A. M. Thornett, Royal Free Hospital.

To Messrs. Allingham, Carter, Christmas, Dufty, Gostling, Haines, Hudson, Jones, Julius, Mawby, Stanton, Tudman, Walker, and Miss Thornett was granted the diploma of the Society.

INDIA AND THE COLONIES.

BURMAH.

Rangoon Lunatic Asylum.—Viewed in the light of the modern treatment of the insane, the voluminous report of the Rangoon Lunatic Asylum for 1893 affords an opportunity of observing the difficulties attending the inauguration of a new system, and the ground that must be travelled to bring such a primitive institution abreast with modern ideas. We have space only for a few of the points of interest mentioned in the report. It appears there is a code of rules in Bengal under which criminal lunatics, in order to qualify for release, "are required to undergo a period of probation extending to three or six years after their attainment of sanity." This has led to the accumulation of sane persons in the lunatic asylum, and consequently insufficiency of accommodation. This is, of course, completely at variance with accepted views on the subject, and we cannot help wondering why asylum accommodation should be taken up by sane criminals, surely they should be sent back to prison as soon as the medical officer can certify that they have attained their sanity. During the year there were 99 criminal and 235 civil lunatics in the asylum, 69 were admitted and 81 discharged or died. The daily average number resident was 255, and there were 43 deaths, giving the unusually high death-rate of over 16 per cent. When, however, the sanitary conditions of the place are considered this death-rate is accounted for, especially when we find the superintendent pointing out that so long as the site on which the night soil was buried was waste ground there could be no objection to that method of disposal, but since the ground has been in a measure built upon and is being enclosed by a pucca wall he says "that to continue to dispose of the asylum night soil as heretofore *is open to objection.*" The italics are ours. Again, "at present the cells and barracks are washed out, there are no drains to collect the water used in the washing so it sinks into the ground, the smell was certainly most offensive." In commenting upon the number of lunatics who had escaped, the medical superintendent remarks: "Now there are several criminals who are perfectly sane and it is a singular circumstance that not one of their number made use

on has not tended in anywise amicably to settle the general question of the hospital treatment of such cases. The Chesterfield Board of Guardians have now for some long time kept the matter going, and as recently as the present month had the account—or rather an amended rendering of it—before them, haggling on that occasion as to the *modus operandi* of settling the disputed bill. At this moment, any circumstance which will have a tendency to delay co-operation between sanitary bodies and Poor-law boards in the direction of the isolation of paupers, is to be deplored. We have reiterated our desire that the matter could be always settled by the public health body doing all that is necessary for the safeguarding of the health of the community, they being recouped all out-of-pocket expenses entailed on account of *bond fide* paupers by the guardians. This way out of the difficulty is now adopted in many unions, and it will be well when the practice is universal. Only, it will be equally essential to a smooth working of the arrangement that there be no squabbling over the part which the guardians will have to play after all the work has been done for them.

ASSISTANTS AND NOTIFICATION FEES.

MEASLES.—As the notifications occurred entirely in Dr. B.'s practice, Dr. B. is clearly entitled to the fees Under the Act the fees in question can only be paid to the medical man notifying the contagious disease; but there can be little doubt that the assistant or *locum tenens* would be required at law to hand over the same to their principal under their ordinary contract in the absence of special agreement to the contrary.

MUCH TOO ZEALOUS INSPECTORS.

ALPHA encloses a remarkable letter which he has received from the "Assistant Surveyor" to a leading London vestry, in answer to a complaint that the sanitary inspector had visited the room in which patients suffering from diphtheria were lying. Some sort of excuse for this unusual and undesirable procedure on the part of the inspector is suggested by the plea that the mother herself invited him to enter the room, but the defence is wrecked by the claim that "the patients in this instance being at home, it is obvious that he must be in and out of the room seeing what steps are taken towards disinfection and isolation." The assistant surveyor evidently has a very imperfect comprehension of the proper extent and limits of the duties of the sanitary inspector with regard to infected households, but to a matter of this kind "Alpha" should have addressed the medical officer of health.

DR. A. G. MACDONALD writes with reference to a similar case at Cupar Fife. From his letter, and the report in the *Fife Herald*, it seems that he was attending a girl of 17 who was suffering from scarlet fever, and that owing to some obscurity in the symptoms there was some delay in reporting the case The sanitary inspector, having heard of it as a probable case of scarlet fever, very naturally and properly called at the house to make inquiries. Whether he was invited to see the patient by the mother, or whether he took the initiative, is a point upon which the evidence is conflicting, but at all events he went into her room, and after an inspection of the chest and arms—at a respectful distance—confirmed the diagnosis of scarlet fever. Dr. Macdonald lodged a protest with the county council, whose servant the inspector was, but after referring the matter to a committee for inquiry, it was decided that the inspector had not exceeded his duty in entering the room and seeing the patient. In the course of the discussion reference was of course made to the delay in notifying the case, and one of the speakers indulged in some criticisms upon the treatment of the case, which were singularly out of place. Since, in the judgment of the council, the sanitary inspector is properly employed in entering the sick room and undertaking the diagnosis of infectious diseases, and the chairman in pronouncing *ex cathedrâ* opinions as to the treatment which he thinks has been adopted in the cases so diagnosed, we are likely to hear of further misunderstandings at Cupar. Although his intentions were doubtless excellent, the inspector was far out of his latitude, and it is a thousand pities that his employers carried their proper desire to support their officer to an injudicious extent, thereby making trouble for the future.

MUNICIPAL INFECTIOUS HOSPITAL RETURNS.

R. R. R.—We know of no published return of hospital treated cases of infectious disease; though Dr. Thorne Thorne mentions one called for by the Local Government Board in his report "On the Use and Influence of Hospitals for Infectious Disease" of 1882, which return he says contained record of "the number of patients suffering from several specified diseases who had been treated in the hospitals during the three years 1876-8." Mr. Johnson Ferguson called for a very similar return in the House of Commons in March of last year, in respect of recent times. We have not seen the return prepared in consequence, and cannot find that it has been yet published.

PERSONAL VISITS BY MEDICAL OFFICER OF HEALTH.

DR. J. G. WOODS (Preston), writes: In reference to letter of "M. O. H." as to "personal visits by medical officers of health" in the BRITISH MEDICAL JOURNAL of November 17th and your comment on same, I should like to place before you a communication of the Local Government Board on the same matter, as I cannot see what right any medical officer of health has to visit a case personally which has been duly notified by a fully qualified practitioner unless for some urgent reason, and then I consider it is his duty to inform the notifier of his intention, so that he may take steps if he so wishes to be also there at the same time. The letter which I enclose a copy of was received by the clerk to the Garstang rural sanitary authority in answer to a letter of his as to the right of Dr. Fisher, medical officer of health, to visit cases of Dr. Gorham without the latter's knowledge or consent.

"Local Government Board, Whitehall, S.W.
"February 2nd, 1894.

"Sir,—I am directed by the Local Government Board to advert to your letter of December 29th last with reference to the representations which have been made by Dr. Gorham, of Garstang, as to the action of the medical officer of health for the Garstang rural sanitary district in visiting certain of his patients. As regards the general question of the medical officer of health's duties in connection with cases of infectious disease, I am to state that the Infectious Diseases (Notification) Act, 1889, makes no difference in those duties but merely extends his information as to the existence of cases of infectious disease. His duties as regards such cases are prescribed by Article 18 (*b*) of the Board's order of March 23rd, 1891, of which a copy is enclosed. It appears to the Board to be undesirable that the medical officer of health should in general undertake a personal diagnosis of the notified cases in order to test the accuracy of the certificates. In some cases, as where there is reason to doubt the good faith of the certifier, or where the disease is one which in itself is, or owing to the attendant circumstances, threatens exceptional danger to the community, it may be desirable that the medical officer should make a personal diagnosis, but it must be remembered that this can only be done with the consent of the patient or those having charge of the patient, and that the medical practitioner in charge of the case should always be communicated with and his co-operation secured it possible.—I am, Sir,

"ALFRED J. ADRIAN, Assistant Secretary."

I respectfully suggest your publishing this letter so that harassed practitioners may have something to go by and officious medical officers of health may have something to be warned by.

OVERDUE CLAIMS.

MEMBER writes to say that, owing to an attack of serious illness, he omitted to send in at the proper time his claim for extras against the guardians, and that they now inform him they are unable to pay, as a period of more than twelve months has elapsed since the date when the debt accrued. He asks whether he has any legal remedy.

*** We believe our correspondent has no remedy if the debt is against the guardians for Poor-law services, but if it is against the guardians acting as the sanitary authority of the district for notifications or other sanitary services, he can recover his claim.

NOTIFICATION AND REMOVAL.

MICKLETON sends the following statement and query. A medical man notifies a case case of scarlet fever, with an intimation that removal is not desirable. The medical officer of health does not see the patient or communicate with the notifier; but next day the sanitary inspector calls and removes the case to hospital. What right has the inspector to do this?

*** None, under the circumstances as stated. Probably there was some misunderstanding or oversight. We are not told whether the friends desired or objected to removal.

LITERARY NOTES.

THE promised *Life of Sir Andrew Clark* is being prepared by Canon MacColl, with the co operation of Dr. W. H. Allchin. An Introduction will be contributed by Mr. Gladstone. The book, which will be published by Messrs. Longmans, is not expected to be ready for some time yet.

The new Norwegian *Pharmacopœia* will be ready for publication at the end of the present year.

Translations of a series of Clinical Lectures by Dr. W. R. Gowers will shortly be published in Italy and in Germany. In the series will be included that on "Silver and Syphilis," which appears in this issue of the BRITISH MEDICAL JOURNAL.

Charcot, like Gull, physicked his patients very sparingly. If he did not, like Sydenham, recommend students to read *Don Quixote* as a part of their medical education, he thought the works of the so-called "naturalist" school of novel writers useful for other purposes. He used to prescribe certain chapters of Zola as the surest emetic known to him; other works of the same master and his disciples were in his opinion valuable as narcotics. He used to say the best shop for narcotics was at Medan (where the author of *Nana* lives); there an infallible "drowsy syrup" could always be got for 3.50 fr. To a student who, after a lecture in which erotomania had been touched upon, asked what was the best remedy for incontinence, Charcot replied, "Anæmia—or, better still, apoplexy." As regards anaphrodisiacs, the only one he had any confidence in was that used by the uncle of Heloise in the case of Abelard. *Cela* (he would add with a grim smile) *tranche la difficulté.*

The first thesis for the degree of Doctor of Medicine, presented to the Paris faculty, that was printed, bears date February 17th, 1589. If a complete list of the theses from that time onwards could be examined, it would serve as an abstract and brief chronicle of the vicissitudes of medical doctrines, and show what Hamlet calls the "form and pres-

sure" of each period. The titles of some of the older theses are very quaint. Thus we find the question: Is woman an imperfect work of Nature? openly discussed in 1643. Mrs. Sarah Grand might be trusted to deal with a man who should ask such a question now. In the same year, one André Guget maintained that heroes were ten months' children; this is a point which was somehow overlooked by Carlyle. In 1622 a precursor of Sir Wilfrid Lawson stood up for water as a more wholesome drink than wine: on the other hand, in 1643 a less austere candidate argued in favour of getting drunk once a month as a sanitary observance. In 1704 Cl. Du Cerf answered the question, *An hominis primordia vermis?* in the affirmative. In 1711 Ant. de Jussieu denied that the mother's blood nourished the fœtus. J. Fr. Leaulté to some extent anticipated Brown-Séquard when he took the affirmative side in discussing the question, *An testes ad mentis fecunditatem multum conferant?* In 1637 Robert Debonnaire was bold enough to deny that children born with a caul were especially lucky. In 1639 a learned Theban urged that the best cure for love-sick maidens was bleeding. In 1662 Hipp Duval maintained that baldness was the result of an over-enthusiastic worship of Venus. In 1624 the value of music as a therapeutic agent was recognised. The question whether literary men ought to marry was discussed in 1745, and answered in the negative, as it has been since by Mr. Andrew Lang and others. It is probable, however, that literary men will defy augury, and marry in spite of the imprudence of the step.

The *Boston Medical and Surgical Journal* of October 11th contains an unpublished poem of considerable length by Oliver Wendell Holmes, which was read at a medical supper party forty-eight years ago. After expressing a wish to chase from the brows of the learned company the

> Portentous scowl, which marks in every age
> The blistering, clystering, tooth-extracting sage,

he goes on to speak of

> Our noble Art, which countless shoals invade,
> Some as a science, many as a trade!
> In every column quackery has its line:
> From every corner stares the doctor's sign;
> From every shore the straining vessel tugs
> Ill-scented balsams, stomach-turning drugs:
> The keels of commerce clear the farthest surge
> Lest some old bedlam want her morning purge.
> The seaman wanders on his venturous route
> To turn a baby's stomach inside out.
> Rich were the Queen of yon hepatic isle
> With half her subjects squander on their bile:
> Rich were Van Buren could he pay his bills
> With half his people's wash on "Brandreth's Pills,"—
> Or with his products fill his farmers' carts
> With tare and tred for reproductive parts.
> . . . . . .

He touches off the quack as follows:

> Small is the learning, which the patients ask.
> When the grave Doctor ventures on his task.
> To greet the Quack admiring hundreds come,
> Whose wisdom centres in his file and drum.
> Why shouldst thou study, if thou canst obtain
> A wig, a gig, an eye-glass, or a cane?
> Greenest of greenhorns! know that drugs like these
> Are the best weapons to subdue disease.
> Shouldst thou not flourish by enacting lies,
> Step into print, get puffed, and advertise:
> And in the *Post*, the *Herald*, or the *Sun*
> Thus let thine honest manifestoes run:
> That great physician, learned Dr. C.,
> F.R.S., Staff Surgeon, and M.D.,
> Lately from London; now at number four
> Left side of North Street (Don't mistake the door)
> May be consulted for life's various ills;
> Where's also sold the patent "Pickwick Pills."
> What grieves the Doctor is, that all mankind
> To their own good should be so shocking blind.
> He could not stand it, but relief imparts
> The grateful feeling of a thousand hearts.
> His fee is nothing; 'tis his conscious skill,
> Backed by the virtues of the "Pickwick Pill."
> That prompts the Doctor to dispense his cure
> To all mankind, and also to the poor.
> What is dyspepsia? When the humours vile
> The cardiac sphincter closes on the bile.
> What cures dyspepsia? Why, the doctor's skill
> (Consult by letter and enclose a bill).
> . . . . . .
> Of testimonies which have come in heaps
> But two small cartloads now the Doctor keeps.

Then come samples of the testimonials, including one from the Reverend Judas Jones to the following effect:

> Dear Sir: The blessing of the Lord attend
> You and your ointment called "the loafer's friend."
> My worthy wife, the partner of my toils,
> Like Job of old, has suffered from the "boils,"
> Some on her fingers, wherewithal she knits,
> Some on her person, whereupon she sits,
> Which quite unfit her, when her ail returns
> To do her duties by her small concerns.
> Since times are hard and earthly comforts dear,
> And gospel harvests come but once a year,
> With my good deacon I resolved to halve
> One precious box of your unrivalled salve.
> With Heaven's kind blessing and one hearty rub
> We chased away this leprous Beelzebub.

The whole poem is an excellent example of the "Autocrat's" humour in a somewhat broader vein than he allowed himself in his writings addressed to the general public. The same number of the *Boston Medical and Surgical Journal* contains a bibliography of Holmes's writings on medical and scientific subjects extending to two columns.

The first series of the *Practitioner*, which, under the editorship of the late Dr. Anstie, Dr. Lauder Brunton, Dr. Donald MacAlister, and Dr. Mitchell Bruce, extends to fifty-three volumes, will come to an end with the current number (December, 1894). Messrs. Macmillan and Co., the proprietors, who have published the journal from the beginning, have transferred it to other hands, and it will in future be published by Messrs. Cassell and Co., under the editorship of Mr. Malcolm Morris. The editors, in the December number, announce that a prospectus setting forth the principal features of the new series will be forthwith issued to subscribers and others by Mr. Morris, and they bespeak for him the support of the profession. We understand that the new *Practitioner* will cease to be described as distinctively concerned with "Therapeutics and Public Health," and will appeal to the medical public as "a journal of practical medicine."

The following extract from the *Ferdinand Court Fathom* of Tobias Smollett—himself, be it remembered, a medical practitioner who had felt the bitterness of the struggle for professional life—shows that the simple arts of Bob Sawyer (late Nockemoff) and the more dainty devices of the ambitious specialist of the present day were not unknown in the eighteenth century:

> The means used to force a trade, such as ordering himself to be called from church, alarming the neighbourhood with knocking at his door at night, receiving messages in places of public resort, inserting his cures by way of news in the daily papers, had been so injudiciously hackneyed by every desperate sculler in physic that they had lost their effect upon the public, and therefore were excluded from the plan of our adventurer.....He should acquire interest enough to erect a hospital, lock, or infirmary by the voluntary subscription of his friends—a scheme which had succeeded to perfection with many of the profession who had raised themselves to notice upon the carcasses of the poor. Yet even this branch was overstocked, insomuch that every street was furnished with one of these charitable receptacles, which, instead of diminishing the taxes for the maintenance of the poor, encouraged the vulgar to be idle and dissolute, by opening an asylum to them and their families from the diseases of poverty and intemperance.

The London Building Act.—The Sanitary Institute has arranged for a discussion to be held on Wednesday, December 12th, at 8 P.M., at the house of the Institute, Margaret Street, Regent Street, W., on the sanitary aspects of the London Building Act. The discussion will be opened by Dr. G. B. Longstaff, Chairman of the Building Act Committee of the London County Council, and it is expected that other members of the County Council, as well as members of local boards and vestries, and the officers who will be concerned in carrying out the Act, will take part in the discussion. The Act comes into force on January 1st next, and contains a number of provisions with respect to the height and curtilage of buildings, as well as other matters of great sanitary importance.

At the request of the Council of the British Institute of Public Health, Dr. G. Sims Woodhead, the Director of the Research Laboratories of the Royal Colleges of Physicians and Surgeons, will give a lecture on Friday, December 7th, at 5 P.M on the Diagnosis of Diphtheria and its Treatment by Antitoxin Serum. The lecture will be given in the theatre of the laboratories, and members of the medical profession are invited to attend.

MEDICAL NEWS.

A Typhoid Antitoxin.—A rumour was current on the Stock Exchange of Frankfort-on-Main the other day, that the Höchst Works would shortly bring on the market a typhoid antitoxin of Behring's discovery. The consequence was a decided rise in Höchst shares!

American Jottings.—The number of medical students in the United States is given by the New York *Medical Record* as 13,000.—The town of Leicester, Massachusetts, has received 6,000 dollars under the will of the late Dr. Pliny Earle for the erection of a building for the public library of the town.—It is estimated that there are some 3,400 medical practitioners within the corporate city limits of Chicago, embracing a territory of 186½ square miles and a population in round numbers of 1,625,000 inhabitants.—According to Dr. G. F. Shrady the average annual income of a medical practitioner "in full practice" in a large city in the United States may be stated as 2,000 dollars (£400) a year, and in the smaller towns and in strictly rural districts 1,200 dollars (£240) a year. Two or three practitioners in New York make over 100,000 dollars (£20,000) a year; five or six range from 50,000 to 60,000 dollars, fifty from 25,000 to 30,000 dollars, one hundred and fifty from 10,000 to 12,000 dollars, about three hundred from 5,000 to 6,000 dollars, fifteen hundred from 2,000 to 3,000 dollars, and the remainder from 800 to 1,000 dollars. Payment for medical services varies in different localities. In the large cities the fees are always comparatively higher. In New York the general family practitioner charges from 2 to 5 dollars per visit to the patient's house. The average of such fees for the wealthy is 5 dollars, although twice that sum is usually demanded by practitioners whose practice is mostly limited to that class. Office consultations by experts range from 10 to 25 dollars, as do also consultation visits. Visits out of town are from 10 to 20 dollars for each hour of absence from home plus travelling expenses, and the regular fee of 25 dollars for the consultation itself. Surgical operations command the highest prices, and range according to the skill and fame of the operator, from 100 dollars up into the thousands. Night calls are twice the amount of day calls whether ordinary or consultation visits. In many of the smaller towns the practitioner gets no more than half a dollar for an office visit and twice that amount for a call within a mile from his home.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to the Chairman of the Medical Board by December 13th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £150 per annum. Applications and testimonials to A. Forrest, Secretary, before December 12th.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon, doubly qualified. Appointment for two years. Salary, £90 per annum, with residence and maintenance in the house. Applications to the Chairman of the Board of Management, Secretary's Office, 29, Eastgate Row North, Chester, before December 1st.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Appointment for six months. Board, residence, and allowance for washing provided. Applications to the Secretary at the Office, 24, Finsbury Circus, E.C., by December 13th.

DERBY COUNTY ASYLUM, Mickleover.—Second Assistant Medical Officer. Salary, £100 per annum, increasing £10 annually to £130, with board, lodging, and washing. Applications to the Medical Superintendent.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon; must possess surgical qualification. Appointment for six months, but may be held by re-election for a further period of six months. Board, residence, and washing provided. No salary. Applications to the House Governor by December 1st.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury. House-Surgeon to Out-patients (non-resident). Appointment for six months, but holder will be eligible for a second term of office. Salary, 25 guineas. Applications to the Secretary, by December 11th.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for the Fever Hospital at Monsall; doubly qualified, not less than 25 years of age. Salary, £250 per annum, with board and residence. Applications to the Chairman of the Board by December 15th.

OWENS COLLEGE, Manchester.—Junior Demonstrator in Anatomy. Annual stipend £100. Applications to the Registrar by December 10th.

PARISH OF ST. LEONARD, Shoreditch.—Second Assistant Medical Officer (Male) for the Infirmary, Hoxton Street, N. Doubly qualified. Salary, £40 per annum, with rations, furnished apartments and washing in the Infirmary. Applications to the Medical Officer, 204, Hoxton Street, N.

ROYAL BERKS HOSPITAL, Reading.—House-Physician, House-Surgeon, and Assistant Medical Officer. Salary, £80 per annum each for the first two appointments, with board and lodging. For the third appointment board and lodging will be provided, but no salary. Applications to the Secretary before December 11th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Three Members of the Court of Examiners; must be F.R.C.S. Applications to the Secretary, by December 8th.

ROYAL EAR HOSPITAL, Frith Street, Soho Square.—House-Surgeon (six months' appointment). Honorarium, 12 guineas.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Appointment for six months. Salary at the rate of £40 per annum, with board and lodging. Applications to the Secretary by December 5th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, Strand, W.C.—Clinical Assistants. Applications and testimonials to T. Beattie Campbell, Secretary, before December 1st.

ST. GEORGE'S HANOVER SQUARE PROVIDENT DISPENSARY, Little Grosvenor Street, W.—Resident Medical Officer. Salary, £100, with allowances (about £80) and residence at the Dispensary. Applications to the Secretary, by December 3rd.

SALFORD UNION INFIRMARY, Hope, near Eccles.—Assistant Medical Officer, doubly qualified. Salary, £130 per annum with furnished apartments in the Infirmary. Applications endorsed Assistant Medical Officer, to T. H. Bagshaw, Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by December 11th.

SHEFFIELD GENERAL INFIRMARY. — Assistant House-Surgeon; doubly qualified. Salary, £80 per annum, with board, lodging, and washing. Appointment for three years. Applications to the Medical Staff of the Sheffield General Infirmary to the care of the Secretary by December 8th.

SHEFFIELD UNION.—Junior Assistant Resident Medical Officer to the Workhouse Infirmary, Fir Vale; doubly qualified. Appointment for six months. Salary at the rate of £25 per annum, with board, lodging, and washing. Applications to Joseph Spencer, Clerk to the Guardians, Union Offices, Sheffield, by December 11th.

WARNEFORD HOSPITAL, Leamington Spa.—House-Surgeon; single. Salary, £100 per annum, with board, lodging, and washing. Applications and testimonials to J. Warren, Secretary, before December 5th.

WEST KENT GENERAL HOSPITAL, Maidstone.—House-Surgeon, unmarried. Salary, £120 per annum, with board, furnished apartments, coal, gas, and attendance in the hospital. Applications to the Secretary by December 1st.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon; tenable for six months. board and lodging are provided. Applications and testimonials to R. J. Gilbert, Secretary Superintendent, before December 12th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Anæsthetist (Honorary and Non-Resident). Applications and testimonials to R. J. Gilbert, Secretary Superintendent, before December 12th.

MEDICAL APPOINTMENTS.

ANDREWS, Archibald G., F.R.C.S., reappointed Junior Anæsthetist to the Manchester Royal Infirmary.

BOND, William Arthur, M.A., M.D., B.C., D.P.H.Camb., M.R.C.P.Lond., appointed Medical Officer of Health for Southwark, *vice* Fallon Percy Wightwick, M.D.Durh., D.P.H., deceased.

BYLES, John Beuzeville, M.R.C.S.Eng., L.R.C.P.Lond., D.P.H.Camb., appointed House-Surgeon to Addenbrooke's Hospital, Cambridge.

CAMPBELL, Donald, M.D.Glasg., reappointed Medical Officer of Health to the Calne Town Council.

DAVEY, W. H. Carthew, M.R.C.S., L.R.C.P.Lond., appointed Honorary Assistant Surgeon to the Liverpool Infirmary for Children.

DUNLOP, J. Dordon, M.B., C.M.Glasg., reappointed Medical Officer of Health to the Long Sutton Local Board.

HOWLETT, Richard T., M.D.Lond., appointed Assistant Bacteriologist in Dr. Macfadyen's Department at the British Institute of Preventive Medicine.

HUDSON, Godfrey, M.B.Edin., appointed House-Surgeon to the Huntingdon County Hospital.

HUDSON, J. S., L.R.C.P., M.R.C.S., appointed House-Surgeon to the East London Hospital for Children, *vice* Henry Troutbeck, M.A., M.B., B.C. Cantab.

HUNT, Bertram, M.A., M.B.Oxon., appointed Assistant Bacteriologist in the Diphtheria Department at the British Institute of Preventive Medicine.

LOGIE, James, M.B., C.M.Aberd., appointed Medical Officer for the Charlton District of the Woolwich Union.

MACGUIRE, Chas. E., M.B., C.M.Aberd., appointed Assistant Medical Officer to the Durham County Asylum.

MARTIN, Albert M., M.B., B.S., appointed Assistant Surgeon to the Royal Infirmary, Newcastle-upon-Tyne.

MORRIS, W., L.R.C.P.Edin., L.F.P.S.Glasg., appointed Medical Officer for the West Bolton District of the Bolton Union.

PALMER, L. Spencer, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Reigate and Redhill Cottage Hospital, *vice* H. W. Ewen, resigned.

PORTER, Thomas, M.B.Vict., reappointed Assistant Medical Officer to the Manchester Royal Infirmary.

Pirie, J., M.A.Aberd., M.B., C.M., **appointed Medical Officer** for the Harbury District of the Southam Union.

Ritchie, A. Brown, M.B.Edin., appointed Honorary Surgeon to Hulme Dispensary, Manchester, *vice* J. Prince Stallard, M.B.Edin., resigned.

Stallard, H., B.A.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to Newark Hospital, *vice* E. Ringrose, resigned.

Stephens, C. E., M.B., appointed Medical Officer for the First District and the Workhouse of the Morth Witchford Union.

Stoker, John Wm., L.R.C.P., L.R.C.S., L.M., appointed Medical Officer and Public Vaccinator for the Rainham District of the Romford Union.

Were, F. J., M.B.Vict., appointed Medical Officer for the Gorton District of the Chorlton Union.

Wilson, A., F.R.C.S., reappointed Senior Anæsthetist to the Manchester Royal Infirmary.

DIARY FOR NEXT WEEK.

MONDAY.

Royal College of Surgeons of England, 5 P.M.—Professor E. Treacher Collins: On the Anatomy and Pathology of the Eye. Lecture I.

TUESDAY.

Pathological Society of London, 8.30 P.M.—Dr. W. P. Herringham: Subdural Hæmorrhage in Pernicious Anæmia. Dr. F. T. Paul: (1) Cancer of an Axillary Breast; (2) Calcifying Cutaneous Adenoma. Dr. P. H. Pye-Smith: Cystic Kidneys. Dr. Herbert Snow: Chondro-sarcoma of the Humerus. Mr. S. G. Shattock: Tumour of Palate.

The Clinical Museum, 211, Great Portland Street.—Open at 2, Lecture at 4.

WEDNESDAY.

Royal College of Surgeons of England, 5 P.M.—Professor E. Treacher Collins: On the Anatomy and Pathology of the Eye. Lecture II.

Obstetrical Society of London, 8 P.M.—Mr. Targett will give a limelight demonstration on Hydatids of the Pelvis. Specimens will be shown. Dr. A. H. N. Lewers: A Case of Primary Carcinoma of the Body of the Uterus, in which Vaginal Hysterectomy was performed and more than two years have elapsed without recurrence; with a Table of five other cases of Vaginal Hysterectomy for Cancer of the Body of the Uterus. Dr. John Shaw: Peritonitis, its Nature and Treatment.

National Hospital for the Paralysed and Epileptic, Queen Square, 3 P.M.—Lecture by Dr. Gowers.

Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Mr. Cheatle: Surgical Cases.

THURSDAY.

Harveian Society of London, 8.30 P.M.—Mr. Herbert W. Page: First Harveian Lecture on Some Disorders of Nervous Function due to Injury and Shock.

Neurological Society of London, National Hospital, Queen Square, 8.30 P.M.—Cases will be shown by Dr. Cagney, Mr. Dean, Mr. Openshaw, Dr. S. Mackenzie, Mr. Horsley, Dr. Ogilvie, Mr. Stoddart (for Dr. Bradford), Dr. Beevor, Dr. Taylor, Dr. Whiting for Dr. Bastian.

FRIDAY.

Royal College of Surgeons of England, 5 P.M.—Professor E. Treacher Collins: On the Anatomy and Pathology of the Eye. Lecture III.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3*s.* 6*d.*, *which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

BIRTHS.

Owen.—On November 11th, at 3, St. Alban's Place, Blackburn, the wife of O. Trafford Owen, M.B.Edin., of a son.

Pinkerton.—On November 27th, at 71, Craven Park, Harlesden, London, N.W., the wife of Robert L. Pinkerton, M.A., M.D., of a daughter.

Stubbs.—At the Convalescent Home, Barkly West, on Monday, October 29th, 1894, the wife of P. B. Travers Stubbs, Esq., J.P., L.R.C.P., M.R.C.S., etc., District Surgeon of Barkly West, of a daughter.

MARRIAGES.

Jones—Westmacott.—On November 24th, at Marylebone Church, by the Rev. Arthur B. Cartwright, M.A.Oxon., John Hervey Jones M.D. Lond., M.R.C.S., of Chorlton Lodge, Stretford Road, Manchester, to Violet Westmacott, of 12, Nottingham Place, London, W.

Stewart—MacKellar.—At Tarbert Harris, N.B., on November 7th, by the Rev. Donald Machean, Minister of the Parish, James Stewart, J.P., L.R.C.P., L.R.C.S.E., Medical Officer of Health for North Harris, to Maggie, elder daughter of Daniel MacKellar, Esq., Proprietor, Tarbert Hotel.

DEATH.

Walker.—On November 23rd, at Redcar, Yorkshire, William Walker, M.D., M.R.C.S., L.S.A., in his 48th year.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

Cancer, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. F. S., 2.

Central London Ophthalmic. *Operation Days.*—Daily, 2.

Charing Cross. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 2.

Chelsea Hospital for Women. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. F., 2.

East London Hospital for Children. *Operation Day.*—F., 2.

Great Northern Central. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Ear, Tu. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

Guy's. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

Hospital for Women, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

King's College. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—M. F., 2.

London. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

London Temperance Hospital. *Hours of Attendance.*—Medical, M. Tu. F., 2; Surgical, M. Th., 2. *Operation Days.*—M. Th., 1.30.

Metropolitan. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2. *Operation Day.*—F., 9.

Middlesex. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1.30, S., 2; (Obstetrical), Th., 2.

National Orthopædic. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

North-West London. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

Royal Eye Hospital, Southwark. *Hours of Attendance.*—Daily, 2. *Operation Days.*—Daily.

Royal Free. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic, M. F., 10.30; (Diseases of Women), S., 9.

Royal London Ophthalmic. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

Royal Orthopædic. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

Royal Westminster Ophthalmic. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

St. Bartholomew's. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

St. George's. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu. F., Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

St. Mark's. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, S., 3; females, W., 9.45. *Operation Days.*—M., 2., Tu. 2.30.

St. Mary's. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

St. Peter's. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 5, Th., 2, F. (Women and Children), 2, S., 4. *Operation Days.*—W. and F., 2.

St. Thomas's. *Hours of Attendance.*—Medical and Surgical, daily, except Wednesday, 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), M., 2.30, F., 9; (Gynæcological), Th., 2.

Samaritan Free for Women and Children. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

Throat, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30. *Operation Day.*—Th., 2.

University College. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th. 1.30; S., 2.

West London. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.

Westminster. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetrics, Tu. F., 1; Eye, Tu. F., 9.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

HOSPITAL SHIPS.

DR. P. MURRAY BRAIDWOOD (Coleshill, Amersham, Bucks) writes: Could any of your contributors kindly assist me in finding literature on the subject of "hospital ships?"

MEDICAL INSPECTION OF SCHOOLS.

MR. W. E. BURTON wishes to be informed of instances in provincial towns in which medical officers have been appointed for the purpose of inspecting schools, once a week or oftener, during the prevalence of epidemics.

A POINT IN REFORMATORY SCHOOL ECONOMY.

WE have received a communication from a correspondent, whose signature we cannot decipher, asking whether there is not danger in allowing boys at a reformatory school to use roller towels in common.

*** The practice is necessarily attended with some risk. Our correspondent might consult the reports with reference to the prevalence of ophthalmia in pauper schools, especially at Hanwell, by Mr. Sydney Stephenson.

RIDER'S THIGH.

MR. J. RALEY, L.R.C.P., etc. (Bedford) asks to be recommended some kind of bandage or apparatus, and where obtainable, for use in rupture of the fibres of the muscle of the inside of the thigh, near the pelvis, which not infrequently occurs to riding, or more especially hunting, men. Though an india-rubber bandage, or, better, strapping, he adds, answers well so long as it remains on, its removal is unsatisfactory. He knows there are several kinds of appliances, but usually too costly to be recommended for slight cases. There may, however, be other kinds of bandage equally good if one only knew where procurable.

ANSWERS.

CALIPH might consult Murchison's *Clinical Lectures on Diseases of the Liver*, edited by Dr. T. Lauder Brunton and Sir Joseph Fayrer. London: Longmans, Green, and Co. 1885. 24s.

H. M. (Wolverhampton).—The information in question is published by the Préfecture de la Seine, and also by the English manufacturers of the apparatus, Messrs. J. Defries and Sons, 147, Hounsditch, London, E.C.

J. F. G.—As the preparation in question is a secret remedy and advertises in non-medical journals, there can be but one course for members of the profession who practise in accordance with the recognised code of ethics to take.

NAUTILUS.—The physical fitness of candidates for entry into the medical service Royal Navy is decided in each case on its own merits to a great extent by the medical board. No candidate would be likely to be accepted unless he possessed fair distant vision and was able to perform any surgical operation without the aid of glasses.

MICROPHONE STETHOSCOPE.

DR. CAREY COOMES advises our correspondent to apply to Mr. Bottone, of Wallington, Surrey, or Mr. Allsop, Bousfield Road, Nunhead, London, S.E.

PRURITUS ANI.

W. P., M.B. writes: In answer to "Member R.M.A.," I beg to suggest that the five ½ gr. pill according to the late Sir Andrew Clark be given, once, twice, or thrice a day, namely, aloin gr. ½; ferri sulph. gr. ½; ext. nucis vomicæ gr. ; pulv. myrrhæ gr. ½; saponis gr. ½; and if no relief obtained add acidi arseniosi gr. $\frac{1}{20}$.

PRURITUS AFTER ERYSIPELAS.

IN reply to "Medico," DR. A. COOPER KEY states that he has found the use of either of the following lotions to be very beneficial:—R. Pulv. sodæ bibor., gr. xx; glycerine, 3ij; naphthæ rectificat., 3ss; aq. flor. sambuci ad 3vj; M. fiat lotio: or R. Calaminæ levig. 3jss; acid. hydrocyanic. (Scheel's), 3ss; glycerine, 3ij; liq. calcis ad 3viij; M. fiat lotio. It is most important to examine the urine from time to time as on this would in a great measure depend the internal treatment. Small doses of strychnine and dilute nitric acid have proved most useful in his hands.

BOOKS FOR M.D. BRUX.

MR. ED. CURETON, M.D. Brussels (9, College Hill, Shrewsbury), writes: If the gentleman inquiring in the BRITISH MEDICAL JOURNAL of November 24th as to the books to read for M.D. Brussels, will apply to me, I shall be happy to give him all the information I can.

WELSBACH BURNERS.

DR. LENNOX MOORE, L.R.C.P. (Hertford Street, Mayfair, W.), writes: In answer to "M.R.C.P.," concerning Welsbach burners, I beg to say that I have used one for the last ten or twelve years for illuminating purposes for examination of the nose and throat and that on an average the "mantles" last me twelve months. The light is steady, brilliant, and white, and could not be better for the purpose in question, and I much prefer it to the electric light.

BELLAMY AND POLLOCK MEMORIAL.

DISGUSTED.—In reply to a long letter which we have received from our former correspondent with regard to the mode with which this fund has been expended, we may state that we find on inquiry that it is the intention of the authorities of the school, so soon as the rearrangement of the museum (now in progress) is complete, to indicate by a suitable inscription those objects which have been purchased out of the Bellamy and Pollock Testimonial Fund. The audited balance-sheet of this fund shows, we are informed, that the total amount received was £157 4s. We think that any further inquiries should be addressed to the secretaries of the fund.

CREMATION.

DR. SYM.—The Council of the Cremation Society and the Paddington Vestry are making arrangements for the erection of a crematorium and a columbarium in the Kilburn Cemetery. The number of cremations at Woking is still increasing every year. The publications of the Cremation Society may be obtained on application at 8, New Cavendish Street. Sir Spencer Wells's article on "The Disposal of the Dead" may be found in the second volume of the *Treatise on Hygiene and Public Health*, edited by Stevenson and Murphy and published by Churchill last year.

CLINE'S SPLINTS.

MR. J. O. VADOKTER (Baillieston) writes: The splints called Cline's splints are not Cline's splints at all but Pott's splints, and in Pott's description of the fracture named after him, the male splint, or the one with the footpiece, is used on the outside of the foot, the leg being slightly flexed, and lying on its outer aspect. The late Sir George Macleod used the male splint on the inside, Professor George Buchanan uses it after Pott's style, but both of these professors preferred two male Pott's splints in cases of Pott's fracture.

DR. CAREY COOMES writes: Two splints each having a foot piece should be applied to a leg fracture; the other straight Cline is useless.

DR. R. HILL SHAW (New Mills, Derbyshire) writes, in reply to "Cymro": If he will refer to Walsham's *Theory and Practice of Surgery*, p. 487, fig. 168, third edition, he will find his query answered.

CLIMATE OF CEYLON.

DR. CHARLES MOORE JESSOP (Redhill) writes: In reply to "Devon" I should say Kandy was not a good climate for chronic phthisis. It is damp and muggy throughout the year. Hong Kong is a better climate, 500 feet above Victoria Town during north-east monsoon, and a house at Peak, 1,400 feet in south-west monsoon. Grand Canary is a dry climate on sea shore, a colder 1,000 feet higher up in a town whose name I forget. Dehra Doon, near the Kangara Valley, India, 2,000 feet above sea level, I believe, is an excellent climate—the magnificent scenery of the Himalaya range to the north and to the south a lovely expanse of green and brown herbage.

NOTES, LETTERS, ETC.

A HOAX.

OUR attention has been called to a hoax, to call it by that name, which has been played upon certain London tradesmen. Dr. J. J. Rutherford, M.O.H. for Shipley, has recently received bills for various articles used by medical men which he had not ordered nor received. The matter is in the hands of the police, but it would appear that some individual has been personating Dr. Rutherford.

THE CONTAGIOUSNESS OF PHTHISIS.

DR. CHARLES R. DRYSDALE (London) writes: The BRITISH MEDICAL JOURNAL of November 3rd contains two series of statistics which point strongly in the direction of phthisis being a contagious and therefore a preventable disease. In the Vital Statistics, London Sanitary Districts, during the Third Quarter of 1894, it is mentioned that the highest mortality from phthisis had occurred in the districts of St. Giles, St. Luke, Whitechapel, St. George-in-the-East, St. Saviour Southwark, St. George Southwark, and Bermondsey, whilst the lowest death-rates from that disease occurred in St. George Hanover Square, Stoke Newington, London City, Battersea, Wandsworth, and Plumstead. This shows how much more frequently phthisis pulmonalis is found in the crowded quarters of the poor than in the richer quarters in London. In Paris this fact has been known for some years. Dr. Lagneau sent me last year a paper read at the Académie de Médecine, wherein it was stated that one poor district in Paris named Plaisance had nearly

ten times the death-rate from phthisis as the Champs Elysées. This view of matters has been corroborated by the remarks of Dr. Jaques Bertillon in the Journal of November 3rd, where it is said: "Overcrowding and mortality are in direct proportion; phthisis is much more prevalent in districts where the dwellings are overcrowded."

In this, phthisis resembles all the diseases of contagious nature, and as so much has already been done to prevent the spread of variola, scarlatina, and other contagions, it would seem that phthisis might also, if similar means were made use of, become very much less of a scourge than it has been. Poverty is at the root of overcrowding, and ought, if possible, to be less widespread, and the means suggested by Dr. Cornet for disinfection of houses would do a great deal. If only the public and the medical public were thoroughly convinced that phthisis is contagious, much might be accomplished.

*** Although there can be little doubt that the mortality from phthisis is greatest in densely populated and poor districts, it would be safer to wait for statistics embracing a larger period than three months before making decided comparisons between the relative mortality from this disease in the different sanitary areas of London. We hope to publish before long phthisis statistics for the whole of the current year; these will afford a basis sufficiently large upon which to calculate the relative mortality from phthisis in different parts of London. With reference to Dr. Drysdale's statement, on the authority of Dr. Lagneau, that the mortality from phthisis in one part of Paris is ten times as high as in the Champs Elysées, we should like to know on how long a period and upon what total of deaths this mortality is based.

Income Tax Assessments.

The Income Tax Repayment Agency write: Will you allow us to correct two mistakes in "D.M.S.'s" reply to "M.D."? The first is that the horse and carriage must be used exclusively for professional purposes. The words of the Act are that the expenses claimed should have been "expended exclusively and necessarily in the performance of the duties of the employment." This is very different to saying that the horse must be "used exclusively." Say that a horse and carriage cost £60 a year to keep and are used in the proportion of five-sixths (or profession and one-sixth for private use. We hold that five-sixths of the expenses incurred are exclusively and necessarily expended for the purposes of the profession and that the doctor is entitled to the amount of the five sixths. The second mistake is telling "M.D." that he can appeal again at the end of the year to the Special Commissioners. He cannot, he must appeal again to the same commissioners who assessed him. This does not, however, prevent him from being assessed next year by the Special Commissioners if he so wish it. What "M.D." should do is to appeal to the General Commissioners as soon as he can make out that his year's profits have not reached the amount of the assessment upon which he paid tax and then decide whether he shall elect to be assessed for the following year by the General or Special Commissioners. If he receives justice from the General Commissioners it may be as well to continue to be assessed by them; if he does not it will be advisable to try the Special Commissioners.

G. P. writes: I have for some time watched with interest the struggles of my fellow medicos in the galling meshes of the income tax and its arbitrary executive, while I have been for some years sailing along in smooth waters, and I have accomplished this by putting before the assessor figures which he has in past years accepted on which I base my coming declaration of the amount to which I am liable. Of course I keep a practice account book, apart from my private and household expenditure, and dividends from funded property, which has already paid income tax. In strict accordance with their instructions, I send each year a return in form and figures just like the following, of which I retain a copy, attaching the original to the income tax schedule sent in to the assessor for the local commissioners. Of course these present figures are given for example sake, and we will consider it the return sent in last April, which I send in. Of course, the returns for 1891 and 1892 having been accepted, the amount for 1893 cannot well be questioned, and I have no surcharging.

	£	s.	d.
Return for 1891 ...	127	6	6
" " 1892 ...	451	4	3
" " 1893 ...	810	8	3
Divide by 3 ... ... 3 / 1,388	19	0	
	462	19	8

... Income for 1893.

The Surgery Paper at the London M.B.

Member of the B.M.A. writes: Hitherto I have considered the London University an examining body that required a high but fair standard. May I draw attention to the surgery paper in the recent M.B. examinations? Be it remembered this is a pass examination for a medical degree, the B.S. being only given after another examination in surgery. Three questions were set, and three hours were allowed for the paper. The first question was on fracture of the clavicle, and was a sound and practical one. The second was on follicular odontome (dentigerous cyst), and ends up, "With what other varieties of odontome are you familiar?" As Erichsen in his 1888 edition says 8 are on record, I should like to ask the examiners with how many they are familiar. It is a pretty piece of wit, and one greatly appreciated by a candidate in whom passing is a matter of importance. The third question was: "Classify the hydrocele of the testis, etc. Give the differential diagnosis between hydrocele of a hernial sac and congenital hydrocele."

The conclusion is that the paper is a "catch" paper; the second and third questions unpractical; they are not the sort of questions usually set; and to set two out of three questions of such a type in the pass M.B. is unfair.

This is not the cry of a rejected student, but of one who feels, in common with many others, that such a paper brings ridicule on the examining body, and calls for protest.

The Zoological Muse.

Dr. R. J. Anderson, Professor of Natural History (Queen's College, Galway) writes: The following lines, written by a lady medical student, may be found useful by some humble follower of Owen and Huxley:

Characteristics of Mammalia.

Occipital condyles number two,
But there's no os quadrate in view;
And, please remember for the future,
The skull bones all unite by suture;
The ramus, too, of the mandible
A single bone is for to nibble.
Of course the teeth are each in socket;
That you will know without this docket.
Substances three do not forget;
And then how many kinds, and yet
Just as important is the brain—
Or rather more so, I maintain;
So, of whatever things you know some,
Do not forget corpus callosum,
The commissure that does connect
Cerebrum hemispheres; this fact
And pons Varolii, then tell 'em,
Connects also the cerebellum.
Now the young embryo's connected,
And by an amnion protected:
Then would it be too much strain mental
To know marsupials aplacental
And that the monotremes absurd
Lay eggs, as if each were a bird.
If not with rhyming nearly sated,
Remember that non-nucleated
The red corpuscles gaily whisk
Each a biconcave little disc.
But cannelide have them oval.
Now this would end this mammal novel,
Except that Nature provides hair
Which they upon their bodies wear:
She also feeds, and keepeth quiet
The young mammalian with milk diet

H. A., Galway.

Darwinism and Syncope.

Mr. D. McKenzie, M.B. (Larkhall, N.B.), writes: While reading over the "Discussion on Functional Diseases of the Heart" introduced by R. Douglas Powell, M.D., I was struck by an interesting remark made by him with regard to the ordinary habituation of sudden excitement or emotion being followed as a general rule by slowing of the heart and [illegible] by the [illegible] if the subject be [illegible] points out that the [illegible] safety depended upon [illegible] agreeing so far, might [illegible] syncope occurring [illegible] salutary, inasmuch as [illegible] phenomenon of common [illegible] with imminent danger

The Peculiar People.

There are many ways [illegible] invented by which to [illegible] than that of the Peculiar [illegible] people is well shown by a remark made by the coroner to the effect that at Canning Town, where there are a considerable number of "Peculiars," there is a woman who is always called in to patients from which it would appear that their sanctimonious assertion that they "trust in the Lord" is not entirely true and that they are not unwilling to ask advice and treatment so long as the treatment is that of a person sufficiently ignorant. It is the light of knowledge that they shun.

The Blessedness of Beards.

Mr. Norris F. Davey (Abergavenny) writes: I think the following *jeu d'esprit* by the Rev. Mr. Wilkinson, formerly classical master in Marlborough College, will amuse your readers. His father-in-laws having denounced a clerical beard as "*mere arena, nec tutamen*," Mr. Wilkinson (though himself *imberbis*) promptly

We wear it not to [illegible]
We leave all that to laymen:
But, since it saves our throats [illegible]
It *is* a neck tutamen.

Epilepsy of from Three to Four Years' Standing: Recovery.

Dr. J. Lockhart Livingston (Hursley, near Winchester) writes: F. C., aged 10, was first seen on June 11th, 1893. He had had "three fits" when nothing at the age of 11 months. When the patient was between 6 and 7 years, the whole family suffered from head poisoning. From this time he began to have fits by day as well as night, and this condition had continued with occasional intermissions. He had been seen by several medical men during this time. Lately the mother had been in the habit of procuring a packet of bromide of potassium from the chemist, and giving it in 10-gr. doses dissolved in water three times a-day. For the past three months he had been very ill: the fits were almost continuous during the whole of every night. The father had recently died of Bright's disease. The boy was in bed, and was unable to sit up by himself; he could not feed himself and was almost

helpless; he had a semi-idiotic expression, and answered questions slowly and in a drawling manner. There were no signs of recent poisoning, no evidence of localised brain disease, and I regarded the case as one of functional epilepsy consequent on or set up by lead poisoning. Bromide of potassium was given, gr. xxiij in divided doses by day, and the same quantity in one dose at bedtime, combined with small doses of iodide of potassium. On June 16th he appeared brighter; his mother said "Last night was the best night he has had." I inquired how many fits that night; she replied "about twelve." He has not had a fit since then, and is still taking the medicine, which the mother is afraid to omit, as he gets twitchings if she does so. He has grown fat, sleeps well at night, is bright and intelligent, romps about, answers questions readily, but still speaks slowly; this appears to be natural to him.

Circumcision.

Mr. Edgar Duke (St. Leonards) writes: Is there any good reason for removing more than a portion of the prepuce in circumcising young children? I have always removed it as far back as the corona, and with good results. Quite lately I have operated upon a child, aged 11 months, as follows: A ligature of rubber tubing was tied round the organ near the root, and then as much of the prepuce as could be drawn forward for dressing forceps removed; the mucous membrane divided and trimmed, and the operation concluded without sutures and with scarcely any hemorrhage. For dressing, a piece of oiled lint was laid over the genitals. Result: a movable foreskin left, with plenty of the glans exposed. No trouble with dressings, and the child so comfortable that it was taken out next day, and daily afterwards (in November). Unless there is some better reason than I am acquainted with for removing the whole of the foreskin in very early life, I cannot see the necessity of doing more than a limited operation, and one which leaves the child in the same condition as the generality of his kind.

Chicken-pox at 64 Years of Age.

Surgeon-Captain J. S. Edge, A.M.S. (Aldershot) writes: Mrs. X. was staying in Liverpool with a family of four children when, on October 28th, one child developed chicken-pox. Mrs. X. nursed it, the other of the four children isolating herself with the baby and the other two children more or less unavoidably being attended on by Mrs. X. The child recovered and Mrs. X. left on November 6th for Aldershot. On November 12th Mrs. X. had a headache, and temperature of 100.4° and felt poorly. On November 13th watery vesicles appeared on the upper part of the back, the neck, the cheek, and one thigh; they burst during the day. On November 14th a second crop of typical vesicles appeared all over the loins, and the temperature remained about 100° with headache and furred tongue. She also had a letter to say that the other three children of the family she had been staying with developed chicken-pox on November 11th. Mrs. X.'s age is 64, and it is for this reason I record the case.

Scarlatina and Measles in the same Patient.

Dr. John P. Henry (High Street, Lewisham, S.E.) writes: The cases of this nature recorded in the British Medical Journal of October 20th and November 24th remind me of a case which occurred in my own practice in the present year. I first saw the patient, W. H., a boy, aged 6, on the evening of May 3rd. He was then suffering from a sharp attack of bronchitis, with a temperature of 102° F. On the morning of May 4th he had a typical scarlatina rash which lasted the usual time. A few days later catarrhal pneumonia supervened, and ran a severe course. Desquamation commenced on May 14th, and on my visit next day his face and chest were covered with a thick eruption of measles, which afterwards spread over the whole body. When I saw that the boy had measles, I feared that the pneumonia would be intensified, but on the decline of the measles rash the lung rapidly cleared, and the patient made a capital recovery. Desquamation was completed in about six weeks from the appearance of the first rash. The interval between the two eruptions was eleven days, almost the same as in Dr. Johnston's and Dr. Ferguson's cases.

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SIXTY-SECOND ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF MEDICINE.

Frederick T. Roberts, M.D.Lond., F.R.C.P., President.

A DISCUSSION ON ATAXIA, AND THE DISEASES OF WHICH IT IS A SYMPTOM.

I.—J. A. Ormerod, M.A., M.D.Oxon., F.R.C.P.,
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Physiology and Pathology of Ataxia.

In a discussion on ataxia or inco-ordination (which I take it will mainly refer to inco-ordination of movements), it may be well to begin by briefly considering what is meant by co-ordination. In nearly all movements, even in very simple ones, more than one muscle is engaged. Thus, for the simple act of clenching the fist, apparently performed by the long flexors of the fingers, there is required a simultaneous contraction of the extensors of the wrist. Other simple movements, such as flexion and extension of the ankle, raising and lowering the eyeballs, etc., are obtained, not by the direct traction of one muscle, but as a resultant of the oblique traction of two or more. Now, the majority of our movements are much more complicated than these, and consequently require a more complex association of muscular actions; and for the proper performance of such movements not only must a proper set of muscles act, but each must act at a proper time, for a proper length of time, and with a proper force. To this harmony in the elementary forces which produce a movement the term "co-ordination" is applied, and when the harmony is imperfect then there is inco-ordination, or, which is the same thing, ataxia.

When the desired effect of muscular action is a movement, the disability produced by such want of harmony is called "motor ataxia." But muscular co-operation may be required not for movements only, but also to retain a fixed position against external forces, and a similar imperfection in this respect is called "static ataxia."

Does this definition maintain the distinction usually made between ataxia and paralysis? Dr. Mercier,[1] whom I have followed, puts the point in this way. Co-ordination consists in the preservation of a due ratio between the muscular forces (their strength, time, and duration of action); so that when this ratio fails there is inco-ordination. But if all the muscles concerned act insufficiently, their relative strength being nevertheless preserved, then there is weakness or paralysis. This is clear enough, so far as concerns paralysis of a movement. But paralysis of an isolated muscle may upset the harmony of a movement. Thus a man with palsy of the extensors of his toes, in walking lifts his knees inordinately high. We might call him ataxic, but incorrectly, for co-ordination, I take it, is essentially a function of the central nervous system; whereas, in this case, the paralysed muscles are cut off by disease of the lowest nervous segment from any and every combination; and we can no more blame the nerve centres than we could impugn the skill of a pianist if some of the keys in his instrument were dumb.

Nevertheless, in cases of central nervous disease, we must not be surprised if the distinction between paralysis and ataxia is sometimes difficult to maintain. For, if the higher motor centres, as Dr. Hughlings Jackson teaches us, represent not muscles but movements, then the selection and combination of muscles is as much a part of their function as is mere stimulation of muscles, and failure of such centres might conceivably be evidenced by ataxia as well as by paralysis of movement.

Again, it may be thought advisable to extend the term inco-ordination so that it shall include cases not only of faulty adjustment between the muscles concerned in one movement, but also between the several movements of a series; or, again, of faulty adjustment between the sensory stimulus which starts a movement and the motor response which follows—as, for instance, in the maintenance of equilibrium by muscles which act in response to afferent impulses from the semicircular canals and elsewhere.

If co-ordination be produced by the action of the central nervous system, where are the "centres" for this process situated, and what is the mechanism on which they act? We do not certainly know. But perhaps we may hazard some such statement as this: There is no one "co-ordinating centre" for all and every kind of movement, ready to put this finishing touch, as it were, on motor stimuli of every grade and variety. Nay, rather, if every movement, from the simplest to the most complicated, requires co-ordination, we must suppose that this function is closely connected with the action of every motor centre, from those of a low grade to those of the highest grade. Ataxia might then be caused by disease at very various levels, and might conceivably manifest itself in very various ways. But, curiously enough, the disease of which it is most characteristic—namely, tabes—is a disease that affects white fibres rather than grey centres, and it is round this question—namely, the production of ataxia by disease of conducting fibres—that the battle of theories has raged.

There are two main theories.[2] First the sensory—or better the reflex—theory of Leyden. On this view the due selection and control of muscular action takes place in response to afferent impulses from sensory organs. The initiation of a movement may be voluntary, but the muscular adjustment, once learnt, is reflex. For as we learn complicated movements by laborious attention to the incoming stream of sensations—from eyes, from semicircular canals, from skin, joints, and (above all) from muscles, so (it is supposed) when the movement has become automatic, these stimuli still remain as guides to the central co-ordinating mechanism. And ataxia may arise when disease of afferent fibres blocks, delays, or perverts these guiding impressions.

Against this theory Erb has urged the following objections, among others: that sometimes in cases of marked ataxia there is no discoverable loss of sensation, and conversely that total loss of sensation has been observed without ataxia. He adopts, therefore, a second or motor theory. The block, he thinks, cannot (as represented in the reflex theory) be on the afferent side of the co-ordinating centre, it must therefore be on the efferent side. Co-ordination of movement once learnt by the higher centres is carried on, he believes, without the guidance of sensation, and "co-ordinating impulses" are transmitted from the centres down special fibres which are distinct from the motor fibres and lie probably in the posterior columns. Disease of these fibres causes the ataxia of tabes. It is obvious, however, that the existence of these fibres is quite hypothetical, and perhaps we might add unlikely. Neither theory, then, is quite free from objections; it may suffice to have briefly stated the two.

A third view must be mentioned[3] (which appears to be an almost inevitable modification of the motor theory) namely, that the ataxia of tabes is a cerebral symptom, and has nothing to do with the spinal condition. It is based, I believe, on some researches of Jendrassik into the condition of the cortex cerebri in tabes.

The Clinical Features of Ataxia.

It is one thing to define inco-ordination verbally and from a physiological standpoint, another to recognise ataxic movements when we see them. Perhaps this ought not to be so; but I imagine that here, as often, the clinical description came first, the physiological definition afterwards.

Let us confine ourselves to the limbs and trunk, and consider the upper limbs first. In moderate ataxia there is a

[1] *Brain*, vol. vi, p. 79.

[2] See Erb on Diseases of the Spinal Cord in Ziemssen's *Cyclopædia of Medicine*, vol. 13, p. 87 *et seq.* (American translation).

[3] Sydney Kuh, Pathology of Locomotor Ataxia, *Med. News*, March 3rd, 1894.

clumsiness and want of precision about the finer movements, rendering difficult or impossible such actions as threading a needle, writing, fingering a musical instrument, or such handicrafts as involve delicate manipulation, or even such an action as fastening a button. In picking up a pin the hand wavers uncertainly, goes wide of the object, and the fingers fumble in grasping it. There is difficulty in bringing the finger tip rapidly to a given point, say to the tip of the nose. All these difficulties are much magnified when the eyes are closed. Nevertheless, the muscular strength as tested by the dynamometer, or by resistance to passive movements, may be normal. I need hardly stay to contrast verbally this affection of movement with others such as chorea, athetosis, the rhythmical tremors of paralysis agitans, the irregular oscillations of disseminated sclerosis, etc., from the majority of which it is easily distinguished. In the upper limbs ataxia of advanced degree, such as to render them altogether useless, is certainly rare. On the other hand, the fineness of muscular adjustment which is requisite for many hand and finger movements renders the early stages of ataxia more easy to appreciate in them.

Now the movements of the lower limbs may be examined in a somewhat similar way, that is, by making the patient, while sitting or lying down, touch a given point with his toe, touch his knee with the opposite heel, describe figures with his foot, etc.—both with his eyes open and with his eyes shut. But that which is of real importance to him, and that in which ataxia best shows itself, is the functions of the lower limbs in standing and walking, for which their muscles have to be co-ordinated not only with each other, but with those of the trunk. Two different types of ataxic gait are commonly recognised:

1. That of tabes.
2. That of cerebellar disease.

In advanced ataxia due to tabes the patient as he walks (if he still can walk) leans forward with his eyes fixed on his feet; he keeps his feet apart, and, as he advances either foot, is apt to fling it forward and outward in a jerky way to an unnecessary height and with unnecessary force, and bring it back to the ground with a stamp. He is said to "walk like a cock." He can only stand still with his feet wide apart, so as to secure a wide basis of support, and while he looks at his feet. As he stands, the tendons round the ankle-joints twitch spasmodically from his efforts in balancing, just as in a normal person who is standing on one leg.

In the cerebellar type of ataxia the patient walks like a drunken man. He swerves from the direct line of march, and reels as if about to fall to one side or the other; there is the same tendency to keep the feet apart, but none of the flourishing and stamping characteristic of tabes. High authorities maintain, as we shall presently see, that the cerebellar gait is not an instance of ataxia at all, but for the purpose of a discussion it is, perhaps, best to include it.

In the earlier stages of tabes, the contrast with cerebellar disease is not nearly so great, because there is then no flourishing of the feet, and all that is recognisable may be an uncertainty in the movements of the legs, which is increased when the patient rises to begin walking, when he turns, when he stops suddenly, when he tries to walk backwards, and, above all, when his eyes are closed. Again, in standing, the patient may manage fairly even with his feet together; but if he shuts his eyes, swaying movements of the trunk begin which threaten to upset him. This last test, well known as "Romberg's symptom," is considered by most physicians to be evidence (and, indeed, the most delicate test) of the presence of ataxia. Co-existing with it is found, in most cases at least, more or less anæsthesia of the feet or legs. It is therefore, *pro tanto*, an argument in favour of the sensory theory of ataxia. The impressions from his feet failing him, the patient substitutes those from his eyes, and when these also are cut off he falls. Erb indeed says[4] that this staggering with the eyes shut is not due to inco-ordination in the strict sense, but is only evidence of loss of that sensory control which is necessary to equilibrium, for he draws a distinction between processes which serve to maintain the equilibrium and processes of co-ordination. He admits, however, that true ataxia may be increased by closing the eyes. A curious observation has been made in this connection, of which I know no sufficient explanation, that ataxic patients who are completely blind from optic atrophy may stagger when they close their eyes.

[4] *Op. cit.* at pp. 92 foll.

ATAXIA AS A SYMPTOM.

It remains to say something of the diseases of which ataxia is a symptom. Some of these are so well known that I need only mention them; of some others which are rarer I will mention the main characteristics as briefly as I can:

The following diseases of which ataxia is a symptom are enumerated:
- Diseases of cerebral hemispheres (posthemiplegic ataxia, etc.).
- Diseases of cerebellum.
- Diseases of corpora quadrigemina.
- Diseases of spinal cord:
  - (1) Disseminated sclerosis and other non-systematic lesions.
  - (2) Systematic diseases of posterior columns—for example, tabes, ataxic paraplegia.
  - (3) Diseases of posterior spinal nerve roots (Hughes Bennett).
  - (4) Diseases of peripheral nerves.
- Certain other rare diseases:
  - (*a*) So-called "acute ataxia" or false disseminated sclerosis.
  - (*b*) "Hereditary ataxia" of Friedreich.
  - (*c*) "Hereditary ataxia" of Sanger Brown.
  - (*d*) "Hereditary ataxia" of Déjerine and Sottar.

In disease of the cerebral hemispheres ataxia is an occasional but not a common symptom. I remember a man who, after a sort of apoplectic fit, became, not hemiplegic, but ataxic in one arm. Dr. Gowers has recorded cases of post-hemiplegic inco-ordination, in one of which he found, *post mortem*, an old cicatrix in the optic thalamus.[5] Children with defective cerebral development may walk in an ataxic way, like a normal infant that is learning to walk. In connection with cerebral disease, also, we may note the possibility of a hysterical ataxia.

Ataxia from cerebellar disease usually shows itself in the reeling gait which I endeavoured to contrast with the gait of advanced tabes. Now Dr. Hughlings Jackson has for some years maintained that this reel is due, not to ataxia as commonly understood, but to paralysis affecting the muscles of the back.[6] The back muscles being weak, the trunk tends to fall over and the legs have to run after it to prop it up. And recently he has strongly substantiated his view by the publication of a case of cerebellar cyst in which the back muscles were demonstrably weak.[7] So that facts go to demonstrate the truth of this ingenious theory. Nevertheless, there remains a certain residuum of facts which suggest that this may not be the whole truth, to wit:

1. That in some few cases of cerebellar disease the movements of the feet are irregular and stamping as in tabes.[8]
2. That sometimes the arms are ataxic too.[9]
3. That in other diseases where the back muscles are weak, such as pseudo-hypertrophic paralysis, the gait is different from that of cerebellar disease.

We may say that there are at least three possible views with respect to cerebellar ataxia:

1. The simple and precise view propounded by Dr. Hughlings Jackson, that paresis of the back muscles is the essential factor, and that the staggering is complementary to it, being an attempt on the part of the legs to correct the weakness of the back.
2. That, apart from paralysis of either set of muscles, the muscles of the back do not act in proper unison with those of the legs (inco-ordination in the precise sense of the term).
3. That the fault of adjustment lies, not so much between muscles or sets of muscles as between impressions received from the sensory organs of equilibrium (semicircular canals, etc.), and the motor response which they should normally evoke (inco-ordination in a less precise sense). On this theory cerebellar staggering would be analogous to aural vertigo. But, whatever the explanation, the fact remains that this reeling gait is an early and a common, though, perhaps, not an invariable, symptom of disease of the cerebellum, and, some would add, usually of its middle lobe.

Disease of the corpora quadrigemina or their neighbourhood may be characterised by a similar gait. This is not surprising considering their proximity to the cerebellum and

[5] *Medico-Chirurgical Transactions*, vol. lix, p. 31.
[6] BRITISH MEDICAL JOURNAL, 1880, vol. i, p. 194.
[7] BRITISH MEDICAL JOURNAL, 1894, February 24th (Hughlings Jackson and Risien Russell).
[8] *Brain*, vol. xv, p. 491.
[9] *Neurol. Centralbl.*, 1890, p. 468, and 1884, p. 58.

to the strands which connect it with other parts. According to Nothnagel[10], ataxia of the cerebellar type, occurring early in the course of an illness and followed by an ophthalmoplegia which involves both eyes, but in an unsymmetrical and incomplete fashion, is characteristic of disease of these parts.

In connection with the discussion of these points I may mention a rare form of disease known sometimes as "acute ataxy" sometimes as "false disseminated sclerosis." Leyden distinguishes two forms of acute ataxia,[11] the one (which I omit for the present) due to peripheral neuritis, the other of somewhat uncertain origin, but probably due to small disseminated lesions in the pons, medulla, and cord.

This affection comes on in connection with acute febrile diseases, and mostly during the early stages of them. The onset is acute and usually masked by severe cerebral symptoms such as delirium, coma, and the like. When these subside the patient is unable to speak, or at any rate to speak properly; and as he becomes less completely bedridden, impairment in the movement of the limbs is noticed. Accurate observations are in most instances of a later date, and they show:

1. That the speech is monotonous, somewhat nasal, and laboured, each word and syllable being separated and brought out with effort.

2. An affection of the limbs. The gait, usually described as ataxic, is sometimes simply unsteady and not like that of advanced tabes; but sometimes it is stamping. In a few cases there has been weakness and tendency to rigidity rather than inco-ordination; or indeed the gait may be normal. The movements of the hands are sometimes described as fumbling and ataxic; sometimes there is tremor of the hands. It would appear, therefore, that the speech affection is a more invariable symptom than the affection of the limbs; it is also a more persistent one. Consequently the name "acute ataxia" does not appear a very good one, any more than the name "false disseminated sclerosis." Sensation is normal, and the knee-jerks are exaggerated, or at least retained, not abolished as in tabes. Lesions not unlike those of disseminated sclerosis have been found in the medulla and cord of one such case;[12] but more probably it began as a disseminated inflammation; for the disease is not progressive like ordinary disseminated sclerosis, but tends towards recovery.[13]

Passing to diseases of the spinal cord, we may first notice that the symptom of ataxia may occur in some of those where the lesion is not limited to any one system of fibres, such as incomplete transverse myelitis, meningo-myelitis of a mild type, disseminated myelitis[14], disseminated sclerosis, syringomyelia, etc. But it is most common in diseases characterised by systemic degeneration of the posterior columns. Of these diseases tabes is the chief. About the ataxia of tabes I need say little more than I have done, save perhaps this:

1. That it is generally a late symptom; there may be a long "pre-ataxic stage," lasting even for many years. During this stage, however, the diagnosis of tabes may be made, from the combined presence of three main symptoms—(*a*) Lightning pains, (*b*) absence of knee-jerk, (*c*) reflex iridoplegia.

2. That even in cases of otherwise typical tabes there may exist alongside of the ataxic a certain amount of positive motor weakness.

"Ataxic Paraplegia."

Ataxic paraplegia is a combination of ataxia with loss of power. It is exceptional in simple tabes, but characterises an allied group of spinal cases. Here there is found, *post mortem*, degeneration both of the lateral columns and posterior columns of the cord, and during life an association of such symptoms as we are accustomed to refer to either of these lesions. Thus the gait is of a mixed character, partly characterised by unsteadiness and irregularity of movement, partly by dragging of the feet due to a loss of motor power and a tendency to rigidity. Into the further symptomatology (which I must own is rather variable) I must not now enter. Probably the disease differs essentially from true tabes, and not least in the conditions of its origin. Thus syphilis is said to be a far less frequent antecedent here than in tabes.

Again, combined degeneration of the posterior and lateral columns may constitute the spinal part (and this is in some instances the predominant part) of paralytic dementia. It may originate in hereditary defects, as in Friedreich's disease. It may occur in connection with pernicious anæmia.[15]

Furthermore, ataxia may be produced by lesions external to the spinal cord. Hughes Bennett has published a case in which tabes was simulated by disease of the posterior nerve roots[16], Déjerine and others have showed that it may be simulated by peripheral neuritis.[17] Such facts support the view that afferent stimuli have much to do with co-ordination of movement. When a peripheral neuritis assumes the form of pseudo-tabes, instead of its more common guise of a neuritic paraplegia, then, just as in true tabes, there is ataxia with loss of knee-jerk; but usually the reaction of the pupils to light is normal, the onset of the disease has been more rapid, and the history reveals some antecedent condition favourable to a neuritis. Such antecedents are toxic influences (alcohol particularly, and metallic poisons such as arsenic), glycosuria, acute diseases, especially diphtheria, and, more rarely, tubercle, rheumatism, gout, or syphilis. The diagnosis of this pseudo-tabes from true tabes is of practical importance, because the one disease often gets well, the other rarely, if ever.

Family Ataxia.

Having thus seen that ataxia may result from disease in very various parts of the nervous system, let us leave the anatomical lines, and consider some forms of ataxia which have in common this clinical characteristic that they run in families.

First, the hereditary ataxia described by Friedreich. This is often ranked as a variety of tabes, but the differences are well marked. The characters common to both diseases are (1) ataxia beginning in the lower limbs, and progressing slowly upwards; (2) loss of tendon reflex, in the great majority of cases at any rate. The differences are as follows: Cases of tabes are usually solitary; Friedreich's disease occurs in several members of a family, sometimes in several generations. Tabes is a disease of middle life, and of men rather than of women; Friedreich's disease begins in childhood, at puberty, or in early adult life: and attacks females and males indiscriminately. In tabes the onset of ataxia is preceded or accompanied by numerous other symptoms; by lightning pains and characteristic affections of the pupil almost always; by transient paralysis of the eye-muscles or other parts, bladder troubles, optic atrophy, and affections of sensation—commonly; by visceral crises, perforating ulcers, disease of bones and joints—sometimes. But in Friedreich's disease there are none of these things: sensation is normal, there are no pains, at least during the early stages. On the other hand, the disease has symptoms of its own, for as the ataxia progresses the speech may be involved; it becomes slurred, drawling, and indistinct, and, later, nystagmus may appear. There may develop also actual motor paresis of the legs with some amount of rigidity; and deformities such as club-foot, contractions of the toes, curvature of the spine. Frequently there is a sort of static ataxia, that is to say, a general shakiness or "wobbling" of the head, trunk, and limbs; sometimes this condition is indistinguishable from a mild chorea. The patient has often a stunted figure and semi-idiotic face. The gait has more often the reeling cerebellar type than the foot flourish of tabes. What is the anatomical basis of this disease? It has been said (Hammond, Senator[18]) disease of the cerebellum. This view lacks confirmation *post mortem*. The result of such examinations as we have seems to be that the whole nervous system is small, the cerebellum included, but not more than

[10] *Brain*, X., 21.

[11] *Zeitschrift f. klin. Med.*, 18, Nos. 5 and 6 (abstract in *Neur. Cent.*, 1891, p. 270). This does not include the rare instances of true tabes in which the symptoms develop acutely.

[12] Ebstein, *Deutsch. Archiv f. klin. Med.*, vols. 9 and 10.

[13] References on this disease are Whipham and Myers, *Trans. Clin. Soc.*, vol. 19, p. 164; Dawson Williams, *Medico-Chir. Trans.*, vol. 75; Westphal, *Arch. f. Psychiatrie*, vol. 3, p. 376, and vol. 9, p. 173. Jaccoud, *Clinical Lectures*, 1886.

[14] Dreschfeld, British Medical Journal, 1894, vol. 1, p. 1176.

[15] Bowman, *Brain*, 1894, p. 198.

[16] *Transactions of the Clinical Society* for 1885.

[17] *Arch. de Phys.*, 1884. *Arch. de Méd. Exper.*, 1889. *Sem. Méd.*, April, 1893.

[18] *Berl. klin. Woch.*, 1883, No. 21; and 1894, No. 2.

other parts. Upon this general wasting, or (it might be more correctly said) want of growth, there is engrafted distinct degeneration, first and principally of the posterior columns; secondly, and in a less intense degree, of the lateral columns.

A second form of "hereditary ataxia" was described by Sanger Brown in 1892.[19] He collected observations of no fewer than twenty-one cases from a single stock, six of which he observed himself. Here, as in Friedreich's disease, there is a family affection, characterised by ataxia of cerebellar type and without affection of sensation, beginning in the legs and progressing slowly upwards. In two other respects there is an apparent similarity, namely, that speech is affected and that there are involuntary movements. I should suspect, however, from the description given that these symptoms differ somewhat from those of Friedreich's disease, the speech being more explosive in character, the movements more spasmodic. At any rate the similarities end here. The differences are: that the age at onset may be much later, sometimes over 30 or 40 years of age; that the tendon reflexes are retained or exaggerated, not annulled; that there are no distortions of toes or feet, nor spinal curvature. The eye symptoms are different: thus nystagmus appears to be generally absent, but there is a peculiar affection of the levators of the lids (ptosis when at rest, an overaction causing staring when the lids are opened), sometimes ophthalmoplegia externa, sometimes optic atrophy. Sanger Brown's picture of an advanced case represents, I think, something different from Friedreich's disease. He writes:

> There is permanent contraction of the legs. When the patient attempts to talk the tongue appears to move in every conceivable position without being protruded; the face undergoes various inco-ordinate movements; the head is bent forward and moved from side to side; there is protrusion of the chin; and the arms are moved backward and forward. The movements are highly suggestive of chorea, but less rapid.....There is almost complete ptosis. There is scarcely any action of the external ocular muscles.....There is complete and typical atrophy of the optic nerves.

Sanger Brown had no opportunities for any necropsy; but if we may reckon under the same type three cases (brothers) published by Nonne,[20] we find that the results of an examination were as follows: General smallness, apparently from defective development, of all the nervous centres; no spinal degeneration, but optic nerve atrophy, and atrophy of the large nerve fibres in the spinal nerve roots.

Nonne, though speaking cautiously, appears inclined to refer the symptoms to cerebellar atrophy, and I notice that Professor Marie speaks unreservedly of this class of case as "hereditary cerebellar ataxy."[21] I should classify them as a different type from Friedreich's disease, but under the same natural order. Both types exhibit as a common element a congenital defect in the structure of the central nervous system, evidenced *post mortem* by its smallness; but the actual points in this weak citadel which degeneration chooses for attack may well be different.

I will conclude by mentioning a rare form of hereditary ataxia described by Déjerine and Sottar,[22] in which the peripheral nerves appear to be the part mainly attacked. The clinical account they give of these two cases (a brother and a sister) suggests a veritable hybrid; some symptoms are those of peroneal muscular atrophy (itself a "family disease"), some are those of Friedreich's disease, some those of ordinary tabes. In one of these cases they found *post mortem* an interstitial neuritis, beginning apparently in the peripheral nerves, and spreading up along the nerve trunks to their spinal roots: there was degeneration of the ascending tracts in the posterior columns, but no more than was, in the author's opinion, secondary to disease of the nerve roots.

II.—LLOYD ANDRIEZEN, M.D.Lond.,

Assistant Medical Officer and Pathologist West Riding Asylum.

I WISH in my remarks to touch mainly on the types of ataxia one meets with in the insane, to indicate briefly their character, and try to correlate them with the results of pathological investigation. I shall first touch on cases which, although they exhibit an ataxic or unsteady gait, yet show other symptoms which so vastly preponderate that the ataxic disturbance is to be looked upon as but a minor part and out come of a vast cerebral change that is going on. In some mental or brain diseases in which there is profound reduction of higher consciousness, with inability to fix the attention, and in which the patient fumbles and stumbles about his room in an automatic stage or a condition of semi-delirium, there is sufficient ataxia and unsteadiness to make him fall frequently to the ground, and these are the patients who, therefore, in our asylums show a tendency to severe bruises about their legs, hips, etc., from frequent slight falls. In these the element of weakness (adynamia) does enter to a certain extent; but what one has to bear in mind is the grave and profound nutritive cerebral disturbance taking place, the rambling or weak and incoherent utterance—when they do speak at all—the restless and fidgety movements of the hands, the furred tongue and slight febrile temperature, and the similar restless fumbling and stumbling about the room during all this time. This may occur in certain phases of general paralysis, in cases of alcoholism during the stages when there is much cerebral breaking down associated with a chronic delirious or somnambulistic stage, in senile recurrent attacks of mania (this not frequently), and in many other of the insanities.

In all these cases there is much brain breakdown going on, much nutritive disturbance, and, when the attack is over, these patients may exhibit much mental reduction, loss of memory of their previous condition, and considerable bodily and cerebral fatigue. They are a striking group of cases as showing how, with the profound nutritive disturbance going on in the brain, there may be a low semi-conscious life during which restlessness, loss of memory and attention, and overaction (irritation) of lower cerebral centres, will produce among other symptoms a restlessness combined with ataxia. I take it that in these cases we have weakness and also lack of co-ordination, the nutritive disturbance in the kinæsthetic area being the cause of the ataxia. *Per contra*, compare cases of stupor where all restlessness or delirium is absent, where the mental functions can find no outward expression, and where there is no ataxia, the patient being able to stand still or, if induced, to walk without ataxia. I think the contrast is a striking one.

Coming now to the group of ataxia from *spinal* diseases, I shall only refer to three of the insanities in which ataxia may be present. These are: general paralysis, with early or predominant spinal symptoms; chronic alcoholism; and cases of true tabes passing on to general paralysis.

Dr. Ormerod states that there are cases of tabes with a pre-ataxic stage—that is, loss of knee-jerk and reflex iridoplegia, and that these are distinctly rare. In our asylums we certainly—not uncommonly—get such cases. Many of these are cases of general paralysis. I can recall several such cases to mind in my own experience. Such patients have absent knee-jerks, the pupils are unequal, they react to accommodation, but not (or very feebly) to light; and some of the articulatory or early mental symptoms of general paralysis may also be present. In other words, there are cases of general paralysis with tabetic or pseudo-tabetic onset. I shall say "pseudo-tabetic" onset rather to distinguish them from cases of true tabes, for sometimes one can do so. The further development of these pseudo-tabetic cases is interesting, for they may take take one of two main pathways, *a* and *b*.

In (*a*) one type, the tabetic symptoms get intensified, and distinct ataxia in gait is developed. They further get lightning pains and allied sensations, including girdle and other sensations. On testing with a pin head or pin point there is diminution of cutaneous sensibility to touch and pain—irregularly distributed about the lower legs—sometimes erroneous localisation of the touch or prick in the opposite limb (allocheiria). The knee-jerk remains absent, never returns, and the ataxia of gait is intensified, and remains so while the disease progresses.

In the other type (*b*) the pre-ataxic symptoms disappear, having never attained further development; but now a group of cerebral symptoms appear on the scene. The patient gets moderate or frequent attacks of epileptiform convulsions with more permanent and deeper brain damage than in ordinary epileptic or epileptiform attacks, and with these there is a slight or moderate rise of temperature, much flush-

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[19] *Brain*, vol. xv., p. 250.
[20] *Archiv f. Psychiatrie*, vol. xx., p. 283.
[21] *Semaine Médicale*, 1893, No. 56.
[22] *Mémoires de la Société de Biologie*, Series 9, vol. v.

ing and sweating, and great throbbing of vessels in the face and head, slight or moderate pareses of the hands or legs, which after a time are recovered from. These attacks recur, and, as the result of their recurrence, they produce distinct spinal, or rather bulbo-spinal effects. Amongst the latter are a group of effects which simulate closely the lesions of lateral sclerosis. The knee-jerk, which was absent, now returns, and is even exaggerated; the pseudo-tabetic sensory troubles are abolished; he gets ankle-clonus, the former ataxic gait, with its wide basis of support in locomotion, is replaced by a normal gait, in which, however, a tendency to spasm of the calf muscles now appears; the gait becomes spastic. With the progress of the cortical disintegration accompanying each "seizure" or series of seizures, the spinal symptoms get more and more like those in spastic paraplegia, the spastic condition coming on first, and the plegia or paraplegia following later on.

There is (*c*) yet another class of cases in general paralysis in which we can find no ataxic stage, but in which the cerebral symptoms are the first and earliest; in which seizures with loss of consciousness rapidly develop, ending in lateral sclerosis with excess of knee-jerk and spastic gait. In these there is no previous loss of knee-jerk, wide gait, or early spinal sensory disturbances. It is especially in cases of alcoholic general paralysis, that is general paralysis in which alcohol plays a prominent part in causation, that this type is present. We might perhaps put these in a separate group under the heading chronic alcoholism, with foci of brain-softening, followed by descending lateral scleroses.

I now come to true tabes. This may occur in the insane apart from brain disease, but the close connection between tabes, alcoholism, and general paralysis, must never be overlooked. It may be that tabes is one of the system diseases, which in the growth of our civilisation mark the milestones, so to speak, on the way to insanity. But however that may be it is a disease by itself. In it the lesion is one of the posterior root nerve-cell of the spinal cord, and especially of its central process; its origin is therefore properly extra-spinal; it involves the ganglion cells which, embryologically are developed from the "Zwischenstrange" of His, and whose processes grow the one outwards to the surface, etc.; the other inward to the spinal cord. It is a system disease of these cells, and we must, with Gowers, Westphal, and others, look upon it as a primary nervous disease—a true neuropathy. It is different from those spinal diseases secondary to perivascular scleroses, to repeated vascular disturbances and endarteritis, or to cortical destructions.

It would be wise to establish a distinction between true tabes and all these other forms (pseudo-tabes), including those secondary to cerebral disease. In the spinal cord substance we may have endarteritis or periarteritis, and these two go together to a certain extent. In cases of the pseudo-tabes of alcoholism or of general paralysis it is frequent to find a sclerosis in the non-nervous tissues of Goll's column affecting the pia mater, the connective tissue, septa, and the adventitial sheaths of the vessels. Whatever may be the cause of these—whether a direct effect of alcohol or not on the vascular and connective tissues—these produce other effects (secondary) on the intrinsic nerve tracts within the posterior column. Examination of the posterior nerve roots outside the cord may in early cases show no lesion. I have had five such cases in which I have examined the spinal cord: and within the cord substance lies the disease, the tracts and foci of scleroses. This has two effects—namely, (*a*) nutritive and (*b*) pressure effects on the intraspinal tracts. The nutritive disturbance is due to the endarteritis, with lessening or obliteration of the lumina of the small vessels: the pressure effects are due to the perivascular sclerosis and coalescing of these sclerotic patches. These changes have their seat of election in the posterior column and as a result they produce destruction and degeneration of nerve fibres there. The posterior part of Goll's column, and a group of fibres near the posterior commissure are most affected. In the mild and recoverable pre-ataxic stage these lesions cannot be advanced, and the spinal disturbances are to be looked upon as due to commencing changes, vascular engorgement, and exudation, owing to the early effects of the alcohol or other agent, but their disappearance in certain cases is a proof that the lesion has not progressed further, or produced much actual destruction of nerve tissue.

A word as regards the post-cerebral symptoms—that is, spastic following paraplegic conditions. Westphal, Mickle, Bevan Lewis, and others have shown that here we have diffuse and scattered degenerations in the pyramidal tract—especially its posterior part—associated in some way either consecutively or simultaneously with the breaking down in the cerebral cortex (Rolandic areas). The spastic ataxias in such are all secondary to brain mischief, and must be differentiated from the primary spinal lesions—that is, intrinsic cord affections, whether alcoholic, tabetic, or general paralytic, in which the nerve structures suffer in a different way, and probably in sequence to lesions of vascular and non-nervous elements. Our pathological and clinical material in the West Riding Asylum is the basis on which I found the above contribution, with the view of drawing more attention to the study of these nervous lesions in the insanities.

III.—H. Waldo, M.D.Aberd.,
Physician to the Bristol Royal Infirmary.

Dr. Waldo said that ataxia appeared to be a symptom of many organic diseases of brain and spinal cord, as well as of the peripheral nerves, and also occurred in hysteria. He touched upon its presence in disseminated sclerosis, ataxic paraplegia, cerebellar tumours, hysteria and in tabes, and related a case of tabes with retention of knee-jerks, with the presence of other characteristic symptoms of the disease. Dr. Waldo gave short notes of a case (which he demonstrated to the meeting) of early tabes, in a man, aged 48, with Charcot's disease of the knee-joint and perforating ulcer of the foot.

IV.—Dawson Williams, M.D.,
Assistant Physician to the Children's Hospital, Shadwell.

Dr. Dawson Williams said he thought that the profession would be very much indebted to Dr. Ormerod for the admirable classification of cases of ataxia which he had worked out in his introductory remarks. The need for such classification was very great, as there could be no doubt that great confusion existed as to the true pathology of cases presenting ataxia as their most prominent, or one of their most prominent, symptoms. Dr. Williams referred to the occasional occurrence after all, or almost all, the acute specific diseases of a widespread nervous disorder, which presented in many instances the symptom of ataxy. In the acute stage these cases might present a complex of symptoms which very closely resembled the condition of a patient with advanced locomotor ataxy. Mistakes in diagnosis had actually occurred in post-diphtherial ataxy. The majority of the patients who survived the acute attack no doubt recovered completely, but in some a chronic condition remained, which resembled in its symptoms disseminated sclerosis. He added that it was interesting to observe that after an acute infectious disease, such as diphtheria, the ataxy was of acute type, whereas after a chronic specific disease, syphilis, we got a chronic progressive disorder, the typical form of locomotor ataxy.

V.—William Gordon, M.A., M.B.Cantab.,
Physician Devon and Exeter Hospital.

It is no paradox to say that it is wonderful that whilst still we know so little about inco-ordination, we already know so much. It is wonderful because the subject is so vast, embracing almost all we know about the nervous system, and so difficult—difficult not only anatomically in unravelling the tangled systems of fibres and cells, but also physiologically in tracing the course of sensory tracts which plunge into relay after relay of nerve cells on their path from the periphery. But difficult as is the task of the physiologist, he is, I think, doing more than the clinician to bridge the gulf which separates them. On the clinical side there is, it seems to me, a lack of classification. Dr. Ormerod has given us a most able pathological classification. Would it not be well to classify the cases, as far as possible clinically, according to the probable part of the mechanism involved, and clinically to try to trace the distinctions between the ataxies of each group? Thus we might have (A) *afferent* ataxies, including

(1) those due to cutting off of afferent impulses, as in tabes; and (2) those due to the passage up of abnormal impulses, as in Menière's disease. (B) We may perhaps have *efferent* ataxies. If Charcot's surmise as to the cause of tremor in insular sclerosis is correct, may the same cause not account for the ataxy, which seems merely a gross exaggeration of the tremor? (c) We should also have *central* ataxies, and these might differ according to whether: (1) Groups of nerve cells were unequally weakened, of which we may, perhaps, take cerebellar ataxy as an example, following Dr. Hughlings Jackson's view that the cerebellum especially subserves the trunk muscles, and that these are weak because the cerebellum is damaged. (2) Conducting tracts between nerve cells might be altered so as to conduct either too sluggishly or too easily. With respect to too easy conduction, I should like to refer to a common and marked form of ataxy, that of chorea. If we watch a choreic patient whom we have told to perform a simple movement of the wrist and fingers we find the act carried out with great disorder. It has been said that the coexisting involuntary movement hampers the voluntary. I think there is more than this. The attempt at voluntary movement excites the disorderly and harassing involuntary movements, and it excites these mainly in parts where cortical representation is close to that of the voluntary movement itself. Thus a movement of the hand and wrist is very apt to cause all sorts of disorderly movements, not only in other muscles of the hand and wrist, but in the elbow and shoulder. Again: tell a child nearly well from chorea to hold the hands over the head. The fingers and thumb may be steady until she is told to put the tongue out, when the tongue movement sets up movement in the fingers and thumb. The ataxy of chorea seems due to a too easy spread of motor impulses from centre to centre along the cortex.

VI.—J. Michell Clarke, M.A., M.D.Cantab.,
Physician and Pathologist Bristol General Hospital.

Dr. Michell Clarke made a few brief remarks on the points of difference between Friedreich's disease, tabes dorsalis, and ataxic paraplegia, and observed that the term "hereditary" in the strict sense of the word as implying the direct ancestors of the patient were similarly affected, was in many cases a misnomer. He showed a case of Friedreich's disease with retention of the knee-jerk, but without increase of the deep reflexes or spastic rigidity; the brother of this patient suffered from similar symptoms, and had died recently from a cerebellar tumour (see below). He also showed another case of Friedreich's disease, and a case of tabes dorsalis of some eight years' duration, affecting chiefly the upper part of the cord, in which the knee-jerks were present, and there was slight nystagmus in the lateral positions of the eyeballs.

A CASE OF FRIEDREICH'S DISEASE OR HEREDITARY ATAXY, WITH NECROPSY.

By J. Michell Clarke, M.A., M.D.Cantab., M.R.C.P.Lond.,
Physician and Pathologist to the Bristol General Hospital: Lecturer on Practical Physiology University College, Bristol.

Historical.

The elder brother of the patient whose case I am about to describe is still living, aged 37, and the disease in him is very slowly progressive. He is now not able to walk or stand without support of some kind, and the movements of "static ataxia" are more marked than they were in 1889. His symptoms are precisely similar to those of the patient the subject of this paper, and I need not therefore give them in detail. He still shows the very unusual feature in Friedreich's disease that the knee-jerks are lively, perhaps brisker than normal, as was the case in his younger brother; at the same time there is no ankle clonus, no excess of the deep reflexes in the arms, and no muscular rigidity or spasm.

[I took the opportunity of exhibiting this patient after the discussion on ataxia opened by Dr. Ormerod at the Bristol meeting of the British Medical Association, and he was considered by those present to be a typical instance of Friedreich's disease.]

The following is a copy of the notes taken in 1889:[1]

The father of these patients, a butcher, A., suffered from heart disease and dropsy, and died in an asylum, apparently of melancholia. His parents died of old age, his father living to be 96; one of his sisters committed suicide; family healthy. The patient's mother, B., is still living. Her father's father died at the age of 99, and his mother at the age of 101. Her father lost all his hair before he was 30 years old, and died of diabetes; her mother died at the climacteric period. There were two other sons and another daughter, all of whom survive. A. and B. had fourteen children—(1) Georgina, aged 37, healthy; (2) Albert, aged 35 (one of the patients); (3) George (drowned); (4) Isaac (died of croup); (5) a son, aged 25 (examined and found healthy); (6) William, and (7) Mary Ann (both died, at the age of 5 months, of "weakness"): (8) Lizzie, aged 21 (examined and found healthy); (9) a daughter (died at the age of 1 month, overlaid); (10) Caroline, aged 18 (one of the patients); (11) Isaac (died, at the age of 3 years, of croup): (12) John, aged 14 (examined and found healthy); (13) Isaac, aged 11 (one of the patients); (14) a child prematurely born at seven months (died in three days). The father was a heavy drinker; no evidence of syphilis could be obtained. The mother is a strong, healthy woman, and does hard work. Has never suffered from fits, from any nervous affection, or any severe illness. She was carefully examined as to state of reflexes, etc., and found to be normal in every respect.

Case II.—I. A., aged 11, is an intelligent boy, and looks healthy. Since the age of 4 his mother considers he has been "restless," and that this restlessness increases. He often falls down when walking, and runs in a zigzag way—that is, from side to side, like a drunken man. He has had no fits or bad illness. As he sits he lets his head fall back, or from side to side, and keeps his mouth open; this gives him a stupid appearance; at the same time there are rocking movements of the head and trunk. Standing with feet together there is well-marked static ataxia; movements of tendons on dorsum of feet, and slight movements of shoulders, head, and arms, whilst the feet are shifted a little from time to time; when his attention is occupied—as by counting fifty—these movements become more marked. He stands by choice with his feet apart. None of the movements at all resemble those of chorea. With his eyes shut there is more general unsteadiness and decided increase in the swaying movements of the trunk and head. There are occasionally slight emotional, not twitching, movements about the mouth. There is slight nystagmus on extreme convergence of the eyes. The pupils are equal, and act well to light and accommodation. Sensation and muscular sense normal, muscles firm, and strength fair. Special senses normal. Speech good. The tendon reflexes in the upper limbs were not obtained. The knee-jerk on the left side was about normal; that on the right diminished, but present. Plantar and other superficial reflexes normal. His gait is a little unsteady, and he is quite unable to stand on one leg. The movements of the upper limbs show some ataxy, which becomes more marked when the eyes are shut.

Since the above report, which was made in 1889, the patient was under my observation from time to time, and became progressively, though slowly, worse. When seen in March, 1892, he was decidedly worse; though he managed to get about, he often fell down in walking. He walked with a staggering gait, swaying from side to side, and stood with legs wide apart. He complained at this time of giddiness, but not of headache or vomiting. The optic discs were healthy. The pupils were equal, and reacted well; there was very slight nystagmus in lateral positions of the eyeballs. No paralysis of any cranial nerve. Shortly before this he had had a mild attack of influenza, and three days afterwards some sort of fit, in which there was momentary loss of consciousness. He was easily tired, and often felt faint. He breathed through the mouth, with snoring, rather irregular respiration. He was never still, there being constant irregular movements of the limbs, and twitching of the angles of the mouth. The knee-jerks were normal; there was no muscular rigidity nor spastic symptoms.

In February, 1893, I admitted him into the hospital for purposes of better observation. We then learnt that he had suffered, at intervals of about a month, ever since he could remember, from attacks of sickness and headache coming on after meals, and for three or four years previously from attacks of sharp shooting pains in the upper part of the right thigh.

At this time he had grown in height (aged 15), and was a lanky lad with badly developed musculature, but with no sign of rigidity or muscular wasting. His expression was dull and heavy, but he was intelligent and bright and cheerful, helping in the work of the ward so far as he was able. The respiration was of the type described above. He had no difficulty in swallowing. His speech was indistinct, somewhat nasal and hesitating, jerky and irregular, but not scanning.

The patient was never still, there being constantly slight, irregular, somewhat jerky movements of the limbs and of the muscles of the head and trunk. He protruded his tongue straight, but it was tremulous, especially at the tip. There was a high arch to the palate.

[1] *Lancet*, vol. i, 1889.

Gait unsteady, the feet raised somewhat high, and the right foot turning inwards. He did not walk straight, but staggered occasionally to one or the other side. The gait was much more ataxic if he tried to take long steps, and he then threw his arms about to balance himself. On standing with his feet together swaying movements from before backwards, and also occasionally from side to side, occurred. These were only slightly marked if the feet were kept wide apart, and were much exaggerated when the eyes were closed.

Arms.—He could bring the tips of his fingers together with outstretched arms, and could touch the tip of his nose with his forefinger, but these movements were uncertain and ataxic, markedly so when carried out slowly or with the eyes closed. He could pick up a pin fairly easily with the aid of sight, but without it only with great difficulty.

Eyes.—On steady fixation of an object slow lateral movements of the eyes occurred, and occasionally a from side-to-side movement of the head. There was nystagmus in extreme lateral position of the eyeballs; no squint; no diplopia. Pupils equal, and reacted well to light and accommodation.

Sensation everywhere normal to touch, pain, and temperature. No delay in perception of sensation; sense of position of limbs, and of movement (muscular force exerted) appeared to be normal. No affection of special senses. There was an absence of expression about his face, which gave him a silly appearance, not justified by the quite average degree of intelligence he possessed.

Reflexes.—Superficial reflexes were all present and normal. The knee-jerks were normal: elbow-jerks present: wrist-jerks not obtained; no ankle-clonus. No interference with micturition or defæcation.

Spine.—No tenderness over spinal column or irregularity of spinal processes; slight lateral curvature to right in mid-dorsal, to left in lumbar region.

Feet.—The feet were hollow and shortened, presenting the deformity described in cases of Friedreich's disease.

It is important to note that there was at this time no optic neuritis, no headache, vomiting, or other symptom of intracranial tumour, and that the symptoms present were precisely those noted in 1889 in more aggravated form.

I heard that he was getting rather more rapidly worse during the summer, and that whilst in the country at the end of July he was seized with vomiting of cerebral type, headache, inability to stand or walk, and some convulsive seizures of doubtful nature. He was admitted to the hospital on August 5th, 1893, a few days before I returned from my holiday. I saw him on August 14th. He was then very dull and heavy, but could be roused to answer questions. He complained of intense pain in his head, and constantly vomited. There was intense optic neuritis in both eyes. He lay constantly on his left side, with his legs flexed: he seemed unable to lie in any other position, and when placed on his back or right side, turned round, apparently involuntarily, on to his left again. The eyes were sometimes directed to the left, but this was not constant. There appeared to be some paresis of the right sixth nerve. The knee jerks were probably very faintly present, but this was doubtful. He could neither stand nor walk, and there was incontinence of urine and fæces. He became rapidly worse, passing gradually into a state of coma, which was profound for two or three days before his death on August 21st. The knee-jerks were entirely lost for some days before death.

From the 17th to the 21st the respiration became extraordinarily slow and irregular, the rate being only 7, 8, or sometimes 10 respirations to the minute. He sometimes paused eight to ten seconds between two respirations. The pulse-rate varied from 72 to 92. On August 17th he suffered from attacks of marked opisthotonic spasm, the body resting only on the head and heels, and this opisthotonos increased in intensity, remaining constant for about twenty-four hours before death. I should have said that on admission there was marked retraction of the head and neck and rigidity of the posterior muscles of the neck. The urine contained no albumen.

Necropsy.

At the necropsy thirty-three hours after death, the body was emaciated. The lungs were congested, especially their bases and posterior borders, and the bronchi full of mucus The heart was flabby and uncontracted, the right cavities full of dark clot. The thoracic and abdominal viscera were otherwise normal. The skullcap was thick: the membranes of the brain were healthy, and there was no sign of meningitis. The longitudinal sinus was empty. The vessels on the convexity of the brain were empty, with an absence of cerebro-spinal fluid; the surface of the brain was dry. On section, the cerebrum was somewhat soft and bloodless, but otherwise normal: cortex cerebri appeared healthy. The cranial nerves appeared to be soft, which, together with the slight softness of the cerebral white matter, was attributed to the *post-mortem* examination taking place thirty-three hours after death in very hot weather.

Springing from the under surface of the right half of the cerebellum was a round, somewhat lobulated, tumour, which lay beneath the cerebellum by the side of the pons and upper part of medulla. The neighbouring parts were pushed aside, but not destroyed by the growth; the right half of the cerebellum slightly upwards, the pons to the left. The tumour was of soft consistence: in appearance resembling the white matter of the brain, and distinctly demarcated from the surrounding cerebellar tissues. On microscopical examination it proved to be a small round-celled sarcoma. The aqueduct of Sylvius was greatly, the third and lateral ventricles slightly, distended and full of cerebro-spinal fluid.

The cerebellum, greater part of the cerebrum, pons, medulla, and cord were hardened in Müller's fluid.

On making a series of vertical sections through the medulla and pons, from before backwards, the tumour was found to be largest at about the mid-point of the cerebellum (antero-posteriorly). It here measured 1¾ inch in its horizontal and 2¼ inches in its vertical diameters. The flocculus and lobules on the under surface of the right half of cerebellum were invaded and destroyed by the tumour, the central white matter on this side was much flattened, compressed, and partly destroyed; the lower part of the pons was pushed to the left and tilted so that its left side lay higher than the right. In transverse sections the posterior fibres of the middle peduncle appeared to be fewer in number on the right than on the left side, especially those in the superior part of the pons.

Microscopic sections showed that except at this part the fibres of the middle peduncle were about the same on both sides. Both medulla and lower part of pons were slightly distorted by pressure, the right side being a little flattened, the left elongated in the vertical direction. The only striking change here was a total atrophy on the right side of the flattened band of white fibres that runs in a longitudinal direction in the floor of the fourth ventricle, dorsal, and superficial to the nucleus of the twelfth nerve. The restiform body was normal on both sides: arcuate fibres and nerve nuclei normal. In the lower part of the medulla the nucleus of the cuneate column appeared to be deficient. The pyramidal tract was healthy throughout the pons and medulla. In the pons, the fillet, both lateral and mesial, the brachium conjunctivum, and posterior longitudinal bundles, were all noted as normal.

Sections of the cerebellar cortex were healthy, both as regards grey and white matter, but on the right side the vessels were everywhere distended.

In the region of the basal ganglia sections taken through the internal capsule showed nothing abnormal. Sections of the motor area of the cortex, and from the frontal and parietal lobes, were healthy. It was specially noted that the large pyramidal cells of the the motor cortex were well developed and normal in appearance.

The above sections were stained by Weigert's method for all parts, in addition for cerebellum by eosin and logwood, and the Biondi-Heidenhain triple stain, and for cerebrum by aniline blue-black. The sections of the cord were stained (after hardening in Müller) by Weigert's stain, Pal-Weigert, borax carmine, Biondi-Heidenhain triple stain, and by aniline blue-black. Some were embedded in celloidin, others not.

First, even allowing for the fact that the patient was aged 15, the cord appeared to be small.

The following measurements were taken after hardening, the transverse diameter being given first:

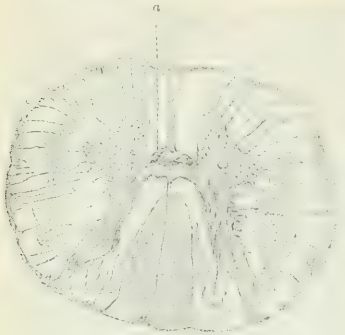


Fig. 1.

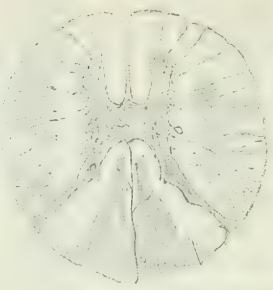


Fig. 2.

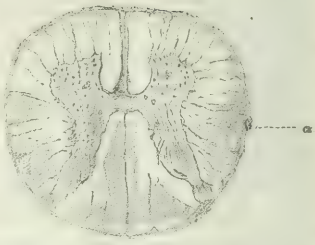


Fig. 3.

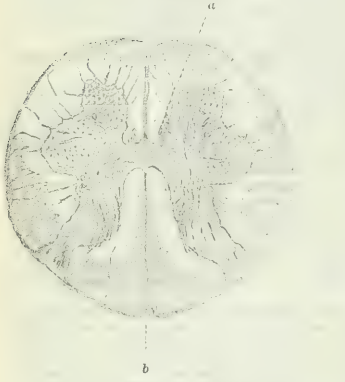


Fig. 4



Fig. 6*a*.

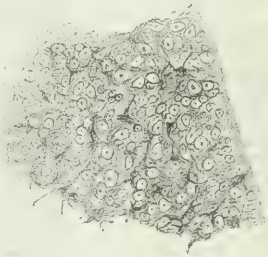


Fig. 5.

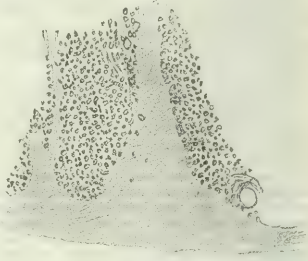


Fig. 6*b*.

EXPLANATION OF FIGURES.—Figs. 1, 2, 3, 4 are $7\frac{1}{2}$ times the natural size. Fig. 1 from cervical region. Fig 2. from mid-dorsal region. Fig. 3 from junction of dorsal and lumbar regions. Fig. 4 from lower lumbar region. The seat and extent of the degenerated areas is indicated by the shading, the depth of which roughly represents the degree of degeneration. Fig. 1 (*a*) large vessel. Fig. 3 (*a*) thickened pia mater with large vessel with thickened walls. Fig. 4 (*a*) large vessel; (*b*) widening out of posterior fissure, filled by homogeneous tissue. Fig. 5 × about 250 times. Zeiss apochromatic. 4 mm. compens. oc. 4. From anterior column in dorsal region. To show the richness in neuroglial tissue of this part of the cord, which contained no degenerated fibres, and appeared otherwise healthy. Fig. 6 (*a*, *b*) × Zeiss, A. Oc. 3. Fig. 6 (*b*) from margin of posterior fissure to represent as closely as possible the average degree of degeneration present in this cord in the posterior columns (and lateral columns where these were most affected) and number of nerve fibres remaining, for comparison with Fig. 6*a*, in which the number of fibres in a healthy part of the cord is shown.

	Cord in my Case.		Normal Cord.*
Mid-cervical	11 × 8 mm.	...	14 × $9\frac{1}{2}$ mm.
Lower ,, ...	9 × $7\frac{1}{2}$ mm.	...	11 × 8 mm.
Mid-dorsal	$6\frac{1}{2}$ × 6 mm.	...	9 × $8\frac{1}{2}$ mm.
Lower ,, ...	7 × $6\frac{1}{2}$ mm.	...	$9\frac{1}{2}$ × $7\frac{1}{2}$ mm.
Upper lumbar ...	7 × $6\frac{1}{2}$ mm.	...	9 × 8 mm.
Mid ,, ...	$7\frac{1}{2}$ × $7\frac{1}{2}$ mm.	...	10 × 9 mm.
Lower ,, ...	$7\frac{1}{2}$ × 7 mm.	...	$9\frac{1}{2}$ × $8\frac{1}{2}$ mm.

* For the above figures of the healthy cord I am indebted to MM. P. Blocq and Georges Marinesco, *Sur l'Anatomie Pathologique de la Maladie de Friedreich*. Paris. 1890.

In the fresh cord no lesion whatever could be detected, and after hardening in Müller there only appeared indefinite slight change in Goll's column. In the sections stained by Weigert's and Pal-Weigert's methods the following changes were observed. I may premise that there was nowhere complete and absolute degeneration of any tract but that the change was partial or diffuse:

Anterior roots everywhere healthy.

Posterior Roots.—Degenerated fibres present in many places but only few in number, most obvious in mid-cervical and mid-lumbar regions. These roots were normal in the lower lumbar and sacral regions.

Posterior Columns.—More or less degeneration of Goll's column was present throughout the cord, most marked and extensive in the cervical region; it chiefly affected the posterior part and centre of the column and did not reach up to the posterior commissure; it was also well marked at the dorso-lumbar junction. In some parts of the dorsal region degeneration did not affect parts of Goll's column alongside of the posterior fissure, but left a narrow elongated tract of healthy fibres.

In the upper lumbar region degeneration did not extend so far forwards in Goll's column, and affected a narrow strip of the most posterior part of the postero-external column along the periphery of the cord as far as the internal posterior root zone; below this degeneration in the posterior column affected the posterior part only of both Goll's and Burdach's columns. In the mid-dorsal region both columns were also similarly affected. In the lumbar and dorso-lumbar regions the posterior fissure was widened out and occupied by a wedge-shaped area (apex forwards) of non-nervous tissue. Burdach's column was slightly affected in its middle part in the cervical region. In one section in the lower cervical region the internal posterior root zone was slightly affected; in all others Lissauer's tract with the entrance of the posterior root fibres was quite intact. There was an excessive number of very fine fibres in the posterior columns. Just above the decussation of

the pyramids there was slight degeneration in the cuneate nucleus, and (?) in the nucleus of the slender column.

Lateral Columns.

In the cervical region, middle and lower parts, is a small ill-defined crescentic area of diffuse degeneration just external to the tip of the lateral horn, and on the surface of the cord, opposite the lateral horns, there is in some sections a small wedge-shaped area from which nerve fibres are absent, and over which the pia mater is thickened. There is well-marked diffuse degeneration in the crossed pyramidal tracts, and in a small area just external to the entrance of the posterior roots. The direct cerebellar tract is however healthy. In many cervical sections there is a little degeneration running round the surface of the cord, and in the mid-dorsal and dorso-lumbar regions this marginal area is damaged by thickened pia mater and its ingrowths into the cord. The direct lateral cerebellar tract is slightly affected in places in the latter regions; but though there is a general excess of structureless intervening substance its fibres are conspicuously large and healthy.

In the dorso-lumbar and lumbar region there is on the margin of the cord just anterior to the crossed pyramidal tracts a small wedge-shaped area (base of wedge outwards) of diffuse degeneration, and in many sections there is, in addition, an indentation of the cord filled with structureless material, with thickened pia mater over it containing large vessels. The crossed pyramidal tracts show evident degeneration, especially marked in the lower lumbar region, but everywhere diffuse and partial, and nowhere absolute. There is also a small patch of degeneration just external to, but not involving, the entrance of the posterior root.

In the sacral region there is slight degeneration in the crossed pyramidal tract and in the marginal area just in front of it. The vessels which pass through the lateral columns, and the processes extending into them from the pia mater, are more conspicuous than normal in most sections.

The anterior columns appeared normal in these preparations, except for slight degeneration in the most anterior part on the surface of the cord in the lumbar region only. In the middle and lower lumbar regions there appeared to be a paucity of fibres running through the posterior horns from the posterior roots, and in one section only the fine fibres which enter and those which run longitudinally close to Clarke's column on its inner aspect appeared deficient, but in all the other sections these sets of fibres were normal, as was also the band of fibres which enter the posterior horn from its inner side, the longitudinally running bundles at the posterior extremity of tubercle of Rolando, the posterior commissure, and the fibres which leave the grey matter for the lateral columns.

There was a very large number, probably abnormally so, of very fine fibres in the lateral columns, as in the cord generally. In sections stained in aniline-blue-black, carmine, etc., the cells of the anterior cornu, of the lateral horn, and of Clarke's column appeared healthy in all respects.

There appeared to be an excessive amount of neuroglial tissue in proportion to the nervous elements, most marked in the anterior and lateral columns. In the anterior columns in carmine-stained sections this was most obvious, there being in them a large number of very large neuroglial cells between the fibres. In places there was much homogeneous or structureless substance between the nerve fibres, and this condition, so marked on the marginal zone of the cord, has been already alluded to. In places there was a peculiar arrangement round the vessels of fibres arranged concentrically or in whorls, and this peculiarity has been already described by Déjerine. The vessels generally showed thickened walls, chiefly due to the adventitial coat, and most marked in those of the pia mater, but also in those of the grey matter, perhaps especially in the cervical region, and in one place in Clarke's column.

The changes in the pia mater, correlated as they were to underlying changes in the cord, have been already mentioned. It remains to be added that the central canal was blocked throughout the whole length of the cord to just below the decussation, where it became patent, with the products of desquamated cells. Sections of the median, ulnar, sciatic, internal popliteal, and peroneal nerves were made, and showed these nerves to be normal.

Commentary.

To sum up, the morbid changes affected chiefly the posterior columns, next the lateral, with involvement especially of the margin of the cord, with thickening in the pia mater and in the walls of the vessels, and probably with some general excess of neuroglia, and small size generally of the cord. The changes were diffuse, and nowhere had produced complete degeneration, and varied much at different levels. They correspond to those found in the cases of this disease previously reported, but are slighter in degree; in fact, the symptoms during life appear to have been more severe than the changes in the cord would have led one to expect. It must, however, be remembered that though the morbid alterations in single sections were not severe enough to lead to absolute destruction of any one tract of fibres, yet the cord is involved throughout its whole extent.

An interesting feature of the case is the complication of it by the growth of a cerebellar tumour; unfortunately, I did not see the patient until near the fatal termination. The tumour was of very rapid growth, and gave rise to such marked symptoms as to leave no doubt as to the diagnosis; so that the symptoms due to the tumour could be distinctly recognised as a fresh addition to those of Friedreich's disease.

Lastly, the disease in this case was not hereditary, in the sense that either parents or grandparents suffered from it: all that can be said is that there is a marked neuropathic tendency in the family. I have, also, under observation two brothers from another family affected with this disease, one of whom was shown at the Bristol meeting. In these cases there is also no history of any other member of the family having been affected, but two of the mother's sisters died of diabetes, and a father's brother committed suicide. There is no evidence of a syphilitic taint.

DIRECT INTRODUCTION OF URIC ACID INTO THE BODY: ITS BEARING ON THE PREVENTION AND TREATMENT OF DISEASE.

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Physician to the Metropolitan Hospital and the Royal Hospital for Children and Women.

As I have previously pointed out in the *Journal of Physiology* (vol. xv, p. 167) and in my book,[1] uric acid may be introduced into the body, and its physiological effects observed like those of mercury, belladonna, nux vomica, or any other drug, by the simple process of swallowing it. In judging of its effects, however, the laws which govern its solubility in the blood must be taken into account; and it is by neglecting to do this that previous experimenters have, I believe, fallen into serious error. Thus, when 2 or 3 grains of uric acid are swallowed along with the food they pass little by little into the blood along with the other products of digestion; but unless the alkalinity of the blood is very high, unless it is thus in an exceptionally good condition for holding urates in solution, they will not remain in the blood stream more than a moment or two, but will be caught up and temporarily deposited in the liver, spleen, and other organs, in which they may generally be found to be present in considerable quantity.

Further, uric acid itself interferes with its own solubility in the blood, for it, just like nitrous or any other acid and many salts of the mineral acids, has the power of converting the normal phosphates of the blood, which are good solvents of uric acid, into acid phosphates, which are not solvents of uric acid at all.[2] Hence, if you give 3 grains of uric acid three times a day and watch the urine for the day, you will find that you have probably not in the least increased the excretion of uric acid and you may have diminished it, for the uric acid you introduced not only did not remain in the blood but it prevented any other uric acid from remaining there. (Fig. 1.) But if, before you gave the uric acid, you had

[1] *Uric Acid as a Factor in the Causation of Disease*, Churchill, London, 2nd Edition, 1894.

[2] *Uric Acid*, p. 31 and elsewhere. Hence the acid phosphates are tonics and stimulants, and have been used as such in hay fever: see *Medical News* February 24th, 1894.

taken care, by the administration of alkalies or otherwise, to get the blood into a favourable condition for holding urates in solution, then you would find that your administration did increase the excretion of uric acid in the urine and that you had produced all the physiological and pathological signs, which I have elsewhere fully described, of excess of uric acid in the blood.

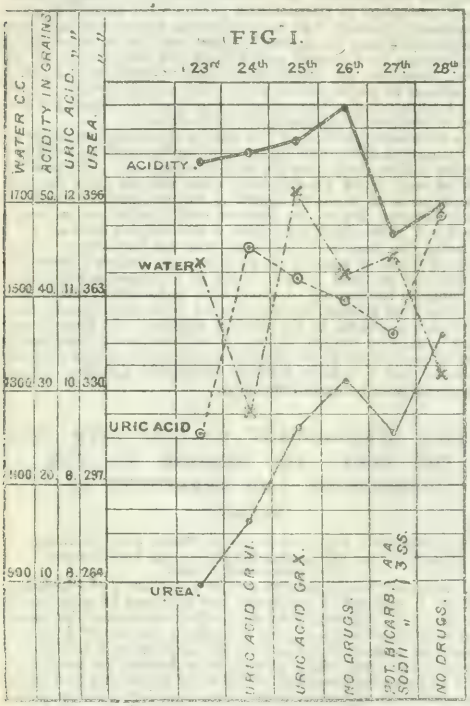


Fig. 1.—Effects of swallowing uric acid. It causes a rise of urea and acidity, and a rise of uric acid, especially on the 24th. But the rise of uric acid would have been much greater if the rise of acidity had not interfered with its excretion.

N.B.—In those on ordinary diet whose urea and acidity would be higher than mine the consequent interference with solubility and excretion would be greater, and the uric acid might not be in excess in the blood and urine for two or three days after it was swallowed.

Similarly those experimenters who have injected uric acid into the blood have paid no attention to its solubility, and have concluded, because they produced no symptoms, that uric acid in solution in the blood is not toxic. The truth is, I believe, that the uric acid they introduced produced no symptoms because it remained in the blood only a few seconds; and if they had bled the animals to death, as I have done, a few minutes after the injection they would have found almost no uric acid in the blood.

On the other hand, by observing the laws which govern its solubility, any of those who care to do it can bring as much uric acid as they like into the blood (Figs. II. and IV.), and they will then find that they have produced most of the signs and symptoms which I have described, such as high arterial tension, headache, mental depression, with scanty secretion of water from the lungs, kidneys, and other glands, and that these will be sufficiently severe to leave on their minds no doubt as to the toxicity of uric acid when in solution with alkalies in the blood. I would remind you also in this connection that uric acid may be present in the blood in combination with salicylic acid, or the normal phosphates in large quantity, as shown by a large excretion in the urine, without producing headache, mental depression, or high tension pulse to any marked extent. So far as I know, it is only the combination of uric acid with alkalies that produces the symptoms I have been led to ascribe to uric acid.

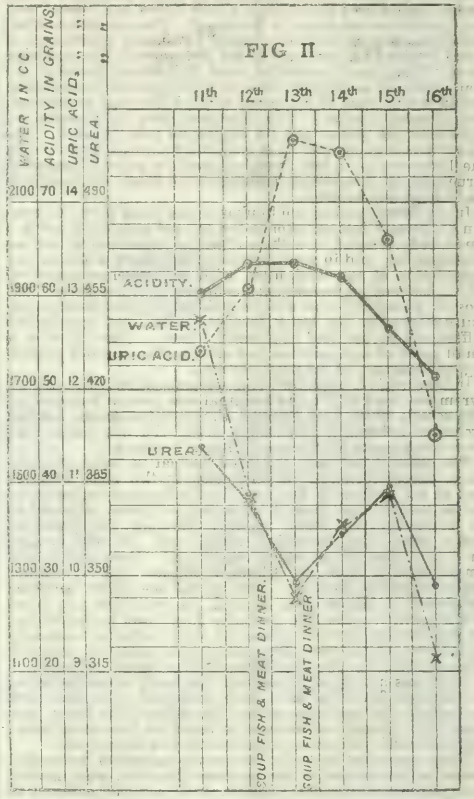


Fig. 2.—Effects of taking soup, fish, and meat. It causes a slight rise of acidity and a rise of uric acid, coming down again on the fourth and fifth day.

This is a point which I am still investigating, and not without hopes that I may some day be able to explain it; but I mention it here merely to prevent your attaching importance to injection experiments, which really prove nothing at all. It is easy to inject uric acid into the blood stream of an animal, but it is difficult, or impossible, to ensure its remaining there.

Not to go into details which can be found in my book, it may be said, speaking generally, that the solubility of uric acid in the blood is favoured by everything that increases the alkalinity of the blood, and hindered by everything that diminishes the alkalinity of the blood, and that uric acid accumulates in the body because it is insoluble, while the soluble urea is practically excreted just as it is formed.

Now, if you take any body of which you happen to be making a *post-mortem* examination and estimate the percentage of uric acid in samples of its various tissues, you will

probably be able to calculate that the body as a whole (though there are no visible urates anywhere) has contained several hundred grains of uric acid.[3] And I say, for reasons you will find in my book, that it contains all this uric acid because during the years of its life the excretion of uric acid has to this extent fallen short of the formation of uric acid *plus* the introduction of uric acid.

For it follows from my previous reasoning that all the uric acid contained in the foods ingested did find its way as uric acid into the body and blood, that is, was introduced.

Those who (as I have pointed out) urged that uric acid could not be introduced into the body in this way, reasoned in ignorance of the laws which govern the solubility of uric acid in the blood, and so reasoned wrong; and the rise of urea, which they thought to be due to the conversion of uric acid, has another and a simpler explanation.[4]

Suppose, then, that we find in such a body 500 grains of uric acid (of course those having visible deposits in their joints or urinary passages will have much more than this), the problem I wish specially to consider in this paper is what share in producing this accumulation has the direct introduction of uric acid had: or, in other words, how much less uric acid might this body have contained to-day if, during the last twenty or thirty years its owner had been careful never to introduce unnecessary uric acid?

I believe that at the present day a great deal of uric acid is often unnecessarily and thoughtlessly introduced into the body, while very slight modifications of diet rules might serve to exclude several grains a day, and this, taken over weeks, months, and years, might just make the difference between health and disease.

Let us see how much uric acid may be introduced in a single meal consisting of soup, fish, meat, with a little meat extract in some savoury dish.[5] Say a man has:

				Grain.
8 oz. soup	containing	0·020	per cent. uric acid	=0.70
2 oz. fish	,,	0.030	,, ,,	=0.26
3 oz. meat	,,	0.040	,, ,,	=0.52
½ drachm meat extract	,,	0.800	,, ,,	=0.24
				1.72

giving a total introduction of uric acid for this one meal of 1.7 gr. (See Fig. II.) Let us say that in his animal food for the rest of the day he introduces half this amount of uric acid in addition, and that in tea, coffee, or cocoa he may introduce 1 grain more, we get 1.7+0.85+1 0=3 55 gr. as his total daily introduction. And, when we further consider that hospital beef-tea may contain as much as 0.098 per cent., while veal, lamb, kidney, and liver all contain a considerably larger percentage of uric acid than that I have reckoned from above, it is easy to see that under many circumstances the daily introduction of uric acid may be much more than 3.5 gr. But of this introduction it is obvious that a considerable quantity is unnecessary, for, without materially reducing the animal food, we may cut out at once the soup, the meat extract, and the vegetable alkaloid—all these things being, like uric acid itself, stimulants, no doubt, but almost devoid of nourishment—and this at once reduces the daily introduction of uric acid to 1.6 gr., or less than half the original quantity.

Let us say that a man in this way introduces 3 gr. of uric acid a day; this will amount to upwards of 1,000 gr. in a year, and more than 20,000 gr., or about 3 lbs., of uric acid in twenty years, so that we thus get enough to account probably for all the uric acid that has ever been found in a human body. But uric acid thus introduced into the body may not only stay there, but at the time of its introduction it absolutely interferes—as shown above—with the excretion of the uric acid which has been previously introduced or formed in the body.

It is easy for anyone to satisfy himself on this point by taking a little uric acid, say two or three grains, three times a day for one day. He will find that it produces a stimulant effect with feelings of strength, well-being, and mental activity, and with this there is a diminished excretion of uric acid in the urine and a rise of urea.

Now the experimenters who gave uric acid appear to have considered that this rise of urea was due to the conversion of uric acid into urea, and that the uric acid which did not appear in the urine was accounted for by the urea which did appear; but if they had watched a few days longer they would have seen that the uric acid they gave did appear in the urine, and they could also have found out that a similar rise of urea is caused by every drug that clears the blood of uric acid. Thus acids which introduce no nitrogen into the body (as citric or sulphuric) will, if they clear the blood of uric acid stimulate circulation and metabolism throughout the body and produce a precisely similar rise of urea.[6]

Now, as I have elsewhere pointed out, everything that diminishes the excretion of uric acid and clears the blood of it produces the same stimulating effect and the same feelings, so that mercury, iron, zinc, copper, silver, acids and acid salts, as the sulphates, all produce these effects.

With regard to the sulphates, their use may, as I have shown[7] produce an attack of gout, and I have elsewhere pointed out that Lord Byron is reported to have recorded their effects on the spirits in the following words: "Talk of champagne, there's nothing cheers your spirits like a dose of Epsom salts." A remark I have myself often verified, and it runs parallel with the similar effects of acid phosphates above referred to.

Therefore the first action of uric acid is that of a stimulant, and this is due to the fact that it clears the blood of uric acid and diminishes the excretion in the urine. I may remark in passing, as I have already done elsewhere, that this is the probable explanation of the stimulant effect of soup, beef-tea, and meat extracts, as well as of the chief effects of thyroid extract, which has as its first effect a diminished excretion of uric acid going with general stimulation of function and nutrition (Fig. III). Though no doubt in all these cases the effect of the uric acid contained is increased by the similar effects of the phosphates, sulphates, and other salts, which act in the way I have pointed out, and of other nitrogenous compounds which act like uric acid in diminishing the alkalinity of the blood, and increasing the acidity of the urine; but, as I have said, anyone can produce similar effects on himself by taking uric acid alone.

Later on, when the uric acid thus introduced comes to be present in excess in the blood and urine, general depression of mind and metabolism take the place of the previous stimulation, and the picture is reversed; but this does not concern us just now, though it accounts, I think, for the some, what serious troubles that thyroid treatment may produce later on. We see then that uric acid thus introduced day after day may not only remain and accumulate in the body, but will also block the excretion of other uric acid previously introduced or formed in the body; and we may thus, I believe, answer the question which we asked above, somewhat as follows:

If a man had by care in diet during twenty years or more of his life introduced only a few hundred grains of uric acid in place of 3 lbs. of it, he would not only have had less uric acid from which to accumulate a store, but he would have been able to excrete more freely and completely that uric acid which he himself formed.

I will only say therefore, in conclusion, that it is possible to diminish very greatly the daily introduction of uric acid into the body without in any way diminishing the income of those substances on which the nutrition of the body depends. (See Fig. IV.)

There is almost no nourishment in soup, beef-tea, meat extracts, and vegetable alkaloids; and I venture to say that the nutrition of the body will not suffer in the least if they be entirely omitted.

No doubt uric acid in these and other forms is, at the time it is taken, a stimulant; but this stimulation may be obtained from other substances, and is I think dearly purchased at the cost of large accumulations of uric acid in the body. Thus acids, such as citric and others, contained in many fruits, and products prepared from them, will produce a similar stimulation of nutrition and metabolism, and though they no doubt temporarily interfere with the excretion of

[3] *Uric Acid*, 2nd Edition, pp. 46 and 377.
[4] *Journal of Physiology*, previous reference, p. 171.
[5] The percentages are taken from the figures given in my book, 2nd edition, p. 365.
[6] *Journal of Physiology and Uric Acid*. Second Edition.
[7] *St. Bartholomew's Hospital Reports*, vol. 24, p. 217, and *Medical* [illegible]
Transactions, vol. 72, p. 402.

uric acid, they do nothing to increase the quantity introduced.

The craving for fruit acids in warm weather is, I think, perfectly natural and physiological, as something is required to replace the acids lost in perspiration; and it is far better to indulge it to a moderate extent than to supply what is required from effete nitrogen in the form of uric acid and its

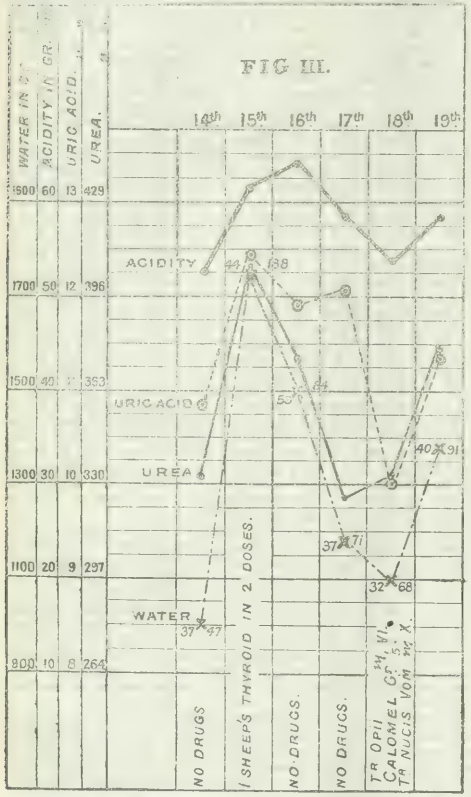


Fig. 3.—Effects of swallowing a sheep's thyroid. It causes a rise of urea and acidity on the 15th, followed by a *plus* excretion of uric acid on 16th and 17th. Uric acid was relatively less on 15th than on 14th.

N.B.—*Plus* excretion of uric acid is shown by its height above urea.

congeners of the xanthin group, which may remain in the body, and cause terrible damage in years to come.

Precisely the same argument applies to the use of caffeine for the cure of a uric acid headache; no doubt it may cure the headache, so would a few grains of uric acid itself; but they cure it by increasing the store of uric acid in the body, and this, if persisted in, will bring disaster at no distant date.

It follows from this that whatever other diet treatment may be necessary for the prevention or cure of uric acid disease, it is of the utmost importance never to introduce into the body a single grain of uric acid that can be left outside it; for that grain of uric acid, if introduced, may not only remain and help to form a store in the body, but it may also prevent the excretion of some of the uric acid which is already in the body.

Lastly, I would again call your attention to the fact that, bearing in mind the conditions which affect its solubility in the blood stream, the physiological and pathological effects of uric acid can be demonstrated with ease and certainty by its direct administration; and indeed this is a corollary of what I have just said about diet and caffeine, and have elsewhere demonstrated as to their effects.[8] So that the direct

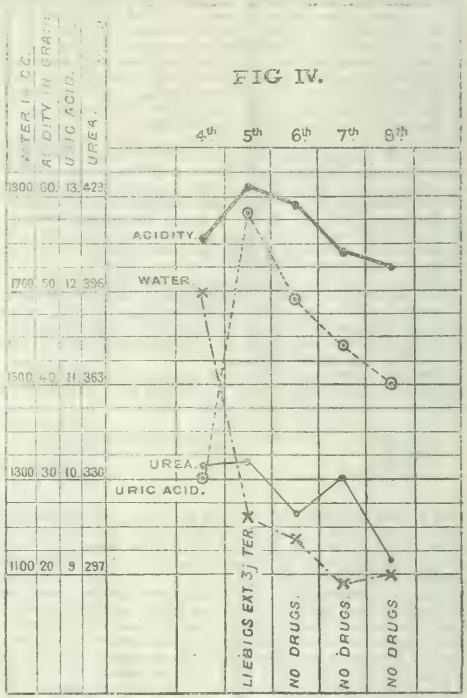


Fig. 4.—Effects of swallowing Liebig's extract of meat. It causes a slight rise of urea and acidity, and a marked rise of uric acid. Note the relation of uric acid and water in illustration of the law that they vary inversely.

introduction of uric acid into the body not only plays an important *rôle* in the causation of disease, but can be employed at any time to demonstrate the pathological effects of an excess of uric acid in the body and blood.

PRACTICAL HINTS FOR INVALIDS ON THE MAINTENANCE OF HEALTH IN THE CLIMATE OF EGYPT.

WITH SOME SUGGESTIONS TO MEDICAL MEN AS TO THEIR SELECTION OF CASES SUITABLE FOR RESIDENCE THERE.

By Arthur J. M. Bentley, M.D.,
Cairo.

In offering the few remarks which I am about to make, I must apologise for any shortcomings on the score of originality. Having spent, however, three winters in Egypt in the neighbourhood of Cairo, at a health resort situate on the edge of the desert at the foot of the Great Pyramid of Gizeh, much frequented by invalids, I have thought that my experi-

[8] British Medical Journal, ii, 1893, p. 673; July 21st, 1894, p. 113.

ences might prove of service to such members of my profession as may contemplate sending patients there.

"The good effects of a complete climatic change upon certain forms of disease have long been an established fact." But in order to obtain the full benefit from a residence abroad not only must cases suitable for each particular climate be selected, but proper directions for the maintenance of health under the changed circumstances of life must be given.

The proper choice of a climate is one of vital importance to the invalid; and nothing can be more opposite in climate, as regards phthisis for example, than the air of a crowded town like Cairo, and the pure desert air of Mena or Helouan, or the almost absolutely dry air of Luxor or Assouan; or "between the Delta, which is under the influence of numerous surfaces of water and cultivated ground, and Upper Egypt, which is under the influence of the two deserts."

Every climate has its disadvantages as well as its advantages. The climate of Egypt in the winter months may be summed up as dry and tonic; its advantages consist in a moderately uniform warm diurnal temperature, in an almost complete absence of rain, and in a bright sunshine mostly all through the winter months, allowing every facility for an outdoor open life. To such as possess sufficient energy and are inclined to take advantage of the invigorating exercises of riding and driving, especially the former, ample opportunities are afforded, whilst to those of a more robust nature excellent sport will be found available all through the winter. There is also complete absence at the different health resorts of fog and of excessive cold, while outside the large towns there is an absolutely pure desert air. The hotels are luxurious and comfortable, and the food supply good. Vegetables and fish are abundant, and fruit unrivalled.

There is besides a complete absence of typhoid at all the health resorts excepting Cairo itself, and there there were only three or four cases amongst the English hotel residents during the whole of last winter, any other which may have developed in visitors after they had left Egypt being probably acquired in Alexandria, where the water should not be drunk unless under the advice of residents.

Malaria is also unknown at Mena, Luxor, or Assouan, so that the windows of the sleeping apartments, if facing south, can safely be left open, thus ensuring complete ventilation, except in some chest cases where chill of any kind may be injurious.

The drawbacks to a winter sojourn in Egypt, and in fact anywhere out of England, are:

1. The injurious habit Egypt shares unfortunately with the Riviera, that invalids do not consult the doctor until they are attacked by serious illness, which they mostly might have escaped from if they had been guided from the beginning by a judicious physician.

2. The ignorance of most invalids as to the nature of the climate to which they resort, and apparently the want of a full appreciation of the real object for which they go abroad, that is the restoration of their health.

3. The opportunities which exist for sight-seeing and social gatherings, with their attendant evils, over-fatigue, overcrowded rooms, and late hours.

4. Its occasional cold high winds and at times unreliable weather.

5. The sudden and sometimes marked fluctuations of temperature between day and night, sunshine and shade.

6. Its hot winds, which commence in February and blow for about two days at a time, accompanied by fine particles of sand suspended in the air (Khamseen).

It is to the end of lessening or obviating altogether some of these disadvantages that my paper is chiefly directed.

It is a mistake for invalids to take a long railway journey without a break somewhere *en route*. Travelling by train is in itself a rapid change of climate, and is to most people exciting, and if any inflammatory mischief is present it will probably be aggravated. Before starting strict attention should be given to the state of the bowels, and during the journey as careful a dietary as possible should be taken both as to quantity and quality, and rest for a while should be ensured if inflammatory symptoms arise *en route*. Much injury is sometimes done through want of attention to these details.

The risks and discomforts to which all newcomers are exposed from a want of knowledge of the vicissitudes of the climate and of the comparatively cold winds that blow more or less in December and January are at times trying but easily avoidable. The diurnal temperature of Egypt is very uniform, but the sudden fall at sunset of several degrees, reaching its climax at about 4 A.M., is felt by invalids, whose sensitiveness to cold is at all times marked, if they are foolish enough to expose themselves to it. All invalids, therefore, should go indoors an hour before sunset, and should not venture out for two hours after sunrise.

Again, nothing is more noticeable than the great difference there is between sunshine and shade. This disadvantage is, however, easily avoided by invalids wearing as warm clothing in Egypt as they do in the autumn or winter at home, the air being so dry that any oppressiveness from woollen clothing is not felt there: also in their carrying always a light coat or wrap, and a silk handkerchief for the neck to be put on when going from sunshine into the shade, while in the house after a walk they should not remove their overcoats at once. Cummerbunds, or a roll of fine flannel round the abdomen, should be worn by all as a preventive of diarrhœa arising from chills, and a heavy or fur-lined coat should always be used when driving: all rooms facing the north should be provided with fireplaces, and a fire kept burning in December and January, when the weather is cold or unsettled. Want of care in avoiding chill may lead to diarrhœa, dysentry, or pneumonia, or to a fresh access of inflammation in a quiescent chronic condition of lung disease. Care is also necessary at times in women to avoid the possible chance of a chill, a case having come to my knowledge last winter where severe local peritonitis followed exposure to cold in this way after a ride.

The direct rays of the sun, if not tempered by the use of an umbrella, or suitable head protection, or smoked spectacles, more especially in March and April, are often injurious, leading to congestions, headaches, and feverishness. I have so often seen invalids sit or lie in the direct rays of the sun while, at the same time, a cold wind was blowing over them, that I am induced to lay stress on the folly and possible danger of this.

Now it is especially to these conditions that the invalid is exposed on going up and coming down the Nile, the days being warm, the wind keen, while the cold after sunset is intense. The warmest clothing and wraps are therefore necessary on the voyage. Draughts which are unavoidable should, as far as possible, be guarded against, even, if necessary, by the invalid remaining for most of the time in the saloon or in his cabin, and on no account should he go on deck after sunset; over-fatigue in any form and long donkey-rides to tombs and other distant places of interest should be scrupulously declined by the consumptive, labouring more or less, as he does, under physical debility. Such persons should not attempt to take part in the amusements and occupations of the strong, but cheerfully acquiesce in their enforced idleness and inaction, for by doing so they very materially advance their chances of ultimate recovery.

The tour made by the regular tourist boat of Messrs. T. T. Cook and Son, each of which carries an experienced physician, and is a floating hotel of comfort and luxury, is well suited to the robust pleasure seeker, but is not the best way for the invalid to reach Luxor. The post boat, being quicker and more direct, is for him by far the best, if he is unable to afford the expense of a dahabyeh on the Nile for the winter.

The hot wind of Khamseen commences in February, and blows for a day or two at a time, but only very occasionally till the middle of April. It has a depressing effect on some, while it is agreeable and invigorating to others. During its continuance the air is devoid of all moisture, and is more or less charged with electricity, while it is, at the same time, full of minute particles and in a state of suspension, causing irritation of the eyes and throat; it has, however, more an irritating effect on the temper than an injurious one on the health. It is less disagreeable to many than the colder winds of December and January, and in cases of phthisis with cavities it has a positive drying up and healing influence. Its goods effects, also, in rheumatism and some cases of asthma is marked. Its discomforts are entirely obviated by the

invalid remaining indoors till it has blown itself out, which it generally does in about two days.

As a rule invalids leave Egypt too soon in the spring and undo in many cases the good effects of their winter sojourn by encountering the cold variable weather of the spring in Europe. Let me warn them against this and in place of hurrying off as soon as the first Khamseen blows to remain quietly in Egypt till the end of April, and if they find the neighbourhood of Cairo too hot and enervating there is Ramleh, on the sea coast near Alexandria, to go to, where excellent hotel accommodation can now be obtained and where they will run no risk of encountering the chills of an early spring. [illegible]

The neighbourhood of Alexandria, owing to the nearness of the sea, has a more uniform temperature and has advantages in autumn, spring, and summer. (Hermann Weber).

Every facility exists in Cairo, Mena, and Luxor for obtaining every medical comfort and good nursing. On this score there is little left to be desired. Invalids, however, who require constant attention are strongly recommended to bring with them their own nurse or valet.

With these few imperfect observations, which apply more or less to all southern health resorts, and to the robust as well as to the invalid, I conclude with the sincere hope that if acted on they may verify by their results the old saying that "prevention is better than cure."

THE NATURAL MINERAL WATERS OF BUXTON: THEIR INDICATIONS AND MODES OF APPLICATION.

By Samuel Hyde, M.D.,

Consulting-Physician The Peak Hydro-Thermal Establishment.

The natural medicinal waters, to which Buxton mainly owes its reputation as a health resort, rise by several springs or "sources," but the principal springs are situated near the Crescent, at the western end of that building. It is from the edge of the limestone, which meets the millstone grit at the lower level of the town, that the Crescent springs rise through various fissures to the surface; and there can be no doubt, from the existence of several similar springs and other evidence, that the larger "sources" found in the Crescent are derived from the limestone formation upon which the higher portion of Buxton stands. The temperature of the water as it issues from the earth at the Crescent source is 82° F. The water has a slight bluish tinge; it is perfectly clear, tasteless, and remarkably buoyant. The chief peculiarity of the water is the considerable quantity of free nitrogen gas with which it is charged, the amount being greater than that in any other known mineral water. The waters of Gastein and Wildbad resemble the Buxton water in this respect, but in a less degree.

Bearing in mind the relatively small proportions of the several salts contained in the Buxton water, it is evident that whatever the effects may be which are produced by them, they must be traced not so much to the individual action of each, but rather to their united action upon the organism. As to the precise part played by the nitrogen gas contained in the Buxton water, much has been written and a great deal has been said which is merely of a conjectural character and has no really scientific basis. It is a question which has up to the present time received no satisfactory answer. Nor am I prepared on this occasion to propound any new hypothesis where so many have already failed. But, having made this confession, it must not be supposed that such waters as those now under review contain nothing of a special character which, if properly understood, would account for the special influences they are alleged to exert over many diseased conditions.

No one who, like myself, has observed during many years the truly remarkable curative effects constantly produced before our eyes—effects which it would be an affectation to ascribe to mere change of air and surroundings—can for one moment doubt their reality. In saying this, I have referred chiefly to my own personal experience; but if additional testimony be desired as to the curative effects of these waters, it will be found in the records of the Devonshire Hospital at Buxton, which accommodates over 300 in-patients, and yearly confers incalculable benefits upon numerous poor sufferers from rheumatic and other painful affections. In this institution, out of 2,559 persons treated as in-patients during the past year, no fewer than 2,398 were discharged as "improved."

Indications for the Use of the Buxton Waters.

The use of these waters is indicated in the following diseases: [illegible]

Rheumatism.—Acute rheumatism, subacute rheumatism, chronic articular rheumatism (rheumatoid arthritis of Garrod or the rheumatic gout of Fuller), muscular rheumatism, arthritis deformans, or chronic progressive articular rheumatism, gonorrhœal rheumatism.

Gout.—In acute and chronic gout and the many protean forms of that disease the Buxton waters are efficacious. In ordinary lithæmia and latent gout the waters promote the elimination of the lithic acid from the system.

Neuralgic Affections.—Sciatica, lumbago, and intercostal and brachial neuralgia are greatly benefited by a course of the waters.

Paralysis and Spinal Disease.—In local forms of paralysis, especially from metallic poisoning, as, for instance, lead, and in writer's cramp; in facial paralysis and diphtheritic paralysis; and in hemiplegia when of not too long standing. I have also seen some remarkably good results in locomotor ataxy.

Anæmia, Malaria, etc.—Especially where these diseases are complicated with rheumatic or gouty symptoms the Buxton waters are of great use. This is often seen in the case of officers and others who have resided in malarial districts abroad, and who, on returning to this country, contract rheumatism. The characteristics of this form of rheumatism are very striking, the malarial cachexia modifying the course and symptoms of the disease in an unmistakable manner.

Diseases of the Skin.—In psoriasis and eczema, particularly when of gouty or rheumatic origin, the waters afford very satisfactory results.

Diseases of Women.—Irregular and painful menstruation, leucorrhœa, chronic ovaritis, neuralgia of the ovaries, ulcerations, catarrh, and sterility frequently derive much benefit from the Buxton bath.

Throat Affections.—In chronic laryngitis, pharyngitis, and clergyman's sore throat the waters sometimes do much good.

Surgical Diseases.—In many surgical affections the Buxton thermal waters are of great service. Conditions such as those following fractures and dislocations, sprains of joints and such like injuries, together with surgical diseases of a constitutional character, as, for instance, hip-joint disease, caries and necrosis of bone, white swellings, chronic synovitis, tumours, etc., are benefited by these waters.

Modes of Application of the Buxton Waters.

These are divided into internal, external, and the combined methods of using the waters.

The internal use consists in drinking from 6 to 10 ounces of the water two or three times a-day between meals, followed by gentle exercise for about half an hour. As a rule, no unpleasant sensations are experienced, but sometimes the drinking of the water is followed by slight giddiness, probably due to an over-stimulating effect on the cerebral circulation, and when this occurs it is an indication to reduce the quantity imbibed or to stop the water altogether for a few days. In some cases I find the addition of milk to the water renders it tolerable where otherwise it could not be taken. The water should not be drunk within a short time before taking a bath, but may be taken immediately after bathing. The chief observable action of the water is upon the kidneys and the skin, especially the former, free diuresis and frequent micturition being common effects during the drinking of the waters.

The external use of the waters is carried out either at the natural temperature of 82° F., or at artificially raised temperatures of from 86° to 100° F. The natural temperature being so low, the water finds its most useful and widest application in the hotter kinds of baths. The forms of baths in vogue at Buxton include swimming and plunge baths, lounge

or reclining baths, douche, needle, spray, shower, wave, and sitz baths, massage douche baths.

The immersion baths are given in the form of "full," "three-quarter," and "half" baths according to the exigencies of the case. Many patients can take partial baths who could not bear a full bath. In such cases the body is immersed to the specified height, and the un-immersed portions are laved with the water. The time usually occupied in the hotter baths varies from 4 to 15 minutes. About 8 is the average time. For the natural bath the time ranges from 2 to 10 minutes.

The best time for taking the baths is half an hour or an hour before breakfast. If the patient is too weak for this, the next best time is about an hour before the midday meal. Contrary to the usual practice of taking a brisk walk after an ordinary bath, the patient is advised not to walk much soon after the hotter forms of the Buxton bath, unless he has a difficulty in getting up a reaction, which is very rarely the case; but to return quietly to his lodgings, and there to rest for an hour or so, either in an easy chair or reclining on a couch. After this he is at liberty to take outdoor exercise.

It is a good plan to take one or two doses of aperient medicine (a saline is the best) before beginning to use the waters. This practice in most cases requires repeating several times during the visit, as more or less constipation is apt to follow the change to the tonic and bracing air of Buxton. The number of baths and the duration of the course will vary according to each case. As a rule not more than four or five baths should be taken in one week, and the course usually occupies from three to six weeks.

Many cases present themselves for treatment at this spa in which the external use of the waters is contraindicated, but who derive much benefit from the internal use of the waters alone. It may, however, be stated that as a rule the combined system of drinking the waters and the application of baths is carried out in the vast majority of cases. Generally speaking, whether the water be drunk or used in the form of a bath there are no unpleasant subjective sensations experienced by the patient. In some cases, however, disagreeable sensations are experienced by bathers, but when such is the case it may be assumed almost with certainty that there is some more or less serious organic disease connected with either the heart or large blood vessels, the lungs, or the brain. To a person in an ordinarily sound state of health the bath is perfectly safe, and there is no ground for that fear which has been excited by some writers. Having said this much, however, it is necessary to warn invalids against the pernicious practice of drinking these waters and taking the baths without proper medical advice. By such a course I have seen very frequently, not only direct injury result, but much valuable time and money wasted by the patient either taking the wrong kind of bath for his case or taking too many or too few of the right ones. It should also be mentioned that at the Buxton spa free use is made of the numerous valuable adjuncts to modern spa practice. Amongst the adjuncts to internal treatment strict and regular diet occupies an important position. Drugs are also often brought into requisition, especially simple purgatives, cholagogues, and hepatic stimulants. Dry massage, shampooing, electricity, active and passive mechanical exercises, counter-irritation, dry and wet packing, hot air and vapour baths, steam douching, are all used more or less frequently.

Before concluding it is necessary to say a few words as to the diseases and conditions in which the use of the Buxton waters and baths are contraindicated:

Cardiac affections, including valvular disease, hypertrophy, dilatation, fatty degeneration, and angina pectoris.

Diseases of blood vessels, such as atheroma, aneurysm, phlebitis, and varicose veins.

Renal diseases, acute and chronic, excepting such as are associated with the gouty diathesis.

Bladder and urethral affections in the form of cystitis, catarrh, prostatitis, and calculi.

Pulmonary diseases, including phthisis, asthma, emphysema, and acute bronchitis.

Gastric troubles, including acute dyspepsia, catarrh, ulceration, hæmatemesis, and diarrhœa.

Cerebral congestion, hyperæmia, tumours, tuberculous meningitis, apoplexy, and epilepsy.

Cancer and malignant disease.

These and many other diseases which the above enumeration will suggest are inappropriate and often positively contraindicate the use of the Buxton mineral waters either internally or externally, although in many instances much benefit accrues from a residence in the Buxton climate. To these may also be added certain general conditions of the patient, such as extreme emaciation, muscular atrophy, and nervous exhaustion.

NOTES ON DIABETES TREATED WITH EXTRACT AND BY GRAFTS OF SHEEP'S PANCREAS.

By P. Watson Williams, M.D.Lond.,
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No disease has received a larger share of attention at the hands of clinicians, pathologists, and chemists in the last fifty years than has diabetes, while the ample literature and the very diverse opinions that have been advanced by the most able observers in regard to its pathology and treatment testify to the difficulties which surround us when we seek to explain the problems involved. Certain facts recently come to our knowledge seem at first sight to justify very important conclusions as to the real nature of diabetes, and to indicate fresh lines of treatment as at least affording some chance of increased control over this disease.

It would serve no useful purpose were I to attempt to review and to reconcile the results of recent investigations in the region of difficulty; they are well known to all physicians who are acquainted with current medical literature, and have proved a source of perplexity to many who are better able than I am to speak on the subject, but as the question of the treatment of pancreatic diabetes by means of the pancreas or extracts is a matter of special interest, and more especially as the possibility of treating pancreatic diabetes by means of grafts of pancreas is likely to receive further attention in the immediate future, I think it is my duty to place on record the results in a case unsuccessfully treated by myself, and to indicate what my unfortunate experience may teach us to avoid.

Before relating my own brief experiences I would call to mind the two interesting cases of diabetes resulting from obstruction in the pancreatic duct, reported by Freylan[1] which support the conclusions of Minkowski based on his recent investigations in the diabetes resulting from destruction of the pancreas in dogs. In Freylan's first case, that of a man, aged 35, who was passing 70 ounces of urine containing 3 per cent. of sugar, death was immediately due to tuberculous lung disease. The pancreas was atrophied and no trace of parenchyma was observable in microscopic sections. The pancreatic duct was completely occluded by concretions of carbonate of lime. His second case was that of a woman, passing 70 ounces of urine containing 8 per cent. of glucose. Death resulted from kidney disease, but the pancreatic duct was found blocked with calcareous detritus and a definite calculus was found in the gland itself, which only contained a few isolated nodules, the remainder being atrophied.

On the other hand we cannot overlook the result of Williamson's investigations of the pancreas in 14 cases of diabetes, which showed that in 50 per cent. the pancreas was normal in structure, rendering it evident that we must guard against attributing a too important position to the pancreas as a factor in diabetes mellitus.

Case 1.—C. T., aged 15, was admitted to the Bristol Royal Infirmary on July 31st, 1893. He was in good health up to three weeks before admission, when he began to complain of thirst, and was noticed by his parents to be wasting rapidly and getting extremely weak. Patellar tendon reflexes absent; no fatty stools. On admission he was weak, rapidly wasting; weight 5 st. 9 lb. 4 oz.; skin dry; average daily amount of urine 77 oz., containing 3,219 grains of sugar and 2·8 per cent. of urea. Daily amount of fluid drunk 7 pints. The case was so grave that I did not consider I was justified in waiting more than two days on a strict diet, modified by allowing brown bread, before commencing active treatment, for the amount of sugar had risen to 9 per cent. in 78 oz. On August 3rd, therefore, he had an absolutely restricted diet with gluten bread. From this day he took freshly minced pancreas for seven days, then 1 drachm freshly prepared liquid extract of pancreas three times daily with his meals, and had a drachm every time he took any food at all in the intervals, so that he never had any food without pancreatic extract. This was continued for four days more, the urine, the amount

[1] *Berl. klin. Woch.*, No. 6, 1893.

of sugar and polydipsia all steadily diminishing, till on August 11th he passed only 56 oz., with 4.16 per cent. of glucose. Then for four days he had 3 drachms of the extract hypodermically daily (except on the first of these four days, when he had 2 drachms), with practically no alteration in the symptoms. Then the pancreatic extract was again resumed by the mouth as before. By this time the elimination of sugar amounted to about 1,188 grains daily—that is, was reduced to nearly one-third of what it had been: the urine passed was about 50 oz. daily, and the polydipsia correspondingly improved. The diet and administration of pancreatic extract remaining unaltered, he was now ordered 1½ grain of codeine daily. In seven days the sugar averaged 456 grains and urine 50 oz. daily. The pancreatic extract was now left off, August 27th, as I believed that the reduction of sugar in the first instance was due to the strict dietary, and in the second to codeine. No other alteration was made, but within two days the amount of sugar nearly trebled, in four days it had risen from an average of 1.9 per cent. to 7.1. But after simply resuming the pancreatic extract it remained about the same, and only fell slightly on changing the gluten bread for Clarke's starchless biscuits. In the meanwhile he gained 5lbs., but had again lost 4lbs. in weight.

On September 18th the codeine was increased to 2½ grs. daily but without benefit. Without further alteration the freshly-prepared glycerine pancreatic extract by the mouth was discontinued on September 20th, and 1 drachm daily of pancreatic extract prepared in Paris by Brown-Séquard and d'Arsonval's process was given hypodermically for eleven days. The amount of sugar eliminated rather increased, and here the treatment by pancreatic extract was left off. The boy was, in spite of a very fair trial of pancreatic extract both by the mouth and under the skin, combined with strictest regimen and both without codeine and subsequently with 2½ grs. daily, practically in the same position as on admission. He was passing 8.2 per cent. of sugar in 66 ozs. of urine daily.

On October 6th the codeine was increased to 4 grains a day. In six days' time he began to be a little sleepy in the daytime although getting up every day. There was a slight diminution in the amount of sugar eliminated (6.2 per cent. in about 60 ozs. of urine).

On October 14th I obtained a supply of freshly-prepared orchitic fluid obtained from a young bull by d'Arsonval's process by my friend, Dr. Fagan Lowe, of Bath, and without any other alteration in the conditions, the patient had 1 drachm daily injected hypodermically, and as he felt so much brighter and better this was continued, and although the amount of sugar passed was at first increased, it again decreased to about 5.5 per cent. in 55 ozs.

October 26th. The codeine discontinued, but the amount of sugar so greatly increased that in twelve days I felt it advisable to give morphine (¼ grain daily at first, subsequently less).

At first the effect of the morphine was very satisfactory, but about December 17th it appeared to be losing its power of controlling the diabetes, and once more the glucose rose to 8.3 per cent. in 80 ozs. of urine. The advisability of resorting to grafts of sheep's pancreas had occurred to me, and my medical colleagues, who had kindly seen this case with me frequently during the time the patient was under my care, agreed with me that the case was one which offered some chance of benefit from such a procedure, seeing that laboratory investigations of Minkowski and others appeared to lend some hope that the patient might be favourably modified.

I had previously visited a neighbouring slaughterhouse in order to familiarise myself with the best method of rapidly extracting the pancreas from a sheep. By suspending the carcass by the hinder extremities one had only to open the abdomen and allow the intestines and stomach to fall down, and the pancreas was exposed and readily removed.

On December 20th my surgical colleague, Mr. Harsant, placed the patient under chloroform, while I extracted the pancreas with strict aseptic precautions from a freshly-slaughtered sheep, so that by the time the patient was anæsthetised the pancreas was at hand, and three pieces each of the size of a Brazil nut had been grafted into the subcutaneous tissues of the breast and abdomen, and the operation completed within twenty minutes of the death of the sheep. The patient came under the anæsthetic a quarter of an hour. The wounds were dressed antiseptically. He passed 116 ounces of urine containing 7.4 per cent. of sugar in the next twenty-four hours.

On December 22nd 95 ounces of urine containing 3.12 per cent. of sugar. The incisions appeared perfectly healthy, and Mr. Harsant considered that they were healing by first intention. But the patient felt very depressed and weak, and drowsy, and there was every indication of coma supervening. The urine yielded a more decided acetone reaction, although this had been noticed in a less degree for some weeks. With a view to prevent the onset of coma bicarbonate of potash was administered, and an aperient ordered.

On the 23rd he died comatose. Large doses of citrate of potash by the mouth, combined with 30 grains of bicarbonate of soda, given hypodermically in three doses had had no effect whatever. Oxygen inhalations and oxygen water had also been tried.

At the necropsy on the following day the heart and lungs were found to be normal, but the liver and kidneys were enlarged and fatty. The pancreas only weighed half an ounce in its capsule. It was small, shrivelled in appearance, and seemed to be little else than fibrous tissue. Examination of sections of the pancreas showed that almost all the secreting structure had disappeared, and that the gland consisted of little else but fibrous stroma. The grafts had apparently failed to become united with the tissues around, and though the incisions in the skin had apparently united, numerous micrococci were found on microscopical examination. But the necropsy was made sixteen hours after death from diabetic coma.

I think that the considerable number of cases of diabetes that have now been recorded as having been treated with pancreatic extract by the mouth have shown that practically nothing can be expected from such treatment. In the case of T. C., the method received a very fair trial, the freshly-prepared extract being given first every time the patient took any food whatever, and subsequently by cutaneous injection.

Of course, in some respects this was not a typical case of pancreatic diabetes, inasmuch as the amount of urine was not very excessive, and there were no fatty stools; but I think the history of the case and the *post-mortem* examination of the pancreas leave no doubt that it was rightly considered to be pancreatic diabetes, and one that presented all the conditions that might lead one to hope for a beneficial result from successful grafting of pancreas, if anything can be hoped for in this direction at all. Failure was possibly due to obtaining the graft from a sheep that had been killed by bleeding, and I fear may have been rendered more likely from the administration of the anæsthetic. If ever I felt justified again in resorting to pancreatic grafts in a similar case, I should obtain them from a living animal anæsthetised and dispense with the anæsthetic altogether.

CASE I.—T. C. Average amount of sugar passed in twenty-four hours: On admission, first two days, 3,212.1 grains.

August 11th, after four days of strict dieting and pancreatic extract by the mouth, 978.8 grains.

August 15th and 16th, after four days' strict dieting and pancreatic extract hypodermically, 983.8 grains.

August 18th and 19th, after the pancreatic extract was resumed by the mouth, other conditions the same, 1,188 grains.

August 26th, after seven days with pancreatic extract by the mouth, strict diet, and codeine (1½ gr. daily), 456 grains.

August 31st, after four days under same conditions, except that the pancreatic extract was discontinued, 1,742 grains.

September 31st, after the conditions of August 26th had been resumed for eighteen days, 1,733 grains.

CASE II.—W. H., male, aged 47, foreman at chemical works, began to suffer from thirst about February, 1892, and soon after noticed his loss of flesh and polyuria, and was told he had diabetes. In November, when I took him into the house, he had lost 2 stone in weight and felt excessively weak. He was then passing 65 ounces of urine containing about 1,245 grains of sugar daily. After two days' restricted diet (with brown bread allowed), and while taking small doses of phosphorus and arsenic the amount of urine was slightly increased, and he passed 1,800 grains of sugar per diem. Again, after taking the same diet, but taking 1 grain of codeine daily for four days the amount of urine continued to increase, averaging 88 ounces, with 1,920 grains of sugar. His general condition *in statu quo*. The same conditions as regards diet and treatment were persisted in for twenty-nine days, during which period the amount of sugar passed had fallen as low as 152 grains daily, the average amount of urine remaining stationary, but towards the conclusion of the twenty-nine days the urine rose to 90 ounces daily, with 1,742 grains of sugar. At this point, that is, January 12th, 1893, I gave him 1ml of pancreatic extract (prepared by extracting fresh pancreas with glycerine) hypodermically. The following day a drachm of the extract by the mouth, then 1ml hypodermically, and again, with a day's interval, a fluid drachm by the mouth. There was no amelioration in the quantity of sugar passed. The same treatment was continued for another four days, with 1½ grain of codeine (instead of 1 grain) daily, resulted in no improvement as regarded the elimination of sugar, but he felt better and stronger in himself. The pancreatic extract was discontinued as useless, but the patient, after many months of treatment by codeine and restricted diet, completely recovered and resumed his ordinary diet without any treatment at all, and the urine has been free from sugar for a year.

MODERN HYDROPATHY: ITS RELATION TO GENERAL THERAPEUTICS.

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THE object of this paper, namely, to stimulate in some degree the growing interest of clinicians in the possibilities of hydrotherapy, will perhaps be best served by presenting as tersely as may be a few salient considerations, theoretical and practical, gleaned almost at random from the mass of available material. It was by the experiments and writings of Dr. Winternitz, of Vienna, that the claims of this method to rank as a genuine scientific procedure were finally established. The publication of his compendium in 1879 did for the *rationale* of the "water cure" what the sensational career of the Silesian peasant, Priessnitz, at Gräfenberg (who died in 1852 worth several millions) had achieved for its popularity.

The recently-published investigations of Sir George Johnson reaffirm and abundantly demonstrate the vast importance of vasomotor influences, as expressed by changes in the capacity of the systemic and pulmonary arterioles, in determining many apparently very diverse pathological conditions. This idea of the predominance of vasomotor influences might almost be called the key to the *modus operandi* of hydrotherapy, for it is the special facility with which they enable us to modify the vascular conditions obtaining in disease to which the efficacy of hydriatic procedures is mainly attri-

butable. Such other elements of utility as the direct effects of thermal and concomitant mechanical impressions upon innervation, local and general temperature, the heart's action, muscular tone, and the digestive, nutritive, and metabolic processes, are, though doubtless of considerable, yet, in so far as they are divorced from the vasomotor effects of the same procedures, for the most part of subordinate, importance.

Although, of course, apart from the question of mechanical impressions, the therapeutic value of water used externally depends largely upon the means it affords of bringing various and exactly determinate degrees of temperature to bear upon parts or the whole of the body, the important sedative and narcotic properties of baths of indifferent temperatures must not be overlooked. Thus a simple warm or tepid bath taken at bedtime will cure some cases of insomnia. These effects are plausibly explained by Heymann and Krebs as being due to saturation of the sensory nerve endings (partly by imbibition, partly through suspended evaporation), and consequent diminution of conductivity.

By the action of thermal stimuli upon innervation, irritability may be raised or depressed, in some instances abolished even, at will (1) at the point of application, (2) in the central organ, (3) by reflection in other parts—for example, the muscular layer or the underlying viscera. The interesting researches of Dr. Head, recently communicated to the Neurological Society, tend to establish the fact (long suspected by clinical observers) that definite cutaneous areas, areas that do not overlap, are connected by nerves of temperature and common sensation with particular spinal segments, and thence, through the distribution of the sympathetic, with particular internal organs. And besides these direct and primary paths of reflection, there are probably many distinct parts of the organism which have positive or negative neural or vasomotorial relations to each other—for example, the feet and the head, and, according to Winternitz, the hands and the organs of respiration. The aim of the hydrotherapist (amply justified by the results of experience) is to utilise these and similar physiological data in the task of modifying by appropriate thermal and mechanical stimuli the metabolic and functional conditions of diseased tissues and organs.

Hardly less important than the distinction between the effects on the superficial and deep-lying tissues of a given thermal stimulus at the point of application is that between the effects produced at situations respectively central and peripheral to it. Generally speaking, a certain antagonism or negative relation between the superficial and deeper, as also between the peripheral and central, primary effects of moderate stimuli may be anticipated, examples of which are, in the first instance, the reflex acceleration of muscular circulation and metabolism, which is a prominent effect of cold cutaneous applications, and, in the second, the fact that the application of ice poultices to the arm near the elbow, while it induces contraction of the radial and ulnar arteries and a fall of temperature in the hand, causes precisely opposite effects in the axilla. There are probably few exceptions to the rule (verified by Schlikoff through experiments on rabbits and by Winternitz with plethysmographic observations as to the circulatory effects of partial baths of various temperatures), that local contraction or dilatation of arterioles, however induced, is accompanied and followed by contrary behaviour on the part of vessels elsewhere.

By the prolonged action of a given thermal stimulus the protective influence of vasomotor accommodation is overborne and a general thermal effect produced, but even the surface temperature of a living part is never quite equalised to that of the thermal medium. Experiments made by Schlikoff and Esmarch prove, however, that the very cavities of bones, as also the deep-lying organs of the trunk, may be cooled or heated by external applications. And to modify the temperature of the body or a part of the body is to modify in the same degree its circulatory, and thereby its nutritive and functional activities. Thus the outcome of a series of hydriatic operations individually to be characterised as a mere abstraction of heat may be, not a loss, but a gain of body weight, showing that over and above the inevitable stimulation of destructive processes there has been a still more effectual stimulation of constructive metabolism.

It is hardly necessary to insist upon the value of cold baths in the treatment of hyperpyrexia, but it is too frequently forgotten that, properly administered, they and similar hydriatic operations constitute a true antipyretic, not a mere antithermal procedure. In other words, over and above the physical abstraction of heat, diminution of its production may by their means be effected. In view of this fact, and also of the encouraging results of early hydropathic interference in fever cases, as contrasted with the depressing effects of antipyretic drugs, it is, I think, to be regretted that in private and hospital practice such interference is usually reserved for extreme cases and resorted to only after the febrile condition has been for some time in evidence. The following rules, if borne in mind by the practitioner who employs this method, will enable him to deal with such cases more effectually and with greater precision than is commonly imagined.

In the first place, it is to be remembered that the more suddenly heat is withdrawn from the body, and the more intensely the cutaneous nerves are stimulated by refrigeration, so much the more rapidly will the reactionary rise of temperature ensue. Now the heat abstraction caused by efficient wet packing being quite a gradual and the concomitant stimulation a mild one, the onset of reaction after a pack or series of packs (for several brief ones may be given in immediate succession) will be correspondingly slow. Another means of avoiding that stimulation of thermogenesis (due to reflex muscular hyperæmia) which in extreme cases takes the form of rigor, is the maintenance throughout the heat abstracting process of cutaneous vascular dilatation. Hence the antipyretic efficiency of the dripping sheet (that is, friction under a sheet drenched at intervals with cold or cool water), for this dilatation is best induced and maintained by the mechanical stimulation of active friction, which should also and for the same reason be employed during the administration of the ordinary cooling bath. It is asserted that the rapidity of heat loss may vary as much as 60 per cent. downwards, and more than 90 per cent. upwards, in accordance with the condition of the cutaneous vessels. Hence the simultaneous employment of friction will enable us to dispense with baths of very low temperature, the use of which may frequently be undesirable in these cases. Repeated packings, followed by cooling baths, have been found to reduce pyrexia more permanently than baths alone. The onset of reaction is also deferred by the application, during the intervals of more vigorous treatment, of cooling truncal compresses, that is, wet towels or narrow sheets wrapped round the body, with a light covering sufficient to interfere but slightly with evaporation, rewetted as often as may be necessary.

The above principles of antipyresis may profitably be contrasted with the hydropathic treatment of obesity, in extreme cases a true pathological condition. Here our main object is to stimulate combustion of non-nitrogenous constituents of the body, and, since physiology teaches us that such combustion is an invariable accompaniment of the phenomena of muscular activity, our object will be secured by whatever promotes the exaltation of muscular tone and function. Since the reflex effects produced in the muscular layer by external thermal stimuli are proportional to the intensity of the stimulation of the cutaneous nerves, the reduction of fat by a given application of cold will be proportional not so much to the actual as to the apparent or felt refrigeration. Hence we shall endeavour to increase the sensibility of the cutaneous nerves before submitting them to the process of refrigeration, and thus is explained the efficacy in cases of obesity of comparatively brief Turkish baths, followed by cold or cool needle, spray, plunge, or shallow baths, even without shampooing. Moderate diaphoresis is useful in such cases as an aid to the elimination of the increased waste products; but the popular notion that the longer the sweating process is borne the better the result is a mischievous fallacy.

The Turkish bath (in spite of a widespread impression to the contrary effect) is fairly described in the words of an authority as "pre-eminently the bath for the weak and disabled." In cases of general atrophy and asthenia it is (as proved by its effects upon the appetite and body-weight) one of the best restoratives at our disposal, and its cautious administration is by no means contraindicated by the

existence of any and every degree of even organic disease of the heart.

In asthenic cases exposure for from fifteen to thirty minutes to a temperature of 115° to 120° F. in the tepidarium—the thermometer hanging three feet from the floor level—will usually induce mild but sufficient diaphoresis without distress of any kind, and may be followed by some appropriate ablution, any intense thermal or mechanical stimulation being, of course, out of the question. Even this modified form of bath is probably inadmissible in severe cases of aortic regurgitation, compound valvular lesions, dilatation from adherent pericardium, or fatty degeneration, but in simple cases of aortic and mitral stenosis and mitral regurgitation it is often beneficial in many ways.

An important subject, to which a mere cursory reference is alone possible at present, is that of the properties and uses of the so-called excitant or heating compresses—cold, wet compresses covered in such a way as to preclude evaporation. The powerful influence of their continued application, in promoting the resolution of chronic inflammations and catarrhs, the absorption of old and hardened exudations, and the relief of various neuralgic and spastic affections, is one of the best-ascertained facts, and its precise *modus operandi* one of the most interesting problems of hydrotherapy. Fortunately, however, the fact itself of the efficacy in question of this apparently trifling procedure is one which can be readily tested by any practitioner.

A few words must be devoted to the subject of the methodical drinking of cold water. As collated and in part discovered by Winternitz, the effects of this procedure may be briefly summarised as follows:

1. Immediately after the drinking of cold water the pulse-rate is lowered, probably by stimulation of the pneumogastric fibres, but soon returns to the normal.

2. The temperature falls in the stomach and also, to a noticeable degree, in the rectum, a fact which may find clinical application in inflammatory conditions of the pelvic organs; conversely, cold enemata reduce the temperature of the stomach.

3. Catabolic processes are stimulated, and there is true diuresis, the excretion of urea, as also of the other urinary constituents, being markedly increased.

4. Peristalsis and the portal circulation are stimulated, and also (in consequence, perhaps, of the latter effect) the excretion of bile.

5. Böcker has attributed to water drinking an improvement in the respiratory qualities of the red blood corpuscles.

Most of the above effects are more marked when the water taken is imbibed gradually, rather than in larger quantities at a time but with longer intervals. The value of pure water as a diuretic is perhaps hardly yet sufficiently appreciated. Dropsical effusions may sometimes be relieved by its free administration, alternated with periods of nearly complete abstention. I would suggest also that in view of the proofs advanced by Dr. Haig of the tendency of alkalies to induce chronic uric-acidæmia, their routine administration in cases of gout and rheumatism, except, perhaps, in the hope of dissolving actual calculi, is hardly justifiable, and in pure water we possess at least one available substitute. Its power of increasing tissue waste indicates water drinking as a remedy for obesity.

What place, then, are we to assign to hydriatic procedures as a class in the modern therapeutic armamentarium? Obviously their scope is far wider than that of any individual drug. The modern renascence of hydrotherapy was contemporaneous with the final close of the reign of authority and tradition in the healing art and the dawn of the epoch of science. A wave of therapeutic pessimism had swept over Europe, and sectarian hydropathy was the outcome of an instinctive return to first principles, a feeling that it would be necessary to begin over again and to build upon surer foundations. But Priessnitzian hydropathy was no less arbitrary and empirical than the system it pretended to supersede, and it was not until the attention of scientific observers had been secured that the extravagant claims of fanaticism were replaced by the sober assertions of reason. In France this was the case almost from the first, but it occurred later in Germany and England. Meanwhile the new science of pharmacology had stolen into being, and it began to be perceived that the so-called rival systems were not necessarily rivals at all, but complementary factors of the one true method, their apparent antagonism being due to an imperfect understanding of their respective functions. In practice there can be no doubt that the benefits of really appropriate medication are augmented by the simultaneous employment of hydriatic procedures.

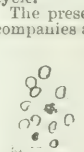
To such other elements of rational treatment as are constituted by massage, medical gymnastics, the scientific regulation of diet, aëro-therapeutics, and the various electrical methods, the natural relationship of hydrotherapy is sufficiently obvious. Its amalgamation with these has already proceeded far, and is destined, probably, to proceed much further in course of the construction of that concrete and organised system which we dimly apprehend as the goal of therapeutic endeavour.

ON THE NATURE AND SIGNIFICANCE OF THE CRESCENTIC AND FLAGELLATED BODIES IN MALARIAL BLOOD.

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In malarial blood certain forms of a parasitic organism are invariably present, singly or in association. The bodies referred to consist principally of a pale hyaline substance with or without granules of dark pigment, and are (1) minute nucleated bodies, or spores, which are free in the blood; (2) small epi- or intracorpuscular bodies, presumed to be these spores which have become attached to or have attacked the red blood corpuscles: (3) larger intracorpuscular, pigmented, amœboid bodies; (4) sporulating intracorpuscular forms, known as "corps en rosace," or "rosette bodies"; (5) the last mentioned outside the blood corpuscles, breaking up and becoming resolved into the first mentioned or free spores: (6) intermediate forms which serve to connect these types and suggest, if not prove, that together they form a complete vital cycle.

The presence of this parasite in the blood precedes and accompanies a special type of fever; the cycle of its development coincides in the main with the cycle of the fever; and it disappears from the blood with spontaneous recovery from or cure of the fever.



The intravenous injection of blood containing this parasite into a healthy individual is followed by the multiplication of the parasite in the blood of the person inoculated, and also by the occurrence in him of the characteristic fever. On these grounds the conclusion that malarial fever is caused by this organism is justified, if not absolutely proved.



Unless in the unnatural way by direct transfusion of blood, the malaria organism and malarial disease are not directly communicable; that is to say, the malaria parasite cannot be acquired by simple proximity to or by contact with an infected individual.



Apart from communication by transfusion of blood, the malaria organism and malarial diseases can be acquired only indirectly either through the air, the water, by food, or by other unknown way.



Malaria can be acquired, and its germ is therefore present, in places where there are few or no inhabitants, and where human beings rarely reside or pass through.

These propositions are all of them fully established facts.

Considering the frequency of the presence of the malaria organism in the human body, that in malarial countries at one time or another almost every individual harbours it in his blood, that it manifestly flourishes and progagates there, it is unreasonable to suppose that its presence in the human blood is a purely accidental circumstance in the sense that it is an organism which has strayed from its proper habitat, or to suppose that being in the blood, as regards itself, it is in

any way abnormally located. On the contrary, it is reasonable to believe that it is present there as being in its *normal* habitat, in its own interests, in furtherance of its own vital necessities, and as a necessary, or perhaps alternative, condition in the evolution of its life-history as a living propagating organism.

That it can sustain itself and multiply in the blood is proved by its appearance therein in vastly increased numbers after intravenous injection of malaria blood, as well as by direct observation of the process of development and reproduction. But as it has been shown that the malaria organism is not directly communicable (in a normal way) by one individual to another, that it can be acquired in places where there is no human population, it follows that it has a second life, one outside and independent of the human body.

Provision, therefore, must be made in the biological arrangements and economy of this organism, for (1) the life inside the human body, (2) the life outside the human body, (3) for the parasite quitting the human body, and (4) for its entrance into the human body.

The life *inside* the human body is provided for by the forms and developmental changes which culminate in the rosette or sporulating form, and already described.

What is the Provision made for the Life outside the Body?

In certain types of malarial disease, in addition to the forms of malaria parasite already mentioned, another and very different looking form is found—namely, the "crescent" form. The materials entering into the structure of this body are identical in appearance with those composing several of the previously mentioned parasitic forms—namely, a pale hyaline substance forming the matrix and particles of black pigment imbedded in this. The crescentic body, like the above-mentioned forms, with the exception of the free spores, lies inside the red blood corpuscles.



If malaria blood be observed some time after it has been withdrawn from the blood vessels, yet another form is seen—namely, the "flagellated body."

It is important to note that the *flagellated body never appears or comes into view on the microscope field immediately after the withdrawal of the blood from the vessels of the body, but only after the blood has been on the slide for some minutes—generally not before a quarter of an hour.*

The flagellated body, therefore, cannot exist as such in the circulation, although, potentially, it must be represented there by some of the forms already described as present in freshly-drawn blood.

The flagellated body, if properly and sufficiently searched for, is to be found in all cases of malarial infection; it is, therefore, a constant feature of the parasitism.



The flagellated body has been observed to be evolved in two ways: First, from the crescentic body; second, from certain of the large intracorpuscular amœboid bodies.

1. Under the microscope the crescentic body can be seen to develop into the flagellated body, thus: first, the crescent becomes straight, next it becomes oval, then spherical, then the centrally-collected pigment becomes arranged as a capsulated ring before being scattered through the sphere, and acquiring peculiar swarming, agitated movements: next the sphere undergoes rapid changes of shape: finally, flagella in varying number burst through the periphery of the sphere. The flagella remain attached to the sphere for some time by one of their extremities, like the tentacles of an octopus, and indulge in rapid, waving, and in peculiar shivering movements.

2. In those forms of malarial infection in which there are no crescents present in the blood the flagellated body can be seen to develop from certain large, pigmented, intracorpuscular forms. Such intracorpuscular forms have been seen to squeeze themselves through an invisible opening in the limiting membrane of the blood corpuscle, very much after the fashion of a leucocyte in diapedesis. When they have effected their escape in this way the pigment they contain becomes agitated, and flagella are subsequently thrown out, as in the corresponding stage of the crescent-derived flagellated body.

Shortly after the appearance of the flagella they break away from the central body and swim about as free parasites in the liquor sanguinis.

The free flagella, as the attached flagella, have two styles of movement—one a waving, undulating movement, like that of an eel in swimming, which is manifestly subservient to locomotion; the other a rapid, vibrating, shivering movement, indulged in particularly when the flagellum meets with an obstacle, as when it impinges against a blood corpuscle. During the latter movement the flagellum is in the main straight and appears to be more or less rigid.



The crescentic bodies persist in the blood for several days or weeks after the other forms of intracorpuscular bodies and the fever they are associated with have disappeared, whether spontaneously or as a consequence of the action of quinine.

Although some may present signs of degeneration, in freshly-drawn blood the crescentic body never appears as if it had undergone developmental change.

The crescentic body is not attacked by the phagocytes.

These, too, are all well-ascertained facts.

Seeing that the crescentic body is so frequent a feature in malaria blood, so persistent, and so resistent to the physiological agency for removing foreign bodies from the circulation, its presence cannot be regarded as accidental or as the result of some caprice or freak of Nature. On the contrary, the crescentic body must be regarded as in some way subservient to the interest of the organism to which it evidently belongs.

As it is not observed to undergo development in the circulating blood, its destiny cannot be the propagation of the parasite inside the human body—a requirement sufficiently secured by the rosette form of the parasite.

As the crescentic body is observed to undergo development after it has been removed from the human body, and only then, this circumstance, together with other considerations to be mentioned, points to the conclusion that the crescentic body is intended to carry on the life of the species *outside* the human body.

If this proposition be correct, then the flagellated organism which proceeds from the crescentic body is the first stage in the life of the malaria organism outside the human body, and the living moving flagella, into which it breaks up, the second stage. The central sphere, to which the flagella are at first attached and from which they are derived, must be looked on as residual.

Those intracorpuscular bodies which, in certain types of

malarial disease, on the withdrawal of the blood from the blood vessels develop into flagellated bodies are to be regarded as analogous to the crescentic bodies, and on the same grounds as bodies destined for the continuation of the species outside the human body. The flagellated organisms which proceed from them have, therefore, a similar destiny to those which proceed from the crescentic bodies.

As the malaria organism has not been found in the physiological or in pathological discharges or excretions from the human body, and as hæmorrhage is a very rare occurrence in malarial infection, it may be concluded that those forms of the parasite which have been shown to be destined for the continuation of the species outside the human body do not leave the human body in any of these ways or in such media. The crescentic body, and the analogous intracorpuscular flagellated-organism-producing form, so long as they remain in the blood vessels are perfectly passive, enclosed in blood corpuscles, and manifestly incapable of spontaneously bringing about or actively conducing to their own escape from the body.

Therefore, seeing that neither the physiological arrangements of the human body, nor pathological processes, nor the inherent powers and organisation of the parasite itself provide for its escape from the human body, and seeing that such escape is necessary, some extraneous agency, such as is likely to be frequently, if not constantly, supplied in natural conditions, must come to the assistance of the parasite. What is this extraneous agent which assists the malaria organism to escape from the human body?

A similar problem presented itself to the writer many years ago in connection with the filaria of the blood—*filaria nocturna*. Like the malaria organism, the filaria is at one time of its existence parasitic and circulating in the blood. Like the malaria organism, the filaria, in order to complete its life-cycle and preserve the species, has to pass from one human being to another, and, in order to do this, has to leave the blood vessels. Like the malaria organism, the filaria is not extruded in the secretions, and pathological discharges containing it are not a normal or usual accompaniment of the parasitism. Like the malaria organism the filaria is incapable of quitting the vessels by its own efforts. As the malaria organism is enclosed in a blood corpuscle so the filaria is enclosed in a sheath—the former to escape the phagocytes, the latter to prevent its leaving the blood vessels. As the malaria organism on being removed artificially from the blood vessels commences, under certain conditions, to enter on its evolutional cycle by first escaping from the enclosing blood corpuscle, so the filaria, under certain conditions, commences to enter on its cycle of development when it is removed artificially from the blood vessels by first escaping from its sheath.[1] In both parasites this first step in development can be brought about experimentally on the microscope slide, and in both parasites a lowering of temperature favours or is associated with the conditions which eventuate in successful experiment.

The parallel is very complete; the conditions, the requirements, and the problem to be solved are apparently identical for both parasites. As the problem and conditions are the same for both organisms, the solution of the problem may also be the same for both. If this be the case, the mosquito having been shown to be the agent by which the filaria is removed from the human blood vessels, this, or a similar suctorial insect must be the agent which removes from the human blood vessels those forms of the malaria organism which are destined to continue the existence of this organism outside the body. It must, therefore, be in this or in a similar suctorial insect or insects that the first stages of the extracorporeal life of the malaria organism are passed.

The two classes of movement indulged in by the flagella—the undulating and the vibrating—suggest that these bodies, on breaking away from the residual body or pigment-containing sphere, move in virtue of the locomotive faculty for some distance—say, traverse the blood contained in the insect's stomach—and then in virtue of the vibratory movement penetrate the cells of some organ of the insect. The malaria organism in the human body is an intracellular parasite like a gregarine or a coccidium, and it is probable that outside the human body it retains this habit. It would be idle to attempt to follow the parasite further without the assistance of direct observations; so many possibilities are open to it once clear of the human body. It may, for all we know, comport itself like the pebrine corpuscle and continue in endless succession parasitic in the tissues and ova of the insect, then in the larva, and so again in the mature insect. This it is impossible to say. But the hypothesis I have ventured to formulate seems so well grounded that I for one, did circumstances permit, would approach its experimental demonstration with confidence. The necessary experiments cannot for obvious reasons be carried out in England, but I would commend my hypothesis to the attention of medical men in India and elsewhere, where malarial patients and suctorial insects abound.

[1] BRITISH MEDICAL JOURNAL, April 15th, 1893.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

CASE OF CHLOROSIS TREATED BY RED MARROW TABLOIDS.

THE success in a case of progressive pernicious anæmia treated by Dr. Fraser[1] with red bone marrow (raw) encouraged me to employ the same substance in the shape of tabloids in allied disorders. I quote a case which will illustrate the results I have gained.

B. H., a young lady, aged 18 years, first came under treatment on July 10th, 1894, complaining of amenorrhœa, dyspnœa, palpitation, constipation, œdema of ankles and loss of flesh. I ordered her ℞ liq. ferri ♏x, liq. arsenicalis ♏ij, aq. ad ℥j, t. d. s., and an aloin compound tabloid every other morning.

By August 2nd, 1894, the above treatment had caused but little improvement. She was still suffering from severe cephalalgia, nausea, and faintness on rising in the morning; weakness, anorexia; pallor of face and lips was marked. She was still habitually constipated, highly nervous, and the menses never more than a "show." The pulse was small, quick and sometimes irregular. There was a venous hum over the great veins and a systolic *bruit* at base. The red cells numbered 2,800,000 per c.cm. The hæmoglobin was 40 per cent., many of the corpuscles were irregular in shape, not many blood plaques were seen. On August 30th, 1894, after taking four red marrow "tabloids" a day the subjective symptoms and abnormal cardiac *bruit* had almost disappeared, she looked brighter, appetite was fair, there was no œdema of ankles, the bowels were regular, the menses almost normal. The red corpuscles numbered 3,200,000 per c.cm., very few irregularly shaped hæmocytes were seen. The hæmoglobin was 70 per cent, and the blood plaques more numerous.

The above case justifies me in recommending these agents (tabloids) in the following conditions: anæmia; oligæmia from loss of blood (wounds, hæmorrhoids, hæmoptysis, hæmatemesis, etc.); anæmia following acute diseases (typhoid, etc.); tropical anæmia (parasitic or malarial); anæmia of toxic origin; leukæmia or lieno-leukæmia (acute or chronic); and progressive pernicious anæmia.

CHARLES FORBES, M.D., etc.,
London. late Surgeon, Wassa Gold Mines, West Africa, etc.

[1] BRITISH MEDICAL JOURNAL, June 2nd, 1894, p. 1172.

A MEETING of the South Western division of the Medico-Psychological Association will be held at Bailbrook House, Bath, on Thursday next, at 3 P.M. Papers will be read by Drs. Goodall and Bristowe, and Dr. Maury Deas will open a discussion on the Uses and Limitations of Mechanical Restraint as a means of Treatment.

THE MEDICAL FACULTY OF BORDEAUX.—The Medical Faculty of Bordeaux has received from the son of a former practitioner of the town, who had exercised his profession there for more than fifty years, a donation of 100,000 francs (£4,000) towards the establishment of a Chair of Gynæcology.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

William Pavy, M.D., F.R.S., President, in the Chair.

Tuesday, December 4th, 1894.

Subdural Hæmorrhage in Pernicious Anæmia.

Dr. W. P. Herringham cited the case of a boy whose skull presented syphilitic nodes, whose spleen was enlarged, and who was suffering from great anæmia. After death, the liver gave the reaction of iron very markedly. There was blood effused in the subdural space opposite the seats of the nodes, though the inner table of the skull was healthy. The noteworthy feature, however, was that there was hæmorrhage also into the tissue of the dura mater. In this case, therefore, the hæmorrhage clearly arose from the dura mater itself.

The President remarked that in pernicious anæmia hæmorrhage was of frequent occurrence, as into the retina and serous cavities, and the causation was the matter of interest attaching to such specimens.

Dr. Howard Tooth, after recalling that one set of observers held such hæmorrhages to be due to pachymeningitis, following Virchow, another held it to arise without inflammation. In Dr. Herringham's case an antecedent inflammation was out of the question, for the clot on being peeled away displayed a healthy surface of dura mater; neither was inflammation concerned in the cases that arose in children from scurvy.

Dr. Pye-Smith remarked that in this country, especially after the observations of Sir Prescott Hewett, the inflammatory origin was not generally held.

Dr. Percy Smith spoke to the fact that such hæmorrhage which took place in conditions of insanity associated with wasting of the brain, or in chronic mania, was not considered by those engaged in lunacy to arise from antecedent pachymeningitis.

Dr. Herringham, in reply, thought that different causes obtained in different cases. In pernicious anæmia it was probably disease of the vessels.

Carcinoma of an Axillary Breast.

Dr. F. T. Paul illustrated with lantern slides the histology of a carcinoma which was removed from the axilla of a woman, the mother of several children. It was clinically a typical scirrhus, of the size of a filbert, and the lymphatic glands were involved, the skin being also adherent. It had no connection with the breast, and was not furnished with nipple or ducts visible to the eye. Recurrence took place internally, and death ensued. He considered that the tumour arose not in true mammary gland tissue, but in the class of tissue that Dr. Champneys had described in the axilla of suckling women. Dr. Creighton had described tumours of the cutaneous glands in the dog, large convoluted glands frequently opening into hair follicles, which he held to be of the class in which he thought his growth arose. In all these cases, and in his own, there was a well-marked layer of unstriped muscle fibre round the glands, and the same held of the sweat glands as a normal histological feature. In his specimen there were ducts related to the gland tissue, which in the non-cancerous parts did resemble mammary structure, and they opened into hair follicles independently of the proper sebaceous glands; the sweat glands were also recognisable, and remained, he thought, unaltered. Before opening into the follicles the ducts were first dilated and filled with a colostrum-like fluid, but afterwards contracted in size. It would appear that there were transitions between sweat and mammary glands, and possibly a better title would have been carcinoma of axillary cutaneous glands.

Dr. C. Creighton considered that the tissue was mammary, and the cancer a scirrhus arising in such. At the same time he thought that the sweat glands were the seat of carcinoma also, which partook of the characters of a rodent tumour.

Mr. A. A. Bowlby had lately examined with Dr. Champneys certain of the structures described by the latter in the axilla of puerperal women; and their joint opinion was that the structures in question were related to sweat and not to sebaceous glands. The ducts opened at the surface of the skin, not into the hair follicles.

Mr. Jackson Clarke considered with Dr. Snow that the tumour arose most probably in an axillary mamma; the opening of the glands into hair follicles told against their being sudoriparous. He thought rodent ulcer arose in the sweat glands.

Dr. Paul, in reply, could not help thinking it very unlikely that carcinoma should commence in two classes of glands at the same time; and he had no doubt as to the connection between the acinous structures and the ducts he had traced in serial sections with the hair follicles. In the dog, sweat glands normally opened into the hair follicles. He considered the gland tissue to be quite distinct from the breast.

Cystic Disease of the Kidneys.

Dr. Pye-Smith exhibited the kidneys of a young man who was in good health until fourteen days before death, which took place from uræmic coma. In such cases death took place with what appeared clinically as chronic Bright's disease; the oldest case he knew was 53, and he regarded the disease as arising in infancy or early age, and, as was well known, it might be congenital. Most such cases passed undiagnosed. There were singularly few symptoms. In some cases, of which he had reported one, there coexisted cysts of the liver, or of the liver and pancreas, and even the brain. He had thought that the cysts in the liver arose as vacuoles in the hepatic cells: but altogether, in his opinion, the coexistence of such cysts was a coincidence only.

Dr. H. D. Rolleston remarked that in the congenital form the dilatation affected the pyramids as well as the cortex, and had been held due to obstruction at the papillary orifices; in the acquired forms of adults, it was chiefly the cortex, and arose from interstitial nephritis. Dr. Kanthack and he had traced a cystic condition of the bile ducts, in one such case associated with disease of the kidney, and this possibly explained the vacuolation described by Dr. Pye-Smith, the appearance in question arising from invagination of the hepatic cells around the dilated radicles of the ducts.

Dr. Alfred Eddowes had seen cystic disease of the kidney in a woman who had died suddenly, and in whom there was a history of past scarlet fever.

Dr. Pye-Smith, in reply, would only observe that if there was a condition acquired in adult life, which led to the same extreme enlargement as was seen congenitally, it was still necessary to explain why chronic interstitial nephritis should in some cases lead to contraction of the kidney, and in others to this excessive enlargement.

Chondro-Sarcoma of the Humerus.

Dr. H. Snow exhibited the humerus of a young woman affected with a subperiosteal tumour, which in the higher part of its extent was osseous, in the middle cartilaginous, and inferiorly of sarcomatous tissue. He adopted the view that the cartilage arose from pre-existing elements of such.

Mr. A. A. Bowlby thought that the wide distribution of cartilage in tumours of glands, etc., showed that the presence of pre-existing cartilage was not necessary, and that the cartilage might arise equally from connective tissue.

HARVEIAN SOCIETY OF LONDON.

George Eastes, M.B., F.R.C.S., President, in the Chair.

Thursday, November 15th, 1894.

Obscure Diseases of the Knee-Joint.

Mr. Howard Marsh related some cases of disease of the knee-joint in which diagnosis was extremely difficult. The first was that of a boy who had a swelling over the internal condyle of the femur. It was cut down upon, and found to be a spindle-celled sarcoma growing from the synovial membrane. It was freely cut away, the joint washed, drained, and put on a splint. The case did well, and no recurrence had been noted. The second case was that of a boy, aged 9, with a fixed, circumscribed, prominent swelling over the joint to one side of the patella. It was diagnosed by several surgeons as a new growth in the subcutaneous tissue, but on operation turned out to be a chronic abscess. The third case was that of a lady with a swelling of the joint—clearly an effusion into the joint, with raised temperature and of several months' duration. It was supposed to be tuberculous disease of the synovial membrane, but no improvement took place after several weeks' treatment by counter-irritation, etc. Suddenly

it was noticed that spontaneous fracture had occurred above the condyles, and then it became clear that the case was one of sarcoma, though no expansion of bone or other signs of that disease were present. Amputation was then performed, and the case did well. Mr. Marsh said that careful observation should always be made as the case proceeded, and the surgeon should not in any way be biassed by his original expressed opinion. He had lately been treating enlarged bursæ beneath the semimembranosus by excision, with ligature of the neck of the sac, and showed the advantages of this procedure over the old method of injecting irritants, aspirating, etc.

Mr. A. PEARCE GOULD said he quite concurred in this new method, and had used it frequently.

SUTURE OF THE URETHRA AFTER RUPTURE AND EXTERNAL URETHROTOMY.

Mr. PEARCE GOULD read a paper on this subject. He related several cases in which, after rupture had occurred through accident, he had cut down upon the urethra and sutured the torn ends with the finest silk over a large catheter, and then sutured the various layers, compressing urethræ, fasciæ, and skin also. The catheter was kept in only three or four days, and the cases did wonderfully well, no trace of a stricture resulting. He divided cases of strictures which were impassable into (1) those without and (2) those with fistulæ. These he treated by dividing the stricture by Wheelhouse's method, introducing a catheter and suturing, layer by layer, in the same way as before. He discussed the relative advantages of external and internal urethrotomy, and showed that, although brilliant successes were recorded after the latter, the former, with suture layer by layer, was the safer in that the surgeon saw and knew exactly what he was doing.

Mr. HOWARD MARSH related a case of suture of the urethra performed by Mr. Bowlby.

Mr. GORDON BRODIE and Mr. PEYTON BEALE made remarks, in which they fully agreed as to the dangers, in many cases, of internal urethrotomy.

HUNTERIAN SOCIETY.

CHARTERS J. SYMONDS, M.S., F.R.C.S., President, in the Chair.

Wednesday, November 14th, 1894.

SYPHILIS OF SPINAL CORD.

DR. FRED. J. SMITH showed a case of syphilitic disease of the spinal cord in a man aged 29, who suffered from syphilis eighteen months before admission. He first complained of stiffness and pain in the back last Easter. Some six weeks after this he was thrown out of a trap, but complained of no ill-effects from the accident. A fortnight later he lost power rather rapidly in the legs, and took to his bed for three weeks, improving under medical treatment. On Saturday, September 8th, he fell down from weakness in the legs, and was admitted on September 13th. On admission he was quite unable to walk owing to weakness in the legs: elsewhere motor power was unimpaired. Over the lower extremities sensation was considerably blunted, and the transmission of impulses seemed delayed, but complete anæsthesia was nowhere present, and temperature changes were correctly, though slowly, recognised. The knee-jerks were grossly exaggerated, ankle-clonus slightly present; superficial reflexes of lower limbs also exaggerated; reflexes of upper trunk and limbs natural. Urine constantly dribbled away without his knowledge, the urine itself being healthy. There was obstinate constipation, the bowels not having been open for ten days, the motion passed unconsciously. The cranial nerves were unaffected, except for possibly slight nystagmus, and the pupils were rather sluggish in reacting to light. Under iodide of potassium, pushed freely, the patient soon showed signs of improvement; control over the bladder and rectum was now very fair, and he was able to walk by pushing a chair in front of him. The diagnosis was made comparatively easy by the "random" nature of the symptoms, which did not correspond *in toto* to any known system lesion of the cord, and yet obviously corresponded to a lesion of all the systems in part; and, secondly, there was the admitted history of a recent attack of syphilis. In point of time the onset corresponded well with a very late secondary stage of the disease, and the wide horizontal spread of the trouble indicated what should rather be expected at that period—namely, a diffuse infiltration of the cord with small cells (granulomatous in nature). Syphilis, as was known, might affect organs in one of two primary ways—namely, either by a local, concentrated growth of a granuloma, or by a diffuse infiltration of the organ with cells of a similar nature. Obviously either the blood vessels of the organ or its parenchymatous cells might be the chief sufferers. In the present case Dr. Smith rejected the blood-vessel-with-thrombosis view, owing to the too gradual onset of the symptoms and the concentrated gumma view, because there was evidence of the whole thickness of the cord being rapidly affected. He accepted the diffuse infiltration view on the following grounds: (1) the onset of the illness about fifteen to eighteen months after the primary sore; (2) the ingravescent character of the symptoms; (3) the wide diffusion in horizontal area combined with a moderately rapid, not chronic, development of implication of nerve structures; and (4) the rapidity of recovery under treatment, pointing to no great severity or permanency of lesion.

The PRESIDENT asked whether there was any pain pointing to affection of the cord in this case, and whether the presence of pain contraindicated syphilis as the origin of the disease.

Dr. HINGSTON FOX asked what treatment had been adopted, and, if iodide of potassium, what was the maximum dose which had been administered?

Dr. POTTER asked whether it was known whether the patient had been treated with mercury from the first appearance of the chancre.

Dr. FRED. J. SMITH, in reply, said he considered the absence of pain contraindicated either peripheral neuritis or gumma of the cord. The rapid onset of rectal and bladder trouble pointed to the acuteness of the affection. The maximum dose of iodide which the patient had taken was 50 grains ter die.

COMPRESSION OF SKULL.

Mr. OPENSHAW showed an infant, aged 4 weeks, with a compressed skull. Above the zygomas, supraorbital ridges, and crossing the centre of the occipital bone the skull presented a well-marked constriction, as if a thick rope had been tied round it. The labour, though not instrumental, had been prolonged. The pelvis of the mother was said to be contracted. The upper part of the occipital bone projected over the parietals, but did not seem to be osseously ankylosed in this position. The two parietals seemed firmly ankylosed together. No change had taken place in the skull since birth. The frontal region was flat and receding. The child had cried almost continuously since birth, and, though taking the breast well, was evidently suffering from defective mental development.

Dr. TATHAM considered the case was one of primary brain defect with secondary skull change, and did not consider operative interference was likely to produce any benefit.

Dr. F. J. SMITH advised operation.

GASTRO-ENTEROSTOMY.

The PRESIDENT showed a woman, aged 41, upon whom he had performed gastro-enterostomy five months previously. She was admitted into Guy's Hospital with typical symptoms of pyloric obstruction of some months' duration, constant periodical vomiting of large quantities of frothy partially-digested food with pain, loss of flesh, and emaciation. Gastro-jejunostomy was performed in May, 1894, an oval piece of the stomach wall being excised. Recovery was uninterrupted. The gain in weight had been marked and rapid. The patient now is in good health and simply presents a firm movable tumour, the size of an orange, in the pyloric region which is not particularly painful and not tender. The President laid especial stress upon the necessity of excising a piece of the stomach wall, and narrated two cases: in one symptoms recurred after gastro-jejunostomy, and *post-mortem* examination showed that the aperture into the small gut was occluded, and in the other in consequence of recurrence of symptoms of obstruction it became necessary to reopen the abdomen and again unite the jejunum to the stomach, the old aperture being closed. This second patient was now alive. The Pre-

sident considered it absolutely essential that the mucous membrane of the stomach should be freely excised all round the aperture.

Mr. Openshaw said he was very glad to hear that the aperture often closed unless a portion of the stomach was removed. He had, *post mortem*, found that the aperture which he had made into the jejunum had become impervious. This defect, though the operation was done as then recommended, he had thought was due to some error on his part.

Tabes Dorsalis without Ataxia.

Dr. McDonnell showed a man, aged 54, the subject of tabes dorsalis, who presented no ataxia. His father was still alive, aged 74, and suffered from paralysis agitans. He served as a soldier; when 20 years of age he had a chancre, which was fourteen days healing; it was not treated. Either before or after this chancre he had symmetrical suppurating buboes of the groins, which healed in two months. No secondary symptoms. At 51½ years of age his sight became cloudy at the temporal side to the left eye first. Six weeks later the following is the report from Moorfields: "Can count fingers at 12 inches with both eyes. Discs white with a general greyish tinge, vessels not obviously shrunken. No signs of old inflammation. Disc outlines sharp; surface cupped. Iris reacts to light and well to accommodation. Knee-jerks diminished slightly, certainly less on left than right side. ℞ Pot. iodi. gr.x, t.d." At 53 he was completely blind. Present condition: Pupils unequal, large, do not contract in response to light stimulus; to attempted near vision there is some contraction of iris, more distinctly of right than left. Nystagmus is present and some strabismus. Tactile, thermal, and pain sense present in feet, and touch localised correctly. Sense of position of feet and legs present. No girdle pain. Until February, 1894, organic reflexes were normal; but now there is occasional involuntary passing of urine and fæces. There is a presystolic *bruit* at apex and systolic heard over subclaviary arteries. There is no inco-ordination. The knee-jerk is absent on account of some lesion on sensory side, since both vasti and rectus on both sides respond to faradic current readily, and probably due to sensory muscle nerves, which have been demonstrated by Professor C. S. Sherrington.

LARYNGOLOGICAL SOCIETY OF LONDON.

Felix Semon, M.D., F.R.C.P., President, in the Chair.

Wednesday, November 14th, 1894.

Swelling of Left Side of Larynx, with Paralysis and Atrophy of Left Half of Tongue and Soft Palate.

Mr. Bowlby showed a man, aged 52, who in December, 1893, suffered from a painful lump on the left side of the front of the neck. In August, 1894, the swelling had increased in size, and was very hard. It was incised, and an ounce of pus evacuated. There was pain, dysphagia, and hæmoptysis. In October, 1894, there was an enlarged, stony, hard gland beneath the left maxilla, with the superjacent skin intact. Some slight loss of facial symmetry. The tongue protruded with difficulty, and pushed over to the left. The left half of the tongue and soft palate were atrophied, and the latter was paralysed. No scars visible. The epiglottis was twisted out of the median line. A smooth reddish mass occupied the greater part of the larynx, obscuring the left side of the larynx. The right cord was fixed. No ulceration or scar. Mr. Bowlby asked whether the swelling was due to the perichronditis; whether malignant disease was underlying it. Paralysis of nerves was rarely caused by merely inflammatory smelling.

The President thought that there was no evidence that the growth was causing the paralysis. Unilateral pressure on the recurrent laryngeal could not cause bilateral paralysis or spasm.

Tuberculous Disease of Soft Palate, Larynx, Pharynx, and Lungs.

Mr. Bowlby showed a patient, aged 22, with active tuberculous disease of both lungs and sore throat, at first believed to be diphtheritic. A greyish membranous-like deposit covered the soft palate, uvula, and epiglottis, but there was no swelling or œdema of the parts. The tonsils were excavated. On clearing the surface a bleeding surface was left which was irregularly ulcerated. Bacilli were found in scrapings from the soft palate.

Pachydermia Laryngis with Perichondritis of Arytenoid Cartilage.

Dr. Bronner (Bradford) showed a specimen from a case of four years' duration, with a probability of former syphilis.

Mr. Butlin observed that so-called perichondritis was very often nothing more than syphilis, and he thought that in this case it was so.

Dr. Milligan (Manchester) commented on the difficulty in determining whether perichondritis or pachydermia was the primary condition.

Lymphadenoma with Obstructed Breathing.

Dr. James Donelan showed a patient, aged 43, suffering from enlarged glands in the neck of one year's duration; other symptoms seemed to indicate enlargement of mediastinal glands also. The patient was not anæmic. Arsenic had been given internally, but only small doses could be tolerated.

Mr. W. G. Spencer mentioned a case in which there had been marked intolerance of arsenic until a portion of the adenomatous mass was removed, after which the patient was able to take the liq. arsen. hydrochlor., with marked benefit.

Congenital Fistula of the Neck.

Mr. W. R. H. Stewart showed a patient, aged 19, who five years previously had suffered from a swelling over the thyroid region. When first seen the skin about the larynx was riddled with sinuses in every direction. These were slit up and scraped until no further channels could be found. The wound healed, but broke out again in a single track, which communicated with the mouth. The sinus, treated with injections of zinc chloride, was now almost closed, and there was hardly any discharge. The case was regarded as one of congenital bronchial fistula.

Mr. Butlin thought that the fistula had probably begun as a cyst in connection with the lower part of the thyro-lingual duct.

Mr. Bowlby believed that these cases were not usually benefited by operation. The difficulty of removing the whole sinus and the impossibility of keeping the parts at rest led to alternate healing and breaking down, but not to cure.

Papilloma of Nasal Septum in Association with Rodent Ulcer in a Man, aged 84.

Mr. P. de Santi exhibited a patient from whom he had removed a growth which had protruded slightly from the left nostril, and occluded the passage. It was of cauliflower formation, and was attached to the nasal septum by a small pedicle. A small painless rodent ulcer was also present on the outer surface of the right side of the nose.

Disease of Tongue and Soft Palate (for Diagnosis).

Mr. C. A. Parker exhibited a patient, aged 8, who had complained of roughness and soreness of the tongue for the last four months, after a short febrile attack of uncertain nature. The whole of the posterior two-thirds of the tongue was covered with large bosses, the surfaces flattened, uneven, and rather paler than the rest of the tongue. They were firm to the touch, but there was no marked pain and no ulceration or discharge. On the soft palate were one or two smaller patches. A few enlarged, hard, and slightly tender glands beneath the chin and in the neck. The child appeared in good health, but postnasal adenoid growths were probably present.

Mr. Butlin thought that the case was one of macroglossia. The youth of the patient, the papillated appearance of the central lump on the tongue, and the presence of enlarged glands all pointed to it. He did not advise any treatment at present.

Mr. Spencer regarded the growth as an abnormal extension of the lingual tonsil. He suggested that it should be gradually destroyed at several points.

Epithelioma or Pachydermia of the Vocal Cord.

Mr. Charters Symonds showed a patient with a localised ulcerated swelling on the left processus vocalis of recent

development. There was free movement of both cords, good voice, and no glandular swellings.

Dr. Milligan thought that the case was probably epithelioma, and would advise thyrotomy and removal of the cord.

Dr. Spicer suggested endolaryngeal removal before resorting to thyrotomy.

Dr. Hill observed that if the condition was pachydermia it must have been of long duration.

The President felt absolutely certain that the case was simply pachydermia. A malignant growth on the inner side of the arytænoid cartilage was not compatible with such free movement. The patient did not suffer, and there could be no need to operate unless the condition got worse. He would simply advise rest to the voice and a course of iodide of potassium.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

F. Lawrance, M.R.C.S., Vice-President, in the Chair.

Friday, November 16th, 1894.

Adjourned Discussion on Diphtheria.

Mr. Lawrance resumed the discussion on diphtheria. He commented on the increase in the number of reported cases since the Notification Act.

Dr. Bennett was satisfied with the existing means of diagnosis, and considered that the bacteriological examination of suspected cases was not only unnecessary but might waste valuable time in the treatment of the disease. With regard to treatment he considered that a mixture containing sesquichloride of iron, chlorate of potash, and hydrochloric acid was most efficacious.

Dr. Ball related a severe case of diphtheria which he had treated at the West London Hospital with Aronson's antitoxin serum with striking success. He discussed the relative merits of tracheotomy and intubation, and urged a more extended use of the latter. His own experience in thirty-two cases of intubation convinced him that the operation gave results at least equal to tracheotomy, and the consent of parents was much more readily obtained.

Dr. Scanes Spicer pointed out the increased liability to diphtheria in patients suffering from enlarged tonsils, adenoids, or other chronic disease of the pharynx. He also urged that the crowding of such cases in schools was a fertile means of spreading diphtheria if a case were imported. He therefore suggested that a systematic throat inspection (together with necessary treatment) should be carried out amongst the Board and other schools.

Dr. Hill considered that bacteriological examination, as carried out under the American system, could not be conclusive when it gave a negative result, since a part of the throat might have been swabbed where no bacilli were present. He also referred to several cases of diphtheria where there had been no faucial affection.

Dr. Abraham showed the New York apparatus for the bacteriological examination of suspected throat cases, and explained the system. He pointed out that the bacillus could be detected on the fauces some days after the disappearance of the membrane.

Dr. Colman emphasised the importance of observing the knee-jerk, since this was often absent for a few days during the acute period of the disease, without any other paralytic symptoms appearing. When the membrane had cleared off its absence might establish a diagnosis in a case seen then for the first time. In treatment he deprecated brushes, and preferred sprays; he emphasised what had been said on the paramount importance of abundant cubic space and frequent change of air.

Mr. Part urged the excellent results of local antisepsis, both in cutting short the disease and in avoiding dangerous sequelæ. If this local antiseptic treatment was thoroughly carried out, the mortality of diphtheria would decrease in hospitals and elsewhere.

Mr. Lake pointed out that while the temperature in true bacillus diphtheria was subnormal, in cases of disease due to cocci, or to a mixture of bacilli and cocci, it was high. He urged the importance of diagnosing between these two forms of the disease on account of the danger which the cases of coccus diphtheria ran of catching true diphtheria if treated in the same ward.

Dr. Cagney regarded paralysis as part, rather than as a sequela, of diphtheria; and dwelt upon the importance of being able to recognise diphtheritic neuritis, and to distinguish it from the other forms, such as alcoholic; the remarkable tolerance of strong faradic currents was a useful indication. He referred to Dr. Martin's two toxins of diphtheria: the first an albumose manufactured and virulent locally, the second an organic, and elaborated in the spleen, and having a more general action. This latter he considered was the cause of neuritis.

Dr. Dudfield referred to the excellent effect of the internal administration of iron, together with the local application of crude paraffin. He referred to the reputed wrong notification of diphtheria, but since the death-rate at the hospitals and among the cases treated at home was about the same, he did not think that there was so much error. He mentioned an outbreak of diphtheria occurring in a newly-built house; it was found that the house was built on made ground, consisting of all sorts of refuse, without any concrete under the foundation, together with a faulty drain. In his opinion, there was some relation between heavy rainfall and diphtheria.

Dr. Pope, in closing the discussion, reviewed the opinion of the other speakers.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

F. Page, M.D., President, in the Chair.

Thursday, November 8th, 1894.

Cases.

Dr. Oliver showed a girl with Cerebral Tumour, for which it was proposed to operate.—Dr. D. Drummond showed: (1) A man suffering from Locomotor Ataxy, the ataxy being extreme; (2) a man who after a fall developed Locomotor Ataxy and Paralysis—the tibials were paralysed and atrophied; (3) Double Dislocation of Femur into Sciatic Notch; (4) Aneurysm of Thoracic Aorta.—Mr. Walter Ridley showed a boy on whom he had performed Thyrotomy for the removal of Papillomata of Cords. Speech was now fairly good.—Mr. Morison showed a woman, aged 48, on whom he had done pyloroplasty three weeks previously. There was a history of twenty years' dyspepsia; latterly there had been grumous vomit, and the patient's weight fell to 5 stones. She was now taking solid food in considerable quantity. All discomfort had disappeared, and she weighed 6 stone 11 pounds. —The President showed a man on whom he performed Pyloroplasty for Traumatic Stricture of Pylorus on March 1st, 1892. He had continued in perfect health since the operation.—Dr. Limont showed a woman, aged 31, with Hypertrophied Stomach. Two years ago she was treated in hospital for gastric ulcer. For four or five months she had had the symptoms of dilatation of the stomach. The stomach was found to be greatly enlarged, but with very thick walls, which hardened under the hands almost like a pregnant uterus. He regarded the case as a very suitable one for pyloroplasty.—Dr. Robertson showed a case of Thyroid Cyst treated with Chromic Acid with good result.—Mr. Williamson showed: (1) A man whose Back was Sprained in lifting a heavy weight, and who became paraplegic a week later; (2) a man on whose Left Shoulder a heavy mass of coal fell. Total loss of motion in the lower limbs came on, also of sensation, except in calf of right leg. In the lower lumbar region there was a prominence from dislocation of the upper part forwards. Under ether the fracture was reduced by extension and manipulation. No recovery of motion or sensation had, however, taken place.

Gall Stones.

A discussion on this subject was introduced by Mr. Rutherford Morison, who said gall stones were formed in the great majority of cases in the gall bladder. He thought they were never formed, though sometimes found in the smaller ducts. The presence of mucus would seem to be essential to their formation, and this was secreted only by the larger ducts and gall bladder. Pain, the most prominent symptom, was neither due directly to the presence of the

stone, nor to the distension of the gall bladder or ducts, but probably to the forcible contraction of unstriped muscle. If the gall bladder were distended, the distension varying in amount, and accompanied by periodic attacks of pain without jaundice, a stone was impacted in the cystic duct, causing its partial obstruction. A mistaken diagnosis of "spasms" was common in such a case. When the gall bladder was distended without jaundice, and pain was absent, a stone had completely blocked the mouth of the gall bladder or the cystic duct. In this case a mistaken diagnosis of floating kidney was not rare. Attacks of severe pain in the epigastrium or right hypochondrium accompanied by vomiting and shivering, and followed by sweating, complete relief and transient jaundice were due to the passage of gall stones from the gall bladder through the ducts into the duodenum. This diagnosis could usually be verified by careful examination of the fæces. If the relief after the pain were incomplete, the jaundice more or less persistent, and the patient every now and again attacked by ague-like paroxysms, generally with, but perhaps without, pain, each attack being followed by temporary increase of jaundice, a stone was impacted in, but not completely blocking, the hepatic duct. In the early stage of the last case the gall bladder could be felt enlarged and tender. Later the only local signs were tenderness and enlargement of the liver, for then the gall bladder was shrunken and thick-walled and buried in adhesions. Persistent jaundice with a distended gall bladder and absence of severe pain were due to a complete block of the common duct, arising from malignant disease in the neighbourhood involving it. The gall bladder, like the urinary bladder, became hypertrophied to overcome a surmountable obstacle, but dilated painlessly when completely overpowered. The prognosis in even apparently uncomplicated cases of gall stones was serious, and the per cent. mortality large. Operation should be recommended if the gall bladder were distended or attacks of hepatic colic recurred. Mr. Morison's conclusions as to the operative methods to be employed were given in the British Medical Journal of November 3rd, 1894, p. 971. He had to add to these conclusions that if the usual operation were followed by the fresh formation of gall stones, as he knew had happened in some unpublished cases; in even a small number of instances, resection of the gall bladder must be the rule. His last conclusion was that when a stone was impacted in the common duct, it depended in what part of the duct it was lodged on whether the finding of it during the operation was easy or difficult, and its removal safe or complicated. The stone might be lodged above that portion of the common duct which came into relation with the head of the pancreas, when it could be grasped and removed by a direct incision, after exposure of the portion of duct in which it was lying, the separation of often troublesome adhesions being the chief difficulty; or it might be lodged in the end of the duct (ampulla of Fater), when it was entirely covered up by the head of the pancreas, and interfered with the flow from the pancreatic duct. The inability to feel the stone and the induration of the head of the pancreas in such cases might lead the operator to believe that he was dealing with a pancreatic tumour. The diagnosis could only be confirmed and the stone with difficulty removed by opening the dilated duct at a convenient spot, and introducing the finger and extracting instruments down to the stone through this opening. After touching the stone, the difficulty of extracting it through the incision in the duct might be insurmountable. In this case he suggested that an opening should be made in the convexity of the second part of the duodenum, through which a finger or probe might be passed, and the upward dislodgement of the stone, and its removal through the incision, or dilatation of the duodenal orifice of the duct, to allow of its extraction through the intestine.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Professor Sheridan Delépine, M.B., President, in the Chair.

Wednesday, November 14th, 1894.

Intramedullary Spinal Tumour.

Dr. Williamson showed sections of a spinal cord, in which there was a small syphilitic gumma in the region of the left lateral pyramidal tract, about the mid dorsal region; it also involved the outer part of the intermediate grey matter and neck of the posterior horn. Around the gumma was a zone of myelitis, and slight changes extended to the opposite side of the cord. The symptoms commenced with severe pain about the mid-dorsal region of the spine. This continued for nine weeks. Then both legs became numb; a week later paresis was noticed, which developed into complete paralysis. There was marked anæsthesia on the lower half of the abdomen and on the right leg, but on the left leg (that is, on the same side as the tumour growth) sensation was only slightly impaired. [During life the case was under the care of Dr. Steell.]

The Pathology of the Ascites in Some Cases of Heart Disease.

Dr. Thomas Harris showed preparations from several cases where the primary affection had been some obstructive heart disease, usually mitral incompetence, and where there had been marked ascites with but little general anasarca. In each of the cases chronic peritonitis, chiefly manifesting itself as a capsulitis of the liver and spleen, was the lesion found, which would account for the fluid in the abdominal cavity. Dr. Harris referred to the remarks of the late Dr. Hilton Fagge, and of Dr. W. Hale White, as to Bright's disease being the most common affection associated with universal perihepatitis, and said that his own experience, and the information derived from an analysis of the cases which had occurred during the preceding ten years in the *post-mortem* room of the Manchester Infirmary, led him to believe that obstructive heart disease causing backward pressure was a more common associate of chronic peritonitis, of which universal perihepatitis was usually only a part. The kidneys in such cases were frequently congested, and not uncommonly showed a certain amount of increase of their fibrous tissue, but the appearance of such kidneys was rather that of an affection secondary to the heart than of a primary and independent origin.

Cases and Specimens.

Mr. Thomas Jones described a case of Inherited Syphilis, and showed the patient.—Dr. Donald made some remarks on Tubo-Ovarian abscess, and showed several specimens.—Card specimens were shown by Dr. Eurich, Dr. H. S. Wansborough Jones, Dr. Hutton, and Professor Delépine.

MIDLAND MEDICAL SOCIETY.

T. F. Chavasse, M.D., President, in the Chair.

Wednesday, November 21st, 1894.

Cases.

Mr. Luke Freer showed a patient in whom Anæsthesia of the forearm had developed with much contraction of the flexor tendons after a severe fracture of both bones of the forearm. Mr. Freer had divided several of the flexor tendons with a very good result.—Dr. Short showed (1) a case of large Gouty Concretions in the Hands of a Woman, aged 50. The first attack of gout had occurred eight years before at the end of twelve months' privation. (2) A case of Pneumothorax of the left side in a man, aged 49, occurring suddenly. In this case the diaphragm had never been much depressed, and the spleen could not be felt. The patient had been short of breath for eleven years, so that it seemed probable that the left lung might have been partially disabled and the diaphragm fixed by adhesions. The affected side was smaller than the sound one. All the other signs of pneumothorax were well marked.

Specimens.

Mr. Chavasse showed a Left Kidney removed by laparotomy from a boy, aged 7. The patient, on various occasions, had had seven calculi removed from his bladder by median lateral and suprapubic lithotomy. In August last he was admitted into the General Hospital owing to pain in the left side. Aspiration yielding pus an incision was made in the ninth intercostal space, and a drainage tube inserted. In a few days the discharge from the wound was shown to be urine. The fistula showing no signs of healing, nephrectomy was successfully performed on November 9th. The organ was dilated, cystic, and showed numerous small interstitial abscesses in the existing cortical substance. It contained no calculus.—Mr. George Heaton showed the Intestines,

Umbilicus, and Bladder of an infant with a congenital fæcal fistula. The specimen showed an opening at the umbilicus lined by mucous membrane, and leading by a short wide canal into the small intestine some 7 or 8 inches from the ileocæcal valve. The small intestine above was much dilated. The cæcum and vermiform appendix lay in the true pelvis attached to the sacrum by a long mesocæcum, and the ascending colon passed upwards on the left side of the spinal column.—Dr. Thomas Wilson showed an Ovarian Cyst in which axial rotation had given rise to twisting of the pedicle and hæmorrhage into the walls and loculi of the cyst. The walls in the lower part near the pedicle were from 1 to 1½ inch in thickness; elsewhere a line of hæmorrhage was seen inside the fibrous capsule of the cyst.

Axial Rotation of Ovarian Cysts.

Dr. Thomas Wilson read a paper on axial rotation of ovarian cysts causing twisting of the pedicle. These cases were divided into three groups: (1) cases in which no serious pathological or clinical consequences ensued; (2) cases of acute strangulation of cysts due to twisting of their pedicles; (3) those of chronic strangulation and its results. The symptoms, signs, diagnosis, treatment, and pathology of each group were described. The causation was referred to purely mechanical factors, the chief being (1) the specific gravity of the tumour; (2) the position of attachment of the pedicle at or near the lowest part of the tumour; (3) the varying position and conditions of the lowest part of the containing cavity, especially depending on posture, and on variations in the hollow viscera which have a more or less fixed base to act from, namely, the bladder, uterus, cæcum, sigmoid flexure, and rectum. The small intestine transmits abdominal pressure to the surface of the tumour, and helps indirectly to fix it in the lowest part of the cavity available at any moment, but movements of this viscus do not appear to be likely to have any direct influence in producing axial rotation.

CLINICAL SOCIETY OF MANCHESTER.

S. Buckley, F.R.C.S., President, in the Chair.

Tuesday, November 20th, 1894.

Traube's Sign.

Dr. Graham Steell related the case of a patient with aortic incompetence, who afforded an example of Traube's sign—a double sound in the femoral artery. Dr. Steell said he had, in Berlin in 1872, been shown a patient with the sign, and that since he had been looking out for an example of the sign in this country, but without success till a few weeks ago. He pointed out that Traube's sign consisted of sounds resembling the normal heart sounds, and not of murmurs as the sign of Duroziez, which, moreover, unlike Traube's sign, required pressure upon the artery with the stethoscope to bring it out. Traube regarded his rare sign as indicative not merely of aortic incompetence, but of very free regurgitation and much dilatation of the left ventricle. Dr. Steell's case bore out this belief. The heart was shown to the Society.

Dry Mouth, or Xerostomia.

Dr. Thomas Harris showed a woman, aged 30, who had good health until three or four years ago, when the affection began. The mouth was absolutely dry, and there was a complete arrest of secretion of all the salivary and buccal glands. There was also a decided enlargement of the parotid glands. The woman was anæmic, but all the organs appeared healthy. There was no disease of the pelvic viscera. Dr. Harris referred to the very few cases of the malady which had been recorded, and especially to two cases recorded by Mr. Jonathan Hutchinson of relapsing parotitis, one of which was associated with a certain amount of dry mouth. Dr. Harris regarded xerostomia as a functional nervous affection, and thought that probably the parotid enlargement had a similar cause, and he referred to Mr. Stephen Paget's communication on the relation of parotitis to injuries and diseases of the abdominal and pelvic viscera.

Cases.

Dr. Harris showed a gentleman, aged 39, who had had during the past two years repeated attacks of Enlargement of the Parotids without any assignable cause and unassociated with any dryness of the mouth.—Dr. Ledward showed a case of Myxœdema which had rapidly improved under treatment with thyroid extract.—Dr. J. Price Williams mentioned a case of "Cut Throat" treated by immediate suture, resulting in excellent recovery.

LIVERPOOL MEDICAL INSTITUTION.

Chauncy Puzey, F.R.C.S., President, in the Chair.

Thursday, November 29th, 1894.

Two Cases of Sarcoma of Larynx a Year after Operation.

These cases were shown by Mr. Paul and Dr. Hunt. Case 1, female, aged 21, with a history of three years' difficulty in breathing. The disease commenced apparently in the cellular tissue between the larynx and pharynx. The microscope showed the tumour to be a spindle-celled sarcoma of mildly malignant type. The progress during the past twelve months had been very slow, and the girl was in better health now than when last seen. It was, however, necessary for her to wear a tracheotomy tube 5 inches in length. Case 2, a boy aged 13, who was operated on fifteen months ago for a solid sarcomatous tumour growing from the anterior wall of the larynx. He was now affected with papilloma of the larynx.

Enterectomy for Gangrene of Bowel.

Dr. Alexander showed a boy, aged 17, admitted in July, 1894, suffering from strangulated hernia. Four inches of the bowel were gangrenous, and had to be removed, leaving an artificial anus. On August 1st the continuity of the bowel was restored by enlarging the wound, cutting off the congested ends of the bowel, fixing a decalcified bone tube in the lower and contracted end, and invaginating the upper and larger intestinal tube over it, in the manner first described by Mr. Paul. The operation was quite successful. The advantages of this method of operation were pointed out.

Messrs. Parker, Paul, G. Hamilton, Banks, and Murray made remarks on this case.

Case of Successful Porro's Operation.

This was performed by Dr. Arthur Wallace, three months ago, for advanced epithelioma of the cervix. The patient, aged 33, was in her tenth pregnancy. Operation at full term by Müller's method. Placenta attached to posterior wall. Supravaginal cervix greatly hypertrophied and three inches long, but not diseased. Mother and child (a girl) did well and are alive now.

Vaginal Hysterectomy for Cancer of Uterus.

Dr. Briggs read a paper on this subject, giving details of nineteen cases. The first operation was performed in March, 1889, and the last in October, 1894. The growths were classified as follows:—1: Adenocarcinoma of the body at an advanced stage; now, nine months later, recurrence in the whole vaginal roof. 17: Cervical carcinomata, including 3 cauliflower form, 1 villous, and 13 infiltrating the cervix, of which two commenced their growth high up in the cervical canal. 1: Cauliflower growth, clinically indistinguishable from the 3 mentioned above; it however possessed no definite cancerous structure; there was an infiltration of closely packed round cells. The patient was 48 when operated upon 4½ years ago; she is alive and well at the present time. The diagnosis was made in all the cases on clinical grounds, except in one of the 13 infiltrating carcinomata of the cervix in which a wedge cut from the posterior lip of the cervix was first examined microscopically. All the patients recovered from the operation. He could not present one radical cure of cancer. The measure of relief was the extent of the modification or suppression of the local symptoms, beneficially influencing the general health. Dr. Briggs maintained that in almost all cases of cervical cancer the operation ought at first to be exploratory in purpose to lay open the parametric cellular tissues, to expose the whole length of the cervix in front, and either to abandon operation or to perform a supravaginal amputation or a vaginal hysterectomy. Pressure forceps had been used in all the operations and left on for forty-eight hours, amidst a packing of cyanide gauze.

Dr. Burton said that, of his own cases operated on by the method described, the first was in November, 1888; the case

was reported to the Society at the time and the uterus shown. The patient was still living and well. His only other case, which was still living, was operated on in July, 1892; she was still free from any return of the disease. The operation itself was now known not to be a dangerous one. Very few cases coming under observation were suitable for operation—probably 19 out of every 20 were already too far advanced.

Messrs. Grimsdale, Puzey, Banks, Alexander, Imlach, Davies, and Boyce also spoke.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Surgery.

Thornley Stoker, P.R.C.S.I., President, in the Chair.

Friday, November 9th, 1894.

President's Address.

The President delivered an address on Some Thoughts on the Method of Relieving an Obstructed Bowel.

Operations for Cancer of the Jaws and Tongue.

Sir William Stokes gave details of a series of cases of cancer of the upper jaw, the lower jaw, tongue, and floor of the mouth. Many points in connection with the *technique* of excision of maxillary tumours invading the bones were discussed, as well as the various methods adopted in the removal of the tongue, either partially or in its entirety. The question of the therapeutic value of these operations was fully discussed and early operation in such cases strongly advocated; even in cases where the disease was fully developed relief of suffering and prolongation of life might be anticipated.

The President expressed his strong belief in the relationship between cancer of the tongue and syphilis. He had a very unfavourable opinion of operations on the tongue, but thought that, if touched at all, the whole of it should be removed.

Mr. Bennett, in referring to the question of heredity of malignant disease, said that at the meeting of the British Medical Association at Cardiff the representatives from Australia had directed the attention of members to the fact that the insurance societies peculiar to Australia had instructed their medical examiners to exclude the question of heredity.

Mr. Croly said he had not been able to trace heredity as often as one might have expected. He considered it better surgery to remove the whole than part of the tongue, especially as complete removal did not prevent articulation. When the disease returned it nearly always did so in the glands of the neck.

Mr. Wheeler was not in favour of removing the whole tongue when only a small part was involved. In operating he advised the use of the thermo-cautery scissors. He also concurred in the belief that syphilis was a very potent factor in producing cancer of the tongue.

Mr. Thomson said that even from a very small ulcer infection would follow, so he believed that partial removal was not good surgery. The return of cancer of the tongue was so frequent that he thought that many cases of non-return were mistakes in diagnosis.

Mr. Myles considered that a ligature passed round the root of the tongue was of no use in checking hæmorrhage from the lingual arteries. He denounced the *écraseur* because it had a tendency to travel in the direction of least resistance, and so to encroach upon the easily broken-down cancerous mass.

Mr. Tobin emphasised the importance of opening the digastric triangle and removing any infected glands. When preliminary tracheotomy was performed it was better to remove the tube at once, and so lessen the tendency to septic pneumonia.

Mr. Franks, in referring to complete or partial removal of the tongue, thought that each case must be decided on its merits. He himself had had two successful cases of partial removal. The tendency of the disease was to follow the lymphatic channels to the glands, not to cross the middle line. He followed Mr. Whitehead's method of operating in excision of the tongue, and was never troubled with secondary hæmorrhage. In operations about the mouth generally he considered Rose's position, with the head lowered, the ideal one.

Sir William Stokes replied.

Medico-Psychological Association of Great Britain and Ireland.—At a meeting on November 15th, Dr. Conolly Norman in the chair, Dr. Goodall read a paper prepared by Dr. Bullen and himself on Intercurrent Diseases and Insanity, in which attention was drawn to the fact that temporary and sometimes permanent mental improvement took place during the occurrence of an intercurrent disease, such as scarlet fever, typhoid fever, or erysipelas. This improvement might be due to the introduction of a toxin into the blood, which neutralised the toxin previously existing in the body. Judging from this experience, the author thought that the theory of introducing a toxin into the body which might counteract mental disease, as in the case of anthrax, was worthy of notice, and he advocated experiments being made on the subject in various asylums. A discussion followed, in which Drs. Stewart, Savage, Mickle, Warnock, and Andriezen took part.—Dr. Campbell read a paper, illustrated by a lantern demonstration, on the Breaking Strain of the Ribs in the Insane: an Analysis of Fifty-eight Cases treated with an Instrument specially devised by Dr. Mercier. He showed that, whereas the breaking strain of a normal eighth rib was about 65 pounds, in many cases in which the bones were brittle the breaking strain was only 15 pounds. A discussion followed, in which Drs. Andriezen, Rogers, Stansfield, and others took part.—A paper by Dr. Neil on Three Cases of Recovery from Melancholia after Unusally Long Periods was taken as read.

Aberdeen Medico-Chirurgical Society.—At the annual meeting of the Aberdeen Medico-Chirurgical Society, which was held in the hall of the Society, the office-bearers for the year 1894-95 were elected. The report of the Society showed that in strength of membership the Society was stronger now than it had ever been, and there were active indications that during the coming session there would be plenty of interesting work to engage the members. The following are the office-bearers elected: *President:* Professor Stephenson. *Vice-President:* Dr. J. C. O. Will. *Secretary:* Dr. G. M. Edmond. *Recording Secretary:* Dr. Thomas Milne. *Treasurer:* Dr. John Gordon. *Librarian:* Dr. George Rose. *Council:* Drs. Garden, Angus Fraser, P. Blaikie Smith, George Gibb, and James Rodger.

Cambridge Medical Society.—At a meeting on November 2nd, Mr. Hyde Hills, President, in the chair, Mr. Hedley Bartlett related a case of Pyonephrosis with intestinal obstruction and uræmia: nephrectomy was performed and the patient, a girl, aged 17, recovered; the urine was now normal. —Dr. Laurence Humphry showed a very large specimen of Cystic Disease of the Kidney removed from a young man, aged 28, who died of general tuberculosis. There had been a kidney tumour as long as the patient could remember, but it had never given rise to any inconvenience. Four or five years before his death he had some tuberculous disease at the apex of the right lung. General tuberculosis supervened about three weeks before death. The disease was probably in the first instance a hydronephrosis.—Mr. W. Gifford Nash related six cases of Nephrectomy which had occurred at the South Devon Hospital when he was house-surgeon, and made remarks on Mr. Bartlett's paper. A discussion followed in which Professor Clifford Allbutt, Sir George Humphry, Dr. Latham and others took part.—Mr. W. J. Midelton read a short paper on the Use of Ergot in Obstetrics, principally with a view to ventilating the question of the administration of ergot during labour. He recommended a dose of 2 drachms of a reliable preparation of liquid ergot. He said the result had been most satisfactory; in no case had harm occurred to either mother or child. He considered he had saved the mother many hours of small, useless, aggravating pains and also had saved his own time. Dr. Boxall condemned the recommendation offered by Mr. Midelton. Mr. Hamming had during the earlier part of his career given ergot freely during labour and had seen no bad results from this practice; he

had gradually given it up as he could not persuade himself he gained much by it. Mr. Gray said two cases of ruptured uterus had occurred in his practice; in neither case had ergot been given. Dr. Latham, when engaged in midwifery practice, had given ergot during labour and had seen no bad effects from its use. He thought labour should be left to natural processes as far as possible. Mr. Cox had attended about 1,700 midwifery cases and had given ergot during labour in suitable cases; he had had no bad results and should continue the practice. Mr. Douty had no personal experience of ergot during labour and considered its administration at that time a reprehensible practice. The President considered ergot of value in causing the uterus to contract after labour where an anæsthetic had been given. The members who took part in the discussion were practically unanimous in the opinion that ergot was useful in causing contraction of the uterus after labour.—Mr. Deighton showed a specimen of Gangrene of the Lower Extremities and Thrombosis in the Aorta and read the notes of the case.

REVIEWS.

Lectures on Genito-Urinary Diseases. By J. C. Ogilvie Will, M.D., C.M., F.R.S.E., Consulting Surgeon to the Aberdeen Royal Infirmary, and Examiner in Surgery in the University of Aberdeen. Illustrated with 29 illustrations, some of which are in colours. London: The Scientific Press Limited. 1894. (Demy 8vo, pp. 164. 6s.)

This little work consists of six lectures delivered in Aberdeen Royal Infirmary, the first five for students, and the sixth, which is on the treatment of syphilis, to a post-graduate class. There are also at the end of the volume separate indices for each chapter, a somewhat novel feature. These lectures are now published chiefly because the author was urged by the late Sir Andrew Clark to write on a subject in which, as is well known, that physician took much interest—namely, "fever following urethral instrumentation."

The author's views on this subject, as expressed in Lecture I, were submitted to, and secured the approval of, the late Sir Andrew Clark. Dr. Ogilvie Will regards urethral fever and catheter fever as two totally different disorders, and points out the difference between them and pyæmia arising from rough use of instruments in urethritis and gleet. His conclusions may be briefly summarised thus: (1) Urethral fever is a reflex disturbance due to local irritation set up by the catheter; (2) catheter fever is caused by the regurgitation of germ-laden air through the catheter after completely emptying the bladder in cases of retention from enlarged prostate; (3) urethral fever and catheter fever are two diseases almost as markedly distinct as typhus and typhoid fever.

It seems to us that the author is right in thinking urethral fever is due to reflex disturbance, but that he lays too much stress on one of several causes of catheter fever when he states that he at once foretells "death of the patient in three weeks" if his house-surgeon completely, instead of partially, empties the bladder in a case of prostatic retention. Sir Henry Thompson and others have for many years past publicly and privately taught the inadvisability of rapid complete evacuation of the bladder, but Dr. Ogilvie Will surpasses all in the degree of importance he attaches to this.

As to treatment, he thinks cocaine freely applied to the urethra and the use of flexible aseptic instruments are the surest means of avoiding urethral fever; and these same precautions as to catheterisation, and care only to partially empty the bladder the best safeguards against catheter fever. Opium and chloroform as prophylactics are not named, nor does the author refer to the precaution of keeping the patient in a warm room, if not in bed, for an hour or two before and after introducing an instrument into the urethra for the first time—a precaution which is too often disregarded.

Lecture II, on the treatment of retention of urine from stricture and enlarged prostate, contains sound advice, but nothing needing special comment, except that the author's method of tying in a catheter—safe, of course, in his own experienced hands—is one that appears likely to lead to gangrene of the glans penis in less cautious or practised ones.

Lecture III, on gleet and its treatment, gives a concise summary of the local causes of gleet. The treatment recommended for gleet due to slight or commencing stricture is practically the same as that advocated by Otis.

Lecture IV, on varicocele, is a summary of the views of many writers on the subject. The object of its publication seems to be that it contains a description of the author's modification of Ricord's operation. We notice that Mr. Keetley's name is written Kettley on p. 73.

Lecture V contains the reports of a few interesting cases of hydrocele, but adds nothing to our knowledge of the pathology or treatment of the various forms of this disease.

Lecture VI gives a brief account of the divergent views of some conspicuous authorities on points relating to syphilis. The author's recommendations for the general and local treatment of this disease are contained in a convenient appendix at the end of this chapter.

We have no doubt that these lectures will be of use to those commencing practice, and will be an agreeable means of refreshing the memory of those who may have enjoyed the advantage of hearing them.

The Theory and Practice of Medicine. By Frederick T. Roberts, M.D., B.Sc., F.R.C.P. Ninth Edition. London: H. K. Lewis. 1894. (Royal 8vo, pp. 1,184. 21s.)

This is the ninth edition of this well-known work, which has now for many years been one of the standard treatises on medicine in this country. The principal points in which it will be found to have been altered from the last edition are chiefly those consequent on the recent rapid advances made in the study of bacteriology, which has now assumed such an important position in relation to practical medicine. In this relation it has received special consideration both from its general aspect and in connection with individual diseases. Beyond these additions the changes are not great, with the exception of certain new sections dealing with the general therapeutics of the principal systems and organs of the body, which sections will be found most useful as an introduction to the study of the symptoms and diseases belonging to each, as well as in their practical treatment. Throughout the work has been revised and is thoroughly up to date in all established particulars, and we congratulate the author on the high standard which now, as before, marks the work as one that will continue as an exact record of the state of our knowledge at the present time.

MEDICAL VISITING LISTS AND DIARIES.

We have received *Letts's Medical Diary* for 1895, published for Letts's Diary Company, Limited, by Cassell and Co., Limited. This annual issue, which is probably already well known to many of our readers, combines a diary with a visiting list, but contains also in the preface notes upon many practical points upon which information is apt to be wanted in a hurry. The volume is issued in several forms, in a leather tuck case for the pocket (3s. 6d.), bound in cloth for the brougham (2s. 6d.), and in limp silk to fit in a pocket book (3s. 6d.).

Messrs. Cassell also send us some specimens of *Letts's Diaries* issued by them. They are well arranged and printed on good paper. We notice that the prefatory matter contains a selected series of extracts from the *Unicode Telegraphic Phrase Book*. These diaries are issued in various sizes, and may be obtained either plain or ruled for cash.

From Messrs. John Wright and Co., of Bristol, we have received a copy of the *Physicians', Surgeons', and Consultants' Visiting List*, for 1895, compiled by Robert Simpson, L.R.C.P., L.R.C.S. Certain improvements and additions have been made since last year, which render the *Visiting List* very complete. It is printed on thin but substantial paper, is neatly bound in leather, and has a purse fastener. The price is 5s. 6d.

Messrs. Hazell, Watson, and Viney issue, for the forty-ninth year, *Smith's Physicians' and Surgeons' Visiting List, Diary, Almanack, and Book of Engagements*. This visiting list, which contains in a preface much useful information, together with a compendium of doses of pharmacopœial

preparations, is issued in various sizes for varying numbers of patients, and in several bindings, in French morocco tuck, for the pocket, with space for 25 patients, the price is 3s. 6d.; for 75 patients, 6s. 6d.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XXVII.—READING.

Our request to visit and report on this infirmary met at once with a ready assent on the part of the Board, the Chairman (Mr. Apsley Smith) was waiting to act as cicerone on our arrival. It is a pleasure to turn from some of the squalid ill-found houses with which we have made acquaintance to a country union which is doing its best to meet the wants of the inmates and to bring itself abreast of the times, and as we went through its various departments we could see evidence of thoughtful consideration on the part of the guardians seconded by their officers.

The Infirmary.

We turned our steps to this department which stands well apart from the house to the left hand after passing through the gates. It is a new building of two storeys in the form of the letter H, the administration block being in the middle connected with the male and female wings by an open covered causeway. The ground around the infirmary was still being turned up by the workmen, but it is intended that the recreation grounds for the patients shall be both in front of and behind the hospital. On entering the middle block we found the "sister's" quarters, the nurses' dining-room, waiting-room, and surgery, and the lying-in wards, the latter on the first floor. The nurses' quarters are not yet finished, for it was found that the plans had not provided sufficient accommodation for the nursing staff, the original estimate of staff not being adequate to the needs of the hospital.

The Lying-in Wards.

These consist of three wards, the labour ward with two beds in direct communication with another ward, also with two beds, for the patients after the labour is over; a larger ward holding six beds for the convalescents. The women remain in this department for at least a month or longer if it is necessary. The sister, who is the midwife, informed us that the number of confinements was about 26 in the year. This department has its separate offices of modern construction, an ample supply of hot and cold water, and a bath. There were two convalescents in the large ward.

The Wards.

These form the two uprights of the letter, the entrance is in the middle with wards on each side on the ground floor and upstairs: on the female side each ward holds 16 beds, on the male side the wards hold 18 beds. The construction of the two sides is alike, oblong rooms with windows on each side, a bed between the windows, and windows at the end, one of which is a door opening on to the garden or a balcony on the first floor. At this far end of the ward are the sanitary arrangements located in turrets, the bath-room on the one hand the lavatories on the other; these latter comprise two closets and a slop sink, the latter is a useful detail that is often overlooked. The bath is white porcelain set out from the wall; the floor is tiled, the walls cemented; hot and cold water are laid on. On the landings at the other end of the wards there is a small kitchen common to both wards, store-rooms for linen and clothing, for ward stores and medicines; also a separation ward with 3 beds, and in one case we found that the small ward had a closet, and hot and cold water supply adjacent. These separation wards are on every landing. The landings are tiled, the staircases are of stone, fenced by low brick walls. The walls of the wards are cement, painted in two shades of terra-cotta. The windows appeared to us to be set rather too high in the walls; they are sash windows, and above the sash is a ventilating section that opens outward, with a regulating bar. The wards are warmed by a central stove, the flue passing under the floor, the fires facing two ways; supplementary to the stove are steam pipes that are carried round the ward at the skirting. We noticed small ventilators in the walls at the level of the cornice, but it was evident that the chief method of ventilation is by means of the windows.

The bedsteads, most of them fitted with spring and hair mattresses, struck us as rather narrow, 2 feet 9 inches. This, we were informed, is the width recommended by the Local Government Board; we should have preferred another 3 inches for comfort. The mattresses were made in three sections, facilitating the removal of any section that may be soiled. This is a good plan, but we would suggest that, instead of being of equal size, the section at the head should be smaller, and that at the feet larger, when a restless patient would not so easily disarrange the bed. Some of the old bedsteads are still in use, a flock bed with a feather bed on the top. We also saw some open locker tables between the beds; they consisted of two shelves, divided by a partition, the top being wider to form a table. The various oddments of personal possessions were not tidy to the eye, but it is more cleanly to have the contents in view. Tables, benches, arm-chairs, and a merlin chair completed the ward furniture. There are no day rooms, nor separate wards for the children.

Patients.

The sister informed us that the wards were exceptionally light for the time of year; the greater number of cases that we saw were old age and paralysis. We noted with pleasure that the incontinent cases were distributed in the wards—were not relegated to some out-building or back ward, treated as the pariahs of the workhouse. On talking this method over with the sister, she said that in her experience—and this extends over twelve years—such a practice was unnecessary and exceedingly unwholesome. A severe case of ulceration of the leg on the female side was being treated in a small ward; iodoform was the dressing. Cases of phthisis, heart disease, rheumatism, and paraplegia were in the general wards. On the male side, beside the usual cases, there was a man with aneurysm, another convalescent from pneumonia; the sister feared that he was developing phthisis. In a small ward there was a man dying of phthisis. In conversation with the medical officer, Mr. Guilding, he said that with the material at his disposal he would be able to undertake any operation in the infirmary or to carry through any treatment. We noticed the absence of bed-cards, but these are under consideration, the present medical officer having only just been appointed. One of the female wards is at present used by the female imbeciles, the separation wards for these cases being in the hands of the builder. The patients are not classified as medical and surgical, the latter bearing a small proportion to the former.

Isolation Departments.

There are two isolation buildings. One of these is "the cottage," in which are placed the male and female lock cases tramps, under treatment, and some cases of offensive ulcerated legs. This building holds 12 beds in two wards, and can be used as male and female isolation simultaneously: at the time of our visit the patients were all males; there is bath-room and lavatory accommodation, and, by an ingenious contrivance of approach, was available for the two wards. The wards are heated by steam pipes and an open fire, the pipes were in use, and it struck very warm on entering. In another part of the grounds we came upon the infectious hospital, a one-storeyed hut, having two wards for 4 beds each, kitchen, bath room, and small laundry. The water supply is heated in the kitchen boiler. This hut is for the intercurrent cases only, and some of its space is being utilised for the additional nurses; when required for its original purpose, the nurses would be housed elsewhere.

The Nursing Staff.

As the department that we have been describing is that for which the sister is responsible, it will be well to state the

number and style of her assistants. The sister is head of the nursing department, under the master, but she rules in her own department; there are four assistant nurses and two probationers to nurse the 150 in the hospital and those patients who are in isolation; two of the staff are on night duty, taking one month on night and three months on day duty alternately. The "cottage" is under the charge of a wardsman, the dressings being attended to by the nurses; he is responsible at night, calling aid if required. All the nurses are trained, the probationers are there as pupils: they will be instructed in nursing by the sister, who will also teach them midwifery; they will also have the advantage of lectures by the courtesy of the authorities of the Royal Berkshire Hospital. The pauper inmates are kept to the cleaning and service of the wards, except that they must help the night nurses with the bed making, until the Board is in a position to give more help at night. The hospital is in telephonic communication with the master's office, and the doctor's house is connected by telephone with the office.

The Diets.

The food is prepared in the main kitchen, where it is divided into portions on plates, and sent to the hospital in covered tins; we were informed that it was quite hot when served out. The dieting of the sick is in the hands of the medical officer. On looking through the table of that which is given to the infirm, we see that it includes fresh cooked meat three days in the week, and on the other days there is hash, meat pie, or suet pudding, and broth. With the meat they have potato, or other vegetable; they also have butter and tea allowed to them. We saw the dinner being served, and it looked well cooked. The bread is made in the house: both it and the butter tasted of good quality. The sister informed us that any special diets that may be ordered for the sick are always nicely prepared. The kitchen is under a man cook.

The Imbeciles' Block.

There are about 60 certified lunatics under the care of the guardians, for whose accommodation alterations are being made in one of the detached buildings. These plans did not recommend themselves to us, for they only include the female patients, the male lunatics having been removed to the house with their male attendant. This arrangement seemed to us to be extravagant as duplicating all the service, and necessitating the appointment of an assistant for the female attendant unless she is to be always on duty, and unless the guardians are prepared to run the risk of a casualty. This block comprises the dayroom, dormitories, and attendant's rooms, with the bathrooms, lavatories, and padded room. We understand that the original plan included male and female quarters, with attendants' rooms in the middle block, an arrangement that sounds more complete. The place was in the hands of the workmen, so that we could hardly judge of its capabilities, but we were unfavourably impressed with the padded room. The floor of this is laid in padded sections screwed to the floor. In the event of excreta being on the sections it would flow between the interstices, and the floor could not be cleansed except by removing the pads. The window also appeared to be quite unprotected. We noticed the same defect in construction in the padded room on the male side.

Laundry and Heating Service.

The washing for the whole establishment, with the exception of that used in the infectious hut, is done in the one laundry. It is a large, well-lighted building, the steam for the coppers comes from the great heating boilers, which are beneath the ironing room, supplying warmth as well as steam, so that the only fire in the laundry is the ironing stove. All machinery is turned by hand. The soiled hospital sheets are at once put in a large sunk tank with Jeyes' fluid as a purifying agent, before they go through the washhouse. In this same shed there is the disinfecting oven, heated by steam; we noted that there appeared to be no pyrometer indicating the heat, it might be well to add this. The two large boilers heat the water, and send the steam for supplying warmth all over the building. In the winter the master thought it would be necessary to work both boilers.

In Concluding this article, we note with satisfaction the steady progress that trained nursing has made in this union. The nurse who now holds the post of sister has worked in the old hospital for twelve years in the face of many difficulties, at first with a male nurse for the men, and then later on single-handed. It must be gratifying to all concerned to see the results, and we cordially re-echo the Chairman's words, that it is well to have seen the end of two such abuses as pauper nursing and the male nurse.

Sick Poor in the Clutton Union.

The Guardians of the Clutton Union, a district of North Somerset, have, like those of many other unions, had their attention called of late by our reports to the provision in their workhouse for the care of the sick paupers. At the last meeting a report upon the subject was presented by a committee who had considered the matter in consultation with the medical officer, Dr. Martin, and the master. The committee thought that the general management of the house was being carried on in a fairly efficient manner, but said circumstances might arise which would make it desirable to have the permanent services of a thoroughly trained and certificated nurse. The medical officer recommended that this change should be made at once in the nursing staff, and the committee stated they felt bound to endorse this recommendation. The additional cost would be £50 or £60 a year. The medical officer also desired a new infirmary to be built, but did not press for this at the present time, and the committee decided not to support the recommendation. There were further suggestions from the medical officer for the improved ventilation of the sick wards, and, under another head, that a more modern kind of mattress should be used for the patients. As the beds and bedding were, however, in good condition, the Committee proposed that only half a dozen wire-chain mattresses be bought and fitted with hair beds: the use of crockery for food for the sick instead of tins; provision to keep the food warm until it reached the infirmaries was also dealt with in the report. To this document the medical officer added a note to the effect that he could only regard the proposed improvements as a temporary measure until such time as a new infirmary might be provided. The matter led to discussion, during which three members urged the adoption of the recommendations which the report contained, and one expressed the belief that it deserved "respectful consideration." On a vote by them, however, the report was rejected by 11 votes to 2. It will be interesting to see whether the new board about to be elected under the Local Government (1894) Act would pay more attention to the opinions of the doctor and of those who had consulted with him than the "expiring" guardians.

Country Guardians' Elections.

A writer in the *National Observer* puts the case in a nutshell when he says "the truth is that no one hitherto has taken much interest in guardians' elections," or, in other words, there has been no public opinion behind those who in past or present days have been agitating for reform in the methods of dealing with the poor in the workhouses. The country electors have now the opportunity of reforming these places themselves; they must see that fit and capable persons are chosen to fill the post of guardian, or, as in some cases, district councillor, and they would do well to set before them the programme as sketched in the article before quoted: "Classification of the inmates—the sick absolutely separated from the able-bodied and treated, not as paupers, but patients, and to give them the same advantages of skilled nursing and doctoring as the patients in every other kind of hospital." That there is a great need of reform must be evident to anyone who has read the Reports of Workhouse Infirmaries in all parts of the country which we have been publishing in our columns, and the present is a grand opportunity to sweep away the old system, which has failed, and for whose failure the public are largely responsible, and to replace it with the new system, which may bring about a humane and conscientious administration of the Poor Law.

Kidderminster.

The Kidderminster Board is still smarting under a sense of injury because, at the request of the medical officer, they have paid £13 4s. for nursing "a pauper" with typhoid fever, and £8 for nursing "paltry cases of measles." The Board is in reality reaping the fruits of its parsimony in not maintaining a staff of trained nurses in the workhouse infirmary, when this need for nurses engaged from an institution would seldom occur. We are sorry to see that the inspector, Mr. Longe, joins with the guardians in rebuking the medical officer for his extravagant demands, instead of at least giving him credit for a conscientious discharge of duty.

Blofield.

We are glad to see that the *Eastern Daily Press* of November 24th has reprinted in full the report of our Commissioner on the nursing and administration of the workhouse and infirmary of the Blofield Union.

Reports of Official Neglect or Ill-Treatment.

These reports reach us with sad persistency. First it is a master, then it is a relieving officer who refuses to give an order for medical relief to a poor man with bronchitis, or sends two women with ulcerated legs to the casual ward, and a man who wanted an order for the infirmary is sent to the casual ward. In all these cases the patients were at once ordered to the infirmary by the medical officer when he saw them. Worse still, a woman taken in labour applies at the gate of the workhouse in the middle of the night for admission, when at last she obtains an answer, is sent by the man to the casual ward, whence she was taken

back to the workhouse, where she gave birth to a child. These are bare statements, and our readers must fill in the details of the unnecessary suffering caused by officialism.

THE BEDFORD BOARD.

We are almost tired of reading the wearisome controversy at the meetings of this board. Much time was taken up during the last meeting in an endeavour to whitewash the master, though the stains of skimmed milk and surreptitiously obtained poultry would make their way through the thick coat laid on by the guardians. There was an apologetic tone on the part of those guardians who had shirked the investigation, which bore testimony to the weakness of their cause. We have every confidence that the ratepayers will follow the lead that has been so courageously given by a few members of the board and by some of the townspeople, and elect only those men or women who will safeguard the interest of the poor for whom they are responsible.

THE COMMISSION AND THE PRESS.

The *Eastern Daily Press*, in commenting on the reports of our Commissioner, says "these visits to the Norfolk workhouses are well timed, and we trust that the reports will be effective of good." The *Eastern Daily Press* is rendering active aid to us by giving full publicity to the comments on each infirmary, and in drawing the attention of its readers to the special points to be noted.

We are also pleased to see that our contemporary the *Local Government Journal* reproduces some of these criticisms on the various provincial infirmaries in its columns. If the daily press and the local press will join hands with us in this matter we shall not have to wait very long for those reforms that must come sooner or later.

DEATHS UNDER ANÆSTHETICS.

Dr. Robert Kirk (Partick, Glasgow) writes: In the British Medical Journal of November 10th Dr. A. E. Sansom refers to what he calls the ready or open method of giving chloroform, by which, he goes on to say, 12 per cent. of the vapour may be breathed. I should like extremely well to be informed on what grounds this latter statement is based. He mentions with approval Dr. Snow's injunctions as to diluting the vapour—and, indeed, this has been frequently brought to the front of late. It is curious to contrast all this with the verdict passed on Dr. Snow's practice twenty years ago by no unfriendly critic, namely, an annotator in the *Lancet*, vol. i, 1873, pp. 879-80. He there says: "The practice founded on the percentage theory was never admitted by the distinguished man who had most to gain from any process that should make the administration of chloroform safe—we mean Sir James Simpson. Sir James, to the last, held to his original plan of putting the chloroform on a folded napkin, and, what is more, he maintained that the quicker the administration of the vapour the greater the safety of the patient. The second and most potent argument against the percentage theory was the fact of results brought against it. Death after death happened with the most carefully constructed inhalers."

What has turned up of late that Dr. Sansom and others should with so much assurance reverse this verdict? For many years I have not seen Simpson quoted as an authority on the subject of chloroform, excepting some notice from myself. And I would here again say that the secret of success was contained in the above statement of Simpson's, but it has in many minds given rise to a false impression. The simple fact is that a drachm of chloroform poured on a towel gives off, at a temperature of 70° F., no more than 2½ or 3 per cent. of vapour, and safety is secured by never stopping in the process of inhalation till deep anæsthesia is reached.

Agreeing, as I do, with Dr. Snow's percentage views, I find the vital difference between him and Simpson elsewhere. Speaking of his fourth degree of narcotism (p. 42) in which the breathing is stertorous, the pupils are dilated (this, I believe, is an error), and the muscles completely relaxed, he says it is very seldom necessary to carry the effects of chloroform as far as this degree. In a review of his work which appeared in the *Edinburgh Medical Journal*, vol. iv, No. vii. January, 1859, p. 645, the reviewer says: "This is the condition generally aimed at by surgeons, at least in Edinburgh." Here, then, is a difference worthy of due consideration.

DISEASE AND INTEMPERANCE.

We have already on several occasions called attention to the unwarrantable construction which has been placed by certain persons—perhaps not altogether disinterested—on the Report of the Collective Investigation Committee with regard to the connection of disease with habits of intemperance. In spite of our frequent warnings and explanations on the subject, the misleading assertions continue to be made, and in consequence the following memorandum, signed by Dr. Norman Kerr, Chairman of the Inebriates Legislation Committee of the British Medical Association, has recently been drawn up. Copies of the memorandum can, we understand, be obtained on application from Dr. Norman Kerr, or from the General Secretary of the British Medical Association. The following are the terms of the memorandum:

"The attempt to construe the statistics published by the Collective Investigation Committee of the British Medical Association as proving that intemperate drinkers live longer than teetotalers is quite unwarranted, and is in direct opposition to the conclusions of the reporters themselves as expressed in their report. Teetotalism, as they suggest, has only of late years been largely practised in Britain, but drinking to excess has had great antiquity; therefore, the average age of living abstainers must be less than the average age of the rest of the community. So that the average age at death of abstainers being 53 years as against 58 in the case of drunkards at death proves nothing against abstinence. The accuracy of this explanation is proved by other tables given in the report. When deaths under 30 years were excluded, the average age of the abstainers was about four years more than that of the decidedly intemperate. When deaths under 40 were excluded, the average age of the teetotaler at death was more than five years greater than that of the intemperate. To guard against misrepresentation or misunderstanding, the Committee expressly stated that the returns reported on afford *no means* of coming to any conclusion as to the relative duration of life of abstainers and 'habitually temperate drinkers;' that habitual indulgence in alcoholic liquors *beyond the most moderate* amounts has a distinct tendency to *shorten life*, the average shortening being roughly proportionate to the degree of indulgence; and that *total abstinence* and habitual temperance *augment* considerably the chance of death from *old age and natural decay*."

SMALL-POX AND VACCINATION IN 1893.

XIV.—Lessons from the Marylebone Small-Pox Outbreak.

The further report which Mr. Wynter Blyth has issued concerning the recent epidemic of small-pox in the parish of Marylebone contains some valuable lessons, quite apart from the oft-repeated story of the benefits conferred by vaccination. As to the part played by that prophylactic, suffice it that 30 per cent. of those attacked were unvaccinated persons, and that the mortality among them was 17·9 per cent. of cases against 6·5 in those vaccinated in infancy, only 5 vaccinated individuals being attacked under 5 years of age against 47 unvaccinated, among whom more than 20 per cent. proved fatal. We would briefly, then, pass in review four other prominent lessons to be derived from the experience of Marylebone.

1. *The Necessity of Prompt Notification of Infectious Disease.*—The Nightingale Street outbreak was undoubtedly set going owing to the serious infection of one of its central houses by the medium of unnotified attacks, the disease being present from about July 25th to August 11th. Of course no medical aid had been sought, but this did not relieve the householder from responsibility in the matter, and this phase of the notification system needs to be pressed home with great clearness. If only parents could be brought to see in its proper light the value of prompt information being given to health officers, we do not doubt that notification would be able to achieve much more than has yet been done by its aid.

2. *The Position of Health Officers in Relation to Schools.*—A Committee of the London School Board have questioned the right of examination of school children by Mr. Blyth. Considering that the examination was conducted in the interests of scholastic duties, we feel bound to say it is a pity that such question was raised, especially as percentages of unvaccinated children were found in the schools ranging from 10 to 42, and an average of 25 per cent. of attendants. If the

right do not exist, by all means let it be acquired. The importance of such examination in a disease like (say) diphtheria might lead to the saving of many lives, especially at the commencement of a diphtheritic outbreak. The lesson is here significantly taught that such examination has in Marylebone achieved its purpose, namely, the protection of many who were unprotected against small-pox.

3. *House-to-House Inspection.*—This duty undertaken in the invaded neighbourhood had for its result the detection of many mild cases of small-pox, which but for their discovery and removal to hospital would have proved so many centres of infection to the surrounding district. Not only was concealment of cases thus prevented, but the ignorance of persons in the face of small-pox in its almost unrecognisable form was rendered harmless.

4. *Need of Public Co-operation.*—The effect on employment and on trade in the invaded locality has been disastrous in the case of Marylebone, and the necessity of hearty co-operation on the part of the community with the officials of the health body is here seen. Every individual effort put forth to aid the stay of disease is so much done to save the district from the unpleasantness and loss occasioned by the presence of infectious sickness.

Such, then, are some of the lessons to be learned from Marylebone in the past few months, and if only they be taken to heart the experience will not have been bought in vain. Experience teaches; let the inexperienced learn.

LITERARY NOTES.

Messrs. Rivington, Percival, and Co. have another volume by Sir William Jenner, entitled *Clinical Lectures and Essays on Rickets, Tuberculosis, Abdominal Tumours, and Other Subjects*, in the press. We regret to hear that, owing to an unfortunate accident, the publication has been delayed, and the book will not be ready for some little time.

Professor Joseph Coats has published with Messrs. Maclehose and Sons, of Glasgow, the full text of the inaugural lecture which he gave at the foundation of the Chair of Pathology in the University of Glasgow on October 22nd. The greater part of this interesting lecture was published in the British Medical Journal shortly after its delivery.

A new medical monthly entitled, entitled *Clinical Sketches* will begin its journalistic life with the new year. According to the prospectus, illustrations are to form a special feature. Mr. Noble Smith will be the editor, and Messrs. Smith, Elder and Co. the publishers.

Yule Tide, Messrs. Cassell and Co.'s annual for 1894, is one of the most attractive of the Christmas issues which have come in our way. It contains an original novel by J. Maclaren Cobban with a truculent title (*The Avenger of Blood*), which should stimulate the literary curiosity of every healthy schoolboy. There are also some really fine illustrations, particularly a magnificent coloured plate by W. E. F. Britten, two beautiful coloured pictures by Robert Morley, R.B.A., and four charming plates in three tints by Prescott Davies and W. Raines, R.I.

Dr. Conan Doyle, who is now on a lecturing tour in the United States, seems to have had some amusing experiences in Chicago. He was introduced to the leading literary club of Pigstickopolis as "Canon" Doyle. This led to his being mistaken for an ecclesiastical dignitary, and at a breakfast given in his honour the creator of "Sherlock Holmes" was considerably taken aback by being invited to "ask a blessing." He is also said to have been overwhelmed with requests to preach in half the churches of Chicago. He was deluged with letters addressed to the "Rev. Dr. Doyle," "Rev. Canon Doyle," "Very Rev. Canon Doyle," and, finally, by swift promotion, "Right Rev. Dr. Doyle." To add to the tribulations of the distinguished writer whom we are still proud to claim as a professional brother, though he has definitively exchanged the lancet for the pen, he has been mistaken for the creature of his own imagination, and it is said was actually invited by the Mayor of Chicago to enter the service of the municipality as Chief of the Detective Police. Such are some of the penalties of fame.

SPECIAL CORRESPONDENCE.

BERLIN.

The Antitoxin Treatment: Sharp Criticism of Professor Behring.

The announcement that Dr. Hansemann, an assistant of Virchow, would speak on the antitoxin serum brought more members than usual to last week's meeting of the Berliner Medizinische Gesellchaft. The speech was a sharp attack on Behring and the treatment associated with his name. It was followed with the greatest interest, and greeted with loud applause. Owing to the lateness of the hour the discussion had to be postponed until the next meeting.

Hansemann began by showing that Bretonneau's diphtheria is not caused by the Loeffler bacillus; that the bacillus does not even always accompany it; and that there are cases of Bretonneau's diphtheria with, and cases without, the Loeffler bacillus. That, on the other hand, Loeffler's bacillus is found constantly in rhinitis fibrinosa without producing diphtheria; that it is even sometimes found in normal mucous membrane; that under favourable circumstances the Loeffler bacilli multiply, without, however, exercising a decisive influence on the course of the disease. He said that in the case of animals an injection of a Loeffler bacillus culture causes, not diphtheria, but a disease *sui generis*, the Loeffler bacillus disease; that epidemic diphtheria had never been observed in animals; that guinea-pigs, in contact with diphtheria patients, had never taken diphtheria; but that a case is known where a cat, with which a child suffering from diphtheria had played, had developed all diphtheria symptoms, without, however, any Loeffler bacilli being discoverable.

He proceeded to the three qualities claimed for the antitoxin—namely, its therapeutic action, its harmlessness, and its immunising power. He said that the present statistics give an erroneous impression (as already shown by Gottstein in his recently published pamphlet), as many children suffering from lighter forms of throat complaints are now sent to the hospitals to be treated with serum, thus swelling the proportion of cured cases, which would, he said, otherwise not be higher than the usual average. He said that the serum injections could by no means be considered harmless, as affections of the kidneys had frequently followed—in one case more severe in type than had ever yet been observed after diphtheria. He said that it was clear, from Behring's new directions to increase the immunising dose from 60 to 150 unities, that no results have yet been achieved as far as immunising goes.

PARIS.

Medical Assistance for the Poor.—General News.

The Chamber of Deputies has passed a Bill authorising the following sixteen departments to spend the maximum of them sum allotted to them for their medical budget, in order to ensure gratuitous medical help for the poor: Ain, Aisne, Lot, Mayenne, Seine and Marne, Somme, Vaucluse, Charente-Inférieure, Cher, Corrèze, Creuse, Finistère, Haute-Loire, Lozère, Nièvre, Pyrenées-Orientales.

Four thousand one hundred and fifty aged sick poor needing medical care are, and have for years been, waiting for admission to the medical asylums. The Municipal Council has therefore requested the Public Assistance to vote £20,000 for the year 1895, in order to succour the aged poor and sick in a way which will compensate them for exclusion from the hospitals.

A dispensing chemist has been fined 15s., and condemned to pay an indemnity of £80 to a person for whom he prescribed and sold a 2 per cent. solution of carbolic acid. The woman had cut her finger in cleaning a window, and the chemist dressed the finger with the solution. The dressing caused great pain, and finally gangrene set in, and she lost her finger. Dr. Laugier gave evidence that it was the repeated use of the carbolic acid dressing which caused gangrene.

Dr. Lucas-Championnière has been elected a member of the Académie de Médecine.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, DECEMBER 8TH, 1894.

THE GENERAL MEDICAL COUNCIL.

The chief subjects which have engaged the attention of the General Medical Council in its present session have arisen out of the report of the visitors and inspectors of examinations, or have been matters in which it has been called upon to exercise its disciplinary powers. The members had the pleasure of congratulating their President on his restoration from an inopportune attack of illness, which at one time seemed to render it doubtful whether on this occasion the Council would be able to enjoy the advantage of meeting under his chairmanship. In his opening address Sir Richard Quain paid a just compliment to the care and good judgment with which the visitation and inspection of examinations have been conducted by the members of the Council, upon whom, in conjunction with Dr. Duffey, this duty had fallen. Progress has also been made with the inspection of the examinations for diplomas in Public Health. On the whole, it would appear that these reports disclose a satisfactory state of affairs, and we think it must be frankly admitted that the action of the Council in making and continuing these inspections has operated, not only to enforce an irreducible minimum, but also to encourage a higher standard in essential subjects, and to give a more practical cast to the examinations.

Sir Richard Quain laid before the Council some statistics with regard to the number of students and of medical practitioners registered during the twenty years 1874-93, and it is impossible not to suspect that the increased strictness with which examinational requirements are enforced may have had something to do with the fluctuations which these figures disclose, although it would appear that other causes must be at work to account for the singular decline in the number of students registering in Ireland. The return, which was printed in the British Medical Journal of December 1st, page 1265, contains evidence also that a very large number of students (apparently about one-third) fall by the way. The total number of students registered in the three quinquennial periods 1874-78, 1879-83, 1884-88, was 27,075. Each individual medical student who succeeded in obtaining a diploma would register as a medical practitioner not earlier, as a rule, than the fifth year after registration as a medical student. A comparison of the entries on the *Medical Register* in the three quinquennial periods 1879-83, 1884-88, and 1889-93, with the figures above given, ought thus to afford a rough test of the number of students entering in the first three periods, who eventually obtained qualifications. It would appear, then, that of the 27,075 students, only 19,566, or very little more than two-thirds, persevered to their final goal.

Several matters of general application, having reference more or less directly to the effectual exercise of the disciplinary powers of the Council, were under consideration. One of these points was whether any legal action could be taken to stop the practice of persons continuing to use titles attaching to diplomas of which they have been deprived, and which no longer appear on the *Registers*. This is an important practical point, to which we have on several occasions directed attention, and we are glad to find that the Council found itself in a position to authorise its solicitor to take proceedings against persons assuming qualifications of which they have been deprived, and whose names have been erased by the Council from the *Medical Register*.

A closely-allied question, for which unfortunately no such satisfactory solution could be found, was raised by Dr. Glover. To this weak point, also, in the Medical Acts we have on several occasions found reason to call attention. The licensing corporations have, as is well known, power to withdraw or cancel a diploma or licence, but the universities have not any power to withdraw a degree. A man, therefore, whose name has been erased from the *Register* remains an M.D. Many of the universities desire to possess this power: and, since a medical degree has been rendered a registrable qualification, the need for such power has become all the greater. We trust that the discussion which took place may further the purpose in view, and that the universities may themselves take steps for acquiring the necessary means of controlling their own graduates.

The issue of certificates to midwives was brought under the notice of the Council by a petition of a committee of the Lancashire and Cheshire Branch of the British Medical Association. Concrete examples were given in the shape of photographs of certificates granted by the Obstetrical Society and by St. Mary's Hospital, Manchester, since the last session of the Council. After obtaining and considering the opinion of its legal advisers, the Council adopted resolutions to the effect that certain documents, issued by various societies or persons as diplomas of education and examination in midwifery, were "colourable imitations" of diplomas conferring a legal right to admission to the *Medical Register*; and that such diplomas contravened the spirit of the Medical Acts, and were calculated to deceive the public. In consequence, the resolutions gave formal notice that the issue of such "colourable imitations" by registered practitioners would in future be regarded as "conduct infamous in a professional respect." In a rider the Council expressly stated that the form of the certificate granted by the Obstetrical Society came within the purview of the resolution, and directed this opinion to be communicated to the President of the Society. These strongly-worded resolutions will doubtless lead the bodies implicated immediately to revise the appearance and phraseology of the certificates issued by them, and it seems to be a matter of regret that earlier action was not taken by them in accordance with the spirit of the resolution adopted by the Council last May.

Of the penal cases brought before the Council we prefer not to say very much. In two cases of covering, in which the facts were brought before the Council by the London

and Counties Medical Protection Society and the Medical Defence Union respectively, the Council, while finding the offence proved in each case, decided not to take any immediate action, and it is to be hoped that this fresh publicity given to the fact that "covering" is an offence regarded by the Council as "conduct infamous in a professional respect" may have the effect of deterring practitioners tempted to resort to it from taking a step so fatal both to their own interests, and to those of the profession to which they belong.

The case of Dr. Herbert Tibbits was also investigated by the Council, and after a long and patient hearing the Council came to the decision that he had committed the offence charged against him, and in consequence directed his name to be erased from the *Medical Register*.

The case of Mr. R. M. Theobald, charged with having published and circulated a book containing a description and recommendation of Mattei's so-called "Electro-Homœopathic Cures and Medicines," and in which it was suggested to persons suffering from disease by Mr. Theobald, as a registered medical practitioner, to adopt such so-called cures and medicines as therein stated to be practised and used by him, occupied the greater part of the time of the Council during its session on Monday. Mr. Theobald's name had been removed from the list of Members of the Royal College of Surgeons of England. It was urged on behalf of Mr. Theobald that he was in the same position with regard to the Mattei fluids as any homœopathic practitioner would be with regard to homœopathic remedies, and further that as soon as his attention had been called by the Royal College of Surgeons to the fact that he ought to have nothing to do with the book he had withdrawn it. In the result the Council found that Mr. Theobald had published and circulated the book, that the offence was "infamous conduct in a professional respect," and directed the name to be erased from the *Medical Register*.

The Pharmacopœia Committee proposed that the work of editing the new *Pharmacopœia* should be carried out on the old lines, and under the sole editorship of Professor Attfield. This proposal, to which we make further reference at page 1326, did not meet with the unanimous approval of the Council, and the Committee's report was sent back for reconsideration. On Wednesday, a new report leaving the debated questions open until next May, was presented and adopted amid general compliments to the President.

CLUBS AND FRIENDLY SOCIETIES IN THE SOUTH OF IRELAND.

In an article published in the British Medical Journal of December 1st, page 1254, we gave some account of the action recently taken by the South of Ireland Branch of the British Medical Association and the practitioners resident in Cork with the object of obtaining a revision of the contract rates with medical benefit societies, clubs, and associations in that city. The contest which has been entered upon is, as we have there observed, a matter of great local interest, but the principle involved is one of far-reaching importance. It may, therefore, be well to add a further statement of the circumstances which have led up to the present situation.

We learn that a great abuse of the club system has arisen in Cork of recent years; the clubs have increased in number and in the number of their members, so that at the present time it is estimated that they include some 20,000 persons. It is stated that persons in the enjoyment of incomes of £500 a year—and even, though it seems almost incredible, of £1,000 a year—are obtaining medical attendance for themselves and their families on payment of an annual sum of 6s. 6d., or even, it is said, of less. It is really impossible to make any comment which would increase the force of this simple statement. We are assured that this tendency to convert clubs—primarily intended for the relief of the poor and working classes—into organisations for sweating the medical profession for the advantage of the well-to-do classes has been for some time growing.

As a result of the complete want of reasonable control or regulation, we are informed that customs have grown up which we think must be recognised on all hands to be abuses. Thus a person being a member of two or more clubs has been successful in obtaining consultations without fee, the gratuitous performance of operations has been insisted on, as have also the administration of anæsthetics, and attendance on midwifery cases.

The South of Ireland Branch first moved in the matter in 1892. Later it was taken up also by the Cork Medical Society, and finally it was again investigated by the Branch, and the code of rules to which we referred last week was drawn up and signed by every member of the medical profession in the city. The clubs in the city, some thirty in number, upon receiving last October a notification of the resolve of the medical profession to refuse to attend members of the clubs upon the old terms, or to attend at all as club patients club members whose income exceeded £200 a year, resolved not to accede to the very reasonable demands put forward, and have expressed their determination to attract medical men from elsewhere. It has been asserted that the united action of the medical profession in Cork is an attempt to break up legitimate clubs and associations, but in face of the facts as they appear in the rule dealing with the rates of payment, such an assertion is absurd. The rates suggested by the medical profession in Cork are extremely low when the nature of the services required is taken into consideration, and as a matter of fact there will be many ready to sympathise with the views expressed by a correspondent whose letter we publish in another column, who contends that the rates are altogether too low.

We sincerely trust that the action of the South of Ireland Branch will meet with general support throughout the profession, and we are glad to see that the Council of the Dublin Branch have already, after receiving a deputation from the South of Ireland Branch, and hearing a statement from Dr. Philip Lee, the secretary of the Branch, expressed their sympathy with and approval of the efforts which the South of Ireland Branch are making. The Council of the Dublin Branch also adopted a resolution expressing their hope that the medical men in Cork would "maintain a united front against the attempt of the said societies to impose unworthy and inadequate terms on their medical officers." The meeting of the Council at which these resolutions were adopted was attended by Dr. John William Moore (President), Mr. Thornley Stoker (President of the Royal College of Surgeons of Ireland), Dr. Heuston, Mr. Edward Hamilton, Dr. T. W. Grimshaw (Registrar-General for Ireland), and the Honorary Secretary, Dr. John Molony. Men more truly representative

of the best traditions of the Dublin Medical School it would not be easy to get together, and we trust that the unanimous opinion of so representative a body will have the effect of preventing the disastrous controversy which is threatened, and of showing to those who are responsible both for the action of the medical club and benefit societies of Cork that in the course they have taken the medical profession in Cork has the approval and support of the medical profession at large, of the leaders as well as of the rank and file.

¶ Owing to the great pressure on space, caused this week by the report of the proceedings of the General Medical Council, we are compelled to defer the publication of numerous articles and letters.

Mr. Timothy Holmes, F.R.C.S., has been elected to the Treasurership of St. George's Hospital, of which he is also a consulting surgeon.

The Bradshaw Lecture will be delivered before the Royal College of Physicians in October next year by Dr. J. B. Bradbury, Downing Professor of Medicine in the University of Cambridge, and Physician to Addenbrooke's Hospital.

In the list of committees given in our account last week of the Annual Meeting of the Association in 1895, the General Purposes Committee (Mr. Frederick Wallace, President; Mr. George Brown, Secretary), was by accident omitted.

We understand that Dr. Jameson, C.B., Administrator of Mashonaland, has accepted an invitation to a banquet addressed to him by the past and present students and the medical faculty of University College.

For the Scottish Commissionership in Lunacy, about to be vacant by the retirement of Sir Arthur Mitchell, the following gentlemen are candidates: Sir James A. Russell, till lately Lord Provost of Edinburgh; Dr. John Fraser, Deputy Commissioner in Lunacy; Dr. Alexander Urquhart, Perth; and Dr. T. F. Sutherland, Glasgow.

THE LATE DR. O. STURGES.

A proposal is on foot for raising a memorial to the late Dr. Octavius Sturges. A circular has been issued signed by Dr. W. H. Allchin, Mr. George Cowell, Dr. H. B. Donkin, Mr. T. Bond, and Dr. F. de Havilland Hall, announcing that a meeting will be held in the Board Room of Westminster Hospital on Wednesday, December 19th, at 4 P.M., for the purpose of considering the subject. Persons prevented from attending who may wish to express their views are invited to communicate with Dr. Donkin at the hospital.

DISCUSSION ON DIPHTHERIA ANTITOXIN.

At the meeting of the Clinical Society of London on Friday evening, December 14th, a discussion will take place on the treatment of diphtheria by antitoxin serum. Messrs. Washbourn, Goodall, and Card will give an account of eighty cases treated with the diphtheria antitoxin prepared by the British Institute of Preventive Medicine, and Mr. Kesteven will also report some cases. We understand that the Society would be glad to hear the experience of any of our readers, who, if they do not happen to be members of the Society, can be introduced by a member.

AN ANTIVACCINATION PETITION.

It is reported that the guardians of the poor of Mile End have prepared a petition to the Queen on the subject of vaccination, in which Her Majesty is entreated "to direct her Ministers to bring the law and administration into better accord with the present state of knowledge and feeling her faithful and obedient subjects have on the matter of vaccination. . . . . Ministers appointed a Commission to examine into the subject several years ago, and that Commission has not yet issued its report." The Mile End guardians would do better, perhaps, if they petitioned the Commission to put a speedy end to its long labours.

LADY FOOTBALL.

Woman seems now to have a task before her in which we fear greatly she will fail. Report goes that female football teams will shortly contest in public, and the problem is how, on the one hand, to make the performance graceful, and, on the other, not to spoil the game. Those who have witnessed the modern developments of that noble sport will probably doubt whether even women will be able to harmonise such conflicting aims. Into this question we will not enter. Whether the real game played by women is a graceful or a disgraceful sight Mrs. Grundy must decide, and whether the game played in a ladylike manner is worth looking at will doubtless soon be settled by the polite frequenters of the football field, who, we may be sure, will not be backward in expressing their opinion. In the meantime, we enter our protest against the whole performance. If girls choose to kick a ball about a field between their lessons no one need object, but for young women to attempt to play at football as played is another matter. Many of the sudden jerks and twists involved in the game are exactly such as are known to cause serious internal displacements, and it is impossible to think of what happens when the arms are thrown up to catch the ball, or when a kick is made with full force, and misses, without admitting the injury which may be thereby produced in the inner mechanism of the female frame. Nor can one overlook the chances of injury to the breasts. The influence of such injuries in originating the development of various tumours may be more or less hypothetical, but at least there is a strong consensus in its favour. In regard to the proper use of the breast, however, in the rearing of infants, there can be no doubt of the deleterious influence of inflammatory changes following injury, and unless we are prepared to advocate the artificial rearing of infants, we can in no way sanction the reckless exposure to violence of organs which the common experience of women has led them in every way to protect.

THE ELECTION OF GUARDIANS.

We cannot too earnestly remind all ratepayers of their great responsibility in appointing the guardians of the poor. The indifference too many show in all local elections is deplorable. It is the duty of the guardians to have regard to the sufferings and misery of thousands of fellow creatures, and if they fail to sympathise with and realise these, and do not intend to devote their best abilities to the alleviation of the same, we cannot admit they are fit and proper persons for the office. The hygienic and sanitary conditions of workhouses need much improvement, as well as the comfort, dietary, and clothing of the inmates; and for this, as well as an efficient medical service, the ratepayers have a right to hold their representatives responsible. It is essential, therefore, that such men are returned as will see the necessity of procuring medical officers whose skill and proficiency are above question, and this can only be done by liberally paying for the same. Our poor cannot pick and choose their doctor, and it behoves the ratepayers to see that the guardians adequately perform this duty for them. The grave question of workhouse reform, including infirmary accommodation and the occupation of the inmates, is a subject demanding urgent consideration, and one on which the profession claims a right to be heard. We trust that the electors will ensure that the medical profession is adequately represented on the new boards of guardians.

Ratepayers should aim at the return to office of economical and thoroughly efficient men, who will make the sympathetic consideration of their fellow-creatures' sufferings their first duty and secure for them the highest professional skill in their medical officer, between whom and the Board there should be mutual confidence, to ensure a harmonious and efficient administration of the grave duties devolving upon them.

THE SANITARY DUTIES OF DISTRICT AND PARISH COUNCILS.

IN the excitement which has been called up by the election of district and parish councils, the interest which these bodies will have for the sanitarian is in danger of being overlooked. One reason for this is probably to be found in the relative absence of matters sanitary in the Local Government Act of 1894 as compared with other numerous details of procedure and the rest. Yet the powers and duties of the newly-elected local authorities will have a direct bearing on the public health. In the first place, town councils of boroughs retain their identity and position as hitherto; and local boards find their greatest change in their new title of urban district councils, whilst the guardians in their sanitary capacity find themselves under a new nomenclature as rural district councillors. These latter members will, as a matter of course, be also members of the Poor-law body. Perhaps the most striking feature in the Act relating to rural and urban authorities is that which has reference to the bestowal of the powers of the one body upon the other; in the case of urban councils on application to the Local Government Board, and in the case of rural councils as that Board shall direct by general order to be laid before Parliament. Otherwise, these bodies remain much as at present constituted in regard to their sanitary powers. Rural authorities may, however, delegate to parish councils their powers, so far as parochial committees have hitherto been able to take them up. But this does not relieve the council of any responsibility in the matters so delegated. Parish councils have powers conferred upon them in respect of water supply, especially where they can utilise sources of supply within the area of their jurisdiction. So also they can move in the matter of defective drainage, and with reference to filth nuisances; and they will be in a position to make a complaint to county councils of default of district councils in the matters of water supply and sewerage, which complaint may have as its sequel the performance in these directions by the county body of the duties neglected by the recalcitrant district council. The power of expenditure of parish councils in the furtherance of sanitation is, however, limited to a sum amounting to a rate of 3d. in the £, or, with the sanction of the parish meeting, of 6d. in the £; and they can only raise money on loan with the sanction of the parish meeting, the county council, and the Local Government Board. Other things the parish councils may do, such as taking steps to secure the repair or construction of cottages, though they have not the power of directly acting in these respects. The question of allotments will be one demanding much attention at their hands, and certain adoptive Acts, including the Burial Acts, can be taken over at will, and the amount of expenditure settled by resolution of the parish meeting. These, then, very briefly stated, are the chief sanitary changes to be brought about; and it now remains to be seen how far the creation of these multiple bodies is justified by their use in a wise and general manner of the powers and duties cast upon them. True, they have the county councils to fall back upon, and there is also the further court of appeal at Whitehall; but, as we have already said, the future will show whether the point at which decentralisation is profitable has not been overstepped. We can only hope that once again the old adage will prove true, namely, that in the multitude of counsellors—shall we say councillors?—there is wisdom.

THE HYGIENE OF BRASS, COPPER, AND ZINC WORKS.

THE Home Secretary has appointed a committee to make an inquiry with regard to trade conditions injuriously affecting the health of workers in the brass, copper, and zinc trades, and to advise upon the rules which should be enforced. During the course of the past summer a new set of revised rules was drawn up, and obtained the assent of the representatives of the men, but before taking steps to make them binding it was considered desirable that the whole subject should be inquired into by a committee of gentlemen specially qualified to advise the Home Office. The committee consists of Mr. Cram, Chief Factory Inspector in the Midland Counties, Chairman; Mr. Lane, to represent the brass manufacturers; Mr. W. J. Davis, Secretary of the Amalgamated Society of Brass Workers, to represent the men; and Dr. R. M. Simon, Physician to the Birmingham General Hospital, with Mr. Knyvett, Factory Inspector, as Secretary. The committee had a preliminary meeting in Birmingham last week, and other meetings will, we understand, be held in Birmingham shortly, but it is the intention of the committee to visit Wolverhampton, Sheffield, and other manufacturing centres before presenting their report.

LEPROSY IN ICELAND.

DR. EHLERS, of Copenhagen, who, at the expense of the Danish Government, recently investigated the condition of leprosy in Iceland, has published an interesting account of the disease as it is found in that island.[1] Iceland received its first colonists from Norway in 874, but it seems very probable that leprosy did not occur in the island until the end of the twelfth century. In 1555 the disease had become so widespread that the Government decided to build four leper hospitals, but they were not actually constructed until 1651. The spread of the disease, he thinks, was always to some extent checked by the fear of contagion on the part of the islanders, but still more so by the epidemic diseases which occasionally swept the island. A terrible epidemic of small-pox in 1707 killed 18,000 persons, including nearly all the lepers alive at that time. The epidemics of measles in 1644 and 1846, and the epidemic of scarlatina in 1797, were similarly severe on the lepers, who seemed to have no power to resist such diseases. Although the latest statistical report of 1889 gave the number of lepers in Iceland at only 47, Ehlers found 141, 102 of whom he himself saw. Of the 39 others, he had sufficiently accurate descriptions, and he considers that others must remain of whom he had no information. For the increase of the disease he holds the premature suppression of the isolating hospitals responsible, and he advises that a leper house should never shut its doors until ten years after the death of the last leper, a single individual who survives sufficing to create a new focus. Dr. Ehlers's observations confirm Hansen's views that leprosy is not hereditary, and that it spreads by contagion. In thirteen of his cases he has documents which show that before becoming lepers they had lived for a long time, some of them for years, under the same roof with lepers, whose bed they sometimes shared. In the case of a woman in whom Dr. Ehlers was the first to diagnose leprosy, Dr. Gudmundsson, who attended her in her confinement, found her lying in a bed in which a leper had died the day before; the linen had not been changed. A widow, aged 51, who had been a leper for three years, had lived in marital relations with her husband, who died of leprosy two years before. Dr. Ehlers gives some interesting information regarding the primitive habits of the Icelanders, which show that the conditions under which they live must contribute to keep alive germs like those of leprosy. In regard to the isolated cases of leprosy which occur in France

[1] *La Semaine Médicale*, November 17th, 1894.

among the Bretons, he remarks that about 4,000 fishermen, mostly Bretons, spend some time on the west coast of Iceland every year, and suggests that it is quite possible that some of the cases of leprosy found in Brittany may have been acquired in Iceland.

TEMPORARY MENTAL DISORDERS IN GENERAL HOSPITAL PATIENTS.

From the *Times*, and from an explanatory letter by the hospital authorities, we learn that an inquest was held the other pay concerning the death of an electrician who had injured a finger which, about a week later, had become so painful that he went to the London Temperance Hospital, Hampstead Road. There the hand became worse, and the leg began to be affected, and subsequently the patient became melancholic, refused food, and was violent and noisy at night; with the wife's consent the relieving officer was communicated with; the patient was certified to be unfit to remain in the general hospital; and, later on, was removed, under the provisions of the Lunacy Act, to the ward for the insane at St. Pancras Workhouse, where he died apparently eleven days afterwards. A discussion, too long to repeat here, upon the bearing of the case on the provision for persons becoming deranged in mind whilst in general hospitals arose between the coroner and the medical superintendent of the workhouse. We believe that, considering all the circumstances and the provisions of the law, this individual case was dealt with in a proper legal manner and in the interests both of this patient and of the other hospital patients. The law, very properly, is careful to safeguard control over individual liberty, and has provided means by which persons who require care and detention as being deranged in mind (even if temporarily so) may be legally dealt with for their own good and the good of others. General hospitals cannot be converted into, or diverted to the uses of, lunatic hospitals, and the safeguards of the law cannot be lightly disregarded. At the same time, we note with approval the practical suggestion of the jury in respectfully suggesting to the hospital authorities the consideration of the advisability of making provision in the hospital for such cases by the addition of some isolation wards if necessary; and the further suggestion was made that, in a case dealt with as the above was, a medical history of it should be forwarded with the patient.

THE GOOD SAMARITAN.

It is not greatly to the credit of our boasted civilisation that even in London no arrangement or organisation exists for providing immediate medical attendance in case of accident or urgent sickness. In a happy-go-lucky and informal manner most accidents find their way to the hospitals by the help either of the police or of the public. But in this great city, for all its wealth and all its unstinted, though often misdirected, charity, it remains the fact that there is no machinery by which a person attacked with sudden illness, or a woman taken unexpectedly in labour, can obtain medical help except by the clumsy method of trundling him or her off to hospital. Even to those with money in their pockets, the delay in getting a doctor is often considerable; what is it, then, for those who have none? The Poor-law organisation is not only useless in the case of emergencies, but is intensely unfair to the medical profession. The formality of getting an order from the relieving officer takes too much time, and so the guardians are relieved of all responsibility for urgent cases. Not so, however, the doctor, who, although in no way called on to visit without an order, knows well that if anything goes wrong an independent jury will asperse his character, and publicly accuse him of want of common humanity in refusing to go at once when sent for, order or no order. It should be recognised that at the present time a wealthy community like London, spending its millions on luxury and pleasure, is willing to leave to the charity of the worst-paid section of an ill-paid profession the important duty of giving first aid in cases of sudden illness. With the present organisation of the London police, with their "points," and patrols, and alarms, it ought to be possible by aid of a very simple organisation to ensure speedy provision of medical assistance to all urgent cases, the police authorities paying the doctor's fees, and recovering them, when possible, from the patient. It is not a matter of prolonged attendance but of first aid in emergencies, and it is a public scandal that London should be without any organisation for the purpose, and that it should be possible for a woman to be left helpless in her distress, as happened recently in Whitechapel, or for people sick unto death to wander through the wet and cold seeking for orders, as happens every week. London sadly lacks a good Samaritan.

INFANT LIFE PROTECTION.

The inadequacy of the Infant Life Protection Act has been effectively demonstrated by the experience of the London Council in administering it, and efforts will be made to obtain its amendment next session, so that it may be unlawful for any person who receives any infant for hire or reward to transfer such infant to any other person other than a relative of the infant without the consent in writing of the local authority. During the five years the Council has administered this Act in London, the inspector has met with only 406 infants to which the provisions of the Act apply, while he has found 1,587 infants kept for hire or reward at unregistered houses who are in no way protected by its provisions. Of the latter number no fewer than 739 were infants under 1 year. Where only one infant under the age of a year is kept the Act does not apply, even if any number of other infants over 1 year old are also kept at the same house. Again, the Act is largely ineffective, since the supervision ends when the infants get beyond 12 months old. At present, too, it is a common practice for a person to adopt an infant for a lump sum, and then to arrange with another person to take the child in consideration of a weekly payment, which, after a time, is frequently dropped. The Act applies to the whole country, and, doubtless, its shortcomings have been felt everywhere.

MIDWIVES AND "STILLBORN" CHILDREN.

A curious story came out at an inquiry held by Mr. Braxton Hicks on December 1st. It appeared from the report in the *Morning* that a Mrs. Cooper, who practised as a midwife, attended the wife of a railway coal porter of Battersea in her confinement. No medical man was called in, and the child was alleged to have been born dead. Subsequently Mrs. Cooper requested an undertaker to bury the infant as stillborn. This he refused to do. On the following day a police constable stopped Mrs. Cooper in the street when she was in company with another woman carrying a bulky parcel. It was found that they were in the act of taking the body of the child to the cemetery. Dr. Kempster, divisional surgeon, gave evidence to the effect that the child had not died before birth, and that its death might have been caused by the manner in which delivery was effected. The verdict was in accordance with the medical evidence, the jury adding a rider to the effect that uncertificated midwives should be placed under control. Mrs. Cooper had previously informed the coroner that she had obtained her training by living in a doctor's house and reading his books, adding that she had had nine deaths in 328 cases. On December 4th the same coroner appeared before Mr. Denman at the South-Western Police Court to support a summons against Mary Stewart, a midwife, living at 18, Europa Place, Battersea, for unlawfully and wilfully making a false statement as to the child of Elizabeth Kinsley. The defendant pleaded guilty. The prosecution was instituted as the outcome of an inquiry held recently by Mr. Braxton Hicks, as coroner for the district. The coroner's statement to the magistrate, as

reported in the *Daily Telegraph*, was to the effect that the defendant certified the infant to have been stillborn, when, as a matter of fact, it had lived for eighteen hours. The proceedings were taken under the Registration of Births and Deaths Act, and he explained that whereas it is essential to register the birth of a living person there was no necessity to register an infant which was stillborn. He pointed out that under the present custom there was no supervision as to stillborn children. If a midwife chose to write on a piece of paper, "I was present at the birth of the child and it was stillborn," the undertaker would at once make arrangements for the burial. In reply to the magistrate, the Coroner said that though he had grave suspicions at the time as to whether the midwife had not conspired with the mother, he had no means of justifying the suggestion as to conspiracy. Since the inquiry into this child's death three similar cases had been brought to his notice. In giving his decision Mr. Denman expressed his agreement with the coroner that it was a matter of great importance, and thought he had rendered a public service in having instituted those proceedings. He confessed that it seemed extraordinary that no provision had been made by the Act for the registration of stillborn children. The defendant had obviously made a false statement, and she appeared to have had a reason, as the child, so he was informed, was not the child of the mother's husband. Such certificates opened the door to acts of deliberate murder; but as no foul play had been suggested in this case he imposed a nominal penalty of 20s., with 2s. costs. Mr. Braxton Hicks informed the magistrate that one of the recommendations of the Select Committee was as follows: "That stillbirths which have reached the stage of development should be registered upon the certificate of a medical man, and that it should not be buried until an order of burial has been issued by the registrar." It is greatly to be wished that the Government would take this matter in hand in the coming session.

THE REVISION OF THE "BRITISH PHARMACOPŒIA."

A discussion of great importance occurred at the meeting of the General Medical Council on Tuesday, December 4th, when the report of the Pharmacopœia Committee was brought up for adoption by the Council. In this report the method to be followed in the compilation of the forthcoming *Pharmacopœia* was indicated. It was proposed to obtain from the medical authorities of Great Britain and Ireland suggestions with regard to omissions, alterations, and additions which seem to these authorities necessary, and from the Pharmaceutical Society statistics with regard to well-recognised non-official remedies and remedies which are now superseded. On these data and on reports from India and the Colonies bearing on the adaptation of the *British Pharmacopœia* to the requirements of these countries, it was proposed that Professor Attfield should edit a new edition of the *Pharmacopœia*; at least, it may be presumed that this was the intention, since £1,250 was to be accorded to him for this work. A Consultative Committee, consisting of three members of the Pharmacopœia Committee, was, indeed, to be appointed; but they were only to be referred to as occasion might require. The Council usually accepts the report of the Pharmacopœia Committee without much comment; but on this occasion it raised a somewhat heated discussion, which ended in its recommitment. Dr. Tuke moved that it be referred back to the Committee, on the ground that the members of the Committee had not had sufficient knowledge of the important matters it proposed to decide upon, and that in consequence several members who were serving on other committees sitting at the same time did not attend. He furthermore objected to the production of a *Pharmacopœia* under exclusively pharmaceutical influence. Professor Turner objected to the adoption of the report, because on the Committee the views of the Scotch members of the Council were not duly represented; and Dr. Leech on the ground that in the lines laid down in the report for the compilation of the *Pharmacopœia* there was not sufficient provision made for due inquiry into the efficiency, from a pharmacological and therapeutic point of view, of the additions it was proposed to make to the *Pharmacopœia*, or into the effects or therapeutic efficiency which changes made on pharmaceutical grounds would have. Dr. MacAlister and other members of the Council expressed similar views. On the other hand, Sir Richard Quain claimed that the pharmacological and therapeutic considerations should have no weight in deciding on the contents of the *Pharmacopœia*, and that, on the lines suggested in the report, a *Pharmacopœia* had been produced which was the best so far published. In his views as to the satisfactory nature of the report he was supported by Sir Dyce Duckworth and Mr. Carter. The Council, however, as we have said, decided to recommit the report. An amended report, which had been unanimously agreed to by the members of the Pharmacopœia Committee on Wednesday, was afterwards adopted by the Council. It is now arranged that the various medical authorities in Great Britain and Ireland, and also the pharmaceutical societies and certain private individuals shall be asked to make suggestions for the forthcoming edition of the *Pharmacopœia* according to usual custom. The suggestions obtained will be submitted to the members of the Pharmacopœia Committee, and this Committee will report to the Council in May, 1895, as to the arrangements, if any, which may be necessary for obtaining additional assistance other than pharmaceutical in the compilation of the *Pharmacopœia*.

DEATH OF DR. WITHERS MOORE.

It is with sincere regret, which will be shared by all who knew him, that we have to record the death of Dr. Withers Moore on December 5th. This sad event took place at his house at Burgess Hill, Sussex, to which he retired on relinquishing practice at Brighton a few years ago. Dr. Withers Moore, who was in his 71st year, attended a meeting of the Council of the South Eastern Branch of the British Medical Association only last week, and he then appeared to be in his usual health. He was seized with attacks of angina pectoris on December 2nd and 3rd, was better on December 4th, but suffered a fatal relapse on the following morning. Dr. Withers Moore was President of the British Medical Association in 1886, in which year it met in Brighton; subsequently, in 1890, he was elected President of the Council of the Association, and devoted himself to the duties of this office with the utmost zeal and disinterestedness. Dr. Moore took a deep interest in social questions affecting the medical profession, and his large experience and conciliatory influence will long be missed. He was a man of great simplicity, directness, and uprightness of character, sincerely devoted to the best interests of the medical profession and the British Medical Association. We hope to publish some account of his career in an early issue.

DENTISTRY AND THE PUBLIC HEALTH.

The annual dinner of the past and present students of the National Dental Hospital, Great Portland Street, was held at the Holborn Restaurant on November 30th, under the presidency of Sir Walter Foster, Parliamentary Secretary to the Local Government Board. In proposing success to the hospital and college, Sir Walter Foster said that one of his first duties on taking office in the Government was to examine reports as to the condition of the teeth of school children. These reports contained much valuable information, and proved that a large amount of public good might be done were proper attention given to the teeth of the rising generation. Another point at which dentistry touched wide public interests was in regard to soldiers and sailors.

That the soldier should be able to march it was essential that he should be able to chew, for if he could not chew well he would not march well or fight well. He mentioned that since the lads on a certain training ship had had their teeth carefully looked after the percentage of recruits accepted for the navy had increased six or sevenfold. As a member of the General Medical Council elected by the general body of the general profession, which included a large number of medical dentists, he considered himself to owe service to the art represented by his audience. The General Medical Council were anxious to assist dentists in maintaining a high and honourable tone in the dental profession, and although so far there was no dental representative upon the Council, he believed that that was the fault of the Act of Parliament, and not the fault of the General Medical Council. Dr. G. V. Poore and Mr. Smith Turner replied to the toast of "The Guests."

THE INDIAN OPIUM COMMISSION.

We understand that the report of the Indian Opium Commission, which will probably be ready for issue at the opening of Parliament, is not likely to make many proposals for a change in the existing system of opium manufacture and sale, although more effective measures will probably be suggested for diminishing the habit of opium smoking, which, from the evidence taken in India, would seem the most injurious manner of taking the drug. The report will probably recommend that the system of paying cultivators in the Behar district should be assimilated to that in the Benares district, with the view of guarding against possible oppression by subordinate officials. This, we believe, is a small detail, but it seems to be thought that the system in force in the Benares district brings less pressure to bear on the cultivators in favour of growing opium. The maintenance of the prohibition of the sale of opium to Burmans, which has been in force since the beginning of this year, will probably be advised, and also that China should be left perfectly free to exclude opium. Various rumours are also current in regard to other points involved. At present, however, the report of the Commission is only in the draft stage, and is still quite open to modifications. How many reports will be issued, or what form they will take, is even open to question. Possibly a minority report will be presented by the two anti-opium representatives, or Mr. Pease may content himself with dissenting from certain of the recommendations of the majority. Then the Indian members, while agreeing generally with the majority, may make separate suggestions of their own, and it is understood that the general features of the opium habit in India and its medical aspect will be treated of separately by the medical member of the Commission, and that his notes on the subject will be issued as an appendix.

ENTERIC FEVER AT NEWPORT, I.W.

Dr. Evans, of the Local Government Board, is assisting Dr. Theodore Thomson in his investigation of the cause of the epidemic of enteric fever at Newport, Isle of Wight. Although chemical and microscopical analysis failed to detect contamination of the water supply, the distribution of the disease, 42 additional cases of which were notified during the week ending December 1st under the voluntary system of notification recently adopted, leaves no doubt that this is the principal source of the poison, the milk supply in part possibly participating in the contamination. Bacteriological examinations are now being made, and the lithia test is being applied. This test consists in pouring solution of lithia in quantity into places suspected of communication with the water supply, and subsequently examining water taken from the wells with the view of discovering its presence there. There are two wells, communicating by means of a siphon, from which the water has been pumped to a reservoir at a considerable elevation, from which it is mainly distributed to the district. One of these is an iron tube well, the other is stone lined, and is situated within 10 or 12 feet of a mill pond, the water of which pours into it through an opening in its side. This pond receives the waters of the Liskeley, a considerable stream which drains the Bowcombe valley, flowing past farmyards, by cottages, and through the village of Carisbrooke, and constantly liable, therefore, to pollution. The Corporation of Newport, with the want of knowledge of sanitary matters which would appear to have characterised them, refused, on the plea of economy, to line their wells with solid iron tubing. The reservoir, the floor of which dips away from the place of entrance of the rising main, which is also the distributing main, has just been cleaned out, and some twenty tons of brownish deposit removed from it. At the pumping station there is a low level reservoir fed by surface springs, the principal of which rises beneath a highly cultivated market garden, sometimes heavily manured with night soil. The waterworks are situated in a populous village, a large number of houses in which drain into the chalk from which the water is pumped. For many years Dr. Groves, in his annual reports, has pointed out the very serious risk which this condition of things involved. In 1888 he wrote: "The mode of disposal of the sewage of the village (Carisbrooke) must be a matter of the deepest concern to the owners of these wells, and more especially to the inhabitants of Newport.....'A large amount of the sewage of Carisbrooke is discharged into the formation from which the drinking waters of many of the inhabitants and of the population of Newport is drawn." And in his last annual report he says: "From year to year, for many years, I have pointed out to you that, as sewage is discharged into deep cesspits in the chalk from which the water supply of Newport is obtained, its population may suffer serious detriment should the unaltered sewage reach any of the large fissures which frequently occur in this formation." Under such circumstances, even though the bar to the sewering of Carisbrooke, so long contemplated, be removed by the consent of the Corporation of Newport to a connection with their sewerage system, the situation is evidently one unsuited for the provision of a public water supply: and the sanitary authority, who have erred so greatly in the past, will probably do wisely if they resolve to cease spending the ratepayers' money in tinkering at the present work, and go farther afield for their water, where they will run less risk, when they turn it on to their town, of turning on disease and death with it.

MODES OF CAPITAL PUNISHMENT.

Of experiments there is no end, and capital punishment having in America reached the experimental state as illustrated by the scientific barbarity of execution by electricity, no one need be surprised to hear that it has now been determined to experiment still further, and see whether the poor wretch can be brought round to life again after being "electrocuted." It would be hard to find any more serious condemnation of any form of capital punishment than that such a proposal should be for an instant entertained. The very essential of the death sentence is its irrevocable certainty, and if uncertainty is to be added to the other horrors, we may expect that before long there will be a revulsion to other methods than the electric current. There can be no doubt that in the search for some means by which the final act of life should be instantaneous and painless, a large element of preliminary mental agony has been introduced, with a possibility, if the apparatus is not perfectly arranged, of substituting death by torture for the instantaneous extinction which was intended. For the sake of the culprit, humanity demands that the execution shall be swift and painless: for the sake of the public justice demands that there shall be no doubt about its efficacy. In both these respects the guillotine seems by far the best method known

as yet. If properly done, hanging is effectual; it is not, however, so instantaneous. We know by plenty of experience that injuries, accidental amputations of fingers for example, effected with absolute suddenness, are entirely unfelt; and when a man's head is in the basket there can be no doubt that he is dead. So to execute a criminal as to leave a glimmer of hope that by some hocus-pocus he may be brought round again is an outrage to justice and public sentiment.

THE CAPE COLONY MEDICAL COUNCIL.

AT a recent meeting of the Cape Town Branch the question was discussed whether or not any active part should be taken in the forthcoming election of members to the Colonial Medical Council. The functions of this body correspond pretty closely to those of the General Medical Council in England. Three members are nominated by the Governor, while four are elective, the whole profession in the Cape Colony being the electorate. After considerable discussion, the motion of Dr. Anderson—namely, "That this Association decides to abstain from taking any action with reference to the coming election of members for the Colonial Medical Council"—was carried. No doubt the Branch had good reasons for their action in this matter, but these are not at first sight apparent. It would seem that there is a grave defect in the mode of election to the Colonial Medical Council; there is no public nomination, and the election is therefore largely at the mercy of any candidates, even unsuitable ones, who might be able to collect votes. Under these circumstances a united Branch might become a great power for good, for the position of the profession must always depend largely on the constitution of the Medical Council. That very defect in the Medical Act which now renders the elections such an uncertainty would give power to any united body, and might enable a Branch of the British Medical Association to ensure that thoroughly reliable men should be elected to the Colonial Medical Council.

THE CLIMATE OF BRITISH CENTRAL AFRICA.

THE extraordinary variety of climate offered by different regions in Africa was well shown by a paper on British Central Africa by Mr. H. H. Johnstone, administrator of that region, read at the opening meeting of the Royal Geographical Society. The great advantage of the Protectorate over the surrounding districts lies in its having a large proportion of high land. About four-fifths of its surface is 3,000 feet and upwards above the sea, and about one-fifth between 5,000 and 10,000 feet. The result is that the climate is much cooler than is common so near the equator. In some parts the heat is never oppressive, and in the cold season frosts prevail. It is a well-watered country, and only a small number of the streams dry up in the height of the hot season. The scenery is said to be magnificent—and withal it is a green country with forests and grassy downs—and the climate to resemble in parts that of Northern Europe, a climate in which it is thought that Europeans will be able to rear their children amid healthful conditions. The root of the prosperity of the British settlements seems at present to lie in the coffee plantation.

THE POLLUTION OF DEEP WELLS.

DR. A. C. HOUSTON has placed on record an interesting story of a well at Morningside, near Edinburgh, which, as he says, teaches the useful lesson that the mere depth of a well does not necessarily afford evidence of the purity of its water. It seems that the sewage of about twenty five persons was discharged into a quarry, and disappeared into fissures in the sandstone rock. This went on from 1878 to the end of 1892. In the direction of dip, 800 feet away from the quarry, there was a well, which yielded pure water until its depth was increased from 114 to 294 feet by means of a bore-hole. The date of this boring (? April, 1887) is not mentioned, but at all events the water then for the first time was found to contain organic impurity, and this continued until July, 1893—six months after the sewage was finally diverted from the quarry—when the well water ceased to afford chemical evidence of pollution. The double coincidence is very striking, but we share in Dr. Houston's regret that no bacteriological investigation was made. The principal index of contamination appears to have been an excessive proportion of saline ammonia, which in September, 1892, is said to have reached 2.6 parts per million! At this time the albuminoid ammonia was low, 0.02, and the highest reading quoted, in April, 1887, was only 0.10. Neither nitrates nor chlorides were in excess, and phosphates were only found once.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

WE have received from the President of the Irish Medical Schools' and Graduates' Association, Dr. Macnaughton Jones, a letter with reference to the misapprehension with regard to the tenour of remarks made by Mr. Hulke, at a recent dinner of the Irish Medical Schools' and Graduates' Association. Mr. Hulke stated in his letter, published in the BRITISH MEDICAL JOURNAL of December 1st, p. 1279, that certain comments respecting qualifications for hospital appointments attributed to him were not made by him. Dr. Macnaughton Jones points out that our medical contemporaries fell into the same error, and adds that he was not himself present at the dinner. It does not seem to be necessary to discuss the point further, as we of course fully accept Mr. Hulke's disclaimer. We learn also that the Council of the Irish Medical Schools' and Graduates' Association have forwarded to Mr. Hulke a resolution in which the Council states that it accepts Mr. Hulke's disclaimer, and regrets the misunderstanding that had arisen.

JONATHAN WILD'S SKELETON.

MR. SECCOMBE'S rather interesting collection of essays on eminent scoundrels by different authors, called *Twelve Bad Men*, issued last summer, merits attention. It treats of persons like Bothwell, Titus Oates, Matthew Hopkins, the Witch-finder; Colonel Charteris, the libertine; and Judge Jeffreys, who were thoroughly bad in their way. They all lived, being no mere productions of *fin de siècle* novelists or "new women." On the other hand, they never defended themselves on the score of being "psychological studies" or victims of imperious "atavism." In short there was no "cant," in Carlyle's sense, about them, not even in the Rev. T. Oates's case, for his cant was sincerely intended for money making out of the trouble and death of others. An injustice has been done to the great thief taker. The author of the essay on that gentleman is unaware that Jonathan Wild's skeleton was presented to the Royal College of Surgeons of England by Mr. Frederick Fowler, of Burton Crescent, in 1847. There it stands, No. 336 in the Osteological Series, to this day. This native of Wolverhampton, who perished at Tyburn in 1725, was of low stature. The skeleton had been in the possession of Mr. Fowler and his predecessors for upwards of fifty years when he presented it. Mr. Arthur Vincent has been misinformed when he states that "a skull, said to be Jonathan Wild's, was exhibited in London in 1860; and up to about the same time a surgeon at Windsor boasted of the possession of the headless skeleton." The College also possesses the skull of a once celebrated malefactor, Thurtell, a Peninsular veteran, hanged for murder in 1824; it can also boast of the skull of the more complex and "psychological" Eugene Aram.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

WINTER SESSION, 1894.

Sir Richard Quain, Bart., President, in the Chair.
Thursday, November 29th.

Final Examinations.

The Council resolved itself into Committee to consider the Report on the Final Examinations of the Conjoint Examining Board in England and the Examination in Surgery of the Royal College of Physicians of London.

Dr. Pettigrew said the report noted the absence of any special examination in ophthalmic and aural surgery, and referred to these as "omissions." He suggested that that statement should be withdrawn, the fact being that examinations in these special subjects were not required by the General Medical Council.

Mr. Brudenell Carter said the duty of the inspector and visitor was to place before the Council an accurate picture of what the examination was. Some bodies found it perfectly practicable to institute a special examination in ophthalmic surgery, while others did not; and it was the business of the Council to express an opinion as to whether these omissions were to be approved or a change asked for. In the meanwhile, the suggestion that the report was to be emasculated was about as strong a proposition as he had ever heard made at that table. The Council wished to know what was being done by the bodies, and, if one body did a thing and another did not, they ought to know the reason why.

Dr. Moore said no difficulty had been found in the University of Dublin for many years in having examinations in aural and ophthalmic surgery.

Dr. Pettigrew did not see how Mr. Carter could make out that a thing was an "omission" if it was not required.

Dr. Glover thought examinations in clinical medicine would be better conducted in a hospital ward than at the Examination Hall. He referred to the time allowed to the clinical examination. It was stated that twenty minutes were allowed for the examination of each candidate, and that two cases were dealt with, ten minutes being given to each. He thought that was altogether unreasonable to assume that, amidst all the excitement of the examinations going on, a good clinical examination could be carried out in ten minutes. He asked the Council to express its decided opinion that this amount of time was inadequate. The same observation applied to the clinical examination in surgery, for which only fifteen minutes was allowed.

Mr. Brudenell Carter, in his capacity as visitor, had appended some special remarks upon the examinations; having withdrawn those remarks from the report, the paragraph referring to them was accordingly withdrawn from the report of the Examination Committee.

Sir Dyce Duckworth, as an examiner of some years' standing, urged that the object of an examination was not so much to get candidates to make an elaborate diagnosis of disease as to ascertain whether they had been properly trained in clinical methods, so as to enable them to arrive at a diagnosis. That he thought could be very well ascertained by two examiners in the course of twenty minutes; at all events for many years it had been found to work very well. He was perfectly convinced it was good enough for the average pass man, though more would no doubt be required for honours.

Mr. Bryant said it would be absolutely impossible to examine 250 candidates in the course of a fortnight at the bedside of patients in hospitals. It was therefore found necessary to have a selected number of cases at the Examination Hall. He believed the lines adopted by the Conjoint Board were the best that could be carried out.

Dr. McVail pointed out that it appeared possible that a man who utterly failed in clinical medicine and surgery might, if he did well in the written and oral examinations, obtain the diploma of the two Colleges. In the Boards of Scotland if a man got below 40 in either medicine or surgery he could not pass.

Mr. Bryant said 30 was their minimum in clinical medicine. Although the case stated by Dr. McVail was theoretically possible, yet practically a man who utterly failed at clinical work was not likely to pass at the other tables. He was informed that such a case had never occurred.

Dr. Gairdner said in Glasgow so much importance was attached to the clinical examinations that it had never occurred to them to "slump" it up with the other examinations so as to allow a man to escape with a comparatively low clinical examination. The impression produced by the report before them was that the clinical was not made to have so much weight as it had in the Scotch examinations. The report also referred to the oral clinical examination as being of very restricted duration, and also as being "hurried." He was suspicious of all examinations of five minutes' duration, and believed that in a clinical examination a time limit was absolutely prohibitive of a good result.

Sir John Banks referred to the great stress laid upon the clinical examination by the University of Dublin, it being regarded as above all others the test of whether a man could be sent out as a safe practitioner.

Dr. Glover said he was rather disappointed at the defence made by Sir Dyce Duckworth, that the clinical test was not so much of the candidate's knowledge of cases as of his knowledge of methods. If it was impossible to test a man's knowledge of cases in a few minutes, it was still more impossible to find out whether he was methodical in his treatment. The defence was more damaging than the charge. He wished to express satisfaction with the discussion that had taken place.

The report as amended was then adopted.

University of Edinburgh.

The Council then considered the report on the Final Examinations of the University of Edinburgh. The visitor and inspector, Mr. Bryant and Dr. Duffey, reported that the examinations for the degrees of M.B. and Ch.M. were "most satisfactory and sufficient." They suggested an alteration in the regulations, so that the written examinations should be held prior to the clinical, and candidates failing to secure 40 per cent. of marks in the former should not be permitted to proceed without a further period of study.

On the motion of Sir Dyce Duckworth, seconded by Mr. Bryant, the report was adopted.

University of Glasgow.

The Examination Committee state that in their report upon the final examinations of this University Dr. MacAlister and Dr. Duffey, the visitor and inspector, state that the final examinations are "sufficient," but they recommend changes in the method and standard of the examination in medicine, in order to bring it up to the level of the examination in surgery. They add: "The examination in operative surgery is commended. In medicine and in midwifery the examiners are reported to have marked certain candidates too liberally, and the details of the examination of a candidate in medicine appear to justify the visitor's and inspector's objection to his being allowed to pass and receive his degree. The oral examination in surgery is described as most searching and practical, the marking never erring on the side of leniency. It is recommended that the written examination should precede the clinical ones, and that candidates should not be permitted to proceed to the latter who had not obtained 40 per cent. of marks in the former. It is suggested that from each candidate a full clinical report and commentary should be demanded in the examination in clinical medicine, and that such a report should be read and marked by at least one of the clinical examiners. The visitor and inspector suggest that it is undesirable, in assigning marks to a candidate for a given portion of the examination, to have regard to his previous marks in the same subject. The results would be more trustworthy if each portion were marked on its own merits."

Sir Dyce Duckworth moved, and Mr. Bryant seconded, the adoption of the report.

Dr. Gairdner, as one of the examiners referred to in the report, disclaimed any suggestion of undue leniency, and

said the examinations of the University were in advance of the requirements of the Council. The University had not the slightest desire to evade the recommendations, but every reasonable suggestion would be most carefully considered. Whilst not confessing to be a lax examiner, his ideal of an examiner was not a Rhadamanthus of cruel unsympathetic impartiality, but rather one who honestly tried to find out not what a man did not know but what he did know, and if he could satisfy himself that a man did know something all round, the fact that there was a good deal that he did not know should not prevent him getting good marks. No doubt in the particular instance referred to the inspector was present on a very unfortunate day, when there were two or three candidates in succession who were very unsatisfactory, and he went away with the impression that a man who ought not to have received his degree did receive it. The case was a remarkable one. The student had received 65 marks for his written examination, a number considerably above that required to pass, but when he came up for the oral examination it was obvious that the man was really unnerved to the extent that he was almost unable to answer anything. It was evident that the man was utterly incompetent on that particular afternoon, and the only thing that could be done was to mark the oral very low, and to strike an average between the oral and the written, which showed that the man had passed and no more. If he had been a weak man all round he would not have been passed, but, seeing that he was not a weak man all round, he (Dr. Gairdner) preferred to do justice and let him graduate, even at the risk of his own credit as an examiner. It was not the fact, as was stated in the report, that the man had 50 marks given to him for his oral. He had only 35, which, with the 65 given for the written examination, gave him an average of 50 for the two. He was perfectly confident that absolute justice had been done, although, perhaps, it would have been easier for the examiners to have plucked him. Dr. Duffey, who was present at the oral examination, did not ask to see the written paper, and the result was that he wrote his report under a complete misconception as to the man's position. He was glad to say that the University had been considering the question of reorganising its examinations with regard to their order in the exact sense recommended in the report, so that in future the written examination would take precedence, and the man who did not get a certain number of marks would be prevented going further. He did not think the award of marks was unduly liberal in any case. In their report on the examination in medicine the visitor and inspector seemed to assume that the examiners acted upon previous knowledge of the candidates, and, in fact, that they acted upon their personal predilections. That was an assumption that he utterly denied, and it was one which should not have been made in what was to all intents and purposes a judicial report. The examiners knew nothing of the candidates, and, in regard to the particular case referred to, he (Dr. Gairdner) knew nothing more about the man than appeared on the papers. A reference was also made in the "observations" to a variation in the questions, subjects, and the value assigned to different answers to different professorial examiners, so that "in some cases a doubtful candidate if examined by Professor A. and Dr. C. might by them be given a passing mark, while if he had been examined by Professor B. and the same Dr. C. he probably would have been given a lower or rejecting one." He regarded that as an accusation upon himself. The candidates came up in alphabetical order, and the result of the written examination was that those examined by himself (Dr. Gairdner) obtained an average of 56 marks, whilst those examined by Dr. Anderson obtained an average of 59¼ marks, so that he (Dr. Gairdner), instead of being, on the whole, the lenient and lax examiner, was in reality the stricter examiner of the two. The clinical examination showed that his marks were a little higher on the average, and Dr. Anderson's were a little lower. They could not, therefore, possibly have a better proof that the two professors were examining on the same lines. He complained that the visitor and inspector had made use of a judicial office in order to pass criticisms which were altogether outside the scope of their office.

Dr. MACALISTER said that he yielded to no man in the veneration he felt for Dr. Gairdner's great services to medicine and to medical education. It was, therefore, a matter of deep regret when he found that the report was taken by Dr. Gairdner as containing personal reflections on himself. It was methods or systems, not persons, that as visitors they were sent to report on. At the same time he pointed out the enormous advantage possessed by Dr. Gairdner in being able to address the Council, seeing that he was the only examiner whose methods were commented upon who had an opportunity of thus giving an oral reply. Seeing that Dr. Duffey could not be heard, he (Dr. MacAlister) wished to take his full share of responsibility for the report. Their conclusions were arrived at after much observation and careful conference, and they represented the joint opinion of the visitor and inspector. The Council had given them no specific instructions; their only guide was the Act of Parliament, which said that the inspector of final examinations shall report on all matters observed by him, and shall lay the report first of all before the body commented upon, and then before the Council. In this case their opinions were not formed hastily. The examinations in Glasgow lasted for a period of six weeks, but it was of course impossible for both the visitor and inspector to be present during the whole time. It therefore seemed not wrong that they should sample the examinations at various points, and they were present, either together or separately, during a very considerable part of those examinations. They compared their figures, and he thought had ample authority for every statement made. Even in the one case of a wrong mark which Dr. Gairdner had referred to, they had gone upon information given by the extern examiner, though this now appeared to be erroneous. Dr. Gairdner had assumed that some remarks as to the examiners were meant to apply to himself only. That was not so; they applied to the system adopted, which held in one of the other branches also. The conclusion arrived at was that in various instances two pairs of examiners seemed to have different methods, and that the candidate was fortunate if he came before the one pair and less fortunate if he came before the other. Dr. Gairdner had rested his case upon the great law of averages, but it had no application here. A few high marks given to honours candidates would more than counterbalance a number of low marks near the passing limit. The defect could only be got over by the two pairs of examiners having more frequent opportunities of comparing notes, and seeing that they were working at the same standard; that was true of surgery as well as of medicine. No one could deny that the candidate who came under the examiner who was not Rhadamanthine had a better time of it than the other one. If, however, there was some opportunity for the two examiners to compare notes, to take the same candidate and examine him independently, they would have a better means of equalising the results. With regard to the suggestion that it was unfair in any way to suggest that in some cases the examiners must have known something previously of the candidates, that did not occur to the visitor or inspector. He referred the Council to a passage in the report on the final examinations of the University of Edinburgh, in which it was stated that there, as elsewhere, occasionally marks were given which were, in the judgment of the visitors, higher than the candidate deserved, and that in such cases it was not unusual to hear the professor say that the candidate had been a hard worker, and was a good man, and therefore deserved a higher mark than his actual answering entitled him to. Naturally such a statement on the part of the professor might influence his coexaminer. Those words were not his (Dr. MacAlister's), but they appeared in the report in which Mr. Bryant was the visitor. Whether or not such a thing was proper to be stated, the fact remained, and it was one which obtained in Glasgow as well as in Edinburgh, for when the marks came out the only explanation in some cases was that the results were affected by previous knowledge of the candidates. In conclusion, he again reiterated that the remarks contained in the report as to defects of method were not personally directed against Dr. Gairdner; they applied to the subjects of medicine and surgery, seeing that in these the pairs of examiners were apt to be disassociated, and so might examine on different lines. This was not the case in the other subjects.

Mr. Brudenell Carter, with regard to the observation made by Dr. Gairdner as to the position of the inspector, said that in his judgment the office of inspector was not in any way judicial, but it was simply to act as the eyes and ears of the Council to bring to its knowledge what occurred in a particular place. This discussion could not fail to do good if it called the attention of examiners to the consequences which might follow from kindly and good-naturedly giving qualifications to men who might be thought by some not qualified to receive them. Examiners were mostly gentlemen who, having lived for many years in the serene altitudes of hospital and consulting practice, could see and know very little of what happened in those districts of the kingdom to which some of their graduates or licentiates might proceed. His (Mr. Carter's) experience had been different, and the result had left upon his mind an abiding horror of the ignorant man in medicine, and a still more abiding horror of the careless man in medicine and surgery.

Dr. Heron Watson said that the remarks contained in that which purported to be the report of the inspector and visitor were to a very large extent quite beyond the limit of what the Council intended. A grave injustice would be done to some of the bodies if these reports were allowed to remain on the records of the Council without any animadversion being put along with them. He hoped some means would be taken to relieve the Council from the idea that it had endorsed the whole of the remarks that had been made by those who were described as its eyes and ears.

Sir William Turner said he could not help feeling on reading the report, having known Dr. Gairdner for nearly forty years, that some reflections had been made upon him as an examiner which ought not to have been made. He hoped that the Counil would express some opinion upon the special point which Dr. Gairdner had dealt with.

Sir John Banks said he claimed to have known Dr. Gairdner at least as long as Sir William Turner had. He believed him to be the very soul of honour, and that there was no man more incapable of doing what was not right or proper than he was. He joined in the hope that some expression would be made on the part of the Council.

Sir Dyce Duckworth moved:

That the Council having considered the report of the Examination Committee upon the Final Examinations of the University of Glasgow, and heard statements from Professor Gairdner, Dean of the Medical Faculty of the University and representative of the University on this Council, are of opinion that the specific allegations referred to in the report have been satisfactorily explained.

Dr. MacAlister, in seconding the motion, said he did so with perfect frankness, because Dr. Duffey had already said that he accepted the explanations offered of the case referred to. He hoped the resolution would be satisfactory to Dr. Gairdner, and, being on permanent record, it would wind up in a most satisfactory way the report of the Examination Committee, which would be otherwise incomplete.

Dr. Glover, as one of the direct representatives of the profession, claimed the right to bring before the Council the fact that, in a community of 600,000 people, the Glasgow University was content with the personal conduct of three labour cases on the part of its graduates. In the first place, he thought that did not come up to the recommendations of the Council; in the second place, to say that the personal conduct of three labour cases was equivalent to three months' attendance on the entire practice of a lying-in hospital was absurd. He therefore proposed that they should express their dissatisfaction that the University should be contented with the personal conduct of three cases of labour as a part of attendance on 12 cases as an alternative to three months' attendance at a lying-in hospital.

Sir William Turner pointed out that the recommendation of the Council was that every student should be required to attend for three months the indoor practice of a lying-in hospital or to have been present at no fewer than 12 labours, at least three of which should be conducted personally under the adequate supervision of a registered practitioner. Perhaps Dr. Glover would state wherein the regulations of the University of Glasgow differed from the resolution of the General Medical Council.

Dr. Glover said, under those circumstances, he would, for the present, withdraw his resolution.

The resolution moved by Sir Dyce Duckworth and seconded by Dr. MacAlister, the visitor, was then agreed to.

The Council then resumed, and the report of the Committee having been brought up, it was resolved that the reports on the English Conjoint Board, on the University of Edinburgh, on the University of Glasgow, and on the University of Aberdeen be adopted; and also Sir Dyce Duckworth's resolution as to the explanations of Professor Gairdner.

On the motion of Sir Walter Foster, seconded by Mr. Teale, the Examination Committee was requested to circulate to the members of the Council the reports on the examinations in public health one month before the May meeting of the Council for 1895.

Misleading Certificates to Midwives.

A petition was received from the Lancashire and Cheshire Branch Committee of the British Medical Association complaining that, in continued disregard of the Council's repeated warning, certain medical practitioners connected with the Obstetrical Society of London had issued on July 20th a certificate identical in appearance and phraseology to that laid before the Council on May 22nd, and that on July 31st a certificate was issued from St. Mary's Hospital, Manchester, of reduced size, purporting, however, to qualify its holder in midwifery. Photographs of the certificates accompanied the petition; and the Council was asked to make a rule visiting its condemnation upon any registered practitioners who appended their names to any document granted to so-called pupil midwives other than such as testified to their having received instruction as midwifery nurses. The Executive Committee resolved in November last that the subject should be referred to the legal advisers of the Council.

On the motion of Sir Walter Foster, seconded by Sir William Turner, it was resolved that the communications be entered on the minutes. Strangers were then requested to withdraw, and the opinion of the legal advisers having been read, the Council deliberated on the subject *in camerâ*.

The Council then adjourned.

Friday, November 30th.

Penal Cases.

The Council proceeded to the consideration of the penal cases on the programme.

The first was the case of William Henry Brecknell, registered as M. R. Coll. Surg. Eng., 1860, Lic. Soc. Apoth. Lond., 1861, M.D.Univ.St.And., 1862, who had been summoned to answer the following charge: That he, being a registered medical practitioner, had acted as cover to, and allowed his name and medical qualifications to be used by H. Kirby, an unqualified man, to enable him carry on medical practice.

Dr. Hugh Woods appeared, instructed by the London and Counties Medical Protection Society, to ask for the removal of the name of Dr. W. H. Brecknell, of 225, Evelyn Street, Deptford, from the *Medical Register*, on the ground that he had been guilty of conduct infamous in a professional respect in covering an unqualified person named H. Kirby, by allowing him to use a plate bearing the name of W. H. Brecknell, M.D., at 201, High Street, Plumstead, for the purpose of medical practice, and to sign that name to death certificates. Having ascertained that Mr. Kirby had signed Dr. Brecknell's name to two death certificates, he wrote to Dr. Brecknell, charging him with covering this unqualified individual. Dr. Woods stated that Mr. Kirby had called upon him, and informed him that he was unqualified. He admitted signing death certificates with the name "W. H. Brecknell," and said that he was authorised by Dr. Brecknell to do so. Mr. Kirby's wife also stated to him (Dr. Woods) that Dr. Brecknell was cognisant of Mr. Kirby's use of his name, and that there was an arrangement for him to share the profits.

Dr. Brecknell, who appeared, said in answer to the charge that Mr. Kirby was his assistant at Greenwich before 1890, and that he was a good diagnostic and "midwife," and altogether a superior, attentive, steady assistant. Kirby eventually left Greenwich, and after staying in Lewisham and Yorkshire for some time came to him and proposed starting a practice at Plumstead. He said he would take a

house as he must live somewhere, and proposed that he (Dr. Brecknell) should share the profits. He consented to Kirby's taking a house and starting a practice providing that he (Dr. Brecknell) was sent for to each case. He entered into this arrangement with the idea of helping Kirby quite as a matter of friendship, and also to assist him to qualify. He had thought at first that nine months would have been sufficient for the purpose, but Kirby never went up for his qualification, alleging that he was unable to do so owing to domestic troubles. In December, 1892, Kirby gave a certificate certifying that a girl was suffering from tonsillitis, signing Dr. Brecknell's name to it. On this coming to his knowledge he (Dr. Brecknell) was very indignant that his name should have been forged in that way, because it looked as if they had still been visiting together, which was not the case. Some time afterwards, at the end of March, 1893, Dr. Woods called upon him and asked him if he had signed two death certificates. He advised Mr. Kirby to see Dr. Woods upon the matter, and he did so, but he appeared to have told Dr. Woods that he (Dr. Brecknell) had authorised him to sign certificates in that way. He charged Mr. and Mrs. Kirby with having made false statements as to the relations existing between them. He had made no arrangements with Mr. Kirby to attend patients himself; on the contrary, it was a condition that he (Dr. Brecknell) should be called in in all cases. During the time he was in the habit of going to Plumstead he received 20s., not enough to cover rail and tram fare, and that money was not paid by Mr. Kirby, but by the patients. In conclusion, Dr. Brecknell handed in some testimonials from the Rector of Deptford and from the guardians of the Greenwich Union. He said he had been deceived in the conduct of his former assistant, as he had evidently done much more than he ever allowed him to have knowledge of.

Strangers having, by direction of the Council, withdrawn, the case was deliberated upon *in camerâ*.

On strangers being re-admitted,

The PRESIDENT announced that the Council had found Dr. Brecknell guilty of the offence charged against him; but from the various circumstances which had been mentioned by him, in mercy they had decided not to proceed further, but to adjourn the consideration of the case *sine die*.

The Council then proceeded to the consideration of the case of Lewis Lamb Bailes, registered as M.B., Bac.Surg.1887 Univ.Durh., who was summoned to appear before the Council to answer the following charge: That he was on July 6th, 1894, convicted of felony (rape) at the assizes held at Newcastle-upon-Tyne, and sentenced to five years' penal servitude.

The certificate to that effect was put in, signed by the Deputy Clerk of Assize. The Council, on this evidence, directed that the name should be removed from the *Register*.

The next business was the consideration of the case of Herbert Tibbits, registered as Mem. Lic. Midwif., 1865, R.C.S.Eng., Lic. Soc. Apoth. Lond., 1865, M.D. Univ. St. And., 1881, who was summoned to appear before the Council to answer the following charges: That he had been connected with Cornelius Bennett Harness, a person with no medical qualifications, and a company managed or controlled by him called the Medical Battery Company, who both carried on an establishment at 52, Oxford Street, London, for administering to patients medical treatment by electricity and electric appliances, and for the sale of things called Harness's electropathic belts and other so-called electric appliances; that he had assisted the company in a system of inducing patients to go to the said establishment for medical treatment and buy the said appliances by the insertion in public advertisements of laudatory notices of the said establishment, that for the same purposes he had arranged with Harness for the publication and circulation in advertisements of a document purporting to be an extract from the last edition of a work by him (Tibbits) on massage, electricity, and allied methods of treatment, and containing a laudatory description and recommendation of the said institution and its electric treatment, appliances, and wares, inducing readers of the advertisements to think that the said treatment, appliances, and wares had been impartially considered and recommended in a medical treatise of repute. It was further alleged that no such work had been, in fact, ever published. That he (Tibbits) received payment and pecuniary assistance from Harness for his services in advertising the institution and assisting in attracting patients. The system of advertising and carrying on of business by the company would have been professionally disgraceful if carried on by a registered medical practitioner; and in his (Tibbits) connecting himself with Harness and the said institution it was alleged that his conduct was professionally infamous. Secondly, with regard to an establishment called the London Massage and Galvanic Hospital and West End School of Massage and Electricity, in Weymouth Street, W., the charge was that he (Tibbits), by representations to the public to the effect that that establishment was a public charity hospital in need of funds, and by other means of a discreditable character, had endeavoured to obtain money from the public, and that his conduct in connection with such establishment, as described in the evidence given by him in the trial of the action Tibbits *v.* Toye in the High Court, was so discreditable as to amount to infamous conduct in a professional respect.

The following documents on which the charge was founded were put in: Pamphlet containing the letter of August 24th, 1892, containing laudatory description of Harness's establishment; prints of advertisements of Harness; printed notes of Tibbits's evidence at the trial of Tibbits *v.* Alabaster on February 15th, 1893, and following days; copy of letter addressed by Tibbits to the Editor of the BRITISH MEDICAL JOURNAL; prints of numerous newspaper advertisements of Harness; printed notes of the trial Alabaster and Others *v.* Harness and Others before Mr. Justice Hawkins in April, 1894; printed notes of evidence given in the action of Tibbits *v.* Toye, tried before Mr. Justice Hawkins and a special jury on January 19th and 20th, 1894; and statutory declaration of Sydney Seymour Wallis, dated October 28th, 1893.

Dr. TIBBITS, who appeared, stated in his defence that he denied every charge contained in the solicitor's letter. With regard to the Harness case, he placed before the Council the report of the Censors' Board of the Royal College of Physicians, dated June 1st, 1893, and the copy of a letter addressed to him by Dr. Liveing, their Registrar. He declared that the reason he had been removed from the list of licentiates was simply that he had refused to admit the legal authority of the Board with regard to his letter of August 24th, 1892, to Harness, which they had declared to be contravening a resolution of the College, which stated that the system of extensively advertising medical works, and of giving laudatory certificates of medicinal and other preparations, or of medical or surgical appliances, was misleading to the public, and derogatory to the dignity of the profession.

At this stage the Council adjourned.

Saturday, December 1st.

PENAL CASES.

The Council first dealt with the case of Thomas Richards, registered as M.R.C.S.E., 1886, and L.R.C.P.Lond., 1888, who was charged with acting as cover to an unqualified person name Hugh Owen, at Llanhilleth, Monmouth.

Dr. BATEMAN, Secretary of the Medical Defence Union, appeared to support the charge. He said the complainant in this case was Mr. Frost, living at Llanhilleth. The defendant lived at Newbridge. Llanhilleth was a colliery village. The owners of the colliery, wishing to have a resident doctor, asked the two medical men who were in the habit of attending there, but who resided at some distance, if one of them could live at Llanhilleth. Neither was able to do so, but Dr. Richards said he would put in a qualified medical man. He put in a Mr. Hugh Owen, who was not qualified. Mr. Owen was there for a considerable time, but the collieries objected, and decided later on to appoint Mr. Frost. Dr. Richards had a plate on his house at Newbridge, three miles away from Llanhilleth, giving his hours of consultation from 8.30 to 11 A.M. and 6 to 8 P.M. He had a similar plate on the house at Llanhilleth, where Mr. Owen lived, bearing his (Richards's) name, and giving as hours of consultation 9 to 11 A.M. and 6 to 8 P.M., practically the same hours as at Newbridge. It would be for Dr. Richards to explain how he

could possibly be in the two places at once. Affidavits had been made by persons whom Mr. Hugh Owen had attended unaccompanied by Dr. Richards. These affidavits were read, and also certificates put in. One certificate, certifying that a patient was eligible to be put on a sick club, was signed: "October 29th, 1894.—Hugh Owen; Residence, Llanhilleth; Professional qualification, M.R.C.P." Others were signed "Hugh Owen, Surgeon." Owen was also in the habit of signing the sick pay books.

Dr. Richards, in his defence, said his practice was in a country district where the patients were very scattered. Six years ago he had an appointment to attend to the Llanhilleth colliery workmen, where he built a surgery and attended almost daily. In February last he was asked to put an assistant there to attend to minor matters in his absence, with the understanding that he was to be at once sent for in a case of necessity. He accordingly placed there Mr. Hugh Owen, a man of good character and experience, who he believed was ready for his "final." Everyone at Llanhilleth understood that Mr. Owen was his assistant. He had not, to his (Dr. Richards's) knowledge, pretended to be qualified, and Mr. Frost did not forget to publish that fact as soon as he came to the district. With regard to the cases referred to in the affidavits, he said they were trumpery cases, which had been sent to the surgery with an object and at an hour when it was known he was not there. He said, having consulted with his medical friends, he had decided not to run any risks by keeping an unqualified assistant any longer at Llanhilleth, and that Mr. Hugh Owen would leave at the end of November. With regard to Owen signing himself M.R.C.P., he (Dr. Richards) had no knowledge. It was certainly not done with his sanction. It was perfectly well understood at Llanhilleth that Mr. Owen was his unqualified assistant. The cards handed in referred to patients of his, and the word "Surgeon" was printed on them. Sometimes patients would see him in the morning and send up their cards afterwards to be signed, and, if he was not there, Mr. Owen signed for him.

The Council, having deliberated *in camerâ*, arrived at the conclusion that Dr. Richards had committed the offence charged against him of "covering" an unqualified person.

The President stated that the Council had, however, taken a merciful view of the case, and had decided not to declare that Dr. Richards had been guilty of infamous conduct in a professional respect, but to postpone a decision on the question till the November session, 1895, when Dr. Richards would be required to produce satisfactory evidence as to his professional conduct during that period.

The consideration of the case of Dr. Herbert Tibbits was resumed.

Dr. Tibbits, continuing his defence, said he was in July, 1892, desired by Mr. Harness to make an investigation into two electrical applicnces belonging to the Battery Company. He consented to do so on the understanding that his fee should be paid in advance, and his report accepted whether favourable or unfavourable. The terms were agreed to. The long printed defence put in being by consent as taken read, Dr. Tibbits said, with regard to the Nursing School and the West End Hospital, he founded the hospital in 1878. In 1886 the board of management resolved to establish a school of nursing. That school was established by Dr. Dowse and himself, and in 1887 he purchased from Dr. Dowse his share in the school, and had since then been alone responsible for its conduct and management. In 1891 unfortunate differences arose between the hospital committee and himself, and he was asked to resign his office as senior physician of the hospital. Denying the statements made by the committee, and refusing to resign, he was then summarily dismissed, and a resolution was passed that no student attending his school of massage should be admitted to the hospital; and, without one day's notice, they were all refused admission upon presenting themselves next morning at the hospital. He wrote a letter to his supporters, proposing to found another hospital for his patients and students, and asking them to transfer their patronage from the Welbeck Street building to the "London Massage and Galvanic Hospital, 55, Weymouth Street." Upon the basis of that letter he transferred so many of his patients as elected to follow him to Weymouth Street, retaining the school at 67, Welbeck Street. The two institutions, the "hospital," supported by charity, and the "school," a self-supporting institution, were kept entirely distinct, the students of the school giving their gratuitous services to the hospital. He was at once attacked by the medical press and ruined by it, and being obliged in March, 1893, to give up the school in Welbeck Street, he arranged for its students to attend after that date for instruction at the hospital, 55, Weymouth Street, when patients were not present. In conclusion, he submitted that the "Massage Hospital" was a true charity, and that the "West End School of Massage and Electricity" had proved a boon both to nurses and the medical profession.

Mr. Ernest Bishop, called as a witness by Dr. Tibbits, said he was chief masseur and electrician to the Massage Hospital.

The President: Are you a medical man?—I am a medical student; also I have been secretary.

At any hospital?—I am unfortunately unable to pay my fees at any other hospital than Dr. Tibbits's. I have been associated with him in practical diagnosis and prognosis for just over a year.

Are you on the *Students' Register*?—Yes.

Sir Wm. Turner: When were you registered?—This year. I got a posteard last night stating that you acceded to my petition to be antedated on the ground of my having attended Dr. Tibbits's hospital for just over a year. You have antedated me to November 13th, 1893. Apart from the antedating, I still was a registered medical student last October.

Dr. Tibbits: How long had you been chief masseur at the hospital?—Since November 13th last year.

I think you have massaged the male patients assisted by other masseurs?—Certainly.

Is it within your knowledge that the female patients are massaged by the masseuses of the hospital supervised by the lady superintendent?—Absolutely.

Is it within your knowledge that many patients have been recommended by the clergy and by medical men for gratuitous treatment?—Yes.

And that they received that treatment?—Yes.

You are prepared to give to the Council whatever information they may desire?—Yes.

Can you see any reason for the recent attacks made upon the hospital by the British Medical Journal?—No, but I should very much like to speak to the British Medical Journal about it.

Mr. Muir Mackenzie: That is not the question before us here.

Witness: I should very much like to have a word to say about the British Medical Journal if you will allow me later on.

Mr. Muir Mackenzie: No; you are not here to attack the Journal.

Nurse Hicks was called, and questioned by Dr. Tibbits.

You are a private hospital nurse?—Yes.

You met with a severe accident sometime ago, did you not?—Yes.

I think you have had daily massage and electrical treatment for the past four months at the Massage Hospital?—Yes.

And with benefit?—And have benefited very much indeed.

The treatment has been gratuitous?—Yes; I have paid not one single farthing. I wrote in the first place to the matron, not knowing who you were: you were a perfect stranger to me. You saw me for the first time when I came to London, and I have been treated ever since free of charge. I have benefited greatly, and I have been filled with admiration at the kindness and courtesy shown even to the poorest class of patients. They have benefited very much. One lady I saw quite cured in three weeks, of paralysis of the face.

Miss Scott you mean?—Miss Scott.

Dr. Glover: How many students are there at the hospital?

Dr. Tibbits: Five, I think.

Dr. Glover: Do they pay a fee?

Mr. Bishop: There is a fee paid for tuition.

Does that go to the hospital fund?—No, it goes between Dr. Tibbits and me and my wife.

Divided?—Yes, we take that as salary.

What is the fee?—Ten guineas, and for hospital trained nurses five guineas.

Mr. MUIR MACKENZIE: What were you, Mr. Bishop, last year before you joined the class of students?

Mr. BISHOP: Before 1893 I was a stockbroker.

Do they have massage treatment on the Stock Exchange?—No, not in the Stock Exchange, certainly. What they do privately I cannot tell you.

Did you leave the Stock Exchange?—Yes, I left the Stock Exchange.

And took to massage?—I took rather to medicine.

Are you a partner with Dr. Tibbits?—In one sense, yes: in the school I am a partner with him.

Do you reside there?—I reside in the basement.

Dr. GLOVER: Is there any committee to the hospital?—Not that I know of.

There is no meeting of governors?—I do not know of any.

Are there any governors?—I believe there are.

How many?—I cannot tell you. We have no receipts from the hospital. We simply have receipts from the school.

Would it be possible to produce any list of subscribers?—I think it would, but you must ask Dr. Tibbits that, because I do not know anything at all about the hospital.

Dr. TIBBITS: A list of governors is contained in my defence.

The Council then deliberated upon the case *in camerâ*. On the readmission of strangers the PRESIDENT said the following conclusions had been arrived at: That in the opinion of the Council Herbert Tibbits has committed the offence charged against him, that the offence is, in the opinion of the Council, infamous in a professional respect, and that the Registrar be directed to erase the name of Herbert Tibbits from the *Medical Register*.

The Council then adjourned.

Monday, December 3rd.

MIDWIFERY DIPLOMAS.

The Council received *in camerâ* the opinion which its legal advisers had been requested to prepare, on the issue, by societies or persons, of certificates or diplomas in midwifery. The Council having considered the subject, strangers were readmitted, when the PRESIDENT informed them that the following resolutions had been passed by the Council:

(*a*) That the Council, being of opinion that certain documents issued by various societies or persons, as diplomas of education and examination in midwifery, are "colourable imitations" of diplomas conferring a legal right to admission to the *Medical Register*, and both contravene the spirit of the Medical Acts and are calculated to deceive the public, hereby give notice that from the present date the issue of such "colourable imitations" by registered practitioners will be regarded as conduct infamous in a professional respect.

(*b*) That in the opinion of the Council the form of the certificate submitted to the Council, and purporting to be granted by the Obstetrical Society of London on July 20th, 1894, is such that it may be regarded as a document coming within the purview of the foregoing resolution, and that this opinion be communicated to the President and Council of the Obstetrical Society.

PENAL BUSINESS.

The Council then took into consideration the case of Robert Masters Theobald, registered as "Mem. R. Coll. Surg. Eng. 1856," who had been summoned to appear before the Council to answer the following charge, formulated by the Council's solicitor: "That he had published and circulated a book named *Electro-Homœopathic Medicine*, in which was contained a description and recommendation of the so-called electro-homœopathic cures and medicines of one Count Mattei, and in which it was suggested to persons suffering from disease by him (Theobald) as a registered medical practitioner, to adopt such so-called cures and medicines as therein stated to be practised and used by him,

Mr. Theobald attended in answer to the summons, and was represented by his counsel, Mr. Acland.

Mr. FARRER (Solicitor to the Council), read certain portions of the second edition of the book, including the preface written by Mr. Theobald, which he considered conclusively connected Mr. Theobald with the work and its practice. Amongst the remedies in the book there were some designated "Elettricitas," some of which the Royal College of Surgeons had submitted to their analyst for analysis, and he reported that he had made a careful and exhaustive analysis of them, and found that in every case the fluid was tasteless, neutral to test papers, possessed the same specific gravity as distilled water, and left no weighable residue on evaporation. With the exception of water he could find no inorganic or organic substance present. There was a slight amount of suspended matter in the water, which, after examining microscopically, he was of opinion consisted of a minute amount of *débris* derived from the corks. In his opinion each of the bottles sent to him contained distilled water only. In a second report the analyst stated that he had further examined for "electric properties," but that in his opinion the medicines exhibited no "electric properties" whatever.

The REGISTRAR read the defence put in by Mr. Theobald, in which he emphatically denied the charge. He admitted that he had published the book in question, but its circulation had been stopped since April, 1894. He stated that he had been a homœopathic practitioner since the year 1856, and had conducted a somewhat extensive practice without any complaint of any sort or kind having been made or suggested against him. In the course of his practice he had become acquainted with some remarkable cures that appeared to have resulted from the use of Count Mattei's medicines, and he had occasionally prescribed the same with beneficial results to his own patients, and he had never made any charge other than the ordinary fee in cases in which he had so prescribed. He published a translation of Count Mattei's book in 1888, with a preface by himself, and in 1891 published a second edition, and a third edition in 1893. The books were sold through the ordinary channels, and never by himself. Until he received a letter from the Secretary of the Royal College of Surgeons, dated January 12th, 1894, he was not aware that those publications were objected to or were objectionable. He further submitted that the evidence placed before the General Medical Council was not evidence of infamous conduct in a professional respect within the meaning of the Medical Act, 1858, and submitted also that the General Medical Council had no jurisdiction to direct the Registrar to erase his name from the *Register*.

The PRESIDENT asked Mr. Theobald if his name had been removed from the list of the Royal College of Surgeons.

Mr. THEOBALD said it had, by a resolution passed on May 10th.

Mr. ACLAND said he appeared in support of a right of the utmost importance to the public at large, and of the utmost importance to the noble profession to which the members of the Council belonged—the right of a man fearlessly to advocate and to practise any system of medicine, or of cure which he himself honestly believed to be of use in the cure of disease. Unless the Council were satisfied that Mr. Theobold had dishonestly advocated the remedies, they would not be justified in removing his name from the *Register*. Dealing with the resolution of the Royal College of Surgeons, removing Mr. Theobald's name from the list of the College, the learned Counsel submitted that the resolution went beyond anything of which notice was given to Mr. Theobald. With regard to the remedy being secret, he (Mr. Acland) asked the Council to come to the conclusion that the word "secret" in the rules could not possibly mean the secret of any other person than the person who was practising. Were the Council prepared to say that the man must be deprived of his diploma simply because he professed or used in his practice a remedy which was a secret so far as he himself was concerned, and which was not known to the majority of the profession to which he belonged? He (Mr. Acland) maintained that the Council were clearly not entitled to say that a man was guilty of infamous conduct because he professed any particular method of treatment. With regard to the book, there was nothing in the book of the nature of an advertisement, apart from the name of Mr. Theobald on it; but that could not possibly be said to be misconduct. There was not one syllable in the book which would make people desert other practitioners and go to Mr. Theobald for advice. No one had come forward, because it was not true, to say that Mr. Theobald had, by professing the remedies, charged excessive fees and got himself into a lucrative practice to the detriment of his neighbours. No attempt had been made to show that Mr. Theobald had anything beyond the ordinary professional fees for advice or done anything derogatory to the profession from that point of view. Mr. Theobald had never sold the remedies at all, and had absolutely no pecu-

niary interest in them. He was not Count Mattei's agent in London. The book was published in 1888, and for six years no step had been taken against Mr. Theobald or any other medical man, although there had been discussions in the medical papers with regard to those very remedies, and although there had been previous analyses of them also published in the medical papers. One evidence of Mr. Theobald's *bona fides* in the matter was the fact that, as soon as his attention had been called by the Royal College of Surgeons to the fact that he ought to have nothing to do with the book, he had absolutely withdrawn it. Without considering what was contained in the book, he (Mr. Acland) submitted there was really no ground for saying that Mr. Theobald was guilty of infamous conduct in a professional sense. Referring to the analysis of the medicines for "electric properties," the learned counsel said neither Count Mattei nor Mr. Theobald had stated there was any electricity in the fluids in the ordinary sense of the word. If Mr. Theobald was to be judged by the book, he must be judged, not by the outside, but by the inside, and it was distinctly stated in the inside that the remedies were not called "electro" because they contained electricity, but because of their rapidity of action. Mr. Theobald had himself complained to Count Mattei of the names. He (Mr. Acland) pressed that point, because a wrong impression might have been produced by the fact of the word "electro" being used without the explanation given in the book of the sense in which it was used. The Council were infinitely better judges of the book than he could possibly be, and whether, apart from the efficiency or inefficiency of the remedies it advocated, it was a proper book, seeing that it was written from a popular point of view. Of course the Council could not say that no medical book could be written for popular purposes, and, except that the book was a book written for popular use and popular information, was there anything in it which made it infamous for a man to put it forward? He respectfully asked the Council to consider the question entirely apart from what they might believe themselves to be the efficiency or non-efficiency of the remedies. That was not the question. The question was, If a man honestly believed that the remedies were effective, he was justified in putting forward a temperate and proper argument in support of them. There was nothing in the book which showed any attempt to improperly filch away practice from any brother practitioner. If the matter had stood there it would have been impossible for the Council to have struck Mr. Theobald's name off the *Register*: but there were the two analyses put in. Those analyses were accepted by Mr. Theobald. There was nothing in the bottles which to careful analysis showed anything but water; but Mr. Theobald's position was that that was the case with a large number of homœopathic remedies, and, if that were true, then Mr. Theobald was in the same position with regard to the Mattei fluids as any homœopathic practitioner would be with regard to homœopathic remedies. The analysis was not known to Mr. Theobald until after he had undertaken to give up the public recognition and use of those remedies. Mr. Theobald had never known what the results of the chemical analysis of the remedies would be, and from his point of view he had not cared what the result might be, because his position was that as a homœopath he was entitled by law to prescribe remedies which by chemical analysis would show merely negative results. He (Mr. Acland) maintained that chemical analysis alone would not show the effect of any drug. It was necessary in order to find out whether any particular fluid or substance had therapeutic or other effects, that experiments should be made to see whether the effects were produced, although by chemical analysis nothing could be found to produce them. Speaking with regard to Mr. Theobald's *bona fides*, the learned counsel said that Mr. Theobald's experience was that the effects had been produced by the medicines, and the Council at present had no reason to doubt his word. It might be that Mr. Theobald's diagnosis was incorrect; it might be that his reasoning power was deficient; but that did not make him an infamous man. The Council must be satisfied, before they could find Mr. Theobald guilty of infamous conduct, that he had wilfully told lies, that he had wilfully said people were suffering from diseases when he knew they were not, and that he had, knowing that, prescribed the remedies in question. In concluding his speech, the learned Counsel referred to certain letters written to the Royal College of Surgeons by Mr. Willis, Q.C., and Lady Mount-Temple, to the effect that they had known Mr. Theobald for many years, and had never known him do anything which was discreditable.

In answer to Dr. MacAlister, Mr. Theobald stated that he was a Master of Arts of Glasgow University.

Mr. Carter asked Mr. Theobald whether the appendix of remarkable cases in the book was part of the translation or a record of his own experiences.

Mr Theobald said they were translated from the French.

In further answer to Mr. Carter, Mr. Theobald stated that the case of tumour of the eye mentioned in the preface was one of his own experience. The case was seen in conjunction with other practitioners, who diagnosed the case as cancer, but his diagnosis was not cancer.

Dr. Glover: What was the result?

Mr. Theobald said the child recovered.

In answer to Dr. MacAlister, Mr. Theobald explained that the Count used in connection with his remedies the word electricity, first, because of rapidity of action; secondly, because in certain cases he had known them to produce shock: and thirdly, because they acted, not by absorption into the blood, but by stimulating action along the nerve currents.

Strangers having, by direction of the Council, withdrawn, the Council deliberated on the case *in camera*.

At the conclusion of the deliberations of the Council, on motion made from the Chair, it was resolved:

(*a*) That in the opinion of the Council Robert Masters Theobald has committed the offence charged against him of publishing and circulating a book named *Electro-Homœopathic Medicine*, in which is contained a description and recommendation of the so-called electro-homœopathic cures and medicines of one Count Mattei, and in which it was suggested to persons suffering from disease by him (Theobald), as a registered medical practitioner, to adopt such so-called cures and medicines as therein stated to be practised and used by him.

(*b*) That in the opinion of the Council the offence is infamous conduct in a professional respect.

(*c*) That the Registrar be directed to erase the name of Robert Masters Theobald from the *Medical Register*.

Strangers, including Mr. Theobald, having been readmitted, the President informed them of the foregoing resolutions.

The Council then adjourned.

Tuesday, December 4th.

Registration of Medical Students.

The first business was the reception from the Education Committee of the report on the registration of pupils as medical students, the recognition of ordinary schools as "teaching institutions where physics, chemistry, and biology are taught": and communications from the Secretary of the Scottish Universities Commission and the Registrar of the Branch Council in Scotland.

The Committee recommended:

I. That the form of the registration of medical students be amended, so as to stand in the following form:

Name.	Preliminary Examination in Arts, with Date thereof.	Date of Registration.	Place and Date of Commencement of Study, as certified by an Official of a University, School of Medicine, or recognised Teaching Institution.

II. That each of the licensing bodies be requested to forward to the Registrar on January 1st of each year a list of "the teaching institutions where physics, chemistry, and elementary biology are taught" which it recognises.

III. That the Council, in pursuance of its resolution of November 27th, 1891, proceed forthwith to arrange for the visitation and inspection of the several examinations in physics, chemistry, and elementary biology held by the various licensing bodies.

IV. That for the purposes of Requirement II the close of the fifth year may be reckoned as occurring at the expiration of fifty-seven months from the date of registration.

V. That with reference to Resolution (*i*) of June 5th, 1890, namely:

"That the examination in the Elements of Physics (including Mechanics), Chemistry, and Biology should be passed before the beginning of the second winter session,"

the following resolution be adopted:

"A student who has previous to registration attended a course or courses of study in one or all of the subjects, Physics, Chemistry, or Biology, in any university, school of medicine, or teaching institution recognised by any of the licensing bodies, may without further attendance be admitted to examinations in these subjects, provided always that such course or courses shall not be held to constitute any part of the five years' course of professional study."

On the motion of Dr. Tuke, seconded by Dr. Angus Fraser, Recommendation I was adopted.

Dr. Tuke moved and Dr. Fraser seconded:

That Recommendation II be adopted.

Dr. Kidd moved an amendment to Recommendation II, as follows:

That each of the licensing bodies be requested to forward to the Registrar on January 1st of each year a list of the teaching institutions where physics, chemistry, and elementary biology are taught, which, after due inspection, it proposes to recognise during the ensuing twelve months, accompanied by a certificate that it has satisfied itself that the said institutions have sufficient laboratory accommodation and appliances for the efficient teaching of the required subjects.

Mr. Wheelhouse seconded the amendment.

On a motion from the Chair, Recommendation II of the Committee was agreed to, with the addition of the words:

Together with a statement that, after due inspection, it is satisfied that the institution so recognised possesses sufficient laboratory accommodation and appliances for the efficient teaching of the required subjects.

On the motion of Dr. Tuke, seconded by Dr. Bruce, Recommendation III, with the words "proceed forthwith to" deleted, was adopted.

On the motion of Dr. Tuke, seconded by Dr. Fraser, Recommendation IV was adopted, with the addition of the words "and that this resolution be appended as a footnote to Requirement II."

Dr. Tuke moved the resolution contained in Recommendation V.

Dr. Bruce seconded the motion.

The resolution was carried.

Report of Pharmacopœia Committee.

The report of the Pharmacopœia Committee was then received and entered on the minutes. The Committee recommended that the President of the Council should apply to the respective medical authorities of Great Britain and Ireland, asking their assistance and co-operation in the compilation of a proposed new edition of the *Pharmacopœia*; that an invitation should be sent to the Pharmaceutical Society to assist in the compilation of the new *Pharmacopœia*; that a Consultative Committee consisting of the President, Sir Dyce Duckworth, Dr. Leech, and Mr. Carter should be appointed to confer with the editor of the *Pharmacopœia*; and that the sum of £1,250 should be assigned to Professor Attfield for his services as editor.

Dr. Tuke moved:

That the report of the Pharmacopœia Committee be recommitted,

chiefly on the ground that it had not been properly considered by the members of the Committee. Dr. Tuke also objected to the constitution of the Consultative Committee, and the amount of salary to be paid to the editor.

Sir Wm. Turner seconded the motion.

Dr. MacAlister said that the members of the Committee who had only heard the discussion which took place at the last meeting of the Committee had no reason to expect that the report now before the Council was the kind of report that was to be prepared.

Dr. Heron Watson suggested that in addition to the names mentioned Dr. Lauder Brunton, Dr. Phillips, Professor Fraser (of Edinburgh), Dr. Stockman (of Edinburgh), and Dr. Smith (of Dublin) should be added to the subcommittee.

Dr. Glover thought that if the report was recommitted it would be possible to find a way of conciliating everyone. The Council would not be at all satisfied unless they obtained the President's assent to some sort of recognition of the therapeutical side of the question in the next *Pharmacopœia*. That might be done by appointing a therapeutical editor in the same way as a pharmaceutical editor had been appointed.

The President said it would take many years to make a satisfactory *Pharmacopœia*, and it would take years and years of investigation for the Council to issue an authoritative book on the medical properties and uses of drugs.

Dr. McVail thought such a gentleman as Dr. Lauder Brunton or Professor Fraser (of Edinburgh) might occupy the position of co-editor with Professor Attfield. Dr. Lauder Brunton or Dr. Fraser could put in a very short space the recognised action of the drugs.

The motion of Dr. Tuke, "That the report of the Pharmacopœia Committee be recommitted," was then put by the President and carried, 13 voting for and 10 against.

The President stated that in the exercise of his powers he should call a meeting of the Committee for to-morrow.

Penal Cases.

The next business was the consideration of the case of Daniel Costelloe, registered as M.R.C.S.Eng.,1867, who was summoned to appear before the Council to answer the following charge, as formulated by the Council's solicitor: "That he acts as cover to an unqualified practitioner named T. W. Allen, who carries on a medical practice at Surrey Street, Croydon, and at Selhurst, and by lending the use of his name and medical qualifications enables the said T. W. Allen to attend patients, give certificates of death and illness in cases attended by him while carrying on such medical practice, and in all respects to carry on a medical practice as though he was duly qualified.

Mr. Costelloe appeared, attended by his solicitor, Mr. Nichol.

Affidavits were put in by Dr. Woods from patients declaring that Mr. Allen had attended them, representing himself to be a duly qualified man.

Mr. Nichol, on behalf of Mr. Costelloe, read the defence which his client had sent in reply to the letter from the Council, stating that his answer to the charges was a total and absolute denial. He explained that the practice was originally Mr. Sanderson's, who owing Allen, who was his assistant, some £250, handed over his practice to him in order that he might recoup himself to the amount of that debt. Mr. Costelloe purchased it from Mr. Allen for £100, that gentleman to remain with him as his unqualified assistant. Mr. Costelloe owned dispensaries at Croydon and at Selhurst, and he and Mr. Allen had their regular hours of attendance at each place.

Mr. Costelloe was called, and bore out counsel's statements. When a patient called while he was absent, only Mr. Allen being present, he (witness) was sent for. He always gave certificates himself, and had never known Mr. Allen to give certificates either in his own name or in witness's.

Cross-examined by Dr. Woods: Mr. Allen had been a medical student, but had not been registered as such. He was not aware Mr. Allen had been prosecuted for acting as a chemist. The two surgeries were about twenty minutes' walk from each other.

By Mr. Muir Mackenzie: He had not paid any of the £100 for the practice to Mr. Allen. He paid Mr. Allen a salary of £2 a week.

It was agreed that the case should stand over, as Mr. Allen, who was to be called for Mr. Costelloe, was unable to attend on that day.

Wednesday, December 5th.

Report of Pharmacopœia Committee.

The Council proceeded to receive a report from the Pharmacopœia Committee, which had been recommitted on the previous day.

Dr. Tuke stated that the President had asked him to inform the Council that the Committee had agreed that the questions which were not considered in the previous draft report should be left open for further consideration, and in the interval they would receive very careful attention, and would then come before the Council in such a form as to enable it to form a final decision. The Committee recommended, amongst other matters, that at the meeting in May the constitution of the Pharmacopœia Committee should be reconsidered.

The amended report was then received, entered on the minutes, and adopted.

The notice of motion by Dr. Pettigrew and Dr. Heron

Watson as to the addition of two members was, by permission, withdrawn.

Report of Students' Registration Committee.

The Council then proceeded to consider the report of the Students' Registration Committee.

Sir Dyce Duckworth, in moving the adoption of the report, called attention to the following note in the report: "The Committee note that, at its meeting in July last, the Executive Committee reversed, in several cases, the decision of the Students' Registration Committee. They beg leave to express the opinion that, in such cases, the particulars laid before the Executive Committee, and the reasons assigned for the decisions upon them, should be reported to the General Medical Council." He said it was the unanimous opinion of the Students' Registration Committee that they should be informed of the reasons which led the Executive Committee to arrive at a different conclusion than itself.

The report was then received, entered on the minutes, and adopted.

Late Registration.

The Council next considered the following recommendation from the English Branch Council:

That the English Branch Council recommends the General Medical Council to register the name of Mr. Henry Edward Garrett, Mem.R.Coll. Surg.Eng., 1878.

The report was adopted.

Premature Publication.

Sir Dyce Duckworth asked to be allowed to call attention to the fact that a confidential report to the Council had been published in the *Lancet* before it had been discussed. During the discussion it had been materially altered, and he considered it was wrong that a confidential report should reach the press before being discussed by the Council.

Dr. Tuke moved and Dr. Pettigrew seconded:

That no reports presented to this Council should appear in the public press until it has been discussed.

Dr. McVail said that the report in question had been entered on the minutes, and, that being so, it became a final document, and any paper was justified in publishing it.

Sir Dyce Duckworth gave notice of the following motion, to be placed on the programme of the morrow:

That this Council will view with great displeasure the publication in the press of any reports to the Council which have not been discussed and adopted by that body.

Penal Cases.

The Council then proceeded with the consideration of the case of Daniel Costelloe, which had been adjourned on the previous day.

Mr. Thomas Newton Allan, the unqualified assistant, was then called, and bore out the statements of Mr. Costelloe. He had been an unqualified assistant to various doctors for ten years, and before that had been in business as a chemist. He had never attended any lectures or received any instruction except what he had picked up while an assistant.

Strangers were directed to withdraw. On their readmission,

The President stated that the Council had found Daniel Costelloe guilty of infamous conduct in a professional respect, and had decided that his name should be removed from the *Register*.

The Council then proceeded to deal with the case of John Patrick O'Connell, registered as Lic. Lic. Mid. K. Q. Coll. Phys. Ireland, 1889, Lic. Lic. Mid. R. Coll. Surg. Ireland, 1889, who had been summoned to appear before the Council to answer the following charge: "That he acted as cover to an unqualified person named William Dodd, under cover of his name and qualification, to visit and administer medical treatment to patients and carry on a medical practice as if he had been duly qualified, and to give medical certificates and make medical reports, signed by him (Mr. O'Connell) and with his qualification, in cases which the said unqualified person had alone attended." Dr. O'Connell appeared with his solicitor, Mr. Drummond, to answer the charge.

Dr. Bateman, who conducted the case on behalf of the Medical Defence Union, said that the case was well worthy the consideration of the Council, as the charge had been formulated by the medical practitioners of Keighley. Dr. Bateman handed in several affidavits made by the leading practitioners of Keighley in support of the charge that Dr. O'Connell had acted as cover to Mr. Dodd.

Dr. Gabriel, medical practitioner at Keighley, was called in support of the charge.

Cross-examined by Mr. Drummond, Dr. Gabriel admitted that unfriendly relations had existed between himself and Dr. O'Connell. Certain statements had been made against Dr. Gabriel by Mrs. O'Connell to the effect that he had subsidised Mr. Dodd to bring a charge against Dr. O'Connell; and by his (Dr. Gabriel's) request the whole matter was placed before the Medical Defence Union. He denied that the present charge was the result of that quarrel.

Mr. Drummond then addressed the Council on behalf of Dr. O'Connell. He denied emphatically that Dr. O'Connell had ever acted as cover for Mr. Dodd in any way. The surgery at South Street, Keighley, belonged to him, and Mr. Dodd resided there because there was an objection to his living at his (Dr. O'Connell's) residence. Mr. Dodd was engaged purely as an assistant, and never attended patients or dispensed medicines except under Dr. O'Connell's supervision. It was true that in one case Mr. Dodd recommended a life for an insurance company, and that the person died within a twelvemonth afterwards.

Dr. O'Connell was then called. In answer to questions put by Mr. Brudenell Carter, he denied that Mr. Dodd ever attended patients or prescribed medicines whilst at the surgery.

Strangers were then requested to withdraw. On their readmission the President informed Dr. O'Connell that the Council had come to the conclusion that he had not committed the offence charged against him.

The Council next proceeded to deal with the case of Charles Oakes, registered as Lic. Soc. Apoth. Lond., 1869, M.B. Mast. Surg., 1873, Univ. Aberd., who had been summoned to appear before the Council to answer a charge in relation to a so-called rupture cure advertised and practised by an unqualified person called J. S. Sherman, and to a medical practice advertised and carried on by the said unqualified person in London and Manchester. The specific charges were that Mr. Oakes lent the aid of his name and professional qualifications to further the practice by Sherman of the said rupture cure, and to assist Sherman to advertise the cure and his medical practice; that Mr. Oakes was personally a party to discreditable advertisements for the purpose of inducing patients to consult Sherman as a medical man; and that Mr. Oakes aided and assisted the said unqualified person to carry on a medical practice as though he were duly qualified.

Dr. Bateman conducted the case on behalf of the Medical Defence Union, and produced pamphlets and advertisements in which Mr. Oakes recommended Mr. Sherman's said rupture cure.

Mr. Oakes appeared to answer the charge. He admitted that he gave Mr. Sherman testimonials with regard to his rupture cure, but he did not give permission for them to be published in any way. He thoroughly believed in the rupture cure, and he invited the Council to appoint a committee to examine into it. He did not know that he was doing wrong by giving testimonials. He had not acted as cover in any way for Mr. Sherman.

Strangers were then requested to withdraw.

On their readmission, the President informed Mr. Oakes that the Council had found the charge proved against him, and that the Registrar had been directed to erase his name from the *Register*.

The Scottish Pharmaceutical Society in Edinburgh.—In connection with the opening of the new hall and laboratories in Edinburgh, the Scottish Pharmaceutical Society gave a dinner last week, at which 150 were present, and over which Mr. J. Laidlaw Ewing presided. The toast of "The Pharmaceutical Society of Great Britain" was proposed by Sir Thomas Grainger Stewart, who indicated that, in his opinion, the Society had now attained to the dignity of a profession as opposed to a trade, the difference being that professional men were cultured, and did not work for mere pelf, but for something higher and greater. Various other toasts, such as the Royal Colleges of Physicians and Surgeons and the Universities followed.

DR. HUGHLINGS JACKSON.

THE movement, to which we referred a month or two ago, to mark the retirement of Dr. Hughlings Jackson from the active staff of the London Hospital by asking him to sit for his portrait has, as was certain to be the case as soon as it became known, attracted the support of many members of the medical profession who have no direct connection with the London Hospital. The services which Dr. Jackson has rendered to medicine by his brilliant clinical studies in the field of neurology have made his name known in every country in which scientific medicine is studied. As the contributors to the testimonial fund are now drawn from so wide a field it may be well to mention, since others may desire to contribute, that the subscription list will not be closed until the end of January next. Cheques, crossed "Jackson Testimonial Fund," may be made payable to Jonathan Hutchinson, jun. (15, Cavendish Square, W.), who is joint Honorary Secretary with Dr. Percy Kidd. Among those who have already associated themselves with the testimonial are the President of the Royal College of Physicians, Sir Henry Acland, Sir James Paget, Sir Spencer Wells, Dr. Buzzard, Professor Victor Horsley, Mr. Herbert Spencer, and many American neurologists, including Dr. Weir Mitchell and Dr. Wm. Osler.

LIBRARY BOOKS AND INFECTIOUS DISEASE.

THE conveyance of infection by means of books is so obvious a possibility that the greatest care should be taken to prevent its occurrence. This matter has lately been discussed in Edinburgh, where we learn a rule is in operation with the object of minimising the danger alluded to. Rule IV of the Free Library by-laws provides for the cancelling of readers' tickets in case of infectious disease. Every day the library authorities receive from the medical officer of health a return of cases of infection, and steps are taken at once to ascertain if books from the library are in those houses. Books from infected houses are removed by the officers of the Public Health Department, and properly disinfected or destroyed. Whenever any book has been in a house infected by small-pox, it has been burnt on its return to the library or to Dr. Littlejohn's department. In other towns also—Bradford, for example—an attempt is made to limit the issue of books in a similar manner and to prevent their use by infected persons. In London, however, we believe things are left to take their course. We do not say this ought to be so, but the enormous difficulty of any attempt to introduce such a system becomes apparent when we consider on the one hand the greatness of the population, and on the other the number of libraries and sanitary authorities involved. If the lending departments only dealt with the inhabitants of their own districts matters would be simpler, but in some cases books are issued, not to inhabitants only, but to all ratepayers and all who are employed in the district, and these, especially the latter, are continually changing their residences, and in many cases live outside the county altogether. Any attempt to trace the books would require a very large organisation; and it would seem that at present all we can expect is that all medical men and nurses will do their utmost to instil into their patients the importance of care in the matter. After all, we must pay some price for the joy of living amid the fogs of London.

SMALL-POX IN EDINBURGH.—Twenty-nine fresh cases of small-pox were reported in Edinburgh last week and 1 in Leith. In Edinburgh there were no fewer than 8 deaths.

PROFESSOR W. D. HALLIBURTON will deliver a lecture on "The Process of Digestion of Food in Animals and Plants," with lantern illustrations and experiments, in the theatre of King's College, London, on Wednesday, December 12th, at 7 P.M. This is one of the series of free lectures now being given at King's College.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

THE SUPPLY OF ANTITOXIN SERUM FOR PROVINCIAL HOSPITALS.

THE applications received since the publication last week of the offer of Dr. Klein to give a supply of diphtheria antitoxin serum to provincial hospitals through the Editor of the BRITISH MEDICAL JOURNAL have been so numerous that the supply is for the time exhausted. It is hoped that a further supply will be available on Monday next, December 10th, on which day we shall be prepared to receive further applications.

As the demand appears to be so considerable, we must ask our correspondents in making their application to state the number of cases which they have under treatment in hospital, as it may be necessary, should the applications be numerous, to send out the serum in smaller quantities, adapted to the needs of the number of cases actually under treatment.

We must repeat that Dr. Klein is supplying the serum only for use in hospitals, and that applicants must state distinctly that the serum will be used only for cases in hospital; and that preference will be given to applicants who undertake that the diagnosis shall be checked by bacteriological examination.

It is, perhaps, hardly necessary to repeat that all applicants are understood to give an undertaking that careful notes of the cases treated are kept and forwarded for publication, whatever the result of the treatment may be.

It is hoped that in all cases statements will be made as to the degree of severity of the case, the stage at which treatment is commenced, the extent of the parts involved, and the time which elapses after injection before amelioration of the symptoms or physical signs is observed.

Dr. Klein informs us that the ordinary therapeutic dose is from 1½ to 2½ drachms, according to the age and the severity of the case. If no amelioration occurs in twenty-four hours, the dose may be repeated, or, if the symptoms are extremely urgent, after even a shorter interval. The place of election for the injection is the loose tissue between the shoulders, and care should be taken that the whole of the serum is injected into the subcutaneous tissue and not into the muscles.

XXVIII.—We have received from Mr. RICHARD HAMILTON M.B.Lond., House Surgeon, Chester Infirmary, the following notes of a case of diphtheria treated by antitoxin and tracheotomy:

G. McN., aged 3½, was admitted into Chester Fever Hospital on October 8th, suffering from scarlet fever. The temperature on admission was 101.2°. It fell to normal on October 10th. The attack was mild; peeling was well marked.

On October 25th the patient, who was convalescent, began to complain of sore throat. The tonsils were seen to be slightly enlarged, but not red; no membrane was to be seen.

The patient progressed favourably until October 31st, when he began to have a croupy cough. On November 1st he was worse: the breathing was rather embarrassed: there were no patches on the throat. In the morning the temperature was 98.8°, the respirations 24, the pulse 108; in the evening the temperature was 101.4°, respirations 26, pulse 120. There was a very faint trace of albumen in the urine. The patient was transferred to a tent bed, with a steam kettle containing carbolic acid (1 in 20).

At 9 P.M. mxv of antitoxin were injected under the skin of the abdomen. At 2.15 A.M. on November 2nd the temperature was 100.4°, the pulse 160, and the respirations 15.

At 3 A.M. the breathing became very laboured, the lower

ribs were drawn deeply in on inspiration, and the patient was of a bluish colour. Tracheotomy was at once performed, and ɱv more of antitoxin were injected. The breathing at once improved, and by 4.45 A.M. the temperature had fallen to 99°, and the pulse to 124 a minute: the respirations were 24. The temperature then rose to 102.2° at 11.15 A.M., afterwards falling again to 99°. The same day a distinct trace of albumen was present, and on the following day, November 3rd, there was a considerable amount present. The same day the neck became swollen and the wound red; the face was slightly swollen. The patient had at times very severe attacks of coughing, becoming slightly cyanosed and exhausted after them. Pieces of membrane were frequently coughed up to the wound in the trachea and then removed; the same day a piece of membrane was removed from the nose; discharge from the nares had been first noticed on the preceding day. The discharge from the trachea was blood-stained. Sulphur was blown down the tube. The patient ate well and slept fairly between the coughing attacks.

On November 4th there had been no more bleeding from the trachea: the neck was still a good deal swollen.

On November 9th the tube was changed for an india-rubber one; this was left out for a few hours on November 10th and 11th, but each removal was followed by a rise of temperature and severe dyspnœic attacks.

On November 12th the patient was not so well. Cresolin was vaporised inside the tent. From this time the patient made steady progress. On November 17th the urine became entirely clear, and the tube was left out altogether. There was but little cough, and no difficulty in breathing.

On November 26th the patient was convalescent, but had an enlarged gland in the neck. The wound healed, and he had no difficulty in speaking.

Valentine's meat extract, Brand's essence, eggs, milk, brandy, and port wine were freely used, the patient taking well throughout his illness. Perchloride of iron was given up to November 7th, when all medicine and stimulants were withdrawn.

I think this case is of interest for the following reasons: (1) The child having been admitted for scarlet fever, diphtheria being in the house at the time, but as far removed from it as possible; (2) the diphtheritic process commenced in the larynx; (3) antitoxin produced no marked improvement, the improvement after tracheotomy being due to the operation; (4) the use of cresolin vapour was followed by marked improvement; (5) the free use of meat extract, in spite of the large amount of albumen present in the urine; (6) the presence of membrane in the nares after the diphtheritic process in the larynx had begun to subside.

XXIX.—Dr. P. H. Mules (Bowdon, Manchester) writes: With many others I anxiously hoped that in antitoxin we had found, if not an antidote to diphtheria, a useful adjuvant to the treatment of that disease; personally I have been disappointed, and I give below the results of my experience with "Aronson's" preparation.

Case I.—My first case this autumn was in a boy, aged 8, who showed membrane covering both tonsils, uvula, and soft palate. The case was a severe one, but fortunately confined to the faucial region. Treated with iron, sulphurous acid spray, and good feeding the initial stage was passed through; paralysis set in, but eventually recovery took place, and the boy is now well.

Case II.—A month afterwards his cousin, aged 7, living in another neighbourhood, was taken ill with croupy cough: his tonsils showed patches of membrane, which had obviously invaded the larynx; ɱxx of antitoxin were injected with marked temporary recession of fever and acute symptoms, but respiration being impeded tracheotomy was performed. The child, a very strong one, died of cardiac failure four days after the injection. In this case the rapid shedding of membrane was a grave source of danger, as the windpipe was constantly blocked and obliged to be cleared with laryngeal forceps. The boy had begun to recover from the membranous stage when he suddenly died.

Case III.—My third case, which I only mention because it infected the fourth, occurred in the Isle of Man: the true nature of the disease was I think overlooked, but I found when first called in, after his return, loss of reflexes with paralysis of accommodation and urine loaded with albumen. This boy, aged 9, died of paralysis of the chest walls, nine weeks from the onset of the disease.

Case IV.—Three weeks after the death of Case III. a second child, aged 4, very strong and healthy, was infected, and on the first appearance of typical membrane on tonsils, a full dose of ɱxv of antitoxin was injected, and a second dose twenty-four hours later. This case persistently went wrong from the commencement: the throat was carefully sprayed and the membrane cleared, but the child gradually grew more and more drowsy until he died, five days from the inception of the disease. The diphtheritic poison was evidently intense, and crushed the rallying powers so that no defence could be made, the antitoxin being powerless for good except so far as keeping the temperature below 100°.

These are the plain facts of these four cases, all in the upper classes of society, therefore under similar conditions, surrounded with every care, skilled nursing, and modern appliances.

1st recovered ... without antitoxin.
2nd died ... with antitoxin.
3rd died ... from paralysis, without antitoxin.
4th died ... in the early stage, with antitoxin.

XXX.—Mr. E. A. T. Steele (High Street, Plaistow) has favoured us with the following case:

E. J., aged 31, a nurse engaged in district nursing at the Nurses' Home, Plaistow, complained of sore throat on November 10th. She had been engaged at a severe case of diphtheria, which proved fatal on November 3rd, and had not been feeling well for several days. On November 10th the temperature was 100.4°, the pulse 96. The tonsils and uvula were swollen and injected, and there was a patch of membrane on the right tonsil. The throat was sprayed frequently with solution of peroxide of hydrogen, and perchloride of iron was given internally. On November 11th the temperature was 100°, and the membrane was spreading on the right tonsil, and a patch appeared on the left. On November 12th the temperature was 100.4°. The right tonsil and the right half of the soft palate were covered with membrane, and there were patches on left tonsil and posterior wall of pharynx. On November 13th the throat was much swollen and painful externally. The membrane was spreading downwards on the right side. The patient complained of some difficulty in breathing. The temperature was 101°. Through the kindness of Dr. Armand Ruffer, a supply of antitoxin serum was obtained, and 20 c.cm. injected under the skin of the abdomen. On November 14th the temperature was 98°. The patient felt more comfortable, but was very drowsy; breathing was quite easy. The swelling of the throat had gone down considerably, and the membrane was peeling off from the right tonsil. A further injection of 10 c.cm. was made this morning. On November 15th the temperature was normal, and continued so. The membrane was nearly all cleared off, and the swelling of the glands gone. On November 16th all the membrane had disappeared, and the patient felt well. Her further progress uninterrupted. Altogether 30 c.cm. of antitoxin were injected, and, with the exception of slight tenderness for about twenty-four hours, there was no discomfort. The rapidity with which the throat resumed its normal appearance was astonishing. The diagnosis was confirmed by bacteriological examination.

XXXI.—We are indebted to Mr. R. Ross Sutton, House-Physician to the West London Hospital, for the following notes:

A. C., a girl, aged 4 years and 8 months, was admitted on November 9th under the care of Dr. Ball. She had been ill five days. On admission both tonsils, the uvula, and anterior faucial pillars were covered with a thick dirty greyish diphtheria membrane. The breath was extremely offensive. The glands below the angle of the jaw were swollen, especially on the left side. There was a profuse mucous discharge from the anterior nares. The face was pallid and puffy. The child was in a drowsy, apathetic condition. The temperature was 103° F., the pulse 132, the respiration 20. There was a slight croupy cough but no laryngeal dyspnœa. The urine contained one-sixth albumen.

At 6 P.M. 30 minims of Aronson's antitoxin serum (obtained from Messrs. Zimmerman) were injected into the subcutaneous tissue of the abdomen. The following morning, November 10th, there was no material change in the condition of the child except that the temperature had fallen to 100.4° F. The pulse was 140, respiration 24. At 11 A.M. 30 minims of antitoxin were injected as before. At 11 P.M. she seemed a little better. The temperature was 99.4, pulse 112, breath less fœtid.

The next morning, November 11th, there was a very great improvement. The temperature was normal, the pulse 100. The child seemed bright, and took interest in everything around her. The fœtor had disappeared; the nasal discharge was only very slight; the glands had considerably decreased. The whole of the thick dirty-greyish membrane had disappeared from the throat, and there remained only thin whitish patches on the sides of the uvula and the tonsils. The urine still contained about the same quantity of albumen. From this point convalescence may be said to have been established. Although the whitish patches remained for some days on the tonsils and uvula, no membrane could at any time be detached, and it is doubtful if there was any real formation of membrane after the separation of the original layer.

On November 13th the albumen had diminished to a faint trace, and there was no mucous discharge whatever from the nose. The child sat up in bed all day and played with toys. On November 24th she was allowed to get up. No drugs whatever were administered during the course of the case until November 23rd, when some iron was ordered. No applications were used except on one occasion, on the morning of November 10th, when the throat was swabbed out with glycerine of carbolic acid (half strength). While this application was being made, it was observed that the membrane was already becoming detached and separating.

Dr. John Haddon (Hawick, N.B) writes: While the attention of the profession is so concentrated upon the antitoxin treatment of diphtheria, it may be well to call attention to some points in the natural history of the disease:

1. *The Fever.*—The primary fever of diphtheria, which we may suppose is due to the poison, whatever that may be, lasts three days, counting the day on which the illness began as one day. The secondary fever may or may not be seen, according to the effect the products of the poison produce in the system.

2. *The Membrane.*—The amount of membrane, which is by no means an early sign, is of no value in prognosis, and so long as it does not extend into the larynx its amount need cause no additional anxiety. It seldom affects the larynx, according to my experience, during the primary fever.

3. *The Paralytic Sequelæ* vary in their time of appearance, and, so far as I have seen, are worse in those cases in which the larynx is not affected.

4. *The Danger* from diphtheria is, I believe, greatest after the primary fever.

To judge, then, as to the value of antitoxin in any case we must know:

1. Whether it was faucial, laryngeal, or both.
2. The day of the disease.
3. The symptoms.
4. The time at which the dose was given.
5. A note, at least twice a day, of the course of the disease.

Knowing how harmless the antitoxin is, there can be no excuse for withholding it where the slightest suspicion of diphtheria exists, and the sooner it is given the better. Thus if it be not given until the larynx is invaded, and it takes twenty-four hours to affect the membrane, what a period of anxiety that must be.

It is a question worthy of discussion whether tracheotomy, considering the fresh elements of danger that it introduces, should not be entirely abandoned in favour of intubation.

The Paris medical students organised a morning representation at the Odéon Theatre. The proceeds were handed to M. Roux towards the expenses of preparing antitoxin. The actors gave their services gratuitously. The theatre was obtained on the same terms. M. and Mme. Casimir-Périer were present at the performance.

The Conseil Général of Algiers has unanimously voted £80 towards the expenses of the diphtheria department of the local antirabic institute. This sum will be sufficient for the purchase of two horses, and further grants will be made for maintenance as required.

Dr. Henri Coppez, of the Hôpital St. Jean, Brussels, reports in *Le Scalpel* of December 2nd a case of ocular diphtheria in a female infant aged 1 year, which was cured by an injection of Behring's serum. The throat was healthy, but the general condition was bad, and the preauricular gland was enlarged. She was treated for two days by local applications of an ointment containing 50 centigrammes of oil of cade, in 8 grammes of an excipient, but the condition became steadily worse. The day after the injection of serum she was "literally transformed;" the eyelids had recovered their suppleness, the infiltration was disappearing, and the false membrane had come away. Four days after the injection cure was complete. The nature of the disease was established by bacteriological examination. Dr. Coppez feels sure that the serum saved the eye, if not the life, of the child.

The immunisation of a horse was commenced on November 5th, at Washington, by Passed Assistant-Surgeon Geddings, of the United States Marine Hospital Service.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1895. ELECTION OF MEMBERS.

Meetings of the Council will be held on January 16th, April 17th, July 10th, and October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely December 27th, 1894; March 28th, June 20th, and October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election. Francis Fowke, *General Secretary.*

SOUTH-WESTERN BRANCH.

An intermediate meeting of this Branch was held at the Devon and Exeter Hospital on November 23rd. Dr. Thompson, of Launceston, in the chair. Invitations had been issued to the West Somerset, the Dorset and West Hants, and the Bath and Bristol Branches, and altogether about 120 were present.

Diagnosis of Cerebral Tumours.—Professor Horsley delivered an address on the Differential Diagnosis of Cerebral Tumours, with remarks on treatment; illustrated by lantern photographs. He also showed a patient of the Chairman (Dr. Thompson, of Launceston), from whom he had removed a cerebral tumour twelve months previously. A discussion followed in which Dr. Thompson (Launceston), Dr. Woodman (Exeter), Dr. Cave (Crewkerne), Dr. Parkinson (Wimborne), and Mr. Bell (Exeter) took part.—Professor Horsley replied.

Vote of Thanks.—A cordial vote of thanks to Professor Horsley for his address was moved by the Chairman, seconded by Mr. Domville (Exeter), and carried by acclamation.

BATH AND BRISTOL BRANCH.

The second ordinary meeting of the session was held on November 28th at Bath, Mr. Nelson C. Dobson, President, in the chair. There were also present twenty-five members.

New Members.—The following gentlemen were elected: J. Ambrose, M.B., C.M., Bristol; P. W. MacCrae, A.B., B.Ch., Bristol; J. Toppin, L.R.C.P., L.R.C.S.I., L.M., Bristol; A. Harvey, M.B., Westbury-on-Trym; C. Gordon, M.B., C.M., Bristol; T. G. Walker, M.R.C.S., Bristol; H. O. Corfield, M.B., C.M., West Town; J. Freeman, F.R.C.S.Edin., Bristol; F. C. Berry, M.D., Burnham; L. J. Godson, M.R.C.S., L.R.C.P., Bath.

Amendment of Medical Acts.—A letter was read from the General Secretary of the Association requesting the opinion of the Branch on some suggested alterations in the Medical Acts.—It was proposed by Mr. Hopkins, seconded by Dr. Goodridge, and carried, that the letter should be referred to the President, the Secretaries of the Branch, and the representatives on the Parliamentary Bills Committee, to be dealt with by them.

Communications.—Dr. Carey Coombs read a paper on Raynaud's Disease, which was discussed by Dr. Waldo, Dr. Goodridge, Mr. Harsant, Drs. Shingleton Smith, Michell Clarke, and Spender, and by the President.—Mr. T. Pagan Lowe read a paper entitled Removal of Cancerous Cyst from the Abdomen. He also showed a Combination Spray and Curette Apparatus for use in diphtheria, upon which remarks were made by Mr. Paul Bush, Mr. Harsant, the President, Drs. Fisher, Shingleton Smith, and Wilson Smith.—Mr. Basil Trevelyan read a paper on So-called Dry Labour in Young Primiparæ, and comments were made upon it by Mr. Scott.

MIDLAND BRANCH, LINCOLNSHIRE DISTRICT.

A meeting of this Branch was held at Grantham on November 29th, Dr. J. West Walker, President, in the chair.

Amendment of Medical Acts.—A draft of a Bill to amend the Medical Acts was read and approved.

The Registration of Midwives.—The following letter from the Lancashire and Cheshire Branch Subcommittee was read:

British Medical Association Lancashire and Cheshire Branch Committee.

November 13th, 1894.

Dear Sir,—I am requested by the Committee of the above Branch to forward you a report of the adjourned annual meeting of our Branch, when an important resolution dealing with illegal diplomas was passed *nem. con.*

I am further requested to ask you to bring this resolution before your Branch at its next meeting.—I am, Dear Sir, yours faithfully,

Colin Campbell,
Honorary Secretary Lancashire and Cheshire Branch Committee.

Resolution:

That the position on the Lancashire and Cheshire Branch Council of gentlemen who continue to grant "diplomas" or "certificates" to pupil midwives—a practice condemned by the General Medical Council and this Branch—is anomalous.

To the Honorary Secretary of the Midland Branch of the British Medical Association.

The following resolution was passed:

That this meeting, without entering into the question of the registration of midwives, feels called upon to express its sympathy with Dr. Lloyd Roberts and his colleagues on the Council of the Lancashire and Cheshire Branch on the unconstitutional attack made upon them by a Committee of that Branch, and it further wishes to emphasise the opinion expressed by resolution at the last annual meeting of the Midland Branch, that communications between Branches should only come through the Branch officials.

Communications.—The following papers were read and discussed:—Dr. W. Newman: (1) Trephining in Idiotic Boy of 17; Epileptic since early Childhood; Head Injury." (2) Amputation in the Thigh in commencing Septicæmia, male 43: Large Necrosis of both Femora in Lower and Posterior Thirds: Specimen.—Dr. C. H. Cattle: Notes on a Case of Pernicious Anæmia.—Mr. W. J. Cant: A Case of Fractured Patella, treated by wire suture passed through the knee-joint.—Dr. Handford: (1) Two cases of Cerebral Hæmorrhage in young persons. (2) Specimen of Miliary Aneurysm and Leucocythæmic Blood.—Dr. Elder: Some Abdominal cases.—Dr. Carline: Two cases of Severe Injury in the Frontal Region without marked Cerebral Symptoms.

Luncheon.—Before the meeting the members took luncheon together at the George Hotel.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A meeting of this District was held at Eastbourne on November 29th. Twenty-one members were present. The chair was taken by Dr. Gabbett.

Communications.—Mr. H. D. Farnell read a paper on Anæsthetics, in which he advocated the use of a combination of nitrous oxide and oxygen in dental practice (as advised by Dr. Hewitt), and urged the more frequent use of ether instead of chloroform in ordinary surgical practice.—Mr. A. H. Dodd related a case of Placenta Prævia in which the patient, moribund from hæmorrhage, had been saved by the injection of saline solution into the cellular tissue of the axilla. He showed the apparatus used (Dr. Morse's).—Dr. A. J. Richardson read notes of 100 (successive) cases of Flatulence and Pain after Food treated by the administration of α or β naphthol in 4-grain pill immediately after food. Marked relief was speedily obtained in 74 of the cases. He thought that α-naphthol was perhaps the more potent drug.—Mr. J. D. Hessey read notes of a case of inversion of the uterus.—Papers by Dr. Gabbett, Dr. Hargood, and Mr. Jenner Verrall could not be read owing to want of time.

CORRESPONDENCE.

THE DEAN OF LICHFIELD AND "THE MASSAGE HOSPITAL."

Sir,—I have been much perplexed by what you have communicated to me through the columns of the British Medical Journal touching my supposed connection with a massage hospital at 55, Weymouth Street. To the best of my belief I had never heard of it before, still less had given my name as a patron of it. I thought at first that my predecessor had given his name, and that the authorities of the hospital had continued to print "the Very Rev. the Dean of Lichfield" without prefixing "late," as they were bound in honour to do if they were aware that the office had changed hands; but the copy of a letter in another issue, which was received from the hospital bearing date "The Close, Lichfield, November 4th, 1892," and said to be from the Dean, perplexed me still further, for the former Dean died on October 9th, and I was not installed till December 8th. At the time, therefore, when it is said that the Dean authorised the use of his name, there was no Dean in existence.

I wrote to Dr. Tibbits asking him to be kind enough to let me see the letter in question, and promising to return it, and I have this morning received the following reply: "Our Honorary Secretary, Mr. Scott, resigned some time since, and is now abroad. The letter dated November 4th, 1892, published in the British Medical Journal of the 24th inst., cannot be found for the moment, but you may take it as a correct copy." He enclosed me a letter dated "The Deanery, Lichfield, February 4th, 1892," in almost precisely the same words as that of November 4th, which is in the handwriting of Mrs. Bickersteth, the wife of the late Dean.

It is clear, therefore, that Dr. Tibbits was justified in advertising the Dean of Lichfield as a patron up to October 9th, when he died; but the mystery of the lost letter from another Dean of Lichfield, written oddly enough not from "The Deanery" but "The Close," awaits its solution. Memory fails as one grows old, and all I can say is I have no recollection whatever of having been asked for my consent, and as I knew nothing at all of the hospital in question, and as I should most certainly have not signed myself "Dean" before I was entitled to do so, I much hope that, as a first step to

discovering the actual writer of the letter, the letter itself may be found. This alone can clear up the confusion.—I am, etc.,

Lichfield, Nov. 30th. H. MORTIMER LUCKOCK, Dean.

CLUBS AND FRIENDLY SOCIETIES.

SIR,—In reference to your article in the BRITISH MEDICAL JOURNAL of December 1st, on Clubs and Friendly Societies in Ireland, I should like to ask, Can it really be true that any doctor is willing to attend a man, his wife, and possibly children for 7s. 6d. per annum? This, you say, is to be the minimum fee.

I cannot see how in accepting this the Irish Branch is deserving of the slightest sympathy. Instead of inaugurating an important reform, it is, I consider, to use your own words, inaugurating a disgracefully low rate of club payment. A labourer earning from 12s. to 15s. a week, with four or five children, is quite able to pay 5s. for himself, 5s. for his wife, and 1s. for each child under 16—that is, 15s. per annum. This includes the supply of medicine, but does not include confinements nor those accidents for which the parish doctor receives extra remuneration. The other fees referred to—for example, 15s. per annum for a man with, say, an income of £150—are equally humiliating and totally inadequate.—I am, etc., M.D., A CLUB DOCTOR.

December 2nd.

THE PAY WARDS OF THE GREAT NORTHERN CENTRAL HOSPITAL.

SIR,—"A Consultant," writing in the BRITISH MEDICAL JOURNAL of December 1st, appears shocked at what he calls my threat of "boycotting." I do not wish to say that "boycotting" is not in some cases perfectly legitimate, but I did not threaten "boycotting." It has always been the custom in our profession to refuse to meet in consultation persons who persistently set at defiance professional ethics. This, I maintain, the staff of the Great Northern Central Hospital are doing when they entice our patients into the "pay wards" by giving their services gratuitously. To use the language of the Royal College of Physicians, they are, "under colour of a benevolent purpose, offering medical aid to persons whom they know to be under the care of other legally qualified medical practitioners," conduct which the by-laws of the College of Physicians forbids. They offer this medical aid subject to the patients coaxing or compelling their usual medical attendant (or another medical man if he fails) into a written consent.

This is, indeed, a cunning device whereby to evade the consequences of breaking the by-laws of their College. But the by-law says "offer" not "give," and if they had not previously been "offered" medical aid by the staff they would not apply to us for certificates. However we may likely take the opinion of the College on this point if other steps are ineffective.

"A Consultant" complains that if we do not meet the members of the staff of the Great Northern Hospital in consultation, we deprive our patients of the advice of those "who are likely to give the very best possible advice in the case." Might we not find men of equal ability on the staff of the hospital to which "A Consultant" is attached; if, indeed, he is not already speaking of that hospital?

For my part I think the advice of some of our experienced general practitioners is as good as any, being myself a general practitioner. I trust the difficulty "A Consultant" complains of will be remedied at an early date by the staff of the Great Northern Central Hospital recognising freely their false position.—I am, etc.,

Highgate, N., Dec. 3rd. HUGH WOODS.

SIR,—Owing to accidental circumstances, a report of the meeting of general practitioners last week at the Athenæum, Camden Road, N., did not appear in the JOURNAL. I accordingly send you a criticism on the staff's reply to the protest, which was approved by the protesting Committee, and laid before the meeting in support of the first resolution. This resolution, which was carried unanimously, expressed "extreme dissatisfaction" with the replies of the Chairman of the General Committee of the hospital, and also of the staff, to the protest.—I am, etc.,

JAS. CRABB,
Holloway Road, N., Dec. 4th. Honorary Secretary to Committee.

"The first two paragraphs of the letter of the staff call for no reply. In the third paragraph the staff state that the scheme was warmly advocated in 1893 by the practitioners of North London; but these, we hold, were only a small section of the North London practitioners, and in no sense had they a mandate to speak on behalf of the general body of practitioners. Indeed, even at that time, a warning was given by one of the best known members of the profession, still amongst us, of the danger of the proceeding. It was certainly not to the credit of the medical staff of the old Great Northern Hospital, to accept office in the new hospital on the condition that there should be pay wards, knowing as they did that the general body of practitioners had not been consulted.

"By their own admission they looked on the innovation as hazardous. It has been said by the committee of the hospital that they make no profit by the pay wards, but it is the contention of this committee that no money at all should be taken in a charitable hospital. "Patients a little above the poorest," that is, the industrious poor, are just the class that have hitherto been considered entitled to hospital relief in urgent circumstances; the very poor, or paupers, being provided for by the State. The fact of their being recommended or not by medical men makes no difference to our fundamental contention that pay and charitable beds should not coexist in the same institution.

"The conditions stipulated for by the staff are utterly inadequate; the first because, as pointed out in the protest, we could not refuse to certify unless at the risk of offending and alienating the patient and his or her friends. To this no power whatsoever is given by the staff. With regard to the second condition, namely, that the medical staff should have control with the House Committee of the admission of these patients, we think it outside the scope of the duties of a medical staff to investigate the pecuniary circumstances of patients. The fact mentioned in the letter, that already a large proportion of applicants had been rejected, only confirms the fears of the protesters, that applications would be made by large numbers of unfit persons, and that the precautions so much relied on would, in the long run, break down.

"The new scheme is truly said to differ from all others. Therein lies its condemnation. There is no precedent for it. The honorary medical staff have no right to undertake gratuitously the charge of other medical men's patients, who are perfectly able to pay fees which most general practitioners are perfectly willing to accept. Before adopting any such new-fangled and objectionable scheme in which the general practitioner was next to the patient, to be the most interested party, at least the staff might have done was to have represented to their committee that, as it was important they should maintain amicable relations with the practitioners, they could not assent to any such scheme until the practitioners had been consulted. As to the promised vigilant supervision of this new experiment by the medical staff, the protesters are convinced that, with the best dispositions, they would not be able to check the working of the system, which they feel would be liable to very great abuse.

"In regard to the remarks as to our request for the abolition of the pay wards, we need only say that we regret to find no indication of a disposition on the part of the staff to reconsider their relation to this scheme. The domestic arrangements existing between the staff and governors must be arranged amongst themselves. Meanwhile, the system to which the staff have lent their sanction and aid must tend powerfully to alienate the sympathies of the profession which has hitherto been so warmly on the side of the hospital."

SIR,—I have been asked to sign a memorial to be presented to the Great Northern Hospital Committee against their taking paying patients. I refused to do this, as I have a firm conviction that something of the kind must come. I hear that many of my professional brethren are astonished at my taking this view and at my not signing. I have put my views in the resolution form, which I enclose, and which I should be much obliged by your publishing, as I should be extremely sorry to be misunderstood in this matter.—I am, etc.,

Seven Sisters Road, N., Dec. 4th. LEWIS J. MAY.

"That since the wards or out-patient departments of a hospital afford greater facilities for the successful treatment of certain diseases than the general practitioner usually has at his command, it is desirable that in such cases the medical profession and the public generally should encourage the treatment of paying as well as of other patients by charitable institutions. Moreover, that it is expedient that these paying patients should, when practicable, obtain a recommendation to hospital treatment from their own medical man, and that a portion of the revenue obtained from their payments should at fixed intervals be handed over to the medical officers of the institution."

SUPPOSED EXCEPTION TO COLLES'S LAW.

SIR,—In reference to the case recorded in the BRITISH MEDICAL JOURNAL of December 1st, p. 1236, which its writer supposes to be an exception to the recognised law of Colles, I should be glad if you would allow me to suggest that it is probably not an exception.

The evidence which Mr. Lucas's narrative affords suggests very strongly—indeed, I think I may say almost conclusively—that the infant was the subject of syphilis, which had been accidentally acquired after birth. Thus, of course, there could

be no sort of protection to the mother. The infant was 8 months old, and had had its sore mouth only two months. Not a word is said as to its having exhibited the ordinary symptoms of inherited syphilis at an earlier age. It is expressly stated that the mother was healthy, and that she had five healthy children living, and that her husband was in good health. With such facts it is very improbable that the child was the subject of inherited syphilis derived from its mother.

I may just add that I believe that the fallacy here alluded to underlies several other narratives of supposed exceptions to Colles's law. In various accidental ways young infants do every now and then acquire primary syphilis, and under such circumstances it almost invariably happens that they infect their mothers.—I am, etc.,

Cavendish Square, Dec. 3rd. JONATHAN HUTCHINSON.

SIR,—In the BRITISH MEDICAL JOURNAL of December 1st there is a note by Mr. Albert Lucas on a case which he describes "as an exception to the recognised law of Colles," but I, for one, must state that the evidence he has brought forward to support his view is most inadequate and unconvincing.

Mr. Lucas in the last paragraph of his letter states: "This case, I think, deserves publication as an exception to the recognised law of Colles, that a mother cannot be infected by her own syphilitic child." Now, Sir, what Abraham Colles wrote was to the effect that he had never seen nor heard of a case in which a child suffering from hereditary syphilis had infected its own mother.

It is quite possible that in the case Mr. Lucas quotes the mother was infected by the child, but no evidence is brought forward to prove that the child had hereditary syphilis; and, looking at the age of the child, an acquired taint is much more probable than an inherited one.—I am, etc.,

EDWARD COTTERELL.

West Halkin Street, Belgrave Square, S.W., Dec. 1st.

TEMPORARY MENTAL DISORDER IN GENERAL HOSPITAL PATIENTS.

SIR,—Wide publicity has been given to the report of an inquest on a patient (John Round) who died subsequent to removal from this hospital. No notice of his death was communicated to the hospital authorities, who were not, therefore, represented at the inquest. As there appears to have been considerable misapprehension of the facts of the case, giving rise to groundless criticism, I am instructed by my Board to beg the favour of your insertion of the enclosed statement.—I am, etc.,

E. W. TAYLOR,

December 5th. Secretary London Temperance Hospital.

"With reference to the evidence given at the inquest on John Round at the St. Pancras Coroner's Court, on November 30th, the Board of Management of the London Temperance Hospital desire to record the following facts: The patient applied at and was admitted into the hospital on November 8th, suffering from ulcers of the leg. He had also a festered finger, which might have arisen from a cut from his lathe, to which cause, however, neither he nor his wife attributed his illness. The case notes show that he was in the hospital ten days, during which time the ulcers began to heal; he had no symptoms of any blood poisoning or fever, his temperature, according to the chart, being hardly above normal. His organs were apparently healthy, but he was somewhat emaciated, and of a morose disposition. On the evening of November 15th he became melancholic, refused his food, would not answer when spoken to, and was violent and noisy at night. Accordingly on November 16th his wife was sent for, informed of his mental condition, and asked whether she would take him home or prefer that the relieving officer of the parish should be communicated with. She took some time to decide, but finally made up her mind that the latter course should be adopted. The patient was therefore removed under the care of the relieving officer. In the opinion of five medical men who saw the case, it was one of acute melancholia arising in a debilitated subject, not one of delirium due to accidental cause or blood poisoning. Cases of the latter class are treated in the separate wards provided within the hospital for such purpose. The only alternatives open for the proper care and treatment of such a case were duly explained to the patient's wife."

IDIOT AND IMBECILE CHILDREN.

SIR,—I am exceedingly glad that Miss Twining has called attention in the BRITISH MEDICAL JOURNAL of November 24th, under the heading "Pauper Imbeciles," to the great need there is for providing institutions where these children can be educated and trained. While medical superintendent at the Darenth Schools for Imbecile Children, and since leaving there I have continually met with cases who, by reason of their living outside the metropolitan area, are cut off, in consequence of the absence of such institutions, from all hope of training and improvement. The five charitable asylums, and the one rate-supported institution at Darenth, are quite insufficient for the education and training of the large number of these children who are in consequence at present unprovided for; many, as Miss Twining says, are retained in the country workhouses where no effort at training or education is made. As far back as 1884, I advocated that each county or group of counties should have its idiot as well as its lunatic asylum, as the result of not training these cases is that they grow up to adult life untrained, and become chargeable on the rates for the whole of their existence. Those of us who know how much these children can be improved by training are anxious that efforts should be made to do away with the present state of things; but the difficulty has been, and still is, to induce the county councils to take up the matter. I am glad to know that the Local Government Board has ordered returns to be made from all the unions, and trust that when the results are known the influence of public opinion will urge the county councils to take action.

As far as the feeble-minded children, to whom Miss Twining refers, are concerned, there are at the present moment some small homes where those who cannot be educated in the ordinary schools can be instructed and trained.—I am, etc.,

Kingston Hill, Nov. 28th. FLETCHER BEACH.

ST. JOHN AMBULANCE WORK.

SIR,—The question between Dr. Kelly and myself is no longer one of general interest. Only one slight alteration in my letter is required to render it accurate; but I have written to him to say that I will meet him and discuss the matter in the presence of the president of the local medical society if he desires it.—I am, etc., F. W. BENNETT.

*** This correspondence must now cease.

CHELSEA HOSPITAL FOR WOMEN: THE LATE MEDICAL STAFF.

SIR,—It is now clear that most of the discarded members of the late staff were disqualified for re-election by a resolution of the Board of Management that, in future, no general practitioner should be eligible for the staff.

This questionable resolution was suggested by Dr. Robert Barnes and Sir Spencer Wells, two of the three consulting physicians who subsequently all resigned office. It was passed on August 8th, 1894, fifteen days after the advertisement inviting applications for the posts vacant on the hospital staff, and two days after the latest date for such applications. It was not founded upon the experience of the hospital or the report of the Committee of Investigation.

Although its resolution was not formally recorded till much later, the Board intended to include it in its advertisement for application: but, by some misunderstanding, this was not done, the Board remaining ignorant of the omission. The late President told us, at the special meeting on November 28th, that he had become aware for the first time that afternoon of the serious injury thus inflicted upon the disqualified members of the late staff.

Nevertheless, Earl Cadogan and the late Board cannot be acquitted of culpable indifference to the interests of the members of the late staff, for whose honour they were especially responsible. The services of these gentlemen had been recently acknowledged by the Board with emphatic gratitude, which must, doubtless, have felt pain at being compelled to part from those with whom it had been long and happily associated. It would have been only courteous if the Board had expressed to each injured gentlemen its sympathetic regret and explained the necessity for its action. It is strange that this courtesy was omitted, stranger that the candidature of the excluded gentlemen did not disclose the incompleteness of the advertisement, and strangest that, on October 10th, when the Board reported progress and tendered its own resignation, it still preserved absolute silence as regards the discarded members of the staff.

It was unavoidably hurtful to these gentlemen to be

checked by a newly-devised disability in a career which they had long and honourably followed; but, if the purely technical nature of their disqualification had been publicly explained, their honour and repute would have been protected. I have myself heard rumours "that indelicacies had occurred in the hospital;" "that improper operations had been performed," and "that false certificates of death had been given," for all which cruel surmises the only foundation was the heartless silence of the Board of Management.

For this silence Earl Cadogan is pre-eminently responsible. He tells us that in quiet times he considered himself as little more than a figurehead to the Board, but that when the recent trouble arose he thought it his duty to descend from the empyrean as a *deus ex machinâ* and assume the initiative. All this may be admitted, and credit given to his lordship for the vigour of his intervention. But unhappily he was as mechanically indifferent to the sufferings of those thereby sacrificed as was Juggernaut to the agonies of the victims crushed under the wheels of his car.

The hospital has, let us hope, been saved, but it is not a happy omen that its reconstitution has been prefaced by careless and unnecessary injury to some of its best servants.

The whole story reminds me of a lamentable occurrence in India long ago. A magistrate and his assistant fired simultaneously at a deer. Unfortunately one or other of them killed a beater. With admirable self-possession the magistrate arrested his assistant on the spot, tried him for manslaughter and acquitted him, thus terminating satisfactorily (?) a regrettable misadventure. The parallel is fairly complete except that in the present case the "assistant," though not "found guilty," is conveniently got rid of, and that "the magistrate" cannot confidently be identified.—I am, etc.,

R. B. CHAPMAN,
Governor of the Chelsea Hospital for Women.

Knaresborough Place, S.W., Dec. 4th.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 8s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A SURGEON-CAPTAIN, who is likely to go abroad next February and March, wishes an exchange. Is willing to pay a liberal bonus. Address Surg.-Capt., Messrs. Holt and Co.

THE NAVY.

THE following appointments have been made at the Admiralty: HENRY D. STANISTREET, Deputy Inspector-General, for service in the department of the Medical Director-General, January 1st, 1895; HORACE B. MARRIOTT, Surgeon, December 6th; JOHN C. FERGUSON, Surgeon, to the *Duke of Wellington*, December 23rd.

Deputy Inspector-General H. F. NORBURY, M.D., C.B., has been promoted to be Inspector-General, November 7th. Entering the Royal Navy as Surgeon June 16th, 1860; he became Staff Surgeon December 16th, 1872; Fleet-Surgeon July 3rd, 1879; and Deputy Inspector-General April 1st, 1887. He served as Staff-Surgeon of the *Active*, and was landed in medical charge of her Naval Brigade during the Kaffir war in 1877-78 (mentioned in despatches and strongly recommended for promotion). In the Transkei he was Senior Medical Officer of six different columns of troops, and was present in numerous skirmishes, in the action at the Quorra River, and at the battle of Quintana. He had medical charge of the Naval Brigade of the *Active* during the Zulu war in 1879, and was Principal Medical Officer of Colonel Pearson's column, being present at the battle of Inyezane, January 22nd, 1879, and of the garrison of Ekowe (several times mentioned in despatches). He afterwards joined General Crealock's Column as Principal Medical Officer of the entire Naval Brigade, and advanced to Port Durnford (twice mentioned in despatches, promoted, and received the South African medal with three clasps). He was nominated Companion of the Bath in 1879.

Staff-Surgeon J. W. H. HAWTON has been promoted to be Fleet-Surgeon November 20th. He was appointed Surgeon March 31st, 1874, and Staff-Surgeon twelve years therefrom.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN FREDERICK T. SERRETT, F.R.C.S.I., is placed on temporary half-pay on account of ill-health, November 30th. He joined the service January 30th, 1886.

Deputy Inspector-General THOMAS PARR died at Dover on November 17th, aged 75 years. He was appointed Assistant-Surgeon, July 21st, 1846; Surgeon, October 21st, 1853; Surgeon-Major, July 1st, 1866; and Honorary Deputy Inspector-General on retirement, March 27th, 1872. He served with the 55th Regiment on the Bhootan Expedition in 1865, and was at the recapture of Dewangiri.

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT CAMPBELL BOYD, 3rd Volunteer Battalion the Queen's Royal West Surrey Regiment, to be Surgeon-Lieutenant, December 5th.

INDIAN MEDICAL SERVICE.

SURGEON-LIEUTENANT-COLONEL P. MURPHY, M.D., of the Bombay Establishment, is permitted to retire from the service from January 17th, 1895. He was appointed Assistant-Surgeon, October 1st, 1869; and became Surgeon-Lieutenant-Colonel, October 1st, 1889. He was in the Egyptian war in 1882, and was at the battle of Tel el-Kebir, receiving the medal with clasp and the Khedive's star.

Surgeon-Lieutenant-Colonel H. P. YELD, Bengal Establishment, has also retired from the service from November 15th. He dated as Assistant-Surgeon from March 31st, 1874; and as Surgeon-Lieutenant-Colonel from March 31st, 1894. He served in the Afghan war in 1879 with the Thull Chotiali and Vitakri Field Forces, and has the medal granted for the campaign.

THE VOLUNTEERS.

SURGEON-LIEUTENANT R.M. ROBERTSON, M.B., 1st Edinburgh (City) Artillery, has resigned his commission, which bore date April 29th, 1891.

Surgeon-Major I. MOSSOP, 2nd West Riding of York Artillery (Western Division Royal Artillery), is promoted to be Surgeon-Lieutenant-Colonel, December 5th.

The undermentioned gentlemen have been appointed Surgeon-Lieutenants to the corps named, dated December 5th: JOHN JOSEPH O'HAGAN, M.B., 5th (Irish) Volunteer Battalion the King's Liverpool Regiment; RUSSELL COOMBE, 1st (Exeter and South Devon) Volunteer Battalion the Devonshire Regiment; Lieutenant R. T. FERGUSON, M.B., 6th (Fifeshire) Volunteer Battalion the Royal Highlanders. The last named officer joined his corps as Second Lieutenant, June 21st, 1890, and was promoted to be Lieutenant, May 26th, 1894.

The Volunteer Officers' Decoration has been conferred upon the following officers: Surgeon and Hon. Surgeon-Major JOHN BURNS, retired, 2nd Volunteer Battalion the East Lancashire Regiment: Surgeon-Major J. S. HOLDEN, M.D., 2nd Volunteer Battalion the Suffolk Regiment: Honorary Assistant-Surgeon T. J. COTTLE, 2nd Volunteer Battalion the Gloucestershire Regiment.

INDIAN ARMY CORPS ORGANISATION.

THERE is much speculation among medical officers in India as to whether the "personal assistants" to the principal medical officers of the Army Corps will be civilian clerks or army medical officers. It is to be hoped that the latter will be placed in the positions of secretaries, although without that designation. This is the only link of connection possible between a medical chief and his subordinate officers.

REFORM IN THE MEDICAL DIVISION, WAR OFFICE.

STRIKING support has been given of late in the *Army and Navy Gazette* to the views we expressed as to the urgent need for reform in the distribution of duties. A general officer now comes into the field, and, while extolling the zeal, ability, and devotion of army surgeons, bitterly complains of the administration of the department. The last issue of the *Army and Navy Gazette* (December 1st) inserts some exceedingly pointed letters.

MILITIA MEDICAL STAFF CORPS.

SURGEON-CAPTAIN is informed that the corps to which Dr. T. W. J. Kelly was lately appointed has nothing to do with any Militia regiment; its name "Militia Medical Staff Corps" has misled others besides him. It is formed on the lines of the Volunteer Medical Staff Corps, only that the men are enlisted like other Militiamen, and we presume the officers have the same status as other Militia officers. The appointment of regimental Militia surgeons ceased with the adoption of the unification system, and the charge of the Militia became thereby thrown upon the already undermanned regular Medical Staff. There is no medical provision for a general embodiment of the Militia on a "great emergency." We suppose the so-called "Medical Reserve" would be absorbed for such duty, or medical charge would be let out at "contract rates." With regard to the latter, which our correspondent had accepted, and found quite inadequate for the duties demanded, we fancy they will be held to cover all duties, and that extra remuneration will be refused on the simple ground of "contract." He will be wiser when next offered such duties for such remuneration.

ARMY MEDICAL ORGANISATION.

AN article on the above subject appears in the *United Service Magazine* for December, and will be read with interest. Many matters it deals with, and reforms it advocates, have already found place in the BRITISH MEDICAL JOURNAL. Some of the proposals are untenable: for example, the extension of ages to 57, 62, and 66 respectively, for brigade-surgeons, surgeon-colonels, and surgeon-major-generals, and the abolition of retirement after twenty years' service—at all events, under the existing conditions of service in the Army Medical Staff.

The remarks on the new position of the Principal Medical Officer of an army corps, at the base, are in conflict with those made by the late Assistant Professor of Military Surgery at Netley in the introductory general remarks to the 4th edition, 1891, of the *Surgeon's Pocket Book*, revised and edited by the late Surgeon-Colonel Godwin.

The writer of the article in the *United Service Magazine* favours rank but not military titles. This does not appear to be the general feeling in the department, nor is it, so to speak, up to date.

PRESENTATION.

SURGEON-LIEUTENANT-COLONEL G. MITCHINSON, on the occasion of his recent retirement from the medical staff of the 3rd Lincolnshire Regiment, was presented by the past and present officers of the regiment

with a piece of plate bearing an inscription referring to his forty years' service in the battalion. The commanding officer in regimental orders, in referring to Surgeon-Lieutenant-Colonel Mitchinson's retirement, stated that he was "sure that in wishing him farewell and godspeed he expressed the sincere feeling of all ranks."

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

We are asked to state that no more tickets can be issued for the special concert and distribution of prizes of the Volunteer Ambulance School of Instruction by Major-General Lord Methuen, C.B., C.M.G., commanding the Home District, on Saturday, December 8th, at Crosby Hall. The applications received by the honorary secretaries have been too numerous to reply to individually.

VOLUNTEER MEDICAL STAFF CORPS.

The annual competition for the London Companies' Challenge shield took place at the Guildhall on November 28th, when three companies competed. Surgeon-Captain D. M. O'Callaghan, A.M.S., the newly-appointed adjutant, who acted as judge, gave his decision in favour of No. 1 Company. No. 5 being placed second, but stated that all three companies did work of almost equal excellence. The winning company, of which the officers are Surgeon-Captain Valentine Mathews and Surgeon-Lieutenant H. D. Brass, M.D., is drawn from the schools of University College, Middlesex, King's College, and Charing Cross Hospitals. The same company has been successful on three previous occasions. A gymnasium class recently started at headquarters promises to be as successful as the shooting clubs established some time ago.

EMPLOYMENT OF RETIRED MEDICAL OFFICERS.

Surgeon-Major Gardner.—The employment of retired medical officers, under the article of the Pay Warrant, is entirely at the discretion of the Secretary of State for War, on the recommendation of the Director-General Army Medical Department. Such officers have no "claim" whatever to employment in the sense of rights or lien over certain appointments; they are merely eligible up to 65 years of age, if not physically or otherwise incapacitated, for such appointments as the Director-General may deem them suitable for. They may apply for retired pay employment, but it rests with the authorities to offer it.

J. G. B., L.R.C.P., L.R.C.S.I.—The questions set at the examinations for the Army Medical Staff are not to be obtained in any collected form. They used formerly to be published in the appendices to the Army Medical Department Blue Books, but this has been discontinued. The general syllabus of the examination is to be found in the official instructions, which can be obtained at the Army Medical Department Office, 18, Victoria Street, Westminster, S.W. "J. G. B." should write to the Director-General, Army Medical Service, at the above address, and ask for the information he requires.

MEDICO-LEGAL AND MEDICO-ETHICAL.

"THE COVENTRY PROVIDENT DISPENSARY."

We have received the following letter, under date December 4th:

Sir,—The publication contained in the British Medical Journal of November 24th somewhat misrepresents our attitude in regard to the only important point in this discussion.

In that communication your correspondents dwell on the fact that they have challenged us to submit "our differences" to arbitration, but we have refused. In commenting on this you say in your editorial footnote: "The essential question in dispute is this—ought a provident dispensary to admit members at very low fees, under a rule specifying that 'the pecuniary position of the applicants is to be no bar to admission'?..... and all other personal questions are of no importance to the discussion, and of no interest either to the profession or the public."

In respect to the first portion of this note, we wish to make it quite clear that there is no issue between us as to the propriety of allowing well-to-do persons to enter a dispensary of this sort; on the contrary, we feel only too keenly the injustice of the proposal. We opposed it to the utmost of our power, and we are now engaged in an effort to induce the members and the committee to revert to the old rules, whereby the benefits of the institution will be confined to those for whom it was established, and we hope our efforts will be successful. It must, however, be borne in mind that we are not the governing body of the dispensary; we possess only two votes in a committee of twenty-four, so that we must rely on the justice of our cause for success. At the same time, we are perfectly convinced that we can do more in the desired direction than any court of arbitration; therefore, until we have tried and failed, we must protest against any interference from without as calculated to again excite the resentment of the dispensary members, as it certainly did before.

But, Sir, it is not this essential question that your correspondents have asked us to submit to arbitration; we have always been in harmony with them upon this point. They asked us to arbitrate about "our differences," and what are they? You have most appropriately described them in your footnote; they are "personal questions of no importance to the discussion, and of no interest either to the profession or to the public." This is exactly the "case" we have taken up throughout; we have consequently refused to submit our differences to arbitration, or to discuss them in public, and we are very pleased to know that in this course we are so fully supported by the weight of your judgment. Your correspondents are well aware that, with a view to settling our differences in private we have already gone quite half way to meet them: we are prepared to do so again, but we will not depart from our determination to avoid publicity in the matter.—We are, etc.,

D. McVeagh. Thos. S. Allan.
Mark Fenton. Charles Davidson.
W. J. Pickup. T. A. Hird.

THE ALABASTER v. HARNESS APPEAL CASE.

In the Appeal Court, on December 5th, the Master of the Rolls delivered judgment in the case of Alabaster v. Harness, in which Mr. C. B. Harness appealed against the judgment of Mr. Justice Hawkins in the action for maintenance brought by the publishers of the *Electrical Review*. The appeal was dismissed with costs, their lordships holding—according to the report of the judgment contained in the *Evening Standard*—that the attack in the article in question formed no part whatever of the ground of Dr. Tibbits's action, and that therefore the defendant, who had undoubtedly induced Dr. Tibbits to bring that action, must pay the amount of the costs incurred by the present plaintiffs in defending the action.

POLICE CASES IN SCOTLAND.

M.B. writes: A man is brought ashore after having been under water some time. The usual treatment for resuscitation was resorted to for two hours, but without restoring life. 1. Am I entitled to a fee from the authorities? I was not called to the case by police. 2. By appointment I met the authorities and gave evidence. Am I entitled to fee?

**** 1. It appears to us that our correspondent is not entitled to claim against the police a fee for attendance on the case, as he admittedly was not employed by the authorities, and his attendance was, in fact, a voluntary act of charity. 2. Apart from special information as to Scotch law, it seems to us that our correspondent was asked to attend the procurator fiscal as one of the persons able to give evidence, whose "precognition" that officer is bound by law to take. It does not appear to us, therefore, that our correspondent can demand a fee for this attendance, unless there is a special rule in Scotland to that effect.

CONSULTATION WITH QUALIFIED ASSISTANT.

J. E. A.—If our correspondent will refer to the British Medical Journal of December 1st, page 1279, he will, under the above heading, find our dispassionate opinion expressed in relation to the exceptional and weighty point involved in the case in question.

DISPENSARY ADVERTISEMENT.

A correspondent has drawn our attention to an advertisement of the Hulme Dispensary, which contains a report of the number of patients treated during a certain week. The statistics are preceded by a list of the honorary medical staff. Our correspondent asks for an expression of our views as to whether it constitutes "unprofessional advertising."

**** We may note that if it emanated from or is wittingly sanctioned by the medical staff, it would, in our opinion, involve them in an exceptionable and unethical position. If, on the other hand, as we assume, it is officially published on behalf and with the full knowledge of the committee of management, the staff must be held blameless in the matter. Now, however, that it has engaged the attention of practitioners and exception taken thereto, it behoves the staff courteously to protest against its continuance.

IRREGULAR CONSULTATIONS.

Town G. P. writes: I have a small property at R., five miles from B., the nearest station, and three from T., and it is about my own servant this misunderstanding has arisen. On October 24th I hear my gardener is ill with rheumatism. On October 25th I hear he is worse, and that Mr. L. had been sent for to come as early as possible on that morning. On October 26th I hear he did not call till evening, after a second message (he apologised for not calling earlier, being so busy): that the gardener was much worse, and that Mr. L. did not intend calling again till Saturday. Naturally I wished to see my own servant, and hurried down on the 28th. I found him seriously ill with acute rheumatism and sortic *bruit*. Temperature 102·2°, pulse 120, with attacks of dyspnœa. In the emergency, as Mr. L. was not likely to call for twenty or twenty-four hours, I prescribed. Having only two hours at R. it was impossible to communicate with Mr. L., but I wrote to him by first post on my return to town, saying what I had done, the reason I could not let him know of my visit, and asking him to meet me on the Sunday, which he refused to do. I had a precedent for what I did, as in 1893 another servant being ill with suspected scarlet fever, Mr. L. wrote for me to come down, but never met me, and went on attending the case, though I acted in precisely the same way. Mr. L. and I were quite friendly up till the present. He asked me to help him four times in urgent cases during my summer holiday, which I did without fee, and with much inconvenience to myself.

**** In relation to the comments made in the British Medical Journal of November 10th, page 1084, under the above heading, we have received from the accused practitioner the above letter, which to our mind bears the impress of truthful accuracy, and to which we give insertion as the best direct corrective to the errors in the statement of the "Country G.P.," and to so far modify and redress the reprehensory comments thereon.

CONSULTANTS AND GENERAL PRACTITIONERS.

G. P., M.D.—Assuming that our correspondent has not been unwittingly misled, and that his statements (the length of which unavoidably bars their insertion in our limited space) correctly represent the facts of the case, we would observe in answer to the following query which he submits: "Is it professional conduct for an 'M.D. consultant' to examine and prescribe three several times for a patient knowing that he is under treatment by a general practitioner, take a fee, and never to suggest or otherwise communicate with the practitioner in question?" that the alleged course of procedure is in direct contravention

of prescriptive and ordinary custom. The unethical position of the consultant referred to is accentuated by the averment that on the third interview he recommended the patient on an inadmissible pretext to reconsult his old medical adviser.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE LOCAL GOVERNMENT BOARD AND THE EARLY DIAGNOSIS OF DIPHTHERIA.

WE are informed by the Medical Officer that arrangements have been made in the Medical Department of the Local Government Board, which have for their object to assist medical officers of health in forming a correct diagnosis as to the character of certain forms of "sore throat" which are often associated with the beginnings of diphtheria prevalences. The plan to be adopted is practically that which was followed during the past two autumns with reference to the differentiation of cholera and diarrhœa.

As was the case in regard of cholera so it is understood that in the case of diphtheria the bacteriological investigations which will be made for the Local Government Board by Dr. Klein, F.R.S., are intended to secure the adoption, at an early date as practicable, of the necessary measures of prevention, and hence when once it has been ascertained that the disease in question is diphtheria no further material from other cases forming part of the same prevalence will be submitted to examination. The following are the conditions under which the material in question is to be transmitted:—

"The material to be transmitted is to be taken by scraping with a clean instrument from the surface of the tonsils or other suspicious-looking surface of the fauces. If membrane be present a small portion of it should also be included.

"The material should be at once placed in a small glass-stoppered bottle, previously washed out with clean water. No spirit or other fluid should be added. The bottle, which should then be properly secured and so packed, in cotton wool or otherwise, as to travel with safety by post, should be posted without delay to the Medical Officer of the Local Government Board, Whitehall, London, S.W.; and it should be accompanied by a history of the case, or of the outbreak of which its forms a part, signed by the medical officer of health for the district concerned."

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,357 births and 3,870 deaths were registered during the week ending Saturday, December 1st. The annual rate of mortality in these towns, which had increased from 16.9 to 17.3 per 1,000 in the preceding three weeks, further rose to 17.8 last week. The rates in the several towns ranged from 13.8 in Huddersfield 14.4 in Croydon, and 15.2 in Bristol to 23.5 in Gateshead, 23.7 in Oldham, and 25.1 in Swansea. In the thirty-two provincial towns the mean death-rate was 19.0 per 1,000, and exceeded by 2.9 the rate recorded in London, which was only 16.1 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London the rate was equal to 2.0, while it averaged 2.2 per 1,000 in the thirty two provincial towns, and was highest in Burnley, Blackburn, and Gateshead. Measles caused a death-rate of 3.0 in Leeds, 3.2 in Burnley, and 5.6 in Gateshead; whooping-cough of 1.1 in Halifax and 2.2 in Swansea; and "fever" of 1.2 in Wolverhampton. The mortality from scarlet fever showed no marked excess in any of the large towns. The 59 deaths from diphtheria in the thirty-three towns included 54 in London, 12 in West Ham, 4 in Birmingham, 3 in Liverpool, and 3 in Blackburn. Three fatal cases of small-pox were registered in Birmingham, but not one in London or in any other of the thirty-three large towns. There were 31 small-pox patients under treatment in the Metropolitan Asylums Hospitals but not one in the Highgate Small-pox Hospital on Saturday last, December 1st, against 51, 42, and 33 at the end of the preceding three weeks; 6 new cases were admitted during the week, against 3 and 2 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,258, 2,254, and 2,198 at the end of the preceding three weeks, had further declined to 2,148 on Saturday last; 191 new cases were admitted during the week, against 215 and 223 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, December 1st, 915 births and 611 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 20.3 and 21.3 per 1,000 in the preceding two weeks, further rose to 21.4 last week, and was 3.5 per 1,000 above the mean rate during the same period in thirty-three of the largest English towns. Among these Scotch towns the death-rates ranged from 14.4 in Leith to 24.4 in Paisley. The zymotic death-rate in these towns averaged 3.2 per 1,000, the highest rates being recorded in Glasgow and Aberdeen. The 313 deaths registered in Glasgow included 17 from measles, 6 from diphtheria, 6 from scarlet fever, and 11 from whooping-cough. Eight fatal cases of small-pox and 4 of diphtheria were recorded in Edinburgh.

FEE FOR LUNACY CERTIFICATION ON MAGISTRATE'S ORDER.

G. C. writes to say that by order of a magistrate he, in conjunction with another medical man, visited a supposed lunatic with a view to certification for a lunatic asylum; that the patient was subsequently sent to a pauper asylum, and that when he charged the guardians £1 1s., they declined to pay the fee on the ground that it should be on the same scale as for a pauper lunatic, though the patient in question had an income of 11s. weekly in excess of the payment made by him for maintenance in the asylum. G. C. asks for our opinion as to his claims.

*** We are of opinion that "G. C." is fairly entitled to a fee of £1 1s. for his certificate in this case, and should advise him to apply to the magistrate who authorised him to examine the patient, to make an order for the guardians to pay it, which he (the magistrate) has full power to do under Clause 285, Sec. i, of Lunacy Act, 1890. Should the magistrate refuse to make an order for payment, "G. C." can appeal to a Court of Quarter Sessions upon giving fourteen clear days' notice to the justice concerned under Clause 301, Sec. i, of the same Act.

SCHOOL CERTIFICATES.

R. S. informs us that he has been in the habit of furnishing certificates of illness demanded by the School Board authorities, free of charge, when the parents were poor; but that, having seen the answer to "M.D." in the BRITISH MEDICAL JOURNAL of November 10th, page 1083, he told a recent applicant to ask the School Board officer if he would pay for the certificate. The mother was summoned and fined at Worship Street, the offence being, as "R. S." understands, the non-production of a medical certificate. He adds that the woman was told by the school officer that a certain local practitioner would give the certificate for threepence!

*** The case, which does not by any means stand alone, is one of considerable hardship, but the remedy is not clear. It is at least doubtful whether the School Board have any power to pay for such certificates out of public funds, and, as false excuses are rife, the verbal assurance of the parents could scarcely be accepted as a sufficient proof of illness. On the other hand, the parents are often ill able to afford any fee for a medical certificate, and medical practitioners have already a sufficient load of compulsory charities without further additions being imposed upon them by public bodies. Nominally a medical certificate is not necessary, but nothing short of it is likely to be accepted as a defence when the parents are prosecuted or threatened with prosecution for not sending a sick child to school.

DISPENSARY AND PAROCHIAL MEDICAL ATTENDANCE.

J. N. d'E. writes: Ought a patient who is on a dispensary and being attended by her dispensary doctor at the same time as she is in the receipt of parish relief (10s. per week) be attended by the parish doctor or her dispensary doctor. If not by the parish doctor but by her dispensary doctor when and under what circumstances should she be attended by the former?

*** It would appear as if the patient in question could claim the attendance of either the dispensary or parish doctor, and it would be best to let her decide which of the two she prefers. It would be unreasonable of her to expect the attendance of both.

VISITING M. O. TO INFECTIOUS DISEASE HOSPITALS.

J. G. asks upon what scale the remuneration of a visiting medical officer to an infectious disease hospital under a conjoint board should be arranged—whether so much a case or whether it should be in proportion to the length of time the patient remains in hospital?

*** The financial arrangements vary greatly in different cases of the kind and it is difficult to suggest a basis without more knowledge of local conditions, such as the distance from home. Two guineas per patient or £100 a year as salary would perhaps be reasonable. A time tariff would not be advisable.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

CLINICAL TEACHING.—The General Board of Studies recommend that the Vice-Chancellor be empowered to confer with the authorities of Addenbrooke's Hospital with a view to establishing closer relations between the hospital and the University teachers in the departments of Medicine, Surgery, and Therapeutics. The examples of Oxford, Dublin, Manchester, and the Scottish Universities are cited as precedents.

STATE MEDICINE.—The State Medicine Syndicate report that in April and October of the present year fifty-six candidates presented themselves for the examination in Sanitary Science. Of these thirty-two were successful, and received the diploma in Public Health. The number of candidates having somewhat decreased, it is possible that one examination in the year may be found in future to be sufficient.

APPOINTMENTS.—The following medical graduates have been appointed to hold University office from January 1st, 1895: Dr. A. Macalister, F.R.S., a member of the Fitzwilliam Museum Syndicate; Dr. A. Hill, Master of Downing, a member of the Lecture Rooms Syndicate; Dr. B. Anningson and Dr. Joseph Griffiths, members of the State Medicine Syndicate; and Mr. G. E. Wherry, M.C., a member of the Special Board for Medicine.

SCOTTISH CONJOINT EXAMINATION IN PUBLIC HEALTH.

THE following candidate has been admitted by this Board a Diplomate in Public Health: R. Balfour Graham, F.R.C.S.Ed.

MEDICAL NEWS.

Dr. Russell Reynolds, Dr. Hermann Weber, Dr. Douglas Powell, and Dr. Cheadle, have been elected Consulting Physicians to the Royal National Hospital for Consumption, Ventnor.

The annual dinner of the past and present students of Mason College, Queen's Faculty of Medicine, was held at the Grand Hotel, Birmingham, on November 29th, under the presidency of Mr. Gilbert Barling, professor of surgery.

The members of the Oldham Medical Society recently presented Dr. Thomas Fawsitt with a piece of plate on the occasion of his recent marriage, as an evidence of the esteem in which he is held by his brother practitioners.

Donations and Bequests.—The late Mrs. Mary Ann George, of Hove, Sussex, has, by her will, bequeathed £500 each to the Sussex County Hospital, and to the Brighton and Hove Dispensary.—A donation of £500 has been received from Mr. William Debenham, for the building fund of the Paddington Green Children's Hospital.

Mr. Lennox Browne commenced a course of four lectures on Diphtheria at the Central London Throat, Nose, and Ear Hospital on Tuesday, December 4th. Subsequent lectures will be given on December 18th, January 15th, and January 29th, at 4.30 P.M. Medical practitioners are invited to attend.

A lecture, one of the Richard Middlemore Post-Graduate Lectures, will be delivered at the Birmingham and Midland Counties Eye Hospital, on Thursday, December 13th, at 4.30 P.M., by Mr. Henry Eales, Surgeon to the hospital, On Ocular Affections Caused by Blows. Illustrative cases will be shown, and qualified members of the profession are invited to attend.

Idiocy and Epilepsy in Livonia.—The newly founded Association for the care of Epileptics and Idiots in Livonia proposes soon to open asylums for the numerous idiots and epileptics in that province of the Russian Empire. The Baltic provinces have two such asylums, but Livonia, with more than 4,000 idiots and lunatics totally uncared for, has at present no institution in which they can be received.

A Pasteur Institute at Algiers.—Thanks to the energy of Dr. Trolard and to the liberality of the Governor-General of Algiers, an antirabic institute, which is to bear the name of M. Pasteur, was opened in Algiers on October 1st. On the very day of opening, a woman and a child who had been bitten by stray dogs were brought to the institute for treatment.

Annuitants proverbially live long, but two instances which have recently occurred in Bristol are surely exceptional. In the one case legacies left to fifteen charities under the will of the late Mr. Ash, who died twenty-eight years ago, have only just fallen in. In the other two bequests of £600 each to the Bristol General Hospital and the Bristol Royal Infirmary by Mr. Thomas Davis, who died in 1854, have only become payable since the death of his wife last month.

The annual dinner of the past and present students of the Dental Hospital of London, Leicester Square, was held on December 1st, under the chairmanship of Mr. S. J. Hutchinson, who, in proposing the toast of "The Past and Present Students," said that £14,000 out of the total sum of £40,000 required for the rebuilding of the hospital remained to be raised. He believed that the addition to the General Medical Council of a representative of the 1,400 qualified dentists in England would add to the usefulness of that body. The toast of "The Hospital and School" was proposed by Sir J. Crichton Browne, and that of "The Visitors" was acknowledged by Sir Dyce Duckworth.

The Anglesey and Carnarvonshire Infirmary at Bangor was reopened on November 30th. The ceremony was performed by the wife of the Lord-Lieutenant of Anglesey, to whom a vote of thanks was proposed by Dr. Langford Jones, physician to the infirmary and Mayor of Bangor. The institution now has accommodation for twenty-eight patients, and has been reconstructed upon the most modern principles. The expense of reconstruction has been defrayed out of a bequest received from Mrs. Symes. The total value of this bequest was over £11,000. It was announced that Miss Paynter, who had received her nursing training at the Liverpool Royal Infirmary, and who speaks the Welsh language, has been appointed lady superintendent.

Quinine and Colonisation.—The Conseil Général of Algiers has contributed £20 to the public subscription set on foot by M. Mézières, of the French Institute, for the erection of a statue of the late Dr. F. C. Maillot in the Market Place of Briey, his native town. Maillot did a memorable work by his advocacy of sulphate of quinine in large doses in malaria. Had it not been for him, it is believed that the paludal poison (which at Bône, for instance, used to cause a mortality of 1,100 in a strength of 5,500 men) would have driven the French out of Algeria. It is almost needless to add that Maillot's proposal was at first vehemently opposed, and his claim to recognition afterwards denied. For ten years (1840-50) he fought a bitter fight, but finally his persistency triumphed, and the sulphate of quinine came into general use. A suggestion has been made that the pension which was granted to Maillot, who was a military surgeon, should be continued to his widow.

Consumptive Homes for the West of Scotland.—A sum of £13,265 has already been put into the hands of Mr. Quarrier, the founder of the Orphan Homes of Scotland, for the erection of homes for consumptives. The homes are at present in course of erection at Bridge of Weir, seventeen miles from Glasgow, in the immediate neighbourhood of the orphan homes. Mr. Quarrier's present expectation is to have accommodation in a series of houses for 200 consumptives, each occupying a separate room. At Bridge of Weir, where these houses are being built, there is already a small village in the form of the houses of the orphan homes, and a community of about 1,200, mainly children, belonging to it. In connection with the group of houses one is about to be built for the treatment of infectious diseases.

Harveian Society of London.—The annual dinner of the Society took place at the Criterion Restaurant on November 22nd. The President, Mr. G. Eastes, was chairman, and was supported by Dr. F. W. Pavy, Mr. A. E. Durham, Mr. Jonathan Hutchinson, Dr. Ward Cousins, Mr. Charters Symonds, Mr. Francis Fowke, several past Presidents of the Society, and about seventy other members of the Society and their friends. During dinner the Royal Handbell Ringers, in Elizabethan costume, played a selection of music on their carillon of 131 bells. After dinner the toast of "The Queen" was proposed by the President. The toast of the evening, "Success to the Harveian Society," was proposed by Mr. A. E. Durham, who spoke of the venerable years to which the Society had now attained, the number of distinguished men who had filled its chief offices, and the excellent work it had done in the past and was still achieving. In his reply the President specially drew attention to the success of the Society amongst general practitioners in Paddington and Marylebone, and showed the great advantages its membership offered those gentlemen. Lastly he called upon the Treasurer (Mr. Cripps Lawrence) also to reply. Mr. Lawrence was able to announce, the first time for some years, that the Society was now free from debt and might shortly hope to add somewhat to its funded property. Mr. Howard Marsh proposed "The Sister Societies and the Guests," for which Dr. Pavy, President of the Pathological Society, and Dr. J. Ward Cousins, President of the Council of the British Medical Association, returned thanks. The next toast, "The President," was proposed by Dr. Stephen Mackenzie, and acknowledged by Mr. Eastes, who spoke of the excellent public spirit that animated the members of the profession and which assured the success of the Harveian and other medical societies. He ended by proposing "The Health of the Honorary Secretaries" (Dr. R. Boxall and Mr. Peyton Beale), who had greatly assisted him during his year of office, whilst to Dr. Boxall was largely due the success of the dinner. The honorary secretaries each acknowledged the toast. The pleasures of the evening were much enhanced by songs, excellently rendered by Messrs. J. Gawthrop and H. Pope, who were accompanied on the pianoforte by Mr. H. W. Richards.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House Surgeon. Salary, £50 per annum, with apartments and board. Applications to the Chairman of the Medical Board by December 13th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £150 per annum. Applications and testimonials to A. Forrest, Secretary, before December 12th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Appointment for six months. Board, residence, and allowance for washing provided. Applications to the Secretary at the Office, 24, Finsbury Circus, E.C., by December 13th.

GOVAN COMBINATION PAROCHIAL BOARD.—Medical Officer for the Poorhouse, Hospital, and Asylum at Merryflatts, Govan. Salary, £300 per annum, with free house, coal, gas, and water. Applications marked "Medical Officer" to be addressed to the Chairman of House Committee, 7, Carlton Place, Glasgow, by December 14th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury.—House-Surgeon to Out patients (non-resident). Appointment for six months, but holder will be eligible for a second term of office. Salary, 25 guineas. Applications to the Secretary, by December 11th.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon; unmarried. Salary, £50 per annum, with board and lodging. Applications to the Secretary by December 29th.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for the Fever Hospital at Monsall; doubly qualified, not less than 25 years of age. Salary, £230 per annum, with board and residence. Applications to the Chairman of the Board by December 15th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, Shoreditch, N.E.—House-Physician. Appointment for six months; at expiration of this term he will be required, if eligible, to serve as House-Surgeon for further period of six months. Salary as House-Physician at the rate of £60 per annum, and as House Surgeon at the rate of £80 per annum. Doubly qualified. Applications to the Secretary, at the City Offices, 27, Clement's Lane, Lombard Street, E.C., by December 18th.

OWENS COLLEGE, Manchester.—Junior Demonstrator in Anatomy. Annual stipend £100. Applications to the Registrar by December 10th.

PADDINGTON GREEN CHILDREN'S HOSPITAL.—Honorary Physician to Out-Patients. Applications to the Secretary by December 15th.

ROYAL BERKS HOSPITAL, Reading.—House-Physician, House-Surgeon, and Assistant Medical Officer. Salary, £60 per annum each for the first two appointments, with board and lodging. For the third appointment board and lodging will be provided, but no salary. Applications to the Secretary before December 11th.

ROYAL EAR HOSPITAL, Frith Street, Soho Square.—House-Surgeon (six months' appointment). Honorarium, 12 guineas. Applications to the Medical Board by December 15th.

SALFORD UNION INFIRMARY, Hope, near Eccles.—Assistant Medical Officer, doubly qualified. Salary, £130 per annum with furnished apartments in the Infirmary. Applications endorsed Assistant Medical Officer, to T. H. Bagshaw, Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by December 11th.

SHEFFIELD GENERAL INFIRMARY. — Assistant House-Surgeon; doubly qualified. Salary, £80 per annum, with board, lodging, and washing. Appointment for three years. Applications to the Medical Staff of the Sheffield General Infirmary to the care of the Secretary by December 8th.

SHEFFIELD UNION.—Junior Assistant Resident Medical Officer to the Workhouse Infirmary, Fir Vale; doubly qualified. Appointment for six months. Salary at the rate of £25 per annum, with board, lodging, and washing. Applications to Joseph Spencer, Clerk to the Guardians, Union Offices, Sheffield, by December 11th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon; tenable for six months, board and lodging are provided. Applications and testimonials to R. J. Gilbert, Secretary Superintendent, before December 12th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Anæsthetist (Honorary and Non-Resident). Applications and testimonials to R. J. Gilbert, Secretary-Superintendent, before December 12th.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard Street, Soho, W.—Honorary Surgeon and Resident Medical Officer. Applications to the Secretary by December 20th, at 10 o'clock.

WESTMINSTER HOSPITAL. — Fourth Assistant Surgeon. Must be F.R.C.S Eng. Candidates must transmit certificate of age, and attend the House Committee on January 1st.

WOLVERHAMPTON EYE INFIRMARY.—House-Surgeon. Salary, £80 per annum, with rooms, board, and washing. Applications to the Secretary by December 17th.

MEDICAL APPOINTMENTS.

ADAMS, Alfred, M.A., M.B., B.Ch Oxon, M.R.C.S., L.R.C.P., appointed House-Physician to the Radcliffe Infirmary, Oxford.

ARNOLD, E. G. E., L.R.C.P., M.R.C.S., appointed Senior Obstetric House-Physician to St. Thomas's Hospital.

BLACKER, A. Barry, M.D., B.S.Durh., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

CUFF, A. W., B.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital (extension).

DICKSON, H. A., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital (extension).

DUDGEON, Dr., appointed Medical Officer for the No. 8. (South Hackney) District of the Hackney Union, *vice* W. P. Bottomley, M.R.C.S.

EDMUNDS, Percy James, M.R.C.S., L.R.C.P., B.Sc.Lond., appointed District Medical Officer for St. James, and Public Vaccinator for St. James and St. Anne, under the Guardians of the Westminster Union, *vice* Corrie Jackson, F.R.C.S., L.R.C.P.Edin.

FISHER, J. H., M.B.Lond., F.R.C.S., appointed Senior Ophthalmic House-Surgeon to St. Thomas's Hospital.

GENGE, G. G., L.R.C.P., M.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital.

GRUNBAUM, A. S. F., M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed Non-Resident House-Physician to St. Thomas's Hospital (extension).

GRIFFITHS, J., M.A.Camb., M.D.Edin., appointed Assistant Surgeon to the Addenbrooke's Hospital, Camoridge.

HALLIWELL, T. O., L.R.C.P., M.R.C.S., appointed Clinical Assistant to the Special Department for Diseases of the Throat at St. Thomas's Hospital.

HARDING, H. W., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

HAWARD, H. H., L.R.C.P., M.R.C.S., appointed Clinical Assistant to the Special Department for Diseases of the Skin at St. Thomas's Hospital.

HEAVEN, J. C., L.R.C.P.Lond., M.R.C.S., reappointed Medical Officer of Health for the Keynsham Rural Sanitary District.

JOYCE, J. H., B.A., M.B., B.C., appointed House-Surgeon to the Kent and Canterbury Hospital, *vice* A. C. Elliman, M.R.C.S., etc., resigned.

JOHNSON, H. Oswin, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator to the Parkes District of New South Wales; also Surgeon to the Parkes District.

KING, A. F. W., L.R.C.P., M.R.C.S., appointed Clinical Assistant to the Special Department for Diseases of the Throat at St. Thomas's Hospital (extension).

LAVER, J. W., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital (extension).

LAYTON, F. G., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

MERRY, W. J. C., M.B., B.Ch.Oxon., appointed House-Surgeon to St Thomas's Hospital (extension).

MILES, William Ernest, F.R.C.S.Eng., appointed House-Surgeon to the Radcliffe Infirmary, Oxford.

MISKIN, L. J., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital (extension).

NICHOLSON, T. G., B.Sc.Lond., L.R.C.P., M.R.C.S., appointed Non-Resident House-Physician to St. Thomas's Hospital (extension).

PEGGE, E. V., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer for the Briton Ferry District of the Neath Union, *vice* Charles Pegge, M.R.C.S., resigned.

PORTER, W. E., M.D.Edin., D.P.H.Camb., appointed Public Vaccinator for the Wood Green District of the Edmonton Union.

RUSSELL, E. A., M.B.Lond., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

SAUNDERS, E. A., M.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital.

STARK, J. Nigel, M.B., F.F.P.S.G., appointed Assistant Obstetric Physician to the Glasgow Maternity Hospital.

STEPHEN, Cecil E., M.B., C.M.Edin., appointed Medical Officer of Health to the North Witchford Rural Sanitary District, *vice* E. B. Stephens, L.F.P.S.Glasg., resigned.

TINLEY, W. E. F., M.B., B.S.Durh., appointed Junior Obstetric House-Physician to St. Thomas's Hospital.

TOOMBS, G. H., L.R.C.P., M.R.C.S., appointed Junior Ophthalmic House-Surgeon to St. Thomas's Hospital.

VINCENT, H. B., M.R.C.S.Eng., appointed Medical Officer of Health to the Erpingham Rural Sanitary District, *vice* S. T. Taylor.

WALLACE, L. A. R., B.A., M.B.Oxon., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

WATTS, Dr., appointed Medical Officer for the Ilchester District of the Yeovil Union, *vice* George Durrant, L.R.C.P., L.R.C.S.Edin.,

WEST, Samuel, M.D., F.R.C.P.Edin., appointed Examiner in Medicine at the University of Oxford.

WILSON, John T., M.B., C.M.Aberd., appointed Medical Officer of Health to the Lanark County Council.

ERRATUM.—In announcing the appointment of Dr. W. A. Bond to the medical officership of St. Olave's District, Southwark, published last week, it was incorrectly stated that his predecessor, Dr. F. P. Wightwick, was deceased.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Hurry Fenwick: On the Value of Exciting Cellulitis in certain Urinary Diseases. Mr. Spencer Watson: A case of Cystic Polypi of the Nose, with Specimens and Drawings.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Dr. J. E. Squire: The Influence of Heredity in Phthisis.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Mr. Oliver Pemberton, F.R.C.S.: The Bradshaw Lecture, On James Syme, Regius Professor of Surgery in the University of Edinburgh, 1833-1869, a Study of his Influence and Authority on the Art and Science of Surgery during that Period.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, 3 P.M.—Lecture by Dr. Beevor.

HUNTERIAN SOCIETY, 8.30 P.M.—(Pathological Evening.) Dr. Arnold Chaplin: Thoracic Aneurysm. Mr. J. H. Targett: Primary Cancer of the Bladder. Mr. Tubby: Acute Arthritis in an Infant. Dr. Glover Lyon: Complete Fibrosis of Lung, with extensive Fibrosis in other organs. Dr. Hingston Fox: Cerebral Abscess. Dr. Fred J. Smith: Notes of a case of Typhoid Fever treated by the Continuous Bath.

LARYNGOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, 5 P.M.—Cases, Specimens, etc., by Mr. A. A. Bowlby, Mr. H. T. Butlin, Mr. A. E. Durham, Mr. R. Lake, Dr. Felix Semon, Mr. Walter G. Spencer, Dr. Scanes Spicer, Mr. Charters J. Symonds, and Dr. W. McNeill Whistler.

POST-GRADUATE COURSE, WEST LONDON HOSPITAL, Hammersmith, W., 5 P.M.—Dr. Garrod: Chorea.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Mr. Herbert W. Page: Second Harveian Lecture on Some Disorders of Nervous Function due to Injury and Shock.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY, Great Northern Central Hospital, 9 P.M.—Dr. James Galloway: On the Bacteriological Diagnosis of Diphtheria; illustrated by Cultures and Lantern Slides.

SOUTH-WEST LONDON MEDICAL SOCIETY, Bolingbroke House, Wandsworth Common, 8.30 P.M.—The discussion on Mr. Dickinson's paper, Professional Remuneration, will be reopened by Mr. T. A. I. Howell.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Specimens. Dr. Bantock: Hæmatosalpinx and Tubal Gestation contrasted.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 8.30 P.M. Card Specimens at 8 P.M.—Mr. Lang: A case of Cataract with Crystals in the Lens, with Microscopical Specimens. Mr. H. Work Dodd: (1) A New Pince-nez; (2) a case of Congenital Perianopsia; (3) a case of Congenital Lens Opacity. Dr. Bronner: (1) Wire Eye Shield for use after Cataract Operations; (2) Benno's Writing Paper with Raised Lines for the use of the Blind. Mr. G. Lindsay Johnson: (1) Removal of Lenses in a case of Myopia; (2) Symmetrical Markings in a case of Lamellar Cataract. Papers: Mr. George Lawson: Plastic Cellulitis of the Orbit. Mr. J. B. Lawford: A case of Hydatid Cyst in the Orbit; Removal. Mr. G. Hartridge: Osteoma of the Conjunctiva. Mr. C. D. Marshall: Notes on Hardening of Eyes in Formal, with Specimens and Microscopical Sections. Dr. Adolf Bronner: Notes on a case of Papillary Conjunctivitis due to Prolonged Internal Use of Arsenic.

FRIDAY.

CLINICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Washbourn, Dr. E. W. Goodall, and Mr. Card: A series of eighty cases treated with Diphtheria Antitoxin. Dr. Kesteven: Somes cases of Rapid Cure of Diphtheria by means of Antitoxin. Dr. E. W. Goodall: An unusual case of Tracheal Diphtheria.

EPIDEMIOLOGICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, 8 P.M.—Dr. Klein, F.R.S.: The Relation of Bacteria to their Toxins.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BROADHURST.—On November 4th, at Woodwal, St. John's Wood Road, Bournemouth, the wife of C. Henson Broadhurst, L.R.C.P., M.R.C.S., L.S.A., of a daughter.

CARTER.—On November 27th, at The Poplars, Rastrick, Yorks, the wife of Wm. R. Carter, M.B., C.M., of a daughter.

HOOLEY.—At Buxmore, Cobham, Surrey, on December 2nd, the wife of Arthur Hooley, M.R.C.S., L.R.C.P.E., of a son.

POTTER.—On Tuesday, November 27th, at Cullompton, the wife of John Hope Potter, of a son.

MARRIAGES.

MARSHALL—MACKIE.—At Hyndland Church, Kelvinside, Glasgow, on November 27th, by the Rev. Henry Gray Graham, Surgeon-Captain H. G. Marshall, 17th Bengal Cavalry, to Elizabeth only daughter of the late N. M. Mackie, of Edinburgh.

ROGERS-TILLSTONE—MCCALL.—On November 30th, at Kelvinside, by the Rev. J. Frazer Graham, John M. Rogers Tillstone, M.R.C.S., L.R.C.P.Lond., of Ditton, near Maidstone, to Rosie, youngest daughter of the late Captain Alex. McCall, Chief Constable of Glasgow.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. F., 2.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Th. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Ear, Tu. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—M. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9, Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

LONDON TEMPERANCE HOSPITAL. *Hours of Attendance.*—Medical, M. Tu. F., 2; Surgical, M. Th., 2. *Operation Days.*—M. Th., 4.30.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1.30, S., 2; (Obstetrical), Th., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL EYE HOSPITAL, Southwark. *Hours of Attendance.*—Daily, 2. *Operation Days.*—Daily.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, S., 3; females, W., 9.45. *Operation Days.*—M., 2, Tu. 2.30.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 5, Th., 2, F. (Women and Children), 2, S., 4. *Operation Days.*—W. and F., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), M., 2.30, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30. *Operation Days.*—W. Th., 1.30; S., 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, Tu. F., 9.30; Ear, M., 9; Skin, W., 4; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A PLAGUE OF FLEAS.

FLEA BANE writes: I shall be glad to be informed how I can get rid of a plague of fleas. I have a patient (elderly lady) who is beset day and night by these pests, her rest broken and her body covered with sores brought on by scratching their bites. Everything about patient and premises is kept strictly clean. I want something that may be used to keep them away from my unfortunate patient.

THE CLIMATE OF ROME.

M.D. asks whether Rome would be a healthy residence for a lad, aged about 14, during winter and spring?

*** If the boy is properly looked after by persons who understand the necessary conditions of healthy life in Rome there is no more danger than there would be in Paris or Berlin. There are risks and dangers associated with all travel, and they can only be avoided by those who understand them and take precautions to escape them.

DISINFECTING APPARATUS.

DISINFECTOR asks medical officers of health and others to give their opinion as to the best and cheapest disinfecting apparatus for workhouse hospitals and rural purposes.

*** See answer to "M.B., M.A." in the BRITISH MEDICAL JOURNAL of October 27th, page 963. An economical and efficient steam apparatus by Reck, of Copenhagen, has lately been introduced into this country.

MIDWIVES "COVERING."

HUNTINGDONSHIRE writes: Mrs. S. came to my house and said, "I have engaged Mrs. B. (an unqualified midwife) to attend me in my confinement. Should any difficulty occur which she cannot manage, will you come up?" I declined. Upon which she said the other doctors would come. Had I consented should not I have laid myself open to a charge of covering, and if so what steps can I take to prevent the other doctors doing so (if they do so); as naturally, if patients can get Mrs. B. to attend them for 3s. 6d., with the certainty that a doctor will attend if necessary, they are not likely to engage a doctor in the first place, and his number of confinements must necessarily diminish?

*** The case described could not be regarded as "covering" without a much wider definition of that offence than the General Medical Council has hitherto promulgated.

ANSWERS.

W. A. should consult his family medical attendant, or any experienced medical practitioner in the town in which he resides, who will be able to advise him. We do not give advice to patients.

NOBIS JACOBIS.—Income derived from dividends should not be declared in the annual statement of income, as by so doing there is a liability to a double assessment. This is explained fully in *Income Tax: How to Get it Refunded*, by Alfred Chapman, which can be obtained from the Income Tax Repayment Agency, 6, Chichester Road, Paddington, London, W., price 1s. 6d. post free.

J. F.—The next edition of the *British Pharmacopœia* must not be expected so early as 1895. The interval between the last two editions was eighteen years, and that between the present and the next is not likely to be less than twelve or thirteen. The current edition was published in 1885, and, as it is intended to take the opinion of Indian and Colonial authorities, the work of preparing a new edition cannot be undertaken for another year or so.

THE SOCIETY OF MEDICAL PHONOGRAPHERS.

P. G. G.—Particulars as to the constitution of the Society of Medical Medical Phonographers, together with the address of the Honorary Secretary (Dr. Neil, Warneford Asylum, Oxford), will be found in the BRITISH MEDICAL JOURNAL of December 1st, page 1229.

CLINE'S SPLINT.

J. W. C., in reply to "Cymro" writes: The splint with a foot-piece is intended to be placed on the outside of the leg, whenever the limb is placed in the side position. In many cases of fracture splints with foot-pieces can be applied with advantages on both sides.

BOOKS.

MEMBER B. M. ASSOCIATION.—Our correspondent might consult (1) on vaccination, Dr. E. J. Edwardes's *Vaccination and Small-pox* (London: J. and A. Churchill); (2) on cremation, Sir Henry Thompson's *Modern Cremation* (London: Kegan Paul, Trench and Co.), and Sir Douglas Galton's *Cremation* (London: Bemrose and Sons); and (3) on inebriety, Dr. Norman Kerr's *Inebriety, its Etiology, Pathology, Treatment, and Jurisprudence* (London: H. K. Lewis).

LOW CLUB RATES.

J. E. M. J.—If the charge of fifteen pence for a family consisting of husband and wife and all children under 14 years is the club rate per quarter, it is much too small and considerably below the average paid by most clubs, that is in urban districts. No medical practitioner can be advised to accept such a rate of payment; at the same time it is quite impossible to formulate any rate of medical fees for our correspondent as this must necessarily be regulated altogether by circumstances best known to himself and concerning the cogency of which he must be by far the better judge.

"ANTITOXINE."

J. E. B.—The drug referred to in the circular forwarded to us is, in it, stated to be a coal tar product. It is very much to be regretted that the manufacturers should have pitched upon a word already possessing a distinct pathological significance as a term for a particular proprietary drug. It would certainly seem to be very desirable that some new name should be found for this particular drug. It has, of course, nothing at all to do with the antitoxin serum used for the treatment of diphtheria.

RIDER'S THIGH.

DR. WILLIAM DOBIE (Keighley) writes: In answer to Mr. J. Raley's inquiry about a suitable bandage for "rider's thigh," let me recommend him to apply to Messrs. Ira Ickringill and Co., Keighley, who are bringing out an elastic cloth which will answer the purpose; and it has this great advantage, that it can be washed with soap and hot water without its elasticity being impaired.

MICROPHONE STETHOSCOPE.

DR. JNO. R. PHILPOTS (Moorcroft, Parkstone) writes: Probably "W. G." overlooked the description of a microphone stethoscope I invented a few years ago; a drawing with letterpress appeared in most of the medical papers, I believe; some thousands are at present in use. It is most simple in construction, and consists of a small oval chest piece of vulcanite, with two pieces of india-rubber tubing, each having vulcanite ends; one fitting into the chest piece, the other for the ears. It takes but little room, and can be carried either in the waistcoat or pistol pocket. The intensity can be demonstrated by inserting the chest piece into a hole made in a cardboard box, introducing a fly, replacing the lid; the insect can be heard walking over the diaphragm. J. Richardson and Co., Leicester, are the manufacturers.

"COVERING," DEATH CERTIFICATES, AND UNQUALIFIED PRACTITIONERS.

J. H. M.—The case reported is a very important one, and it is difficult to understand why the delinquent was not prosecuted by the Registrar-General, who, we are advised, is the only person empowered by law to take any steps against the giver of a false death certificate. If our correspondent were to communicate with the M.P. for his division he might possibly get him to ask a question in Parliament on this matter, but it is to be feared there is no other remedy in the present state of the law. The conduct of the principal in this matter is much to be condemned if all the facts stated are correct, and if accused before the General Medical Council of "covering" this assistant he might find it difficult to defend himself by the plea of ignorance that his assistant was unqualified, especially where a few months later he takes on the same man as his assistant again, the latter having got a diploma in the interval. It is obviously the duty of every principal who employs an assistant in any professional business requiring the skill and knowledge of a duly qualified practitioner to ascertain before engaging him whether or not his name is on the *Medical Register*: if he does not do so he ought plainly to be held responsible.

COOKING BY GAS.

IN answer to "Pensioner, M.D.," Dr. Atkinson, of Sherborne, writes, giving his experience of cooking by gas. In June he put in an oven, and for the quarter ending September 30th his gas bill was £7 more than the corresponding quarter last year, while for one month of the time the family were away, only a *locum tenens*, the groom, and one servant being left. He had to pay for the fixing of the oven, the rent of it, and the purchase of pans, kettles, etc., and lost the hot water supply to the bath room. On the other hand, he saved from 30s. to £2 in coals, and his conclusion was: Where gas is cheap or coal dear use a gas cooking stove; where coal is cheap or gas dear don't. As he stated that the cooking stove was one of Fletcher's, we made inquiries from that firm, and received from Mr. Thomas Fletcher an interesting letter. He says: "I will take as an example the 14o size gas range, which is amply large enough to cook for ten persons. I have myself tested this connected to a 2-inch gas main[1] the maximum consumption, with every burner full on, is 72 cubic feet per hour. At the rate given by your correspondent the gas must have been full on at every burner every day for five and a-quarter hours. In practice a gas cooking range is

[1] BRITISH MEDICAL JOURNAL, November 17th, 1894, p. 1165.

working, on an average, at considerably less than one-half its maximum possible consumption, and, if the gas had been used for cooking in the ordinary way, this must have been going on continuously for more than eleven hours each day, which, of course, is absurd. It is abundantly evident that the gas has not been used for cooking purposes. I have met with one case still more striking than that of your correspondent, where the gas bill was increased some 30s. weekly. On sending to try to find out how the waste occurred, the messenger found all the burners of the range turned full on, no sign of any cooking being about. The cook said she was 'most careful,' she 'always turned the burners out before she went to bed,' and, of course, lighted it all again as soon as she came down in the morning. Probably the key to the difficulty in those cases where gas cooking appears expensive is to be found in the following sentence: 'There is always a greater risk of waste with gas than with coal—a gasburner will not extinguish itself if neglected as a fire will.' The common cook, using an ordinary range, finds it 'handy' to keep the oven always hot, and when such a person takes charge of a gas oven she deals with it in the same way, and no wonder the gas bills run up. But for people of intelligence, who will exercise care, there can be little doubt that cooking by gas, when this is of a reasonable price, is economical; but care means turning the gas out whenever it is not actually required."

NOTES, LETTERS, Etc.

Erratum.—In the report of the meeting of the Ophthalmological Society, published in the British Medical Journal of November 17th, p. 1113, the name of Mr. Kenneth Scott, of Cairo, was by a clerical error printed "Campbell."

Massage Certificates.

In reference to our massage articles, we have received a letter from Mr. Creedon, dated from the "Male Nurses' (Temperance) Co-operation, 8, Great Marylebone Street, Portland Place," stating that we are in error in saying that there is no real hospital which gives a certificate of competency in massage and electricity, because "The National Hospital (Albany Memorial), Queen Square, W.C., gives such a certificate to male nurses after twelve months' training if they pass the examination. During the winter months lectures are given on electro-therapeutics, physiology, anatomy, medical nursing, and antiseptic surgery; they also go through a course of practical training in the application of massage and electricity."

"The Surgery Paper at the London M.B."

Mr. Storer Bennett, F.R.C.S., etc. (George Street, W.), writes: Your correspondent, signing himself a "Member of the B.M.A.," by his letter in the British Medical Journal of December 1st, has evidently misunderstood "the second question, on follicular odontomes (dentigerous cysts)," which ends with the words, "With what other varieties of odontome are you familiar?" The question asked is not With what individual cases of odontome are you personally familiar? but What other kinds of odontome do you know or have heard of? such as cementomata, dentomata, etc. I cannot but think, therefore, that his strictures on the fairness of the examination at the University of London are unjust.

Lower Molar Abscess.

Dr. F. Isdell, M.A. (Shaftesbury Avenue, W.C.), writes: About a year ago a woman consulted me who had an alveolar abscess below the last molar on the left side of the lower jaw. As she was over eight months pregnant I explained to her the risk of entering on childbed with an abscess in her jaw; and she took a note from me explaining the necessity for immediate operation to a dental hospital which she selected. It was not the Leicester Square one. About two months afterwards she returned about some other ailment. She informed me that the hospital surgeon refused to operate on account of her condition. She then had the sense to take my note to Charing Cross Hospital, where she was at once admitted, and the operation performed. This proved more difficult than was to be expected, and she was kept in bed for some days. In the result she returned home, and got through her confinement without any trouble.

Leucocythæmia and Enlargement of the Spleen.

Dr. W. P. Herringham (Upper Wimpole Street, W.) writes: In the account of the meeting of the Clinical Society in the British Medical Journal of December 1st I am misreported as saying that a patient formerly in the Middlesex Hospital with leucocythæmia had now neither leucocythæmia nor an enlarged spleen. I did not mention his spleen. It is enlarged.

Epidemic Skin Disease and the Lay Press.

Dr. Thos. Savill (Upper Berkeley Street) writes: When I wrote you on October 13th disclaiming any connection with an article which appeared in the *Pall Mall Gazette* of October 11th containing a *precis* of my monograph on epidemic skin disease, I stated my belief that it would hardly be necessary to trouble you to publish my letter, as it seemed to me sufficiently obvious to anyone who read it closely that I could not be held in any way responsible for that article. Subsequent events have shown me, however, that a public disavowal is desirable, and I should esteem it a favour if you could find a place for this in your columns. Enclosed I beg to forward for your perusal a letter addressed to me by the Assistant Editor of the *Pall Mall Gazette* (dated that the article in the *Pall Mall Gazette* of October 12th on the new skin disease was not published at your instigation or suggestion, and, so far as I know, you read it, like the rest of the world, first in our columns. The writer was never in communication with you. He was, and is still, unknown to you."

Life Assurance and Medical Aid.

T. G. H. and H. de B. D.—Our correspondents entirely misapprehend the tenour of our remarks. We do not approve of the London and Manchester Assurance Society. Its rate of remuneration is grossly inadequate, and the "touting" alluded to has been over and over again condemned in these columns. It has been pointed out that there is a difference in principle between this society and the worst kind of medical aid society, and that the remuneration it offers is up to the average of the greater number of clubs and friendly societies in the metropolis, but that is quite another thing from speaking favourably of any societies of this kind. As to the public policy of insuring young children, that is quite another question. We were unaware that the main object of this association was to insure young children, and no evidence has ever come before us that the members were chiefly taken from the infantile portion of the community. No doubt children are frequently accepted as members, but we have no evidence that they greatly exceed in number adult members.

The "Dr." as Decoy Duck.

Delta writes: Having read a good deal of correspondence lately in the British Medical Journal concerning Medical Aid Societies, and having noticed particularly the remarks (*ib.* November 17th) about "cheap doctors," I venture to think the following notes may serve to emphasise those remarks: I practise in a small country town where, as elsewhere, there is the usual amount of club practice. Besides myself there are two other gentlemen here—acting together in partnership. A short time ago there appeared on the scene an individual to start, with great flourish of trumpets, a branch of one of these medical aid insurance societies. The firm above alluded to having been appointed medical officers of the same, two men proceeded to canvass the town, making a house-to-house visitation to work up members. All my poorer patients—both club and private—were visited, and persistently urged to join, many of them being visited two or three times. This process of "touting" does not, however, appear to have been very effectual. Now for the sequel. Last week another individual appeared and this time I was the "favoured" one for selection as a probable M.O. The individual is question is a traveller who often visits the town, and in course of business sees a great deal of the poorer class. He informed me "that he had heard of the 'booming' of the new society club in the town, and assured me it was met with very little success so far; that as I was very popular amongst the poor (I presume he meant amongst my own patients) he came to ask me to act as medical officer to a club which he himself proposed starting here with the purpose of cutting out this other bombastic affair." Out of curiosity I asked for particulars. This club was to start on a similar basis to the other, namely, a small fee per week for each member of a family, a certain sum at death, and men to canvass the town for patients and to collect the fees, a certain percentage being paid for this. I declined with "thanks." As Dr. Martin truly states, the low level is indeed reached when men think they can use doctors as decoy ducks like this.

The Saddle and Neurasthenia.

Saddle and Bridle writes: The British Medical Journal of September 8th discusses the subject of neurasthenia, which is stated to be "a nervous disorder in which there is both weakness and irritability of the nervous system." This is a class of case which proves most troublesome to many men. In fact a physician who can get a patient to throw off this helpless state and take on an energetic life certainly achieves a success which is not given to all. The fact that this disease is more rarely seen amongst the labouring classes than amongst the studious seems to favour golf and carpentering in the way of treatment, as mentioned in the discussion. Those unable to play golf might undertake horseback work, which treatment has given good results in a case belonging to a country practitioner, the particulars of which were given to me by the patient himself. With regard to saddle work the medical men of the present day have not had the experience of their forefathers. Forty years ago I believe that most medical men were practised horsemen; nowadays it is only the few, comparatively speaking, that that will account. I think, for this exercise not being more often recommended. In my opinion riding on horseback should not be forgotten in treating these cases.

Medical Education in Dublin.

L.R.C.P., L.R.C.S.Edin., L.F.P. and S.Glasg., writes: I was not a little surprised on reading the style of language in which Mr. Thornley Stoker's "admirable" inaugural address in the Journal of November 10th was couched. There are many points in his address on which I would like to touch, but space forbids me. I will only mention a few. I do not for a moment question the ability of this Dublin professor to teach, but what I ask is, Is there more teaching done in the public lecture theatre or in the private grind class? The fee for the latter used to be 18 guineas, which, with the already high fees not only for lectures but examinations, is more than the ordinary student can bear. There is a distinct grievance here, as evidenced by the recent agitation among the Dublin students. Scotland seems to be a sore point with Mr. Stoker. Now, in Glasgow private grinds are practically unknown. The professor is the "grinder," but it is in the public lecture theatre, not in the private class room, and without any additional fee. For instance, the first quarter of an hour in each lecture is taken up by an examination on the subject before, and in the anatomical department of St. Mungo's College, the Professor, in addition, devotes one day weekly to special tutorial instruction in the dissecting room. In all my time in Dublin I never heard a professor ask a question in the public lecture theatre. Mr. Stoker insinuates that Scotland is the royal road to learning. If I remember rightly, in a recent report by the Visiting Committee of Examinations the triple qualification received a high place. Those in glass houses should not throw stones. It is within the memory of all what took place some time ago regarding the examinations conducted by the R.C.S.I. and Apothecaries' Hall.

Circumcision.

Dr. W. Macfie Campbell (Consulting Surgeon, Northern Hospital, Liverpool) writes: Having had very extensive experience in this minor operation is my excuse for a few remarks upon Mr. Duke's letter in the British Medical Journal of December 1st. In their religious rites the Jews use no sutures, and after seeing a Rabbi operate some years ago I tried the same plan. My first case was most successful, but

as others were followed by prolonged granulation, evidently owing to separation of the divided structures by penile erection, I discarded this practice once for all. I now always divide or tear the mucous membrane up to the corona, trim it, and put in eight or ten thin catgut sutures, the more the better. I have also tried partial removal, sometimes successfully. I have had, however, to reoperate, or take great care to prevent contraction during healing, occasionally a painful procedure. There does not seem to me need of the elastic ligature round the base of the penis. The operation is almost bloodless, but immediately after division the frenum must be grasped and a ligature applied. Whether the frenum should be divided down is a moot point. I see no advantage either way, but if undivided there is a great deal more œdema about the part for the first few days.

I should advise Mr. Luke to try the following dressing: simply a pad of cotton wool, with a "lump" of vaseline in the centre, kept in position by a T bandage. It is a soft support to the parts, even better than lint, which may stick, and is easily changed by the nurse after urination. Mr. Banks used this dressing in operating upon my boy many years ago, and I have always employed it since. It has relieved the procedure of half its terrors. Simple dilatation, as so highly recommended by some surgeons, has disappointed me because it is very painful for days after, and we do not get rid of the long prepuce, which, as well as the contraction, may be a source of evil in after-life.

EUCALYPTUS USELESS AGAINST MALARIA.

UNDER the heading "The Passing of the Eucalyptus," the *Journal of the American Medical Association* states that the Consuls of the United States in Europe report unfavourably on the supposed virtues of the eucalyptus. The Trappist monks of Tre Fontane, three miles from Rome, have planted since 1873 no fewer than 50,000 trees on a few acres. In 1880 the Government established an agricultural colony of penitentiary convicts in quarters supposed to have been already improved by the eucalyptus. The convicts were surrounded by hygienic conditions far superior to those of the labourers of the Campagna, yet nearly all became stricken with malarial fever within a year after their arrival. In 1892 all the inhabitants of Tre Fontane were attacked. The guards at the colony had all to be changed. The efficacy of the eucalyptus for the improvement of the air is no greater than that of the elm, pine, and mulberry. If it recommends itself by rapidity of growth, the trees just mentioned recommend themselves by being hardier and more easily grown. Professor Liversidge, of the University of Sydney, stated long ago that in the southern hemisphere, where the eucalypti thrive best, there are forests of these trees where malaria is specially noxious. The tree itself is no ornament, the continually spontaneous peeling off of the bark producing an unsightly effect.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) Mr. H. Andrew, Exeter; Dr. T. C. Askin, Woodbridge; Mr. W. Arthur, Ipswich; Mr. W. C. Allardice, Macclesfield; Mr. D. W. Aitken, Edinburgh. (B) Dr. J. B. Bradbury, Cambridge; Dr. J. H. Bell, Bradford; Mr. J. G. Boyce, Wotton-under-Edge; Mr. A. B. Berry, Stanwell; H. A. Brooke, M.B., Manchester; Mr. J. H. Brooks, Seychelles; Messrs. Burroughs, Wellcome, and Co., London; J. W. Batterham, M.B., St. Leonard's; Dr. J. Brown, Bacup; Mr. P. T. B. Beale, London; W. L. Brown, M.B., Glasgow; Mr. S. Bullen, Bristol; Mr. S. Bennett, London; Dr. W. A. Bond, London; H. P. D. Benson, M.B., Pontrilas; Mr. J. E. Bayton, Watlington; Dr. F. W. Bennett, Leicester; Dr. P. Boulton, London; Dr. R. Boxall, London. (C) Mr. H. Collins, Birmingham; Church Society for the Promotion of Kindness to Animals, Secretary, London; F. Clark, M.B., Lowestoft; Dr. J. Cameron, Edinburgh; Mr. M. L. B. Coombs, Newport; Messrs. Cosenza and Co., London; R. Crawford, M.B., London; Mr. W. M. Campbell, Liverpool; J. A. Codd, M.B., Wolverhampton; Cambridge Medical Society, Secretary, Cambridge; Mr. H. Collins, Birmingham; Dr. J. Crabb, London; Mr. R. B. Chapman, London; Dr. W. A. Carline, Lincoln. (D) Mr. J. L. Dalby, Ipswich; Dr. T. M. Dolan, Halifax; Dr. E. Davies, Wrexham; C. L. Drew, M.B., London; Mr. T. J. Davies, Manchester; Dr. W. Dobie, Keighley; Mr. L. F. Dods, London; Mr. D. Donnelly, Widnes; Disinfector; Mr. C. Daniel, Georgetown. (E) Mr. H. Eales, Birmingham; Enquirer; Mr. T. S. Ellis, Gloucester; Mr. A. C. Evered, Albany; Dr. A. A. Edward, Rawtenstall; Mr. P. Edmund, London. (F) W. E. S. Finny, M.B., Kingston-on-Thames; Sir Joseph Fayrer, London; Mr. E. G. Firth, Leeds; Mr. T. Fletcher, Warrington; Mr. C. E. S. Flemming, Freshford; Dr. F. W. Forbes-Ross, New Brighton; Flea Bane; Dr. E. L. Fox, Plymouth; C. Forbes, M.B., London; Mr. L. Fletcher, Debenham; W. Fligg, M.B., Taunton; Mr. E. Frazer, Jersey; Dr. R. H. Fox, London. (G) Mr. L. Gamgee, Birmingham; Mr. P. G. Griffith, Buntingwood; Graduate; Mr. W. J. Green, Cardiff; Mr. G. B. Graham, Leven; Dr. J. Galloway, London; Mr. B. Gordon, London; Dr. H. Gabbett, Eastbourne; Mr. G. Govan, Cockermouth; Mr. J. G. Gornall, Warrington. (H) Dr. W. P. Herringham, London; Mr. A. Hamilton, Chester; Dr. J. B. Hellier, Leeds; Messrs. J. Halford and Sons, London; Mr. H. Hines, London; Mr. R. F. Harvey, Liverpool; Huntingdonshire; Dr. A. J. Hull, Rothesay. Mr. J. Hutchinson, London; Mr. H. Hastings, East Dereham; Dr. C. Harrison, Lincoln; W. Hardman, M.B., Blackpool; Mr. W. C. Hossack, Edinburgh; J. C. Hall, M.B., Monaghan; Dr. S. Hellier, Stowmarket; Mr. T. G. Horder, Cardiff; H.M.; Mr. G. Hudson, Huntingdon. (I) Dr. R. A. Ironside, London. (J) A. Jamieson, M.B., Pollokshields; T. H. Jones, M.B., Liverpool; Dr. C. M. Jessop, Redhill; H. S. W. Jones, M.B., Pendlebury; Mr. W. M. Jones, Rotherham; Dr. C. E. Jennings, London; J. F. (K) Messrs. King King and Co., London; Dr. P. Kidd, London. (L) Dr. H. A. Lawton, Poole; The Very Rev. Dean of Lichfield, Lichfield; Mr. A. Lèche, Axbridge; Mr. T. Lloyd, London; Dr. J. R. Leeson, London; Mr. A. J. Lancaster, Canterbury; Mr. K. M. Lumsden, Aberdeen; L.R.C.S.I.; Mr. A. E. Lovitt, London. (M) Mr. H. M. Morgan, Lichfield; Mr. V. Matthews, London; Dr. J. McNaught, Waterfoot; W. S. Melsome, M.B., Cambridge; Mr. L. B. Maurice, Marlborough; Member; Mr. R. W. Murray, Liverpool; J. Munro and Co., London; J. Macdonald, M.P., Inverness; Mr. E. F. Morris, Hereford; Dr. C. Muirhead, Edinburgh; Mr. F. H. Moore, Littleport; Mr. W. Maw, Bradford; Dr. T. H. Moorhead, Cootehill; Mr. L. J. May, London; Mr. K. Muxloe, Leicester; Medicus; Mr. T. F. Manning, London; J. W. Mason, M.B., Hull; Mr. H. G. Myles, Mullingar; Mr. G. Mannox, Leamington; B. H. Morris, M.B., Denbigh. (N) National Hospital for the Paralysed and Epileptic, Secretary, London; Dr. R. Neale, London. (O) J. E. O'Connor, M.B., Leicester; Dr. Openshaw, London; Dr. J. A. Offord, Norwich. (P) Messrs. Parke Davis and Co., London; Mr. J. H. Potter, Cullompton; Mrs. M. H. Piper, Darlington; Dr. W. E. Porter, London; J. Priestley, M.B., Rotherhithe; Mr. G. F. Parry, London; Mr. W. H. Pearse, London; Dr. R. Purnell, Wells, Somerset. (R) Dr. J. Robertson, St. Helens; Messrs. J. Raphael and Co., London; Mr. M. W. H. Russell, Shoeburyness; Royal National Hospital for Consumption, Secretary, London; Dr. H. D. Rolleston, London; Mr. G. Rendle, London; Dr. J. Rowat, Highworth; N. E. Roberts, M.B., Liverpool; Mr. T. F. Raven, Broadstairs. (S) Mr. H. W. Shettle, Southampton; Mr. E. Snape, London; Mr. C. H. Shears, Liverpool; Mr. K. Scott, Cairo; Mr. E. A. T. Steele, Plaistow; Dr. W. T. Stoker, Dublin; Messrs. Street and Co., London; Dr. J. E. Squire, London; Dr. F. F. Schacht, London; Dr. C. E. Shelly, Hertford; J. N. Stark, M.B., Glasgow; Dr. A. W. Sandford, Cork; Mr. R. Stoney, London. (T) Mr. J. P. Tildesley, Willenhall; Mr. A. J. Temperley, London; Dr. G. G. S. Taylor, Liverpool; Mr. W. Thornton, Bradford; A. Todd, M.B., Market Drayton; Dr. H. Tibbits, London; Mr. A. W. Thomas, Swaffham; A. J. Tonkin, M.B., Manchester. (V) Variola. (W) Mr. W. Watson, Rochester; Dr. S. West, London; W. P., M.B.; G. H. Weston M.B., Shirley; W. J. Watson, M.B., Wellington; Dr. R. Wallace, Greenock; Mr. E. S. Whitehouse, Birmingham; Mr. R. C. Worsley, Ramsgate; Dr. J. Wilson, Castleblayney; Dr. H. Woods, London; etc.

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*** In forwarding books the publishers are requested to state the selling prices.

SIXTY-SECOND ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.
Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF LARYNGOLOGY AND OTOLOGY.

P. McBride, M.D., President.

TYPHOID FEVER OF A PECULIARLY VIRULENT TYPE COMMUNICATED BY THE BREATH.

By P. Watson Williams, M.D.Lond.,
Senior Assistant Physician Bristol Royal Infirmary.

I record these five cases of typhoid fever from a single source, mainly in order to invite attention to some special points of interest, and more especially as tending to prove that typhoid fever may be communicated by the breath or expectoration of infected persons.

Though only one of these cases was under my care, I think it will simplify matters and render the course of events more appreciable if I relate the cases in the order in which they occurred, and not in the order in which they came under my notice.

The first case, E. S., aged 20, a painter, began to feel ill on February 9th with headache and general *malaise*, and on the 15th was admitted to the Bristol Royal Infirmary under Dr. Prowse. Shortly after admission the temperature was 104·6° F.; he was drowsy and complained of severe backache. There were several typhoid spots on the abdomen, and his spleen was enlarged.

On February 18th the case was notified as typhoid fever.

On February 20th the patient's symptoms had become more aggravated; he was delirious and continually trying to get out of bed.

On February 24th, the estimated seventeenth day, the morning temperature began to remit, but he was still delirious. For some days there had been a good deal of laryngeal and bronchial catarrh, and the patient was constantly coughing and expectorating about the bed. He began to improve, and by February 28th the condition of the patient was considerably better, the temperature had fallen by lysis and on this day reached the normal, but later in the afternoon he began to have a relapse.

On March 7th, seven days later, he developed fresh typhoid spots and the temperature reached 103°. There was now discharge of pus from his right ear, and epistaxis had occurred on two occasions.

March 10th. Symptoms of acute laryngitis with some glottic obstruction came on in the evening. A steam bed relieved him considerably, but in a few hours he became more cyanosed, and he died suddenly, it was supposed, from cardiac failure.

Post-mortem examination showed all the typical lesions of enteric fever, typhoid ulcers in the intestines, enlarged spleen, etc., but the lungs were extremely congested, and the lower lobes of both lungs consolidated. The foramen ovale was patent with a valve-like opening. In the larynx, the epiglottis and ary-epiglottic folds were œdematous, the ventricular bands were ulcerated extensively, yellow and sloughy. The right vocal cord had an ulcer on the vocal process, with an area of congestion all round.

On making inquiries as to the possible source of the infection of this case, Dr. Davies, medical officer of health, informed me that the inspector visited the boy's home on February 19th, and reported that there was no evidence of the source of contagion.

Cases II and III, brothers of E. S., and aged 5 and 8 respectively, were notified as suffering from enteric fever at their home on February 28th, that is, thirteen days after their elder brother was removed to the Royal Infirmary, but the symptoms, of course, must have begun some days before they were notified as cases of typhoid fever. These two were removed to the Bristol Union Workhouse to be under Dr. Henry Grace, who has been good enough to write me to the effect that they were under his care for about seven weeks. "The cases were certainly of a severe type, especially in the younger, in whom the typhoid fever was followed by an abscess in the hand; they had no special laryngeal symptoms."

Case IV.—Nurse F., aged 25, who had been nursing E. S. in Ward V of the Royal Infirmary, began to have a rise of temperature on March 25th, with pains in the back and limbs.

March 27th. Scarcely any sleep, headache and general pains being very severe, but relieved temporarily by exalgine, temperature fluctuating between 100° and 104°.

On March 31st, the sixth day of her illness, there was some abdominal distension, but no splenic enlargement, the lungs remained clear, but the headache was still a very marked symptom.

On April 3rd, the ninth day, the patient lay in a semi-conscious condition, being aroused with difficulty. She had been passing excreta in the bed for two days. Pulse and respiration frequent: *râles* were heard extensively over bases of both lungs: the abdomen was distended and the spleen enlarged, and typhoid spots appeared.

On April 10th she was very ill indeed—semi-conscious, and presenting every indication of profound nervous depression. Pulse 148, respiration 50: the temperature reached 105.2°. She had been ordered digitalis and nux vomica the previous day, and brandy. She did not sleep at all during the night, but was a little better the following morning. Ordered ol. terebinth. with each dose of the digitalis and nux vomica mixture every three hours. At 1 P.M. put in a bath at 78°, gradually cooled to 70°. This reduced the temperature of the patient in forty minutes from 103.8° to 101.2°, and it subsequently continued to 99.8°. Baths were given at intervals during the next eight days.

But on April 19th she became cyanosed and respiration was laboured, with cough and inability to expectorate.

On April 20th tubular breathing was heard over the left lung, and the patient became unconscious and more and more cyanosed. Several injections of strychnine and digitalis under the skin seemed to restore the patient considerably, and she became conscious and was able to answer questions. She, however, became more cyanosed again, and died at 12.30 P.M., remaining conscious till within a few minutes of death.

There was no *post-mortem* examination of this case.

Case V.—J. V., aged 38, the only one under my care, had been attending as an out-patient, and was admitted to Ward V of the Bristol Royal Infirmary on November 18th, 1893, under Dr. Shingleton Smith, for aneurysm of the thoracic aorta. Subsequent events proved that the line of treatment adopted by Dr. Smith succeeded in practically curing the aneurysm. He had contracted syphilis twenty years before, and for the five years previous to admission the patient had been subject to cough, especially in the winter, and to attacks of laryngitis, his voice having been permanently hoarse for some years.

Laryngoscopic examination showed hyperæmia of both vocal cords. On November 24th he was placed on Tufnell's diet and 30 grains of iodide of potassium daily. At intervals this was increased, till on March 23rd he was taking 30 grains every four hours, but by this time the pulsation had so markedly diminished that the patient was allowed to get up, and ordinary diet had been resumed in moderate quantities. In fact, by this time Dr. Smith felt justified in expressing the hope that a firm deposit of fibrin had occurred in the aneurysmal sac, and that there was every prospect of the aneurysm being cured, and at the *post-mortem* examination twelve days later the sac was found to be almost completely obliterated by the deposit of *ante-mortem* fibrinous deposit. But in the meantime, on March 23rd, the temperature was slightly raised (101.2°). On March 25th the patient began to complain of intense neuralgic pains on the right side of the head, which persisted, or rather increased in severity, several days. The headache was unrelieved by large doses of bromide of potassium, antipyrin, caffeine, or analgen, but it was slightly relieved by the ice-bag, continuously applied, and occasional hypodermic injections of morphine. The in-

tensely severe right-sided headache, with vomiting, led me to examine the optic discs, but they were normal; the temperature had risen steadily each day, till it was now persistently above 103°. There was no diarrhœa, but the mental condition and general aspect of the patient and an enlarged spleen led me to watch for any further indications of enteric fever, though how he could have contracted it I could not conceive, seeing there were no cases in the ward.

On April 1st some typhoid spots appeared on the abdomen, which was tumid, and there was some tenderness on the right iliac fossa and typical loose enteric stools. I then learnt that a nurse had become ill with symptoms of enteric fever, and that it was thought she had contracted it from the patient who had died with laryngeal complications, from typhoid fever in the other ward. My patient had just been through a course of Tufnell's diet and large doses of iodide of potassium, and with lungs considerably damaged by his aortic aneurysm, besides being an old syphilitic and alcoholic subject. Needless to say, his conditions were such as to render him wholly unfit to cope with an attack of enteric fever. Two days later, on April 4th, his breathing became very difficult, and he appeared to be sinking from cardiac failure. On entering the ward shortly after these grave features supervened I found him greatly cyanosed, with laboured breathing, but with a very fair pulse. Fearing laryngeal œdema had occurred I got a momentary glance of the larynx which showed that there was extensive ulceration on the cords but no glottic obstruction here. We placed him in a steam bed and freely administered stimulants, but in a few hours he died, having become gradually more cyanosed, and passed into unconsciousness. The *post-mortem* examination revealed all the typical lesions of typhoid fever at the 12th or 14th day, and these I need not recount. But in the larynx superficial ulceration was found on the posterior thirds of the vocal cords and on the anterior surface of each arytenoid cartilage.

From the large and pulpy spleen, following Gaffky's directions, I inoculated some agar culture tubes, the larynx having been removed: it was divided through the posterior commissure with clean and unused scissors. A fresh stream of water direct from the tap was allowed to run on the ulcerated surfaces. I then inoculated other agar tubes with a platinum point first sterilised in the usual manner by heating to a white heat, and then on cooling plunged it into the ulcers on the vocal processes. As I hoped to obtain evidence which might solve the vexed question as to the true character of these ulcers, I endeavoured to ensure against possible contamination of the larynx or any of the instruments used with typhoid bacilli from other parts of the organism, but I should add that the scissors with which the larynx was divided posteriorly were not sterilised, and thus a possible though improbable source of error was introduced.

One of the splenic culture tubes gave a pure culture of the Eberth-Gaffky bacillus, and one of the larynx tubes yielded a plate culture of numerous typhoid bacilli colonies, with a very few colonies of some liquefying micro-organism. From this plate culture secondary cultures of the Eberth-Gaffky bacillus were readily obtained.

We may recognise that these two preparations of undoubtedly identical micro-organisms may be the Eberth-Gaffky bacilli of enteric fever:

1. By their appearance. They are numerous, very short, rod-shaped micro-organisms, which are so short in proportion to their breadth that they might almost be mistaken for micrococci under a low magnifying power, and they tend to arrange themselves in parallel fasciculi.

2. By the naked eye characters of the culture, with an abundant surface growth in the slab culture, and numerous small discrete growths in the plate culture, without liquefaction.

3. They do not liberate carbonic acid gas when grown in glucose broth.

4. They grow in phenol broth containing 1 per cent. of phenol and 0.15 per cent. of hydrochloric acid.

5. They were obtained in pure cultures from the spleen in a case of typhoid fever.

The true nature of ulcers of the larynx in typhoid fever is still an open question. Are they simple catarrhal ulcerations following the somewhat common complications of typhoid fever, catarrhal pharyngitis, and laryngitis, or are they specific ulcers of typhoid fever analogous to the ulcers in the intestine? Osler states that he believes that the bacilli have not yet been found in the ulcers; and Fagge, Murchison, Roberts, Liebermeister, Strümpell, and Bartholow are cited by Lincoln[1] as being of opinion that the ulcers are always secondary, and not specific lesions of the typhoid process; while on the other hand Klebs, Rokitansky, Landgraf, and Morell Mackenzie are among those who take the view that they are due to a specific deposit upon the laryngeal mucous membrane.

Typhoid ulceration of the larynx is rare in England, having been observed in about 3 per cent. of cases in which the larynx has been examined, and I regret that in both cases these interesting specimens were not kept, but the importance of these cultures from the larynx is sufficiently obvious. The specific bacilli have also been found in the lungs as well as in the blood of typhoid cases. This discovery throws some light on the method by which the disease may have been communicated by Case I, the patient first admitted, to Cases IV and V, for I think, in view of our elaborate and careful precautions, it is practically impossible for any case of enteric fever to be communicated by fæcal contamination in the Bristol Royal Infirmary. But, although I never saw the larynx of Case I, I have little doubt now that his expectoration contained the specific microbe, and as he was delirious and was coughing and expectorating in all directions, I conclude that from this cause the nurse in attendance contracted the disease.

I also ascertained that my patient, having recovered from his aneurysm and being allowed up, was in the habit of going into Ward V to see another patient, and, though he never went within a few feet of the typhoid case, there can be no manner of doubt that he contracted the disease during his visits to this ward. Very possibly the fact of his having an old-standing laryngitis rendered him particularly vulnerable in this region.

There is no evidence as to how the two brothers of E. S., namely, Cases II and III, became infected. E. S. himself had been working at several houses, but there was no history of illness at these places nor amongst his fellow workmen. The water supply at his home was "Company's," and there was no reason to suspect the milk supply. The brothers were supposed to have been secondarily infected from stools kept in the house, owing to the situation of the waterclosets—several yards away.

I would direct attention to the peculiarly virulent type of fever here presented. All the three cases in the Royal Infirmary began with very severe headache and backache; profound nervous prostration supervened very early in the cases, and all three died apparently from respiratory failure. In two at least there were laryngeal ulcers and probably also in the third, the nurse.

In Case I there was purulent discharge from one ear, and in Case IV an abscess formed in the arm, and in this connection we may bear in mind that Chantemesse and Widal consider that the specific bacillus is the cause of chronic osteomyelitis following typhoid fever, while in some of the cases attended with pus formation typhoid bacilli often of extreme virulence have been found in the pus even eighteen months after the fever.

The futility of seeking to prevent relapses in typhoid fever from the administration of so-called intestinal antiseptics hardly requires to be emphasised. It has long been known that the specific organisms can generally be found in the mesenteric glands and in the spleen, the enlargement and softening of which is due to their presence in this organ, and I think that there are very few now who have not ceased to expect much result in this direction. But the practical importance of bearing in mind the possibility of typhoid fever being communicated by the expectoration cannot be over-estimated.

These cases would seem to explain the possibility of typhoid fever being infectious as maintained by Budd, a view endorsed by Collie,[2] and brings home the necessity for more careful prophylaxis in cases exhibiting laryngeal complications.

[1] *Burnett's System*, vol. ii, p. 655.
[2] *On Fevers*, p. 53.

In conclusion, I acknowledge with sincere thanks my indebtedness to Mr. F. Wallis Stoddart for the kind and skilled assistance he rendered in undertaking the investigation of the cultures.

A DISCUSSION ON THE DIAGNOSIS AND TREATMENT OF EMPYEMA OF THE NASAL ACCESSORY SINUSES.

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Chronic Suppuration in the Ethmoidal Sinuses.

The time at my disposal will not permit of my dealing with the whole of the subject set down for discussion, so I propose to limit myself almost entirely to disease of the ethmoid. Suppuration in the maxillary sinus is so common, and, above all, the diagnosis can be so easily and safely confirmed by exploration that the class of case presents no special difficulty. The intranasal changes produced by the irritation and pus in the middle meatus give rise to appearances not infrequently mistaken for local disease, and it is a common experience to see the granulations on the outer wall of the meatus treated by the cautery or other means, on the view that they represent a primary affection. So difficult is it to decide in some cases whether the pus comes from the antrum or one of the upper sinuses, that exploration of the antrum becomes a routine method in diagnosis. I have not myself found transillumination of any great service. In women it has some value, but in men with thicker skins it is difficult to detect small differences. I put it thus: When there is a marked shadow it is confirmatory; when there is no difference or a doubtful difference I explore.

If empyema of the antrum is easy of diagnosis, and the nasal discharge still more easily removed by puncture and drainage, it is unfortunately not so simple to get rid of the tube. In my cases it has been many months before the tube could be removed. I would set down the time at over a year on the average, except, of course, in the acute cases.

In my experience I find the most difficult case to diagnose and to treat is the following: A patient with polypi in the middle meatus associated with discharge of pus. On removing the polypi and curetting the meatus the discharge of pus continues. The antrum is explored and found healthy, the middle turbinated looks swollen and pale, and on removing it with punch forceps it is found soft and gelatinous. The better view thus obtained shows the pus coming from high up in the nose, and many vascular granulations. A probe may be passed a long way and impinge on bare bone. After further curetting and treatment, the pus continues to flow, the granulations to develop, and for fear of disturbing the cribriform plate, one feels bound to desist. The patient has, in some cases at least, to make the best of it, and to obtain alleviation by syringing and cleanliness. This is a disease either of the ethmoidal sinuses, or of the frontal or of both. Can we easily exclude the frontal sinus? The spot from which the pus exudes and the direction the probe takes aid considerably, and when the pus is seen to travel along a probe, approximately in the frontal sinus, the diagnosis is strengthened. So far as I have seen, there is in these frontal cases less pus in the back of the meatus, and no "gelatinous" change in the middle turbinated.

In a doubtful case I am disposed to explore the frontal sinus, and obtain the same definite information as we do in the case of the maxillary sinus. Selecting a point at the inner angle of the orbit, where, indeed, pus spontaneously finds its way out, an opening may safely be made. Finding the sinus healthy we are left with the most difficult case of all, that which I have sketched above, and the question I would put to-day is this: What is the best plan of treatment, and what measure of success has followed?

In the following remarks I offer to you my own experience, and when I reviewed it for the purpose of this paper I felt that I had little to say, and needed more to be taught than to teach. I felt that, though I had acquired some confidence in diagnosis, and appeared to see the best line of treatment, yet that I had accomplished very little indeed. I must ask you to accept this communication simply as an effort to deal with a difficult class of case, and as relating my personal experience in the hope that it may be helpful to others.

The first case is an example of simple suppuration of the left frontal sinus. There is no history of a preceding catarrh, though the termination of the case suggests some simple cause of this kind.

Case I. *Suppuration in Left Frontal Sinus, with Œdema of Forehead and Eyelids: Spontaneous Recovery.*—Mrs. F., aged 49, was sent to me on June 18th, 1894, by Dr. Alexander, of Faversham, to whom I am indebted for the notes of the case and for permission to publish them. She stated that she had had pain over the left side of the head for six weeks. Three weeks ago the left frontal region became œdematous, and soon a prominent elevation was noticed at the inner angle of the orbit. A purulent discharge from the nose made its appearance about three weeks ago. It began in the night, and has been occasional. Some relief follows the escape of the pus. The eyelids, cheek, and forehead puff up very much for a time, and then get better. The first complaint, says Dr. Alexander, was of a neuralgic pain over the left side of the head, relieved by antipyrin. Three days before I saw the patient there was an unusual amount of discharge, but there has been less since.

When I saw Mrs. F. there was œdema over the left brow, and a soft swelling at the inner angle of the orbit, evidently due to an abscess of the frontal sinus pointing at this site. On examining the nose pus was seen covering the anterior and outer part of the middle turbinated bone, and on removing the secretion the mucous membrane looked swollen and granular, and the pus soon reappeared. There was no difficulty in confirming Dr. Alexander's opinion that the case was one of suppuration in the frontal sinus. I suggested that he should incise over the swelling, enter the sinus, and enlarge the aperture into the nose. When he went to do this the next day, he found that a fairly free discharge had taken place from the nose, and the œdema had diminished. The operation was postponed and never required. She was treated by a blister and a nasal spray, and was pronounced well about July 20th.

This I take to be an example of simple suppuration of the sinus similar to that occurring in the antrum in connection with acute catarrh. It is this class of case which more often comes under the notice of the ophthalmic surgeon. It exhibits the usual site for spontaneous discharge, and indicates this as the point we should select for exploration of the sinus.

No instance of uncomplicated chronic suppuration in the frontal sinus has come under my own treatment so far as I know. In three cases at present under my care, I suspect that this sinus is affected in association with the ethmoidal, and I propose to explore the sinus from the outside.

Two methods of effecting drainage can be adopted: the one by removing the anterior end of the middle turbinated bone, and passing a cannula suitably curved, the other to enter the sinus from the outside at the inner angle of the orbit. From numerous experiments on the cadaver this proceeding seems simple and safe, and certainly may be accomplished with little or no resulting scar or deformity. I hope in the future we may use this means for diagnosing and treatment with the same security as we enter the maxillary sinus.

Next let me draw attention to the most difficult and, in my experience, the most dangerous class of cases, that of suppuration in the ethmoidal sinuses. This, in my own experience, is far more common than suppuration in the frontal sinus. The cause of this affection requires much investigation. We find the cases in middle life, though now and then in young people. It certainly is, as a rule, associated with the presence of polypi. At first the case seems to be one of simple polypus, but the very presence of pus indicates the existence of further disease. It is a well known axiom, I imagine, to all present, that pus with polypi, especially when unilateral, indicates suppuration in one or other of the sinuses. Is the disease a primary suppuration, and are the polypi merely pendulous granulations grown into myxomatous tumours? Or is the polypus primary, and the suppuration caused by retention of secretion? Or, again, is there such a disease as a primary caries or necrosis of the ethmoid? One is tempted to ask one more question—is not the cautery responsible for some of these cases? I think I have seen it

produce empyema of the antrum, and if thrust blindly out of sight high up into the ethmoid I should fear the consequences. The first of the four following examples ended after prolonged treatment in complete recovery, and was from the first a by no means extensive case. One was able to see the patient frequently, and to keep the granulations under pressure, and the part more or less aseptic. In no class of nasal cases does so much good result from a daily dressing as in these. The more one treats them on the same lines as granulations in the tympanic cavity, I mean by antiseptic applications, and by pressure, the better are the results. In the following case the first polypus which was of large size was removed in December, 1887. She was under treatment from time to time till August, 1889, when there was very little discharge. After an interval of nearly two years the patient returned, with a considerable amount of purulent discharge, still from the right side only. It had never quite ceased, and of late had increased. She was then regularly and frequently seen for three months, after which she remained well.

Case II. *Nasal Polypi: Chronic Suppuration in Ethmoid: Recovery.*—Miss A., 16, when seen with Dr. Bull, of Chislehurst, December 6th, 1887, one very large mucous polypus from the right side, and several smaller ones were removed, under chloroform.

In February and March, 1888, polypi were removed again with the snare, and the cautery applied.

In June, 1881, the membrane over the middle turbinated was noted to be thickened, and the middle meatus narrowed. No definite polypus; therefore she was left alone for two months. There was a good deal of discharge.

In August the mucous membrane, being much thicker, was cauterised.

In October, the discharge still continuing, the cautery was again used.

In December a polypoid mass was removed with the snare from the middle turbinated. As nasal breathing was never complete, and as the meatus was now free, we removed some adenoids with benefit.

In January, 1889, she could keep her mouth shut more easily, but the discharge of pus persisted. A polypoid mass was seen in the middle meatus, and removed.

In August she was much better. There was still more discharge from the right than the left side. The middle turbinated had shrunk, so that now for the first time there was a passage between it and the septum. There was still a little pus.

For family reasons, the patient did not return till May, 1891, when the discharge from the right nostril was more abundant, very troublesome, and distinctly purulent. On examination, granulations occupied the middle meatus and pus oozed from this cavity.

The anterior part of the middle turbinated was removed, and then by repeated curetting, application of carbolic acid, and of chromic acid, the discharge slowly and gradually disappeared, and ceased by the end of September. She was continuously under treatment for three of these four months. The greater part of the middle turbinated was removed by degrees, and I think the anterior sinus was opened. The actual cautery was not used more than once during these months.

In August, 1892, nearly a year after the cessation of treatment, the patient wrote that she remained well.

It is to be noted here that there was pus from the beginning of the case. It is impossible to say which was primary, the polypi or the condition of the ethmoid; I incline to think the former. Had the use of the cautery in the early period of the case anything to do with the prolonged suppuration? I can only say the remedy was used carefully, and applied only to parts within view.

I next select three cases typical of the advanced and persistent form of this disease, and examples of the condition referred to in the opening remarks. In one there was also empyema of the antrum. All three came under observation first as examples of nasal polypi, and in all the presence of pus was an early feature. In the policeman's case recurrence of polypi was distinctly traced to the irritation of the pus from the antrum.

Case III. *Nasal Polypi: Purulent Discharge from the Middle Meatus: Empyema of the Antrum: Suppuration of Ethmoidal Sinuses.*—A police constable attended the out-patient department at Guy's Hospital with discharge from the left nostril, with obstruction. After removing several polypi from the middle meatus the discharge continued, and was distinctly pus. There were many granulations on the outer wall at the anterior boundary of the meatus. The pus seemed to come from a point higher than the antral orifice. However, in puncturing the alveolus a fair quantity of pus was removed through the nose, and the nasal discharge reduced a good half. Now the pus can be seen to come from a point high up and behind the situation of the aperture from the frontal sinus. A probe goes up 4 inches from the nostril and impinges upon bare bone. There are a good many granulations to be seen. The region has been carefully curetted on several occasions, and an attempt made to enlarge the openings into the sinuses.

The question is, How far may we safely go in these cases? Again, Can these cases be dealt with from the outside?

Case IV. *Nasal Polypi: Chronic Suppuration of Ethmoidal Sinuses.*—A girl, aged 23, came to the out-patient department at Guy's Hospital in March, 1894, with polypi in the left nostril. There was, in addition, a purulent discharge, passing chiefly into the throat. The polypi were removed, when the pus was seen to come from the middle meatus. The anterior part of the middle turbinated bone was removed, and the pus was then seen to issue from a point higher up. On passing a probe, it entered amongst soft vascular granulations, and impinged upon bare bone. These granulations, together with small portions of bones, were removed with the double curette. When last seen (July, 1894) there was still a fair amount of pus, and she complained of pain over and about the eye. I may say that some time ago the antrum was explored with a negative result.

This seems a suitable case for exploration of the frontal sinus, and I intend to propose the operation to the patient.

Case V. *Nasal Polypi: Chronic Suppuration of Ethmoidal Sinuses.*—H. S., aged 26, came to Guy's Hospital with nasal polypi in both sides. There was a purulent discharge as well, and all the polypi were high up and small. After removal the pus still flowed from the middle meatus. The right middle turbinated looked pale and polypoid. Its anterior extremity was removed with punch forceps, and found to be soft, pulpy, and composed largely of polypoid tissue. Then a good deal of similar material was curetted away. Later the left antrum was explored with a negative result. A tube was retained a few weeks without diminishing the discharge. An attempt was made to open more widely into the ethmoid cells, and from time to time granulations are removed. But still the pus continues to secrete, and though the anterior half of the middle turbinated has been removed and the curette has been passed high up, the condition remains unrelieved. On the left side a similar condition of things exists. This patient has no pain, no sign of retention of discharge.

What is his future? One thinks of the end of Dr. W. (Case vii). In treatment, the object, so far as I can see, is to keep under the granulations, open a free channel for discharge, and have the part syringed out daily. The treatment in these cases has been to remove, by means of the double curette, the granulations, together with portions of the middle turbinated: occasionally to apply chromic acid. The aim has been to open up the sinuses, and allow free drainage. The cautery has not been used.

It is in this class of case especially that one asks for the experience of others. I feel myself that most benefit results from the use of the curette chiefly, and of chromic acid occasionally; and, above all, the establishment of free drainage. The daily dressing with pledgets of boracic or other antiseptic wool is almost essential for anything like a rapid result.

Can the sinuses be reached from outside? I will record presently two cases, in which the pus escaped through the upper eyelid, at the inner corner of the orbit. This is, as we know, the track commonly taken when the suppuration extends towards the orbit. Through such an opening I have entered the ethmoidal and frontal sinuses; and Mr. Stewart recorded during the last session of the Laryngological Society a case in which, through a similar opening, he was enabled, by the use of the curette and drainage, to bring about a complete recovery without interference with the eye.

I am not aware that the ethmoidal sinuses have been attacked from the outside along a line suggested by the above facts. Provided it can be done without injury to the globe, it seems to offer the best and speediest means of relief.

I also think that it is wise to give these patients periods of rest from operative treatment, instructing them to use irrigation only. Active treatment may do harm, and if the cautery be used freely I feel almost sure it may do harm. I have no facts bearing upon the possible tuberculous nature of some of these cases, nor have I seen any caseous material.

Finally, I come to two fatal cases. In both the disease was primarily in the ethmoidal sinus. In both there was extension to the orbit; in one with a spontaneous escape of pus through the upper lid; in the other an incision was made. In both there was an abscess in the frontal lobe. In one of the cases the frontal sinuses were involved.

Case vi.—*Chronic Suppuration of Ethmoidal Sinuses: Extension to the Orbit: Cerebral Abscess: Death.*—J. F., aged 62, came on August 28th to Mr. Brailey's out-patient department at Guy's Hospital, with the left eye somewhat proptosed and displaced downward and outward; no paralysis. Between the upper orbital ridge and the displaced eyeball was an elastic swelling, which was thought to be due to an abscess beneath the periosteum of the orbit. The diagnosis made was obstruction of the exit of the frontal sinus with the formation of pus. An exploratory incision was made, and bare bone found in the roof of the orbit. A very small quantity of pus was evacuated, but the globe did not regain its position.

The patient was discharged on September 4th, the sinus being still unhealed. On the 10th, in the out-patient department, bare bone was still felt, and there was a free discharge of pus through the drainage tube. On the 30th two small pieces of bone came away. On October 7th the flow of pus ceased. On the 15th he was readmitted, when there was orbital cellulitis, with swelling of the parts around the eye. The next day the wound was opened up under chloroform, and bare bone felt in the roof of the orbit and on the inner wall. On the 21st the temperature was 103.5°. On the 24th the patient had convulsive seizures.

I was then requested by Mr. Brailey to see the patient in consultation. I found him practically comatose, with a high temperature, breathing deeply and rapidly, like a case of meningitis from suppurative otitis. Through the sinus at the inner angle of the orbit bare bone could be felt. I concluded that there was probably diffuse meningitis, and that operative interference would give no relief. On October 26th my colleague, Mr. Davies-Colley, saw the patient, and as a last resort opened the frontal sinus, which was found healthy. He then explored the dura mater and brain without finding any pus. The fits continued; the temperature ranged between 102° and 105°. On the 27th the man died. The *post-mortem* examination report by Dr. Parry is as follows:

"There was no pus about the wound. The brain was rather wasted, and on removal showed a couple of abscesses on the under surface of the left frontal lobe. The more posterior one seemed to be the older, and the pus in it smelt foully, and its walls were greenish and sloughy-looking. Neither abscess opened the lateral ventricle. The dura mater beneath the frontal lobe was adherent to the brain, and there was just a little lymph outside it, between it and the bone, at the front of the frontal lobe. In other respects the brain and membranes were healthy, and there was no general meningitis. On opening up the ethmoidal sinuses on the left, after chipping away the cribriform plate, they were found to be full of greenish pus. There was caries or necrosis of the inner wall of the orbit, and it appeared as if the pus from the nasal fossæ had raised the periosteum of the orbit, and so presented as an orbital abscess. No cause for the proptosis of the eyeball was discovered except inflammatory œdema, and at the necropsy little or no proptosis remained. In the lungs there was diffuse broncho-pneumonia."

Case vii. *Chronic Suppuration of the Ethmoidal and Frontal Sinuses: Abscess of the Left Frontal Lobe: Operation: Death.*—Dr. W., 65, was first seen in consultation with Mr. Blatherwick of Dulwich, September 30th, 1893. The patient gave a history of nasal discharge, dating from the latter part of the previous year, and following an attack of influenza. For this, in January, 1893, he consulted Dr. Stoker, who has been good enough to furnish me with notes of this period of the case. The nasal discharge appeared of a simple kind at first, and under treatment greatly abated. It returned again, and in April, after severe pain, an abscess opened through the upper lid at the inner corner of the right eye. Mr. Higgens saw him at this period, as the case seemed to be an orbital abscess. The nasal discharge and that from the orbit continued. In the summer he went to Scotland, and while there had what he thought was a severe cold, with sore throat. On his return Mr. Reynolds Ray saw him, and found profuse nasal discharge, with some redness and swelling of the pharynx and fauces.

When seen on September 30th, 1893, the patient was up and about; he was bright and conversational, though rather deaf. There was a profuse unpleasant-smelling discharge from both nostrils; it poured away and never ceased. At times the discharge was excessive, as if some cavity had emptied itself. Through a fistulous opening in the right upper lid pus escaped freely, and on inserting a probe bare bone was felt on the inner orbital wall. The eyeball was slightly displaced outwards and downwards. On examining the throat the pharynx was covered with thick pus, and on introducing the finger the posterior surface of the soft palate was rough, as was the pharyngeal wall. The sensation communicated to the finger was that of an ulcerated surface. The septum was thickened, and on the left side was an irregular mass resembling a new growth. Of late Mr. Blatherwick had thought the patient dull, and he had been observed to twitch more than once and to doze in the day. There was no lack of intelligence, no paralysis of any kind, and the patient was particularly bright and kind.

It did not appear that the case demanded just then further treatment than the use of persistent irrigation, though subsequent events led me to regret that more active measures were not at once undertaken. Mr. Blatherwick had already given perchloride of mercury on the supposition that it might be a syphilitic process, and in view of the mass felt behind the palate I concurred in this plan. That peculiar form of epithelioma known as "boring epithelioma," in which there is extensive suppuration, seemed the other possibility. On October 5th I was again sent for, and, visiting him at 8 A.M. on Friday, October 6th, found his condition serious. Mr. Blatherwick told me the drowsiness had increased, and he was now in bed. The patient recognised me, shook hands, and replied distinctly, though he was very deaf indeed. He relapsed at once into a drowsy state. The temperature was not raised. The nasal discharge was profuse, and again was said to vary. Fortunately Dr. Stoker arrived and joined in the consultation, and, as he had brought some instruments, I proceeded at once to enlarge the sinus leading into the orbit. The turbinated bone was soft, and easily broke away. A large opening was then made into the nose. Then the frontal sinus on this side was freely opened, and was found lined with thick pus. Through an existing opening in the septum the left side was entered, and both freely irrigated and a large tube introduced. He was relieved to some extent, but personally I felt very strongly that there was either a subdural or a cerebral collection. Further exploration for the time was postponed. The next two days—Saturday and Sunday—he seemed better, there was less torpidity, and he took food well. On Monday, however, he was not so well, and, as the pus continued to flow freely, we decided to operate again. On Tuesday, October 10th, the right frontal sinus was opened by removing the anterior wall. The bone covering the posterior appeared normal, and was not discoloured. I, however, thought well to remove the bone and expose the dura mater. There was no sign of pus. Then the left frontal sinus was opened and found lined with pus. On removing it and searching the posterior wall I discovered a very minute black spot (the size of a comma, as Dr. Stoker remarked). This seemed a guide, and, on removing the bone with a gouge, black and softened dura mater was exposed, and foul pus escaped from an abscess in the frontal lobe. It was not possible accurately to estimate the size of the abscess, for it was partly empty, and appeared to be discharging through the nose. The patient had now been some time under the operation, which was performed with the use of very little chloroform, and, after inserting a good-sized tube, the parts were

dressed. He did not long survive the operation, dying in a few hours.

The centre of disease appears to have been in the ethmoid bone. On the right side the morbid process spread outwards into the orbit, on the left side it spread into the cranial cavity, upwards from the ethmoid cells. The abscess was opened through the posterior wall of the frontal sinus. I approached it from this route to avoid injury to the eye. The cerebral infection arose from the ethmoid and not the frontal sinus.

The disease here being bilateral, there was no guide as to the site of the abscess. From the fact of the right orbit having been invaded one naturally searched that side, and yet the pus was found in the opposite lobe.

The spontaneous discharge of pus through the orbit in these cases illustrates the course usually taken when the disease of the ethmoid extends inwards. Both cases also illustrate the most serious complication, that of extension upwards to the dura mater and brain.

When a sinus exists as in these cases there is no difficulty in enlarging it and reaching the disease from outside with every prospect of success, provided the malady is unilateral. To reach the ethmoid by external incision must, it seems to me, be our aim, when the disease has resisted treatment through the nose. As in suppurative otitis the danger of long-continued suppuration in the ethmoid cells is extension to meninges and brain. Unfortunately it is not so readily treated. The bone being more deeply seated we cannot reach the disease without some risk to the integrity of the movements of the globe: and, lastly, the operation area cannot be so satisfactorily asepticised.

These conditions put a check to exploration, yet when we learn in what proportion of cases cerebral complications arise, we may be more disposed to undertake the proceeding.

In conclusion, let me ask for information on the following points:—

The cause of suppuration in the ethmoid sinuses.

The termination of such cases when left untreated.

The frequency of meningitis and cerebral abscess.

The best and safest mode of treatment through the nose, and the dangers attending it.

Lastly, as to the practicability of treating the disease from the outside.

II.—Greville MacDonald, M.D.,

Physician to the Hospital for Diseases of the Throat, London; Assistant Physician for Diseases of the Throat, King's College Hospital.

When I was first honoured by a request from our distinguished secretaries to open a discussion on suppuration in the accessory cavities of the nose, the magnitude of the subject made it appear impossible to enter upon anything like a complete summary of the subject. So I have decided not to attempt this, especially as such work would be so much better done by other workers in the same line. And if you will bear with me I propose to tell you briefly how these cases have impressed me, more especially from their clinical aspect and from their analogy to certain other surgical diseases; I shall incidentally mention certain lines of treatment that have appeared serviceable in my cases, which, so far as I am aware, have not been generally practised: and I shall conclude by suggesting certain points that need clearing up, and from the discussion of which I believe we may mutually increase our knowledge.

Many of the worst cases with which we have to contend begin with suppurative inflammation of one or more ethmoidal cell, either during an attack of general rhinitis, or independently. The usual story is an attack of sharp supraorbital neuralgia, lasting for two or three days, and then relieved by a flow of pus from the nose, continuing from one to twelve or more hours, often ceasing either not to appear again, or recurring after a longer or shorter interval after fresh cold taking, and in only too many cases becoming chronic. In this case the mischief spreads; other cells become involved from infection, and granulation tissue springs up from a bed of ulcerating bone. The bony dissepiments are absorbed in the process, the granulation tissue and the accompanying suppuration extend in various directions, more especially through the thin party walls between the ethmoidal attics and the roof of the large chamber in the superior maxilla. Indeed, the walls in this locality often consist solely of mucous membrane, and sometimes natural openings may be found. In this way we may have empyema of the antrum arising in association with suppuration of the ethmoidal cells. But more than this: the inner wall of the infundibulum may became similarly absorbed, the passage into the frontal sinus may become blocked with granulations, and septic inflammation may pass upwards into this important accessory cavity. Indeed, the whole history of these cases may be very accurately compared to the course of similar disease in the tympanum: the initial abscess with earache, relieved as soon as the pus gains an exit through the tympanic membrane, the cicatrisation of the latter, the liability to repetition, in the course of time leading to chronic otorrhœa and proliferation of granulation tissue; while further, the extension of the mischief into the accessory cavities of the ear completes the analogy. A great practical difference exists, however, in the dangers attending the ear disease, owing to the neighbourhood of large vessels and their becoming involved in the septic process, as well as in the fact that in this region the surgery is comparatively easy and attended with the happiest results; while in the case of the nose, the danger of the mischief extending beyond its usual limits is comparatively slight, and the surgery is extremely difficult and often unsatisfactory. Yet in both ear and nose there is probably equal danger of the mischief extending to the cranial cavity and the meninges of the brain.

The association of polypus with suppuration is precisely the same in each case, the so-called polypi being no more than more or less organised granulation tissue, over which the epithelium has, or has not, spread to a greater or less extent, the new tissue in the meantime becoming œdematous and more or less fibrous in character. In the nose, the supply of mucus being more free, the tendency is greater for the growths to absorb water by a process of endosmosis, and to become consequently more translucent and colourless.

In point of diagnosis, all I would insist upon is the importance of realising the fact that where we have suppuration in the nose together with granulation tissue or polypi in the middle meatus, we can seldom, at first sight, be sure of the full extent of the disease, and must therefore be guarded in our prognosis. I have not infrequently seen cases where suppuration in the antrum was supposed to comprise the whole disease, and the patient promised a cure upon its evacuation, whereas the anterior ethmoidal cells, and possibly also the frontal sinus, were quite as much at fault; or, on the other hand, cases which had long been under a course of treatment for the so-called "necrosing ethmoiditis," where the antrum had been overlooked, although the prime source of the profuse suppuration.

I am not going to trouble you, Sir, with any remarks upon empyema of the antrum, for I believe the subject has been well threshed out, and any one of us specialists would write an almost identical paper on the subject; but I cannot refrain from remarking that much of the disagreement among us as to the etiology of the disease arises from the fact that we do not all recognise the frequent coexistence of ethmoidal disease and caries of the middle meatus with pus in the antrum.

But the association of suppuration of the frontal sinus with ethmoidal and antral disease is a point that I think may well repay discussion, so difficult is the diagnosis, except of course in cases of acute abscess and retention. In all the cases that I have seen or in which I have suspected the frontal sinus to be involved, there has been coexisting suppuration of both the ethmoidal region and the antrum; and practically I may assert that I have never been able to diagnose positively the condition until the discharge of pus has been arrested, or at any rate greatly modified, by treatment of the coexisting sources of the suppuration. The diagnosis is indeed the more difficult in that the very symptom upon which we most rely as proof of the presence of pus in the antrum, namely, the augmented flow on bending the head forwards, may be presented, even to a striking degree, in empyema of the frontal sinus, and even after the antrum has been proved to be free of any pus whatever. And I must confess to a strong suspicion that in these complicated cases where the suppurative mischief is not confined to

any one region, the frontal sinus may be far more frequently involved than we have as yet means of ascertaining.

In speaking of the treatment of these affections I am always careful to impress upon my students the fact that there is little to be said beyond the inculcation of ordinary surgical principles. In the first place we aim at securing free drainage, which in the case of the antrum is easily enough provided for, but in the case of the ethmoidal region may prove exceedingly tedious to ensure. All polypi and granulation tissue must be removed as impediments to free drainage, while it may prove necessary to remove a greater or less portion of the middle turbinated body. As a destructive agent in these cases, I prefer chemical caustics to the incandescent wire, seeing that the presence of a large quantity of pus and mucus in which the granulations are so generally imbedded is apt to induce scalding of more or less extensive areas, owing to the generation of steam. Thorough irrigation with antiseptic lotions frequently and forcibly applied is of essential service. Lately I have used, with enough success to warrant further experiment, a 25 per cent. solution of peroxide of hydrogen, made by Messrs. McKesson and Robbins, of New York, and called by them pyrozone. It is said to be caustic, although it produces no destruction of granulations; but it destroys all pus, and probably its putrefactive accompaniments. It is applied in small quantities on a mop of cotton wool tightly wrapped round a probe, and can be safely thrust deeply into all the suppurating sinuses and cells, with the production of a violent ebullition of oxygen, which rapidly fills the fossæ with a tenacious froth. If applied in too large a quantity at a time, the sudden liberation of gas may produce enough tension to give pain; but used cautiously and with cocaine, it is absolutely free from objection, and certainly has some, if not considerable, power in reducing the quantity of pus.

There is one other point in the treatment of suppuration confined to the ethmoidal region to which I wish to draw your attention, and with which I have had some success. By allowing the head to hang backwards over the end of a couch, so as to assume an inverted position, it is possible to fill up completely the nasal cavities with fluid. By using a non-irritating antiseptic lotion, such as a 5 per cent. solution of boroglyceride, and pouring it into the anterior nares while the head is thus inverted, we can ensure the summit of the nasal cavities being thoroughly irrigated, and thus washed of their retained secretion. After a little practice a patient will be able to keep his head in this position for fifteen or twenty minutes at a time, although it always entails more or less headache afterwards. In one case at least it has completely arrested suppuration of some fifteen or more years' duration, which had defied more ordinary lines of treatment; and in another I believe the results have been quite as striking; but it is a mode of treatment that should not be attempted except while the patient is closely under observation. I have known it induce very severe neuralgia and in one case the temperature rose immediately afterwards to 103° F., the patient suffering very acutely; but although we did not venture a repetition of the process in this patient, the single attempt produced such striking amelioration of the symptoms that he declared himself cured.

There is yet one point in the treatment of these affections on which it will, I think, be well worth eliciting the opinions of our *confrères* in this special department. It is implied in the questions as to how far we may venture to leave alone ethmoidal and frontal suppuration, provided there is fairly free drainage; or, on the other hand, as to how far it is incumbent on us to urge upon our patient the necessity of a course of treatment full of inconvenience to himself, necessarily extending over a very considerable length of time, and not absolutely certain in its results. What is the actual danger in leaving the disease untreated? Exactly how great is the risk of meningitis? Is surgical treatment—say, of the cribriform plate—in itself devoid of risks; and may we not, in our anxiety to attack the malady, actually induce that which we seek to forestall? These seem to me questions of vital importance which each of us has to ask himself before undertaking any case. For my part, I am inclined to think that rather than put before our patient the actual risks which he is incurring by leaving the catarrh, as he calls it, untreated, which risks are apparently not great, and which we cannot in every case be certain of our ability to eradicate: I am inclined to think, I say, that rather than fill his mind with fears which might never become substantiated, it were, perhaps, wiser in his interests to leave the disease to take its course, contenting ourselves with draining and irrigating, so as to reduce the dangers to a minimum.

Finally, I would suggest, as points especially worthy of discussion (1) the diagnosis of suppuration in the frontal sinus, when associated with antral and ethmoidal disease, excluding, of course, acute abscess and retention of pus; (2) the treatment of ethmoidal suppuration; and, lastly, the question I have last raised—namely, the necessity of treating chronic frontal and ethmoidal suppuration.

III.—Scanes Spicer, M.D.Lond.,

Surgeon to the Throat Department, St Mary's Hospital, London.

The Surgical Treatment of Chronic Empyema of the Antrum Maxillare.

The method which I have adopted in treating cases of chronic empyema of the maxillary antrum, during the last two years, and which I have applied to cases previously treated by others and myself without success by the more ordinary measures, was referred to in a few lines *apropos* of a case shown at the West London Medico-Chirurgical Society in the British Medical Journal, June 23rd, 1894, p. 1361, but as no detailed account of it has been published by me, I have ventured to submit it to this Section as a contribution to the present discussion.

In the first place, the diagnosis having been established, the patient is placed under influence of a general anæsthetic, and after a crucial incision over the canine fossa and reflection of flaps with a raspatory, a large opening is made with a chisel and mallet in the anterior wall of the antrum according to the methods of Dr. Robertson, as published in the *Journal of Laryngology* and *Lancet*, 1892. Great care is taken that the bone is chipped away down to the level of the floor of the antrum, and a groove established down the alveolus. The opening is large enough to admit the finger to explore the interior. The interior surface is now curetted thoroughly so as to remove every trace of soft fungous granulation tissue, abscess sac, polypi, cysts, necrosed bone, or cholesteatomatous material. Instead of now closing the operation, I introduce the finger into the antrum to act as a guard, and pass Krause's trocar and cannula down the inferior meatus of the corresponding nostril well behind the nasal duct opening, and make one or two large perforations through inner wall. Chips of bone are usually pushed into the antrum, and can be detached by manipulation. We have left now as well as the large opening in the anterior antral wall a permanent large accessory ostium maxillare in the inferior meatus of the nose.

The antrum and nose are now irrigated with boracic lotion, and the cavity of the antrum packed with creolin gauze for forty-eight hours, the gauze being made to tightly fit and distend the bucco-antral opening, until the tissues around are matted together, and the passage established. After forty-eight hours the gauze is removed, and no form of mechanical drain is used. Free irrigation is practised thrice daily with a Higginson syringe. The patient is now further instructed to do two things: first, to frequently blow air through the antrum from nose to mouth and *vice versâ*, and also to force boracic solution from mouth through antrum to nose. The object, indeed, of the large additional opening in the inferior meatus is to permit of the frequent passage of this free blast of air, which at once moves along any secretions tending to loiter in the antral recess, and at the same time has the practical effect of keeping the bucco-antral opening patent for a sufficient time; at least usually so. However, if the soft tissues should close over too soon, it is only necessary to apply cocaine and make an incision down to the perforation in the bony wall and dilate the soft tissues with a ring dressing forceps. *Pari passu* with the diminution of the secretion the opening contracts, but seldom heals up entirely. This is markedly so in my most successful cases, the patient when completely cured of suppuration being able to blow air through the antrum either way.

By this method we avoid the almost indefinite continuance of discharge into the mouth, which in my experience attends

the adoption of the other methods, and which I believe is due to the great irritation produced sooner or later, or periodically, by the drain used. As a practical result the period of treatment is greatly shortened. To illustrate this, and the permanence of the result, I will refer to four cases.

CASE I.—W. R., aged 35, purulent fœtid catarrh of left nostril for twelve months, the usual classical symptoms, diagnosis confirmed by transillumination; eighteen months before tooth in region of left antrum carious and stopped; "gum boil" every two months since. On May 10th, 1892, tooth extracted by Mr. Dolamore, and perforated through alveolus. No pus at first. Cautiously pushing on trocar through thin plate of bone very foul pus discovered. The antrum was then operated on by Robertson's method and the usual drains used. Decided improvement for some time, but relapse. Necrosed bone was removed from the left middle turbinate region anteriorly. Suppuration continued. Operation repeated on January 28th, 1893, with the addition of large additional opening in inferior meatus and no drainage apparatus used. Within a month suppuration scanty. After two months only a bead occasionally. When last seen, June 3rd, 1893, had seen no pus for three months. Report from doctor, June, 1894, that patient had seen nothing for over a year and considered himself completely cured.

CASE II.—F. H., lawyer's clerk, aged 30. Had nasal polypus with fœtid suppuration right nasal cavity. First treated by alveolar opening and gold tube fitted to plate December 27th, 1890, by Mr. Boyd Wallis and myself. Temporary improvement. After some months tube caused great irritation and pain and had to be several times altered and finally removed. In May, 1892, was operated on in St. Mary's Hospital, Robertson's method being used and subsequently drainage apparatus. Again benefit, but relapse. In April, 1893, the anterior opening enlarged, and *curettement* repeated, large naso-antral opening made in inferior meatus, no drainage apparatus used. Discharge soon entirely ceased. Patient exhibited at the West London Medico-Chirurgical Society May, 1894; had seen no matter for nearly a year.

CASE III.—D. F., warehouseman, aged 38. Well marked case, three months' duration, of dental origin. Operation carried out by method described, November 16th, 1893. Report on January 9th, 1894: Free communication between nose, antrum, and mouth; no discharge of any kind, no bad smell, no nasal obstruction; expresses himself as completely cured, and I have ascertained he was so in June, 1894, eight months after operation.

CASE IV.—G. H. S., aged 19. Commenced treatment for profuse nasal suppuration and obstruction March 5th, 1891. Had extensive intranasal disease of some years' standing. After rectifying condition of nose, suppuration continued, and operation on antrum was indicated by site of discharge in nose and transillumination test. This was done in February, 1894, by method described. Discharge ceased in a month, and patient has been well since.

From the results of these cases and several others, my opinion is that the method I am advocating is the method *par excellence* for operating on antral empyema of long standing, and where we have reason to suspect there are any fungous granulations, cholesteatomatous cysts, necrosed bone from ethmoid, polypi, etc., in antrum. It is impossible to attack these through an alveolar opening, and it and the opening through anterior wall only demand a drainage apparatus, which of itself usually prolongs the period of suppuration by irritating the surrounding tissue; whereas by the method I advocate all intra-antral disease is removed, and a radical cure is speedily effected. I have purposely avoided speaking of concomitant disease of other accessory spaces and of intranasal disease, which would naturally receive the treatment they demand, and have brought forward cases in which one could exclude disease of other sinuses with tolerable certainty.

IV.—WILLIAM HILL, M.D.,

Assistant Lecturer in Anatomy St. Mary's Hospital.

DR. W. HILL alluded to three cases which had been under his care, and which he had transferred to his colleague, Mr. Ernest Lane, who had opened the antrum and cleared out morbid contents by a large opening in the canine fossa, making a counter-opening in the nose in the middle fossa. In two of these three cases the result had been satisfactory; in the third case, in which both antra were opened, the symptoms were only relieved on one side, and the surmise was that the ethmoidal cells on that side required further operative treatment. Dr. Hill had had two cases of ethmoidal cell disease, in one of which polypoid hypertrophy was found.

V.—H. KNAPP, M.D.,

New York.

I BEG to say a few words about the differential diagnosis of empyema of the accessory sinuses of the nose. We have to distinguish empyema from exostosis and sarcoma of these cavities. These three diseases may be very occult in their beginning; they then produce an inflammatory—more frequently a non-inflammatory—swelling at the walls of the orbit, and feel hard and bony. The diagnosis is made either by a puncture, or by the initial step of any operation, the incision. The progress of the operation will then be guided by the diagnosis; but even on the *post-mortem* table it will not always be easy to distinguish between empyema producing hard lardaceous-looking granulation tissue, or an original sarcoma producing corrosion of the walls of the sinuses and subsequent suppuration.

VI.—J. DUNDAS GRANT, M.D., F.R.C.S.Eng.,

Surgeon, Central Throat and Ear Hospital, London.

DR. GRANT attributed considerable value to transillumination, if only because it sometimes, in cases where antrum suppuration was suspected, showed such unmistakable translucency that empyema could be absolutely excluded, and unnecessary operation avoided. In several suspicious cases he had forbidden the performance of perforation through the alveolus, relying upon evidence of this kind. For further exploration of the antrum he employed Lichtwitz's fine trocar, which could be passed into the antrum through the outer wall of the inferior meatus. Boric solution syringed through it would wash out any pus there might be in the antrum. In those cases in which there was no evidence of dental disease he thought it wrong to extract a tooth, and considered it desirable that treatment should, if possible, be carried out through the nose. Garel, of Lyons, urged that it was feasible in a large number of cases to irrigate the antrum through the natural opening in the middle meatus, and maintained that he had obtained a high percentage of cures by daily use of boric solution by this channel. He found that cases were of two classes: those that recovered with very great rapidity and those that were rebellious under all treatment. The former would probably be susceptible of cure by treatment through the nose, the latter only by free opening in the canine fossa. Dr. Grant thought that after the use of Krause's trocar through the inferior meatus, irrigation would be facilitated by the removal of the anterior portion of the inferior turbinated body. This could be done by means of scissors or of a punch forceps.

In a case of his of frontal sinus suppuration in which antral disease was carefully excluded, the discharge persisting in spite of external operation, Dr. Grant found that suppuration in the antrum had supervened, and recovery followed on irrigation of that cavity. He thought sphenoidal disease was capable of being diagnosed in many cases. When pus ran down between the middle turbinated body and the septum it might be suspected, and a cannula which he showed (devised by Lichtwitz) could be often passed into the natural orifice, so that muco-pus could be syringed out, and the diagnosis established while the headache was relieved. Sometimes exposed bone could be felt in the region indicated. In a case under his care he had removed on repeated occasions a myxomatous growth of the middle turbinated body, but there always remained a portion posteriorly which he could not seize with a snare. One day there came away a mass of granulation tissue attached to a thin plate of bone obviously from the front of the sphenoid. He could then introduce a probe or a cannula into the sphenoidal sinus with the greatest ease. Growths apparently arising from the middle turbinated body which could not be caught in the snare should, therefore, be suspected of originating from the front of the sphenoidal sinus.

In cases of inflammatory swelling set up by the discharge of pus from that cavity, the enlargement of the middle turbinal might easily occlude the orifice. We should, therefore, be prepared to remove, by means of a snare, the posterior part of that body when it produced such an effect. In a case of sphenoidal suppuration producing intense headache and mental disturbance this operation gave the greatest relief. To show how necessary it is to diagnose and treat sphenoidal suppuration, he would add to what had been said by citing a case recently reported by Dr. Sandford, of Cork, in which he had had the opportunity of making a *post-mortem* examination of a lunatic who had become blind some time before death. There was enormous distension of the sphenoidal sinus compressing both optic nerves, and extensive extradural suppuration.

Ethmoidal sinusitis was very troublesome, and was apt to give rise to one of the forms of atrophic rhinitis as a sequel to the suppuration. He believed that a number of cases of atrophic rhinitis arose from sinus disease, others from syphilis, and others without any discernible cause. In the case of a gentleman sent to him by Dr. Cartaz, of Paris, this stage had been reached, and the most distressing mental depression, with asthenopia and dread of light, accompanied it. He got considerable relief from irrigation of the ethmoidal cells by means of suitable cannulæ through the nose, the orifices being enlarged artificially as well as by the disease, and particularly from the use of the post-nasal douche. Chiari was reported to say that the ethmoidal cells were best opened by means of a perforation made in the bulla ethmoidalis. The anterior portion of the middle turbinated body might be previously removed. An interesting case of ethmoidal disease occurred in the person of a medical friend. It caused proptosis, and several eminent surgeons diagnosed the case as one of sarcoma requiring operation, but offering little hope. The operation was commenced, and during the necessary dissection the swelling was punctured, and pus escaped. He was now perfectly well, and had no discomfort as long as he kept the external orifice of the sinus from healing up by means of a small celluloid plug.

VII.—F. Richardson Cross, M.B., F.R.C.S.,

Ophthalmic Surgeon Bristol Royal Infirmary.

My experience is confined to cases where the orbital cavity has been the seat of extension of disease. In the *Ophthalmic Review*, 1892, I published a paper on Empyema of the Frontal Sinus. In one of the cases the pus cavity occupied also the ethmoidal and sphenoidal sinuses, and death resulted from inflammation of the brain meninges, though *post-mortem* examination revealed no direct communication between the skull cavity and the abscess sac. When a continuous purulent discharge from the nose is complicated with frontal headache, and occasional cessation of the discharge is associated with increase in the headache and particularly with swellings or evidence of inflammation over any surfaces of the frontal sinus, empyema of this cavity is certain and operation for its relief should not be delayed; alternating relief or exacerbation of the symptoms may without interference result, but cure will not follow without surgical interference. This should aim at relief towards the nasal cavity through the natural channel, the infundibulum. This can, I think be found by a probe, after trephining either through the frontal eminence or by selection at a point I have defined in the paper alluded to, which opens the sinus at the spot most nearly available to the upper end of the infundibulum. The operation should be done early: if not there is a risk of the ethmoidal and sphenoidal sinuses becoming implicated in the disease, thus rendering brain complications more probable. I should have no hesitation when the os planum of the ethmoid is forced towards the orbit in freely incising the upper lid and, where necessary, also the tendo oculi and the lower lid, so as to freely open the ethmoidal bone, and to give exit to the accumulated fluid towards the nose. If this cures the empyema, the eyeball and contents of the orbit will replace themselves, whilst among other dangers that follow the progress of the disease is inflammation and atrophy of the optic nerve, almost as serious for the patient as the loss of his eyeball.

VIII.—W. Milligan, M.D.,

Lecturer on Ear Diseases, Owens College, Manchester.

Dr. Milligan thought that in cases of unilateral empyema of the maxillary sinus pus was usually to be seen during intranasal examination flowing from under the middle turbinated body. This flow was markedly increased by the patient's lowering the head, and more especially by the patient's both lowering the head and turning it slightly so that the affected side became uppermost. The flow was intermittent, was generally worse in the morning, when it was frequently found to have travelled backwards to the post-nasal space, and the patient was painfully conscious both of a disagreeable smell and of a disagreeable taste in the mouth. Percussion over the antral area he had not found of much value in chronic cases, but in one acute case recently under his care percussion elicited marked pain. He was in the habit of examining every suspected case of antral disease with Voltolini's electric lamp placed in the mouth. In all the cases in which the antral area had been opaque, in which there was no light zone immediately under the lower eyelid, and in which the corresponding pupil had not shown a red and luminous reflection pus had subsequently been found when the cavity was opened.

In several cases, however, with well-marked opacity he had been surprised to find but a small quantity of pus, and was consequently inclined to think that the opacity might in certain cases be caused not so much by the presence of pus as by the presence of a thick pyogenic membrane, the result of the constant presence of a purulent exudation in an almost closed cavity. He believed that the absence of a red glow in the pupillary region was a very important diagnostic sign of the presence of antral suppuration. He thought it would be desirable that a lamp of definite illuminating power should be used in such cases, as with lamps of varying strength he had seen somewhat differing results. The age of the patient, the height of the alveolar margin, and the formation of the palate should all be borne in mind during the time of the examination. He was in the habit in all cases, seeing that absolutely positive evidence could not be obtained from the use of the electric lamp, of puncturing the outer wall of the nose with a fine Lichtwitz's trocar as a routine method, and as a means of diagnosis only. The puncture could be made almost painlessly if the nasal mucous membrane were previously anæsthetised with a 10 per cent. solution of cocaine. He employed no nasal speculum during this manipulation, thrusting the trocar well upwards and outwards at a selected spot between the middle and inferior turbinate bodies. Through a cannula which he showed he syringed a warm solution of weak boracic acid or of hydrogen peroxide, keeping the patient's head well bent forward during the proceeding, and watching closely for the escape of pus from the anterior nares of the same side. In no case had he seen any harm result from this manipulation, which he regarded as the most valuable of all methods for accurately diagnosing the presence of antral suppuration. Over the small wound in the nasal mucous membrane caused by the trocar puncture he insufflated a small quantity of aristol, which had the double advantage of hastening repair and of checking hæmorrhage. He had had no experience of irrigating the antrum through the natural opening in the middle fossa of the nose.

Regarding the method of opening the antrum he thought that that method should be chosen which would afford the best possible drainage. An opening in the most dependent portion of the sinus would afford this; and as, in his experience, the great majority of cases were secondary to dental irritation, the diseased tooth should be drawn, and an opening made through the alveolar margin. This opening he made (the patient being fully anæsthetised, and with the head thrown well backwards) by means of a small trephine worked by a dental engine. After having made the opening, and after having syringed all pus out, he was careful to examine with a bent probe for the presence either of a highly granular state of the mucous membrane, or of eroded bone, and, if present, to curette the parts thoroughly. He considered the after-treatment the real *crux* of the question, and largely from this fact—that it was somewhat difficult to get the patient to thoroughly cleanse the cavity. For some time past he had used a small irrigating cannula

in the following way. The opening in the alveolus was made just large enough to hold comfortably the gold-plated antrum tube, and the rectangular silver cannula was made to fit exactly into the antrum tube, and long enough to project into the antrum, so that the stream of fluid subsequently injected might be readily scattered within the cavity itself. The rectangular silver cannula was provided with a movable platform, carrying a rubber washer, which, when pushed up against the alveolus, completely closed the opening and prevented any regurgitation of fluid.

When in use the cannula was run up into the gold-plated antrum tube, the platform was raised until the rubber washer completely closed the alveolar opening, and the whole apparatus was kept *in situ* by means of the patient closing the jaws upon the instrument. In order to irrigate the cavity, a long rubber tube was attached to the cannula, and a siphon action established. In this way thorough irrigation could be obtained with very little trouble to the patient, and with very satisfactory results. The gold-plated tube was attached to a dental plate, and kept closed by means of a small screw plug.

In the treatment of suppuration of both anterior and posterior ethmoidal cells, of which he had seen a few cases, the diagnosis had been established by carefully watching the flow of pus, while at the same time disease of the frontal sinus and of the antrum could be excluded. The treatment had consisted in breaking down the cells with a small Volkmann's spoon, converting the whole into one large cavity, and packing loosely with iodoform gauze.

A CASE OF SANGUINEOUS CYST CONNECTED WITH THE PANCREAS.

By THEODORE FISHER, M.D.Lond.,
Registrar to the Bristol General Hospital.

SINCE there are many points that need elucidation in connection with pancreatic cysts, nearly every case is worthy of record. Although this example presents nothing particularly striking, there are one or two features of interest. The following are noteworthy: (1) A long history of epigastric pain preceded the appearance of the tumour; (2) the swelling appeared suddenly, within the course of a few hours; (3) the cyst contents proved to be sanguineous; and (4) since the cure of the cyst, the patient's health has been better than for several years previous to its appearance. It may be mentioned that a similar case was admitted into the Bristol General Hospital under the care of Dr. Markham Skerritt during the early part of last year. The cyst contained altered blood and, as in the following case, its appearance was preceded by several attacks of epigastric pain. In the *Guy's Hospital Reports* for 1892 (Peritoneal Sanguineous Cysts and their Relation to Cysts of the Pancreas) I have given reasons for believing that all so-called pancreatic cysts may be due to hæmorrhagic effusions either arising in the gland or in its neighbourhood, and that the cause of such hæmorrhage is probably a lesion of the sympathetic system that at first manifests its presence by intermittent attacks of epigastric pain. This case is published with the kind permission of Mr. R. Poole Lansdown, under whose care the patient was admitted.

C. M., aged 38 a cabinet maker, was admitted into the Bristol General Hospital on July 3rd, 1893, complaining of abdominal pain. Twenty-two years before he had contracted syphilis, and had been attending as an out-patient during two or three months previous to admission for syphilitic testis. When last seen by Mr. Lansdown, June 17th, he appeared to be in perfectly good health. On admission he stated that on June 14th he was seized while at work with severe vomiting and abdominal pain. The pain, which was most marked on the left side of the abdomen, about the level of the umbilicus, continued for several hours, when he discovered a lump about the size of a closed fist. This swelling disappeared in a day or two, but he noticed that he could not lie upon either side with comfort; when on the right side something in the abdomen seemed to "fall over," and when on the left side to "press up." He had kept his bed since the onset of the abdominal pain. This attack of pain, however, was not the first. During the past six years he had suffered from severe epigastric pain, so severe at times that he had been obliged to leave work. His appetite had been bad, he had suffered from constipation, and for the last few months previous to admission he thought that he had wasted. There was no history of abdominal injury, but he attributed the attacks of pain to a strain produced by lifting a very heavy dining table. He said that the first attack followed three days after. A year before the str in he had fallen backwards and fractured his ankle, but was certain that his abdomen had not been struck.



Diagram showing the position of the swelling; S, stomach resonance.

The patient was a well made but rather thin man of yellowish sallow complexion and lethargic expression. On inspecting the abdomen slight fulness was seen on the left side, and on palpation a tumour could be felt which gave the impression of an enlarged spleen extending as low as the anterior superior spine of the ilium and inwards to within an inch of the umbilicus. It was so hard as to feel solid, but differed from an enlarged spleen in the want of definition of its borders. Below it did not extend outwards into the left lumbar region and could not be palpated between the two hands, one being placed behind. There was little if any tenderness, and it did not move with respiration. The note over it was dull, absolutely so immediately below the costal margin, but becoming less marked towards the limits of the tumour. Marked out by percussion and palpation the border of the swelling extended along a line drawn obliquely inwards and downwards from the cartilages of the ninth rib, to a point 2 inches above and 1 inch internal to the umbilicus. From that point it passed downwards to the level of the anterior superior spine of the ilium, where it turned directly outwards until the spine was reached, and from there obliquely upwards to the tip of the twelfth rib, leaving an area of resonance in the left lumbar region. Above the margin of the ribs the dulness extended to the seventh intercostal space in the mid-axilla passing obliquely downwards and backwards from that point to the junction of the tenth rib with the spine, thus giving a small area of dulness at the base of the left side of the chest. Stomach resonance separated the dulness in front from that of the heart.

On July 10th a consultation was held by Mr. Lansdown with his surgical colleagues, when there was a general opinion that the tumour was solid. The history seemed, however, to give a clue to its real nature. After some deliberation, it was thought that the needle of an exploring syringe might be inserted. Dark reddish brown fluid was drawn off, and 7 ounces of the same fluid afterwards aspirated. The fluid was strongly alkaline and highly albuminous, of specific gravity 1014. A dark brown sediment was quickly deposited, leaving a clear fluid of deep reddish-brown colour above, which proved to be altered blood. This deposit, under the microscope, showed numerous pigment granules, but no formed elements and by dialysis a fluid was obtained that gave peptone reactions. There was marked reduction of Fehling's solution after digestion with starch for ten minutes at the temperature of the body.

On the following day there was little of the tumour to be felt. About the site of the puncture there was a small area of dulness of about 2 inches diameter, separated from the splenic dulness by a band of resonance. The dulness at the left base of chest had disappeared.

On July 13th it was noticed that the cyst appeared to be refilling, and on the 22nd it had regained its former size.

On July 25th, after chloroform Mr. Lansdown made an incision over the tumour about 2½ inches long in the line of the left linea semilunaris. On coming down upon the cyst it was found to be adherent to the abdominal wall. Little could, therefore, be learnt of the situation of the collection of fluid. The cyst was opened, and 26 ozs. of fluid of the colour of *café au lait* came away. Mr. Lansdown introduced his finger, and could reach the limits of the cyst. Above it reached to the point up to which dulness had been noted, and internally to the middle line. The spleen could be felt but not the left kidney. The fluid, which was of much lighter colour than that aspirated on July 10th, on standing deposited granular material of light greyish colour, leaving a clear, dark brown fluid above. It was strongly alkaline, highly albuminous, of specific gravity 1012, and amylolytic as before. The granular deposit showed transparent granules under the microscope, highly refracting spheroids of various sizes, and orange masses of pigment, with a few large round cells, some containing highly refracting granules.

August 12th. Some of the fluid draining from the wound was collected in a sponge. It was of dirty brownish-white colour, depositing a grey sediment, alkaline, highly albuminous, and markedly amylolytic. Under the microscope the deposit showed masses of granular material, some colourless, some of faint yellow colour. There were also irregularly-shaped flakes of hyaline material of various sizes, but no formed elements could be seen. The skin round the edge of the wound was reddened and macerated, but not more than is common with discharges of other character, such as pus from an empyema.

On August 19th the patient left the hospital with a sinus still discharging, which, however, healed six weeks after.

He was seen eight months after leaving the hospital when he stated that he had enjoyed better health than for six years previous to the appearance of the cyst. He had been free from pain and was 4 lbs. heavier than when last weighed before his illness. His wife was more emphatic than the patient when speaking of the improvement in his general condition, and said that he could do more work than he had been capable of doing during the six years that preceded his admission to the hospital.

The history of pain, the sudden appearance of the tumour, and the sanguineous nature of its contents, have already been pointed out. The change in the colour of the fluid is also worthy of note. At first it was deep reddish-brown, afterwards the colour of *café au lait*. It seems possible that this change of colour may progress until the cyst contents fail to give evidence of their former sanguineous nature, and the origin of the pancreatic cyst in a hæmorrhagic effusion be thus overlooked. The cessation of pain after the appearance of the cyst is a curious feature that has occurred in other cases. The patient is cured of pain that may have existed for months or even years before the development of the swelling. A long-standing disease culminates in a severe manifestation that, instead of proving disastrous to the health of the patient, results in the removal of the distressing symptoms. This fact increases the obscurity of the origin of these cysts, but a discussion of its import is beyond the scope of this brief record; it may, however, be remarked that the great point of interest seems to be how far the pancreas is involved. In fatal cases of hæmorrhage in the region of the epigastrium the pancreas may be extensively affected, but we can hardly suppose that a patient would improve in health and gain in weight after destruction of that important gland.

OBSTRUCTION OF THE BOWELS CAUSED BY AN INCOMPLETELY REDUCED LEFT INGUINAL HERNIA.

LAPAROTOMY: DIVISION OF INTERNAL ABDOMINAL RING FROM WITHIN THE ABDOMEN: RECOVERY.

By W. C. EVERLEY TAYLOR, F.R.C.P.Edin., M.R.C.S.,
Surgeon to the Scarborough Hospital.

On April 13th, 1893, I was asked by Dr. Wilkinson, of Cloughton, to see G. H., a man aged 53, living at Scalby. The patient had for many years suffered from hernia, which was kept in position by a well fitting truss. On April 7th, after retiring to bed and taking off the truss, he sneezed violently, which caused the hernia to descend. He attempted to reduce it himself without success. On the following morning he sent for Dr. Wilkinson, who found a manifest left oblique inguinal hernia. With gentle manipulation the hernia seemed to be easily reduced, with apparent great relief of the pain. During the next two days there were no remarkable symptoms save that no flatus passed. On the morning of April 11th the patient complained of wandering colicky pains, which during the day increased in intensity; obstinate vomiting set in, and the general condition became alarming.

I saw him on the afternoon of April 13th, at 4.30 P.M. The patient was much exhausted: the pulse was 120, rapid and running; the tongue small and red; the temperature 100° F. The abdomen was distended and tender; there was no dulness nor increased pain on pressure over the site of the hernial apertures. There was nothing to be felt in the inguinal canals. The patient's condition was desperate; the stercoraceous vomiting had existed for forty-eight hours, and there had been no action of the bowels or passage of flatus since April 7th. I was of opinion that either the gut had been incompletely returned or that there was strangulation by a band.

Ether having been administered, a median incision was made. The intestines were much distended. I passed my hand to the site of the left internal ring, and found a knuckle of the small intestine tightly grasped by the inner margin of the internal ring. A very slight incision liberated the gut; about two-thirds of the lumen of the gut had been involved in the constriction; it was dark chocolate colour, but shining; there was no evidence of any peritonitis. The abdominal contents were as little disturbed as possible, and no "toilet of the peritoneum" was attempted. The peritoneum and muscles were sutured separately with silk, and the skin wound with silkworm gut; three carbolised catgut sutures were unfortunately used in the superficial wound. The patient rallied well from the operation; flatus was passed within six hours; the vomiting ceased immediately; the progress to recovery was only retarded by some stitch abscesses set up by the carbolised catgut sutures, and the patient is now "as well as ever he was" in his life.

The remarkable points in the case are the abeyance of symptoms for forty-eight hours after the gut was thought to be returned, the desperate condition of the patient when operated upon, and the great ease with which the hernia was dealt with from within the abdomen.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

LYING-IN HOSPITAL, MADRAS.[1]

A CASE OF SYMPHYSIOTOMY.

(By Surgeon-Lieutenant-Colonel A. M. Branfoot, M.B.)

The patient, Velliammah, Hindu girl, 15 years of age, was admitted into the delivery ward on September 16th, 1893, in labour with her first child. It was stated that she had been in labour for eight hours previous to admission, but she had all the appearances of having been much longer than this. The uterus corresponded to full term of gestation, and was somewhat rigid. Fœtal heart audible on the left side below the umbilicus. Bladder was distended, and 20 ounces of urine drawn off by catheter. In general appearance the girl was small. *Per vaginam* head presenting in the brim with a large scalp tumour, membranes absent, and the rim of the cervix could just be felt. Pelvis markedly small, and of apparently infantile type. Chloroform was administered, Simpson's axis-traction forceps applied and traction made, but considerable traction force failed to move the head. It was therefore determined to perform symphysiotomy.

Operation.—The abdomen was washed with antiseptic lotion and the pubic hair shaved. An incision 2½ inches in length was made from above the symphysis downwards in the median line, dividing skin and tissues down to the top of the symphysis. Symphysis was exposed and a blunt-pointed bistoury pushed into the joint; but the separation of the pubic bones could not be completed, and it was found necessary to complete the division with a small Hey's saw, when the pubic bones separated to about half an inch, the hips being firmly supported by an assistant. Pressure from above failing to deliver, Simpson's ordinary forceps were applied and delivery readily effected. During delivery the bones separated to about 2½ inches. The head was delivered with the occiput posterior. The bones were then approximated by pressure and the periosteum united by two deep silk sutures. The wound was closed by silk sutures and a small drainage tube inserted at the lower angle. The placenta was expressed, the wound dressed with antiseptic gauze, and a firm bandage placed round the pelvis. The child, a male, weighed 2½ *tolas*—just under 6 lbs.: length 18½ inches. It was alive and has since thriven well.

Convalescence after delivery was uneventful. The wound healed almost by first intention, except at the lower part, from which a little pus escaped. The patient was kept on her back until September 29th (twelfth day), when she was allowed to lie on her side. On October 1st the following note was taken: Temperature, normal; pulse, 88. Vaginal walls natural; the finger can be passed along both sides of the pubic arch, and the symphysis appears united. There is still a small sinus at the lower end of the wound externally. On October 9th patient sitting up. She has some cough. October 18th patient is able to walk by herself. No pain complained of over the symphysis. Slight rise of temperature due to bronchial catarrh. When walking there is slight incontinence of urine occasionally; this is apparently due to debility. When convalescent patient's height found to be 4ft. 6½ inches, and weight 65 lbs.

A careful examination of the pelvis was made. External measurements, A.S.S. 8½ inches, Cr. Il., 8½ inches. External ante-posterior 5 inches. Promontory of sacrum reached by

[1] Communicated to the South Indian Branch

finger. Sacrum flat, pelvis generally small; infantile and rachitic in type. Probable conjugata vera not more than 2.5 inches.

REMARKS.—The case is a good example of the class of case suitable for the operation of symphysiotomy. The choice here lay between Cæsarean section on the one hand, for which conditions were not satisfactory, and delivery of a mutilated child on the other. The operation performed secured a live child by a comparatively safe means.

Since writing the above remarks the patient has had a severe attack of pneumonia from chill, but is now again convalescent. The wound, however, has not completely healed, and there is still a small sinus at the lower part, but which now appears to be closing.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

JONATHAN HUTCHINSON, F.R.S., President, in the Chair.

Tuesday, December 11th, 1894.

THE INFLUENCE OF HEREDITY IN PHTHISIS.

DR. J. E. SQUIRE, in his introductory remarks, dealt with the generally received belief that phthisis is truly hereditary. He suggested that the frequency of this disease in members of the same family was, at any rate, in part due to the conditions of life and environment, and not necessarily to heredity. He did not wish to disprove the existence of heredity as a factor in the causation of phthisis, but to modify the received impression as to its preponderating influence. He asked the question, Is there a true or direct heredity to phthisis, or is there merely a hereditary delicacy of constitution? He gave an analysis of 1,000 cases of phthisis, with special reference to the proportion of cases in which apparent heredity was found. In 474 of the cases the total number of children in these families was analysed to find the percentage of consumptives amongst the children of phthisical and of non-phthisical parents respectively. The result of the inquiry tended to show that the

Table Showing the Incidence of Phthisis on the Children of Non-Phthisical and Phthisical Parents respectively.

474 Cases.	Children.		Died in Infancy.		Phthisical.	
	Total Number.	Proportion to Each Family.	Total Number.	Per cent. of Whole.	Total Number.	Per cent. of Children excluding Infantile Deaths.
A. 275 families. Parents non-phthisical	1,745	6.34	193	11.06	386	24.87
B. 84 families. Father phthisical	511	6.08	67	13.11	138	31.80
C. 82 families. Mother phthisical	506	6.17	56	11.06	155	34.40
D. 33 families. Both parents phthisical	105	5.00	18	10.90	58	33.15
B. C. D. 199 parents. One or both families phthisical	1,182	5.93	141	11.92	351	33.71

influence of heredity could not be put higher than 9 per cent. of cases amongst the children of phthisical parents in excess of the cases occurring amongst the children of non-phthisical parents. It was argued that the hereditary influence in phthisis was not a true heredity, but a tendency to suffer from disease—tuberculosis amongst other complaints—which the offspring of consumptives had in common with the children of weakly parents from whatever cause this delicacy might arise. Tables dealing with a larger number of cases than any yet published (as far as the author had been able to ascertain) had been drawn up from the cases analysed, giving the figures which had led the author to the opinion expressed above. Of 1,000 phthisical patients, 325 gave a history of phthisis in one or both parents, the apparent heredity being 32.5 per cent. Male patients, 604; apparent heredity, 28.97 per cent. Female patients, 396; apparent heredity, 37.87 per cent.

The PRESIDENT admired the logical manner and great care with which Dr. Squire had marshalled his facts. He himself had taken great interest in and had worked at the heredity of phthisis, and at surgical diseases in connection with the tuberculous diathesis. He asked the author how he proved the existence of phthisis in family histories, for errors easily crept in: parents really tuberculous were frequently described as dying from asthma, bronchitis, etc., and in many cases phthisis, being cured or obsolete, was never suspected. In tuberculosis of the skin or lupus he had collected statistics, and his results coincided with the now general belief that it was predisposed to by a family history of tubercle. He believed, however, as a result of his investigations, that lupus erythematosus had an even stronger connection with phthisis than lupus vulgaris. He said that the time was probably not far off when definite facts as to the possibility of tubercle bacilli remaining latent until adult life or even later would be established. Did the author think tubercle bacilli could pass direct to the fœtus *in utero*? He himself thought it quite possible. Long periods of latency in tuberculous affections of the skin were illustrated by two cases, both of them ladies, who, when about 17 years old, had been most successfully treated for undoubted lupus of the nose and cured; they married, and at the age of 60, with declining strength, they were again attacked by lupus in its former site. In these cases the tubercle bacilli might have remained latent for forty years. He said that socially we were indebted to the author of the paper for mitigating the strong belief in the public mind that phthisis was almost invariably inherited by the descendants of a tuberculous parent.

Mr. W. SEDGWICK thought statistical study cast only a limited light on the subject of heredity, and that more advance resulted from the study of individual cases and their family histories. With regard to the first report of the Brompton Hospital, it brought out the well-known preference for sex seen in all hereditary diseases: for example, tuberculous fathers transmitted the disease to their sons in 59 per cent., and to their daughters in 43 per cent; the same ratio was preserved in the case of the mothers: there was, therefore, a preference of 16 per cent. for sex. He quoted Dr. H. Greenhow to the effect that the occurrence of asthma in a family tree increased the transmission of phthisis.

Dr. J. E. POLLOCK, after complimenting the writer of the paper, referred to Dr. R. E. Thompson's statistics, which showed that 38 per cent. of the observed cases of phthisis had parental phthisis preceding them: these figures did not agree with those of the author of the paper. The question was a larger one than the heredity of phthisis only; it involved the transmissibility of cancer, insanity, gout, and rheumatism. He quoted the statistics of the American insurance companies, which were in favour of the heredity of phthisis; and he considered they were right to charge more highly for a family history of phthisis. He asked, Does heredity exist at all? He answered emphatically, Yes: among the factors of phthisis, heredity was the most important. He did not consider phthisis contagious in the ordinary sense of the term, and instanced the rarity with which it developed among the medical officers and nurses of the Brompton Hospital for Consumption. Heredity not only transmitted phthisis but it transmitted definite forms, such as the fibroid or the hæmoptoic; in some cases as a result of this transmitted taint members of different generations in a family died off at the same age. If both parents died of phthisis the offspring would die not only at an earlier date but from a more acute type of the disease. All his experience of forty years' practice pointed to heredity being the most important factor in the causation of phthisis.

Dr. CAUTLEY thought two points were being discussed: (1) whether the tubercle bacillus was transmitted to the fœtus by means of the semen, ovum, or the placenta; as an example

of this he referred to the case of a tuberculous calf *in utero*, and (2) whether heredity merely increased the liability to tuberculosis. He thought that early infection in children might simulate hereditary affection.

Dr. Heron thought Dr. Squire's view of the heredity of phthisis a very reasonable one. He considered the physical condition of the patient more important than his family history. If inquiry was made, on the same lines as in the case of tuberculosis, into the family history in the exanthemata, strong evidence of the influence of heredity would be found. All these diseases were hereditary, and in so far tuberculosis was hereditary, but not to a great extent in any other sense. He admitted that weaklings were more liable to develop tuberculosis, but could not agree to the converse—namely, that strong men and strong women were exempt. He quoted the frequency of tuberculosis some years back among the Foot Guards, and the case of the Prussian nursing orders in which, in spite of the fact that no one, unless perfectly healthy, was admitted, the death-rate from tuberculosis was 63 per cent. He regarded infection as the great factor in phthisis.

Dr. West thought it was necessary to reconsider heredity in the light of recent discoveries. Tuberculosis was a germ disease, and the germ was introduced, but the question when this occurred became a difficult one to answer when the extraordinary latency of tubercle was borne in mind. In cases of general tuberculosis a primary focus was almost always forthcoming. Experimentally attempts to produce tuberculosis of the fœtus were, as a rule, not successful, and congenital tuberculosis was extremely rare. There was not sufficient evidence to discuss the possibility of spores being present and latent in the fœtus and subsequently developing. Since tubercle became increasingly commoner after birth the deduction was that it was acquired. His figures were much in accord with Dr. Squire's; he ascribed about 12 per cent. of cases of phthisis to the influence of heredity.

Dr. Fowler did not agree with the view that the offspring of healthy and tuberculous parents were equally liable to the disease, and quoted the results obtained by insurance companies and the popular view as to the evil results of tuberculous subjects marrying. He referred to Dr. R. Thompson's statistics, which showed the great tendency for tuberculosis to develop in a hereditary manner. He mentioned cases of tubercle of the placenta, and of a fœtus removed by Cæsarean section from a phthisical mother, in which tubercle was present in the liver and in the lymphatic glands. He considered the theory of the latency of tubercle bacilli hard to accept. He referred to the remarkable relation between tubercle and cancer; he had seen patients dying with cancer with sufficient vitality to resist the growth of tubercle at both apices. He quoted figures from the report of the Middlesex Hospital for 1888, prepared by Mr. Roger Williams, in which it appeared that tuberculosis in the parent predisposed the offspring to tubercle when young, and to cancer when advanced in years.

Dr. Fletcher Little asked whether the family tree or the family house was the most important factor. He gave an example of the influence of adverse conditions in developing phthisis in previously healthy persons. He thought cancer and tubercle were complemental to each other, that cancer occurred in districts where phthisis was rare, and *vice versâ*.

Dr. Squire, in reply, defined phthisis as primary pulmonary tuberculosis, and quite excluded general tuberculosis. He had accepted the statements of his patients as to the presence or absence of phthisis in their relations, and confessed it detracted from the value of statistics. By true or direct heredity he meant, not the passage of the germ or bacillus from the mother to the fœtus, but the tendency to develop phthisis rather than any other disease. He had purposely begun drawing up his tables like Dr. R. Thompson, and then found that their results were exactly opposed. With regard to the transmission of special forms of phthisis, such as the fibroid type, he thought exactly the same was true of other diseases; for example, certain families were attacked by severe or by mild types of scarlet fever. Tubercle might be encapsuled and unable to manifest any activity, but the latency of tubercle bacilli was another question. The children of phthisical patients acquired phthisis earlier than other children because, being weakly, they were continually exposed to infection in their homes, while other children were not. He thought the mode of life and the environment more important than the family tree and pedigree.

MEDICAL SOCIETY OF LONDON.

Sir William Dalby, M.B., F.R.C.S., President, in the Chair.

Monday, December 10th, 1894.

Artificial Cellulitis in the Treatment of Certain Urinary Diseases.

Mr. E. Hurry Fenwick related a number of cases of diseases of the kidneys, bladder, prostate, etc., in support of his contention that under certain circumstances many inflammatory conditions of the solid viscera might be materially benefited by exciting inflammation of a benign type in the cellular tissue in their immediate neighbourhood and by draining off the products of inflammation which had obstinately resisted less severe measures. To this procedure he had applied the term "aseptic counter-irritation," because it was, he said nothing more than the scientific and purposive application of the seton or blister of old-fashioned medicine. He added that although most of his illustrations were drawn from urinary surgery he had also had excellent results in general surgery. He had gradually collected pathological as well as clinical evidence which convinced him that an inflamed cellular tissue exerted a very marked influence on the organs with which it was in immediate contact. He instanced the extraordinary effects observed in the kidney in cases of long standing perinephritis, all of which were not attributable to mere pressure. It was of course necessary to secure that the cellulitis thus set up should not be lighted into a flame by septic organisms, for nothing could be more detrimental than a cellulitis set up by a slovenly septic surgeon.

Mr. Marmaduke Sheild said he had not been able to follow the author in his arguments, because in the cases narrated the cellulitis seemed to have been set up, if at all, consequent on operations undertaken for the relief of certain specific conditions. It was, therefore, open to them to infer that the good results were possibly due to the operation, and not so much to the induced cellulitis. He referred to the beneficial effects that followed counter-irritation of the perineum and inner side of the thighs in inflammatory affections of the bladder, and suggested that possibly the cellulitis set up by the author's method might be on a par with this.

Dr. A. Routh asked whether it was quite certain that cellulitis had really been set up in the author's cases. He inclined to the belief that this had not been the case. Were this so one would expect to find the organs fixed and matted together. He asked, further, how the author proposed to retain the control of cellulitis thus set up, which he suggested might very easily get beyond the surgeon's control by spreading along the connective tissue. In his own opinion the drainage had probably achieved most of the good that had resulted.

Mr. Hurry Fenwick, in reply, said he was pleased that Mr. Sheild had admitted the analogy between the inflammation which he proposed to set up and the old-fashioned seton or blister, for that was the point of his paper. He admitted that in most of the cases referred to the incisions had been made by way of operation, but these were the cases on which he had built up his proposal.

A Case of Cystic Polypi of the Nose.

Mr. Spencer Watson showed sections of the specimen, along with the specimen, of cystic polypi of the nose removed by him from a gentleman, 51 years of age, who had been the subject of several violent injuries of the face and nose, and had suffered from nasal polypi for many years, leading to almost complete obstruction of the nares. He had removed them by means of a special form of snare and by his ring knife. He found the growths to consist in great measure of cystic polypi containing blood, though the contents of some of the cysts were mucoid.

Successful Vaccination.—Dr. W. F. Hingston, District Medical Officer and Public Vaccinator for Deptford, has been awarded the Government grant for successful vaccination in his district.

OBSTETRICAL SOCIETY OF LONDON.

G. E. HERMAN, M.B.Lond., F.R.C.P., President, in the Chair.

Wednesday, December 5th, 1894.

SPECIMENS.

THE following specimens were shown: Dr. ROBERTS: Living Child with Congenital Deformities of Limbs.—Dr. STOTT (Leeds): Ruptured Tubal Gestation.—Dr. HANDFIELD JONES: Cystic Fibroma of Ovary.—Mr. TARGETT gave a lantern demonstration of Hydatids affecting the Bones of the Pelvis.

VAGINAL HYSTERECTOMY FOR PRIMARY CARCINOMA OF THE BODY OF THE UTERUS.

Dr. LEWERS read this paper. He recorded a case of primary carcinoma of the body of the uterus in a patient aged 44. Vaginal hysterectomy was performed on March 17th, 1892. The patient made a good recovery, and had remained in good health, and there was no sign of recurrence when she was last examined on November 1st, 1894. Attention was directed to the possibility of early cases of cancer of the body being mistaken for uterine fibroid. The shorter duration of the symptoms in cancer of the body would, generally at least, justify further investigation by dilatation of the cervix. As regards the operation itself, attention was called to the difficulty of getting the uterus out, even when it was partially or completely separated, where it was as large as that in the present case. The author preferred pressure forceps to ligatures for securing the broad ligaments. Ligatures, however, were used in the first two cases in the table, and pressure forceps in the remaining cases. For a case such as that here recorded to have any scientific value as bearing on the amenability of cancer of the body of the uterus to operative treatment, two conditions were essential: first, the exhibition of the specimen and of sections of it, so that independent observation might corroborate the author's opinion as to the nature of the growth; and, secondly, that the patient should come regularly to be examined, as she fortunately had done in this case. The author gave reasons for thinking that primary cancer of the body of the uterus might be a more caronic disease than cancer of the cervix. As regards clinical varieties, he had met with two. In one set of cases the growth was soft, friable, and easily broken down with the finger. In the other there was merely a hard, irregular, perhaps ulcerated condition found in the endometrium; in these cases nothing could be detached with the finger or curette. A table of the six cases in which the author has performed vaginal hysterectomy for primary cancer of the body of the uterus is appended. There was no mortality from the operation.

Dr. PETER HORROCKS related a case in which the passage of a sound caused no hæmorrhage worth mentioning, and yet there was extensive malignant growth in the uterine walls. No doubt this was an exceptional case, but it was important to remember. He was disposed to agree with the author that the severity of the pain was not so great on the average in cases of cancer of the body as in cancer of the cervix. He had hitherto used ligatures rather than forceps to secure the broad ligaments, but the author's experience made him feel disposed to try forceps again. He pointed out that the handles got in the way, and might be dragged off during manipulations. He asked if the author used any particular form of forceps, as it was difficult to get a pair that would grip equally from heel to tip of the blades. In some cases where the uterus was very large it was necessary to open the abdomen, fix a *serre-nœud* low down and remove the part above; then close the abdomen and remove the piece of cervix and the *serre-nœud per vaginam*.

Dr. AMAND ROUTH had, when he began to do vaginal hysterectomy, used forceps for securing the broad ligaments because they shortened the duration of the operation, thus lessening shock, and because one could tell with more exactness the point up to which the ligament should be divided, which one could not always do with ligatures. He found, however, that the convalescing stage was longer owing to the forceps, when they were removed, leaving a piece of broad ligament which had to slough off, and caused pyrexia, etc., in the process. The forceps took up much room, especially where the uterus was large, and they had to be put on obliquely. He would like to know what was Dr. Lewers's practice as regards removing the ovaries in these cases.

Mr. MALCOLM said he had been asked by Mr. Knowsley Thornton to mention 2 cases operated on by him, one in July, 1885, and one in July, 1889. Both were now quite well, more than nine and five years after the operations. Both were diagnosed by scraping and microscopic examination of the parts removed, and in both cases the diagnosis was verified after removal. One of these cases showed a hard tumour, about the size of a hazelnut, situated in the centre of the fundus of the uterus, close to its mucous membrane, which was destroyed. The growth resembled a scirrhus of the breast, with trabeculæ extending in all directions, but in no case passing beyond the uterine substance. Ligatures were used, and no forceps were left in the vagina.

Mr. ALBAN DORAN concluded, after a study of Dr. Lewers's and Professor Kaltenbach's statistics, that vaginal hysterectomy for cancer was justifiable, and that cancer of the uterus was less malignant than cancer of the breast. Many surgeons, arguing *a priori*, insisted that vaginal hysterectomy was bad surgery, as it was impossible to cut freely beyond the limits of the cancer. In operating for cancer of the breast many authorities adopted very radical measures, excising the pectoralis major muscle, and all the fat around the breast as high as the clavicle and far up the axilla reaching to the vein. Yet the cancer recurred in many patients. On the other hand, recurrence was hardly, if at all, more frequent after vaginal hysterectomy, where the knife of necessity passed very close to the limits of the malignant deposit.

The PRESIDENT said it was beyond doubt that the removal of cancer of the uterus did often prolong life. There was a good reason why better results should follow removal of uterine cancer than removal of cancer in other parts, for secondary growths were rarer in the former cases. When the Society last discussed this question in 1885 the mortality was shown to be about 28 per cent. In a recent paper by Buecheler[1] was a table embracing nearly 800 cases by different German operators, and showing an average mortality of about 10 per cent.; while of 159 cases operated on by the late Professor Kaltenbach the mortality was only between 3 and 4 per cent. He (the President) saw no reason why the mortality should not be still further reduced. In Kaltenbach's cases the proportion of those going three years and upwards without recurrence was 25 per cent., and other statistics showed as large a proportion. The question of ligature *versus* forceps

[1] *Z. f. Geb. u. Gyn.*, Bd. XXX.

Table of Six Cases of Vaginal Hysterectomy for Primary Carcinoma of the Body of the Uterus.

No.	Initial.	Age.	Date of Operation.	Place of Operation.	Result.	Variety of Growth.	Subsequent History.
1	Mrs. R.	58	March 1st, 1886	London Hospital	Recovered	Soft	Well for nearly a year, then recurrence. See *Obstet. Trans.*, vol. XXX, p. 218.
	Mrs. W.	42	November 7th, 1889	London Hospital	Recovered	Soft	Known to be quite well October, 1893; not seen since. Full record of case, *Lancet*, 1893, vol. i, p. 1379.
3	Mrs. T.	41	March 17th, 1892	London Hospital	Recovered	Soft	Quite well November 1st, 1894. This is the case fully recorded in the present paper.
4	Mrs. D.	53	February 1st, 1893	Private: with Dr. Stott, of Highgate	Recovered	Hard	Well so far as is known, but the author has no recent report of this case.
5	Mrs. S.	57	June 8th, 1893	London Hospital	Recovered	Hard	Quite well, June 22nd, 1894.
6	Mrs. T.	54	August 21st, 1893	London Hospital	Recovered	Soft	Quite well, October 13th, 1894.

was a very important one. By using ligatures the removal of the appendages was possible. This had two advantages. First, there was the possibility of there being pyosalpinx or of extension of cancer along the tubes; these events were not common in cases suitable for operation. Secondly, it was said that where the appendages were left pelvic pain and troublesome moliminal symptoms occurred. He (the President) did not remember that in the cases in which he had removed the uterus and left the appendages there had been much complaint of the kind, but the experience of others would be of value. Kaltenbach made a point of suturing the peritoneum. By this, any prolapse of bowel or omentum was prevented. He (the President) had had one case in which a piece of omentum came down after the operation, became adherent in the wound, and sloughed off. The patient did well, but it was an accident which it was desirable to avoid. He could confirm Dr. Lewers's statement that there were cases of cancer of the body of the uterus in which nothing could be detached with finger or curette: in these cases the diagnosis had to be made without the help of the microscope. Dr. Lewers's classification of cases into hard and soft, although perhaps clinically useful, did not exhaust all the varieties of this disease.

Remarks were made by Drs. Handfield Jones and Griffith.

Dr. Lewers, in reply, said that it was true in the large majority of cases of cancer of the body that rather free bleeding occurred, no matter how gently the sound was passed; and also in the majority of cases that pain was an early and marked symptom; exceptionally, as in his case, pain was not conspicuous. At present the only hope for a patient suffering from cancer lay in early diagnosis and free removal, and there could be no question that life was prolonged by the operation in suitable cases. Diagnosis was usually easy when all circumstances of the case were taken into account. He believed that in cancer of the body the disease remained for a longer time than in the breast strictly circumscribed, and therefore amenable to treatment. Dr. Horrocks had referred to a case where the uterus was too large to remove *per vaginam*, and where, therefore, the combined abdominal and vaginal operation had been employed. He (Dr. Lewers) believed that, speaking generally, by the time the uterus was too large to remove *per vaginam*, the disease had involved other tissues, and the operation was not worth undertaking. His classification was merely a clinical one; the hard form was much the rarer, and might easily be overlooked unless its existence were remembered and the negative results of curetting borne in mind. As regards the details of the operation, he thought it important to bear in mind the difference between the operation in cases of cancer of the body and cases of cancer of the cervix. In the former the patient was frequently old, and there was, therefore, senile narrowing of the vagina; she was often nulliparous, and the body of the uterus was considerably enlarged. On the other hand, in the latter the body was generally small and the vagina capacious. Dr. Lewers had not usually removed the appendages, and had traced no ill-effects to leaving them. He thought it was best to trust to forceps for securing the broad ligaments, and that it was dangerous to remove them too soon, not only for fear of hæmorrhage, but owing to the risk of breaking down the adhesions in the neighbourhood of the wound.

HUNTERIAN SOCIETY.

Charters J. Symonds, M.S., F.R.C.S., President, in the Chair.

Wednesday, November 28th, 1894.

Cases.

Dr. Fred. J. Smith showed a patient Convalescent from Typhoid Fever after some weeks' continuous treatment by bathing.—Dr. Arthur Davies showed a series of Lantern Slides representing patients suffering from myxœdema and psoriasis, and other skin affections, before and after treatment by thyroid extract.

The Thyroid Treatment in Skin Disease.

Dr. P. S. Abraham showed a case of Lupus Vulgaris of the Face, which had exhibited marked improvement under thyroid feeding. The patient, a girl, had been taking three tabloids a day until quite recently. She had, however, also used an ointment which contained oleate of mercury, salicylic acid, and oxide of zinc. He had never seen such a result before in so severe a case. In reply to questions from Dr. Hingston Fox and Dr. Mitchell, Dr. Abraham said that the patient had been also treated with cod-liver oil until lately. She had been under treatment for six months, and he should continue it until the affected part was quite healed. Subsequent experience had not led him to modify in any great degree the opinion he had already expressed as to the thyroid treatment.[1] He was disappointed with the effect of the drug in psoriasis. Although some of the cases treated by him had benefited in a marked manner, the majority had not; and even in those that had, he thought equally good results, with less disturbance of the patient's health, would have been achieved by the vigorous use of external remedies, such as ointments and baths. The most satisfactory results were in connection with lupus. He could record four cases where the results had been extremely good. Two of these were alluded to in his original paper, and the improvement had been maintained. A third was the case shown that night. He had tried the remedy in two cases of leprosy, and one of these patient thought himself very much better; at any rate, his condition was no worse than it was a year ago. The other case was a very advanced one, and the patient had since died. The late Dr. Rake, at his suggestion, tried the tabloids at the Trinidad Leper Asylum, putting five patients under the treatment. His verdict was not encouraging. He thought the most powerful preparation of the drug had been pushed as far as safety would allow in leprosy without much result. But Dr. Rake's supply had been a small one; there was a long delay in getting more, and the cases were of three and four years' standing. Dr. Abraham thought that the remedy was worthy of a more extended trial in this disease. At the last meeting of the American Dermatological Association much was said in disparagement of the use of the thyroid gland in skin diseases. But so far no one had gone so thoroughly and systematically into the subject as Dr. Bramwell, and it must be hoped that he would continue his researches. In psoriasis the question was whether the game was worth the candle: patients did not like the treatment, and Dr. Abraham felt in consequence averse to use it. He should like to mention a very favourable result obtained in a case of nearly complete alopecia areata in a woman. The administration of the thyroid gland had been followed by a very general sprouting of the hair, both on the scalp, eyebrows, and elsewhere.

Dr. Fred. J. Smith asked if Dr. Davies and Dr. Abraham had any experience of the exact action of thyroid treatment on the local lesions, and if they could give any clue as to the causes of the action. If the treatment was of use in cases of lupus, and if it was admitted that lupus was a tuberculous affection, might it be worth trying in cases of phthisis?

Dr. E. C. Kingsford mentioned the case of a lady suffering from eczema of the face and arms of three years' standing, whom he had treated with injections of Brady and Martin's extract, 5 minims every third day. The result on the eczema was *nil*, but the effect on the patient was startling. She became very ill and thin, and developed an abscess at the seat of the last injection. Noticing that the treatment made her thin, he suggested it to one of his brothers, who said he was too fat, and gave him Burroughs and Wellcome's tabloids, three a day. He soon lost 6 lbs. in weight, and complained he had got "the staggers." He left off the treatment, and got perfectly well.

Dr. Chaplin said he noticed that some of the cases of psoriasis which were unsuccessfully treated occurred in the early spring or early autumn, when such cases were particularly liable to become worse, and that when the treatment had been successful it had been at those seasons when psoriasis tended to get better.

The President spoke of a case of exophthalmic goitre under his observation, where the use of the extract resulted in the patient becoming extremely ill. Upon stopping it she became better at once.

Dr. Hingston Fox asked if Dr. Davies could give the proportions between the thyroid extract, tabloids, and

[1] See British Medical Journal, January 13th, 1894, p. 66.

glands. He noticed sometimes one and sometimes the other would be tried. He would like to know if there were any theory by which the effect produced on a strictly bacillary disease could be explained. The cases treated by Dr. Bramwell seemed to be very severe ones.

In replying, Dr. Davies said he thought it extremely important to thoroughly consider the treatment from every point of view, it being now so much used in skin diseases. He thought there could be no question that thyroid treatment could not be regarded as a specific in these cases, as in myxœdema and cretinism, where the result was nearly always successful. He would like to ask Dr. Abraham whether the cases he had had under his care were out-patients or if they had been treated in bed. Dr. Byrom Bramwell laid much stress on this point. He also considered the disease was first of all aggravated, and that the treatment should be continued for at least two months after producing thyroidism. Cases of a neurotic nature were liable to become worse. He saw no reason why, if used carefully, the treatment should not be tried for phthisis. He had not done so himself, hesitating on account of the consequences sometimes produced. Dr. Bramwell had also suggested trying it in cases of cancer. Dr. Davies thought the treatment acted either indirectly on the nervous system, or directly on the skin itself. With regard to the bad effect produced on patients, he should rather have expected a case of eczema to be made worse by treatment by injection. In myxœdema $\frac{1}{15}$s of a gland had produced toxic effects, showing the power of the remedy. He had not met with any cases of asthma amongst those he had treated. Neurotic people were not good subjects for this treatment. With regard to the effect of the time of year on psoriasis he had also noted that point. As to the quantities, 90 minims of Brady and Martin's extract equalled one gland, Burroughs and Wellcome's tabloids equalled one-sixteenth of a gland. He should like to ask Dr. Abraham if his cases were of old standing or new ones.

Dr. Abraham said they were both, and of all ages. He was of opinion that the effect of thyroid treatment in cases of psoriasis was very uncertain. His best cures had been that of a little boy, aged 7, and a man of 55. They were out-patients.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Wednesday, December 5th, 1894.

T. S. Clouston, M.D., President, in the Chair.

Cases.

Mr. David Wallace showed (1) a patient on whom he had performed Gastrostomy near the left costal margin, somewhat after the manner of Labbé. The modification was associated with the names of Franck and Albert. (2) A woman, aged 45, from whom he had removed a Malignant Goitre. She had made an excellent recovery, and was now under thyroid treatment. The specimen was shown, and Mr. Stiles made some remarks.—Dr. Sloan showed a young woman on whom he had performed Cardicentesis. (See below.)—Dr. F. D. Boyd showed a child who had recovered from Diphtheria after two injections of Antitoxin and Tracheotomy.—Dr. C. Macgillivray showed a little boy on whom he had operated for Osseous Ankylosis of the Jaw, and also a case of Dentigerous Cyst of the Upper Jaw.—Dr. W. Allan Jamieson showed a case of Lupus that had been under treatment for three years with weak chromic acid in distilled water, and the result seemed to be highly satisfactory.

Specimens.

Dr. W. Russell showed a Tumour of the Brain without symptoms from an epileptic. The tumour was in the left frontal lobe, posterior well back, and the dura mater was adherent. It measured 2½ in. by 1½ in.—Dr. George A. Gibson showed a card specimen and the microscopic appearances of Blood in Congenital Heart Disease. The corpuscles numbered something like eight or nine millions in place of five.—Dr. C. Macgillivray showed an Os Calcis which he had removed for acute necrosis.

Exhibits.

Dr. R. A. Lundie showed (1) Feldbausch's Nasal Respirator, and pointed out its advantages over all other respirators that he knew of, adding that patients could use it for several hours at a time. It was extremely simple—two aluminium tubes joined by a slight bar. Into these tubes four small coils of blotting paper, on which the medicinal agent was dropped. (2) A Feeding Cup, designed by Dr. F. M. Watt, the points of which were a flattened mouthpiece, and three handles, right, left, and posterior. He had himself found it a great comfort and convenience during a recent severe illness.

Electrical Theory of the Physiology of Vision.

Dr. Dawson Turner read a paper on this subject. He discussed and demonstrated the theory of vision brought forward by Dr. Oliver Lodge at the last meeting of the British Association.

Dr. Milne Murray congratulated Dr. Turner on the success of his demonstration, and also concurred with Dr. Turner on the value of his modification of Lodge's theory. He pointed out that the difficulty lay in explaining the nature of the energy which traversed the optical apparatus. All experience went to show that whatever it was, it was not electricity, and did not in any way correspond to the laws which regulated electric action. Before accepting this hypothesis as explaining the physiology of vision, it became necessary at least to show that the transmission of nerve energy could be influenced by luminiferous waves in the same way as the transmission of electric energy was influenced by Hertzian waves.

Drs. Noel Paton and George Mackay also took part in the discussion, and Dr. Turner replied.

Stricture of the Œsophagus.

Mr. David Wallace read notes of a case of stricture of the œsophagus. There were two points of constriction, one at the level of the cricoid carrilage, and one a little above the upper margin of the manubrium sterni. They were probably simple or spasmodic in nature. The upper stricture could be passed, but not the lower; gastrostomy had to be performed.

Mr. Caird and others made some remarks, and Mr. Wallace replied.

A Successful Case of Cardicentesis.

Dr. Sloan read a paper on a case of endocarditis and pericarditis with effusion; accidental tapping of the right ventricle after apparent death; recovery. The patient was a young woman of 19, who had had three previous attacks of acute rheumatism. The fourth was preceded by a sharp attack of erysipelas from which she was recovering when the rheumatic seizure occurred. The patient seemed to be *in articulo mortis*, when Dr. Sloan suddenly introduced the trocar of an aspirator, and drew off 10 ounces of blood apparently from the right ventricle. The patient lived and improvement began. She was now fairly well. Dr. Sloan gave a historical summary of the literature of cardicentesis.

Remarks were made by Dr. Joseph Bell, Dr. Bramwell (who had seen the patient at a time when he thought she could not live many hours), Dr. Affleck, and others.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

R. D. Purefoy, M.D., President, in the Chair.

Friday, November 23rd, 1894.

Specimens.

Dr. W. J. Smyly showed: Eight ovarian cysts, including two dermoids; two specimens of interstitial salpingitis; four specimens of double pyosalpinx; one fibro-cystic tumour of the uterus; two fibro-myomata (one suppurating), removed from the same patient by abdominal section; six uteri, in which the entire organ, including the cervix, had been removed by abdominal section (Martin's method); one uterus, removed by abdominal hysterectomy, with intraperitoneal treatment of stump; four myomatous uteri removed *per vaginam* by Doyen's method (*morcellement*) (the fragments of the largest specimen weighed 4 lbs. 12 ozs., and of the smallest 1½ lb.; the operation in the latter case was necessitated by cancer of the mucous membrane); four specimens of cancerous uteri removed *per vaginam;* one suppurating kidney (in this case the tumour was of enormous size, and a diagnosis was not possible until the hilum of the kidney was

reached). The only death was after the removal of a myomatous uterus with intraperitoneal treatment of the stump, but the cause of death being shock the method of dealing with the stump could not be blamed, for the result. He also showed a Six Months' Fœtus removed from a case of secondary abdominal pregnancy. The sac consisted of the fœtal membranes, and was soft and friable. The intestines were firmly adherent to it, and considerable difficulty was found in separating the adhesions. The patient died on the third day from asthenia. On *post-mortem* examination the abdominal cavity appeared healthy. Dr. Smyly also showed a specimen of Ruptured Uterus, and the Uterus of a patient who had died after Cæsarean section. It was the second operation upon the same patient. The patient died on the morning of the fourth day. At the *post-mortem* examination a small opening was found in the intestine, and the fact that it was not discovered at the operation was due to the imperfect light.—Dr. Alfred Smith showed (1) a Pair of Non-cystic Pyosalpinges which he removed from a married woman aged 28. She made a good recovery. (2) A Large Unilocular Ovarian Tumour, which caused some difficulty in removing on account of very extensive adhesions. The patient made a splendid recovery; no reaction followed. (3) A Large Dermoid Cyst with Extensive Adhesions. Numerous calcified plates were in the wall of the cyst; these, when palpating the tumour before the operation, produced a sound like that of breaking egg-shells. The recovery was rapid and uneventful. (4) A Hydrosalpinx removed from a patient, aged 29, who had puerperal fever after her first child six years ago. The history, the symptoms, and the bimanual examination pointed to a cystic pyosalpinx, but the abdominal section revealed a fine specimen of hydrosalpinx. Recovery good. (5) A Pair of Large Phosphatic Vesical Calculi, removed from a farmer's wife, aged 40. An attempt was made to remove them through the urethra, but failed; a section was made through the vesico-vaginal wall, and the calculi were easily picked out with the finger. The larger stone, the size of a large walnut, was found growing like a barnacle on the base of the posterior wall of the bladder. The patient was able to leave hospital twelve days after operation. There was no evident cause for the formation of the calculi.—Dr. Atthill exhibited an Encapsulated Tumour, removed from the vaginal wall of a young unmarried lady. Cystic tumours were met with commonly enough in the vagina, but an encapsulated solid tumour Dr. Atthill had not previously seen nor read of.—Dr. More Madden showed: (1) A case of Molar Pregnancy; (2) Broad Ligament Cystic Tumour; and (3) Ovarian Tumour.—Dr. F. W. Kidd exhibited a specimen showing the process of Amputation, *in utero*, by Amniotic Bands. The specimen was a fœtus of about 4 months, which had come away before the patient came into Coombe Hospital and had been roughly treated, having its head almost separated from its body. Adhesive bands had amputated portions of the fingers on both hands, and, extending to the feet, had amputated some of the toes, and one band was amputating one of the lower limbs, midway between the knee and ankle. The fœtus had also double hare-lip.

President's Address.

The President delivered a short inaugural address. He reviewed the work done by the members of the Section during the previous session, and touched on the improvements in the treatment of, and operations on, the different organs usually treated by the gynæcologist and obstetrician.

Rotunda Hospital Report.

Dr. W. J. Smyly read his clinical report of the Rotunda Lying-in Hospital for the year ending October 31st, 1893.

MANCHESTER MEDICAL SOCIETY.

J. Dixon Mann, M.D., F.R.C.P., President, in the Chair.

Wednesday, December 5th, 1894.

Cases.

Mr. Whitehead showed a girl, aged 18, upon whom he had successfully operated in January for Ankylosis of the Jaw. The deformity was attributed to an arthritis following some fever in early childhood. A wedge-shaped portion of bone was removed from each side of the maxilla.—Mr. Whitehead observed that from his experience passive movements were more easily persevered in by the patients after this operation than when the condyles were excised.—Mr. E. Stanmore Bishop mentioned a case of Appendicular Abscess, with perforation, treated in conjunction with Dr. Wilkinson by almost immediate operation and drainage, terminating in recovery.—Dr. Milligan and Dr. Brown showed a man, aged 25, upon whom the operation of tying the internal jugular vein and clearing out the lateral sinus had been performed for Otitic Pyæmia. The lateral sinus, which contained a large thrombus and a quantity of puriform fluid, was cleared out, and the sinus flushed with bichloride solution. The mastoid antrum was exposed, granulation tissue scraped away, and a thorough toilet of the middle ear performed. Rapid recovery followed. Dr. Milligan made some remarks upon the occurrence of sinus thrombosis secondary to purulent middle-ear disease.

Tetanus.

Mr. Jordan related a case of traumatic tetanus in a girl, aged 6½. Seven days after the accident patient could retain the head in upright posture. Gradual recovery took place.

Diphtheria.

Mr. Jordan also made a short communication on the treatment of diphtheria. The most important part of his paper was devoted to a consideration of mild forms of diphtheria where no membrane formed. As this form was generally recognisable, and might give rise to a severe attack in others with all the sequelæ usually met with in typical attacks of the disease, Mr. Jordan thought that this form of the disease (diphtheroid) should be treated just in the same way as the regular type. His method of treatment was to order the fauces to be well painted every hour, night and day, with a large brush, holding as much as possible of a glycerine-saturated solution of boracic acid. This should be done with intelligence and firmness; then immediately afterwards a drink of beef-tea, and then a small dose of a mixture containing tannin, chlorate of potash, and dilute nitro-hydrochloric acid. This treatment should be continued, gradually lengthening out the intervals until all redness had left the throat, that is, until infection has ceased. The idea was that boracic acid being a strong oxidiser, by applying it frequently the diphtheritic poison was destroyed so far as it came in contact with the disinfectant, as soon almost as it was formed. By these means the throat was kept clear of mucus, and regularity of feeding and of treatment with intervals of rest was secured.

MIDLAND MEDICAL SOCIETY.

T. F. Chavasse, F.R.C.S.Edin., President, in the Chair.

Wednesday, December 5th, 1894.

Cases.

Mr. Christopher Martin showed a patient, aged 29, on whom, eight weeks previously, he had performed Porro's Operation for impacted labour due to contraction of the pelvis. She was at full time, and had been in labour for two days. She was 4 feet 6 inches in height. The true conjugate diameter of the pelvis was only 2¼ inches. She made a speedy and uninterrupted recovery.—Dr. Kauffmann showed a woman, aged 38, with marked symptoms of Locomotor Ataxy, together with widespread painful skin sensations implicating the back of the trunk up to the fourth dorsal vertebra. These had existed for sixteen years, and Dr. Kauffmann looked upon them as being due to functional disturbance of the nerve cells of the posterior horns of grey matter. They started from a wrench of the back. The definite signs of posterior sclerosis commenced only six years ago. The dorsal pain had almost ceased, and the pains in the legs had become much less severe under treatment. There was no discoverable trace of syphilis, and no cause for the disease other than the old injury could be found. Pathologically the case suggested that the old injury had interfered with the nutrition of the posterior portions of the spinal cord and that in the postero-external white columns of the lumbar region; this altered function had led on to actual sclerosis.—Mr. Edge showed a Large Cystic Kidney which he had removed from a woman by abdominal nephrectomy. The patient made a good recovery.

"Catarrhus."

Dr. Foxwell read a paper on the advisability of combining into one disease various catarrhal affections which at present received the names of the portions of the body attacked. The name he suggested for this disease was "catarrhus." The reasons he gave for this unification were: 1. These affections were evidently constitutional in nature. 2. In all of them the general character of the disease was the same, though naturally modified in local detail according to the part chiefly affected. 3. One of these affections never, or with extreme rarity, occurred alone; most commonly three or more arose together. 4. They all occurred under similar climatic and meteorological conditions. 5. They were mutually contagious: that is, any one of them did not necessarily reproduce itself in a fresh subject, but with equal frequency reproduced some other of the series. 6. If contagious, they must be due to a germ; pneumonococcus had been found in them all, and cultivations of this germ had set up conditions closely resembling some of them—for example, acute pneumonia and enteritis. Still the position of pneumonococcus was not established, and it might well be that the causative germ was yet to find. 7. Some individuals inherited a tendency to fall victims to this disease as they did to tubercle, though predisposition was here far less important than in tubercle. In conclusion, Dr. Foxwell gave a description of the disease as he saw it, enumerating the various affections which he included under it.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

T. Churton, M.D., in the Chair.

Friday, November 30th, 1894.

Suppression of Urine.

Dr. Bampton (Ilkley) read notes of a case of complete anuria in a man, aged 64 lasting ten days without convulsions, and without any obstruction in the urinary passages. The *post-mortem* examination showed granular kidney only. The bladder was found empty ten days before death, and no urine was secreted during the remainder of the patient's life. There had been slight œdema of the ankles for eight weeks, but, until quite the end, when the patient became slightly delirious, and ultimately unconscious, he did not appear to be very ill, nor did he complain of feeling so. Sir Dyce Duckworth had recorded a similar case when the suppression lasted eight days. Dr. Bampton discussed three theories to account for the suppression: (1) "choked filter" from accumulation of excrementitious bodies; (2) paralysis of renal epithelium from an alkaloid poison; (3) stopcock action of the renal artery, from irritation produced by retained urinary constituents. He considered that potassium salts were the probable poisons mainly concerned.

Mr. Jessop said that hitherto he had always held that complete suppression of long standing, and unassociated with ordinary uræmic symptoms, always meant mechanical obstruction. The narration of this case made him doubt the propriety of his resolution, formed some time ago, always to operate in such cases. He mentioned the case of a man now alive and well who had twice had complete anuria for ten days, and who suddenly recovered on both occasions.

Drs. Major, Braithwaite, Chadwick, and Wardrop Griffith, Mr. Littlewood, and Mr. Knaggs also took part in the discussion.

Anæsthetics.

Mr. Rumboll, coming from Edinburgh, confessed to having started with a strong prejudice in favour of chloroform, having seen no fatality with it either during his student course or his practice in Scotland. Since coming to England, however, he had seen cause to alter his opinion as to its safety, having in three cases narrowly escaped disaster. This, together with the numbers of fatal chloroform cases recorded from time to time, led him to turn his attention to ether. In this year's British Medical Journal there had been no fewer than 27 deaths under chloroform. But whilst ether appeared to be safer it had disadvantages of its own. It had a tendency to produce a feeling of suffocation, its smell was most disagreeable, and in some cases it produced struggling. These drawbacks he found in practice to be obviated by preceding the administration of ether by that of nitrous oxide, which put the patient under quickly and easily. To ensure success in giving gas, he advised attention to the following details. The facepiece must fit accurately so as to exclude air which, if inhaled, intoxicated the patient, causing him to shout and struggle. The gas bag must only be half filled at first so as not to rush into the patient suddenly and frighten him; keep the gas turned on, and gently running into the bag during administration. When the patient is nearly under, turn the handle of the stopcock so that the patient can breathe to and fro into the bag: this gives a longer period of anæsthesia. Though the patient's colour becomes livid and his pupils grow larger this need not alarm, as the colour regains its natural condition on removing the facepiece: also the gag should be pushed till the breathing is stertorous, and there is twitching in the extremities. In giving gas and ether in two separate inhalers, there was the difficulty of the patient recovering consciousness between. This led Mr. Rumboll to make an effort to construct a combined gas and ether inhaler which should have, if possible, all the advantages of Clover's and none of its disadvantages. Such an inhaler he showed to the meeting. For many minor operations, Mr. Rumboll considered nitrous oxide the best because the only perfect anæsthetic.

Mr. J. Main Nicol commented on Mr. Rumboll's apparatus, thinking the administration of nitrous oxide from a simple apparatus followed by ether in the ordinary Clover's inhaler quite as efficient, and preferable because it avoided the bag used for gas acquiring an ethereal odour, and consequently largely neutralising the value of nitrous oxide as a preliminary to ether. He held that the admission of air, or, better still, of oyxgen, in graduated quantity, was not only not harmful, but prolonged the anæsthesia, in addition to its abolishing cyanosis and jactitation. By the administration of nitrous oxide with a certain proportion of oxygen, a perfectly tranquil anæsthesia might be obtained and maintained for any small operations, occupying three to ten minutes, such as tenotomies, circumcision, etc., without the after-effects of ether, and with a very rapid return to consciousness.

Mr. Croft, Dr. Bronner, Dr. Bampton, Dr. Johnston, Mr. Littlewood, and Dr. Griffith also made remarks.

Cases, Pathological Specimens, etc., were shown by Mr. Lawford Knaggs, Dr. Trevelyan, Mr. Littlewood, Dr. Gordon Sharp, Dr. Tacey and Dr. Clarke (Doncaster), and Mr. W. A. Stott.

LIVERPOOL MEDICAL INSTITUTION.

Chauncy Puzey, F.R.C.S., President, in the Chair.

Thursday, December 6th, 1894.

Removal of Large Sarcoma from the Neck.

Dr. Alexander showed this tumour, which weighed 5 lbs., and was a mixed-celled sarcoma. The patient was now 76. A small nodule midway between the angle and symphysis of the jaw was first noticed thirty-five years ago. It was only within the last few years that it had grown to the present size.

Two Cases of Amputation at the Hip-joint for Sarcoma.

Dr. Alexander showed the first case, a man of 48. Twenty months ago he sprained his knee: eight months ago he again injured the same knee, and a swelling formed in the popliteal space. At a hospital in Calcutta some arteries were tied, the swelling was injected with "some black stuff," and finally the leg was amputated just above the knee. He was admitted about six months ago with what appeared to be an inflamed stump, which on closer investigation proved to be a small round-celled sarcoma.

Mr. Paul showed the second case, a man of 40. The operation was performed about two years ago. No shock resulted, and the patient left in seven weeks. Mr. Paul considered that the amount of shock which followed secondary amputation was more a question of loss of blood than of the number of inches removed. He had performed seven secondary amputations at the hip-joint, five in persons under 20 for tuberculous disease and two above that age for sarcoma. All made an excellent recovery, which he believed was due to the simple method which he employed for retaining the elastic

tourniquet around the innominate bone. By this method (which he demonstrated) he was able to control all hæmorrhage during the entire operation.

Mr. Rushton Parker agreed with Mr. Paul that the danger in amputations of the lower limb was probably not increased inch by inch the higher up the section was made, but this only applied to amputations for disease. In injury the danger was increased with each advance towards the trunk, even in the absence of severe hæmorrhage.

The President and Drs. Alexander, Boyce, Thomas, and Barendt discussed these cases.

Two Cases of Lead Poisoning.

Dr. Caton showed a boy, aged 11, who had suffered from vomiting, colic, constipation, epileptiform attacks, great muscular wasting of the arms and legs, with complete wrist and ankle drop. There was scarcely any lead line on the gums. The drinking water in the village where he lived contained 3 grains of lead to the gallon. The second case, an electrician, aged 48, had lost 3 stones in weight in less than three years. He had suffered from colic for a year, and for three months from advancing paralysis of the arms with wrist drop, and had a marked lead line on the gums. It was discovered that the tea, coffee, and soup were made with water taken from the kitchen boiler, and which held in solution, on the average, 2 grains of lead per gallon. The boiler contained a leaden worm. The man's wife and child showed signs of lead poisoning.

Drs. Carter and Boyce made remarks.

Anæmia with Flagellated Protozoa in the Blood.

Dr. Barron related the case of a lady, aged 39, suffering from anæmia and a peculiar earthy complexion suggestive of malignant disease. In August last the blood contained large numbers of flagellated protozoa, as many as eight or ten in the field of the microscope $\frac{1}{12}$ oil immersion. She was treated with arsenic, aloes, and iron, and two months later no protozoa could be found.

Orbital Neuralgia.

Mr. R. J. Hamilton showed a man, aged 32, with no history of rheumatism or syphilis. Pain began suddenly, nine months ago, after exposure to cold wind. It was very intense, paroxysmal in character, and of almost daily occurrence. The pain was felt in and behind the eyeball and in the upper and lower lids. The supraorbital nerve was divided but without giving any relief; no drug seemed to have any effect on the pain. The eye was not irritable, but there was a leucoma adherens of 20 years' standing which interfered greatly with vision. Enucleation of the eyeball had been suggested. The Gasserian ganglion was thought to be the probable seat of the disease.

Dr. Carter suggested the subcutaneous injection of 5 minims of a 1 per cent. solution of osmic acid.

Mr. Bickerton and Mr. Shears made remarks.

Radical Cure of Hydrocele.

Mr. Thelwall Thomas drew attention to the percentage of recurrence after injection (10 to 15 per cent.) and the many recorded accidents when this method was employed. He advocated excision of the parietal tunica vaginalis to a more thorough extent than was recommended by von Bergmann, leaving only a narrow strip to stitch the skin to, which is carefully done all around. Three cases were recorded; in one of them incision and packing had failed. The average stay in hospital was 17 days.

The President and Messrs. Alexander, Parker, Paul, and G. Hamilton discussed this treatment. Most of the speakers appeared to be well satisfied with the injection method.

West London Medico-Chirurgical Society.—At a meeting on December 7th, Mr. F. Swinford Edwards, Vice-President in the chair, Mr. Keetley showed (1) a girl, aged 17, on whom he had performed Trendelenburg's operation for flat foot ten weeks before. The result was very good. Mr. Keetley recommended Trendelenburg's operation for those cases where ankle valgus was the marked symptom; (2) a man, aged 35, from whose chest he had extracted a drainage tube which had been lost there (in the country). Part of the sixth rib was resected in two successive portions from before backwards until the tube could be reached and felt with the finger. Part of the seventh rib was also resected. The case was now doing well. Mr. Paget referred to a case where he had succeeded in extracting a lost tube through the sinus with urethral forceps.—Mr. Alban Doran showed a specimen of Papilloma of Left Ovary which he had removed from a patient aged 55. Five years previously he had removed a similar tumour from the other ovary. He raised the question whether, in the case of papilloma of one ovary, the opposite one should be removed, even if it should seem healthy. In view of the frequency of the return of the disease in an ovary if left, he felt inclined to recommend its removal in all cases of papilloma.—Mr. Paget showed (1) a man suffering from Acromegaly, and contrasted the disease with osteitis deformans. Mr. Lunn considered that many cases described as osteitis deformans were in reality cases of acromegaly. (2) Mr. Paget also showed a girl on whom he had performed Resection of elbow-joint for arthritis which followed a penetrating wound of that joint. An excellent result was obtained. (3) A case of Acute Necrosis which had affected several bones. He urged that in cases of acute necrosis involving a large portion of the shaft of a long bone, the bone should be trephined and the medullary cavity opened up; in this way he thought the subsequent sequestrum was smaller.—Mr. Lloyd Williams showed a boy from whom Mr. Bidwell had removed the two right upper incisor and canine teeth, together with a corresponding portion of jaw, for Myeloid Epulis. The resulting deformity had been corrected by means of an artificial denture, carrying a gum block of three teeth.—Mr. Bidwell showed (1) a boy, aged 16, on whom he had operated for extensive Lupus of the Face by means of excision and Thiersch's skin grafting. The operation was done one year ago, and six months later three recurrences occurred in the new skin. These were excised in November, and regrafted. There was very little cicatricial contraction. (2) A patient on whom he had operated for Obstinate Ingrowing Toenail. A wedge of skin and subcutaneous fat, about a quarter of an inch wide, was dissected up from the inner side and top of the great toe, and removed. Avulsion had been tried, but the trouble recurred when the nail grew again. Dr. Bennett considered that such cases could be cured by insertion of lint, impregnated with nitrate of silver, under the edge of the nail.—Dr. Abraham showed a case of Tinea Circinata, which had resembled rodent ulcer: the microscope revealed abundant mycelium, and the spot had arisen in consequence of a scratch of the nail of a child suffering from alopecia.

Sheffield Medico-Chirurgical Society.—At a meeting on November 22nd, Mr. Makeig Jones, President, in the chair, Dr. Wilkinson showed a child with Spina Bifida cured by the injection of Morton's fluid.—Mr. Atkin showed a man on whom he had operated three months before for Trifacial Neuralgia. All the branches of the third division of the fifth were divided just below their exit at the foramen ovale, and portions of them removed.—Cases were also shown by Mr. Snell and Mr. Pye-Smith.—Mr. Caley showed a bowel with swollen Peyer's patches and solitary glands from a patient who died on the first week of enteric fever.—Mr. Richard Favell showed a Hydrosalpinx, removed from a woman aged 29. He also related a case of Idiopathic Erysipelas in a child who had been vaccinated fourteen days before the appearance of the rash. It appeared simultaneously on both forearms, and extended from the elbows to the wrists. The skin round the vesicles was not affected.—Mr. Reckless related a case of Hydatid Cyst of the Liver treated by free incision.—Dr. Harvey Littlejohn read a paper on Enteric Fever in Sheffield.—The President, Dr. Martin, Mr. Dale James, Dr. McCall, Mr. Atkin, Mr. Pye-Smith, Dr. Addison, Dr. Sinclair White, Dr. Dyson, and Dr. Reid took part in the discussions.

Bradford Medico-Chirurgical Society.—At a meeting on December 4th, Dr. Samuel Johnston, President, in the chair, Dr. H. Bronner described a case of Intussusception which had recently been under his care, and which had ended fatally. The patient, a girl aged 18 years, was anæmic, complained of vomiting, abdominal pain, and constipation; a few weeks before death a cylindrical tumour was noted in the left

iliac region. Surgical interference was refused. *Post mortem* an intussusception of the upper portion of the jejunum was found. Dr. JOHNSTON, Mr. HORROCKS, and Dr. DENBY discussed the case.—Dr. CHAPMAN showed a specimen of an Aneurysm of the Anterior Communicating Artery (of the circle of Willis), and read notes on the case. The patient, a man, was suddenly attacked with loss of consciousness, passing into coma, and ending fatally in twenty-two hours. On removing the brain there was a surface hæmorrhage on both sides, and a ruptured aneurysm was found in the anterior communicating artery. The vessels were atheromatous. No history of syphilis or of endocarditis was obtained.—Mr. HORROCKS showed a specimen of Abscess of the Liver due to gall stones impacted in the common duct. The patient was too collapsed to allow of surgical interference.—Dr. T. C. DENBY read notes of a case in which a Pencil-holder which had been swallowed by a boy, aged 10, had passed into the Right Bronchus. Early treatment by emetics, inversion, etc., did no good. Thirty-six hours afterwards the pencil-holder was coughed up. The boy ultimately made a good recovery.—Mr. APPLEYARD read a communication on Puerperal Conditions and Uterine Drainage, advocating continuous drainage of the uterus in certain cases after labour, when there was fever and an absence of the lochia. Syringing with carbolic lotion was also employed.

WIGAN MEDICAL SOCIETY.—At a meeting on September 13th (Mr. G. H. MONKS, jun., the President, in the chair), Mr. MITCHELL ROOCROFT showed a patient from whom he had removed the arm below the shoulder for Elephantiasis after injury some years before, also the specimen and a photograph of the case.—Mr. BERRY showed some cases in the wards of the infirmary.—Dr. DONALD (Manchester) read a paper on the Operative Treatment of Uterine Displacements. A discussion followed, in which Messrs. GRAHAM, BENSON, FRANCE, and the PRESIDENT took part.

THE ULSTER MEDICAL SOCIETY.—The opening meeting of the winter session was held in the Society's new rooms, 13, Lombard Street, Belfast, on Friday, November 2nd, when the President-elect, Brigade-Surgeon F. E. MCFARLAND, took the chair, and delivered an interesting address on Intemperance as affecting the Military and Civil Population. There was a large attendance of members. The annual dinner of the Society was held in the Grand Central Hotel, Belfast, on Thursday evening, November 22nd, and proved one of the most successful *reunions* of the kind in the history of the Society. The President, Dr. McFarland, occupied the chair, and fifty-five gentlemen sat down to dinner. Among the guests were the Lord Mayor of Belfast, Mr. Wm. W. Cammond, J.P.; the President of the Queen's College, Dr. Hamilton; the President of the Royal College of Physician, Dublin; Dr. Walter G. Smith; and the President of the Royal College of Surgeons, Dublin (Dr. Thornley Stoker). After dinner the Chairman proposed the "Health of the Queen, Prince and Princess of Wales, and the other members of the Royal Family," which was cordially received. Dr. Walton Browne proposed "The Lord Lieutenant and Prosperity to Ireland," which was responded to by Dr. Whitaker. Dr. Byers proposed the toast of "The Guests," and the Lord Mayor of Belfast and President Hamilton responded. Professor Cuming proposed the toast of "The Dublin Medical School," and Dr. Walter G. Smith and Dr. Thornley Stoker responded. Dr. Walter G. Smith proposed the toast of "The Queen's College and the Belfast Medical School," and President Hamilton, Professor Symington, Mr. Fagan, and Dr. J. A. Lindsay responded. President Hamilton proposed the toast of "The President of the Ulster Medical Society," and Dr. McFarland responded. The speaking generally was up to a high level of excellence, Dr. Cuming's speech in particular being by universal consent pronounced one of his happiest efforts. The proceedings of the evening were pleasantly varied by some good music. The Society is at present in a highly flourishing condition, the membership exceeding that of any previous period. Dr. McKisack is the honorary secretary, and to his efforts the growing success of the Society is largely due.

REVIEWS.

THE DYNAMICS OF LIFE. An Address delivered before the Medical Society of Manchester, October 3rd, 1894. By W. R. GOWERS, M.D., F.R.S. London: J. and A. Churchill. 1894. (Cr. 8vo, pp. 70. 2s.)

Dr. GOWERS has in this address rendered a service to all interested in speculative physiology and psychology. Although he disclaims anything of novelty in the conceptions here presented, it cannot be denied that there is a great freshness in the manner the subject is treated, and no one can rise from its perusal without having learnt first that there are certain new ways of looking at well-known phenomena; and, secondly, how vast is the realm of the unknown and the hypothetical.

After some introductory words of warning that we have to rely on hypothesis almost entirely in forming our ideas of living functions, Dr. Gowers discusses the question of the source of vital energy. He begins with the comparatively simple case of muscular contraction. The source of muscular energy is "latent" chemical energy. The term "latent" is preferable to "potential" for reasons which the author justifies at length. No energy can be manifested which does not exist before in some other form. Physicists have ample evidence of this, and the energy which moves a ponderous piece of machinery existed before combustion in the furnace of the engine as minute motion among the atoms of the carbon and oxygen of fuel and air. This term "minute" motion is used to express the movement between atoms and molecules as distinguished from "massive" or "molar" motion—the movement of masses of molecules. The term "transformation of energy," of light into heat, of electricity into motion, and so forth, may thus be replaced by the term "transition of motion." Granting this idea, it is easy to place muscular energy in the same category; the "massive motion," called a "muscular contraction," is a transition from the condition of "minute motion" called "latent chemical energy."

The next point in the argument is that attraction limiting and determining the motion always exists whenever motion is a constituent of energy, and this is true both for massive and minute motion. The physical and chemical sciences afford, again, abundant instances; we need mention only gravitation and chemical affinity. Dr. Gowers avoids—wisely and purposely, we should say—any introduction of the question of movements of the imponderable substance called ether, the existence of which physicists have found it necessary to assume.

So far, then, we have attraction that unites and motion that tends to separate, and the greater the former in proportion to the latter, the greater is the stability of any substance. In lighting a coal fire attraction so far preponderates over motion that the latter has to be considerably increased in order to release energy in the form of light and heat. To set light to phosphorus or to gunpowder or nitroglycerine by a spark or concussion is a much less difficult matter. The spark or the concussion is in each case added motion, and may be spoken of in physiological language as a stimulus: or, to reverse it, we may speak of a physiological stimulus to a nerve or muscle as added motion.

The change in a muscle that follows the reception of an additional amount of energy or stimulus is shown partly in thermal and electrical manifestations, especially at the beginning of the contraction period, but the main and useful change is one in form. There is increase in the movement of the atoms, so that they occupy in considerable proportion a transverse instead of a longitudinal position; there is escape of atoms in more or less simple combinations from the surface; and this transverse movement and escape of atoms inevitably suggests a comparison between function and structure as evidenced by transverse striation.

Physiologists have now recognised the essential similarity between the phenomena exhibited by muscle and by nerve. The muscular impulse, as Professor Foster terms it, is best seen in a nerveless (for example, curarised) muscle, and differs from the nervous impulse in degree rather than in kind. Nerve force is called into activity by various forms of

"added motion" or stimuli; and the change, whatever be its intimate nature, is propagated along the fibrils to its destination, where the effect is proportionate to the intensity of the original stimulus. It is, however, remarkable how small the added motion need be to produce such a result, just as the balance of a pound in a pair of scales may be turned by a grain, so the lightest touch on the skin of an animal may excite reflex contraction whereby many foot pounds of energy are liberated. This shows the extreme instability of the nervous tissues, to which it is possible that the presence of phosphorus may contribute. In certain diseases like epilepsy or tetanus, or in poisoning by strychnine, this instability is increased.

In dealing with the action of drugs, Dr. Gowers admits the dangerously hypothetical ground on which he treads. Put briefly, he thinks the action of drugs in causing increased stability or instability of the spinal cord or other nervous structures is due to definite chemical changes produced in these organs.

When Dr. Gowers attacks the "mysterious process of inhibition" in nerve centres he becomes more daring still. The release of atomic motion is the source of manifested energy, but an increase in the motion of molecules or submolecules will lessen the energy liberated, or, in other words, produce inhibition. There is certainly no *a priori* reason why this theory should not hold. It is easier to form a conception of inhibition in an organ like the heart where there is massive motion to deal with. If the activity of the heart is due to release of atoms, its inhibition must be due to the converse, that is, to some restraining influence on this "minute motion." It does not need a wide stretch of the imagination to apply this to nervous structures if we remember that differences between muscle and nerve are differences of degree only.

Dr. Gowers recognises difficulties in the full acceptance of his theory, and with some of these he grapples very successfully. If a stimulus, it may be argued, is added motion, how comes it that diminution of motion, like cold, or the removal of a galvanic current, also produces sensation? Here the element of abruptness comes in. A current, if gradually increased, produces no effect, and currents of ordinary strength only produce effects at make and break. The blending of the minute motions of nerve force and electricity may be so adjusted that no stimulus is produced; but suddenly disturb the blend by abrupt increase or decrease of the artificial stimulus, and there are disturbances of motion in either case, which act as stimuli. It is quite possible to advance other explanations of the apparent difficulty without injury to the author's general conceptions. Take the case of cold: a cold object applied to the skin produces a sensation; the effect of cold is to lessen minute motion, and, consequently, the parts around have their minute motion relatively increased; hence the contrast produces the sensation in question.

Another difficulty arises from histological considerations: the axis cylinder consists of non-insulated fibrils, hence any comparison of nervous to electrical force is out of court. The researches of Golgi, Ramon y Cajal, and others have, moreover, shown that nerve cells are primarily nutritive in function; that in nerve centres, as in peripheral nerves, the spongework of fibrils is the exciting as well as the conducting mechanism, and moreover that conduction occurs through non-continuous (though contiguous) arborisations of this network. This most remarkable fact is certainly at first sight very staggering. The continuity of protoplasm has been demonstrated where previously it was never expected to exist, as between epithelium cells; and in that situation in nerve centres where it was assumed to exist it has been shown to be non-existent. We are, however, bound to accept the facts as they stand, and must admit that motion may pass from fibril to fibril though the fibrils only touch and do not anastomose. In conceiving this idea we are helped by analogous facts, such as the non-continuity of nerve with muscle, especially involuntary muscle, and we might add also the non-continuity of the substances that produce, say, an electrical stimulus with the sensory nerve endings that they affect.

One other point we should have liked to have seen treated in the light of Dr. Gowers's ideas and experiences. It is one which leads us into the deeper questions of psychology, such as the meaning of the *Ego*, and perhaps this was the reason why Dr. Gowers avoided reference to it. The question is how is abstract thought to be brought into correlation with physical forces. Nervous force, manifesting itself through the muscles or glands as work and heat, can conceivably be measured in terms of work and heat: one can be translated into the other just as work, heat and electrical force are mutually related to one another. But what about the labour involved in purely mental efforts, abstract reasoning, or emotional disturbances which need not necessarily manifest themselves in external work? Are such processes as these amenable to the laws of the transformation and conservation of energy or are they due to something beyond these laws?

We have done little more than indicate the main drift of this very remarkable and most suggestive address, but we hope that what has been said will be sufficient to induce our readers to study the book carefully.

Zur Aetiologie der Idiotie. Von Hermann Piper, Erziehungs-Inspector der städtischen Idiotenanstalt zu Dalldorf. Mit einem Vorwort von Medizinialrath Dr. W. Sander, Direktor der Irrenanstalt Dalldorf, bei Berlin. [The Etiology of Idiocy, by Hermann Piper, School Inspector of the State Idiot Asylum at Dalldorf. With a preface by Dr. W. Sander, Director of the Lunatic Asylum at Dalldorf, near Berlin.] Berlin: Fischer. 1893. (Roy. 8vo. pp. 199. M. 4.50.)

Dr. Sander, in his preface, strongly recommends the book to the notice of physicians engaged in this branch of practice and highly eulogises the author for the care he has taken in collecting statistics on the subject. He states that the proportion of congenital to acquired idiocy, which formerly was considered as 2 to 1, in this book is raised to 3 to 1, which Dr. Sander thinks is due to the accurate collection of facts. The influence of infectious diseases in the causation of acquired idiocy also is insisted on strongly.

In the year 1882 the journal which is the organ of the conference held annually in Germany to consider matters concerning idiots published statistics on the causes of idiocy, gained from the existing German asylums, which showed that of 1,287 cases, 860, or 66 per cent., were congenital, and 427, or 33 per cent., were acquired, a proportion of 2 to 1 in favour of congenital idiocy. The conditions then enumerated as causes are mentioned, as well as the age at which acquired idiocy was first noticed.

Herr Piper, with a laudable desire to add to the information given in this journal, has devoted himself during the twelve years he has been occupied in educating idiots in prosecuting further inquiries on the subject, and the contents of this book are the result of his researches; 416 cases have been analysed, of whom 125 had, and 291 had not, convulsions. Taking first the 291 without convulsions, he finds that 215 are congenital and 76 acquired cases, a proportion of 3 to 1 in favour of the former. Of these 215, 142 are boys and 73 girls, there being twice as many of the former sex, a proportion somewhat higher than in the English asylums. The causes of these cases are mentioned, and the number of cases is added under each heading. Each cause is then taken separately, and the occupation of the parents, the order of birth, and the number in each family are given. Together with the occupation of the parents is mentioned the number of children, and whether boys or girls, which the man following that occupation possesses, and then the history of each particular case is shortly described. The same course is pursued with respect to the 76 acquired cases without convulsions, and to the 95 congenital and 30 acquired with convulsions.

Summarising his results, he finds that the children of labourers are most affected, then the children of civil officials, joiners, tailors, shoemakers, and tradesmen. This is curious, but not scientific. Of more importance is the fact that 133 of the 416, or 32 per cent., are first-born children; 89 of these are boys and 44 girls. The principal antecedents in 310 congenital cases were found to be, as in England, phthisis, mental disorder, intemperance, and convulsions in the parents or their relations, while a history of syphilis is

three times more common than in this country. Consanguinity accounts for 3 per cent., so that that cause is not so frequent. Various other causes are given, but as they altogether account for a small number of cases it is not necessary to mention them. With regard to the 106 cases of acquired idiocy, scarlet fever, diphtheria, and measles account for 41 cases, or 38 per cent., and falls for 22 cases. Rickets, which is occasionally found in idiocy, but is certainly not a cause, is given as such in 10 cases. Evidently the author has taken a considerable amount of trouble in compiling the book, and the physician interested in the subject must make allowance for the non-medical training of the author.

A Manual of Therapeutics. By A. A. Stevens, A.M., M.D. Philadelphia: W. B. Saunders. 1894. (Cr. 8vo, pp. 436. 2.25 dols.)

So extensive has been the growth of pharmacology and therapeutics of late, that we cannot expect a volume of 400 comparatively small pages of large type to contain more than an epitome of these subjects, especially when a part of this space is claimed for the description of remedies and other matters which are outside the title adopted.

The chief object of the work apparently is to associate the experimental proof of the action of remedies with the employment of these in treatment. Within the limits of space which the author has set himself, he has been painstaking and fairly exact in his compilation.

For those who stand in need of such an epitome the volume may be of service, but it is doubtful whether it would satisfy the intelligent student who is endeavouring to obtain a basis of experimental fact upon which to found his therapeutical practice. Even less would it suffice to lead the empiric to amend his ways.

Pharmacology does not submit itself either easily or profitably to the degree of condensation which is here attempted. When its processes and results are given in more detail they fascinate and arrest the attention; whereas for the student half the instructive value is lost when a more condensed statement of ascertained facts is presented.

The therapeutical section is more satisfactory than the pharmacological. The author has, in addition to epitomising current information, touched upon useful questions which often receive too little attention, such as the speed of supervention of action and the duration of effect of remedies.

There are some forms of prescription which will be of service to the student, but it must be recollected that the preparations are those of the United States *Pharmacopœia*.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A "NEW" SYSTEM OF SANITARY DRAINAGE AND TREATMENT OF SEWAGE MATTER.

As far as we understand Captain M. P. Nadiéine's system, which he has described in a small pamphlet (London: Ward and Foxlow, 113, Church Street, N.W., 1893, pp. 23) it would seem to have little chance of general acceptance in this country, although it comes with high credentials from Russia, and has obtained medals and other distinctions in Paris, Brussels, and London. By an automatic apparatus, located apparently in the basement of the house, the solid excreta are separated from the liquid waste water, and mixed with peat or other disinfectant substance, after which they can either be conveyed to the soil or burned in the household stove, and we are assured that the latter alternative has been proved by experience to be quite practicable. Another feature is the aëration of liquid wastes, from urinals for example, by means of siphons of special construction. In the diagram the water from the lavatory flushes the urinal and their combined effluent flushes the closet, passing thence to the separator. Neither the sketches nor the letterpress succeed in making the details quite clear; but the position and arrangement of indoor sinks, urinals, and closets, and the diagrammatic array of pipes therefrom careering about the house, are somewhat alarming to English eyes, accustomed to seeing every waste pipe carried straightway through an external wall and ventilated as soon as possible. It is right to add that one of the advantages claimed for the system is that traps are largely superseded. The writer of the pamphlet speaks of the solids lodging as a matter of course in the trap beneath the closet, and remaining there until they dissolve, the flush being assumed to be merely a trickle of water down the conical sides of the basin. Under the new system this unpleasant condition is to be remedied, not by a better flush or better form of basin, but by dispensing with the closet trap altogether, one general trap placed close to the separating apparatus being considered quite sufficient to prevent the reflux of foul gases into the house. Here again the author is out of touch with our insular facts and notions. Closets such as those which he assumes to be general would stimulate the most sleepy of British sanitary authorities into prompt action under the nuisance clauses of the Public Health Act.

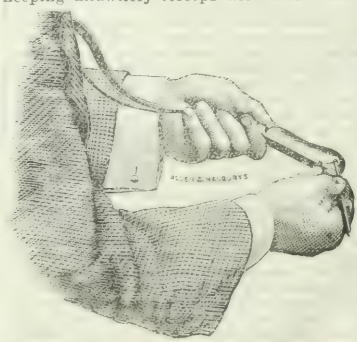
Captain Nadiéine's scheme includes some of the characteristics of both the dry earth closet and the waste water closet or "slop closet," supplemented by new and certainly ingenious mechanism, and brought indoors. He makes a strong point of the economic advantages, ranking them higher than most English authorities are disposed to do, but his contention that the separation of the solid excreta is to be regarded as a disinfection of the liquid sewage is scarcely convincing.

AN ARTIFICIAL EYE FOR SHRUNKEN SOCKET.

We have received from Messrs. Arnold and Sons, West Smithfield, London, a letter with regard to this special form of artificial eye, made by Mr. Salt, of Corporation Street, Birmingham, and described in the British Medical Journal of November 17th, p. 1117. Messrs. Arnold desire to state that this invention was anticipated by Dr. Collins, who described a glass eye secured by a pair of spectacles in the *Lancet* of September 29th, 1894. In reading the description given by Dr. Collins there appear to us to be several points of difference between the two contrivances. We may add that Mr. Salt showed to us a specimen of his invention sometime during the course of the past summer, though the detailed description was not received from him until shortly before the publication of the notice in the Journal of November 17th.

ASEPTIC MIDWIFERY FORCEPS.

Messrs. Allen and Hanburys, in view of the difficulty of keeping midwifery forceps with metal handles soldered or brazed to the shanks free from septic material at the seams, have introduced an instrument with detachable metal handles, for which they claim the advantage that it can easily be kept aseptic. This claim seems to us well founded. The handle is detached by pressing with a pencil a catch situated at the end of the handle as shown in the figure. These and surgical instruments of every variety can now be obtained at Messrs. Allen and Hanburys' establishment for the supply of instruments at 48, Wigmore Street, and 12, Welbeck Street, W.



AN INQUIRY

INTO

THE RELATIVE EFFICIENCY OF WATER FILTERS

IN

THE PREVENTION OF INFECTIVE DISEASE.

A Special Report to the "BRITISH MEDICAL JOURNAL."

BY

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Director of the Research Laboratories of the [illegible] cians (London) and Surgeons [illegible] Research Scholar of the British Medical Association.

PART I (CONTINUED).

NON-PRESSURE FILTERS, "TABLE," "POCKET," AND OTHER PORTABLE FORMS.

IX.

SPONGY IRON FILTER COMPANY, *22, New Oxford Street, London, W.C., Sole Purveyors to Her Majesty the Queen by Appointment.*—The manufacturers of this filter state that their medium exerts a strong chemical action on the impurities which may happen to be present in the water. They urge that charcoal filters favour the growth of certain lower forms of life, and thus compare unfavourably with the spongy iron used as their filtering medium. The filtering mechanism consists, as seen in Fig. 5, of three parts: First, an upper layer of spongy iron; second, an intermediate layer of pyrolusite; third, a

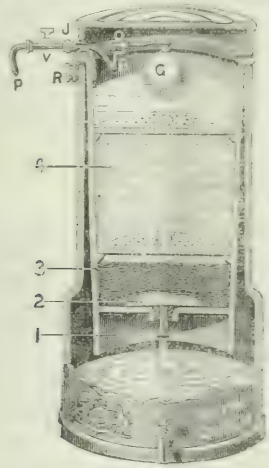


Fig. 5.

bag of asbestos cloth, on which the latter rests. No direct claims are put forward on its behalf as regards the prevention of the passage of disease organisms, but a quotation is made from a report of the Royal Prussian Military Administration, in which the non-recurrence of typhoid fever is attributed to the use of these filters under the heading "Zymotic Diseases Arrested by Spongy Iron Filters." This firm supply their filtering medium for use in table and domestic filters, cistern filters, and pocket and tourist filters. Our examination was carried out on two of the quart table filters (No. 1 of glass and No. 2 of glazed porcelain). The results are given in the following tables:

(1) QUART PLAIN GLASS.

TABLE XL.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	3,000 to 4,000	50 to 60
Cholera bacillus (first day)	5,000 to 6,000	20 to 40
Cholera bacillus (second day ...	—	120
Typhoid bacillus	[illegible]	[illegible]

TABLE XLI.—*Tap Water.*

		Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample ...	No. 1	—	Not recorded
...	No. 2	40	2 to 3
Second day ...	No. 1	50	15
...	No. 2		3
Third day ...	No. 1	80	500
...	No. 2		200
Fourth day ...	No. 1	25	Innumerable
...	No. 2		[illegible]

(2) QUART GLAZED PORCELAIN.

TABLE XLII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts ...	10,000 to 15,000	50 to 80
Cholera bacillus ...	10,000	to 150
Typhoid bacillus ...	10,000 to 15,000	1 to 50

On examining the tables it will be seen that, although at first a very large proportion of the organisms present is kept back, yet there can be no doubt that these ultimately find their way into the filtrate; thus in the case of cholera, on the first day only 40 colonies per c.c. appeared in the plates

made from the filtrate, but on the next day these had risen to 120, and would no doubt have appeared in still greater

TABLE XLIII.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	—	Not recorded
,, ,, ,, No. 2	58	5
Fourth day ,, No. 1	45	Innumerable
,, ,, ,, No. 2		400 to 500

numbers on succeeding days, as the bacilli were gradually washed through into and from the deeper layers of the filtering medium. We have also found little evidence to support the statement that spongy iron does not "favour the growth of low forms of life" in the same way as animal charcoal and porous charcoal blocks do. Thus the water from the filters in both cases on the fourth day contained at least ten times as many germs as were present in the original tap water. We have also carried out an extended experiment with No. 1 filter, in which we were able with ease to distinguish cholera bacilli in the filtrate up to the eighth day, when the investigation was discontinued.

TABLE XLIV.—*Cholera.*

Date of Sample	1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	8th day.
Presence or absence of cholera	+	+	+	+	+	+	+	+

There can accordingly be no question that these filters allow of the free passage of disease germs; and that when either a domestic or a pocket filter once becomes infected, the filtered water will for a considerable time contain disease organisms, thus increasing enormously the risk of infection when any of the water used happens to have been infected.

X.

THE MORRIS TUBE COMPANY, LIMITED, *11, Haymarket, London, S.W. The Morris Patent "Circulating" Filter, as supplied to Her Majesty's Army and Navy, pronounced by the Medical Profession and Experts on Water to be the most scientifically perfect Filter ever offered to the Public.*—"The special feature in this system is the bringing of each particle of water into contact with a great number of particles of carbon or other medium charged with air. . . . . This condition is brought about by first causing the water to take a circuitous up and down course through various sections of filtering medium, the bulk of which is freely open to the air; and, secondly, by making the outlet freer than the inlet, so that the water is constantly escaping, and cannot accumulate in the centre of the filter and flood the medium."

The object of the filter is to oblige the water to pass through as deep a layer of filtering medium as possible—(1) finely granular, and (2) more coarsely granular charcoal—and at the same time to ensure its most perfect aëration. This result is undoubtedly obtained in a most ingenious manner. The vendors state that "any filtering medium can be used in the Morris filter, such as spongy iron, well-burned animal charcoal, etc., but manganous carbon has been selected, after careful tests, as being the most suitable." They claim, in addition, that "this filter possesses such great purifying power that after exhaustive competitive trials by Government experts it has been adopted by Her Majesty's Army and Navy," and their analyst says: "The action of the filter is simply wonderful; it has, in fact, rendered a horribly polluted and dangerous water an almost absolutely pure one, as far as organic contamination is concerned."

Our experiments were carried out on two of these filters:

1. A two-gallon domestic filter, which was charged with Doulton's manganous carbon.

2. A four-gallon domestic filter charged with charcoal of unknown origin, for the use of which we were indebted to the courtesy of the Director-General of the Army Medical Department.

As we received the latter filter when our investigation was drawing to a close, we subjected it to our preliminary test only—the passage of yeasts and staphylococcus pyogenes aureus, which indicates clearly, however, its permeability to micro-organisms. The results obtained will be found in the following tables:

(1) TWO-GALLON DOMESTIC FILTER.

TABLE XLV.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000	30 to 40
Cholera bacillus	10,000	500 to 600
Typhoid bacillus	10,000 to 15,000	150 to 200

TABLE XLVI.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	—	Not recorded
,, ,, ,, No. 2	59	6
Fourth day ,, No. 1	45	Innumerable
,, ,, ,, No. 2		300 to 400

(2) FOUR-GALLON DOMESTIC FILTER (Army Medical Department).

TABLE XLVII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	5,000 to 6,000	6 to 10

On examining the tables, it will be observed that only a very small proportion of the organisms originally present in the fluid appear in the filtrate when initially tested; but this is without doubt due to the depth of filtering medium through which the water has to pass, and had the filters been examined from day to day the proportion of organisms obtained would undoubtedly have rapidly risen as they were washed through into the filtrate. It may be noted that this filter functions admirably as regards the aëration of water, and may perhaps be used with advantage for rendering boiled and condensed water brisk and palatable. It cannot, however, in our opinion be contended that these filters render unwholesome water less dangerous as regards the transmission of infective disease.

XI.

GEORGE CHEAVIN'S NEW PATENT IDIOCATHARTES REMOVABLE PLATE WATER FILTERS, *under the distinguished Patronage of Her Most Gracious Majesty the Queen of England, His Royal Highness the Prince of Wales, His Majesty Leopold II, King of the Belgians; Her Majesty the Queen of the Netherlands, His Late Imperial Majesty Napoleon III, Emperor of the French, etc.*—The filters supplied by this firm consist of domestic, pocket, and cistern filters. The composition of the filtering medium is not stated, but, so far as we are aware, is the same in all patterns. It is stated by the vendors that "It is the only filter that can be depended upon to remove effectually from

water all germs of disease, metallic impurities, lead, zinc, etc., dissolved in it, as well as all animal, vegetable, and earthy impurities held in suspension, and absolutely cleansing it from all particles of lead, zinc, lime, iron, sewage, organic, mineral, and saline impurities held in solution. It affords a certain protection against the dangers that lurk in the domestic water supply, and is guaranteed to remove all germs of cholera, typhoid, diphtheria, and all causes of blood poisoning, etc. It is the best possible preventive of cholera, typhoid fever, and all other diseases arising from drinking impure water. No water should be used for drinking or cooking without being effectually purified, and no house can be thoroughly furnished without such a filter. The 'New Idiocathartes,' which is prepared by means of recent and valuable improvements, has a wonderful power. It gives up nothing to the water, but, on the contrary, absorbs in and on its pores, and burns up, as it were, all matter capable of oxidation. It not only arrests microbes, and all other suspended matter, dead or alive, but also removes all noxious matter in solution, such as sewage or metallic poisons and deleterious gases. No filtering medium possesses so powerful and so strong and absorbent and purifying a power as our 'New Idiocathartes.' The water that issues from it is better than that of the finest spring."

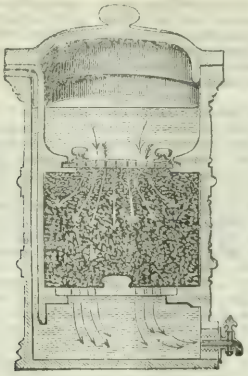


Fig. 6.

We have tested the claims of this filter on domestic filter A of their catalogue, and the results obtained are appended in the accompanying tables.

As will be seen from these tables, these filters exert no influence in arresting micro-organisms, a conclusion which might indeed have been drawn from the ultramarine experiments, the much larger particles of which readily passed through the filter. It was necessary, however, to repeat the experiments with disease organisms in view of the claims put forward on its behalf, and as will be observed these passed through in large numbers into the filtrate. An extended experiment was also carried out with cholera, in which the presence of the disease microbe was demonstrated in the filtrate up to the eighth day after one infection.

TABLE XLVIII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	3,000 to 4,000	800 to 1,000
Cholera bacillus (first day)	5,000 to 6,000	1,000 to 1,500
,, (second day)	—	8,000 to 10,000
Typhoid bacillus	20,000 to 30,000	10,000 to 15,000

TABLE XLIX.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	—	Not recorded
,, ,, No. 2	40	23
Second day, sample No. 1	80	100 to 500
,, ,, No. 2		50 to 80
Third day, sample No. 1	60	Innumerable
,, ,, No. 2		,,
Fourth day, sample No. 1	25	,,
,, ,, No. 2		500 to 1,000

TABLE L.—*Cholera.*

Date of Sample	1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	8th day.
Presence or absence of cholera	+	+	+	+	+	+	+	—

From these experiments it is obvious to what risk the vendors of these filters expose an unsuspecting public by the truly remarkable claim as to the purifying properties that they make for this filter, which, so far as the evidence we have obtained goes, is absolutely without foundation.

XII.

THE CROWN FILTER COMPANY. *Manufactory and Show Rooms, 66, Bishop Street, Port Dundas, Glasgow.*—The filtering medium adopted by this firm appears to be some preparation of charcoal used either alone as a simple compressed block or combined with an outer covering of granular charcoal. We have examined only one form of this filter, the simple block of compressed charcoal, as we considered it unnecessary to test the second form, as our previous experiments with similar material had already indicated that a covering of loose charcoal only affects the time required for the organisms to be washed through, but affords no protection as a filtering medium. The specimen experimented with was a quart glass table filter.

TABLE LI.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 1	
Cholera bacillus	10,0	
Typhoid bacillus	10,000 to 1	

TABLE LII. *Tap Water.*

	Average Number per c.c. originally present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1 ...	—	Not recorded
,, ,, No. 2 ...		
Fourth day, ,, No. 1	45	Innumerable
,, ,, No. 2		1,000 to 1,500

In the circular issued by this firm the necessity of freeing water "from all pollutions that generate disease" is insisted upon, and the statement made that the only remedy is "regular

and judicious filtration." It is claimed for their filters that "impure water is made sweet and wholesome." The results obtained in our experiments are given in Tables LI and LII.

It will be seen from these tables that the compressed charcoal exerts no appreciable action as regards the retention of micro-organisms, and cannot accordingly render "impure water ..... sweet and wholesome," as is contended by the manufacturers.

XIII.

JACOB BARSTOW AND SONS' PATENT COMBINATION NATURAL STONE AND CARBON FILTERS, *supplied to Her Serene Highness Princess Mary Victoria of Teck, the Empress Eugenie, the Prince of Monaco, the Belgian and other Governments, have never yet received a second or an inferior award at any time, but have won thirty-one Gold and other First Prize Medals, Filter Works, Pontefract, England.*—The filtering medium adopted by this firm consists of a combination of natural porous stone and carbon, which they assert "possesses the following advantages over every other filter: 1. The water passes through two distinct processes for its purification. 2. The vessel which holds the water to be filtered is made of a natural stone, through which the water percolates (leaving all the suspended impurities on the surface of the stone, from which they can be easily washed), and in hot weather acts as a first-class cooler. 3. The water is thus passed on to the next process perfectly clear and bright, and the impurities in solution can then be perfectly removed by the specially prepared carbon, and for a much longer period in consequence." The manufacturers fit up their combined filtering medium in all the forms which are in general use—table, domestic, cistern, tap, and pocket filters. We have examined one of their quart glass table pattern, and also a tap filter, but at present report only on the former. It is claimed for these filters that they "remove all impurity, whether in suspension or solution, such as lead, iron, copper, sewage, lime, all decomposed animal and vegetable matter, and bacilli, etc., from water." They also append an analytical report that contains the following statement: "The filter was tried with water containing a large number of a very discernible kind of bacilli. Even after the filtered water had stood for a long time, we could not find the bacilli again. Then the filter was completely disinfected, and water containing about 200,000 bacilli per gramme put into it. After filtration it was quite free from bacilli..... From these tests we draw the conclusion that 'Barstow's water filter' is excellently adapted for rendering even very impure water drinkable."

QUART GLASS TABLE FILTER.

TABLE LIII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	8,000 to 10,000	200 to 300
Cholera bacillus	10,000 to 15,000	100 to 150
Typhoid bacillus	8,000 to 10,000	400 to 500

TABLE LIV.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1 ...	—	Not recorded
,, ,, ,, No. 2 ...	30	8
Fourth day, first sample ...	45	Innumerable
,, ,, second ,, ...		300 to 400

These tables indicate at once that this filter possesses no power to prevent the passage of micro-organisms. It will be observed, however, that frequently a very large proportion of the microbes are retained in the filter, but this is to be accounted for by the fact that a certain time and succession of flushings are required to wash these into the filtrate, into which, however, they would undoubtedly pass in the course of time. At the same time so far as regards the removal of suspended matter from the water and rendering it brisk and palatable, it possesses certain advantages over many of the other filters in common use, but as regards the prevention of the transmission of disease organisms its claims are absolutely without foundation.

XIV.

ALCARAZAS FILTER, PASTEUR'S PRINCIPLE, "ROCH-BRAULT" PATENT, *Agents, Hersey Brothers, Limited, 70, Berners Street, W.*—The vendors state that "filtration by porcelain is, according to Pasteur and his colleagues, the only method that effectually prevents the transmission by water of epidemic maladies, such as cholera, typhoid, diphtheria, etc. The Alcarazas Filter is constructed on this theory; the filtering material being composed of artificial porcelain..... The material is an artificial product, in which the pores are determined to a definite degree (in natural stone the pores are never uniform; portions vary in density, consequently the filtration varies). The exact porosity required having been ascertained after exhaustive experiments with the double object of the material being sufficiently porous to filter the water to a given quantity, and at same time to be dense enough to entirely arrest microbes or germs..... The system of filtration by prepared porcelain has been adopted by the French Government on the recommendation of M. Freycinet (War Minister), and is now extensively employed in the barracks and hospitals."

We must draw attention here to the extreme danger of drawing the conclusion that because Pasteur, after long and tedious experiment, has obtained certain results with a specially prepared form of porcelain that similar results will be obtained, as is assumed by some filter makers, by other forms of porcelain.

TABLE LV.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus	8,000 to 10,000	20 to 30
Cholera bacillus	15,000 to 20,000	10 to 15
Typhoid bacillus (first day)	10,000 to 15,000	1 2
Typhoid bacillus (second day)	—	400 to 500

TABLE LVI.—*Tap Water.*

	Average Number per c.c. originally present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	35 to 40	0
,, ,, ,, No. 2		2 5
Second day, ,, No. 1	,,	Not recorded
,, ,, ,, No. 2		50 to 60
Third day, ,, No. 1	,,	600 to 700
,, ,, ,, No. 2		600 to 800
Fourth day, ,, No. 1	,,	2,000 to 3,000
,, ,, ,, No. 2		1,500 to 2,000

M. Pasteur has stated that the use of his name in connection with any filter except that which was worked out and tested in his own laboratory by M. Chamberland is made without his authority and against his will. The bare use of unglazed earthenware for filtration is, of course, considerably older than Pasteur, and its efficiency appears to depend, not only on the precise porosity of the medium, but also to some

considerable extent on the surface tension, between its particular constituents and micro-organisms. The Alcarazas filter may or may not arrest microbes, but absolutely no inference that it does can be drawn from the fact of its being composed of earthenware. The statement as to the French Government is true only in respect to the Chamberland or Pasteur filters.

Our experiments have been carried out with the No. 1 type, fitted in a bamboo stand. It consists of a large unglazed porcelain bowl with a lower receptacle provided with a tap. The fittings in this filter are excellent, and, so far as regards the removal of visible suspended matter and rendering the water cool and pleasant, it may, no doubt, function admirably were it not that the rate of filtration is very slow. We may remark that the prepared porcelain, which serves as a filtering medium, is apparently much thicker than that required in the Pasteur-Chamberland candles, which at once raises doubts as to its efficacy, since, unless the medium absolutely arrests the microbes, its mere depth simply affects the time required to wash them through into the filtrate. Our examination has shown this to be the case, as although the first portions of filtrate passed were sometimes germ free, yet continued filtration or examination on the succeeding day always revealed the presence of the test organisms. We may also mention that the thickness of porcelain presents great difficulties as regards sterilisation with boiling water—a fact we observed on several occasions in our experiments.

We may mention here that this was the only filter in which we had any difficulty in determining as to whether it should be classed under heading "A" or "B," that is to say, whether or not it allowed of the direct passage of micro-organisms. The difficulty was undoubtedly due to the slow rate of filtration, and to the fact that the density and thickness of the porcelain necessitated a succession of charges of water to wash through the organisms. In Table LVI, containing the results of our experiments with tap water, it will be observed that after the second day, the two samples which were taken contained approximately the same number of organisms—a result which at once distinguishes it from those obtained in the case of the other filters. This was no doubt due to the water organisms which had multiplied and accumulated in the filtering medium, being only slowly and regularly washed through into the filtrate instead of being (as is usually the case) concentrated in the first sample collected.

It is evident from our experiments that the Alcarazas filter does not act in the same way as the Pasteur-Chamberland, since the latter gives an absolutely germ-free filtrate when directly charged with test organisms. This filter accordingly confers no protection against the passage of disease organisms, and the assumption of the makers that it functions in the same way as the Pasteur filter is a very dangerous one for the general public, who are unable to distinguish between the two.

XV.

Slack and Brownlow, *Abbey Hey Works, Gorton, Manchester.*—The filtering medium adopted by this firm is some preparation of charcoal used either alone in its granular form, as a compressed block, or the two combined. They are put on the market as table, domestic, cistern, pocket, and bottle filters, the two latter being specially designed for use in foreign parts. We have experimented only with one of their large household filters, which was provided with a block of compressed carbon, as this would indicate sufficiently clearly how the filtering material would probably function in all cases. These filters appear to be in very extended use from the statement of the manufacturers that they "have been adopted by Her Majesty's Government for railway and transport service, by the Emperor of Russia, the President of the United States; by the Russian, Italian (who purchased 6,000 filters in 1887), Swedish, Chinese, and Japanese Governments; and have been found of the greatest service in all parts of the world," and by many "steamship and railway companies." They also state that the filters remove "every trace of lead, all organic matter, and the microbes and bacteria so frequently the cause of zymotic diseases." An analytical report is also appended, which states:

"I have been requested to examine two samples of drinking water, one unfiltered and the same filtered, and have submitted both to a most searching bacteriological examination under Koch's process of cultivation of bacterial germs, and find the unfiltered water contains several thousand germ colonies of bacteria per cubic centimetre of water, and is literally swarming with microbes. The effect of the filter is most satisfactory. The same impure water filtered is rendered perfect for all potable purposes."

Table LVII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 15,000	180 to 200
Cholera bacillus	10,000	1,000
Typhoid bacillus	10,000 to 15,000	400 to 500

Table LVIII.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	—	Not recorded
,, ,, ,, No. 2	50	35
Fourth day, ,, No. 1	15	Innumerable
,, ,, ,, No. 2		600 to 800

The results obtained as indicated in the foregoing tables show that these filters provide no safeguard against disease organisms as claimed by the vendors. The danger attending their use is most apparent in the case of the pocket and bottle filters (made of the same material as that which we have tested), which are supposed to be used for waters of suspicious origin such as occur in India and the Colonies, where these filters seem to be in extensive use.

XVI.

London and General Water Purifying Company, Limited, *157, Strand, London, W.C.*—This firm supplies domestic, portable, and pocket filters, which are fitted up on a system precisely similar to their siphon cistern filter which appears to be in greatest demand. We have examined the siphon cistern filter supplied by this firm. The filtering medium appears to consist of some preparation of charcoal in a finely granular and in a more coarsely granular form. "The filter, charged solely with animal charcoal, through which the water passes when being drawn, by ascension, through a siphon is placed at the bottom of, and continues to act so long as any water remains in the cistern. It yields the water pure, limpid, aërated, and free from colour and taste. It arrests impurities in mechanical suspension, purifies the water by oxidation from organic contamination, and takes metallic oxides out of solution. The water is filtered the last moment when required for use, and therefore is not liable to acquire fresh taint from standing, as is the case when drawn from most filters which require filling. The filter when once fixed requires no attention on the part of servants or others."

"The Company's patent cistern filter is patronised and used by Her Most Gracious Majesty the Queen (at Osborne), His Royal Highness the Prince of Wales (at Sandringham), His Royal Highness the Duke of Connaught (at Bagshot Park), His Royal Highness the Duke of Cambridge, the War Department, in Barracks, and Government Hospitals, the *élite* of the medical profession, at the London, Middlesex, Consumption, Fever, St. George's, St. Mary's, Small-pox, Evelina, and German Hospitals, in breweries, and other large establishments, and at the schools established by the School Board for London." They appear to lay great stress on the number of medical men by whom their filters are patronised as is evidenced by their statement that "this company publishes a dated list (which can be had on application), corrected

from time to time, of medical men who use the company's filters, which speaks more emphatically for their value than anything else."

The results of our experiments are given in the subjoined table:

TABLE LIX.—*Test Organisms.*

	Average Number per c.c. originally present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	8,000 to 10,000	1,000 to 1,200
Cholera bacillus	10,000	2,000 to 3,000
Typhoid bacillus	10,000 to 12,000	400 to 500

The table sufficiently indicates, as might have been expected from the nature of the filtering material used, that this filter offers no obstacle to the direct passage of disease microbes.

XVII.

PORTABLE STONEWARE FILTER IN WICKER BASKET (lent by Army Medical Department).—The manufacturer of this filter and the medium used was not ascertained, but it appears to differ in no way from most of the other filters on the market. The upper plate of the filter had a central orifice plugged with a sponge, through which the water passed to the true filtering apparatus. As this plate was firmly fixed in position we were unable to ascertain of what material the filtering medium consisted. As we received this filter when we were finishing our examination it was examined only as regards the passage of the first of our test organisms.

TABLE LX.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	8,000 to 12,000	200 to 300

The passage of both the yeasts and staphylococcus pyogenes aureus sufficiently indicate that this filter cannot be trusted to arrest the passage of disease organisms.

(To be continued.)

THE DISPOSAL OF THE ASHES AFTER CREMATION.—The Prefect of the Seine has issued an ordinance that all persons who leased cases in the Père la Chaise columbarium in 1889 must renew the lease on January 1st or remove the urns. What is to become of the unclaimed ashes? The authorities say they have not yet come to a final decision on the matter. It is probable that unclaimed ashes will be buried in a corner of the cemetery or burnt. There will not, however, be much to dispose of after all, for cremation does not seem to be much in favour with the Paris public. Since 1889, when the crematory was opened at Père la Chaise, only 810 bodies have been cremated. The number, it is true, shows an annual increase, but it is very slow. Thus there were 49 cremations in 1889, 121 in 1890, 134 in 1891, 159 in 1892, 199 in 1893, and 148 in 1894 up to the end of July. More than three-fourths of these cremations were gratuitous, the remains being mostly those of persons who have died in hospital, and been burnt at request of the family. The crematory is much more largely used for fœtuses and shreds and tatters of humanity from the dissecting room and operating theatres. Since 1889 till now 6,288 stillborn children and the *disjecta membra* of 11,222 bodies have been burnt at Père la Chaise.

DR. WILLIAM P. SPRATLING has been elected Superintendent of the Craig Colony for Epileptics, New York. The choice was made by competitive examination. Before entering on his duties, Dr. Spratling will visit the colony for epileptics at Bielefeld and the colonies of the same kind recently established in England.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

SPECIAL COMMISSION OF THE "BRITISH MEDICAL JOURNAL."

XXVIII.—WITHINGTON, LANCASHIRE.

At Withington is the hospital for the Chorlton Union, one of the three unions for the city of Manchester, Withington itself being a suburb of Manchester. On one side of the road are the large Poor-law schools, and on the other the Chorlton Union and Withington Hospital. We were met by Dr. Rhodes, a guardian, and by the medical officer, Dr. Orchard, who accompanied us round the hospital, and gave us every assistance. The hospital buildings lie behind the workhouse, and are built to accommodate over 700 patients.

THE PLAN

is that of pavilion blocks, having at the workhouse end a communicating corridor, which forms an open air terrace on the first floor. At this end of the block are the ward kitchens, isolation wards, and charge nurse's room; at the other end, in turrets, are the bath rooms and closets, one of which is set apart as the soiled linen chamber. There are three floors in each block including the ground floor, and the upper storeys are reached by a wide open staircase and a wide landing. The pavilions vary in capacity, the wards having from thirty-three to thirty-six beds in each, with one or two single-bed wards for special cases. There are seven pavilions in all, the three middle blocks being older than the remaining four. The former were built experimentally, and the latter show many improvements in structure and arrangement, such as slow-combustion fireplaces, self-purifying gaslights, and a space at the far end of the ward partitioned off to serve as a day room. In the older pavilions there is a wide balcony at the end which was supposed to serve as a relief to the ward, but practically it was found to be frequently useless.

CLASSIFICATION

is on the most approved hospital methods—male and female, medical and surgical—and there is one ward for chest cases, kept at a suitable temperature. The imbeciles and fit cases are in separate blocks, quite apart from the hospital, under the care of trained attendants, who are entirely responsible for them whether sick or well. The children have a separate ward in one of the pavilions. The lock cases are treated in a small building apart, with its separate offices and staff.

THE INFECTIOUS HOSPITAL

was at the time of our visit occupied by the little victims of an epidemic of measles. It is a self-contained building, having its own laundry and storing room under the control of the charge nurse. It is built with an outside staircase, so that the upper floor can be used if necessary for a distinct class of disease, the attendants having no cause to interfere with each other. This isolation hospital is used for intercurrent cases only. At the time of our visit the staff consisted of a charge nurse and probationer, the ground floor only being used for the patients with measles.

THE LYING-IN WARD

is placed at the top of one of the hospital pavilions, and occupies the whole of the floor. The labour ward is the partitioned end, corresponding to the day room on the storey below, and the doorway admits of the bedstead being wheeled out into the larger ward. The women remain in this department from three weeks to a month, until they are quite strong. The nurse, who is a certificated midwife, has her quarters close to her ward, an exception to the rule that all the nurses shall reside in the nursing home when off duty.

IN THE WARDS

the bedsteads are placed between the windows, facing each

other, some wards holding 33 and some 36 patients. Over each bed is a large card, giving particulars of patient, diagnosis, and treatment; behind is the temperature chart, and in some cases there is a second holder, containing the clinical notes of the case. We were informed by the superintendent that the temperature of every patient was taken and recorded on admission, but afterwards only by the doctor's orders. Between the beds are lockers combining seat and cupboard. the latter for personal possessions; the one we saw opened contained some books, a pipe, and some small articles of clothing. Behind the upright, forming the back of the chair, is a hook for the towel and the comb bag. We think that a pull might be placed over each bed with advantage; a large proportion of the patients are very helpless, and the pull would help the nurses in lifting. In the middle of each ward is a buffet table, in the cupboards of which are surgical dressings, ward medicines, poisons, and sundries; these are all kept locked. There is cross ventilation, carried on in the older wards by means of the upper part of the windows, in the more recent buildings by ventilators in the walls and under the beds as well. The walls are of glazed brick.

The Children's Ward

is intended for the reception of boys and girls from the month until 16 years of age. Both medical and surgical cases are treated in it. The style and arrangements are similar to the ward above described. We were sorry to see the tube feeding bottle in use here.

The Diets

for the hospital are served from the house kitchen, and distributed in jacketed tins; a certain amount of sick cookery is prepared in the ward kitchens, one object being to give the nurses an opportunity of learning that important, but too often neglected, part of their duties. The diets are in the hands of the medical officers, the guardians being most liberal in this particular; a glance at some of the bed cards showed this conclusively.

The Female Lock Wards

are small wards in a separate part of the grounds: there were five patients in bed at the time of our visit, and some up in the day room. These wards are in the charge of a nurse; the building is self-contained.

The Imbeciles, etc.,

are lodged in two separate blocks at the end of the male and female wings of the house. They are cared for by trained nurses, and provision is made for their treatment in these quarters if attacked by any acute illness. These wards are large and cheerful, and such amusements are provided for the inmates as they can enter into. The day rooms open on to small gardens for outdoor exercise. We noted with pleasure an instance of thoughtful contrivance—the iron frame of the bedsteads for the epileptics is rounded, to obviate any danger of injury from a sharp corner. Padded rooms are provided for use if necessary.

The Nursery

is in the house, and is under the charge of a responsible officer. The room is spacious and wholesome, and the little things seemed well cared for and on good terms with their attendants. Separate offices are attached to this department. The wisdom, to say nothing of the humanity, of the Chorlton guardians, is apparent in this provision of efficient management for these infants; it may relieve the rates of future paupers.

Laundry.

The whole of the washing for over 2,000 inmates is done in the one laundry in the house, except that for the infectious hospital, which has its own laundry. The laundry is fitted up with modern machinery, driven by steam power, and is capable of turning out any amount of clothing. The labour is provided by the inmates.

The Sanitary Appliances

are of most modern construction. In the newer pavilions the closets and bathrooms are cut off by an intercepting lobby. We noticed an omission in these arrangements; there is no slop sink, therefore all the bedpans, etc., must be emptied in the closets. The urinals are emptied in a small urinal, over which there should be a flowing stream of water: but the one we saw was not flushed, and consequently not sweet. All vessels are kept in these places, and with this one exception they were perfectly wholesome.

The Soiled Linen

is removed twice a week from the wards, unless there is need for immediate removal, when these articles are sent to the laundry daily. An improvement in the linen storage might be made by having a metal-lined hamper, or zinc box with a lid, to be kept in the soiled linen cupboard, as a linen receptacle.

The Nursing Staff.

In each pavilion there is a charge nurse, and on each floor there are two probationers; in the children's ward there are three probationers. At night there is one nurse for each pavilion, but this number is shortly to be doubled, and there will be two nurses on duty at night in each pavilion. The charge nurses are all fully trained, and this hospital is a large training school of Poor-law nurses. There is a trained matron responsible for the nursing of the hospital, and a resident medical officer. The nurses are lodged in the nursing home, the door to which opens on to the pavilion corridor; it is fitted up in accordance with modern requirements, the whole being placed under the charge of the home sister. The cleaning of the wards and all service is performed by the inmates, and inmates are on duty by night in each pavilion.

Recommendations.

It will be gathered from the report that the Withington Hospital hardly differs from some of the large voluntary hospitals, either in appointments or management, and dealing as the guardians do with an increasing population, the aid that they offer the sick poor is readily claimed. The points that struck us as capable of improvement are very few: they are, a slop sink for ward vessels, the hamper or box for the storage of soiled linen, pulls for the patients in bed, and the discarding of the tube feeding bottle in the nursery department.

THETFORD.

We have received a communication from the medical officer of this union, in which he begs us to correct a statement made in our report that may be misconstrued. Our Commissioner wrote: "The doctor informed us that he did not recognise this system as [illegible] he did not put it to the test by [illegible] is evident that such a remark must [illegible] of nursing in the infirmary and [illegible] criticism on the line pursued by the medical officer, who would not look for skilled nursing at the hands of a promoted inmate who had received no previous training. Mr. Minns says "the cases under his care are treated as carefully as possible, and his instructions with regard to the sick are carried out." Of that we are sure, [illegible] has in his work and the skill that he brings to bear on the cases of the sick entrusted to him; but with a better-equipped nursing staff the anxieties of the medical officer would be fewer.

SUICIDE IN A WORKHOUSE INFIRMARY.

An inquest has been held on the body of a woman who committed suicide whilst in the infirmary of the Birkenhead Workhouse, under circumstances that point to [illegible] general wards [illegible] evidently much affected. [illegible] dinner knife; all [illegible] the doctor, master, and nurse, but her life could not be saved. There are several points which have not been cleared up in the inquiry; we are not informed how many beds were under the care of the night nurse; how a patient admitted with a suspicion of mania was placed in a general ward, without special watchers; and how she became possessed of a dinner knife. Unless the inquiry clears up such points as these it fails of one of its objects, which is to point out wherein there has been lack of care and so serve as a warning for the future.

THE TRAINED v. THE UNTRAINED MATRON.

The Lambeth Board has been asked to adjudicate between the two officers who are responsible for the infirmary department. As we read the quarrel, the matron is an untrained officer, and to meet the difficulty of the supervision of trained nurses by an untrained head, an assistant matron, who is also superintendent of the nursing, was appointed, herself being a trained nurse. The inevitable friction created by having two heads has arisen, the Board at its last meeting decided that the matron was to be responsible for the control of the nurses and for the management of the nursing; moreover, we read that the matron is moving for the abolition of the office of assistant matron.

We are at one with the Board in advising that the matron of the infirmary should be the responsible officer, but we fail to see how that can be, when she is lacking the main qualification for that post—the hospital training; the plan of placing trained nurses under an untrained

head has been tried over and over again, with the one result, that the nurses do not stay; it suggests placing soldiers under a civilian, and then wondering that discipline is not maintained. At the Lewisham Infirmary there has been a trouble, not caused by the two matrons, but arising also from the dual government. In this case it is the medical superintendent and the matron who cannot agree; theoretically, the medical superintendent is supreme over the whole establishment, the matron simply holding the post of housekeeper. No trained nurse will quietly accept such a position when the theory is pushed to practice, especially when the medical superintendent, as is often the case, is a young untried man, who knows nothing about the difficult task of controlling a large number of trained nurses. We trust that the Asylums Board will see its way to defining the post of the matron, so that it will include control of the female department and of all the domestic arrangements; only thus can we hope for smooth working of the complicated machine.

THE RATE-SUPPORTED CHILDREN.

Dr. Ley has been moving his board (Newton Abbot) to provide a separate bed for each child; we are surprised to see that the motion was only carried after great opposition; we should have thought that no one could have been found to advocate the placing of promiscuous children in the same bed; such a practice is to be condemned on the ground of morality and of health; as the expenditure was only estimated at £17 it really was not worth fighting over. Whilst on the subject of the workhouse children we would draw attention to a letter on "Workhouse Reform" in the Wexford paper *The People*, advocating the education of these children so as to make them members of the wage-earning class by removing them from the pauper surroundings, and paying attention to their moral and physical health. It is a favourable sign of the times that the solution of this problem is receiving so much attention from all parties, and though the means advocated for obtaining this result are diverse, still it is only by well-conducted experiment that an answer can be found.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

WINTER SESSION, 1894.

Sir Richard Quain, Bart., President, in the Chair.

Thursday, December 6th.

Restoration of Names to the "Register."

The Council proceeded to consider the opinion of the legal adviser in regard to the form of the standing order regulating the procedure to be adopted in restoring names to the *Medical Register*. After discussion, it was moved by Mr. Wheelhouse, seconded by Dr. MacAlister, and agreed to that the standing order be adopted in the following amended form:

1. If any person whose name has been erased from the *Medical Register* by direction of the General Medical Council, and who still possesses a qualification entitling him to be registered, makes application to the Council for the restoration of his name to the *Register*, the following shall be the method of procedure:

2. The application shall be in writing, addressed to the General Medical Council, and signed by the applicant, and must state the grounds on which the application is made.

3. The statements in the application must be verified by certificates in writing, to be given by a justice of the peace and by a registered medical practitioner resident in the neighbourhood where the applicant has been residing since his removal.

4. On receipt of the application, it shall be referred by the Registrar to the Executive Committee for consideration and report. Before the application is considered by the Executive Committee, the Registrar shall notify the same to the Licensing Bodies whose qualifications were held by the applicant at the time his name was erased; and shall further, by letter addressed to the person or body (if any) on whose complaint the applicant's name had been erased, give notice of the application and the time when the Executive Committee intend to consider the same.

5. The Executive Committee shall consider the application, and may, if they think fit, adjourn the consideration to a future date, or require further evidence or explanations from the applicant.

6. The Executive Committee shall make a report to the General Medical Council upon the application, embodying in such report such recommendations as the Committee shall think fit to make, with the reasons for the recommendations.

7. The application and certificate shall be in the Forms 1 and 2 in the *Appendix*, with such variations as circumstances may require. Printed forms shall be kept by the Registrar, who shall supply them to intending applicants.

[illegible] "Congreve's Balsamic Elixir."

The Council then proceeded to deal with the case of John Alexander Brown, registered as M.R.C.S.E. 1877, Lic. Soc. Apoth. Lond. 1877, who was summoned before the Council to answer the following charge: "The complaint is in reference to an establishment at Coombe Lodge, Peckham, carried on by an unqualified person named George Thomas Congreve, who professes there to effect cures of consumption, and to prescribe treatment and sell medicines to consumptive patients, which cures and medicines are described and advertised in a book circulated and published by the said George Thomas Congreve, that he (Brown), as a registered medical practitioner, had associated himself with the said George Thomas Congreve in the conduct of the said establishment, and assisted him with his (Brown's) name, qualifications, and presence to carry on a medical practice at the said establishment."

Mr. Brown did not appear to answer the charge.

Dr. Bateman, who conducted the case on behalf of the Medical Defence Union, said that the charge was based on a book—which was published by Mr. Congreve—setting forth a so-called cure for consumption, coughs, colds, chronic bronchitis, etc., called the "Balsamic Elixir." A statement was made in the book that Mr. Brown was associated with Mr. Congreve and assisted in carrying on the establishment. Mr. Brown had reported upon several cases which Mr. Congreve claimed to have successfully dealt with, and these reports were also published in the book. The medicine sold by Mr. Congreve had been analysed, and had been found to contain an infusion of elderberries, a little friar's balsam, and a little allspice.

Mr. Farrer, the Council's Solicitor, read a written defence which had been received from Mr. Brown, in which he admitted that he had been associated with and had assisted Mr. Congreve for some years, but not as a partner. Mr. Brown also admitted that he had seen patients at Mr. Congreve's residence, and in certain cases had prescribed the medicine referred to.

Strangers were then requested to withdraw, and on their readmission the President stated that, in the opinion of the Council, Mr. Brown had been guilty of infamous conduct in a professional respect, and the Registrar had been directed to erase his name from the *Medical Register*.

Newspaper Reports.

Sir Dyce Duckworth moved the following resolution:

That this Council views with grave displeasure the communication to the press of any reports to the Council that have not been discussed and adopted by that body.

He said the necessity for such a resolution was self-evident, as it was most undesirable that reports to the Council should be published until they had been discussed and adopted. A case in point had arisen during the present session. A report made by the Examination Committee was entered on the minutes and published in the journals two days before it was finally adopted by the Council. Subsequently some very material changes were made in the report; but in the meantime the original report had received full circulation, the result being that certain bodies implicated in the report appeared to receive a reprimand from the Council which it was not desired by the Council they should receive. The object of the resolution was to prevent a repetition of any such proceeding in future.

Dr. Heron Watson seconded the resolution.

Dr. MacAlister suggested that the word "adopted" in the resolution should be altered to "dealt with," as very often reports were never adopted by the Council at all.

Dr. Glover said he trusted Sir Dyce Duckworth would withdraw the resolution. He could not help thinking that its adoption would lead to unfortunate consequences; the resolution was altogether in excess of the little incident which had given rise to it. The Council was under a very great obligation to the medical press for the accurate reports which they had given for so many years. When the reporters were present they were at liberty to report whatever happened. On the particular occasion in question Sir Dyce Duckworth read out word for word the report of the Examination Committee, and if a reporter had been present who was able to take down the report verbatim no action of the Council could prevent him from reporting every word he

heard. There were two courses open to the reporter: either to take down the words as read out by Sir Dyce Duckworth or to copy them from the written report. The reporters very wisely preferred to copy the written report instead of trusting to their hearing on account of the imperfect acoustic properties of the council room, and that was the sole offence which had called forth the remarkable resolution moved by Sir Dyce Duckworth. He strongly deprecated a resolution on such a flimsy basis being passed, when the reporters were only doing their duty in accurately reporting the proceedings of the Council. Moreover, if the resolution were carried, it would not in any way be a remedy for the evil of which Sir Dyce Duckworth complained. The result would simply be that, on account of imperfect hearing, instead of the reports being accurate as they had hitherto been, they would be imperfect. It was due both to the reporters and to the Council, when the reporters were invited to attend and a report was read word for word, that the press should be supplied with the exact documents.

The President stated that Sir Dyce Duckworth had modified his resolution, so that it read:

That this Council views with grave displeasure the communication to the press of any reports to the Council which are marked "confidential."

Dr. McVail pointed out that the modification did not affect the matter at all, as all the reports were marked "confidential." It would simply mean that when a report was read the press would have to trust to their hearing instead of having a correct copy before them, and it could only result in inaccurate reports. The only way in his opinion to get over the difficulty was for the Council to consider the reports before entering them on the minutes. He trusted the resolution would not be carried.

Dr. Fraser pointed out, as a remarkable fact, that the actual report in question was not marked "confidential."

Dr. Heron Watson said for his part he did not in the least degree wish any blame to be attached to the reporters, or to the medical press, but to the person who handed to the press reports belonging to the Council, containing information which it was premature to communicate to the public.

Dr. Moore said that certain matters had appeared in the Dublin papers before they were reported to the members of Council, and such a proceeding was likely to be very hurtful to the Council.

Dr. Tuke said that for about two years the whole of the business of the Council, as stated in the confidential and provisional programme, was given by one of the medical papers (the *Lancet*). In the present instance, however, the reporters, as far as he could understand, had only exercised their legitimate rights in reporting what they had heard at the Council.

Dr. Bruce was of the opinion that the resolution cast an aspersion on the press without any ground whatever.

Mr. Carter expressed the opinion that too much had been made about a very small thing. In his capacity as visitor he had made certain observations in the report of the Examination Committee which he was afterwards told had given offence where no offence was intended, and he agreed to withdraw the observations. It appeared that a brief summary of the observations had got into print, and that was the whole matter. The least said about it the sooner mended.

The resolution was then put to the Council and declared to be lost.

The President said that the press were present by permission of the Council. They had always shown great tact in reporting the proceedings in the past, and he felt sure that the same tact and discretion would be exercised in the future.

Sir Dyce Duckworth agreed with the President that such would be the case. He was quite satisfied with the discussion that had taken place, and he felt sure that what had happened would not occur again.

The session was then brought to a close.

Corrigendum.—In the list of medical men suggested by Dr. Heron Watson as suitable members for a consultative subcommittee on the revision of the *Pharmacopœia* our reporter omitted the name of Professor Charteris of Glasgow.

INFANT MORTALITY AND FACTORY LABOUR.

From Mr. Asquith's remarks in reply to a deputation from the Parliamentary Bills Committee which waited upon him on November 14th in order to call attention to the effect on the infant mortality of mothers neglecting their home duties to work in factories, it would appear that he did not appreciate the true bearing of the statistics in the Committee's report, a copy of which had some time previously been forwarded to him. The report did not, as might have been inferred from what Mr. Asquith said, go into the question whether the infant mortality of our large towns was on the increase, but had reference solely to the persistently high mortality among infants in one class of artisan towns as compared with another, the main reason for which, according to the contention of the Committee, being the employment of young married women in factories, and the consequent increase in the proportion of artificially fed infants, among whom it has been conclusively proved the mortality is enormously high.

Mr. Asquith said: "In reference to the employment of mothers after childbirth, no doubt the facts which Dr. Reid had brought together were striking and significant: but he could not say that it had as yet been established to his satisfaction as a scientific conclusion that the increase in infant mortality which had undoubtedly taken place, and was taking place, and was one of the most melancholy features of our vital statistics, was due solely or even chiefly to the employment of women in factories too soon after childbirth." Taking Mr. Asquith's own figures, we do not admit that they justify his conclusion that the infant death-rate is increasing, and we assert that they have no bearing whatever on the question of factory labour in relation to infant mortality.

Wolverhampton was mentioned as a striking example among the large towns in England where the infant mortality was on the increase, and particular stress was laid upon the figures quoted owing to the fact that it was one of the towns included in Dr. Reid's inquiry in which married women were not engaged in factory work. As a matter of fact, Mr. Asquith was wrong as regards the latter assumption, for Wolverhampton was classified in the second group of Staffordshire towns which embraced those where the trade carried on is such as affords employment for a considerable number of married women. Disregarding this for the present, however, let us examine the figures on which Mr. Asquith based his conclusions. He stated that in 1885—why he especially selected this year does not appear—the infant death-rate of Wolverhampton, that is, the number of infants who died during the first year of life per 1,000 births, amounted to 140, and that in 1893 the rate had risen to 208, the average for the nine years being 175. Why, we ask, was nine years selected as the period, and why did Mr. Asquith disregard the elementary principles of statistics, and base his conclusions on such insufficient data as the comparison of one year with another, or even one year with a nine years' average? The fallacy of such a proceeding will at once appear on referring to the figures in the following table, which is compiled from the past annual reports of the medical officer of health for Wolverhampton. It will be noticed that during the nine years' period quoted by Mr. Asquith, two phenomenal years occurred, namely 1885, when the infant death-rate was much lower than it had ever been during the twenty years for which the figures are given, and 1893, when it greatly exceeded any previously recorded rate. As a matter of fact, the prevalence of infantile diarrhœa, in the main, accounted for the high rate of 1893, just as the exceptional absence of that disease gave rise to the low rate of 1885. This is shown by the great increase in infant deaths during the third quarter of 1893, as compared with the corresponding quarter of 1885, and in the reports of the medical officer of health for each of those years the exceptional rates are so accounted for. Now, as summer diarrhœa is, in the main, dependent upon long-continued high temperature, both these rates are incidental to exceptional climatic conditions, and might very well have occurred in the reverse order; so that—apart from the too short period upon which Mr. Asquith sought to establish his statements that infant mortality was increasing—the figures themselves do not warrant such a conclusion.

Wolverhampton.—Infant Mortality, 1874-93.

	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.
Deaths under one year per 1,000 births	162	134	174	148	173	150	163	148	156	149	189	138	174	175	166	179	174	188	171	205
Number of deaths under one year during third quarter of year	—	122	159	103	134	82	164	107	127	118	185	84	148	172	113	138	147	159	120	232
Population estimated to middle of year	—	—	72,118	72,871	73,632	74,402	75,178	75,963	76,756	77,557	78,367	78,624	79,311	80,005	80,705	81,411	82,124	82,842	83,567	84,298

Let us, for the sake of argument, include 1884 in the period covered by Mr. Asquith's figures, and compare the averages of the two component quinquennial periods, and we find that in the first period the infant mortality amounted to 168, as compared with 184 in the second. Supposing, however, that the climatic conditions of 1893 had corresponded with those of 1885, and *vice versâ*—a thing which might very well have happened—the rates of mortality practically would have been reversed, the figures for the first period then being 182 as compared with 170 for the second.

Again, granting, for the sake of argument, that it had been shown that the infant death-rate, which, as a matter of fact, had been steadily on the decline since 1861, is now on the increase, and that this increase has taken place chiefly in towns where married women are not largely engaged in factories, why should Mr. Asquith infer from this that the case presented by the deputation was weakened? May it not more reasonably be suggested that the adverse influences which led to the increased mortality would be likely, other things being equal, to operate more severely in an infant population which had not already been seriously depleted, owing to exceptional hardships, than in one which had only been exposed to the risks common to all artisan communities?

Referring again to Wolverhampton, although Mr. Asquith was wrong in supposing that in the Staffordshire statistics it had been grouped among the towns where practically no married women work in factories, he was right in concluding that at any rate the infant mortality has for some time been on the increase. This, however, was not demonstrated by the figures he quoted, but the table, which covers a period of twenty years, does show it. Whereas in the decennial period ending 1883 the average infant mortality was 158, the corresponding figures for the subsequent decennial period are 176, an increase of 11 per cent. Coincident with this increase, however, it is interesting to note that two trades, namely, japanning and galvanising, had largely developed in the town, in both of which, but especially the former, married women are employed: it was for this reason that, on the advice of the medical officer of health, the town was classified in the second group for the purpose of Dr. Reid's inquiry, in place of in the third, as Mr. Asquith supposed, and it is to this cause in all probability that the increase in the infant mortality is to be attributed.

As regards the suggested remedies, the deputation fully realised the difficulties which stood in the way of their adoption, more especially from a trade point of view, and Mr. Asquith appears to have satisfied himself as to these by a special inquiry. It is to be regretted that he did not take equal pains to verify the Committee's conclusions in place of attempting to refute them by figures which in no sense supported his arguments. Considering the fact that both Dr. Reid's figures and the statistics which were subsequently obtained from artisan towns throughout England had run the gauntlet of an able committee of specialists before they were accepted by the Parliamentary Bills Committee, Mr. Asquith would have done well to have availed himself of the experienced statistical help at his command in place of attempting to refute carefully prepared statistics by founding an argument upon a few years' returns, which have been shown to be exceptional.

At the examination for Inspectors of Nuisances held in London on December 7th and 8th by the Sanitary Institute, 112 candidates presented themselves, of whom 68 were certified, as regards their sanitary knowledge, competent to discharge the duties of sanitary inspectors.

LITERARY NOTES.

Dr. John Chapman, who recently died at his residence in the Avenue de l'Opéra, was one of the best known members of the English colony in Paris. He was the author of several publications on medical subjects, chiefly relating to the treatment of cholera, sea-sickness, and other affections by the application of icebags to the spine. He was best known to the public, however, as one of the editors of the *Westminster Review*—a position which he held for a great number of years. In his earlier life Dr. Chapman was a publisher, and is thought to have been the last of the older generation who were booksellers as well as publishers and stood behind their own counters. His business and his connection with the *Westminster Review* brought Dr. Chapman into contact with George Eliot and other literary notabilities. We believe it was in a kind of literary hostel or boarding house near the Strand, kept by Chapman, that the author of *Romola* first met George Henry Lewes.

Dr. C. M. Jessop (Redhill) writes:

In your Literary Notes, page 1283, you say: "J. Fr. Leaulté to some extent anticipated Brown-Séquard," etc. Unfortunately you do not give the date when J. Fr. Leaulté flourished, so I trouble you with an extract from *Seplasium Salmonis* on the subject. William Salmon, the author of the *Seplasium, or the Druggist's Shop Opened*, lived about 1685. At page 755, chapter lviii, "Testes, Testiculi, the Testicles or Stones," are discussed. I must abridge:

"Those taken from the Beaver are called Castoreum, of which see chapter 6. Taken from Man or Beast, consist of a Flegm, Spirit, Sulphur, and Volatile Salt joined with some Earthy Particles: the chief used are from Bull, Horse, Goat, Ram, Boar, and Buck. Being cut out, are hung up, dried in the air, or over a gentle charcoal fire, or in a chimney; thus carefully dried, will keep seven years together.

"Their virtues are very great, for they refocillate the Spirits—Natural, Vital, and Animal, comfort the Head, Brain, and Nerves, and resist all Diseases afflicting them, as Epilepsies, Apoplexies, Vertigos, Lethargies, Megrims, Headaches, Dimness of Sight, hurt of the Optick Nerves, Palsies, Trenblings, Weaknesses of the Nerves, Muscles, and Joints; they restore in Consumptions, repress Vapors, and cure Fits of the Mother; are powerful in Convulsions, and good against the Bitings of Serpents, Mad Dogs, or other Venomous Beasts; they cause a good Memory, and cure Coughs, Colds, and Catarrhs, or Distillation of Rheum from the Head, upon the Lungs, or other parts, and cause a speedy and easie Delivery to a Woman in Travel, bringing away both Birth and afterbirth; they are also good against the Collick, and particularly strengthen the Instruments of Generation and provoke Lust."

Formula follow for making a tincture: Extract, the Antipileptic Spirit, the Potestates, the Spirit, Oil, and Volatile Salt. After each formula the particular diseases for which it is beneficial are given.

I trust this extract may be worth your consideration as to whether Leaulté or Salmon anticipated Brown-Séquard.

The date of Leaulté's thesis is 1717. The question of priority raised by Dr. Jessop does not, however, as it seems to us, arise. In speaking of Leaulté as a partial forerunner of Brown-Séquard, we had not the testicular "pentacle of rejuvenescence" in our minds, but certain later phases of the distinguished physiologist's teaching as to the connection between the functional activity of the testicle and that of the intellectual centres which caused some scandal at the Société de Biologie not very long before his death. It may make the matter clearer if we add that it was not an injection but an *ejection*, or at any rate an increase of secretion, of which Brown-Séquard was speaking in this instance.

Bequests.—The late Mr. John Henry Warre, of Onslow Square and Ramsgate, has by his will bequeathed £1,000 each to the London Hospital (Whitechapel) and the City of London Hospital for Diseases of the Chest (Victoria Park), and £250 each to the Convalescent Homes at Bexhill and Walton-on-Thames, The Children's Hospital (Walthamstow) and the Walthamstow Dispensary.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, DECEMBER 15th, 1894.

THE ROYAL BOTANIC SOCIETY OF LONDON.

Of the multitude of persons who well know the Botanic Garden in the Regent's Park as a place for flower shows, evening *fêtes*, floral parades, and quiet skating in winter, probably not one in five hundred even suspects that it is a really important scientific institution, which plays no trifling part in helping on the education of medical men, and therefore aids in supplying the unthinking public with what (when the pinch comes) they most of all crave—efficient aid in sickness. But the gardens have yet higher claims on the interest and support of all lovers of science. The Zoological Society does good zootomical work, thanks largely to its excellent menagerie. The Linnean Society is our only one devoted to publications concerning the science of plant life, but, unlike that previously mentioned, it has no corresponding garden. Kew, of course, is a most important aid, but it is relatively distant and inaccessible, and the garden of the Botanic Society in the Regent's Park may be said to hold to the Linnean Society a place in many respects analogous to that borne to the Zoological Society by the Regent's Park menagerie.

The Botanic Society, however, labours under one great difficulty and disadvantage. The objects it offers to its visitors are far less popular than are the apes and parrots, the snakes and lions, of the adjacent menagerie. Therefore, no income could be gained by payment at its gates even distantly approaching that obtained by the sister society, for which a fine Whit Monday means a gain of close upon a thousand pounds. Besides this, one of the very objects of the Society's garden is to afford to its Fellows a reserved and quiet pleasure ground, wherein ladies may be securely free from the drawbacks that must attend a place to which the payment of a shilling will give entrance to every casual passer by. Were this condition wanting, many Fellows would fall away, and the narrow means of the Society become thereby fatally straitened.

In seven years' time the lease of these gardens falls in, and we think it ought to be renewed at a much lower rent, or at none: as also that the Society should be spared the very heavy rates it has now to pay. At present the rent paid amounts to £360, while the property is rated at £1,000 a year. The gardens of Kew, on the other hand, are not only free, but actually receive from £24,000 to £26,000 a year. We rejoice that Kew does receive this, and have not the least intention to make any remark to the prejudice of that admirable institution, but we think that the well-informed public, and, above all, the medical profession, should have placed before them some facts which, in our opinion, clearly establish a claim to favour and public recognition on the part of the very conveniently situated and readily accessible Botanic Gardens of the metropolis.

In the first place it will, we are sure, interest the readers of the British Medical Journal to know that all students connected with our London hospitals are allowed gratis (on the recommendation of some teacher or professor of their school) tickets of admission, and also specimens for study. The number of students profiting by this privilege has continually augmented. In the year 1855 there were but 32, but in 1865 there were 175, in 1875 there were 364, in 1885 as many as 706. In 1891 the total reached 808, and in 1893 there were 820. To these students no fewer than 47,000 specimens have been annually distributed, and the Society continually receives acknowledgment of the great assistance it renders to the cultivation of botany, especially on account of its being so close at hand and ready of access. There is a valuable museum of preserved specimens of botanical, medical, and industrial interest, and in a spacious conservatory a large number of medicinal and economic plants are cultivated at a heavy annual cost.

Besides students from the hospitals, others from the Veterinary College, St. Paul's and the City of London Schools, the Female School of Art, and from various other institutions, are also permitted to participate in all that the Society can offer for their observation; and a considerable part of the garden is laid out in beds containing plants arranged according to the natural orders to which they severally belong, all being duly named and labelled.

A botanical lecture is also given freely to all visitors on every Friday in May and June, and thus an opportunity is afforded for gaining instruction from some of our most eminent botanists.

Besides all this the garden is a recording station of the Meteorological Society, and sends a quarterly report to the Government Offices in Victoria Street, Westminster: it also publishes a quarterly record of facts of botanical and meteorological interest.

We say nothing here respecting mere horticulture, as we now desire only to make known the serious scientific merits of the Society; it may, however, be mentioned that since 1843 the Society has paid over £54,000 in prizes to exhibitors.

For all the above-stated reasons we do not hesitate to assert that the Botanic Society has a substantial claim on public recognition and support, at least to the extent of being excused more than a nominal rent for the land which it applies to the advance of medical science, and therefore to the public good.

SEASONAL PREVALENCE OF EPIDEMIC DISEASES.

It is a well known fact that the mortality from the commoner infectious diseases shows a certain seasonal variation. A curve, for instance, plotted from the mortality returns of whooping-cough shows a high level in the earlier months of the year and a decline in the late autumn. Small-pox presents a somewhat similar curve but with a maximum rather later in the year. Scarlet fever and diphtheria present

curves with maxima in the late autumn or early winter and minima in the early spring, whilst measles presents a double curve with a maximum in June and in December. It is one of the chief problems before the epidemiologist to work out the causes of these seasonal variations.

They are undoubtedly complex, and a satisfactory solution can be reached only by the consideration of a large series of statistics. Further, recent experience of the working of notification has shown that it is not safe to assume that a rise in mortality represents exactly a corresponding rise in the prevalence of a disease. The seasonal variation of the statistics represents the gross resultant of many forces, and opportunities for dissociating the effect of these various forces are not numerous, but modern life, especially life in great cities, has become so complex that it is impossible to foresee all the far-reaching consequences of any disturbance of the ordinary equilibrium. Such a disturbance, brought about by the Elementary Education Act of 1870, has given an opportunity of dissociating one cause which has an influence on the variation in the seasonal prevalence of certain diseases. That school attendance is one of the agencies by which scarlet fever, diphtheria, and measles are disseminated has been for some years recognised. The causes of these seasonal variations was the main topic of the presidential address delivered by Mr. Shirley Murphy, Medical Officer to the London County Council, before the Epidemiological Society. His elaborate and judicious studies of the vital statistics of London have undoubtedly advanced our knowledge of the subject, and give increased precision to views which have already received a good deal of support from the reports made to the Local Government Board, and by the writings of Dr. Whitelegge and other medical officers of health.

Mr. Shirley Murphy was able to show that in London there has been an increasing tendency for children from 3 to 10 years of age to die from diphtheria, and that this increased incidence on them was first manifested somewhere between the two periods 1861-1870 and 1871-1880. Closer examination shows that this increased incidence first became conspicuous in the year 1871, in the year, that is, in which the elementary Education Act first became operative. The fact is all the more striking because the mean mortality from diphtheria in London in the second decenniad dealt with was less than in the preceding decenniad. This decrease was due to the fact that the number of deaths occurring in persons under 3 years of age and over 10 years of age was very much less. Baldly stated, the figures at least suggest that the enforcement of the Education Act may have had something to do with the special incidence of the disease upon children of school age.

Mr. Shirley Murphy applied a further test to his figures. He argued that, if the suggestion was correct, any interruption in school life could be indicated by a diminution in the amount of prevalence of disease, and that, further, the closing of schools ought to be attended by some differences in the age incidence of certain infectious diseases.

The statistics for scarlet fever and for diphtheria for the two years 1892 and 1893 were examined. All the cases of scarlet fever notified were grouped into three age periods: under 3 years of age, from 3 years to 13 years of age, and above 13 years of age. If school attendance be one main determining cause of the spread of scarlet fever, then the children from 3 to 13 years of age ought to have enjoyed a larger immunity during the holidays than those of the other age periods. The London figures for 1892 show that this was the case for the summer holidays. For the earlier and the later age periods the number of notifications for the three successive months, including the holiday, steadily rose, but in the intermediate period—the school age—the second month, showed a distinct diminution, the third a sudden rise, while the number for the first month was intermediate. Examined from week to week, it was found that the fall coincided with the closing, and the subsequent rise with the reopening of the schools, due allowance being made for the incubation period and for some delay in notification. In 1893 the results were similar, though there was at that time some fall in the number of cases at each age period. But, whereas the fall at infant ages was 1 per cent., and the fall among persons over 13 years of age was 17 per cent., children at the school age fell 25 per cent.

With regard to diphtheria, the figures in 1892 were not so clear. There was a fall among the schoolboys but not among the schoolgirls. In 1893 there was a marked fall in August corresponding to the holidays, and this in spite of the fact that the holiday occurred at a time when increased prevalence of the disease might have been expected. Certain figures supplied by Dr. Newsholme, from Brighton, point in the same direction; and Professor Linroth, of Stockholm, furnished Mr. Murphy with the notification figures for scarlet fever of that city for 1893 and 1894. The average number of cases of scarlet fever in 1893 in the four weeks before the holidays was 36.2, in the nine weeks of holidays 24.8, and in the four subsequent weeks 25. This shows a fall with the holidays but no notable increase after the holidays. The figures for 1894 are much more striking. They are for the corresponding periods 23.8, 13.1, and 41.6. There was, thus, a remarkable fall during the holidays, and a further striking rise after them. As measles is not a notifiable disease in London, Mr. Murphy was unable to supply any statistics from his own experience; but he quoted Körösi's opinion that school attendance was one of the main determining causes of the prevalence of measles. There are exceptions in the case of measles as in that of other diseases mentioned, and Mr. Shirley Murphy was careful to point out that the problem for solution is extremely complex, and that the influence exerted by interruptions of school operation would only make itself felt as a cause of diminution of prevalence if, in the weeks preceding the holidays, the disease in question was spreading through the schools.

Another modifying circumstance, which can at present, perhaps, only be indicated and not explained, is the variation in the type or virulence of the infection. Dr. Whitelegge, in his Milroy Lectures, directed attention to one point which proves the extreme care required in making deductions, especially from mortality statistics. It appears that the seasons of high fatality of scarlet fever and diphtheria do not exactly coincide with the seasons of greatest prevalence. It is easy to see that this may have an important bearing on deductions drawn from particular therapeutic methods if employed for limited periods. Mr. Murphy's statistics show that the case mortality of diphtheria varied in 1893 from 30.3 per cent. in January to 20.8 per cent. in June. In the same year the case mortality of scarlet

fever varied from 7.48 per cent. in January to 2.96 per cent. in September. In both instances the high case mortality coincided with diminished prevalence, a lower case mortality with increased prevalence of the disease. It is easy to see how a clinical observer may be misled in forming conclusions as to the value of his therapeutic remedies if he fails to take account of the natural history of the disease which he is treating.

On the other hand, Dr Ballard has shown that the fatality of diarrhœa increases with its prevalence, and Mr. Murphy suggested that, in view of the saprophytic relations of enteric fever, it was not improbable that its fatality might be governed by a similar law. Further, not only must the condition of the general health of the individual and the population be taken into account, but also in all probability the mode of infection. Mr. Murphy advanced reasons for believing that when the infection of enteric fever, and possibly that of scarlet fever and diphtheria also, were derived from milk the disease might tend to be of a mild type, owing possibly to the occurrence of infection in persons who would have resisted it if introduced by other channels. If such a tendency exists it would operate perhaps to increase prevalence without any corresponding increase in fatality. Lastly there remains to be mentioned, but hardly yet to be discussed, the hypothesis advanced by Dr. Thorne Thorne, that there is in certain diseases a possible progressive development of the property of infectiveness.

It is clear then that while giving full weight to the influence of school attendance, other conditions determining the prevalence of epidemic disease must not be lost sight of. Among these are to be included the meteorological influences which perhaps impress upon the curves of prevalence their general seasonal character. Generally if sufficiently long periods are taken there is a direct association of prevalence and fatality. Yet it seems to be pretty clear that in any particular years the two may not coincide, and that there is in fact a seasonal fatality and a seasonal prevalence which may or may not coincide in time. We are still in ignorance of all the conditions which determine these variations, but Mr. Shirley Murphy's address was an important contribution, not only by reason of the facts which it contained, but also for the numerous suggestions for future inquiry which he threw out.

GERMAN CRITICISM OF THE DIPHTHERIA ANTITOXIN TREATMENT.

The address on diphtheria and antitoxic serum by Dr. Hansemann before the Berlin Medical Society, to which our Berlin correspondent referred last week, was a drastic criticism of Behring's method of treating diphtheria, and the statistics and theories on which it is based. He maintained, though in support of his position he brought forward little proof, that the diphtheria bacillus is not the cause of diphtheria in all cases. If Dr. Hansemann had stated that the diphtheria bacillus was not the cause of all the various forms of membranous sore throat, most present-day critics would have agreed with him; but as to the other view, Dr. Hansemann will find few inclined to follow him very far. Whilst admitting the cures obtained in the lower animals by means of the antitoxic serum treatment, he holds that in such cases they are not cured of diphtheria, but of the "disease caused by Loeffler's bacillus." As he acknowledges that this cure does take place, his arguments as to the impossibility of it having any effect in the case of man in those cases in which Loeffler's bacillus is certainly present, and an active agent in the production of the processes known as diphtheria, can scarcely be said to hold good.

It is an exceedingly difficult point to prove a negative, and therefore Dr. Hansemann's statement that the antitoxic serum does not immunise against diphtheria may for the present pass without comment. He dwelt on the fact that the course of the disease where the antitoxic serum is used is not uniform and asserted that a specific remedy would give identical results in every case. After what Behring has distinctly stated as regards the period of the disease at which the treatment is commenced, the complications due to mixed infections, and the varying susceptibility in different patients, it is astonishing that Dr. Hansemann should hold such a position as this. A person ignorant of medicine and pathology might argue in such a fashion, but that a skilled pathologist should hold that any therapeutic agent should act in the same way in every case in which it is administered is a matter for great astonishment.

The only real point that Dr. Hansemann makes in his whole criticism is that previously only the most severe cases of diphtheria were sent into hospital, and therefore the mortality was regularly larger than in private practice. Now, however, the physicians—in Berlin at least—also send mild cases of diphtheria into the hospital in order that the serum, which cannot be obtained from the apothecaries, may be used. This, of course, must have a favourable influence on the recent statistics of the hospitals.

Dr. Hansemann gives two cases in which serum was used at an early period of the disease, but in which, nevertheless, death occurred within three days; but here he states "the child would not have died more quickly without serum." As regards the sequelæ of diphtheria and deaths resulting therefrom, Dr. Hansemann maintains that these should all be counted with the deaths from diphtheria, and he argues that the serum is no specific remedy against diphtheria, although he goes on to acknowledge that the serum undoubtedly exerts a certain curative action, but not in all cases.

Dr. Hansemann stated that urticaria almost invariably follows the exhibition of the antitoxic serum, and that skin hæmorrhages, fever, heart weakness, pain in the joints, coma, etc., also occur, but he concludes by saying that certainly, as yet, no patients had succumbed to these sequelæ. It is evident from the way in which this subject is treated that Dr. Hansemann cannot bring himself to lay any very great stress on this point. He gives one example of acute nephritis which he maintains was the result of the injection of the serum into a three-years-old child. It is marvellous, considering the number of cases in which the kidney is affected in diphtheria, that a larger number of cases of nephritis have not been ascribed by careless and ignorant people to the action of the antitoxic serum; and it is one of the strongest testimonies in favour of the innocuousness of the serum injections that a skilled pathologist, who has specially laid himself out to collect statistics and cases which might discredit this method of treatment, has been able to bring forward so little in support

of his thesis. Professor Virchow, as will be seen from the letter of our Berlin correspondent which we print this week, though he declines to accept the theory upon which the use of the serum rests, is convinced by the "brute force" of figures that it possesses high therapeutic value, and holds that it is the duty of every medical practitioner to employ this remedy in diphtheria.

MR. ROBERT LOUIS STEVENSON headed a deputation which on October 11th made a presentation to Dr. D. T. Hoskyn, R.N., of H.M.S. *Curaçoa*, in recognition of the manner in which he had devoted his time and skill to the needs of the poor in Apia, Samoa, during the time the ship was stationed there. The presentation took place on board the *Curaçoa* shortly before she was relieved.

THE MINUTES OF THE GENERAL MEDICAL COUNCIL.

MR. W. J. C. MILLER, B.A., the Registrar, has issued with commendable promptitude the *Minutes* (Vol. XXXI) of the General Medical Council, of its Executive Committee, and of the English Branch Council, from June 1st to December 25th. The volume contains as appendices reports by the Education and Examination Committees. The volume is, we understand, at present subject to revision, and will be placed on sale in its permanent form at the end of the year. Those who have not frequently consulted them are probably hardly aware of the amount of interesting material contained in these volumes of *Minutes*, which ought to be found in the library of every medical society and medical club.

THE TITLE OF "SURGEON."

AGAIN we have to protest against the free-and-easy way in which the title of "surgeon" is applied to anyone who chooses to to describe himself as such. At the Staffordshire assizes a man described as a "surgeon" was indicted for performing an illegal operation, and was sentenced to five years' penal servitude. But this man was not a surgeon, and the acceptance of such a description by the court was but an example of the loose way in which evidence is too often received by lawyers, who are imagined to be raised greatly above the rest of mankind by their knowledge of the rules of evidence. It is to be hoped that his indictment was more true than his description.

THE GOOD SAMARITAN.

A CORRESPONDENT informs us that in the Parish of Poplar, notices were sent out by the Board of Guardians to the medical practioners of the district, about a year ago, stating that if they were called out to a case of urgent sickness, and the person was destitute and unable to pay, and the case was reported within twenty-four hours, the guardians would pay at the rate of 3s. 6d. for visit and medicine by day, and 7s. 6d. by night. This is a plan worthy of much praise; at the same time it does not exactly fill the void which we pointed out. It applies to paupers and the indigent; what we suggested would be open to everyone. In an emergency the doctor would attend as a public officer. He would have nothing to do with the gross question as to whether the sufferer was able to pay; all that would be looked after by public officials.

MIDWIVES AND SYPHILIS.

DR. CABANÈS has discovered a valuable record of the transmission of syphilis by a midwife as long ago as 1628. The Parliament of Normandy condemned a midwife to damages to the plaintiff, costs to the court, and three hours of the pillory, on the count that she had communicated the venereal disease to the plaintiff when delivering her of a child. Some of the judges held that the disease could be contracted only in the usual manner. They held that she should therefore be spared the corporal punishment. Others, who seem to have far more carefully followed the trial, noted that there was evidence that the defendant had sores on her hand at the time of the labour, and that medical witnesses had testified how venereal disease could be propagated by touch alone. The most convincing proof was the evidence of five more women who had been attended by the defendant and had all become infected. The defendant's character was further found to be questionable, so this early and interesting case, which aided in the recognition of a great danger, ended by the careless and vicious midwife having to stand in the pillory.

THE SICK POOR IN PROVINCIAL WORKHOUSES: WITHINGTON.

AT Withington we have an example of what can be done for the sick pauper under the direction of an enlightened and humane board of guardians. Our Commissioner's report of a visit to the infirmary in this Manchester suburb describes a fully appointed and properly nursed hospital for 700 beds, with separate and additional quarters for the children and the imbeciles. Organisation is no doubt easier, as it is more necessary, in dealing with such large numbers, and we do not forget that the conditions of the rural unions are too different to allow them to take Withington as an example. Yet wherever the number of patients to be treated runs into three figures we should like to see the complete system of classification adopted as at Withington, and a staff of trained nurses under a trained matron, and other probationers in training. If all the larger infirmaries were, like this one, training schools for nurses, the difficulty of obtaining suitable nurses for the country workhouses would disappear, a difficulty which is often urged by guardians as a sufficient reason for maintaining the system of pauper nursing. We congratulate the Withington guardians and those who elected them, on their hospital, and we wish that others who are not so advanced might be stirred to emulation.

CHOLERA AND FLIES.

SURGEON-MAJOR R. MACRAE, in an interesting paper contributed to the *Indian Medical Gazette*, reviews the incidents of the recent outbreak of cholera in the Gaya Gaol from the point of view of the possible conveyance of the contagion from excreta to food through the agency of flies. The first case was a newly admitted prisoner, who appears to have contracted the disease on his way to the gaol. This man occupied successively several wards, and passed evacuations which were not specially dealt with in each. The presence of swarms of flies in the gaol, and their easy access to excreta, food, and milk are indisputable facts. The water in this instance was beyond suspicion. No direct proof is tendered of actual conveyance of the cholera poison from stool to food, but the probability of such an occurrence is advanced a stage by the detection by Professor Haffkine of cholera bacilli in specimens of sterilised milk exposed in new vessels, to which flies were permitted free access in various parts of the gaol. Dr. Macrae contends that even if the comma bacillus be not the cause of cholera, the agency which can disseminate that organism is also competent to distribute any other material which may be the cause.

LORD COLERIDGE ON MEDICAL TREATMENT.

LORD COLERIDGE is at least amusing. He suggests that one grave reason against antitoxin being used in the hospitals of the Asylums Board is that the patients, some of whom are patients by compulsion and others are but children, are none of them in a position to decide for themselves on the very difficult question of medical treatment. The *naïveté* of this is delightful. Are we to imagine that until these unfortunates recover their mental acumen, and until these children grow up so as to understand these "very difficult questions," they are to receive such treatment only as

has been "proved to be a cure?" Where is this panacea? and where is the common sense of a deputation which can listen to such suggestions without laughing? Knowing the terrible anxiety which must be felt by a physician to a fever hospital, on whose judgment as he goes his rounds life and death must so often hang, it is a picture of delightful irresponsibility which Lord Coleridge's speech suggests. The patients are to decide for themselves on this "very difficult question of medical treatment." The doctor is to take round the bill of fare, and the patient is to choose the feast. A tepid bath and antipyrin, a dose of antitoxin and tracheotomy to follow! They are all on the *menu*, and the patient, forsooth, is to decide. As for the poor dying children, we suppose their parents are to be sent for to decide the trying question before an effort is made to save them. It is to be supposed that the speaker did not see the absurd conclusions to which his observations led: but if there was the slightest spark of humour left in the "large number of ladies" and others who formed the deputation, they must have been heartily ashamed of their champion before he had done.

THE GUNBOAT AS A SANITARY AGENT.

A paper recently issued by the Colonial Office[1] includes the official correspondence June 18th-August 20th—relating to the plague in Hong Kong. Besides bearing testimony to the pluck and devotion of the profession during a trying and dangerous time, it gives some account of Kitasato's discovery. It is specially interesting in regard to the attitude of the Chinese population in opposing the efforts of Government to cope with the calamity. In many of our eastern colonies the Chinese, in virtue of their numbers, their cohesiveness, and of their importance as a body to the commercial, manufacturing, agricultural, and labour markets, presume sometimes to dictate to the Government; by threats of strikes, of boycotting, and of riots they have, in more than one instance, gradually been permitted by weak-kneed and confiding governors to set up an *imperium in imperio*. When the plague fell on Hong Kong, and the Government instituted drastic but reasonable measures for dealing with it, the Chinese *imperium in imperio*, which had gradually grown up under the noses of the officials, resented what they were pleased to consider unwarrantable interference with their accumulations of filth and the sanctity of their squalid houses. Sir William Robinson very wisely adopted the only argument applicable in the circumstances. The great public danger, above everything, demanded immediate action. He anchored a gunboat near the centre of disaffection. The measure was effective, as such arguments always are with Chinese when the argument is backed by right.

THE ALLEGED NEW ELEMENT.

At the anniversary meeting of the Royal Society on St. Andrew's Day Lord Kelvin was profusely complimentary to Lord Rayleigh in the presidential address, but as he proceeded he became cautious and spoke of the supposed new element—"the hitherto unknown and still anonymous fifth constituent of our atmosphere." It was said that there was nearly 1 per cent. of this new element in the atmosphere, and now that more than three months have elapsed since that statement was made at the meeting of the British Association in Oxford surprise will be felt that nothing definite should yet be known. At the meeting of the Chemical Society on December 6th the President called upon the assembled chemists to discuss this question, and he called in vain, but Professor Wanklyn placed on record immediately after the meeting of the British Association an explanation of the supposed discovery. According to this, the gas which has given rise to the curious results obtained by Lord Rayleigh is nitrous oxide. It is about one and a-half times as heavy as nitrogen, and therefore traces of it would slightly increase the specific gravity of nitrogen. It is by no means impossible that the atmosphere contains traces of this gas. Furthermore, it is quite in accordance with our knowledge that during the passage of air over red-hot copper turnings the energetic action of the copper on the oxygen of the air should induce the formation of traces of nitrous oxide. Pure nitrous oxide, as every schoolboy knows, behaves very like pure oxygen, but traces of nitrous oxide in presence of much nitrogen are singularly difficult to deal with. Professor Dewar has suggested the possibility of the Rayleigh gas being condensed nitrogen, three atoms being in the molecule. But that is quite untenable, inasmuch as the theory forbids that three atoms of a three- or five-atomic element are able to form a saturated molecule. The theory demands that the molecule produced by fusing together three atoms of nitrogen shall be either chemically active or devoid of stability; and Rayleigh gas possesses, according to its discoverer, neither of these characters.

[1] Further Correspondence relative to the Outbreak of Bubonic Plague at Hong Kong. London: Eyre and Spottiswoode. Edinburgh and Glasgow: J. Menzies and Co. Dublin: Hodges, Figgis and Co. 2d.

THE PROPOSED MUIRHEAD MEDICAL COLLEGE FOR WOMEN.

Several years ago Dr. Henry Muirhead, of Cambuslang, on his death left the residue of his estate for founding a medical college for women in Glasgow. His trustees have since been occupied considering how best the terms of his will may be carried out. They wish to establish a college in the vicinity of the youngest of the Glasgow infirmaries, the Victoria, but have met with unexpected difficulties in the refusal of the governors of the hospital to discuss the proposals of the trustees unless arrangements can be made by the latter whereby the students may obtain the degrees of the University. The trustees have failed to come to any arrangement with the University, because their proposals amount to a scheme of affiliation, and the University Court declines to discuss a scheme of affiliation with a body as yet non-existent. So the trustees have failed to get their scheme discussed by either the University or the Victoria Hospital. The funds at the disposal of the Muirhead Trust are only £32,000, a sum which will not go very far towards the endowment of lectureships after the erection of a building, the equipment of laboratories, etc., have been paid for. The truth is the Muirhead trustees lost their opportunity when they refused to amalgamate with Queen Margaret College before the latter became part of the University, and it is not likely such an opportunity will ever return.

DELIRIOUS PATIENTS IN HOSPITAL WARDS.

We last week commented shortly upon a case in which a patient was removed from a general hospital to a workhouse infirmary under the provisions of the Lunacy Act, and, having made inquiries, we expressed the opinion that this individual case had been dealt with in a proper manner. The evidence given at the inquest, however, raised questions of a somewhat wider interest, especially as to the mode of dealing with those who, while under treatment in general hospitals, develop that form of mental derangement which cannot fairly be called insanity, namely, delirium. The medical superintendent of the St. Pancras Workhouse stated that there were specially constructed wards in the workhouse meant, not only for the confinement of lunatics, but also for those rendered temporarily insane by disease. He also stated that he had admitted a large number of persons suffering from various diseases with delirium. Many hospitals, he said, had no accommodation for such patients. This is the point to which we desire to draw attention. Delirium is a phase of many diseases—an accident it might almost be called. The class of people, the broken down subjects, who form so large a proportion of the inmates of general hospitals are peculiarly liable to delirium under the strain of injury, or operation, or acute disease, and it would seem that hospitals which take these cases in ought

to be prepared to treat them to the end, and deal with all the eventualities which may arise. In the larger hospitals undoubtedly this is done. On inquiry at Guy's, for example, we hear from Dr. Perry: "The custom at Guy's, and I think at most of the other London hospitals, if not all, is not to send away out of the hospital any patient whose delirium, or, if you like, 'lunacy,' is, so to say, an incident of the disease for which he is admitted. For instance, we often get men with lobar pneumonia who develop delirium, sometimes of the tremens variety, and for the time they are mad; but we do not think of sending them off to the workhouse or Bethlem. We put them in an isolation ward . . . . and when they are better send them back to the ward into which they were first admitted . . . . We do not keep in the hospital actual lunatics, but deliver them over into the charge of their friends, or, if their friends will not take them, then we send for the relieving officer and invoke his assistance. These are folk who are lunatics pure and simple, not those whose madness is a complication or accident of the disease for which they are being treated. When I was a student at the London Hospital we had just the same practice there." We apprehend that this is the usual method of dealing with such cases. As a type of one of the smaller hospitals, we find this is the course adopted at the Addenbrooke Hospital at Cambridge; and from the Manchester Royal Infirmary, as a type of a large provincial hospital, we have a letter to the same effect. To a great extent the question is one of original construction, and no architect who has studied his subject would now build a hospital without a proper supply of isolation wards. There is, however, a side of the question of which mention must be made. It is for architects to build but for managers to use; and upon the right use of a hospital, that is, its application to the purposes for which it was planned, a great deal of its utility will depend. This is a side of the question which is well worth bearing in mind by those hospital managers who propose to admit pay patients to their wards. If it is true, as we believe it is, that for the proper working of any hospital a certain proportion of small wards is essential, may not the admittance of pay patients, who usually occupy these small wards, destroy the balance of that hospital's design, interfere with its efficiency as a means of treating the sick poor, and lead directly to regrettable incidents, such as the removal of delirious patients to workhouse infirmaries in the midst of their disease?

TRIAL FOR CRIME DONE BY THE INSANE.

IN relation to a case occupying the attention of the public at the present time, the question has been raised. What proceeding could be followed, short of arraigning and trying for murder, in the case of one who is alleged to be mentally affected? The provisions only refer to cases of "insanity." When a person is, within the meaning of the Act, a "prisoner," there are the following provisions: Where it appears to any two members of the visiting committee of a prison that a prisoner in such prison, who is not under sentence of death, is insane, they shall call to their assistance two legally-qualified medical practitioners, and these members and practitioners shall examine the prisoner and inquire as to his insanity, and, after such examination and inquiry, may certify in writing that he is insane. Where a prisoner is thus certified to be insane, one of Her Majesty's Principal Secretaries of State may, if he thinks fit, by warrant direct such prisoner to be removed to the asylum named in the warrant.

THE INSANITARY STATE OF ALDERSHOT.

THE death of Captain Bomford of the 1st Yorkshire Regiment at Aldershot from enteric fever, the illness of another officer, and the fear on the part of the authorities that defective drainage may lead to further developments of the disease, again attract public attention to a well-known and not insufficiently discussed subject. Whether the opening of foul drains at the back of Captain Bomford's quarters caused the attack of enteric fever which proved fatal may be open to some doubt, but of one point we may be pretty sure, that satisfactory sanitation is an unknown quantity in our largest garrison. During the existence of the hut accommodation it was reported that scarcely any record existed in the Royal Engineer offices of the general plan of the drainage in the several camps, and very probably now with the reconstruction (that is, erection of stone barracks) old and defective drains have been interfered with. Army sanitation is a very ungratifying and hopeless topic to discuss, as the expenditure of money on remedying insanitation is a very slow procedure. As an example of this we may quote the case of a garrison in Ireland where grave sanitary defects causing disease were found to exist in the drains of the barracks, and, although, so far back as March or April last, a sum of £1,800 was voted for their remedy, we are informed that up to date not a step has been taken to execute the necessary work. The responsibility for such a discreditable state of affairs can surely be placed on the shoulders of some department; certainly not the medical.

LIBRARY BOOKS AND INFECTIOUS DISEASE.

DR. LOVETT, M.O.H. St. Giles, writes to say that in his district a list of infected premises is regularly furnished to the librarian of the public library, who immediately stops the issue of books to borrowers residing in those premises, and books returned from such places are at once disinfected by the board's workmen free of charge. Dr. Henry Kenwood (M.O.H. Stoke Newington) informs us that very similar regulations are in force in that parish. A copy of every notification of infectious illness is forwarded at once to the public library. The librarian ascertains if any book has been lent to an inmate of the infected house, and, if so, the book is not received into the library again until the public health authority certifies that the premises and the book have been disinfected to its satisfaction. Meantime an inmate of the house is debarred from borrowing. Two printed forms are in use, and the plan is found to entail only an insignificant increase in the clerical work of the health department. If books are issued not only to residents, but to ratepayers and persons merely employed in the district, the system, we should fear, would be likely to break down; but Dr. Kenwood states that in most of the free public libraries of the metropolis books are issued only to residents in the parish. If so the system in force in St. Giles and Stoke Newington would, if applied to the whole of London, reduce the danger of infection very materially, even if it did not do away with it altogether. There would remain the lending libraries not public, which appear to be at present quite out of reach of control. A book is not an easy object to disinfect, and we should be glad to learn what method of disinfection satisfies the requirements of those public health authorities which have put regulations of this nature in force.

SUPERANNUATION OF POOR-LAW MEDICAL SUPERINTENDENTS.

SIR WALTER FOSTER, M.P., Parliamentary Secretary to the Local Government Board, received on December 12th. a deputation from the Society of Infirmary Medical Superintendents. The deputation was introduced by Dr. J. G. Glover, and the case of the medical superintendents was stated by Dr. D. M. Forbes, who pointed out that, although the principle of superannuation was fully recognised by the Local Government Board, the possibility of gaining the consent of local authorities in individual cases was uncertain. He urged that medical superintendents of infirmaries should be placed in this respect on the same footing as the superintendents of county asylums. Dr. W. H. Webster dwelt on the fact that medical superintendents are prohibited by

the terms of their appointments from increasing their incomes by private practice, and had therefore special claims to a superannuation allowance. Mr. John Lunn, F.R.C.S., and Dr. A. H. Robinson urged that, in the event of any new legislation, the medical superintendents should have their claims fully considered. Sir Walter Foster, in replying, said that, although the Government had no present intention of taking the initiative in this matter, the medical superintendents of the metropolitan Poor-law infirmaries had his warmest sympathy in the claim they put forward for superannuation allowances. He intended to place on record his conclusions on this subject for the future guidance of the Local Government Board. The deputation, having thanked Sir Walter Foster for the attention which he had given to their representations, retired.

MEDICAL MARTYRS.

A young medical practitioner of Yvetôt, Dr. Georges Masson, has just died of typhoid fever, contracted under circumstances which do him the highest possible credit. Having been called in to some poor people attacked with typhoid fever and lying amid the most squalid and filthy surroundings with no one to minister to them, Dr. Masson himself undertook the task of cleaning the patients, who were lying in their own excrements in their wretched homes. He succeeded in making them fairly comfortable, but he fell a victim to his own self-sacrificing devotion. He was only 34 years of age.—The New York *Medical Record* states that Dr. John M. Byrom, Director of the Bacteriological Department of the Loomes Laboratory, is suffering from tuberculosis, contracted, it is believed, by inhaling the germs of that disease while engaged in pathological research.

THE SANITARY CONDITION OF THE EAST END.

Three important reports dealing with the sanitary conditions of Deptford, Whitechapel, and Mile End Old Town have just been prepared by the London County Council's medical officer, and prove how very necessary it is that the sanitary staffs in these districts should be strengthened. Whitechapel occupies a condition altogether exceptional; the district has a relatively large proportion of its population living in one- or two-roomed tenements. It is the district of London to which alien immigrants especially resort, and the number of workshops it contains is considerably above the average of the rest of London. In spite of these circumstances, the sanitary staff is numerically weak, although excellent work has been accomplished by it as far as it could cope with the enormous amount to be done. The district needs much improvement in the removal of unhealthy houses in certain localities, and the institution of a more complete system of inspection. Mile End Old Town is less crowded both in respect of houses and population, and the number of ill-arranged courts is much fewer than in Whitechapel, and the population generally is less poor. In Deptford half the houses inspected were found faulty. No houses let in lodgings have been registered; in many instances overcrowding of tenements has been found. There has been little effort to inspect workshops.

THE EPIDEMIC OF ENTERIC FEVER AT NEWPORT, I.W.

The epidemic of enteric fever at Newport seems to be subsiding, very few cases having been notified since the incubation period expired after closing the old well at the waterworks. Upon pouring a solution of lithia into the Carisbrooke millpond, the substance was found in this well and in the low level reservoir in which were abundance of trout. The bacteriological examination is not yet completed, but it is said the bacillus coli communis has been discovered in the water, but not Eberth's bacillus. Since this became known, the mains from the low level reservoir have been cut, and the water is now pumped only from the new iron tube well. The Corporation of Newport, upon the motion of Mr. Councillor Charles Pinnock, have definitively adopted notification. They have determined to continue for another month the use of the Hermite solution for the sewers: and they have decided to discontinue the discharge of crude sewage into the Medina as soon as the sewage tanks provided for by Mr. Latham's sewerage scheme are constructed. It is proposed to place these tanks on the town quay, a most unsuitable position. The first duty of the corporation is to protect the public health, and the second duty is to re-establish the prosperity of their town, which can only be effected by restoring public confidence. To do this, they must not only obtain their water supply from another source, but they must carry their sewage away from the town to tanks placed further down the river.

AMBULANCE PROVISION FOR THE WOUNDED IN WAR.

Major-General Lord Methuen, at a meeting on December 9th in connection with the Volunteer School of Instruction for the purpose of presenting the prizes to successful competitors, made a speech in which he protested that the idea sometimes heard that the medical department of the army was not as much appreciated as it might be was an utterly false notion. He asserted that in the army there was no department looked upon with greater regard or watched with greater anxiety. With regard to the ambulance portion of the mobilisation scheme, he said that it was a great enterprise to provide for 20,000 sick and wounded in case of an invasion. He described the scheme worked out by Surgeon-Colonel Hamilton, when Principal Medical Officer of the Home District, as most comprehensive and careful, and believed that with such a groundwork as that provided by the scheme there need be no fear in case of an invasion as to the medical department being anything but a success. It would be a godsend to the country, he added, to be able to reckon upon some 10,000 men, properly trained, to attend to the sick and wounded in the ambulances. We trust that Lord Methuen may be able to impress his enlightened views on these questions on the powers that be at the War Office.

MEDICAL CHARITY.

Charity is doubtless a most excellent virtue; there are also many charitable people in the world who expend yearly in charity vast sums of money for the good of their fellow beings. All honour be to such. At the same time it appears to be one of the necessities of existence that the canker evil is never absent from the good. Charity, though it has unquestionably been a factor of incalculable value in advancing civilisation, and has been fraught with the utmost good to mankind generally, has also been productive of not a little mischief likewise. Abuse of charity has been familiar to us at all periods of the world: homely saws, such as "Charity begins at home" and "It is easy to be charitable at other peoples' expense," all remind us of this fact. It is not unlikely that to many a hard pressed, toiling, and ill-paid general practitioner the term "charity" may seem synonymous with all that is unjust and unfair. He sees only too clearly that a large part of the medical charity lavishly poured out around him is entirely at his expense, and when he feels, year by year, that he is less able to make a profit, is it wonderful if his heart becomes somewhat hardened against this virtue? Nowhere is charity more abused than in what is known as medical charity. Hundreds of people, who would not dream of accepting charity in any other form, have no kind of scruple in doing so when it is at the expense of the medical profession. Even the State does its best to foster this practice, as, for instance, by encouraging a belief that there is a difference between medical outdoor relief and other kinds of parochial relief, and even goes so far as to imply

that a man who accepts the former is not a pauper, while he who accepts the latter is. In no other way can any intelligible reason be found why a pauper who accepts medical relief shall be entitled to his vote, while he who accepts any other kind of relief shall be *ipso facto* disfranchised. The recipients of charity, too, nowadays, are considered justified in picking and choosing as to how they will take their relief, for we find an advertisement in a contemporary which appeals for special donations to support a medical charity for "gentlewomen who have been delicately nurtured, and cannot bear the publicity which necessarily belongs to the arrangements of a large hospital." If delicately nurtured gentlewomen require medical charity, why should they not get it in the same way as their humbler sisters do? It is difficult to see why the public should be asked to provide a special medical charity for their exclusive use. The society which is endeavouring to furnish this charitable luxury styles itself "a medical aid society," so it would seem there are all sorts and conditions of this kind of institution; all, however, agreeing in one fundamental principle, which is to get as much as possible out of the medical profession at the smallest cost to their own pockets.

JOLTING AS A THERAPEUTIC AGENT.

GEORGE COLEMAN "the younger" long ago described the disastrous effect which may follow when the patient—instead of his physic—is "well shaken." Charcot, however, was of opinion that shaking, or, as he preferred to call it, *médecine vibratoire*, was beneficial in certain forms of nervous disorder; and the scientific use of "inversion" and "abdominal taxis" is, of course, well known to surgeons. The following case, which is reported by Assistant-Surgeon Khalifa Rash-Ud-Din in the *Indian Medical Record*, illustrates the value of a "good shaking" in suitable cases. A villager, aged 70, after a meal of coarse food followed by hard work, suffered from constipation. When seen his bowels had not been moved for five days. The abdomen was distended, the patient was restless and anxious, and volvulus was diagnosed. Medicinal remedies having failed to give relief, laparotomy was proposed, but declined. The old man's sons then took him home, a distance of some fifteen miles, on an improvised palanquin made by lashing some bamboos to a *charpoy*. The roads were bad, and the journey necessarily involved a good deal of rough jolting; the effect of this was that when near home the old man passed a large quantity of flatus followed by two or three copious motions, after which he felt perfectly well. This case suggests a doubt whether inversion, even with the accompaniment of shaking as applied *secundum artem*, does not often fail owing to want of thoroughness. Perhaps a short railway journey (say on one of our southern lines) might be tried with advantage in some cases of intestinal obstruction before recourse is had to the knife!

MEDICAL ATTENDANCE ASSURANCE SOCIETY.

A CORRESPONDENT who has had a circular sent to him by this society writes to us for advice. Till quite recently we had never heard of this society, but not long ago we were requested by the secretary to insert an advertisement in our columns for medical referees. Not being satisfied, however, as to the exact nature of the society, or the character of the business it was doing, we required further particulars as to its business before inserting the advertisement. These have not been forthcoming. After reading the circular in question we are of opinion that our scruples were well founded, and we cannot too strongly warn members of the profession to exercise the greatest caution in dealing with the numerous medical aid societies which seem in vogue at present—their name is "legion"—and although they differ considerably in the aims and objects which they individually profess, they all agree in being, from a professional point of view, more or less objectionable. Take, for instance, the one whose circular we have now before us. When the objects of this society are considered, however, their extensive and far-reaching character by no means corresponds with the paucity of names of responsible persons on the prospectus. We are informed that the society proposes, in addition to its medical aid department, to keep the books and collect the debts of members, to conduct the sale and purchase of practices, to provide resident patients, to supply drugs, bottles, instruments, carriages, harness, books, and magazines, and, finally, even to advance money to those in need of temporary pecuniary assistance. It must be confessed the aims of this society are by no means inconsiderable; we are not told what capital there is to finance this huge commercial undertaking, but we are told that every member who aspires to enjoy any of the benefits in question is required to pay an annual "procuration fee" of one guinea. Our readers may possibly ask what is the meaning of all this, and feel a natural curiosity as to the number of innocent members who have paid their guineas to enjoy the advantages here offered. We can only refer those desirous of making any further inquiry into the matter to the—shall we say—proprietor or proprietors of this society or company, whose chief office is at 43, Finsbury Circus, E.C.

RACIAL IMMUNITY TO PLAGUE.

THE report on the outbreak of bubonic plague in Hong Kong, presented to the International Congress of Hygiene and Demography, held at Buda-Pesth, by Dr. P. B. C. Ayres, C.M.G., and Dr. James A. Lowson, M.D.,[1] cannot fail to interest the student of the late outbreak of bubonic plague at Hong Kong. Though necessarily hurriedly written, it contains valuable details, particularly as regards dates, numbers, symptoms, the hygienic condition of the town prior to the epidemic, the measures undertaken to cope with the disease, and so forth, which cannot readily be found elsewhere. It brings out very clearly the relative immunity of the well-housed, cleanly European, as compared with the extreme susceptibility of the filth-surrounded, water-shunning Chinese, and also the comparatively mild nature of the disease when it did attack the European. The intermediate liability to death of the Japanese, Portuguese, Manilaman, and Indian is a curious fact. We trust that Drs. Ayres and Lowson will see their way to extend this report, and to give us in greater detail the clinical and bacteriological aspects of this terrible disease.

INSANITY IN IRELAND.

IN an interesting paper in the last number of the *Journal of Mental Science*, Dr. Drapes, of the Enniscorthy Asylum, goes carefully into the statistics of insanity in Ireland, and compares the various aspects of the matter with much acuteness. At first sight Ireland presents the painful feature of an increasing amount of insanity with a decreasing population. This feature seems partly to be accounted for, as we find in England, by a shifting of locality rather than positive increase in number, asylum accommodation being later in development in Ireland. After considering this factor, the enormous number of readmissions, the transference of mere senile cases to the list of the insane, the recounting of transfers as new cases, and the lower death-rate due to the rarity of general paralysis, Dr. Drapes concludes that the amount of occurring insanity in England and in Ireland is approximately the same. The author then considers the causes of insanity in Ireland. He agrees with other observers in regarding hereditary tendency as "by far the most powerful predisposing cause;" alcohol, he says, is a decreasing factor in the causation of insanity, though still very active in some districts; tea he regards with suspicion: and he thinks that the "Celtic temperament lends itself more readily to disturbing influences on the mental organisation," such as the "stirring up of emotions, some evil, some generous, by political unrest and disappointed ideals." Agricultural depression also may be regarded as a disposing condition.

[1] Printed at the *China Mail* Office, Hong Kong, 1894.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

THE PREPARATION OF BEHRING'S DIPHTHERIA ANTITOXIN.

By E. KLEIN, M.D., F.R.S.

With the view of enabling those who are engaged in preparing from the horse Behring's antitoxin to obtain it in a much shorter time than the present methods permit, I take this opportunity of publishing the following notes:

I have been carrying out for the Medical Department of the Local Government Board a series of experiments that have for their object the study of the preparation and of the nature of Behring's antitoxin. The *rationale* of the method used by Roux[1] for obtaining from the horse Behring's antitoxin seems to me difficult of acceptance from a theoretical point. This does not, of course, imply that the serum which Roux obtains has not the antitoxic power which he claims for it; the numerous experiments described by him[2] as made on the guinea-pig, and particularly his striking curative results on the human subject, can leave no doubt as to this. What seems to me the chief difficulty of his method is that horses require in his process a very long and tedious series of numerous injections—some direct into the vessels—with enormous quantities of pure diphtheria toxin (sometimes 200 c.cm. of pure toxin in a single injection) for the production by them of serum of considerable antitoxic power. Roux explains his procedure by assuming that by injection of increasing quantities of pure strong toxin, the tissues of the horse are again and again stimulated and sustained in their formation (secretion) of antitoxin.

In all infectious diseases the degree of resistance to a given disease acquired by one or more previous infections rests with the blood and the tissues. In some of the infectious diseases—for example, small-pox, scarlet fever, anthrax—this condition of resistance against a fresh infection amounts to almost complete immunity. This condition of resistance is brought about by, and (as far as we know at present) depends on, the growth and life processes of the specific microbe in the infected body during the antecedent attacks, whether natural or experimental. The precise manner, however, in which this condition of resistance is created is as yet not clearly made out. Various views have been put forward to explain it, which it is not necessary to enter into here; they are all (including Roux's) based more or less on assumptions. The chief facts experimentally established by the researches of Behring, Kitasato, R. Pfeiffer, Wassermann, and others are that the blood of an animal which has acquired immunity possesses antitoxic property, and that the degree of antitoxic property of the blood stands in direct relation to the degree of resistance acquired by the animal furnishing it. Further, this antitoxic property of the blood not only renders the particular animal, but also other animals into which it is introduced capable of overcoming and of withstanding the disease that is in question. In the case of the sheep and goat Behring has shown that it is possible by repeated diphtheria injections to render these animals gradually highly tolerant against diphtheria, and at the same time to confer on their blood a high degree of antitoxic power. By virtue of this antitoxic condition of their blood small amounts of the blood serum are capable of protecting guinea-pigs against inoculation of diphtheria bacillus and of neutralising in these animals the diphtheria toxin if it be injected. The two substances—toxin and antitoxin—are, then, in their proper proportions, mutually antagonistic.

Now Roux, as I have said, introduces over and over again large amounts of pure diphtheria toxin into a horse which has already by previous injections of the pure toxin been rendered to a certain extent resistant against this toxin (it is because of this resistance that he finds it necessary to increase the dose of the toxin), that is to say, a horse that has by previous injections of diphtheria toxin become more or less resistant must possess a corresponding amount of antitoxin in its blood. But since the two substances, namely, toxin and antitoxin, are antagonistic and neutralise one another, it follows that each successive injection of a large quantity of pure diphtheria toxin into a given horse must neutralise a proportionate amount of antitoxin already formed and present in the blood of the animal. This possibly explains the extraordinarily long time which Roux's horses take before their blood is rendered sufficiently antitoxic. These considerations led me to adopt a different plan in the preparation of antitoxin serum from the horse—a plan, indeed, which corresponds more closely than Roux's to the natural process. By this plan I have succeeded in obtaining from the horse antitoxic serum in a far shorter time than is possible by Roux's plan; and, as observation proves, this serum is possessed of considerable antitoxic power. The principle of my method is as follows: By a few injections of attenuated living bacilli—the attenuation is due to age of the culture—along with their toxin into the horse, this animal is furnished with a certain degree of resistance. Next, large quantities of living diphtheria bacilli (*minus* their toxin) taken from the surface of solid cultures of gradually increasing virulence are repeatedly injected subcutaneously, so as to allow the bacilli to grow and to multiply, and to gradually produce within the body of the animal, as is the case in the natural order of things, the toxin and ultimately the antitoxin.

Every such injection on my plan is followed by a temporary reaction; a rise of temperature varying between 0.5° and 1.8° C., and a local tumour; but there is no suppuration at the seat of inoculation. As soon as one such tumour has disappeared, a new injection is made, as stated above, with large quantities of living bacilli scraped from the surface of solid media (agar and gelatine). By the third week the animal will bear the scrapings from the surface of two whole agar cultures of virulent character. In the case of one horse I, by this method, obtained antitoxin serum in twenty-three days, in another horse in twenty-six days, from the date of the first injection. If, after the first bleeding of the horse, it be again twice or thrice injected with virulent living bacilli (taken from the surface cultures), the further serum obtained from such horse posesses even increased antitoxic power.

The antitoxic power of the serum in the twenty-three and twenty-six days' horse was tested on guinea-pigs, and it was found that one part of serum was capable of protecting 20,000 to 40,000 grammes body weight of guinea-pig against the living bacilli and toxin (not merely against pure toxin): considerably more than a fatal dose of living bacilli having been injected. This serum has been used in cases of diphtheria on the human subject, some of them very severe cases. It was injected in doses of 5 c.cm to 8 or 10 c.cm., and in severe cases the injection was repeated within twenty-four hours. The result was highly satisfactory. In some severe cases it was particularly striking; further spread of membrane being entirely arrested, and rapid loosening and discharge of the existing membrane being also a conspicuous feature.

[1] *Annales de l'Institut Pasteur*, September, 1894.
[2] *Loc. cit.*

THE NATURE OF DIPHTHERIA AND THE BASIS OF THE ANTITOXIC TREATMENT.

At the request of the British Institute of Public Health, Dr. G. Sims Woodhead gave a lecture on the antitoxic serum treatment of diphtheria at the Examination Hall, Victoria Embankment, on December 7th. He observed that important points to bear in mind were that the organism producing the disease was a perfectly well defined one: that while the lymph which formed the membrane lay partly among the epithelial cells the bacteria were chiefly found on and near the free surface, thus practically outside the body: that the bacteria did not enter the tissues, but produced toxic substances probably of the nature of enzymes: that these were absorbed, and, acting on the blood and tissues, produced substances which have been shown by Sidney Martin to be of at least two kinds—acid and toxalbumins: that these among other poisonous properties had the power of causing fatty degeneration of the muscles and inflammation and degenera-

tion of nervous structures; and that the symptoms and dangers of the disease and of its sequelæ arose largely from the effect on the economy of these poisonous products.

The method of bacteriological diagnosis, which is now about to be undertaken at the Laboratories for the Metropolitan Asylums Board, was then described, and it was pointed out that, although in doubtful cases it might be necessary to employ secondary cultures, in the great majority of cases the fact that the diphtheria bacillus grew in the culture media far more rapidly than did any other organism commonly found in the mouth or pharynx, made it possible very often to speak with great certainty as to their presence in about twenty hours.

Dr. Woodhead next described the steps and the lines of thought by which investigators had been led up to the current conception of the antagonistic nature of toxins and antitoxins. We must assume, he said, that the disease produces toxic substances, which in proportion to their quantity injure the tissues; that in time and by degrees the tissues become indifferent to them, in other words, immune; that in the meantime protection is obtained by the production in the blood and tissues of protective substances which when mixed with the toxins neutralised them, or at any rate their effects, and are therefore spoken of as antitoxins; that this antagonism between toxins and antitoxins can be shown to take place even outside the body in test tubes, so that known lethal doses of toxins can be rendered inert and harmless by admixture with the antitoxic serum of animals recently rendered immune; that when patients die from diphtheria it is probably because they cannot form sufficient antitoxin in a sufficiently short time; that the injection of antitoxin-containing serum can render certain rodents quite immune to the disease and can cure it after it is set up; and that the endeavour in the same way to cure the disease in the human subject by injecting the serum of animals, which have been made to produce large quantities of antitoxins by repeated injection of toxins, has likewise been attended with results of a most satisfactory character.

The process of producing in quantity the toxins required to rouse the antitoxin-producing power to full activity in the animals employed was then described, and emphasis was laid on the fact that the horses used were not made ill by the proceedings, and that the pain was of the slightest character.

Dr. Woodhead insisted on the fact that diphtheria was essentially due to a manufacture of poison taking place practically outside the body, and that if, while attacking the disease at its source, we can at the same time neutralise the poisons that are being diffused into the body, we have complete control over the disease, and that when it is once got under we need have little or no fear of its return. The necessity of early treatment depended not on any inability on the part of the antitoxins to neutralise the toxins then existing, but on the fact that they could not undo damage already done to muscle or nerve, and could not inhibit those secondary septic processes with which diphtheria sometimes soon became complicated. In regard to the questions which had been raised as to the possibility of glanders or tuberculosis being transmitted, the obvious answer was that serum was never taken from animals so diseased. By aid of mallein and tuberculin the animal could very readily be proved to be in good health so far as those two diseases were concerned.

In proposing a vote of thanks Lord Playfair said that with the evidence before them it would be a scandal and a crime if owing to the feelings of certain persons, whose motives he honoured, with regard to inflicting pain on animals, they failed to give the children of England the benefit of the treatment.

Dr. Thorne Thorne, C.B., Medical Officer to the Local Government Board, in seconding the proposition, said he could not but feel that we had arrived at a crisis in our knowledge of the natural history of the infectious diseases of man. That there existed some link between certain of the specific contagia in man and those of the lower animals they had known for many years. There loomed behind these scientific researches a question he had often put to himself—Was it possible that man had not always been heir to those specific contagia by which in historic times the human race had so often been devasted? Was it not rather that by reason of unnatural methods of life he had acquired specific infections which in the lower animals were well nigh if not altogether benign but which by transference to man had acquired a potency before unknown? And if so, might we not now be learning that if we would reduce these specific contagia to their original level of trivial potency and in the end secure their annihilation, we must take them back to the lower animals with all their altered virulence and find in the bodies of these animals the medium by which they might be reduced to comparative or complete impotency? The question might be bold, but he hoped it might not be deemed over-bold.

THE ANTI-SCIENCE PROTEST.

At the fortnightly meeting of the Metropolitan Asylums Board held on Saturday, December 8th, a deputation, headed with filial feeling by Lord Coleridge, presented a memorial against experiments being carried out in the Board's hospitals on the use of the antitoxin treatment of diphtheria.

The question was brought up by the report of the General Purposes Committee, presented by Mr. Augustus Scovell, which recommended the Board to accept the offer made by the Royal Colleges of Physicians and Surgeons, in response to their inquiries, to supply antitoxin to the medical superintendents of the managers' hospitals, provided they were supplied with the necessary horses, stabling, grooming, keep, etc., together with railway fares and incidental laboratory expenses. The accommodation required would be for not less than four nor more than ten horses.

Lord Coleridge raised objections, on the ground that public funds ought not to be devoted to what he chose to call experiments in physiology; that it ought to be proved that the treatment was a cure and would do no harm; that many of the patients under the control of the Board were compulsorily so, and many were children, and that none were in a position to decide on the very difficult question of medical treatment.

Notwithstanding his remarks, however, the Board by a large majority accepted the report of the Committee.

BACTERIOLOGICAL EXAMINATION FOR THE LOCAL GOVERNMENT BOARD.

The step which the medical department of the Local Government Board are taking with a view of facilitating the early diagnosis of diphtheria on the part of local medical officers of health deserves commendation; and it should be noted that the fact that the material from one typical attack, if it prove not to be diphtheria, would not seem to preclude the transmission of further material if occasion demand it from the same neighbourhood, although it is distinctly stated that when once Dr. Klein has satisfied himself that the disease is diphtheria, no more material from cases of the same prevalence will be examined. Thus it appears open to a health officer, who has reason to fear the development of graver symptoms in reported attacks from throat maladies, to ease his mind by submission of additional material to headquarters. At least this is how we read the memorandum of conditions, and we trust we read them aright, since it will avail little for a health officer to receive a negative report on a solitary attack of obscure sickness which may be followed by others of more pronounced type.

Dr. I. Burney Yeo (Professor of Clinical Therapeutics at King's College, London) writes: In order to compare profitably the different observations of practitioners who have used antitoxin serum in the treatment of diphtheria it is obviously most important that they should employ as nearly as possible uniform doses of a uniform preparation. The concentrated serums produced by manufacturing chemists in Germany are far more likely to err in want of uniformity of strength and in uncertainty of action than the pure serum as used by Roux of the Pasteur Institute; and it is also probable that even the pure serum obtained from different horses will vary somewhat in activity. It is clear, however, there can be no useful comparison of such results as are recorded in the British Medical Journal of December 8th. In one (Dr. Hamilton's) we are told the "antitoxin produced no marked improvement:" and we look to the dose and we

find the child received at first 15 minims and, six hours afterwards, 5 minims, the case being a severe one. In the case reported by Dr. Mules, who has been "disappointed" with antitoxin serum, and who had two fatal cases in which it was injected—obviously, therefore, very severe cases—we find, in the first case, one dose only of 20 minims was given, and in the second case two doses of 15 minims, with an interval of twenty-four hours, were given, and these are termed "full" doses. In Mr. Ross Sutton's case we notice that a child of the same age as the preceding received two doses also, with an interval of about twelve hours, but of exactly double the quantity, the same serum (Aronson's) having been used in both cases; so that this case received in twelve hours exactly four times the amount of antitoxin serum received by the previous one, and Mr. Sutton does not appear to have been "disappointed."

In Mr. Steele's case, an adult, the first dose was 20 c.cm. of antitoxin serum, obtained from Dr. Ruffer (the c.cm. measures in use in this country, I find, differ slightly, giving about 15 to 17 minims to the c.cm.), equal to over 5 drachms, and 10 c.cm. more were given the next morning, making nearly an ounce of serum altogether; and Mr. Steele also does not appear to have been "disappointed."

Roux states that his practice has been to give 20 c.cm. (over 5 drachms) of serum to each little patient on admission, and the same quantity, or half the same quantity, according to the severity of the case, twenty-four hours afterwards; and if the pulse and temperature still remain high, the same dose is again given. He adds that the smallest quantity he has used has been over 5 drachms, and the largest quantity about 4 ounces; but in one exceptional case he gave as much as between 6 or 7 ounces! Practitioners should remember these facts, and that Roux's series of cases is by far the largest and most important hitherto published.

In the same issue you have published an abstract of a hostile criticism of this method by Dr. Hansemann, of Berlin, which has already been made use of by the antivivisectors in the public press in the denunciation of the antitoxin treatment. It would be unfair to criticise this criticism in what may be but an imperfect abstract, but it would not be difficult to show how disingenuous and fallacious the reasoning is as it appears therein. This will doubtless be done in the discussion which will follow this paper, and which has been postponed. I may, however, take this opportunity of expressing the hope that so undesirable and ambiguous a term as "Bretonneau's" diphtheria will not be adopted in this country.

Dr. John Patterson, M.B., etc. (Ranelton, co. Donegal, Ireland), writes: In the British Medical Journal of December 8th you publish notes of 4 cases of diphtheria treated by Dr. P. H. Mules (Bowdon, Manchester). Two of these cases were treated on the old lines, and 2 with antitoxin; both the latter died. As antitoxin is now on its trial both by the profession and by the public at large, might I suggest that the failure of the antitoxin in these two cases may have been due to the insufficiency of the dose used—20 minims for a child aged 7, and 15 minims for a child aged 4. I am not sure of the strength of Aronson's fluid, but I have seen the dose mentioned as from 60 minims to 160 minims. Some ten days ago, through the kindness of Dr. Armand Ruffer, I had an opportunity of trying the serum (as supplied by the British Institute of Preventive Medicine) in a case of a child aged 10. The dose I used was 10 c.cm. (roughly 160 minims). In twelve hours there was a most marked improvement in all the symptoms, both local and general. At the end of twenty-four hours I injected a further dose of 5 c.cm., merely as a precautionary measure.

Mr. Lennox Browne (Surgeon to the Central London Throat, Nose, and Ear Hospital) writes: I venture, with all respect to my professional brethren, to protest against the character of some of the literature which is being so lavishly supplied to the British Medical Journal with regard to the treatment by antitoxin of so-called diphtheria. I say "so-called" because a large proportion of the cases, including some from metropolitan hospitals, have not been verified as diphtheria by bacteriological examination, and my personal experience confirms that of Continental and American observers, that something like two-fifths of the cases certified will not bear this test.

Taking No. XXVIII of the series published in your issue of December 8th of cases treated by antitoxin, the report supplies no evidence that the child who was admitted for scarlet fever came from a house in which there was diphtheria, nor any evidence that the child had diphtheria at all; for, independently of the absence of a bacteriological report, there are certain points in the clinical history which require clearing up.

1. As to adenitis, was it cervical or was it submaxillary? If the former, it is characteristic of diphtheria; if the latter, of scarlet fever; while when diphtheria is planted on scarlet fever, both sets of glands are involved.

2. Was not the rise in temperature probably as much due to the adenitis as to the laryngeal disturbance?

3. The fact that antitoxin produced no marked improvement should further negative the diagnosis of diphtheria. And, lastly, no mention is made of paralytic sequelæ—the only irreproachable clinical test of exact diagnosis.

No. XXXI is another example in which, neither by bacteriological examination nor by any history of paralysis, is the diagnosis confirmed. Granted that only fifteen days having elapsed between the admission of the patient and the date of the report, sufficient time has not yet been given to settle this last point, is it not a pity to make these reports so early?

I would conclude by a brief allusion to the views of Dr. Haddon. I should be prepared to contest almost every one of his points, but will content myself with quoting but one or two as especially calling for protest.

1. His remark that: "The amount of membrane, which is by no means an early sign, is of no value in prognosis, and so long as it does not extend into the larynx, its amount need cause no additional anxiety."

2. The writer leaves the question of nasal diphtheria completely out of his category of conditions to be noted before employing antitoxin. To those who may think this a rare complication, I may state that, according to original and as yet unpublished statistics which are in my possession, of 1,000 consecutive cases of the disease, the proportion of nasal diphtheria is 21.6 per cent., and of these over 64 per cent. ended fatally.

Lastly, Dr. Haddon is of opinion that "the paralytic sequelæ, so far as he has seen them, are worse in those cases in which the larynx is not affected." The same statistics show that while some form of paralysis supervened in 11.9 per cent. of the whole 1,000 cases, laryngeal diphtheria was present in 16 per cent., and these laryngeal cases were followed by paralysis in 14.3 per cent. In other words, paralysis occurred in about 10 per cent. of the cases in which the larynx was not affected, but in over 14 per cent. of those in which it was. And why should we expect it to be otherwise?

XXXII.—We are indebted to Mr. T. H. Jones, M.B., Assistant House-Surgeon, Infirmary for Children, Liverpool, for the following notes of a series of cases of diphtheria which occurred recently in that infirmary. Diphtheria antitoxin serum, furnished by M. Roux, of the Pasteur Institute, Paris, was used in eight out of these ten cases.

Cases under the care of Dr. P. Davidson.

Case I.—J. T., aged 4, was admitted on August 27th, 1894. The breathing was stridulous, and there was marked recession of the chest wall and epigastrium, and cyanosis. There was membrane on the fauces, uvula, and tonsils. Tracheotomy was performed at once, and the membrane removed as far as possible. On August 29th the membrane was not spreading, but was not separating. The urine contained one-half albumen. Antitoxin ℥xx was injected. On August 30th the child had a bad attack of dyspnœa during the day. Antitoxin ℥xv was injected. A large piece of membrane separated from the fauces later in the day. On August 31st antitoxin ℥xv was injected. The tube was removed on September 1st. During the following six days the general condition improved, several pieces of membrane separated, and the breathing was good. Paralysis of soft palate was noticed on September 2nd. On September 7th the child

became suddenly cyanosed, the pulse was very feeble, and the child died of cardiac failure.

CASE II.—J. F., aged 8, was admitted on August 6th, suffering from acute nephritis and post-nasal adenoids. The adenoids were scraped on August 8th. The albumen was one-half on admission, and blood was present in the urine. By August 18th there was only a trace of albumen, and no blood. On September 28th it was found that the fauces and uvula were much congested, and that there was membrane on each tonsil. The urine was smoky and contained a trace of albumen. The temperature was 102.8°. As much membrane as possible was picked off. Antitoxin ℥xx was injected. For the next five days the membrane spread a little; small pieces became detached occasionally. The temperature came down to normal on the day after the injection and remained so, with the exception of one rise to 101° on the fifth day, when the membrane was found to have spread somewhat on the back wall of the pharynx. After this the membrane did not spread, but separated well, and the patches diminished in size. On October 9th no membrane remained, and it did not reappear. There was no albuminuria.

CASE III.—A nurse on October 14th presented much congestion of the throat, and membrane on each tonsil. The temperature was 103.4°. On October 15th the membrane had spread. There was no albumen in the urine. Antitoxin ℥xxx was injected. The membrane was picked off for three days in succession. The temperature remained normal after October 15th. On October 24th no membrane was visible, and it did not re-form. The general condition was excellent.

CASE IV.—E. N., aged 2, was admitted on September 2nd for empyema, which was incised and drained. On October 18th the child was found to have patches of membrane on the uvula and left tonsil. The temperature was subnormal. On October 19th antitoxin ℥xx was injected. For five days after this the temperature varied between 99° and 101° F.; it then came down to normal, and remained so. There was never albuminuria. The general condition was bad; the chest symptoms having become aggravated at the time the diphtheria was discovered. On October 29th no membrane remained, and it did not reappear. The general condition was improved. The child remains in the hospital on account of the empyema and a post-diphtherial paralysis of the palate.

CASE V.—A nurse presented congestion of the throat, and membrane on each tonsil. On October 21st the temperature was 101.8°. Local and general treatment was applied. The temperature was normal for two days after October 21st; it then rose to 102.5°. After that it gradually fell to normal, and remained so. There was never albuminuria. On November 2nd no membrane remained, and it did not re-form.

In Cases I and V no bacteriological examination of the membrane was made. In the other cases it was made, and Loeffler's bacillus was found in each case.

REMARKS.—Owing to the introduction into one of the general wards of the Children's Infirmary of a case of diphtheria in which tracheotomy was urgently required, a number of children and two nurses became infected with the disease. The case (Case I) by which the infection was introduced into the hospital was as severe a case of diphtheria as I have ever seen, affecting the tonsils, soft palate, larynx, and trachea. In ordinary circumstances one would not have expected such a case to have survived tracheotomy more than four or five days. This child, after three injections of antitoxin, lived a fortnight, and appeared to be convalescent, but died suddenly of cardiac failure. After the second injection the membrane seemed to become loosened, and was coughed up—as much as would fill a tablespoon in one day. Case II was also one of severe diphtherial infection, the membrane affecting both tonsils and parts of the soft palate and pharynx. In this case also the injection appeared to produce loosening of the membrane, so that it could be more easily picked off. In the other cases the disease was more limited, and the beneficial action of the injection of antitoxin less observable. In some of the cases which occurred in the hospital no antitoxin was used, owing to the supply (for which we were indebted to Dr. Roux, of Paris) having become exhausted. They were all mild cases, and got well as quickly with local treatment alone as the others had done with local treatment and antitoxin combined. Our local treatment consisted of frequent syringing or spraying the throat with boracic lotion, and the daily removal of membrane with forceps or with a dry sponge-stick, and the application of solid nitrate of silver to the raw surfaces. Two of the cases treated with antitoxin (Cases I and IV) afterwards showed signs of diphtherial paralysis. Case IV is now in hospital with general diphtherial paralysis of a severe form. Our experience of antitoxin injection is that it acted with marked benefit on severe cases of diphtheria, but that it did not prevent the occurrence of diphtherial paralysis.

CASES UNDER THE CARE OF DR. MARSH.

CASE VI.—A. B., aged 10 years and 9 months, was admitted suffering from a very severe attack of chorea. On October 20th the temperature rose from normal to 101°, and it was found that the fauces, uvula, and tonsils were much congested, and that there was a patch of membrane on each tonsil. There was no albuminuria. Antitoxin ℥xx was injected. About two hours afterwards a scarlatiniform rash appeared on the chest, arms, and legs, in isolated patches. The temperature rose to 104°. The chorea became much worse. By October 22nd the temperature was down to normal; the rash had nearly disappeared; the membrane had not spread. He was sent to the Fever Hospital on that day and was there treated further with antitoxin. By October 24th the membrane had disappeared, and did not re-form. The chorea was also much improved. There was no paralysis.

CASE VII.—W. S., aged 1 year and 6 months, was admitted on October 2nd. The child had a cleft palate, was very emaciated, markedly rachitic, and suffering from tetany and laryngismus. On October 21st it had improved very greatly, but the temperature had been variable during the past two days. It was found that much membrane was present on the cleft palate, on the pharynx, and on each tonsil. Antitoxin ℥x was injected. On October 22nd the temperature was normal; the membrane was as abundant as before; there were no laryngeal symptoms. Slight trace of albumen was present in the urine. The child was sent to the Fever Hospital on that day, and there treated further with antitoxin. The membrane had totally disappeared by October 25th, and the general condition was much improved.

CASE VIII.—A. G., aged 7, was admitted on October 17th suffering from enteric fever. The temperature had gone down to normal on October 21st. On October 29th severe erysipelas of the left arm developed, and the general condition was very bad. On November 1st a large patch of membrane was discovered on the left tonsil, and a smaller one on the right tonsil; the fauces and uvula were much congested. On the next day the general condition was very bad; the pulse was very feeble; the membrane as abundant as before. About one-half albumen in the urine. The child vomited many times during the day. The temperature remained normal. In the evening some antitoxin was obtained, and ℥xx injected. The child spent a very bad night, vomiting very frequently, and died at 6.30 A.M. on November 3rd.

In each of these cases bacteriological examination showed the presence of Loeffler's bacillus. In Case VIII the child's condition was so bad before diphtheria supervened, and the antitoxin was used so late, that there was no prospect of any benefit from its use. Local treatment was used in each case; it consisted of frequent painting of the throat with glycerine of boracic acid, or spraying with boracic lotion; and occasional picking off of the membrane where it was very abundant. The injection was generally made into the subcutaneous tissue of the lumbar region.

CASES UNDER THE CARE OF MR. MURRAY.

CASE IX.—J. T., aged 7, was an in-patient for abdominal tumour. On October 18th it was found that the fauces, uvula, both tonsils, and the back wall of the pharynx were thickly covered with membrane. As much as possible was picked off, and the tonsils touched with nitrate of silver. The temperature was normal. Antitoxin ℥xx was injected. On October 19th the membrane had re-formed, but had not spread; it was again picked off. The urine contained about one-third albumen. Antitoxin ℥xx was again injected. During the four days following the membrane re-formed, but

not so thickly; it did not spread. At no time were there any laryngeal symptoms. The albumen diminished gradually. The temperature came down to normal on the fourth day, and remained steady subsequently. On October 24th the membrane re-formed, but the patches were smaller and isolated. On October 27th no membrane remained; of albumen the urine contained only a trace. The membrane did not re-form. The general condition was good.

Case x.—H. B., aged 3, was, on October 21st, found to have a patch of membrane on the left tonsil; the fauces, uvula, and right tonsil were congested. During the three following days this patch spread a little, and small patches formed on the right tonsil and the back wall of the pharynx. There was no albuminuria at any time. The temperature never rose above 99.5°. On October 28th there was no membrane, and it did not re-form.

In each of these cases bacteriological examination showed the presence of Loeffler's bacillus.

THE BRADFORD THROAT, EYE, AND EAR INSTITUTION FOR PAYING PATIENTS.

The following circular has been sent round to the members of the medical profession in Bradford, and has been forwarded to us by Dr. Kerr:—

Dear Sir,

We have opened an institution with the above name to co-operate with and aid the medical profession of Bradford and its neighbourhood.

A large number of people in this district who suffer from diseases of the throat, nose, ear or eye, especially astigmatic or other refraction cases which may be difficult to deal with satisfactorily in private practice, are quite unable to afford a specialist's fee, and yet ought not to be aided by institutions supported by charitable subscriptions.

We feel that in many cases medical men will welcome a means by which their poorer patients requiring special advice may receive it from a trustworthy source for a fee which they can afford, and without becoming *habitués* of the charities.

The institution is not a charity, and will neither ask for nor receive subscriptions. No one will be seen gratuitously, a uniform fee of three shillings and sixpence being proposed, with proportionate extra charges in the case of necessary operations. Medical men introducing patients will have the result of the examination and the treatment suggested communicated to them by the first post. Under no circumstances will a patient of the institution be afterwards treated privately by any member of the staff.

We are, Dear Sir,

Yours faithfully,

H. E. Taylor, M.R.C.S., L.S.A.,
Late Assistant Surgeon of the Bradford Eye and Ear Hospital.
J. Johnston, M.B.,
Assistant Surgeon of the Eye and Ear Hospital.
Geo. H. Dodd, B.A.Cantab., M.R.C.S., etc.,
Assistant Surgeon of the Eye and Ear Hospital.
James Kerr, M.A., M.D.Cantab.,
Honorary Assistant Officer of the Bradford Infirmary; Medical Superintendent of the Bradford School Board.

November, 1894.

We have also received a letter from a practitioner in the town who thinks the proposed institution injurious to the interests of the medical men there, and who requests our opinion whether those of the signatories who are now on the staff of the Bradford Eye and Ear Hospital, and who, he says, receive a salary for their services, ought to be retained on that staff. We prefer to give no opinion on the latter point, which obviously must be decided by the governors of the hospital from their own knowledge of the working of the new institution.

With regard to the plan of forming such a consultative institution, we cannot but see the numerous objections to which it is open, and the great danger that it will result in simply offering to well-to-do persons advice and treatment at ridiculously low fees, for which they could easily pay the usual charges, and for which, under other circumstances, they would be quite willing so to pay. But if the institution is really worked fairly, so as "to co-operate with and aid the medical profession," as its circular states; if no one is admitted except on the introduction of his usual medical attendant; and if the concluding stipulation of the prospectus is rigidly adhered to, we do not see that there is any conclusive objection to the plan, at least, any other objection than may fairly be made against any other sick club: for, as far as we can understand, the proposed "institution" is really a private sick club. As such, of course, it ought not to be advertised in public, nor do we understand that it has been so, though paragraphs have been sent to us from local newspapers which have rather a suspicious look.

There can be no question that special knowledge of the affections in question is not at the command of every private practitioner, and that it would be a boon to many a patient, as well as an assistance to his medical attendant, to have an independent and duly qualified opinion at hand at a reasonable fee. We should be inclined, therefore, to watch the scheme jealously, but not to condemn it utterly until experience has been had of its operation.

DEATHS UNDER ANÆSTHETICS.

Dr. A. Ernest Sansom (Harley Street, W.) writes: I was somewhat surprised to read in the British Medical Journal of December 8th some criticisms by Dr. Robert Kirk, of Partick, Glasgow, of observations made by myself in the Journal of November 10th. I could not remember that I had written on the subject so recently. I find that Dr. Kirk was in error in attributing to me statements which were made by your contributor, Dr. R. W. Carter, of Weymouth. Dr. Carter quoted a sentence of mine, duly isolating it by inverted commas, and then went on to make the observations which Dr. Kirk visits with much reprobation. Although the sentences criticised, however, were not written by me but by Dr. Carter, I do not hesitate to express my concurrence with them, and I am happy to give Dr. Kirk what he asks for—the grounds on which the statement is based that by the ready or open method of administering chloroform, on a towel or handkerchief, an atmosphere containing at least 12 per cent. of chloroform vapour may be breathed.

In 1868 I made a large number of investigations on the volatility of chloroform, and on the proportion of the vapour in varying volumes of air passed over it. I had previously, in my book on *Chloroform* (1866) stated that still air at 40° F. could retain 6 per cent. of chloroform vapour, and at 60° F. 12 per cent. Air inspired from a surface on which chloroform is poured is, however, air in motion, and I made a series of investigations as to the quantity of chloroform vapour which could be carried by varying volumes of air. I brought these before the British Medical Association in 1868 at the Oxford meeting. A summary of my views then expressed may be found in the British Medical Journal of August 8th, 1868, p. 149. It is there said: "By a very large number of calculations the author proved that by the common means adopted atmospheres of from three to ten times the necessary strength were employed." My communications *in extenso*, with all the papers on anæsthetics read at the meeting, were published in the *British Journal of Dental Science* for September, 1868, and afterwards reprinted. As the exact data may not at the present be very accessible, and as the subject has been so recently discussed, perhaps I may be permitted here to reproduce a portion of the tables, showing the doses of chloroform vapour which air, at temperatures varying from 60° F. to 64° F., will convey.

Resulting Atmospheres in Cases of Varying Volumes of Air passed over Chloroform.

Quantity of Chloroform employed.		Quantity of Air passed over.	Loss of Chloroform, that is, quantity taken up by the Air.	Percentage of Chloroform Vapour in Resultant Atmosphere.
Fluid Drachms.	Grains.	Cubic inches	Grains.	
2	180	100	73.5	35.7
3	270	400	195.0	27.1
2	180	375	166.5	25.2
3	270	800	226.5	17.6
2	180	750	172.5	14.9
In these instances chloroform was poured upon lint.	76.5	100	20.0	15.2
	38.25	100	13.25	9.9
	25.5	100	12.25	8.5
	12.75	100	9.75	6.9
	6.375	100	5.875	4.3

It is seen from this table that air, inspired from a surface of chloroform at ordinary temperatures, can be loaded with chloroform vapour to the extent of 35 per cent.; that as the chloroform continues to evaporate the proportion rapidly

decreases; that the proportion also diminishes according to the quantity of chloroform originally employed; but that even half a drachm poured upon lint may give off at the earliest inspirations an atmosphere containing more than 9 per cent. of vapour, a percentage known to be dangerous.

I hope Dr. Kirk will be satisfied that the statement attributed to me is based on some precise grounds, and I leave your readers to judge whether Dr. Kirk's own dictum can be substantiated when he says: "The simple fact is that a drachm of chloroform poured on a towel gives off at a temperature of 70° F. no more than 2½ or 3 per cent. of vapour, and safety is secured by never stopping in the process of inhalation till deep anæsthesia is reached."

It can scarcely be to the point to cite the practice adopted by the late Sir James Simpson, and the views which he—the discoverer of chloroform and the chief of those who gave mankind the priceless boon of anæsthesia by inhalation—promulgated as indisputable for all time. Snow, Anstie, Clover, Richardson, and myself worked in the field in the early days of anæsthetics, but we all recognised that in chloroform we had an agent which, though potent for good, could also be lethal, and ought to be used with due regard to the sanctity of human life. In these later days there has been much controversy on the point whether in death from chloroform the powers of circulation or of respiration are the first to fail. This is an interesting question from a scientific point of view, but to deduce from any series of experimental investigations the doctrine that chloroform is a safe drug for inhalation, and may be used in a manner which must convey haphazard doses, seems to me to do violence to the simple logic of facts. The mortality from chloroform administration does not diminish—rather the reverse—and the clinical evidence (if I may be allowed the term) continues to show us that in the complex creature man death does not take place in the same manner as in exact experiments upon the lower animals. Syncope in the former can be induced by causes which do not operate in the latter, and chloroform can (and does if we are to follow the ordinary rules of evidence) bring about paralysis of the forces of circulation. I hope there are few left to deny, whatever their views on the physiological question may be, that the administration of chloroform in any case ought to be conducted with such sense of responsibility as should be present with the physician who is administering a valuable, albeit a dangerous, drug.

CLUBS AND FRIENDLY SOCIETIES IN THE SOUTH OF IRELAND.

Another stage has been reached in the difference between the clubs and friendly societies of Cork and the medical profession in that town. The medical officers of the various clubs having been individually invited to a conference with the delegates of these associations, have each replied, stating that they had forwarded the invitation to the secretary of the Council of the medical profession from whom they would receive a reply. This reply runs as follows:

Dear Sir,—I am directed by the Council of the medical profession of Cork to acknowledge the circular letter which has been addressed to the medical officers of the benefit societies, and to inform you that the medical officers of these societies have placed themselves unreservedly in the hands of the profession at large of this city, and that under those circumstances they cannot comply with your invitation. And further that the Council will be most willing to receive any communication or suggestion you have to make.—I am, yours truly,

Phillip G. Lee, Hon. Sec.

At a further meeting of club delegates it was resolved:

That, having heard from the different society doctors in reply to our communication referring us to their council, resolved that we do not recognise the interference of said council with the arrangements entered into between the doctors and these societies.

After this a levy was made upon the members of the clubs, and a working committee appointed.

It is earnestly to be hoped that the medical profession will stand firm; and in saying this we hope it will be recognised that we say nothing against the co-operative or provident principle, which, properly worked, is capable of great good, both for the working classes and the doctors; but a one-sided co-operation, really a co-operation of employers for the purpose of beating down the wages of the employed, is capable of great tyranny, and in this case the medical fees seem already to have been reduced to the lowest point at which it is possible that an honest medical service can be maintained.

To reduce them still further would be to put a premium upon inefficiency in an article regarding the quality of which the public is unable to judge. In this dispute the public should bear in mind that the honour of the profession is not a matter of carriages and fine houses but of honest work, and that we consider that a level of fee has been proposed to the Cork clubs below which honest service cannot be rendered. Doctors, like other people, must live, but we protest against a proposal which will prevent them from earning a living except at the expense of conscience.

THE BRADSHAW LECTURE.

The Bradshaw Lecture was delivered before the Royal College of Surgeons on Wednesday, December 12th, by Professor Oliver Pemberton, F.R.C.S., President and Emeritus Professor, Mason College, and Consulting Surgeon to the General Hospital, Birmingham. Professor Pemberton took for his subject "James Syme, Regius Professor of Surgery in the University of Edinburgh 1833-1869: A Study of His Influence and Authority on the Art and Science of Surgery during that Period"—a subject which is not an inappropriate fulfilment of the intention of the founder of the lecture, for, apart from being a special subject of surgical science, the consideration of the career of a great surgeon cannot but afford material of the highest interest and value.

Though upwards of twenty years have passed away since the death of Syme, few have since equalled him in his absolute devotion to his calling, and none have surpassed him in the utility of his practical suggestions for the preservation of the lives and limbs of his fellow creatures.

Apart from a personal eulogy of his character and personality, the main theme of the lecture was, of course, the advances made by Syme in the science and practice of surgery, but in considering these the lecturer insisted that it must be remembered that during the earlier years of his active work surgery was not so striking in its developments as during the latter. This difference, said the lecturer, of course arose from what followed the discovery of anæsthetics—the application of the antiseptic system, and the use of ligatures antiseptically prepared. It must, therefore, be remembered that the difficulties surrounding the successful practice of surgery at that time were vastly more pressing than they are at the present time, and demanded the extreme of personal attention; but it was also to be remembered that the time covered by his practice comprehended a period of advancement unequalled in the history of the profession. In 1828, unconnected with any hospital, Syme performed for the first time in Great Britain the operation of excision of the elbow-joint, and to him and to him alone belongs the establishment of that beneficent operation. Though tibio-tarsal amputation had been not infrequently performed on the Continent previously to Syme's operation on that joint, it is also to him that the profession is indebted for its introduction and perfection in this country. The new feature which he introduced and which has made the operation what it is—that of securing the pad of the heel as the covering of the joint—was first performed on September 8th, 1842, an improvement, and indeed the essence of the success of the operation that was certainly foreign to the former operations of Velpeau or Baudens.

No subject has so widely elicited a difference of opinion as the treatment of urethral strictures. The principles involved in Syme's proceedings as given by the lecturer were:—

1. That no stricture is truly impermeable.

2. That all strictures which cannot be remedied by simple dilatation admit of effectual relief only through a free division of the contracted part of the canal.

3. That this object can be attained with certainty and safety by external division only.

Syme was thus the first advocate of external urethrotomy, and whatever may be the opinion of practitioners nowadays, his skill as an operator is uncontested, for out of 108 cases he lost but 2.

Syme, therefore, must be considered as having originated a treatment of stricture by external division for cases where dilatation and other means had failed.

The lecturer then dealt with Syme's contributions to the study of aneurysm, a study which, amongst surgeons in all countries, has ever been one of deep interest. And Syme's treatment of certain aneurysms of the most formidable character, to which, had he not deviated under his own limitation from the Hunterian principle that the artery should invariably be ligatured beyond the confines of the tumour, there had been no other ending than disaster and death, again showed some of the strongest qualities of the man. That Syme had a happy touch in dealing with arteries may well be believed, since he tied the femoral twenty-five times with but one failure from suppuration of the sac, owing to the use of prolonged pressure and consequent derangement of the general health.

That he was alive to the value of the antiseptic method his contribution to the British Medical Journal of January 4th, 1868, affords abundant testimony; and his well-known contribution "On the Power of the Periosteum to Form New Bone" may be seen in the *Transactions* of the Royal Society, London, vol. xiv, 1857.

After the lecture specimens were shown illustrating one of Syme's most successful operations—the removal of an enormous tumour from the lower jaw of a young man. This was one of the first operations undertaken of any magnitude on the inferior maxilla.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 16th day of January next, at 2 o'clock in the afternoon.

December 11th, 1894. Francis Fowke, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1895. ELECTION OF MEMBERS.

Meetings of the Council will be held on January 16th, April 17th, July 10th, and October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely December 27th, 1894; March 28th, June 20th, and October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election. Francis Fowke, *General Secretary*.

BRANCH MEETINGS TO BE HELD.

Aberdeen, Banff, and Kincardine Branch.—An ordinary general meeting of the Branch will be held in Milne's Library, 229, Union Street, on Wednesday, December 19th, at 8 P.M.—C. Thiselton Urquhart, J. Scott Riddell, Honorary Secretaries.

Worcestershire and Herefordshire Branch.—A meeting will be held at the Worcester Infirmary on Friday, December 21st, at 5 P.M., to consider the "draft of a Bill to amend the Medical Acts." Afterwards Dr. Armand Ruffer has kindly promised to give an address on Bacteriological Examination of Cases of Diphtheria and their treatment by Anti-toxin.—Geo. W. Crowe, Honorary Secretary, 43, Foregate Street, Worcester.

Gloucestershire Branch.—The next ordinary meeting of the Branch will be held on Tuesday, December 18th, at 7 P.M., at the Cheltenham General Hospital, when Mr. Noble Smith, F.R.C.S.Ed., will read a paper upon the Physical Culture of Youth.—S. T. Preen, M.D., Honorary Secretary, Sherborne Lodge, Cheltenham.

METROPOLITAN COUNTIES BRANCH: HERTFORDSHIRE DISTRICT.

A meeting of this District was held at the Town Hall, St. Albans, on December 5th.

Election of Officers.—Dr. Brett was re-elected President of the District: Dr. J. Morison was elected Honorary Secretary; Mr. F. C. Fisher was elected representative of the Branch on the Council; Drs. Lipscombe, Lovell Drage Steele, Webber, Batterbury, and Blake, and Mr. J. H. Gilbertson were elected members of the Committee.

Next Meeting.—It was resolved that the next meeting be held in Hatfield in February next.

DUNDEE AND DISTRICT BRANCH.

Registration of Midwives.—At a meeting of the Branch, held at Dundee on November 29th, it was unanimously resolved that it is the opinion of the Branch:

(*a*) That the employment of midwives to attend women in labour will continue whether regulated by law or not. (*b*) That much harm results from the employment of untrained women. (*c*) That the proposed legislation to establish a system of registration of midwives is desirable in the interests of the thousands of women who at present employ them, in order to give them the means, which they have not at present, of distinguishing between trained women and untrained. (*d*) That the Association should use its influence to promote the proposed legislation. (*e*) That the Parliamentary Bills Committee should insist on the necessity for improved means for the obstetrical education of midwives, and that a period of three months is inadequate, and it should also take care that in any Bill, and likewise in all regulations and certificates in connection with such registration, it be made evident that the midwife's function is the strictly limited one, as at present generally understood and accepted, of the management of natural labours.

Proposed Outdoor Maternity Charity.—A scheme for an outdoor maternity charity for necessitous cases in Dundee was discussed and approved, and remitted to the Council with powers.

Amendment of Medical Acts, etc.—The Council was directed to call a meeting in January to discuss the amendment of the penal clauses of the Medical Acts, the withdrawal of degrees by the Universities and the Association's Committee on the Interests of General Practitioners.

Exhibits.—A series of bacteriological slides was on exhibition in the physiological laboratory.

STAFFORDSHIRE BRANCH.

The first general meeting of the present session was held at Stoke-on-Trent, on November 29th, Dr. Charlesworth, the President, in the chair. Eighteen members were present.

New Members.—The following gentlemen were elected members of the Branch: G. Petrave Johnson, M.B., Stoke-on-Trent; George Mathieson, M.B., County Asylum, Stafford.

Amendment of Medical Acts.—The proposed Bill to amend the Medical Acts was referred to the Council for consideration, and report at the next general meeting of the Branch in February.

Cases and Specimens.—Mr. Spanton showed (1) a boy who was operated on for the cure of Inguinal Hernia by the screw method, seven years ago; now perfectly sound. (2) A very large Parovarian Cyst, and Tumour of Right Ovary, removed from a patient aged 30. The cyst contained twenty-six pints of fluid; the subperitoneal cavity was drained. The patient recovered. (3) Ovaries and Fallopian Tubes removed from a married woman, aged 29, for chronic ovaritis and hypertrophy; the patient recovered. (4) Left Ovary containing a highly developed Corpus Luteum, which was adherent and larger than the ill-developed ovary itself removed from a married patient, aged 30, who had never been pregnant, but had always suffered from ovarian pain. (5) Ovaries and Appendages removed from a married woman, the subject of old standing chronic ovaritis and salpingitis, in which each ovary and tube was matted together and bound down by very firm and extensive adhesions. Perfect recovery. (6) Right Ovary containing multilocular cyst and adjacent hæmatocele probably caused by rupture of the

tube, from married woman, aged 34, who suffered from acute pelvic symptoms. Complete recovery. (7) Ovaries and Appendages removed from married patient, aged 28, who suffered from uncontrollable vomiting during pregnancy and also during each menstrual period to such an extent as to endanger life. The ovaries were very hard, with leather-like capsule, quite opaque. Patient recovered, and had had no sickness since. (8) Cystic Ovaries and Appendages removed from a married patient, aged 31, for bleeding uterine myoma. Patient quite well. (9) Renal Calculus, weighing over 2 ounces, consisting of phosphate of lime, removed by lumbar nephrolithotomy from married woman, aged 41, followed by complete recovery. (10) Uterus removed by vaginal hysterectomy for epithelioma, from married patient, aged 57, followed by recovery.—Dr. Edge exhibited: (1) Cystic Complete Degeneration of Kidney, successfully removed by lateral abdominal incision. (2) Suppurating Ovarian Cyst, incarcerated in the pelvis successfully removed.—Dr. Charlesworth (the President) showed a man with a Congenital Pendulous Tumour, consisting of thick skin, fat, and innumerable sebaceous cysts, hanging from the abdomen to the right of and above the umbilicus. There were 20 to 30 sebaceous cysts in various parts of his body, all congenital, varying in size from that of a horse bean to a walnut. The patient was a potter, aged 37, who had always been weakly.—Dr. Hatton exhibited two Polypi of similar structure removed from a boy and a girl three months and three years ago respectively. One was attached to the body of the sphenoid the other to the posterior end of the middle turbinated bone. In each case the anterior part filled up the right nasal fossa and was mucous in character, and the posterior part, which was fibrous, filled up the whole of the naso-pharynx and projected into the mouth. Both were pedunculated and neither had recurred.

Papers.—Mr. Herbert Folker read a paper on Glaucoma and its Treatment, mentioning the more recent theories. In the operative treatment he strongly advocated the method of combining posterior sclerotomy with the iridectomy.—Dr. Edge read a paper on Asepsis in Midwifery.—Mr. Spanton read a paper on a case of Cystic Tumour of the Brain in a married man, aged 49, in which trephining and evacuation were followed by recovery.

HALIFAX, NOVA SCOTIA, BRANCH.

A regular meeting of this Branch was held on November 23rd at Halifax, the President (Dr. Milsom) in the chair.

New Member.—John Stewart, M.B., was elected a member of the Branch.

Communications.—Dr. Kirkpatrick showed a case of Chronic Glaucoma.—Dr. Campbell reported on a case of Osteo-sarcoma of the Tibia, and also on one of Osteo-sarcoma of the Femur.—Dr. Chisholm showed a specimen of Enlarged and Dilated Heart from the body of a woman, aged 24, who came to hospital suffering from pain, palpitation, and cough. The heart's area was very much enlarged; no murmurs. She died, and at the necropsy the heart was found enlarged, weighing 35 ozs. No valvular disease; effusion in pericardium, pleura, and peritoneum; aortic opening not contracted. A prolonged discussion followed, in which Drs. Farrell, Black, Campbell, Smith, and others took part.—Dr. Farrell showed a specimen of Dermoid Cyst of the Ovary removed from a child, aged 11, containing a large quantity of teeth, etc. The child made a good recovery.

SYDNEY AND NEW SOUTH WALES BRANCH.

The one hundred and twenty-second meeting of this Branch was held at the Royal Society's room, Sydney, on October 5th. Dr. W. H. Crago, President, in the chair. Drs. Fiaschi, Worrall, Clubbe, Knaggs, Chisholm, Thring, Cohen, Fieldstadt, Jamieson, Morgan Martin, M. A. Gill, Niell, Tidswell, Barkas, Mullins, Thomas, Huxtable, Foreman, Lyden, Goode, McKay, Paton, Wood, Jas. Dick, Brady, Pickburn, Litchfield, Scot Skirving, Pockley, Langhorne, Gordon, Macleod, James McLeod, O'Hara, Weeks, and four visitors were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Member.—The President announced the election of Dr. S. Alcorn.

The Library.—The Hon. Secretary laid upon the table the list of books and publications in the library including donations from Dr. Knaggs, Dr. Kendall, Dr. Crago, and Dr. Davenport Parry.

Incorporation of the Branch.—The President stated that Drs. Mullens and Faithfull had been appointed a subcommittee by the Council to examine Mr. Bruck's books and verify the statements placed before the members, and also that a circular had been sent to each member stating that the Branch would become incorporated and then the members would be placed upon the same footing as the members of the parent Association, that is to say the liability of each member would be limited to one guinea.

Communications.—Dr. Thring read a paper on two cases of Hysterectomy for Fibromyoma and exhibited the specimens. Drs. Foreman and Worrall discussed the paper. Dr. Thring replied.—Dr. Fieldstadt read a paper on Organo-Therapeutics. Drs. Fiaschi, Scot Skirving, and Foreman discussed the paper, and Dr. Fieldstadt replied.

SPECIAL CORRESPONDENCE.

BERLIN.

The Antitoxin Treatment of Diphtheria: Discussion at the Berlin Medical Society.

The adjourned discussion on Behring's antitoxin serum stood fourth on the order of the day for last week's meeting of the Berliner Medizinische Gesellschaft. Excitement on the subject had run high since Hansemann's address, and more than one Behringite expressed indignation at what seemed an intentional postponement of the discussion. The most absurd rumours were current in medical circles: that the word had been passed at the Koch Institute that none of its men should take part in the discussion; that Hansemann had only made his attack by order (he is Virchow's assistant), etc. The meeting on the evening of December 5th was more crowded than it had ever been since the days of the late lamented tuberculin. Two papers were listened to with apparent patience by the tightly-packed audience; but when, at the close of the second, Virchow rose, and said, with a twinkle in his eye, that he supposed this crowded meeting had scarcely assembled for the purpose of entering into a discussion on chloroform narcosis (the third item on the order of the day), loud applause and signs of evident relief greeted his proposal to enter on the antitoxin discussion at once, and postpone that on chloroform.

Von Bergmann was the first speaker. He denied Hansemann's assertion that the Loeffler bacillus was not to be found in every carefully examined case of real Bretonneau diphtheria. In 430 cases of diphtheria out of a series of 450 cases the Loeffler bacillus had been found. In his opinion the Loeffler bacillus was undoubtedly the cause of diphtheria. He said that not without serious misgivings had he taken up the serum treatment. "A burnt child shuns the fire," he said: "and from tuberculin I had carried away bad burns." Three years ago Behring had tried to induce him to use the serum in his clinic; but he had then refused to do so, without having first seen successful experiments on animals. Behring had then experimented on a series of guinea-pigs. First he injected a Loeffler bacillus culture, and then treated a certain number with his serum. The results had been the reverse of encouraging; the guinea-pigs treated with serum all died and the rest recovered. Of course he (Bergmann) had then declined to use the serum. What induced him to make a trial of it much later was a conversation with Virchow, in the course of which the latter gave him the statistics obtained in the Kaiser and Kaiserin Friedrich Hospital. In view of these numbers and similar results in many other clinics, he thought it right to continue the trial of the new remedy, though a much longer space of time must elapse beiore he could give a final opinion of its therapeutic value.

After von Bergmann, Virchow rose. He said that treatment by diphtheria antitoxin was begun last March in the Kaiser and Kaiserin Friedrich Hospital. At that time Dr. Aronson had placed his serum at the disposal of the hospital —a present of the value of about 4,000 marks (£200)—for which the hospital owed him sincere thanks. In June and July

nearly all diphtheria cases were treated with the serum. The results were as follows:

In the first	week, cured	13	deaths,	1	child
,, second	,,	9	,,	1	,,
,, third	,,	6	,,	2	children
,, fourth	,,	12	,,	1	child
,, fifth	,,	6	,,	2	children
,, sixth	,,	1	,,	1	child
,, seventh	,,	3	,,	0	,,
,, eighth	,,	5	,,	0	,,

Suddenly the supply of serum ceased, as, unfortunately, the very horses from which the serum was taken died. The old methods of diphtheria treatment had again to be resorted to, and the results were:

In the first	week, cured	5	deaths,	7	children
,, second	,,	6	,,	8	,,
,, third	,,	6	,,	6	,,
,, fourth	,,	8	,,	11	,,
,, fifth	,,	8	,,	5	,,
,, sixth	,,	8	,,	12	,,
,, seventh	,,	13	,,	6	,,

This sad increase in the mortality induced the hospital to return to the serum, which was then procured from Höchst. Immediately there was a change:

In the first	week, cured	3	deaths,	2	children
,, second	,,	4	,,	1	child
,, third	,,	14	,,	1	,,
,, fourth	,,	14	,,	2	children
,, fifth	,,	17	,,	1	child
,, sixth	,,	17	,,	5	children

The total figures were as follows: In the whole space of time 533 cases were treated—303 with the serum, 230 without. The former had 13·2 deaths; the latter 47·8 deaths. Virchow continued that, in view of these results, he held it to be the duty of every doctor to use the serum in diphtheria. "All theoretical considerations," he added, "must give way to the brute force of these figures." He continued that even if disagreeable by-effects were proved to occur here and there, they were not sufficient to dissuade him from continuing the treatment. Turning to the theoretical question, he said that he considered the disease artificially produced in animals by means of the Loeffler bacillus had nothing to do anatomically—with Bretonneau's diphtheria. Nor did he consider the bacillus as the cause of human diphtheria. A theoretical explanation of the therapeutic action of the antitoxin serum must be left to the future.

Thus Virchow recommends the serum, to which he attributes a brilliant therapeutic action; at the same time he pronounces the theory which forms the basis of Behring's entire antitoxin therapeutics to be a fallacy. Needless to say that his words were followed with breathless interest. The discussion was adjourned to the next meeting.

PARIS.

Insufficient Accommodation in the Paris Medical School.—Epidemics in France and Algiers.—"Frigotherapy."—Preservation of Biscuits.—Goats and their Milk.—Serotherapy.—The New Pharmacy Bill.—Provident Societies and Medical Men.—Medical Officers of the Army and Navy and the Notification of Disease.—General News.

M. Brouardel, Dean of the Paris Medical Faculty, stated before the *Conseil Académique*, that the number of students entered at the Paris Medical School has doubled in eight years, and that the alterations made in the laboratories, lecture-rooms, dissecting-rooms, etc., have already proved insufficient before they are finished. The constant new discoveries oblige candidates for the M.D. degree to be thoroughly educated in medicine and science. The education necessary to obtain this knowledge can only be provided by organising classes of a limited number of pupils, in order that each pupil has practical individual teaching. Dr. Henrot, Mayor of Rheims has informed the *Conseil Académique* that a bacteriological school will soon be opened at Rheims, where students and medical men can pursue their bacteriological studies. The Dean is also very anxious to induce young medical men to settle in the provinces instead of leading a struggling existence in Paris. During the last year mortality in Paris has greatly decreased. The Dean urges the towns and communes to assure medical men an income of £40 a year. If this small sum be not assured, a house might be assigned to the doctor rent free. The Prefect of the Seine Inférieure has occupied himself with this question, and forty-five doctors have settled last year in the department.

At a recent meeting of the Comité Consultatif d'Hygiène Publique, M. Henri Monod, Director of the Public Assistance and Sanitation, stated that a case of typhus occurred in Paris on November 13th; the patient was removed from his lodging and treated in the annexe of the Hôtel Dieu. The origin of this infection is unknown. A serious epidemic of typhus has broken out at the lay prison at Bougie, in Algiers. The healthy prisoners have been removed and the prison has been disinfected. The cause of the outbreak of the epidemic in the Bougie prison is being investigated.

At Rouen, from November 1st to the 24th, there were 24 cases of small-pox; diphtheria is notified in the Creuse Department, four cases have appeared at Fresselines; there is none elsewhere in the neighbouring villages; the school has been closed and disinfected, likewise the school at Alun, some children in the neighbouring villages having been seized with diphtheria. At Jussey, the Haut Saone department (2,760 inhabitants), from September 20th to November 9th, 72 cases of different kinds of sore throats occurred; sixteen children were attacked, and four died. They all went to school; two children were treated by the antitoxic serum. The school has been closed for a month and disinfected. On November 20th five fresh cases were notified. An epidemic of diphtheria has also broken out at the Jasse hamlet in the Gard Department. Some cases are notified at Haironville, in the Meuse Department. A few cases of choleraic diarrhœa have been notified in Paris; two deaths have occurred.

M. Raoul Pictet has invented a new word and a new treatment—"Frigotherapy." He has ascertained by experimenting on himself that the digestive apparatus is actively stimulated by the action of cold. During six years he suffered from an affection of the stomach, which caused so much suffering during digestion that he dreaded taking nourishment, and never felt hungry. After a series of experiments on the lower animals, he put on warm clothing and a fur pelisse, and went down into his freezing pit. After an interval of eight minutes he was ravenously hungry. This experiment repeated eight times entirely cured his stomach affection. He has now a good appetite, does not suffer during digestion, and strongly recommends "frigotherapy."

MM. Stroebel and Decaut, army surgeons, have studied the question of preventing biscuits from attack by insects, and have ascertained that biscuits must be made between September 15th and May 15th; during this period the eggs are not hatched. The biscuits must be packed in tin boxes well soldered, and the sides soldered must be covered with paper. The depôts must be kept antiseptically clean; the walls of the depôts must, between April 15th and May 8th, be scraped and brushed over with coal tar mixed with petroleum. The floor must be washed with potassium in order to kill the insects that burst from the eggs. The insects must be caught by strings covered with treacle and honey between May 15th and September 15th. These parasites, like most others, are not affected by a low temperature, but die when exposed to a high temperature.

M. Burgault, of the French National Agricultural Society, makes a suggestion of some importance to invalids whose hopes of cure are founded on drinking goats' milk. It is the custom in Paris to make these animals walk from house to house to the piping of a Pyrenean peasant, genuine or "make believe." M. Burgault points out that the goats, notwithstanding the soothing effects generally attributed to music, must be fatigued by these peripatetic exercises, and their milk is consequently impaired, with the result that the invalids suffer. The only solution to this difficulty is the one propounded by M. Burgault, that the goats should be conveyed from door to door in carts.

Dr. Gabriel Pouchet, Professor of Pharmacology at the Paris Medical Faculty, in his opening lecture, treated the question of serotherapy and its relation with pharmacology. He rapidly passed in review all the experiments which have been made with serum from the earliest—those of Maurice Raynaud on heifers inoculated with cow-pox—down to the present time. He succinctly tabulated the following interest-

ing facts. Behring and Kitasato stated in 1890 that the blood of a rabbit refractory to tetanus destroys the tetanus toxin. This action may be present in the blood and serum freed from cells; it is lasting, and continues a considerable time after transfusion of the serum. The serum of animals which are by nature refractory to tetanus does not possess any antitoxic action. Fowls do not contract tetanus, their blood does not exercise any action on the tetanic poison, not even when kept a long time in contact with it and in superior proportions; nevertheless, the blood of fowls can be rendered antitoxic by injecting a sufficient quantity of culture of the tetanus bacillus. Animals naturally susceptible to the influence of the tetanus toxin, such as rabbits, become refractory to it, and their blood does not possess any antitoxic action on the tetanus toxin. The blood becomes antitoxic when larger doses than those necessary to render the animal refractory are injected. The antitoxic power of the serum increases according to the quantity of tetanus bacillus introduced into the organism. When immunity is established it persists during a long time after the vaccinating injections cease. Behring has ascertained a fact which M. Pouchet considers of great importance. After each injection of toxin the serum loses to a certain degree its power of immunity; it appears that a certain part of the antitoxin of the blood is used to destroy the fresh injections of toxin. According to Behring's experiments, in the case of the horse the serum, after being rendered antitoxic, may become again toxic.

According to the Pharmacy Bill passed by the Senate, medical men can supply drugs to those of their patients who live six kilometres from a chemist. The regulations applying to dispensing chemists apply also to medical men who dispense their own prescriptions, except that of having the druggist's patent. In urgent cases, even though there be a chemist near, a medical man can provide certain remedies named on a schedule drawn up according to law. There are two important changes. First, the distance between the doctor's house and that of the patient's is calculated, not that between commune and commune or church steeple and church steeple; secondly, all medical men are allowed to keep remedies at hand to be used in urgent cases. Government asked the Budget Commission to add the following paragraph: "That, until the pharmacy law be in force, the antidiphtheric serum is not to be furnished, either on payment or gratuitously, unless with the sanction of the Minister of the Interior—the new law to come into force in a year's time." The authors of the above proposition believe this would protect the public from counterfeit and dangerous productions. The Senate has rejected the proposition. Dr. Lutaud, in the *Journal de Médecine* of December 2nd, admits that Dr. Roux is warranted on scientific grounds not to trust to his serum being indiscriminately prepared, the preparation being complex, but is at a loss to understand why this product is not to be sold by chemists and druggists when prescribed by medical men, measures being taken to guarantee its authenticity.

According to the *Bulletin des Sociétés Mutuelles* there are 10,000 mutual societies, numbering 1,600,000 members. If the women and children, who are medically treated for almost nominal fees, are left out of account, the number may be estimated at 4,000,000, and the number yearly increases. The medical men are paid according to the subscription fees. These vary from 1s. 8d. to 3s. 4d. per annum. It is clear, therefore, that the fee paid for visits and consultations to the medical men attached to these societies must be infinitesimal. In 1885 Dr. Béraud pointed out that the sum paid by subscribers to these societies enabled them to call in a doctor at any hour at the price of 8d. a year for each member. Dr. Le Blond mentions a society which for an outlay of £120 has received 7,000 visits and consultations. The medical men of Chambéry rebel against this condition of things, and, headed by Dr Francois Carret, have declared that they will adopt the tariff decided on by the General Council of Savoy for gratuitous medical assistance for the poor. This tariff is as follows: 1s. 3d. for day visits, 4s. 2d. for night visits or consultations with a colleague, an extra charge of 2s. 6d. for a simple surgical operation, and 8s. for replacing a dislocation or applying an apparatus for fracture.

The duties of army and navy surgeons with regard to the law of November 30th, 1892, concerning the notification of epidemics, are now clearly defined. When the patients are in barracks or any military establishment the cases are to be notified by the medical officer to the military authorities, who informs the civil authorities. When the patients, though belonging to the army or navy, are living in houses of their own, the medical officer is directed to inform the civil authorities. The Minister of the Interior has requested the prefects of the French departments to take the necessary measures for providing the medical officers of the army with notification forms similar to those supplied to civil practitioners. Mayors are called upon to inform the military authorities of all cases of contagious illnesses in barracks and in the localities which will be crossed by troops during military manœuvres.

The Paris Academy of Sciences has awarded to Dr. Roux the Francis Joseph Audiffier prize given for acts of devotion. The prize consists of £480, and is given to Dr. Roux for his devotion to science.

The Municipal Council has voted £40 in order that M. Mangin may study the question of the destruction of the trees in the Paris streets from the emanations of the gas pipes laid down by the gas companies. The roots are attacked, and the trees perish.

In the budget of the Assistance Publique dans les Ministères 500,000 francs (£60,000) are inscribed for gratuitous medical help, and 100 000 francs (£4,000) for the organisation of the treatment of diphtheria.

ST. PETERSBURG.

The Death of Rubinstein.—Professor Zakharin's Return to Moscow.—The Embalming of the late Emperor.—The Funeral Ceremonial at the Burial of the late Emperor.

Within little more than twelve months Russia has lost her two greatest musical composers. Tchaikovski died of cholera on November 4th (N.S.) of last year, and now Rubinstein has followed him to the grave. Those who remember the face and figure of the great pianist will not be surprised to learn the cause of his death. For some ten years it seems he was subject to asthmatic attacks. During the last few months these had become more frequent, occurring particularly after sitting for any time at the pianoforte. For five days before death there was almost complete insomnia; there was also slight feverishness and complaint of a dull pain in the left arm. These symptoms, however, caused no alarm, either to the patient himself or to his relations. He refused to consult a physician, and even when, at the urgent request of his wife, he permitted one to examine him, he declined to remove his clothes, so that a careful auscultation was impossible. This superficial examination took place on the evening of November 19th (N.S.). At 1 o'clock in the morning of the 20th a violent attack, apparently of the nature of angina pectoris, suddenly developed, and after half an hour of considerable agony death supervened. At the necropsy the heart was found to be extremely fatty. There was great deposit of fat under the pericardium, and the heart muscle had undergone fatty degeneration. The coronary arteries were atheromatous. The deceased, who had very nearly completed his 65th year, lived a life of extreme sedentariness, rarely, if ever, taking exercise. He was also impatient of medical advice.

Professor Zakharin has returned to Moscow, where, on November 16th (N.S.) he gave his first clinical lecture after his prolonged absence in attendance on the late Emperor. The Professor was received by the students with loud and long applause. He said a few words in reference to the illness of the Czar, but was so deeply moved as to be compelled to leave the theatre for a few minutes. He then returned and continued his clinical lecture.

The process of embalming the body of the late Czar was commenced fifty-three hours after death. Whether owing to this delay or to some imperfection in carrying out the process, the end desired does not seem to have been perfectly attained. During the lying-in-State in the Fortress in St. Petersburg, the features were quite unaltered; in form and expression they were exactly those of the Emperor during his lifetime; the colour, however, was livid and unpleasant.

The funeral ceremony according to the Greek rites is a long one, lasting considerably over two hours. The absence of

seats in the Greek Church and the necessity of standing during so long a period made the funeral service in the Cathedral of S S. Peter and Paul rather physically exhausting for those who were present. The long journey from the south of Russia, and the series of processions and ceremonials that have filled the last three weeks do not appear to have told in any way upon the health or strength of those who have had to take a prominent part in them. One member of the royal group, a lady, fainted at the funeral service, but with this exception the long ceremonial passed without let or accident.

CORRESPONDENCE.

SHORTHAND IN MEDICINE.

Sir,—Permit me to thank you for the article on shorthand in medicine (published on December 1st), and to confirm the statement made therein regarding my own assertion. I have yet met with no one who was not convinced of its approximate truth by an inspection of examples of the evidence of my use of shorthand. If it would be of interest I shall be happy to deposit some examples in the Library of the British Medical Association. Unfortunately experience of use alone can produce adequate conviction, and without conviction the experience is generally as distant as the ability to swim without which a certain mother would "never let her son go into the water." I do not hesitate to refer to my own use of shorthand, because the possession of this help to work is chiefly an accident, and of no personal credit. But my experience compels me to regard as a duty the endeavour to do all I can to reduce the degree to which it shall be, in future, an accident that others do not possess the help to which I owe so much, and which to no one, in any work, can be other than useful. The Society of Medical Phonographers is an attempt to place the endeavour on a permanent basis. It is a small beginning, but clear promise of progress can be discerned. The start would acquire more momentum by some external help. The practical perception of this fact by Sir William Broadbent and Dr. Hughlings Jackson has encouraged and helped us. If any other members of the profession choose to assist I know that the Hon. Treasurer, Dr. Gray, Beaumont Street, Oxford, will very thankfully receive their contributions, and I am certain that no contribution will be without future, and perhaps very wide, effect.—I am, etc.,

Queen Anne Street, W., Dec. 10th. W. R. Gowers.

*** It may be mentioned, in confirmation of the statements made regarding the legibility of shorthand, that a note from Dr. Gowers accompanying this letter and others from him were read at sight by a shorthand clerk as readily as if they were written in good longhand.

PAY WARDS AT THE GREAT NORTHERN CENTRAL HOSPITAL.

Sir,—It is high time that it was pointed out to your readers and the public that the pay ward question in the Great Northern Central Hospital is a much wider and more far-reaching one than appears on the surface. The disagreement between the local medicals and the staff of the hospital is so narrow that it hardly rises above the dignity of a squabble between two sections of one trades union. One section of that union wishes to keep the practical surgical or medical work of this hospital, and of all hospitals, exclusively in their own hands, and the other section do not exactly see why this should be, especially when paying patients come upon the scene.

I assure you, Sir, the lay members of the managing committees of hospitals have little patience with these medical jealousies. They think of hospitals and patients altogether apart from either consultants or general practitioners. Those institutions are not looked upon as splendid fields for the training and keeping in training of a select few medicals, or as a means of giving these few lucky gentlemen a position and status envied by all their outside brethren: neither does the lay manager look upon the patients as cases, but as fellow human beings to be assisted in their physical troubles.

Dr. G. W. Potter pointed out in the British Medical Journal of December 1st that the Great Northern Central Hospital from the first was to be partially a pay hospital, but a pay hospital on novel and modern lines. The first resolution submitted to the first public meeting held on its behalf on April 28th, 1883, ran as follows:

That this meeting, being fully convinced of the urgent necessity for increased hospital accommodation in North London, and recognising the advantage of combining the free with the graduated pay system, and of representative administration, resolves to establish a hospital on these principles within the Northern district.

Previous to that meeting many smaller meetings had been held to further the project, and to debate the best means of bringing it before the public, and making it popular with local medical men. The first provisional prospectus, signed by G. W. Potter, M.D., as Honorary Secretary, contains the following paragraphs:

"An important departure from established precedent will be an attempt to combine a paying with a purely eleemosynary hospital."

And:

"The experiment will be made of setting apart one or more wards for those paying patients who may wish to be treated in hospital by their ordinary medical advisers. Family physicians not infrequently find their efforts frustrated by domestic mismanagement and inefficient nursing. In such cases, removal to a well equipped hospital would secure that diligent attention to medical instruction which is essential in serious and prolonged cases of sickness."

Could anything show more clearly than these paragraphs the way in which the pay wards were originally designed to be worked? Some of the gentlemen who helped to form the first Provisional Council for the proposed hospital are still on the Committee of Management of the combined hospitals, and most if not all are as ready now as they were then to carry out the resolutions passed at the first public meeting.

Ought not this question now to be settled by loyally carrying out the intentions of the original promoters of this newest and, as it has proved, most popular general hospital in London?

Whose carriage blocks the way?—I am, etc.,

Crouch Hill, N, Dec. 5th. T. Fraser Black, J.P.

A LEGAL ANOMALY.

Sir,—The General Medical Council have power to remove the name of a medical man from the *Register* for any fault which they may deem infamous in a professional respect. The Society of Apothecaries have also power to expunge from their list of Licentiates the name of any struck off the *Medical Register*, but have neither authority nor machinery to investigate any case upon its merits. Nor, it would seem, have the General Medical Council power to restore the name of any practitioner to the *Register* who had possessed only the qualification of L.S.A., and has been removed from the list of licentiates by the Apothecaries. There is thus created a vicious circle, well exemplified in the following case in which I have been concerned. Mr. ——, an L.S.A., was privately proceeded against last year before the General Medical Council for the offence of covering an unqualified assistant, and his name removed from the *Register*. He had signed no death, nor club, nor even vaccination certificates, and the ordinary ones he had signed were not alleged to be otherwise than true in substance and in fact, and bad only because he did sign them. Mr. Braxton Hicks, Coroner, was the chief witness against him, and stated the facts impartially to the Council.

Mr. ——'s only diploma was that of L.S.A., and the General Medical Council subsequently received a formal notice from the Society of Apothecaries that consequent upon the removal of Mr. ——'s name from the *Medical Register* the Society had removed it from the list of their Licentiates. Just before this session commenced Mr. ——, who, as appears from results of inquiries by Mr. Braxton Hicks (at Mr. ——'s own suggestion) had been living quietly and respectably since his sharp lesson, determined to get his name replaced on the *Register* if possible. A petition was prepared, joined in by many medical men and by Mr. Braxton Hicks. This was sent to the Council. A few days after word was sent to Mr. —— by the Executive Committee that he having lost his only qualification, that of L.S.A., there was

an initial and fatal difficulty in the way of replacing his name. This was communicated to the Society of Apothecaries, and the following reply received from their very courteous registrar or clerk of the Court (Mr. Upton):

Society of Apothecaries, London, E.C., November 23rd, 1894.

Dear Sir,—In reply to your letter of the 21st instant I am not aware of any such initial difficulty as you suggest. We have *not* (underlined in original) taken away the qualification; we have merely removed the name from the list.

In reply to my suggestion that the Society should furnish a written statement that they would restore the name if the General Medical Council saw fit to do so, Mr. Upton went on to say:

The Society would carefully consider the reasons which induced the General Medical Council to restore a name to the *Register*, and, if satisfied, would doubtless follow the example; but I cannot undertake beforehand that they would do so.

The General Medical Council say, before they will even hear the case the name must be restored by the Apothecaries. There is thus a deadlock.

Now, Sir, I submit this is an anomalous state of affairs, repugnant alike to good sense, good feeling, and the most elementary principles of justice. Mr. ——— had the qualification of L.S.A. No one but the Society of Apothecaries can take it away (if even they can). They state they have not taken it away. Therefore Mr. ——— possesses it still. The General Medical Council refuse to take the same view as the Apothecaries, and the man suffers. I have a sincere admiration for the General Medical Council, and great respect for so ancient an institution as the Society of Apothecaries, but here is a condition of things for which no one can have admiration (in a favourable sense) nor any respect at all. A further appeal will be made to the Apothecaries in the matter, and meanwhile I ask your leave to ventilate the subject in your columns for the consideration of the profession.—I am, etc.,

The Temple, E.C., Dec. 10th. H. S. SCHULTESS YOUNG.

MEDICAL CERTIFICATES IN SCHOOL ATTENDANCE CASES.

SIR,—I should suggest that medical men practically impress on school boards the necessity and justice of paying an independent medical referee for certificates in school attendance cases. The boards can appoint medical officers, and pay them by salary or by items, or by both combined. In the case of small districts the medical officer of health would be a suitable person; under large boards a separate appointment is necessary. Bradford, Leicester, and London afford examples of such appointments under various conditions. By such means medical certificates, when necessary—very few are required, 1 per annum in 300 children is about the proportion—are actually being paid for by school boards. Poor people need not complain of a virtual tax on sickness in children, and medical men do not risk offending their patients by refusing the certificate asked for.

The practical way to do all this is for doctors to give personal advice, but refuse any certificate regarding school attendance; and, if a summons be served, direct that it be brought for the doctor to write across the face of it in red ink that the child was detained at home by his orders.

It is to be hoped that the petty jealousies which oppose any innovation may not hinder improvement in these matters. The school attendance certificate is trivial compared with other benefits which may result from a general appointment of medical officials by school authorities. In these summons cases, I may add, the school attendance officers are not generally in the wrong, and even the practitioner is occasionally duped.—I am, etc.,

JAMES KERR, M.A., M.D.,
Medical Superintendent Bradford School Board.

Bradford, Dec. 10th.

SUPPOSED EXCEPTION TO COLLES'S LAW.

SIR,—Cases to be regarded as exceptions to Colles's law ought to be presented in a totally different manner from the way in which Mr. Lucas states his case in the BRITISH MEDICAL JOURNAL of December 1st. I only lately had occasion to urge this point in the *Lancet* of June and July, in reference to a case of Dr. Coutts's on the same subject, the history of which was certainly given in a more convincing form.

Colles himself, in 1837, gives the history of a case in which a mother was infected by her own syphilitic child, to show how easily mistakes in this direction might be made; and Diday, in 1854, proved that in the five cases of apparent exceptions to Colles's law then known—Ambroise Paré, Fucen, Bertheraud, Bertin, and Cusack—the syphilis of the child was not congenital and was therefore communicable to the mother.

A minute examination of the cases published since then—in number about 15—shows that in most of them the possibility of the same error has not been excluded with sufficient definiteness, while only a few of them will stand a more searching criticism. Amongst the latter, Ranke's case will always stand in the front rank, and the possibility of these exceptional occurrences is further demonstrated by such well observed cases as those of Rinnecker and Bergh, in which a mother contracted a primary hard chancre of the labium followed by the usual secondary symptoms shortly after giving birth to a syphilitic child. Both classes of cases show that a mother who has transmitted syphilis from father to child is, in spite of this, not always immune to syphilitic infection, and therefore liable to infection by her own child or any other bearer of the virus.

It would be interesting to know of cases in which a mother who has given birth to a syphilitic child has contracted a chancre of the nipple by suckling another syphilitic child. I have not been able to find any example of such a case, for the obvious reason that it is only under the most exceptional circumstances that a mother will suckle someone else's child without suckling her own at the same time.

The complicated laws of immunity, of which we are only learning the rudiments, can only, where experimental research is impossible, be ascertained by careful clinical observation. No conclusions whatever can be drawn from such an incomplete case as that described by Mr. Lucas.—I am, etc.,

Welbeck Street, W., Dec. 11th. GEORGE OGILVIE.

INSTRUCTION IN MEDICAL ETHICS.

SIR,—The question of medical ethics does not appear to me to be sufficiently considered. It is one which affects both the public and the profession, and is most important. I see in your correspondence columns week after week questions on this subject, many of which denote the most complete ignorance on the part of the inquirer.

The number of medical men who fall into the ranks of the advertisers or of the medical aid surgeons is steadily increasing, adding to those who are practising in an irregular manner, and the status of the profession is being lowered.

I believe that in a great measure this is the result of a want of knowledge on the part of young men entering on the practice of their profession. They have nothing to guide them. Medical ethics have never occupied their attention, and they have for the most part no opportunities of learning anything of the subject.

In the old days of apprenticeship the medical student acquired something of the rules of professional conduct, at any rate had the practitioner with whom he served his apprenticeship to consult when he entered practice on his own account. Now there is no proper guide, and I cannot help thinking that many a young man takes a wrong step through ignorance, and regrets it for the rest of his life. He is received with open arms by others who are practising unprofessionally, and his admission to the ranks of those who are professionally moral is hopeless.

I would suggest that some instruction should be given to students in their final year of study at their hospitals. The lecturer on medical jurisprudence would appear to be the proper person to undertake it, and in the course of two or three lectures could impress on the men the importance of the subject, and of the dangers they run of ostracism should they make a false step in starting.

I could say much more on this matter, but that I fear my letter may be unduly long. I hope, however, that some step may eventually be taken in this direction.—I am, etc.,

Plymouth, Nov. 27th. THOS. LEAH.

DEATH FROM PNEUMOTHORAX AFTER TRACHEOTOMY.

Sir,—In the British Medical Journal of December 1st Dr. Bertram Rogers gives particulars of a case of tracheotomy for diphtheria, the patient dying on the third day after operation, and there being found *post mortem* a pneumothorax on one side.

Dr. Rogers remarks that the opening from the lung into the pleural cavity could not be found. May I suggest another cause of pneumothorax in this case? The child had a convulsion during the operation, and soon afterwards emphysema of the face, neck, and upper part of the chest appeared. My explanation is that, during the struggling, air was sucked in beneath the pretracheal fascia, and, travelling downwards, caused emphysema of the mediastinum, and that, shortly before death, the air made its way by a slight rupture from the mediastinum into the pleural cavity.

In *Guy's Hospital Reports* for 1860 Dr. Wilks mentioned three cases of emphysema of the mediastinum following tracheotomy, and Dr. Champneys called attention to the same condition in the *Lancet*, vol. i, 1882. I have myself seen a case of death from pneumothorax with mediastinal emphysema four hours after tracheotomy, and, in this case, air was also effused into the deep tissues of the neck, but no opening from the lung was found. I think that this explanation is all the more likely to be correct in Dr. Rogers's case, as he distinctly states that the low operation was performed. —I am, etc.,

Birmingham, Dec. 1st. Leonard Gamgee, F.R.C.S.

SIR WILLIAM STOKES ON FLAT FOOT.

Sir,—May I suggest that Fig. 7 in the paper by Sir W. Stokes, in the British Medical Journal of December 1st, diagram only though it be, is strictly accurate in one respect, the importance of which is apparently not realised by the author? The toes are much distorted. The great toe is everted, in the so-called "valgus position," and both it and the third are partially over-ridden by the second. Now, the great toe, in its position of rest, is extended upwards and outwards, and in action moves downwards and inwards. It is obvious that when packed in the stocking and boot in the position shown it cannot move upwards and outwards, being prevented by the second; it is, therefore, never in complete rest, and, if it move at all, it can only do so in a plane for which the joint at the base is not adapted. In such a case action of the powerful flexors is instinctively avoided; the bow-string or tie-rod influence of the long flexor on the arch is lost and flat foot ensues. If the great toe be packed over the second, it is there in its position of rest, and, so far as it moves at all, it does so in a natural plane. In this case much less harm results from tight packing of the toes.

Sir W. Stokes emphatically states of the specimen produced that there was no evidence of any atrophy of any muscle. But when the plantar arch has completely fallen, it must crush and, for the time, paralyse the sole muscles. Moreover, as in walking, the long flexor of the great toe requires the co-operation of the short flexor, that great muscle must be thrown out of use, or persistent flexion of the middle joint of the great toe is inevitable.

Sir W. Stokes ignores muscular action as having any influence whatever in the cure of even slight cases of flat foot. Can it be that he really means it?—I am, etc.,

Gloucester, Dec. 4th. T. S. Ellis.

"THE NEW PHARMACY."

Sir,—The interesting correspondence started by "An Old Fogey" on the administration of drugs in the form of "tabloids" may, I trust, be taken as an *auspicium melioris ævi* as regards the vexed question of dispensing by medical practitioners.

"What, again, would be thought.....of the doctor who had no 'shop?'" asks Dr. George Peachey in the British Medical Journal of November 24th. Why, simply that he would cease to be regarded as a mere "shopkeeper" and would assume his proper social status. It seems ridiculous that another class of men—pharmaceutical chemists—should have to obtain qualifications to dispense and then find that through the shopkeeping proclivities of the provincial practitioner their "pharmacy" is often limited to the sale of paraffin oil and huckster's wares. Can they be blamed for retaliating on the shopkeeping surgeon?

By the gradually-extended use of "lozenges" by country practitioners dispensing will be confined to cases of emergency on their part; while the "liquids," etc., will, I trust, be relegated to the duly-qualified pharmaceutical chemist, to the elevation and mutual respect of both practitioner and pharmacist.—I am, etc.,

November 28th. J. C.

WATER FILTERS: A SUGGESTION.

Sir,—It is to be hoped that your inquiry into the relative efficiency of water filters will either indicate an efficient contrivance for depriving water of injurious material or convince the users of filters of the fools' paradise they have been living in. The following case—which does not stand alone in my experience—shows what death-traps these objectionable appliances may become.

Mrs. B., living in comfortable circumstances, was constantly having her children in ill-health, either with loss of appetite or diarrhœa. Not being able to account satisfactorily for their state, I had the drains examined, but nothing wrong was discovered in them. The cisterns were thoroughly cleansed; still the ill-health went on. One day the mother informed me that only filtered water was taken by the children, and that a filter was so placed as to be easy of access. I obtained a glass of this water and found it to have an offensive odour. As to the filter, it was nasty in the extreme; the sponge was abominable.

It is all very well to say filters should be cleaned, but the fact remains they seldom are. I had the filter destroyed, with the result that my little patients rapidly improved in health.

Instead of a filter, I have—ever since there has been constant supply—advocated the use of water drawn straight from the main service pipe, with most satisfactory results. In my pretty large household, including several young children, diarrhœa is unknown. I believe cisterns are the chief sources of contamination; they may be cleaned to-day, and a mouse may be drowned in one of them to-morrow, as the following case illustrates:

Mr. B. consulted me with reference to recurring whitlows and general ill-health; he ridiculed the suggestion that foul water might be the cause of his trouble, notwithstanding that further inquiry showed that other members of his family had boils. The drinking-water cistern was examined—which, by the way, had been recently cleaned—and a putrid sparrow was found. Here, again, the improvement in health dated from the discovery of the real cause of the illness.

It is important to note that the water companies do not object to branches being taken off the service pipe, but a screw-down tap must be used.—I am, etc.,

Weymouth Street, W., Nov. 26th. Charles W. Chapman.

AXILLARY CANCER.

Sir, The case of primary axillary cancer lately brought before the Pathological Society of London by Mr. Paul raises some interesting questions. If the tumour really arose, as Mr. Paul seems to think, from the large tubular-coiled glands, like sweat glands, but penetrating more deeply, that are found chiefly beneath the skin at the top of the axilla, with the marked development of which the axillary odour of certain individuals is believed by Sappey, who first described these structures, to be associated, then the specimen would be altogether unique.

I am not aware that there is on record a single instance in which any form of neoplastic disease has been shown to have originated from these structures. Creighton has, however, described neoplasms as thus originating in dogs. In this connection I should like to point out that primary cancer of the axillary skin is an exceedingly rare affection. Of 7,297 primary cancers analysed by me 571 were of the skin, but of the latter only 3 were axillary.

On the other hand, as I was the first clearly to demonstrate,[1]

[1] *Journal of Anatomy*, vol. xxv, p. 225—Polymastism, with special reference to the Development of Neoplasms from Supernumerary Mammary Structures.

there are frequently to be found in the axilla (and elsewhere in the vicinity of the mamma), completely detached masses of mammary glandular structures, from which neoplasms, identical in structure with mammary neoplasms, often arise. I have found that no less than 14 per cent. of so-called mammary fibro-adenomas and 9·8 per cent. of so-called mammary cancers thus originated. The histological, clinical, and other features of Mr. Paul's case all appear to me to indicate that it had a similar origin. In my recently-published work on *Diseases of the Breast* I have instanced several precisely similar cases.—I am, etc.,

Preston, Dec. 8th. W. ROGER WILLIAMS.

WOOLSORTERS' DISEASE.

SIR,—I have been misunderstood, if I have been reported to have said[1] that "infected wool, even when made up in wearing material and into garments, may develop anthrax." No such case has been published. Ragsorters, in paper and other factories, have frequently been attacked, but the disease has not been traced to the wearing of garments made of textile materials. It has arisen from manufactured goods as upholstery in which horsehair had been used and also from leather-made goods.

It is true that the spores of the bacillus anthracis resist various washings, dryings, and steeping in tanks of diluted sulphuric acid. What becomes of them afterwards is doubtful; possibly they may cause many of the outbreaks of anthrax among domestic animals in those counties where those infective materials are manufactured into goods.

Chabert's "charbon symptomatique," black-quarter, *Rauschbrand*, is more common among domestic animals in this country than anthrax. It is not communicable to mankind. The cases given in Dr. Budd's classical paper on Malignant Pustule,[2] said to be "an identical, or very closely allied, disease" to black-quarter, were probably infected from some other source.—I am, etc.,

Bradford, Dec. 2nd. J. H. BELL, M.D.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The first post on Thursday mornings is the latest by which these announcements can be received.

A SURGEON-CAPTAIN having over two years to serve in Canada wishes to exchange with an officer having a good position on the roster at home. Address No. 3,724, BRITISH MEDICAL JOURNAL Office, 429, Strand, W.C.

THE NAVY.

FLEET SURGEON J. H. MARTIN, D.S.O., has been promoted to be Deputy-Surgeon-General, December 7th. His previous commissions are dated as follow: Surgeon, February 20th, 1865; Staff-Surgeon, September 8th, 1877; and Fleet-Surgeon, May 21st, 1884. Deputy-Surgeon-General Martin was Surgeon of the *Nassau* during the encounters with the Sulee pirates, and was present at the destruction of Carang in 1872. He was Staff-Surgeon in charge of transports during the Zulu war in 1879, mentioned in despatches (medal with clasp). He was Staff Surgeon of the *Thalia* during the Egyptian war in 1882; Senior Medical Officer in charge of transports, received thanks of the Admiralty (Egyptian medal, Khedive's bronze star); Principal Medical Officer to the Royal Marine Battalion in the Eastern Soudan, 1884; present at the battles of El Teb and Tamaai (mentioned in despatches, wounded, promoted to Fleet-Surgeon, and two clasps). Was Fleet-surgeon of the *Boadicea*, Flag, as Principal Medical Officer; served in the Naval Brigade landed under the command of Sir E. R. Fremantle, for the punitive expedition against the Sultan of Vitu, in East Africa, October, 1890 (mentioned in despatches, and nominated a Companion of the Distinguished Service Order).

The following appointments have been made at the Admiralty:—OCTAVIUS S. FISHER, Surgeon, to the *Pioneer*, December 5th; WILLIAM J. BROWN, Staff Surgeon, to the *Brisk*, undated; PERCY V. JACKSON, Surgeon, to the *Brisk*, December 11th; HAMILTON MEIKLE, Surgeon, to the *Excellent*, December 11th.

Deputy Inspector-General GEORGE IRWIN WILLES died at 39, South Eaton Place, S.W., on December 6th. He entered the Royal Navy as Surgeon, April 8th, 1844; became Staff-Surgeon, May 5th, 1854; Fleet-Surgeon, July 21st, 1867; and Deputy Inspector-General on retirement, May 7th, 1877.

According to a Reuter telegram from Mozambique, dated December 7th, Surgeon ELRINGTON F. S. MCKAY, of H.M.S. *Pioneer*, was killed by a lion in the vicinity of lake Nyassa. His commission was dated August 22nd, 1889, and his appointment as Surgeon to the *Pioneer*, June 21st, 1893.

[1] BRITISH MEDICAL JOURNAL, November 3rd.
[2] BRITISH MEDICAL JOURNAL, 1863, vol. i, p. 169.

ARMY MEDICAL STAFF.

SURGEON-MAJOR ROBERT DE BURGH KELLIHAN died at Newcastle-on-Tyne on December 3rd, at the age of 58. He was appointed Assistant-Surgeon, October 1st, 1860; Surgeon, March 1st, 1873; Surgeon-Major, September 30th, 1875. He served in the Egyptian war of 1882 as Senior Medical Officer with the advanced force which landed at Alexandria in July (medal and Khedive's bronze star).

Surgeon-Major R. BENT FLEETWOOD ANDREWS died at St. Peter's, Ramsgate, on October 27th. He entered the service as Assistant-Surgeon, September 30th, 1853; became Surgeon, March 3rd, 1863; and Surgeon-Major, no date being gazetted. He retired on half pay, December 19th, 1873. He was with the 1st Dragoon Guards in the Crimea from August, 1855, including the battle of the Tchernaya and the siege of Sebastopol (medal with clasp and Turkish medal). He was also in the Indian Mutiny campaign in 1857-59 with the 2nd Dragoon Guards, and was at the siege and capture of Lucknow, in the actions of Koorsee and Nawabgunge, and in the Trans-Gogra affair at Bungaon (medal).

The death is also announced of Brigade-Surgeon MICHAEL QUINLAN as having occurred on October 22nd. His commissions were thus dated: Assistant-Surgeon, December 8th, 1857; Surgeon, March 1st, 1873; and Surgeon-Major, April 1st, 1873. He was granted retired pay, with the honorary rank of Brigade-Surgeon, June 1st, 1881. He was engaged in the Afghan war in 1881, and received the medal granted for that campaign.

It is announced that an examination of candidates for twelve commissions in the Army Medical Staff will be held at the Examination Hall, Victoria Embankment, on February 15th, 1895, and following days.

THE VOLUNTEERS.

SURGEON-LIEUTENANT W. HODGSON, M.B., 1st Devonshire Artillery (Western Division Royal Artillery), is promoted to be Surgeon-Captain, December 12th.

Surgeon-Lieutenant H. E. AMBLER, 2nd (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment, has resigned his commission, which dated from November 28th, 1891.

Brigade-Surgeon Lieutenant-Colonel C. S. HALL, 1st (Cumberland) Volunteer Battalion the Border Regiment, has resigned his commission, from December 12th, with permission to retain his rank and uniform.

Mr. JAMES MIDDLETON, M.B., is appointed Surgeon-Lieutenant to the 3rd Volunteer Battalion the Gordon Highlanders, December 12th.

The Queen has been pleased to accept the resignation of Surgeon-Lieutenant T. A. WOODS, M.D., in the 7th (Isle of Man) Volunteer Battalion the King's Liverpool Regiment, December 3rd.

VOLUNTEER MEDICAL STAFF CORPS.

MR. THOMAS KERR BELL, M.B., is appointed Quartermaster to the Glasgow Companies, December 12th.

Brigade-surgeon-Lieutenant-Colonel C. S. HALL has resigned his appointment on the Northern Counties Brigade, December 12th.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

At the distribution of prizes on December 9th, Major-General Lord Methuen, C.B., commanding the Home District, was present. The report presented by the Chief Instructor, Surgeon-Major Stokes, London Rifle Brigade, stated that all the classes held during the past year had been well attended, and that a larger number of medical officers had passed than in any previous year. Since the school had been founded no fewer than 175 different regiments had had officers or men trained therein, and 132 medical officers of British or Colonial volunteers had received certificates of proficiency from the War Office. The Challenge Prize—a handsome silver bowl, presented by Surgeon-Colonel Hamilton, late Principal Medical Officer of the Home District—was won on this occasion by the Artists, after a close contest with the London Scottish. The official inspection and examination of the present class took place at the headquarters of the London Rifle Brigade on December 11th. Two companies were paraded, and, after the march past, stretcher and hand-seat drill were performed. Subsequently each man went through a *viva voce* examination in First Aid. Surgeon-Major Robbins, the senior examiner, in the course of his speech congratulated the officers of the school upon the way the men had been instructed, and stated that all would be recommended for army ambulance certificates. He also referred to the changes in the method of treating the wounded from the time of the Crimean war to the present day. The next class, which will begin on Thursday, February 7th, 1895, will be held at the headquarters of the Queen's Westminster.

A REPROACH TO THE ARMY.

UNDER this heading appears an article in the *Pall Mall Gazette* of November 30th, followed by a strong supporting letter in the same paper on December 4th, on the unpreparedness of the Medical Department for war. The matters brought under notice were adverted to in our military columns on August 18th: "The Army Medical Service in Parliament," and also prior to that date. It behoves the Secretary of State for War to give close attention to a matter the importance of which, both to the army at large and that important branch of it, the Medical Staff, cannot be over-rated. Grave defects, if allowed to continue, must end in disaster.

RETRENCHMENT IN THE MEDICAL STAFF.

THE rumoured probable abolition of Halifax and Hong Kong as surgeon-colonel's appointments, as reported in the *Broad Arrow*, will set medical officers reflecting what must ultimately be the fate of the department. It is generally stated that startling announcements may be expected, but of their nature we are not informed.

"FIRST AID" IN THE ARMY.

S. writes: Medical officers in the army are in future to instruct all officers and men in the use of the "first field dressing." The actual amount of instruction to be conveyed is not much, being confined to

knowledge of the component parts of the dressing, and how to apply them; but as each individual is expected to be personally and fully acquainted with the subject the classes must be small. The work of imparting this instruction to whole regiments will therefore be considerable, and as whenever fresh individuals join the station it will be necessary for the instruction to be imparted to them, this teaching will become a distinct addition to the medical officer's duties.

MILITIA MEDICAL STAFF CORPS.

DR. J. W. CURTIS (Canterbury) late East Kent Militia, writes: The officers of this corps are volunteers, and have no status as militia officers. You state that the medical charge of the militia is thrown upon the already undermanned regular Medical Service. The duty was not thrown upon the Medical Service of the army. The members at the time were trying to get better terms from Government, and among other inducements they stated they could do the militia work at a much cheaper rate. They practically got rid of the militia medical officer, but in his place they have the volunteer, who is likely to do them much more mischief in times to come.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ASSISTANTS AND CORONERS' FEES.

R. D.—An assistant, in the absence of special agreement to the contrary, is always expected to hand over inquest and other professional fees paid to him in the course of his principal's practice, to the principal. Our correspondent is quite right in not assuming a custom to the contrary on account of an instance in his own experience, where the principal did not ask his assistant for these fees. We can only account for the principal not asking for the fees in this case on the ground that he expected the assistant as a matter of course to give them to him without being asked to do so.

AN ELASTIC INTRODUCTION.

PERPLEXED.—There can be no doubt that a medical practitioner disposing of his practice is not entitled to introduce his successor to the patients of a neighbouring professional brother on the ground that he had originally attended them more than five years before. Such conduct appears to us a breach of professional etiquette, and a manifest violation of the fundamental rule applying to such questions—namely, to do unto others as you would wish them to do unto you.

PARTNERSHIP ACTS.

DR. B. AND G. T. G.—It is usual in such cases to have a proper deed of partnership drawn up by a solicitor, the details of which our correspondents must settle between themselves, as these must entirely depend on mutual agreement; no outsider ignorant of all the conditions of the practice in question would be likely to be able to advise. In all partnerships, unless otherwise agreed by special arrangement, the incoming partner is only entitled to share in profits which arise after he has become a partner, so that with regard to book debts he can claim no interest in any which refer to work done before he became a partner, and the same would also apply to bills contracted partly before and partly after the partnership—that is to say, he would only be entitled to share in the portion of the bill contracted after the partnership.

PURCHASE OF PRACTICE.

H. W. C.—Our correspondent has fallen into a very common error in purchasing upon net profits. Medical practice is always valued upon gross receipts in order to avoid the difficulty which has arisen in this case. The date of the purchase is from the commencement of the introduction, or the time when the first instalment of the purchase money is paid. We would advise our correspondent to consult a medical transfer agent without delay.

PRESCRIPTIONS.

M.B.—We believe that there can be no doubt that a prescription belongs to the patient to whom it is given, unless it be given under some special conditions. The patient can put it in the fire, or have it made up by a chemist again and again, of course at his own peril. In the case in point, in which a prescription given by a physician was handed by him to the family medical attendant, the legal claim of the patient may be open to dispute, but we think the family medical attendant is ill-advised in refusing to give a copy of it to the patient.

MEDICAL EVIDENCE AT INQUESTS.

L.R.C.S.I. asks who should be called to give evidence at an inquest? The medical man who first saw the deceased after death, or the medical man who prescribed for the deceased five weeks before death, and who saw it the day before death, but not then for medical treatment? The deceased child suddenly died the next day, when our correspondent was sent for and found it dead.

, In the first place, it is quite in the discretion of the coroner, on holding an inquest, to call such witnesses as he may consider necessary, including medical witnesses, and if the jury should not be satisfied with the medical evidence given as to the cause of death, they can adjourn and call further medical evidence. With regard to the question asked, the coroner can summon which medical man he likes, or any other practitioner in the neighbourhood. Usually the medical witness in such cases is the medical man who last saw the deceased alive, or first attended after death; but the choice rests with the coroner, as already stated, and afterwards with the jury.

CONTRACTS NOT TO PRACTISE.

INQUIRER (W. C. H.)—Our correspondent must not confuse the medico-legal with the medico-ethical aspect of the question he propounds. Under the circumstances he details he is under no medico-legal obligation whatever, but from a medico ethical point of view it is incumbent on him to act precisely as he would expect another professional brother to act towards himself under similar conditions; he, therefore, ought not to commence practice anywhere in the vicinity of his late principal without the latter's consent, where his doing so might be considered reasonably likely to damage the practice of the late principal.

Although it might be allowed that the farther an assistant went from his late principal to start an independent practice the less the likelihood of injuring the latter, it is quite impossible to lay down any rules as to this, and each case would have to be judged entirely on its own merits.

The special questions of our correspondent so far as they are not completely answered by the above comment, almost entirely refer to the medico-legal side of the question; and as to this it is a very difficult subject, and one by no means easy to answer. As to the specific enforcement of agreements, and what is, and what is not, "restraint of trade," against which the law will give relief, the late Nordenfeldt case has completely revolutionised the old law, and it would appear that now a definite time and distance is by no means necessarily a bar to specific performance of these agreements.

CLUB APPOINTMENTS.

J. B. writes to ask whether it is in accordance with medical ethics for the neighbouring practitioners to compete for a club the surgeoncy of which has become vacant owing to the retirement of the surgeon, who had been a member of a firm; the club work having been originally done by the partners indiscriminately, although the retiring partner was the recognised court surgeon, and the remaining partner continues in practice.

, The retirement of a club surgeon in this way undoubtedly gives rise to a vacancy, and if the club takes any steps to throw the post open to public competition, it could hardly be maintained that the neighbouring practitioners are not entitled to compete. At the same time we believe that many members of the profession even under these conditions would decline to do so, and we cannot but think their course the better one.

It need hardly be said, before the club has decided to hold a public election and to invite candidates, it would be most unprofessional for any practitioner to canvass for the post; such conduct is fortunately seldom successful, and is deservedly reprobated by all honourable practitioners.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,320 births and 4,057 deaths were registered during the week ending Saturday, December 8th. The annual rate of mortality in these towns, which had increased from 16.9 to 17.8 per 1,000 in the preceding four weeks, further rose to 20.2 last week. The rates in the several towns ranged from 14.6 in Burnley, 14.8 in Birkenhead, and 15.2 in Halifax to 27.2 in Sunderland, 28.2 in Oldham, and 29.1 in Norwich. In the thirty-two provincial towns the mean death-rate was 20.9 per 1,000, and exceeded by 1.5 the rate recorded in London, which was 19.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.3 per 1,000; in London the rate was equal to 2.0, while it averaged 2.6 per 1,000 in the thirty two provincial towns, and was highest in Portsmouth, Huddersfield, and Leeds. Measles caused a death-rate of 2.5 in Sheffield, 3.4 in Gateshead, and 4.3 in Portsmouth and in Leeds; scarlet fever of 1.1 in Swansea; whooping-cough of 2.1 in Huddersfield and in Blackburn; and "fever" of 1.1 in Burnley and 1.1 in Sunderland. The 95 deaths from diphtheria in the thirty-three towns included 54 in London, 7 in Manchester, 6 in West Ham, 4 in Liverpool, 3 in Birmingham, and 3 in Leeds. Three fatal cases of small-pox were registered in Birmingham and 1 in Hull, but not one in London or in any other of the thirty-three large towns. There were 32 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, December 8th, against 42, 33, and 31 at the end of the preceding three weeks; 7 new cases were admitted during the week, against 2 and 6 in the preceding two weeks. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,254, 2,198, and 2,148 at the end of the preceding three weeks, had further declined to 2,142 on Saturday last; 228 new cases were admitted during the week, against 225 and 191 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, December 8th, 867 births and 630 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 20.3 to 21.4 per 1,000 in the preceding two weeks, further rose to 22.1 last week, and exceeded by 1.9 per 1,000 the mean rate during the same period in thirty-three of the largest English towns. Among these Scotch towns the death-rates ranged from 14.8 in Paisley to 25.7 in Aberdeen. The zymotic death-rate in these towns averaged 3.0 per 1,000, the highest rates being recorded in Greenock and Aberdeen. The 313 deaths registered in Glasgow included 15

from measles, 11 from whooping-cough, and 6 from scarlet fever. Six fatal cases of small-pox, 4 of scarlet fever, and 2 of diphtheria were recorded in Edinburgh.

SUMMONSES UNDER THE INFECTIOUS DISEASES (NOTIFICATION) ACT.

At the Hove Petty Sessions on December 3rd, summonses were heard against the matron of a convalescent home and against a medical man for failing to notify a case of diphtheria. It appears that an inmate of the convalescent home in question was seen by the medical man on October 22nd, and on his advice was removed to the Sussex County Hospital. It was alleged that the matron of the house and the medical man knew that the case was one of diphtheria, and failed to notify the same. The magistrates imposed a penalty of £2 and costs upon the matron of the home but dismissed the summons against the medical man. A summons was also taken out against the matron for exposing an infected person without proper precautions, the patient having been removed to hospital in a cab. This summons was by the magistrate's permission withdrawn, but attention was directed to the importance of publicity being given to the provisions of the law on the matter, and the Bench held it was quite proper that the case should have been brought to their notice.

DISTRICT MEDICAL OFFICER'S APPOINTMENT.

P. J. E. W. writes to complain of not having been appointed a district medical officer when a vacancy occurred in consequence of the death of his senior partner, to whose practice he has succeeded by purchase, and for whom he had acted as deputy for fourteen months previous to his death. He states that, though he is himself a householder and ratepayer, a lodger in the district, and one junior to him, has been elected.

*** We are afraid, as the majority of the guardians have, for reasons of their own, supported our correspondent's opponent, who is a resident in the district and fully qualified, that the Local Government Board will confirm his appointment, as it appears to have been made in strict accordance with their regulations.

CRITICISM OF DISTRICT MEDICAL OFFICER'S TREATMENT OF PATIENTS.

H. C., who is a district medical officer, writes, enclosing a letter he has received from a medical *confrère* who formerly held the same appointment, but lost it by vacating the district. H. C. asks for our opinion on the letter.

*** We consider that the writer has without sufficient cause taken upon himself to criticise "H. C.'s" treatment of the patients under his care, and that the letter in question may, as "H. C." thinks, be described as an offensive one.

SPREAD OF DISEASE BY INFECTED MILK.

DR. G. H. WESTON (Shirley, Southampton) writes: My attention has been drawn to an extract from one of my reports to the Shirley and Freemantle Local Board, which appeared in the BRITISH MEDICAL JOURNAL of October 27th, relating to an epidemic of scarlatina having been traced to a source of milk supply. As I have been asked whether the disease was traced to the cows themselves, would you kindly allow me to extend the extract by the following: The outbreak started in four houses, in which nine cases appeared. Each of these families was supplied with milk from one source. In an adjoining cottage, under the same roof as the dairy, I discovered a boy still peeling, who had started to peel soon after his return from a visit to the adjoining borough town. He had evidently brought the infection, unrecognised, and I infected the milk in the dairy to which he had access, and in each house supplied from this source cases appeared. The cows were examined and found healthy.

LUNATICS IN WORKHOUSES.

A WORKHOUSE M.O. writes: In the case of an alleged lunatic being in a workhouse (having obtained admission thereto in one of the ways mentioned in the Lunacy Act, 1890), and in case a Justice of the Peace does not see the person within three days, is it not legal and right for the medical officer of the workhouse, even though the patient be one suitable for removal to an asylum and not for permanent detention in the workhouse, to make a certificate upon Form 10, in accordance with Section 24, subsection i, of the Act above-named? And is it not lawful for such a person to be then detained by the master of the workhouse, under Section 24, subsection ii, for a period not exceeding fourteen days, unless some order is made by the justice within that time?

*** "A Workhouse M.O." may properly do what he suggests in his letter, provided always that, in the particular case, the signing of a certificate, as in Form 10, by the medical officer of the workhouse, is consistent with his duty, and the intention of the Act as provided in Sections 14 and 16, and subsections iv and vi of Sections 24 of the Act. The general tenour of the Act is adverse to the detention of lunatics in workhouses, but special provisions are introduced whereby, under certain circumstances, lunatics may be so detained either for shorter or longer spaces of time.

VARIOLA acted quite properly under the circumstances he describes, and neither exceeded nor fell short of his duty. We see no objection to the proposed issue of printed instructions. Probably the factory inspector was misunderstood. The list of outworkers may be valuable to the medical officer of health in many ways, but he is not required to visit all the addresses except at his discretion.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

WALSINGHAM MEDAL.—The Lord High Steward's gold medal for research in biology (including physiology) has been awarded to H. Burkill, B.A., Assistant Curator of the Herbarium.

MEDICAL EXAMINATIONS.—Dr. H. H. Tooth, of St. John's College, has been appointed an additional examiner in medicine for the present term. There are over 50 candidates for the Final M.B. Examination in Medicine.

MEDICAL ACTS.—The following have duly performed the exercises for the Degree of Doctor of Medicine: E. J. F. Olive, B.A., M.B., B.C.; J. Atlee, M.A., M.B., B.C.; L. G. Glover, M.A., M.B., B.C., all of St. John's College, and the first has been admitted to the M.D. Degree. G. B. Woodrooffe, B.C., of Caius College, has kept the Act for M.B.

UNIVERSITY OF LONDON.

M.B. EXAMINATION: EXAMINATION FOR HONOURS.

Medicine.—First Class: A. H. Leete, B.Sc. (Scholarship and Gold Medal), Guy's Hospital; A. E. Russell (Gold Medal), St. Thomas's Hospital; G. E. Manning, Guy's Hospital; F. J. Poynton, St. Mary's Hospital; J. S. Collier, B.Sc., St. Mary's Hospital; G. B. Hunt, University College; J. Stephenson, B.Sc., Owens College and Manchester Royal Infirmary; F. J. Steward, Guy's Hospital; J. H. Fisher, St. Thomas's Hospital; R. A. Young, B.Sc., Middlesex Hospital. Second Class: F. C. Taylor, Guy's Hospital; J. S. Bolton, B.Sc., University College; E. M. Hainworth, B.Sc., St. Thomas's Hospital; F. G. Hopkins, B.Sc., Guy's Hospital; A. Stanley, St. Mary's Hospital; G. H. Cowen, London Hospital; H. Davies, Guy's Hospital; Alice Mary Corthorn, London School of Medicine for Women; W. E. Lee, St. Bartholomew's Hospital; M. H. Raper, Middlesex Hospital; J. S. Sloane, B.Sc., St. Bartholomew's Hospital; E. Smith, St. Thomas's Hospital. Third Class: C. S. Wallace, St. Thomas's Hospital; Lizzie Bennett, London School of Medicine for Women; Susan Anne Hughes, London School of Medicine for Women and Royal Free Hospital; R. H. Steen, Queen's College, Belfast, and St. Mary's Hospital; A. C. Hovenden, Guy's Hospital; E. W. Spink, Yorkshire College; J. W. Haines, St. Bartholomew's Hospital; W. Shears, St. Bartholomew's Hospital; Maud Mary Chadburn, London School of Medicine for Women and Royal Free Hospital.

Obstetric Medicine.—First Class: W. E. Lee (Scholarship and Gold Medal), St. Bartholomew's Hospital; *C. S. Wallace (Gold Medal), St. Thomas's Hospital; F. J. Steward, Guy's Hospital; E. C. Taylor, Guy's Hospital. Second Class: F. J. Poynton, St. Mary's Hospital; A. E. Russell, St. Thomas's Hospital; J. H. Fisher, St. Thomas's Hospital; A. N. Weir, B.Sc., St. Bartholomew's Hospital. Third Class: G. H. Cowen, London Hospital; Elizabeth Jane Moffett, B.Sc., London School of Medicine for Women and Royal Free Hospital; E. H. Houlton, Yorkshire College.

Forensic Medicine.—First Class: J. S. Collier (Scholarship and Gold Medal), St. Mary's Hospital; J. S. Bolton (Gold Medal), University College; M. H. Raper, Middlesex Hospital; G. E. Manning, Guy's Hospital; F. J. Steward, Guy's Hospital; A. Stanley, St. Mary's Hospital; Y. H. Mills, London Hospital. Second Class: E. E. Murray, University College; T. Warner, King's College; H. B. Meakin, St. Bartholomew's Hospital. Third Class: F. D. Harris, St. Mary's Hospital; F. G. Hopkins, Guy's Hospital; Elizabeth Jane Moffett, London School of Medicine for Women and Royal Free Hospital.

* Obtained the number of marks qualifying for the University Scholarship.

UNIVERSITY OF EDINBURGH.

THE following gentlemen have been appointed office-bearers of the Edinburgh University Union for the ensuing session: President: S. J. Aarons. Honorary Secretary: James G. C. Scott. Treasurer: W. A. Wood, C.A. Auditor: H. Hay Brown, C.A. Committee of Management: Professor T. Annandale, Professor Butcher, Dr. Musgrove, Dr. J. G. Cattanach, Mr. C. W. Cathcart, F.R.C.S., Mr. James A. Clyde, L.L.B., Messrs. W. J. Garbutt, A. McArthy Morrogh, J. W. Tullo, B.Sc., D. Waterston, R. D. Melville, R. D. Story.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

AT the December meeting of the Faculty held on Monday, December 3rd, George Balfour Marshall, M.D., Woodside Crescent, Glasgow, and Charles J. Renshaw, M.D., Ashton-upon-Mersey, having passed the necessary examination, were admitted Fellows of the Faculty.

DR. G. R. CUNDELL, of Kew, has been elected Chairman of the Health Committee of Richmond, Surrey.

SMALL-POX IN EDINBURGH.—Seventeen fresh cases of small-pox were reported in Edinburgh and six deaths.

SUCCESSFUL VACCINATION.—Mr. John J. Powell, public vaccinator for the Weybridge District of the Chertsey Union, has received, for the second time since 1890, the Government grant for successful vaccination.

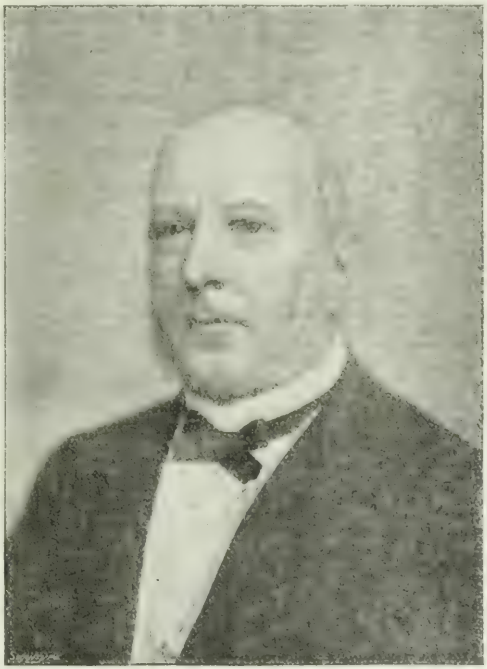
AT the last meeting of the Royal Microscopical Society Dr. A. W. Turner gave a demonstration on methods of staining sections of the central nervous system. A new microtome, made by Messrs. Swift, as well as several other microscopical appliances, was exhibited.

OBITUARY.

W. WITHERS MOORE, D.C.L., M.D., F.R.C.P.,

Vice President of the British Medical Association.

It was with sincere regret that we announced in a brief paragraph in the British Medical Journal of December 8th the unexpected and almost sudden death of Dr. Withers Moore. We are now enabled to present our readers with a more detailed account of his life and work, which cannot fail to be of interest to those who were acquainted with him, or were associated with him in the work of the Association. It appears that on November 29th he attended a meeting of the grand jury at Lewes, leaving home at 9 in the morning, and returning at 9.30 in the evening, having in the meantime heard and disposed of upwards of forty cases. On November 30th he was present at a meeting of the South Eastern Branch Council, at 429, Strand, and appeared to be in excellent health and spirits. On December 1st he read a paper at the Chichester Diocesan Conference at Brighton, and spoke for a considerable time, and was apparently none the worse for his exertions when he returned home in the evening. During the night of Dec. 1st, however, he was seized with an attack of angina, from which he occasionally suffered, and this continued to recur from time to time during the following day, and on Sunday night he had a very bad seizure; but on Tuesday, December 4th, he was so much better that all danger seemed to be over, and hopes were entertained that he would make a good recovery. In the course of the night, however, a relapse occurred, and early in the morning of Wednesday, December 5th, he passed away. He was most kindly attended to the last by Dr. Wilks, of London, Dr. Dill, of Brighton, and Dr. Fielden, of Burgess Hill.



William Withers Moore was born at Doncaster in 1823, and was the third son of John Moore, of Hall Gate, Doncaster, who practised as a surgeon there for many years—from 1817 to 1854. His mother was a Miss Allen, who was a daughter of Oswald Allen, surgeon, of York, and niece of Dr. Withers of that city, and also of William Withers, who was the Recorder of York.

His paternal grandfather was the Rev. Stephen Moore, Prebendary of York Cathedral, who was Vicar of Doncaster for upwards of seventeen years, which living he held with the Rectory of Maw, and the Vicarage of Appleby in Lincolnshire; he was also chaplain to the Archbishop of York. The *Gentleman's Magazine* for 1807 contains the following obituary notice: "After a very short illness, aged 60, the Rev. Stephen Moore, M.A., upwards of seventeen years Vicar of Doncaster, Prebendary of York Cathedral, and formerly chaplain to Robert, Archbishop of York, a man endeared to his friends by the open, generous, manly qualities of an excellent heart, and to his parishioners by whatever was amiable and praiseworthy in the discharge of his duties as a clergyman." This eulogy, *mutatis mutandis*, might apply to the grandson.

Dr. Withers Moore was educated at Doncaster Grammar School, under Mr. Cape, and had among his class-fellows the Rev. Francis Bashforth, the Second Wrangler in Adams' year; Chessiman, who was Fifth Wrangler of his year; and Morley Puncheon, the great Nonconformist. He was apprenticed to his brother-in-law, John Lister, F.R.C.S., of Doncaster. After completing his apprenticeship he entered as a student at University College Hospital, London, having Mr. Cadge, of Norwich, as one of his contemporaries. He was an industrious worker, and won both gold and silver medals whilst there. He became M.R.C.S. and L.S.A. in 1845, and at once commenced practice in Doncaster as a general practitioner; and, although he had but few friends to support him, his indefatigable zeal and industry soon laid the foundation of an extensive and rapidly-increasing practice. In a few years his success in his native town was fully assured, and he had no longer any anxiety as to his future in Doncaster. But hard work began to tell upon him, and the constant exposure to the severe winter climate—he often drove from thirty to forty miles a day in an open gig—so impaired his health that he resolved to leave Yorkshire and seek a more genial climate in the south, where he could practise as a physician. With characteristic energy and decision he forthwith disposed of his practice in Doncaster, and proceeded at once to Edinburgh for the purpose of taking a degree. After completing his University career he finally graduated M.D. in 1861, and then turned his step southwards. At first he had some thoughts of practising at Clifton, but he soon abandoned this idea, and finally made up his mind to settle at Brighton, and took a house in Montpelier Place, to which he forthwith removed his family. The prospect was not very encouraging for him. He was nearly 40 years of age, with a family dependent on his exertions; the ground was already fully occupied by men of eminence in the profession, and there seemed but little likelihood that an unknown stranger, with no influential friends to recommend him, would make headway under such circumstances. But Dr. Withers Moore was not easily daunted, and with characteristic Yorkshire resolution he faced his difficulties manfully, and gave his very best attention to the few cases that came in his way. But patients were slow in coming, and for several years his anxieties were very great, and his income very small. Indeed, he has often assured the writer of this brief memoir that this was the most anxious period of his professional life. Meanwhile he diligently attended the meetings of the East Sussex District of the South-Eastern Branch, frequently contributing papers himself, and taking part in the discussion of those of other men. His experience as a general practitioner at Doncaster stood him in good stead, and gave a practical value to his contributions, which those who heard them were quick to appreciate. His practice gradually increased, and in 1870 his position was so well assured that he felt himself justified in

moving into the house in Brunswick Square which he occupied till he finally retired from practice. This was a bold move, but it was fully justified by the result. His practice continued to grow year by year till he attained the foremost rank as a consulting physician, and enjoyed one of the most lucrative practices on the South Coast. In 1874 he was elected a Fellow of the Royal College of Physicians. For some years he was a member of the Court of Examiners of the Society of Apothecaries. He was also Physician to the Brighton General Dispensary, and President of the Brighton and Sussex Medico-Chirurgical Society, and up to the time of his death was Consulting Physician to the Sussex County Hospital. In connection with this latter institution he established a clinical afternoon once a week, when the most interesting cases in his wards were exhibited and discussed with such members of the profession as chose to avail themselves of this opportunity of keeping alive their interest in clinical medicine. He always regarded this afternoon at the hospital as one of the most enjoyable in the week.

At one time he was President of the South-Eastern Branch, and in 1886, when the Association held the annual meeting at Brighton, he was unanimously chosen as the President. On this occasion he delivered a remarkable address upon the Higher Education of Women, as regarded from a medical standpoint, with its possible disastrous results to the community at large. The views which he put forward gave rise to much newspaper controversy at the time and many leading articles were devoted to the consideration of the subject matter of the address. The Brighton meeting will long be remembered as most successful, and its success will always be associated with the name of Withers Moore.

In 1890 he was unanimously elected President of the Council, and for three years he devoted himself and all his leisure to the discharge of the duties of his office. At the termination of his Presidentship, he was elected a Vice-President for life; and during the meeting of the Association in August last year at Newcastle-upon-Tyne, the University of Durham conferred upon him the honorary degree of D.C.L.

Dr. Moore continued to practise till 1889, when he made up his mind to retire. He then left Brunswick Square, and resided permanently at his country house at Burgess Hill, Sussex, which he had occupied during the summer months for many years before. As indicative of the natural kindness and generosity of his nature, he resolved to dedicate whatever fees he took during the last six months that he was in practice to charitable purposes, and he assured the present writer that he never, in all his life, received so much in the same period as he did during those six months.

But though Dr. Moore had retired from practice for the sake of leisure it was impossible for him to be idle, and he entered largely into the public life of the town, which was now his permanent residence, and its neighbourhood. He became President of the Burgess Hill Conservative Association, and County Councillor for Burgess Hill on the East Sussex Council. As a Justice of the Peace he was indefatigable in his attendance at the Petty Sessional Bench at Hayward's Heath, his medical knowledge often proving of great service in the administration of justice. Indeed, he had but little leisure; he found that he had exchanged the busy life of a practising physician for the busy life of an active country gentleman.

Although Dr. Withers Moore wrote many papers he published very few. His chief contributions to medicine were on the Pathology of Chorea Anterior Poliomyelitis, and the Production of Heat in Fever, all of which have appeared in the pages of the British Medical Journal.

Dr. Withers Moore was a man of simple, unaffected piety, devotedly attached to the Church of England, taking a deep interest in all questions affecting her welfare. It was on this ground that he was earnestly requested to take part in the proceedings of the Diocesan Church Conference at Brighton on December 1st. On this occasion he made an excellent speech on Disestablishment and Disendowment regarded from the layman's point of view. This, alas! was his last public utterance.

As a public man, taking an active interest in public affairs, he will be sadly missed, but by none will his loss be more keenly felt than by the members of the South-Eastern Branch. As an old member of the Council of the Association he was beloved by his colleagues, who greatly valued the sagacity, wisdom, and judicial impartiality of his counsel at all times. The keen and lively interest which he always took in whatever affected the welfare of the general practitioners of the country was manifested at the last meeting of the Council, when he moved for a committee to inquire in what way, if any, the Association can best promote their interests. It is deeply to be regretted that that committee will not now have the advantage of his great experience and personal familiarity with the subject to aid and guide them in their deliberations. Those who had the privilege of intimate personal friendship with him will ever retain an affectionate remembrance of his large-hearted sympathy, his genial kindliness of disposition, his buoyancy of spirit and innocent love of fun, which oftentimes enlivened the dulness of a business meeting. He was a great lover of good music, and he gave a magnificent organ to the parish church of Burgess Hill in memory of his late wife, at a cost of about £1,500. His liberality in contributing to the support of most of the local institutions in his neighbourhood was well known, and few appealed for help in vain. Throughout his long career Dr. Withers Moore was one of the most attached and devoted members of the Association, and he has often declared to the present writer his conviction that whatever professional success he had attained in life he owed very largely to his connection with the British Medical Association.

FRANCIS BISSET HAWKINS, M.D.Oxon., F.R.C.P., F.R.S.

Dr. Francis Bisset Hawkins, who died at Bournemouth on December 7th at the patriarchial age of 98, was the Senior Fellow of the Royal Society though not, we believe, the senior member of the medical profession, he was the oldest graduate of the University of Oxford on the books, and was the senior Fellow of the Royal College of Physicians by no less than fifteen years. He was born in London on St. Luke's Day, 1796, and was the son of Mr. Adair Hawkins, a distinguished London surgeon. He was educated at Eton and Exeter College, Oxford, and so must have been in residence there at the time of the battle of Waterloo. He took his B.A. in 1818, M.A. in 1821, M.B. in 1822, and M.D. in 1825; in the latter year he was admitted a candidate at the Royal College of Physicians, and was admitted to the Fellowship in the following year. He delivered the Gulstonian lectures in 1828, and the Lumleian lectures in 1835 and filled the office of Censor in 1830. In 1825 he joined the Royal Medical and Chirurgical Society, and was one of the subscribers in 1834, when the Society applied for and obtained its Royal charter; he left the Society in 1840. From 1828 to 1832 he was physician to the Westminster Dispensary; and in 1831, on the establishment of King's College, he joined the professorial staff and held the chair of Materia Medica, resigning office in 1835. In 1833 he filled the office of factory commissioner, and in 1834 was elected a Fellow of the Royal Society. From 1835 to 1842 he was an inspector of prisons for the Southern and Western Districts of England, and in his reports contended earnestly and successfully against the adoption of the American system of solitary confinement. In 1842 he was elected metropolitan commissioner in lunacy, a post which he held until August, 1845, retiring upon the creation of the present Board of Commissioners in Lunacy at that date, and in 1847-48 he was commissioner for the Government of the model prison at Pentonville.

During the active part of his professional career he practised in Golden Square, but he retired from practice more than half a century ago and moved to Upper Harley Street, as it was then called, and about the same time adopted Bournemouth as his country residence, and since 1858 had held the office of Deputy-Lieutenant for Dorsetshire. Dr. Hawkins's earliest literary contribution known to us is a paper on the "Elements of Medical Statistics," published in 1829 (his Gulstonian Lecture of the previous year), and he wrote the article under this heading in the *Encyclopædia of Practical Medicine* which appeared in 1835. In his factory report in 1833 he strongly recommended the diminution of the hours of labour for women and children, and suggested the creation of public gardens or parks

at Manchester, all of which has since been accomplished, and when the Government of the day introduced the Act for the Registration of Births and Deaths, it was partly through his representations that a column was inserted containing the names of the diseases or the causes by which death was occasioned. In 1830 he contributed to the *Lives of British Physicians*, a volume of "Murray's Family Library," notices of several medical worthies, amongst them being Mead, Heberden, Cullen, and Jenner. In 1831 appeared his *History of the Epidemic Spasmodic Cholera of Russia*, and in 1838 a paper entitled "Germany: the Spirit of her History, Literature, National Economy, and Social Condition." The Roll of the Royal College of Physicians, published by Dr. Munk in 1878, which comes down to the year 1825 includes a notice of the deceased, and to that source we are indebted for most of the facts above given.

Dr. Hawkins lost his wife about sixteen years ago; they had had no children. His brother, the Rev. Bentinck Hawkins, died last August at the age of 92, and only a few days ago his collection of miniatures, clocks, etc., were presented to the University of Oxford by Dr. Bisset Hawkins in accordance with the known wishes of his brother, though not expressed in his will. The late Sir Andrew Clark was often heard to remark on the extraordinary fact that Dr. Hawkins was a Fellow of the College before he (Sir Andrew) was born, and he was very anxious to secure his presence at one of the College dinners, and on one occasion almost succeeded, but at the last moment the weather was unfavourable, and Sir Andrew and the College were disappointed. Owing to the great lapse of time since he lived in London, there are but few who have any personal recollections of him, but those who did know him speak of him as a kindly and and benevolent disposition, and he retained his faculties up to the last, and was able to carry on the considerable correspondence and enter fully into all the business matters necessitated by his brother's death with perfect comprehension. He lived a very regular life, not rising till midday and going to bed about 8.30 P.M., and keeping entirely to two rooms, the temperature of which was regularly maintained between 62° and 65°; and he lived partly at his house in Dorchester and partly in Bournemouth, and when he went from one to the other he always drove as he was unwilling to risk the possible delay and waiting at the railway station. He was buried on December 11th at West Knighton, the College of Physicians being represented at his funeral by Dr. Vawdrey Lush, who had known him long and intimately.

WILLIAM WALKER, M.D.,

Redcar.

We regret to announce the death of Dr. William Walker, which took place at his residence in Redcar on November 23rd. Dr. Walker was born at Radcliffe, near Manchester, in 1845. He studied at the Royal Infirmary, Manchester, where he held several of the usual appointments including that of house-physician; after which he was for two years resident medical officer to the Fever Hospital, Monsall, Manchester, and Convalescent Hospital, Cheadle. He obtained the L.S.A. in 1874, the M.R.C.S. in 1875, and subsequently in 1889 obtained the degree of M.D. in the University of Durham. He commenced private practice in Coatham in 1875, joining Dr. George Oliver as partner; and he subsequently moved to Redcar, and married a daughter of the late Dr. Bennett, of that town.

His personality was great, and both in professional and lay circles in Redcar and the surrounding district he will be sorely missed. He was much respected by those with whom he came in contact. He held several medical offices in the neighbourhood, including that of Medical Officer to the Convalescent Home at Coatham.

For several years he had suffered from diabetes, but carried on his work with an energy and a cheerfulness which were remarkable. In the spring of this year he suffered from laryngitis, and at one time it was feared the cause was malignant, which, however, was afterwards proved not to be the case. He, however, determined to relinquish practice in Redcar during the winter months, and in October entered into partnership with Dr. Legh de Legh, and a few days afterwards was called to Switzerland to see an old patient. He remained there a week or two, and then returned to Redcar, apparently in excellent health; but during the first week of November a large carbuncle developed on the back of his neck. After a few days, Dr. James Murphy was called to see him, and freely incised the carbuncle, and for a week all went well; but after this he gradually sank from exhaustion, in spite of all attention. His funeral took place on November 28th.

JOHN WILLIAM TAYLOR, M.D. Edin., L.F.P.S.Glasg.

Dr. Taylor, of Port Glasgow, died on November 27th, after an illness of some duration, due to bronchitis. He was born in Dundee, his father being the Rev. Dr. Taylor, minister of St. Paul's Established Church there. Qualifying in Edinburgh in 1864, his first appointment was as house surgeon to Paisley Infirmary. He subsequently began practice in Houston, Renfrewshire, and in 1867 succeeded Dr. Reid, of Port Glasgow, on the removal of the latter to Helensburgh. He was medical officer of health for Port Glasgow and Kilmalcolm. He enjoyed a very extensive practice in Port Glasgow and the surrounding country, and the esteem in which he was held was evinced by the universal tokens of mourning which attended his funeral, which partook of a public character. He died at the age of 54, and has left a family of two sons and a daughter.

The death is announced of Dr. William Bell Hunter, the author of the article on Hydropathy in the *Encyclopædia Britannica*. Dr. Hunter, who obtained his medical education in Glasgow, was at one time physician and medical superintendent of the City Parish Fever Hospital, Glasgow, and held other appointments in that city. Subsequently he became resident physician to the hydropathic establishment at Fowes, and finally to Smedley's Hydropathic Institute at Matlock.

INDIA AND THE COLONIES.

INDIA.

The Health of Calcutta in 1893.—Dr. Simpson's annual report, which has recently reached us, presents the vital statistics and sanitary proceedings of the year 1893 in great elaboration. The year was remarkable for its heavy rainfall and high humidity; 85 inches of rain fell on 124 days, the average fall being about 65 inches. The price of food exceeded that of the preceding nine years. The registered birth-rate was 19.7 per 1,000, and death-rate 29.5. These figures include that portion of the suburban area which lies outside of the Mahratta ditch, and which was amalgamated to Calcutta proper in 1888 for purposes of administration. This added area is less advanced in sanitation than the town, and differs also in other important respects which tend to elevate its death-rate, which stood at 37.1 against 25.9 for urban Calcutta. Indeed, the circumstances of the several wards of both urban and suburban areas differ so widely as to produce startling variations in both birth- and death-rates. The former fluctuate between extremes of 6.7 to 38.1 and the latter of 12.4 to 42.8. The conditions which chiefly govern these curious results are density, permanence, class and occupation of population, situation and above all the sanitary state of the different sections of the town. The healthiest sections are the European and business quarters, well sanitated, and occupied mostly by an adult population, and the least healthy are those densely filled with a permanent population of poor labourers with scanty means, large families, and filthy premises and surroundings. The year was remarkable for the low mortality from cholera and small-pox, and the high mortality from fevers. Only 596 deaths from cholera were registered in the town and 273 in the suburbs, and 13 and 18 from small-pox. On the other hand, there were 4,749 deaths from fever in the town, and 3,342 in the suburbs. The comparative immunity from cholera was shared by the surrounding districts; but it is satisfactory to be able to pronounce the town figures unprecedented. The fever ratio—10.1 for town and 15.5 for suburbs—were both considerably in excess of past years, and the increase is attributed to the unusual rainfall and humidity, accentuated and applied, more especially in the case of the suburbs, by defective and faulty drainage. The question of drainage is ex remely pressing, and we are glad to find that it is engaging the earnest attention of the Commissioners. Dr. Simpson again draws pointed attention to the need of building regulations based on sound sanitary principles. He also urges the need of improved arrangements for the accommodation and treatment of lepers.

The statistical tables appended to the report are most elaborate, perhaps too elaborate in consideration of the probable shortcomings in accuracy and completeness, and many of the data tabulated. The statements indicating sanitary work done and routine health administration show that Dr. Simpson and his assistants are indefatigable in their efforts to remove nuisance and raise the standard of public health by detailed and practical attention to all the causes—and these in Calcutta are legion—which militate against the purity of water, food, soil, and air, gives evidence of the report on the whole energetic and enlightened sanitary administration

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30 *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. F., 2.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Ear, Tu. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—M. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

LONDON TEMPERANCE HOSPITAL. *Hours of Attendance.*—Medical, M. Tu. F. 2; Surgical, M. Th., 2. *Operation Days.*—M. Th., 4.30.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1.30, S., 2; (Obstetrical), Th., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL EYE HOSPITAL, Southwark. *Hours of Attendance.*—Daily, 2. *Operation Days.*—Daily.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 3; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopedic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Tu. F. (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, S., 3; females, W., 9.45. *Operation Days.*—M., 2., Tu. 2.30.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 5, Th., 2, F. (Women and Children), 2, S., 4. *Operation Days.*—W. and F., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10 *Operation Days.*—W. S., 1.30; (Ophthalmic), M., 2.30, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th. 1.30; S., 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopedic, W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, Tu. F., 9.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

MEDICAL NEWS.

IT is proposed to found a lodge of Freemasons upon the lines of the Bar, the Apollo and the Sir Isaac Newton Lodges for those brethren who have received a part or the whole of their education at St. Bartholomew's Hospital. Gentlemen who are interested in the project are invited to attend a preliminary meeting to be held at 26, Bloomsbury Square, on Monday, December 17th, at 4.30 P.M.

WE regret to learn that the collection of relics of Dr. Edward Jenner, the discoverer of vaccination, which were described and illustrated in the BRITISH MEDICAL JOURNAL at the time of their exhibition at Bristol last year, are to be dispersed. We are informed that the collection will be sold by Messrs. Puttick and Simpson on December 21st. The collection includes portraits of Jenner, MSS., correspondence, various diplomas, addresses, and presentations, and a small library of controversial literature.

WOMEN AND THE UNIVERSITY OF DURHAM.—At a meeting of Convocation of the University of Durham, held on Tuesday, December 11th, it was resolved, with only one dissentient vote, to affix the seal of the University to the petition for a supplementary charter to enable the University to confer degrees upon women. Some formal proceedings remain before the power is granted, but it is not anticipated that there will be any difficulty or opposition. The faculties of medicine and science will then probably throw open their degrees to women.

LIVERPOOL ROYAL SOUTHERN HOSPITAL DINNER.—The annual dinner of past and present students of the Liverpool Royal Southern Hospital took place at the Adelphi Hotel, Liverpool, on December 8th, and was one of the most successful that has ever been held. Mr. Rawdon, the senior Surgeon to the hospital, was in the chair, and about ninety sat down. Some of the speeches bore witness to the undoubted fact that the work done in the hospital is most excellent and that it is steadily gaining ground as a clinical school. This success is largely to be attributed to the admirable way in which the Committee of Management support the staff in their efforts to keep the institution abreast with the times and to place every possible facility at the disposal of the students.

DIARIES.—We have received from Messrs. John Walker and Co., Limited, Warwick Lane, London, E.C., some examples of the pocket diaries manufactured by them; the special feature of these diaries is what the manufacturers term the "back loop." By a special manner of binding, a case for carrying the pencil is formed at the back. The diaries are well printed on good paper, and contain the ordinary information as to postal regulations, etc. A particularly convenient type for the male pocket is No. 17, called the "Graphic Diary," apparently because the dates are very clearly shown in large figures. Some of the more elaborate diaries have removable covers, and in future years new editions can be obtained to fit into these covers, which serve also as pocket cases. The prices vary from 6d. for a small pocket diary bound in cloth, to 10s. for a larger and more elaborate edition in a Russia case.

PORT SANITATION.—At a recent meeting of the Northern District of the Association of Municipal and County Engineers, Mr. T. W. Stainthorpe described the floating hospital on the river Tees. It lies in a dredged-out dock, and is protected from north and north-east gales by a large, crescent-shaped breakwater. The building rests upon ten large cylinders, and consists of two ward blocks, and administrative block, laundry, mortuary, and destructor. The walls consist of corrugated iron lined with felt and wood. The hospital has cost £10,000, and contains accommodation for twenty beds. At the same meeting Mr. W. G. Laws, M. Inst. C.E., described an apparatus for sterilising all dejecta and liquid sewage from wards in which cholera was being nursed. He recommended that a sterilising pan, to contain thirty gallons, should be placed in each ward, and steam conveyed to it from a central boiler. The total cost of such a pan, set ready for action, was £30; but it was found that when the cost of the steam boiler and the requisite connections was included, the total cost for six sterilisers was about £300.

The *conversazione* given by the President and Council of the British Medical Temperance Association at the London Temperance Hospital to medical students, on December 7th, was well attended. Sir B. W. Richardson related some reminiscences of the practice of bleeding as it was conducted fifty years ago, and expressed his conviction that the practice of stimulation would also be abandoned.

MEDICAL VACANCIES.

The following vacancies are announced:

BOOTLE BOROUGH HOSPITAL.—Assistant House-Surgeon and Dispenser. Salary, £80 per annum, with board, lodging, and washing. Applications the Clerk, Wm. B. Brooker, by December 18th.

CHURCH OF SCOTLAND MISSION, Punjab.—Lady Missionary, fully qualified as a doctor. Applications to Secretary, Women's Association for Foreign Missions, 22, Queen Street, Edinburgh.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY, Cardiff.—Assistant Resident Medical Officer: must be qualified. Appointment for six months. Board, lodging, and washing provided. Application, with testimonials, to George T. Coleman, Secretary and General Superintendent, before December 17th.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon; unmarried. Salary, £50 per annum, with board and lodging. Applications to the Secretary by December 20th.

LEWES DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL.—Resident Medical Officer, doubly qualified. Salary, £110 per annum, with furnished apartments, coal, gas, and attendance. Applications to the Honorary Secretary, Mr. Reginald Blaker, Lewes, Sussex, by December 21st.

LONDON COUNTY COUNCIL.—Pathologist to the London County Asylum. Salary, £700 per annum, with travelling expenses. Applications on forms to be obtained at the office of the Committee, endorsed "Application for Pathologist," to R. W. Partridge, Clerk to the Asylums Committee, London Asylums Committee Office, 21, Whitehall Place, S.W., by 10 o'clock on January 5th, 1895.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Assistant Medical Officer, doubly qualified. Honorarium, £25 per annum. Applications to C. W. Hunt, Secretary, by December 15th.

MANCHESTER ROYAL INFIRMARY DISPENSARY AND LUNATIC HOSPITAL OR ASYLUM.—Honorary Obstetric Physician; must be F. or M.R.C.P.Lond. Applications to the Chairman of the Board by December 31st.

NEW HOSPITAL FOR WOMEN, 144, Euston Road.—Two Physicians, an Assistant Physician, and two Clinical Assistants; must be fully qualified medical women. Applications to the Secretary by December 28th.

NORFOLK AND NORWICH HOSPITAL.—Assistant to the House-Surgeon, doubly qualified. Appointment for six months. Board, lodging, and washing provided. Applications to the House-Surgeon by January 5th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, Shoreditch, N.E.—House-Physician. Appointment for six months; at expiration of this term he will be required, if eligible, to serve as House-Surgeon for further period of six months. Salary as House-Physician at the rate of £60 per annum, and as House-Surgeon at the rate of £80 per annum. Doubly qualified. Applications to the Secretary, at the City Offices, 27, Clement's Lane, Lombard Street, E.C., by December 18th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent. Assistant House-Surgeon. Board, apartments, and washing provided. Applications to the Secretary by December 31st.

ROYAL FREE HOSPITAL Gray's Inn Road, W.C.—Anæsthetist. Applications and testimonials to Conrad W. Thies, Secretary, by December 31st.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £50 per annum, with board and lodging. Appointment for six months. Applications to the Honorary Secretary by December 19th.

WEST BROMWICH DISTRICT HOSPITAL.—House-Surgeon, surgically qualified and unmarried. Salary, £80 per annum, with board, residence, and washing. Applications to the Honorary Secretary, Mr. William Bache, Churchill House, West Bromwich, by December 29th.

WEST HERTS INFIRMARY, Hemel Hempstead.—House-Surgeon and Dispenser, doubly qualified and unmarried. Appointment for two years. Salary, £100 per annum, with board, furnished rooms, fire lights, attendance, and washing. Applications to the Secretary by January 17th, 1895.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard Street, Soho, W.—Honorary Surgeon and Resident Medical Officer. Applications to the Secretary by December 20th, at 10 o'clock.

WESTMINSTER HOSPITAL.—Fourth Assistant Surgeon. Must be F.R.C.S.Eng. Candidates must transmit certificate of age, and attend the House Committee on January 1st.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant. Appointment for six months. Board, lodging, and washing provided. Applications, inscribed "Application for Resident Assistant," to the Chairman of the Medical Committee by December 31st.

WOLVERHAMPTON EYE INFIRMARY.—House-Surgeon. Salary, £60 per annum, with rooms, board, and washing. Applications to the Secretary by December 17th.

MEDICAL APPOINTMENTS.

BATES, W. R., L.R.C.P.I., reappointed Medical Officer for the Addingham District of the Skipton Union.

BRIDGES, Ernest C., M.B., B.S.Durh., M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the Great Northern Hospital.

COOKE, Wm. Conway, L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health to the Bognor Local Board.

DICKINSON, H. B., M.B.Lond., M.B., Ch.B.Viet., M.R.C.S., L.R.C.P., appointed Senior House-Surgeon to the Bootle Borough Hospital.

EDMUNDS, Dr. P. J., appointed Medical Officer for the Western District of the Westminster Union, *vice* Dr. Jackson.

FERNIE, Edward, M.D.St.And., M.R.C.S.Eng., reappointed Medical Officer of Health for the Parish of Swynnerton of the Stone Union.

HARDWICK, Arthur, M.D.Durh., reappointed Medical Officer of Health to the Newquay Local Board.

HUTLEY, Charles, M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the Wakefield Clayton Hospital.

JONES, W. D., M.B., M.R.C.S., L.R.C.P., appointed Senior House-Surgeon to the Wakefield Clayton Hospital.

LESLIE, R. Murray, M.B.Edin., M.R.C.P.Lond., appointed Assistant Physician to the Royal Hospital for Diseases of the Chest, London.

MAHOOD, Allan E., M.B., M.Ch., M.A.O.R.U.I., F.R.C.S.Eng., appointed Medical Officer and Public Vaccinator for the Northam District, Bideford Union.

RODERICK, Sidney J., M.B., C.M.Edin., reappointed Medical Officer of Health to the Llanelly Local Board.

STEWART, Mr. C. P., appointed Medical Officer and Dispenser at the Infirmary of the Croydon Union, *vice* E. H. Lemon, M.R.C.S., resigned.

TURNER, J. A., M.B., C.M.Edin., D.P.H.Camb., appointed Public Analyst to the Litterworth Rural Sanitary Authority, *vice* W. L. Emmerson, M.D.

DIARY FOR NEXT WEEK.

MONDAY.

SOCIETY OF MEDICAL OFFICERS OF HEALTH, 20, Hanover Square, W., 7.30 P.M.—Dr. T. M. Legge: Some Points of Difference between English and Continental Methods of Municipal Sanitary Administration. Dr. Ransome: On the Limitation of Infectiousness of Phthisis.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2, Lecture at 4.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. S. G. Shattock: Tumour of Palate. Dr. W. Collier: Enlarged Spleen. Mr. C. H. Golding-Bird: Pastractal Dermoid, forming a Rectal Polypus. Mr. Cecil F. Beadles: Malignant Tumours at the Base of the Skull. Mr. J. H. Targett: Tumour of the Hypophysis Cerebri. Dr. W. W. Ord: Subdural Hæmorrhage in Infantile Scurvy. Mr. J. Jackson Clarke: Some Observations on the Repair of Tendons. Dr. H. D. Rolleston: (1) Pharyngeal Pouch. (2) Diffuse Secondary Growth on the Dura Mater.

WEDNESDAY.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, 2 P.M.—Lecture by Dr. James Taylor.

ROYAL METEOROLOGICAL SOCIETY, 25, Great George Street, Westminster, 7.30 P.M.

THURSDAY.

SOCIETY OF ANÆSTHETISTS, 20, Hanover Square, 8.30 P.M.—Dr. Bowles: On Dangers connected with Respiration in Anæsthesia.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Mr. Herbert W. Page: Third Harveian Lecture on Some Disorders of Nervous Function due to Injury and Shock.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BERRIDGE.—On December 2nd, at Enderby, Leicestershire, the wife of W. R. Morpott Berridge, M.R.C.S., L.R.C.P., of a son.

CLOWES.—On December 10th, at Reading, the wife of Norton B. Clowes, M.R.C.S., L.R.C.P., of a daughter.

TUCKETT.—On December 10th, at Woodhouse Eaves, Leicestershire, the wife of W. Reginald Tuckett, M.R.C.S., etc., of a son.

MARRIAGE.

BEVERLEY—KEMP.—On December 1st, at St. Martin's Church, Scarborough, by the Rev. C. C. Mackarness, M.A., W. H. Beverley, M.R.C.S.Eng., L.R.C.P.Lond., F.R.C.S.Edin., son of Robert Beverley of Leeds, to Emma, only daughter of the late Eustace Kemp of Grantham. No cards.

DEATH.

WESTON.—On November 29th, at The Green Hall, Stafford, Adelaide Marie, wife of Edward Francis Weston, surgeon, and youngest daughter of the late Dr. Knight, magistrate and deputy-lieutenant of the county of Stafford.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 428, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

W. W. desires to hear of a home where a patient suffering from paralysis agitans (a woman, not bedridden) could be received for a small sum (about seven or eight shillings per week).

W. A. L. asks to be recommended a boarding school—terms about 40 to 45 guineas per annum—suitable for a boy with symptoms of threatening phthisis. He would prefer a locality in fairly high altitude, dry, and sheltered from north and east winds.

MEDICO, L.R.C.P., L.R.C.S.EDIN., would be much obliged if anyone will recommend tutor by correspondence for the F.R.C.S.Edin., and what is the average fee required, when the subjects are (1) Principles and Practice of Clinical and Operative Surgery and (2) one optional subject—Syphilis, Genito-urinary Surgery, or Gynecology.

MEMBER asks if there is an institution on the south coast of France or shores of the Mediterranean where a young lady who is suffering from incipient phthisis could be received, and on what terms and conditions. What would be the probable total cost of the journey and expenses whilst at the home?

*** There is such a home at San Remo, and full particulars can be obtained by applying to Dr. Freeman at San Remo. As to the cost of the journey, Messrs. Cook will afford any information; it will, of course, depend on the route chosen and the class of accommodation required.

GOLF ELBOW.

MEMBER B.M.A. asks for the experience of others in the treatment of a "golf elbow," what it is and how it should be dealt with?

THE COCKADE.

MEMBER writes: Is a Surgeon-Captain, volunteer regiment, entitled to a cockade on hat of his coachman?

*** A Surgeon-Captain in a volunteer regiment holds Her Majesty's commission, and this entitles him to the use of the cockade in his coachman's hat. We believe some volunteer surgeons continue the use of the cockade after resigning their commission; this they have no right to do.

SCHOOL FOR GIRLS.

SUBSCRIBER asks for information as to any school where one or more girls aged 5 to 10, daughters of a deceased medical practitioner, could be received and educated. The widow, who is without any means of support beyond a small sum from the Medical Benevolent Fund, cannot obtain employment while she has charge of the children.

*** Our correspondent might apply to the Secretary of the Royal Medical Benevolent College, Epsom (address, 37, Soho Square, London, W.). A girl of about 10 years would probably have a good chance of a scholarship at St. Anne's School, it there be a vacancy. These scholarships are awarded by the Council of the Royal Medical Benevolent College without canvassing, or any expense to the candidate's friends.

FRACTURE BY HAWKSBILL FORCEPS IN EXTRACTION.

DR. L. DEMETRIADI (Huddersfield) writes to ask whether any of our readers have noticed cases of fracture of the alveolar process of the jaws after extraction of teeth by hawksbill forceps? I have had, he adds, two such injuries within a few days, and I find in both cases these forceps were used, and by different dentists (both qualified men). I believe the use of hawksbill forceps greatly relieves the amount of force used in teeth extraction, but I think the alveolar process of the jaw is often used for the fulcrum, with the result of injury or perhaps fracture.

THE NEW COUNCILS.

C. B. A. writes: I am a candidate for the Urban District Council for this town. Will you kindly give me information on the following:

(1) Will there will be a fresh election of officers after the new Council is elected, that is, will the present M.O.H. (who is M.R.C.S. only) have to resign. Of course if I am elected on the Council I could not become a candidate for the office.

(2) Will the new Council have the power to appoint a single qualified gentleman, namely, a M.R.C.S., for the office of M.O.H.U.D., provided there are others fully, that is, doubly qualified medical men, willing to to take the office if a vacancy is declared?

(3) Can a councillor (urban) send in his account and demand fees for reporting cases under the Infectious Diseases (Notification) Act?

*** (1) The medical officer of health will continue to hold office until the expiration of the term for which he was appointed, whatever that may be.

(2) District councils will occupy the same position as the present sanitary authorities with regard to the appointment of medical officers of health holding a single qualification, that is, they can only make such an appointment with the special sanction of the Local Government Board.

(3) The position of a medical practitioner with regard to duties and fees under the Notification Act is not altered by the circumstance of his becoming an urban or rural councillor.

ANSWERS.

G.—Information of the kind required will be found in *A Winter Trip to the Fortunate Islands*." By Ernest Hart. London: Smith, Elder and Co. 1847. Price 1s. *Orotava as a Health Resort.* By G. V. Perez, M.B. London: C. J. Clark. 1893. 1s. *The Health Resorts of the Canary Islands in their Climatological and Medical Aspects.* By Dr. J. C. Taylor. London: J. and A. Churchill. 1893. 3s. 6d.

G. G. asks to be recommended good and concise books on law and bacteriology to read for the D.P.H.Camb.

*** On law we believe that the chapters in Dr. Whitelegge's book *Hygiene and Public Health* (Cassell and Co., 1894) will supply what is required. On bacteriology: *An Introduction to Practical Bacteriology*, by Dr. W. Migula. Translated and edited by M. Campbell and H. J. Campbell, M.D., M.R.C.P. London: Swan, Sonnenschein and Co. (Cr. 8vo, 6s.) *Manual of Bacteriology*, by Dr. S. L. Schenk. Translated by W. R. Dawson, B.A., M.D. London: Longmans, Green, and Co. (Demy 8vo. 10s.) *The Principles of Bacteriology*, by A. C. Abbott, M.D. London: H. K. Lewis. (Post 8vo, 7s. 6d.)

MEDICAL MISSIONARIES AND COVERING.

E. D. K.—If the support and assistance given to the unqualified "medical missionary" is such as to enable her to practise as if she were duly qualified, or to induce the public to think her qualified, we are of opinion that a *primâ facie* accusation of "covering" could be fairly made and sustained.

BEEF-TEA.

W. J. W.—No doubt prolonged stewing is an error in making beef tea. Heat brings out agreeable flavours, a fact which must not be entirely disregarded as of no importance. But treatment with distilled water of a temperature below 160° F., and strong expression, will produce the most nourishing beef-tea.

ANTITOXINE.

M.B.—The term antitoxin and the adjective antitoxic have been in use for some years to connote a whole class of pathological products. The words have been adopted into the terminology of pathology, and nothing but inconvenience and confusion can arise from the word antitoxine being applied to a coal tar product. The manufacturer would be well advised in his own interests to find another name for his powder.

A PLAGUE OF FLEAS.

IN answer to "Flea Bane" a correspondent writes: In seeking the cause of the plague of fleas with which patients are sometimes attacked it is well to bear in mind certain facts in natural history. The flea in its development runs through certain phases, the egg, the lava, the pupa, and the perfect insect. To go through these, from egg to insect, takes about a month. It is therefore obvious that wherever fleas persist notwithstanding a very moderate amount of personal cleanliness their breeding ground lies in some substance or material which remains unchanged for at least three weeks. We are thus led to suspect furs, feather pillows, woollen wraps, blankets, mattresses, the folds under cuffs and collars, etc., rather than the underlinen, which is commonly changed at comparatively short intervals. An iron bedstead with woven wire springs, a thin chaff bed and pillow, frequently changed, and clean blankets every fortnight or so ought soon to remove the plague. It is to be remembered, however, that carpets and hearthrugs in an invalid's room which is constantly kept warm may well serve as nests for the intermediate stages of the flea's development, and that it is to be feared that blankets are often washed in only moderately warmed water not hot enough to kill the eggs.

MR. W. J. POOK (Barnsbury, N.) writes in reply to "Flea Bane": Saturate a few flannel bags with eucalyptus and afterwards put into them some carbonate of ammonia. He will find this effectual. I shall be glad to hear result.

T. W. B. writes to recommend Jeyes' powder (3, Cannon Street, and sold by most of the chemists in tin cases with perforated lid for scattering the contents), to dust it about the room once or twice a week, and the pests will soon disappear.

EXPERTO CREDE writes: 'Flea Bane' should use paraffin oil. It is a

most effectual remedy against fleas and other insects. Sprinkle on the bedding, blankets, and underclothing until no fleas are to be found. It is harmless both to the individual and her clothing.

Another correspondent suggests the examination of dogs or other domestic pets. The female flea, he thinks, infests dogs and hens chiefly.

Medical Practitioners and Chemists' Shops.

M.R.C.S.—Much depends on the usages of the locality. To avoid misconstruction, however, it would be well to have the surgery separate from the chemist's premises, and with a distinct door of access. The brass plate on the chemist's door would probably be deemed open to considerable objection.

The Alleged Sporulation of Typhoid Bacilli.

Surgeon-Major Rennie (Meerut, N.W. India).—The statement by Fliigge and others as to the presence of spores in the typhoid bacillus is a repetition of that made originally by Gaffky, that after several days' growth on potato the bacilli show at one end a bright granule. Dr. Klein, to whom we have again referred this point, states that it has since been shown that this is not a spore. It is now almost universally admitted, he adds, that the typhoid bacillus, as also the bacillus coli and the whole group of similar bacilli, do not form spores. The bright granules, which were formerly considered to be spores, are killed at 60° to 65° C, just as the bacilli themselves. Real spores are known to possess a resisting power against heat far above that possessed by the bacilli.

Medical Officers of Health and Death Registration.

M.R.C.S., D.P.H.—The first and second reports from the Select Committee on Death Certification, presented to the House of Commons on August 15th and September 1st, 1893, contain the following paragraphs:

"It has been represented to your Committee that a great improvement might be looked for in the way in which the work of registration is discharged if the medical officer of health for every district were entrusted with the performance of this duty [that of a registration], he being appointed superintendent registrar and having under his immediate control and supervision the staff of registration officers by whom the work would actually be performed.

"Your Committee share in the opinion of witnesses that the work of registration would be more satisfactorily performed under the arrangement indicated, and they think that the practicability of such a scheme merits careful consideration."

NOTES, LETTERS, Etc.

A Disclaimer.

Dr. James Cagney (London) writes: It has to-day (December 11th) come to my knowledge that a paper writen by me, and published in the *Clinical Journal*, has reappeared in full in the *Electrical Review*. I am assured that this was without the knowledge or approval of the editor of the *Clinical Journal*, and I shall esteem it a favour if you will afford me this opportunity to disclaim all responsibility for the publication of my work in a lay paper.

The Irish Medical Schools' and Graduates' Association.

Dr. H. Macnaughton Jones (Harley Street, W.) writes: Will you kindly correct a slight error which appears in your annotation of December 8th, p. 1328, with reference to the Association. Dr. Richard Heath, of St. Leonard's, is the present president. For nearly two years I have taken no part in its administration.

Prize Essays on Alcohol.

The Council of the British Medical Temperance Association offer three prizes of £5, £3, and £2 for essays on "The Arguments for Total Abstinence from Alcohol, derivable from Physiology." These prizes may only be competed for by medical students in the United Kingdom now in their third winter session. The essays must not be longer than would fill six pages of the *Medical Pioneer* (long primer). They must be sent to the Honorary Secretary, Dr. Ridge, Enfield, Middlesex, on or before March 31st, 1895.

Guillotine for Papillomata and Small Growths.

Dr. Henry Waite (Armley, Leeds) writes: For the removal of small growths, papillomata, molluscs, and the like from the eyelids and skin generally, I have on several occasions used the now familiar nail cutter sold at 1s. or 1s. 6d., with a spring and knife edge. For operations on the eyelids particularly, where a sudden nervous movement might make scissors dangerous, I think this inexpensive instrument peculiarly suitable.

Gaseous Applications to Wounds.

Dr. Richard Neale (Boundary Road, N.W.) writes: Having spent fifty years of a busy life in the endeavour to let my brethren learn readily all that has been done in therapeutics and other branches of medical science during that period, it does seem unsatisfactory that gentlemen will not avail themselves of the aid of the *Medical Digest*. Mr. Stoker writes in the British Medical Journal of December 1st, p. 1236, "I wish to bring under the notice of the profession a new method I have devised for the treatment of wounds. It consists in the continuous exposure of the injured part to the action of gases.....Of these oxygen is the most important." A glance at the Therapeutic of Oxygen, in Section 224: 4 of the *Medical Digest* will show the idea is far from novel; and also Sections 160: 5, 161: 1, 175: 1, refer to various gaseous agents which from time to time have found able advocates in the treatment of wounds.

Dr. E. H. Snell (East Greenwich, S.E.) writes: The British Medical Journal of December 1st contained among its "Memoranda" a suggestion for the treatment of wounds by gases. The method, however, is not a new one, a full account of the application of different gases to medical and surgical purposes is given in Demarquay's *Essai de Pneumatothérie Médicale*, Paris, 1866.

Hospital Appointments for Women.

Miss Ina Cadell, M.D. (St. Nicholas Hospital, Sialkot, Punjab) writes: In the British Medical Journal of October 27th I was glad to see mention made of how women are handicapped by so few hospital posts being open to them. I hope the day is not far distant when all hospital appointments will be open equally to women as to men. Should it not be so probably the women will start hospitals for themselves, which would be a questionable benefit in the already overcrowded state of those institutions.

What is a "Trained" Nurse?

There are curious misapprehensions abroad among the public as to the scope and meaning of a nurse's training. A lady who describes herself as "for fifteen years examiner to the National Training School of Cookery," writing to the papers about beef tea and the feeding of the sick, says: "Are all the nurses in attendance upon the sick conversant with the best methods of preparing this or any other food for the sick room? Is a three months' (*sic*) training in hospital a due amount of time for a lady who has never cooked anything to become proficient in cooking for the sick? and should such a lady be accounted a "professional" nurse? Certainly not; but then who does consider her as such? People who discuss nursing questions surely ought to know that nurses are not turned out "trained" after a three months' course of combined cooking and nursing.

Scarlet Fever as a Sequel to Diphtheria.

Dr. Trafford Mitchell, M. O. H. (Gorseinon, Glamorganshire), writes: With reference to the correspondence in the British Medical Journal on the subject of concurrent attacks of measles and scarlet fever, I should like to mention a case in which scarlet fever occurred in a patient already suffering from diphtheria. On November 4th, 1893, I was called to see a girl aged 10. I found her with a husky voice, stridulous breathing, livid lips, and an appearance of impending suffocation. There were deposits of false membrane on the soft palate, tonsils, uvula, and pharynx, extending down to the larynx. Temperature 100°. On November 9th a typical scarlet fever rash appeared, accompanied by a further rise of temperature, increased deposits on the tonsils and occurrence of numerous small ulcers on the tongu and lips. On November 14th desquamation commenced, and eventually the whole body peeled. Albuminuria was present, but not dropsy. For two months after the appearance of the rash the voice remained an almost audible whisper; there was considerable difficulty in swallowing, and the patient was unable to stand up, though able to use the legs freely enough in bed. No alterations of reflexes or of sensation were noticed in the limbs. The extreme prostration gradually disappeared, and the patient eventually made a complete recovery.

The Contagiousness of Phthisis.

Dr. J. Edward Squire (Harley Street, W.) writes: The letter of Dr. Drysdale in the British Medical Journal of December 1st might convey the impression that the relation between the prevalence of phthisis and density of population has not been clearly recognised in this country. This would hardly be correct. Amongst others Dr. Farr, in his *Vital Statistics* (1885), draws special attention to this point. The reports of the Registrar-General give the proportionate death-rate from phthisis for the different districts in London for years, and show results similar to those quoted from Dr. Lagneau for Paris. I have before me the figures extracted from the Registrar-General's report for 1884, which I used in preparing a paper on the Prevention of Phthisis in 1889. In this paper I showed that the death-rate from phthisis in the extra-metropolitan portions of Middlesex, Surrey, and Kent is only three-quarters of that for the metropolis. From a later publication of mine[1] I quote the following:

"The annual death-rate for phthisis for the whole of England and Wales during the ten years 1871 to 1880 was 2.12 per 1,000, and for London it was 2.51 per 1,000, the latter being, therefore, above that of the country generally; but in London itself we find marked differences between the various districts. In the outskirts we note a death-rate from consumption below the general London average.....As we get further into the town the death-rate from phthisis is higher.....In the more crowded central districts the deaths from consumption exceed the average, and we have the City and Holborn districts with a phthisis death-rate of 3 per 1,000, and the Strand and Whitechapel each exceeding 3.6 per 1,000."

These figures are from statistics embracing a period of ten years, instead of only three months. The statistics for the present year, which you propose to publish, will be valuable in drawing more general attention to an important fact which has been long recognised by those interested in the etiology of phthisis.

The Function of the Appendix.

Dr. David Wm. Aitken (Edinburgh) writes: Perhaps the following may throw a little light upon the use of the much abused little organ, the appendix. Were the small intestine to communicate directly with the large, there would be no separation between the distinctly fæcal matter and that which is still undergoing digestive changes. Again, the whole weight of the contents of the large intestine would press directly backwards with results sufficiently plain. To avoid these very great objections the ileum opens into the colon at right angles and is defended by a valvular structure. Further, in early development—and it is remarkable that it is true only of the primates or upright animals, though it is said the wombat shares the distinction—the colon extends for some distance beyond the valve and forms a pouch. This pouch to remain throughout life, not only would large masses of fæcal matter remain for indefinite periods undisturbed, causing trouble infinitely more frequently than at present, but when the intestine was discharging its contents so much pressure would be put upon the terminal pouch that it would be gradually thinned, and bursting would be a common accident. Instead of this, the pouch contracts into the funnel-like appendix, and thus, though accidents will happen—as happen they will under any arrangement—the great majority of us reap the benefit of this wise arrangement.

[1] *The Hygienic Prevention of Consumption*. Griffin and Co. 1893.

Medical Bookkeeping.

Dr. W. W. Hardwicke (East Molesey) writes: May I inform your readers that the two larger editions of my *System of Medical Bookkeeping*, published by H. Silverlock, are in the press, and will, I hope, be ready for use on January 1st. The second edition provides for 180 names per month, can be used for a partnership of two, and is of the same size as the first edition, but has increased accommodation. The third edition provides for 240 names per month, can be used for a partnership of three, but is necessarily of larger size. Both the editions, besides being arranged so that they may be used by partners if required, are provided with a special page for division of profits. Junior practitioners, as a rule, have very little, if any, knowledge of bookkeeping, or of how to conduct the business portion of a practice. In the old-fashioned day book and ledger system the date had to be written and each name repeated from day to day, producing the following results, taking a single entry:—List, 1 entry; daybook, 1 date, 1 entry=3; Ledger, 1 date, 1 entry=5 per day, and 110 per month. The result of the same entry in my book is: List and day book (combined) no date required, 1 entry per day; Ledger, no date required, 1 entry per month= 28 per month (of 4 weeks). The accounts, instead of occupying the spare time of a fortnight or three weeks, as in the old system, can be written out in that of a couple of days.

Antipyrin as an Analgesic.

Dr. W. Gilyard Scarth (Leeds) writes: Probably antipyrin is the best modern analgesic of the day. My own observations of its action have been chiefly confined to cases of neuralgic origin; in doses of 10 to 15 grains here it exerts the beneficial action like a charm, two or three doses every four hours or so usually subjugating pain. In migrainous forms of headache it acts promptly, and probably bromide of potash together with sol volatile intensify its action. In abdominal neuralgias good results have not been so constant as in those of cranial affections, but here I have found small doses of codeine in combination effective. In renal and hepatic colic antipyrin cannot supplant our sovereign remedy opium. Given in the early stages of tonsilitis, it has seemed to abort the disease, and good results have also been noted from its use as a gargle. Dr. T. McCall Anderson, in his interesting paper of December 1st, tells us that he has had hardly any experience of its deleterious effects when used with due precautions, and his suggestion that antipyrin is the remedy for chorea is valuable. As an analgesic I have never found it needful to give larger doses that 15 grains, but have often found less than 10 grains ineffectual in adults. Tabloids of the remedy are of course convenient, but do not seem to act so well as the drug in solution. In conclusion, I would venture to say that its harmful effects (as far as my own experience tends) are practically *nil*: further, that when combined with diffusible stimulants, any untoward result is reduced to a minimum. As regards idiosyncrasy, antipyrin will compare very favourably with the salicylates, iodides, and quinine. Profuse perspirations and an erythematous rash have been noticed once or twice. It is to be regretted that such a valuable drug as this should be so largely in the hands of an indiscriminate public.

A Deodoriser for Waterclosets.

Mr. Thomas Fletcher, F.C.S. (Grappenhall, Warrington), writes: My attention has been called by Mr. J. T. Picton, chemist, of Warrington, to the fact that if a few drops of eucalyptus oil are sprinkled over the water in the pan of any ordinary watercloset before it is used, the smell of the faeces disappears entirely. On investigating this I find that the oil of eucalyptus has the rather unusual property of spreading instantly over water in a thin film; anything dropped into the water is at once coated with this film, which prevents any other smell which might arise. The eucalyptus oil has a flavour of its own, which is objectionable to many; and I have made a considerable number of experiments to try to discover any oily or other fluid which, when mixed with the eucalyptus, will allow the film to spread and reduce the very pronounced smell, but up to the present without success. All the fluids tried cause greasy drops, without the necessary film. The subject is worthy of further study. I use an ordinary sprinkler scent bottle; a shake of this over the pan is sufficient, if done before the closet is used; if done after the effect is practically *nil*. Three or four drops only are needed, and the cost is very trifling.

LETTERS, COMMUNICATIONS, Etc., have been received from:

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BOOKS, Etc., RECEIVED.

Helps in Sickness and to Health: Where to Go and What to Do. By H. C. Burdett. Second Edition. London: The Scientific Press Limited. 1894. 5s.

Physiologie: Travaux du Laboratoire. De M. Charles Richet. Tome Troisième. Paris: Felix Alcan. 1895.

St. Thomas's Hospital Reports. Edited by Dr. T. D. Acland and Mr. B. Pitts. Vol. XXII. London: J. and A. Churchill. 1894. 8s. 6d.

Atlas of the Diseases of the Skin. Dr. R. Crocker. Fasciculus VII. London and Edinburgh: Young J. Pentland. 21s.

Higher Medical Education: the True Interest of the Public and the Profession. By Dr. W. Pepper. Philadelphia; J. B. Lippincott Co. 1894. 1 dol.

*** In forwarding books the publishers are requested to state the selling prices.

A SERIES OF 80 CASES TREATED WITH DIPHTHERIA ANTITOXIN.

WITH

OBSERVATIONS ON THEIR BACTERIOLOGY.

Being an Abstract of a Paper read before the Clinical Society of London.

BY

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E. W. GOODALL, M.D., Medical Superintendent, Eastern Hospital.

A. H. CARD, M.R.C.S., L.R.C.P., Late Clinical Assistant, Eastern Hospital.

The serum was supplied by the British Institute of Preventive Medicine, was prepared by Dr. Ruffer, and was used at the Eastern Hospital.

Bacteriological Examination.

A bacteriological examination was made in all the cases; care was taken that the colonies should be evenly distributed over the surface of the blood serum in the tube, and should be separate. Cover-glass preparations were made from the exudation, and in about a third of the cases a diagnosis could be made from this alone.

The tubes were examined carefully after about twenty hours' incubation, and on several occasions for the next two or three days. Special attention was paid to the character and number of colonies other than diphtheria that developed, on account of the importance that has been attached to the association of other bacteria with the diphtheria bacillus with regard to the severity of the disease.

Diagnostic Value of Bacteriological Examination.

After twenty hours the majority of the diphtheria colonies were characteristic, and were likely to be mistaken only for the Brisou coccus, from which they were distinguished by their opacity and microscopical appearances.

Atypical diphtheria colonies often developed in addition to the typical ones. In 8 out of the 61 cases of true diphtheria none of the diphtheria colonies presented the characteristic appearances. Eighty cases certified to be suffering from diphtheria were examined, and in only 61 were diphtheria bacilli found. With one exception, all the cases in which diphtheria bacilli were found were also diagnosed from the clinical point of view as diphtheria. This exceptional case was one that had the clinical aspect of follicular tonsillitis. Of the 19 cases in which diphtheria bacilli were absent, 8 would have been considered not to have been diphtheria had a bacteriological examination not been made. The other 11 cases were, on admission, clinically diphtheria, but the further progress of the cases fully bore out the bacteriological evidence. One of the cases died, but was complicated with bronchitis, to which death was attributed. A careful consideration of these cases fully confirms the belief of the writers in the extreme value of a bacteriological examination.

Prognostic Value of Bacteriological Examination in True Diphtheria.

A careful analysis was made of all the cases, both from the clinical and from the bacteriological point of view, in order to determine the prognostic value of the bacteriological examination.

Microscopical Examination of the Exudation.

The following results were obtained: In the majority of cases a large number of bacteria were found. In 6 cases the exudation was remarkably free from bacteria; and of these cases 4 were mild and 2 of moderate severity. In 10 cases the exudation was comparatively free; half of these cases were mild, and only one severe; none of them were fatal. From these figures the writers concluded that the fewer bacteria in the exudation the less severe is the case likely to be.

As to the character of the bacteria found in the exudation: they were of various kinds, and included straight bacilli of different sizes, comma-shaped bacilli, fine spirilla, diplococci, streptococci, and other micrococci. Diplococci were almost always abundant, and were often grouped in large masses, especially on the surface of epithelial cells. In only 7 cases were they absent.

In 12 cases fine spirilla were present, and sometimes in large numbers. In 22 cases comma-shaped bacilli were present, and at times in abundance. In about half the cases straight bacilli of various sizes were present. No prognostic value could be attached to the absence, or presence, or to the number, of the diplococci, spirilla, straight or comma-shaped bacilli.

Particular attention was paid to the streptococci. In more than half the cases some were found in the exudation. In 7 cases many were found, and of these 4 were mild cases, 2 severe, and 1 moderately severe. Careful analysis of these, as well as of the cases in which a smaller number of streptococci were found, showed that they were neither more nor less severe than the average of the cases.

In about a third of the cases characteristic diphtheria bacilli could be distinguished in the exudation with sufficient certainty to make a diagnosis of the disease. Very few of these cases were mild, and more than a third of them died; so that the finding of any quantity of the characteristic bacilli in the exudation is of unfavourable import.

Examination of the Cultivations.

1. *Cases in which only Diphtheria Colonies Developed.*—In 13 cases no other colonies than those of diphtheria developed in the tubes, even after three days' incubation. The majority of these cases were of a severe type, and a third of them died.

2. *Cases where only a Small Number of Diphtheria Colonies Developed.*—In 17 cases only a comparatively small number of diphtheria colonies developed in the tubes; 11 of these cases were mild, and only 4 were severe.

3. *Cases where the Diphtheria Colonies were Atypical.*—In 8 cases the diphtheria colonies were atypical. Of these cases, 5 were mild, 2 severe, and 1 moderately severe.

It would thus appear that when only diphtheria colonies develop in the tubes the case is likely to be severe; but that when the diphtheria colonies are few in number or atypical in character the case is likely to be mild.

4. *Cases where the Diphtheria Colonies were Associated with Streptococci.*—In 45 cases colonies of streptococci developed in addition to those of diphtheria; but in only 18 were they present in large numbers. Of the 18 cases, 10 were mild, and 4 were severe; only 3 died; 17 of these cases showed the long variety of bacillus. In the series of 61 cases of true diphtheria there were 3 cases which were remarkable for containing a very large number of streptococci both in the cover-glass preparations of the exudation and in the cultivations. Two of these cases were mild. The other was severe and ended fatally, but was complicated with scarlet fever. In one of these two mild cases many diphtheria colonies of the long variety developed, and in the other a moderate number, also of the long variety.

It will be noted that these observations show that the association with streptococci, as evidenced by a single bacteriological examination, is not of unfavourable import, but rather the contrary, a conclusion which differs from that of other observers.

5. *Cases where the Diphtheria Colonies were Associated with those of the Brisou Coccus.*—Three cases were associated with the Brisou coccus; 2 were mild, and the other moderately severe.

6. *Cases where the Diphtheria Colonies were Associated with the Staphylococcus Aureus.*—Two cases were associated with the staphylococcus aureus; both were mild.

7. *The Variety of the Diphtheria Bacillus.*—In 3 cases only the short variety of the diphtheria bacillus was found; all were mild. In 10 cases the medium variety was found; half of the cases were mild. In the rest of the cases the bacilli were of the ordinary long variety. It would thus appear that the short variety is the least virulent, and that the medium variety is less virulent than the long.

Bacteriological Examination of Non-diphtherial Cases.—In the 19 cases where no diphtheria bacilli were found, the colonies which developed were those of streptococci and of the Brisou coccus. In 1 case streptococci alone developed,

in 1 the Brisou coccus alone, and in the rest both in varying proportions.

Clinical Observations.

Mode of Injection.—The injection was made into the flank with strict aseptic precautions. The quantity injected varied from 5 to 30 c.cm. at one dose, the total quantity during the course of any one case varying from 5 to 90 c.cm. With a well-made syringe no difficulty is experienced in injecting as much as 20 c.cm. at a time; 182 separate injections were made, and in none of them was there the slightest sign of any local inflammation.

Results and Statistics.—Eighty patients under 15, certified to be suffering from diphtheria, were treated; 8 were excluded from the statistics because they were clinically as well as bacteriologically not cases of diphtheria. The remaining 72 cases would have clinically been considered diphtheria, and can thus be compared with previous cases. The following table shows the results obtained:

Case Mortality of Diphtheria in Children under 15 at the Eastern Hospital.

	Cases.	Deaths.	Mortality per Cent.
1893	395	166	41.8
January 1st, 1894 to October 22nd, 1894	400	144	36.0
January 1st, 1893 to October 22nd, 1894	797	310	38.8
September 14th, 1894 to October 22nd, 1894 (39 days).			
Not treated with serum	72	28	38.8
October 23rd, 1894 to November 27th, 1894 (35 days).			
Cases treated with serum	72	14	19.4

It will be seen that the mortality has been diminished by one half. The diagnosis of all diphtheria cases at the Eastern Hospital since 1892 has been personally supervised by one of the authors (E. W. G.). It is the opinion of this observer that the cases treated with the serum were rather above than below the average severity. Not much stress was laid on comparisons with other hospitals on account of the varying standards of diagnosis. During the period of antitoxin treatment at the Eastern Hospital, the mortality at the Western, South-Western, Fountain, and South-Eastern Hospitals was 33.3, 32.2, 30.5, and 23.6 per cent. respectively. At the last named hospital the number of cases was too small for accurate comparison.

Of the 72 cases in the series only 61 showed diphtheria bacilli; of these 61 cases 13 died, a mortality of 21.3 per cent., considerably lower than that (38.8) of the previous series of 72 cases clinically diphtheria. An account was given of the cause of death in the fatal cases. In 10 death ued from the poisoning of diphtheria, and in the rest m complications. In one case death occurred within eight urs and in another thirty-two hours after admission.

Tracheotomy.—There were 9 cases of tracheotomy, and 6 recovered. In 13 previous series of 9 tracheotomies the number of recoveries varied between 0 and 4, and the average number of recoveries was 1.75.

For the sake of comparison with M. Roux's cases, the authors analysed their cases of true diphtheria, and divided them into the following categories: Anginas, Croups not operated on, Tracheotomies.

Angina Pure (that is, without association with other bacteria): 30 cases with 8 deaths, 26.6 per cent.

Angina associated with Streptococci: 11 cases with 1 death, 9 per cent.

Angina associated with Brisou Coccus: 3 cases, no death.

Angina associated with Streptococci and Staphylococcus Aureus: 2 cases, no death.

Croups not operated upon: 6 cases with 2 deaths. True diphtheria: 4 with 2 deaths. Associated with Brisou: 1 with no death. Associated with streptococci: 1 with no death.

Tracheotomies: 9 cases with 3 deaths. True diphtheria: 5 with 1 death. Associated with streptococcus: 3 with 2 deaths. Associated with streptococcus and staphylococcus aureus: 1 case, no death.

In comparing these with M. Roux's statistics remarkable differences were found. Of pure diphtherial angina there were in his series 120 cases, with 9 deaths, a mortality of 7.5 per cent. Of angina associated with streptococci, 35 cases, with 12 deaths, a mortality of 34.2 per cent.

It will thus be seen that pure angina cases at the Eastern Hospital showed a much higher mortality, and those associated with streptococci a much lower mortality than M. Roux's; in fact, the mortalities were almost reversed.

On the other hand, the cases associated with the Brisou coccus agree with his in being mild. The number of tracheotomies and croups is too small to draw any conclusions in reference to this point.

The clinical course of the cases under treatment fully bore out the evidence given by the above statistics. An account was given of the effect of antitoxin in diminishing the exudation, reducing the pulse rate, and in improving the general condition of the patient. In severe cases the effects were not observed till after two or three days.

Mention was made of the fact that 20 out of the 61 cases were on admission suffering from the toxic effects of diphtheria, and an unfavourable prognosis was made; 8 of these cases recovered. There is no evidence that the antitoxin diminished the incidence of albuminuria. It is still too early to speak of the effect on the incidence of paralysis, but so far 6 cases have occurred.

Apart from the curative action, two other effects were noticed—a rash, and the onset of joint pains. The rash occurred in 25 per cent. of cases, and appeared from seven to nineteen days after the first injection. It was of an erythematous character, and was sometimes accompanied by pyrexia. Except for itching it gave rise to no further inconvenience. In 6 of the cases there were joint pains, which appeared about the same time as the rash, and lasted at most three days.

The hips were most frequently attacked; there was pyrexia, no cardiac affection, and the condition of the patient was never serious. It was noticed that the incidence of rash and joint pains was greater in the cases treated with the serum from the first of two horses from which it was obtained, than in those treated with serum from the second. The latter serum was much stronger than the first, and was used in smaller doses. With the exception of the antitoxin no other treatment was adopted, except that complications were treated *secundum artem*.

Dosage.—The authors recommended the following doses of the serum of which 0.0001 c.cm. neutralises a dose of the diphtheria toxin otherwise fatal to guinea-pigs. In severe cases 20 c.cm. when the patient is first seen, followed by 10 c.cm. in from 18 to 24 hours, and again another 5 or 10 c.cm. in another 18 to 24 hours; for a moderately severe case a first dose of 10 c.cm., followed by one of 5 c.cm. the next day, and perhaps another 5 c.cm. the day after that: for a mild or doubtful case one dose of 5 c.cm., should there be any reason to suspect that the case is likely to become worse.

Because in any given case the larynx is involved the writers did not necessarily consider the case a severe one; for by severe they meant one in which the toxic symptoms of diphtheria were present. But seeing with what rapidity membrane will spread along the air passages, they recommended that from 5 to 10 c.cm. of serum should be given in every case of diphtherial croup without toxic symptoms, to be followed by another 5 c.cm. the next day if the symptoms showed no improvement.

This series of cases showed that if in a severe case there was no improvement by the fourth day of the treatment, none was likely to ensue. But where improvement is observed by that time it is well to give another injection of 5 c.cm. on the fifth and sixth day.

The authors recommended the amount of the dose to be regulated not by the age or weight of the patient but by the severity of the attack.

A clinical account was given of the 19 cases that were shown bacteriologically not to be diphtheria. These cases were admitted into the diphtheria wards, yet did not contract the disease; but this was not attributed by the authors to the action of the antitoxin, the previous experience at the Eastern Hospital showing that there is little fear of the disease attacking such cases if proper precautions be taken.

In conclusion, the authors expressed their thanks to the Council of the British Institute of Preventive Medicine, and especially to Sir Joseph Lister and Dr. Ruffer. Thanks were also recorded to Dr. Richards, of the Eastern Hospital, for his assistance in carrying out the treatment and in recording of notes.

SIXTY-SECOND ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BRISTOL July 31st, and August 1st, 2nd, 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF OBSTETRIC MEDICINE AND GYNÆCOLOGY.

J. G. Swayne, M.D., President.

AN INTRODUCTION TO A DISCUSSION ON THE INDUCTION OF LABOUR.

By Robert Barnes, M.D., F.R.C.P.,
Consulting Obstetric Physician to St. George's Hospital.

The induction of labour under just indications marks the progress of medical science, and it is one of the most brilliant examples of conservative surgery. These characters must also command the earnest attention of the obstetric surgeon. And hardly less forcibly do they challenge the attention of all physicians on account of the light which they throw upon general pathology.

The application of the proceeding is one leading expression of the state of obstetric science; therefore as science advances the necessity for revising the conditions under which this proceeding should be resorted to is ever recurring. This consideration proves the wisdom of those who have selected this topic for discussion at this meeting. When seeking to determine the indications for bringing pregnancy to an end, the first source of light will rightly be sought in the observation of the conditions under which Nature herself seeks relief by adopting this course, and the evils incurred if this mode of escape or relief be missed. *Natura ostendit viam.*

Our search for guidance towards the solution of the problem before us must therefore be determined by the steady observation of the physiology of gestation, and of the pathological accidents emanating from or associated with it.

The history of reproduction is marked by four distinct epochs: (1) Gestation, (2) Parturition, (3) Puerpery, (4) Lactation. The strict scope of our inquiry is comprised within the first three epochs. The question of shortening the duration of pregnancy can rarely arise in the cases of women who have simply proved unequal to the task of lactation. But when women, who through some fault of structure or constitutional defect have struggled through parturition and puerpery with serious difficulty threatening life, become pregnant again, the question whether it be possible to lessen the dangers attending these processes at the natural term by terminating the gestation at a chosen time, is a fair subject for consideration.

The question, indeed, sometimes forces itself whether it would not be more prudent to avoid pregnancy altogether. But evasion of the difficulty by prohibition is rarely feasible. Preventive medicine has not yet achieved adequate authority. We cannot, however, evade the call to act upon the indications so frequently given by the observation of the accidents arising during pregnancy and puerpery. The indications spring from the study of the conditions which imperil the mother, the embryo, or both. In accordance with the law generally accepted, the safety of the mother is the first claim, that of the child is a secondary consideration. Sometimes, indeed, frequently the two interests run together, they do not conflict. The course best calculated to preserve one is also the best for, or is at least compatible with, the preservation of the other. And with the advance of science, the occasions on which the necessity of condemning one or the other arises have become less frequent. Thus the advance of science brings us more and more in accord with the law of Nature.

It would be difficult to state a problem in practical medicine more widely interesting than this of demonstrating the conditions which indicate the propriety of inducing labour. The physiological and pathological factors which have to be studied and weighed in the search for a solution are many; and there yet lingers a prejudice of mistaken morality which, ignoring the law that true medicine is based upon the right appreciation of physiology and pathology, further complicates the question. The obvious duty of the physician when he sees a pregnant woman in difficulty is to consider and determine how to secure the safety of both mother and child. There is no parallel problem in the range of medicine. The ordinary physician has to deal with one subject. Whether it be due to this circumstance or to his defective understanding of the physiology of gestation, he is apt to concentrate his attention upon the mother. He fails to recognise the interdependence and correlation of the two beings. So, for example, in the case of a woman suffering from albuminuria, his attention is engrossed by this symptom, and he directs his treatment accordingly. His conduct is ruled by the specious and ignorant dictum: "Treat the symptoms and let the cause continue to act." It is needless to point out to those who study the physiology of pregnancy that this course imperils both mother and embryo.

Our theme does not embrace the cases in which interference with the course of gestation is indicated by mechanical obstructions to the process of labour. But one remark pertinent to this subject is not inappropriate. In case of mechanical difficulty the question for decision may lie between embryotomy and the Cæsarean section or the sacrifice of the embryo by inducing labour before the term of viability is reached. This question is one of growing interest, as the advance of abdominal surgery is rapidly tending to minimise the resort to sacrificial operations. Here, then, we have further confirmation of the law that obstetric practice becomes every day more conservative—the day is at hand when Cæsarean section will greatly, if not quite, supplant embryotomy.

We may, therefore, pass on to the study of those constitutions which so overtax the powers of the systems as to threaten life directly or to lay the foundation of organic change of structure which may lead to permanent disease.

The theme so stated leads us to follow up the survey of the conditions which threaten death or disease by the study of the means resorted to with the view of averting these calamities and their relative efficacy. These means may be classed under the three heads: (1) General; (2) medical; (3) surgical.

The solution of the problem depends primarily upon a right appreciation of the forces brought into action under the influence of pregnancy. Then we must observe the disturbing factors—watch how Nature succeeds or fails in the struggle to preserve the physiological balance—and then by combined physiological observation and clinical experience we may arrive at certain definite indications for medical and surgical intervention.

Let us, then, in the first place, observe the phenomena evoked by pregnancy. The most remarkable are the marvellous exaltation of nervous and vascular tension, and attending alterations in the qualities and quantity of the blood.

From the moment that the embryo takes possession of the woman every drop of blood, every fibre, every organ is affected, the entire system is working under high pressure. It is our business to watch narrowly to see how far she is able to bear the strain and to be prepared with means to help her in preserving or in restoring the just equilibrium. Failing in that we endeavour to relieve the overstrained organism by removing the cause of the disturbance, that is to remove the embryo by the induction of labour.

At the outset of the discussion we must recognise the fact that the struggle is at first strictly physiological. So long as we can help Nature to preserve the physiological predominance we may pursue a policy of expectancy. Keeping a vigilant watch over the patient, testing the capacity of each

organ to fulfil its proper function, helping her, as we sometimes may, to relieve one organ or more by invoking other organs to do supplementary duty, and so to maintain the integral work of the system.

We must be careful not to be deluded into pursuing the policy of expectancy too far. The transition from physiology to pathology is often insidious or sudden. Judicious action during the reign of physiology may prevent disease. The reign of pathology once started we are reduced to palliative treatment in the hope of cure.

The strictly medical treatment of the difficulties that complicate pregnancy is often delusive. We must not defer too long an appeal to the decisive intervention of surgery.

Let us begin with the conditions attending excessive nervous tension. One of the first evidences of high nervous tension is vomiting. This we know commonly sets in early. It is a healthy physiological regulating function, essentially conservative, letting off excessive tension and maintaining the equilibrium. It acts as a safety valve. But it is a fact to be borne in mind that all convulsive affections, and vomiting is really a form of convulsion, tend to acquire force by repetition. Every attack or fit of convulsion of whatever kind, renders the nervous centres more responsive to exciting factors; and so the habit of convulsion is formed, the diastaltic proclivity becomes more predominant; and repeated attacks may lead to organic change of structure, that is, to permanent disease. Every fit increases the irritability of the nervous centres, and oppresses the brain. Every fit acts as a shock. Diarrhœa is not uncommon, supplying further evidence of toxæmia.

Vomiting is most severe when it sets in with severe mental shock or distress; when there is gloomy depression passing into despondency. Such cases may run rapidly to a fatal issue, resisting all treatment, even the induction of labour. Toxæmia soon complicates the case, even when the embryo lives. First, there is starvation giving strong impetus to the process of absorption; secondly, no adequate nutrition being supplied from without, the system feeds upon itself. There is rapid disintegration of tissue, most marked in the fat; so the blood is degraded and empoisoned. Uræmia often enters as a factor. Nervous energy is diverted from its proper destination; it is exhausted in destructive morbid action. Irritative fever with delirium sets in. At this point labour, whether it occur spontaneously, as it often does, or be induced artificially, comes too late. Death soon follows delivery. Violent vomiting may also throw excessive strain upon the heart and brain.

When vomiting is associated with, or depending on, marked functional or structural disease of organs, the condition is especially serious. A striking example is seen in cholæmic vomiting connected with acute atrophy of the liver. The indications of danger are: extreme emaciation; pulse small, easily put out, over 130; hollow, staring eyes; Hippocratic aspect, delirium, especially if there be albuminuria.

There is a special group of cases in which vomiting becomes obstinate in the latter stages of gestation, owing to excessive rapid distension of the uterus from undue secretion of liquor amnii, the development of twins, or diseased ovum or placenta. In such cases the indication to induce labour is clearly in the interest of both mother and child.

From vomiting—the most simple form of convulsion—we may pass on to the severer and more commonly pathological forms. Of all the forms of convulsion that come before us, those in which albuminuria is an efficient factor leave the least room for doubt. This form, eclampsia, calls for prompt decision. The danger is twofold: first, imminent danger to life; secondly, life being saved, the highly probable danger of permanent disease of the kidney. Tetanus, not often seen in this country, is a strong indication for the induction of labour.

Chorea and epilepsy occurring in pregnancy are presumptive evidence of latent disease of the nervous centres started in early life, and called into activity under the excitement of gestation. Observation has led me to the conclusion that in such cases pregnancy should be ended. Chorea, when evoked by gestation, assumes a special gravity; it is likely to culminate in insanity. The general rule may be formulated: We must not allow convulsive disorders to persist.

Insanity has an important bearing upon the problem before us. The convulsive disorders already noted are evidences mainly of diastaltic disorder, that is, more especially of disease or disorder of the spinal cord. We cannot, indeed, exclude the concurrent implication of the brain and cerebellum. And in this connection I may venture to offer a reflection which has often struck me when nervous phenomena of pregnant women have been under observation. The strange emotional proclivities arising under the influence of gestation suggest a resemblance to convulsion. They may be looked upon as a form of cerebral or mental convulsion. The factors in the process being (1) high tension of the cerebral centre, (2) intrauterine or other peripheral or external irritation, (3) diastaltic response in the form of emotional convulsion. Observation of the phenomena of hysteria suggests a similar reasoning. Certainly hysteria is allied to convulsion.

It is further to be noted that marked emotional proclivities, even when not certainly associated with structural changes, not seldom lead to insanity. Such cases are almost certainly aggravated by pregnancy. Hence the indication to terminate the pregnancy is strong. I have seen mania quickly vanish on the arrest of gestation. But the question is too wide to be settled by a few observations. Savage speaks emphatically against the induction of labour. He says it will almost certainly convert a case of insanity of gestation into a case of puerperal insanity.

We may now pass under rapid review the dangers of high vascular tension with ultra-physiological changes in the qualities and quantities of the blood, Nature's methods of relief, and the consequent therapeutical measures indicated.

The double duty thrown upon the heart to drive arterial blood enough to nourish the organism, implying, as it does, an increased volume of blood, is only to be accomplished by increase of arterial tension. This is demonstrated by quickened pulse and the indications given by the sphygmograph. This pressure is essentially eccentric or towards the periphery. The pressure when excessive is at times relieved by external hæmorrhages, as epistaxis, hæmatemesis, hæmoptysis; intestinal as from hæmorrhoids; or from the vagina. If relief is not found by external hæmorrhage there is danger of internal hæmorrhages, as apoplexy. Another mode of relief is by peripheral serous effusions. In every pregnancy there is, I believe, some amount of serous effusion in the cellular tissue of the pelvis. Not seldom there is anasarca, and in the necropsies of pregnant women which I have seen there was found diffuse serous effusion of the brain. Then some relief is gained by excessive excretion of liquor amnii. I need not do more than mention the ordinary physiological relief gained by transudation from the skin, lungs, and intestines. This function is exaggerated during pregnancy. Another source of relief is found in the quantity of fluid thrown off by vomiting. Thus vomiting relieves both nervous and vascular tension. Then, again, Nature struggles to relieve herself by dropsical effusions into the serous cavities. Some of these efforts at relief overstep the physiological boundary, and danger is imminent. It is sometimes averted by the occurrence of abortion or premature labour. No function can be efficiently carried out when the whole system is waterlogged.

What are the indications thus given? May we not take a lesson from Nature, and purge, or give emetics as hot water? Venesection is sometimes strongly indicated, as when hæmorrhages occur, and when there is undue pressure on the kidneys, as in Mahomed's pre-albuminuric stage, or in the early stages of albuminuria with convulsion. Venesection is out of date, but I have practised it with the best results. Then in the last resource we follow Nature's most decisive action in her rebellion against pregnancy by inducing labour. Extreme anæmia, especially the pernicious form, may also indicate recourse to induction of labour.

The hyperinotic quality of the blood is a source of danger. Under ordinary conditions the excess of fibrin is no more than physiology can deal with; but when, under strong emotion, the circulation is brought under physical disturbance or arrest, the fibrin may clot in an artery, plug it and cause gangrene if it be in a limb, or fatal apoplexy if in the brain. I have seen both. Another cause of clotting or embolism is more frequent; that is, some toxic element finding its way into the blood or formed in it may cause coagulation.

But we must remember that there is an underlying common condition acting in all these nervous and vascular disorders, and that the direction or form in which trouble may issue depends upon accidental factors.

Valvular disease of the heart, fatty degeneration, aneurysm are perilous conditions. A catastrophe may occur at any moment under any accidental impetus to the ordinary arterial pressure. I have related in the *System of Obstetrics* the case of a young woman which I saw at the Clinique d'Accouchements under Dubois, who died suddenly from the rupture of an aneurysm of the aorta under the strain of defæcation. I think where disease of the heart exists, we should carefully watch, and be prepared to induce labour when signs of distress are marked.

The question of inducing labour arises when a woman suffering from a grave constitutional or organic disease becomes pregnant. We have to consider what effect the pregnancy may exert upon the disease and *vice versâ*. Take the case of phthisis. The idea was at one time prevalent that phthisis was checked by gestation. And there is a popular belief that pregnancy will cure other diseases. The belief is one expression of the old theory of derivation of diseased action by setting up a new action in another part. It is based upon the hypothesis, not unfounded, that two morbid actions cannot coexist, but that a second factor engrafted on an existing one will divert the forces that sustained it. But it is more in accordance with clinical experience that concurrent diseases aggravate each other.

No doubt the performance of the natural function is on the whole beneficial. But observation convinces me that the argument as applied to phthisis is erroneous. The additional strain thrown upon the heart and lungs can hardly act beneficially. In cases which I have seen the subject has struggled through pregnancy more or less successfully. But the crisis came with labour and puerpery, when the breakdown was rapid and fatal. Wanting the free action of the lungs in aid of the process of absorption, metabolism, and elimination, the system is overpowered. Pregnancy is less trying to the phthisical patient than labour and childbed. The puerperal process throws such an increase of work upon the circulation that the system often breaks down at this period.

Still the question of inducing labour is an anxious and difficult one. Can we prolong life or moderate the progress of the disease by shortening gestation? Even if gestation be prematurely ended, will the strain of puerpery be checked? This must in many cases be doubtful. Nature sometimes decides the matter by abortion or premature labour. The question is one specially deserving of attention. Looking at the culminating danger of puerpery it may be desirable, in the interest of the mother as well as of the child, to postpone labour as long as possible; and we should not forget that the prognosis of phthisis is often open to fallacy.

When tumours of the uterus exist it is generally unsafe to let gestation go on. The danger of hæmorrhage, rupture, and sphacelus of the uterus when labour occurs at term or even late is very great.

Another complication raising the question is that of plural gestation. Nature commonly decides for herself in such cases; and the symptoms generally indicate this course to surgeon.

The history of repeated pregnancies ending prematurely in the birth of a dead child obviously suggests the question of bringing on labour whilst the child is alive. Disease of the placenta due, perhaps, to syphilitic or tuberculous diathesis and fatty degeneration, especially if recurrent, points to the expediency of anticipating the loss of the child by inducing labour. In such cases the interest of the mother also is observed. Carrying a dead child is not free from danger.

Diseases arising during gestation often start the question of the expediency of inducing labour. The zymotic fevers—as scarlatina, typhoid, and small-pox—may run their course without interrupting pregnancy. Sometimes, however, abortion takes place. In the case of scarlatina especially—of itself a frequent cause of albuminuria and kidney disease—we should watch carefully for the first indication of albuminuria, and be prepared to induce labour before organic changes have time to arise. I have induced labour, saving mother and child, in a severe case of pneumonia.

When contemplating the induction of labour or abortion, we must carefully weigh one strong reason for temporising—that is, the preservation of the child. This points, of course, to the expediency of delay until the period of viability is attained. But our first care is not to risk the safety of the mother. Not only is her claim pre-eminent, but the safety of the child almost certainly hangs upon that of the mother.

In determining upon the propriety of inducing labour, we must not forget that much depends upon the mode of carrying out the proceeding. This is eminently important when the motive of action is nervous complication as convulsion. *Accouchement forcé* by the old methods is not only bad but unnecessary. As I have shown, the induction of labour at a predetermined hour is quite within our power. By taking the whole conduct of labour into our own hands, watching it throughout, we are prepared to meet any emergency. By adopting the methods I have demonstrated we may greatly extend the application of this most beneficial and conservative operation. Upon this topic, however, I need not dwell.

The rule urged by Denman not to undertake the induction of labour or abortion without a formal and deliberate consultation is imperative. When we reflect upon the many grave medical, legal, and moral points involved in the arbitrary interruption of pregnancy, we shall find abundant reasons for seeking counsel to avoid possible clinical error and for sharing serious professional and social responsibility. In this way the physician will set the question in all its gravity before those who consult him. He will show that a step so important can only be justified on the strict rules of medical science, and that these rules are in harmony with the law of right.

Now, I am sure you will agree with me that it is time to end this imperfect statement of a difficult and complicated problem. Full exposition would carry us through a wide range of the field of medicine. I am, however, conscious that I have said enough to challenge ample criticism and discussion.

Dr. More Madden referred to the circumstances which justified or called for the induction of premature labour. Excluding obstructive causes, induction of labour might be justified on the ground that the safety of the mother or the child would be imperilled by the continuance of gestation. In the first category were cases of serious cardiac or renal disease, aneurysm, abdominal or pelvic tumours, also in some cases of abdominal or other dropsical effusions, and in some cases of albuminuria and impending convulsions, and in a few other conditions. In regard to the child, labour might be induced to relieve it from dangers which would be inevitable if gestation were continued to the normal period: for example, in cases of syphilitic or placental disease, or when, from the history of former conceptions, there was reason to anticipate death of the fœtus, it might be desirable to induce labour as soon as the child was viable.

Dr. James Murphy said the induction of labour in severe cases of albuminuria was a most important factor in the treatment of this grave complication. The simplest and safest method was the introduction of a sound, which should be turned freely round within the uterus, followed by Barnes's bags if it were necessary to terminate labour rapidly.

Professor M. Cameron did not think the induction of labour before the seventh month advisable; such children seldom lived, and if they did were not valuable contributions to the human family. Every day after the seventh month gave the child a much better chance.

Dr. Heywood Smith limited his remarks to a consideration of the cases in which it was necessary to terminate gestation on account of fibroids, relating a case in which pregnancy occurred along with a sessile fibroid and an ovarian tumour on the same side. As pregnancy advanced the ovarian was drawn out of the pelvis and the fibroid was so flattened that the woman was delivered at full term. In case of larger fibroids however, labour, whether natural or induced, was hazardous, and if the fibroids were multiple, the only practicable treatment was Porro's operation.

Mr. J. W. Taylor observed that there was a class of case, and especially a stage in that class, on which more light was required as to our proper course of action. These were cases of nephritis with albuminuria and œdema in which preg-

nancy was only moderately advanced. In later stages, where the child was both living and viable independently of its mother, there could be little doubt that the induction of premature labour was the best treatment both for mother and child. But at an earlier stage, about the fifth or sixth month, when the induction of labour must necessarily terminate the life of the fœtus, the question was a difficult one.

Dr. Hooper related a case of pregnancy of seven months, in which there was extreme albuminuria and almost complete suppression of urine. Labour was induced; the patient was delivered of twins, which lived only two days; and in a month's time the albuminuria had completely disappeared.

Professor Byers (Belfast) spoke of the induction of labour for persistent vomiting and for albuminuria. With reference to the former, he thought it was agreed that, provided all medication, rest, and rectal feeding failed, labour should be induced. These cases were very few in number. As to the presence of albumen, this in itself should not in all cases be considered an indication for terminating pregnancy. He gave examples of cases of albuminuria treated in different ways. The plan by injecting morphine had given in many cases good results.

Professor C. J. Wright (Leeds) mentioned a case of severe ptyalism at the third month. The patient was emaciated and unable to take food, but abortion having been induced she recovered. If an ovarian tumour of considerable size existed during pregnancy it should be removed. The patient would generally abort, but that did not interfere with recovery. He related cases, however, showing that grave operations might be performed without bringing pregnancy to an end. He thought the bougie was safer than the catheter as a means of inducing labour.

Dr. Aust-Lawrence thought that this was a question of medicine as well as of obstetrics and that only when the disease could not be checked by any treatment should labour be induced.

Dr. E. T. Davies related a case in which, notwithstanding the presence of cancer of the cervix, pregnancy went to term and labour was not unusually difficult.

Dr. Tweedy (Assistant Master Rotunda Hospital) said that at the Rotunda Hospital the induction of premature labour was looked upon as a dangerous operation only to be resorted to under the rarest conditions. For albuminuria it was never done, for in the first place it was known that only 2 per cent. of women suffering from this condition suffered from eclampsia and the cases which would develop it could not be recognised beforehand. Even were this known still labour would not be induced for eclampsic fits, as the opinion was held that it enormously added to their severity. In the treatment of pregnancy complicated by myomata with a living child and an orifice too small to admit the delivery at full term Dr. Smyly this year performed Cæsarean section, and then removed the uterus by total extirpation. Both child and mother recovered. Morning sickness must very rarely call for this heroic treatment. In ovarian tumour complicating pregnancy operation, when the tumour was first discovered, would, he thought, give results infinitely superior to those obtained by the induction of premature labour.

Dr. A. R. Eversheb thought that in some cases of chronic phthisis in which hæmorrhage tended to increase in severity with the duration of the pregnancy the induction of premature labour might be beneficial.

Dr. Robert Boxall said that in severe and rapidly progressive varicosity of the veins, especially about the vulva, premature delivery was sometimes necessary to obviate the risk of rupture and death from hæmorrhage. Its advisability as soon as the probability of pregnancy could be established had also presented itself in more than one case of chronic endometritis associated with repeated abortions. As the fœtus in such cases was practically certain to die, and the prolongation of the pregnancy to a late period only served to intensify the endometritis, the question arose whether it was not advisable to terminate the pregnancy as soon as discovered. Dr. Boxall agreed with previous speakers in recommending the removal of ovarian tumours during pregnancy, and as soon as possible.

Mr. Frederick Pearse thought that the Dublin school were going to an extreme in refusing in nearly all cases to resort to this operation. Too much consideration was, he thought, given to the viability of the child, and, personally, he would not allow the question whether the child were viable or not to influence his opinions, which would be based on the condition of the mother, the danger to her life or subsequent health.

Dr. Barnes said, in reply, that he was gratified to find that he had succeeded in giving rise to so full a discussion, that some important omissions in his address had been supplied, and some errors corrected. He had endeavoured to state the main points. He agreed with several speakers that every case must be judged by itself; general principles only could be stated. He had seen a case of cancer of the cervix go through pregnancy successfully; the disease rather improved than otherwise. He had seen varicose swelling of the vulva undergo mortification and end fatally under labour at term. As to the mode of operation, he had not dwelt upon this. He would only say that he did not rely upon any one method. He generally began with the bougie, using the bags according to indication. He would only say one word as to the bags. They failed sometimes because bad instruments were used, and sometimes good ones might be used unskilfully. Digital dilatation he thought bad.

A CASE OF ADVANCED EXTRAUTERINE GESTATION,

IN WHICH A LIVING CHILD WAS REMOVED, THE PLACENTA LEFT, AND THE ABDOMINAL WOUND ENTIRELY CLOSED.

By Charles J. Cullingworth, M.D., F.R.C.P.,
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Although there is now a general agreement as to what ought to be done in a case of advanced extrauterine gestation in which the child is dead, there still exists much difference of opinion as to the proper treatment where the child is living. The difficulties and risks attending the removal of the placenta are so formidable that not long ago it had almost become the recognised rule of practice not to operate until after the death of the child, and the complete or partial arrest of the placental circulation. So deliberate a sacrifice of the life of the child is so utterly repugnant to all right-minded men that the desire has been strong to discover some mode of operating by which the lives of both mother and child might have a reasonable chance of being saved. The great problem is how to deal with the placenta. Some have boldly advocated and practised its separation and removal at the time, adopting various means with the view of preventing or arresting the hæmorrhage. This plan can only be adopted with impunity under exceptional circumstances—namely, when the blood vessels which supply the placenta are under command. If these can be secured beforehand, then, and only then, will the immediate removal of the placenta be other than a rash and dangerous proceeding. The alternative course is to leave the placenta attached. Hitherto, when this plan has been adopted, it has been usual either to stitch the walls of the sac to the edges of the abdominal incision, or to close up the abdominal incision except at its lower angle, in either case leaving the cord protruding, so as to provide a means of exit for the placenta in the event of its undergoing decomposition and being cast off. But the process of gradual sloughing and discharge that usually follows this mode of treatment is not only offensive but dangerous, from the constant risk of septic absorption. Hence it has been proposed to cut away the cord close to its placental insertion, and to close the abdominal incision completely, leaving the placenta *in situ*, either to undergo gradual absorption or to be removed at a subsequent operation in the event of any indication of septic mischief. This course has been specially advocated by Mr. Lawson Tait. He points out that the mode of attachment of an ectopic placenta is altogether different from that of a placenta in contact with the endometrium; and that whereas after the expulsion of the child an intrauterine placenta is separated and the hæmorrhage arrested by the force of uterine contraction, in the case of an ectopic placenta no such mechanism is available. Secondly, he calls attention to the cases where an extrauterine pregnancy has gone on without disturbance for an indefinite period after the term of gestation, and to the conclusive evidence they afford of

the capability of all the tissues, except perhaps the bones, of being digested and absorbed. He further points out that in this process of digestion and absorption the placenta is generally the first of the tissues to disappear. "I am therefore disposed," he says, "for the present at least, and until I am corrected by future experience, to advise that in dealing with an ectopic gestation in the advanced stages we should deal with the fœtus only, should empty the placenta of blood, and close the wound hermetically upon it." Should absorption "not occur, we may then, by a secondary operation at such time after the first as may be indicated by the course of events, remove the placenta."[1]

This suggestion has received the support of Olshausen, Bland Sutton, J. W. Taylor, and many others[2]; but, so far as I am aware, the case I now bring before you is the first instance of extrauterine pregnancy with a living child in which it has been carried out.[3] Unfortunately, owing to the development of septic symptoms, it became necessary on the twenty-sixth day to reopen the abdomen and remove the the placenta, with the result that the patient died from shock. Nevertheless, I believe the plan of treatment to be the right one, and should not hesitate to adopt it in any future case.

A. C., married, aged 33, the wife of a street hawker, and herself a worker in the fields, was admitted to St. Thomas's Hospital under my care on September 25th, 1893. Up to the present pregnancy the patient had not had any serious illness, but she was extremely ill-nourished, and presented a painfully emaciated, anxious, and pale appearance. She had had one child thirteen years ago, and one miscarriage at the fifth month three years ago. She had last menstruated in the previous March or April. In May she had had an attack of pain in the abdomen, with slight hæmorrhage. There were at this time several of the symptoms of pregnancy: morning sickness, heart-burns, fulness of the breasts with pigmentation of the areola, and a whitish discharge from the vagina. In the middle of August she had another attack of severe abdominal pain, chiefly on the right side, and had to remain in bed for a short time. In the middle of September she was suddenly seized with bearing-down pains, accompanied by a considerable amount of blood-stained vaginal discharge. The pains soon passed off, but the discharge continued in lessened amount for some days. Her medical attendant, Dr. Green, of Edmonton, sent her to the hospital as a probable case of extrauterine fœtation. The abdomen was distended by a large, irregular swelling, reaching from the pubes to a level one inch above the umbilicus. Fœtal movements were felt, and the fœtal heart sounds were heard. The result of my examination was to incline me at that time to regard the case as one of intrauterine pregnancy. This view was strengthened by the patient's rapid improvement while in the hospital. She remained quite well from the time of her discharge on October 18th, 1893, up to January 5th, 1894, with the exception that she became weaker and thinner. This was, however, easily explained by the patient's extremely poor surroundings and insufficient food. Early in the morning of January 5th the patient was seized with acute pain in the abdomen, accompanied by vomiting, which continued up to the time of readmission to hospital on January 13th, 1894. She states that during this time she was unable to retain anything on the stomach, and that the pains were paroxysmal in character, like those of labour. These pains succeeded one another with increasing rapidity, and eventually became almost continuous. She got rapidly weaker, and lost flesh. There was no discharge of any kind from the vagina. The bowels acted normally. Dr. Green saw the patient about noon on the 13th, and found her in pain and apparently in labour. The child was alive. At first the cervix would not admit his finger, but later on in the afternoon he was able to make out that the uterus was empty, and was lying behind and to the left of the fœtus. The sound passed 3 inches. She was therefore again sent into the hospital, arriving there at 8.15 P.M. on January 13th, greatly emaciated, and evidently suffering severely. The abdomen was distended by a large swelling, in which the fœtal parts were easily made out, the head being in the left iliac fossa, the back directed upwards and towards the left, the breech above and to the right. The fœtal heart was heard 2 inches below and to the left of the umbilicus.

Per vaginam the cervix was felt to be high up and patulous. The uterus was empty, its walls rough and soft. A soft, fairly-fixed mass was felt lying behind the symphysis and reaching about 2½ inches above it. (This was subsequently found to be a portion of the placenta).

Operation.

At 10.15 on the evening of her admission the patient was placed under ether and an incision was made in the middle line from an inch above the umbilicus downwards for 4 inches. The fœtus was lying in the peritoneal cavity enveloped in its membranes and surrounded in its lower part by the remains of the ruptured sac. The position of the fœtus was found to agree with that previously made out. The membranes were incised and the liquor amnii, which only amounted to an ounce or two, was allowed to escape. The child was then extracted by the head, separated, and handed to an assistant.

It soon cried lustily. The membranes were drawn out of the abdomen and the greater part removed with scissors, the free cut edge being secured by catch forceps. The deeper portion of the sac was adherent; the placenta was situated chiefly behind, below, and to the right. The amniotic cavity and the peritoneum were now carefully sponged dry, and the umbilical cord was again ligatured and cut off short. Through an oversight the cord was not allowed to bleed before the ligature was applied. The opening in the membranes was now partially stitched up with eight catgut sutures (in order to prevent coils of intestine becoming entangled in it), and the abdominal wound was closed by nine deep and four superficial silkworm gut sutures. No douche was employed and no drainage tube was used. Very little blood was lost, and the patient showed little or no sign of shock during the operation. The operation lasted fifty minutes. The child, which was a male, measured 19 inches in length and weighed 5 lbs. There was no deformity of any kind. Both testicles were in the scrotum. The pregnancy appeared to have advanced to the end of the eighth month of gestation.

There was very little shock, and the patient passed a fairly good night. She progressed satisfactorily for a little over three weeks. There was no vomiting after the first twenty-four hours. The bowels were relieved by enema on the third day, and again more copiously and satisfactorily by enema and castor oil on the 5th. During the first week the urine contained a gradually diminishing amount of albumen. Solid food was taken on and after the fifth day, and the patient improved in appearance, and expressed herself as feeling very well. Towards the end of the first week the temperature, which had hitherto seldom exceeded 100°, rose a little for three or four days, varying from 99.8° to 102.6°. The pulse-rate was from 120 to 140. At the beginning of the second week the quantity of urine passed was for four days unusually large (71 to 80 fluid ounces). The placenta formed a tumour reaching to the level of the umbilicus. There was

[1] *Diseases of Women*, vol. i, 1889, pp. 531-3.

[2] In addition to the considerations urged in the above quotation from Mr. Lawson Tait, a case related by Dr. James Braithwaite, of Leeds, may be referred to, as showing that it is by no means chimerical to hope for absorption of the entire placenta. Dr. Braithwaite's case, related in the *Trans. Obstet. Soc.*, London, vol. xxviii, 1886, p. 33, is that of a patient with extrauterine gestation, from which a full grown fœtus, which had been dead about th weeks, was removed by abdominal section. The placenta was atta l cd to the fundus and posterior surface of the uterus and to the neighbouring parts. No attempt was made to remove it. The wound was closed, except at its lower angle, where the funis was left hanging out, and also a drainage tube. The patient slowly recovered, and with the exception of a portion weighing about 20 grains, which protruded on the sixth day from the upper angle of the wound, no part of the placenta was ever seen. On bimanual examination two months later, scarcely any trace of the placenta could be detected. A similar experience occurred to Dr. Aust-Lawrence in January, 1888, and is recorded by him in the *Bristol Medico-Chirurgical Journal* for June, 1892, p. 75.

[3] The nearest approach that has been made to the carrying out of this suggestion was in the well-known case of Dr. Champneys, in which it was impossible to keep the wound open. In that instance the cord and two indin-rubber drainage tubes as large as the little finger were inserted between the lowest suture and the lower angle of the wound, the cord being allowed to hang over the left hip. On the eleventh day the tubes were found blocked with organised lymph, and were removed; and the cord, being dry as far as half an inch inside the wound, where it was still whitish and moist, was cut off. All went well till the thirty-second day, when symptoms of the separation of the placenta began, and the patient died, with symptoms of septic intoxication, eleven weeks and a half after operation.—*Trans. Obstet. Soc. Lond.*, vol. xxix, 1887, pp. 455 *et seq.*

dulness on percussion in the hypogastric and right iliac regions, the note on the left side being resonant. The sutures were removed on the eleventh day; the wound was quite healed. The condition, notwithstanding a little abdominal distension and occasional attacks of pain, remained satisfactory until the twenty-fourth day, when a rigor occurred, lasting ten minutes, followed by vomiting. Later in the day the temperature rose to 103.4°, and then to 104.2°, the pulse rate being 138. The next day the temperature had fallen a little, but the patient lost her appetite, became restless, perspired a good deal, and complained of abdominal pain. It was evident there was some source of septic absorption, and that the patient was losing ground. I therefore determined to reopen the abdomen and remove the placenta. Accordingly, on February 8th (the twenty-sixth day), a median incision 3 inches long was made through the lower part of the old incision. The placenta presented in the wound. The small intestines and omentum were adherent to the sac. During the separation of the placenta a considerable quantity (about 8 or 10 ounces) of purulent fluid escaped, apparently from the interior of the remains of the amniotic sac. The hæmorrhage was inconsiderable. The right broad ligament was transfixed and tied with a double silk ligature. The placenta was now cut away, and it was seen to have been adherent to the posterior surface of the bladder and to the uterus. Several vessels in the stump having been ligatured, a hot douche of boracic acid solution was given, which stopped some oozing. A small portion of omentum which had been adherent was ligatured and removed. The edges of the wound were brought into apposition by ten deep silkworm gut sutures, a drainage tube having been inserted through its lower angle. The patient bore the operation fairly well.

Two hours after she had been put back to bed, she suddenly became very faint and collapsed, and the pulse could hardly be felt. At 5.30 P.M. four pints of saline solution were infused. This was followed by a decided improvement in the pulse and respiration. An hour later she was in much the same condition. At 8 P.M. the temperature was 99.6°, and the pulse 156. Just before 11 P.M. she again became suddenly collapsed; the skin was cold, pulse hardly perceptible, face livid, and respiration shallow, and she died soon after 11 P.M.—that is, seven hours and a-half after the operation.

The weight of the placenta and portion of sac removed was 1 lb. 11 ozs. The placenta consisted of two large lobes and one smaller one. On section the greater part of it presented the normal honeycombed appearance; in some parts irregular areas of firm consistence and of a yellowish-white colour were seen, due to fibrous and fatty change. There was no evidence of suppuration in the substance of the placenta. The amnion presented a dull opaque appearance, had a slightly unpleasant odour, and was readily stripped off the fœtal surface of the placenta. The portion of umbilical cord removed with the placenta measured 3 inches in length. It was dark purple in colour, soft, and œdematous, and had a faint unpleasant odour. The distal end, beyond the ligature, was white and bloodless, but did not appear to have undergone any necrotic change. On laying open the umbilical vein and its tributaries, they were seen to contain soft breaking-down blood clot, which became more and more purulent as the smaller branches were reached.

Necropsy Sixteen Hours after Death.

On opening the abdomen the omentum was found properly disposed over the small bowel, with a thickened tag dipping down into the pelvis, from which a portion had been ligatured. No hæmorrhage seemed to have occurred from this spot.

There was no recent peritonitis present, though there was evidence of past adhesive peritonitis around the appendages of the left side. The parts contained in the pelvis were roofed in by a thin dark layer of soft clot. On clearing the latter out the uterus was seen lying in its normal position; the bladder was thick-walled, and on the upper part of its posterior surface was a roughened part, from which portions of the placenta had been separated. Finally the ligature was seen firmly securing a large bunch of blood-darkened tissues, which constituted the pedicle of the mass removed at the second operation.

The internal measurement of the body of the uterus was 2 inches, of the cervix 1½ to 1¾ inch; maximum thickness of the uterine wall 1 inch. Internally the lining membrane was hyperæmic, and near the mouth of the left Fallopian tube was adherent a small nodule of soft decidual tissue.

The right Fallopian tube included in the stump on the right side could not with certainty be traced. The right ovary, in itself healthy, formed part of the same mass. The tissues held in this ligature comprised a large number of vessels, and from the mass there ran up, under the peritoneum across the right ureter, a large ovarian vein, which opened into the inferior vena cava 1 inch below the entrance of the right renal vein; unopened this vein had a breadth of ⅝ths of an inch. It contained fluid blood, and showed no evidence of septic thrombosis.

The left Fallopian tube was closed at its fimbriated extremity, and the outer half-inch was distended with clear fluid. The left ovary was healthy.

The right ureter was moderately dilated in the upper part of its course above the pelvic brim. The pelvis and calices of the right kidney also showed some dilatation, but there was no secondary structural change in the kidney substance. The left ureter was double for the upper two-thirds of its course; the left kidney was healthy. The liver showed no change. The spleen was very soft but not swollen. The lungs, pleuræ, and pericardium were healthy.

The heart was of normal size; its valves were healthy. There was a little *post-mortem* clot in the right ventricle and trunk of the pulmonary artery; the pulmonary arterial branches were fully opened up, and there was no trace of thrombosis or embolic clot in them. The left ventricle was lined with yellowish-white clot, not adherent but merely entangled in the columnæ carneæ; this was an *ante-mortem* clot, but must only be taken as evidence of death having occurred from a slowly failing heart. The cardiac muscles were apparently healthy; the brain and membranes were normal.

The child was alive at the time this paper was read, but died on September 1st 1894, apparently from the combined effects of poverty and neglect.

Remarks.

The patient's death, which took place seven and a-half hours after the second operation, must, I think, be attributed to shock acting on a dangerously debilitated patient. I need not say it was a source of extreme disappointment to me. At the same time, I consider the result to have been so far accidental as to afford no solid reason for rejecting this plan of treatment, and, indeed, if another similar case presented itself, I should have no hesitation in again adopting it. Success depends, of course, on being able to keep the placenta aseptic. Unfortunately, where there are intestinal adhesions there are possible sources of contamination which are beyond the operator's control.[1] There are one or two details of the operation which I should another time carry out differently. For instance, I would follow the example of other operators and allow the placenta to empty itself as far as possible of its contained blood by encouraging bleeding from the divided end of the cord before applying the ligature. I would also divide the cord much closer to the placenta than I did in this case. Lastly, in order to diminish the chances of sepsis I would strip away the amnion from the placental surface and remove it, with as much of the sac and membranes as might be practicable.

Dr. Aust-Lawrence strongly advocated cutting the cord close to the placenta and closing the wound. If symptoms of septic trouble arose then the wound should be reopened and the placenta removed.

Dr. Rabagliati said he would suggest, in place of making up the wound in such a case, to put in a wide glass drainage tube in contact with the placenta. A large structure like a placenta, say 12 inches in diameter and an inch thick, was unlike anything else in the body, and, when its function had been performed, it must be got rid of somehow. It might

[1] For a good summary of our present knowledge of the subject I cannot do better than refer my readers to a small French work that has just appeared: A. Orrillard, *De l'Intervention Chirurgicale dans la Grossesse Extrautérine lorsque l'Enfant est Vivible*, pp. 112. Paris: Steinheil. 1894.

be absorbed or it might necrose and break down. The chances that it would do the latter were 3 or 4 to 1 that it would do the former. His suggestion, therefore, would be to express by manual gentle compression as much blood as possible, to cut off after that the cord as short as possible, and to place a wide glass drainage tube in contact with the placenta, so as to allow any necrosing tissue or pus to escape. The sepsis in such cases was far more likely to be from inside the patient than outside; the less objection, therefore, to the use of the drainage. By-and-bye, when circumstances seemed to indicate, the wound might be enlarged and the placenta removed. In Dr. Cullingworth's case the woman's pulse was quick almost from the first and indicated danger.

Professor Wright related a case of extrauterine gestation, which occurred some years ago. The child, from the history, had been dead for six months. At the time of the operation the patient was in a critical condition, with a temperature of 105°—apparently from septicæmia. A putrid fully-developed fœtus was removed from a cyst in the abdomen. The placenta was firmly attached near (partially across) the median line. The rule then in existence of leaving the latter was followed. It came away through the wound in a week, and the patient made a good recovery.

Dr. Sinclair thought Dr. Cullingworth's proposal to remove membranes, etc., as a feasible proceeding adding to the chances of success, but considering the enormous mass of a placenta at full term, it was too much to expect absorption without further trouble. Dr. Sinclair would thoroughly drain in every case. There was no reasonable ground to expect absorption of the placenta in any given case, and the wide glass drainage tube enabled the operator to know what was going on and when to interfere.

Dr. Cullingworth, in reply to Dr. Heywood Smith, said his suggestion was that the amniotic covering of the placenta should be stripped up as far as the insertion of the cord, and removed, on the ground that the amnion, being a non-vascular membrane, was prone to undergo septic change, and that it could be removed without risk of hæmorrhage and without prolonging the operation seriously.

HYPODERMIC INJECTIONS OF STRYCHNINE IN THREE CASES OF PERIPHERAL NEURITIS: CURES.

By A. STODART-WALKER, M.B., C.M.,
Edinburgh.

The use of strychnine hypodermically in cases of multiple peripheral neuritis is now generally agreed upon as advisable by many neurologists; and the three following cases, two of which I met with in private practice, and the third while resident physician in the Royal Infirmary, Edinburgh, may serve to prove the advantage of a continued use of the drug in advanced cases where other milder remedies have failed. The use of the drug in these peripheral conditions was first impressed upon me by Sir Thomas Grainger Stewart; and I fail to remember any case in which, under treatment with strychnine, improvement has not taken place. Of course in very advanced cases, and sometimes in the early stages of very acute cases, changes are apt to take place in the spinal cord, and in these we can only expect improvement up to a certain point. With regard to the latter condition, it has been suggested that the want of improvement in many cases is of importance in diagnosing a concomitant spinal condition. In each of the three following cases paralysis was advanced and marked. As will be seen, various other drugs were tried in all cases, with little or no result, and the remarkable and rapid improvement on the commencement of the strychnine course is to be noted.

Case I.—J. P., aged 34, a street porter, residing in Bayswater, London, much addicted to alcohol and in his work much exposed to cold and wet, began to complain of tingling and numbness in both feet, symptoms shortly afterwards experienced in both hands. These symptoms were quickly followed by wasting, and severe pain on pressure, in the muscles of the legs and of the arms. The progress of the case was rapid, and when I saw the patient in October, 1892, he was confined to bed, suffering much from pain in his legs and arms, and unable to raise himself in bed or to stand when assisted out of bed. From the patient I gathered that his mother had died in an asylum, and that his father died of a "stroke." Patient, in his younger days had never drunk very heavily, but had always been partial to an occasional "nip" of whisky. Of late years, however, he had given himself up to frequent drunken bouts. I could discover no evidence of marked pathological change in the circulatory, respiratory, or urinary symptoms. In the alimentary system the liver was markedly enlarged. On examination I found that the movements of both legs were of a very limited nature. The hip-joint movements were the least modified, the knee could be flexed slightly, but scarcely any movement could be performed at the ankle-joints. The toes could be moved fairly well. The movements of the arms were more satisfactory, though great pain was felt in attempts at movement. The muscles of the leg were markedly wasted, and patient evinced great pain upon pressure over them; the same condition in a modified degree was present in the arms. There was no interference with the muscles of the abdomen, chest, or face. There was marked loss of sensation over various localised patches of skin on the legs and arms. There was no response to faradisation or to galvanisation. The knee- and wrist-jerks were lost.

The patient was treated for some time with massage and electricity, and with salol in 20-grain doses internally. No improvement followed this course, and with the hope that a taint of syphilis might be present, the patient was put upon full doses of mercury and iodide. By January, 1893, patient shortly afterwards no change in his condition, at which time he began to have the hypodermic injections of strychnine, commencing with $\frac{1}{30}$ gr. three times daily, and gradually increasing up to $\frac{1}{15}$ gr. three times a day.

Patient immediately began to show improvement. The pains in the muscles diminished, and gradually he began to be able to move his limbs. The improvement was most rapid in the legs, and at the end of the month of January patient could walk across the room; at the end of February he could get out of bed and dress himself, and at the end of March he could walk about fairly well. I did not see the patient again till October, at which time he had been at his work for three months. On examination I found there was no pain on pressure, and on movement the muscles were large and firm; there were no patches of anæsthesia (except a slight one over the large toe of the left foot), and the reactions to electricity were normal.

Case II.—F. P., aged 28, a student of arts at the University of Paris, was seen by me in April, 1893, suffering from multiple peripheral neuritis. He had been confined to bed since February, and had up to that time been treated with electricity and antirheumatic drugs in the shape of salicin and salicylate of soda. Patient had had an attack of acute rheumatism two years ago, from which he had made a good recovery. There was no history of syphilis, a marked history of indulgence in liquors, and an hereditary history of gout and rheumatism.

Patient was completely prostrated in bed, suffering very severe pain. The condition in his arms was not very marked. The pain was comparatively slight, and there was no marked emaciation, and the movements were fair. Both lower limbs however were markedly affected; the muscles were small and painful, especially the extensors; the knee-jerk was absent, and the movements at the various joints were almost *nil*. There was no response to faradisation, but the galvanic contractility was increased. There was typical reaction of degeneration. (Note the difference from Case I).

Besides the above there was slight loss of power in the muscles of the lower jaw, and some pain on movement. I recommended first that salol should be tried, salicin and salicylate of soda having failed, but after a course of these for three weeks and no improvement being evinced, the hypodermic injections of strychnine were commenced, with the same doses as in Case I. As in that case, the improvement was marked and immediate, and I need only add that at the end of July the patient was walking about in comparatively good health. Some slight numbness and tingling persisted for some time and he occasionally had severe shooting pains in the limbs, but when I heard from him in November he had completely recovered, and was doing his full work at the Sorbonne.

Case III.—For the publication of the third case I am indebted to Sir Thomas Grainger Stewart, in whose ward the case was, when I was resident physician. C. W., aged 37, a ship captain, was admitted into Ward 22 of the Royal Infirmary, Edinburgh, in January, 1893, suffering from pain in the elbows and arms. No rheumatic or neurotic hereditary history could be gathered, and he denied having been much addicted to alcohol. He had never suffered from gout or rheumatism, and there was no specific history. He had a bad attack of influenza in Russia three years before. There were no conditions of relative importance to be found in the circulatory, respiratory, alimentary, or urinary systems.

The pains on admission were chiefly below the elbow, especially on the extensor aspect and ulnar border. They rapidly increased and spread, pain appearing in all limbs. His elbows were much swollen, and the movements at these joints were very slight. He gradually got worse, and was soon confined absolutely to his bed. The muscles wasted considerably, and pain on movement and pressure was very severe, especially over the great sciatic nerve. Swelling of the ankle-joint now became marked, and a slight swelling of the right hip-joint. The knee-jerks were exaggerated, and ankle clonus was present on both sides. At this time he was treated with salol, but with no improvement, patient, in fact, getting worse daily, until the slightest movement produced the most excruciating pain, and, besides wasting of the muscles, some degree of contracture was taking place. He was tried with various drugs—mercury, iodide of potassium, and cimicifuga—but it was not till the commencement of the hypodermic injections of strychnine at the end of February that any marked improvement was noticed. Some slight increase of pain in the legs and swelling of the glands in the groin followed the first few injections, but this rapidly subsided, and from this date he continued to improve, though very gradually, until on March 16th he could walk about the ward. The power in his limbs gradually returned, the pain and swelling disappeared, and when he was discharged on May 6th he could walk fairly well with the aid of a stick. After his discharge he continued to make improvement, and at the end of the year he was again in command of a ship, completely recovered, with no remaining pain, swelling, anæsthesia, or exaggerated knee-jerks.

I have not thought it necessary to enter into the details of the symptomatology in these cases, my object being solely to indicate the rapid improvement in each case which took place on the commencement of the use of the strychnine.

The variations in the three cases with regard to the responses to electricity will be noted, and also the differences with regard to the condition of the knee-jerk.

NOTE ON THE VALUE OF PIPERAZIN AS A SOLVENT OF URIC ACID STONES IN URINE.

By J. FAWCETT, M.D.Lond., F.R.C.S.Eng.,
Demonstrator of Physiology and Biology, Guy's Hospital; Beaney Research Scholar in Materia Medica.

I HAVE been conducting experiments in connection with the above subject during the past year; and, in view of the paper published by Dr. Gordon in the BRITISH MEDICAL JOURNAL of June 16th last, I think that some of my results may be of interest.

METHODS EMPLOYED.

1. Fifteen grains of piperazin were given daily for two weeks to a presumably healthy young adult. The urine for the following twenty-four hours was collected and allowed to drip over a stone during the subsequent twenty-four hours at such a rate that the whole was passed over the stone in that time. The stone was placed in a Soxhlet's fat extractor. This acts automatically, so that when the urine reaches a certain point in the tube it is siphoned off into a receiving vessel below. The whole apparatus was kept in a water bath, so arranged that the temperature of the urine was approximately that of the body. The stone was dried at 110° C., and weighed to a constant before and after experiment.

Weight of stone before experiment	...	...	2.400 g.
At end of first week	...	...	2.404 g.
Weight of stone before experiment	...	...	2.4435 g.
At end of second week	...	...	2.6155 g.

The stone used in the second week was analysed for me by Mr. Coram, and found to contain 78.5 per cent. of uric acid. The slight increase in weight was undoubtedly due to a deposit of phosphates on the stone, which on being carefully scraped off gave the characteristic reactions.

After such a dose of piperazin the urine then is quite useless as a solvent of uric acid stones. Mendelsohn has also shown that outside the body the solvent action of piperazin in urine is *nil*.

2. The urine of the same individual, as in the above experiment, was collected every day for fourteen days. Two pieces of the same stone were taken. One was placed in the urine, to which 15 grains of piperazin were added each day, the urine being changed every morning. The other was placed in a solution of piperazin in water, 15 grains to 1,000 c.cm. of water, the latter changed each day and fresh piperazin added. The conditions of the experiment were the same as in the former case. The stones were dried and weighed at the end of each week.

i. *Stone Suspended in Urine.*

Before Immersion.	At End of 7 Days.	At End of 14 Days.
3.6395 g.	3.6591 g.	3.734 g.

ii. *Stone Suspended in Watery Solution of Piperazin.*

	Before Immersion.	At End of 7 Days.	At End of 14 Days.
First week	3.4795 g.	*2.9636 g.	—
Second week	2.8636 g.	—	2.484 g.

* The stone had crumbled somewhat and some few small particles may have passed through the fine muslin bag in which it was suspended. The decrease in size, however, was extremely marked and very little, if any, had passed through. The bag was then opened, the small pieces washed away, and the stone dried and reweighed for the second week's experiment.

CONCLUSION.

Although a watery solution of piperazin has a marked effect, yet a solution of piperazin in urine of the strength used—that is, about 1 in 1,000—has no effect whatever. The slight increase in weight was again, no doubt, due to deposit of phosphates on the stone. In Dr. Gordon's experiments the strengths of solutions of piperazin in urine were 1 per cent., 2 per cent., 5 per cent., and 7.5 per cent., and no experiments were done with solutions weaker than these. But according to Dr. Gordon's own showing, when 2 grammes of piperazin were taken daily only 0.3 gramme of unoxidised piperazin was excreted. This is about 0.02 per cent., taking 1,500 c.cm. as the normal amount of urine passed daily. As, therefore, his experiments do not deal with anything like such a percentage of piperazin in the urine, they do not in any way prove the therapeutical value of piperazin as a solvent of uric acid.

It appears, however, from the powerful action of piperazin in a watery or an alkaline medium that it is along these lines any real advance in testing its therapeutical value can be obtained, and I am at present conducting experiments from this point of view.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

CASE OF PERFORATING ULCER OF STOMACH TREATED BY LAPAROTOMY, STITCHING, AND WASHING OUT.

THE following are the concluding notes of the case of perforative ulcer of stomach reported in the BRITISH MEDICAL JOURNAL of November 3rd, on page 982:

The operation was performed on October 27th, 1894. J. L. has gone on steadily improving. The rectal feeding was entirely depended on until the seventh day, when she was allowed half a pint of peptonised barley water by the mouth, the next day a like quantity of milk.

On November 3rd I removed all stitches. Two stitch abscesses had formed, which healed in three days. On November 6th she was allowed peptonised beef-tea, and on November 11th half a pint of bread and milk with beef-tea peptonised. Rectal feeding was still continued, but at longer intervals. The temperature, pulse, and breathing had been normal since November 2nd. The drainage tube was removed on October 31st. On November 18th the patient was on a couch in the ward looking very well. She had no pain after her food. On November 22nd rectal feeding was discontinued, and the patient was allowed farinaceous food with beef-tea peptonised. Discharged cured November 30th.

REMARKS.

I attribute the success in this case to:

1. Being enabled to operate so soon after the perforation occurred (three hours).

2. Thorough washing out of the peritoneal cavity with an aseptic and non-irritating fluid—namely, boiled water at 110° F.

3. Drainage.

4. The two sets of stitches fixing the infolded stomach.

5. The insistence on rectal feeding being continued for a long period.

6. Favourable situation of perforation, thereby enabling the operation to be quickly completed.

Hull. R. H. BOURCHIER NICHOLSON, M.R.C.S.

DISLOCATION OF THE HUMERUS BY MUSCULAR ACTION.

As cases of dislocation of the humerus or any of the long bones caused by muscular action are comparatively rare I think the report of the occurrence of such an accident is worthy of record.

Mrs. D., aged 28, is a strong, rather stout individual, and is about seven months pregnant. She has never suffered from any previous injury to her shoulder-joint. She went to bed perfectly well about 11 o'clock on the evening of November 24th. She did not fall asleep till about 12 o'clock, being rather restless previous to that. About half-past 12 she found herself sitting up in bed suffering from very acute pain in her left shoulder-joint. Her husband tells me that she wakened him by starting up with a cry, and for some time she did not recognise those around her. The pain was very acute, and as hot fomentations did not relieve it the husband came for me.

The condition I found at 3 A.M. was as follows: The arm was lying helpless on the bed with the elbow flexed and away from the side. There was marked flattening of the shoulder and the acromion process stood out distinctly. On palpation the head of the humerus was found lying below the coracoid process. The case was one of undoubted subcoracoid dislocation of the humerus. The dislocation was very easily reduced by Kocher's method, and, as soon as the head of the bone returned to its normal position, which it did with a distinct snap, the patient experienced great relief.

The probable explanation of such an unusual accident is that the patient was suffering from nightmare, and that in her fright she had started up suddenly and displaced the head of the humerus.

Whether the dislocation was caused by her trying to raise herself from her elbow or whether it was due to the direct action of the pectoralis major I am unable to say, but un-

doubtedly the muscles controlling the shoulder-joint played a very important part in the causation of the accident.

Anstruther, Fife. JOHN J. WILSON, M.D.

A CASE OF ACUTE PEMPHIGUS (?).

E. W., aged 24 years, fell suddenly ill on October 1st, with headache, backache, shivering, and pains in the limbs. On October 2nd a rash appeared, and she had a sore throat. On October 3rd she was sick and vomiting, and, her case being looked upon as small-pox, she was sent to hospital.

I found a bright red rash, neither raised nor punctate, over the greater portion of the chest, back, and arms; two slightly raised erythematous patches on the forehead, dying away; on the right side of the neck and the upper portion of the chest were several flaccid bullæ as large as eggs. In fact the appearance of the chest suggested an extensive superficial scald. The temperature was 105°, and the pulse 125; the liver and spleen were enlarged, but there was no abdominal tenderness; the pharynx and fauces were inflamed. Constipation had existed for four days. On October 4th many more bullæ had made their appearance, and had merged into one another on the neck, back, arms, and abdomen. The eyelids and ears were red and raw from bullæ that had burst. The average temperature was 104°.

On October 5th large flaps of cuticle came away, leaving more than half the trunk and arms denuded of epidermis. The temperature was 103° to 106.5°; the pulse was 130 to 140, and very weak; it ceased to be felt when the arm was raised. There was muttering delirium at times. On October 6th the pulse was imperceptible, and the temperature 106°. She was wandering at times, but not incapable of understanding when spoken to. On October 7th the temperature rose to over 107°, and breathing became irregular. The pulse was still imperceptible. She died on this day after an illness of five days and a-half.

Her urine on October 3rd and October 4th contained about one-twelfth albumen. On October 5th it became one-third. The *post-mortem* examination revealed tuberculous changes at the apices, and a small ulcer on the epiglottis; the liver weighed 55 lbs. Nothing further of importance was noticed.

The cases recorded by Dr. Southey, Dr. Payne, and Sir D. Duckworth are in very few respects comparable with the above; yet it is difficult to suggest a better diagnosis than acute pemphigus. JAMES PRIESTLEY, M.B. (R.U.I.).

Metropolitan Asylums Board Hospital, South Wharf, Rotherhithe.

SYMMETRICAL LABIAL HERPES FOLLOWING A FALL ON THE HEAD.

M., aged 69, showed severe herpes of the lower lip, which had existed for a week. The herpes, on healing, formed scabs, which cracked and bled severely. On the upper lip were two similar, but drier scabs, one on each side of the labial commissure. A week before he had missed his footing when getting into a trap, and fallen directly backwards. The brim of a hard felt hat protected the head, but the impact of the blow left a tingling along both lower jaws, and a week afterwards the herpes broke out. The point of application was a little to the right of the occipital protuberance, and the herpes was more severe on the right half of the lower lip than on the left.

Shaftesbury Avenue, W.C. FITZGERALD ISDELL, M.A., M.D.

COCAINE IN LABOUR.

I NOTICE at p. 1111 of the BRITISH MEDICAL JOURNAL of November 17th that Dr. Amand Routh kindly alluded to my proposal (now some years ago) to paint the os and the cervix with cocaine in the first stage of labour with rigid os. Such was my practice, but I did not find it invariably successful. I have since adopted the following method, and I have now three years' experience of its use; and though my obstetric practice is not a large one, I yet think the method worthy of extended adoption by those to whom a rigid os means many hours of weary waiting and "bedlessness." I keep a freshly prepared ointment of 1 in 2 of cocaine in anhydrous lanolin. I smear my forefinger with this pretty liberally, and with it anoint the internal surface of the os. Where the os is too high to reach with ease I pass a speculum, and insert the ointment with Barnes's instrument for applying ointment to the cervical canal. I douche with hot boracic just before using the ointment. In this method of applying cocaine I have full confidence.

Shanklin, I.W. GEORGE H. R. DABBS.

I OBSERVE in your report of the meeting of the Obstetrical Society of November 7th an allusion by Dr. Amand Routh to my obstetric cones, and the very wise suggestion of the President, Dr. G. E. Herman, as to the desirability of further observation of the use of cocaine in cases of rigid os.

May I be allowed to recapitulate the advantages of the cones over other methods of applying cocaine in this very troublesome contingency in midwifery practice?

1. The cone contains a definite dose of the drug (3 grs. I use and recommend). By most other methods the quantity applied is about as indefinite as that conveyed by the classical phrase "about the size of a lump of chalk."

2. The cone is introduced on the forefinger of the right hand without the patient's knowledge. Thus exposure of the patient, the use of the speculum, and the most undesirable idea of an "operation" being performed are obviated.

3. The drug being exhibited in an antiseptic medium of cocoa butter and boric acid, the cone tends to assist in the lubrication of the part, while the application of watery solutions must tend to wash away Nature's lubricant, the mucus secreted by the parts.

I trust that those of your readers who have extensively used cocaine, especially in cases of rigid os, will give the BRITISH MEDICAL JOURNAL the benefit of their experience.

Falmouth. E. HEAD MOORE.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

CHELTENHAM GENERAL HOSPITAL.

CASE OF TRAUMATIC RUPTURE OF THE HEART.

(By FRANK HUTCHINSON, M.B.Edin., House Surgeon.)

G. H., a farm labourer, aged 59, was brought to the hospital just before midday on September 21st, with a history of having received a severe kick from a horse. From his wife's statements it appears the accident happened two hours before admission, and that the kick was a severe one, knocking him senseless to the ground. He was at once conveyed to the hospital (a distance of about five miles). He was a well developed muscular man, very collapsed, but conscious, and complaining of no pain. There was a contused, lacerated wound in the centre of the forehead, and a contusion of the right eyelids. The pupils were equal, regular, and reacted to light and accommodation. There was slight hæmorrhage from the nostrils.

There was a hæmatoma of the anterior chest wall, occupying almost precisely the precordial area, the point of maximum intensity being apparently situated in the fifth interspace, about 2 inches from the midsternal line. The skin was unbroken, and there was no evidence of fracture of the ribs. The extremities were very cold; the pulse 60, regular, of small volume and low tension. The walls of the vessels were much thickened.

At 12.20 P.M. the patient was suddenly attacked with severe pain in the cardiac region, and between the scapulæ. The pulse was imperceptible at the wrist, and cardiac pulsation could not be seen or felt. He complained very much of want of air. The pain was much relieved by hot fomentations to chest.

At 1.15 P.M. the patient, who had become fairly comfortable, grew much worse: in his struggles for breath he made many attempts to jump out of bed, and on being restrained seemed to derive some comfort by lying on his left side. Hypodermic injections of ether and strychnine were tried, but he died at 1.45 P.M.

Post-mortem Examination (rather more than twenty-four hours after death).—There was no fracture of the sternum or

ribs. The costal cartilages showed no signs of ossification; on lifting the sternum the anterior mediastinum was seen to be filled with blood clot, which had issued from a rent in the front part of the pericardium; a second rent communicated with the pleural cavity. The heart was lying in its normal situation, and in diastole. A rupture was discovered situated at the extreme apex of the right ventricle, three-quarters of an inch from the ventricular septum. It was under a quarter of an inch in diameter, and direct not valvular. Under the epicardium, between the rupture and the ventricular septum, was a small ecchymosis. The cavities of the heart contained no blood; the valves appeared quite healthy. There was slight atheroma of the aorta, and the heart muscle was a little pale. The wall of the right ventricle was a quarter of an inch thick; that of the left ventricle half an inch. The weight of the heart was 12½ ozs. The left pleural cavity was filled with blood, causing partial collapse of the left lung. There was no evidence of disease or injury elsewhere.

REMARKS.—It seems at first sight strange that this man should have lived for four hours with a non-valvular rupture of the heart, sufficiently large to admit a No. 7 catheter. Nor can the delayed result be accounted for by the rupture having been only slight at first, and having enlarged towards the end, for the slightness of the ecchymosis around the wound forbids such a view.

The solution of the difficulty appears to me to lie in the fact of the rupture of the pericardium and adjacent pleura, which, by permitting the escape of blood from the pericardium, prevented the overdistension of that cavity, and the consequent compression and rapid stopping of the heart.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

J. W. HULKE, F.R.C.S., F.R.S., President, in the Chair.

Friday, December 14th, 1894.

DISCUSSION ON DIPHTHERIA ANTITOXIC SERUM: A REPORT ON A SERIES OF EIGHTY CASES.

DR. WASHBOURN, Dr. E. W. GOODALL, and Mr. A. H. CARD contributed a report on these cases, which was read by Dr. WASHBOURN, and of which a full abstract is published at page 1417 of this number of the BRITISH MEDICAL JOURNAL.

Dr. KESTEVEN had treated several cases of diphtheria by antitoxin, with the result that a marked improvement was produced within a few hours. He furnished details of the cases. In many of them the Klebs-Loeffler bacillus was present. Most of the cases began as follicular tonsillitis. In the cases not examined bacteriologically the clinical evidence as to the diphtheritic nature of the disease seemed conclusive.

Dr. CLEMOW described the case of a girl, aged 15, whom he first saw on December 1st at 5 P.M. She had been ailing eight days, and had attended a school where there had been cases of diphtheria. The soft palate, uvula, tonsils, and posterior pharyngeal wall were covered with thick white membrane. Temperature 103°, pulse 135. The urine on December 2nd contained one-fourth of albumen; there was pneumonia at the base of the left lung; the voice was reduced to a whisper; and the case was altogether severe. At 2 P.M. (December 2nd) 8 c.cm. of antitoxin, supplied by Dr. Klein, were injected, followed by a second injection of the like quantity at 8.30 P.M. On December 3rd, at 2 P.M., 7 c.cm. of antitoxin were injected. The diphtherial membrane was then growing thinner. At 11.30 P.M., during a severe fit of coughing, a large tubular portion of membrane was displaced and ejected from the throat, to the great relief of the patient. The child had since made good progress, and the pneumonia was now undergoing resolution. Dr. Klein had examined the membrane, and reported that it contained diphtheria bacilli. Dr. Clemow considered that whether or not the serum killed the bacillus, it undoubtedly loosened the membrane. It apparently did not prevent toxic symptoms, nor suppress complications, such as pneumonia or nephritis, that had already begun before it was used.

Dr. HERRINGHAM said that 22 cases at St. Bartholomew's had been treated with antitoxin; of these, 4 were perhaps not diphtheria at all, as no Loeffler bacillus was found in any of them. Of the remaining 18 cases, 7 were slight, affecting the fauces only. Four were early cases, not tested for bacilli. In 14 cases bacilli were found. Of the 18 cases, 7 were mild, and all recovered; 5 were severe, 6 very severe. All these 11 cases required tracheotomy except 1, which was treated by intubation. The ages varied from twenty months to thirty-nine months. In 1893 tracheotomy had been performed in the hospital on 32 occasions for diphtheria; of those 32 cases, 20 died and 12 recovered. In 1892 there were 31 such tracheotomies, of whom 21 died and 10 recovered. Of the cases recently treated with antitoxin, 10 had been submitted to tracheotomy, of whom 3 only died, being less than half the average of the fatal cases in 1892 and 1893.

Dr. GEORGE TURNER said that Dr. Washbourn had eliminated from his list all the cases in which bacilli were not found. But this absence of the bacilli, although careful examination for them was made, did not prove that they were not cases of diphtheria. It did not even prove that the bacilli were not present. He noticed, moreover, that these other cases did not contract diphtheria, although fully exposed to the infection in the wards. He referred to the cases of two children recently treated in the Herts Infirmary for tonsillitis, though, as it afterwards was discovered, their brother was at home suffering from diphtheritic paralysis. The two children left the infirmary; two other children were placed in the beds which the two former had occupied, and both the latter cases contracted diphtheria. It was notorious, too, that cases of slight diphtheria remained slight if isolated, but if allowed to crowd a school there was at once an outbreak of severe diphtheria. One attack of diphtheria did not always prevent a second.

Dr. BURNEY YEO asked if any attempt was made to estimate the period of the case at which the treatment was commenced. This was important. Dr. Roux had obtained far better results where the treatment was begun early. Unless early treatment was adopted there was not much chance that toxic symptoms could be arrested. He asked why intubation was so much less frequently employed than tracheotomy in this country. Had English surgeons any great objection to intubation?

Mr. LENNOX BROWNE asked what was the mode and cause of death in the 10 per cent. who died from the direct effects of diphtheritic poisoning. He had employed the antitoxin treatment in 5 cases, 2 of which died of suppression of urine in thirty-five and fifty-four hours respectively. In each of the 3 other cases also there was a tendency to such suppression. He could confirm the rapid subsidence of the glandular swelling and of the feverishness after the employment of antitoxin. He asked further what was the average date of death in the fatal cases, and what was "simple ulceration of the throat" in cases of diphtheria with discharge from the nose?

Dr. ORD proposed the adjournment of the debate. This proposal was seconded by Mr. GOLDING-BIRD and carried unanimously. The President thereupon adjourned the meeting to the evening of Friday, December 21st.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

D. ARGYLL ROBERTSON, M.D., F.R.S.E., President, in the Chair.

Thursday, December 13th, 1894.

FIVE CASES OF PLASTIC CELLULITIS OF THE ORBIT.

MR. GEORGE LAWSON read this paper. In 4 of the cases there was no pus, and in 1 a little pus was formed at the close of the case, and escaped through one of the exploratory incisions which had been made into the orbit. Of the 5 cases 3 died, 1 had to have the eye removed, and 1 recovered, with impaired sight. The symptoms were pain in the orbit, œdema of the eyelids, and proptosis coming on shortly after the first symptoms, with increasing impairment of sight. High temperature, from 101° to 107°. The symptoms rapidly increased in severity, the eyelids became purplish red, shining, and œdematous, and the upper lid tightly stretched over the protruding globe. There was pain in the orbit, varying in intensity and restlessness. If the symptoms were

not relieved by treatment the patient became delirious, then comatose, and died. In neither of the cases had the patient received any injury, and in neither was there any trace of syphilis. In 4 of the cases the cellulitis was confined to one orbit, and in 1 there was cellulitis of both orbits. Four of the patients were women, and one a young man. Mr. Lawson's impression was that those cases were due to septicæmia, but that in three he was unable to trace whence the septic matter came. In Case III the cellulitis of the orbit was preceded by acute tonsillitis, and to this was probably due the orbital cellulitis. In Case V the patient was distinctly suffering from pyæmia before the cellulitis of both orbits came on. She had a pyæmic rash on the face, high temperature—103.4°—and pain in all her large joints; but the source from which the pyæmia originated could not be determined. Mr. Lawson said that in the female he felt certain that septicæmia occurred more often than was suspected from septic materials supplied from the vagino-uterine track: and he thought that some of the so-called rheumatisms to which women were so much more prone than men were really septicæmia, probably induced from this source.

Mr. Tweedy considered all these cases very grave. He had had a recovery in one case, seen by Mr. Lawson, and this he attributed to a free division of the upper eyelid extending to the orbital margin; by this means the tension was greatly relieved and the patient recovered. The swelling disappeared and the movements of the eye, though at first very limited, eventually became free, the sight was eventually almost normal. In one of his cases there had been an operation on the lachrymal duct sometime before, and in the other the nasal mucous membrane had been cauterised, and he attributed some importance to the fact of there having been a previous injury.

Mr. Hulke thought it a pity there was no necropsy in these cases; it was a question whether the orbital cellulitis was primary or secondary to a thrombosis of the ophthalmic vein or cavernous sinus or to a meningitis. Some of the mild cases were the result of influenza or measles, and these mostly recovered.

Mr. Critchett had shown one case before the Society some years before, it was supposed to be due to retained molar teeth, and recovered after removal of the molars. He agreed with Mr. Tweedy that free division of the lid should be made.

Dr. Bronner had seen cellulitis of this kind after injury to the nose.

Hydatid Cyst of the Orbit.

Mr. Lawford read notes of this case. The patient was a girl, aged 17, who in September had pain and prominence of the right eye, some displacement of the eye downwards, limitation of movement, some œdema of the lids, and congestion of the conjunctiva. Vision was $\frac{6}{18}$. The optic papilla was swollen, the retinal veins tortuous, and there were a few retinal hæmorrhages. The symptoms had been present two months. After ten days the patient was admitted to the hospital when a deeply-seated tumour could be felt behind the trochlea. The tumour was cut down upon, an exploratory puncture made, a thin clear fluid was withdrawn, and the tumour collapsed. The incision was enlarged, the wall of the cyst seized, and the whole cyst was easily withdrawn entire. The characters of the fluid were those of hydatid, but no hooklets, scolices, or daughter cysts were found. The eye quickly regained its position, the sight returned, its movements become normal, except that it remained divergent, probably from damage to the internal rectus. Two months later there was no sign of return of the growth. Mr. Lawford advocated early removal; he thought the tumour should be exposed and opened or its contents withdrawn, and the cyst should then be removed entire if possible.

The President had had a case of this kind seventeen years ago, which he treated by puncture and removal. He thought the defect of movement in Mr. Lawford's case was due to an interference with the nerve supply rather than to accidental division of the internal rectus.

Mr. Rockliffe had had one case in which he had had to excise the eye owing to the patient deferring the operation; the cyst was found suppurating and removed.

Mr. Johnson Taylor had had a case in which there was a cyst at the upper part of the orbit; it was a question whether it was a meningocele or not. It was tapped, and the fluid not being meningeal, the cyst was removed.

Mr. Lawford, in reply, said there was some difficulty in distinguishing between a hydatid cyst and a meningocele, but it was always safe to tap the cyst and examine the fluid.

Osteoma of the Conjunctiva.

Mr. Hartridge read this paper. R. W., aged 3 months, was found to have a swelling at the outer part of the right eyeball, which was noticed three days after birth. It was diagnosed as a dermoid growth, and was removed. It measured 12 by 6 millimetres, and consisted of a superficial soft part and a deep hard one, the latter being like an incisor tooth in form. On examination it was found to be bone covered by periosteum; in one part like an ivory exostosis, in another cancellous.

The President had had a case many years ago exactly similar in position and appearance to the one now recorded.

Formol as a Hardening Agent.

Mr. Marshall read this paper. Formol was introduced by Professor Leber; it was supplied under two names—formol or formaline. A 10 per cent. solution of this was best suited for hardening purposes. If, after removal, an eye was immersed in this fluid for twenty-four hours, it became perfectly hard, and could be cut easily: the eye retained its natural fresh appearance, the cornea and lens were transparent, the iris was normal; blood and pus were unchanged in appearance, the vitreous was unaltered, and the retina and choroid remained *in situ*. There was no need to freeze the eye in order to cut it, as was necessary after hardening in Müller's fluid.

The President thought as a hardening agent it was almost perfect.

Mr. Juler had used it, and found it very satisfactory. In one case an eye had been put into a full strength solution by mistake, but it had not been harmed by it.

Mr. Lindsay Johnson had used it before Leber introduced it, but had given it up, as he thought some other agents were superior. Formol precipated metallic silver from solutions of its salt; and, in this way, by precipitating silver in the tissues, it might be very useful.

Papillary Conjunctivitis.

Dr. Adolph Bronner (Bradford) read notes of a case of papillary conjunctivitis of the left eye, due to the prolonged internal use of arsenic. The patient, a youth of 22, suffered from chronic eczema of the skin. In July he began taking arsenic, in pilules of 1 milligrame. For two months he had been taking 24 pilules daily, when the eyes became red and very irritable. There was a peculiar slight œdematous condition of the conjunctivæ and of the lids. Boric acid lotion and cocaine drops relieved the symptoms for a time. In two weeks the patient called again. There were pinkish, small, hard, irregular papillary growths of the conjunctiva of the left upper lid, most marked at the upper end of the tarsus. In spite of the local application of sulphate of copper, the growths did not seem to diminish for fourteen days. The arsenic was then discontinued and, under treatment, the growths grew much less. The use of arsenic frequently gave rise to conjunctivitis, but there were no cases on record in which papillary growths had formed.

The President thought it very problematical that the arsenic was the cause of the papillary growths; if it had been so they would probably have come in both eyes.

Card Specimens.

Mr. Lang: A case of Cataract with Crystals in the Lens, with Microscopical Specimens.—Mr. H. Work Dodd: (1) A New Pince-nez: (2) A case of Congenital Lens Opacity.—Dr. Bronner: (1) Wire Shield for use after Cataract Operations; (2) Benno's Writing Paper with raised lines for the use of the Blind.—Mr. G. Lindsay Johnson: (1) Removal of Lenses in a case of Myopia; (2) Symmetrical Markings in a case of Lamellar Cataract.—Mr. N. C. Ridley: A case of Congenital Coloboma in the Macular Region.—Mr. W. J. Cant: Large Sarcomatous Tumour of the right side of the Brain.—Mr. Donald Gunn: Case of Tuberculous Iritis.

PATHOLOGICAL SOCIETY OF LONDON.

F. W. PAVY, M.D., F.R.S., President, in the Chair.

Tuesday, December 18th, 1894.

TUMOUR OF THE PALATE.

MR. S. G. SHATTOCK showed an example of tumour from the soft palate, which in structure was one of those resembling the growths of the parotid and submaxillary glands. It consisted of cartilage and myxomatous tissue, in which lay branching columns of cells, which though often regarded as glandular were also held to be of connective tissue, and in the latter view he concurred. Similar tumours had been met with in the lip, and he had himself examined such a one. The likeness of these different tumours to those of the parotid and submaxillary glands, and the general peculiarity of their structure had led the author to inquire whether the palatine and labial glands of man were salivary. It was difficult to say what should be understood by a salivary gland: in the horse the saliva contained no ptyalin; and he had found the same of the submaxillary gland in the sheep. It was clear, therefore, that what was a salivary gland might be merely a mucus-forming one. He had tested the matter in man by finely mincing the palatine and labial glands after careful cleansing, and dissecting away the whole of the mucosa, triturating with weak starch solution, and then placing in the incubator at body temperature. The cut surface of the palatine glands often gave an acid reaction, as a *post-mortem* change; and it was necessary that this should be neutralised. The results he had tested in the usual way by the action of iodine solution. Although he had made a considerable number of such experiments, he had found only in few evidence of the presence of ptyalin; this was in the cases of two children and one adult. In an infant of one month no amylolytic action was obtained from either the palatine or labial glands. He recalled the fact that ptyalin was absent from human submaxillary saliva before the third month: and that in dog's saliva its presence was variable. Professor Klein had many years ago described in the child's soft palate, glands which he held to be quite different from the mucous, and the author suggested that these were probably amylolytic. These physiological facts were of interest, as relating these various tumours to one another, but he could offer no explanation why cartilage should be so commonly found in all—not merely in the parotid, with which Meckel's cartilage or that of the pinna might come into connection, but also in those of the soft palate and labial glands.

MR. A. A. BOWLBY agreed that the peculiar tissue in the parotid and similar tumours was of connective tissue nature, though he would not exclude the possible presence of a true gland element: nor did he think that the presence of embryonic or preformed cartilage was necessary to account for the production of cartilage in such new growths.

MR. STEPHEN PAGET exhibited a microscopic section of palatine tumour for Mr. MORTON, which presented a similar structure of tracts of hyaline tissue ramifying between groups of cells.

DR. CECIL BEADLES had, with Professor Boyce, met with cartilage tumours in the lungs of a myxœdematous patient, and thought they possibly arose from mucous tissue, as they were not connected with the bronchial tubes.

DR. SNOW thought the admixture of elements in such growths showed an origin in embryonic vestiges.

MR. SHATTOCK, in reply, observed that simple cartilaginous tumours had been described in the lung by Virchow and Dr. Wilks: and though they were doubtless genetically related to the bronchial cartilages, it was curious that no direct continuity had yet been observed.

POST-RECTAL DERMOID.

MR. GOLDING-BIRD recounted the case of a woman from whom what appeared to be a rectal polypus was removed; it was of doughy consistence, and covered with mucous membrane. It was enucleated through an incision in the rectal mucosa. The contents of the cyst, as it proved to be, were clayey, without bone or teeth, and its wall consisted of normal mucosa, that is, lymphoid tissue and Lieberkühn's follicles, and beyond this of unstriated muscle fibre. It was a rare form of tumour; and in answer to Mr. SHATTOCK question why he had named it a dermoid, seeing that no skin had been described, the author stated that he was using the term proposed by Mr. Bland Sutton.

MALIGNANT DISEASE INVOLVING THE HYPOPHYSIS CEREBRI.

DR. CECIL BEADLES reported as the first of two such cases one of squamous-celled carcinoma probably arising in the tympanic cavity. The pituitary body was not involved, except that it lay within an investing layer of new growth. Towards the close of life the patient, who was in the Colney Hatch Asylum, was quite demented; there was a swelling of the left side of the face, and some discharge from the left ear. After death the base of the skull was found widely destroyed by a carcinoma of the kind above mentioned. The second case was one of glandular carcinoma, which probably arose in the glandular epithelium of the naso-pharynx. Before death the patient presented a large ulcerating growth in the left temporal region. After death a large mass was found connected with the bone, and a second large oval tumour beneath the brain, occupying the sella Turcica. The pituitary body was intimately connected with, but not involved in, the growth.

TUMOUR OF THE HYPOPHYSIS.

MR. J. H. TARGETT exhibited a tumour about 2 inches in diameter removed after death from the pituitary fossa; shortly before death discharge of pus had been noticed from the left nostril. After death suppurative meningitis was found, and the growth was seen to have perforated the floor of the fossa, whence the discharge of pus observed during life. Histologically the tumour had the structure of an endothelioma containing nest-like bodies. He did not himself comprehend the real difference between a psammoma and an endothelioma. Mr. Bland Sutton had described psammomata as papillomata, and stated that they invariably grew from the choroid plexus: there was no proof of this, and they might arise without any connection with the plexus.

DR. H. D. ROLLESTON doubted whether the second tumour described by Dr. Beadles was not a sarcoma.

SUBDURAL HÆMORRHAGE IN SCURVY.

DR. WALLIS ORD showed an extensive subdural hæmorrhage from a case of infantile scurvy. The clot occupied the whole of the vault of the cranium, but there was no sign of hæmorrhage at the base. The patient had been fed on a proprietary food from birth, and showed marked rickety deformity of the head with beading of the ribs but no affection of the long bones. There had been no sign of intracranial pressure during life, and the child had died of an attack of acute broncho-pneumonia. There was no history of syphilis, tubercle, or hæmophilia. Feeding on fresh food and medicinal treatment had not effected much improvement in the case, which showed an extreme degree of anæmia, hæmoglobin only amounting to 10 per cent. of normal. The author drew particular attention to the question of feeding, the involvement of the cranial bones, with freedom of the long bones, the absence of pressure signs, and the evidence of the non-epidemic character of the disease, a twin brother brought up in the same way being quite free from scurvy.

DR. H. SUTHERLAND had seen three cases of similar nature. In one there was thrombosis of the basilar artery, and he inquired what was the condition of vessels in Dr. Ord's case. He associated the hæmorrhage in the latter instance with the great vascularity of the calvaria.

INFARCTS IN THE LIVER.

DR. C. OGLE exhibited a specimen of the above. There were, in addition, infarcts in the liver and kidneys. Their source was probably a soft patch of fibrin on a calcareous aortic cusp. He thought that some septic change in the blood had favoured coagulation, the man having died after an injury, as Dr. Wooldridge had shown that portal thrombosis could be induced by the intravenous injection of an extract of lymphatic glands or testicle.

REPAIR OF DIVIDED TENDON.

MR. JACKSON CLARKE found that twenty-four hours after aseptic division of a tendon the retracted ends were joined by a gelatinous material. At the end of forty-eight hours this material was traversed by branched and anastomosing young connective tissue cells, which, to all appearance, were

derived solely from the sheath and its interfascicular prolongations. The severed tendon showed no sign of activity. There were no *Mastzellen* nor any appearance which lent the least support to Grawitz's theory of *Schlummerzellen*. Phagocytosis of granular leucocytes and red blood corpuscles by lymphocytes and young connective tissue cells had been in active progress. The appearances due to phagocytosis could not be mistaken for sporozoa.

In answer to Mr. Shattock, he distinguished in his specimens between lymphocytes and young connective-tissue cells by the ramifications of the latter; and he thought that Biondi's reagent served to distinguish leucocytes with amphophile granules from young connective-tissue cells.

Pharyngeal Pouch.

Dr. H. D. Rolleston exhibited a median pouch like one previously described by Mr. Chavasse. It was taken from an old man after death; its wall consisted of fibrous tissue without muscle fibre.

Mr. J. H. Targett had found in Mr. Chavasse's case a certain amount of involuntary muscle fibre.

Mr. S. G. Shattock had shown a lateral pharyngeal pouch, the situation of which indicated that its origin was probably in the fourth branchial cleft, and drew from Dr. Rolleston the opinion that in the case now exhibited the origin was probably traumatic.

Nottingham Medico-Chirurgical Society.—At a meeting held on December 5th, Dr. J. S. Tew, President, in the chair, Dr. Handford showed: (1) A boy, aged 11, suffering from Idiopathic Muscular Atrophy. No other member of the family was affected. At the age of 5 years the boy had typhoid fever, and for two months after convalescence was established was unable to walk, and had to be carried about. The upper extremities gradually became affected. At the age of 9 he suffered from scarlet fever. Since then the muscular wasting had made more rapid progress, and for a year he had been unable to stand or to rise in bed. (2) A man, aged 31, suffering from Progressive Muscular Atrophy following Injury. The patient had had gonorrhœa, but denied syphilis. Eight years ago, whilst a soldier in India, he fell and his arms were severely strained by holding the bridles of two horses pulling in opposite directions. About a year later his right arm began to fail, and six months ago the left arm was affected. The wasting had progressed very rapidly. It was possible that the injury produced a neuritis, which had spread to the spinal cord and excited a chronic poliomyelitis. —Mr. Gray read a paper on Club-foot. He confined himself to the congenital form of talipes equino-varus. He pointed out that the deformity was one involving more or less every structure in the foot. He showed that the deformity was kept up not by the tendons, but by the overgrowth of the ligaments between the scaphoid and the astragalus. He deduced from this the futility of tenotomy of the tibiales tendons, but advised manipulation, without plaster-of-paris, if possible, in the slighter cases. He described the operation of syndesmotomy and also Buchanan's operation, but preferred Phelps's open method of division of the astragalo-scaphoid capsule. Operation was useless unless followed by manipulation. He was opposed to the use of mechanical apparatus.—The President and Drs. Tresidder, Handford, MacMillan, Steavenson, and Waring discussed the subject; and Mr. Gray replied.

Newcastle-upon-Tyne Clinical Society.—At a meeting on December 6th, Dr. George Murray, President, in the chair, Dr. Coley showed a case of well-marked Pseudo-hypertrophic Paralysis in a boy.—Mr. Morison brought forward a case of Epithelioma of the Floor of the Mouth complicated with doubtful ulceration of the Faucial Pillars, probably syphilitic. Mr. Morison also showed a case of Syphilis affecting the Epididymis on both sides.—The President showed cases of (1) Ataxic Paraplegia, (2) Early Myxœdema.—Dr. R. A. Bolam then gave a most interesting and instructive Pathological Demonstration with the aid of the Projection Microscope.

Medical Magistrate.—Mr. Bertram Thornton, M.R.C.S., L.R.C.P.Lond., has been placed on the commission of the peace for the borough of Margate.

REVIEWS.

Difficult Labour. By G. Ernest Herman, M.B., F.R.C.P. London: Cassell and Company. 1894. (Cr. 8vo, pp. 460; 163 illustrations. 12s. 6d.)

A practical work written by the President of the Obstetrical Society necessarily commands attention. The object of the present book is to give practical information upon what the writer considers the best means of delivering in cases of difficult labour. The style of the book is dogmatic; in extenuation the author pleads an opinion of Bacon in favour of permitting "the magistral and peremptory tradition and delivery of knowledge." The work is written in a scientific spirit, and the recommendations as to practice are based on the ripe experience of the author, and may in general be at once accepted and acted upon.

There are, however, a few of the modes of treatment concerning which authorities will differ widely, and it may be desirable to mention them. In speaking of face presentation the author recommends bimanual conversion into a vertex; he does not mention the use of the vectis, which will sometimes succeed when the other method fails. He also gives Schatz's as a practical method, and says that the manœuvre "is harmless but may fail." We believe, however, that it seldom succeeds on the living body, though it is a pretty practice on the mannikin. It might have been well for the author in a practical book like the present to have brought out more clearly the fact that the great majority of cases of face presentation terminate successfully without any interference.

To induce premature labour at the thirtieth week in pelves with a conjugate of 3 inches, and at the thirty-second week with a conjugate of 3½ inches, as recommended, may be expected to result in a very high fœtal mortality, and it is open to question whether better results would not be obtained by performing the operation in each case a fortnight later.

The recommendation to perform Porro's operation in certain cases of severe accidental hæmorrhage must be followed with much discretion, for a patient who is so weak that there is no hope of saving her by other methods would run a great risk of succumbing to the shock of this operation.

The method of treating *post-partum* hæmorrhage due to lacerated cervix by suturing the cervix with a needle passed by the sense of touch does not seem to be applicable to cases in which the tear extended above the vaginal insertion. Plugging the tear with iodoform gauze is an easier proceeding and, as a rule, prompt and efficient in its action.

The last six chapters of the book give an excellent account of obstetric operations, including symphysiotomy.

We confidently recommend this work as a supplement to the ordinary textbooks. It contains the opinions of an obstetrician of wide practical experience, set forth in a judicious and scientific manner.

Myxœdema, Cretinism, and the Goitres, with some of their Relations. By Edward T. Blake, M.D., M.R.C.S. Bristol: John Wright and Co. 1894. (Roy. 8vo, pp. 90, with 7 full page illustrations. 3s. 6d.)

The reader, Dr. Blake states in the first words of his preface, will soon find that the burden of this book is the septic or the infective nature of disease. This being so the title is somewhat misleading, and if the reader expects a complete and up-to-date account of these diseases, which have excited so much interest of late, he will be very much disappointed. Dr. Blake's work is, in fact, a thesis in support of certain peculiar views which he holds as to the etiology of myxœdema, etc. Incidentally he mentions a number of facts in regard to these diseases, but they are disconnected and ill arranged, and the whole is little calculated to be of much service either to the student or to the practitioner.

He regards Graves's disease as an autotoxis most frequently caused by the absorption of purulent products, that process being aided rather than induced by the toxins of terror or shock. The same products may produce rheumatism in males as well as myxœdema, mania, epilepsy, chorea, and possibly also Addison's disease. It would be easy to bring

forward exactly the same arguments in favour of a similar etiology for any other disease. The toxins of a lively imagination have as real a claim to existence as some of those of which Dr. Blake so confidently speaks.

The book is well printed, and is furnished with copious indices. The illustrations are numerous, and although those of myxœdema are not as typical as they might have been, those of cretinism and exophthalmic goitre are excellent.

Die durch Eitrige Mittelohrentzündung verursachte Lateralsinus-Thrombose und deren operative Behandlung. [Thrombosis of the Lateral Sinus due to Suppuration of the Middle Ear, and its Operative Treatment.] Von Arthur af. Forselles, Assistenzarzt der chirurgischen Klinik zu Helsingfors. (Kuopio: G. W. Backman. 1893. Imp. 8vo, pp. 254, M 6.)

This work deals, from a surgical point of view, with thrombosis of the lateral sinus of aural origin. It presents a good review of the profusion of scattered literature on this subject that has accumulated since the appearance of Lebert's paper on Inflammation of the Cerebral Sinuses in 1856: much of which has been added during the recent development of intracranial surgery. The book is made up of two sections; one gives 137 cases of thrombosis of the lateral sinus, of which 6 are original; and the other derives from a painstaking analysis of these records the typical clinical features of this affection, and the indications and contra-indications of surgical treatment.

The author holding that thrombosis of the lateral sinus is almost invariably fatal if left to itself, is in favour of its treatment by operative means. The value of such treatment still remains to be determined, as but very few instances of trephining for this affection have hitherto been recorded. The prospects, however, are good. Of 29 cases in which the thrombosed sinus had been exposed and laid open, 17 had a good result and 12 were fatal. As death is due in most instances either to diffused intracranial inflammation or to the intensity of the general infection, there are few grounds for belief that improved diagnosis and an earlier resort to trephining will in future lead to much better results.

In the section on the operative treatment of this affection Dr. af. Forselles advocates in all cases preliminary trephining of the mastoid antrum. This he states should be followed, and not preceded, by direct exposure of the sinus. He is a strong advocate also of ligature of the internal jugular vein. This vessel, he states, is involved in more than one-third of all the cases of thrombosis of the lateral sinus, and the records of cases treated by operation show that better results have been obtained after exposure and ligature of the vein than in cases in which such steps had not been taken. Of 16 cases in which the vein had been tied, 10 were successful, and 6 fatal; of 13 cases in which it had not been tied, 6, or nearly one-half, were fatal.

For surface localisation of the anterior and curved portion of the lateral sinus the author draws a line from the occipital protuberance to the upper margin of the orbit. A point in this line 9 centimetres from the occipital protuberance will, he states, correspond to the position of the sigmoid fossa. This we think will in most skulls be found too high and not so satisfactory as the method recommended by Mr. Ballance. A very full and useful list is given of the many contributions that have been recently added to the literature of this interesting subject.

The Proceedings of the Fourth Annual Meeting of the Association of Military Surgeons of the United States held at Washington, D.C., on the 1st, 2nd, and 3rd May, 1894. St. Louis: Buxton and Skinner Stationery Co. 1894. (Imp. 8vo, pp. 792. 4 dollars.)

It is impossible in the short space at our disposal to do justice to the varied, interesting, and important matters connected with military and naval medicine, surgery, and hygiene treated in this volume; we can, therefore, only direct the attention of our naval and military medical officers to some of the papers, for example, "Tent Field Hospitals in War," "Brief Notes on Ship, Hospital, Barrack, and Camp Furniture," and on "Electric Heating and Cooking," "First Aid on the Battlefield," etc.; also to notes on "The Sanitary Organisation of the German, Austro-Hungarian, French, and other Foreign Nations," with a concluding remark that the volume noticed should be in the possession of every service surgeon.

In a note in our military columns seven months ago[1] we expressed a desire that in our own military and naval medical services there should be an institution similar to "The Association of Military Surgeons of the United States Army" holding its annual or monthly meetings for the discussion of, and lectures on, service medical, surgical, and sanitary subjects. The annual departmental Blue Books scarcely give sufficient scope for the records of experience gained in these topics.

The Jewish Method of Slaughter. By J. A. Dembo, M.D., Physician to the Alexander Hospital, St. Petersburg. Translated from the German with the Author's Amendments. London: Kegan Paul, Trench, Trübner, and Co. 1894. (Roy. 8vo, pp. 125, with 3 illustrations. 2s. 6d.)

It is with great pleasure that we welcome this translation of Dr. Dembo's work into the English language. When his German work came under our observation we expressed the hope that such a translation might be forthcoming, so as to allow a larger number of people in this country to have access to its contents. On that occasion we dealt as exhaustively with the original as space would permit, so that there is no necessity for us to enter into any detail in reviewing the translation now before us.

Dr. Dembo is to be congratulated on the enthusiasm which has characterised his investigations throughout, and which is further evident in the appearance of the present volume. He is also to be congratulated on having obtained so faithful a rendering of his work into the English language. The facts and arguments are so clearly expressed that even that portion of the book which deals with chemical problems cannot fail to be understood by a layman, unfamiliar though he may be with the fundamental principles of chemistry; and certainly but a scant knowledge of anatomy and physiology is necessary to make it possible to follow Dr. Dembo's reasonings, in such simple and unequivocal terms does he express himself. Facts the outcome of his visits to slaughterhouses in this country, which did not appear in the German edition, owing to the observations being made subsequently to its publication, have been incorporated into the present volume.

We sincerely hope that Dr. Dembo's work will be widely read in this country, not only by scientists, but also by laymen, for we are convinced that the more widely its contents are known the more popular will the Jewish method of slaughter deservedly become.

Organic Chemistry. Part I. By W. H. Perkin, jun., Ph.D., F.R.S., and F. Stanly Kipping, Ph.D., D.Sc. London and Edinburgh: W. and R. Chambers. 1894. (Cr. 8vo, pp. 302. 3s. 6d.)

This is a volume which may confidently be recommended to students. It is valuable not only on account of the lucid style in which it is written, but also on account of its general accuracy, completeness, and the wise choice which has been exercised in the exclusion of all but those portions of the subject which are of most scientific import, and therefore calculated to impart an accurate and comprehensive knowledge. Part I now before us deals with the fatty compounds. It contains in the first place, a general account of the methods most frequently employed in the separation, purification, and analysis of organic compounds, and in the determination of molecular weights. The preparation and properties of typical compounds are then described, and we are glad to see that attention is directed to those changes which come under the heading of general reactions rather than to isolated facts regarding particular substances. Questions of constitution are also discussed at adequate length, and in the case of most of the typical compounds the facts on which the given constitutional formula is based are specifically

[1] *Vide* British Medical Journal, May 26th, 1894.

mentioned. A considerable portion of the text, dealing as a rule either with matters of less importance or of a more advanced nature, is printed in small type. The author recommends that the consideration of this summary and extension should be postponed until the student has acquired some knowledge of the subject.

Hospitals, Dispensaries, and Nursing. Edited by John S. Billings, M.D., and Henry M. Hurd, M.D. Baltimore: The Johns Hopkins Press. London: The Scientific Press, Limited. 1894. (Roy. 8vo, pp. 734. 21s.)

This rather bulky volume, comprising more than 700 pages, consists of the collected transactions of Section III of the International Congress of Charities, Correction, and Philanthropy, held at Chicago in June, 1893. It contains about ninety papers and discussions, dealing with almost every topic that can be included under the comprehensive title chosen for the above-named Congress. To illustrate the range of questions considered and discussed it is enough to mention the following papers taken at haphazard from the table of contents: The Relations of Hospitals to Public Health, by J. S. Billings, M.D.; The Medical Charities of the English Metropolis, by Lord Cathcart; Educational Standards for Nurses, by Isabella Hampton; Hospital Finance and Account Keeping, by H. C. Burdett; The Relation of the Medical Staff to the Governing Bodies in Hospitals, by E. Cowles, M.D.; Isolating Wards and Hospitals for Infectious Diseases, by G. H. M. Rowe, M.D.; Hospital Dietaries, by M. A. Boland; Hospital Construction, by L. S. Pilcher, M.D.; Sick Nursing and Health Nursing, by Florence Nightingale; The Origin and Present Work of the Queen Victoria's Jubilee Institute for Nurses, by Amy Hughes; Nurses' Homes, by K. L. Lett; The History of Workhouse Reform, by Louisa Twining; Red Cross and First Aid Societies, by John Furley; and, finally, Hospital Saturday and Sunday, by Fred. F. Cook. It will be strange indeed if the reader cannot find something to attract him in the above list of subjects: nevertheless, the result of reading the book as a whole is to produce in the mind a certain feeling of dissatisfaction, the result of the inevitable superficiality of many of the contributions—inevitable, we say, for a paper intended for a Congress must be curtailed within fixed limits, and if as often happens the subject matter is one of great intricacy and complexity, the treatment of it must of necessity be broad and popular. Hence it is that whilst the uninstructed reader will find much to interest him in these pages, the serious student of philanthropic problems who turns to them for definite information upon a particular point will often be disappointed.

Those of our correspondents who have lately addressed us on the perennial topic of hospital reform will perhaps be surprised when they learn the opinion of Lord Cathcart, who, as a member of the Lords' Committee on Hospitals, listened to much evidence on each side of the question, that "these charities"—referring particularly to the out-patient departments—"are not abused to any serious extent" (p. 17). They may, however, set against this judgment the remarks of Mr. Burdett, quoted on p. 120: "There is nothing doing more injury to the old countries of the world than the continuous, ever increasing amount of free medical relief which is being given in our medical institutions. I am confident that the out-patient department is the portal to pauperism. It is there that people begin to learn that they can get something for nothing, and they are not ashamed of doing it." Which of these contradictory statements is nearer to the truth it is, fortunately, not our business to decide—*non nostrum tantas componere lites*. In conclusion, we have pleasure in recommending this book to the notice of those members of our profession whose interests extend beyond the routine of daily practice, and who desire to gain an intelligent conspectus of recent developments in philanthropic enterprise at home and abroad.

Handbuch der praktischen Gewerbehygiene. [Handbook of the Practical Hygiene of Trades.] Herausgegeben von Dr. H. Albrecht. Lief. 2. Berlin: Oppenheim. 1874. (Royal 8vo, pp. 175. M. 4.50.)

The second part of this valuable treatise has speedily followed the appearance of the first, reviewed recently in the British Medical Journal. The part now before us is entirely occupied with preventive and hygienic teachings, and forms a comprehensive textbook on the construction, heating, lighting, and ventilation of factories and workshops. To assist the interpretation of the text, more than a hundred illustrations are introduced. The consideration of these topics necessarily involves numerous architectural and engineering details. These are concisely stated, and show acquaintance with the views and practice of other than German lands.

Besides describing the accepted modes of heating and lighting by stoves, steam, and hot-air pipes, and by the varied forms of lamps, both gas and electric, the author gives a good sketch of arrangements to avoid fire, and to save life should a disaster occur.

It may be added that the chapter on construction and structural arrangement is by Factory Inspector Oppermann, and that on warming and ventilation by Professor Hartmann, of Berlin, who also is engaged in the civil service of the Crown; both are able men, well versed in the subjects upon which they write.

Hydatid Disease. Vol. II. By the late John Davies Thomas, M.D.Lond., F.R.C.S.Eng. Edited by Alfred Austin Lendon, M.D.Lond. Sydney: L. Bruck. London: Baillière, Tindall, and Cox. 1894. (Demy 8vo, pp. 166. 2s. 6d.)

It was the intention of the author to have brought out a complete work on hydatid disease. Unfortunately his health broke down, and he died early in 1893, before he could carry out the plan he had formed. The present work is therefore fragmentary, but the fragments are of great intrinsic value, and Dr. Thomas's widow has done well to publish them. Even in its incomplete form, this little work cannot fail to prove of immense service to investigators and writers on hydatid disease. In addition to a large amount of original matter there are references to the literature of the subject, carefully classified under the appropriate headings, which will be a great boon to the student. Had the editor supplied a good index, he would have further entitled us to his gratitude. This is not the least important of the contributions to the literature of hydatid disease we owe to Australia.

NOTES ON BOOKS.

Annual of the Universal Medical Sciences. Edited by Charles E. Sajous, M.D. (Philadelphia, New York, and Chicago: F. A. Davis Co. London and Melbourne: F. J. Rebman. Issue of 1894. Volumes v. Roy. 8vo. £4 7s.)—We have again to congratulate Dr. Sajous on having accomplished for one year more the Herculean task which he has imposed upon himself. This is nothing less than to give continuously from year to year a complete view of the progress of medicine, surgery, and midwifery in all their departments. To this end he has enlisted the services of 70 associate editors and over 200 correspondents. The result is a serial of great value for reference, containing articles in most cases by acknowledged authorities, embodying abstracts of all the papers regarded by them as important. Dr. Sajous laments the late appearance of the present issue, but those who have had to face similar difficulties will best know how to excuse the delay.

Post-nasal Growths. By Charles A. Parker. (London: H. K. Lewis. 1894. Demy 8vo, pp. 98. 4s. 6d.)—The second chapter of this little book consists of a reprint of an article by the author in the *St. Bartholomew's Hospital Reports*. In it the author brings forward his observations on 50 cases of post-nasal growths, which prove, he considers, that respiration is nasal and not buccal during sleep in cases of nasal obstruction, especially when due to post nasal growths. In discussing deafness due to adenoids the author says (p. 67): "If a person with normal nasal passages hold his nose and swallow an excess of air is forced into the tympanum." This is well known as Toynbee's experiment, by which air is *extracted* from the tympana. The remainder of the work contains an account of the symptoms, diagnosis, and treatment of this disease, which are now pretty generally known.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

SPECIALITIES FOR INVALIDS.

These preparations are meat jellies made respectively from beef, mutton, and chicken, and they are stated to be pure essences, without any addition of water or other substances for their preservation. They are all of agreeable appearance, and have a good flavour. The percentage of solid material is higher than in some other preparations of a similar nature, and there is proportionately a larger amount of the constituents of meat broth. Like all preparations of this kind, the nutritive value is small as compared with that of meat, and it is chiefly on account of the soluble stimulant constituents of flesh that they are serviceable for invalids. In that respect the essences of beef, mutton, and chicken are of excellent quality. They are put up in tins which can be easily opened, and have a lid fitted which admits of the tin being closed after the protecting strip has been torn off. This is often convenient when only a portion of a tin has been used for keeping the remainder out of contact with the air. The makers inform us that they also intend to put up the essences in glass vessels to meet the desire of those who object to the use of tin. These essences are manufactured by Messrs. Halford and Son, 12, Upper St. Martin's Lane.

SOLAZZI.

We have received from Messrs. Street Brothers, 5, Serle Street, Lincoln's Inn, W.C., a sample of the stick-liquorice known as solazzi. Of the several varieties of this form of liquorice, solazzi juice is the most famous. It has been manufactured for many years at Carligiano, a small town of Calabria, in the Gulf of Taranta. Our examination of the sample shows that it possesses all the characters attributed to pure extract of liquorice, and that there is an entire absence of any matter foreign to the root. It would be well to notice that stick-liquorice is essentially different in composition and properties from the extractum glycyrrhizæ of the *British Pharmacopœia*. The pharmacopœia extract is prepared by treating the crushed root with cold water, the stick-liquorice by boiling with water. The former is a soft hygroscopic substance entirely soluble in cold water, whereas the stick-liquorice, or so-called Spanish juice, when treated with cold water, leaves a large residue undissolved.

CANARY CLARET.

This wine is the produce of grapes grown in the Monte district in the Canary Islands. It is of a deep, ruby-red colour, full bodied, and of the Burgundy character, guaranteed to be an absolutely pure natural wine, neither blended nor fortified by the addition of spirit. Analysis shows that it contains nearly 23 per cent. proof spirit by volume; the amount of extractive is 2.8 per cent., and the ash 0.32 per cent. The importers are Messrs. Holt, Webb, and Co., 14, Mincing Lane, E.C.

AN IMPROVED DUST CART.

Messrs. F. W. Decker and Co., London, E.C., have shown us a series of apparatus designed with the object of collecting "dust" in a more cleanly manner than is usual, and at the same time automatically "disinfecting" it. This so-called disinfection is merely a process of sprinkling with a powder containing carbolic or cresylic acid, and of course, so far as the true meaning of the word is concerned, is not effective. It may, however, tend to keep flies at bay and to substitute an æsthetically less repulsive odour. In the case of dustbins, waterclosets, or privies, this powder is consolidated in the form of a block, and this being placed in a box having a perforated bottom, like an inverted nutmeg-grater, which is fastened to the under surface of the lid, it is rattled about every time the lid is opened or shut, and the powder which is grated off falls into the dust or closet as the case may be. They also show an arrangement for discharging permanganates into the flush of a water closet. The matter of chief interest, however, is an automatic dust-cart lid, which has been devised with the object of at once covering the dust as it is thrown in and at the same time sprinkling it with "disinfectant" powder. The apparatus certainly has the advantage of working automatically. The lid is opened by the weight of the dust, and as soon as this has entered it closes again, and there can be no doubt that if it meets with the approbation of our good friend the dustman, so that he will refrain from knocking it to pieces, it will prove a great amelioration to the condition of the streets in gusty weather. The sprinkling part of the design does not seem very important. The aim of the arrangement is certainly good, and if it should turn out to be durable and not too heavy it will probably be of considerable utility in town conservancy. We understand that the Commissioners of Sewers for the City of London have ordered one of their ordinary waggons to be fitted with this attachment for the purpose of testing it.

FLOUR, BREAD, AND BISCUITS FOR DIABETICS.

In most of these preparations advantage has been taken of the comparatively small amount of starch and the preponderance of fat and albumenoid constituents in the soya bean by using it as an adjunct in their manufacture. The sample of flour prepared from this material was found to contain only a minimum of starch, and the biscuits made from this flour were of good texture and palatable, although the presence of a considerable amount of fat was evident. Euthenia biscuits, made from soya bean flour and almond flour, contain rather more starch, but less than one-seventh as much as in ordinary biscuits, and they are free from sugar. Several other kinds of biscuits, prepared from the same materials, are of similar character, but flavoured with carraways or cheese. The ginger biscuits are made of gluten flour and almond flour. The composition of all these articles renders them suitable as food for diabetic patients, and the advantages derived from their use in London and provincial hospitals afford a safe ground for recommending them for general use. They can be obtained from Messrs. G. Van Abbott and Sons, 6, Duke Street Mansions, Grosvenor Square, W.

CLAM BOUILLON.

This is a rich soup prepared from clams by a method which admits of their delicate flavour being preserved. It is said to be much patronised by the medical profession in the United States as an adjunct to the invalid's dietary. It is a thin liquid of peculiar shell fish flavour and smell, and contains nearly 10 per cent. of extractive matter. Analysis shows that it compares favourably as a nutrient with a meat extract. It is put up in glass bottles without the addition of any preservative agent. One pint of clam bouillon mixed with two pints of boiling water will make a broth, or it can be mixed with milk to form a soup. It is prepared by Messrs. E. S. Burnham and Co., New York, the London agents being Messrs. Gordon and Dilworth, St. George's House, Eastcheap.

ASEPTIC CATHETER CASE.

Messrs. Allen and Hanburys have sent us a very useful metal case for containing a catheter which they have made at the suggestion of Dr. Godson, and which seems to be well fitted for the purpose. It not only keeps the catheter clean, but prevents it being crushed in the carriage case or hand bag.

PATENT ARTIFICIAL EYE FOR SHRUNKEN SOCKET.

Messrs. Salt and Son (69, Corporation Street, Birmingham) write: We notice from the British Medical Journal of December 15th that Messrs. Arnold and Son have claimed anticipation of the above invention by reason of an eye made for Dr. Collins, notice of which appeared in the *Lancet* in September last. Permit us to thank you for your mention of the fact that we exhibited this invention at your offices early in the summer, and to inform you as further evidence of our prior claim that the complete specification for our patent was deposited at the Patent Office in May last, and accepted the following month.

We perused Dr. Collins's article, but as it concerned an isolated case of a medical man we thought it better taste not to protest against the infringement. In future we shall of course protect our rights.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XXIX.—DOWNHAM MARKET, NORFOLK.

The workhouse stands in the middle of the little country town of the same name, and harmonises well with its surroundings; it is a flint building of irregular outline, with casement windows. It is approached by a drive, bordered by gay and well-kept flower beds. As in so many of these Norfolk districts, the population of the neighbourhood has declined, or has improved in circumstances, so that the number of beds in the workhouse greatly exceeds the demand. The house is licensed for about 250, and at the time of our visit the inmates numbered 70. Twenty-eight beds are set apart for the sick.

The Infirmary

is part of the house; the whole building is very old, and in many ways quite unsuited for its work. We visited the day-rooms first, and the old people were called in from the yards by the master and matron to see us.

The Day-rooms

are fairly comfortable, with benches placed on either side of the fireplace, and they are made cheerful with plants and pictures; but it struck us as a grave defect that these day-rooms are approached from the yards by five or six steep stone steps, which form a serious barrier to the infirm old people. Nor were there any easy chairs; nothing but the hard benches. All the female patients were up; one woman was both blind and deaf, and sadly isolated from her fellows; another woman, who had all the appearance and manner of having been in a much superior position, was deaf; another had a paralysed hand and arm; the rest, six in all, were cases of old age.

The Sick Ward

was above this room, and was reached by a narrow, steep, stone staircase opening out of the day-room. The steps were worn quite hollow, and we wondered whether the guardians ever went up or down them. If so they would hardly be left in this dangerous state—dangerous even to the active, but much more so when used by the infirm. Must some poor inmate break his or her leg before these steps are condemned? At the top of this perilous ascent is a long ward, having casement windows on both sides, and a pitched roof with ventilators in it; there is a strip of matting down the middle, the beds, thirteen in this ward, are ranged down either side, and there is a fireplace at one end. The master showed us with commendable pride a contrivance by which he could screen off two beds at one end of the ward, so as to make two cubicles; these beds are intended for an offensive, a noisy, or a dying patient, and answer the purpose satisfactorily. There were no patients in bed.

The Male Ward

is on the same level, with a locked door of communication for the nurse's use. It is in all respects similar to the female ward, except that it holds only 10 beds. The bedsteads in both wards are low and of the ordinary width of a single bed: the bedding is various, either long straw or flock, the one or the other being used, according to the case; and a water mattress when required. In this ward we found a bedridden old man suffering from asthma and heart disease. The master told us that until thus laid aside he was the useful and handy man of the place. He was the solitary tenant of the ward, but was a cheerful and contented old man, and beautifully clean. The other inmates, seven in number, were in the day room below.

The Men's Day-room.

A descent down another worn stone stair brought us to the men's day-room, similar in all respects to that provided for the women. Again we plead for arm chairs for the old folks, just to make them a little more comfortable. The old gentlemen hobbled up the stone steps from the yard to be introduced to us. An old man with double cataract could yet distinguish between the light and the dark parts of our clothing much to his joy; he and another man with defective vision were to be sent to a neighbouring town to see an oculist, and they were planning the ways and means with the master with evident anticipation of the benefit to be derived from the visit. Another man was an imbecile, with a deformed foot; he had a surgical boot. The other patients were in various degrees of old age.

The Lying in Ward

is across a landing on the same floor as the female ward; it has two beds. The matron told us that it is very seldom used; the nurse is not a midwife; the medical officer, Dr. Wales, lives quite close, and he is responsible for the midwifery cases.

There is a Bathroom

for the women, with hot and cold water, outside the ward; the men's bathroom is on the ground floor. The closets, having a water flush, are outside each ward on the first floor; they are of the old style, and were littered and dirty, as is so frequently the case; for it is difficult to teach paupers cleanly habits. There were a few commodes in the ward.

Isolation

when necessary can be carried out in the small unoccupied wards in the infirmary department; the medical officer stated that they seldom, if ever, had a lock case; that if such did occur they would be placed apart. The only provision for the care of the insane would be by using the receiving wards, and setting apart special inmates as watchers, or by procuring such from the town.

No Trained Nurse.

The attendant who is responsible for the care of the sick has been four years in the work, in which time she must have gained considerable experience; but when a doctor has only untrained assistance much more work must devolve on him, with increased responsibility. There are pauper attendants at night, and the same act as wardsmen or women by day. The nurse whom we saw at her duties impressed us very favourably.

The Diets.

The matron invited us into the kitchen department to see the dinners served: these consisted of suet dumpling, currant dumpling, vegetables, meat, and broth; the portions were suet pudding and vegetables, meat and vegetables, currant pudding, or broth. Each portion was weighed by the master, and despatched quickly to the part of the house for which it was intended; we saw no hot water tins for the transit, so that if the food was to reach the inmate warm, it required to be expeditiously served. In the winter time we doubt if it be possible to keep the food warm in transit. We were again struck by the junks of meat that were carved for some of the patients, old people who must find a difficulty in mastication. The food was well cooked, the puddings light and well mixed, the vegetables well strained: the meat, beef, was boiled.

The Workhouse Grounds

are extensive, including flower and kitchen garden in front and at the sides of the building, and behind there are small gardens, which are the airing courts for the infirm and the sick. The old people are taken into the flower or kitchen gardens by the master or matron, but we must confess that we should like to see them disposed about the grounds at all times, the men with their pipes, the women with their knitting or their bit of work; we feel sure that the permission would be appreciated by the inmates, and could hardly be abused.

Recommendations.

We sympathise with the guardians, who have such an unmanageable structure for their infirmary. Still the difficulties are hardly insuperable, and we would suggest that some other part of the house might perhaps be adapted to infirmary work at a comparatively small cost. The worn out

steps can be turned or replaced, and this is a matter that demands immediate attention, unless the Board is prepared for a possible coroner's inquest, with its damaging verdict of culpable negligence. Then with regard to the nursing, while admitting most fully the merits of the present attendant for the sick, we cannot feel that the best is done for them until they have a trained nurse, who should be also a midwife. In the small infirmaries this question bristles with difficulties; but even a year's training in a hospital or infirmary, and the course in a lying-in hospital, would be an immense gain in the service that is rendered to the sick and infirm. We have already referred to the need for some small addition to the comforts for the infirm old people.

ARCHÆOLOGICA MEDICA.

XI.—"THE BYRTH OF MANKYND, OTHERWYSE NAMED THE WOMANS BOKE."

The question of the training of midwives is now so prominently before the profession that it will not be amiss to consider for a short time the first book addressed to them in English by a medical man.

Der Swangern Frauwen und Hebamen Rosegarten originally appeared at Worms in 1513, with a dedication to the Princess Katherine of Brunswick-Lüneberg. It was written by Eucharius Rösslin, or Rhodion, a doctor who died at Frankfort-on-the-Maine in 1526. He is credited with two editions of the *Kreuterbuch*, a work on the plants and metals used in medicine, which appeared in 1533 and 1566. The work spread over Europe like wildfire, for it was the first attempt to systematise the science and art of midwifery. German editions appeared at Strassburg in 1522; at Augsburg in 1528, 1532, 1544, and 1551; at Frankfort in 1561 and 1568; in Latin, under the title *De Partu Hominis*, at Frankfort in 1532; at Paris in 1535; and at Venice in 1536. The first French translation, by P. Bienassis, appeared at Paris in 1536, and it was often reprinted. It appeared in Dutch at Amsterdam in 1559. It was taught to speak English, as the translator quaintly puts it, in 1540, when it was issued as a small 4to of 86 leaves, dedicated by Richard Jonas to the Lady Quene Katheryne, wyfe and most derely belovyd spouse unto the Most myghty and sapient Christen prynce kynge Henry the VIII.

If it learnt to talk English late, however, it very soon became naturalised, for its sale must have been enormous. Edition succeeded edition with the utmost rapidity. It is still not unusual to find copies of the editions of 1545, 1552, 1560, 1564, 1565, 1598, 1604, 1613, 1626, 1634, 1654 (called the 4th edition), and 1676, all in 4to and printed in black letter. It is somewhat remarkable that many of the earlier editions were issued without the printer's name, and that the anatomical plates were not inserted until after the 1565 issue, though in the earlier editions a full description of these plates is given, and in at least one copy of the 1552 edition blank sheets are left so that the owner may paste in the plates from one of the other versions. In each edition the birth figures are present in the form of four copperplate engravings, containing seventeen illustrations of children *in utero*. These plates lend the highest interest to the book, for they are some of the earliest specimens of copperplate printing known in England.

The 1540 and 1545 editions of the work were issued from the press of Thomas Raynalde and William Hyll, the printers of Matthew's Bible. The work published by Reynalde in 1545 is larger and differs in other respects from the original edition produced by Richard Jonas in 1540 and as the translation is said to be made by Thomas Raynalde, Phisition, it is probable that the editor, printer, and publisher were one and the same person.

The work consists of four books, and an interesting prologue, in which the writer betrays his anxiety lest this English version should fall into improper hands or be used for other than lawful purposes. The first book gives an excellent summary of the anatomy of the female generative organs, illustrated in the later editions by well-engraved plates of the parts taken in one case from "a woman at the last Anathomie which I did see at the uniuersitie of Padua in Italie," whilst another "fygure is pourtrahed after ye quycke bothe in length and bredth according to the length and bredth of the matrix of a woman which was cut open for the same purpose by physitions."

The second book gives common-sense directions as to diet and general hygiene at the time of labour and for a month before it. A picture of the birthstool is given, and the various ways in which the fœtus may present are described and figured. Short and clear directions are given to the midwife as to what she shou'd do in cases of unnatural presentations. The accidents which may occur after delivery are then passed in review, and in cases of metrorrhagia it is recommended to "take the stone Hæmatites and rubbe it on a barbar's whetstone called hone, tyll the hone seme red, then wash it agayne from the hone wyth plantayne water, and so do often tymes, untyl that ye haue a good quantite of it, and euery morning let the one drinke ii, iii, iiii, or v sponefuls of the same water." This was clearly a method of administering an alkaline preparation of iron and was probably efficacious.

"Agayne sometyme it cometh to passe, that after the woman's labour the Matrix is remoued oute of hys place, and appeareth forthe, then let it be wasshed and soked wyth the water in which be soden, these thinges folowynge": "Item many tymes it chaunceth that thorowe the greate difficultye and thronges of laboure the preuye parte and the foundament become one by reason of rupture and breakinge of the same parte in the delyueraunce of the chylde.....the whych thing chaunceth sometimes by reason that the same place is very narow and also tender and the byrth bygge, and of great groweth, so that it procedeth with soch violence, that it breaketh the waye before it. When thys myshappe falleth, fyrste wasshe and soke the Matrix, and also reduce it to hys place agayne after the maner as I told you here immediatly before, then heale thys bracke and wounde by sowynge of bothe sydes of it togeather agayne with a silken threde, as chyrurgions do other woundes; and yf that lyke ye not then maye ye cure it otherwyse wythout sowyng thus. Take two lyttle peces of lynnen cloth eche of the length of the wound, and in bredth two fingers brode: sprede the little clothes with some fast cleuing plaster, the which wyl cause the cloutes to stycke fast where they shalbe set; then fasten them the one on the one syde of the ryft, the other on the other syde.....then.....sow the sides of the lynnen together close as before I byd you before to sowe the skyn; and when they be thus stytched together laye a little liquid pytch or tarre upon the same; and this done the lappes and sydes of the wound under the linnen plaster wyl grow together agayne and heale, and then may ye remoue your playsters."

The third book is devoted to the newly-born child, and excellent directions are given for choosing a wet nurse, though "it shall be beste that the mother geue her chylde sucke her selfe, for the mothers mylke is more conueniente and agreable to the infant than any other womans."

In the fourth book such things are considered of as "may farther or hinder the conception of man." This is eked out with various bellifying receipts or embellising medicines, forming the least satisfactory part of the work. Amongst many curious terms used by the author, that "against yexing or the hyckate" is not the least interesting, for it is clearly the same as that used by Shakespeare in *Midsummer Night's Dream*, where Puck says:

> Sometime for three foot stool mistaketh me;
> Then slip I from her bum, down topples she,
> And "tailor" cries, and falls into a cough;
> And then the whole quire hold their hipps and loff,
> And WAXEN in their mirth, and neeze, and swear.
> A merrier hour was never wasted there.

"This yexing," says Raynalde, "commeth either of coldness of the stomacke, outher els of ouermuch fulnesse, or for lacke of meate, and emptinesse of the stomack," so that it is here clearly used in the sense of hiccough, which exactly agrees with Shakespeare's use of the term, though it has been perverted by his editors into *waxen*.

At a meeting of the Glasgow Dental Students' Society on December 5th Mr. J. A. Biggs read a paper on Cleft Palate and its Mechanical Treatment, and exhibited several patients benefited by the use of artificial palates. A discussion followed, in which Professor H. E. Clark and Drs. Edgar and Marshall took part.

THE SUBSIDISED HOSPITALS OF NEW SOUTH WALES.[1]

We commend this report to the careful study of those persons interested in hospital management who are meditating on the possibility of a change in this country which would place the general hospitals more or less under Government control. As we remarked in a previous number of the British Medical Journal, Government support of the hospitals, or even the entire foundation and maintenance of the hospitals by Government, may be absolutely necessary in a new country, so long as there is no moneyed class to undertake that duty. But we have no doubt that the system which prevails in this country of voluntary charities, supplemented by Poor-law infirmaries, is infinitely better both in regard to medical education and to the care of the poor.

We should judge from this report of the medical adviser that in New South Wales the system of subsidised hospitals is carefully administered and thoughtfully organised. It seems that the voluntary contributions of the public and the payments received from the patients are met by a Government subsidy, apparently of equal amount as far as establishment expenses are concerned, and of some proportion (not here stated, but settled by a Legislative Act) for maintenance. In return for this the Government stipulates that before it consents to subscribe it shall have been convinced of the need of any new hospital proposed, and that the hospital when founded shall admit (1) all accidents and urgent cases, (2) all destitute cases recommended by the police magistrate or other approved officer, and (3) all cases of fever and infectious disease. And we may here note with hearty approval that on some of the aborigines having been refused admission at one of the hospitals, it was ruled that they shall have an equal claim with all other persons to admission.

In the absence of a Poor Law, and in the absence also of a moneyed class, we do not see how a better system can be devised. But the authorities evidently see how undesirable it is that all the expense of the hospital should devolve on the State, and hence they have introduced this system of subsidies, which we take to be transitional, and intended so to stimulate the benevolence of private individuals that ultimately there may spring up a class of hospitals free from the trammels of the State, these being supplemented where necessary by State institutions.

In the present report some of the defects of State hospitals are very plainly to be traced. In the first place, in a really free country the control exercised by the public authority must always be imperfect. In Continental systems, where a rigid bureaucracy prevails, this may be otherwise; but in New South Wales the control exercised is so imperfect that the medical adviser has at the outset to express his regret that he has been unable even to obtain the details necessary to make the statistics of his report reliable. "Some of the figures are admittedly incorrect; in some cases certain of the required tables are wanting, in a few others none whatever have reached me."

"The average cost per head per annum varies from £295 14s. 9d. to £37 5s. 3d." This extraordinary discrepancy is explained as depending chiefly on the fact that, in some districts, hospitals have been founded far too large for the local needs, so that a large institution has to be kept up for a very small average number of patients—another proof of imperfect control.

Again, "the death-rate varies from 57.14 per cent. to *nil*." On referring to the tables, however, it will be seen that the enormous mortality of 57.14 occurred in a hospital where the total number of patients admitted in the year was only six. A hospital which has no mortality must either have no patients or the patients must be suffering from diseases which hardly justify hospital treatment.

Another proof of the inferior character of some of the institutions is that a question has arisen whether unqualified medical men might not be appointed on the staff. This, however, has been decided in the negative. Again, it is said "frequently to happen in small towns that, in the absence of the hospital medical officer, the matron or nurse has, upon emergency, to rely to a great extent on her own resources."

All this seems to point to a condition of hospitals far from perfect, but which an enlightened and intelligent central authority is occupied in raising as rapidly as may be by the cultivation of voluntary energy. To this end a general inspection of country hospitals by the chief medical inspector has been commenced, and the defects which he may detect will be remedied, it is hoped by the committees of management elected by the subscribers, and the medical adviser is endeavouring to draw up a model set of by-laws to act as a guide to these committees.

We may add that the number of applications for admission has risen year by year, especially in the last year treated of, in consequence of the exceptional distress then prevailing. And we cannot but see that the securities for the eligibility of the applicants and the quality of the treatment are far, indeed, from adequate.

Still, on the whole the report is a fresh proof of the energy for which our colonies are famous, and of vigour in dealing with a state of things in which the organisation of medical relief is very difficult.

[1] *Report on the Subsidised Hospitals.* Ordered by the Legislative Assembly to be printed, August 29th, 1894.

THE NEWCASTLE THROAT AND EAR HOSPITAL.

The prevailing fashion now in semi-charitable medical institutions seems to be the foundation of so-called "hospitals" for diseases of the ear and throat. We say "so-called" hospitals with no intention of stigmatising any particular institution, for in each case inquiry is necessary to disclose the nature of its practice. But speaking of the whole class, there can be no reasonable doubt that in some unknown, but we believe not very insignificant proportion, these institutions are not so much public hospitals as means of advancing the interests of private persons. A complaint has reached us in respect of the institution above named from a medical man who does not wish to give his name in public, which runs thus:

"I beg to enclose a circular which has been delivered at every house in this part of Newcastle, and to ask whether this is in accordance with the traditions of our profession? When good patients present themselves for treatment at the hospital they are frequently, if not regularly, drafted off to the doctors' own surgeries, and there treated as private patients. I am, etc., A Sufferer."

Diseases of the
THROAT, EAR, NOSE, Etc.

The Newcastle
THROAT AND EAR HOSPITAL,
1, Clayton Street East,
is now open daily
from 3 to 4 o'clock.

ATTENDANCE IS ALSO GIVEN,
for out-patients
at the
SURGICAL HOME 20, BRIGHTON GROVE,
every Friday, at 10 o'clock.

A Letter not Necessary.

A Small Charge is made for Medicines, which goes entirely towards the Support of the Institutions.

This handbill is said to have been circulated broadcast to both poor and rich, together with the sixteenth annual report of the hospital, containing the names and addresses of its seven surgeons. We learn from this report that no letters of recommendation are required, "the urgency of the case alone being considered sufficient recommendation," and also that "the really indigent" are relieved gratuitously, while those who can do so are expected to contribute a small sum weekly or monthly towards the expenses of their treatment. These sums, we presume, go to the funds of the hospital exclusively, and the contributions so obtained amounted in the year 1893 to about £370 out of a total receipt of £618. No mention is made of any steps taken to ascertain whether an applicant is really indigent, or his circumstances are such as to justify

his receiving hospital treatment on the terms of giving "a small sum" at his own discretion. It will be seen that the institution has been in existence for a comparatively long period, so that it will naturally be asked whether any change has recently been made in its management to occasion present complaint. The issue of the handbill seems one such cause; and as the surgeons are all on the Committee of Management they must be taken to be consenting parties to this very objectionable step. Again, it is said that when patients present themselves for treatment at the hospital they are sometimes recommended to consult the surgeon at his private residence, and that by the indiscriminate circulation of the handbill the surgeons are in effect touting for private patients.

It would be entirely unjustifiable on our part to pronounce any opinion on these charges with the imperfect information we possess; but they are very serious imputations on the hospital and on all concerned in its management, and appear to require some explanation from the medical staff.

ROYAL COLLEGE OF PHYSICIANS.

An extraordinary comitia of the College was held on Thursday, December 13th, J. Russell Reynolds, M.D., F.R.S., President, in the chair.

The President, after referring to the deaths of Dr. Bisset Hawkins and Dr. Sturges since the last meeting of the College, announced that Dr. Church would deliver the Harveian Oration next year, and Dr. Bradbury the next Bradshaw Lecture.

A communication was received from the Foreign Office, enclosing a despatch from Her Majesty's Minister at Dresden, to the effect that a medical man there was warning the public not to place too much reliance upon Dr. Behring's treatment of diphtheria.

The Registrar read two letters from Dr. Hermann Weber, asking the College to accept the sum of £2,500 in trust for founding a prize and medals to be given biennially or triennially as might be subsequently determined, for the best essay on the subject of tuberculous consumption.

Dr. Hermann Weber, who was received with great applause, being invited by the President to explain his views if he wished to do so, said that he was only carrying out a project that he had long had in his mind and had often discussed with the late Sir William Gull and the late Dr. Wilson Fox. He was certain that the establishment of a prize would promote the further elucidation of the subject, and would contribute to induce the younger men to make researches, for to the successful candidates an award from the Royal College of Physicians would be a great prestige for the rest of their lives. He thought that perhaps a medal might be awarded to the second candidate as well as to the first: he was no doubt partly influenced in proposing a medal by his love of the art of medalling. He had not the slightest doubt that it lay in our power to diminish the ravages of this disease, if not ultimately to eradicate it, and that we should be able to improve the condition of those attacked. He wished the essays to deal either with the etiology, pathology, prevention, or treatment of the disease, and he had no doubt that the most important point would be the prevention of the spread of the disease not only by social and hygienic measures, but also by treatment in properly arranged hospitals or asylums in different parts of the country. He was in hopes that some future essay would put the matter in such a convincing way, not only before the profession but before the public, as to secure the help of the community at large, and so help to bring about the much needed change not only in regard to the food and dwellings of the poorer classes, but also in factories, etc. He then referred to his intimate friendship with, and love and esteem for, the late Edmund Alexander Parkes, a common bond which he had shared with the President, and he concluded, "I hope in honour of the memory of the man you will accept my offer."

The President, in accepting the gift on behalf of the College, conveyed the thanks of the Fellows in a few appropriate words, and nominated as a committee to confer with Dr. Weber, Drs. J. E. Pollock, Douglas Powell, Theodore Williams and Coupland to arrange the details of the trust.

On the recommendation of the Council Dr. P. W. Latham was unanimously chosen Senior Censor in the place of the late Dr. Sturges; and the thanks of the College were given to Dr. J. E. Pollock, who had filled the post during the interval.

A letter was read from Sir Richard Quain, announcing that the General Medical Council were undertaking to bring out a new edition of the *British Pharmacopœia*, and inviting suggestions and recommendations from the College. It was left for the President to nominate a committee to do this.

Permission was given to Mr. Renison to take a copy of the bust of Sydenham from the cast, but not from the original bust. A letter asking permission to take a photograph of the portrait of Harvey was deferred for further consideration.

After some discussion it was resolved, at the request of Dr. J. K. Fowler, Secretary to the Club, that permission be given to the Fellows Club to hold their quarterly dinner in the College for one year.

A report from the Laboratories Committee was received, and, on the motion of Dr. Pavy, after a very full discussion, was adopted *nem. con.* It referred to matters of unusual importance, of which the following are the chief:

1. A letter had been received from the Metropolitan Asylums Board inquiring whether the Royal Colleges of Physicians and Surgeons could afford the managers facilities for the bacteriological investigation of doubtful cases of diphtheria which may be sent to the Board's hospitals from time to time. The Committee undertook that the investigation should be carried out by special persons appointed by themselves under the superintendence of their Director, Dr. Sims Woodhead, on condition that the Metropolitan Asylums Board would undertake the expenses of the investigation, including the salaries of those engaged in the work; these were estimated at £750 per annum, and the Board agreed to the terms for six months as a provisional arrangement.

2. The Asylums Board subsequently asked whether the Royal Colleges would be willing to supply, and if so when and upon what terms, diphtheria antitoxin for use in the hospitals of the Board. To this the Committee replied that they would be willing to supply antitoxin serum on the following conditions, namely:

That the Metropolitan Asylums Board will afford accommodation on one of their farms near to London for the required number of horses, such accommodation to include the services of the necessary stable attendants and the keep of the animals, and that other expenses entailed in the preparation of the serum should be defrayed by the Metropolitan Asylums Board with the exception of the initial cost of the horses, which will be provided by the Royal Colleges.

The reply of the Board to this is shortly expected.

3. A communication announcing that the Goldsmiths' Company had decided to make a grant of £1,000 for the purpose of prosecuting research work in connection with the antitoxin treatment of diphtheria, with which they desired to combine, if possible, the supply of serum for use amongst the poorer classes of the community, and asking whether the Conjoint Board of the two Royal Colleges would undertake the administration of the grant. The Committee had accepted the offer of the Company, and it only remained to settle the details of the scheme for carrying into effect the wishes of the donors.

4. The re-election of Dr. Woodhead as Director of the Laboratories.

ROYAL COLLEGE OF SURGEONS.

An ordinary Council was held at the College on December 13th, Mr. Hulke being in the chair. The minutes of the last meeting were read and confirmed.

The following regulation, as recommended by the Board of Examiners in Dental Surgery, was adopted:

A candidate who is referred at the examination for the L.D.S. will be required to produce before admission to re-examination a certificate of three months' additional study at a general hospital and a special dental hospital, the precise attendances required at each hospital being left to the discretion of the respective hospital authorities.

A report was received from the Laboratories Committee, dealing with certain applications from the Metropolitan Asylums Board. Resolutions were passed similar to those already mentioned as having been passed by the Royal College of Physicians.

In reference to the proposal for the institution of a practical

examination in Physiology at the Primary Examination for the Fellowship, it was resolved, on the recommendation of the Nomination Committee, that at present no alteration be made.

Mr. Edmund Owen was re-elected, and Messrs. W. Anderson and H. W. Page were elected, members of the Court of Examiners.

It was announced that the two vacancies on the Board of Examiners in Dental Surgery occasioned by the expiration of the period of office on the Court of Examiners of Mr. Langton and Mr. Pick would be filled up at the quarterly meeting of the Council in January next.

The Council resolved that a Member of the College, residing in Sydney, New South Wales, be removed from being a Member of the College, in accordance with Clause 2, Section xvi, of the by-laws: and that the Registrar of the General Medical Council, the Registrar of the Medical Board of New South Wales, and the Honorary Secretary of the New South Wales Branch of the British Medical Association be informed of this resolution.

In reference to a resolution carried at the meeting of Fellows and Members on November 1st, the following reply was adopted:

That the Council do not think it advisable to apply for such an alteration in the charters as will give to Members of the College a vote in the election of members of the Council, or a proportion of seats upon the Council.

It was announced that a half-yearly meeting of Fellows would be held at the College, on Thursday, January 3rd, 1895.

The following motion, proposed by Mr. Macnamara, was carried.

That the Council of the Royal College of Surgeons of England urge Her Majesty's Government to take such steps as may be necessary in the coming session of Parliament for the appointment of a Statutory Commission to carry into effect or modify, as may seem advisable, the recommendations of the Commissioners appointed to consider the draft charter for the proposed Gresham University in London.

QUACKERY IN BRITISH GUIANA.

A woman, named M. E. Yglesias, was lately convicted on prosecution by the police at Georgetown for obtaining money unlawfully by false pretence. The case presents some peculiarities which are worth noting. The case was reported in the local newspaper under the heading of the "Tapeworm" Fraud, and the history gathered from the magistrate's decision is as follows:—The defendant arrived in the colony a short time ago, and by means of a printed handbill gave notice to the public that she was prepared to treat persons suffering from worms. Induced by the advertisement, a Mr. Saltus Jones visited the woman Yglesias to consult her as to whether he was affected or not. In accordance with the directions given Jones went the next day, and, after taking a spoonful of some liquid unknown and a draught of castor oil and beer combined, had an enema administered, and was subsequently shown several small white objects which he was informed were the cause of his disease, and which were stated to be liver worms. Jones paid a fee of twelve dollars and brought away the "worms." The "exhibits" were examined by Dr. Daniels and found to be sections of tapeworm, and that it was impossible for these to have been expelled from the human body in such a form, the portions being cut longitudinally and transversely. The defendant was convicted of obtaining money under false pretences, and fined 100 dollars or six weeks' imprisonment. It was made clear from the evidence given that these fraudulent representations of worms were used by the defendant in cases where the action of the enema showed no presence of real worms. It is worthy of note that the woman produced testimonials purporting to be signed by well-known members of the medical profession in other British colonies testifying to the efficacy of her treatment, but these, of course, may be also as fraudulent misrepresentations as the tapeworms were.

THE MEDICINE MAN, CONJURER, HYPNOTIST, AND DOCTOR.

Dr. Max Bartels, of the Berlin Board of Health, has recently completed an exhaustive treatise on the medical practices of aborigines. It is profusely illustrated, the author giving to the world the result of years of conscientious and scholarly research. For its compilation a tedious examination of thousands of archæological specimens was necessary, as also a studious inquiry into aboriginal customs and beliefs and acquaintance with the jugglery and quackery in the lower stratum of civilised society. A superficial investigation makes it appear to the reader that these unenlightened savages had no "method in their madness," that their system is a chaotic agglomeration of superstition and ghost fear, of ignorance and vulgar brutality—the work of certain impostors and charlatans, not with healing results, but to the destruction of the sufferers. Dr. Bartels has systematised the aboriginal practices, and finds a close relation to the methods of rural doctors in many countries to-day. The savages have conjurers, bone-setters, herb and medicine men to drive away the evil spirits. These primitive practitioners knew how to administer herbs with excellent medical properties in connection with their overawing necromancy, and they understood the cold and hot water and the sweat bath cure as well as the "wise doctresses" of to-day.

A close scrutiny of the logical basis of these curative and protective tactics, a systematic and scientific investigation of the medical and surgical manipulations of the wild men of Asia, Africa, and America will show remarkable therapeutic results, a coarse application in many tribes of the healing methods of modern massage and hypnotism, and cases of the most difficult and hazardous surgical operations, the only difference being that the knowledge of the aborigines was not reduced to a science.

The aborigines in their etiology ascribed most of their maladies to demons. The conception that devils were the cause of sickness was only erroneous in so far as these beings were materialised. Martin Luther asserts that "pestilence, fevers, and other maladies are undoubtedly to be regarded as the spoiling work of the devil."

In their carnal vagaries the phantasy of the aborigines moulded a demon in human shape for every disease. The typhoid fever devil, for example, was pictured by the Singalese as Mahakola Yakscha, a being burdened with eighteen uncanny visages, representing the various stages of this dreadful contagion.

There were other causes than demons in prehistoric etiology. Here and there notions are met with which anticipate modern conceptions. Many Indian tribes such as the Kaffirs, and the Anamites, regard animals, principally worms, as the cardinal causes. They believe the worms of decaying human bodies enter the bodies of the nearest relatives and friends. May one not look upon this as the dawn of all subsequent parasite theories? Their imagination ran away with them, however, when they explained to the patients the painful ailment caused by the accumulation and protrusion of small bones, which had made their way into their anatomy in some mysterious manner at the will of malicious animals. But these wise men of old were not far amiss when they shook their fists at the evil winds that swept through their unprotected wigwams. Are these same winds not regarded to-day as the carriers of the infectious miasmata, those fine particles of putrefied bodies floating in the atmosphere which enter the human system with the breath inhaled? Finally they understood well enough that there existed an intimate connection between sickness and the indulgence in unwholesome nourishment. The inhabitants of the Lisang and Seemala Islands, as well as those of the Gerong Archipelago, believe that certain fish species eaten with Spanish pepper will invariably cause leprosy.

In this curious mixture of sagacity and superstition it is readily seen that the first curative and protective means consisted in the driving away of evil spirits. The medicine man used two methods for his purpose—exorcism and hypnotic sleep. The first of these procedures is so generally known that it is not necessary to repeat it in this connection. More interesting is an inquiry into the hypnotic and suggestive

actions. Around the couch of the patient the medical man and his assistant kept up a not overgraceful dancing with a weird and monotonous accompaniment of drum beating, to which the patient was in duty bound to succumb. If he happened to wake up the hypnotic performance was repeated and the final awakening brought renewed health and strength.

If the patient imagined a foreign body was the cause of his misery, then the medicine man would place his mouth in the affected part, and suck out the intruding object. Suddenly he rises, and (*mirabile dictu*) takes a stone out of his mouth, or he shakes claws of animals or human bones out of his sleeves, or often a whole porcupine, and presents the extracted (?) "thorn in the flesh" to the sufferer. The prayers and oft-repeated ritual lasting for hours, as a variation to the dances, could also not fail to produce a hypnotic effect on the patient.

The Navajo Indians make use of the following supplication to their mountain spirits:

> Thou mighty ruler of the mountains!
> Lord of the mountains!
> Thou strong young hero!
> O great victor!
> I have brought thee my sacrifice!
> Restore unto me my body in health!
> Restore unto me all my beauty!

The petitions addressed to the demons during epidemics resulted perhaps, less successfully. On the Watavela Islands the demon is made to listen to the following mild proposition. "Lord Contagion, thou shalt dwell no longer here! Move on to a more favourable resort."

On the Island of Buru the evil spirit is made to understand the means of the inhabitants are already exhausted. When the small-pox rages they cry piteously:

"Dear Grandfather Small-pox please go away! We have prepared victuals for thy voyage! We have nothing more to offer thee!"

Besides these practices, originating in the primitive belief in demonism, the savages use a series of procedures full of therapeutic and prophylactic significance. Thus the medicine men among the Indians order an artificial vomiting, which takes place in the sanctuaries, and the subjects are made to believe it is an internal spiritual cleansing.

The fatiguing medicine dances really aim at a profuse perspiration more than anything else. Dry, cold, and vapour baths are in vogue among many tribes. Vapour huts are found in most Indian villages. Massage, which has reached a high state of development of late through the praiseworthy efforts of the Swedes and the French, originated with the Chinese, and was one of the most logical cures among the aborigines of Asia. Even to the present day, it is the most popular remedy in Japan, where it is called the Ambuk.

PRIVATE LUNATIC ASYLUMS.

In reference to the recent revival of exaggerated charges against private lunatic asylums and the allegations that patients are either cruelly treated or unjustly detained there, it may be interesting to recall a cry of the same kind which was raised upon the publication of a novel called *Hard Cash* by Mr. Charles Reade, and the societies then formed and meetings held to redress the alleged grievances. There was, however, one difficulty, and that was that although everybody was very willing to redress the grievances, it was found impossible to discover an aggrieved person.

The following is a note furnished to us by Mr. Ernest Hart, which may be of considerable interest just now in reference to the circumstances which occurred, and the relations which he had on this subject with Mr. Reade, and the investigations which he undertook at Mr. Reade's own request. The results will show that no grievance, such as Mr. Reade alleged in his book, could be substantiated in any private asylum or that there was any one lunatic or person that was improperly detained. Mr. Hart writes:

"I have often been tempted by my duties as Chairman of the Parliamentary Bills Committee to enter upon the thorny path of the amendment of the lunacy law, and early in life was led to form a strong opinion that the hardships and difficulties which were often inflicted upon medical men in their efforts to do what was best for lunatic patients were excessive, and that the responsibility thrown upon them should be lightened, either by the intervention of a magistrate, who should share that responsibility, or by the appointment of Government officials, specially selected, upon whom the duty of certification should fall. On the other hand, I was always desirous of limiting, as far as possible, the interest such as a private asylum gives, or the imaginable temptations which it might offer to the proprietor to prolong unduly the detention of private patients. I was always in favour of substituting, as largely as possible, asylums such as the Royal Crichton Asylum at Dumfries, or the middle-class public asylums of Northampton for private enterprise asylums, of which I believed only a certain number of exceptional establishments should be continued to meet exceptional needs."

In this connection some notes will be found of the work done in the report of the Parliamentary Bills Committee. When Mr. Charles Reade published the famous novel already mentioned Mr. Hart felt that a gross injustice had been done by the representation as a typical character of a person whose counterpart he did not believe to exist in the medical profession—one who would lend himself to conspiracy and abuse the powers which he held in solemn trust for criminal purposes, and one whose whole life was a living lie. Of course, it was possible to conceive that there might be such people, but in a career which had given him many opportunities of observation, and in the course of which he had been led by his interest in this subject to make very searching inquiries from friends holding high official position and of a perfectly independent character, such as Dr. Bucknill and Dr. Tuke, he had never been able to find a trace of the existence of any such state of things as Mr. Reade represented to be frequent and typical and as he led the public to believe were so.

Just at this time it happened that Mr. Winwood Reade, a favourite nephew of Mr. Charles Reade, a well-known traveller and *littérateur*, author of *Savage Africa*, was staying at Mr. Hart's house for some months. Mr. W. Reade was a man who presented a curious combination of amiability and cynicism, and his literary style gave little idea of the natural sweetness of the man's character. He desired to study medicine, and had come to Mr. Hart, who was then Dean of the Medical School at St. Mary's Hospital, desiring to take up a complete course of medical study. Being lonely in London, and with few friends, Mr. Hart had invited him to stay for the first few months at his house as a friend: and when Charles Reade came out with this manifesto and put himself at the head of a society for the purpose of freeing all persons unduly detained in lunatic asylums, and for the reform of alleged abuses of authority by medical men, Mr. Hart freely expressed to Mr. W. Reade his conviction that Charles Reade was on the wrong tack, and that there were no facts to justify the violent attacks on doctors made in *Hard Cash*.

Charles Reade, however, protested that he had abundant evidence in his notebooks on this point. It was then agreed, through Mr. Winwood Reade, that he would entrust the investigation of such cases which should come under his notice to Mr. Hart. Weeks and even months passed before he was able to produce any one example of these alleged wrongdoings, which at first he had believed to exist in great numbers.

One day, however, the footman brought to Mr. Hart in his consulting room two cards, one bearing the name "Major ——," and the other "Introduced by Mr. Charles Reade." The gentleman was ushered in at once. He was a tall, very handsome man, with long brown beard and blue eyes, manners most correct and gentlemanly, excellently well tailored, and having all the appearance of possessing the habits and manners of a person in a good position. Mr. Hart asked him what he could do. "I see," he said, "you have come from Charles Reade. Any friend of his is welcome."

The Major then began a fluent description of his wrongs. He was detained at the present moment in a private asylum, the very asylum which Mr. Reade had indicated as being conducted by a person under the name of Dr. Wolf. He was not mad, but he was certified as mad, and he was in gaol in this terrible although luxurious establishment. His history was that he had considerable claims on estates which were

unjustly held by his brother, a well-known member of Parliament. His brother had brought false charges against him of violence, which were wholly untrue, and had succeeded in persuading some doctors to certify, and had given him in charge of Dr. ——, in whose establishment he had been now for eight months, being, as he said, "as sane, sir, as you are." Of the preliminary transactions he gave a most clear and correct account. "And now, sir, Mr. Charles Reade tells me that you will investigate the matter. I ask for nothing else; and you will obtain for me my freedom."

"Well," said Mr. Hart, "you give a very coherent account of this matter, and I do not doubt that I can help you, and probably obtain your release. But you have just told me that you are shut up. How do you come here? Have you any attendant with you?"

"Oh, no," said the Major, "I dodge that very easily. I am allowed out with an attendant, and as soon as we get a little way off I give him a sovereign to go and amuse himself, and I go down to ——— Club, read the newspapers, and pass the day buying little trifles and amusing myself; and at a given hour he meets me at the corner of St. James's Street, and we go back together."

"Well," said Mr. Hart, "it is 1 o'clock now. I have to go to my hospital, but if you will look in here to-morrow at 11 o'clock and bring any papers you have with you I will go more thoroughly into it, and, if necessary, go with you to the Commissioners."

"No; for Heaven's sake, do not go to the Commissioners; they are in the conspiracy," said the Major.

"Very well, I will be able to manage the matter, no doubt, without going to the Commissioners."

Mr. Hart called at Dr. ——'s house and asked: "Have you a patient in your house called Major ——?" "Oh, yes," he has been here for eight months." "Do you mind telling me his history and why he is there?" said Mr. Hart. "Oh, no," Dr. —— returned, "there is no reason why I should not, as you tell me your reason for asking. He is a very violent lunatic, but his attacks are of intermittent mania. During the attacks he displays great violence, and has many times committed assaults which might have ended in homicide. His last attack before he came in was on his brother. They were sitting in the breakfast room with his wife and family, when he suddenly declared that his brother was a rascal and was keeping him from his rights. He could not be soothed. He seized his brother and threw him out of the window." Mr. Hart then said: "Do not you allow him a great deal of liberty?" "You must know he is quiet and well conducted in the intervals," was the reply. "He has only one incurable symptom, and that is he always believes himself followed by persecutors. Of these the chief is his brother, who, he states, has laid down telegraph wires wherever he goes and is always scheming to get him in his power and to annoy him, and constantly annoys him by abusive voices." Dr. —— showed Mr. Hart the notes of his case.

The next morning the Major came again. "Well," said Mr. Hart, "I do not know that it would be difficult to get your release; but would not you be badly off if you were let out? Would not your enemies be pursuing you and laying down wires and abusing you?" "Yes," he said, "that is true, and that is why I had better not go out. They know I am here, and I can hear them now; cannot you?"

In other words, this unfortunate man was the victim of a delirium of persecution accompanied by intermittent mania, but the violent maniacal attacks were always preceded by periods of hypochondriacal depression, and thus gave warning of their approach. He was in the meantime allowed out with his attendant. The doctor had warning of the alleged untrustworthiness of the attendant, and the visits to the club were no longer so easy, probably much to the advantage and safety of the members.

The result of this inquiry was communicated to Charles Reade, who professed surprise. He was thankful for the information afforded, and promised further examples, but was never able to find one, and never during the course of three years did he find any case which stood the test of his own investigation, or which he felt justified in sending to Mr. Hart. In the interval Mr. Hart went with Mr. Winwood Reade to a whimsical banquet. In the room were many of the members of this now extinct society for aiding imprisoned lunatics. Charles Reade took the chair. Things went fairly well, barring some eccentricities of manner and excited talk. At the end of dinner Mr. Reade stood up and said: "Gentlemen, there is one toast and one only which we need give in an assembly of English gentlemen, and that is the health of the Queen." The toast was duly drunk. "I rise, sir," said a tall man at the bottom of the table, "to thank you for the honour you have done me; I am the Queen." He was pulled down and continued to struggle, and another gentleman thereupon stood up and protested that that could not be the Queen, for he was the King. The dinner shortly broke up in great confusion, and the Reades left in disgust. It was probably the last dinner of the sort which was ever given. These were examples of the oppressed lunatics and of the friends of the insane people who were in asylums, and who ought to be let out.

Probably before his death Reade was convinced of the impropriety of his attack. He never fully acknowledged this but continued to entertain a vague belief that he had entered upon a useful crusade, and championed a just cause. These events caused some coolness, but Mr. Winwood Reade was perfectly satisfied of the real facts of the case, and by no means coincided in his uncle's views.

AMUSIA.

(Musical Aphasia.)

Professor Edgren, of Stockholm,[1] gives an extensive review of what has been published in this curious subject. It is only within the last few years that attention has been drawn to the fact that the musical capacity may be lost from various pathological causes, and further, that musical aphasia may occur either in conjunction with ordinary aphasia, or be independent of it.

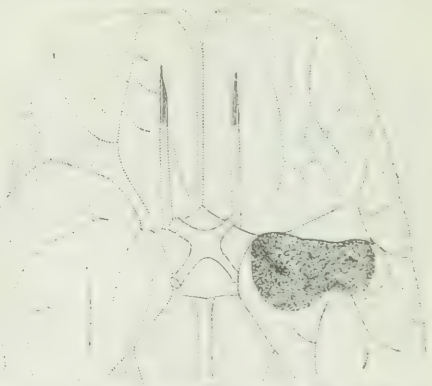


Fig. 1.—Base of brain: anterior part of the left temporal lobe.

According to Ballet, the expression of music should be placed between the emotional and the artificial (verbal) language. The organisation of the figures of music is less complicated and is earlier than the figures of words. A great number of children sing before they speak. Reyer tells of a child of 9 months, who was able to repeat the notes exactly as played on the piano. A son of the composer, Dvorak, it is said, sang the Fatinitza March, with his nurse, at the age of one year. It is not uncommon to find idiots with few or no words at their command, who possess a certain degree of musical feeling. In the clinical diagnosis of the various musical disturbances the author uses a terminology, analogous to that used for aphasia by the French school. Thus amusia is a general term analogous with aphasia. The sensory forms of amusia are tone-deafness and note-blindness; the motor forms are called vocal motor amusia;

[1] *Hygiea*, May-June, 1894.

inability to sing and instrumental motor amusia; inability to play a musical instrument and musical agraphia. It follows that some forms of amusia can be diagnosed only in patients with some musical education, and others only in those who are musical by nature. Cases of congenital tone-deafness are spoken of. Even musical people differ in their way of appreciating music. To most people the auditive impressions are the most important, but there are exceptions. Stricker tells of a singer who had distinct sensations in the larynx on listening to music, analogous to those she felt when singing herself. Some persons experience the same pleasure on reading a piece of music as when they hear it executed.

Professor Edgren gives a review of 53 cases, and divides them into three groups:

A.—CASES OF APHASIA WITHOUT AMUSIA.

Some of the 24 patients in this group suffered from more or less complete motor aphasia, but retained their power to sing. Some aphasic patients, when singing, could pronounce the words in the text, which they were unable to articulate in speaking. Agraphic patients could write and compose music. Patients with word-deafness could appreciate music, and those who were word-blind could read music.[2] Neither motor nor sensory aphasia need therefore necessarily be followed by similar forms of amusia.

B.—CASES OF APHASIA COMPLICATED BY AMUSIA.

In the 22 cases belonging to this group, a certain form of amusia was often combined with the analogous form of aphasia, but there were exceptions. In several cases of more or less complete aphasia, vocal motor amusia was the only musical abnormality; in others, both vocal and instrumental motor amusia were present. In 3 cases word-deafness and note-deafness were the only symptoms present. Word-blindness and note-blindness were combined in a patient of Déjerine's. Isolated forms of amusia may be combined with complicated forms of aphasia, and *vice versâ*.

C.—CASES OF AMUSIA WITHOUT APHASIA.

The cases in this group include 4 transient cases observed by Brazier—2 cases of complete amusia, 1 of note-blindness, and 1 of tone-deafness; the two latter occurred during attacks of migraine. Also an important case reported by Bernard of transient motor and sensory aphasia and permanent tone-deafness, where the following changes were found after death in the left hemisphere: destruction of the middle and back part of the third frontal gyrus, the whole insula, the whole first temporal gyrus, and a small part of the lower parietal lobe and part of the large central ganglia. Charcot related in one of his lectures in 1883 that the first symptom noticed in one of his colleagues of a cerebral affection which later resulted in rightsided hemiplegia, aphasia, and death, was note-blindness.

PROFESSOR EDGREN'S CASE

A man, aged 34, the day after knocking his head against a lamp-post, complained of severe headache, difficulty in seeing, and mental confusion; he vomited, had illusions of taste, and eighteen days after the injury developed tone-deafness as well as aphasic symptoms. The patient, an intelligent and musical man, came home and told his wife that he had been unable to make out the melodies played at a place of public amusement. He had been round to several places to test himself. He could only hear indistinct sounds, and was unable to make out any melody; he could not even distinguish between a march and a valse or polka. When his wife spoke to him he did not understand her. The following two days the patient did not speak. His speech and other aphasic symptoms disappeared within a month, but his tone-deafness remained unchanged till his death from purpura three years after the accident.

The chief *post-mortem* changes were the following: In the left hemisphere the anterior two-thirds of the superior temporal gyrus and the anterior half of the middle temporal gyrus were destroyed, exposing to view the island of Reil. At the junction of the posterior and middle thirds of the superior temporal gyrus the surface was sclerotic and adherent to the thickened pia. Under this sclerotic patch and for about 1 cm. behind it in the first temporal gyrus the softening was continued in the grey matter, but with decreasing depth. The surrounding parts were all healthy. In the right hemisphere there was a somewhat similar defect, surrounding the horizontal limb of the fissure of Sylvius. The defect here included the superior and external surface of the superior temporal gyrus in its posterior half and the lower edge of the supra-marginal gyrus for a similar distance. The destruction extended deeply down to the bottom of the fissure of Sylvius, and had spread to the white matter, which was softened to a much greater extent than the grey. The central ganglia and the internal capsule were healthy. Part of the branch of the left arteria fossæ Sylvii which ascends to the island of Reil was found converted into a fibrous cord, and presented a bulbous enlargement. To the disturbance of circulation caused by this the author attributes the transient aphasic symptoms as the back part of the first and second temporal gyri were healthy—the place of localisation of the auditive figures of words, according to most authors. That the right hemisphere should have taken up the functions of the left temporal lobe the author thinks improbable for two reasons: the short duration of the aphasic symptoms and the destruction of the back part of the first temporal gyrus of the right side. Professor Edgren would, therefore, regard the destruction in the temporal lobe in connection with the tone deafness, and, as the case was evidently one of pure tone-deafness, it is one of some importance in the study of amusia.

Professor Edgren's conclusions are:

1. Through various pathological processes the musical capacity, as well as the power of speech, can be destroyed wholly or partially, in the latter case being decomposed into its several components, thus making several varieties of amusia.

2. The various forms of amusia possess a certain degree of independence both as regards each other and in relation to aphasia.

3. The clinical varieties of amusia appear to be analogous to the clinical forms of aphasia; they are often, but not necessarily, combined with the analogous forms of aphasia.

4. Amusia may occur without aphasia and *vice versâ*.

5. It is probable that particular clinical varieties of amusia also possess an anatomical independence; that they may be localised to neighbouring but not to the identical parts, where the analogous forms of aphasia are believed to be localised.

6. It is probable that a special form of amusia (tone deafness) may be localised in the left temporal lobe in the first and second gyri, in front of the place the destruction of which causes word deafness.

[2] A musician, observed by Lasègue, who could neither speak nor write, was able to note down with ease any phrase of music sung to him. One of Bouillaud's patients with complete aphasia and agraphia could compose and write down a piece of music without mistakes, and hum it afterwards.

A SERIES of winter cruises in the Mediterranean has been arranged by the Ocean Cruising and Highland Yachting Company, Limited. The first cruise commences on December 29th, on which day London is left. Subsequent cruises commence at Marseilles. Among the ports at which the boat, the steam yacht *Cleopatra*, of 3 847 tons, calls are Leghorn, Naples, Corfu, Alexandria, Malta, Tunis, and Algiers. Other cruises vary a little from this: thus the third cruise, starting from Marseilles on March 17th, includes Athens, Constantinople, and Smyrna. On the fourth, which will start on April 19th, Venice is visited. The agents of the company are Messrs. Cook and Son, and the head office is at Messrs. P. H. Baker and Co., 20, Water Street, Liverpool.

LARGE MEDICINAL INJECTIONS THROUGH THE LARYNX.—On December 7th, Mr. Colin Campbell, of Saddleworth, gave a demonstration before the Manchester Medical Club on the method of administering large medicinal injections through the larynx. Mr. Colin Campbell described his method and results in a paper read recently before the Royal Medical and Chirurgical Society, an account of which was published in the BRITISH MEDICAL JOURNAL of December 1st. The four cases in which the injections were made at the Manchester Medical Club included three of phthisis and one of bronchial asthma.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscription must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, DECEMBER 22ND, 1894.

RATE-SUPPORTED HOSPITALS AND THE NEW BOARDS OF GUARDIANS.

In the reports on provincial workhouses and infirmaries which have been appearing weekly in our columns for the past six months, the attention of our readers has been directed mainly to the antiquated methods and appliances which, in most of the country unions, are considered good enough for the sick pauper. But in view of the recent elections we have selected from the material at hand the accounts of Reading and Withington Workhouse infirmaries [1] by way of showing to the newly-elected bodies what may be done in these rate-supported hospitals under an enlightened board. We may state once for all that we do not desire that the able-bodied pauper should be pampered; we urge no extravagance with public money. Our whole contention is that humanity and economy alike demand an efficient hospital department and proper classification of the inmates.

In considering the question of the workhouses, we must go back to the early part of the century when the reform of the Poor Law and the abolition of indiscriminate outdoor relief led to the erection of these buildings all over the country to serve the fourfold purpose (*a*) of a temporary shelter for the casual, (*b*) of a place for the education of destitute children, (*c*) of a house where the labour of the able-bodied pauper could be turned to account, and (*d*) of an asylum for the aged, helpless, and sick. Of these four purposes the first and the last are now by far the most important: the children are by degrees being lodged and educated outside the house, and the able-bodied are rarely to be found in the country unions unless they are feeble-minded, or unfortunate women detained because of their illegitimate children; the vagrants, the aged, and sick remain. In country districts the old people, when past work, are more and more driven to take refuge in the workhouse. The change which has been steadily but surely coming over the face of the country, driving the younger members of the family in quest of work into the towns, has often left the parents without their natural supporters in old age. Hence we find many of the respectable poor in the house, seeking there the asylum and ministrations which are denied them elsewhere by the force of circumstances; here also are the chronic invalids, paralytic, rheumatic, cancerous, or otherwise, who cannot be cared for in their own homes. To these we may add a sprinkling of patients with acute ailments, cases of minor operation, and sometimes cases of intercurrent infection, and in the larger towns the overflow from the general hospitals. Finally, there will always be found a proportion, less or more, of feeble-minded, of epileptics, of idiots, and of insane; indeed, in some of the remote unions the officers have to rely for the labour of the house on the imbeciles.

Considering, then, this motley assemblage—tramps, able-bodied, children, helpless, sick and diseased—we ask what is the machinery provided for the control, education, ministration, and development of the respective classes in each workhouse? We can only reply that the diversity of method and administration is nothing less than amazing, the variation depending to some extent, but by no means entirely, upon the size of the house and the number of its inmates; and ranging from the vast well-appointed house, with its schools, lunatic department, and hospital to the squalid country union, with all classes of inmate gathered under one roof, and its master and matron representing the executive.

Since our concern here is mainly with the sick and infirm, we shall not now discuss the classification and management of the feeble-minded, but will pass briefly under review the treatment of the first-named classes, as shown in the reports which deal with all parts of the country, and with every style of union.

In the first place we note that skilled nursing of the sick has received very little attention on the part of the guardians. In no single report, except the two above referred to, do we read of an adequate staff set apart for that purpose; in some instances we find a trained staff, but working in such insufficient numbers that their duties are of necessity confined to supervising the erratic and irresponsible service of the able-bodied paupers selected to wait on the sick. In many cases the sick attendant has had no training for her work except such experience as she has acquired during her residence in the wards; in a few instances she is an inmate promoted to the charge of the sick wards, with or without salary; and in many small unions we find that the matron is the only officer responsible for the nursing. At night the practice most in favour is to delegate the care of the patients to a functionary known as the wardsman or wards-woman -an able-bodied inmate, who has done a full day's work and who may be aroused during the night by any patient needing attention if, indeed, he or she can be awakened and consents to rise. The next step to this is the employment of a night staff of inmates who are not required to work by day; there may be a responsible officer controlling this staff or they may be left without supervision. In a very few cases we find a trained nurse on night duty.

This system, or, rather, absence of system, is answerable for much cruelty, begotten of ignorance rather than of wilfulness, but the result is the same; it is the iron which has entered into the soul of the poor, and it explains the widespread horror of the "house," which if it influenced only the idle and the worthless would do no harm; but it is a scandal and a shame when it drives the old and the sick to starve and die rather than accept their only refuge. Occa-

[1] The former appeared in the British Medical Journal of December 8th, p. 1317, the latter in that of December 15th, p. 1380.

sionally a case of ill-treatment comes to the surface, as at Newton Abbot and, more recently, at Chester, but, as the judge then remarked in passing a well-deserved sentence, "We so seldom know what goes on in these places." Still, we do know that pauper inmates are not fit to be trusted with the care of helpless and infirm old people.

Passing from the nursing to the buildings, we note almost everywhere their unsuitability; they were never intended for what has now become their chief work, that of hospitals. We find none of the sanitary appliances required by modern science, to say nothing of the modern sense of decency and cleanliness, nor any of the indispensable adjuncts for the efficient care of the sick; the bedsteads are low and narrow, the bedding often scanty, the furniture innocent of comfort. Again and again we read of dark and cheerless wards, of inadequate lighting and heating. Often the only classification is the isolation of the coarsely termed "dirty cases," whose piteous condition and consequent treatment appeal for consideration to every humane person, or the separation of the lock cases from the general wards, but there is little attempt at keeping the sick children apart from the adults, or the respectable poor from the vicious and ill-conditioned.

This, then, is some part of the work that lies before the new boards of guardians: to provide rate-supported hospitals with a proper equipment for the nursing of the patients, and an adequate staff of trained nurses for tending them. As a further development these country infirmaries might be organised to supply medical and nursing aid to the union they serve, and so solve the question of skilled nursing in the rural districts, which is at present so full of perplexity.

We have not touched on the use which might be made of these infirmaries as training schools for nurses, nor on the amount of clinical material in the wards which is at present of no avail to the medical student, because, important as these matters are, nothing can be done in this direction until the foundation as above sketched out has been laid.

STUDIES IN THERAPEUTICS.

VI.—The Newer Antipyretics: Acetanilide and Phenacetin; Their Drawbacks.

Though one of the most largely used and efficient antipyretics, acetanilide is not free from the objections of its congeners of the aromatic series; on the contrary, it induces symptoms of intoxication perhaps more frequently, and at times more alarming than any of the others. It has an action on the nervous system similar to antipyrin, the power of lessening pyrexia being even greater. The fall of temperature is usually accompanied by perspiration more or less profuse; it may attain its maximum in two or three hours and finally bring on depression and collapse. Not uncommonly we meet with a rebound ushered in by chilliness and rigor; on the other hand, a few reports show that this drug, like antipyrin, may send the temperature up in an unexpected way. Its action on the heart may be very pronounced and makes the utmost care imperative in administration to children and weakly individuals. There is a difference of opinion whether the depressive action attains the same degree as after antipyrin. Individual experience varies in a striking manner not easy to explain; it may be a more careful attention to dosage has followed the publication of the earlier cases of acetanilide intoxication. With the exception of miliaria produced by copious diaphoresis untoward effects on the skin rarely obtrude themselves. An impression exists among practitioners that acetanilide may induce or increase bronchial catarrh in children, though there is no evidence that it does so in greater measure than antipyrin; cyanosis is, however, more striking; it may appear with very small doses and persist for days after the discontinuance of the drug. Prolonged administration, even in moderate doses, may develop a marked state of anæmia. This is a symptom which has scarcely received the attention it deserves, for its onset is often rapid and it may reach a considerable degree. Gastric disturbance is not prominent, impaired appetite and nausea being only occasionally noticed.

The quantity of acetanilide used as an antipyretic varies from five to ten grains for an adult; its power as an analgesic is slight. Many practitioners employ it extensively as a quickly-acting remedy further recommended by its small bulk and comparative cheapness. A child of three years would receive a 1 grain dose, a boy of ten about 3 grains and children up to fifteen 3 to 4½ grains; it should generally be combined with a stimulant.

In phenacetin a claim to freedom from ill effects, put forward on its introduction, has been justified in a comparative sense by subsequent experience. Nevertheless we may meet with unpleasant and profuse diaphoresis, rendering its habitual use in phthisis and typhoid fever undesirable; collapse and exhaustion are not unknown even after medium doses, while palpitation and oppression of breathing followed by nausea and vomiting have likewise been observed. Cutaneous eruptions, chiefly urticarious, prevail with a frequency scarcely inferior to antipyrin; and cyanosis of the face due to changes in the hæmoglobin may be seen to a similar degree. In short, we may meet all the ill effects of the aromatic group though the incidence is undoubtedly less. Its use as an antipyretic, however, remains small as its power in that respect is not equal to the others except when given in doses that are very often associated with symptoms of intoxication.

New substances each bearing a sanguine prospectus continue to appear as antipyretics, in the endeavour to reduce to a minimum toxic action on nerve and muscle. Success has not yet rewarded the effort and the experience of the most recent—phenocoll and salipyrin—is too limited to draw any trustworthy conclusion; so far the results are not encouraging.

The important question of impurity and adulteration should not be lost sight of in considering the ill effects of any drug. Good work has been done in this direction with the salicyl preparations, and pharmacists are now more alive to its importance. Many of the toxic symptoms of acetanilide so closely resemble anilin poisoning as to suggest the production of that substance in the blood. There is a close relationship between the two bodies and some ground to suspect the occasional presence of anilin in samples. Again, phenacetin may be adulterated with phenetidin, a bye-product in manufacture and a poisonous substance, which in small doses brings on kidney trouble.

In any attempt to estimate the comparative efficacy of a group of antipyretics we are met at the outset by the existence of widely diverging opinions on the pathological

significance of elevation of the body temperature. We may regard fever as "a wise contrivance of the organism" and revert to the doctrine of the ancients who believed the *calor præter naturam* of Galen to be of "salutary influence" and a means of ridding the economy of noxious material. Experiments are not wanting claiming to show that increased body heat raises the tissue resistance and its phagocytic power or renders the tissues unsuitable to the growth of the active principle of disease. MacAlister has pointed out, however, the danger of viewing the febrile process too much as a separate entity and has, moreover, shown that the ideas of the other extreme school—that all pyrexia is dangerous and ought to be reduced—cannot be substantiated in its entirety. Definite and practical conclusions are not possible in the light of our present knowledge of the pathological processes underlying fever. The recent doctrine of phagocytosis gives promise of breaking fruitful ground: and there is much to be done in determining the influence of the nervous system on pyrexia, as well as the workings of the thermal mechanisms and their relation to centres in the brain.

The question of antipyresis hinges largely upon the important fact that a persistence of high temperature implies serious consequence to the heart muscle; on the other hand, from clinical evidence we gather that a fall in pyrexia is followed by marked relief to the patient's general conditon. An ideal antipyretic, to quote Liebermerster's definition, would be one that limits the production of heat, and it is claimed for the antipyrin group that such is their action, "repressing thermogenesis and simultaneously rendering heat dissipation more efficient." The evidence from experimental sources has, however, proved very conflicting, and we have already alluded to the view that the main action is on the thermolytic mechanism. This would throw them rather into the category of antithermic remedies—to which all fever-reducing drugs with perhaps one exception belong. Gottlieb urges that an antipyretic of the antipyrin group should be given when it is desirable to procure reduction of high temperature rapidly and safely, and to reserve quinine (which, he holds, lessens heat production and is a true antipyretic) for a more prolonged administration. To some extent, the therapeutical application runs upon the lines of this generalisation, for quinine continues to be the febrifuge most favoured in the hectic state, and antipyrin and acetanilide in sudden accession of temperature of short duration. The prevalence of heart failure among the untoward effects of the antipyrin group enjoins the necessity for caution where the cardiac organ suffers. It requires very little consideration to apply this to their use in diphtheria, pneumonia and typhoid fever, though it by no means follows that their toxic action is more pronounced than others; on the contrary, they mark a distinct advance towards the consummation of the therapeutical ideal, bringing fresh assurance of further success in the future. The study of the ill effects of drugs is of great importance to the practice of therapeutics; much can be done in the way of prophylaxis if they are kept prominently in view. Perhaps in the future it will receive increased attention and do something to establish the use of antipyretics on a more definite basis, and at the same time in this relation remove the reproach of Montaigne that "the drug is an assistant not to be trusted."

A monument to Dr. James Henry Bennet, the discoverer of Mentone from a climatological point of view, was unveiled in that place on December 13th. Addresses were delivered by Dr. Siordet (President of the Memorial Committee), the Mayor of Mentone, and Drs. Maurin and Rocques (Presidents of the Nice and Mentone Medical Associations). The memorial, which is in the form of a granite pillar surmounted by a marble bust of the late Dr. Bennet, stands on a plot of ground given by the town council near the centre of Mentone.

THE LATE CZAR'S PHYSICIAN IN ORDINARY.

Dr. Hirsch, who was one of the physicians in attendance on the late Czar during his last illness, had a sharp attack of influenza on his return from Livadia. He has now recovered, and has entered on his duties as Physician in Ordinary to His Imperial Majesty the present Czar. Dr. Hirsch's first appearance in the Medical Society of the Russian capital on his return was made the occasion of an enthusiastic reception, which was intended as a mark of the sympathy of his professional brethren with him in the unworthy attacks of which he had been made the object in certain foreign newspapers, and of their recognition of the services he had rendered to his Sovereign.

DINNER TO DR. JAMESON, C.B.

The proposal that a dinner should be given to Dr. Jameson in honour of his distinguished career in South Africa by his former teachers, friends, and contemporaries at University College Hospital, has now taken definite shape. Dr. Jameson has accepted the invitation for Thursday, January 24th, at the Hôtel Métropole; and all those desirous of being present should at once give notice to either of the two honorary secretaries, Dr. Radcliffe Crocker, 121, Harley Street; or Mr. Quarry Silcock, 52, Harley Street, W.

INDIAN MEDICAL CONGRESS.

The *Times* correspondent at Calcutta, telegraphing on December 18th, states "that over 500 membership tickets have been issued for the Medical Congress which opens here on Monday. It will be divided into seven sections, namely, Medicine, Surgery, Military Medicine and Surgery, Public Health, Legal Medicine, Obstetrics, and Pharmacology. All the sections sit at St. Xavier's College, which has been placed at the disposal of the Congress by the Rector. The Government has given fifteen days' leave to all medical officers who can be spared, to enable them to attend. Mr. Ernest Hart, the Editor of the British Medical Journal, who has arrived here to attend the Congress, proposes to hold a conference of leading Mohammedans to consider the question of cholera at Mecca with reference to Indian pilgrims."

[BUTTER AS THE VEHICLE OF TUBERCULOUS INFECTION.]

John Bright's ideal of a "free breakfast table" has pretty well been realised; what we now want is a breakfast table free from what Johnson would have called "potentialities" of disease. At present it is not advisable for persons of a timid disposition, in sitting down to the morning meal, to consider too anxiously of the event. One may face the dangers of the tea urn, the coffee-pot and the sugar bowl with some amount of philosophy, and after all it is only the digestion that is, as a rule, imperilled by the arts of the adulterator. It is not pleasant, however, to think that poisons may lurk in the innocent-looking sardine, that bread may be a breeding ground for disease germs, and that there may be death even in the milk jug. Mr. Hutchinson, if we remember aright, some time ago spoke strongly in praise of butter as a safeguard against tuberculosis, but now comes M. Roth, of Zurich, who tells us that of twenty samples of butter made of cow's milk, bought in different

Swiss markets, there were two which contained tubercle bacilli, and which, when inoculated in guinea-pigs, caused the development of tuberculosis in these animals. Dr. Brusa Fevro, of Turin, has made similar experiments with Italian butters with like results, that is to say, 10 per cent. of the samples conveyed tuberculous infection. We are not aware that experiments of the same kind have been made with English butter, or with the Brittany, Danish, and American butters so much in use, but, as there seems to be no practical method of sterilising butter known, there is no reason to believe that they are more free from tubercle bacilli than the Swiss and Italian products.

THE MEDICAL STUDENT POPULATION.

An American contemporary announces that "England has but 552 medical students; there are 8,000 in the Germany (*sic*) universities, but the United States has 13,000. We could loan England a few thousand, and have plenty to spare." Figures are generally a strong point with our American cousins, but it is difficult to imagine whence the above inspiration has been drawn. A study of the records of the General Medical Council would have shown that the number of students registered as having commenced their curriculum this year in England alone amounts to 980. In 1893 the number of freshmen in the medical schools of England, Scotland, and Ireland was 1,747, and by adding up the entries of the last four years it is clear that at present there must be over 7,000 students in the medical schools of the United Kingdom. So that we have ourselves a good many students to "loan," and as with us they have to undergo a five years' curriculum, they might be tempted by the briefer period of study in the great Republic of the West.

THE DUST OF LONDON.

An inquiry into the collection and disposal of house refuse by London sanitary authorities reveals the necessity for improvement on systems now in vogue. Of the 42 sanitary districts of London, 16 authorities make a house-to-house call once a week, 4 only collect at houses having the letter "D." in the window, whilst portions of 13 districts depend for their dust to be cleared upon hearing the dustman in the street. Only portions of 5 districts arrange to call on a specified day. The requirements specified in the London Council's by-law that all house refuse shall be removed from all premises at least once a week ought to be strictly observed throughout London; but it is not likely that it will be unless there is a systematic house-to-house collection. As to the disposal of refuse, London is still far behind provincial cities. Only 4 sanitary districts in London have dust destructors, the remainder disposing of the refuse by removal from the district by barge or rail without manipulation, or after sorting and sifting of the refuse either by machinery or hand labour. Some 1,500,000 tons of dust have to be dealt with yearly in London, and it is quite time both the method of collecting and disposing of it was placed on a more satisfactory basis.

GRAND OLD MEN OF MEDICINE.

Medical men have, as statistics show, a shorter average lease of life than members of the other liberal professions. The late Dr. Bisset Hawkins's exceptional span of years is discounted to some extent by the fact that for half a century he had not been engaged in professional work; it is not probable that at any period of his career he was ever heavily burdened with the cares of active practice or that he felt the stress of the struggle for existence. There are, however, a few instances of longevity in working members of the profession which go some way to bring our average of life up to a fairly respectable level. Not to mention Dr. G. Paris, formerly physician to Louis Philippe, who has just passed away at the age of 93, the medical profession of Valencia, in Spain, has been celebrating the birthday of the oldest member among them, Dr. Salvador Lopez Català, who completed his 91st year on November 9th. Dr. Català was in active practice till less than four years ago. An American paper states that Dr. Hiram Corson, of Montgomery County, Pa., is the oldest practitioner in the United States who is still in harness. He is now 90, and he has been in practice since 1827. Dr. Corson is still in excellent health, and preserves his powers of body and mind to a remarkable degree. He is now writing his personal recollections of the anti-slavery movement, in which he took an active part, having assisted many a runaway slave to escape by the "underground railroad." The New York *Medical Record*, however, enters a claim for what it calls the long-distance championship on behalf of Dr. Hull Allen, of Milford, Conn., who was born on May 16th, 1798, and is now consequently well on in his 97th year. This gentleman qualified in 1821, and began practice in the same year at Sparta, New Jersey, subsequently removing to Milford, Conn., where he continued in active practice till 1870. Since then, the old man says, "he doesn't go out much nights," but until lately he has continued to give advice to such patients as presented themselves in his consulting-room. Dr. Allen has always enjoyed excellent health, and is said to be still remarkably bright and active for one so near the hundredth milestone of life. We have older practitioners than either of these American "champions" in this effete old world in the persons of Dr. Boisy, of Havre, who, we believe, was in practice, and could even go upstairs to see his patients in their bedrooms, after he had completed his century of life; and of our own Mr. W. Salmon, of Penllyne Court, Glamorgan, who became a Member of the Royal College of Surgeons in 1809, and is now in his 104th year. To all these grand old men of medicine we wish a happy New Year, and many of them.

THE ALLEGED NEW ELEMENT.

At a meeting of the Royal Society on January 31st, Lord Rayleigh and Professor Ramsay will read a paper on the new gas which they believe they have demonstrated to exist in the atmosphere. Last session the Council of the Society passed a resolution that certain meetings—not more than four in each session—should be devoted to the hearing and discussion of some one important communication. The meeting of January 31st will be the first under this new rule.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

We understand that the Council of the Royal Medical and Chirurgical Society has just resolved on certain improvements in its method of dealing with papers. It has often been felt to be a grievance that a paper should be accepted for reading and be reported in the *Proceedings*, and yet ultimately be rejected as unworthy of publication in the *Transactions*. There was a good deal to be said for the old practice, but this has been done away with, and in future a paper accepted for reading will be *ipso facto* accepted for publication. This does not mean that papers will be selected with less care, but that the *amour propre* of an author will be saved from the humiliation of partial publication and ultimate rejection. This change should have an immediate effect in inducing many of the younger men to submit papers to the Council, who have hitherto shrunk from the ordeal. The second improvement is that in future all papers will be published within three months of being read, instead of being reserved for an annual volume. All the papers read from October to the end of the year will be published in a fasciculus early in January; the papers read in January, February, and March will appear in a second fasciculus on May 1st; and the papers read in April, May, and June will be published on August 1st. These three fasciculi will make up the annual volume, and at the end of the year those Fellows who desire it can have their parts bound in the usual way. A third, and a very important improvement,

is, that all papers will be issued separately for sale soon after the publication of each fasciculus, and thus authors of important contributions have offered to them a means of publication, not only free of cost to themselves, but highly honourable. Still another departure has been determined upon which should greatly enhance the value of discussions at the meetings of this Society: the Council has decided to print all papers before they are read, and to distribute copies of these gratis on application at the library (for obvious reasons they will not be sent by post) to those Fellows or visitors who wish to take part in the discussion. In future, also, authors will be encouraged to read their own papers at the meetings, instead of having them read, as hitherto, by the secretaries. Finally, it has been decided that some of the ordinary meetings shall be devoted to discussions and demonstrations on special subjects, to be introduced by a short paper or papers by Fellows of the Society or other members of the profession at the request of the Council. A small permanent committee has been appointed to arrange for these meetings, and to draw up regulations respecting them. These changes mark an important epoch in the history of the Society, and taken along with the improvement introduced some four years ago by which the *Proceedings* are published within two days of each meeting, will serve to increase the influence and popularity of this Society, which has so long occupied a position of great importance in the medical life not only of London, but of the whole country.

THE ROYAL HOSPITAL, BELFAST.

Through the munificence of Mrs. Dunville, of Redburn, Belfast, Professor Byers been enabled to have the women's operation room at the Royal Hospital, Belfast, completely refurnished, so that, for its size, it is now most thoroughly equipped. New wash basins have been introduced, and there is a Veit-Schroeder chair for vaginal and perineal surgery, and a glass table for abdominal sections. A very fine glass instrument cabinet has been procured, and an apparatus for sterilising instruments, and one of Lautenschläger's newest steam sterilisers, with Schimmelbusch's kettles, for rendering dressings, etc., aseptic, as well as a douche can and stand for continuous irrigation, have been placed in the ward. The board of management of the Royal Hospital have passed a special vote of thanks to Mrs. Dunville for her generous gift, and they have decided to call the room which she has so admirably furnished "the Dunville Ward."

SERUM ANTITOXIN—A PATENT.

The *Law Journal*, December 15th, contains an article which states that provisional protection under the Patent laws has been applied for and granted with relation to the production of the antitoxic serum. To what extent the patentees may be able to sustain their position as true and first inventors or importers, as the case may be, remains to be seen. At all events, certain bodies have been making the substance in this country for some time. Whether or not the words of the Statute of Monopolies "any manufacture" will be extended from results or processes due to mechanical or chemical action to those which depend upon vital or bacteriological action, is a legal point which has never been decided. It is pretty certain that such applications would not have been made if there had not been very good reason for supposing that the protection granted could be sustained. In many foreign countries there cannot be a patent for pharmaceutical compounds or medicines. There is no such reservation in England, and it may be doubted whether the antitoxin could be legally included under either of these terms. It is almost impossible to realise what may be the effect on the use of the serum if it is patented. These great discoveries of men of science have been freely offered to the world to relieve humanity. If they become the subject of a patent right then the general public is excluded from their advantages. The remedy becomes the privilege of the rich. The poor are denied its benefits. The price may be so high that it would become impossible to use it in hospitals. It is a matter that affects all classes of the community. We believe that the application for a patent has been made by a Frenchman, and that he is finding considerable difficulties on his road. Whether he is successful or not, he has at all events drawn attention to a peculiarity in our law that requires to be remedied. If the discovery had been a new explosive for purposes of warfare the Government would have stepped in and purchased. Because a means has been discovered for combating one of the most distressing diseases, the State stands idly by and allows it to take its chance as to whether or not it becomes a patent remedy.

M. PASTEUR.

Owing to incorrect statements which have been in circulation concerning the health of M. Pasteur, the *mot d'ordre* at the Institut Pasteur is not to answer any inquiries. All that can be authentically ascertained is that M. Pasteur fell ill early in November and that his illness was due to the bad weather and his advanced age. He is now better and has not left for the South of France, as was stated in some daily papers.

THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

A meeting of the Committee of the Association of Fellows of the Royal College of Surgeons of England was held last week, when a letter containing two propositions from the Council of the Society of Fellows of the Royal College of Surgeons was read. The first proposition was that the Society should canvass the opinion of all the Fellows upon the method of election of President. The Committee decided to recommend to the members of the Association to reply to the inquiry. The second proposition was a proposal that the details of the proposed new charter should be referred to a joint committee of Fellows and of the Council. After discussion it was resolved that Mr. Gant should, on the part of the Association of Fellows, give notice of the following resolution to be moved at the meeting of Fellows in January next:

That the Council of the Royal College of Surgeons of England be asked to agree to a conjoint committee of the Council and the Fellows of the College for the purpose of considering what alterations should be made in the existing charters of the College.

THE SICK POOR IN PROVINCIAL WORKHOUSES: DOWNHAM MARKET.

We learn from the report of our representative, given in another column, something of the condition of the sick in the workhouses of the remoter agricultural districts. Downham Market Union is a type of its class, where the number of inmates is so small as to allow, under humane management, of individual care and attention to the sick. The difficulties of classification, isolation, etc., that press so heavily in the overcrowded infirmaries of the urban districts are here non-existent, yet, with so much space at their disposal, the guardians seem hardly to have made the most of their opportunities. The staircases between the day rooms and the wards are in a condition which is positively dangerous, especially when we consider that the great majority of the patients are not bedridden, but infirm people who have to go up and down these stairs, hampered by all the disabilities of age or defective sight. It is pleasant to find the authorities on such friendly terms with the inmates, but why indeed, as our Commissioner remarks, should not the poor old people have a little more use of the gardens? It is not very likely that the privilege would be abused, and its continuance might be made conditional on good behaviour. Again, we find no trained nurse. It is true that the Commissioner speaks highly of the attendant.

who seems to be both kindly and efficient; it is true, also, that there were no acute cases, but the principle is none the less unsound. The sick require skilled attendance, and who shall say that the winter will not bring its proportion of acute cases, taxing severely the resources of the one attendant, and throwing a heavy responsibility on the doctor, who cannot be always on the spot? In midwifery cases also the anxiety of the doctor and the chances of accident are enormously increased by the absence of a properly qualified nurse. It must be remembered that the infirmary is the only hospital for the neighbourhood, and that all cases of illness among the poor, except operation cases, may come to be nursed within its walls. In the matter of diet, would it not be possible to have some variety on the boiled beef and suet pudding, which, however well suited as food for the able-bodied, hardly seems the right diet for the sick and infirm? It is possible that the board may have some of these points under consideration, but we would urge a rearrangement of the sick wards without delay. In a house licensed for 250, where the occupied beds are only 70, there can be no difficulty on the score of lack of room.

HOSPITAL SUNDAY FUND.

At the annual meeting of the Metropolitan Hospital Sunday Fund, held on December 17th, Mr. C. T. Ritchie, in proposing the adoption of the report, stated that the subscriptions this year show an advance, not only upon those of last year, which were exceptionally low, but upon those of the year before. The total amount received this year was £43,600. This, he stated, was the highest amount ever received except upon one occasion. He stated that the total number of beds in the metropolitan hospitals was 8,212, that the number of in-patients last year was 83,341, and of out-patients 1,308,813. A useful part of the work of the Fund was the supply of surgical appliances, which to the number of 2,814 had been distributed during 1894. One of the good features in connection with the hospitals was the training of nurses; there were, he understood, no fewer than 1,300 trained nurses in the hospitals. He pointed out that the cost of management of the hospitals varied from 2·1 per cent. to 24·3 per cent. of the cost of maintenance. This divergence depended purely no doubt upon the kind of hospital, but it would seem that there was considerable room for improvement in this respect, and one of the great merits of the Fund was the care which the Committee took in investigating the accounts and expenditure. The cost of management of the Fund had been 3·6 per cent., a lower average than for the last twenty-two years. The adoption of the report was seconded by the Rev. Dr. Kennedy, and accepted unanimously. The constitution of the Fund was continued, and the Council re-elected with the addition of the Rev. C. H. Grundy, Canon M'Cormick, and Sir George Tyler to replace vacancies. June 16th was fixed for Hospital Sunday next year.

ROBERT LOUIS STEVENSON.

Robert Louis Stevenson, the great romancer, whose loss is now being mourned by every lover of English literature and the English tongue, had ever a good word for the medical profession. The dedication of his book *Underwoods*, published in 1887, contains one of the finest tributes ever paid to the profession of medicine. He wrote:

> There are men and classes of men who stand above the common herd: the soldier, the sailor, and the shepherd not infrequently, the artist rarely, rarelier still the clergyman, the physician almost as a rule; he is the flower (such as it is) of our civilisation; and when the stage of man is done with, and only remembered to be marvelled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practise an art, never to those who drive a trade; discretion tested by a hundred secrets; tact, tried in a thousand embarrassments, and what are more important, Heraclean cheerfulness and courage. So it is that he brings air and cheer into the sick room, and often enough, though not so often as he wishes, brings healing.

It is interesting at this sad moment to recall that only last week we had the pleasure of recording that he had taken a prominent part in making a presentation to an English naval surgeon who had generously served the needs of the people of Apia near Mr. Stevenson's residence in Samoa. The address, which was written by Mr. Stevenson, will be read with interest:

> Donald Templeton Hoskyn, Surgeon H.M.S. *Curacoa*.
>
> We, undersigned inhabitants of the Samoan Islands, desire to express our sense of your conduct. In a time of war and sickness you became the benefactor of these islands. Your rare skill enabled you to save the lives of many whose loss we should otherwise be mourning. Your devotion to duty kept you late and early at the call of all. In every part of your conduct in this place we recognised the inspiriting picture of a man who loves his profession, and exults in its exercise, while the qualities of your heart made you in a singular degree the personal friend of all; so that you became a known and welcome figure in our midst, and were everywhere greeted, alike by white and native, by warrior and child, with confidence and affection. We desire to offer you this address as a token that, in this distant place, and among our diverse people, your memory will be preserved by gratitude.

The address was accompanied by a letter to Mrs. and Miss Hoskyns, also from the pen of Mr. Stevenson, and we fancy that we detect in this graceful act Mr. Stevenson's own initiative:

> Madam,—We are people of many different nationalities and ways o life, united only in one thing, in the affectionate admiration with which we regard your husband's character. When you are left alone, and he is far from you at sea, even strangers may be welcome if they speak to you of him. It should help you to bear your separation with a better heart, that strangers from the uttermost parts of the sea, some of whom he has raised from the dead, many of whom he has cheered, and whose pains he has alleviated, and all of whom he has bettered by his brave example—should lift up their voices in thankfulness for his humanity, courage, patience, and skill. We enclose a draft; not in the vain idea that we shall thus be able to pay even a small part of our debt, but from a desire to mark our gratitude by a token which derives its only value from its spontaneity, and which we therefore venture to hope his wife and daughter will not refuse.—We are, Madam,
>
> Your Sincere Well-Wishers.

The telegrams leave the cause of Mr. Stevenson's death somewhat obscure, but it was well known that he had long suffered from phthisis, and had been under the treatment when in this country of, among others, the late Sir Andrew Clark. It seems not improbable that the immediate cause of death may have been pneumothorax.

SMALL-POX IN DUBLIN.

There has been a serious increase in the number of cases of small-pox in Dublin during the past week. On Monday last 40 cases were reported, so that the number for six days was over 100. The Cork Street Auxiliary and the Hardwicke Special Hospital are full, and means are being taken to provide additional accommodation. The Governors of the Hardwicke have agreed to provide at least 60 additional beds to meet the increase of cases, and the Guardians of the South Dublin Union have prepared sheds for the reception of the convalescents. The work of revaccination goes on. The public are alarmed, but there is no question with them as to what is best to be done to ward off attack. One large wholesale and retail drapery establishment has suffered severely by the outbreak. Several of its *employés* were attacked, with the result that customers deserted the shop for a time, and a heavy loss has been sustained.

EDINBURGH NEW DENTAL HOSPITAL.

The new buildings of the Edinburgh Dental Hospital and Schools at 31, Chambers Street, were formally opened by the Lord Provost of Edinburgh on December 13th. The earliest beginnings of the hospital go back to 1857, though the incorporation as it now exists only dates from May 20th, 1892. The details of the new hospital are mainly these. On the basement: Students' cloak room and lavatories; a laboratory, 44 feet by 22 feet, fitted with blow pipe, etc. On the

ground floor: Anæsthetic and recovery rooms, the board room, lecture rooms, and lecturer's cloak room. On the first floor: Extracting room, waiting room, and two rooms rented as an eye dispensary. On the second floor: A single large room for stopping, with roof lights and space for thirty-one operators. Above part of this last room is the caretaker's house. The house has been fitted with the necessary apparatus for electric light, which, however, is not likely to be in use before March, 1895, when it is hoped the city supply may be turned on. The rooms are heated by a closed hot-water system. Telephonic communication exists between the working rooms. The total cost will be £6,000. Towards this sum the Royal College of Surgeons have given £210; Mr. McEwan, M.P., £50; the Right Hon. the Earl of Rosebery, £25; and the Town Council £600 from the residue grant. During last year 11,621 operations were performed, and the number of students attending the school was 45. Great credit is due to the veteran Dr. John Smith for the work he has done in advancing the interests of the school.

A PRIZE ESSAY ON TUBERCULOUS CONSUMPTION.

The munificent offer of Dr. Hermann Weber at the last meeting of the College of Physicians, reported elsewhere in our pages, to found a prize for an essay on tuberculous consumption to be awarded biennially or triennially will, we are certain, be hailed with the warmest approbation by all except perhaps the Chancellor of the Exchequer. The essay is not to be restricted to any one branch of the subject, but may deal with the etiology, pathology, prevention, or treatment. Possibly the committee to whom the matter has been referred will advise that these separate branches shall be taken in different years; this would at any rate obviate some of the difficulties which the judges might have to deal with in endeavouring to award the prize. The subject is one which Dr. Weber has long had at heart, and to the elucidation of which he has contributed much, notably in his Croonian Lectures some ten years ago on the Hygienic and Climatic Treatment of Consumption. Nor must we forget that this prize has been especially founded in reverence for the memory of Dr. Parkes, whose labours for the public weal are not likely to be forgotten or ignored by medical men.

A DAMP ELECTIONEERING SQUIB.

Never before, perhaps, has this country been given up more completely to electioneering than during the last fortnight. Many have been the eccentric notions aired and curious the nature of some of the test questions addressed to candidates, but perhaps the strangest agitation of all is that which has been raised against the use in public infectious hospitals of diphtherial antitoxic serum in the treatment of that disease. Our contemporaries, the *Morning Leader* and *Star*, as the habitual champions of the anti-scientific party, have given prominence in their pages to a special question which it was suggested should be addressed in public meeting to every candidate for the office of guardian. It applied particularly to London, where the electors were reminded that 55 out of 73 members of the Asylums Board were elected by the boards of guardians of London. The elector desirous of heckling a candidate was advised to ask him whether, if elected, he would vote only for such members of the Board as would pledge themselves not to permit the children of the ratepayers to be used as material for experimental inoculation. That there should be no doubt as to what is meant, the article from which we quote is opened with the statement that the Metropolitan Asylums Board have decided to permit experiments to be made upon the diphtheria patients in their hospitals. Past experience seems to teach us that it is useless to expect those who guide the policy of these two contemporaries to examine into questions of this kind for themselves. They seem to have taken for their motto the short resolution which was, if we remember rightly, adopted by the Convention during the French Revolution: *La République n'a pas besoin de savants.* For some reason or other, while professing to be the organs of the most advanced Radical opinions in politics, they have constituted themselves the defenders of the most hopeless Conservatism in science—and especially in medical science. That the efficacy of the treatment of diphtheria by antitoxic serum is not completely established may be admitted, though a man of science so little predisposed in its favour as Professor Virchow said a few days ago that the statistics in the Berlin hospitals had convinced him that it was the duty of every medical man to give his patients the advantage of the treatment. To speak, however, of the children of the ratepayers submitted to this treatment as being used as material for experimental inoculation is somewhat absurd. In the first place, the treatment is not an experiment; and in the second it is not an inoculation. Our contemporaries may not be disposed to attach much weight to scientific authority, and cannot, we fear, be induced to examine the statistics for themselves; but they would probably subscribe to the doctrine: *Vox populi vox Dei;* and we can assure them, from the recent experience which we have had since Dr. Klein offered to place in our hands a supply of this serum for the use of provincial hospitals, that a very large section of the public at least are very eager to have this so-called "experiment" tried upon themselves or their children. Further, it would appear that the majority of those who have been privileged to observe its action when used sufficiently early are not, as a rule, disposed to await statistics before forming a very definite opinion. The treatment is not dangerous. It is certainly often efficacious, and we could well imagine that a much better grounded outcry might be raised if it were sought to limit the advantages of this treatment to the children of the rich.

CRIME, DISEASE, AND THE LAW.

In view of the present state of the question of criminal responsibility, the case of Alan Fergusson, to which we referred recently, is one of great importance. The prisoner, a lad of 16, was tried in Edinburgh for fire-raising, or what is known in the South as arson, and pleaded guilty. Upon this plea a remarkable course was pursued, and one for which there is, as far as we know, no precedent in England. Counsel for the accused related the circumstances under which the crime was committed, and went in considerable detail into the previous history of the prisoner. Counsel then called—and no objection was taken to this course either by the court or by the Crown—medical witnesses to give their opinion as to the prisoner's mental state. Their opinions were given upon the case as stated by counsel, but they had previously examined the prisoner and were allowed to add to his statement facts concerning the prisoner which had been communicated to them out of court, and to use these additional facts as part of the ground of their opinion. Upon the medical opinion thus given the judge passed a mitigated sentence. The case was one in which a still more merciful sentence would have been appropriate. As a child the prisoner had suffered from meningitis. While at Rugby he had attracted notice by his peculiarity of manner, and from that school he had run away without any apparent motive. Shortly before the crime, for which he was tried, which was of an equally motiveless character, he had received a severe blow on the head, after which he complained continually of pain in the head and deteriorated in his schoolwork to the extent, as measured by the marks awarded to him, of 84 per cent. The unavoidable character of his deterioration was recognised, and he was not punished for it. The medical evidence was to the effect that the unfortunate lad was mentally in the condition of a child of 6 or 8, and there appeared to be no doubt that he did not in the least appreciate the gravity of his act. Under these circumstances a sentence of twelve months' imprisonment appears greatly in excess of the needs of the case. It was

strongly contended by the medical witnesses, Drs. Clouston and Littlejohn—and no expert will question the truth of their contention—that the effect of imprisonment would be disastrous to the boy's mental development. The judge (the Lord Justice Clerk), however, refused to accept this plea in mitigation of punishment; he left it to the prison authorities to exercise their discretion in the matter. In several cases upon which we have commented the Scotch judges have shown themselves in advance of their English brethren in their appreciation of the bearings of mental disorder upon responsility in criminal cases; but in the case of Fergusson the judge was more lacking in discrimination, and more draconic in severity than most of our own judges would be in similar cases. The latitude that he allowed to the prisoner's counsel and to the medical witnesses was, it is true, most praiseworthy; but it is to be noted that the question of the guilt of the prisoner was not being tried. He had pleaded guilty, and the evidence admitted was given solely in mitigation of sentence, and might not have been admitted at an earlier stage in the proceedings.

THE MEDICAL AND SANITARY INSPECTION OF SCHOOLS.

The school inspector, as he exists to-day, is beginning to be regarded as more or less responsible for those abuses of teaching which the public has learned to group under the name of "overpressure." It cannot be denied that the working of compulsory education has revealed the need of something in the nature of compulsory interference with its methods. But everyone who has given thoughtful study to the subject must have been convinced that evils of both commission and omission attend the educational practices of all schools as at present conducted. The physical and sanitary requirements as well as the mental training of the children of one section of the community are subjected to some amount of Government supervision. But no such official control is exercised in the case of private schools for either sex, whose pupils have needs as great and are subject to the risks of neglect not less serious though they compete for scholarships instead of merely earning a Government grant. In their case the head master or the head mistress practically decides all questions of hygiene as absolutely as he or she determines the course of study. And, though each may strive to do the best according to his or her lights, their knowledge, their training, their ignorance, and their whims vary within exceedingly wide limits; while the sanitary laws and the physical needs of childhood remain practically fixed quantities. *Quis custodiet custodes?* Dr. Clement Dukes, in a paper recently read before the College of Preceptors, told that body that the solution of this question would be found in a system of school inspection from the medical and sanitary point of view to be carried out under Government by duly appointed medical men, and to be applied to schools of all kinds throughout the land. He urged that the teachers and the taught would both share in the improvements thus to be initiated; from the infant, who now spends as many hours in a Government grant-earning school as does the child of 14, to the teachers, whose mortality in primary schools is no less than 20 per cent., according to the late Sir Edwin Chadwick's tables. Such a proposal, if it can be realised, would doubtless help to bring about many and much-needed reforms, especially in schools for girls. The great majority of private schools is said not to be averse to such inspection; and, on those who object to it, the certainty of being shown to themselves, or, more effective still, to their neighbours, as others see them would be likely to act as a stimulating discipline in the direction of improvement. Such a change, however, to be workable must have the support of intelligent public opinion; and thus—indirectly, it may be, but, nevertheless, substantially—the motive power must come from the parents themselves. If only they can be made to realise the facts as they are, few of them will fail to see the advantages—national, social, and pecuniary—of such a plan. Not the least significant argument in its favour might be deduced from the statement of one of Dr. Dukes's critics (himself a teacher), who stated that the scheme proposed was totally impracticable, inasmuch as, in relation to such a question, "the phase of the body is diametrically opposed to the phase of the mind." True education recognises no such irreconcilable opposition between the two sides of the dual nature, with both of which it has to deal for the true welfare of the human whole.

WORK FOR THE ORIENTAL HERCULES.

The progress of events in the Far East during the last few months has brought Corea, the hermit kingdom, so long a sealed book to Europeans, prominently into notice. As yet very little is known of the country and of its diseases or of the sanitary condition of any of the large towns with the exception of Seoul, Chemulpo, and Fusan. In 1891 the entire European population amounted to only 149 souls, among whom were one or two medical men. It is to the latter and to their reports, published in the Chinese *Customs Gazette*, that we are principally indebted for the scanty knowledge available. Doubtless when the termination of the present war places our Japanese *confrères* at liberty, we shall have full accounts on many points interesting to the profession. From what we can gather we are forced to conclude that the Coreans are a lazy, superlatively dirty, unenterprising race, given to gluttony, to venery, to drunkenness, and to many other physical and moral impurities. Consequently in the reports we refer to dyspepsia, syphilis, gonorrhœa, and delirium tremens occupy a prominent place. The people, we are told, wear beautifully clean white robes, and the better class wash their hands and faces, but no one ever bathes or washes his body if he can possibly avoid it. So that notwithstanding the appearance of cleanliness the people are but whited sepulchres and the subjects of all sorts of parasitic skin diseases. Their food, consisting o millet, rice, vegetables, pulses, and various kinds of flesh, including dog's flesh, is sufficiently nutritious and varied. But it is often rotten, and very generally imperfectly cooked. Consequently tape-worm, ascarides, and perhaps trichiniasis are prevalent. So common is tapeworm that the people think little of passing a few yards of parasite. We are told that it is no unusual thing in passing through the streets to see tapeworm proglottides in the human excrement, which is everywhere and indiscriminately deposited. In Seoul, the capital, a city of over 150,000 inhabitants, there is no system of drainage in the proper sense of the word. An open ditch exists in front of the irregular rows of houses—one, therefore, on each side of the street—and into this all night soil and domestic refuse is tumbled. These ditches are not kept clear; they are never repaired or cared for in any way; the only cleansing they get is when the flood waters during the summer rains sweep them out once a year. Water for domestic purposes is drawn from wells inside the city, and placed in close proximity to the ditch we have mentioned. It is fouled by soakage through the soil and by the overflow of the storm waters. As the Coreans, unlike the Chinese, are great water drinkers, which they neither boil nor filter, we find that cholera and dysentery are common enough among them. In 1886 upwards of 3,000 died of cholera in ten days in Seoul alone, 7,000 before the epidemic subsided. Typhoid is known to occur. The houses are picturesque enough, but they have no provision for efficient ventilation at night, and are dirty in the extreme at all times. The public rooms are sufficiently large, but the sleeping apartments are little dens, only 8 feet square, and so densely packed with sleeping forms, for the most part naked, that the entire floor space is occupied. During the cold season the houses are warmed by a very ingenious and economical system of flues, which, communicating with a fire outside, pass underneath the wooden oil-paper-covered floors. But

these flues, being imperfectly constructed and rarely repaired, leak into the rooms, which are thereby often flooded with smoke and the products of combustion. In summer the flues are the abode of a happy family of rats, weasels, and snakes. It is easy to understand how in these conditions of dirt, imperfect ventilation, artificial warmth, and overcrowding, typhus, small-pox, measles, relapsing fever, scarlet fever, and diphtheria, when introduced, spread like wildfire. The climate on the whole is good. There is a short but very hot and, at its commencement, rainy summer; a short but very cold winter, with intermediate and very pleasant spring and autumn seasons. Malarial diseases, apparently of a non-pernicious type, are rife enongh in the summer and autumn seasons, and beri-beri is common in places. Phthisis, bronchitis, and "asthma" are also common enough, and there appears to be a good sprinkling of leprosy and elephantiasis Arabum. Pulmonary distomiasis is supposed to be the cause of the large attendance at the foreign hospitals of patients suffering from hæmoptysis. It will be readily understood from the foregoing that typhus, dysentery, and the numerous filth diseases endemic in the country, will claim more victims in the Japanese armies of invasion than the bullets of their enemies. We trust that the Coreans will find in these armies a blessing in disguise, and that the Japanese will do something in the direction of sanitary as well as of political reform for this wretched country. The new-born Oriental Hercules could set himself no better or perhaps harder labour than to purify this Augean stable.

THE CHELSEA HOSPITAL FOR WOMEN.

The reconstruction of this charity has advanced a stage. From the advertisement announcing the vacancies on the honorary medical staff it would appear that a certain change is contemplated in the distribution of the work. Two surgeons will be appointed, one for out- and the other for in-patients. There will thus be two physicians and a surgeon for in-patients, and three physicians and a surgeon for out-patients, together with a pathologist and a registrar. It is distinctly stated that candidates must be "engaged in consulting practice only," and that in making the appointments great weight will be attached to evidence of previous training in special gynæcological work. It is to be hoped that before long their charity will enter upon smooth waters and carry on a useful work, but everything will depend upon the *personnel* of the election committee, and the public will await with considerable interest the announcement not only of the names of the medical committee which the Board of Management may call to their assistance, but of the extent to which they will be responsible in the selection of the new staff—whether, that is, they are virtually to appoint, or only to nominate, a list from which the final selection is to be made by the lay Board.

CLUBS AND FRIENDLY SOCIETIES IN THE SOUTH OF IRELAND.

We are glad to note that the medical practitioners in Cork are receiving from various quarters proof of the sympathy of the medical profession at large with the stand which they are making against the unreasonable demands of the clubs and friendly societies in Cork. At a recent meeting of the Council of the Poor-law Medical Officers' Association resolutions were adopted tendering the support and sympathy of that Association and expressing the hope that no member of that Association would so far forget the traditions of his calling as to associate himself with any persons who might contribute to the degradation of the profession by accepting inadequate remuneration for medical services. We regret to hear that one member of the profession in Cork has accepted the offer from one of the societies of 5s. The gentleman in question is, we are informed, a young member of the profession, and we anticipate that the unfortunate step which he has taken will in after-years be a subject of the deepest regret to him as it is now to the great body of the profession which he has recently entered. We have received several letters from correspondents in this country, who express the opinion that even the terms proposed by the medical profession in Cork are a great deal too low. With this view we are very much disposed to sympathise. At the same time, it must be remembered that the terms are a notable improvement on those which unhappily have hitherto ruled in Cork. Moreover, in their struggle our medical brethren in Cork have distinctly enunciated sound principles, especially the principle that a wage limit should be enforced, and on this ground alone their action appears to deserve the hearty and unanimous support of the medical profession throughout the United Kingdom.

VACCINATION AND DEMOCRACY.

To the down-trodden multitudes in England it ought to be a matter of great interest to see how revaccination is dealt with in such a free and enlightened country as the United States. It appears that a member of the "Gaiety Girl" company now touring in the United States developed an attack of modified small-pox. The company was called together at the theatre, and informed that they were required by the Board of Health to be vaccinated. After some demur and threats to appeal to the British Consul they settled down to the inevitable and submitted to the operation. After them the property men and the scene shifters went through the same process.

THE DIET OF EPILEPTICS.

The influence of diet upon epilepsy is a matter of peculiar importance in the treatment of the disease. In a certain sense epilepsy is always reflex. The starting-point of a fit must be looked on as an extrinsic irritation, and in many cases it arises from indigestion. Errors in diet, however, probably influence epilepsy in other ways than this. The portion of food which is absorbed may be injurious, besides that which, remaining undigested, acts as an irritant, and there is a good deal of clinical experience in favour of supplying a minimum quantity of meat in cases of this sort, not on account of it producing indigestion, for it is often digested quite well, but because of its imagined effect in increasing the "irritability" of nervous structures—a somewhat hypothetical property, but one based on the same sort of rough observation as is the well-recognised relation between corn and skittishness in horses. The interest of this subject has led us to make inquiries as to the food given to the patients at the epileptic colony at Chalfont St. Peter, and by the courtesy of the secretary we have been furnished with the daily dietary for a fortnight. Breakfast was on each day the same, consisting of oatmeal porridge, with new milk or sugar, tea and bread and butter. Dinner consisted of roast or boiled or hashed beef or mutton, with cabbages and potatoes, followed by a rice, sago, tapioca, suet, or jam-roll pudding. Tea was accompanied with bread and butter or dripping, or sometimes golden syrup, or currant cake. Supper generally included some pudding, with milk and bread, varied occasionally with soup instead of pudding. On Fridays fish was given instead of meat. It must be noted that all the inmates are men. At the present time they are nearly all engaged in outdoor work for a considerable number of hours a day, which probably enables them to assimilate without difficulty a somewhat freer diet than would be possible in other conditions; and it is not improbable that the improved nutrition, due to the combination of active work with a dietary better than could be digested in a sedentary life, may be a not unimportant factor in relieving the disease.

At an examination for inspectors of nuisances, held by the Sanitary Institute at Cardiff on December 14th and 15th, sixteen candidates presented themselves, of whom nine passed.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

THE SUPPLY OF ANTITOXIC SERUM TO PROVINCIAL HOSPITALS.

IT seems necessary, from certain facts which have come to our knowledge, to insist that to obtain good results by the use of the antitoxic serum it is absolutely essential to abide by the directions as to the quantity given. The dose, as stated by Dr. Klein, is 1½ drachm to 2 drachms. A drachm or 1½ drachm is a minimum dose for a child, and to inject quantities of 10 or 20 minims is merely to waste the material.

The necessity for careful nursing, also, after the use of the antitoxic serum must be insisted upon. The curative effect of the serum cannot, of course, extend to the removal of actual structural lesions already produced by the disease; it cannot do more—and no conceivable remedy could do more—than check the extension of the morbid process. Further, the very fact that the arrest of the morbid process, brought about by the action of the serum, leads often to an extensive detachment of membrane, is an additional reason for the utmost care in nursing. We are led to dwell upon this point because a case has come to our knowledge in which, after tracheotomy was performed and marked improvement in the general symptoms had followed the use of antitoxic serum, the child died suddenly of asphyxia, due to the blocking of the tube by a piece of detached membrane. There was no medical assistance at hand, and the child was not attended by a skilled nurse.

THE SUPPLY OF SERUM.

WE publish on another page an abstract of a paper read by Drs. Washbourn, Goodall, and Card at the meeting of the Clinical Society on Friday last. The adjourned discussion will be resumed at a meeting to be held this (Friday) evening, December 21st, at 8.30 P.M. The cases described in the paper referred to were treated with the serum supplied by the British Institute of Preventive Medicine. We understand that the use in some of the London hospitals of the serum prepared by Dr. Klein at the Brown Institute has also yielded some striking results.

The supply of antitoxic serum is still considerably below the demand. Of the two stocks placed at our disposal by Dr. Klein, the first was exhausted in a few days; of the second very little now remains. It will not be possible, Dr. Klein informs us, to renew the supply before the first week in January at the earliest.

We understand that the preparation of the serum by the British Institute of Preventive Medicine has been making satisfactory progress, and that it is hoped that early in January a quantity sufficient for the treatment of 100 patients may be available, and a much larger quantity by February.

The medical officer to the County Council of Worcestershire announces that he has made arrangements with the British Institute of Preventive Medicine to undertake bacteriological examination of material from cases of supposed diphtheria, as well as to supply, at a charge of eighteenpence, sufficient reliable serum for two average cases. These arrangements have been made for the benefit of the medical practitioners of the County of Worcestershire by Dr. G. H. Fosbroke, the County Medical Officer, President of the Worcestershire and Herefordshire Branch of the British Medical Association. This arrangement will come into force on January 1st, 1895.

Messrs. Burroughs, Wellcome and Co., Snow Hill Buildings, London, E.C., ask us to state that they have now a further supply of antitoxic serum. They add that the first supply was exhausted in a few hours, and that they greatly regret the disappointment of many correspondents, with whose requests they were unable to comply. The serum is prepared for Messrs. Burroughs and Wellcome under the personal superintendence of an experienced London bacteriologist. The process adopted has been that followed by Dr. Roux, of the Institut Pasteur, Paris. The serum is supplied in glass-stoppered phials, properly sealed, each containing a full adult dose. The price charged for each phial is 3s.

THE STRENGTH AND DOSAGE OF SERUM.

A LETTER from Dr. A. Ruffer respecting the antitoxic serum supplied by him and used by Drs. Washbourn and Goodall in the cases reported by them to the Clinical Society was read by Dr. Washbourn at the end of the meeting on December 14th. Dr. Ruffer first desired it to be made perfectly clear that he took no part in the preparation of the statistics shown by Dr. Washbourn. The serum of horse No. 1 was of such strength that the injection into a guinea-pig of 0·001 c.cm. of serum mixed with 1 c.cm. of diphtheria toxin produced no symptoms whatever, the control animal dying in thirty-six hours. The injection of 0·0005 c.cm. of serum with the same quantity of toxin was not always efficient in preventing death, whilst 0·0001 c.cm. prolonged life for some hours only. The serum of horse No. 2 was of such strength that 0·0001 c.cm. or 0·00005 c.cm. sometimes protected guinea-pigs inoculated with a dose of toxin which proved fatal to the control animals in thirty-six hours or less. The serum of the second horse was considerably stronger, therefore, than that of the first, whilst Dr. Washbourn, judging by clinical evidence, had formed the same opinion before being told of the fact. As reported by Dr. Goodall, not only were the results on the patients more favourable, but the joint pains and rashes (which might be attributed to the serum) were less severe and occurred less often in patients treated with the serum of the second horse, who received less serum than the children treated with the serum of the first horse. It would appear, therefore, that the unpleasant effects are due to the serum as such, and not to the curative substance contained in it. Dr. Ruffer had consequently endeavoured to obtain the maximum quantity of curative substance in the minimum quantity of serum, and it had been decided that no serum shall be sent out from the Institute of Preventive Medicine unless it be of such strength that 0·0001 c.cm. of it effectually neutralises the minimum dose of toxin which will prove fatal to a guinea-pig weighing 500 grammes in thirty-six to forty-eight hours. Within the next few months Dr. Ruffer hopes to get a still more powerful serum. Further, from January 15th, 1895, the Institute hopes to be able to supply enough serum to treat 150 cases per diem, and 250 cases per diem from February 1st. No profit will be made, the cost for each case not exceeding 1s. 6d., on the supposition that each case will require two injections, and this will, in all probability, be greatly reduced shortly. There has not been a single case of illness amongst the horses, nor has it ever been necessary to throw one, or even to use any forcible means of restraint for any of the necessary operations. The horses will be shown to any member of the Clinical Society. Most emphatically, neither Dr. Ruffer nor his assistant has now or has ever had any pecuniary interest whatever, direct or indirect, in the preparation of the serum. Their best thanks, wrote Dr. Ruffer, are due to Sir Joseph Lister and the Council of the Institute for their encouragement in this work; whilst the able services of Mr. W. Robertson, M.R.C.V.S., and Mr. Harold Nolan, his collaborators throughout, were highly appreciated.

BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.

AT a meeting of the North London Medical and Chirurgical Society, held at the Great Northern Hospital, on December 13th, the President, Dr. J. G. Glover in the chair, Dr. James Galloway read a paper on the Bacteriological Diagnosis of Membranous Inflammations of the Throat, based on eighty cases recently examined by him. He commenced with a consideration of the difficulties lying in the way of an accurate clinical diagnosis in cases of diphtheritic affections. The extraordinary difference in the death-rate of the disease in different epidemics, and especially the difference of view as to the efficacy of various remedies, were quoted as facts showing the variety in membranous affections of the region, and also that no accurate means had been at our disposal to

allow of correct classification of these diseases up to the present time.

The question of the symptoms of experimental diphtheria and what might now be called pure diphtheria in the human subject was discussed, and the symptoms of these compared with other membranous diseases of the throat and larynx. None of the signs nor symptoms observed could be regarded as of absolute diagnostic value in differentiating true diphtheria from similar affections, with the exception of the characteristic diphtheritic paralysis. It was only by a recognition of the organism or organisms causing the disease that a trustworthy basis for diagnosis and for the classification of these diseases can be obtained.

Various pathogenic micro-organisms discovered in diphtheritic affections were mentioned and described. The following were those specially noted: (1) Bacillus diphtheriæ (Klebs-Loeffler). (2) Streptococcus pyogenes. (3) Staphylococcus pyogenes aureus. (4) Staphylococcus pyogenes albus. (5) Diplococci described by different observers. (6) Micrococcus of Talamon-Fraenkel. (7) Pneumococcus (Friedländer) and other organisms. The characters of these were demonstrated, their pathogenic properties were described, and mention was made of their probable *rôle* in diphtheritic affections. In this connection the subject of mixed infections was alluded to, and the possible increased virulence produced by some of the associated micro-organisms mentioned.

Easily adopted methods for the purpose of distinguishing these micro-organisms having been shown, the speaker stated that early accurate diagnosis was possible only by bacteriological examination, and that this test would also supply us with trustworthy methods for the formation of a new classification of the diseases under consideration. In view of new methods of treatment now under trial the importance of accurate bacteriological examination was especially insisted on, and attention was drawn to the unreliable character of many of the cases and statistics now being published for want of this precaution.

After some remarks from Mr. Lennox Browne, Dr. Gayton especially emphasised the necessity of regular examination of the throats of nurses and attendants in diphtheria wards, and the advantage of retaining the throat in as healthy a condition as possible.

Dr. D. S. Davies spoke of the advantages of systematic examination of cases of diphtheria from the point of view of public health, and stated that the authorities in Bristol had made arrangements for the bacteriological examination of cases by the public health department of that city.

Dr. Bailey and the President also made remarks.

THE DEATH-RATE OF DIPHTHERIA.

The commencement of a new method of treatment of diphtheria in our public hospitals makes it very important that we should have as accurate an idea as possible regarding its normal mortality before that treatment was commenced.

Some figures, which may be obtained from the statistics of the Metropolitan Asylums Board, throw considerable light upon the subject, giving, as they do, the mortality from diphtheria since that disease began to be received into their hospitals.

The case mortality year by year runs as follows:

1888	...	...	...	59.35 per cent.
1889	...	...	...	40.74 ,,
1890	...	...	...	33.55 ,,
1891	...	...	...	30.63 ,,
1892	...	...	...	29.35 ,,
1893	...	...	...	30.42 ,,

From this it will be seen that on the whole it is a descending rate, and that the percentage of mortality is considerably less than it was at first.

This is an improvement on which we may congratulate the managers. It must, however, be borne in mind that there are reasons for believing that the gain may not be in reality quite so great as it appears from the figures.

Cases of diphtheria have been admitted only since October 23rd, 1888, so that the very high mortality of 59.35 per cent. put down for that year was really founded on a comparatively small number of cases. That there was something accidental about it is pretty evident from the sudden drop to 40.74 in the next year, and although no statement may appear to that effect we may well believe that in the earlier years, when there was not the same general willingness to go into hospitals as exists at present, the cases admitted were of a selected and very severe character. It will be observed that from 1890 to the present time the improvement is much less striking, and if we take age-periods and estimate the mortality per cent. of cases under 15 years of age, we find that the case mortality has risen slightly during recent years. The following are the figures:

Diphtheria: Admissions and Deaths to the Hospitals of the Asylums Board of Cases under 15 Years of Age.

Year.	Admitted.	Died.	Per Cent.
1890	743	308	41.6
1891	1,050	387	36.9
1892	1,595	567	35.6
1893	2,238	829	37.0

We have taken the age of 15 as the limit because that is the age taken by the readers of the paper before the Clinical Society, of which we publish an abstract in another column, but it is worth remembering that statistics founded on such a wide grouping do not help very markedly in deciding questions of comparative mortality, or of the efficacy of treatment.

For example, in the table published by the Asylums Board showing the mortality at different ages up to the end of 1893, the mortality per cent at different ages is as follows:—

Under 1	...	...	...	...	69.9
1 to 2	...	...	...	...	65.1
2 to 3	...	...	...	...	60.7
3 to 4	...	...	...	...	50.4
4 to 5	...	...	...	...	43.8
5 to 10	...	...	...	...	28.6
10 to 15	...	...	...	...	10.5

The group there described as under 15 years of age contains a mixture of such different death-rates that it is obvious that, if the investigations at the Asylums Board hospitals are in any way to decide the efficacy of a new treatment, we must have the cases sorted out in a very thorough manner according to their ages.

The enormous virulence of the disease at early periods of life is well shown by the fact that of 40 cases last year under 1 year of age 37 died; and of 163 between 1 and 2 years of age, 106 died.

DIPHTHERIA CHART.

We have received from Messrs. Adlard and Sons, Bartholomew Close, London, E.C., a specimen of a chart, designed for them by Dr. Walter Jobson Horne, late House-Physician at St. Bartholomew's Hospital. The chart is designed to obtain careful and complete daily records of clinical observations in cases of diphtheria treated by antitoxic serum. It consists of a temperature chart, below which are special columns for the condition of the urine, the time of injection of antitoxin and its source; and for the condition as to the presence or absence of membrane of the parts affected. There are also special columns for notes as to paralysis, condition of the lungs, tracheotomy, and bacterioscopic investigation of membrane. The charts are likely to be extremely useful in obtaining uniformity, and in saving the observers from the mortification of discovering that in some of his cases he has at the time omitted to note points essential for subsequent satisfactory statistical classification. We are informed that the charts, which will be printed in red ink, will be sold at the price of four copies for 1s.

SYRINGES.

Dr. Charles Forbes (London) writes: All the syringes (hypodermic) advertised for use in this treatment are not only expensive but do not quite reach an aseptic standard. A simple "aseptic" hypodermic syringe, plainly constructed, with a capacity of 20 c.cm., also marked in minims, and the use of platinoiridium needles would meet the exigencies of the case. The barrel of this syringe can be sterilised by boiling and the needle by heating to redness in a spirit flame. Heat does not tarnish or soften this metal, its conductivity being almost perfect.

Dr. V. Cnyrim, in the *Deutsche med. Wochenschrift*, reports that in a case of diphtheria which he treated successfully with two 10 c.cm. doses of Höchst serum, No. 2 and No. 3, the subsidence of the disease was followed in a few days by the appearance of an urticarial eruption about the site of injection, and later by swelling of the lymphatic glands, pains in the knee and elbow joints, in the muscles, and "hammering headache." The temperature rose to 39.5°. The symptoms began to disappear on the fifth day. In another case in which the patient, Dr. K., was himself a medical man, an injection of 10 c.cm. of Höchst serum No. 1 was given. Four days later constitutional disturbance came on; on the seventh day there was swelling of lymphatic glands, on the eighth urticaria; the symptoms began to subside on the eleventh day. Up to the twenty-first day there were pains in the right arm, and marked loss of power in the limbs.

M. Roux has now 140 horses undergoing immunisation. On and after January 1st the authorities of the Institut Pasteur hope to be in a position to supply the whole of France with serum. The impossibility of getting the serum in the provinces is causing an afflux of diphtheria cases to Paris, and the attention of the Minister of Public Works has been called to the danger to the public health involved in the transport of such patients in ordinary trains. It is urged that depôts where the serum can be procured should be established without delay in the chief towns of the several departments. This, however, is declared to be impossible before the end of January or the beginning of February.

The Association of Friends of the University of Montpellier has taken the initiative in the movement for the creation of a bacteriological institute at Montpellier, and has already collected a sum of over 58,000 francs (£2,320) for the purpose. At a recent meeting of the committee the Dean of the Faculty of Medicine stated that Professors Kiener and Carrieu had inoculated two horses, and that in two months a sufficient supply of serum for the needs of the town and district would be ready. Professor Kiener also undertakes the bacteriological examination of specimens of false membrane sent to him by practitioners, the result of each examination being communicated by telegraph to the person interested.

At the Royal Institute of Hygiene in Rome which is under the direction of Professor Pagliani, two horses are now being immunised and will be ready to supply the serum in six or seven weeks. The municipality of Rome have also two horses ready for immunisation. A report has been current that the Government intended to monopolise the supply in Italy. This, however, turns out to be incorrect, as on December 12th the Under-Secretary of State for the Interior, in reply to Professor Celli, the Director of the Institute of Experimental Hygiene, who is also a deputy, stated that there was no monopoly and that the State would not prevent the numerous laboratories in the kingdom manufacturing and supplying the serum. He added that the Government intended supplying it at a very cheap rate. The supply in Rome is at present very small, but fortunately cases of diphtheria are few at present.

From the reports published on all sides it would appear that the cause of the antitoxic serum finds nowhere more sanguine support than in Holland. Subscription lists have been opened by the medical journals and the principal daily papers. The Committee of the Witte Kruis has added to its budget for next year a sum of 5,000 francs (£200), to enable Professor Foster, of Amsterdam, to prepare the serum in that city. The Leeuwarden Society for the Promotion of Public Health has sent a delegate to Paris to study in Roux's laboratory the preparation of the serum and the effect of the treatment in the children's hospitals. In Rotterdam £400 was subscribed by the public within a few days. In the Algemeene Handelsblad a horse is now undergoing immunisation.

Dr. John Haddon (Hawick, N.B.) writes: My experience has been gathered from the field of general practice. I did my best by taking notes at the bedside, to study disease as I found it, and the conclusions I arrived at with regard to diphtheria were contained in my note, which appeared in the British Medical Journal of December 8th.

Mr. Browne takes exception to my "views." Mere "views" I value little, no matter whose they are; but I would like to point out that I state facts as well as views, and facts are "chields that wunna ding." But upon what does Mr. Browne base his views? On 1,000 unpublished cases of diphtheria, in which only 11.9 per cent. showed some form of paralysis.

Mr. Browne says, in criticising those who are at present publishing cases of diphtheria, which he thinks may not be cases of diphtheria at all, that "no mention is made of paralytic sequelæ—the only irreproachable clinical test of exact diagnosis." If, then, we apply this test to his 1,000 cases, and say that it occurred in 12 per cent. (instead of 11.9) for the sake of round numbers, it is evident that his 1,000 cases are at once reduced to 120, from which it is just possible that by proper analysis his views might be altered.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

The usual monthly meeting of the Executive Committee of this Society was held at 429, Strand, on December 13th.

There was present the Chairman, Dr. De Havilland Hall, in the chair; Dr. G. E. Herman, Treasurer; Dr. Major Greenwood, Dr. J. Pickett, Dr. W. Knowsley Sibley, Dr. J. W. Hunt, and Dr. J. B. Ball.

The accounts presented showed the Society to be growing in financial strength, and the list of current sickness claims was found to be light for the time of year. One rather curious case was that of a member who has been totally incapacitated for more than two months from the bite of a pet monkey.

For some time past the Committee have been considering the question whether a portion of the money which is annually saved by economy of management might not be used to obtain some additional benefits for the members of the Society. At the suggestion of the Chairman, the Committee resolved to subscribe 20 guineas a year to the Royal Medical Benevolent College, Epsom, in order that if any members of the Medical Assurance Society and their friends should at any time be candidates for the annuities or other benefits offered by the College, they might be aided by the votes of the Society.

Prospectuses and all particulars may be had on application to Mr. F. Addiscott, Secretary, Medical Assurance Society, 33, Chancery Lane, London, W.C.

THE APPEALS OF THE CIVIL RIGHTS DEFENCE COMMITTEE.

We have received from the Earl of Stamford, President of the Civil Rights Defence Committee, a letter and a copy of the interim report. The report deals with two separate matters: (1) The appeals to the Privy Council from decisions of the Supreme Court of Trinidad and Tobago; and (2) an appeal to the House of Lords in the action brought by Mr. Anderson in this country against the Trinidad judges. Lord Stamford states that the object of the Committee is to raise funds to enable these appeals to be prosecuted. The decisions of the Court of Trinidad and Tobago, which are still in force against Mr. Anderson, prevent him from returning to Tobago to carry on his practice, collect his debts, dispose of his property, or in any way satisfactorily settle his affairs.

The action was tried before the late Lord Chief Justice Coleridge and a Middlesex special jury in April last, and resulted in the following verdict against Mr. Justice Cook: "The jury find that the defendant Cook oppressively and with malice overstrained his judicial powers to the prejudice of the plaintiff and the wilful perversion of justice, and found a verdict for the plaintiff for £500." Lord Coleridge, however, entered judgment for the defendant, on the ground that even in such circumstances no action will lie against a judge; and the Court of Appeal has affirmed his decision. The report of Sir W. Markby and Sir Frederick Pollock, the Royal Commissioners who were appointed to inquire into the administration of justice in Trinidad and Tobago, states that the outrages done to Mr. Anderson were "a public danger," and that Mr. Anderson acted in defence of his rights. After reciting these facts Lord Stamford proceeds: "Had Mr. Anderson recovered the damages awarded him by the jury it would have been unne-

cessary to make this appeal to the public for funds. The Civil Rights Defence Committee has therefore adopted a resolution that a committee be formed with the special object of enabling Mr. Anderson to appeal to the House of Lords from the decision of the Court of Appeal in this country which deprives him of the fruits of his verdict, and also with the intention, should the House of Lords affirm the decision, of appealing to Parliament for an amendment of the law and for an indemnity to Mr. Anderson.....If the law is permitted to stand as declared by the judgment in Anderson *v.* Gorrie and others, no such verdict can ever again under any circumstances be obtained, and the time for appealing against the judgment will expire about the middle of the year 1895..... The names of gentlemen willing to take part in the formation of the committee for the appeal to the House of Lords should be sent to the Secretarial Committee at the offices, 5, Mitre Court, Temple, London, E.C., and subscriptions specially marked 'for the appeal to the House of Lords,' will be reserved for that purpose. The present fund, as before stated, is solely for the appeal to the Privy Council."

All subscriptions to the fund should be sent to the Manager of the Union Bank of London (Chancery Lane branch), and be made payable to the "Anderson Appeal Fund Account."

LITERARY NOTES.

The *Leucocyte* is the name of a medical journal conducted by the students of Detroit College of Medicine.

The *Therapeutische Wochenschrift* is the name of a new medical journal which has recently appeared at Vienna.

The *Policlinico*, which is edited by Professors G. Baccelli and Francesco Durante, now issues a weekly supplement somewhat on the lines of our own Epitome, but containing, in addition to abstracts, reviews and miscellaneous matter, notably a column headed *Interessi Professionali*, in which matters affecting the interests of the medical profession are dealt with. The supplement is under the editorship of Professor E. Morelli.

The first number of a new serial, *La Chronique Médicale*, appeared in Paris on Saturday last, December 15th. It will be issued twice a month, and will consist of original papers on the medical sciences, including pharmacy, and on medico-historical and medico-literary subjects. The editor is Dr. Cabanès, already well known for his essay on Marat, and for his researches elucidating the professional treatment of Louis XIV and Napoleon in their hours of sickness.

An interesting contribution to the history of epidemics is about to be published by the Epidemiological Society of London. It consists of an account of the Great Plague of London in 1665, written by a London apothecary, William Boghurst, who resided through the whole of the epidemic and gained a large experience of the disease. This document has long remained in MS. in the British Museum, and a few quotations have been made from it by various authors, but it has never been printed. Boghurst gives an account of the origin and spread of the epidemic, being different from that given by Nathaniel Hodges, whose work is the only other medical authority on the subject; and his account of the symptoms and complications of the disease is also much fuller than that of Hodges. This description offers many points of resemblance to the accounts of the latest epidemic of the true Plague, that of Hong Kong in the present year. The treatise will be published in the *Transactions* of the Society, and also separately, edited with an introduction by the late President of the Society, Dr. Payne.

A correspondent writes to direct attention to the inordinate discount charged to authors, amounting, *de facto*, to some 30 per cent. more or less (namely, 25 per cent. direct discount, and, indirectly, for payment for 96 copies only for every 100 sold), which, added to the cost of printing and binding, and interest thereon, etc., leaves the author little or nothing, excepting in the case of works that command a rapid sale and go through repeated editions. In these days (our correspondent proceeds) of such a plethora of unemployed money (an evident outcome of general distrust) that first-class investments only realise 2½ to 3½ per cent., surely it is but right that the existing old-world relations between authors and publishers should be revised, and a more equitable apportionment of the assumed profits accorded to the former; and, at the same time, an end be put to the questionable system so unwisely introduced by various booksellers, with the view of attracting customers by the unreasonable proffer of 20 per cent. for cash, a system detrimental alike to fair trade earnings and to a just return for the mental labour of the often impecunious struggling author. We are in full agreement with the views expressed by our correspondent, and we only wish we could suggest a remedy for the state of things of which he complains. Perhaps Mr. Walter Besant and the Society of Authors might be induced to take the matter up. As a last resource the authors might strike, like the colliers, and bring their masters, the publishers, to terms by stopping the literary output.

Yale Medical Journal, which has lately come into existence, is edited and published by the medical students of Yale University, under the auspices of an advisory board composed of the leading students of the University.

In the Library of the Surgeon-General's Office of the American army there are now, according to a recent official report, 114,567 bound volumes and 183,778 monographs and theses on medical subjects.

The following sonnet by Oliver Wendell Holmes was published for the first time in a recent number of the *Boston Medical and Surgical Journal*. The sonnet was written at the request of Dr. Bowditch, by whom it was read before the Harvard Club of New York:—

ALMA MATER.

Yes, home is sweet! and yet we needs must sigh,
Restless until our longing souls have found
Some realm beyond the fireside's narrow bound
Where slippered ease and sleepy comfort lie,—
Some fair ideal form that cannot die,
By age dismantled and by change uncrowned,
Else life creeps circling in the self-same round,
And the low ceiling hides the lofty sky.
Ah, then to thee our truant hearts return,
Dear Mother, Alma, Casta,—spotless, kind!
Thy sacred walls a larger home we find,
And still for thee thy wandering children yearn,
While with undying fires thine altars burn
Where all our holiest memories rest enshrined.

Laënnec, the discoverer of auscultation, was, it appears, not only a devout Catholic, but a fervent Royalist, and his practice lay largely among the blue-blooded denizens of the Faubourg Saint-Germain. On the title-page of his *Traité de l'Auscultation* he places after his name, before any of his academic distinctions or official appointments, the title of "Médecin de S. A. R. Madame la Duchesse de Berry." What Her Royal Highness thought of her physician we do not know; that she was not the most appreciative of patients we know from the somewhat malicious descriptions of Dubois and the other obstetricians in whose hands she had been, which we quoted a little time ago. It is certain that among Laënnec's artistocratic patients there was at least one who allowed herself to speak of him with scant respect. In a letter which appears in a book recently published (*Les Correspondants de J. Joubert*, par P. de Reynal), Madame de Chateaubriand writes as follows, referring to the retirement of the famous physician from Paris: "Our little dry stick of a Laënnec has gone to his own part of the country, Quimper: he said good-bye to nobody but sent his account to everyone. I don't think he will come back. I have, however, adopted the plan of keeping wonderfully well, and I have made up my mind to have no other physician than common sense and no other physic than asses' milk." There speaks the ordinary patient when he does not happen to be ill—especially when the doctor takes the liberty of reminding him about his fees. It should be stated that two years before Laënnec had cured Madame de Chateaubriand of a broncho-pneumonia which brought her to the very brink of the grave.

The London Health Laws, just brought out by Messrs. Cassell and Co., is "a manual of the law affecting the housing and sanitary condition of Londoners, with special reference to the dwellings of the poor." It is issued by the Mansion House Council on the Dwellings of the Poor.

The first volume of a new German translation of the complete works of Hippocrates by Dr. Robert Fuchs, of Dresden, has just been published by H. Lüneburg, of Munich.

According to the Philadelphia *Medical News* the *Index*

Medicus is about to be discontinued. To publish it without loss would require about 800 paying subscribers, and the work has been carried on with less than 300. Our contemporary suggests that the publication of the *Index Medicus* should be continued by the United States Government. It might, it is suggested, appear as a part of the work of the office of the Surgeon-General.

PROPOSED AMENDMENT OF THE MEDICAL ACT.

WE have received from several correspondents the printed advertisements of various quacks. In some cases these have been handbills, in others pages torn, apparently, from some book. We would recall the attention of our readers to the statements made in the article published in the BRITISH MEDICAL JOURNAL of December 1st, 1894, page 1271, and on several previous occasions.

The mere denunciation of quacks in the pages of the JOURNAL cannot be expected to bring about any very beneficial results. If anything is to be attempted seriously, it is essential that the evidence should be complete from a legal point of view in each case. Circulars or pages torn from books and unaccompanied by further full information are quite useless in this regard. Information supplied must deal with each one of the following heads:

(1) The name and address of the quack.

(2) The description of his premises.

(3) One of his advertisements, including a copy of each book and pamphlet, and cuttings from the local papers with dates.

(4) A memorandum must also be made of the date on which the name, address, and description of the premises is taken down.

(5) The member must do this himself, and preserve his original notes. It would also be necessary to note the nature and condition of the neighbourhood where the quack purports to practise, and his hours of attendance.

(6) The results of the observations should then be catalogued and arranged by the different Branches.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 16th day of January next, at 2 o'clock in the afternoon.

December 11th, 1894. FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1895. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 16th, April 17th, July 10th, and October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely December 27th, 1894; March 28th, June 20th, and October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election. FRANCIS FOWKE, *General Secretary.*

GLOUCESTERSHIRE BRANCH.

AN ordinary meeting of this Branch was held at the Gloucester Infirmary, on November 20th, under the presidency of Mr. O. H. FOWLER (Cirencester). Twenty-five members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Presidential Address.—Mr. FOWLER gave his presidential address upon Circumcision: its advantages and how it is best performed. Referring to the results occasionally obtained by careless operators, the President instanced cases in which so much skin was removed that a pointed contracted penis like that of a boar was the result, whilst in others so much mucous membrane was left that, after healing, the organ possessed a sort of Elizabethan ruffle round its neck, inelegant in appearance and obstructive in function. In common with most authorities he advocated the operation in infancy if there was the slightest phimosis; but otherwise he would not actually advise it, though he was prepared to perform it when asked to do so; especially as, whilst being without any firm conviction, he rather leaned to the opinion that it was a preventive of masturbation. The following were the steps of the operation and the after-treatment: 1. That the prepuce, with plenty of mucous membrane included, should be held by a pair of parallel-bladed forceps, having an accessory spiked edge on the further side, and that it should be cut from above downwards, care being taken not to injure the frenum. 2. That stitches should always be used in adults, but only when necessary in infants. 3. That the plan of dressing suggested by Mr. Christopher Heath should be followed. This consisted in applying a strip of lint 6 in. by $\frac{1}{2}$ in. by its middle to the under surface of the wound, winding the two ends once lightly round the cut surface, and applying the penis to the abdomen, fastening the free ends of the lint by plaster. 4. That after the operation care should be taken not to let the parts slip over the glans, lest contraction and phimosis resulted. 5. That care should be taken to avoid adhesions, and that to this end the nurse should be instructed how to pass a probe behind the glans. 6. That the dressings should be removed on the fourth day by immersing the patient in a warm bath. The President then considered the alternative operation—namely, dilatation of the preputial orifice, a method strongly recommended by Dr. Snow and others. After having carefully watched the results of cases under this treatment, he had no hesitation in condemning it as difficult, unreliable, very painful, and quite ineffectual.

Vote of Thanks.—Mr. ELLIS proposed, and Dr. BATTEN seconded, a vote of thanks to the President for his eloquent and practical address.

EAST ANGLIAN BRANCH.

A SPECIAL meeting of the East Anglian Branch was held at the Norfolk and Norwich Hospital on December 4th, 1894, the President, Mr. A. C. MAYO, in the chair. The special meeting was summoned by the President and Secretaries of the Branch at the request of the Parliamentary Bills Committee of the Association to consider a "Draft Bill to amend the Medical Acts."

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Amendment of Medical Acts.—The opinion having been expressed that of the two draft Bills submitted by the Parliamentary Bills Committee, that settled by Mr. Mackenzie and Mr. Turner was on the whole the preferable Bill, it was proposed by Dr. BEVERLEY, seconded by Dr. MCCLURE, and unanimously resolved:—

That the Bill as settled by Mr. Mackenzie and Mr. Turner be the one to which the attention of this meeting be directed.

This Bill was then considered clause by clause, and the following resolutions were passed:—

1. That the title and preamble be approved.
2. That the words "Master in Medicine or Surgery" be added after the

words "Doctor of Medicine" in paragraph *a* of Clause I, and that the clause thus amended be approved.

3. That the words "of the United Kingdom" be inserted immediately the words "*Medical Register*" in paragraph *c* of Clause II, and that the clause thus amended be approved.

4. That Clause IV be approved.

5. That Clause V be approved.

6. That Clause VI be approved.

7. That paragraph 3 in Clause VII be struck out, and that the clause thus amended be approved.

8. That Clause VIII be approved.

9. That Clause IX be approved.

MALTA AND MEDITERRANEAN BRANCH.

A MEETING of this Branch was held at Valletta Military Hospital on August 21st, Professor PISANI, Chief Government Medical Officer and President, in the chair. There were present also Surgeon-Major-General Inkson, P.M.O. and five other army medical officers, Deputy-Inspector General Macdonnell and fourteen naval medical officers, and five local civilian practitioners.

Malta Harbours and Mediterranean Fevers.—Surgeon-Major MANCHÉ, R.M.A., introduced a discussion on the influence, if any, of the present condition of the Malta harbours in causing the so-called Mediterranean remittent fever. He contended, in opposition to statements made in the English press, that the harbours were in as good a sanitary condition as circumstances permitted, while large sums of money had been spent on deviating the sewage of the towns from the Grand Harbour, so that only the sewage of the ships and that of a very few houses found its way into that harbour. The inhabitants of the houses surrounding even the dirtiest parts of the Quarantine Harbour did not suffer particularly from fever.—Staff-Surgeon KIRKER observed that, although it was true that the fleet suffered from Mediterranean fever to a larger extent when at Malta than at any other Mediterranean ports, this state of affairs was not due to the condition of the harbour water, but rather to the unhealthy surroundings of harbour life and the proportionately long periods spent each year by the fleet in Malta Harbour.—Fleet-Surgeon ELLIS thought a great deal too much stress had been laid on this year's sickness, on account of the larger number of officers that had been attacked. The only difference between officers and men was that the former spent more time on shore and took less regular exercise. An ironclad was a small space in which to crowd from 500 to 1,000 men, and it was surprising that so small a sick-rate as 3 per cent. even had been registered during the year in the *Ramillies*. Eighteen years ago he remembered that the harbour was much filthier, and that there was less fever.—Dr. CARUANA SCICLUNA described numerous bacteriological experiments that he had conducted which proved the Malta harbours to be cleaner and to contain fewer bacteria than those of Naples and elsewhere.—Surgeon HILL, R.N., stated that while at anchor for a long period in Dockyard Creek but two cases had occurred in H.M.S. *Surprise*.—Surgeon-Captain HUGHES said that if the harbour water was capable of causing fever, it must be on account of some material poison existing in it. This could only gain entrance to the human body by (1) inoculation by mosquitoes or by cuts or scratches when bathing; (2) by swallowing the water when bathing or by eating badly-cooked fish; (3) by breathing air infected by the virus, which could only occur when the virus underwent a drying process. He held that these were preventable causes of an improbable character, not borne out in any way by facts, and that there was no reason why the harbour, even if infective, should give rise to naval sickness. —The PRESIDENT said that fifty years ago the fever in question was unknown, although the water in the harbours of Malta was of chocolate colour through contamination by sewage from the towns.—Deputy-Inspector-General MACDONNELL, R.N., considered that the fever was due to the filth-sodden condition of the island and the want of proper drainage in many parts, and not to the state of the water of the harbour. —Dr. GHIO stated emphatically that the fever was due to the horrible pollution of the subsoil of Sliema and the inland towns, and to the want of flushing water in the drains of Valletta and the three cities.—Surgeon-Major MANCHÉ then proposed, and Staff-Surgeon KIRKER seconded, the following resolution:

That in the opinion of this meeting the state of the water in the harbours of Malta does not account for the attacks of fever observed among the officers and men of the navy.

Surgeon-Major-General INKSON did not think the meeting would be justified in saying that no fever cases arose from the condition of the harbour, though he agreed with those who thought it an improbable cause.—After further discussion, Fleet-Surgeon ELLIS proposed as an amendment:

That the sanitary state of the water in the harbours of Malta is not more conducive to the production of the so-called Mediterranean fever than that of many other parts of the island; and that fewer cases had occurred among the civil population, the army and the navy, during the current year than had occurred during the previous three years.

—This was seconded by Surgeon-Major-General INKSON, and on being put to the vote was carried.

SPECIAL CORRESPONDENCE.

BERLIN.

Debate on the Antitoxin Treatment at the Medical Society.

THE adjourned discussion on diphtheria antitoxin, at the meeting of the Berliner Medicinische Gesellschaft, was resumed on December 12th by Professor M. Wolff. He said that, in his opinion, the Loeffler bacillus was undoubtedly the cause of diphtheria, and that the bacillus was to be found in every true diphtheria case. One was quite justified in speaking of the constancy of the bacillus. The cases in which Loeffler bacilli were found in the mucous membrane of healthy persons were extremely rare, and did not go to prove, as Hansemann assumed, that these persons were diphtheritic though healthy, but rather that they were naturally immune to diphtheria. Again, the disease produced in animals by the Loeffler bacillus was very similar to human diphtheria. There was membranous exudation, especially of the trachea, and subsequent paralysis also occurred in animal diphtheria.

Dr. Benda, prosector of the Urban Hospital, said that what was spoken of as Bretonneau's diphtheria had been considerably modified during the last sixty years. Bretonneau did not know all the varieties of diphtheria into which modern research and, above all, the labours of Orth and Senator have given us an insight. He (Benda) had made *post-mortem* examinations on 39 cases of deaths from diphtheria, some of which had been treated with, some without, the serum. Of these, only 6 were without traces of nephritis. In 2 cases he found fresh miliary tuberculosis, both of these being serum cases the one dead six, the other seven, days after treatment. Similar observations had been made elsewhere.

Dr. Körte, of the Urban Hospital, said that he, too, had begun to use the serum with great misgivings, but that he was now convinced of its eminent therapeutic qualities. Of 36 cases treated by serum in his clinic, 9 only had died. Never had he had such good results with any other treatment, and he denied that the decrease in the mortality was due to the mildness of the cases, as Hansemann had alleged.

The next speaker was Dr. Gottstein, known as an opponent of antitoxin by his recently published pamphlet on the subject. He said that the statistics of the serum treatment hitherto published were anything but convincing. Two facts, it was true, did seem so: the statement by Roux that in his hospital, where the serum was used, the mortality had only been half as great as in another hospital where it was not used; and then the well-known statements of Virchow and others with regard to the results in the Kaiser und Kaiserin Friedrich Hospital. But Roux's statement had lost the power to convince, since Rumpf had shown that greater differences of mortality coexisted in two hospitals of Hamburg through causes that had nothing to do with therapeutic mehods. And, as regarded the Kaiser Friedrich hospital, if its diphtheria statistics from 1891 onwards were compared with the statistics of the other children's hospitals, it would be seen that its percentage of deaths had always been about the same as that of the others. Now the total number of diphtheria cases and deaths in Berlin had kept the same average in Berlin in this year as in former years, and thus if really the mortality of serum-treated cases had been so much lower,

the mortality of the cases without serum during the same time must have been proportionately higher; but this was not the case, as a statistical table would show. The hospital returns must not be considered separately, but in connection with the yearly statistics and averages of diphtheria cases and deaths in Berlin. He showed the two following tables of cases and deaths from 1890 to 1894, up to November 24th:—

From September 30th to November 24th.

In the Year.	Total of Deaths in Berlin.	Deaths in Berlin Hospitals.	Cases in Berlin Hospitals.	Per-centage.
1890.....	276	181	548	30.9
1891.....	216	124	320	38.7
1892.....	269	175	453	38.6
1893.....	334	197	454	43.3
1894.....	209	131	712	18.4

From January 1st to December 31st.

In the Year.	Total of Deaths in Berlin.	Deaths in Berlin Hospitals.
1890	1391	682
1891	1196	613
1892	1442	837
1893	1627	961
1894*	1281	737

* From January 1st to November 24th.

From these tables he deduced that the percentage of mortality had gone down more than one-half in 1894 as compared with 1893, but that the unchanged height of the total mortality in Berlin proved that this decrease was not due to the serum, but to the enormous increase in the numbers of cases brought to the hospitals. In fact, a glance at the second table showed that the total mortality of 1894, though taken only up to November 24th, is already almost larger than that of 1891. Probably more than a thousand children had been treated by serum in the Berlin hospitals this year, but the treatment had been without any influence on the mortality taken as a whole.

Professor Baginsky, of the Kaiser und Kaiserin Friedrich Hospital, said that the question at issue could not be decided by discussion; nor was it a question for the bacteriologist or the pathological anatomist; its decision lay with the practitioner. When cases were received into his clinic he was in the habit of making the diagnosis from the clinical aspect of the case alone. Later on the diagnosis was confirmed by bacteriological examination. That in many doubtful cases no Loeffler bacilli were found was no wonder. The quality of the cases brought to his hospital did not differ essentially from year to year. But whereas formerly he had been obliged to confess that all his therapeutic methods were equally ineffectual to combat diphtheria, and that the more or less successful results obtained were entirely due to more or less careful nursing, since the introduction of the antitoxic serum the case was altered. No previous remedy had done for diphtheria what the serum had done. He had had in his clinic this year 533 cases of diphtheria. Of these, 303 had been treated with serum, and had resulted in 40 deaths, that is, a percentage of 13.2; and 230 had been treated without serum, and here there had been 110 deaths, a percentage of 47.82. He did not care for the statistics, he was quite prepared to give them up; but as to his conviction—founded upon observations at the bedside—that could not be shaken by anybody.

Some personal remarks followed, in the course of which Virchow referred with indignation to an attack made on him in the *Deutsche medizinische Wochenschrift*, which had insinuated that he had not been strictly impartial in arranging and conducting the serum discussion.

The discussion was then adjourned to the next meeting.

ROME.

Malaria in Italy.

THE General Direction of Statistics have published a report of the mortality from malaria in Italy during the years 1890, 1891, and 1892. The total number of deaths in the three years was 49,407, which gives a yearly mortality of 54 per 100,000 living. On the shores of the Mediterranean the disease is very endemic in Agro Pontino, Salerintano, and around Pesto. On the slopes of the Adriatic, in the district which extends from the promontory of Gargano, through Molise, Capitanta, and Basilicata to Ionio, the disease is most prevalent. It is also very prevalent in Sicily and Sardinia.

In Rome, from 1881 to the present time, there has been a rapid diminution of deaths from malaria. Thus, in 1882, there were 505 deaths, and in 1893 only 189. Nearly all the deaths from this disease which take place in Rome occur amongst those persons who have taken the disease in the Campagna, and who are brought in ill and frequently in a dying condition to the Roman hospitals. The few cases of the disease that occur in Rome proper are generally prevalent in July, August, and September, and are of a benign kind. The disease is found amongst the poorest and worst fed of the Roman population. It is the general experience of all the English medical men practising in Rome that they never meet with a case of malaria caught by an English person in Rome. This fact is mentioned as one so often hears from visitors how much they dread coming here because they have heard that Rome is a hotbed of malaria. Judging from what visitors tell us there is reason to believe that many members of the profession in England are also imbued with the same erroneous opinions. Rome of to-day is one of the healthiest and cleanest cities in Europe. Its water supply, both for purity and quantity, is unequalled in the world; and as for the climate, one must spend a winter here to know how beautiful, calm, and clear it is.

CORRESPONDENCE.

PAY WARDS AT THE GREAT NORTHERN CENTRAL HOSPITAL.

SIR,—Mr. Fraser Black's letter, published in the BRITISH MEDICAL JOURNAL of December 15th, is very misleading as to the essential grounds of the dispute.

Our quarrel is not primarily with the staff of the hospital at all, nor was our protest against the pay wards directed to the staff. It was directed to the Committee of the hospital; and the deputation of medical practitioners who presented it urged that the action of the Committee in compelling the staff to attend patients in the pay wards gratuitously was a great injustice (1) to the deserving poor, (2) to the members of the staff, (3) to the outside medical practitioners.

The Chairman of the Hospital Committee certainly asserted that the staff gladly acquiesced in the pay ward plan, but this was immediately contradicted by a member of the staff on the Committee, who declared that they undertook their new duties with hesitation and most unwillingly.

Our quarrel, therefore, is only secondarily with the staff, inasmuch as they have allowed themselves to be coerced into a position of direct antagonism to the rest of the profession, in which they systematically break not only a fundamental and universally recognised rule of professional ethics, but also a by-law of the Royal College of Physicians.

Under these circumstances, Mr. Fraser Black's remark that the disagreement "hardly rises above the dignity of a squabble between two sections of one trades union," appears to be a gratuitous impertinence, and one which only becomes intelligible when read in conjunction with his further assurance that "the lay members of the managing committees of hospitals have little patience with these medical jealousies."

It is in great measure because we have nothing analogous to a trades union in the profession that otherwise well-meaning gentlemen sitting on hospital boards are enabled and en-

couraged to treat with contemptuous indifference and unconcealed impatience all reference to the rights and interests and feelings of medical men.

The supreme test of medical virtue with these gentlemen is the willingness of the practitioner to be fleeced, and they are pleased to patronise him in proportion to his display of that willingness, which patronage is only one degree less insulting than their sneering references to "trade jealousies" when the practitioner grumbles at the introduction of new schemes and instruments for fleecing him more effectively.

The intention of the original promoters of the hospital was obviously from the second paragraph quoted by Mr. Fraser Black's letter, that medical men who "find their efforts frustrated by domestic mismanagement and inefficient nursing" should be able to remove them "to a well-equipped hospital," where they might be "treated by their ordinary medical adviser." If Mr. Fraser Black will name the man who prevents the carrying out of this cardinal feature of the scheme, we will promptly inform him "whose carriage blocks the way."—I am, etc.,

Tollington Park, N., Dec. 19th. W. Parker.

Sir,—The letter of your correspondent, Mr. T. Fraser Black, J.P., throws an interesting light on the controversy anent the establishment of pay wards in charitable institutions.

Its autocratic style shows the tendency which exists for the people composing the managing committees of hospitals to treat the feelings and opinions of medical men—consultants or general practitioners—("the two sections of one trades union"), with a contemptuous indifference which we rarely see so openly expressed in print.

It appears to be ignored that the more important part of the charity which serves to maintain the hospitals is the charity of those members of the medical profession ("one section of that union," "a select few medicals"), who freely give their services to these institutions. The mere matter of providing the accessories to their treatment is a minor thing of much less true value. Besides, all classes are asked in the pulpit and press to pay for these accessories, and they do so under the supposition that their gifts are for the benefit of people poorer than themselves; when, however, they learn that their charity is expended on individuals in comfortable circumstances, the natural tendency is for their subscriptions to diminish or cease altogether.

It is because the profession do look upon the poor "as fellow human beings to be assisted in their physical troubles," and not simply "as cases," that they object to hospital beds being occupied by well-to-do people, who, however interesting their diseases may be from a medical aspect, are taking the charity that is intended for the poor and needy.—I am, etc.

Highbury Grove, N., Dec. 15th. C. F. Bailey, M.D.

Sir,—I venture to reply to Mr. Black[1] that we medical men think of our patients apart from hospitals or lay members of committee. We have little patience with the jealousies and rivalries of these institutions. So long as the hospitals content themselves with affording, for the most part, rough, hasty treatment to thousands of persons who could not pay any reasonable fee to us, we tolerate the system, though I, for one, think it a thoroughly bad system; but when they try to step in between us and those of our patients who can both pay us and provide comfortably for themselves, it is time to decline once for all to allow interference between us and our patients. When we ask Mr. Black and others to supply nursing homes for our patients, or when our patients ask him, it will be time enough to talk of pay wards. I can get my patients into comfortable nursing homes for £2 2s. a week at any time; but I usually prefer to keep them at their own homes, since I believe the results are better so, even if little difficulties arise.

The proposal of certain laymen to give gratuitous medical assistance to persons whom they think not entitled to free board and lodging, shows how benevolent men are in giving away the property or work of others. The unfair competition of the hospitals has already reduced the fees paid by the working and middle classes so unnecessarily low, that an evil influence is already apparent in the attendance they receive in sickness. And do the hospitals touch the fringe of the question of medical help to the working classes? Do they provide medical care for the poor artisan dying of a lingering malady? He is left in our care without hesitation. He is refused at the hospital. Do they take in the friendless servant girl taken ill in service, and suffering from an uninteresting malady? She must go to the infirmary. Fill all the beds in all the hospitals in London, what provision is this for the sick poor of the metropolis? Yet with thousands and thousands lying ill in wretched apartments, a room to a family, and no chance of admission to a hospital, we see millions of money squandered in supporting out-patient departments which deal with trivial ailments requiring not more than three visits on an average; and these are the very cases which might be an easy source of income to the doctors, who are compelled by humanity to give work and medicine for nothing to hundreds and thousands of the suffering poor, for whom the hospitals are not available.

These and other injustices we complain of on behalf of the sick poor and their medical attendants; but we have hitherto contented ourselves with complaints. If, however, ignorant philanthropy and commercial charity are boldly taking on themselves the *rôle* of taskmasters, cutting down the payment of doctors below that of barbers (and 4d. is not unknown as a doctor's fee for advice and medicine), it is time to rebel against them.

I do not refuse to attend a sick person because there is no chance of my ever being paid for it; but I should consider myself a traitor to my profession if I allowed hospital committees or medical aid societies to give my services for nothing, or next to nothing, to persons who ought to pay me. —I am, etc.,

Highgate, Dec. 17th. Hugh Woods.

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[1] British Medical Journal, December 15th.

THE ROYAL BOTANIC SOCIETY OF LONDON.

Sir,—Having seen the very excellent article on the Royal Botanic Society and its garden in the Regent's Park which appeared in the British Medical Journal of December 15th, will you kindly permit me to give to those of your readers as may desire to join the Society (owing to your article) information as to the mode of procedure? New Fellows are elected into the Society by ballot on the nomination of Fellows. The payments are: Entrance fee, £5 5s.; annual subscription, £2 2s., or a life payment of £21. I shall be happy to send papers and give all information desired by letter or otherwise.—I am, etc.,

December 19th. Wm. Sowerby, Secretary.

MORPHINE AND ATROPINE.

Sir,—For some years past I have used, like most of my brethren, tabloids of morphine for purposes of hypodermic medication. Lately the "hypoderm" of Allen and Hanburys, consisting of gr. ¼ of morphine, and gr. $\frac{1}{75}$ of atropine, has been the form I have most frequently employed. These leave behind, as a rule, no unpleasant effect beyond the drowsy look and contracted pupil characteristic of opium and its derivatives.

Occasionally, where the pain has not been so very acute as to necessitate the use of the syringe, I have given the "hypoderm" by the mouth. At the time pain is relieved, but next day one observes the after-effects are not those of morphine. The pupil is widely dilated, there is loss of accommodation to such an extent that the patient cannot read ordinary letterpress. I have observed this in every case in which I have used the "hypoderms" by the mouth. I have tried to account for this by supposing that when administered orally the morphine is intercepted by the digestive tract, which has for it a special affinity. Thus it is prevented passing in any quantity into the general circulation, and as a result, throughout the system, we have the action of atropine unhampered, as is evidenced by the effects in the eye,—I am, etc.,

Melrose, N.B., Dec. 17th. W. Hall Calvert.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

A MEMORANDUM appears in the *London Gazette* of December 14th to the effect that Fleet-Surgeon J. H. MARTIN, D.S.O., has been promoted to be Deputy-Inspector-General, November 7th, instead of as stated in the *Gazette* of December 8th, and cited in the BRITISH MEDICAL JOURNAL of December 15th.

The following appointments have been made at the Admiralty: ARTHUR S. G. BELL, Surgeon, to the *Royal Arthur*, additional, December 17th; GEORGE R. MCMAHON, Surgeon, to the *Aurora*, December 17th; GEORGE A. DREAPER, Surgeon, to the *Cockatrice*, undated.

An examination of surgeons who are eligible and may be desirous of qualifying themselves for the rank of staff-surgeon will be held at Haslar Hospital on January 16th. Notice is to be sent in to the Inspector-General not later than January 12th, 1895.

INDIAN MEDICAL SERVICE.

THE undermentioned promotions, which have been already announced in the BRITISH MEDICAL JOURNAL, have received the approval of the Queen:—*Bengal*: Surgeon-Majors R. M. STOKER, GERALD BOMFORD, M.D., and C. J. MCCARTIE, M.D., to be Surgeon-Lieutenant-Colonels; Surgeon-Captains A. W. D. LEAHY, M.D., and R. R. WEIR, to be Surgeon-Majors. *Madras*: Surgeon-Major WILLIAM O'HARA, to be Surgeon-Lieutenant-Colonel; Surgeon-Captains R. E. S. DAVIS and W. H. NEILSON, to be Surgeon-Majors. *Bombay*: Surgeon-Major N. PARAKH, to be Surgeon-Lieutenant-Colonel; Surgeon-Captains W. H. BURKE and JOHN CRIMMIN, V.C., to be Surgeon-Majors.

Surgeon-Colonel W. P. WARBURTON, Bengal Establishment, Principal Medical Officer Assam District, on return from employment under the Civil Department, is appointed to officiate as Principal Medical Officer, Bundelcund and Nerbudda Districts, *vice* Surgeon-Colonel D. O'C. Raye, in civil employ.

THE VOLUNTEERS.

SURGEON-LIEUTENANT J. B. BERRY, 1st Cinque Ports Artillery (Eastern Division Royal Artillery), and Surgeon-Lieutenant J. HARVEY, 2nd Volunteer Battalion the Princess of Wales's Own Yorkshire Regiment, are promoted to be Surgeon-Captains, December 19th.

Mr. CHARLES HENRY POWERS is appointed Surgeon-Lieutenant to the 1st Cumberland Artillery, and Mr. ROBERT ODELL is appointed Surgeon-Lieutenant to the 1st (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment, December 19th.

Surgeon-Captain G. H. JAMESON, 1st Volunteer Battalion the Lancashire Fusiliers, has resigned his commission, December 19th.

REFORM IN THE MEDICAL DIVISION OF THE WAR OFFICE.

WE observe in a recent issue of the *Army and Navy Gazette* forcible remarks, supporting in every respect the reforms we have from time to time recommended in the distribution of duties at Army Medical Department headquarters. Once for all we think it a duty to state that until these reforms are effected we are long distant from silence on the subject. The remedy for the agitation is obvious, namely, redistribution, giving the Professional Assistant (whose designation should be altered) charge of the roster and movements of medical officers.

OUR IMMATURE SOLDIERS.

AN extraordinary state of things is reported in the *Times* respecting the embarkation of the 1st Battalion Scottish Rifles (the Cameronians) for India (Ranikhet). Immature soldiers, to the number of some 200, of this battalion had to be left behind owing to physical unfitness, many possibly being under 20 years of age; the battalion, therefore, left for India with 21 officers and only 426 men. The so termed immature soldiers will join the 2nd Battalion on its arrival at Parkhurst. No stronger commentary on the condition of our battalions first for foreign service could be offered.

THE HEALTH OF QUETTA.

THE health of the troops at Quetta during October and November has been far from satisfactory. Some 300 in hospital is equal to a percentage to strength of about 16 or 17 of sick. In the face of this it is difficult to understand how the *Pioneer* takes a roseate view of the health of the garrison. At a rehearsal parade for the manœuvres some 150 men fell out, the Lancashire Fusiliers doing very badly.

MILITARY SURGEONS.

THE Annual Report of Surgeon-General Sternberg on the Medical Department of the American Army for the fiscal year ending June 30th, 1894, contains some very pointed remarks which are extremely applicable to our own Army Medical Service. In respect of the employment of civil practitioners in lieu of military medical officers, he says: "But it is a mistake to suppose that private physicians could be employed at garrisoned posts, whether large or small, at low estimates. A post medical officer has various and important duties to perform in addition to caring for the sick. In fact, his presence as a member of the garrison is more important than that of any officer, for no other can perform his duties, whereas any line officer present can perform the duties of quartermaster, commissary of subsistence, adjutant, or commanding officer of a garrison. The Major-General-Commanding states: At military posts it is, in my judgment, impracticable to supply the necessary service, including that in hospitals, in any other way than through the regular commissioned officer."

Touching on the weak points of a medical department, Surgeon-General Sternberg says: "If is, however, when troops are ordered out for active service that the weakness of a medical department, consisting in part of medical men attending and paid by the visit, would be mainly felt. The principal reason for supporting an army in time of peace is that an efficient organisation may be maintained which will be ready for service in any emergency and serve as a nucleus for the larger army which will be required in case of war. This applies to the medical department as well as to the fighting force. The duty of our medical officers is not only to attend to the sick at their stations, acting at the same time as health officers for their command, but to be prepared, and to prepare their hospital corps detachments, for any emergency, and especially for field service."

In respect of non-effectiveness in war, the American Surgeon-General expresses himself as follows: "It must be remembered that medical officers are as liable as other officers to break down under the exposures and accidents of field service, or from other causes."

The subject of leave of absence is dealt with emphatically in these remarks: "These (medical) officers are as much entitled as other officers to leave of absence; but inasmuch as the regulations of the army prescribe that leave will not be granted so that a post will be left without competent medical attendance, many of the medical officers have to do, year after year, without leave such as is enjoyed by others. During the past ten years the leave of absence granted to medical officers was equivalent to an average leave annually of a little less than fourteen days for each." To obviate such an unfair state of things, Surgeon-General Sternberg advocates a strength of about 8 per cent. over and above that necessary to medically man the military posts.

AGE EXTENSION.

IN reference to our remarks on the contemplated age extension to Surgeon-Major-General Girard, we receive communications pointing out that this officer returned last from foreign service in April, 1893, in Brigade Surgeon's rank, and that since that time he has been continuously serving at home. Further, that owing to his approaching retirement, on November 30th, under the former provisions of Article 347 he has been exempt from foreign service on the Surgeon-Major-Generals' list; and that now an extension to continue serving at home is considered unfair. We cannot say whether the head of the Medical Department, before sanctioning or recommending this extension, placed fairly before the authorities the points on which medical officers are now so strongly commenting.

REFUSAL OF LEAVE.

A CORRESPONDENT informs us that the shorthandedness of the medical staff in all our districts is becoming a positively serious aspect; some are worse than others, but all are more or less in the same plight. The fault may partly, but cannot be altogether, laid on the administration; for principal medical officers are forced to make bricks without straw. Duties are, as it were, day by day carried out from hand to mouth, without the smallest margin for inevitable casualties. Lately, a retired pay officer employed at a regimental district unfortunately died, and immediately the duties of the entire administrative district were thrown out of gear. If such can happen during profound peace, we shudder to think of the panic and confusion which sudden war mobilisation would cause; our medical service would be in a state of utter chaos. A direct result of having no supernumerary officers in a district is that medical officers can get no leave, to which they are entitled not only by regulation, but by every consideration of honour and humanity; it amounts to veritable "sweating," to which no class in the public service is subjected to a like extent. The establishment of medical officers has been gradually pared down, until it is at least fifty short of what is necessary to allow of the duties being carried out in an efficient and decent manner. Something should be done, either by increasing the active establishment, which would be the proper solution, or by the freer employment of retired officers, so as to allow a margin for casualties at every headquarters. We know such a margin is laid down, but we fear it is more honoured in the breach than in the observance.

MEDICO-LEGAL AND MEDICO-ETHICAL.

UNQUALIFIED ASSISTANTS.

WE have received a further communication from the correspondent whose letter was noticed in the paragraph under this heading published in the BRITISH MEDICAL JOURNAL of December 1st, page 1279. The letter there noticed had reference to comments on a case stated by "Rossendalian" in the JOURNAL of November 17th, 1894, page 1147. Our correspondent finds fault with us for not having published the full text of his reply, but its great length precluded this. We shall, however, be perfectly ready to publish any correction of errors of facts if briefly and temperately worded. Our correspondent also complains that in the comments in the JOURNAL of December 1st a quotation was made from a part of the document sent to us which he had marked private. If we have imported into this unfortunate controversy any statement which was not intended for publication we desire to express our regret, as it is always our wish to avoid embittering such misunderstandings.

The points, as we understand them, as to which our correspondent considers that misapprehension exists are as follows: (1) That his unqualified assistant is not a fourth but a fifth year's student who has completed his curriculum, attended the necessary number of labours, and passed all but the final examination; (2) that the assistant sleeps at the branch surgery, but attends at our correspondent's house from 9.30 A.M. to 7 P.M.; (3) that the assistant does not conduct the Council, or any part of the practice, his work consisting chiefly in dispensing, dressing, and minor cases, and is always conducted under the immediate supervision of his principal; (4) that the "other borough" mentioned comes up to within 200 yards of the principal's house.

Our correspondent contends that the assistant is, under the circumstances stated, completely under his control in the sense of the resolutions of the General Medical Council. As to these resolutions, it may not be out of place to quote their exact terms. On February 27th, 1888,

the Executive Committee reported to the General Medical Council that in its opinion:

"A registered medical practitioner would render himself liable to the censure of the General Medical Council in case of the employment of an unqualified assistant in the practice of medicine, surgery, or midwifery on behalf and for the benefit of such registered practitioner, either in complete substitution for his own services, or under circumstances in which due personal supervision and control are not, or cannot be, exercised by the said registered practitioner."

"The Executive Committee furthermore called attention to a resolution, passed by the General Medical Council on April 21st, 1883, which implies that, in the Council's opinion, 'any registered practitioner practising for gain, who knowingly and wilfully deputes a person not registered, or qualified to be registered, under the Medical Act to professionally treat on his behalf, in any matter requiring professional discretion or skill, any sick or injured person, "should" be subject to the same legal liabilities as a person who falsely represents himself to be a legally qualified medical practitioner, but with special proviso that such enactment "should" not hinder any duly regulated training of pupils in medical schools or otherwise by legally qualified practitioners, nor the use of trained pupils in partially treating the sick or injured under the direction, supervision, and responsibility of such practitioners, nor any legitimate employment of nurses, midwives, or dispensers.'"

SEIZURE OF TINNED FOOD.

Dr. Fredk. Wm. Alexander (M.O.H. Poplar and Bromley) writes: When sanitary officers are about to seize unsound food, more especially that which is tinned, I should like to point out a legal technicality which has arisen through the decision recently given in the case of Regina v. Dennis. This decision, it will be remembered, is the result of the appeal decided by eleven judges. The case is reported at some length in the *Justice of the Peace*, September 29th. The conviction against Dennis was quashed, ten judges assenting. Mr. Justice Mathew, the only dissenting judge, in giving his opinion, stated: "I do not see why, if the notice in question should be held to exonerate the seller, a notice to the same effect set up in the shop or on the barrow of the buyer should not be equally available to him as an answer to proceedings for seizure, condemnation, or punishment under the statute." I will now explain how this statement has bearing upon a seizure recently made in my district.

On the night of November 30th, 392 tins containing lobster were seized in Chrisp Street, Poplar. At the time of seizure, 15 tins were opened on the barrow; 150 tins were also opened, but placed under the barrow, and the remainder were unopened on the barrow. On the barrow was exhibited a good-sized card stating: "Fresh lobster 1½d. a tin; all bad ones changed." The 392 tins were taken next day, December 1st, before Mr. Dickenson, the magistrate sitting at the Thames Police Court, who requested that all the unopened ones should be opened, and then he made the order for the contents of the whole number seized to be destroyed. The owner was summoned on December 7th for the exposure of the lobster.

The defendant's solicitor pleaded that the contents of the tins under the barrow were not exposed for sale, but were placed there in order to be destroyed, and that the contents of the only tins exposed for sale were those of the fifteen opened ones on the barrow, and he argued that so far as the unopened tins on the barrow were concerned the defendant covered himself by exhibiting the notice: "All bad ones changed." When I was giving my evidence I was asked did I see these fifteen tins apart from all the other opened tins? My answer was in the negative, for when the sanitary inspector sent for me to come to the Poplar Police Station the fifteen opened tins were mixed with the other opened ones taken from under the barrow, but I explained that these fifteen opened tins could not have been good because there was not one good tin among the whole number seized.

The defendant was fined £5 and 30s. costs. Now, Sir, as I was unable to pick out the fifteen tins, I feel certain that a conviction would not have been obtained if the whole number of opened tins had not been bad.

This shows, from the recent decision, that in order to obtain a conviction for exposure the importance of keeping separate at the time of seizure of tinned food any opened tins exposed on a barrow or stall.

This may seem a trivial point to write about, but I have had some little experience in seizing tinned food in the streets, and I may say that the duty is not a pleasant one, more especially in a crowded market street late at night, when one is liable to be hustled and the tins mixed.

DISPENSARY ADVERTISEMENT.

Mr. W. Harold Radford (Hon. Sec. of the Hulme Dispensary, Manchester) writes under date December 18th: My attention having been called to a notice under the above heading in the British Medical Journal of December 8th, in which comments are made upon an advertisement of the Hulme Dispensary which contains a report of the number of patients treated during a certain week and which is preceded by a list of the honorary medical staff, I beg to inform you that it has for many years been the custom of Manchester medical charities to publish in the local papers a weekly return of the number of patients treated together with the names of the medical staff, and hitherto no protest has been received against this custom. The statistical notice of the Hulme Dispensary has been officially published on behalf of and with the full knowledge of the Committee of Management, who greatly regret that your correspondent had not the courtesy to communicate either with them or the Medical Committee before airing the grievance in your columns.

The Committee of Management has no desire to involve its medical officers in an unethical position and for the future the portion of the notice complained of will be withdrawn.

The following resolution of the Medical Committee was passed at a meeting held on December 13th:—"The Medical Committee is of opinion that the names of the medical staffs of medical charities should not be inserted in the weekly reports published in the public newspapers."

With reference to this matter we have received a communication from one of the honorary medical staff of the Hulme Dispensary, informing us that our assumption that the advertisement in question is official and in no way emanates from the medical staff is, at any rate so far as concerns our correspondent, correct. He adds that he proposes to take the necessary steps to prevent the reappearance of the advertisement. The above letter states the outcome.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,452 births and 3,959 deaths were registered during the week ending Saturday, December 15th. The annual rate of mortality in these towns, which had increased from 18.9 to 20.2 per 1,000 in the preceding five weeks, declined to 19.7 last week. The rates in the several towns ranged from 11.8 in West Ham, 13.5 in Croydon, and 15.3 in Norwich to 25.9 in Leeds, 26.1 in Plymouth, and 28.9 in Oldham. In the thirty-two provincial towns the mean death-rate was 20.6 per 1,000, and exceeded by 2.0 the rate recorded in London, which was 18.6 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London the rate was equal to 1.8, while it averaged 2.3 per 1,000 in the thirty-two provincial towns, and was highest in Derby, Leeds, and Gateshead. Measles caused a death-rate of 2.2 in Brighton and in Sheffield, 4.8 in Derby, 5.0 in Gateshead, and 5.5 in Leeds; whooping-cough of 1.1 in Swansea and in Huddersfield; and "fever" of 1.3 in Salford and 1.6 in Derby. The 87 deaths from diphtheria in the thirty-three towns included 53 in London, 4 in Manchester, 3 in Bristol, and 3 in Oldham. Three fatal cases of small-pox were registered in Birmingham, 1 in Halifax, and 1 in Birkenhead, but not one in London or in any other of the thirty-three large towns. There were 22 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, December 15th, against 33, 31, and 32 at the end of the preceding three weeks; 3 new cases were admitted during the week, against 2, 6, and 7 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Hospitals and in the London Fever Hospital, which had been 2,198, 2,148, and 2,142 at the end of the preceding three weeks, were 2,034 on Saturday last; 187 new cases were admitted during the week, against 191 and 228 in the preceding two weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, December 15th, 885 births and 647 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 20.3 to 22.1 per 1,000 in the preceding four weeks, further rose to 22.5 last week, and exceeded by 2.8 per 1,000 the mean rate during the same period in thirty-three of the largest English towns. Among these Scotch towns the death-rates ranged from 10.8 in Leith to 26.6 in Paisley. The zymotic death-rate in these towns averaged 3.2 per 1,000, the highest rates being recorded in Glasgow and Aberdeen. The 326 deaths registered in Glasgow included 21 from measles, and 7 from scarlet fever. Two fatal cases of small-pox were registered in Edinburgh, and 5 of measles in Aberdeen.

VACCINATION IN IRELAND.

According to the returns of vaccination for the third quarter of the present year, there were 34,693 persons successfully vaccinated; in 2,439 cases the operation was postponed, and in 32 instances children were reported as insusceptible of vaccination. The deaths of 1,320 unvaccinated children under 3 months old were registered during the quarter, making a total of 38,484 children with regard to whom particulars as to vaccination were ascertained.

MEDICAL OFFICERS OF WORKHOUSES AND CORONERS' FEES.

A medical officer of a provincial workhouse writes to say that the coroner of his district declines to pay the usual medical fees for inquests held on workhouse patients, and asks whether we consider that workhouse medical officers can claim the usual fees for such cases.

*** We have always held that medical officers of workhouses are not debarred from the receipt of fees by Subsection 2 of Clause 22 of the Coroners Act of 1887, which rules this question; and on this point we are supported by the opinion of Mr. Poland, Q.C., who has advised the London County Council upon it. The result of his opinion is that medical officers of workhouses within the jurisdiction of the London County Council are now paid the usual medical fees for *post-mortem* examinations made and for evidence given on patients dying in the London workhouses. The law is the same elsewhere.

Professor P. J. Kovalevsky, incumbent of the Chair of Mental Diseases in the University of Kharkoff, has been appointed Rector of the University of Warsaw.

OBITUARY.

WILLIAM PALMER ROWE, M.R.C.S.ENG., L.R.C.P.EDIN., L.S.A.

Liverpool.

WE regret to record the death of this well-known and respected practitioner, which took place at his residence, 32, Oxford Street, Liverpool, on December 4th. Dr. Rowe received his education at Ruthin Grammar School, and was apprenticed to Dr. Price Roberts, of that town. In 1851 he proceeded to Dublin, obtained the licence in midwifery in 1852, and studied for some years at the Meath, Richmond, and the Whitworth and Hardwicke Hospitals. In 1854 he qualified as M.R.C.S., and, returning to Liverpool, he became actively engaged in combating the cholera epidemic in the service of the town authorities. He took the L.S.A. in 1856, and the same year was appointed House-Surgeon to the South Dispensary. Subsequently he was made Medical Officer to the parish of Liverpool, in which capacity he worked for three years. He took the L.R.C.P.Edin. in 1860, and afterwards commenced private practice, in which he met with very great success.

He was appointed Assistant Surgeon to the Infirmary for Children, but, owing to the large private practice which he soon acquired, he found himself unable to devote the necessary time to the institution, and felt himself obliged to resign. He continued in active practice almost till the day of his death, which resulted from pneumonia after an illness of three days. For the last eighteen months there had been serious indications of failing health, especially constantly recurring asthmatic attacks, which nothing seemed to alleviate. In spite of this he went about his work bravely and cheerfully, and in the autumn attended the adjourned meeting of the Lancashire and Cheshire Branch of the Association at Manchester. He was 62 years of age. He leaves seven daughters, and is succeeded in his practice by his son-in-law, Dr. Sidney J. Palmer.

JAMES WILKES, F.R.C.S.ENG.

MR. JAMES WILKES, who died on December 8th, at the ripe age of 83, received his medical and surgical education at the General Hospital, Birmingham, and King's College, London. He became a Member of the College of Surgeons in 1835 and a Fellow in 1854.

He was appointed Medical Superintendent of the Stafford County Asylum in 1841, and held that office until 1855, when, on the recommendation of Lord Shaftesbury, he was appointed a Commissioner in Lunacy.

He resigned the post of paid Commissioner in 1873, but retained his seat at the Board as an Honorary Commissioner, attending its deliberations regularly up to within a short time of his death, and bringing to the discharge of his duties there the same conscientious and painstaking spirit which characterised him throughout his career.

Dr. PHILIPPE FAURE, who recently passed away at the age of 73, was for nearly thirty years *Inspecteur Adjoint* at the waters of Néris, and was a man of some mark in his profession. He studied medicine at Lyons, and after some years of country practice he was, on the outbreak of the revolution of 1848, appointed Government Commissioner at Villefranche. After a time he was transferred to Orange in a similar capacity. The *Coup d' Etat* restored him to medicine, and he was sent on a mission to found a series of French hospitals in the East. Of this task he acquitted himself in a manner that won for him on his return to France the Cross of the Legion of Honour. In 1870 he was promoted to the grade of Officer of the same Order. Dr. Faure was a man of very studious habits, and had a highly cultivated literary taste. He was engaged for some years in the preparation of what was expected to prove an important work, on the medical doctrines of the day; but the death of a son to whom he was deeply attached changed the current of his life. He gave up practice and retired to a little village near Grenoble, where he spent the remainder of his days in almost complete retirement

WE regret to record the death, at Florence, at the early age of 33, of CHARLES BLAIR WILSON, M.B. and C.M, He was educated at Fettes College and the University of Edinburgh, where he graduated in 1887. He was appointed Resident Physician to Professor Greenfield's wards in the Edinburgh Royal Infirmary, and later he was one of the residents in the Maternity Hospital. For a time he went to some of the Continental schools, and then settled down in Florence as assistant to his father, William Wilson, M.D., F.R.C.P.Lond. Dr. C. B. Wilson's never very robust health probably prevented him from having the brilliant career he would otherwise have had. His gentle manliness and his extreme geniality made him a great favourite with fellow students, colleagues, and patients. In Florence he was fast taking a foremost place in practice, and there also he was highly esteemed by his *confreres*. He was seized with influenza, pneumonia supervened, and he died on December 13th, after a few days' illness. The deepest sympathy will be given to the young widow and mother, and to his aged father, by everyone who knew Charles Blair Wilson.

SAMUEL ILLFORD, M.D., died suddenly on December 18th from heart failure at his residence, Upper Parliament Street, Liverpool. He was educated in Dublin, where in his earlier years he was a successful teacher of anatomy. But blood-poisoning and ill-health compelled him to abandon this career, and he settled in Liverpool, where for nearly thirty years he has been surrounded by a large circle of friends and patients, who now mourn the loss of his smiling face and genial presence. He was an active member of the Medical Institution twenty years ago, and he was also a Fellow of the North of England Obstetric and Gynæcological Society. As Senior Physician to the Victoria Hospital for Women and Children he had a strong bent in this direction, and was well abreast with the advances of these subjects. He was 67 years of age.

DR. JOHN B. WHITE, of Saginaw, Michigan, died on November 21st, of blood-poisoning contracted while performing an operation a week before his death. Dr. White was one of the most respected practitioners in the State of Michigan, and for many years had a large practice in diseases of women.

DR. F. A. FLUCKIGER, formerly Professor of Pharmacognosis in the University of Strassburg, died at Berne a few days ago, after a long and painful illness, in the 66th year of his age. His chief work, written in English in collaboration with Mr. Hanbury, was his well-known *Pharmacographia*. Among his other writings may be mentioned *Pharmakognosie des Pflanzenreichs; Grundriss des Pharmakognosie*; and *Pharmaceutische Chemie*. Flückiger's works are valuable from the scientific, and interesting from the literary, point of view. He is the leading authority on the history of drugs.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently passed away are Professor Schroeter, the well-known bacteriologist of Breslau; Dr. Leonardo Cova, surgeon to the San Vittore Hospital of Milan, aged 41; Dr. Alberto Ambrosi, of Montegiorgio, editor of *Il Diritto Sanitario*; Dr. Heinrich Reimann, a prominent obstetrician and gynæcologist of Kieff, aged 62; Dr. Winge, Professor of Special Pathology and Therapeutics in the University of Christiania; Dr. Léon Eyers, formerly Burgomaster of Waasmunster, Belgium, where he had been in practice for half a century; Professor Giuseppe Somma, of Naples, a well-known specialist in children's diseases and director of the *Archivii Italiani di Pediatria*; and Dr. Paris, formerly physician to Louis Philippe, aged 93.

THE students of the London School of Medicine for Women gave an entertainment to the patients and nurses of the Royal Free Hospital on December 13th. A short play founded on "The Cricket on the Hearth" and some *tableaux vivants* were well rendered, and a song with topical allusions was highly appreciated; but the success of the evening was a scene between an art student, Miss Le Pelley, and a medical student, Miss Green, in which the characteristics of each were cleverly hit off

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

First M.B. Examination. Part I. *Chemistry and Physics.*—Ainsworth, B.A., Pemb.; H. W. Atkinson, Gonv. and Cai.; Baddcock, Cath.; Barnett, Joh.; Barnicot, Pemb.; Bates, T. W., M.A., Queens'; Bedford, King's; Bigg, Gonv. and Cai.; Bigge, Trin.; Bousfield, Pemb.; Browning, Joh.; Brydone, Jes.; Carver, Cla.; Clarke, H., Trin.; Curl, Down.; Dale, H., Trin.; Dunlop, Sid. Suss.; Eastwood, Joh.; Falkner, Pet.; Flook, Trin.; Gaitskell, B.A., Cla.; George, Gonv. and Cai.; Gilbart-Smith, Trin.; Gillespie, Joh.; Glover, Joh.; Graham-Smith, Pemb.; Hall, D. G., Emm.; Harman, non-coll.; Hulbert, H. L. F., B.A., Trin.; Illingworth, Cla.; James, W. M., B.A., Chr.; Johnston, Trin.; Kellie, Gonv. and Cai.; Knobel, Trin.; Köttgen Jes.; Langton, J. M. E., Trin.; Linnell, H. Selw.; Lock, J. L., Gonv. and Cai.; McBryde, King's: Matthews, H. N., Joh.; Neave, W. S., Joh.; Plachecki, Chr.; Punnett, Gonv. and Cai.; Roche, Queens'; Sanders, Chr.; Saunders, Trin.; Sellon, Gonv. and Cai.; Smith, T. D., Jes.; Stokes, W. H., Pemb.; Telford, Gonv. and Cai.; Timmins, Emm.; Topham, Chr.; Trevor, B.A., Cla.; Truman, Trin. H.; Walker, King's; Ward, R. F. C., Joh.; Watts-Silvester, B.A., Gonv. and Cai.; Weatherhead, Joh.; West, Chr.; Willoughby, Gonv. and Cai.; Wood, Joh.

Part II. *Elementary Biology.*—Almond, Emm.; Andrewes, King's; Bedford, King's; Bigg, Gonv. and Cai.; Branson, W. P. S., Trin.; Broughton, Gonv. and Cai.; Brownlow, Joh.; Castle, Pet.; Cullis, Gonv. and Cai.; Curl, Down.; Dale, H., Trin.; Ede, King's; Elder, Gonv. and Cai.; Fitt, Joh.; Flook, Trin.; Fuge, B.A., H. Selw.; George, Gonv. and Cai.; Gillespie, Joh.; Glenn, Pemb.; Glover, Joh.; Hadfield, C. F., Trin.; Harman, non-coll.; Holmes, Gonv. and Cai.; Johnston, Trin.; Jones, R. L., Sid. Suss.; Kellie, Gonv. and Cai.; Kottgen, Jes.; Lanchester, King's; Mappin, Trin.; Orton, L., Joh.; Paterson, Gonv. and Cai.; Punnett, Gonv. and Cai.; Robinson, H. J., Joh.; Roche, Queens'; Saunders, Trin.; Sedgwick, A. V., Gonv. and Cai.; Sellon, Gonv. and Cai.; Seyfang, Pet.; Sheppard, Down.; Stewart, Gonv. and Cai.; Style, Emm.; Telford, Gonv. and Cai.; Timmins, Emm.; Trevor, B.A., Cla.; Truman, Trin. H.; Ward, R. F. C., Joh.; Watts-Silvester, B.A., Gonv. and Cai.; Willoughby, Gonv. and Cai.; Wilson, A. G., Gonv. and Cai.; Wood, Joh.; Wood, T., Gonv. and Cai.

Second M.B. Examination. Part I. *Pharmaceutical Chemistry.*—Alder, Pemb.; Anderson, Trin.; Blackman, S. S. F., B.A., Joh.; Brailey, Queens'; Brenan, Trin.; Briscoe, Pemb.; Brooke, Pemb.; Brunner, Gonv. and Cai.; Darby, Trin.; Davies, Gonv. and Cai.; Evans, Cla.; Foster, King's; Fraser, Jes.; Fryer, Chr.; Gaine, Emm.; Greig, A. W., Jes.; Harthan, Jes.; Hawkins, Emm.; Hay, Gonv. and Cai.; Housman, B.A., Cla.; Iowid, Trin.; Jupe, Down.; Killick, Down.; Le Fleming, B.A., Cla.; Lindsay, B.A., Sid. Suss.; Lock, P. G., Gonv. and Cai.; McCarthy, B.A., non-coll.; McCaskie, Gonv. and Cai.; Manners-Smith, B.A., Down.; Martin, A. E., Down.; Maxwell, W. H., Trin.; Mayo, Cla.; Mills, Jes.; Nixon, Gonv. and Cai.; O'Sullivan, H., Emm.; Parker, Emm.; Pearson, Sid. Suss.; Philbrick, Trin.; Reckitt, P. B., B.A., King's; Ross, non-coll.; Rudman, Gonv. and Cai.; Rushworth, R. E., Gonv. and Cai.; Shobrer, B.A., Trin. H.; Shrubsall, Cla.; Shuttleboth am, Trin.; Staynes, B.A., Chr.; Symes-Thompson, B.A.; Chr.; Taylor, J. G., King's; Tebbs, B. N., Queens'; Thomas, F. G., Gonv. and Cai.; Walker, Cla.; Walker, Queens'; Ware, Pemb.; Watson, D. P., Trin.; Wilkin, B.A., Pemb.; Wilson, E. L., Cla.; Wilson, W. R., B.A., Corp. Chr.

Part II. *Human Anatomy and Physiology.*—Allfrey, B.A., Trin.; Baker, M.A., Trin.; Bell, R. H., B.A., Trin.; Bodington, M.A., Gonv. and Cai.; Burton, F. H., B.A., Cla.; Carsberg, B.A., Gonv. and Cai.; Charles, B.A., Gonv. and Cai.; Cole, B.A., Corp. Chr.; Coleman, Trin.; Collingwood, B.A., Gonv. and Cai.; Daniel, A. W., B.A., Emm.; Deller, B.A., Trin.; Greg, B.A., Trin.; Gregory, R. L., B.A., Joh.; Gutch, J., B.A., Chr.; Harrisson, A. E., B.A., Magd.; Heilborn, Gonv. and Cai.; Hill, E. C., Trin.; Housman, B.A., Cla.; Jeaffreson, B.A., Chr.; Jordan, B.A., Sid. Suss.; Letchworth, Emm.; Martin, Gonv. and Cai.; Matthews, B.A., Trin.; Muir, B.A., Emm.; Myers, C. S., Gonv. and Cai.; Roderick, B.A., Emm.; Sanderson, B.A., Cla.; Sargent, B.A., Joh.; Shoyer, B.A., Trin. H.; Simson, C. C., B.A., Trin.; Skyrme, Chr.; Slater, Trin.; Snowden, B.A., Chr.; Stacey, B.A., Joh.; Turnbull, B.A., Gonv. and Cai.; White, Chr.; Yeld, B.A., Trin.

Third M.B. Examination. Part I. *Surgery and Midwifery.*—Beedham, M.A., Chr.; Burnett, B.A., Joh.; Clark, M.A., Down.; Clarke, A. V., B.A., Gonv. and Cai.; Cooper, C. E., B.A., Gonv. and Cai.; Cornwall, B.A., Trin.; Davies, B.A., non-coll.; Dobie, B.A., Gonv. and Cai.; Eichholz, B.A., Emm.; Henderson, B.A., Joh.; Herbert, B.A., Gonv. and Cai.; Hunter, B.A., Down.; Hutchinson, F. A. S., B.A., Trin.; Kidd, B.A., non-coll.; Peters, B.A., Gonv. and Cai.; Scott, Hon. G. H., B.A., Trin.; Smallwood, Gonv. and Cai.; Smith, J., B.A., Jes.; Stabb, Down.; Thornely, B.A., Cla.; Troup, B.A., Pemb.; Villy, B.A., Joh.; Woolley, B.A., Chr.; Worthington, B.A., Pemb.

Physiological Psychology.—W. H. Rivers, M.D. Lond., of St. John's College, has been specially recognised as a lecturer in psycho-physics by the General Board of Studies.

Literary Training.—The General Board of Studies publish in the *University Reporter* of December 18th a long report containing proposals for the improvement of the literary training of candidates for the various degrees of the University.

UNIVERSITY OF LONDON.

B.S. Examination.

First Division.—C. E. Carpmael, Guy's Hospital; J. St. T. Clarke, Guy's Hospital; G. H. Cowen, London Hospital; H. Davies, Guy's Hospital; J. H. Fisher, St. Thomas's Hospital; G. S. Hovenden, Guy's Hospital; E. Huntley, Guy's Hospital; W. P. Montgomery, Owens College and Manchester Royal Infirmary; S. W. F. Richardson, B.Sc., St. Thomas's Hospital; E. W. Selby, University College; W. R. Smith, King's College; E. C. Taylor, Guy's Hospital; C. S. Wallace, St. Thomas's Hospital.

Second Division.—E. L. Adams, Guy's Hospital; A. P. Allan, Guy's Hospital; J. S. Bolton, B.Sc., University College; F. G. Bushnell, M.D., University College; H. W. Collier, Guy's Hospital; F. J. Fielder, King's College; E. M. Hainworth, B.Sc., St. Thomas's Hospital; A. C. Hovenden, Guy's Hospital; J. L. Iredale, Yorkshire College; T. J. Manning, Guy's Hospital; D. Morrison, University College; E. E. Murray, University College; F. J. Steward, Guy's Hospital; W. H. B. Stoddart, University College; G. H. C. Way, University College.

M.S. Examination.

T. Carwardine, Middlesex Hospital; W. McA. Eccles (gold medal), St. Bartholomew's Hospital; E. P. Fatop, M.D., St. Bartholomew's Hospital; J. E. Platt, M.D., Owens College and Manchester Royal Infirmary; H. W. Webber, M.D., Guy's Hospital.

M.D. Examination.

Medicine.—S. K. Alcock, St. Bartholomew's Hospital; L. B. Aldrich-Blake, B.S., London School of Medicine and Royal Free Hospital; Annie Mary Slate Anderson, London School of Medicine and Royal Free Hospital; E. W. Ashmead, B.S., St. Bartholomew's Hospital; H. S. Ballance, B.S., King's College; A. E. Brindley, Owens College and Manchester Royal Infirmary; R. J. Carter, King's College; W. A. Clark, St. Bartholomew's Hospital; J. G. Clegg, B.S., Owens College and Manchester Royal and Workhouse Infirmaries; H. O. Davies, B.S., St. Bartholomew's Hospital; J. Dobson, Leeds School of Medicine; S. G. Floyd, B.S., Guy's Hospital; J. C. M. Given, University College, Liverpool; C. J. Harrison, B.S., University College; M. L. Hepburn, B.S., St. Bartholomew's Hospital; J. A. Howard, Guy's Hospital; C. S. Jaffé, B.S., St. Thomas's Hospital; J. W. F. Jewell, B.S., Guy's Hospital; W. J. Johnson, B.S., Guy's Hospital; G. S. Johnston, Mason and Queen's Colleges, Birmingham; W. B. Jones, B.S., St. Bartholomew's Hospital; G. L. Kemp, Guy's Hospital; H. L. Mack, King's College; T. H. Mant, B.S., Guy's Hospital; E. G. G. Little, St. George's Hospital; A. J. Martin, General Hospital and Mason College, Birmingham; J. Morrison, St. Bartholomew's Hospital; J. L. Morton, St. Mary's Hospital; E. A. Nathan, B.S., St. Mary's Hospital; A. E. Norburn, B.S., Guy's Hospital; A. P. Nuttall, University College; C. S. Pantin, B.S., Guy's Hospital; W. F. Purvis, B.S., B.Sc., St. Thomas's Hospital; H. Ramsden, Owens College and Manchester Royal Infirmary; *M. Randall, B.A., University College; F. A. Roberts, Yorkshire College; F. E. Rock, Middlesex Hospital; K. Rogers, St. Bartholomew's Hospital; A. J. Sharp, B.Sc., Guy's Hospital; W. C. Swayne, Bristol Medical School and Guy's Hospital; T. R. Taylor, B.S., B.Sc., Guy's Hospital; H. C. Thomson, Middlesex Hospital; S. G. Toller (gold medal), St. Thomas's Hospital; Ethel Newton Tribe, London School of Medicine for Women; W. B. Warrington, Owens College and Manchester Royal Infirmary; Helen Mary Wilson, Royal Free Hospital and Vienna; J. Young, B.S., Guy's Hospital.

State Medicine.—C. Coles, M.D., St. Bartholomew's Hospital; A. Griffith, M.D., University College; B. W. Hogarth, B.Sc., Guy's Hospital and University of Edinburgh; A. Paine, B.S., St. Mary's Hospital; W. G. Willoughby, M.D., St. Bartholomew's Hospital.

* Obtained the number of marks qualifying for the Gold Medal.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following gentlemen, having passed the necessary examinations and having conformed to the by-laws and regulations, have been admitted Fellows of the College:

G. C. Hall, Surgeon-Lieutenant-Colonel, Bengal Army, L.R.C.P.Edin.; D. J. Williams, M.A.O.R.C.S.Eng.; H. E. Counsell, L.R.C.P.Lond.; E. Evans, M.B.Cantab.; S. H. Hughes, L.R.C.P.Lond. and L.S.A.; G. W. S. Farmer, M.B. Oxon, L.R.C.P.Lond.; Y. H. Mills, M.B.Lond.; L.R.C.P.Lond.; H. L. Brownlow, L.R.C.P.Lond.; G. E. Newby, L.R.C.P.Lond.; T. Carwardine, M.B.Lond., L.R.C.P.Lond.; E. W. Selby, M.B.Lond., L.R.C.P.Lond.; F. P. S. Cresswell, M.B.Lond., L.R.C.P.Lond.; C. S. Panting, M.B.Lond., L.R.C.P.Lond.; R. H. Luce, M.B.Cantab., L.R.C.P.Lond.; G. R. Baldwin, L.R.C.P.Lond.; H. P. Godfrey, M.B.Melb.; D. Crawford, M.B., C.M.Edin.; J. E. Barrett, M.B., C.M.Edin.

One other gentleman passed the examination, but not having attained the legal age of 25 years, will receive his diploma as a Fellow at a future meeting of the College. Fourteen gentlemen were referred.

The following gentlemen, having passed the necessary examinations, have been admitted Licentiates in Dental Surgery:

C. H. Ackland, N. G. Bennett, J. Butterworth, U. E. Cave, C. Cannell, E. G. E. Fogg, Frost, M. H. Gartrell, T. Godfrey, F. W. Hands, H. W. Hardy, J. P. Headridge, H. G. Howitt, E. Hutson, G. S. Jones, F. E. L. Lambert, K. F. Lane, W. J. Leigh, L. F. Morris, H. G. Newland, H. W. Norman, W. E. Partridge, E. Picton, W. J. Pike, J. Pilcher, C. S. Prideaux, A. Reeve, J. Reeve, N. P. Rogers, F. J. F. Rooke, P. R. Sibson, E. W. Stabb-Johnson, A. W. Steynor, C. Talintyre, W. T. D. Timms, H. J. Torpey, R. Watson, and J. A. Woods.

INDIA AND THE COLONIES.

INDIA.

Bombay Lunatic Asylums (1893).—The report shows that the total number of lunatics under treatment in the six asylums belonging to this Presidency during the year was 988, being 11 fewer than the previous year. Of these 800 were males and 188 females. This difference in the proportion of the sexes is very striking, especially when compared with the proportion in this country, which, according to the last report of the Commissioners, stands at 41,834 males to 50,233 females during the same

year. The percentage of recoveries to the admissions is given as 27·6, and the death-rate, calculated on the average daily number resident, is 10·8. We observe that the criminal lunatics are mixed up with the others, and this is unfortunate, but doubtless difficulties of distance and other circumstances render the building of a separate criminal lunatic asylum such as we have in this country a matter of some difficulty. The number of patients admitted was 275. Of these, the cause assigned was the result of charas smoking in 1 case, of ganga smoking in 26, the use of bhang in 4, opium eating 1, and spirit drinking 10, accounting for 40 cases out of the 275. According to a return of sick treated in the asylum hospitals for diseases other than insanity, 45 remained under treatment at the end of the year, and the total treated was 350. The chief diseases were ague, debility, dysentery, diarrhœa, and various forms of lung affections. The causes of death for the most part were dysentery, debility, and phthisis.

THE ASYLUMS IN THE PUNJAB.—There are two asylums in the Punjab one at Lahore and one at Delhi. At the Lahore Asylum the total number of lunatics under treatment during 1893 was 243—195 males and 48 females, showing again the large proportion of males to females as in the Bombay asylums. The average daily population was 217. There were 82 admissions, 72 discharges, and 22 deaths. Five of the patients were discharged cured though admitted as suffering from dementia. The health of the inmates was good, and there were no cases of cholera. The Delhi Asylum is a much smaller institution. It contained at the end of the year 104 patients; of these 83 were males and 21 females, another instance of the small proportion of females to males. Thirty-five patients were admitted and 5 readmitted, and what is remarkable about them is that 14 out of the total 40 admissions were suffering from toxic insanity ascribed to the use of various forms of Indian hemp. In the hot weather months numbers of lunatics are allowed to sleep in the open; during the rains all sleep in barracks, but the doors are not as a rule closed. Advocates of "the open-door system" should make a note of this, as there were no escapes during the year. The percentage of deaths to the average number daily resident was 9·9.

HOSPITAL AND DISPENSARY MANAGEMENT.

JEWISH PATIENTS AT THE METROPOLITAN HOSPITAL.

THE Committee of Management of the Metropolitan Hospital have arranged for the reception of Jewish patients, as well as for their treatment as out-patients, from and after December 1st. Dr. Abram Cohen has been added to the medical staff of the institution in order to attend to Jewish inmates, and special nurses will also be engaged. A "kosher" kitchen has been provided, and every facility will be given to Jews to observe their religious rites and customs.

PENNY FEES AT PUBLIC CHARITIES.

MR. LEWIS J. MAY writes to say that more than twenty years ago, when resident medical officer of the Finsbury Dispensary, he proposed that a charge of one penny should be made upon each supply of medicine, which would usually amount to about twopence a week from each patient. This plan was adopted, and the reports show that it now brings in nearly £300 a year. The medical officers are paid something for their services. He thinks that the adoption of some such plan by hospitals would solve many difficulties; and to prevent abuse he would have a printed list of all patients, with their addresses, posted in some convenient place, where it could be inspected by anyone interested in the proper administration of the charity.

There is much to be said in favour of schemes of this nature, and something also against them. Dignity undoubtedly is lost to some extent. Neither doctors nor institutions can consider that their position wholly satisfactory so long as, while offering charity with the one hand, they take a penny with the other. Nevertheless, it has a dash of practicality about it. If a man cannot pay a penny he surely ought to be receiving assistance from the Poor Law, and any relief given him at a charity is a relief really to the rates; so that one need not in any way consider that the "penny" would keep out the deserving poor. The real question is whether it would not limit in the undeserving well-to-do. This perennial question of wage limit comes in whenever any attempt is made to help those who deserve assistance.

That the really poor should be relieved by the Poor Law; that those who, while able to support themselves in regard to other matters, are unable to pay for medical attendance, should be assisted to do so by charity; and that the rest should be left to the action of the ordinary law of supply and demand, would be an ideal scheme. Unfortunately the human race declines to divide itself neatly into three classes; and thus, whatever we do, a constable is necessary who shall make people take their places, and this constable must take the form of an inquiry officer asking questions about wages.

We fear greatly that the search for any method of automatic selection of suitable objects of charity by means of the ubiquitous penny will end in disappointment. If under the guise of charity good advice and medicine are offered for a penny, the thrifty middle class will not hesitate to avail itself of such an opportunity. Cheap physic has a charm that few people can resist, and the penny fee, however good in itself, will, unless backed up by strict inquiry, only intensify the evils now complained of, for it will tend to break down the one barrier which now keeps better-class people from the out-patient departments of our hospitals—namely, the dirty people they may have to sit with in the waiting rooms.

THE SEAMEN'S HOSPITAL, LAS PALMAS, GRAND CANARY.

We have received the reports of this institution for the past two years. The hospital is small, but it fulfils a useful mission, and appears well worthy of support. With England's vast carrying trade to all parts of the world, it is of the greatest moment to Englishmen that there should be established in various quarters such outposts of charity, refuges for sailors in accident or sickness, for, needless to say, the majority of the patients are seafaring men.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30 *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. F., 2.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Ear, Tu. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical andSurgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—M. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

LONDON TEMPERANCE HOSPITAL. *Hours of Attendance.*—Medical, M. Tu. F. 2; Surgical, M. Th., 2. *Operation Days.*—M. Th., 4.30.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., & Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1.30, S., 2; (Obstetrical), Th., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL EYE HOSPITAL, Southwark. *Hours of Attendance.*—Daily, 2. *Operation Days.*—Daily.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, Tu., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, S., 3; females, W., 9.45. *Operation Days.*—M., 2., Tu. 2.30.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 5, Th., 2, F. (Women and Children), 2, S., 4. *Operation Days.*—W. and F., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10 *Operation Days.*—W. S., 1.30; (Ophthalmic), M., 2.30, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th. 1.30; S., 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, Tu. F., 9.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

MEDICAL NEWS.

The new children's and general hospital for Leyton, Walthamstow, and Wanstead, was formally opened on December 13th.

Mr. John Dacre, M.R.C.S., and Mr. Bertram M. H. Rogers, B.A., M.D., have been elected members of the committee of management of the Bristol Hospital for Sick Children and Women.

The Empress Frederick has presented to the children's ward of the Throat Hospital, Golden Square, a bust of the late Prince Waldemar of Prussia, after whom the ward was named by Her Majesty on her recent visit to the hospital.

Dr. S. Boake has been presented by the members of the St. John Ambulance class, held at Ilminster last month, with a secretaire, in recognition of his services. Out of 27 candidates 23 passed.

We regret to have to record the sudden death, at the age of 68, of Sir Edmund Lechmere, Bart., M.P., who took an active interest in ambulance questions, and was Chancellor of the Order of the Hospital of St. John of Jerusalem.

Presentation.—The late medical officer of the Birmingham Workhouse, Mr. G. A. Ferraby, was the recipient of a marble clock and other gifts from his fellow officers upon the occasion of his leaving to take the appointment of district medical officer.

Bacteriology in Russia.—A Bacteriological Institute is about to be established in the University of Kieff, at an estimated cost of £10,000. A well-known druggist of Moscow has given a house, valued at £3,000, with £500 towards the fitting up of it as a bacteriological laboratory.

At the final meeting, on December 10th, of the Reception Committee of the Public Health Congress, held in London last July, the Lord Mayor presented to Professor W. R. Smith, the President, a service of silver plate from the Fellows, Members, and Associates of the British Institute of Public Health.

Professor Isidor Schnabl, of Prague, has been appointed to the Chair of Ophthalmology in the University of Vienna, vacant by the death of Dr. Ludwig Mauthner, who, as may be remembered, held the post only about twenty-four hours. Professor Schnabl is a pupil of Jäger's, and was appointed Professor at Innsbruck in 1877, afterwards being transferred successively to Graz and Prague.

The University of Nancy.—There are now 60 foreign students in the Medical Faculty of the University of Nancy. Female students are coming to look with favour on this school; there are at present 12 ladies studying medicine there besides 4 in the Faculty of Science. The recently published *Programme de l'Université de Nancy* gives full information as to all matters interesting to foreign students, including a tariff of prices for board and lodging.

University of Utrecht.—Professor von Eiselsberg, of Utrecht, to whom the chair of surgery at Prague was recently offered in succession to Professor Gussenbauer, who was called to Vienna, has decided not to sever his connection with the Dutch University. The Government of Holland has granted him an increase in salary of 2,000 florins, in addition to an extraordinary subsidy of 1,500 florins for the organisation of the Surgical Department in the University of Utrecht.

Vaccination and Small-Pox in the Edinburgh District.—Again there was a very decided increase in the number of small-pox cases in Edinburgh last week, 26 cases as against 17 in the preceding week. During last week there were 2 deaths. One new case was reported from Leith, and 1 from North Berwick. On December 13th there were 58 cases of small-pox in the Queen's Park Hospital, and only 1 fresh case had been reported since December 14th. During the past four weeks 6,000 persons have been vaccinated or revaccinated free in the city of Edinburgh.

A general meeting of the Institute of Certificated Sanitary Inspectors was held at the Sanitary Institute on December 14th, under the presidency of Mr. Wynter Blyth. Mr. W. H. J. Gathercole (City of London) read a paper on "Drain Openings inside Buildings," in the course of which he expressed the opinion that the kitchen arrangements in all eating houses should be at the top of the buildings rather than in underground cellars, where proper light and ventilation could not be obtained. A paper was also read by Mr. Bates, Bromley, Kent, on the "Investigation of Infectious Diseases and some Means of Preventing their Spread."

An Improvised Incubator.—Marion Sims's first speculum was the handle of a kitchen spoon, and Sir William Fergusson is said to have amputated at the shoulder with a pocket knife. We do not, however, remember to have come across a more notable instance of inventive genius rising superior to mechanical difficulties than the following, related by Professor Landouzy, of Paris, in the *Gazette des Hôpitaux*. A pupil of his, M. Queyrat, had occasion to make some bacteriological cultures in the country, far from the simplest apparatus of the laboratory. He was not to be beaten, however. He captured a hen, tied her up, and fixed a tube containing serum sown with micro-organisms under her wing. At the end of twelve hours some fine colonies had made their appearance.

Health of the United States Army.—The report of the Surgeon-General of the United States army for the year ending June 30th, 1894, states that the health of the army was nearly as good as during any previous year. The admission rate per 1,000 was 1,289.04, a great improvement on the average annual rate for the past two years (1,424.2), and only slightly greater than the lowest rate (1,247) ever furnished by American troops. The death-rate was 6.91 per 1,000 living, but little greater than the lowest rate ever recorded in the United States army (6.33), and considerably less than the average for the past ten years, namely, 8.51. The death-rate from disease alone, excluding accidents and injuries, was 4.01 per 1,000.

Cremation in Manchester.—The annual report of the directors of the Manchester Crematorium states that during the year ending December 1st, 1894, the number of cremations was 47, a considerable increase upon the number for the previous year. The financial report shows that the annual income is sufficient to cover the annual working expenditure. This is very satisfactory, but the balance sheet would be more satisfactory if it were not that the institution is in debt. This debt might be easily wiped out, and if the whole of the shares were taken up, the company would be placed in a thoroughly sound financial position. The apparatus and other arrangements for cremation have continued to work satisfactorily, and as soon as finances permit it is intended to erect a second furnace in order to meet the necessity for repairs in the existing furnace, or special pressure might occur during an epidemic.

The Plethora of Medical Students in France.—M. Brouardel, Dean of the Medical Faculty of Paris, recently stated that there are about 10,000 students at present in the different medical faculties of France. The number has doubled in the last ten years. In the Paris faculty alone there are 5,144, of whom 1,002 are foreigners. Of the latter, 833 are men and 169 women. Among the female students French-women are in a small minority, there being only 24. The chief cause of the enormous increase in the number of medical students has been said to be their partial exemption from military service, as they have only one year to serve with the colours. M. Brouardel, however, points out that the supposed privileged position of medical students in this respect is based on a misconception; if a man fails to get his doctor's degree by the age of 26, he has to serve two years. In the Dean's opinion, the real reason is the economic crisis which at present exists in France. He adds that industrial or commercial crises have always had the effect of causing a large influx of young men into the liberal professions, and he refers to such a period in the reign of Louis Philippe, when the number of students suddenly doubled for the same reason.

MEDICAL VACANCIES.

The following vacancies are announced:

Birmingham and Midland Free Hospital for Sick Children.—Resident Medical Officer and Resident Surgical Officer. Salary, £70 and £50 per annum respectively, with board, washing, and attendance in the institution. Applications to the Secretary Children's Hospital, Steelhouse Lane, Birmingham, by January 8th.

CHELSEA, BELGRAVE, AND BROMPTON DISPENSARY, 41, Sloane Square, S.W.—Honorary Physician. Applications to the Secretary by January 3rd.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Two Physicians to In-patients, one Surgeon to In-patients, three Physicians to Out-patients, one Surgeon to Out-patients, a Pathologist, and a Registrar. Must be engaged in consulting practice only. Applications, on forms to be obtained of the Secretary, to be sent in by January 4th.

DEVON AND EXETER HOSPITAL, Exeter.—Assistant House-Surgeon: doubly qualified and unmarried. Salary, £40 per annum, with board and lodging. Applications to Albert E. Boyce, Secretary, by January 7th.

ELTHAM COLLEGE, Kent (Royal Naval School).—Medical Officer. Applications to the Rev. the Bursar by January 5th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Two Assistant Physicians; must be F. or M.R.C.P.Lond. Applications to the Secretary by January 14th.

HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician; doubly qualified. Salary, £30 for six months, with board, etc. Applications to David Cannon, Secretary, by December 26th.

INISHOWEN UNION, Cardonagh Dispensary.—Medical Officer. Salary, £120 per annum, and £15 yearly as Medical Officer of Health, together with registration and vaccination fees. Applications to Mr. P. Doherty, Honorary Secretary, Cardonagh Hotel. Election on January 4th.

JESSOP HOSPITAL FOR WOMEN, Sheffield.—House-Surgeon; unmarried; doubly qualified. Salary, £50 per annum, with board, lodging, and washing. Applications to the Honorary Secretary of the Medical Staff, Dr. Martin, Claremont Place, Sheffield, by December 26th.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon; unmarried. Salary, £50 per annum, with board and lodging. Applications to the Secretary by December 28th.

LONDON COUNTY COUNCIL.—Pathologist to the London County Asylum. Salary, £700 per annum, with travelling expenses. Applications on forms to be obtained at the office of the Committee, endorsed "Application for Pathologist," to R. W. Partridge, Clerk to the Asylums Committee, London Asylums Committee Office, 21, Whitehall Place, S.W., by 10 o'clock on January 5th, 1895.

MANCHESTER ROYAL INFIRMARY DISPENSARY AND LUNATIC HOSPITAL OR ASYLUM.—Honorary Obstetric Physician; must be F. or M.R.C.P.Lond. Applications to the Chairman of the Board by December 31st.

NEW HOSPITAL FOR WOMEN, 144, Euston Road.—Two Physicians, an Assistant Physician, and two Clinical Assistants; must be fully qualified medical women. Applications to the Secretary by December 28th.

NORFOLK AND NORWICH HOSPITAL.—Assistant to the House-Surgeon, doubly qualified. Appointment for six months. Board, lodging, and washing provided. Applications to the House-Surgeon by January 5th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent. Assistant House-Surgeon. Board, apartments, and washing provided. Applications to the Secretary by December 31st.

NOTTINGHAM BOROUGH ASYLUM.—Second Assistant Medical Officer; unmarried and under 30 years of age. Applications to the Medical Superintendent by December 31st.

PENRHYN QUARRY HOSPITAL, Bethesda, near Bangor, North Wales.—Surgeon; must be able to speak Welsh. Applications to E. A. Young, Port Penrhyn, Bangor, North Wales.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Anæsthetist. Applications and testimonials to Conrad W. Thies, Secretary, by December 31st.

VICTORIA HOSPITAL, Folkestone.—House-Surgeon; doubly qualified. Salary, £80 per annum, rising £10 annually to £100, with board, residence, and laundry. Applications to the Secretary of the Hospital by December 29th.

WEST BROMWICH DISTRICT HOSPITAL.—House-Surgeon, surgically qualified and unmarried. Salary, £80 per annum, with board, residence, and washing. Applications to the Honorary Secretary, Mr. William Bache, Churchill House, West Bromwich, by December 28th.

WEST HERTS INFIRMARY, Hemel Hempstead.—House-Surgeon and Dispenser, doubly qualified and unmarried. Appointment for two years. Salary, £100 per annum, with board, furnished rooms, fire lights, attendance, and washing. Applications to the Secretary by January 17th, 1895.

WESTMINSTER HOSPITAL. — Fourth Assistant Surgeon. Must be F.R.C.S.Eng. Candidates must transmit certificate of age, and attend the House Committee on January 1st.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant. Appointment for six months. Board, lodging, and washing provided. Applications, inscribed "Application for Resident Assistant," to the Chairman of the Medical Committee by December 31st.

YORK COUNTY HOSPITAL.—Assistant House-Surgeon; doubly qualified. Salary, £60 per annum, with board, rooms, washing, and attendance. Applications to C. E. Pinfold, Secretary, by January 3rd.

MEDICAL APPOINTMENTS.

ANDERSON, William, L.R.C.P.Lond., L.S.A., appointed Consulting Surgeon to the Sevenoaks Hospital for Diseases of the Hip.

ANNINGSON, Bushell, B.A.Cantab., M.D., M.R.C.S., reappointed Medical Officer of Health to the Chesterton Local Board.

BLAYNEY, Dr. Joseph A., appointed Medical Officer and Resident Magistrate in British New Guinea.

BULLEN, Harold, L.D.S., appointed Dental Surgeon to the Royal Cornwall Infirmary.

BYERS, H. S., M.B.Durh., M.R.C.S.Eng., L.R.C.P.Lond., appointed Junior House-Surgeon to the Northern Hospital, Liverpool.

CARRÉ, L. J. Gerard, M.D.Brux., M.R.C.S., L.R.C.P., appointed Registrar and Anæsthetist at the Royal Hospital for Children and Women, Waterloo Bridge Road.

CHALLENOR, W., B.A.Camb., M.R.C.S.Eng., appointed Medical Officer for the Windle District of the Prescot Union.

COTTON, John, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Eccleston District and Public Vaccinator for the St. Helen's District of the Prescot Union.

DACRE, John, M.R.C.S., L.R.C.P., reappointed House-Surgeon to the Bristol Hospital for Sick Children and Women.

ELLIOTT, Harry Scott, M.R.C.S.Eng., L.R.C.P.Lond., L.S.A.Lond., late House-Physician at St. George's Hospital, London, appointed House-Surgeon to the West London Hospital.

EMERSON, Herbert B., M.R.C.S.Eng., L.R.C.P.Lond., appointed Visiting Surgeon to the Chester General Infirmary.

FARLEY, George W., M.B., Ch.B.Roy.Univ.I., appointed House-Surgeon to the Bangor Infirmary, North Wales.

FARNAR, C., M.D.Heidelb., L.F.P.S.Glasg., reappointed Medical Officer of Health to the Chatteris Local Board.

GALLOWAY, James, M.D., F.R.C.S.Eng., Assistant Physician to the Great Northern Hospital, appointed Physician in charge of the Department for Diseases of the Skin, Charing Cross Hospital.

HALL, F. de Havilland, M.D., F.R.C.P., appointed Physician to the Westminster Hospital, *vice* Octavius Sturges, M.D., deceased.

HARPER, W. J., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Braunton District of the Barnstaple Union, *vice* Stephen O. Lane, M.R.C.S.Eng., retired.

HOME, G., M.B., C.M.Edin., appointed House-Physician to the Northern Hospital, Liverpool.

HOOD, Mr. C., appointed Medical Officer of Health to the Rural Sanitary District of the Strood Union, *vice* P. Whitcombe, M.R.C.S., resigned.

LAURIE, A. P., M.A., B.Sc., F.R.S.E., late Fellow of King's College, Cambridge, appointed Lecturer on Chemistry and Physics at St. Mary's Hospital Medical School.

MUSSEN, A. A., A.B. M.B., B.Ch.Dub., appointed Senior House-Surgeon to the Northern Hospital, Liverpool.

NEWBY, Thomas, M.D.St.And., M.R.C.S.Eng., reappointed Medical Officer of Health for the Borough of Great Grimsby.

O'BRYEN, J. Wheeler, M.D., L.R.C.P., L.R.C.S., appointed Medical Officer to the Crystal Palace District Gas Company.

PORTER, George, M.B., C.M.Edin., appointed House-Surgeon to Out-patients at the Hospital for Sick Children, Great Ormond Street, W.C., *vice* L. J. Gerard Carré, M.D.Brux., M.R.C.S., L.R.C.P., resigned.

ROBERTS, C. Gordon, M.A.Camb., M.B., reappointed Medical Officer of Health to the Halstead Local Board.

ROGERS, Bertram, M. H., B.A., M.D., B.Ch., appointed Pathologist to the Bristol Hospital for Sick Children and Women.

SMITH, William R., M.B., B.S.Lond., appointed Medical Registrar to King's College Hospital.

SOMERVILLE, J., M.D., appointed Medical Officer for the Neepsend District of the Sheffield Union.

WATSON, J. K., M.B., C.M.Edin., appointed Second Assistant House-Surgeon to the Sheffield General Infirmary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

ROE.—On December 16th, at 47, West Hill, Wandsworth, S.W., the wife of A. Dumville Roe, B.A., M.B.Cantab., M.R.C.S., of a daughter.

SHEARER.—On December 13th, at Woodside, Anerley Road, Norwood, the wife of Donald F. Shearer, B.A., M.B.Oxon., F.R.C.S.Eng., of a daughter.

MARRIAGES.

CHEYNE—SMITH.—On December 12th, at St. Mildred's Church, Lee, S.E., by the Rev. T. J. Henderson, Vicar of Farley and Pitton, Salisbury, assisted by the Rev. F. W. Holder, Vicar of the parish, W. Watson Cheyne, F.R.S., F.R.C.S., of 75, Harley Street, W., to Margaret, second daughter of the late George Smith, S.S.C., of Lerwick, Shetland. No cards.

M'NAUGHT—BUTLER.—On December 4th, at the English Presbyterian Church, Blackheath, by the Rev. James Head Thompson, B.D., James G. M'Naught, M.A., M.D., Army Medical Staff, to Sophie, fourth daughter of J. W. Butler, Esq., Blyth House, Humber Road, Blackheath.

DEATHS.

STEPHENSON.—On December 9th, at the residence of his brother-in-law, Bingley, Yorkshire, after a short illness, Charles W. T. Stephenson, M.B., C.M., second son of Professor Stephenson, Aberdeen.

WILSON.—On December 13th, at 9, Via Tornabuoni, Florence, of pneumonia, Charles Blair Wilson, M.D.Edin.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not Later than Midday Post on Wednesday. Telegrams can be Received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the **Editor**, 429, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any Circumstances be Returned.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal and not to his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

Indian Army asks for advice as to the best textbooks to read for the examination for the Indian Medical Service.

Inquirer asks for the English or American address of the Havard Medical Couch Co.

Dr. George H. Ormsby (Runcorn) asks to be recommended a "retreat" or "home" for "reduced" gentlemen, who are taken on payment of a small weekly sum.

Member has a patient who, being thin, would like to be stouter. Patient has tried all kinds of diet, but cannot take cod-liver oil, etc. Will any drugs be of service?

W. P. H. writes: Is there any home or institution for indigent gentlewomen who, by reason of some infirmity such as deafness are unable to earn their own living? If so, what are the steps necessary to obtain admission?

Treatment of the Opium Habit.

An M.D. asks what is the best line of treatment to adopt in a case of confirmed opium habit, and what books he can consult on this subject.

Antipyrin Rash.

R. H. S. desires information as to the character of an "antipyrin rash"—whether it is squamous, papular, erythematous, or otherwise; its distribution, colour, and duration after the discontinuance of the drug.

Practice in Canada.

Celtic Member writes: Can any member recommend a dry, bracing part of Canada suitable for a young practitioner suffering from chronic rheumatism, and say how information as regards opportunity for practice, either as partner or assistant, can be obtained?

Treatment of Borborygmi.

Nemo asks for a remedy for a very troublesome case of borborygmus in a young lady of about 20 years of age. Her bowels are regular, uterine and other functions completely satisfactory. She takes sufficient walking and horse exercise. It troubles her more during the late evening. Change of food has no effect.

Medical Representation on the Governing Bodies of Hospitals.

Staff asks: In what way is the staff usually represented on the committee of a hospital? Is it usual for the whole of the staff to be members or only a certain portion elected thereon? If the latter, how is it customary for the selection to be made?

*** The practice varies much. In some hospitals the members of the medical staff are ineligible as governors of the hospital, and are only allowed to give advice or information but not to vote. In others the staff depute a certain contingent of their body to serve on the board or committee of management. In others, again—and these are, in our opinion, the best constituted hospitals—all members of the staff are eligible as governors equally with all other persons, vote equally on the board of management, and are equally eligible to serve on committees. Where the staff are represented by only a select part of their body, we believe the selection is always made by themselves, but on this point we are not absolutely certain.

Certificates to Midwifery and Sick Nurses.

A correspondent sends us the manuscript copy in the following terms of a certificate which he has been in the habit of issuing, and asks for an opinion upon its terms: "I hereby certify that ——— has attended my course of instructions in midwifery, diseases of women and children, nursing medical and surgical. I have this day duly examined her on these subjects, and find her capable of undertaking the duties of a midwifery or sick nurse. In testimony of which I hereto affix my hand and seal this ——— eighteen hundred and ninety at Aberdeen. ———, M.D C.M. Univ. Aberd., L.R.C.S. & L.M. Edin."

*** No authoritative decision on the point raised by our correspondent has yet been given, but it is plain that no such certificate should by its form, appearance, or wording afford ground for the accusation of "colourable imitation" of a registrable diploma. Difficulties might be avoided if the medical man giving a *testimonial* to a nurse confined himself to the statement that, *in his opinion*, she was capable of undertaking the nursing of medical, surgical, or obstetrical cases.

ANSWERS.

J. B. should consult his medical attendant.

Medicus has omitted to enclose his card.

A. S.—Some allowance must be made for the exciting circumstances of the case.

Medicus.—The Conjoint Examining Board of the Royal Colleges of Physicians and Surgeons in England do not hold examinations in honours.

F. W. J.—We have ascertained that a work entitled *What to Observe at the Bedside and after Death* was published by Messrs. J. and A. Churchill for the London Medical Society of Observation at the price of 4s. 6d. Messrs. Churchill inform us that the work has been out of print for many years, and that they doubt the wisdom of reissuing it.

Attendant.—The authorised fee for a medical witness in a civil action (according to the English scale—presumably it is similar in Ireland) is from two to three guineas per diem and travelling expenses. The witness can demand an adequate sum for conduct money with his subpœna, that is enough for travelling expenses and fee up to the probable date of the trial.

Medicus.—The combination of F.R.C.P.Edin. and M.R.C.S.Eng. is quite unusual. An F.R.C.P.Edin. is supposed to be and ought to be essentially a physician. We are informed that the usual designation on doorplate and card in Edinburgh and Scotland of a Fellow of the Scotch College is either Mr. A. B., F.R.C.P.Edin., or A. B., F.R.C.P.Edin. The latter, it is said, is better.

Prifysgol Cymru.

J. H. B., B.A., M.D.—The University of Wales does not, for the present, confer medical degrees. Information as to the matriculation examination may be obtained by addressing the Acting Registrar, care of Messrs. Faithfull and Owen, 11, Victoria Street, London, S.W.

Steam Disinfectors.

Surgeon-Captain.—All three forms of apparatus are efficient, but only the first-named is on the English market at present. It would cost £200 to £250 (full size), apart from the expense of building a two-roomed station, which is, of course, common to all kinds. See also the answer to "Disinfector" in the British Medical Journal of December 8th, page 1350.

London and Manchester Assurance Society.

Inquisitor.—Much that our correspondent says respecting the way the business of this Society is carried on is no doubt true, and it is for this reason we should advise all medical practitioners to have as little as possible to do with it. It must be pointed out, however, that, as has been frequently shown in the columns of this Journal, the Medical Aid Department is an adjunct to a life insurance business, and although our correspondent contends the former is "simply a bait to lure proposers to join the latter," proof that this is really so apart from mere assertion is by no means easy. If the statement is a "fact," our general condemnation of other medical aid societies applies equally to this.

"Isapghul."

A. de B.—We have referred our correspondent's inquiry to Brigade-Surgeon-Lieutenant-Colonel Kenneth McLeod, formerly Professor of Surgery at Calcutta Medical College, who has been good enough to send us the following note:

"'Isapghul' is the seed of Plantago Isaphaghula (Roxb.). These seeds are sold in all Eastern bazaars, but I don't know whether they are to be had in London. I fancy they are. They contain a mucilage which is extracted by water, and are said to be mildly astringent. They are given dry, in which case they swell, and yield their mucilage in the intestinal canal, or as decoction (3 drachms to the pint, boiled and strained). They are used for chronic dysentery. I have seen them do good."

NOTES, LETTERS, Etc.

Erratum.—In the report of the proceedings of the Manchester Medical Society, published in the British Medical Journal of December 15th, the mixture referred to by Mr. F. W. Jordan should have been "*guinine*, chlorate of potash, and dilute nitro-hydrochloric acid," not "tannin."

Mr. Marmaduke Sheild (4, Cavendish Place, W.) asks us to state that he would feel greatly indebted to anyone in private practice who would inform him of cases of long immunity from recurrence after removal of undoubted scirrhus of the breast. If possible the name of the operator should also be given. The sources will be duly acknowledged of any information received.

Warning.

Mr. A. Reddick (Furnival Street, Holborn) writes: We understand that there is an individual going about to the houses of medical men seeking to obtain a few shillings for the insertion of a name and address in

some directory which is supposed to be published at this address. May we be allowed to state that we know of no such directory?

Postal Orders.

The director of a vaccine institution asks us to warn members of the profession not to send postal orders without crossing them or taking the numbers, as during the last month he has received numerous complaints as to the non-receipt of lymph, the orders for which were never received.

Arsenic in Glycerine.

F. C. S. writes: With reference to a medico-legal case, in which one of the points brought forward was the possible presence of arsenic in the glycerine administered to the deceased, I am not aware that attention has ever been called to the fact that the *British Pharmacopœia* of 1885, and Additions of 1890, contain no test for the detection in glycerine of this serious impurity. This unfortunate omission will, it is to be hoped, be rectified by the editors when another edition of the volume is issued, and will meanwhile receive the consideration of dispensing chemists and medical men.

Vaccination and the Guardians' Elections.

A Medical correspondent who was a candidate for a guardians' election recently sends us the following string of questions which were put to him. They appear to have been copied from a kind of guide published by the *Star*. Our correspondent informs us that he answered the questions, but we think it might be advantageous to publish the following notes, which contains outlines of answers to similar questions:

1. Have you personally given any attention to the subject of vaccination?

2. Have you observed that the Registrar-General's returns furnish annually a record of deaths admitted to be the result of "cow-pox and other effects of vaccination?"

3. Do you know that in London during 1892 (according to the latest available statistical report of Dr. Murphy, of the London County Council), there were 20 deaths from "cow-pox and other effects of vaccination," as compared with 29 from small-pox?

4. What action will you take, and how will you vote, when the guardians have to determine whether they will prosecute poor people for declining to vaccinate their healthy children?

*** 1. Every medical man is obliged to give personal attention to the subject of vaccination. Theoretically it is bound up with the study of small-pox, and as to its practical side before admission to the final examinations a certificate of a course of attendance at some public vaccination station, and of ability to vaccinate properly, is required from every medical student.

2. It is well known that medical men state upon their certificates of death every cause of death, direct and indirect, connected with the death. It may be safely assumed that many deaths amongst children, when the cause of death is obscure, are attributed to "cow-pox and other effects," if the child has been recently vaccinated, which are not fairly attributable to vaccination in itself. Personally we do not believe that vaccination properly performed on a healthy child ever causes death. In Germany all alleged deaths from vaccination are investigated locally, and the vaccination report for the year 1889 lies before us; the following is an abstract of such deaths: Eleven were reported in Prussia, 7 in Bavaria, 4 in Saxony, 17 in Württemberg (besides 1 after revaccination), 3 in Baden, and 1 each in Saxe-Weimar and Saxe-Coburg-Gotha. It was found that not one of these deaths could be brought into causal connection with the (recent) vaccinations, most of them being due to diarrhœa, catarrhal pneumonia, and similar causes, including convulsions.[1]

3. The above answer applies.

4. Each case should be considered on its own merits or demerits, and it is evident that a precise answer cannot be given to this question. True the Royal Vaccination Commission has recommended the abolition of repeated prosecutions, but the Government has declined to act upon this recommendation so far.

Letters, Communications, Etc., have been received from:

(A) Mr. J. Affleck, Manchester; Astonished; Anti-Puff; An M.D.; Another Club Doctor; Mr. C. E. Abbot, Taunton; Mr. F. W. Alexander, London. **(B)** Dr. E. M. Brockbank, Manchester; Professor G. Buchanan, Glasgow; Dr. A. M. Buchanan, Glasgow; Bristol Hospital for Sick Children, The Secretary of the, Bristol; Messrs. Burroughs, Wellcome and Co., London; Mr. D. Bush, Manchester; C. H. Bond, M.B., Sutton; Mr. C. J. Blakeman, Liverpool; Birkenhead Medical Society, The Secretary of the, Birkenhead; Mr. H. Bowlby, London; Mr. A. E. Boyce, Exeter; Mr. J. P. Bush, Bristol; Mr. W. B. Benham, Oxford; T. M. Bonar, M.B., Probus; Mr. F. A. Baldwin, London; Dr. A. G. Barrs, Leeds; Dr. E. G. Barnes, Eye; Mr. C. J. Blakeman, Liverpool; Mr. G. E. Borsall, Aberystwith; Dr. J. N. Byers, Belfast; Mr. J. Branson, Rotherham; Mr. C. J. Bond, Leicester; Dr. L. T. F. Bryett, London; Blackman Ventilating Company, London. **(C)** Mr. T. Carwardine, London; Mr. L. Cooke, Wigan; Mr. C. Coventon, St. Leonard's-on-Sea; Mr. H. N. Constance, London; Celtic Member; Dr. W. Carter, Liverpool; Mr. A. H. Card, London; Mr. E. Cutter, New York; Dr. W. H. Calvert, Melrose; F. W. Clack, M.B., Lowestoft; Dr. H. R. Crocker, London; Dr. W. Collingridge, London; Mr. Andrew Clark, London. **(D)** W. B. Drummond, M.B., Lochgilphead; Mr. J. H. Dow, Bolton; Mr. A. De Butts, Folkestone; Dr. W. Donovan, Erdington; Dement. **(E)** Enquirer; Dr. A. Edinger, Freiburg; Mr. E. H. Ellison, London; Mr. G. R. Ellis, London; Mr. H. S. Elliott, London; Epidemiological Society of London, The Secretary of the, London; Dr. T. G. Emerson, Wantage. **(F)** W. E. S. Finny, M.B., Kingston Hill; Dr. R. W. Felkin, Edinburgh; R. Ferguson, M.B., Anstruther; Mr. G. H. Fosbrooke, Worcester; F.C.S.; Mr. J. Faulkner, London; Mr. G. J. W. Flower, Yeovil. **(G)** Mr. G. R.' Gashill, London; Mr. W. Gardner-Waterman, Maidstone; Dr. J. Galloway, London; Mr. F. G. Gardner, Upton-on-Severn; A. Gray, M.B., Hull. **(H)** W. F. Hingston, M.B., London; W. H. Hewlett, M.B., Wivenhoe; Mr. E. Howard, London; Dr. D. Hilston, Gosport; Mr. G. C. Hearne, London; Mr. J. Hyslop, Settle; Mr. N. Holmes, Irvine; Mr. F. Horner, Norwich; Dr. A. J. Hubbard, Hemel Hempstead; Dr. J. Haddon, Hawick; Dr. M. Hay, Aberdeen; Mr. R. Harrison, London; Mr. D. Hilston, Gosport; G. Hulme, M.B., Felixstowe. **(I)** Indian Army; Dr H. J. Ilott, Bromley; Inquirer. **(J)** Mr. R. Jones, Liverpool; Mr. F. P. James, Leeds; Mr. F. W. Jordan, Stockport; J. B. **(K)** H. Kenwood, M.B., London. **(L)** Dr. R. Lord, Crewe; Lighthouse; Liquor Carnis Company, Aston Clinton; Messrs. Charles Letts and Co., London; Dr. W. G. Lush, Weymouth; Mr. E. W. Lewis, London; R. C. Lees, M.B., Glasgow; Mr. A. Lucas, Birmingham; Mr. W. K. Lumsden, Aberdeen. **(M)** Dr. A. Mitchell, London; Medicus; Mr. L. J. May, London; Mr. F. A. Madden, London; J. Macdonald, M.B., Carlisle; M.O.H.; Dr. C. Muirhead, Edinburgh; Member; M.D.; Dr. C. M. McQuibban, Aberdeen; R. W. Merrick, M.B., Surbiton; Dr. P. W. MacDonald, Dorchester; Miss G. Mannox, Leamington; Professor E. Morelli, Rome; Mr. F. St. G. Mivart, London; Mr. C. A. Morton, Clifton; Mr. T. Maltby, London; Messrs. J. Mott and Son, London. **(N)** Mr. E. Nettleship, London; Mr. R. J. Newstead, London; Mr. R. H. B. Nicholson, Hull; Nemo; Mr. N. H. Nixon, London. **(O)** Onlooker; Mr. G. H. Ormsby, Runcorn; Mr. G. P. O'Connor, Edinburgh. **(P)** Mr. E. Powell, Nottingham; Dr. G. K. Poole, London; P.Q.X.; Dr. G. W. Potter, London; Mr. G. F. Parry, London; T. Priestley, M.B., Preston; Mr. O. Pemberton, Birmingham; Mr. G. C. Peachey, Wantage; Mr. J. F. Pink, London; Mr. T. Partridge, Stroud; Mr. F. T. Paul, Liverpool; Mr. A. E. Price, Folkestone; Dr. S. T. Pruen, Cheltenham; Mr. C. E. Pinfold, York; Dr. C. B. Plowright, King's Lynn. **(R)** Mr. G. Q. Roberts, London; Messrs. A. Reddick and Co., London; Dr. W. Robinson, Sunderland; Retired Surgeon of Eighteen Years' Service; Mr. J. Reed, Hawera; Messrs. Reynolds and Branson, Leeds; Dr. W. Reid, Gosport; Mr. W. H. Radford, Manchester; Dr. A. Ruffer, London; Mr. A. Richards, Birmingham; Dr. E. S. Reynolds, Manchester. **(S)** Mr. Noble Smith, London; Mrs. M. Scharlieb, M.D., London; Mr. H. Sell, London; Mr. Marmaduke Sheild, London; Mr. W. A. Stradling, Watford; Messrs. Street and Co., London; Mr. W. Stanley, London; Mr. R. H. Shaw, New Mills; Messrs. Salt and Sons, Edinburgh; S. Stanwell, M.B., Stamford; Soldier Doctor; J. L. Siordet, M.B., Mentone; Mr. W. G. Sutcliffe, Hull; Dr. W. R. Smith, London; K. Scott, M.B., Cairo; Mr. W. H. W. Stacey, Grimston; Dr. E. Snape, London; Mr. G. F. Stone, Bristol. **(T)** Dr. D. Turner, Edinburgh; Miss I. Thorne, Lewes; W. E. Tressider, M.B., Nottingham; Mr. E. Thompson, Omagh; Mr. W. Thompson, Leeds; Dr. S. Tidey, Florence. **(V)** Veritas. **(W)** W. A. L.; W. H. A.; Mr. F. J. Warmsley, Chester; Dr. J. W. White, Philadelphia; Dr. J. W. Washbourn, London; Dr. Williams, Penarth; D. J. Wood, M.B., Cape Town; J. K. Watson, M.B., Sheffield; Dr. Wallace, Liverpool; Mr. G. A. Williamson, Inverness. **(Y)** M. Young, M.B., Brighouse; etc.

Books, Etc., Received.

Manual of Practical Morbid Anatomy. By Dr. H. D. Rolleston and Dr. A. A. Kanthack. London and Cambridge: C. J. Clay and Sons. 1894.

The Evolution of the Diseases of Women. By Dr. W. Balls-Headsley. London: Smith, Elder and Co. 1894. 16s.

Diseases of the Ear. By A. Marmaduke Sheild, M.B. London: Cassell and Co. 1895. 10s. 6d.

Zur acuten Ueberanstrengung des Herzens und deren Behandlung. Von Dr. T. Schott. Wiesbaden: J. F. Bergmann. 1894. M. 1.

Organic Chemistry. By W. H. Perkin, jun., and F. S. Kipping. Part II. London and Edinburgh: W. and R. Chambers. 1895. 3s. 6d.

The Medical Profession and Freemasonry. By R. F. Gould. Margate: *Keble's Gazette* Office. 1894.

Modern Materia Medica for Medical Men, Pharmacists, and Students. By H. Helbing. 4th Edition. London: H. K. Lewis. 1895. 8s.

Pulse Gauging: a Clinical Study of Radial Measurement and Pulse Measure. By Dr. G. Oliver. London: H. K. Lewis. 1895. 3s. 6d.

*** In forwarding books the publishers are requested to state the selling prices.

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[1] *Medizinal-statistische Mittheilungen aus dem K.K. Gesundheitsamte* Bd. i. Heft 1. Berlin. 1891.

AN ADDRESS

ON THE

MEDICAL PROFESSION IN INDIA

ITS POSITION AND ITS WORK.

Delivered before the Indian Medical Congress held at Calcutta, December, 1894.

By ERNEST HART, D.C.L.

Mr. Hart commenced his remarks by a careful history of medicine in India showing how rational medicine introduced by the English had gradually displaced the older systems in many parts, and how by aid of the medical education now offered to the natives, this process was continuing in others. He also entered into the various difficulties which beset the profession, and pointed out many of the needs and requirements of the different branches of the medical services in India.

Turning to the more scientific part of his subject, he spoke hopefully of the anticholeraic vaccination recently introduced and carried out by M. Haffkine. This, however, was but one illustration of the growing importance of the germ theory of disease, which had of recent years intruded itself into ever-extending regions of pathology.

The Germ Theory of Disease.

He continued: From what I have said you will understand why it is that in the remarks which I propose to make on tropical diseases, germs and parasites will occupy a very prominent place; for you will understand that I regard the study of tropical disease as being in great measure a study of tropical parasites. In these remarks I shall hope to indicate what I consider promising lines for research, and I shall take the liberty of describing certain methods of investigation which, though probably well known to some of you, may not be familiar to all of you, but which all of you are capable of employing with advantage to the science of medicine, to your patients, and to yourselves. And if I appear to be somewhat presumptuous in my remarks on Indian work and Indian workers, and to be assuming too tutorial, too authoritative, or too critical an attitude, I beg your pardon in advance. I would ask you to remember that as Editor of the British Medical Journal I enjoy what are perhaps exceptional opportunities of gauging the times, of learning what is being done in things medical all over the world, and of perceiving, perhaps, what is the best thing next to be done. Though in a sense an outsider in Indian medical matters I am by no means an indifferent spectator.

The Malaria Parasite.

Of the two greatest discoveries of recent times in pathology—the parasite of tubercle and the parasite of malaria—it is difficult to say which is the more important. Certainly as regards India and tropical countries in general, the more important is the discovery of the malaria parasite. It is hardly necessary to insist on this to an Indian audience, for the fact is only too patent that a very large proportion of the mortality and a still larger proportion of the morbidity of India are directly or indirectly attributable to malaria.

Seeing this, it is a somewhat strange circumstance that, although we have been acquainted with this parasite now for some fourteen years, and although many pathologists in Italy, in France, in Germany, and in America have occupied themselves with its study, it has been entirely, or almost entirely, neglected by the profession in India and England. At all events, if they have not entirely neglected the subject, it cannot be said that they have added any important fact to our stock of knowledge about it.

One name certainly stands out a prominent exception in this, as it has done in many other departments of Indian pathology—that of Vandyke Carter. But with this exception I cannot say that our Indian brethren have done their share in this work—work which so specially concerns them, and for the prosecution of which they enjoy opportunities so exceptional. Even Carter's investigations are more valuable as confirmatory of Laveran's than as adding to them.

True, there have been other workers and writers in India who have concerned themselves with the malaria parasite; yet in most instances their statements are so indefinite, so hard to follow, that they can hardly be regarded as advancing the subject. In not a few instances they evidently refer to what are merely *post-mortem* changes in the normal elements of the blood, and certainly not to the malaria parasite. The publication of these observations has perhaps done more harm than good; for, as a consequence, we now find in India, in addition to those believers in the malaria parasite who have a genuine and well-founded belief, two classes of individuals with diametrically opposite opinions about this germ; and of these two classes, although they are of opposite opinions, neither is correct. Thus we have those who do believe in the malaria parasite, but who found their belief on false data, namely, on the normal *post-mortem* appearances alluded to, and which they have wrongly interpreted; and we have those who, recognising the true nature of the *post-mortem* appearances which some of their colleagues mistake for the malaria parasite, have, in consequence, become sceptical as to the existence of any such parasite whatever, regarding all observations in this connection of a positive character as equally fallacious and unreliable.

Now, neither one nor the other is correct. These *post-mortem* appearances are certainly not the malaria parasite, and do not justify a belief in the existence of such a parasite; and the scepticism of the sceptics is equally unjustified, founded as it is on the same faulty observations.

Before we can look for assistance from India in the furtherance of this study, these opposing and equally fallacious views must be got rid of, and a fresh start made on a sounder basis, on sounder observations.

If there is one thing certain in pathology, it is that a living parasite is present and can be found—practically invariably—in malarial blood. This is the creed of everyone who has worked at the subject on sound lines. One reason for the scepticism on the subject which is so common among the members of the profession is the difficulty experienced in finding the parasite. *Difficulty* is hardly the right expression; rather, I should have said *ignorance* of the methods which should be followed to demonstrate the parasite. It seems ungenerous to blame Laveran, to whom we owe so much, for this. Still we must consider him in a measure responsible for this ignorance and the prevailing scepticism. Laveran, though a great pathologist and a great discoverer, has, in this particular instance, proved himself a poor teacher. A good teacher studies his pupils as well as his subject. He studies their capacities and takes into account their previous training. Laveran has not done this. The fact is he has not realised how stupid and ignorant we, his pupils, are. For, although he indicated a way of demonstrating the malaria parasite, his description of his methods was brief, and the principle on which his method depended was not sufficiently accentuated, and it loses much of its value inasmuch as it takes no account of our incapacity and clumsiness, and of our want of familiarity with microscopical blood *technique*. Had Laveran recognised our ignorance, had he described fully and carefully, and reiterated his *technique* over and over again, printed it in capital letters on every page of his earlier work, had he succeeded in thoroughly educating his public in his methods of demonstration, his followers in India and elsewhere, instead of numbering, as they do to-day, some paltry tens or hundreds, would by this time have been reckoned by thousands. And Laveran's example in this respect has been followed by nearly all writers on the subject of the malaria parasite. The thing is so simple and self-evident to them—after they have done it—that they apparently assume as a matter of course that everyone must know how to set about the demonstration, and without special instruction. Now this is far from being the case; so much so that he who should succeed in impressing upon the profession a knowledge of the proper method of demonstrating this parasite will confer a great boon on medical science. He will at once multiply enormously the number of observers and also of believers: for whoever employs the right method cannot fail with a little patience and a fairly good microscope to see nearly at once and in every case of malarial fever the object he is in search of, and become himself a convert to the existence of the malaria parasite, a believer in its

far-reaching importance, in its great *rôle:* and, in addition to this, he will become an investigator and a valuable apostle of the new pathology.

Undoubtedly the malaria parasite is the principal fact in tropical pathology. Everyone, therefore, practising in the tropics must familiarise himself with its appearance, and with the way to demonstrate it. This is a manifest duty. It can be shown in the blood of every ague patient, in the blood of every malarial remittent which has not been treated with quinine. This point of demonstration is therefore so fundamental, so important, that I feel I shall have accomplished something worth doing if I succeed in impressing it thoroughly on my audience. Feeling this I entertain the hope that my presumption will not be taken amiss, and that it may help someone in his search if I indicate briefly the best method of demonstration. Should I succeed in this, I would strongly advise those of you who have not already seen this parasite, particularly every sceptic, having thoroughly grasped the principle of the method, to set to work on the first case of well-marked, untreated ague you come across, and never to rest in your search until you have found it.

A slide of blood as ordinarily prepared shows the blood aggregated in rouleaux, the corpuscles closely approximated, and presenting their edges only to the eye of the observer. Now, in blood slides so prepared, it is simply impossible to perceive the usual and most common forms of the malaria parasite; as impossible as it would be to see the Empress's head on the individual coins piled one on top of the other, constituting a roll of rupees. If you wish to see the stamp on the coins you must spread them out flat on their faces, so to speak. It is exactly the same with the malaria parasite in the blood corpuscle as it is with the Empress's head on the coin. The parasite is inside the body of the corpuscle, not on its edge, rarely outside of it, so that to see it you must dispose the blood corpuscles as you would the coins—you must lay them flat on their faces. Whoever would see the malaria parasite must remember this as a prime and elementary fact; his *technique* must be directed to secure this disposition of corpuscles. If he succeed in this his difficulties are practically at an end. This is the whole secret and principle of malaria blood examination. It is so evident, so simple, that it almost seems necessary that I should apologise to you for mentioning it; nevertheless, like many another very evident and simple matter, and just for this very reason, it has been very generally overlooked.

To secure preparations of blood showing the corpuscles lying flat on their faces proceed in this way. Wash cover-glass and slip in alcohol or ether. Make them thoroughly clean and dry. Wash the finger of the patient with soap and water, afterwards, if necessary, with ether and dry it. Ligature the finger and prick it in the usual way, but prick it very lightly; this is important—prick it very lightly: a big drop of blood is a snare. Wipe the first drop of blood which exudes away, then gently press the pad of the finger between finger and thumb, and, as soon as a droplet of blood no bigger than a pin's head has appeared, take this up by touching its apex—if I may use the expression—lightly with the centre of the cover-glass. Then drop the cover-glass on the slip. If finger, cover-glass, and slip are thoroughly clean and dry, and the operation has been rightly and quickly performed, the blood will run out in an exceedingly delicate film in which, after a minute or two, all the blood corpuscles will be found lying flat on their faces. Best make six such preparations at a sitting, for some are sure to be failures, having the corpuscles in rouleaux or imperfectly disposed and isolated.

Over imperfect preparations no time should be lost; they are mostly useless. Select only the best slides and search them with a twelfth immersion lens in a fairly good but not too bright illumination. If the blood-giver is suffering from an access of malarial fever, or is about to suffer from malarial fever, and if he has not been taking quinine recently, with a little patience you are now sure to see what you are in search of. You may have to search many fields and to spend some time, but persevere; the parasite is certainly on your slides.

At first there may be some difficulty in recognising the plasmodium—as it is conveniently but somewhat inaccurately termed. Once seen it will not be forgotten; ever afterwards you will have no difficulty in telling whether a given specimen of blood so prepared is malarial or not.

Look in your slides for ill-defined, palish, nebulous bodies containing dots or clusters of black pigment, and lying inside blood corpuscles. These palish bodies may be mere specks, or they may occupy a fourth, or a half or nearly the whole of a corpuscle. The black pigment particles attract the attention most readily. If you see such a particle or cluster of black particles in a corpuscle focus carefully, scrutinise carefully; see if they lie in a pale, ill-defined body; look for changes in the position of the particles and for alterations in the shape of the pale substance in which these are imbedded: in other words, look for evidences of life in this intra-corpuscular body. In some slides you may find one, or two, or many such intra-corpuscular bodies in every field; in other slides, and generally you will have to search many fields before you find one.

Recollect always that you must have your corpuscles lying flat, each of them isolated. Recollect that it may be only in one corpuscle out of many hundreds or thousands of healthy corpuscles that you will find a parasite. Recollect, let me repeat, that in the first instance you should look for specks of black pigment lying inside some of the corpuscles, one in perhaps every two, three, four, or perhaps fifty fields. Recollect that this pigment lies within the pale, nebulous, ill-defined body whose living nature is manifested by slow, or more or less rapid, changes of shape. Recollect that this body may be only a mere speck in the corpuscle, or that it may occupy a fourth, a half, or nearly the entire disc. Find such a body and you have found the usual form of the plasmodium malariæ. And when you have seen and recognised it, those of you who have hitherto worked unsuccessfully at the subject will be astonished that you failed to find the parasite before. You will be astonished that medical science had to wait till the end of the nineteenth century before discovering it. I have known men who worked for months on malarial blood diligently, carefully, and on every opportunity, and yet, simply because they did not follow the proper principle in preparing their slides, did not quite realise what they had to search for; they failed completely to see the parasite, and gave up the search in disgust, perhaps became sceptics. Recollect that you may actually see the parasite and not recognise it. Recollect that eyes sharp and trained as those of Virchow and Frerichs, although they undoubtedly saw the plasmodium, described phases of it in fact, completely failed to recognise it, to accept the discovery they had actually made, and which was lying patent under their very noses. Sometimes you must know what you look for before you can perceive it.

The rarer forms of the parasite, the crescents and flagellated bodies, are easily made out when encountered. But do not mistake artificially produced rents and vacuoles in the corpuscles for intra-corpuscular bodies, as has been so often done: buckled up corpuscles for crescents: or a stellate arrangement of the fibrin for the flagellated body; or blood plates for spores, or clustered blood plates for the sporulating forms. If ever in doubt about the nature of some body you see under the microscope, depend upon it it is not the malaria parasite. Look with suspicion on every body not carrying pigment. The crescent is a pale body with black pigment about its centre; the buckled corpuscle is crescent shaped too, it is true, but it is hæmoglobin coloured, and carries no black pigment. If you see any movement in a limited part of the field, any sudden quivering, trembling, or sudden change of shape in the blood corpuscles, look carefully for the cause of this disturbance: most likely it is produced by the flagella of a flagellated body lying in close proximity to the agitated corpuscles. The body of this flagellated organism, the sphere to which the flagella are attached, is full of pigment in very active movement and cannot be mistaken. Do not expect to see these flagellated bodies often, or the crescents often; but expect to see the intra-corpuscular bodies—large or small—in every case of malarial fever.

I have no intention of entering on a detailed description of this parasite, or of discussing the many important questions connected with it. All this you can find in the latest publications of the New Sydenham Society, in their translation

of Laveran's last work, in their translation of Marchiafava and Bignami's conjoint work on the *Summer-Autumn Fevers of Rome*, and in their translation of Mannaberg's elaborate and most excellent monograph on the *Malaria Parasite*.

Do not be deterred by assumed incompetence or imaginary difficulties. Many suppose that microscopical examinations and scientific work in general cannot be efficiently conducted by men circumstanced as I presume the majority of Indian medical officers are, having only limited apparatus, without command of a large library, without abundant leisure.

For example, in this matter of the malaria parasite a common question is what is the best stain for it? Now, why on earth should we stain it? It is perfectly visible without being stained. The idea evidently is that some sort of artificial staining and preparation of the blood are necessary before we have a right to look for the parasite; that some sort of "open sesame" ceremonial must be gone through in every microscopical performance; that the raw material must be submitted to some elaborate process before the germ it contains has a right to be visible—dipping it in this fluid, dipping it in that fluid, sterilising, and cultivating, and putting it through no end of complicated bacteriological gymnastics. Staining and similar modern histological methods are of great use for certain purposes, but not for every purpose. The tendency is to overdo them, to apply them to every purpose. Nowadays many histologists would rather contemplate a hardened, stained, artificial tissue than a tissue in its natural condition. The ends of microscopical investigations are too often forgotten in the means, too often in this way never attained. Consequently, many important facts in histology and pathology are overlooked, simply because histologists, wedded to methods and fashions, fancy that such processes are necessary, and so lose themselves in their methods. Too often in carrying out these methods they destroy one of the best aids in such investigations as the one we concern ourselves with at present; they destroy life and that important evidence of life, movement. To see the malaria parasite none of these elaborate processes of preparation are required, are even desirable. You examine fresh blood—fluid blood, not dried and stained blood. Laveran's discoveries were made with unstained preparations, with fresh blood. His entire apparatus consisted of a needle and a string, a slip and cover-glass, and a microscope with a magnifying power of some 400 or 500 diameters; yet with this despicable microscopical outfit he made his great discovery, and his descriptions of the histological features of the malaria parasite are still, perhaps, the best we have.

The history of the discovery of this same malaria parasite is an excellent illustration of what I urge with regard to simplicity and directness in scientific work. About the same time that Laveran was pursuing his investigations Marchiafava was also working on malaria blood. Marchiafava was bitten by the modern mania for drying blood, passing it through the flame, staining, cultivating, mounting in balsam, and so forth, and the consequence was that, although he actually saw the malaria parasite times without number, yet in consequence of his manipulations of the blood he missed the significance of what he saw. He killed the parasites, and he called and regarded their corpses as "degenerated hæmoglobin." Laveran simply looked at fresh unmanipulated blood, and observed his parasites in their living state. Consequently he saw their movements, and his simplicity was rewarded by a great discovery. The flagellated organism, the finding of which was the key to Laveran's discovery, is not recognisable in dried and stained slides. Staining methods are of use in working out a few of the details of the malaria parasite. They can prove that it is an independent organism, as by their means the nucleus and nucleolus of the animal are rendered visible; to this extent they are of use, but further than this they cannot be said to have any value whatever. Had such means only been employed very likely the plasmodium would never have been discovered. I would therefore advise anyone who would engage in this investigation to leave staining and artificial preparation of blood alone, at all events until he has thoroughly familiarised himself with the appearances and characters of the living malaria parasite in fresh blood; above all, to cultivate simplicity in his methods.

Until lately malaria has been studied only in its effects: henceforth the study will embrace—and that in the first instance—its cause. When the next textbook on tropical medicine comes to be written the chapters on malarial disease will be written from the standpoint of the malaria parasite. The first chapter will be a piece of natural history—the life-history of the parasite. When this has been fully set forth, then, and not till then, the writer will pass to the consideration of the action of the parasite on its human host, that is, to malarial disease. This is scientific medicine. Hitherto as regards malaria it has been as with astronomy before the laws of gravity were discovered. Laveran by his discovery has proved himself a medical Newton. The old touchstones of malaria—quinine and periodicity—were extremely unsatisfactory and fallible as a basis for scientific study: the thing malaria itself—the germ—is infallible. Thanks to Laveran we can now see the thing itself, and the subject has thus passed at one bound from the region of empiricism to the region of science.

When the Indian observer has satisfied himself of the existence of the malaria organism; when he has learnt to recognise its various phases and their relation to each other; when he has become so familiar with them that he can apply his knowledge with confidence to diagnosis; then he should endeavour, so far as lies in his power, to apply his knowledge to the reinvestigation of the entire range of Indian fevers. Recently (December 1st) the JOURNAL published for Dr. Patrick Manson a malaria chart, which, in its present form, or in a form modified by further experience, it is hoped, will prove of service in such investigations. It enables observations on the plasmodium in the blood to be rapidly recorded and read, and this in comparison and in conjunction with the progress of the fever was indicated by thermometer.

Whether there is only one malaria parasite whose disease-producing properties are modified by changes of temperature, moisture, soil, or whether there are several parasites closely resembling each other, but still specifically distinct, we cannot as yet say. The settlement of this and of many another knotty point about malaria is bound to come soon. It is *your* duty to tackle these knotty points. European science, knowing your opportunities, expects this of you. I hope that when the successes of the future do come many of them will be scored to British names. I hope these names will not, as hitherto in this matter, be conspicuous by their absence. England has done much for tropical medicine in the past: do not let her lose the place she has gained. Certainly an active investigation of Indian fevers from the standpoint of the new departure is imperatively demanded of the profession in India.

Besides forwarding our knowledge of malaria, good will come of such an investigation in many other and unexpected ways. I have not the slightest doubt that, apart from the malaria question, the systematic examination of the blood in India will result in important discoveries in other departments of tropical pathology. Certainly many fevers now regarded as malarial will be relegated to another class or other classes. There will be many strange and probably useful additions to our knowledge of the fauna and flora of the blood. Diagnosis will become more precise, and consequently treatment more successful, and in a hundred other ways the theory and practice of medicine in the tropics will be advanced.

There is one direction in which in India you could make important contributions to malarial pathology. The discovery by Danilewsky, Grassi, Feletti, and others of organisms closely resembling that of malaria in the blood of the lower animals is not only interesting in itself but is likely to prove of extreme value in elucidating the life-history of the malaria organism of man.

Comparative pathology should in this instance, if vigorously followed up, prove a powerful aid to human pathology. A systematic examination of the blood of the Indian fauna should, therefore, go hand in hand with the systematic examination of the human blood. It is probable that it will be in this way, by the study of the malaria-like parasites in the blood of the lower animals, that the life-history of the malaria parasite of man will be worked out. The investigation into Surra disease and the Surra micro-organism,

at present so ably conducted by Lingard, cannot fail to react favourably on human pathology, particularly on this malaria question. As a general rule I am not an advocate for Government aid or patronage in such matters; but the mention of this Surra investigation leads me to think that, if properly approached, a Government which is so thoughtful about the diseases of its beasts of burden might be found to be equally thoughtful about its human subjects and their diseases, and might be induced to aid in some way in their investigation.

This question of malaria is a fascinating subject, and I would fain pursue it further did time permit. Before leaving it I would congratulate the profession in India on having so splendid an opportunity for original work of the most important and attractive description. I sincerely trust that for the honour of British medicine it will not be slow to avail itself of its opportunities.

The Filaria Sanguinis and Filaria Disease.

While on the subject of blood parasites, Mr. Hart wished to say a few words about one which, although its study practically commenced in India, had, nevertheless, not received there—at all events of late years—that attention its importance demanded.

With the exception of Maitland, of Madras, since Lewis's time no strictly Indian observer, so far as he knew, had done much to advance our knowledge of filaria sanguinis, now usually called filaria nocturna. It was astonishing that no one in India had taken up Manson's work; long ere this it ought to have been confuted or confirmed, and, if the latter, extended.

There could be no doubt of the etiological relationship of the filaria to chyluria and to different forms of acquired lymphatic varix. This was thoroughly established. In genuine elephantiasis Arabum, however, although the evidence for the etiological relationship of the filaria to the disease was very strong, it could not be said to be absolutely conclusive. Any existing doubt on this point might easily be, and ought to be, definitely cleared up in India. This was one of the duties those in India owed to the profession. Another point of great importance was the determination of the particular species of mosquito which acted as intermediate host.

It had often occurred to him that it would be no very difficult matter to construct what he might call a "filaria map" of India, that is to say, a map which would indicate the distribution of this parasite in the native population. Such a map, combined with a similar map showing the distribution of elephantiasis, would be a valuable aid in determining the relationship of the parasite to the disease.

From such an investigation, the initiation of which was well worth the attention of this Congress, and the successful carrying out of which would be a permanent monument to its usefulness, much precise information could not fail to accrue. It was more than probable that a systematic examination of blood, such as that proposed, would reveal to us that in India, as in Africa, the human blood was the *habitat* of more than one species of nematode embryo.

Recent Investigations of Guinea-Worm.

The guinea-worm was another instance of an important parasite whose study, although practically originating in India, had, with the exception of some interesting observations by Charles, been virtually abandoned by the present generation of Indian medical men. No elaborate apparatus was required and the opportunities for investigation were endless. The treatment also required reconsideration. The plan recently described in the British Medical Journal of killing the worm by a hypodermic injection of bichloride of mercury solution was worth a thorough trial. This very practical point, the treatment of guinea-worm, should be settled at once. There surely could be no great difficulty about this.

Dysentery: Liver Abscess: Amœba Coli.

Among tropical diseases, particularly as affecting Europeans, next in importance to malarial disease and cholera came dysentery or, more correctly, the group of diseases of which colitis was a principal and the most frequent pathological expression, a group also including abscess of the liver.

The subject was far too wide for him to do more than glance at one or two of the many unsolved problems with which it bristled. It was interesting to note that slowly—some would say surely—opinion was veering towards recognising it as a fact that liver abscess was in some way invariably preceded, accompanied, succeeded, or otherwise intimately related to dysentery.

We could not be surprised, therefore, that a large section of pathologists had concluded that the only cause of liver abscess was dysentery. There were many, however, particularly in India, who energetically dissented from such a generalisation. And even among the ranks of those who took this view there was by no means unanimity as to the exact way in which dysentery gave rise to liver abscess. This was a question of great practical and scientific moment, to the settlement of which this Congress might powerfully contribute.

Hanging over it, however, was another which also required solution, namely, were there not several kinds or species of dysentery, some of which might not be etiologically connected with abscess of the liver? Again, what was the relation, or what were the differences, between the so-called "tropical abscess" and those which were spoken of as "secondary" or "dysenteric abscesses?" The whole question required restudying.

Two important facts which might prove powerful aids in settling many disputed points in the etiology of dysentery and liver abscess and their inter-relationship had been but recently discovered, namely, the presence of the amœba coli in dysenteric discharges and in the pus of liver abscess, and the fact, that in many, not in all cases of liver abscess the ordinary pyogenic micro-organisms were entirely absent.

Although not absolutely an Indian discovery, the amœba coli, or an amœba of the colon, was studied in India long ago by Lewis and Cunningham, and by them disallowed pathogenic properties. Others also had declared against the pathogenic qualities of amœba coli for the reason that the same or a similar organism was frequently found in healthy conditions of the alimentary canal, and unassociated with disease of any kind whatever: but, it did not follow that under particular conditions—say, for example, catarrhal inflammation of the bowels or ulceration of the bowel from other causes, the amœba might not successfully attack weakened tissues, and thus become a serious complication and source of danger. Many micro-organisms were pathogenic only in the presence of tissues with lowered vitality.

At all events the amœba coli was a parasite with which all physicians in India ought to make themselves practically familiar. It was easily recognised in dysenteric discharge and in liver pus. A fragment of the fresh mucus in the one case or of the fresh pus in the other was spread on a slip and compressed under a cover glass into a thin transparent film. It was then to be examined with a magnifying power of from 100 to 300 diameters. The amœba could be readily recognised by its movements. It was a transparent, colourless, slightly granular organism, in size from three to six times the diameter of a blood corpuscle and sometimes it was very active in pushing out its pseudopodia.

Beri-beri.

The importance of a complete study of beri-beri was insisted on. Recent observers had succeeded in showing that this was a specific disease, produced by a specific poison manifesting its pathological effects in the form of a well defined variety of multiple peripheral neuritis. But the germ had still to be discovered. It was desirable to study carefully the distribution of the disease, and in so doing not to overlook cases of paresis, with or without œdema, and complaints of rheumatic-like pains among the natives, for such cases were not uncommon, and might well be examples of beri-beri.

Ankylostomiasis.

The discovery that in Assam a vast amount of sickness among the coolies on tea plantations and among the natives of certain villages was caused by ankylostoma duodenale, and a similar discovery in Ceylon, had led to some very interesting investigations into the distribution of this parasite in India and the East generally, which were likely to bear practical fruit. Doubtless much of the anæmia so pre-

valent among natives was attributable to the ankylostoma. The general appreciation by the profession of this fact, a knowledge of the methods of diagnosing the presence of the parasite in the alimentary canal, and of the use of thymol as a remedy, would save many a life and much invaliding and suffering.

This prevalence of animal parasites in the intestinal canal as well as in the blood and tissues of the natives of India and other tropical countries was eminently suggestive of the absence as well as of the importance of sound hygienic conditions, particularly as regards water supply, directed to the exclusion from this not only of animal parasites, but of parasites in general. This fact suggested the reflection that if under the present hygienic conditions animal parasites were so extensively prevalent in India, these conditions were still more favourable for the spread of such diseases as cholera, dysentery, and other grave waterborne zymotic affections. It might be taken as a fact that the degree of prevalence of animal parasites in the general population was a good though rough test of the quality of the hygienic conditions under which the population lived, particularly of its water supply. This test applied to India afforded an object lesson which appealed very directly to the understanding, proving in an unmistakable way the urgent necessity for a more systematic and general study of the question of the water supply of the people.

Chronic Intestinal Flux.

Various forms of chronic intestinal flux were exceedingly common in India, as in all hot countries, particularly in Europeans. No very energetic effort had been made in recent years by our English workers to study and elucidate the nature of many of these affections and they all demanded further investigation: their types should be distinctly separated and defined, and their pathology brought into line with the medical science of the day.

Typhoid Fever.

One of the best pieces of work which of late years was to be credited to the profession in India was the separation of typhoid fever from the malarial group.

Such was the frequency of typhoid in young European immigrants in this country—and that in spite of elaborate sanitary precautions, which, if taken in Europe under similar circumstances, would practically ensure immunity—that the idea forced itself on us that the typhoid germ in India might have a somewhat different history from what it had in England and that in some instances the germ which produced typhoid might be a pure saprophyte, and need no periodical resuscitation in the human body to confer on it pathogenic properties or to keep it in existence as a species.

If this view of typhoid in the tropics were well founded there would be an explanation of the inefficiency of the sanitary measures at present in vogue, and also of the great frequency of the disease in our young soldiers in India.

Cholera.

It might seem strange that the subject of cholera had been left to the last, but for the due comprehension of its etiology it was necessary to demonstrate, as had been done, that man was surrounded by a host of minute enemies which not only could live in his tissues and so produce disease, but could, especially in hot climates, maintain an independent existence outside in soil or in water, as the case might be.

This once being demonstrated, as in the case of the coarser intestinal parasites, and it being once recognised on the one hand that the maladies produced by them occur with enormous frequency in India, and on the other, that they all gain access to the body by being swallowed along with what is drunk or eaten, our minds were prepared to admit that, a habit, namely, that of drinking impure water, sufficiently common to make these diseases among the most frequent in India, would also render cholera continually endemic.

Who then could separate cholera from these other waterborne diseases, and deny that it also was carried to the mouth by water? In Europe we had proof that by being so introduced it could cause great epidemics, while in India, where it was endemic, we had proof, in the vast diffusion of parasitic maladies, that the habits of the people were such, that if the cholera germ were present in the water it certainly would not lack opportunities of being swallowed.

Mr. Hart said he had been much misunderstood in regard to the phrase "waterborne cholera," and proceeded: "What then, do I mean when I say that cholera is a waterborne disease? I mean that it is caused by a poison which is swallowed, and which in ninety nine cases out of a hundred is carried to the mouth in water. Within the body this poison grows, multiplies, and in its growth causes the disease, in the course of which it is discharged; then it is ready to take up the other phase of its life, to grow in damp earth, to breed in dirty water, to be washed by rain into watercourses, to soak through porous soil into wells; in some very rare, unproved cases, perhaps, where cholera is very rife, and filthy habits are overabundant, to be blown by gusts of wind or carried by the hand or flies into food, and thus by one means or another, but in an infinitely larger proportion of cases by means of water, to get round to another person's mouth, to be swallowed and again set up the whole cycle of events..... There is nothing strange, then, in cholera becoming endemic in India: there is a climatic condition, such that the germ can keep alive for considerable periods outside the body, and there is an endemic habit of drinking it freely; but if this habit is broken people can and do live in the very midst of this area free from cholera, and whole districts and communities have thus been endowed with an immunity depending merely on the breaking of one link in the chain of events by which cholera is produced, namely the habit of drinking contaminated water..... I wish, however, particularly to guard myself against the charge of looking at water carriage as covering the whole pathology of the disease or explaining the etiology of its occasional epidemic prevalence.....I am as aware as anyone can be that we have much yet to learn regarding the causes of the epidemic spread of cholera, and it is to a continued investigation of these causes that I would urge my medical *confrères* in India, but this investigation must be always made on the basis of established truth, and especially that great truth that cholera goes in at the mouth..... In this regard I would venture to suggest two special lines of inquiry on which accurate information is just now greatly wanted, and concerning which India, with its great opportunities, may fairly be expected to give some answer: (1) What is the relation between the preceding and concurrent diarrhœa and the actual cholera: (2) is any other micro-organism besides Koch's bacillus engaged in the production of the disease?"

Mr. Hart then urged certain precautions which he recommended with the object of limiting the dissemination of the disease, and preventing its spread to other countries.

Official Discouragement of Original Research.

Before concluding there was one point on which he would make a few observations. He knew he trod on very delicate ground. He trusted, however, that should he seem to be ungracious in what he said his motives would not be misunderstood, and that he would be credited as speaking from a patriotic and sincere love for the good and for the reputation of English medicine.

There was a time, and that not so very long ago, when all that was best and most valuable in the science and in the practice of tropical medicine was almost entirely of English creation. It was so no longer. There was one department in which those in India might still be said to lead the world: as tropical sanitarians and medical statisticians they were still infinitely ahead of all other tropical colonising Powers together. But there English pre-eminence stopped, and where it should still be in the ascendant, English pre-eminence in tropical pathology, in the investigation of tropical disease, and in tropical medical literature was decidedly on the wane. England with her huge tropical empire and the unbounded opportunities her services might afford ought to be *facile princeps* in tropical medicine. But was she so?

Our countrymen had done something of late years for tropical pathology, as his previous remarks amply testified, but what they had done was little in comparison to their numbers, to their opportunities, and to the work of foreigners.

Why was this? There were many causes. "I shall indicate" said Mr. Hart, "what I think are the most important.

As in England, research is not adequately encouraged in India. So far as words go there may be the appearance of encouragement. But—so it is whispered—in reality research is frowned on in official circles here. There is a feeling that a man with a leaning to science, with a new scientific fact in his head, is regarded by officialdom as a nuisance, as a sort of pestilent fellow with a new bug. This may be an over-statement, but I am told this is the feeling in regard to the younger and more scientifically ambitious medical officers in India. Promotion, therefore, is felt to depend not so much on medical merit as on seniority, on knowing which way the wind blows, on avoiding giving trouble at headquarters, on respectable conservatism; so that in the race of life it is felt that the man who devotes himself to, and who distinguishes himself in, his purely medical duties is sure to be left behind by the man who devotes himself to the practice of patient waiting and a judicious diplomacy. The pathologist is out at elbows and is nobody; the diplomatic senior medical officer has all the plums. This, I am credibly informed, is the feeling in the services.

"A second obstacle to the successful cultivation of medical research in India is the overloading of the medical officer with clerical work of the most menial character, and which might be very well and much more economically done by a less highly paid and less valuable officer. I have been told that the casebooks in many instances tend to be filled with the cases of patients requiring extra diet, and not with important medical cases. I understand that every insignificant case to which an extra egg, or such like, is prescribed, must be written out in full, while perhaps some case of medical interest may be neglected. This is a sad and surely avoidable waste of time and energy, and so throughout the whole of his duties; perpetual writing and red-tapeism. Medical officers tell me they have to spend more time in their office than in their wards.

"Another, and I believe an important reason for our backwardness in tropical medicine is the want of regular instruction on the subject in the schools. Netley, of course, supplies this to a limited extent, and to a limited section of medical men: but in addition to the army medical men, who alone enjoy the privileges of Netley, there are hundreds of English practitioners in tropical countries equally in need of appropriate instruction, but who, very probably, have never seen a case of malarial fever, of dysentery, of liver abscess, of beri-beri, of filariasis, or perhaps of any tropical disease whatever, until they are called upon to diagnose, and to treat, and to investigate these complaints for themselves. Consequently, when these men begin to practise in the tropics, they have the entire subject to learn from the beginning. They have no one to teach them, often no book to guide them. Years must therefore elapse before they are familiar enough with the subject, and with what has already been done in it, to be in a position to add something to the common stock of knowledge about it. When that time has arrived the energy and enthusiasm of youth have passed; the career in the tropics is about over.

"Then again, although what is called the combatant officer may come home at the public charge to furbish up his knowledge of killing machinery in an appropriate and well-furnished school, and to bring himself abreast of the times in guns and torpedoes, the medical officer has no such opportunity given him of rubbing up his fading knowledge of life-saving machinery and of acquiring fresh medical ideas. He has to come home at his own expense: and if he still retain a love for that profession which is so much repressed in the land of his adoption, and if he desire to bring himself abreast of the times he has humbly to solicit, hat and guineas in hand, at the door of some London hospital or laboratory for permission to learn.

"All these things are emphatically not right. As a consequence tropical medicine languishes where it should flourish. When circumstances and public opinion do force Government to institute some scientific investigation, they do not find suitably trained men in the ranks of their own services; they have either to send home for them or they have to employ a foreigner. That, or they cynically leave the investigation to the enthusiasm of the foreigner, afterwards reaping the fruit where they have not strewn.

"Is there a remedy for this disgraceful state of affairs, so galling to our pride, so unpatriotic?

"1. I would make promotion in the medical services in greater measure than at present a reward for medical merit.

"2. I would give, at the public expense, to deserving and suitable medical men an opportunity to return occasionally to Europe for a year or two to brush themselves up in medical matters, and to familiarise themselves with new methods.

"3. I would have less clerical and more medical work in the services.

"4. I would have the examining and graduating bodies in Britain to give at least one question in their examination papers in medicine on a tropical disease.

"5. I would have the large hospitals in Liverpool and in London in which tropical diseases most abound affiliated with the local hospital medical schools in some way, and thus utilise their valuable clinical material, at present running to waste, for teaching purposes and for research.

Conclusion.

"Gentlemen, I must end here. Although sensible of the merely sketchy character of the outlines to which the limits of time have confined my address, I trust that you may find in it some elements of useful suggestion, some helps towards scientific progress along safe lines of work, some aids to the redress of grievances, some links towards the formation of a chain which shall bind all the members of the profession in fraternal union and by union give them the greater strength. I have endeavoured, at the obvious risk of dulness, to avoid rhetoric or mere phrase making. Pemmican is never the most attractive kind of food, but it is sustaining and enduring. May my words spoken to-day prove to have the like qualities. I feel deeply grateful for the distinguished honour you have done me on this and on former occasions. It has been the ambition of my life to deserve and to requite such honour and such kindness by unremitting labour for the public good and for the highest interests and duties of our common profession. To have achieved some success in that aim to-day will amply repay my labours and anxieties in coming to you from so far and leaving behind me so much unfinished and suspended public work. It will be in your power to foster the growth of the seeds which I have endeavoured to sow. It will be the crown of a life spent wholly in the service of my profession and of my country as fellow subject with you of the Kaiser-i-Hind if I am allowed to see now and hereafter some evidence of having usefully helped the development of life-saving science, the enlargment of civic liberties, and the efficiency of the great public services in this vast Empire of ancient wonders and modern experimental marvels—this awestriking and beautiful India."

A Hygienic Exhibition will be held in Warsaw in 1896.

American Jottings.—There are now 32,269 specimens in the Army Medical Museum in Washington. The number of specimens received during the year ending June 30th, 1894, was 1363.—Dr. R. P. Talley, in the *Texas Medical Journal*, gives the following list of modern specialists in America. There are, he says: (1) The eye, ear, nose, and throat specialist; (2) the gynecological specialist; (3) the railway surgeon specialist; (4) whisky, opium, etc., specialist; (5) dentist or oral surgeon specialist; (6) orificial surgeon specialist; (7) the Arkansas hot-spring specialist; (8) the self-constituted midwives; and on down the line to the street medicine man, the Christian science doctors, the pile doctors, *et hoc genus omne*.—Since 1880 more than fifty medical schools have been chartered in the United States. Although the death-rate among them is pretty high, the numbers do not sensibly diminish, for as fast as one is absorbed into the infinite another starts into existence. A new medical college was organised the other day in Alabama, and another at Fort Worth, Texas. Of the 110,000 practitioners in the United States, more than 3,000 are teachers in the medical schools. Of this number, Ohio, with 16 schools, boasts 408; New York, with 12 schools, has 540; Missouri, with 16 schools, 405; Maryland, with 7 schools, 170; and Tennessee, with 8 schools, 160. It is estimated that there is one medical school for every 730 practitioners.

SIXTY-SECOND ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in Bristol, July 31st, and August 1st, 2nd, and 3rd.

PROCEEDINGS OF SECTIONS.

SECTIONS OF LARYNGOLOGY AND OTOLOGY AND DISEASES OF CHILDREN.

P. McBride, M.D., President.

A DISCUSSION ON THE TREATMENT OF ACUTE LARYNGEAL STENOSIS.

I.—William Perry Northrup, M.D.,
New York.

In the interpretation of our subject, by "acute laryngeal stenosis" we shall assume in this paper that we have to do with diphtheria, true or false, involving the larynx in children. Concerning its treatment we shall emphasise two methods, a medicinal and an operative, at present in favour in New York, namely, calomel fumigation and intubation. What medicinal treatment have we to recommend beyond steaming, vomicants, etc., to determine a favourable course in laryngeal diphtheria, to relieve by milder methods the urgent symptoms? Our answer is, Calomel fumigation. This method was first publicly advocated by Dr. J. C. Corbin, of Brooklyn, in 1881, was later taken up by Dr. O'Dwyer in New York, and has steadily gained in favour. It is believed that by all former methods of treatment without operation about 10 per cent. of pseudo-membranous laryngitis recover (J. L. Smith and O'Dwyer).

Statistics have not accumulated sufficiently to frame a strong argument in regard to calomel fumigation, but the conviction of those best capable of judging is positively favourable. In 275 cases of "true croup" collected by McNaughton and Maddren, 48.7 per cent. recovered, the only treatment being calomel fumigation ("sublimations"). Again, this medicinal treatment is advised after operative procedure has been required, and here its advocates are equally positive that it acts favourably. Dr. Brown gives 483 cases of laryngeal diphtheria treated without calomel fumigations with 35.4 per cent. recoveries, 250 cases with calomel fumigations with 47.5 per cent. recoveries. It goes without saying that a child which tides past the urgent symptoms on fumigation without operation and without wearing an intubation tube—other things being equal—makes the better and speedier recovery.

Method of Fumigation.—A tent or canopy is rigged about the top of a crib in any way most convenient. A sheet is thrown over supports and allowed to fall about the four sides of the crib. The supports may be upright sticks lashed to the four corners of the crib, or a line stretched between two uprights at diagonally opposite corners, or a stepladder placed astride the middle of the crib, or any other extemporised frame suggested at the time by the ingenuity of the persons in charge. The main point is to have a fairly large and fairly tight enclosure. In such a tent the child lies undisturbed; if sleeping so much the better.

The crib tent is in use in the Willard Parker Hospital, New York. It contains about 50 cubic feet of air.

The apparatus for furnishing fumes must first of all be safe from upsetting and the danger of fire. Such a one is easily extemporised in the following manner. Select some deep vessel, a wash bowl, saucepan, or *pot de chambre*: place in this an alcohol lamp; lay across the top a tin strip of any kind, and over the spot, when the flame of the alcohol lamp touches the under side of the tin make a little compact pile of the requisite amount of calomel for a single fumigation.

A special lamp has been constructed by Geo. Ermold, the instrument maker. This can be hung up by wire, or can stand on a plate or in a pan as desired. (See Fig. 1.) As to the child, fumigation is often given while it sleeps, and it needs no preparation. Ordinarily eight to ten minutes are required to volatilise the calomel, and the tent should be kept closed about fifteen minutes. A very safe and satisfactory method in severe cases is to volatilise in an ordinary crib tent 15 grains every two hours for two days and nights, then prolonging the intervals to three hours on the third day, four hours on the fourth day, fumigating three times a

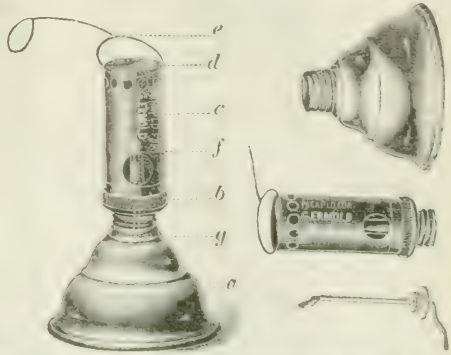


Fig. 1.—Fumigating lamp. *e*. Wire for hanging up the lamp. *d*. Cup for calomel tablet, gr. x.

day thereafter according to indications (O'Dwyer). Attendants become easily salivated from inhaling calomel fumes, and must be cautioned. The room should be thoroughly aired after opening a tent. It is well when circumstances permit to fumigate in a separate room, removing the child and attendants to a fresh room while the other is freely aired.

Now what effect has fumigation upon the patient, the child? It does not suffer ptyalism. Occasionally, especially older children, after days of treatment have a mild stomatitis, sometimes diarrhœa. If the calomel is impure, there may be conjunctival irritation. Chemically pure calomel is essential. After prolonged use there is more or less anæmia. This must be combated by administration of iron, and if there is associated prostration a little whisky may be required before fumigation.

The above directions are quite in the line of moderation. Many physicians vaporise 20 to 40 or even 60 grains, and make the intervals in urgent cases no more than half an hour at first. Such practice is considered safe and justifiable, but symptoms of prostration and anæmia are likely to appear after a few days. It is a desperate disease, and warrants heroic treatment.

I am not one of those who urge calomel fumigations in all diphtheria cases as a prophylactic, not one of those who think they know how it acts; but I am of the number who believe it affords relief from the urgent symptoms many times when no other medication will, and helps the patient to survive the stress without operative procedure. To this intent I employ it, to this extent I recommend it.

Intubation.

A progressive dyspnœa, uncontrolled by calomel inhalations, comes at length to require operative interference. Our part is to speak of intubation, and we shall discuss it under the following heads: When to Operate, How to Operate, How to Remove the Tube, When to Remove the Tube, Dangers and Difficulties of Operation, Dangers and Difficulties of Wearing, Dangers and Difficulties of Removal, and thereafter, Advantages.

When to Operate.—When a progressive, unremitting dyspnœa, despite all previous treatment, allows any considerable part of the posterior portion of the lungs to become non-inflated, when the laboured breathing begins to produce sensible exhaustion, intubation is to be performed promptly. From this moment nothing but harm can come to the lung and to the heart. If air cannot be aspirated, blood will be, and pneumonia is invited.

How to Operate.—The *technique* of intubation has become so

thoroughly a matter of literature, we will emphasise only certain points. Wind the child from chin down in a light blanket, shoulders, arms, and hands included. Pin the blanket closely about the neck, and yet do not make a bulky roll to interfere with depressing the introducer handle. In this way the elbows are pinioned to the side, and the hands are held across the child's abdomen.

These precautions cause no annoyance to the child; it does not worry or resist, and when the time for rapid action arrives it cannot move. The nurse who is to hold the child should sit in a high firm chair bolt upright. The child should be placed upon her lap, nurse and child exactly facing the operator. The nurse being upright, not leaning back, should grasp the child's elbows firmly, outside its winding blanket of course, and clasp the child's legs between her knees, making sure she twines her own about the legs of the child. All these precautions are to secure the child in a firm grasp, to immoblise it without interfering with the expansion of its chest, and may be taken without causing any apprehension or excitement. The position of the child should be as though it hung from the top of its head.

The physician assisting should stand behind the chair of the nurse, grasp the child's head between his hands, hold it firmly, and when the gag has been inserted include it within his grasp to ensure its firmness and steadiness. The operator, seated or standing squarely facing the child and nurse, inserts the gag, opens the mouth widely, gives the handle into the keeping of the assistant. At this point, for the first moment the child worries, yet from this point to the end of the operation need be but a few seconds, though it takes some moments to describe it. The introducer, armed with the proper sized tube, is supposed to be threaded and at hand.

Just at this point it is well for the operator to be sure that all the above directions have been carefully carried out, that the position is exact, the gag well held, and the grasp firm. A moment suffices, and it is time well spent. Next he inserts his left index finger, hooks up the epiglottis, crowds his finger to one side, passes the tube past it till it engages in the chink of the glottis, elevates the handle, gently passes the tube down till the head is within the box of the larynx, and the introducer lies crowded upon the tongue. He then, with the trigger, loosens the obturator, holds the tube with the left index finger while withdrawing the obturator, and with a gentle thrust presses the tube's head well into the larynx, and removes the finger and gag. Just here let me emphasise what is stated above: Keep the introducer in the middle line; otherwise the obturator will pinch in the calibre of the tube, and drag the tube with it as it is withdrawn.

The handle of the introducer should be held most lightly between the end of the thumb and the fingers. In this way it is impossible to use enough force to make a false passage. It is easy for a right-handed operator, inadvertently, to carry his handle to the left of the child's middle line; it is often that the child manages by one effort to slip down in the nurse's lap, while the grasp which the assistant exerts tilts the head back, and the tube may then impinge on the anterior wall of the larynx; the lines and angles must be maintained to ensure quick intubation. The lack of observance of and carelessness in these points explain many failures of inexperienced operators.

Again, suppose on the first attempt the tube is not successfully placed in the larynx? How long shall one try? Shall one repeat the attempt? It is better to make repeated short attempts than to prolong one.

Having placed the tube in the larynx, there will be rattling in the tube on first respiration, and subsequent cough and expectoration. A vigorous cough argues well for the sensitiveness of the parts and for evacuation of accumulations below. The gag is removed as soon as the tube is in place, but not so the thread; this must remain till it becomes evident that all obstruction to breathing has been overcome, and no partially detached false membrane is in the trachea below the tube. The thread at first acts as an inciter to cough which is desired; ordinarily ten minutes are sufficient.

How to Remove the Tube.—Place the child in the position for intubation, as described above. Thrust the left index finger past the epiglottis, hook it up, rest the tip of the finger upon the two arytenoid cartilages and carry the extractor point to the end of the left index finger at the pulpy portion generally regarded as the most delicately tactile. The situation is then as follows: The finger tip upon the arytenoids marks the posterior boundary of the glottis in the median line. Now if the extractor point be carried along the median line to the end of the finger and the handle be elevated the point will naturally be prised forward from the end of the left index finger on the arytenoids into the aperture of the tube. To me this seems the most satisfactory method for a beginner. I have described it to several and their successes have justified the plan. The guard screw of the extractor-lever should be carefully set to avoid injury to the tissues in case the extractor-jaws should be opened by mistake in the soft parts instead of in the tube. Of course the difficulty of removal is to find the opening in the tube. Many operators, both in Germany and America, leave the thread attached throughout the whole time and occasionally a tube is coughed out after the swelling releases its grip. So in actual experience one is not called upon to extract so often as to intubate. The fact remains that extubation is more difficult.

When to Remove the Tube.—This depends upon the age of the child and the duration of the disease before intubation became necessary. The older the child the earlier the tube can be dispensed with. Estimating the maximum of the disease to be seven days, five days wearing the tube is considered, on an average, sufficient.

Dangers and Difficulties of the Operation.—In the hands of an experienced operator there are practically no dangers to life at the time of operation. A few authentic cases of pushing down membrane before the entering tube have been recorded. It happened to O'Dwyer three times in his first 209 cases, on first intubation. Expert intubation presupposes that the thread has been left attached, and therefore easy immediate removal is possible. What does it mean, then, to push loose membrane into the trachea from tissues above—the larynx, for instance? It means more room in the larynx. If the tube is removed, the mass of membranes is forcibly ejected, and the patient is really benefited by the proceeding and at no time endangered. This experience with loose pseudo-membranes more often occurs late in the disease and in re-intubation.

To the inexperienced there are many dangers: (1) asphyxia from prolonged attempts; (2) laceration of the parts, false passages, etc. The explanation usually given of those two most common accidents is "pushing down false membrane." So-called syncopal attacks are simply less attacks of asphyxia. Convulsions are recorded and instruments have been broken in intubation.

Difficulties.—An experienced operator may encounter two difficulties: (1) The point of the tube may enter one of the ventricles of the larynx. This is not common, for the original disease usually fills and obliterates these cavities. Such obstruction, however, does occur. It may readily be seen how an inexpert, sure that his tube and handle were exactly in the middle line, might force his tube into the tissues of the neck. He certainly has but to remember the cardinal points of advice, and he will use most gentle pressure; indeed, he need but look at the light introducing instruments to appreciate that they are for delicate work. (2) The second difficulty or obstruction that an experienced operator may meet in intubation is subglottic stenosis, or what is so often described as "œdema." The narrowest part of the respiratory ways is the cricoid ring. This fact, so far as I know, came to light for the first time in Dr. O'Dwyer's early investigations in intubation. If the head of an intubation tube be forcibly crowded down from above it may pass the vocal bands and yet resist all effort at the cricoid ring. Given a resisting cartilaginous ring lined with mucous membrane we have the very elective conditions for stenosis. Fortunately the swelling and infiltration are not often extensive enough to cause serious obstruction, but may be. Operators come upon cases where the properly-selected tube surely passes into the larynx and yet encounters resistance—even "creeps back," as someone says, "like an oiled cork in a bottle." If one is sure of the diagnosis and a proper size fails, a smaller tube may, with moderate pressure, be introduced. This is the only condition where force is justified in intubation.

Dangers and Difficulties of Wearing.—1. Tubes may become obstructed by loosened plaques of false membrane. This constitutes the one important danger in wearing an intubation tube. It is easy to understand that large plaques may become loosened and detached in the trachea, especially after several days of the disease.

A detached plaque may act like a valve at the tube's lower end, closing on expiration, opening on inspiration, till the lungs became quite distended from accumulated air. Such is exactly what happened in three of O'Dwyer's first 209 cases, with 3 deaths.

At this point let me interject the symptoms of loose membrane: (1) croupy character of cough (tube being in), (2) flapping sound, (3) most important, sudden obstruction to out-going air, especially during coughing.

If the string had been left attached in O'Dwyer's three cases this danger would have been obviated. Most Continental operators loop the thread about the ear, protecting it along the cheek with rubber adhesive plaster, and leave it throughout the wearing of the tube. This is advisable outside of hospital with beginners, and in case loosening pseudo-membrane is suspected in the trachea. Possibly, mucus may gradually collect in the tube, of such a tenacious quality, especially in mouth-breathers suffering from high temperature, that it becomes an embarassment or even a danger.

Short Tubes (Loose Membrane or Foreign Body Tubes).—At this point let me call attention to the special tubes devised for the easy expulsion of loose membrane and foreign bodies. They are short, hollow cylinders, of large calibre—short enough not to push down the tracheal membrane, yet long



Fig. 2.—Short tubes to facilitate expulsion of loose membrane.

enough to reach below the cricoid stenosis, and large enough to permit masses to pass through them.

Occasionally a long tube loosens the upper attachment of a tracheal cast, and crumples it into a wad below the end of the tube. The usual result is, as would be expected—apnœa. Immediate removal of the tube is commonly followed by either expulsion of the cast or other disposal of the mass in the comparatively large trachea. At this point, when the long tubes have failed to give relief, the short cylindrics become of temporary service.

These tubes are of various sizes, seven in number. Since they have no retention swell it is necessary to use the largest size possible, wedging it into the larynx, and, for obvious reasons, in the line of pressure, not leaving them more than a few hours in place. They require a special introducer, with long curve, in order to carry the short tube well through the cricoid constriction before withdrawing the obturator.

In short, to allow the expulsion of loose membrane from the trachea, the largest possible hollow cylinder is passed through the narrowed larynx, allowed to remain for a little while, and removed as soon as the resulting cough has expelled the foreign body requiring its insertion.

Ulceration from too large a tube making pressure within the cricoid ring, and ulceration at the lower end of the tube may occur. The former can be of serious nature, destroying the cartilage; the latter is superficial, and of little import. Ulceration within the cricoid is due to improper size, ulceration below to improper construction of tube.

Properly constructed tubes are difficult to describe, more difficult to secure from a maker, even if a most faithful and conscientious servant (See Fig. 3). But one maker in this world has succeeded in making tubes that embody all the ideas of the inventor. He alone has been willing to try over and over again to make O'Dwyer's tubes. All others have felt the quiet self-conceit that the inventor thought he knew what he wanted, but in the maker's mind he did not, and would get over it sooner or later.

Every swell and knob, every constriction and crease, every hole, the canting back of the head or collar, all is the work of the inventor, to make the tube conform to the anatomy of the parts.

I should not dwell upon this so much had I not on former visits to England seen tubes from your best makers, which tubes embodied every vice which the inventor has sought by most careful description to warn against. I say again but one maker in this world makes O'Dwyer's tubes, the others make maker's tubes.

Feeding an Intubated Patient.—There is one disadvantage after operation. Feeding is difficult; the larynx is sore; many times it is sorer because of the inexperience of the operator. The less the larynx is bruised in intubation the less the child will dread the clasp of the pharyngeal muscles in the act of deglutition. The fact remains that there is more or less difficulty in swallowing both from pain and cough. The latter arises from fluids entering the trachea, though many patients acquire the accomplishment, and learn to swallow very well. The method of feeding adopted by Dr. Casselberry, of Chicago, has very much relieved the situation. The child is inclined, head down, so that it swallows up hill, and any fluid that may get into the tube in the act of deglutition quickly gravitates out again. The directions are as follows: Place the child across the nurse's lap, bend the head well down, and feed either with a spoon or through a nursing bottle. At first the patients object, but when they learn that by so doing they can swallow without coughing they give no further trouble. Medication can be continued after intubation as well as before.

Danger of Removal and Thereafter.—If the tube is removed on the fifth day in a case having an average fair course, there is little or no danger; the operator should remain half-an-hour; if in this time there has been coughing and clearing of the throat and trachea, and no loose pseudo-membrane remains and no dyspnœa, there will be no sudden urgent necessity of rapid reintubation. Even yet it is deemed desirable to be within easy call for some hours.

I once considered I had on an average four hours' leeway, but, exceptionally, prompt aid was needed sooner, and a few cases needed reintubation twelve and twenty-four hours afterwards. Whether, pressure removed, the mucous membrane becomes quickly congested, or whether muscular spasm sets in or membrane re-forms I know not, but I have learned to respect the emergency of the first twelve hours after removal of the tube, especially if it be a premature removal.

Retained Tubes (Laryngeal Cannulæ).—Rarely, it is neces-

sary to reinsert a tube many times. The child may get along a half-day or two days, and yet require the reintroduction. If the tube is not of proper anatomical conformity it may cause granulations about the head. To relieve this and cure the condition, a special tube has been devised, having a prolonged or built-up head. It rides above and causes pressure upon the granulations with consequent absorption.

Finally, not to recapitulate the literature of the subject, I may mention advantages. First of all, parents will consent.

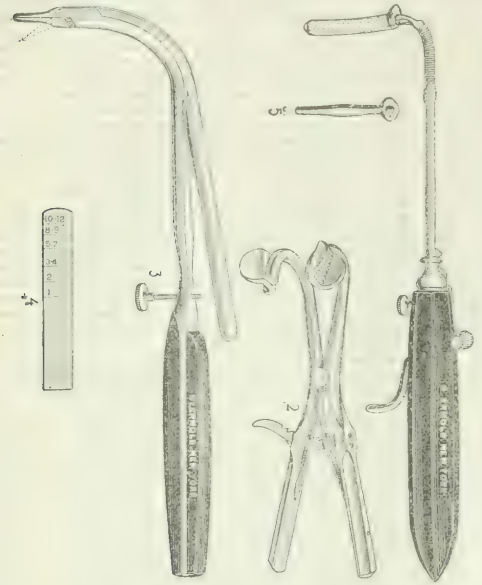


Fig. 3.—O'Dwyer's intubation instruments.

It is a bloodless operation: no cutting, no anæsthetic, and this means much to the friends. It is quickly performed, requires no trained assistants or trained attendants (it is trained operators that are needed). The air inspired is warmed and moistened through natural passages. Results are equal to or rather better than those of tracheotomy under similar circumstances, whether in hospital or outside.

INTUBATION IN THE TREATMENT OF CHRONIC STENOSIS OF THE LARYNX.

II.—By J. O'DWYER, M.D.,

New York.

THE writer proposes, in response to your kind invitation, to briefly set forth his accumulated personal experience in the treatment of chronic stenosis of the larynx by intubation.

In December, 1885, there came to my office a woman with laboured stridulous breathing. She was 40 years old, married, the innocent victim of a dissolute husband. The morning of the previous day she had visited a prominent laryngologist of our city (New York), who advised her to have tracheotomy performed before the sun went down. Soon after she met a colleague of the writer, who advised a trial of intubation. So came to me the first case of chronic stenosis ever treated by intubation.

The stricture resulted from the healing of oft-repeated tertiary ulceration: the tissue about was dense cicatricial; the aperture scarcely sufficient to admit air enough to allow the patient to move easily about. The stenosis was of two years' standing and slowly progressive. At this time there was no such thing as an adult intubation tube. I therefore had a set constructed, the largest of which was made in accordance with the measurements of several normal adult larynges, and the smallest of a size that was supposed to be barely sufficient to admit of easy respiration in a state of rest. The gap between these two extremes was filled in with several easily-graded sizes. After repeated attempts it was found impossible to pass the smallest tube of this set through the stricture, and the largest of the croup tubes was therefore substituted, and inserted only after the employment of considerable force. The plan of treatment thereafter was as follows: The tubes were introduced as in children, by the sense of touch, and allowed to remain in position for several days, when removal was accomplished by the aid of the mirror. A larger size was then immediately inserted, or if too much irritation of the larynx existed, an interval of one or two days' rest was allowed. Owing to the necessity of having the retaining swell small to facilitate introduction the tubes were expelled on several occasions in less than twenty-four hours, when a larger size could always be used without difficulty. Rapid dilatation was accomplished in this manner, so that the patient was allowed to return to her home at the end of eighteen days with ample breathing room in her larynx. Tubes were inserted nine times, and retained an aggregate of 173 hours.

In two months and a-half the patient returned, suffering from dyspnœa almost as bad as before the treatment was begun. The same course was adopted, and after thorough dilatation was accomplished, the patient was instructed to return once a week for treatment; the necessity for occasional dilatation extending over a considerable period of time being now apparent. This interval was gradually increased to a month, and sometimes to six weeks, without any return of the dyspnœa in the interim. In the report of this case before the Laryngological Section of the Ninth International Medical Congress, the following prognosis was given: "It is now one year and nine months since I began the dilatation of this patient's larynx, and there is scarcely any doubt that it will be necessary to continue it during the rest of her life." About fifteen months after this unfavourable prognosis was given, or three years from the beginning of the treatment, the cicatricial tissue lost its power to contract, and the patient has remained now over five years free from any return of the stenosis.

The second case, a woman 35 years old, was sent to me in April, 1886, with the diagnosis of incurable bilateral paralysis of the abductors of syphilitic origin. This patient had been seen by the late Dr. Elsberg, and several other laryngologists who concurred in the above diagnosis. Anti-syphilitic treatment, electricity, etc., were tried without result, and tracheotomy was finally resorted to while the patient was unconscious and moribund, the crico-thyroid space having been selected in order to save time.

It was not expected that intubation alone would accomplish any permanent result in a case of this nature: the operation proposed was to remove a portion of one or both cords, and then place a tube in the larynx until the wound thus made had healed. On investigating the case I found that her ability to speak even in the faintest whisper was entirely lost, which proved that no air passed up through the larynx. Neither could a small probe be passed down between the vocal cords, which were closely approximated but otherwise normal in appearance. There was therefore complete occlusion of the larynx between the vocal bands and the external wound, which occurred at some time since the introduction of the cannula two years previously. In consequence of this unexpected feature of the case it was decided to break up the adhesions and try intubation alone for a time before resorting to the more radical operation. This was done under ether, by enlarging the external wound to admit of the introduction of sounds from below. Entering from above was not considered safe under the circumstances, owing to the liability of the sound to engage in one of the ventricles. An intubation tube, 2½ inches long, was then inserted, but the lower end came out through the wound, and no means could be devised to retain it within the trachea. As all the large tubes thus far made were of the same length, the tracheal cannula was replaced until a tube 3 inches long could be procured. This was inserted and retained without difficulty. The patient was seated on

a chair, while an assistant with one hand drew the trachea forward by means of a small retractor inserted into the lower angle of the wound, and with the other hand pressed the tube backward as it passed the opening, using a lead pencil made concave at the end for this purpose. This plan of treatment was not long continued, as the vocal cords dropped together as soon as the tube was removed or expelled, necessitating the immediate introduction of the tracheal cannula. The original operation was therefore resorted to, a portion of each cord being removed after enlarging the external wound, and the same tube was replaced. It was removed at the end of a week, and the patient could breathe comfortably through the larynx with the tracheal wound hermetically sealed. A laryngoscopical examination showed the beginning of granulation tissue, which threatened soon to fill the gap made by the excised portions of the cords. This demonstrated the necessity for more lateral pressure, which the intubation tubes were especially constructed to prevent. A tube, almost cylindrical in form, was therefore procured and placed in the larynx, instead of the flat oval one previously used, and the external wound was allowed to close. The patient now felt so comfortable and happy at being able to breathe through the natural passages and to dispense with her writing pad that she failed to return for ten months, and then only because of some dyspnœa due to the development of granulation tissue, which partially overlapped the proximal aperture of the tube. It required considerable force to remove the tube, which was much eroded and deeply imbedded in the tissues. The patient was kept under observation for four months, during which time several laryngoscopic examinations were made, but no change could be discovered except a gradual reduction and final disappearance of the granulation tissue referred to above. No trace of the vocal cords could be discovered, but a large cylindrical opening replaced the chink of the glottis.

The most remarkable and instructive feature of this case was the existence of distinct motion of the arytenoids during attempts at phonation, which teaches an important lesson in the treatment of bilateral paralysis of the abductors supposed to be incurable.[1]

These two illustrative cases, while on the one hand serving as a groundwork for this paper, may on the other be taken as types of two classes of this condition, into which, for convenience of description, all cases of chronic stenosis of the larynx requiring intubation may be divided.

First, those for which intubation is resorted to for the twofold purpose of relieving present dyspnœa and at the same time producing gradual dilatation of the stricture. Secondly, to get rid of retained tracheal cannulas, the retention being due either to a persistence of the original obstacle to respiration, for the relief of which tracheotomy was performed, or to a new form of obstruction resulting from the operation and presence of the cannula, and subsequent disuse of the larynx, or to a combination of both. As each of these classes of cases presents difficulties more or less peculiar to itself, they will be discussed separately. In cicatricial stenosis of the first class, the chief obstacle to be overcome is the first introduction of a tube of sufficient calibre to admit of free respiration. This having been once accomplished, the subsequent treatment is comparatively easy. The development of cicatricial stenosis is such a peculiarly slow process that the patient gradually becomes accustomed to breathing through a small space, so that when urgent dyspnœa finally supervenes the lumen of the larynx will be found extremely small, often not larger than that of a crow-quill. Through such a close stricture, composed of unyielding cicatricial tissue, it would be impossible to force even one of the smaller croup tubes. Either divulsion, or internal or external incision must therefore precede intubation in extreme cases of this nature. The length of time that intermittent intubation will be required to effect a permanent cure will be influenced largely by the amount of cicatricial tissue present and its location. If confined to the chink, a more speedy result may be expected because of the stretching which is exerted by the expansion of the glottis with every breath. After the normal lumen of the larynx has been restored, or at least ample breathing room secured, a tube should be inserted once or twice a week and allowed to remain in position from twelve to twenty-four hours. This interval can be gradually increased according to indications, and continued until the tendency to reconstraction has been permanently overcome. It is important to remember that the danger of apnœa attending intubation in this class of cases is greater than in croup, owing to the resistance offered by the stricture and the longer time liable to be consumed in completing the operation. In other forms of chronic stenosis than those due to cicatricial tissue there is little difficulty at the outset of passing tubes of sufficient size to afford ample breathing room, and therefore to dispense with the necessity for frequent intubation.

Intubation for the Removal of Retained Tracheal Cannulas.

The difficulty of getting rid of a retained tracheal cannula will be influenced to a great extent by the following conditions: First and most important, the length of time the cannula has been retained; secondly, whether there is complete or only partial occlusion—in other words, whether the respiratory function of the larynx has to some extent been retained or completely abolished. As a rule, the longer a cannula has been worn the more difficult it is to get rid of. The causes for this will be given later.

In recent non-cicatricial cases, such as croup and other acute inflammatory affections of the larynx, in which the original cause of the obstruction has disappeared, intubation usually effects a cure very promptly. In the reference already given will be found the report of the case of an adult male, on whom tracheotomy was performed for the relief of dyspnœa due to a subglottic neoplasm. The neoplasm proved to be a mass of fungous granulations which had developed around an impacted foreign body. These were removed, and the cannula was reinserted for a few days, when the wound was allowed to close. As it did so, the dyspnœa returned, and a reopening of the trachea became necessary. Some time later the larynx was again laid open to seek, and if possible to remove, the cause of the obstruction to respiration, but nothing was found, and the patient continued to wear his cannula for three months. At the end of this time an intubation tube was inserted and worn for one week, which resulted in a permanent cure.

Narrowing of the chink of the glottis from general thickening of the mucous membrane with partial ankylosis of the arytenoids from disuse of the larynx was probably the principal cause of the retention of the cannula in this case, as it undoubtedly is in many of the cases following tracheotomy for croup and other self-limited diseases in which the obstruction to respiration persists after the original cause has disappeared. In the course of time other changes of a more serious and permanent character are superadded.

The following quotation from the first edition of *Holmes's System of Surgery*, vol. xi, p. 316, has an important bearing on this subject: "When the tube has been worn for a considerable time the cavity of the larynx becomes so much contracted that it is necessary in many cases, if not in all, for respiration to be carried on through the artificial opening. In the Museum of St. Bartholomew's Hospital may be seen the larynx and trachea of a man on whom the operation of tracheotomy was performed twelve years before death, the patient continuing to the time of his death to breathe through a cannula passed through the opening made in the operation. The orifice in the trachea is situated immediately below the cricoid cartilage. The rima glottidis is almost closed by the thickening and contraction of the mucous membrane lining the larynx. The chordæ vocales are also so much shortened that the arytenoid cartilages are within a quarter of an inch of the angle of the thyroid cartilage."

Notwithstanding the teaching of physiology as to the central origin of the respiratory movements of the glottis, the clinical fact remains that when respiration is carried on exclusively through an artificial opening, if these movements do not cease altogether, they are at least too slight to prevent ankylosis of the arytenoids, which is necessarily followed by atrophy of the posticus muscles. With the smallest possible opening in the glottis the ability to speak, or at least to whisper distinctly, is retained, but the air necessary for this purpose is supplied through the cannula. The vocal function

[1] For details of these and other cases, see *Transactions of the Ninth International Medical Congress*, vol. iv.

of the larynx being thus retained and frequently used while its respiratory function is practically abolished, it follows that the adductor muscles must soon get the better of their antagonists, and gradually draw the cords closer together until the chink is finally obliterated. This is what actually occurs, and whether the respiratory movements of the glottis are wholly of central origin or partly central and partly reflex, or whether the interference with these movements under the circumstances mentioned is due to some inhibitory influence on the respiratory apparatus resulting from deflecting the current of air through an unnatural channel, are matters of no practical importance. When the vocal bands are in actual contact—which occurs more rapidly in children, owing to the very small space that normally exists between these ligaments while in a state of rest—it is very apt to be mistaken for bilateral abductor paralysis, and with injurious results. This happened about six years ago in the case of a boy aged 12 years, who was sent to me from a distant city for advice in regard to a retained cannula that had been inserted for the relief of croup one year previously. The vocal cords were very close together, and immovable, but not in actual contact throughout. There was room enough to allow him to breathe for a minute or two with the cannula closed. Intubation was recommended, and a speedy cure predicted, provided no other obstruction existed below the chink. Before submitting to the operation the father of this patient consulted a prominent laryngologist, who pronounced the case one of double posticus paralysis, and consequently not amenable to any mechanical method of treatment. As a result of this erroneous diagnosis this boy still continues to wear his cannula, now seven years. Even a slight amount of daily practice of the respiratory function of the glottis through ever so small a space renders the prognosis as regards speedy cure much more favourable, because the nutrition of the abductor muscles is thus to some extent maintained, and complete ankylosis of the arytenoids prevented. Enforced inactivity of these little articulations is more disastrous in its results than it would be to any other joint, owing to the fact that in the normal condition they never rest day or night during the whole course of life.

In addition to the form of obstruction just described, there is another of later development and more serious import. It is a stricture which develops at the upper angle of the wound as the direct result of the long continued irritation of the cannula, and is found in a large proportion of the cases, especially in young subjects and when the operation is high, involving the cricoid cartilage or its immediate vicinity. This stricture is composed largely of cicatricial tissue, and requires intubation extending over a considerable period of time to effect a cure. When the wound is still higher, that is wholly within the larynx, complete occlusion with adhesion of the vocal cords is very liable to occur, as in the second case reported above. It is in fact a combination of the two secondary forms of stenosis previously described with the binding together of the cords superadded. Owing to the complete suspension of all the important functions of the larynx these are the most difficult of all classes to cure.

In a case of this nature, in a boy, aged 8, in whom a cannula had been inserted in the crico-thyroid space for the relief of croup eight months before he came under my observation, continuous intubation for over three months was required before the vocal cords would remain sufficiently separated without the tube to permit of respiration through the larynx for even half an hour at a time. Granulation tissue springing from the lateral aspects of the base of the epiglottis above the level of the ventricular bands corresponding to the points of greatest pressure in the vestibule of the larynx was a source of considerable trouble in this case. It originated from leaving a metallic tube continuously in the larynx for four weeks. This difficulty can always be avoided by removing the tube once a week and occasionally changing the size or shape of the head or shoulder of the tube so as to prevent erosion of the mucous membrane at any one point from long-continued pressure. Granulation tissue developing in the neighbourhood of a tracheal wound is not of serious consequence. It usually promptly disappears after the removal of the cause aided by the pressure of an intubation tube.

In adults intubation can be accomplished, as a rule, with greater ease by using the mirror as a guide than by the sense of touch, which is the only means available in young children. In fact it is the only method practicable in a certain proportion of the cases wearing tracheal cannulas owing to the deeper situation of the larynx under these circumstances, which sometimes places it beyond the reach of the finger. In three adult males of this class the most I could do was to touch the tip of the epiglottis without any power to control it. In two of these cases intubation was performed by the aid of the mirror, and in the other without any guide whatever except keeping the tube directly in the middle line. As soon as the tube has been inserted as far as the short curve on the introducer permits, the mirror must be dropped, and the finger quickly inserted to carry it well home until the retaining swell has passed beyond the stricture. Considerable force is sometimes necessary at this juncture, and the finger will be found too short to follow the larynx, which recedes under the pressure. To supplement the finger under these circumstances I have used a small steel sound, with a shoulder a short distance from the tip. The extremity of the sound engages in the aperture of the tube, which prevents slipping, while the shoulder prevents it from entering too far.

Metallic tubes should not be allowed to remain continuously in the larynx for much longer than a week, owing to the irritation produced by the calcareous deposits, which always occur on the outside to a greater or less extent. This deposit does not take place on vulcanite tubes, which are therefore to be preferred, because they may be allowed to remain in position almost indefinitely without serious consequences. Small tubes cannot be made of hard rubber on account of the greater thickness of the walls necessary for safety, which must be at the expense of the lumen.

With the simplest precautions there is practically no danger while wearing an intubation tube of sufficient calibre in uncomplicated cases of chronic stenosis. The patient should be instructed to clear the tube by coughing whenever secretions are found to be accumulating. In the early stage of treatment, while using tubes of small calibre, the thread should always be left attached in order to guard against any possible danger from the tenacious secretions which are thrown out immediately after the introduction of the tube. The inhalation of steam is very grateful to the patient, and aids in liquefying the mucus. In practising intubation for the removal of a tracheal cannula the wound under all circumstances must be kept open until sufficient breathing room through the natural passage has been secured to sustain life, in case the tube should be coughed out. This is, as a rule, extremely difficult to accomplish, especially in children. The hard rubber plug devised by Drs. Pitts and Brook, and used in a series of cases, appears to be the most practicable for this purpose. It is provided with a collar similar to that on tracheal cannula, by which it can be held in position.

In adults when the opening is well in the trachea the best plan is to wear a small tracheal cannula corked together with the intubation tube, for which there is plenty of room. In one case I was obliged to resort to this method, and permit the patient to respire through both channels, because the larynx was too small for comfortable breathing. In the beginning adults experience the same difficulty in swallowing after intubation, whether for acute or chronic stenosis, that is found in children after this operation for croup. When continuous intubation for a considerable period of time is required the ability to swallow almost perfectly is soon acquired, which proves that the epiglottis alone, unaided by its constrictor muscles, can protect the vital opening in the glottis, the action of the latter being nullified by the presence of the tube. Conversely it has often been demonstrated that deglutition can be performed perfectly after complete destruction of the epiglottis. In either case some time is required to educate, so to speak, either of these safeguards to assume the duties of both in excluding foreign substances from the air passages. For this reason the ability to swallow well is seldom acquired after intubation for croup because of the short time the tube is usually worn.

With the Casselberry method of feeding, which is more practicable in adults than in children, there will be little difficulty in tiding over the early period of treatment in

chronic stenosis, or until the epiglottis has learned to do double duty. The set of adult chronic stenosis tubes shown was developed almost exclusively from the experience derived from the two cases reported in the beginning of this paper. It consists of ten tubes, an introducer, and extractor. The smaller sizes can be used in any form of acute stenosis during the years of adolescence, for which period of life no provision has been made in the set of croup tubes. Owing to the small size of the heads, they are not safe without the string in any form of stenosis in adults except the cicatricial. No set of tubes can be devised that will suit all the various distortions of the larynx that are sometimes found in long-standing cases of chronic stenosis; special tubes will, therefore, have to be constructed to meet such indications.

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III.—A. D. Blackader, M.D.,

Montreal.

I desire merely to express what I believe to be the opinion of the profession in Montreal in reference to intubation, the merits and methods of which have, I think, been so clearly stated in Dr. Northrup's paper. In the first place, we find it comparatively easy to induce the parents to accept intubation for their children when it is really called for. It is always difficult to obtain their consent for tracheotomy till the case becomes desperate, and the strength of the patient much impaired. Again, O'Dwyers tubes pass beyond the region of narrowing in the cricord. The danger of obstruction below this, except from detached membrane, we think is comparatively slight. The introduction of a tube by a really skilled person involves little distress to the patient. I have never actually performed it myself, but only watched its performance on my patients by others. I was, therefore, in a position to judge. The quiet tranquil breathing through the natural passages, which follows the introduction of the tube, is in marked contrast to the rather distressing breathing after tracheotomy. Any difficulty in feeding has, in my experience, been easily overcome by the lowered position of the child's head. In my personal recollection during the past few years I have had ten cases of intubation, with four deaths, two of which were almost hopeless when the operation was performed. My previous records were twelve tracheotomies, with nine deaths. My friend, Dr. Armstrong, gives me the following as his record of intubations and tracheotomies performed by himself during the past ten years: 32 intubations, with 7 deaths; 20 tracheotomies, with 14 deaths. Let me emphasise one thing more—the necessity of careful and prolonged previous training, both on the dead body and on animals, of anyone who attempts to do intubation on the sick child. In Montreal we delegate the work to one or two, who in this way perfect their experience. Only by those experienced will the best results be obtained. An inexperienced person attempting to pass a tube on a sick child, in my opinion, will only do harm.

IV.—Felix Semon, M.D., F.R.C.P.,

Physician for Diseases of the Throat, St. Thomas's Hospital.

Dr. Semon asked for information as to the frequency of obstruction of the tube after intubation, and expressed his misgivings about the risks thereby incurred unless the patient could be kept under the constant supervision of a practitioner skilled in the performance of intubation, and ready, if necessary, to reintubate immediately. He further asked what the *rationale* was of intubation in cases of new growth in the larynx, and of bilateral paralysis of the adductors, in which it also had been recommended; and dwelt upon its risks (detachment and pushing down of fragments of growth, asphyxia, hæmorrhage, *Schluckpneumonie*) in the former class of cases, whilst expressing his belief that it could be of no lasting use whatever in the latter. Finally, whilst fully admitting the usefulness of intubation in certain cases of chronic fibroid stenosis of the larynx, he warmly recommended, in cases particularly of syphilitic stenosis in which the voice had already been lost and tracheotomy been performed, thyrotomy, with subsequent excision of the fibroid tissue, as a means of enabling the patient to dispense with the permanent wearing of the tube. Mr. Butlin's simple after-treatment of thyrotomy had divested that operation of most of its dangers.

V.—Thomas Eastes, M.D., F.R.C.S.,

Folkestone.

It is difficult for a meeting to turn its attention from such interesting surgical points as were brought before us at the opening of this discussion to the medical side, but I wish to bring forward the subject of treatment of diphtheria by the specific diphtheria antitoxin. We all know clinically that certain diseases produce an immunity from their recurrence of longer or shorter duration and more or less certainty. There are some peculiar occasional exceptions, which I know no explanation for, such as the return of scarlet fever soon after the primary illness and the relapses of typhoid. The immunity is due to a material in the blood, a solution of which can be made and preserved, and by this solution immunity can be artificially produced, but we must not expect more than we get in immunity produced in the natural course of the disease. The first cases I saw recorded were published in the Epitome of the British Medical Journal of May 5th, 1894, and the percentage of recoveries was shown to diminish every day the treatment was delayed. Thus: First day 100 per cent. recovered, second day 97, until the fifth day only 56.5 recovered. [Dr. Eastes then gave details of cases in which he had used the antitoxin successfully in his own practice.[1] He went on to say:] The most marked and earliest effect is the diminution in inflammatory œdema, which may be noticed after a few hours: the membrane may sometimes increase for a time I am told by others who have used antitoxin successfully. Apparently antitoxin is quite harmless, and solutions that can be procured now may be used in doses of 5 to 20 c.cm., and repeated, if necessary, according to the duration of the disease before treatment and the age of the patient. If there is not some improvement after twenty-four hours, or, in severe cases, after twelve hours, repeat the dose. I believe we have now entered upon a new epoch in the treatment of diphtheria, and that bacteriology has again gained another victory over disease by a remedy which in the early stages will be found to be almost perfect.

[1] See British Medical Journal, July 21st, p. 125.

VI.—W. F. Brook, F.R.C.S.Eng.,

Surgeon to the Swansea General Hospital.

Whatever difference of opinion may exist as to the respective merits of tracheotomy and intubation in diphtheritic stenosis, I think there can be no doubt that intubation should be adopted in the great majority of cases of acute non-diphtheritic stenosis, and in a certain class of cases of chronic stenosis of larynx.

During the last four years I have been in the habit of regarding my intubation instruments as equally essential to the proper dealing with emergencies as my case of catheters; and just as in the great majority of cases of obstruction to the urethra, one never dreams of puncturing the bladder before attempting catheterisation, so in the vast majority of cases of stenosis of larynx, I attempt intubation before proceeding to tracheotomy.

For acute non-diphtheritic stenosis I have intubated under the following circumstances: For œdema glottidis, the result of scald, in a child aged 2, the tube was dispensed with

two days and not again required. In another case I failed to get into the larynx on account of the immense swelling of the epiglottis, which projected backwards like a cherry. I was proceeding to tracheotomy when I found that my attempts to intubate had torn the mucous membrane of the epiglottis and caused bleeding, thereby reducing the size and relieving the obstruction. Here the epiglottis was alone œdematous. Scarification is inadmissible unless one is prepared to follow up immediately with tracheotomy. I know of a case in which tracheotomy was performed at great disadvantage, to save a child in whom, after scarification, blood had got into the larynx and completed the obstruction.

For simple laryngitis in infants (in whom the stenosis called for operative interference) I have intubated three times within the last two years.

In one, a child aged 18 months, the tube was worn for two days and then removed without recurrence of dyspnœa. The inflammation, however, extended down, and the child died a day and a-half later from broncho-pneumonia.

In the second case, a boy aged 5, the inflammation remained localised in the larynx. The tube was worn for two days; after removal, the dyspnœa gradually returned, and five days later it was necessary to intubate again. The introduction of the tube, about which there was no difficulty, was immediately followed by the coughing up of a few drops of blood and a drop of pus. The following day the tube was removed, and dyspnœa did not again recur. I was not able at any time to obtain a view of the cords, so cannot describe the exact condition.

The third case was one in which laryngitis supervened in the course of broncho-pneumonia in an infant aged 4 months. The smallest of O'Dwyer's tubes afforded complete relief. It was worn for a day and a-half. The child recovered. In the first and third of these cases my only assistants were the parents or neighbours hastily summoned.

In all these cases tracheotomy must have been performed in the absence of intubation instruments. In none was there any opposition on the part of the relatives to the operation. There was no difficulty in feeding in any of them: all took their ordinary food, the four months' baby remaining at the breast while the tube was in.

For the following conditions when I get an opportunity I intend to use intubation:—

1. In spasm of glottis from any cause.

2. In bad cases of laryngismus in infants as the best means of assuring a quiet night to the patient and all concerned.

3. Whenever there is the slightest suspicion of the presence of a foreign body in the trachea. By performing intubation in these, instead of waiting for further evidence of the presence of a foreign body, I am sure many lives would be saved. I know of two cases in which the further evidence took the form of sudden spasm of the glottis. One child died before aid could arrive; in the other, my own case, all attempts at breathing had ceased for three minutes before I arrived. Fortunately the child was resuscitated after tracheotomy, and a ring of beads hooked up from the bifurcation of the trachea.

From chronic stenosis resulting from ulceration due to the wearing of a tracheotomy tube, intubation is, I believe, the only available method of treatment. I have had experience of five such cases in which it was adopted. Four of them are described in a paper by Mr. Bernard Pitts and myself, which is published in the *Transactions* of the Medical Society of London for 1890. In all five it had been impossible to dispense with a tracheotomy tube, which had been worn for periods varying from six months to five years. All were treated by intubation, but not successfully, until a thorough exploration had been made, and the cicatricial tissue, which in three cases existed as a complete web across the junction of larynx and trachea, had been thoroughly dissected away. The after-treatment consisted in passing large-sized intubation tubes, gradually increasing in size, and leaving them *in situ* for periods varying from two or three days to a fortnight. Evidently, when the usual means of leaving off a tracheotomy tube have failed, the correct treatment is to explore the parts, thoroughly remove all cicatricial tissue, and close the incision over an intubation tube. Had this been done in these cases the after-treatment would probably have been measured by days instead of months.

In another case of chronic stenosis which had slowly developed and for which tracheotomy had been performed, having failed to get a view of the child's larynx, I intubated, with the result that a papilloma the size of a pea was coughed up through the tube. The instrument had detached it on its way down. I do not suggest intubation as a routine treatment for papilloma, but evidently it may prove useful at times.

A point of no small practical importance in intubating for chronic stenosis is the following: It often happens that it is necessary to exert continuous pressure on the obstruction with the point of the tube before it will give way, so that there is danger of causing asphyxia. This difficulty can be got over by partially withdrawing the obturator at the same time keeping the tube in place with the finger and so allowing a small current of air to pass through the tube. Pressure is then again applied and the stricture generally yields before it is necessary to repeat the manœuvre.

In no case of intubation for non diphtheritic obstruction, acute or chronic, have I seen any difficulty in feeding. Pulpy food was generally given for the first day or two, after which ordinary solid diet was given.

After considerable experience in tracheotomy and intubation for diphtheria while house-surgeon at St. Thomas's the West London, and the Children's Hospital, Great Ormond Street, I came to the conclusion that in ordinary cases intubation might well take the place of tracheotomy, but that it should entirely supplant it I do not hold. The lines upon which I now work in private practice are as follows: I should, intubate in all cases except those in which there is extensive deposit of membrane on the palate, tonsils, and pharynx, or in which there is excessive nasal discharge, or in which there is foul ulceration of the palate and tonsils, such as occurs in scarlet fever or when diphtheria complicates scarlet fever.

My experience in about 30 cases is that immediately after introducing the tube a large piece of membrane—sometimes incomplete casts of half the trachea—is generally coughed up, either through the tube or bringing the latter up with it. Whenever in the course of the treatment the tube has been coughed up, an interval of an hour or more has elapsed before it has been necessary to replace it.

Although I have seen some 15 necropsies after intubation, I have never seen that extensive destructive ulceration of the larynx which has been described by some. Slight excoriations of mucous membrane opposite the end of the tube and the enlarged part—and, where the string has not been removed, to the left of the epiglottis—are the most I have seen. I cannot help thinking that the cases in which denudation and destruction of cartilages and sloughing of the cords have occurred were cases in which the virulence of the disease had so reduced the vitality of the tissues that destructive ulceration would have occurred around a tracheotomy tube equally readily; or else that they were cases in which too large a tube had been used. Nevertheless, in view of the possibility of these injuries, if the tube cannot be left out by the fourth or fifth day I shall be inclined in the future to replace it by a tracheotomy tube.

I generally make a practice of replacing the gag and removing the string after the first fit of coughing incident upon the introduction of the tube is over.

The larger percentage of recoveries after intubation as compared with tracheotomy is, I think, due mainly to three factors: 1. The dyspnœa is generally relieved earlier than when tracheotomy is performed, the patient's strength being therefore husbanded to enable him the better to struggle against the disease. 2. A certain number of lives are saved which would have been lost simply as the result of prejudice against tracheotomy. 3. The necessity of giving an anæsthetic is avoided, resulting in a certain saving of life.

VII.—T. PAGAN LOWE, L.R.C.P., M.R.C.S., Bath.

THE speaker advocated the treatment of diphtheria with local application of alcohol in the form of brandy and water, whisky and water, or spirits of wine in equal parts as a suitable, safe, and very convenient method of treatment. To be effectual it must be applied thoroughly. Chloroform even should be administered rather than to fail in thoroughly disinfecting the area affected.

VIII.—F. W. Bennett, M.D.,
Surgeon, Ear and Throat Department, Leicester Infirmary.

As the discussion has been confined almost exclusively to diphtheria and acute stenosis, I will merely mention two suggestions made by Mr. Bond, of Leicester, without any comment. Some years ago he introduced a T-shaped tube for stenosis of the trachea. In a recent case of syphilitic stenosis of the glottis he shortened one end of the tube, and attached to this an india-rubber tube long enough to pass from an opening in the trachea well into the larynx. When first introduced chloroform was administered, the adhesions separated, and the tube introduced. It was found to be in position without causing any irritation of importance. Subsequently it could be removed and reintroduced with ease. In the future treatment it is proposed that this tube should be introduced by the patient at night or at such intervals as may be required, and a tube, without the india-rubber, worn during the day-time in order that the patient may speak. In the treatment of chronic syphilitic stenosis he suggests, further, that the larynx be opened, the cords separated, some of the fibrous tissue pared off, and skin flaps turned in and fixed so as to form a new coating to the vocal cords.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

J. W. Hulke, F.R.C.S., F.R.S., President, in the Chair.

Friday, December 21st, 1894.

Adjourned Discussion on the Antitoxin Treatment of Diphtheria.

Mr. Golding-Bird, who had seconded the proposal for adjournment at the previous meeting, in the absence of Dr. Ord, the proposer, spoke of the great value of the paper by Drs. Washbourn, Goodall, and Card, which was the first to be published in this country of a large series of cases treated by antitoxin. To the surgeon it was important from the diagnostic as well as the therapeutical point of view. A surgeon had no right to deal with diphtheria or scarlet fever, but with the complications of either he might deal. He inquired how far antitoxin was capable of preventing the complications and sequelæ of diphtheria, particularly that chief complication "croup" (in its widest sense), or membranous laryngitis. Could antitoxin diagnosticate between simple croup and infectious croup? He thought it was not likely to be of much service for this purpose, because the remedy was not rapid enough in its effects. Bacteriology seemed capable, however, of settling the diagnosis. Albuminuria was not a good diagnostic sign; it might be due to venous congestion caused by laryngeal obstruction. As to the therapeutic uses of antitoxin, he noticed that of 9 cases (mentioned in the paper) which were treated with antitoxin and tracheotomy, only 3 had died; and those cases had been treated with tracheotomy simply because the patients seemed to be *in extremis*. Of such cases, for 66 per cent. to be recoveries was grand indeed. Prior to the use of antitoxin, of each series of 9 cases there was an average of 7 deaths, or 23 per cent. of recoveries. He (the speaker) had had 60 cases of tracheotomy, done for "croup" which was probably for the most part diphtheritic, and he could only claim 12 or 13 per cent. of recoveries. How did antitoxin act? locally? or on the system generally and the poison in the system? If the latter, there must be a limit to its use. What was the limit when one could say antitoxin was of no use, as the child was too far gone? Might not a child recover even when *in extremis* by the action of antitoxin on the local membrane in the throat? After all, it was not so much suffocation as septic pneumonia that generally killed the little patient, who died from want of air surface, not of air entrance. Surgeons were incapable of controlling septic pneumonia. At what stage might laryngeal suffocative symptoms be expected to be controlled by antitoxin? And, again, if septic pneumonia had been started, would antitoxin control that? To these three points he directed attention.

Dr. D. Newman (Glasgow) said that as to the general question, the great difficulty was that of diagnosis. This was often extremely easy, but sometimes very difficult. He quoted the case of a family nurse, suffering apparently from ordinary sore throat, and in attendance upon children in a country house. After a week or ten days, one of the children was laid up with diphtheria. The nurse's case, however, was examined for bacteria microscopically and by cultivation, without the discovery of any bacilli, and yet that nurse later on developed diphtheritic paralysis. The absence of the diphtheria bacillus, therefore, did not prove the absence of diphtheria, though its presence did prove the presence of that disease. Dr. Washbourn had shown that the large bacillus was found in the worst cases; the medium-sized bacillus in less severe cases, and the smallest bacillus in the mildest cases. This harmonised with his own experience. In Glasgow lately there had been an epidemic of diphtheria, and his cases had usually been severe, as a consultant's cases generally were. The results he had obtained from antitoxin—he had always used Behring's serum—were not so good as those he had been led to expect from cases narrated in the medical journals, nor so good as those occurring in a hospital where all cases, severe and mild alike, were congregated together. His hospital statistics were better than his private case statistics in respect to the employment of tracheotomy for diphtheria before the days of antitoxin. In Glasgow ordinary cases of diphtheria were now very properly sent to the Fever Hospital. As to the strength of the antitoxin used, he noticed that that from horse I was very much weaker than that from horse II. This showed the direction in which future work should be carried on—namely, the separation of the antitoxin from the serum, so as not to introduce into the child a quantity of serum which was of no use. The antitoxin in the serum must be very small, and he thought one might anticipate the day when the dose would be much less than it was at present. When antitoxin was purchased in the open market one could not be sure of its strength. As to the effects of the remedy, he had never seen a case in which antitoxin had done any real harm, any bad effect whatever. A slight rash was produced within twenty-four hours in one case. In most cases, after the use of antitoxin, the faucial membrane separated sooner than it used to separate in past days without antitoxin. He always continued during the treatment by antitoxin, the other remedies which had been used before the introduction of antitoxin. The most usual symptom was a rapid fall of temperature, amounting to 3.0° where the temperature was 103°, of 2.5° where it stood at 102°. This was accompanied by a fall in the pulse-rate, and the pulse became fuller and stronger. He believed that the introduction of antitoxin into the system prevented the toxins of the diphtheria bacillus from operating deleteriously. He cited a case to show that immunity might be gradually produced. An old nurse who came to attend upon cases of diphtheria used at first to suffer from slight sore throat when nursing such cases, but after two years that effect was not produced, although she was wont to encourage her patients to eat by partaking with them of the same dishes. Her slight attacks apparently produced in her after a time an immunity from attack.

Dr. H. P. Hawkins thought that each speaker should state the source of his antitoxin: several speakers had not done so. There were three or four kinds on the market. First, was Aronson's a secret preparation, the source whence the earliest cases in this country were inoculated, which were published in the autumn; of this a very small dose was required. Secondly, there was Behring's antitoxin, which had gradually been developed into Roux's antitoxin. Dr. Washbourn's cases had been treated by Dr. Ruffer's antitoxin. Lastly, another kind was the antitoxin with which Dr. Klein was now experimenting. This latter was obtained not by using the toxin, as in Roux's process, but by injecting the bacillus of diphtheria into the horse's body. This gave a serum of equal potency as that obtained by the Parisian method. A horse could be rendered immune after Klein's method by any man with leisure to attend to the animal daily in one month, not three months, which were required by Roux. He (the speaker) injected into his horse the surface of two agar tubes of forty days' growth, attenuated by age, rubbed up with 40 c.cm. of broth for a first dose, followed after an interval by a second and third

dose of greater strength, and by a fourth dose from two agar tubes of three days' cultivation (when there would be the greatest amount of virulence), followed by one more injection. The serum of that horse henceforward had great immunising power. Dr. Ruffer's latest fluid had now ten times the power of the first used. He related particulars of a few cases treated with his own antitoxin. The first was that of a child aged 5, ill for five days before admission, for whom tracheotomy was required directly after admission. The membrane lined the whole fauces, and the child was very bad indeed. Twenty-one c.cm. in three divided doses were injected on the first day, followed by a small dose on the second day. On the third day the tracheotomy tube was taken out. In the second case, that of a child, aged 2, admitted after three days of illness, tracheotomy was done at once, and the tube again taken out on the third day. It was quite exceptional to be able to do this formerly in cases of diphtheria. His third and fourth cases were less encouraging. They were two sisters, aged respectively 11 and 8; both had been ill eight days, and had scarcely had any food all that time; both had been treated by an old nurse with orange flower water; the fauces were covered with membrane. The second had tracheotomy performed; both died. In the fifth case, a boy, who had been ailing thirty-six hours but was not very ill, there was a membrane on the right tonsil, and 10 c.cm. were injected. Next day the left tonsil was covered, and 8 c.cm. were given. Twenty-four hours afterwards no membrane was to be seen at all, and on the third day the child was quite well. All these cases had Loeffler's bacillus, and the cases that died had the streptococcus as well as a coccus that liquefied blood serum in three or four days. One difficulty was (in Paris) the enormous quantity of serum required for injection. In one case as much as 150 c.cm. were injected into a child.

Dr. MacCombie had begun four weeks ago to treat cases of diphtheria occurring in the South-Eastern Fever Hospital with antitoxin kindly supplied to him by Dr. Ruffer. Of 31 cases so treated in that period 3 had died and one more was probably going to die. The cases admitted during that period amounted to 54, but to some, partly on account of the late period of their admission, and to others on account of their age, antitoxin was not administered. Of the whole 54 cases 7 had died. This was a lower mortality than he had ever known before. In January of this year his mortality of 21 cases admitted had been at the rate of 42 per cent.; in February, 17 cases, mortality 35 per cent.; March, 16 cases, and 31 per cent. fatal; April, 24 cases, 29 per cent fatal; May, 23 cases, 30 per cent. fatal; June, 32 cases, 34 per cent. fatal; July, 70 cases, 37 per cent. fatal; August, 43 cases, 18 per cent. fatal; September, 57 cases, 29 per cent. fatal; October, 48 cases, 25 per cent. fatal; November, 23 cases, 25 per cent. fatal; and now for the last four weeks had come by far the lowest mortality of the year. It was true the percentage of mortality had varied considerably from month to month; thus from July, when it stood at 37, it fell to just half that rate, namely, 18·6 in August; so that if he had used antitoxin in August he would have attributed the fall of mortality to the antitoxin, which showed how very careful one ought to be in estimating the effects of treatment. Still antitoxin had exercised in his cases a considerable influence on the course of the disease. If the treatment was commenced on the first, second, or third day, it would prevent the spread of the membrane and facilitate its disappearance. In cases accompanied by much fœtor, that soon subsided and often after twenty-fours had altogether disappeared, far more quickly than it was wont to go before antitoxin was used. He had not hitherto tried the treatment on cases more than four days ill, but he should for the future employ it in all cases under the age of 15, unless they were actually moribund. In a few cases the temperature had risen after the first injection. The effect on the pulse was peculiar. Where the pulse was irregular he thought that condition was more prolonged in the cases treated with antitoxin than in those not so treated. He had had 1 case of relapse twelve days after the use of antitoxin. It was in an adult who had a very marked rash, with much membrane, and the usual bacilli. The proportion of rashes in his cases had been 50 per cent. He had given large doses of antitoxin, and the high percentage was probably due to that circumstance. But in some cases the rash had appeared when only a small dose of antitoxin had been used; the rash came generally with a rise of temperature. Only 2 cases had been followed by joint pain; 1 of those 2 had had acute rheumatism some little time before, and the rheumatism had not yielded quickly to the usual salicylic treatment. Lastly, less paralysis had been noticed to follow in the cases in which antitoxin had been used than in those in which it had not been employed.

Dr. F. F. Caiger said that the results at Homerton, as recorded by Drs. Washbourn and Goodall, had been very satisfactory. The reduction in mortality was the same as had been obtained by Dr. Roux. He, at the South Western Fever Hospital, Stockwell, had, by the kindness of Dr. Ruffer, been able to treat all his cases of diphtheria during the last three weeks with antitoxin. It had been of great use in some cases, especially if employed at an early date. He had had thirty cases, with eight deaths. Of those eight, five had died within twelve hours of admission, and three of the five within three hours. These were not fair cases of the value of the remedy. If it was used early it was very successful. The paralysis was due to the formation and extent of the membrane. The time during which the membrane had been present before antitoxin was used was consequently a great element in the case. The results of Dr. MacCombie's cases showed that there had been a light kind of diphtheria in the south-eastern district; but in the south-western district the type of the disease had been severe, and for two months consecutively the mortality this autumn had been as high as 30 per cent. of the cases admitted. Never before had he known the mortality for two months consecutively to be so high. According to Dr. Washbourn, the association of the Loeffler bacillus with the streptococcus was characteristic of mild cases. But Dr. Caiger's experience confirmed that of Roux, who had stated that the combination of the Loeffler bacillus with streptococcus pyogenes was found in cases of the worst type. Moreover, Dr. Washbourn had stated that some of the colonies in his tubes were streptococci, being transparent. He (the speaker) would like to prove for this reason that they were colonies of diphtheria bacilli. What were the special characters of the Brison coccus? He would publish his cases later on, as he considered the time at present too short for trustworthy results.

Dr. N. Tirard said that he and Dr. Willcocks had had several cases at the Evelina Hospital; and had always used Behring's antitoxin. They had had 8 cases, all bacteriologically investigated, and found to be associated with the Loeffler bacillus. In every case, too, there was albuminuria with membranes and marked depression. Only one case was fatal, and that was characterised during life by hæmorrhage due to ulceration into a tonsillar artery. There were two cases of tracheotomy, both of which recovered though very severe. The tubes were removed on the third day. As to the points of improvement produced by antitoxin, they were found in the pulse, fall of temperature, and general condition, so that the child would soon be found sitting up in bed. One case of low pulse recovered under the use of stimulants. In only 1 case was there a rash, mild urticaria, lasting a few hours. The albuminuria, which was present in all the cases before antitoxin was used, quite disappeared before the children left the hospital. In no case was there any indication of paralytic troubles.

Dr. Thomas Eastes (Folkestone) had used Aronson's antitoxin. He showed charts of the temperature in three cases in which a bacteriological investigation was made, and the diphtheria bacillus found. In the first case there was a rapid fall of temperature directly after the injection, with a rise on the tenth day for urticaria. In the second case the fall of temperature to normal occurred within thirty hours; in the third case within forty-eight hours. The chief point to be insisted upon he considered was the earliness of the treatment, for in some cases the danger was due, not to the original severity of the attack, but to the time during which the symptoms had lasted. In his first 7 cases he had injected antitoxin on first seeing the patient; it then became scarce, so the injection was delayed, but to the disadvantage of his patients. Four of 13 had died. In his fourth fatal case the pulse was 130, temperature below normal, and the throat sloughing, although it was said to be only the third day. The patient was semicomatose and had

diarrhœa and vomiting for nearly a week before she died, yet the throat became perfectly clean. He did not think the antitoxin quite neutralised the toxin in the system. His first case was injected on the third day, and six weeks afterwards had sudden symptoms of heart failure. If the toxin were all neutralised at first, how could this be accounted for? He believed antitoxin could only be used for immunity or cure, not for diagnosis. He thought all cases of diphtheria uncomplicated with laryngeal symptoms would recover if injected within the first forty-eight hours.

Dr. Sims Woodhead said the paper contained many points besides those of clinical interest. The cases in which the diphtheria bacillus preponderated were apt to end fatally and early. Those in which with the diphtheria bacillus there were streptococci lasted longer, and fewer of them died. As to the antitoxin, he thought one must attempt to increase the strength of the serum rather than to isolate the antitoxin, which was of very unstable composition. It was in solution in the serum, and its separation must be difficult. In solution it remained in a stable condition. In Klein and Roux's serum one dealt with two different substances. Antimycetin, as Klein's serum might be called, had greater effects on the bacilli than on the poison produced by the bacilli. In diphtheria a series of poisons, probably, were produced which subsequently acted on the other tissues of the body; as in tetanus, they affected the nerves and muscles. In this, perhaps, lay the key to the greater success of antitoxin when used in the earlier stages of diphtheria, as compared with the comparative failure in the treatment of tetanus by the antitoxic method. Tetanus was only recognised when the local symptoms were over, and the poisons formed later on had already produced their effect.

Dr. Goodall said that as to the day of the disease on which antitoxin was used, it was omitted from the paper because it usually depended on the unreliable statements of third parties. He had a table, however, which showed that of 32 cases injected within the first three days only 2 died; whereas of 29 injected from the fourth to the fourteenth day as many as 11 died. He did not despair, however, of success, even if the case was beyond the fourth day at the time of the injection. Mr. Lennox Browne had mentioned that 2 out of his 5 cases had died of suppression of urine, and attributed this result to the antitoxin treatment. Further, if the serum determined nephritis, how was it that in none of the non-diphtherial cases treated by serum was there albuminuria? A tendency to anuria was amongst the commonest symptoms of diphtheria, and Dr. Goodall considered that local treatment of the throat trouble should be persevered with even after the antitoxin had been used. In his series of 72 cases warm water alone had been employed locally. The use of antitoxin usually brought the temperature down if it was raised beforehand. It might at first rise a little, but he did not lay much stress on the temperature at all. As to his several previous series of 72 cases each, the lowest mortality had been 25 per cent. and highest 47 per cent. Only twice had he seen a mortality under 30 per cent. within the same year. It was very striking, therefore, to obtain at once a mortality under 20 per cent.

Dr. Washbourn said that antitoxin did neutralise the effects of the poison of diphtheria, but not as an acid neutralised an alkali. The antitoxin stimulated the cells of the body so that they were able to resist the poison itself. He imagined that the poison of the diphtheria bacillus acting on the body produced its secondary effects, and in that process altered its own character, so that antitoxin could not then act upon it. It was thus with regard to tetanus also. In reply to Dr. G. Turner, he remarked that diphtheria would not spread in a ward from patient to patient if proper precautions were taken to prevent infection. Dr. Turner's cases in the Hertford Infirmary, of which he had spoken, were not recognised as diphtheria, and therefore the disease spread. As Dr. Goodhall had shown, albumen was often present in the urine in diphtheria in large quantities. The urine first decreased in quantity, and then ceased, and the patient died. At the *post-mortem* examination the kidney to the naked eye appeared to be normal, but on section had commenced to undergo a fatty change. The diphtheria bacillus might not be discovered in some cases, although searched for carefully, and yet those cases might have after-symptoms. He believed antitoxin would prevent septic pneumonia from arising; and he believed the pneumonia might be prevented if every possible attempt was made to keep the tracheotomy wound itself and the lung aseptic, but not whilst the tube was attempted to be cleaned with feathers loaded with organisms. He related the case of a nurse who had virulent diphtheria bacilli in her throat for weeks, and yet was without any symptoms whatever. She had been in constant attendance upon cases of diphtheria at a fever hospital. As to antitoxin, its source was of far less importance than its strength; and there were many ways of testing that strength, as by Dr. A. Ruffer's method. It would be noticed that the numbers in the series of Dr. MacCombie's cases varied very much, namely, from 16 or 21 a month to 70 in another month. Dr. Washbourn contended that in his own cases the association of other organisms with the bacillus occurred in the milder cases; and that the diphtheria bacillus was found alone in the most serious cases.

Dr. Kesteven made a few remarks.

The President announced that the Council had that evening approved the proposal to nominate a Committee to investigate the clinical value of antitoxin for diphtheria.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Professor Sheridan Delépine, M.B., President, in the Chair.

Wednesday, December 12th, 1894.

Traumatic Epilepsy.

Mr. Thorburn described a case of traumatic epilepsy of eighteen years' duration, which was due to a depressed fracture of the skull. The specimen shown consisted of the bone removed together with a large bony spicule, which was found at the operation (performed three months ago) projecting into the motor cortex. The epileptic seizures had very much diminished in number since the operation.

Dried Pathological Brains.

Dr. Trevelyan showed some dried specimens of brains: (1) A brain from an old man dead from an accident, showing marked wasting of a convolution in the neighbourhood of the motor speech centre. There was considerable asymmetry between the two frontal lobes. No symptoms were known to exist during life. The brain showed, six months after the hardening, scarcely any general shrinking. (2) and (3) Specimens of intracranial growths—one a diffuse cortical gumma, the other a glioma of the cerebellum. (4) The right hemisphere from a case of acute myelitis. The colour here was well preserved and the general shrinking slight.

Enucleation of Femoral Aneurysm.

Mr. Thorburn mentioned a case of femoral aneurysm which had occurred in the old amputated leg of a man; it had been successfully removed by enucleation. About four months after the operation sudden perforation of the common iliac artery on the same side had occurred without apparent cause. The specimen was shown.

Specimens.

Dr. Kelynack showed specimens from a case of Double Encysted Hydrocele of the Epididymis in a man, aged 62. The cyst on either side appeared to have developed from the head of the epididymis. The left, which was the larger, contained numerous spermatozoa.—Card specimens of ligatured medium-sized Arteries and of Chylous Ascites in a cat were shown by Professor Delépine.—Dr. Kelynack showed preparations of a Tumour of the right suprarenal capsule. The growth involved the whole gland, which was uniformly enlarged to the size of a small Tangerine orange. Weight 1½ ounce. Microscopically it presented the characters of a simple epithelial growth. It appeared to be one of the rare examples of an adrenal adenoma or so called adrenal goitre. It was found in a man, aged 63, who died from cerebral hæmorrhage. It was the only tumour in the body.

AN INQUIRY

INTO

THE RELATIVE EFFICIENCY OF WATER FILTERS

IN

THE PREVENTION OF INFECTIVE DISEASE.

A Special Report to the "BRITISH MEDICAL JOURNAL."

BY

G. SIMS WOODHEAD, M.D., F.R.S.E., AND G. E. CARTWRIGHT WOOD, M.D., B.Sc.,
Director of the Research Laboratories of the Conjoint Board of Physicians (London) and Surgeons (England). Research Scholar of the British Medical Association.

PART I (Continued).

Non-Pressure Filters, "Table," "Pocket," and other Portable Forms.

XVIII.

Messrs. J. Defries and Sons, *London Offices and Warehouse, 147, Houndsditch, E.C.: Filter Kilns and Factory, Surrey.*—The filters sent out by this firm are stated to consist of mineral carbon compounded with powdered pumice stone so as to form a solid block. The manufacturers are very guarded in their statements regarding the action of their filters alone in preventing disease from impure water. They say: "Such impurities are with certainty destroyed by boiling the water, and filtering it in a suitable filter before use. Neither boiling or filtration is by itself sufficient. Attention is drawn to the fact that means must be taken to periodically destroy the impurities which are abstracted by the filter from the water, or the filter itself will become an active source of danger, capable of infecting water which is otherwise pure. This applies to filters of every kind without exception. It is important that such means be simple, and that it be applied regularly."

Boiling the water is undoubtedly at present regarded by hygienists as an absolute safeguard against the communication of the diseases which are supposed to be propagated through this medium, and why this should not be "sufficient" without filtration we are not quite able to understand. However, the advice of the vendors to boil the water and periodically (every week) sterilise their blocks in boiling water should undoubtedly disabuse the minds of the purchasers of these filters of any rash confidence in their unaided efficacy in converting an impure into a wholesome water. We considered it desirable, however, to report on these filters, inasmuch as they appear to be in somewhat extended use in our Colonies, since it is not very probable that the directions of the makers would ever be carried out in actual practice.

Our experiments were carried out with a plain glass quart type of filter, the results of which are appended:

Table LXI.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	10,000 to 15,000	4,000 to 5,000
Cholera bacillus	25,000 to 30,000	2,000 to 3,000
Typhoid bacillus	10,000 to 12,000	1,000 to 2,000

A mere glance at these tables clearly indicates that this filter provides us with no safeguard against the dangers arising from the consumption of impure water, although it should be stated that no such claim on its behalf is made by the makers, unless supplemented by previously boiling the water.

Table LXII.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	35	9
,, ,, ,, No. 2		22
Fourth day, ,, No. 1	40	Innumerable
,, ,, ,, No. 2		400 to 500

XIX.

The Wittmann Filter. *Agents: Messrs. Wittmann and Roth, 47, Great Marlborough Street, London.*—The filtering medium adopted in the "Wittmann" filter is stated to consist principally "of the finest spodium (that is, animal charcoal), with which no known substance can compare in capacity for absorbing all kinds of impurities." This material is moulded to form a vase or bowl, which acts as the reservoir to receive the unfiltered water. It is claimed that this form of filter allows the process of filtration to be both perfect and rapid, while at the same time it permits of the filtering medium being easily and effectually cleansed in



Fig. 7.

boiling water. They also state that: "It is absolutely unrivalled for use in the Colonies and other remote places, owing to its practically indestructible character: for where it is impossible to effect an exchange, it need only be fired in a space from which the air is excluded in order to become as good as new, and will then last for years."

It must be admitted that the structural simplicity of this filter, which possesses no fittings which can possibly go wrong, leaves nothing to be desired in this respect at any rate, and it undoubtedly compares very favourably with most of the other types constructed of the same or similar material.

No direct claim is made by the vendors of this filter as regards the prevention of disease through its use, but perhaps the ordinary public, on reading the circular issued by them, which has for its heading "Pure Water," and below a quotation from the late Dr. E. Lankester, that "One of the great sources of epidemics, which destroy the life of thousands every year, is impure water," would draw the conclusion that these filters by "purifying" the water obviate such risks.

The type of filter with which we experimented consisted of a bowl of moulded charcoal supported by a glass vessel, which was fitted with a tap at its base, as shown in the illustration, the bowl being surmounted by a glass cover. The results of our experiments are appended:

TABLE LXIII.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts (first day, sample No. 1)	10,000 to 15,000	10 to 15
Staphylococcus pyogenes aureus + yeasts (first day, sample No. 2)		300 to 400
Staphylococcus pyogenes aureus + yeasts (second day, sample No. 1)	—	2,000 to 3,000
Cholera bacillus	10,0000	80 to 100
Typhoid bacillus	10,000 to 12,000	100

TABLE LXIV.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day, sample No. 1	35	1 to 2
,, ,, ,, No. 2		2
Fourth day ,, No. 1	40	Innumerable
,, ,, ,, No. 2		200 to 300

From the small number of organisms which appear in the first sample taken it would appear that the filtering capacity of this form of carbon is above the average, an idea which is confirmed by the fact that ultramarine is completely separated from the water to which it has been added, while milk cannot be filtered, apparently owing to its immediately obstructing the surface pores of the filter. This more perfect action of the filtering medium exerts no influence as regards the ultimate communication of infective disease, but it indicates that most of the solid suspended impurities would be retained on the surface of the charcoal where they could be most easily removed. There can be no doubt, however, from these experiments that this filter offers no effective impediment to the direct passage of micro-organisms, and can accordingly afford no protection against infective disease conveyed through impure water.

B. FILTERS WHICH DO NOT DIRECTLY TRANSMIT DISEASE GERMS.

XX.

FILTRE CHAMBERLAND, SYSTEME PASTEUR, *Sole Licensees and Makers in this country, J. Defries and Sons, Limited, 147, Houndsditch, London, E.C.*—The filtering medium employed by the manufacturers of these filters consists of a specially prepared form of porcelain formed by a mixture of kaolin and other clays, the exact details of which still remain a trade secret. The filtering mechanism is sent out under two forms: in the one candles marked "B" being used, in the other candles marked "F," the latter allowing of much more rapid filtration, and being those which seem to be in more general use, inasmuch as the English agents seem to be in the habit of supplying only this form in this country. In most of our experiments the "F" candle was used, but we obtained exactly the same results with the "B" candle, with the exception that the process of filtration went on much more slowly when the latter form was used. Although these candles find their most extensive use as tap or pressure filters, still, as they are supplied as ordinary table filters, or to be used with an air pump under atmospheric pressure, they must receive consideration in this part of the report. It is unnecessary to describe the various forms of filter which can be obtained, as these all consist of exactly the same filtering medium fitted up to act either as a simple drip filter, or by means of siphonage under a slight pressure. As the process of filtration as a non-pressure filter is extremely slow, a considerable number of candles connected together, to constitute what is technically known as a battery, is required for the process to go on with any rapidity: under these circumstances reservoirs to hold the filtered water are necessary, in order that the filtration may go on continuously to provide a sufficient supply for domestic purposes. Such a principle of storage should without doubt, if possible, be avoided, since it is desirable that the water should be consumed as it passes directly from the filter.

The filtering mechanism consists of a hollow cylinder of prepared porcelain, closed at one extremity with the same material, and with a nipple-shaped open tube composed of glazed porcelain at the other extremity. The unfiltered water surrounds the outer surface of the unglazed porcelain, and, passing through this, issues as filtered water from the glazed nipple. In course of time (varying naturally with the purity of the water) the outer surface of the candle becomes covered with a slimy coating, and the rate of filtration becomes very much diminished. We may quote here the directions of the vendors as to what is to be done under these circumstances:

"The germs and other impurities, which are arrested on the outer surface of the tube, form a soft, slimy deposit. This must be cleaned periodically. The cleaning consists in brushing and rinsing off most of the deposit, which comes away readily, and in periodically destroying such part as sticks to the filter. Filters should be cleaned when the output has been considerably reduced. The brushing only takes a minute or two. The periodical destruction of the remaining germs can be quite simply effected by boiling, baking, or steaming the filter tube, or by passing through the filter a little cleaning substance as directed. Each operation is of the simplest and least troublesome character, and requires no skill whatever. The filters are made, if desired, with automatic brusher, so that the filter tube need not even be removed from its case, the residue being run off through a valve at the side."

The cleansing fluid supplied by the vendors is mixed with a dye, the latter being added so that the consumer can recognise by the absence of colour in the filtrate when the filter has been completely cleared of this substance. We shall reserve for consideration under the heading of pressure filters the results of our experiments with this cleansing fluid, and also the influence of brushing in restoring the rate of flow.

It is claimed for this filter that it is "a simple and effective precaution against typhoid fever, cholera, dysentery, and all diseases communicated through water." The vendors also state that "the Pasteur filter, although practically new to the public in this country, has been used in France on an enormous scale since 1886, and has been scientifically investigated in all countries. Both practically and scientifically it has been shown to absolutely arrest all germs of disease in water, and to prevent typhoid fever, cholera, malaria, dysentery, and all other diseases communicated by water. No other filter can be relied on to do this, and the large majority tend to actually favour the development of such diseases.

These statements are made exclusively on the authority of Government reports and of independent investigations published in standard scientific periodicals and textbooks."

In addition, they assert that the Pasteur filter "for some years has been the only water filter permitted to be used in the French army, navy, schools, and Government service." As a result of its adoption they state that "the figures show a continuous and rapid decrease of typhoid fever, till more than 75 per cent. of the typhoid fever in the Paris barracks and more than one-half of that in the whole French army had been stopped in three years after the introduction of the Pasteur filter; and in 1892 M. de Freycinet, reporting a still further reduction, adds: 'Wherever the Pasteur filter has been applied to water previously bad, typhoid fever has disappeared.' The Minister of Education, as a preventive against the cholera epidemic of 1892, forbade the drinking in any school in France of any water which had not passed through a Pasteur filter. The schools were practically free from the epidemic even in infected districts."

Many other instances are cited of places where typhoid and other diseases had previously prevailed before the adoption of this filter, but which ceased after these had been brought into operation in filtering the water. The manufacturers draw special attention to the fact that porcelain filters in imitation of the Pasteur filter are on the market, which, however, confer no protection against disease and in support of this cite the following paragraph:

"The experiments undertaken by the jury of Class 64 (Exposition Universelle, 1889) have confirmed on every point those carried out by the Commission charged by the Minister of War to investigate the best process for filtering drinking water. They have likewise established the fact, already ascertained by that Commission, that the cylinders of porous porcelain made in imitation (or more properly in piracy) of the Pasteur filter in no way give the results as to freeing water from germs and microbes which are obtained by that filter."[1]

Most of our experiments were carried out with the candles fitted up in a lamp glass with india-rubber connections, as they are usually employed for laboratory experiments. In some cases, however, the candle was simply inverted in the fluid to be filtered, and the filtrate carried over under exhaust pressure, by means of an india-rubber tube, to a sterile reservoir.

In the table containing the results obtained with tap water, it will be found that the water organisms did not grow through the walls of the cylinder into the filtrate so rapidly as sometimes occurred when used as a tap filter as will be seen later. It should be mentioned, however, in connection with this that water organisms may appear in the filtrate even on the fourth day, according to the conditions present. This occasionally longer period during which the filtrate remained sterile was undoubtedly due to the fact that when used as a table filter the cylinder was not kept constantly moist with the water, that is to say the upper reservoir was not kept supplied with

TABLE LXV.—*Test Organisms.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts, first day	3,000 to 4,000	0
" " " " second day	—	0
" " " " third day	—	0
" " " " fourth day	—	0
Cholera bacillus ... first day	5,000 to 6,000	0
" ... second day	—	0
" ... third day	—	0
" ... fourth day	—	0
Typhoid bacillus ... first day	8,000 to 10,000	0
" ... second day	—	0
" ... third day	—	0
" ... fourth day	—	0

[1] *Rapport à M. le Ministre de la Guerre: Commission Chargée*, etc., Fascicule No. 8, pp. 41-43.

successive charges of tap water. This allowed the cylinder to become more or less dry, a condition less favourable to the growth of water organisms through its wall. This question, however, is of minor importance since, as we have seen, the true criterion of an efficient filter is whether it permits or not of the passage of test organisms—such as cholera and typhoid bacilli which do not multiply readily (if at all) in water—into the filtrate.

TABLE LXVI.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day	35 to 40	0
Second day	do.	0
Third day	do.	0
Fourth day	do.	0

From these tables it will be seen that the Pasteur-Chamberland candles do not permit of the direct passage of micro-organisms, and we may state here that we have tested over three dozen candles, and that in every case these gave a sterile filtrate when used directly. It may also be pointed out that the Pasteur-Chamberland has now for a number of years been the acknowledged standard filter in scientific laboratories, and that hardly any complaints regarding their reliability have been made public, and these complaints all occurred previous to the introduction of a test to which each candle is now subjected before it is allowed to be sent out. A candle is said to be efficient when it does not allow air at a pressure of 7 lbs. to pass through it. In the case of disease germs (Table LXV), it will be observed that the results are given only to the fourth day, and the question naturally arises whether these would not in course of time grow or be washed through into the filtrate. This is the crucial problem which has to be solved as regards all such filters, and will be discussed in full detail under the heading of tap filters. It may be mentioned here, however, that all our experiments go to show that any filter which does not permit of the direct passage (during two days) of test organisms permanently arrests disease germs. We are accordingly of opinion that this filter does prevent the communication of water-borne disease as is claimed by the vendors.

XXI.

THE BERKEFELD FILTER COMPANY, LTD., *Engineers and Contractors for Pure Water Supplies (Contractors to Her Majesty's Government), 121, Oxford Street, London, W.*—The filtering medium used by this company consists of silicious earth formed into a hollow cylinder, the common candles presenting a very similar appearance to those of the Pasteur-Chamberland type, whose model they appear to have followed. The candles in this case, however, are made in many different sizes, whereas the former are all of one pattern. The filtering medium consists of the microscopic silicious skeletons of diatomaceæ, which from their form "(ladderlike and interlacing) leave an enormous number of exceedingly minute pores, thus affording a free passage for the liquid, and at the same time stopping that of the minutest suspended organic or inorganic matter, while their hard silicious nature gives a firm and practically indestructible material."

The manufacturers state that "the great difficulty to be overcome has been the formation of a solid substance of this deposit," and the method by which this is secured appears to be still a trade secret. A microscopic examination of a portion of a candle, pulverised, showed that most of the skeletons were broken, and this suggests that the medium had been rendered solid by compression (either alone or after mixture with some foreign substance), so that the individual particles came within the sphere of their own molecular attraction. The hollow portion of this cylinder appears then to have been bored out, as this is frequently observed to be slightly excentric.

Although this filter finds its most extended use and application as a pressure filter, still it can be used as a table or non-pressure filter, and must accordingly receive consideration in this section of the report. As the filtering medium and its mode of use in the various forms of table and domestic filters are essentially alike, these will not here require further description. The manufacturers claim that the Berkefeld filter possesses the following advantages:

"1. It will filter large or small quantities according to pressure and number of cylinders.

"2. The filtered liquid is absolutely free from any solid particles and from germs.

"3. The filter can easily be cleaned, as all impurities remain on the surface, owing to the density of the material. One cylinder will last for years.

"4. Each cylinder can be thoroughly sterilised by being placed in warm water, and boiled for an hour."

The chief advantage which they claim for their filter over others which give a germ-free filtrate is that it gives a sufficiently rapid flow of filtered water, while at the same time the arrested impurities are retained on the "*very surface*," from which they can be easily washed or brushed away, when the initial filtering capacity of the cylinder is at once restored.

The vendors state that their filter "continuously sterilises water;" they also publish many testimonials which they have received regarding the power of their filters in arresting the passage of pathogenic and other organisms. They also give a number of extracts from scientific journals of the results of experiments carried out by bacteriologists on their filters in support of their claims. We find among these writers some of the most distinguished Continental bacteriologists and hygienists, and we may single out Professor Max Grüber, Director of the Hygienic Institute, Vienna, as one who speaks most highly of this filter. The English agents state that "These filters have been supplied among many others to H.R.H. the Prince of Wales, both Houses of Parliament, H.M. Government, Sir Henry Roscoe, Sir Andrew Clark, Dr. Parkes, Dr. Pasteur, Dr. Hutchinson, Dr. Theo. Acland, Dr. Ford Anderson, St. Thomas's Hospital, St. Bartholomew's Hospital, Guy's Hospital, London Hospital, Hospital for Diseases of the Skin, London Fever Hospital, St. Mary's Hospital, Dr. Klein, Fulham Infirmary and Workhouse, Midland Railway Company; Manchester, Sheffield, and Lincolnshire Railway Company; Lancashire and Yorkshire Railway Company, Manchester Royal Exchange, Eastman's Photo Material Company, etc."

The statements made on behalf of this filter we shall have to consider in more detail under the heading of pressure filters; we must limit ourselves for the present to recording the results of experiments similar to those which we have carried out on the other table filters. The experiments recorded in this place were carried out with cylinders 13 and 14 of the vendors' list, the former being fitted up in the glass cylinder supplied by the makers, while the latter was fitted up in lamp glasses, as in the case of the Chamberland filter. The results of our experiments are appended below.

TABLE LXVII.—*Test Organisms.*

		Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts,	first day	3,000 to 4,000	0
" " " "	second day	—	0
" " " "	third day	—	0
" " " "	fourth day	—	0
Cholera bacillus	... first day	5,000 to 6,000	0
"	... second day	—	0
"	... third day	—	0
"	... fourth day	—	0
Typhoid bacillus	... first day	8,000 to 10,000	0
"	... second day	—	0
"	... third day	—	0
"	... fourth day	—	0

TABLE LXVIII.—*Tap Water.*

	Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
First day	35 to 40	0
Second day	do.	0
Third day	do.	60
Fourth day	do.	200 to 300

It will be seen, on reference to Table LXVIII, that the claim of the vendors that their filter "continuously sterilises water" is not confirmed, and we may state that numerous experiments have proved, as might have been expected, under ordinary conditions of temperature, that on the third day water organisms invariably grow through into the filtrate, and sometimes even earlier. On the other hand, it will be observed that the test organisms are completely arrested, so that we must conclude that the Berkefeld filters may afford an efficient safeguard against the passage of disease germs. We shall, however, discuss more fully under the heading of pressure filters, the relative advantages and disadvantages of this form of filter.

XXII.

AÉRI-FILTRE-MALLIÉ, THÉORIES PASTEUR, PORCELAINE D'AMIANTE, MAISON MALLIÉ, *155, Faubourg Poissonnière, Paris.*—This filter has attracted very considerable attention in France, where it has been recommended by such men as Gautier, Miquel, and Bouchard, as the most perfect filter made as regards the exceedingly fine nature of the filtering medium. A Committee of the French Academy has reported very favourably on it, and as a result of this the Academy awarded "Le Prix Montyon" for the year 1893.

The filtering medium used in the manufacture of these filters consists of some specially prepared form of unglazed porcelain, the pores of which it is contended are immeasurably more fine than those found in any other form of porcelain. The makers state that the three essentials of a filter are the following:

"1. The filtering material should be unputrescible and incapable of being altered (*inattaquable*).

"2. The filtering material should be impervious to all dangerous germs.

"3. Every filter should be capable of being at once and easily cleaned."

They state that no other filter subserves these three conditions so certainly, completely, and perfectly as those made of *porcelaine d'amiante*.

TABLE LXIX.—*Test Organisms.*

		Average Number per c.c. originally Present in the Suspension.	Average Number Present per c.c. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts,	first day	3,000 to 4,000	0
" " " "	second day	—	0
" " " "	third day	—	0
" " " "	fourth day	—	0
Cholera bacillus	... first day	5,000 to 6,000	0
"	... second day	—	0
"	... third day	—	0
"	... fourth day	—	0
Typhoid bacillus	... first day	1,500 to 2,000	0
"	... second day	—	0
"	... third day	—	0
"	... fourth day	—	0

This firm send out their filtering material in the most varied forms—for example, domestic, table, tourist, and pocket filters. Our experience, however, of this medium as a non-pressure filter would lead us to believe that it is not well

adapted for this purpose, owing to its very slow rate of filtration, which would place it much below even the Pasteur-Chamberland filter under similar conditions. These filters accordingly, in our opinion, must find their most extended use as tap or pressure filters, under which heading they will be considered in more detail. The results of our experiments with the table forms of filter will be found in Tables LXIX and LXX.

Table LXX.—*Tap Water.*

	Average Number per c.c. originally Present in the Tap Water.	Average Number Present per c.c. in the Filtrate.
First day...	35 to 40	0
Second day	do.	0
Third day	do.	0
Fourth day	do.	0

These tables indicate clearly that this material functions perfectly as a filter for microbes. The rate of filtration is, however, very slow, and our experiments were in all cases carried out, under pressure by means of a water pump. It must be admitted, accordingly, that these filters afford, so far as we can demonstrate, a complete safeguard against the communication of water-borne disease, but we must defer till later the full consideration of the relative advantages and disadvantages attending the use of these filters.

Concluding Remarks on Table Filters.

In the present report we have given the results of the examination of the filters of twenty-one manufacturers and as has been seen, have had to report unfavourably on almost all of them.

The following list contains the names of those firms whose filters, in our experiments, afforded no protection against the communication of waterborne disease:

The Silicated Carbon Filter Co., *Battersea, London.*

Doulton and Co., *Lambeth Pottery, London, S.E.*

Maignen's "Filtre Rapide" and "Anti-Calcaire" Co., Limited, *355, Regent Street, London, W.*

The Atkins Filter and Engineering Co., Limited, *65, Farringdon Road, London, E.C.*

The Nibestos Filter Co., *126, Charing Cross Road, W.C.*

Fr. Lipscombe and Co., *233, Strand, London, W.C.*

The Lipscombe Filter Co., *146, Oxford Street, London.*

The Magnetic Filter Co., *32a, Euston Square, London, N.W.*

The Spongy Iron Filter Co., *22, New Oxford Street, London, W.C.*

The Morris Tube Co., Limited, *11, Haymarket, London, S.W.*

The Fulham Pottery and Cheavin Filter Co., Limited, *Fulham, London.*

The Crown Filter Co., *66, Bishop Street, Port Dundas, Glasgow.*

Jacob Barstow and Sons, *Pontefract.*

Alcarazas Filter, "Roch-Brault" Patent: *Agents, Hersey Brothers, Limited, 70, Berners Street, London, W.*

Slack and Brownlow, *Abbey Hey Works, Gorton, Manchester.*

London and General Water Purifying Co., Limited, *157, Strand, London, W.C.*

J. Defries and Sons, *147, Houndsditch, London, E.C.*

The Wittmann Filter: *Agents, Wittmann and Roth, 47, Great Marlborough Street, London.*

From the very different forms of carbon blocks which we have tested it is highly improbable that this medium will ever furnish a reliable filter. Those in which the filtering medium consisted of stone, iron oxide, or nibestos, have also proved ineffective; although it is possible that the latter medium may in the future be successfully applied to this purpose. It will also be seen that porcelain as a filtering medium does not necessarily produce the same results as have been obtained with certain specially prepared forms of this substance. Many of these filters, ineffective from the bacteriological point of view, however, are not used—by the purchasers, at any rate—so much with the object of preventing disease as of rendering the water clear and palatable. No doubt filters will continue to be used for such purposes, so that it is desirable perhaps to indicate from among the filters in general use those which are least liable to pass into a more or less putrescent condition, or which, if they should happen once to become infected, are least likely to continue distributing the contamination over a lengthened period. The Nibestos filter appears to us to function admirably as a purely mechanical filter, and inasmuch as its filtering medium is purely mineral and can be easily and cheaply renewed when its surface becomes covered with the impurities extracted from the water, the dangers attendant on the use of an imperfect filter are here reduced to a minimum. In the case of the charcoal filters it is much more difficult to decide on which are to be recommended, since this medium forms such a favourable breeding ground for many micro-organisms. No doubt if the medium were sufficiently often renewed or cleaned many of its disadvantages would be obviated, but the trouble and expense involved would certainly in most cases prevent this being carried out as often as is necessary. The Wittmann charcoal vase filter, inasmuch as it possesses no corks or other fittings which can go wrong, and can at the same time be more easily cleaned and sterilised than any other form, presents certain advantages over many of the other types of carbon filters.

The following list contains the names of those firms whose filters in our experiments appeared to afford protection against the communication of waterborne disease:

Filtre Chamberland. Système Pasteur: *Agents, J. Defries and Sons, Limited, 147, Houndsditch, E.C.*

The Berkefeld Filter Co., Limited, *121, Oxford Street, London, W.*

Aéri-Filtre-Mallié, Porcelaine d'Amiante. Maison Mallié. *155, Faubourg Poissonnière, Paris.*

These three filters which are all of foreign manufacture (*Pasteur-Chamberland, Berkefeld,* and *Porcelaine d'Amiante*), as we have seen, all appear, as table filters, to protect against the communication of infective disease through the agency of water. The rate of filtration is, however, in all these cases a more or less slow process, unless a number of candles are used to form what is technically known as a battery. When these are made use of, however, the number of candles employed and the number of connections required multiplies the risk incurred from either an imperfect candle or one of the fittings going wrong, which in either case would frustrate the whole object of filtration. In all cases where such filters are required we should recommend their employment as tap or pressure filters wherever possible, as (1) it is essential that a sufficient supply of filtered water should be available to subserve *all* domestic purposes; (2) this should be effected with as little trouble as possible, otherwise the person or persons to whom this duty is relegated may be tempted to neglect filtering the water to be used for household purposes.

Before concluding, we may perhaps be permitted to make a few observations regarding the testimonials and statements published by the makers of the filters (imperfect from the bacteriological point of view) which we have reported on. These filters may, as we have already said, materially increase the risk of acquiring infective disease; but in addition they are to be looked upon as an unmitigated evil, in so far as they give rise to a sense of false security, which prevents the precaution of boiling the water being taken where necessary. We should recommend accordingly that the vendors should either withdraw these statements or at the very least satisfy themselves, by taking independent expert evidence, that they are justified in making these claims in regard to the prevention of disease by the use of their filters.

[End of Part I.]

The Leper Colony, established under the auspices of the St. Petersburg Society for the Repression of Leprosy at Krutija Rutschja, twenty versts south of the Maloskowizy Station of the Baltic Railway, was formally opened on December 14th.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1894.

Subscriptions to the Association for 1894 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscription must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, DECEMBER 29th, 1894.

IGNORANCE OF TROPICAL DISEASES.

The general absence in the English medical schools of any provision for teaching or acquiring even a rudimentary knowledge of the important subject of tropical disease—to which attention is drawn by Mr. Ernest Hart in his address to the Indian Medical Congress, extracts from which are published at page 1469—is not the least of the anomalies in our system of medical education. Considering England's position as incomparably the greatest tropical as well as colonial power, and that year after year she sends out hundreds of young medical men to combat disease in tropical countries in which, although the principles of pathology may be the same as in Europe, the individual diseases themselves are vastly different, it is strange that our teaching institutions have made so little provision for instruction or our graduating bodies for testing proficiency in this particular department of practice. The fact is that medical men resort to the tropics without special preparation or the remotest idea of what sort of work is before them; and the public, or, rather, the graduating bodies, who in such a case are really the custodians of the public interests, take no care that they shall be properly instructed and qualified. There can be little doubt that, under such circumstances, before the tiro acquires anything like skill in tropical practice, rude and painful lessons have to be learned, and, we fear, learned only too often at the cost of much human life.

Mr. Hart's remarks had reference principally to India, but they apply with equal force to the diseases occurring in all portions of the great tropical belt. It has been estimated, for example, by Dr. Manson that at least 11 per cent. of the mortality among Europeans in tropical Africa is attributable to hæmoglobinuric fever. We question if one medical student in ten who passes to his degree has ever even heard of such a disease, much less been taught how to recognise and treat it. And yet at any time one of them may find himself in Africa, and, within twenty four hours of his landing, face to face with this most dangerous disease. There is no consultant there to fall back on. He is alone with his patient and his utter ignorance. His helplessness may be imagined, and so may his feeling of gratitude to his teachers and the graduating bodies who gave him his licence, and thus led him to believe he was qualified to practise his profession. The best he can hope for is that at least he may do no harm. He knows nothing about the nature of the disease, nothing of its dangers, of its causes, or of its treatment. He turns to his textbooks in vain for information. Who can say how many lives are lost in this way before dearly-bought experience has taught what might have been and ought to have been learned in the medical school?

What holds good for hæmoglobinuric fever holds good for a dozen other tropical diseases. What has a young graduate been taught about malarial fevers and their dangers? Has he ever heard of such a thing as a pernicious remittent or intermittent fever? Does he know how to prepare and administer a hypodermic injection of quinine? How often in his early career in the tropics does he overlook abscess of the liver? How often does he treat dysentery as diarrhœa, tropical entero-colitis as simple looseness of the bowels, beriberi as dropsy or paralysis or malingering, leprosy as syphilis or ringworm? And so on through a long category of diseases. Would he recognise yaws if he met it? or Oriental sore? or diagnose such important conditions as anchylostomiasis or filariasis? We do not very well see how he could; for who has taught him about these things; where can he learn about them? He can get his degree and yet be absolutely ignorant of many of them—even of their names. Yet these diseases are the A B C of tropical practice.

Not only is the student in England hampered by the absence of teaching in these subjects, but he was, until the publication only a few months ago of *Davidson's Hygiene and Diseases of Warm Climates*, further handicapped by the want of systematic works in English on the subject. To get a catholic knowledge of tropical disease he had either painfully to hunt up the by-paths of medical literature for himself or go to foreign works. It is true that there were several excellent books—none of them very recent, however—on the diseases of India; but it must be remembered that India is only a fraction of the tropical world, and that there are many tropical diseases which are not to be found there and which, consequently, are not treated of in Indian medical works—this same hæmoglobinuric fever is an instance in point.[1] All this is not as it ought to be. It is not right that a man should be called on to treat disease without having had an opportunity to learn at least something about it first; and it is not right that the licensing bodies should give the sanction of their degrees to such ignorance. It is not right that lives should be sacrificed in the acquisition of knowledge. It is not right that we should essay to govern millions of human beings, and withhold from them the full measure of civilisation; nor is it seemly that we in England should have had to go for so many years to France and Germany for textbooks on a subject in which England should lead the way. It may be said that this country has made ample provision in the Army Medical School at Netley for instruction in tropical disease. Doubtless this is true so far

[1] We are sometimes asked by young medical men about to proceed to the tropics, as to the books they ought to take out with them, and especially to recommend them a good book on tropical disease. Until the appearance of Davidson's work above referred to, our answer generally was—Do you read French? If the reply were in the affirmative, we told them to buy Corre's *Maladies des pays Chauds*, and Kelsch and Kiener's work on the same subject. If the reply was in the negative, we recommended them to get the Sydenham Society's translation of Hirsch's *Geographical Pathology*, and one of the more recent books on the diseases of India.

as army medical officers are concerned; but the army medical officers are, after all, only a part of the crowd of English medical men who every year go abroad to practise. There are hundreds of Government and civil practitioners all over the East and West Indies, in Africa, China, the Eastern Archipelago, and elsewhere—colonial surgeons, medical missionaries, medical officers of plantations, mines, trading companies, shipping companies, and civil practitioners who cannot have the benefits of the Netley School, and who stand as much in need of special preparation for their work as do the medical officers of the army. But where can they get this, and what guarantee has the public that they have received and profited by such instruction?

There is another aspect of this subject which should appeal to us as members of a scientific profession. A medical man should be abreast of his times, not only for his patient's sake, but also for his profession's sake. He ought to know what has been done that he may be able to start from the foremost point attained in his attempts to advance our science. But, as things are at present, how can the ordinary practitioner in tropical climates hope to contribute to the advance of our knowledge of the diseases he is specially concerned with? In the absence of books and instruction it takes a man four or five years to learn to recognise the diseases he encounters in the tropics, another four or five years to find out his ignorance about them, another four or five years to get an insight into what others have done on the subject. By that time, as Mr. Hart says, "the energy and enthusiasm of youth have passed, the career in the tropics is about over" and his health, or his family, or service reasons, compel him to leave his work, perhaps just when he was beginning to feel his way to contributing something to the common stock of knowledge. Were education properly conducted, the man who elects to practise in the tropics would come to his patients with knowledge abreast of the times, able to do the patient justice, and to utilise his opportunities to contribute to the advance of medical science. He ought to begin where his predecessor left off, and not, as at present, where his predecessor began. Three things are very much wanted in this matter of tropical disease—clinical or systematic instruction in our medical schools, good textbooks, and insistence by the licensing bodies on a competent knowledge of the subject.

THE DISCUSSION ON THE TREATMENT OF DIPHTHERIA BY ANTITOXIN AT THE CLINICAL SOCIETY.

THE discussion on the treatment of diphtheria by antitoxin raised at the Clinical Society by the paper of Drs. Washbourn, Goodall, and Card, of which an analysis was published in the BRITISH MEDICAL JOURNAL of December 22nd, was brought to a close on December 21st. It was interesting to note that, although on many minor points there was great difference of opinion amongst those who have had experience of the treatment, there was general agreement that not only statistics but clinical experience give no undecided evidence as to the value of the antitoxic serum as a therapeutic agent.

From the statistical point of view it is certainly very striking that Dr. Goodall has been able to bring his case mortality to a lower point than has ever previously been reached in the history of the hospital to which he is attached; whilst other reporters have much the same story to tell. As regards the erythematous rashes and the pains in the joints which occurred in 25 per cent. of Dr. Goodall's cases and in 50 per cent. of those treated by Dr. Caiger, it is reassuring to find that these rashes and pains are merely temporary, that they are never serious, and that they cannot in any way be looked upon as of any great moment. It is interesting to find, moreover, that such manifestations occur most frequently in those cases in which large quantities of comparatively inactive serum are given, and that as more active serum is used—of course, in smaller quantities—the proportion of cases of erythematous rash is diminished.

In this connection the desirability of being able to obtain the antitoxin apart from the serum or in a concentrated form was indicated, but, as Dr. Sims Woodhead pointed out, bacteriological chemists have no light task before them to separate such a subtle and probably physically unstable substance from the "normal" fluid in which it is held in the blood. This, however, is a question of such great importance that the expenditure of much time and much trouble on its solution would be well laid out.

Another point that was raised in the paper but that was not in agreement with the observations of Roux, Martin, and Chaillou, was that the most fatal cases were those in which almost pure cultures of the diphtheria bacillus were obtained. It is interesting to find that this has not been the experience of all observers in this country, and it is a point, the value of which can only be determined by a careful and accurate study of the cases, their nature, the special series of symptoms, the secondary complications, and the causes of death. Much light may be thrown on the nature of diphtheria and its treatment by a careful study of some of these points.

The different results obtained in the treatment of tetanus and diphtheria by the antitoxic serum method are exceedingly suggestive. In view of the opinion which is steadily gaining ground that the specific effects of the antitoxic serum are much more definite in the early than in the late stage of diphtheria, the explanation suggested by Dr. Woodhead deserves attention. The difference between the two diseases appears to consist in the fact that the primary local lesion of diphtheria is recognisable at an early date and before the general toxæmia has developed far. In tetanus, on the other hand, before it can be recognised as a disease the constitutional or general condition which follows the local injury and inoculation has developed.

The secondary symptoms in diphtheria correspond really to what we are accustomed to look upon as the real disease in tetanus, and it is of course during this stage that experience teaches that we are able to help the patient in a comparatively small degree by the antitoxin method of treatment, though even here, as in certain cases of tetanus, some good seems to result from careful treatment with the antitoxic serum.

DR. GEORGE W. BALFOUR informs us that a telegram received from Mr. Louis Stevenson's mother has destroyed the lingering hope which Dr. Balfour entertained that there might have been some mistake in the earlier telegrams. The great novelist is dead, but the real cause of his death cannot be known until the mail arrives next week, if then.

"THE INCREASING NERVOUSNESS OF OUR TIME."

Under this rather startling title Professor W. Erb at Heidelberg gave an address some time ago which demands more than a passing notice. Professor Erb takes it for granted that there is marked increase of functional nervous disorders, and he believes that the events of the present century have naturally led to this result. The nineteenth century began in disorder and commotion. France had passed through a bloody revolution which was to be followed by the excitement and exhaustion of Napoleonic adventures; restlessness, political and social, was followed by a period of calm, but, with the advancing years, labour-saving inventions rapidly replaced man and increased wealth, and rendered communication easy—as our author says, time and space seemed to be annihilated.

In science, in literature, all were developing, and with it there appeared incapacity for restful pleasures; rushing from change to change seeming to be the only alternative to work. With overwork there was overcrowding and over-stimulation; alcohol and tobacco were used in greatly-increased quantities; railway travelling and its nerve-jarring motion still further tended to nervousness; and, so Professor Erb convinces himself, that with all this there has been a clear loss of nerve tone to the whole of the highly-civilised nations.

Nothing could have been more brilliantly put than the contrast between the normal reaction to work and worry and the neurasthenic and abnormal reaction to the same conditions, and it will be for us to see whether we agree with all that Professor Erb says. According to him, all this rapid restless movement has left an irritable and slow-recovering nervous system, which must be considered as neurasthenic. The essentials of this disorder, which has not been recognised twenty years, are increased sensitiveness, with weakness, weariness, lack of power of endurance, and defective recuperative power. This disorder is a refinement of hysteria and hypochondriasis, and it is the outcome of the conditions of life. He thinks it ought to be found in all periods of excitement and of luxury, but owns that there is no evidence of its existence in Greece or in Rome.

The disorder is to be recognised and to be met by changing conditions, and nerve hygiene is to be considered as much as sanitation. From school days to professional life the human being is to be tended and brought up, his mental, moral, and physical education is to be regulated, his holidays are to be methodised, his business is to be conducted in healthy surroundings, and his cities are to be made healthy and beautiful, with fresh air and beautiful surroundings. Thus the Professor is a preacher of hygienic socialism. As we said before, we have been charmed with the address, but not convinced.

The old question reappears in another form. Is increased insanity and nervous disorder in necessary correlation to developing complexity of society? It must be recognised that the more complex the rules of society the more frequent will be breaches of these rules, at all events for a time. In developing civilisation, too, we have a very perplexing factor added in the survival and the propagation of the non-fittest, and this doubtless adds to the increasing number of the nervous.

We are inclined to believe that there is some slight increase of nervousness, but that there is a much greater knowledge of the subject, and with knowledge comes sub division and classification. We remember the time when hysteria, in its present connotation, was looked upon as a new and increasing danger to society. This disorder is now recognised as no longer a defect of will for which the patient is to be blamed, and has been subdivided. Hypochondriasis in the same way is no longer considered to be a *maladie imaginaire*, but is recognised as having some organic basis, and with this progress the so-called functional disorders have to be studied apart, and are now placed under the head neurasthenia. We do not believe more women, at all events in England, have "nerves" now than had fifty years ago. With the increase of excitement there has been a still greater tendency to more freedom of exercise, more freedom from conventionalism, and much healthier home surroundings.

One change to which attention might be called is the decrease of religious feeling and the allied emotional excitement. It is thought by our author that over brain-work has had a very serious effect. We have grave doubts as to overwork being established as a cause of neuroses, and we have still greater doubt as to there being any amount of overwork in England. Worry, not work, is the danger, and we believe that danger arises from decreasing and deferred marriage.

We agree with our author in recommending carefully selected mates, and healthy surroundings, and skilled and orderly education, but we do not believe that people will be made good by Acts of Parliament or professional orations, and we do not believe there is any very serious risk to the stability of society in the so-called development of neurasthenia.

CHRISTMAS AT THE HOSPITALS.

At all the London hospitals the practice of making special effort to celebrate with some appropriateness the festive season of Christmas has been followed again this year. In many of the hospitals further entertainments will be given to the patients by students, nurses, and friends of the hospital, during the next few days. These entertainments give an infinite deal of pleasure to those for whose benefit they are arranged, and the task is undertaken with the greatest readiness and good feeling by all concerned.

SIR HENRY ACLAND.

With the close of this year the resignation by Sir Henry Acland of the Regius Professorship of Physic at Oxford takes effect. He has held the Chair since 1858, and the occasion has seemed appropriate to testify by some permanent memorial to the esteem in which Sir Henry Acland is held. During his tenure of office the whole face of the University has changed. In particular Oxford has once more become a medical school, and has begun to show a certain appreciation of the importance of the biological sciences, and of the duties of a great University in their regard. If Oxford was slow to move, if the Regius Professor showed himself no eager disciple of the newer methods, it will always be recollected to his honour that when the move was to be made, he knew how to obtain the co-operation of men of most distinguished eminence, who at once gave to the new medical school a distinction and a direction worthy of the ancient fame of this great seat of learning. Sir Henry Acland has always shown a warm interest in schemes for the ameliora-

tion of the conditions under which the labouring classes live, and it is in accordance with this that he should have allowed it to become known that the form which he would prefer the proposed memorial to take should be the permanent endowment of the Sarah Acland Home for Nurses. This institution has at present no suitable house, and its income, derived almost wholly from subscriptions, is all expended on district nurses engaged in nursing the sick poor. It is proposed to raise £10,000 to ensure the continuance and extension of the work of the Home on existing lines. Among those who have promised to co-operate in the movement are the Prince of Wales, Princess Christian, the Duchess of Albany, the Marquis of Salisbury, Mr. Gladstone, the Earl of Rosebery, Sir James Paget, Sir Richard Quain, Sir George Humphry, Sir John Banks, of Dublin; Sir William Turner, of Edinburgh; Professor Gairdner, of Glasgow; Sir John Simon, Mr. Ruskin, Professor Max Müller, and many others.

THE METROPOLITAN ASYLUMS BOARD, 1894.

The responsibilities of the Metropolitan Asylums Board have notably increased since it was enacted that the admission of a person to one of the hospitals of the Board did not constitute parochial relief and involved no legal disabilities. The difficulties in obtaining suitable sites for the new hospitals which were requisite to meet the increased demands upon the resources of the Board greatly delayed the work of erection, which has, however, now happily commenced. The plans for new large permanent fever hospitals at Shooter's Hill, Hither Green, and Tooting have been settled during the year which is now coming to an end, and additional small-pox hospital accommodation has been provided at Long Reach. Fortunately the Board has not had to deal with so large a number of cases during 1894 as during 1893. The number of cases of scarlet fever notified has shown a very noteworthy decline, being under 20,000, or very little more than half the number in the previous year; diphtheria also showed a smaller number, though the decline was very much less marked than with scarlet fever. Altogether there were nearly 42,000 notifications in London, and about 17,000 cases were admitted into the Board's hospitals. About two-thirds of the cases of scarlet fever and about two-fifths of the cases of diphtheria notified were treated in the Board's hospitals. The number of cases of small-pox treated was over 1,260, which number includes nearly every case of the disease notified in the metropolis. The land ambulance service dealt with 30,000 persons, but in this number are included in many instances two, or as many as three, removals of the same individuals, to the hospital, from the hospitals to the convalescent homes, and, finally, to their own homes. In addition to the infectious sick the Board has charge also of the imbecile poor of London to the number of 6,000. Of this number nearly 2,000 are at Leavesden under Dr. H. Case, over 2,000 at Caterham under Dr. G. Stanley, and over 1,000 at Darenth under Dr. Dyer. At the Darenth schools, a separate establishment under the direction of Dr. Walmesley, there are 955 children who are taught on a progressive system by which the senses are educated to the appreciation in the first place of common objects; eventually, if sufficient intelligence can be developed, the children as they grow up are trained to some industry.

ALPINE ACCIDENTS.

The dangers of mountaineering have no doubt been greatly magnified in some quarters, but that they have been unduly minimised in others appears to be proved by some statistics published recently in Vienna. Thirty-seven persons altogether lost their lives while mountaineering in the Alps during the season of 1894. As to four persons the mode of death remains unknown, but fourteen persons slipped and fell over precipices, six while pursuing dangerous paths, but eight while climbing in easy places. One person was killed by falling into a crevasse, two by falling avalanches, and two by falling stones. It may be said that all these accidents, except perhaps those from avalanches and falling stones, might have been avoided if well recognised precautions had been taken, and mountaineers may point to the fact that the total number of deaths is below the average of recent years, which is 41. But the facts afford one more proof that this fascinating and exhilarating form of sport can only be enjoyed at a certain risk. This risk can be reduced within reasonable limits when every precaution which prudence and experience can suggest has been taken. But the risk remains, and does not bear any direct relation to the height or reputed "difficulty" of the mountain. A man may be, some men have been, killed on a grass slope.

R.C.M.P.C.V.S.

An action of some considerable importance to the medical profession was tried at the last Leeds Assizes. It was brought by Messrs. Jones and Castle, practitioners, of Wath-on-Dearne, against a bonesetter for slander, and damages were claimed. Mr. Makeig Jones, it may be said, is a medical man of position, and this year fills the office of President of the Sheffield Medico-Chirurgical Society. The facts alleged were these. A boy sustained a compound fracture of the right forearm on April 2nd last at an adjoining colliery. He was seen and treated in the first instance by Dr. Castle and subsequently also by Mr. Jones. When the splints were removed on May 12th the boy's father, in consequence of the arm being somewhat stiff, expressed dissatisfaction, and took him to a bonesetter named Cranidge, a man, it would appear, of some repute among the people of the district. The defendant was proved to have said that the boy was crippled for life, and added that unless the arm was reset it would never get right, and that he would have to reset it. He proceeded to "break" the arm and then put it up in splints, charging the father 3s. 6d., and later on 1s. A plea was, it seems, set up at the trial that a remark of this kind was privileged and therefore it is important to note that he was also proved to have said, "Oh dear, what a lot of this man's work I have had to put right," meaning Mr. Jones, by whom he was told the boy had been treated. This coming to Mr. Jones's notice he demanded that the colliery authorities, to whose pit he was surgeon, should hold an inquiry, which they accordingly did. Mr. Blackburn, of Barnsley, who acted as referee for the colliery, examined into the case only five days after the reported rebreaking of the limb, and he swore that no fracture of the bones had been caused. The lad was able to carry a heavy weight with the arm and to hold the arm horizontally with a glass full of beer in the hand, and Mr. Blackburn gave evidence at the trial to the effect also that the treatment had been most successful and an excellent result had been obtained in a very bad fracture. Evidence was also given by the plaintiffs, by Mr. Victor Horsley, Mr. Mayo Robson, and Mr. Arthur Jackson, Senior Surgeon to the Sheffield General Infirmary, was present for the purpose of going into the witness box, but it was declared that no further medical evidence was necessary. The jury found, in answer to questions put by the judge, that the words complained of were slanderous, that they were not true, and that according to the judge's ruling they considered that the defendant was actuated by malice, but they believed that his wish was to exalt his own office and not to damage plaintiff's. They assessed damages at £30. Mr. Jones and Dr. Castle have shown considerable courage in bringing this man to book, and we have no doubt that many practitioners in different parts who find the bonesetter, to say nothing of other unlicensed practitioners, a thorn in their flesh, will be grateful to them. In vindicating their own skill they have rendered a service to their profession. It is pleasing to note that they not only had the assistance of the Medical Defence Union, but, as will be seen, Mr. Victor Horsley gave them the benefit of his

services at the trial. An amusing incident as to the meaning of letters which this class of unregistered practitioners place after their names was brought out in court. He was asked: "Here is a certificate. John Cranidge, bone setter, R.C.M.P.C.V.S. What do these letters mean?" The answer came "Registered Chemist, Member of the Pharmaceutical Conference, and Veterinary Surgeon," the Member of the Pharmaceutical Conference being, he explained, the conference which meets every year, and supplies each member with the yearly volumes!

SMALL-POX IN AN UNVACCINATED COMMUNITY.

To understand the ravages which small-pox can commit it is at present happily necessary for us to go back to historical accounts which survive to us from the days before the discovery of vaccination or to rely upon observations of travellers in uncivilised communities. Such instances are not very numerous although it will be remembered that the late Dr. Parke related some striking facts which he had observed in Central Africa. A not dissimilar story comes to us from the northern shores of the same continent. Dr. Kerr, writing from Rabat, on the western shore of Morocco, to the *Journal* of the American Medical Association (December 1st, 1894) states that small-pox makes fearful havoc among the Moors, with whom Dr. Kerr has lived seven years. During an epidemic at Rabat over one thousand persons died from that disease in the course of two months. Rabat is a town on the Atlantic seaboard of Morocco, having a population of 26,000. Of the conditions of the town during the epidemic, Dr. Kerr writes as follows: "Often we felt it sickening when going through the streets to see young men and boys sitting at shop doors, flour mills, etc., covered with small-pox eruption, in every way facilitating the spread of the disease. Everyone thinks that it is impossible for him to escape small-pox, hence no precautions are taken. It is painfully sad to see so many people who have lost the sight of one eye, while many are blind altogether. One day, not long ago, I paid a passing visit to a *douar*, or collection of tents, outside the city, and it was touching to see the mothers bring their children, asking me to put the medicine in their arms to prevent the infection. I vaccinated all the children in the village, and, although they were surrounded by small-pox, none took it."

MEMORIAL TO DR. O. STURGES.

At a meeting held in the Board Room of the Westminster Hospital last week under the chairmanship of Mr. George Cowell, Senior Surgeon to the hospital, a resolution was adopted, on the motion of Sir Rutherford Alcock, seconded by the Rev. J. Troutbeck, D.D., expressing approval of the proposal to establish a memorial to the late Dr. Octavius Sturges, Senior Physician to the hospital. By a subsequent resolution, moved by the Dean of Westminster and seconded by Dr. J. B. Potter, it was determined that the memorial should be a prize, exhibition, or scholarship in connection with the Westminster Hospital Medical School. A third resolution made provision for the appointment of a representative committee. The next volume of the *Westminster Hospital Reports* will contain a portrait of Dr. Sturges. Subscriptions may be sent to Mr. W. G. Spencer, Dean of the Westminster Hospital Medical School.

WATER FILTER EXPERIMENTS.

The account recently published by Dr. H. H. Johnston, of the experiments on water filters which he conducted at the Public Health Laboratory of the University of Edinburgh between October, 1893, and June, 1894, shows the need for a reform of such apparatus which led to the research undertaken by Dr. Sims Woodhead and Dr. Wood for this Journal. Dr. Johnston's experiments were made with the organisms in the Edinburgh main water, and their importance from the sanitary point of view, of course, depends on the inference that pathogenic organisms would behave similarly, an inference which previous research seems to justify. His investigation was confined to four filters, those of Atkins, Maignen, Berkefeld, and Pasteur. With the two first he found the same incapacity to arrest micro-organisms as have been recorded by other experimenters. The main interest, therefore, of the research lies in its comparison between the Pasteur filter and the Berkefeld under identical conditions. The two filters were placed side by side on the same service pipe, and simultaneously observed, with the result that in one series of experiments the Berkefeld filter failed to sterilise the water after ten days, and in the other three after two or three days, while the Pasteur continuously sterilised the water for the whole limit of the experiments—from three to six weeks on each occasion. How long the Pasteur filter retains its efficiency yet remains to be seen, but there is no longer any necessity in the case of this filter to infer its efficiency from laboratory experiments. The statistics of the French Government, and their experience that in every sort of circumstance typhoid, cholera, and other waterborne diseases cease after its use give more direct proof. Dr. Johnston was, therefore, well advised while testing a filter from which similar results were hoped in setting the Pasteur filter simultaneously to work as a standard of comparison. Variety in means of avoiding waterborne disease should undoubtedly be sought; but the public interest in the means which we now possess is too great for it to be desirable that the standard of efficiency should in the search be lowered below that which leaves a considerable margin of safety.

KING'S LYNN WATER SUPPLY.

We have felt it our duty on several occasions to call attention to the occurrence of epidemics of typhoid fever in Lynn which there was little reason to doubt were associated with an impure water supply. The members of the medical profession in Lynn have taken a prominent part in forcing upon the attention of the Town Council the necessity for an adequate supply of water from a source above suspicion. This action was very much resented, and we are informed that Mr. Thomas Brown, who made himself the exponent of scientific views on the Council, recently failed to obtain re-election. Nevertheless, the arguments in favour of this elementary sanitary principle have, we are glad to say, carried the day. Waterworks are to be erected on a range of hills seven miles east of the town, and will, it is expected, yield a large supply. The site has been selected by Mr. W. Whitaker, F.R.S., and the first sod was turned by the Mayor with some ceremony last week. It is expected that the supply to be derived from the two wells which are to be sunk will amount to a million gallons in twenty-four hours. The cost of the works, which are to be carried out under the supervision of Mr. E. J. Silcock, borough engineer, is estimated to be £30,000. In addition to obtaining a water supply, the Town Council, we are informed, contemplates spending the sum of £41,000 on new sewerage works, and a local inquiry has been held under the Public Health Act by Mr. F. H. Tulloch, Inspector of the Local Government Board, with a view of obtaining the sanction of the Board to the necessary loan. We are glad to be able to chronicle the re-awakening of King's Lynn, and we have no doubt that this expenditure, which appears very large for a town of 20,000 inhabitants, will turn out to be a true economy and will increase the prosperity of this ancient port.

THE SICK POOR IN PROVINCIAL WORKHOUSES: MITFORD AND LAUNDITCH.

The workhouse of the Mitford and Launditch Union has an infirmary which is in many respects quite above the average. There are two trained nurses and a probationer in training, and all the arragements show the control of a humane and enlightened board. Our Commissioner suggests certain

improvements in detail which will doubtless be considered in due course, but we would urge more especially the adoption of the recommendation to separate the infirmary administration from that of the workhouse, putting the sick under the care of a superintendent nurse, who shall be responsible to the board. This system lessens friction, and, wherever it is in force, it has proved to be an improvement on the plan of allowing the master's authority to override that of the nurse in her own department. We speak, of course, of the trained and competent nurse, not of the untrained attendant; where such are employed in the service of the sick, it is necessary that they should be under the control of the master and matron. When these provincial infirmaries are, as they are so well fitted to be, the properly equipped hospitals of the district, it may be found possible to train a staff of nurses to visit patients in their own homes, bringing only the severer cases for treatment in the hospital. We should like to see some such scheme tried by a progressive board; it is an experiment which, well managed, might relieve the rates and prove a means of spreading sanitary knowledge, similar to the work of the district nurses in the towns.

THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT the meeting to be held at the College on Thursday next, January 3rd, 1895, at 4 P.M., the Chairman will report the resolution adopted by the Council of the College on July 30th last, in response to a resolution passed at the last meeting of Fellows, requesting the Council to take steps to obtain the opinion of the Fellows on the mode of election to the office of President, namely:

That the Council are not prepared at the present time to consult the Fellows or solicit their opinion through other means than the meetings of Fellows, which have been lately established.

The resolution further pointed out that if any Fellow is anxious to test the opinion of the general body of Fellows as to whether or not it is desirable to make any change in the present mode of election to the office of President, he can submit a motion on the question to any meeting of Fellows. Mr. Herbert Page, on behalf of the Society of Fellows, will communicate the result of a canvass, made by the Society, of all Fellows resident in Great Britain upon the mode of election to the office of President. Mr. W. H. Bennett will move:

That the Council be requested to appoint a conjoint committee of members of the Council and other Fellows of the College to consider the desirability of obtaining a new charter, together with the details thereof.

Whilst Mr. F. J. Gant will move:

That the Council of the Royal College of Surgeons be asked to agree to a conjoint committee of the Council and of the Fellows of the College for the purpose of considering what alterations should be made in the existing charters of the College.

PILGRIMS AND CHOLERA.

THE *Times* correspondent, telegraphing from Calcutta, states that on December 22nd, at the request of several leading Mohammedans, Mr. Ernest Hart, the editor of the BRITISH MEDICAL JOURNAL, delivered an address at Madrissa College on the subject of the prevention of cholera among the pilgrims at Mecca. Prince Sir Jehan Kadir, son of the late King of Oude, presided, and there was a large audience, which included many influential members of the Mohammedan community. Mr. Ernest Hart said it was now universally admitted that cholera was not communicable from person to person like measles or scarlet fever, but was solely due to the introduction of a specific poison into the system. The main agent in spreading the poison was water which had been contaminated by the discharges of cholera patients. If a constant supply of pure water could be insured the disease would cease to exist. He described the fearful epidemics which had befallen the pilgrimages in recent years, and said that they were entirely due to the neglect of all sanitary precautions at Mecca and on the way thither. He suggested that the Mohammedans of India should form a central committee in Calcutta, with corresponding committees throughout the country; that these committees should appoint qualified persons among the pilgrims to report each year upon the sanitary conditions of the holy places, and that on the basis of these reports representation should be addressed to the Sultan, praying him to take any necessary measures. After a few words from Surgeon-Colonel Harvey, Inspector-General of Hospitals in Bengal, and Dr. Simpson, Health Officer of Calcutta, the chairman, in the name of the Mohammedans, thanked Mr. Hart, and strongly advised his own coreligionists to adopt the course recommended by him.

STORE PRICES.

A CORRESPONDENT draws attention to the following advertisement taken from the current price list of the Civil Service Supply Association:

MEDICAL AND DENTAL.

Special arrangements beneficial to members have been made with several medical practitioners and dentists. Particulars may be obtained on application to the secretary.

No names are published here, or the gravity of the breach of professional decorum would be sufficiently patent to all; as it is, it is difficult to feel any admiration for this business enterprise on the part of certain members of the profession, who, for the sake of a slight gain, are willing to sink the dignity of their profession, and allow it to be put on the same level with the hundred and one trades of the commercial world, by permitting themselves to be identified on a trade circular with tradesmen, who are willing to vend their wares at a reduction to all members of this Association. It is another instance of the lack of professional feeling, which has been shown in so many ways of late, and which is a sure sign of professional decadence.

SEWAGE-FLOODED BASEMENTS.

THE extreme importance of houses being so built in relation to the level of the sewers that they shall be free from sewage regurgitation is well shown in the annual report of Dr. Waldo, medical officer of health for the vestry of St. George the Martyr, Southwark, in which he describes what he found in a house-to-house visitation in his district. Amongst the flooded cellars were two under large butcher's shops. In one of them there were twelve wooden tubs filled with salted pork and beef, besides two salting tanks which were in use. Sewage had risen in this cellar to a height of two feet, and had invaded a meat safe which was in it. In a public house sewage had risen to a height of 1 ft. 9 ins. in a cellar used for storing pots. Among other flooded cellars were those of a model dwelling, a sweetstuff shop, and a bank. In another house the concrete flooring was rent and cracked by the backward pressure from the main sewer, and in it a maid-of-all-work and three young servants were in the habit of taking their meals. Dr. Waldo also visited a baker's shop beneath which was a cellar used as a bakery, in which the master and his journeyman were actually working as best they could in a flood of sewage. In one corner of the workshop a row of sacks filled with flour rested on a wooden platform three inches high. The sewage had risen to a height of four inches, as shown by the stain on the wall, and, by the baker's own admission, had fouled the under surface of the sacks and caused a portion of the flour to cake together in lumps. At the same time it was admitted that the flour from those particular sacks had been made into bread. It is far from easy to suggest a remedy for this state of affairs so far as the occasional flooding of the basements is concerned. In a level and low-lying district it is exceedingly difficult to provide for the sufficiently rapid removal of storm water when this comes in great excess, and it probably will always be the case that the occasional flooding of basements will be one of the penalties of building houses.

in such ill-chosen situations. Clearly, however, such an occurrence ought to be very exceptional; anything like frequent sewage flooding renders a house unfit for habitation, and the responsibility must lie between the owners and the authorities. As regards the use of such places for any purpose connected with the preparation or storage of food the matter is different. There can be no hesitation in laying down a very positive rule that they should never be used for any such purpose. A medical officer of health is well employed in calling public attention to the existence of such obvious causes of disease.

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA.

The fourth meeting of the Intercolonial Medical Congress of Australasia will be held in Dunedin, New Zealand, during the week beginning Monday, February 17th, 1896, under the presidency of Dr. F. C. Batchelor, of that city. The work of the Congress will be divided into five sections, namely, Medicine, including Diseases of the Skin; Surgery, including Diseases of the Eye, Ear, and Throat; Midwifery and Diseases of Women and Children; Public Health, including State Medicine, Forensic Medicine, Psychological Medicine, and Demography; Anatomy, Physiology, Pathology, and Pharmacology. The General Secretaries are Professor J. H. Scott, M.D., University, Dunedin, and Mr. L. E. Barrett, F.R.C.S., Dunedin.

LAMPOONS AND DISGUISES.

Mr. Stead is a man of many parts. Among others he is a producer of Christmas numbers which, in the words of his preface "unite the licence of fiction with the realism of fact." This would not seem to be an inordinately difficult task to a man of ordinary imagination. To some it may appear, as Mr. Stead himself suggests, "audacious beyond measure" to weave into such a story topics such as death duties, bimetallism, and agricultural depression, to say nothing of vivisection, knickerbockers, and disease germs. This, however, is but a matter of masks, dresses, and local colour, and so far as it is audacious is but characteristic; but for the sake of those curious and peculiar people who take Mr. Stead and his vagaries seriously, it might have been well to give some hint how slight is the realism and how large the licence which the author has allowed himself. Otherwise these clients and believers will surely be misled by the statement in the preface that "the characters, with few exceptions, are borrowed from real life, and most of them, I fear, are but thinly disguised." Even making all allowance for the exaggerations on other matters with which they are mixed up, and for the curious position taken up by the *Review of Reviews* in regard to all knowledge which is not fantastic, the picture which is drawn of the doctor is too obviously a parody, untrue in fact and malicious in suggestion, to deceive any one. Nevertheless, the enormous sale of this tissue of absurdities makes one regret that a man who by good fortune has been placed in the position of having so many readers should so prostitute his opportunities. Here is our friend the doctor *à la* Stead. "But what experiments are you making, doctor?" "Invaluable experiments," said he; "I am cultivating the bacillus of typhoid fever. I have converted this hospital into a physiological laboratory. The other day I inoculated five perfectly healthy subjects. It is true that they were healthy that is, they were healthy at the time I pricked them but they were not healthy five minutes afterwards; and after all it is only a question of time. They took typhoid fever in due course, and are going through all its stages." Ethel's eyes were dilated with horror. "You don't mean to say that you give healthy people typhoid fever merely in order to experiment?" "Of course;" replied he, "we all do it. What are the great London hospitals for but to collect the poor in order that they may be used as experiments for the benefit of the rich? Surely you don't need me to tell you that." And so on. Needless to say that this doctor came ultimately to great wealth. His discovery of the possibility of preserving the microbes of cholera in ice, and the power which that gave him of regulating the population in accordance with the commercial needs of the country, was in itself enough to render his services of great value to the coming plutocracy. Some people may say that all is fair in fiction. Let us then call it fiction, and not begin by saying that the characters are borrowed from real life, and "are but thinly disguised." As members of a profession whose work is done in public before the world, we need not trouble much about such lampooning. After all, when we find that the same romancer pictures lawyers as being bribed, the press purchased, the temperance party introducing "jinjams," a new drink which, while innocent of alcohol, "was destructive of what might be called the moral tissue of man," and a preacher who opposed the new plutocrat being incontinently decapitated in the public highway by his private body guard we need not feel much hurt by the onslaught of so indiscriminating a prophet of evil. Nevertheless, when we consider the patients, the sick sufferers who go to our hospitals for cure, and who are there treated with the object of cure alone, and when we remember that with their minds shaken by disease or wandering from fever, horrid stories and fantastic lies as to the treatment of patients in those homes of refuge, which they would have laughed at when in health, rise as nightmares in their delirium and bar their way to recovery, we say that it was a cowardly thing to sow broadcast such unfounded accusations against our great hospitals—accusations which are harmless as against the profession at whom they are aimed, for after all we have to be judged by sane people, but are sure to be the cause of misery and doubt where all should be peace and confidence among the sick inmates of our hospitals.

KITCHEN CONCERT IN THE EDINBURGH ROYAL INFIRMARY.

A very successful concert was given by the resident physicians and surgeons of the Edinburgh Royal Infirmary last week. As usual the entertainment was given in the kitchen, which for the evening had been transformed. The residents gave a series of tableaux setting off in a clever, amusing, and good-humoured way some of the little weaknesses and foibles of some of the teachers or professors of the school. Some also contributed to the more purely musical part of the entertainment. There was a crowded audience, and the general feeling seemed to be that the "K.C." of 1894 had been the most successful of recent years. A good many of the members of the staff were present. Refreshments were provided in the residency dining room.

THE INDIAN MEDICAL CONGRESS.

The first Indian Medical Congress was opened in Calcutta on Christmas Eve by the Viceroy. The ceremony was attended by a large number of officials and by a numerous company, native and European, including not only members of the medical profession, but many representatives of the general public. The Earl of Elgin, in his opening address, dwelt on the importance of sanitary questions to the welfare of India, and spoke of the great amount of good work which had already been accomplished, while recognising that much remained to be done. The President of the Congress, Surgeon-Colonel Robert Harvey, Inspector-General of Hospitals in Bengal, delivered an address dealing with the progress which had been made in medical knowledge and teaching, and in sanitary matters since he first entered Bengal, thirty years ago. He instanced the introduction of good water supplies into all the largest cities and cantonments, not one of which had a pure water supply in 1865. Coincident with this great sanitary improvement had been a decline in the death-rate among British troops in India from 69 to 15 per mille. He

then passed on to consider the many improvements which still remained to be carried out, and expressed the hope that the time would come when every district would have its sanitary fund and a skilled health officer. He dwelt on the need for further study of the fevers of India, which were the great source of the high mortality, and urged that bacteriological laboratories should be established in which inquiries of this nature could be carried on. A vote of thanks to the President for his address was adopted, on the motion of the Lieutenant-Governor, seconded by Dr. Galley (Pondicherry), the delegate of the French Government. A vote of thanks was passed also to the Viceroy, on the motion of Surgeon-Major-General Bradshaw, seconded by Mr. Ernest Hart. Subsequently the Viceroy and other visitors inspected the exhibition of drugs and surgical and sanitary appliances. The addresses of the Presidents of the Sections were delivered in the afternoon of the same day, and the Congress adjourned over Christmas Day.

DEATH OF MATTHEW BAILLIE'S SON.

A link with the past has been severed by the death of Mr. William Hunter Baillie, the only son of Dr. Matthew Baillie, who was Physician Extraordinary to George III. It is just a hundred years since Matthew Baillie gave his course of Gulstonian lectures. Matthew Baillie was the son of the sister of William and John Hunter, and in 1783 inherited a sum of £5,000 from Dr. William Hunter, together with the house and museum in Great Windmill Street. William Hunter Baillie, who has just died in his 98th year, was the first cousin of Sir Benjamin Brodie and nephew of Lord Chief Justice Denman. His aunt, Agnes Baillie, lived to the age of 101 years, but his father, the celebrated Dr. Matthew Baillie, when he died, in 1823, was only 62. Mr. Hunter Baillie was the owner of Long Calderwood, the place where John Hunter was born; he had in his possession a fine collection of portraits of the Hunter family; these were exhibited at the Royal College of Surgeons in July, 1893, at the celebration of the centenary of Hunter's death. The connection between Hunter and the College of Surgeons is still kept up by Captain Hunter Baillie, a son of the deceased gentleman, who is one of the Hunterian trustees.

INFLUENZA IN LONDON.

During the week ending December 22nd, 17 deaths were directly attributed to influenza in London: in the preceding three weeks the numbers had been 10, 11, and 14 respectively. Although this disease has shown a slightly-increasing fatality during recent weeks, there appears to be no reason to anticipate its immediate return in an epidemic form. The appearance of epidemic influenza in London on previous occasions has been preceded by a marked increase in the mortality from pneumonia, to which disease it is well known that very many deaths due primarily to influenza are ascribed. During each of the first three weeks of December the deaths referred to pneumonia were below the corrected average number in the corresponding weeks of the ten years 1880-89—the period immediately preceding the first outbreak of influenza in London—and were also below the number recorded in the corresponding period of any of the four subsequent years 1890-93, during each of which influenza was more or less prevalent.

THE HEALTH OF THE POPE.

We are happy to be able to state on the highest authority that the reports lately published to the effect that the customary health of the Pope is not maintained are not founded on fact. On the contrary, the venerable Pontiff enjoys his usual health, and, if possible, has been more busy than usual for some time past. He presides at the Conference on the Eastern Church for from three to four hours a day twice a week, and he gets up from the sittings, in which he takes a prominent part, less fatigued than some of the Cardinals present. It is true that he has not been receiving many people in private audience lately, but this is due solely to his being employed in more important work, receiving bishops and other dignitaries. Leo XIII takes great interest in all questions of the day, and is always desirous of obtaining the most thorough information on all questions in which he is specially interested. Thus, in reference to the present Conference, he has read and studied all the pamphlets and papers which have been written on the subject. The Pope takes his daily walk in the Vatican gardens when the weather permits, and he is always anxious to see that those about him perform their various duties thoroughly, however humble they may be. For instance, when taking his daily walks in the gardens he frequently calls the attention of the gardeners to the arrangement of the flowers, the condition of the grass, and so on. His physician, Dr. Lapponi, is accustomed to visit him professionally every Sunday morning. Dr. Lapponi's visits have not been more frequent lately, which in itself is another proof that the report above mentioned is incorrect. The Pope eats as well as usual, and has his customary amount of sleep, though for many years he has accustomed himself to very little. In conclusion, it is the opinion of those who are most about him that the Pope is in better health now than he was a few years ago.

THE ILLNESS OF LORD RANDOLPH CHURCHILL.

The friends of Lord Randolph Churchill have this week heard with much sorrow of the serious and critical condition in which he now lies. It has for some time past been generally understood that he suffered from some grave nervous disease, but we believe that, although before his recent journey was undertaken, the most serious apprehensions were entertained as to future developments of the complaint, there appeared reason to think that no inconsiderable amount of benefit might result from a lengthened rest, and especially from abstinence from the busy political life in which Lord Randolph delighted. For several years past Dr. Roose, who has been Lord Randolph's medical adviser, has consulted occasionally with Dr. Buzzard in regard to his patient. At the end of September, whilst in Japan, Lord Randolph was seized with a transitory paralysis of one arm, and this was followed not long afterwards by loss of power in some facial muscles and weakness in the lower extremities. He arrived in town on Monday last in a semi-comatose condition, which has gradually become more confirmed. There is much reason to believe that this illness is the result of the intense application which Lord Randolph gave at a comparatively early age to the work in which he had engaged, and his friends can but condole with him and his relatives in the premature closing of what at one time gave promise of being a most brilliant career.

NEWCASTLE THROAT AND EAR HOSPITAL.

We have received the following communication, dated December 26th, with reference to the article published in the British Medical Journal on December 22nd, page 1437:—

At a meeting of the medical staff held on December 26th it was resolved, and carried unanimously, "That this meeting direct a note to the Editor of the British Medical Association's Journal, pointing out that the circular referred to in the article in last week's Journal was printed and circulated by mistake, and without the knowledge or sanction of the Committee or staff of the hospital."

In reference to the circulation of the hospital reports, it was pointed out by the staff "that these reports are in constant request: for instance, only last week or so requests were made for them by students, or by others directly or indirectly connected with the Medical College or the Royal Infirmary; they therefore recommend that these reports in the future be more sparingly issued, and that (beyond subscribers) a record be kept by the secretary or matron, for whom they are required and for what purpose they are wanted.—(Signed) R. Ellis, S. Macaulay, Wm. Robertson, G. Metcalfe, T. Lyle, Jos. Wm. Leech."

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

XXXIII.—For the following notes of eight cases of diphtheria treated with antitoxin at University College Hospital, under the care of Dr. Sydney Ringer we are indebted to Mr. F. Travers M.B., House Physician.

In each of the following cases, unless otherwise stated, Aronson's diphtheria antitoxin was used. In all the cases local treatment, in the form of steam sprays of bicarbonate of soda, was adopted. The cases were injected as admitted, and none omitted, even where, as in Case VI, the outlook seemed hopeless.

Case I.—A child, aged 9½, was admitted on the eleventh day of the disease. On admission there was thick membrane on both tonsils, the fauces, and the wall of the pharynx, and a little on the palate and uvula. The glands at both angles of the jaw were much enlarged. The temperature was 99.4° F., pulse 108, weak but regular. No laryngeal disturbance evident. Antitoxin ℥xv was injected into the thigh, and twenty hours later ℥vij was injected. The child improved steadily for forty-eight hours; after this the pulse became irregular, and the patient died suddenly whilst lying quiet sixty hours after first injection. *Post mortem* examination: the membrane extended down as far as the cricoid: heart muscle much softened.

Case II.—A child, aged 1 years 8 months, was admitted on the fourth day of the disease. On admission there was cyanosis, great stridor and recession of the chest wall. There was membrane on both tonsils and on the wall of the pharynx. Tracheotomy was performed, and antitoxin ℥x injected into the thigh. The temperature was 103.4°; the pulse 160, irregular and very compressible. Seventeen hours later antitoxin ℥vij was injected. The patient was in a very critical condition for ten days, but eventually recovered entirely.

Case III.—A child, aged 3, was admitted on the third day of illness. There was membrane on both tonsils, and an offensive nasal discharge. The glands at the angles of the jaw were much swollen. Antitoxin ℥xv was injected into thigh. The temperature was 100°; the pulse 100, regular, and of fair strength. The throat was apparently perfectly well four days later. Suppression of urine occurred on this day, and continued for two days, when death ensued. *Post-mortem* examination: The throat was quite well. There was acute nephritis.

Case IV.—A child, aged 12½, was admitted on the fifth day of illness. There was membrane on both tonsils and a watery discharge from the nose. The glands at the angles of the jaw were much swollen. Antitoxin, ℥xv, was injected into thigh. The temperature was 102.4°; the pulse 115, regular, but weak. Improvement began next day, and continued steadily. During convalescence, complete paralysis of the palate, but of no other part, occurred lasting eleven days.

Case V.—A child, aged 1 year 8 months, was admitted on the third day of illness. There was membrane on both tonsils; some stridor and recession of the chest wall. The temperature was 102.4°; the pulse was 136, small, weak, regular. Antitoxin, ℥xv was injected into the thigh. Four hours later the stridor and recession became so marked that tracheotomy was performed, and some membrane removed from the trachea. Progress was very satisfactory: the tracheotomy tube, however, could not be removed till the sixteenth day. A week later the trachea was reopened for stenosis of the larynx, and the child developed broncho-pneumonia, and died six days later, twenty-eight days after injection. *Post mortem*, there was no evidence of diphtheria remaining.

Case VI.—A child, aged 6, was admitted on the seventh day of illness. The breath was very foul. The tonsils met behind the uvula, and appeared almost gangrenous, with greenish patches of membrane and black sloughs on them, the latter extending along the sides of the mouth as far as the molar teeth. There was a very offensive nasal discharge and great obstruction to respiration. Tracheotomy was performed, and antitoxin, ℥xv, injected. The temperature was 102°; the pulse 160, very weak and irregular. This case appeared hopeless from the first; the child's aspect improved, though he steadily got weaker, and died twenty-four hours after injection. *Post mortem*, an acute septicæmic condition was found, with numerous hæmorrhages and embolisms in the lungs and commencing endocarditis.

Case VII.—A girl, aged 6, was admitted on the seventh day of illness; she was only a week convalescent from scarlet fever. There was much stridor and recession and membrane on both tonsils. The temperature was 102°, the pulse 160, small and compressible. Tracheotomy was performed, and antitoxin (20 c.cm.) from the British Institute of Preventive Medicine, injected into the right loin on the same day. She improved till the eighth day, when signs of broncho-pneumonia appeared, and she went downhill steadily and died on the fourteenth day after injection. *Post mortem*, the membrane was found still to extend from the larynx to the second division of the bronchi. There was extensive septic broncho-pneumonia.

Case VIII.—A child, aged 5, was admitted on the third day of the disease. There was marked stridor, recession, and croupy cough. No membrane could be seen. The temperature was 101° F. Tracheotomy was performed. Three days later some membrane appeared on each tonsil, and antitoxin, ℥xv, was injected. The temperature was 102.6°. The pulse 140, small and weak. Progress was satisfactory and the patient made a good recovery.

Remarks.

The effects noted after injection were that the aspect and general condition, except in Cases II and VI, showed marked improvement in from six to twelve hours. Six patients slept well the same night: sleeplessness had been marked in all cases. The pulse in Cases I, V, VI, VII, VIII, showed a marked improvement within twelve hours, becoming slower, and the force and tension improving. In Cases II and III it was worse at the end of twelve hours, becoming small and irregular, and improved very slowly afterwards. In Case IV no improvement took place for twenty-four hours. The temperature in Cases I, II, IV, VII, VIII, fell from 1° to 2° during the first twelve hours. This was followed during the next twelve hours by a rise to the original height, and this again by a fall, generally directly to normal. In Cases I and II the rise after the primary fall was interrupted by the second injection. In Case III no rise occurred again after the primary fall of 2°. In Case V the temperature was irregular, varying from 100° to 103° on alternate days, and reaching normal on the seventh day. In Case VI the temperature rose steadily till death occurred. Albuminuria occurred in all the cases. No regularity was noted in the time of its appearance, and the injection had no apparent influence on it. Paralysis only occurred in Case IV, was confined to the palate, and cleared up satisfactorily. No reaction occurred at the site of injection in any case, nor was there any subsequent pain. No rashes appeared. As to the effect on the membrane, in Cases I, II, III, IV, V, VII, VIII, this showed no improvement, and even extended for from eighteen to twenty-eight hours: it then rapidly cleared up, and in all cases was apparently gone by the fourth day, and the throats looked quite healthy the day following. Cultivations for bacteriological examination of the membrane were made by Dr. H. R. Smith in Cases III, IV, V, VI, VII, VIII on blood serum. Those from Cases III, IV, V, VIII showed the typical growth and microscopic appearances of the bacillus diphtheriæ, mixed in all cases with staphylococci and streptococci. In Case VII none of the tubes inoculated showed any growth. In Case VI micrococci alone were found.

XXXIV.—We are indebted to Dr. O. T. Stephenson, Woolstone, Southampton, for the notes of the following striking instance of the action of antitoxic serum in diphtheria:

E. G., a strong and well-nourished boy, aged 4, living at Woolstone, Southampton, was seen first on November 28th, 1894. Previously he had complained of feeling ill, and of sore throat for two days. The glands of the neck were swollen, there was dysphagia, and a large patch of membrane on the left tonsil and soft palate. The temperature was 100.2°, the pulse 100. He was ordered cresoline vapour, and a mixture containing iron, chlorate of potassium, and glycerine.

On November 29th, at 11 A.M., the condition was worse, and

the membrane had increased in size. The temperature and pulse the same. At 3 P.M. Professor A. E. Wright, of the Army Medical School, Netley, kindly saw the case with me, and administered antitoxin 20 c.cm. by injection into the flank. At 9 P.M. the diphtherial membrane was much less in size, and had been shed in parts. The mucous membrane was bleeding very readily. The child's strength was maintained, and he had eaten a good meal at tea time. The pulse was 104, the temperature 100.2°. The urine contained albumen one-eighth.

On November 30th, at 10.30 A.M., thick membrane had again formed extensively on the left tonsil and palate. The temperature was 101.2°, the pulse 104. At 2.30 P.M. the membrane had increased still further, and appeared to be spreading downward. The mother said the child had a "croupy" attack at noon, and she thought he would have been choked. At 5 P.M. Professor Wright saw the child with me again, and gave a second injection of antitoxin 20 c.cm.

On December 1st there was a large patch of membrane loosely attached to the throat, grey and sloughy. The child had slept well through the night, was in no pain, and swallowed without difficulty. The temperature was 99°; the pulse 108.

On December 2nd the throat was much better. One small patch only was to be seen. The temperature was normal. There was no pain nor swelling.

On December 3rd the temperature and pulse were normal. A small slough was still to be seen.

On December 5th there was no membrane, and the child had eaten and slept well.

From this date onwards the child progressed favourably. On December 15th general urticaria developed, but faded on December 16th. There has been no paralysis.

The antitoxin employed was prepared by Dr. Armand Ruffer. It was a citrated plasma of such strength that $\frac{1}{1000}$ c.cm. protected a guinea-pig against a lethal dose of diphtherial toxin.

The clinical diagnosis was confirmed by the bacteriological examination of the membrane undertaken by Professor Wright.

A DISCUSSION on the many interesting pathological question raised by the discovery of the efficacy of antitoxic serum in the treatment of diphtheria will probably be arranged by the Pathological Society of London at an early date. The Glasgow Medico-Chirurgical Society have also arranged for a discussion on the general subject to be introduced by Dr. David Newman.

STEPS have already been taken to commence the production of diphtheria antitoxin under the superintendence of the Director of the Laboratories of the Royal Colleges of Physicians and Surgeons on the Embankment. Suitable stabling has been obtained at a short distance from London, and the first set of horses, four in number, have been tested with mallein, with satisfactory results. It will be possible to increase the stud, if necessary, to twelve horses.

THE sum of £1,000 presented to the Laboratories Committee by the Goldsmiths' Committee will, we understand, be devoted to the investigation of the many chemical and biological questions in connection with the nature and mode of production of antitoxic serum, which as yet remain unsolved. In this task the Director, Dr. Sims Woodhead, will have the assistance of several pathologists already known in connection with the investigation of kindred subjects.

THE Russian Government intends to establish special institutes for the preparation of immunised serum in Russia. M. de Giers's private physician, Dr. Janowsky, has gone to Paris to investigate the methods and results of the serum treatment under M. Roux.

MEDICAL MAGISTRATES.—Of six magistrates recently appointed for the borough of Cambridge, two are members of the medical profession—Dr. Alex Hill, Master of Downing College, and Mr. T. Hyde Hills, Mayor of Cambridge, and President of the Cambridge Medical Society.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

SPECIAL COMMISSION OF THE "BRITISH MEDICAL JOURNAL."

XXX.—MITFORD AND LAUNDITCH, NORFOLK.

THE Chairman (Mr. T. H. Hubbard) and his colleagues on the Board of Guardians of the Mitford and Launditch Union had kindly agreed to show us over this workhouse, situated in the small village of Gresenhall, about three miles from East Dereham, the last home and burying-place of the poet Cowper. The union comprises sixty parishes, all agricultural: it is the largest in Norfolk. The house was built about 1840, round three sides of a squre, in which is a garden. The infirmary, which is a separate building, stands at one end of the workhouse proper, beyond the square.

ON ENTERING

the hospital garden we face an open arcade, roofed by the upper story, which overhangs the ground-floor rooms. A portion of the arcade, at either end, is enclosed, forming a short passage, containing a bath, a copper for heating the water, and a wash-up sink. The doors giving access to the day rooms and to the staircase open on to this arcade. There is no bath room on the first floor, only some fixed basins, which were being altered at the time of our visit. There is a watercloset for each floor on both male and female sides.

THE WARDS

hold 72 beds, of which 64 were occupied at the time of our visit. They are on two floors, and contain each 12 or 13 beds. Both male and female wards are in the same block of buildings, communicating by a door on the first floor, and on the ground floor by a passage, off which is the nurse's room. The arcade is divided by the party wall, and there is also a wall which divides the garden into two halves, corresponding to the two divisions of the infirmary.

ON THE FEMALE SIDE

we found a patient with cancer of the breast; there was no open wound, but the poor creature was in a state of helpless suffering. The rest were cases of decay, paralysis, and infirmity. The nurse told us that she had 33 women in the wards as helpless as children. The walls are painted brick, giving an uneven and insanitary wall surface, the day-rooms, staircases, and passages are colour washed. There is no attempt to relieve the monotony of the day-rooms by any decoration. The bedding is principally straw, on a cocoanut mat; the nurse said that the latter were not being replaced, since they served as a hiding place for unlawful possessions, and it was also suspected that they might harbour vermin. There are a few spring mattresses. The beds are of good width, and most of them of modern pattern. The wards are not very cheerful; the windows are set high in the walls, and are small; there are few open fireplaces. The nurses, however, by the aid of plants and pictures, had done the best they could to improve their aspect. The method of heating most in favour is the tortoise stove, with a length of stove pipe chimney. In one ward where the stove was alight the air was stifling, and most unsuitable for sick people; this was in a ward of which the occupants were in the day-room, but it served as an object lesson as to the effect of wards heated by these stoves. The wards are square, or nearly so; the principal means of ventilation is by the windows, and the lighting is by oil lamps.

THE LYING-IN WARD

is on the first floor, opening off the landing at right angles to the door of the watercloset; it holds three beds. This ward is now disused, the medical officer, Dr. Vincent, having noticed a rise of temperature in successive patients, beginning in the first week and lasting for about ten days, then

subsiding and leaving no ill-effects. For this reason the lying-in women are now treated in an attic room above this, and make an uninterrupted recovery. The watercloset, which may be in fault, has a good flush, and is quite sweet; it has, however, no intercepting lobby. The guardians are careful to keep the lying in ward whitewashed, and the bedding is changed after each confinement.

The Male Wards

are on the same plan as the female, but there were fewer patients in bed. There was one case of far advanced senile decay, another patient recently admitted, the diagnosis not yet given; a third had an ulceration of the leg. The nurse informed us that six of the men were quite helpless. The more serious and helpless cases are placed on the ground floor. The old men were in the day-room, seated on benches round the fire, watching it, a monotonous occupation in a dreary room. Does it never enter the heads of the authorities that a hard wooden upright seat affords very little rest to old bones?

The Boys' Ward,

which is a small crowded room holding six beds, was occupied by two boys with whooping-cough. We found these boys in the men's day room, so that the ward only imperfectly provides for the separation of the lads from the adults. It is much too small for its purpose. We saw no ward for the girls.

Classification.

There is practically none. We saw two imbeciles in the wards, and on asking the Chairman what arrangements were made for the care of these patients, he said that they kept the idiots for the most part out of the house by their system of outdoor relief. This bore out the doctor's statement that he had no ward for the imbeciles. We saw one small ward holding two beds available for the isolation of any case; it was really a passage room, and, of course, could only be used for temporary nursing.

The Diets.

The dinners were being served whilst we were in the house; they were well cooked, and were sent up hot. The able bodied paupers were having pea soup and rice pudding. For the infirmary the excellent custom obtains of sending the food over in bulk in jacketed tins, the nurses being responsible for its distribution. The nurse told us that the old man with decay had milk, broth, or beef tea in small quantities at frequent intervals; the other diets were pudding, broth, roast meat, and vegetables. The food at this workhouse and the method of serving it are alike to be commended.

The Nursing Staff.

There are two trained nurses and a probationer; the former are obtained through the Workhouse Infirmary Nursing Association, and the latter is generally a probationer in training for the Fakenham Rural Nursing Association. The head nurse is a certificated midwife, and either the second nurse or the probationer is on night duty. Pauper help is used to a certain extent, but the nurses make the beds of such patients as are confined to bed, and are responsible for the nursing; and we must bear in mind that thirty-nine patients, more than half of the total number on the medical relief book, are quite helpless. The infirmary is not a separate department. We ascertained that the supply of linen does not admit of each individual having his own towel; the plan seemed to be to issue a certain number of towels, which are shared as far as they will go, and changed thrice a week or oftener. It seems a pity that in apportioning the linen for the sick department the estimate is not calculated at so many articles per bed, and the nurse then held responsible for the care of the linen under the usual method of inventory and stock-taking. This would conduce to the smooth working of the machine.

The Nursery

is in the main building; in it were five infants under the charge of a pauper. We learned from the Chairman that the pauper is often changed according to the exigencies of the work in the house. Once more we noticed the absence of anything calculated to develop the child life; there were a few cradles, a low bench, a chair or two, in a whitewashed room. We were not surprised to learn from the doctor that these infants often came under his care for excoriations about the body, for under such circumstances the babes only receive the same haphazard nursing as is the lot of the little ones in their cottage homes. The Chairman said that the management held the mothers responsible for their infants, and that they were reluctant to relieve them of that responsibility. The theory may be good; but the result in practice is the raising of a permanent crop of paupers.

Drainage and Water Supply.

The drainage was entirely overhauled and improved about five years ago, and is pronounced in good order; the water is pumped up every day from wells into tanks and cisterns; there appeared to be an ample supply. The closets have a good flush, and there is water for the baths.

The Medical Officer

lives about two miles and a-half from the house; he is fetched by messenger. Considering this distance, it is fortunate that he can rely upon the services of trained nurses, whose skilled observation can tell them when it is necessary to send for him. There are bells from the wards to the nurses' room.

Recommendations.

It appeared to us that, considering the size and situation of the infirmary, it might with advantage be made into a separate department under its superintendent nurse: that the wards wanted more light and air and a better system of heating. More wards are required for isolation and for the treatment of the fit and imbecile cases, a children's ward (with which the nursery might well be combined and put under the control of the nurse), and increased accommodation for the nurses. We would also suggest an intercepting lobby to cut off the closets, and that another place be chosen for the lying-in ward. More comforts for the patients might be added to this list.

We trust that these suggestions will be met in the spirit in which they are offered, as we are fully sensible of the courtesy with which the board allowed the inspection of the house. We look forward to the day when this infirmary shall take its right place as the hospital for the district, the ambulance bringing patients from the remote villages to be nursed within its walls, and a visiting staff of nurses setting forth on their errand of healing to the cottage homes.

THE LAMBETH INFIRMARY MATRON—A CORRECTION.

We have been informed by a correspondent that Miss Griffiths, the matron of the workhouse infirmary, is a trained nurse, and that she received her training at the Royal Infirmary, Manchester, where she was three years. We hasten to insert this correction, and apologise for the incorrect statement in the British Medical Journal of December 15th. As we read the report of the guardians' meeting we were forced to the conclusion that the cause of the dispute was the friction that always exists when the trained nurse is in subordination to the untrained officer, especially as the medical officer in his report to the board said "that it was essential that the nurses whilst on duty should be under the exclusive control of the assistant matron as a hospital trained nurse," and one of the board pointed out "that the matron was not a certificated nurse and was not qualified to give the necessary lectures to the nursing staff." As the nursing certificate is of quite recent date, and many of the best qualified nurses do not hold any certificate, it is evident that the cause of the quarrel lies deeper than appears on the surface.

THE SICK IN A CORNWALL WORKHOUSE.

Dr. Fuller has been looking up these remote districts, with the result that at Penzance he finds no trained nurse, "only a middle-aged officer, who has acted for seventeen years, and there is no night nurse." A man suffering from cancer in the stomach had bad sores on the hip and shoulder, which were not dressed, but only washed with Jeyes' fluid; a dying man unable to take his food had no one specially to attend him, and the nurse thought it was no use to try and feed him; the inspector says "these two cases required for some time the almost constant attention of a trained nurse." The lying-in ward is condemned as "most unhealthy, and should be entirely remodelled." We are sorry to see that this report was jeered at by some of the board as the result of red tape, and that there seemed to be no disposition to mend their ways; to us the report reads as a grave indictment of incompetency, which we trust the new board will remove.

THE LEEDS UNION INFIRMARY NURSES' HOME.

We have before us an account of the opening of this home by the Rev. W. H. Stansfield, the Chairman of the Board. It seems that the guardians have experienced much difficulty hitherto in obtaining and retaining an adequate staff of nurses, and like wise men they searched into the cause, finding that one reason, and that a very important one, was that the nurses had no home apart from the infirmary; to quote from the chairman's speech, "the result being that they had to spend

their spare time amidst the same influences and surroundings as encompassed them when on duty." The erection of the Nurses' Home is a step in the right direction, and we doubt not that the results will soon manifest themselves in an improved and contented staff of nurses. The home appears to be most complete in all its arrangements, and to have been planned with a care and forethought for the comfort of the nursing staff that is creditable to the board.

CANTERBURY WORKHOUSE INFIRMARY.

A CORRESPONDENT writes to say that in this infirmary there has never been pauper help in the nursing, and that "when the assistant nurse has been doing night duty the extra help has only been to act as wardwoman—to scrub floors, make beds for patients that were up, not to nurse." The point we urged was that for the sake of avoiding the employment of a regular night nurse the assistant nurse had at times to take night duty, and that at such times the work of the house was disturbed, the one remaining nurse "having to be assisted by paupers from the house." We do not say that these paupers help to nurse; we do not even say that the paupers are nursed while the assistant nurse is withdrawn for night duty. What we say is that when that is the case all the day nursing, which usually employs two, is done somehow by one, "assisted by paupers from the house." What part each takes in the performance and how the one nurse gets through the work of two we do not suggest. We do say, however, that the necessity of so disturbing the work of the house when night nursing is required points strongly to the desirability of having a permanent night nurse, especially as we understand that during a considerable part of the year there is no night nursing at all, and the unfortunate day nurse has to be rung up when anything is wanted. Like many other ladies, our correspondent keeps the most important part of her letter to the end, which runs as follows: "but, I may add, a night nurse is wanted"—which is exactly what we contend.

A VISIT TO THE NEW COLONY FOR EPILEPTICS.

[From a Correspondent.]

THE train from Baker Street reaches Chorley Wood in some 40 minutes, and a pleasant country walk of about four miles brings us to Skipping's Farm, where the colony is situated. It is a homestead, pleasantly located on the borders of Bucks and Herts, commanding pleasant views of the surrounding country, and it lies facing the south. The geography of the district is, however, decidedly ambiguous, and were it not for the assistance of the ordnance survey the site of the colony would be difficult to find. This freedom from publicity is a great point in favour of the spot selected for this important undertaking, and the wisdom of it is shown in the quiet simplicity of the daily life of the place.

Interest in work to be done is the chief idea which is encouraged to act upon the minds of the colonists, and their ability and willingness to do it lends a brightness and energy to the daily routine.

The National Society for the Employment of Epileptics is to be congratulated, for it may be fairly said to have commenced its actual work. There are already twelve epileptics comfortably settled in the new colony, and there is at present accommodation provided for about six more. Daily occupation is provided for them, and during the short time they have been in residence there are evident signs of the quantity and quality of the work these afflicted ones are capable of doing under competent supervision. It is a happy reflection to consider that here a helping hand is being held out to rescue those sufferers from epilepsy whose lives under ordinary circumstances would be one of blank inertia, useless to themselves and to others, till mind and memory became lost in madness, and they had qualified for the lunatic asylum.

The present buildings are of a temporary nature, which, on the completion of the block now in the process of erection, will be converted into workshops. There are suitable dormitories, and a large comfortable general sitting room, together with capital domestic offices, all under the personal supervision of the excellent lady superintendent, Miss Delaney. A skilled attendant and a farm bailiff also look after the various outdoor occupations. The rooms are well warmed and lighted, hot and cold water are laid on throughout the building, and an artesian well has been sunk which yields a good supply for domestic purposes, and also for the bathing and other sanitary requirements. Much has been done in the way of road making, planting, preparing the ground for future crops, and in building the requisite houses, offices, etc.

Everything "institutional" is kept as much as possible in the background. There is complete freedom from restraint, and an air of quiet domesticity prevails. Yet to the expert eye the epileptic remains the epileptic still, but under conditions eminently more favourable and conducive to a life of quiet usefulness than has hitherto been the case in this country.

The colonists are confined to one sex. Obviously, and for many reasons, it would have been unwise to commence such an undertaking with a mixed colony, and as the initial work to be done necessitates male labour, the first colonists are of that sex.

When the value of this undertaking has been more fully grasped by the community, and the enormous amount of good it is capable of effecting in alleviating the lifelong suffering of our epileptics is realised, means for the further development of the colony will doubtless be forthcoming. Already the land, the buildings, the furniture and fittings, and the working staff have been provided, and an influential committee of willing workers are carrying on the good work. The future of this colony will certainly be a bright one if good intentions, energy, and enlightenment are to be relied on for producing good results, and the successful formation of our National Colony for Epileptics must be hailed with satisfaction. Under such favourable auspices it should ultimately become our British Bielefeld.

LITERARY NOTES.

THE *Revista Clinica* is the name of a new medical journal which has recently appeared in Madrid. It will be published twice a week, and will be edited by Drs. Eulogio Cervera, Gonzalez Encina, G. Tanago, Riva, and Rebolledo.

The number of theses for the degree of Doctor of Medicine presented to the Paris Faculty from December 18th, 1798, to July 31st, 1894, is officially given as 28,793. In addition to these, 793 theses for the post of *agrégé* and 220 for that of Professor were presented, making a grand total of 29,806. From 1825 to 1886 it was the rule that theses should be presented in competition for the post of *agrégé*; during about half that period they were also required of candidates for professorships.

The first number of the *Monatschrift für Geburtshülfe und Gynækologie*, just issued under the editorship of Professors A. Martin, of Berlin, and M. Sänger, of Leipzig (S. Karger, Berlin) presents a handsome appearance, and the high reputation of its editors, together with the scientific value of its contents, give promise of a successful career. In the editors' programme an interesting sketch of the history of German gynecological literature is given, and among the other matters contained in the number before us are important original communications by Professor F. Schauta, of Vienna; Dr. P. J. Moebius, of Leipzig; and Professor Sänger, of Leipzig. Abstracts of some of the papers will appear in due course in the EPITOME.

The following is a copy of an autograph letter written by the late Dr. Oliver Wendell Holmes to a man "whose fame is unsurpassed by any name in the American profession" (we are quoting the *Medical and Surgical Reporter*, in which the letter is published), but who prefers to remain anonymous. The letter is interesting as a record of the opposition which Holmes encountered when he endeavoured to put the profession on the right way as regards the prevalence of puerperal fever.

Boston, October 23rd, 1874.

MY DEAR SIR,—I happen to be suffering from influenza to-day, with so much lassitude and febrile disturbance that I do not feel able to answer you as I should be glad to. But I am unwilling to wait longer, and therefore I must now thank you most cordially for the letter and the pamphlet which came soon after it. The testimony you bear to the sad fact which I laid before the public so many years ago confirms, if confirmation were needed, the thesis I maintained.

It is *thirty-one* years since (April, 1843), in the *New England Quarterly Journal of Medicine and Surgery*—a periodical of merit, but which died with its fourth number—I published an article which I considered settled the point of the communicability of puerperal fever from one patient to another by the accoucheur.

Dr. Meigs and Dr. Hodge attacked my position in a way which made me ashamed, both talking like class declaimers in the face of facts which people of common sense could only interpret in one way. I confess that *I* declaimed too, but I only fired powder after firing shot and shell. I have been sick of the name of "Professor" ever since.

Hundreds of lives might have been saved if, instead of ranting to their ignorant classes, they had enforced the disagreeable truth I had made plain enough for those who would not shut their eyes.

Twelve years later, in 1855, I reprinted the essay with additions, and

reprinted it once more in my volume, *Currents and Counter-Currents*, printed in 1861.

Of course, being separated as I have been from medical practice, I still could not help being interested in Dr. Barker's book, which he kindly sent me; and I assure you that I feel very much obliged to you for sending me your notice of it, to say nothing of the fact that I read a good part of your address, which seemed to me eminently readable, as well as of great practical significance

Forgive the petulant way in which I have spoken of the two distinguished gentlemen, one of whom was very probably your teacher. You may set it down partly to the irritation which sometimes accompanies these wretched influenzas.—Believe me, dear sir, very truly yours,

O. W. Holmes.

It is proposed to collect the physiological papers and addresses of Professor Newell Martin and to publish them as one of the memoirs of the Biological Laboratory of the Johns Hopkins University. This plan has (we learn from the *Johns Hopkins Hospital Bulletin*) been adopted in response to suggestions from a number of Professor Martin's former pupils, in order that his long and valuable services to the University and his brilliant contributions to American physiology and biology should be commemorated in an appropriate manner. It is hoped to raise a fund among Professor Martin's friends sufficient to meet the cost of an edition of about 300 copies. One copy will be sent to each person or institution subscribing 10 dollars. Subscriptions are to be made payable to Professor W. H. Howell, Johns Hopkins University, Baltimore. The work is to be placed at once in the hands of the printer.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 16th day of January next, at 2 o'clock in the afternoon.

December 11th, 1894. Francis Fowke, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1895. ELECTION OF MEMBERS.

Meetings of the Council will be held on January 16th, April 17th, July 10th, and October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely March 28th, June 20th, and October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election. Francis Fowke, *General Secretary*.

CAPE OF GOOD HOPE BRANCH.

The annual general meeting of this Branch was held on September 20th.

Reports of Secretary and Treasurer.—The reports of the Secretary (Dr. Kitching) and Treasurer (Dr. Dodds) were read and adopted, both being very satisfactory.

Condition and Work of the Branch.—During the recent session seven ordinary meetings were held. At all of these original papers were read and discussed, and several interesting pathological and living specimens were exhibited. A special meeting was held to decide whether or not it lay in the province of the Branch to influence the impending election of members of the Colonial Medical Council. The question was decided in the negative. The membership roll now includes nearly 100 names, many from distant parts of the Colony and South Africa generally.

Election of Officers.—The office bearers for the ensuing year were elected as follows:—*President:* Dr. J. H. M. Beck. *Vice-President:* Surgeon-Colonel Hamilton. *Secretary:* Dr. D. J. Wood. *Treasurer:* Dr. Dodds. *Members of Council:* Drs. Anderson, Herman, Murray, and Ross.

President's Address.—The Presidential address was then delivered by Dr. J. H. M. Beck, who took as his subject a retrospect of medicine and medical practice at the Cape. As early as 1827, or even earlier, a medical society existed in Cape Town, and a record of its proceedings was extant. From a perusal of these minutes one learned that this older race of medical men was strongly imbued with humane and philanthropic instincts, keenly alive to scientific research, and determined to uphold the dignity of their profession with regard to the outer world, and their self-respect among each other. A resolution was passed by this society to promote concord and *camaraderie* among the members, while another even more admirable one bound the signatories to supply the absence of a widows' fund by honourably paying to the widow or children of a deceased member all fees obtained from his former patients during an entire year. That these were no empty resolutions was evidenced by the minute book of the Association. Further, it could be gathered that the purely medical work of their predecessors was of a high order, while not a few of the members had left behind names held in honour on account of their achievements in other scientific subjects. The President alluded by way of contrast to the extraordinary romance centreing round the name of Dr. James Barry. After a phenomenal career, including a fatal duel, and culminating in the post of inspector-general of hospitals, death revealed that this strange being not only was a woman, but had also been a mother. The President concluded by impressing on the members that now more than ever they had a large share of public duty, which as an assemblage of educated men it behoved them to fulfil.

BERMUDA BRANCH.

A meeting of this Branch was held at Hamilton on November 16th, Dr. T. A. Outerbridge, President, in the chair. Nine members were present.

Confirmation of Minutes.—The minutes of the last meeting were read by the Secretary and confirmed.

New Members.—Dr. Thomas Martin Allen and Dr. Edward Ernest Brown were elected members.

School Hours in Bermuda.—A discussion on this subject ended in the following resolution being passed:

That a circular letter should be sent to the head masters and mistresses engaged in schools for higher education suggesting that an interval of two hours be given the children in the middle of the day which would enable them to go home to a hot dinner with their parents.

Exhibits.—Sanitary appliances suitable to Bermudian houses were shown by Mr. Eldon Harvey.

BRITISH GUIANA BRANCH.

The annual meeting of this Branch was held on November 1st at the Georgetown Public Hospital.

New Members.—Drs. G. O. W. Deane and J. R. K. Ross were elected members.

Annual Dinner.—It was agreed to have the annual dinner in January.

Election of Officers.—The following officers and members of Council were elected for the ensuing year:—*President:* Dr. Wallbridge. *Vice-Presidents:* Drs. Shannon and Anderson. *Honorary Secretary and Treasurer:* Dr. Daniels. *Council:* Drs. Leary, Godfrey, London, and Neal.

SPECIAL CORRESPONDENCE.

PARIS.

New Diphtheria Services in the Paris Hospitals.—Cheap Dwellings.—Sanitary Improvements in Paris.—The Protection of Infants.—Baths in Paris Schools.—Meeting of Medical Syndicates.—Proposed Asylums for Inebriates.—General News.

Two new diphtheritic services have been organised, one at the Trousseau Hospital, the other at the "Enfants Malades." These services are not, as formerly, placed under the charge of the hospital physicians, who take it by turns to go round the wards and treat the child patients. A special physician is attached to these wards. The administration is also engaged in making further improvements, providing sufficient beds for the doubtful cases kept under observation, isolating those who are attacked with another contagious disease.

According to the Bill passed on November 30th on Cheap Dwellings, committees may be formed in each department for the object of providing cheap healthy dwellings. These committees may be legally subsidised by the State, by the Departments, or by the Communes; they may accept gifts and bequests if the rules laid down by the Code are respected. These Committees are forbidden to possess other house property than what is strictly necessary to carry on Committee business. These Committees can offer prizes for models, plans, etc., and use every means to encourage the construction of cheap, healthy dwellings.

At a recent meeting of the Conseil Municipal M. Laudrin read a report on the proposed sanitary improvements voted in July, 1894. The city of Paris is authorised to borrow 117,500,000 francs (£4,700,000); £40,000 will be spent in constructing new sewage canalisation in Paris. All the work must be completed within five years.

The Prefect of Police has sent to the mayors of the Seine Department a circular reminding them of the law of 1894 concerning the protection of infants, which requires a notification to be made to the mayor when a child is boarded out. If this is not done, and at the same *mairie* where the birth of the said child is registered, the penalty is imprisonment during a period varying from six days to six months and a fine varying from 14s. to £12.

M. Lucipia, M. Blondel, and M. Puech, at a recent meeting of the Municipal Council, urged the Assistance Publique to give £800 to the free dispensary for poor children which will be opened in the Third Arrondissement. M. Chausse, a member of the Council, demands that shower baths should be used in all the Paris schools. In certain districts, inhabited principally by working people, this is of the greatest importance. In the Eleventh Arrondissement there are 17,000 school children. If these remain unwashed they constitute a terrible army of possible conveyors of infection.

A meeting of medical syndicates was held a few days ago at the Hôtel des Sociétés Savantes. Fifty of the French departments were represented. With regard to gratuitous medical help the delegates desire that patients be allowed to choose their doctor whom they wish to be paid for each visit separately. They also asked that disinfecting services be organised. The pharmacy law recently voted was approved of by the delegates. All the delegates agreed that medical students should be allowed to do their year of military service in hospitals, or under conditions in relation with their professional studies.

The General Council of the Seine has organised a competitive examination of plans for an asylum for male and female drunkards, to be built on a site belonging to the Ville Evrard domain, in the Seine et Oise Department. Dr. Bourneville, Dr. du Mesnil, and Dr. Puteaux, members of the Superintending Committee of the Public Asylums of the Seine Department, are among the examining judges.

Dr. Léon Labbé, Dr. Cornil, Dr. Lannelongue, and Dr. Pédebidou have represented to the Minister of Instruction that they consider that medical men attached to lycées should have the right to send their sons to these establishments without paying fees. The Minister replied he could not make the change, but should not oppose its being made.

CORRESPONDENCE.

THE NEW PHARMACY.

SIR,—There is an aspect of this subject which I had hoped would have been earlier touched upon. The convenience of tabloids and other proprietary mixtures and preparations may be great, but the evils are certainly many.

In the first place, tabloids and all other sorts of proprietary medicines are far too often recommended by laymen to their friends, or procured from chemists on the strength of some advertisement, without a doctor's prescription—usually to the sufferer's disadvantage. Who has not had experience of patients who have tried in vain this or that tabloid or mixture or syrup for complaints which could only be made worse by the selected remedy?

But, apart from this, it is owing to "the new pharmacy" that the art of prescribing is in danger of becoming largely a lost one. I have even heard of medical men using a printed form of prescription of some wholesale chemist's puffed mixture sent out by the hundred, and requiring only a signature to be appended. Where now is the dignity of prescribing?

I think it is the duty of all medical men to set their faces against the class of preparations I allude to. Of course, certain proprietary crude products, such as animal extracts of no standardised strength, stand on a different footing. With a little pains and the co-operation of an intelligent chemist, a far more efficacious imitation of most of the mixtures may be made, for these proprietary articles are mostly palatable and contain homœopathic doses. The chemist will gladly give his help, for these preparations are forced upon the market by the wholesale houses, and the retailer gets a very small profit. If tabloids are used, they should be made or procured by the local chemist from a doctor's prescription that can be varied as needed, and not from Messrs. X. Y. Z.'s prescription. Many things which chemists commonly do not make, such as lozenges, suppositories, etc., there is no reason why they should not.—I am, etc.,

Bournemouth, Dec. 18th. H. G. LYS, M.D.Lond.

SIR,—I must ask you for sufficient space to reply to your correspondent "J. C." in the BRITISH MEDICAL JOURNAL of December 15th. I am quoted as saying in my letter of November 24th: "What, again, would be thought.....of the doctor who had no 'shop?'" My words were: "What, again, would be thought in these *(isolated country)* districts of the doctor who had no 'shop' (surgery)?" The term "shop" is commonly applied by the villagers of these old-world spots to the doctor's surgery, and its meaning in this reference is very probably its original one of "storehouse," long antedating its present signification as "a place for retail trade." This is somewhat borne out by the fact that though keeping a "shop," he (the doctor) is neither spoken of nor looked upon here as a shopkeeper in its ordinary sense; his social status, I fully believe, depending both here and everywhere else entirely upon himself.

With your correspondent's suggestion that dispensing by country practitioners should be confined to cases of emergency I cannot agree; for instance, the nearest chemist lives at the nearest town, fully six miles from here; to whom, may I ask, would he hand over the dispensing of medicines? "An isolated case," he may answer; in one sense it most certainly is, yet its parallels are doubtless to be found. He says it seems ridiculous that another class of men—pharmaceutical chemists—should have to obtain qualifications to dispense, and then find that, through the shopkeeping proclivities of the provincial practitioner, their pharmacy is often limited to the sale of paraffin oil and hucksters' wares. In the first place, may I ask him on what lines, by what means and for what reasons he would propose to forbid the dispensing of medicine by the country doctor, who is duly and often specially qualified for this branch of practice by having taken an apothecary's diploma?—I am, etc.,

Brightwalton, Wantage, Dec. 17th. GEORGE C. PEACHEY.

AXILLARY CANCER.

SIR,—Mr. Roger Williams, in writing of my case of axillary cancer, labours under the disadvantages of not having seen the specimens, and of only having read an abstract of the

paper. The neoplasm evidently originated in one of those "axillary lumps" described by Dr. Champneys, and the point at issue is—Of what do these lumps consist? At present I believe no other description of one of these specimens has been published; but Mr. Bowlby informed the Society that Dr. Champneys had recently investigated two cases microscopically, which he would shortly publish. When the details of these are known, it will be much easier to form a judgment as to the true nature of the lumps. If, however, it will help Mr. Williams to a correct conclusion, I may say that the following observations are probably to be relied upon:—

1. The neoplasm was indistinguishable from ordinary scirrhus mammæ.
2. Mammary gland acini were present in the axilla.
3. The acini opened into large convolute tubular ducts, of sweat gland character, and with muscular walls.
4. These ducts contained milk-like secretion.
5. They all opened into hair follicles (? about 200).
6. Normal sweat and sebaceous glands were present in fair quantity.—I am, etc.,

Liverpool, Dec. 18th. F. T. Paul.

SUPPOSED EXCEPTION TO COLLES'S LAW.

Sir,—Mr. Hutchinson remarks that the infant whose case was reported by me had probably acquired syphilis in some accidental manner after birth. To this I can only reply that after careful examination no primary sore could be found, and that the first symptom noticed was soreness about the angles of the mouth, and again, that the mother informed me the child had been nursed by no other woman than herself. Then, too, this must be regarded of importance: the child presented the "wan and old-mannish" appearance so well described by Mr. Hutchinson. The presence of snuffles points strongly to congenital rather than acquired syphilis. It must be admitted that it is unusual though not impossible for congenital syphilitics to exhibit no signs until the age of six months.

Mr. Cotterell remarks that it is quite possible the mother was infected from the child. As to this being the case I think there can be no doubt, for the first lesion noticed on the child was sores on the insides of the cheeks; the mother's breasts became affected one month later. When I saw her on the last occasion she had a typical secondary rash and pharyngitis.

Mr. Ogilvie's remarks do not require any answer; but I should like to remind him that it is not essential to have every symptom present in order to make a correct diagnosis.—I am, etc.,

Birmingham, Dec. 17th. Albert Lucas, F.R.C.S.

PAY WARDS AT THE GREAT NORTHERN CENTRAL HOSPITAL.

Sir,—With reference to the letter of Mr. Fraser Black of December 5th, I am desired by the Committee of Management of the Great Northern Central Hospital to repudiate any approval of, or sympathy with, the opinions and sentiments therein contained, which must be regarded as those of the writer alone.—I am, etc., C. T. Murdoch.

Eccleston Square, S.W., Dec. 21st. Chairman of the Committee.

LIBRARY BOOKS AND INFECTIOUS DISEASE.

Sir,—With reference to the method of disinfection employed in respect to library books in the parish of Stoke Newington, in each case I exercise my discretion as to whether I shall order the book to be removed to the disinfecting station, where it is exposed to dry heat at 250° to 300° F. for two hours, or whether it shall only be left (opened) in the room during fumigation. The latter alternative is judged sufficient where the patient has suffered from erysipelas, for instance, or, in some cases, where the book has has not been actually handled by the patient. Where smallpox is concerned the books are destroyed.

I fancy that books are retentive of infection only to a slight degree, or it would follow from the general absence of precautions that there should be no lack of instances in London in which library books have acted as the vehicles of infection.

It is easy to see several respects in which books afford a far less acceptable and permanent nidus for infective material than clothing and bedding, which, unlike books, have so frequently been shown to be instrumental in the spread of infection.—I am, etc.,

Henry Kenwood,
Medical Officer of Health, St. Mary, Stoke Newington.
December 18th.

MEDICAL ATTENDANCE ASSURANCE SOCIETY.

Sir,—With reference to the article in the British Medical Journal of December 15th *re* Medical Attendance Assurance Society, I regret I was induced to connect myself with it, but when I became aware of its true nature I felt obliged to sever my connection as soon as possible.—I am, etc.,

Kingsland Road, N.E., Dec. 14th. E. Campbell Hearne.

NAVAL AND MILITARY MEDICAL SERVICES.

SELECTION *VERSUS* SENIORITY.

Various rumours, which appear to be well grounded, are in circulation to the effect that the days of strict seniority promotion in the administrative grades of the Army Medical Staff and brigade-surgeons' rank are over for ever, and that, in the future, it will be replaced by strict selection by a selection board composed of general officers and probably one administrative medical officer (not an *employé* in the medical division of the War Office) to represent the department.

An arrangement such as this will be accepted by medical officers as a very just and necessary measure; but the so-called ethical aspect of the matter needs a short notice. It is expressed in this short question: Shall or shall not a medical officer whom it is proposed to supersede be duly informed of the intention to pass him over, and thus be given a chance of voluntary retirement before, as it were, publishing in a *Gazette* his unfitness for advancement; or, on the other hand, is it a fair method of treating old officers with many years of service to let them learn of their supersession first and only through the medium of the *Gazette*? The general opinion is decidedly in favour of an affirmative answer to the first query; to the second the reply is in the negative.

If forewarning of supersession is carried out it will, at all events, give any officer concerned the chance of voluntary retirement before the appearance of the *Gazette*; while, *per contra*, if the summary publication of a *Gazette* is the only intimation an unfortunate superseded officer receives, circumstances may make him hold on to the last moment, and thus obstruct the promotion of those in lower rank, and cause promotion to be slower than ever. Surgeon-Colonels cannot be compelled to retire till 60 years of age. The remedy, then, should be that any officer superseded for any physical or administrative unfitness should be forced to retire.

Another matter connected with the selection board should not be overlooked. This board can only recommend to the War Office selection or supersession from the records laid before it of an officer's capability or unfitness by the Army Medical Office, so that any medical officer with a succession of clean confidential reports by general officers under whom he has served, should not, we should say ought not, be injured by any verbal or hearsay evidence brought against him through any personal feeling of the medical division of the War Office. This may be considered a harsh remark to make, but human nature is not unerring in this respect, and this has been proved often enough in official army life. In short, the selection board for promotion will have a grave duty to perform, and it would be well if its power of very thorough inquiry into each case were established.

A proposal that has recently been made by the *Broad Arrow* respecting extensions of age deserves earnest attention, for its realisation would at once content the department and set at rest suspicion of favouritism. This reasonable proposition is that in every case in which extension in age is granted under the provisions of Article 347, a notification should appear in the *Gazette* setting forth the period and reason for giving it to any particular medical officer.

AMERICAN OBSERVATIONS ON THE ARMY MEDICAL DEPARTMENT.[1]

A certain number of our readers will recollect the visit to this country, three years ago, of a very pleasant, observant, and distinguished medical officer of the United States Army, Lieutenant-Colonel Woodhull. The results of his observations are now before us in an abridged form. He states: "Having been sent to England, in 1891, upon other duty, I was ordered to make the utmost use of such facilities as may be granted to study the British military hospitals; the Army Medical School: the duties of medical officers; the sanitary administration of barracks and camps; and particularly the instruction and service of the Medical Staff Corps; also, to carefully examine the system of physical training in the British Army."

He gratefully acknowledges the courtesy and unwearied attention of all, to whom he was introduced, in their endeavours to make his mission a success; and we can return the compliment by hearty congratulations upon his having made the "utmost use" of facilities extended to him.

The abridged report, extending to 160 pages, is so comprehensive, that we can form some idea of the elaborate character of the full official report; indeed, the abridgment is such an admirable summary of the organisation and regulations of our army medical department, that it might be perused with advantage by the medical officers themselves; every point, almost, is reviewed with surprising accuracy, and any misstatements are of the most trifling character.

We have always been struck with the general excellence of reports issued by the War Department of the United States, both as regards matter and form. It would seem in America that when a competent officer is selected to report, he is allowed a free hand as to scope, style, and length; his work is apparently not mutilated by superior intelligence at headquarters, nor cut down by a stingy printing office.

We are, of course, chiefly interested in Colonel Woodhull's running criticisms, which give us a glimpse of ourselves as "others see us," and are invariably marked by a friendly frankness. His report suggests so many interesting points for comment, that it is with reluctance we are compelled to notice only a few.

On our army medical establishments, generally, he remarks that numbers, designation, rank, pay, retirement, etc., are not fixed by "law," by which we suppose he means statute, but by Royal Warrant, while the whole rests indirectly on an annual vote or appropriation for the army. This arises from the constitutional fiction that a standing army is a menace to civil liberty, and may be dispersed any year by a vote of the Commons; but although the rights of our soldiers seem to rest on such a shaky and ridiculous foundation, the balance is redressed by giving Royal Warrants the force of law, although seldom interpreted in a court of law.

On voluntary retirement in the medical service, he states: "This voluntary renunciation of active service makes promotion relatively rapid, but at the same time the army loses many trained men in the prime of life, and the sentimental attachment to the service, which is a considerable element of efficiency, is liable to be weakened." But he apparently overlooks the very different conditions of our army, and especially medical service, largely in unhealthy foreign climates, from those of the United States: with us the privilege of voluntary retirement even in the prime of life is only the unavoidable alternative of wholesale sick leave and invaliding.

On our "Morning Sick Report" he remarks, probably in contradistinction to procedure in his own army, that it is "not signed by any officer, and there seems to be no obstacle to any soldier who desires coming before the medical officer." That is so: our assumption is that the medical officer is the best, indeed the only competent, judge as to whether a declaration of sickness be well founded or otherwise: but Colonel Woodhull does not seem to infer that our easy access to a medical officer encourages scheming; for he states from personal observation in our inspection rooms: "I was impressed with the rigor exercised in taking up men as sick. Soldiers that I should not have hesitated to excuse were summarily marked 'medicine and duty,' and so disposed of."

Colonel Woodhull evidently considers our married roll absurdly large, for he declares it is "enormous judged by any ordinary measure of a combatant force." Attendance on the families of soldiers not on the married roll being voluntary, and left to the goodwill of our medical officers, he remarks: "According to my observation, such voluntary attendance, although a very great tax on their (medical officers') time and patience, is freely rendered and much appreciated." We heartily endorse this, all the more that the detractors of our medical officers never mention such voluntary and kindly labour, but represent that their time is engrossed with too purely military functions, to the neglect of the professional.

Our "stations" correspond to the "post" hospitals of the American army; yet another example of the invincible repugnance to the word station in that country, where it is always supplanted by some synonymous term.

The temporary employment of hospital orderlies from the ranks is common with us, but, he mentions, is prohibited by "law" (? regulation) in the American army, which is probably judicious in view of the small fighting force of that army.

The system of our hospital dietary is essentially different from the American; ours is based on individualism, with personal stoppages, theirs on collectivism, with the whole on a general debit and credit account. They have two classes of hospital diets, full and special. The former is supplied in bulk for twelve men daily, with a varied and liberal bill of fare for each day in the week; the special is of course ordered to individuals, and embraces a long catalogue of articles, among which "stewed oysters" and "broiled ham" will tickle the fancy of our medical officers.

In view of our continuous service in all parts of the world, he thinks our medical history sheets useful documents; but they would be superfluous in America, as the information they afford is concentrated in a hospital register at Washington.

Concerning recruiting, he somewhat erroneously states that attestation is "effected by a civil magistrate, not a military officer": that was so up to within ten years ago, but is now only true of outstations. At all our great urban recruiting centres, and at the headquarters of regimental districts, approving field officers have the power of justices to swear in recruits; and in this way the old delays and obstructions in resorting to a civil magistrate are avoided. He observes that our "special enlistments are very frequent"; he may take them to be from 15 to 25 per cent. of the whole, but we trust he is not imbued with the common fallacy that "special" recruits are necessarily inferior; such enlistments arise in the great majority of cases, simply from want of correlation, in growing lads, between the hard and fast military standards of height and chest, which after all are only approximate, and in no way to be considered as ultimate physiological or vital facts. Nor, for all the outcry, do our "specials," under good food and training, long remain distinguishable as such in the ranks.

As the Medical Staff Corps was to be particularly reported on, we have scanned this lengthy review of it with much interest. On the limitation of the standard of height, between 63 and 65 inches, he emphatically states, what we fully endorse, and wish we could bring home to our opportunist military rulers, who seem to think any stunted creature good enough for a departmental corps: "I am justified in saying that medical officers of experience do not regard with satisfaction the limitations of stature for these men; and it is obvious that for the conditions of our own service an undersized corps, with consequent inability to handle heavy men, would be unsuitable."

Our Medical Staff Corps, notwithstanding disadvantages, is evidently more highly organised than its American cousin, which, according to Colonel Woodhull, is most deficient in the intermediate grades of non-commissioned officers, and "resembles a regiment made up of privates and serjeants-major." He considers it "one of the anomalies that, although on duty at all other stations, and on troopships to India, the Medical Staff Corps does not serve in that Empire." But there are substantial reasons for the anomaly; a native hospital service had grown up in India long before the Medical Staff Corps was created, and the supersession of that native ser-

[1] *Observations upon the Medical Department of the British Army made in 1891*: abridged from an official report. By Brevet Lieutenant-Colonel Alfred A. Woodhull, Major, Medical Department, United States Army. (Publication authorised by the Secretary of War.) (Demy 8vo, pp. 160, 1891.)

vice by Europeans would not only be enormously expensive, but of doubtful utility, and, from the nature of the duties in an Indian climate, attended with the gravest risks.

His comments on the Depôt and Training School of the corps at Aldershot are of especial interest in view of the underhand attacks we sometimes see made on it in the "service" press. He says: "All the Medical Staff Corps recruits at depôt are diligently taught infantry drill..... Careful and constant observation of the drill, which was extremely interesting from the pains and thoroughness with which it was taught, showed that the medical officers at Aldershot had brought their battalion into an admirable and enviable military state. Necessarily adjusting the movements of their stretcher-bearers to those of their infantry, as we must to our own, I may say at once that I saw nothing except their zeal to recommend for our adoption; and in several particulars our own methods are simpler, the movements more quickly executed, and the exercises more diversified and better adapted to the general end in view, the speedy relief and collection of the disabled."

Again, "the actual drill at Aldershot is admirably executed, but, in my opinion, our manual and drill as a whole are swifter, simpler, and better adapted to the purpose." We would not, even if we could, now traverse these views, but rather present one more extract: "I wish to emphasise the expression of my opinion that this instruction, like all I saw at Aldershot, was given with such intelligence and fidelity as to compel the interest and improvement of the men, and that in turn they acquired much of what was taught."

That is handsome testimony from an entirely competent foreign officer, whose mission was to criticise not to praise. We hope it will not be lost upon those who on one pretext and another and from the most apparent military jealousy would regardless of disastrous results, destroy if they could both the depôt and the training it so well affords. For what are the objects of bearer company as of other military drill according to the report?

"The rigid adherence to the methods of the drill cannot be commended too highly or imitated too closely. As in all other forms of military instruction it is careful repetition and unvarying uniformity that lead to perfection and to automatic work when the test of battle comes."

On the question of medical service with the fighting line in the field Colonel Woodhull remarks: "The knowledge that a medical officer is with them (the fighting line) increases the *morale* of the command. In practice, unless fighting under general cover, I doubt whether it will be physically possible for any medical officer to reach many of the wounded where they fall, and an advancing line will very rapidly leave the medical staff in the rear unless that staff passes the disabled without assistance." In other words he clearly foresees that not only a highly-trained but a very numerous medical service will be required to cope with the terrible demands of future battlefields.

On our field equipment he writes: "In my judgment our system of tenting in all its particulars, whether considered for shelter, artificial warmth, convenience of transportation, or general adaptability of campaign, has nothing to acquire from that of Great Britain."

He strikingly points out that our "whole scheme of hospital service in the field is based on the theory of invasion, and active columns proceeding from a marine base, where the general hospital is established, and whence the process of transfer to England of the seriously disabled is carried out." Just so: as a Power essentially maritime and insular, we must always consider our base a marine one.

Colonel Woodhull witnessed our autumn manœuvres of the First Army Corps, and expresses his supreme surprise that there was no field service whatever trained with it. He says: "Naturally I did not inquire too curiously into the cause of the failure to utilise such an opportunity for practical work, but I believe the medical department was not responsible." For all that, he is probably as well aware of the "cause" as we are—namely, the penuriousness of the War Office, and the entire indifference of the military authorities to medical training; but he utters a sentence of warning from which those responsible will not ultimately escape: "Modern wars are too sudden in their onset to allow the Medical Department, which in the nature of the case has few current opportunities, to await for its mechanical training the pressure of immediate service."

Of Netley and Aldershot, in their combined functions, he writes: "In some respects the courses at Netley and Aldershot overlap, and exertion is thus wasted. But taken as a whole, they both are admirable, and are strongly recommended for our imitation."

Could these institutions be more highly flattered?

Colonel Woodhull's last few pages relate to the physical training of our soldiers; his appreciation of our system may be gauged from the following sentence: "Notwithstanding inferior material, there is no question that the British soldier looks better on duty, and as a soldier is more active, than our own. To the systematic gymnastic instruction now in force, which is an amplification and an extension of the physical training proper, they are much indebted for this superiority." Again: "The physical development of the soldier, in whom the fighting instinct is naturally strong, gives to the British army much of the formidableness it possesses, notwithstanding certain deficiencies in the original material and other incidental conditions of the service." From all of which it will be seen our American cousin is a just as well as a frank critic in army matters. We sincerely trust his criticisms on the withholding of medical training in field duties, which is absolutely culpable, will not be lost upon those who are primarily, as they will be held ultimately, responsible.

THE NAVY.

Staff-Surgeon W. H. Patterson is promoted to be Fleet-Surgeon, December 7th. He was appointed Surgeon, March 30th, 1874, and Staff Surgeon twelve years thereafter.

Staff-Surgeon W. E. Bennett is also promoted to be Fleet-Surgeon, December 9th. His commission as Surgeon dates from March 31st, 1874; and that of Staff-Surgeon from March 31st, 1886.

Inspector-General W. H. Lloyd, M.D., Plymouth Hospital, has been appointed Honorary Surgeon to the Queen, in the vacancy caused by the death of Inspector-General R. D. Mason, C.B., on November 23rd last.

Inspector-General Sir James Jenkins, M.D., K.C.B., has been awarded the good service pension of £100 a year, vacant by the death of Inspector-General R. D. Mason, C.B. Sir James was appointed Surgeon, December 27th, 1841 became Staff-Surgeon, March 3rd, 1851; Fleet-Surgeon, October 6th, 1865; Deputy-Inspector-General, March 22nd, 1872; and Inspector-General, March 9th, 1878. He retired from the service July 2nd, 1878. He was Surgeon-in-Charge of the Naval Brigade in the Crimea, during the Russian War, during the winter of 1854, and until the capture of Sebastopol; was present at the capture of Kinburn, and landed afterwards to attend the wounded (Crimean and Turkish medals and Legion of Honour). He was Staff-Surgeon of H.M. Hospital Ships *Belleisle* and *Simoon* during the China War, from 1857-61 (China medal, two clasps). He was appointed Honorary Surgeon to the Queen, November, 1862; and was nominated a Companion of the Bath in 1867, and Knight Commander of the same Order (additional member), June 21st, 1887, on the occasion of the celebration of the fiftieth year of Her Majesty's reign.

The following appointments have been made at the Admiralty: William S. Lightfoot, Staff-Surgeon, to the *Sybille*, January 8th; Joseph Crowley, Staff Surgeon, to the *Lion*, January 8th; Lawrence Bidwell and Walter H. S. Shearly, Surgeons, to be lent for three months' study at a metropolitan hospital, January 1st; T. W. Philip, Surgeon, to be lent to the *St. Vincent*, January 1st; George G. Borrett, Surgeon, to the *Pembroke*, additional, January 9th.

ARMY MEDICAL RESERVE.

Surgeon-Captain F. E. Fenton, 1st Middlesex Volunteer Rifle Corps, to be Surgeon-Major, December 22nd.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ASSISTANTS AND LEGAL FEES.

Member propounds the following query:—Dr. A. is an assistant with Dr. B., and attends an inquest for Dr. B. Dr. A. then leaves Dr. B., and goes to Dr. C. as *locum tenens* with permission from Dr. C. to attend a police-court summons following the inquest, and give evidence on the above case. Dr. A. receives a fee from the police authorities. To whom does this fee belong?

*** If Dr. A., when he became *locum tenens* to Dr. C., stipulated that he should be allowed to attend and give evidence at the police court on his own account, this fee would belong to Dr. A.; but as it was entirely derived from his late principal's business, according to the best rules of medical etiquette, he ought to offer to share this fee with the latter.

THE *PHILANTHROPIST* ON PAYING PATIENTS.

We extract the following remarks from the *Philanthropist*:—

"We have before expressed our views as to the conversion of voluntarily-supported hospitals into asylums for paying patients. We do not think the policy a sound one. Medical charities should, in our opinion, be reserved exclusively for those who cannot afford to pay. We do not

know any paying wards which can be said to recoup the institution for their costs, to say nothing of giving an opportunity of 'making money.' Medical practice, nursing, and feeding, as carried out in metropolitan hospitals, are very costly advantages, and any charge which would really cover that cost would be far too high for the class of people who are likely to apply for admission to a hospital. We think the admission of paying patients considerably reduces the force of an appeal for donations. People who will give munificently for the relief of the needy seem likely to divert their benefactions from the hospital receiving contributions from patients and send them to hospitals where the poor receive medical and nursing care without money and without price. So that although the 'pay system' has been and still is a pet theory of social economists, yet, considering all things, and especially the fact that medical practitioners may (logically or not) conceive themselves to be injured by its adoption, we think that the board of management of any hospital will do well before establishing paying wards to pause and seriously ask themselves whether the game is really worth the candle."

The view above expressed is worth the consideration of those who are interested in the foundation of "pay hospitals." Our contemporary admits, nay urges, the necessity for pay hospitals in London, but we are glad to see that he thinks with the BRITISH MEDICAL JOURNAL that it is not a wise or sound policy for voluntary charities to "go outside their charitable work to meet the want." The *Philanthropist* is looking at the matter from a financial point of view. This, of course, is far from exhausting the question, but it is a very important consideration for hospital boards, especially in the present hard times.

AGREEMENTS WITH UNQUALIFIED PRACTITIONERS.

DELTA. who encloses an agreement, states the case briefly thus: Eighteen months ago I, with a partner, purchased our present practice, X., mentioned in the agreement, had been for several years engaged as an unqualified assistant and dispenser. When we agreed to purchase the practice, X. got due notice that his services would not be required after a certain date. He soon after opened a chemist's and druggist's shop, and now practises extensively as an apothecary, visiting patients, prescribing and compounding medicines for them, within one hundred yards of my house.

I now wish to ask: *a*. Is accompanying agreement still valid, notwithstanding transfer of practice? *b*. If valid, how best to proceed, by injunction or for damages.

I may remark that X. has no qualification—medical, surgical, or pharmaceutical.

*** (*a*) The case is not free from doubt, but we think the purchasers of the practice would have the benefit of the covenant entered into with the vendors although "assigns" are not mentioned, the ground being that the benefit of such a covenant is part of the goodwill or beneficial interest. (*b*) As to injunction and damages, a solicitor should be consulted. There is the further point that the person referred to is unqualified to practise, and if sufficient evidence were forthcoming of medical practice on his part, the Society of Apothecaries would doubtless be willing to take proceedings against him under their Act.

CANDIDATES' ADVERTISEMENTS.

NON-ADVERTISER.—ANTI-PUFF.—Though it would, in our opinion, have been in stricter accord with the true ethical principle of the professional appointments detailed in the third paragraph if the advertisement in question had been limited to the circular note usually addressed, with copies of testimonials, to the governors of public hospitals by candidates seeking an official appointment therein, nevertheless the introduction thereof would not, under the circumstances, constitute unprofessional advertising. With reference to the other point mentioned, the practitioner alluded to was, in a subsequent communication, exonerated from personal complicity in the objectionable paragraph referred to, though it would appear that a more or less professionally biassed feeling still unhappily exists, so great is the force of first impressions.

FOREIGN DEGREES.

ENQUIRER.—A correspondent asks whether the possession of a non-registrable foreign degree in medicine entitles a duly registered medical practitioner in this country to style himself "Doctor" on his visiting cards and on his doorplate?

*** The holder of a foreign medical degree is not entitled to use it (1) where its use would imply he is on the *Medical Register* in this country, when, as a matter of fact, he is not; (2) when he is specially required to put down a registered qualification, as in signing a death certificate.

MIDWIFERY SUBSTITUTES.

M.D. writes: A. and B. are neighbouring practitioners. C. has engaged A. to attend her in confinement, but when she is taken ill A. cannot be found, and B. is called in and delivers her. A. then appears on the scene, and B. hands the case over to him. To what part of the fee is B. entitled, or is he entitled to any part at all?

*** The rule annexed is that which should govern the above case: "When a practitioner is called in, or otherwise requested to attend an *accouchement* for another, and completes the delivery, or is detained for a considerable time, he is entitled by custom (except in the case of illness, etc., provided for by Rule 3) to one half of the fee; but on the completion of the delivery, or on the arrival of the pre-engaged *accoucheur*, he should resign the further management of the case. In a case, however, which gives rise to unusual fatigue, anxiety, and responsibility, 'tis right that the *accoucheur* in attendance should receive the entire fee. Note.—In either event, when the officiating *accoucheur* is a stranger, or a non-acquaintance of the family doctor, the full fee should be tendered to him."

ADVERTISEMENT CARDS.

A CORRESPONDENT forwards an advertisement card issued by a medical man, containing hours of attendance at surgery and list of fees per visit or by weekly order, and inquires whether the practitioner in question is within his rights in distributing those advertisement cards and in styling himself "surgeon" thereon.

*** We need hardly say that the distribution of such advertisement cards is extremely reprehensible, and the matter might be brought to the attention of the General Medical Council. With regard to the title of "surgeon," it would seem, according to a recent decision, that a L.S.A. whose diploma is dated prior to the Medical Act of 1886 coming into operation, and who holds no other qualification, is not entitled to call himself "surgeon," but it might be difficult to succeed in a prosecution if this were the only offence against the provisions of Section 40 of the Medical Act, 1858.

"CALLING" BY A NEWCOMER.

GRADUATE.—If our correspondent be correct in his supposition as to "D.'s" motive for calling upon the other practitioner's patients—presumably unknown to him—it would be an unethical proceeding. It may be, however, that his object was to deliver a note or notes of social introduction from mutual friends, and in that case it would be a legitimate procedure.

RECEIPT OF FEES BY *LOCUM TENENS*.

D. A. S.—A *locum tenens*, in the absence of a special agreement to the contrary, is entitled to no fees for professional services rendered in the course of his employer's practice; as, moreover, he is paid to devote his whole time to this practice, it is difficult to see how under any circumstances he could claim fees for professional work except with the consent of the principal.

M.B.'S AND THE TITLE OF "DR."

J. S.—For reasons which reflection will readily suggest, we would counsel our querist to omit the prefix of "Mr.," lest it should lead the more or less ignorant to form an erroneous opinion as to his true position and status as a graduate, and simply designate himself "J—— S——, M.B.," without the suffix of "C.M."

We may further note, under reserve, that although the courtesy of the faculty, and the public outside the University precincts, have for a long period accorded the title of "Dr." to M.B. graduates, it is better to avoid such prefix on their visiting cards, etc.

FREE ATTENDANCE ON MEDICAL STUDENTS.

W. H. B.—If our correspondent will refer to the *Ethical Code*, chap. ii, sec. 2, rule 1, he will find that gratuitous professional services are, as a rule, limited to *de facto* "practitioners, their wives, and children, while under the paternal care," and do not, we feel constrained to hold, extend to students under the peculiar circumstances in question. The most that can reasonably and legitimately be expected would, as we view the matter, be "advice and prescriptions;" conditionally, moreover, that the student-patient resides within the distance of an ordinary visit, and not in the country.

TABRIZ, PERSIA.—Although in the absence of a copy of the American Code we are not in a position to speak determinately of the rule specially referred to, we are impressed with the belief that its principle is based on the same lines as that specified in our correspondent's letter; namely, of the *Code of Medical Ethics*, Chapter ii, section 5, rule 3, and not that quoted by his friend the medical missionary.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE MODEL BY-LAWS OF THE LOCAL GOVERNMENT BOARD.

W. P. H. asks: Are there any parishes, villages, or towns, where the model by-laws of the Local Government Board with respect to (*a*) cleansing of privies, etc., (*b*) nuisances are in operation and enforced? If so, are they numerous or few in number?

*** By-laws of both kinds are in operation in a large number of districts, and are enforced with various degrees of thoroughness. In some they are practically a dead letter, in others more or less use is made of them, as of the statutory powers of health authorities in other respects, but a categoric reply is scarcely possible. It may safely be said, however, that some of the provisions, such as the requirement as to the cleansing of ashpits by private persons at intervals of one week—the limit usually prescribed by the by-laws—are rarely carried into practical effect.

CESSPOOLS IN VILLAGES.

DR. GEORGE J. PEACHEY.—(1) Overflows from cesspools can be dealt with either in urban or rural districts. (2) In a general sense, it is not "possible to acquire a right by prescription to any action which causes

a nuisance," but cases may arise (under the Rivers Pollution Prevention Acts for example) in which the unqualified application of this principle would be misleading. (3) Although it would appear to be unreasonable to require a rural authority to construct a long sewer for the use of two or three cottages only, the fact of the rest of the village being drained to cesspools would probably be regarded as evidence that a general scheme of sewerage was needed.

ANTIVACCINATION HANDBILLS.

"Astonished" enclosed a handbill against vaccination, which is much milder than such handbills usually are. It contains some individual opinions and two statistical statements, namely, of the deaths of soldiers of the British army, and of the deaths of 1,010 children from "cow-pox and other effects," as found in the Registrar-General's Reports. The title "cow-pox and other effects" is in reality a misleading title, which is eagerly taken advantage of by antivaccinists, and it ought to be altered.

THE DISPOSAL OF SEWAGE.

Mr. R. B. Anderson asks, among other questions, what is the best way of disposing of sewage?

*** The question involves too many local considerations to be profitably dealt with here. It would be well to consult Dr. Reid's *Practical Sanitation* (London: Charles Griffin and Co.; 6s.), or one of the smaller manuals of Public Health, for an outline of the subject. Fuller details will be found in Santo Crimp's (London: Charles Griffin and Co.; 30s.), or Corfield and Parkes' (III) (London: Macmillan and Co.; 16s.) larger works. The process named has not yet been sufficiently tried on a large scale, but it does not appear to be likely to come into general use.

DISPENSARY AND PAROCHIAL MEDICAL ATTENDANCE.

Mr. Geo E. Jeaffreson writes apparently in reference to a reply under this heading in the British Medical Journal of December 8th, p. 1346: Parochial cases must have parochial attendance; if a parochial case can pay a doctor, it is not destitute, and ceases to be a parochial case, and relief is stopped.

LEAD POISONING.

At the recent meeting of the Yorkshire Society of Medical Officers of Health, Dr. Hunter, of Pudsey, stated that at one time in Pudsey he had found the first flow of water in the morning to contain as much as from half to one grain of lead per gallon. A "lead epidemic" through which he had passed was at its height at the time this was found.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Third M.B. Examination. Part II. *Medicine.*—Bagshawe, B.A., Gonv. and Cai.; Barraclough, B.A., Joh.; Bates, B.A., Queens'; Bond, B.A., non-coll.; Burton, B.A., King's; A. V. Clarke, B.A., Gonv. and Cai.; Cotter, B.A., Trin.; Cowan, B.A., King's; E. C. Daniel, B.A., Emm.; Falkener, M.A., King's; G. H. Field, B.A., Cla.; Fison, B.A., Corp. Chr.; H. C. Goodman, B.A., Joh.; Gordon, B.A., King's; L. N. Harding, B.A., H. Selw.; Heaton, B.A., Trin.; Hedges, B.A., Sid. Suss.; Henderson, B.A., Joh.; Irving, B.A., Gonv. and Cai.; Key, B.A., Emm.; T. P. King, B.A., Joh.; Marks, M.A., Jes.; H. Marshall, B.A., Gonv. and Cai.; G. P. Mathew, B.A., Trin. H.; Millward, B.A., Cla.; Moysey, B.A., Gonv. and Cai.; Nachbar, M.A., Cla.; W. Norbury, B.A., Trin.; Norris, M.A., Chr.; Paget, Gonv. and Cai.; Pead, B.A., Down.; Ll. C. P. Phillips, B.A., Gonv. and Cai.; Ll. Powell, B.A., Trin.; Powell, B.A., Cla.; Sandall, B.A., Joh.; Sheppard, B.A., Chr.; Smith, B.A., Trin.; Taylor, B.A., Emm.; Thomas, B.A., Chr.; Whichello, B.A., Sid. Suss.; White, B.A., Sid. Suss.; Wingfield, M.A., Gonv. and Cai.

UNIVERSITY OF DUBLIN.

At the winter commencement, held on Wednesday, December 19th, 1894, in the Theatre of Trinity College, the following licences and degrees were conferred in the presence of the Senate by the University Caput:

Licentiatus in Medicinâ, in Chirurgiâ, et in Arte Obstetriciâ.—G. T. Homan.

Baccalaureus in Medicinâ.—P. V. Dodd.

Baccalaurei in Medicinâ, in Chirurgiâ, et in Arte Obstetriciâ.—L. W. Crowe, G. S. Haughton, H. Jellett, R. C. B. Maunsell, A. Rhodes, M. J. Smith (*nuda Lic.*), R. T. Smith, and R. Smyth.

Doctores in Medicinâ.—P. V. Dodd, H. M. Eustace, G. G. Flemyng, J. H. Head, E. V. Legge, F. E. Rainsford, B. H. Steede, and G. H. P. Vickers.

In Absentiâ.

Doctor in Medicinâ.—G. P. Birmingham.

Baccalaureus in Medicinâ, in Chirurgiâ, et in Arte Obstetriciâ.—R. P. Lyle.

ROYAL COLLEGE OF PHYSICIANS IN IRELAND.

The following registered medical practitioner has been admitted a Licentiate in Medicine: P. Merrin, L.R.C.S.I., L.A.H.

The undermentioned candidate has been admitted a Licentiate in Medicine and Midwifery, under the Conjoint Scheme with the Royal College of Surgeons in Ireland: E. J. Tynan.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Fellowship Examination.—Mr. Allan Hastings Hanley, District Medical Officer, Niger Coast Protectorate, West Africa, having passed the necessary examination, has been admitted a Fellow of the College.

SOCIETY OF APOTHECARIES OF LONDON.

Pass List, December, 1894.—The following candidates passed:

Surgery.—V. J. Batteson, London; T. D. Bell, University College; G. Downes, Dublin; J. Mace, Leeds; E. G. Moon, St. Mary's; W. G. Mumford, Guy's; A. E. Sears, London; S. B. Stedman, St. Thomas's; L. F. F. Winslow, Charing Cross; A. B. Wright, London.

Medicine, Forensic Medicine, and Midwifery.—F. S. Flint, King's; A. H. H. Huckle, Guy's; G. H. Lansdowne, King's; W. G. R. Macauley, St. Thomas's; E. H. Read, London; R. M. Russell, London; F. S. Tidcombe, St. George's.

Medicine and Forensic Medicine.—E. B. Barber, London; W. D. Macdonald, Guy's.

Forensic Medicine.—J. W. Clegg, Manchester; H. F. Forty, Middlesex; R. Irvine, Belfast; B. S. Mankar, London.

Midwifery.—F. A. M. Flegg, St. Thomas's; C. W. Moorshead, Guy's.

To Messrs. Batteson, Barber, Bell, Flegg, Flint, Lansdown, Macauley, Macdonald, Mace, Read, Stedman, and Tidcombe was granted the diploma of the Society entitling them to practise medicine, surgery, and midwifery.

At the recent (December) Examination in Arts twenty-one candidates passed. The number of unsuccessful candidates is not stated, but ten candidates passed in some subjects only.

OBITUARY.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. S. S. Jermolajeff, some time Professor of Anatomy in the University of Kasan, aged 51; Dr. W. J. Prisselkoff, a medical officer of high rank and distinguished service in the Russian Army, and well-known by his contributions to literature, aged 65; and Dr. Eugen Lewis, formerly physician to the Elizabeth Children's Hospital, and afterwards Ordinator of the Obuchow Hospital, St. Petersburg, aged 47.

MEDICAL NEWS.

The sixteenth Congress of Balneology will take place in Berlin on March 7th, 1895, and four following days, under the presidency of Professor Oscar Liebreich.

The Chelsea Hospital for Women has recently received from a lady who wishes to be known only as "H. M. E." a donation of £500.

M. Roux has been promoted to the grade of Commander of the Legion of Honour, in recognition of his "exceptional services to science and to humanity."

A laryngological society has been formed in Vienna under the name of "Wiener laryngologische Gesellschaft." Professor Stoerk has been elected the first president of the new society.

Prize.—Dr. Aubert, of Mâcon, has offered a prize, to be awarded by the Académie de Médecine, to the author of the best work on the following subject: To investigate by clinical and experimental observation if there are among the members of the human race constitutions refractory to tuberculosis.

Lectures for Nurses.—A second course of lectures on nursing, anatomy, and physiology, hygiene, domestic economy, and ward management, has been arranged by the Royal British Nurses Association. The course will commence on February 4th next. Full particulars can be obtained on application to the Secretary, 17, Old Cavendish Street, W.

Conservative Dentistry.—Towards the rebuilding of the Dental Hospital of London, Leicester Square, the staff of the hospital, the past and present students, and the dentists in Great Britain, have contributed £6,000; the public, £5,000. There remains to be subscribed £14,000, and we hope that the public will follow the excellent example set by the dentists, and shortly place the committee of the hospital in a position to commence operations. The benefits which the hospital, if properly equipped, could confer on the poorer classes of

London are very great, and the want of skilled conservative dentistry at the general command of the working and poorer classes is one of the most glaring defects in our system of medical relief.

Leprosy in Cuba.—According to Dr. Sotolongo y Lynch, writing in *La Abeja Medica*, the number of lepers at present in the Real Hospital de San Lazaro, in the island of Cuba, is 91. Of these 42 are natives of Cuba, the rest being natives of Asia (28), the Canary Islands (16), Africa (4), Spain (5), and the United States (1). Fifty-one are white, 17 negroes, 23 Asiatics. As regards sex, there are 74 males and 17 females. Dr. Sotolongo y Lynch thinks that there are more lepers in the island than these statistics would seem to show, and that Cuba presents certain features favourable to the development of leprosy.

Presentation.—Dr. C. C. Gibbes, of Surbiton, who has retired from private practice on account of a recent illness, but retains the office of medical officer of health, was last week presented with a valuable testimonial, consisting of a purse of two hundred guineas and an album containing a list of the subscribers. The testimonial was accompanied by an expression of the pleasure with which the donors learnt that Dr. Gibbes would continue to discharge public duties in Surbiton, both as medical officer of health, and as a member of the District Council, to which he was elected on December 18th.

Prizes of the Académie de Médecine.—The annual award of prizes by the Paris Académie de Médecine took place on December 11th. The Academy Prize of 1,000 francs for the best paper on the etiology of influenza was not awarded, but sums of 200 francs each were given by way of encouragement to five competitors. The Baillarger Prize of 2,000 francs, was divided between M. Bourneville, of Paris, editor of the *Progrès Médical*, and M. A. Marie, Director of the Family Colony of the Seine Department. The Infantile Hygiene Prize of 1,000 francs, for an Essay on Apparent Deaths in Newborn Children, was awarded to M. Demelin, of Paris; the Itard Prize of 2,400 francs (triennial, for the best work on practical medicine and applied therapeutics), to M. Chauffard, of Paris. The Laborie Prize of 5,000 francs (given for contributing to the advance of surgery), was divided as follows: MM. Broca and Maubrac, of Paris, 2,000 francs; Professor Delorme, of the Val de Grâce; Professor Demosthenes, of Bucharest; M. Félizet, of Paris; M. Mauclaire, of Paris; and M. Schwartz, of Paris; 500 francs each. For the Saint Paul prize of 25,000 francs (£1,000) offered to the discoverer of a remedy recognised by the Academy as "efficacious and sovereign" against diphtheria there were thirty-three competitors. The prize was not awarded, but the Academy gave 1,800 francs to to M. Bourges, of Paris, by way of encouragement. Numerous other minor prizes were awarded, besides medals for medical work in epidemics, efficient vaccination, etc.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and Resident Surgical Officer. Salary, £70 and £50 per annum respectively, with board, washing, and attendance in the institution. Applications to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham, by January 8th.

CHELSEA, BELGRAVE, AND BROMPTON DISPENSARY, 41, Sloane Square, S.W.—Honorary Physician. Applications to the Secretary by January 3rd.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Two Physicians to In-patients, one Surgeon to In-patients, three Physicians to Out-patients, one Surgeon to Out-patients, a Pathologist, and a Registrar. Must be engaged in consulting practice only. Applications, on forms to be obtained of the Secretary, to be sent in by January 4th.

DEVON AND EXETER HOSPITAL, Exeter.—Assistant House-Surgeon; doubly qualified and unmarried. Salary, £40 per annum, with board and lodging. Applications to Albert E. Boyce, Secretary, by January 7th.

ELTHAM COLLEGE, Kent (Royal Naval School).—Medical Officer. Applications to the Rev. the Bursar by January 5th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Two Assistant Physicians; must be F. or M.R.C.P.Lond. Applications to the Secretary by January 14th.

INISHOWEN UNION, Cardonagh Dispensary.—Medical Officer. Salary, £120 per annum, and £15 yearly as Medical Officer of Health, together with registration and vaccination fees. Applications to Mr. P. Doherty, Honorary Secretary, Cardonagh Hotel. Election on January 4th.

LONDON COUNTY COUNCIL.—Pathologist to the London County Asylum. Salary, £700 per annum, with travelling expenses. Applications, on forms to be obtained at the office of the Committee, endorsed "Application for Pathologist," to R. W. Partridge, Clerk to the Asylums Committee, London Asylums Committee Office, 21, Whitehall Place, S.W., by 10 o'clock on January 5th, 1895.

LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, Mile End.—Lectureship on Organic Chemistry. Salary not less than £175 a year. Applications to Munro Scott, Warden, by January 10th.

MANCHESTER ROYAL INFIRMARY DISPENSARY AND LUNATIC HOSPITAL OR ASYLUM.—Honorary Obstetric Physician; must be F. or M.R.C.P.Lond. Applications to the Chairman of the Board by December 31st.

NORFOLK AND NORWICH HOSPITAL.—Assistant to the House-Surgeon, doubly qualified. Appointment for six months. Board, lodging, and washing provided. Applications to the House-Surgeon by January 5th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent. Assistant House-Surgeon. Board, apartments, and washing provided. Applications to the Secretary by December 31st.

NOTTINGHAM BOROUGH ASYLUM.—Second Assistant Medical Officer; unmarried and under 30 years of age. Applications to the Medical Superintendent by December 31st.

PAROCHIAL BOARD OF BARONY PARISH OF GLASGOW.—Senior Assistant to the Medical Superintendent of the Barony Parochial Asylum, Woodilee, Lenzie, near Glasgow. Salary, £200 per annum, with board, apartments, etc. Applications, marked "Woodilee Medical Assistant," to Jas. R. Morton, Acting Inspector of Poor, Barony Parish Chambers, 38, Cochrane Street, Glasgow by January 12th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Anæsthetist. Applications and testimonials to Conrad W. Thies, Secretary, by December 31st.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Junior Assistant House-Surgeon; unmarried. Applications to Dr. Sinclair White, Honorary Secretary Medical Staff, by December 31st.

WEST HERTS INFIRMARY, Hemel Hempstead.—House-Surgeon and Dispenser, doubly qualified and unmarried. Appointment for two years. Salary, £100 per annum, with board, furnished rooms, fire lights, attendance, and washing. Applications to the Secretary by January 17th, 1895.

WESTMINSTER HOSPITAL.—Fourth Assistant Surgeon. Must be F.R.C.S.Eng. Candidates must transmit certificate of age, and attend the House Committee on January 1st.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant. Appointment for six months. Board, lodging, and washing provided. Applications, inscribed "Application for Resident Assistant," to the Chairman of the Medical Committee by December 31st.

YORK COUNTY HOSPITAL.—Assistant House-Surgeon; doubly qualified. Salary, £60 per annum, with board, rooms, washing, and attendance. Applications to C. E. Pinfold, Secretary, by January 3rd.

DIARY FOR NEXT WEEK.

WEDNESDAY.

Obstetrical Society of London, 8 p.m.—Specimens will be shown by Drs. T. E. Stevens, Ilott, Amand Routh, Des Vœux, and Remfry. Dr. John Shaw: Peritonitis, its Nature and Treatment. Dr. J. Inglis Parsons: The Disintegration of Organic Tissue by High Tension Discharges.

THURSDAY.

Harveian Society of London, 8.30 p.m.—Clinical evening. Cases by Mr. E. Owen and Drs. Wilkin, Caley, and Cagney.

FRIDAY.

West London Medico-Chirurgical Society, West London Hospital, 8 p.m.—Dr. Coleman: The Treatment of Epilepsy. Dr. Dockrell: Mistakes in Diagnosis and Treatment of Syphilis.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

MARRIAGE.

Mackintosh—Fullarton.—At the Station Hotel, Perth, on December 19th, by the Rev. George C. Baxter, assisted by the Rev. Lewis Davidson, Donald J. Mackintosh, M.B., Superintendent Western Infirmary, Glasgow, to Maggie, youngest daughter of the late Thomas T. Fullarton, Redstone, Coupar-Angus. At home Thursdays after January 17th.

DEATH.

Farrer.—On December 15th, at Eawood Lodge, Scarborough, Robert Farrer, M.R.C.P., M.R.C.S., etc., aged 72 years, formerly of Brighouse, Yorkshire.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL and not to his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

PLATES OF EFFECTIVE FEVERS.

M.B. asks whether any coloured plates are published showing the characteristic eruptions of the various zymotic fevers. He requires them for lecture purposes, for a lay audience, but they need not be large, if clear and distinct. He would be glad to know author, publisher, and price, if any such plates are to be had.

ANSWERS.

PINOL.—We are informed that "Carter's Little Liver Pills" do not contain mercurial preparations, and are chiefly composed of vegetable extracts and resins, apparently podophyllin, jalapin, and hyoscyamus, nux vomica, etc.

"ISAPGHUL."

MESSRS. THOMAS CHRISTY AND CO. (25, Lime Street, E.C.) write to say that they always have a stock of the seeds of plantago isaphaghula, and would be pleased to supply them.

ILLEGAL USE OF DIPLOMAS.

M.D.—On May 25th, 1894, the General Medical Council instructed the Executive Committee to obtain legal advice as to what means could be adopted by the Council to stop the practice of persons continuing to use titles attached to diplomas of which they have been deprived and which no longer appear on the *Registers*. The following report was presented to the Council on November 28th, 1894, and adopted, on the motion of Mr. Wheelhouse, seconded by Sir William Turner:

"The following report on this subject has been made by the solicitor to the Council: '(*a*) If a person wilfully uses the title of a medical diploma which he does not possess he can be prosecuted under section 40 of the Medical Act (1858). (*b*) Such a person might also in some instances be prosecuted under the laws against false pretences and false statements. (*c*) The body which originally conferred and afterwards cancelled the diploma might take proceedings in a civil court to prevent the person continuing to use the diploma.' The Executive Committee recommends the Council to authorise the solicitor to take proceedings against persons assuming qualifications of which they have been deprived by the licensing authorities and whose names have been erased by the Council from the *Medical Register*."

NOTES, LETTERS, Etc.

ALVARENGA PRIZE.

THE College of Physicians of Philadelphia announce that the next award of the Alvarenga Prize, amounting to about 180 dollars (£36) will be made on July 14th, 1895. Essays which may deal with any subject in medicine, but which must not have been published, will be received by the Secretary of the College up to May 1st, 1895.

CLUB RATES.

ANOTHER CLUB DOCTOR writes: I think every member of our profession will agree with your correspondent "M.D., a Club Doctor," that 7s. 6d. per annum is far too low a club fee for attendance on a whole family. Now that the Cork doctors have combined, let them hold out for something substantial. They should insist on 4s. a year each person as a minimum. Other people pay it, why not in Cork? It makes one's blood boil to hear of the low terms offered to an educated gentleman for his services.

THE FUNCTION OF THE VERMIFORM APPENDIX.

DR. C. F. MARSHALL, F.R.C.S. (Richmond Hill, Birmingham) writes: In the BRITISH MEDICAL JOURNAL of December 15th I observe a very ingenious but misapplied attempt 'to explain the "function" of the vermiform appendix. Allow me to point out that the views held by comparative anatomists at the present day concerning the vermiform appendix is that it is one of the class of rudimentary or degenerate organs which are possessed by man as by other animals, and that its presence is due to the fact that man is descended from animals in which the appendix was of larger size and of functional value. These animals were herbivorous, and the appendix was an accessory organ to the intestine: in man, however, it is of no functional value. The same explanation applies to other rudimentary organs possessed by man: for example, the intrinsic muscles of the external ear, which are of no use whatever to the human subject, but are functional in lower animals.

DR. RICHARD J. A. BERRY (Edinburgh) writes: In the BRITISH MEDICAL JOURNAL of December 15th you publish some remarks from Dr. David William Aitken which profess to throw some light upon the function of the vermiform appendix. Having been engaged in a research upon that organ for the past two years, and which is in fact still occupying my attention, I may perhaps be permitted to speak with rather more weight than that of a mere theorist. The view put forward by Dr. Aitken is not original; it was practically advocated by Amyot in the *Medical Times and Gazette* in 1857. Amyot also advocated the view that the appendix, in addition to acting as a safety valve as Aitken suggests, throws out a fluid to lubricate the fæces, and so prevents their accumulation in the intestine. This lubricating theory, as I may term it, put forward by Amyot, and now held by many modern authors who seem to regard the idea as original, was, however, first advocated by Sabatier in 1791, in his *Traité complet d'Anatomie*, and again subsequently by Monro, jun., in 1813, in his *Outlines of Anatomy of the Human Body*. These theories, like many others, are unsupported by fact. The functions of the appendix are not to be sought in its unformed elements, but in its solid secretions—namely, leucocytes. I have examined histologically the cæca or appendices of almost all the vertebrate types, and I find that the human appendix represented morphologically a mass of lymphoid tissue at the apex of the cæcum. Coincidently with this discovery I performed a series of experiments upon rabbits. These experiments consisted in placing a ligature upon the appendix and returning it to the abdominal cavity, care having been taken not to interfere with the vascular supply of the organ. The results confirmed those arrived at by the morphological analogy. In almost every instance the cavity of the appendix was found to contain a semi-solid mass, which on microscopic examination proved to be mainly composed of enormous numbers of leucocytes, which were certainly not the result of any inflammatory reaction from the presence of the ligature. The effect upon the animal was apparently *nil*, one rabbit living for a month without the appendicular secretion passing on into the intestine, thus agreeing with the effects upon the human organisms of excision of the tonsils. The conclusion seems irresistible that the vermiform appendix is a lymph gland, or a Peyerian patch placed at the apex of the cæcum, for the same purpose that the tonsils are placed in the fauces and Peyerian patches in the intestine. These results and others will, I hope, be published *in extenso* during the course of the coming year.

CIRCUMCISION.

DR. P. J. DUFFY (Forest Gate, E.) writes: In reply to Mr. Edgar Duke's letter in the BRITISH MEDICAL JOURNAL of December 1st, the only reason I know of against removing the prepuce partially in cases of circumcision is that the part of the mucous membrane that is left is very liable to slip forwards and form adhesions to the prepuce. I have done the partial method several times, and have always had to break down adhesions formed between the mucous membrane and the prepuce at each dressing subsequently, and I have found the younger the child the more difficult it is to keep the mucous membrane well back.

GINGER BEER.

DR. WM. HARDMAN (Blackpool) writes: After your leader upon temperance beverages, and ginger beer in particular, and my subsequent letter on the same subject, a medical gentleman wrote me for an address where he might procure genuine ginger beer, that is, that in stone bottles. I was unable to reply to him at the time, and unfortunately mislaid his letter and do not remember his name and address. I advise everyone who wishes for it to make it himself. Very little genuine is sold. I enclose a recipe, used in our family for over fifty years, the excellence of which I can guarantee: Take 1½ oz. of the best ginger well bruised, 1 oz. of cream of tartar, and 1 lb. of cane loaf sugar. Put all the ingredients into an earthen vessel, and pour on a gallon of boiling water; when nearly cold add a gill of yeast, cover over with a blanket, and let it stand in a warm place until next morning. Then skim it, and run it through a filtering bag, bottle it, cork well with good corks, and tie down the corks with string. In three days it will be fit for use. The bottles must be clean and sweet. A little lemon juice is considered an improvement by some.

INVERSION AND TAXIS IN INTESTINAL OBSTRUCTION.

DR. JAMES MURPHY (Sunderland) writes: Will you allow me to make a few remarks on the paper by Surgeon-Major Arthur Sargent, "Note on Inversion and Taxis in Intestinal Obstruction," published on page 1174 of the BRITISH MEDICAL JOURNAL of November 24th? In the first place I must tender a strong protest against any remedies being given what he calls a fair trial on the ground that "it is always satisfactory to the deceased's relatives to know that no possible treatment had been overlooked, as the ignorant gossip and the educated read and hear of all possible treatments often months after their relative's death." The art of surgery should not be interfered with by such considerations.

In the second place, his first case, from the notes that he gives of it, cannot be regarded as a clear case of intestinal obstruction, and the result of the treatment goes far to show that it was not such a case. As regards his second case, which died one hour after his treatment, had he made a *post-mortem* examination he would have found some condition which would have justified Mr. Erichsen's statement about enemata. And there is no abdominal surgeon who would have "no

doubt, if he had seen the second case recorded some twenty-four hours earlier before collapse set in, that his life would have been saved."

As regards his third case, it is not usual to submit a patient to a "severe operation" where "the diagnosis is one of impacted fæces combined with paralysis of intestine." I am sorry to criticise adversely a paper written with the best intentions, and by one who may possibly be still abroad, and therefore unable for some time to reply to the criticism. But in the great majority of cases of intestinal obstruction it is absolutely impossible with our present knowledge to be at all certain of what the cause of the obstruction is, and many are of such a nature that any rough movements would inevitably cause the patient's death, whereas in cases of real intestinal obstruction in the hands of a capable man whose *technique* is right, there is no risk in opening the abdomen, and then he is in a position to deal with the cause of the obstruction, but the publication of the archaic surgery of your correspondent may prevent medical practitioners from getting suitable surgical treatment in time. This is my reason for writing.

The Future of the Cow-catcher.

One of the most distinctive peculiarities of the American railway engine is the cow-catcher, a large and pointed sort of plough by which strong cattle are supposed to be tossed aside to their own discomfiture, but greatly to the safety of the train. Other things than cows, however, obstruct the progress of a railway train travelling at a high speed, among which resistance of the air takes a high place, and experiments have recently been made with the object of cleaving a passage through it in a more satisfactory manner than is done by the present square-ended engine. From an account given in *Nature*, it would appear that, by filling up the spokes of the wheels and placing inclined planes in front, the resistance was diminished by one-half. There was, in consequence, a marked increase of useful work, and an economy of 10 per cent. on the coal consumption. The engine, in fact, was made to carry in front of it a magnified cow-catcher, built for pushing aside the air much as the bow of a boat pushes aside the water through which it glides.

The results of the experiments are said to be so satisfactory that M. Ricour has fitted his apparatus on forty engines belonging to the Paris Lyons-Mediterranée railway for general traffic. Similar experiments were made in 1890 by M. Dresdonit, chief engineer to the state railways, the engines saving 300,000 kilometres and saving 15 per cent. of coal. It is stated that even if 4 or 5 per cent. were saved by the use of these inclined planes the gain would be as great as that arising from compounding the engines. Perhaps in future we shall speak of the "lines" of a train much as we now do of those of a ship; the train will be shaped like an elongated torpedo on wheels; ventilators, chimneys, door handles, and all such lumber will be cleared off as so many barnacles obstructing progress, and the passengers meekly entering at the stern.

A Legal Anomaly.

A Doctor, though not a Solomon, writes: Perhaps a little ridicule might help the General Medical Council and the Apothecaries' Society out of the difficulty set forth in the British Medical Journal of December 15th by Mr. Schultess Young, of the Temple. It would appear that Mr. ——, having been struck off the *Register* by the Council and off their list by the Apothecaries' Society, has repented and lived a good professional life since the date of his punishment. His penitence, as penitence will, has softened the hearts even of these two learned corporations; and both of them are willing to forgive, and to restore the name of the erring one to its places of honour on their rolls. But, alas! neither of them will take the lead. The Apothecaries will not; the General Medical Council cannot. Why, then, do they not each send a representative down to Greenwich, where the exact time of day on the clock of the Universe is recorded, and at one given tick of the clock command their representatives to write the illustrated name, each in the appointed register, and to finish the last stroke of the last letter of the name at the very same instant by the firing of a minute gun? Then neither could be before or after the other, and there would be no risk of any member of either of these two solemn and weighty bodies being in danger for a breach of the law.

The Heredity of Phthisis.

Dr. Gilbert Richardson (Putney) writes: In reference to the debate at the Royal Medical and Chirurgical Society on December 11th on the heredity of phthisis, a subject of great interest alike to the public and our profession, the author of the paper founded his argument, that there was no true heredity, upon statistics showing that the incidence of phthisis upon children of phthisical parents was only 9 per cent. greater than upon those of non-phthisical parents. In no argument of this nature, I think, are statistics the best evidence to found conclusions upon; but in this instance they may be peculiarly fallacious because sufficient weight is not given to the difference between transmission and development.

We all know that in every organism there are a number of potentialities which remain latent, but which may nevertheless be transmitted; and, therefore, as these children of non-phthisical parents may inherit, though possibly in a less degree, a tuberculous tendency, it is not a comparison of children known to possess a phthisical constitution and those known not to do so; and although the advocates of a true heredity might expect a somewhat greater percentage than 9 per cent between the two classes selected by Dr. Squire, this goes a very little way to prove the absence of a true heredity. And I think it is all the more necessary to bear these points in mind in drawing conclusions in the consideration of pathological heredity, because the longer any variation has been in existence in the progenitors, the greater is the probability of transmission. It is not possible to prove a predisposition nor the transmission of acquired characteristics, but it makes a very convenient working hypothesis, and if we are prepared to abandon our belief in the hereditary nature of consumption upon such statistical evidence as this, it would be difficult to retain our belief in the transmission of a tendency to any diseased condition whatever.

Chloroform Administration—"The Usual Way."

Onlooker writes: In all the chloroform fatalities reported of late the anæsthetic seems to have been administered in "the usual way." As "the usual way" has so often led to disaster, should it not be replaced by a way in which the administrator has complete control over the amount of chloroform given? Krohne and Sesemann's inhaler affords this control. By this instrument as large or as small a dose of chloroform vapour as desired can be thrown into the air taken into the lungs at each inspiration. The anæsthetist knows exactly what he is doing, a knowledge which is impossible by the ordinary method. Rule of thumb dosage is not tolerated in the case of any other powerful drug. Why should it be tolerated in the case of chloroform?

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Lyons, R. H., M.B., Surg.-Maj.
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Macaulay, [illegible], Surg.-Capt.
Macdonald, [illegible], M.B., Surg.-Capt.
Macdonald, S., M.D., Surg.-Capt.
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Rowan, H. H., M.B., Surg.-Capt.
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Russell, G. E., M.B., Surg.-Capt.
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AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(1) Tests for Serum Albumen in the Urine.

Stewart (*Philadelphia Med. News*, May 5th, 1894) describes how some of the more recently introduced tests, and especially trichloracetic acid, are fallacious. Nucleo-albumen present in small quantities in all urines and of extra-renal origin can easily respond to tests employed for traces of serum albumen. In healthy urines it is not uncommon to obtain a slight response from contact (a few minutes to half an hour) with cold picric acid solution, and almost at once with trichloracetic acid, Sebelein's test, and also with Tauret's, and less often with Millard's reagent. Glacial phosphoric acid reacts in three to five minutes. Among other sources of error urinary mucus must also be excluded. The author has employed picric acid for some years, but attaches greater importance to a negative than a positive reaction. He has investigated the urine in the case of 105 healthy young men. In the first set of 52, picric acid, trichloracetic acid, glacial metaphosphoric acid were used; and in the second group of 53 trichloracetic acid alone. With three exceptions, all gave a positive result with trichloracetic acid, and these three yielded an undoubted response when the test tube was put into warm water for a few seconds. Only 11 out of 52 failed to give a positive result in five minutes with picric acid. With metaphosphoric acid only 10 out of 52 failed to react in five minutes. Of 5 giving a marked reaction in ten seconds, only 2 gave the cold nitric acid contact test. The precipitate with trichloracetic and picric acids was not due to urates, proteose, or peptones. Of the 105, all admittedly in good health except perhaps 1, 20 gave an undoubted serum albumen reaction to cold nitric acid. In 19 of these cases examined, there was no evidence whatever of renal disease; it was probably the result of fatigue. Excluding these 20 cases, the positive reaction was in all probability due to nucleo-albumen of extrarenal origin. Thus, as a practical test the author thinks trichloracetic acid of little value, its utility being much less than metaphosphoric acid, and especially less than picric acid. In suspected cases in which the more reliable tests give a constant negative result, the amount of urine present and an examination of the deposit must be appealed to.

(2) Pancreatic Colic.

Holzmann (*Münch. med. Woch.*, May 15th, 1894) gives the further history of this case. A man, aged 69, had, two days after admission, severe pain in the left hypochondrium, radiating at times to the right. The attack of pain had been preceded by dull aching sensations in the abdomen. From the commencement of the colic salivation was noted. Distinct traces of sugar were found in the urine passed during the attack; the sugar was not maltose. In two abortive attacks there was no glycosuria and no salivation, but in the next severe attack both were present. Later the severe colic was accompanied by slight salivation and no glycosuria; whereas in the following attack salivation and fever were present, but no glycosuria. No concretions and no real excess of fat were found in the stools. The salivation, intermittent glycosuria, and fever were new facts in the case. The coexistence of these three symptoms was striking; they made the diagnosis even more certain than before. The salivation was due to the pancreatic disease, and not to the presence of vomiting or any gastric affection. It cannot yet be said whether salivation occurs in pancreatic colic alone or in other lesions of the pancreas as well. A direct connection between the glycosuria and the colic could not always be established in this case. Fever is not unknown in this disease, and resembles that found in biliary and renal colic. Including the past history, the diagnosis was based on the following facts: Concretions in the stools, attacks of pain, ptyalism, glycosuria, and fever. Injections of pilocarpin were given for some days before the patient's discharge without very obvious benefit: they were continued, however, three times a week, and no further attacks occurred. Theoretical considerations make a causal connection between these facts probable. At any rate, pilocarpin is well worthy of a further trial. Morphine during the attack seemed almost useless.

(3) Hæmatological Studies.

In the *Centralbl. f. d. med. Wissenschaften*, April 21st, 1894, Tschistowitsch relates his investigations in the case of a woman whose spleen had been removed two years previously. He distinguishes four kinds of leucocytes: (1) lymphocytes, (2) polynucleated neutrophile leucocytes, (3) mononucleated leucocytes, and (4) esinophile cells. In this case the formation of the various elements in the blood took place satisfactorily. The quantity of the red cells and hæmoglobin mostly varied within normal limits, but at times exceeded the normal. The leucocytes, especially the lymphocytes, were increased in numbers. The results observed in this patient are rather different from those seen in guinea-pigs in which the spleen had been removed; although there was considerable lymphocytosis there was no decrease in the red cells or hæmoglobin, and no marked increase in the esinophile cells. Perhaps the patient was in the stage when the lymphocytosis had not yet disappeared, and the esinophile cells were beginning to increase in numbers. The patient's blood was examined at different times. Immediately after a meal, and an hour or even an hour and a-half later, the leucocytes were increased in numbers, the increase being noted in the polynucleated and esinophile cells: the lymphocytes were unaffected, and the mononucleated leucocytes diminished in numbers.

(4) General Paralysis of the Insane at Puberty.

Saiki (*Neurol. Centralbl.*, June, 1894) adds a case of his own to the already recorded cases in literature (12-14) of progressive paralysis of the insane occurring at puberty and adolescence. The patient was a girl aged 14, who seemed apparently healthy till two years before, when she had an "eruption and enlarged glands," which subsequently subsided. It was then noticed at school that she was morose and backward, and a year ago some speech disturbance began to be noticed. Both speech and handwriting became subsequently very confused and defective, and during the last three months the mental disturbance was pronounced. The pupils were unequal, fixed, reacting neither to light nor accommodation, and the whole complex of symptoms pointed to general paralysis. Direct syphilis could not be ascertained, though the author states that a prominent place as a cause should be assigned to hereditary syphilis, and predisposition in these cases.

(5) Two Primary Carcinomata in the Alimentary Canal.

Lannois and Courmon (*Rev. de Méd.*, April, 1894) report the following case in a man, aged 77. His illness began five months previously with diarrhœa, which lasted a month, and with difficulty in swallowing. On admission he could only swallow liquids. The obstruction was at 36 cm. from the teeth. There was now obstinate constipation. Nothing abnormal was found in the abdomen, except perhaps a diffuse resistance later to the right of the xyphoid cartilage. There was no jaundice. At the necropsy a tumour was found in the lower part of the œsophagus, producing almost complete obstruction; the microscope showed it to be a squamous epithelioma. In the duodenum and about the papilla a soft tumour was present. The pancreas and liver with their ducts were absolutely healthy. This tumour was a columnar carcinoma, and apparently presented a similar degree of invasion as the œsophageal growth. Some 13 cases of two primary independent malignant neoplasms are on record. The duodenal growth here was considerably larger than usual. It is the rule in these cases to have no biliary obstruction owing to the softness of the growth, but there are exceptions.

SURGERY.

(6) Laminectomy.

Riggs (*Annals of Surgery*, June, 1894) reports two cases of laminectomy for fracture of the vertebræ with compression of the cord. A successful case

reported by Macewen in 1888, and the results obtained by W. White and others in the same direction, go to show that extensive resection of the lamina may be accomplished without materially impairing the strength or utility of the spine. Under modern antiseptic precautions the danger of consecutive inflammation of the cord and membranes is no longer to be feared, and hæmorrhage is not difficult to control by moderate and prolonged pressure. Nor is the escape of spinal fluid a very serious complication. Riggs concludes that operations for spinal injuries should be done immediately after the accident, and when luxation has occurred its reduction should be attempted by guarded but forced manipulation directly applied to the vertebræ themselves.—Pyle (*ibid.*) gives two cases of laminectomy with a tabulated collection of 52 cases of the same operation of recent date. Of these 2 cases, 1 demonstrates in the highest sense the good results of such operation, and the other shows the typical course of spinal fracture with paralysis unrelieved by operation, but with subsidence of pain and the absence of any indication of the fatal issue impending.

(7) Extirpation of the Larynx for Cancer.

VIRCHOW (*Deut. med. Woch.*, June 28th, 1894), at the Berlin Medical Society, showed specimens from the *post-mortem* examination of a man in whom Wolff had completely excised the larynx 2½ years before for malignant disease. The patient had been able to speak with an artificial larynx, and at the beginning of last March looked very well. In the middle of March a tumour was observed in the right thigh; an attempt to remove it failed, and the patient died of cachexia in May. Besides the metastatic growth in the thigh another one was found at the necropsy situated in the upper lobe of the right lung, which had not been diagnosed during life. No local recurrence was found; the scar tissue left by the excision of the larynx appeared quite healthy, and no glands in the neighbourhood were affected. In the metastatic cancerous growths there were protozoa-like appearances, as in molluscum contagiosum. Wolff said that eleven other cases had been reported of laryngeal carcinoma cured by extirpation of the larynx; five of these patients were still alive and free from recurrence (one of them operated on 7½ years ago); the other six died after years, one of apoplexy, one of pneumonia, one of pleurisy, one of inanition, one of alcoholism, and one of phthisis, but in none of them were metastatic growths found.

(8) Wound Diphtheria due to Loeffler's Bacillus.

ABEL (*Deut. med. Woch.*, June 28th, 1894) gives the case of a girl, aged 17, who had diphtheria of the fauces. Whilst there was still membrane in the throat the girl, accidentally, wounded one of her fingers and on the wound a false membrane appeared. From this cultivations were made in Loeffler's blood serum, and on the following day pure cultures of diphtheritic bacilli were found. A guinea-pig was, however, inoculated with culture thus obtained, and from the considerable time which elapsed before the animal died it appeared that the bacilli were not of a very high degree of virulence. The wound was treated with liquor ferri, and healed, though somewhat slowly. From this case it is evident that in patients with diphtheria the most trivial wound must be carefully looked after. Brunner has recently mentioned three cases of wounds in patients without faucial diphtheria, in all of which he cultivated the bacillus of diphtheria from the wounds, but in all the cases accompanied by pyogenic cocci. In these cases of Brunner the cocci may have been the real infection agents and have also given rise to the membranous appearance on the wounds—just as on the fauces they may, like diphtheritic bacilli, give rise to false membranes. In other cases of wounds with a membraneus coating Brunner found cocci only without the bacilli of diphtheria.

(9) Gangrenous Hernia.

MCCOSH (*Annals of Surgery*, June, 1894) gives three cases subjected to circular enterorrhaphy, and the satisfactory results obtained in these cases lead him to favour the immediate closure of the intestine whenever the patient's condition will allow. For the purpose of uniting the divided ends of intestine, the author does not believe in rings and plates and other artificial aids, but prefers sutures alone. CASE I. A male aged 25 years. For four years he had had a right inguinal hernia, for which he had worn a truss. For three days, however, he failed to carry out this precaution, with the result that the hernia became irreducible and painful. Taxis having failed, even under ether, he was admitted to hospital almost in collapse with stercoraceous vomiting almost constant. CASE II, Mrs. L., aged 43 years, had in 1889 been operated on for tuberculous peritonitis. Laparotomy was performed, and apparently a cure had resulted without any tendency to hernia through the cicatrix. On December 12th, 1891, the author was summoned to see the patient and to operate on a strangulated hernia, the presence of which had not been suspected until three days previously, when she began to vomit and complain of pain in the groin. The bowels had not moved for five days, and vomiting had continued for three days, and for the preceding twelve hours had been stercoraceous. The patient was in a desperate condition, demanding immediate operation, from which she made an excellent recovery, and it was interesting and gratifying to note that not the slightest trace of the former tuberculous peritonitis remained. CASE III. A woman, aged 66, in whom strangulation had existed forty-eight hours, was operated upon on June 5th 1888, and made an excellent recovery, and now in spite of her seventy-two years, is well and active.—Hoegh (*ibid.*) reports a case which shows the great value of Senn's bone plates in gastro-enterostomy.

MIDWIFERY AND DISEASES OF WOMEN.

(10) Cancer complicating Fibroid Uterus.

GEUER (*Centralbl. f. Gynäk.*, No. 14, 1894) has collected 46 cases. They are classed as (1) primary cancerous degeneration of a myoma, (2) carcinoma and myoma of the body of the uterus, and (3) myoma of uterus and cancer of cervix. Of (1) 10 cases are recorded, only 4 appearing trustworthy as to the cancer being primary. Of (2) there are 23 reported cases. In only 2 of these was the disease secondary in the myoma, and in both the myoma was submucous. The remaining class is of considerable clinical interest; 13 are recorded. There is no evidence that the myoma of the body is ever the cause of the cancer of the cervix, but, like many other morbid conditions, it makes the uterine tissues unhealthy, and either predisposes them to cancer, or at least causes the malignant disease to be especially grave when once established. In every case of myoma at the climacteric when flooding sets in, certain further complications, such as pain, fœtid discharge, and loss of strength out of proportion to the loss of blood, are all suspicious symptoms. For diagnosis it is absolutely necessary to scrape the uterus with the curette, and to examine the scrapings under the microscope. Operation for cancer of the cervix, with myoma of the body of the uterus, has proved fairly successful, vaginal amputation having been performed 9 times with 7 recorded recoveries, 1 death, and 1 unrecorded result. This proceeding is always preferable even when the uterus is as large as a child's head. Abdominal hysterectomy has not proved satisfactory, the cancerous mass being likely to foul the peritoneum.

(11) Congenital Rickets not "Fœtal Rickets."

HERZFELD (*Centralbl. f. Gynäk*, No. 18, 1894) describes a female infant born of a single woman, aged 28. Labour was spontaneous, and the mother had none of the symptoms of rickets. On the other hand, the infant had all the signs of the common rickets, the true rachitis of children and adults. There was craniotabes, also softness of the cranial bones near the sutures and fontanelles, beaded ribs, and shortened curved bones in the extremities. The left humerus was fractured in the middle of its shaft. There was a greenstick fracture of the right femur. Separation of the epiphyses was detected in both femora. Both feet were deformed by talipes equino-varus. The fractures were explained by the small quantity of liquor amnii in the uterus coinciding with the natural brittleness of the diseased bones. During the first ten days there was infiltration, apparently of

blood, around the fractured humerus and femur. The temperature exceeded 104°. The infant was sickly, and not expected to live. Herzfeld dwells on the difference between this case of true rickets developed before birth and the so-called "fœtal rickets" of Kaufmann and Paltauf, which is a marked defect in development, with other signs of cretinism—deformed cranium, œdema in thoracic and abdominal cavities, and myxomatous changes in certain organs. This disease is hardly rickets, "osteogenesis imperfecta" of Stilling, but a distinct disease, to which Herzfeld proposes to apply the name "chondrodystrophia fœtalis."

(12) Gonorrhœal Peritonitis.

Chaput (*Bulletins de la Soc. Anat. de Paris*, March-April, 1894) reports the case of a girl, aged 17, who had suffered from abdominal pains for a fortnight, and was admitted with all the symptoms of very acute peritonitis. Abdominal section was performed. A quantity of creamy yellowish pus was found in the pelvis; the entire intestine was congested. On raising the right Fallopian tube, it was found to be dilated. Its fimbriæ were deeply injected. On pressing the tube with his fingers, Chaput caused a drop of creamy yellowish pus, of the same appearance as that in the pelvis, to issue from the ostium. The same condition was detected in the left tube. In order to protect the peritoneum from the septic stumps of the tubes when the appendages were removed, Chaput left the ends of the ligature silks hanging out of the abdominal wound, and a strip of iodoform gauze was pressed into Douglas's pouch. The patient in a few days had obstruction from paralysis of the intestine. An artificial anus was made, but afforded no relief, and the patient died. No mechanical obstruction could be found; the violence of the peritonitis had caused paralysis of the intestine.

(13) Gonorrhœal Endometritis.

Lantos (*Klinische Zeit und Streitfragen*, vol. viii, pt. 1, Vienna, 1894) gives good advice as to the care with which uterine therapeutics must be used in cases of gonorrhœal infection. When the uterine cavity is clearly involved, the physician must at once set to work to cure it lest the disease spread to the tubes. Lantos here, however, warns us not to be too enthusiastic. The hasty use of the curette, or even of carbolic crystals, solid chloride of zinc, and other powerful caustics has set up the gravest complications. Even more gentle intra-uterine medication is perilous when the appendages are already involved in the infectious inflammatory process. Hence should there be the least tenderness in either lateral fornix, the patient must be kept at rest for a few days, warm injections, etc., being administered. Whenever the condition of the genital tract shows that the endometrium may be safely treated, a Playfair's probe dipped into a 1 per cent. solution of sublimate should be introduced into the uterine cavity. A still better method is the washing out of the uterus with a 1 per cent. chloride of zinc solution by means of a double current catheter. When the cervical canal is made sufficiently wide the uterus must be plugged with iodoform gauze.

(14) Hysteria and Phantom Tumour in a Child aged Eleven.

Moizard (*Journ. de Méd. et de Chirurg. Pratiques*, April 10th, 1894), received into the Hôpital Trousseau last autumn a sickly girl, aged 11. Nothing abnormal had been observed until four months previously, when pains in the abdomen, soon followed by swelling, set in. A very remarkable condition existed. A large tumour occupied the epigastrium and hypochondria; it was tense and tympanitic on percussion. All the rest of the abdominal wall was retracted, the muscles feeling like wood. Apparently, the stomach and colon formed a hernia at the level of the uppermost segment of the recti, the only portion of the muscular walls which was not contracted. The pressure of the contracted muscles forcing the viscera against the relaxed area must have been very strong. The girl was put under chloroform several times. On every occasion the tumour disappeared immediately the patient was completely under the influence of the anæsthetic, developing again as soon as she began to come to. She was troubled with a constant hysterical spasm of the diaphragm, and possibly of the larynx as well. After remaining in hospital for a few days, the hiccough disappeared. Neither suggestion nor any other treatment availed to reduce the swelling. A month after discharge it was as marked as on admission.

(15) Symphysiotomy in Australia.

Rothwell Adam (*Australian Med. Journ.*, May 20th, 1894) claims to have performed the first operation of symphysiotomy in Australia, or even in the entire Southern Hemisphere. The patient was 33; at the first labour (1886) craniotomy, cephalotripsy, and version were found necessary. At the second (1888) she was delivered of a living male child, 5 pounds in weight, by podalic version. The child died in an hour. Over eleven months later premature labour was induced at the end of the seventh month, a stillborn child being delivered by podalic version. The fourth confinement was on May 20th, 1891. The foot presented, and a small dead female child was delivered with difficulty. The measurements shortly before the operation were:—Interspinal, 7½ inches; intercristal, 9¼ inches; conjugata vera, 2⅜ inches. The patient was at term, and Adam, for certain reasons, passsed a bougie into the uterus on December 19th, 1893, to induce labour, which set in early on the 21st; then symphysiotomy was performed. The patient was placed in the extreme dorsal position, the thighs flexed on the abdomen and held apart by a Glover's crutch. Pinard's free incision was made. The enlarged venous plexuses about the clitoris were tied off in batches with phosphorised gut. The urethra was protected by an assistant drawing it downwards and to the right with a metal sound during the whole time of the operation. Directly the symphysis was divided the pubic bones sprang apart with a sharp report. To protect the sacro-iliac synchondroses, an assistant firmly supported the two halves of the pelvis. The child was easily delivered by forceps. It was born alive but weighed only 4¾ lbs., and did not live over half a day. The sole difficulty in delivery arose from the bladder prolapsing and being pushed down by the advancing head. When the legs were extended the pubic bones came accurately together, care being taken to ascertain that the bladder was not nipped between them. The usual precautions were taken during and after the operation. At the end of four weeks there was firm union of the symphysis. In May, 1894, the patient felt as if nothing had been done to her.

THERAPEUTICS.

(16) Chloralose.

Chambard (*Rev. de Méd.*, June, 1894) concludes a study of this hypnotic. Among the complications of the hypnosis are the following: (1) Psychical and psychomotor manifestations. Automatic actions have been noted in some cases. The author gives details of a case of somnambulism which occurred under its use. (2) Motor disturbance such as tremor. (3) Synthesis of physiological action. As to its therapeutic use, chloralose is almost a certain hypnotic, but its action is at times variable. Thus a minute dose (0.1 g. to 0.2 g) will sometimes produce a sleep lasting several hours, whereas at other times relatively large doses have no hypnotic effect. In insomnia due to cough or to thoracic pain accompanying influenza, acute bronchitis, phthisis, chloralose in small doses seems to answer well. Chloralose is not an analgesic, and it succeeds less well in the sleeplessness due to pain. In the dyspnœa of chronic pulmonary disease and of cardio-vascular disease, good hypnotic results have been obtained. Chloralose has acted well in cases of hysteria, epilepsy, neurasthenia, mental affections, but in three cases of alcoholic insomnia the effect was only moderately good. Besides its hypnotic action, a quietening and soothing effect has been noted in several affections of the central and peripheral nervous system. In addition to its therapeutic effects, it provides a means of dissociating the most exalted and differentiated functions. Some diagnostic value has been attributed to it in hysteria, manifestations of this disease having appeared under its action. One drawback in its therapeutic use is its capriciousness, as well as its power of producing delirium and convulsive attacks, never very serious in themselves during the sleep. It has been known to aggravate the inco-ordination

of locomotor ataxy and the tremor of paralysis agitans. In painful affections and in alcoholic insomnia it cannot replace opium. In insomnia and cerebral excitement it can compete with chloral. It is especially cardio-vascular affections, even in their asystolic stage, which in the author's opinion give the strongest indications for its use.

(17) Ergot for Night Sweats in Phthisis.

GOLDENDACH (*Deut. med. Woch.*, June 28th, 1894) thinks that the night sweats of consumptives are not simply due to fever, and that their real cause has not yet been fully explained. Many remedies have been recommended for them—quinine, acetate of lead, atropine, hyoscin, brandy, rubbing the body before sleep, or using the powder composed of starch, talc, and salicylic acid. Most of these Goldendach has tried and found wanting. On considering the part probably played by the vasomotor nerves, he determined to try the effect of ergot against night sweats, and in most cases found the result very satisfactory. He usually gives one or two 5-grain doses of powdered ergot before bed time, and the cases are few in which this remedy is found quite useless. He has, moreover, never seen any harm result. Lately he has modified his method by injecting the ergot subcutaneously in the form of a diluted extract.

(18) Thiosinamin in Lupus.

VAN HOORN (*Weekblad van het Tydschrift van Geneeskunde*, June 16th) records his experience of the effect of thiosinamin in lupus. On the whole he confirms the statements of Hebra as to the effects of the drug. After injections of thiosinamin he observed redness and swelling of the affected parts. During the reaction the patients noticed a feeling of heat and tension. The day after the reaction abundant desquamation took place. The therapeutic effects were not constant. Patients in whom the affection was pretty severe showed much more marked improvement as long as the treatment was continued than those who were only slightly affected. The author's observations lead to the conclusion that thiosinamin is not to be recommended in cases in which the lupus is confined to a small space, and that, if possible, local treatment should be employed in all cases. Experiments as to the antiseptic effect of thiosinamin on skin parasites showed that the presence of small quantities in nutritive media could sterilise a culture; that the addition of a few drops of a 10 per cent. solution would retard or, in some cases, prevent development; that, on the other hand, the immersion of a culture in a copious solution was, under certain conditions, ineffectual in killing the parasites in twenty-four hours.

(19) Cranberry Juice in Cholera.

G. I. GORIANSKY (*Vratch*, No. 6, 1894) has found that juice expressed from raw cranberries (*Fructus oxycocci palustris*), and given freely, pure or diluted with an equal part of water, is an excellent means of relieving thirst and vomiting in Asiatic cholera. The patients take the acid and somewhat astringent beverage most readily. As the author's observations in fifty cases have shown, in a large number of patients in whom ice and narcotics fail to make the slightest impression on sickness, the subsequent administration of cranberry juice in small but frequently repeated doses rapidly checks both vomiting and nausea. The author lays stress on the fact that the harmless juice has a powerful destructive action on the cholera vibrio, being, in fact, much superior in this respect to lime water, carbolised lime water, birch tar, Raptchevsky's pixol, and a 5 per cent. solution of carbolic acid.

PATHOLOGY.

(20) The Blood in Pulmonary Stenosis.

BANHOLZER (*Centralbl. f. inn. Med.*, June 9th, 1894) describes the results of the examination of the blood in a deaf mute aged 10 years, with congenital pulmonary stenosis. There was marked cyanosis, and the finger ends showed great clubbing. The hæmoglobin stood at 160 per cent., the number of red cells at 9 447,000 against 5,000,000. The alkalinity was 0.028 as against 0 25 to 0 35, and the specific gravity 1071.8 instead of 1035-1068. Reduced hæmoglobin was present as well as oxy-hæmoglobin. The N-estimation corresponded to 3.7 per cent. of the fluid blood, and 13 15 per cent. of the dried blood. There was no change in the morphological elements. The examination thus showed a striking concentration of the blood. The author refers to two recorded cases in which the same observation was made. The marked cyanosis is in all probability due not to stagnation, but to this concentration of the blood.

(21) The Bacteriology of Influenza.

PIELICKE of Renver's clinic (*Berl. klin. Woch.*, June 4th, 1894) observes that the influenza bacillus grows only on nutrient media containing blood (serum) and not on glycerine-agar alone. He records his investigations in 35 cases of influenza. In 15 influenza bacilli were found in the sputum, and in 5 of them influenza pneumonia was present. In one case the diagnosis could alone be made by an examination of the sputum. In only 5 out of the 15 cases could cultures be obtained. The bacilli then grew exactly as Pfeiffer has described, but the size was greater than in the case of the sputum. In one case of atypical pneumonia influenza bacilli were found along with the strepto- and pneumococcus. Cultures revealed a bacillus morphologically the same as Pfeiffer's pseudo-bacillus, but in aspect they appeared exactly like cultures of the true bacillus. In three weeks, however, the bacilli were considerably smaller in size, corresponding then to the true influenza bacillus. The author thus concludes that these two forms of bacillus are identical; the remaining 10, giving negative results on cultivation, were not recent cases. In one severe and genuine case of influenza the blood from the median vein also gave negative results. In the 20 cases where no bacilli were found, examination of the sputum yielded varying results: the diplococcus was found six times, the streptococcus twice. During the influenza epidemic 35 cases of pneumonia came under treatment, and in 11 of these the course was atypical. In typical cases Fraenkel's pneumococcus was found—in the atypical cases mostly the streptococcus, but twice the staphylococcus. In one case the influenza bacillus and the streptococcus were found in the sputum, but the streptococcus alone grew in cultivation experiments. The case appears to show that a streptococcus infection can be engrafted upon influenza, and can cause a fatal pneumonia. Influenza provides a favourable soil for a severe strepto- or staphylococcus pneumonia.

(22) The Pathology of Graves's Disease.

REINHOLD (*Münch. med. Woch.*, June 5th, 1894) relates the following case in a woman, aged 35. The patient had previously been under treatment for hæmatemesis, and at that time no signs of Graves's disease were present. She was admitted with influenza, Pfeiffer's bacillus being found in the sputum. On the third day the temperature again rose, and there was painful swelling of the thyroid gland. She was discharged well a month afterwards. Three months later she was readmitted with all the symptoms of Graves's disease. Here the connection between the strumitis and the latter disease must suggest itself. The same parts of the gland were enlarged as after the influenza. The inflammatory affection had given rise to a permanent alteration in the gland. The occurrence of Graves's disease after influenza has frequently been observed. Thus after an acute infective involvement of the thyroid gland, Graves's disease may appear. The author refers to the different views as regards the nature of this affection—whether it is due to a disease of the sympathetic or to a lesion in the medulla (Mendel), or whether it is a functional neurosis (Charcot). Moebius has advanced the view that it is a a disease of the thyroid gland itself. He points out that occasionally some or all of the symptoms of Graves's disease may exist in ordinary goitre, and that Graves's disease is in many ways the opposite of myxœdema, etc. It has been suggested that the former is due to hypertrophy, the latter to atrophy of the gland; myxœdema has been known to follow upon Graves's disease. If the local theory is accepted, many clinical difficulties still remain. The specific treatment with thyroid gland has been without effect and opinions on the value of removal of the thyroid are divided. The author refers to another case in which Graves's disease followed upon scarlet fever. Here the gland was already enlarged, but no symptoms existed previously.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(23) The Temperature in Cerebral Apoplexy.

Dana (*Amer. Jl. Med. Sc.*, June, 1894) states that, as a general rule to which there are but few exceptions, the rectal temperature rises after a serious hæmorrhagic laceration of the brain, and does not after a serious embolic or thrombotic softening. The exceptions are cases of very extensive embolism, as of a whole lobe, or of embolism of the pons or medulla, or when the lesion is septic. He found in fatal cases of hæmorrhagic apoplexy that the temperature reached, on an average, 101.7° on the day after the stroke, and sank a little on the next day, in cases not immediately fatal. Unilateral disturbance of temperature was observed in apoplexy due to hæmorrhage, and not in that due to softening. The temperature on the paralysed side was higher (on the average about 1° F.). The cases were few in number, but Dana points out that the observation is in agreement with the fact that after surgical injuries of the cortex there is a progressive rise of temperature. The rise may be preceded by a slight fall. Dana discusses the evidence for special heat centres, and comes to the conclusion that the evidence does not justify a more precise conclusion than that a rise of temperature is more apt to be caused by lesions of the pons than elsewhere, and next to this by lesions of the cortex cerebri of a hæmorrhagic and lacerating kind.

(24) So-called Amyotrophic Lateral Sclerosis.

Senator (*Deut. med. Woch.*, May 17th, 1894) refers to the views of Charcot and his school, who would attribute this disease to a sclerosis of the lateral columns with secondary involvement of the grey matter. Leyden, on the other hand, maintained almost alone that the disease cannot be separated from progressive bulbar paralysis, and that the spastic phenomena are only a secondary feature in the disease. The following case in a man, aged 57, is recorded: On admission, five years after the onset, the patient presented the typical symptoms of amyotrophic lateral sclerosis. There was paresis of all the limbs, more pronounced on the right side, together with rigidity, ankle clonus and increased knee-jerks. There was, in addition, marked atrophy of the small muscles of the hands, and increased bulbar symptoms. There was no mental change, no sensory disturbance, and no affection of the sphincters. The patient died of deglutition pneumonia. Only the spinal cord could be examined. Marked atrophy was found by Rosin in the ganglion cells of the anterior horns in the cervical and dorsal regions, being more pronounced on the right side in the upper cervical region. The cells in the lumbar cord were intact. The blood vessels were greatly distended, and hæmorrhages of various sizes were found both in the grey and the white matter, most abundant in the upper dorsal region and fewest in the lumbar cord. The lateral columns were not specially involved in this respect. Patches of softening were present in the grey matter, apparently due to the hæmorrhages. The muscular atrophy was readily explained by the lesion in the anterior horns. The hæmorrhages must be looked upon as a late phenomenon, perhaps due to the increasing cachexia. There was no sclerosis of the lateral columns to explain the spastic symptoms. Thus this case proves that the clinical picture of so-called amyotrophic lateral sclerosis can exist without a lesion in the lateral columns. It is recommended that the term atrophic spastic paralysis of spinal, bulbar, or bulbar-spinal origin be used.

(25) Phosphaturic Albuminuria and Glycerine Phosphates.

Robin (*Bull. de l'Acad. de Méd.*, December 19th, 1893) distinguishes certain cases in which albuminuria is secondary to phosphaturia. As an example, he gives the case of a doctor, aged 43, who in consequence of overwork and mental trouble began to suffer from albuminuria, polyuria, and excessive thirst. He became feeble in body and incapable of any mental exertion, began to suffer from a dull headache and attacks of vertigo, and his whole character changed. The diagnosis of interstitial nephritis seemed to be supported by the history of previous attacks of nephritic colic. Milk diet did him no good. Robin examined the urine, and found great excess in the excretion of phosphates, whereas, during the night at all events, the oxidation of nitrogenous material seemed to be diminished; albuminuria was more marked during the night than the day. In spite of a diet rich in phosphates, the patient rapidly improved under treatment, and was cured. This was seven years ago, and there has been no relapse. Robin divides such cases of phosphaturic albuminuria into four classes: (1) Simple cases. These cases have often been included in the artificial group of "cyclic or intermittent albuminuria." (2) Pseudo-neurasthenic cases, which have usually been included in the group which constitutes the so-called "neurasthenia." (3) Cases which have been confounded with interstitial nephritis, like the case of the doctor, already described. Such cases are functional, but, if neglected, may run on to actual organic disease of the kidneys, in which case they constitute the last class. (4) Cases of true interstitial nephritis, but having a "phosphaturic" origin. Treatment should be commenced early, for the three first classes are most often curable. The treatment should be directed with the object: (*a*) To get rid of the exciting causes, mental over-work, over-feeding, etc., and to fight against hereditary and acquired arthritism: (*b*) to diminish nitrogenous waste in general; to hinder excessive catabolism in the organs rich in phosphorus, and favour proper assimilation of phosphates; to aid due oxidation; (*c*) to prevent undue destruction of the red blood corpuscles, and favour their formation; (*d*) and, only lastly, to oppose the albuminuria and its causes, whether they be in the general nutrition, the blood, or the kidneys. In the pseudo-neurasthenic class narcotics, ordinary hydrotherapeutical treatment, and Weir Mitchell's treatment, are to be guarded against. Robin thinks that the disease, described as Bright's disease, is sometimes an anatomical complication of an earlier disease, at first purely functional. In neurasthenic cases Robin (*Acad. de Méd.*, April 24th, 1894) prefers to administer phosphates in the form of glycerine phosphates of lime, soda, and potash, either mixed together or given separately. They may be administered subcutaneously or by the mouth, but the latter method is slower, and gives less result. He recommends glycerine phosphates in recovery from influenza, in the various forms of nervous asthenia, and also in tabes instead of Brown-Séquard's injections, which he thinks owe their virtue to phosphorus compounds. Glycerine phosphoric acid is formed by the decomposition of lecithin, and, therefore, glycerine phosphates are a near approach to a form in which phosphorus is naturally present in nervous tissue.

(26) Accessorius Spasm.

C. Gerhardt (*Münch. med. Woch.*, March 6th, 1894) reports a case in a man, aged 62, in whom the larynx was also involved. The clonic spasm of the head began a year ago after an accident. The right shoulder stood higher than the left, the ear approaching the shoulder on that side. The right sterno-mastoid and upper cucullaris muscles felt hard. In ordinary breathing the right vocal cord made much greater excursions than the left, and the inspiratory abduction was accompanied by several short spasmodic movements of the cord. Occasionally similar movements were seen on adduction. Over the lower part of the thyroid cartilage the spasm could be felt. During inspiration the soft palate lowered itself, and tremulous movements were noted in the right arch and right side of the uvula. The author points out the importance of this case in respect of the innervation of the laryngeal muscles. The spasm occurring almost exclusively during inspiration furnishes support to the view of the distinction between the nerve fibres concerned in breathing and vocalisation.

SURGERY.

(27) Removal of the Gasserian Ganglion.

Keen (reprint from the *Transactions of the Philadelphia County Medical Society*, 1894) reports a successful case of removal of the Gasserian ganglion, as the

last of fourteen operations—one being excision of the whole of the right upper jaw—in thirteen years for tic douloureux. The ganglion was removed by the Hartley-Krause operation, a flap of scalp and bone being made in the temporal region and the dura detached from the middle fossa of the cranium. The operation was a very difficult and serious one, as the patient proved to be a "bleeder." At the first attempt to reach the ganglion the flow of blood was so profuse that it was found necessary to plug the deep wound with iodoform gauze, and to postpone the final stage of removing the ganglion for three days. The plug of gauze passed between the dura and the bone, though a very large one, covering when unrolled 222 square inches, caused no bad symptoms save slowing of the respiration and slight aphasia. Four days after the second operation the patient was out of bed with the wound practically healed. The operation was performed in October, 1893. Mitchell, in an appended report on this case, states that the patient, when last seen in the early part of 1894, reported that there had been no return of pain in the face. Keen has collected forty cases of removal of the ganglion, in some by Rose's operation, in others by the Hartley-Krause method. Of these cases six were fatal, and thirty-four may be regarded as successful, as in none of them, excepting an early case of Rose's, has any return of the pain been reported. There is very little risk, it is thought, of loss of an eye, and Keen does not take the precaution to protect this organ by preliminary temporary suturing of the lids. The author regards these results as very encouraging, and holds that if removal of the ganglion should in time prove to be a cure in cases of tic douloureux, it should be the first operation to be recommended for severe cases, provided that time and experience enable surgeons to diminish the relatively large mortality. If, however, the pain should return in any considerable proportion of the cases, then, he states, as this is the final operation, he would advise his patients hereafter to have repeated peripheral operations done, gradually approaching the centre, and the removal of the ganglion, should the pain return again and again, should be the last operation. In other words, if removal of the ganglion proves to be an unqualified success, and its dangers are lessened, surgeons should begin with this operation, and not waste time with peripheral methods. If, on the other hand, like the peripheral operations, it gives only temporary relief, then surgeons should begin at the periphery and work towards the ganglion by as slow steps as it is possible to take.

(28) Traumatic Hydronephrosis.

Wagner (*Berl. Klinik*, June, 1894) first relates a case of this uncommon lesion. After an injury to the abdomen a boy, aged 10, had severe pain. He passed urine containing almost pure blood with clots, the hæmaturia lasting 5 days. About three weeks later a well-defined fluctuating tumour was felt in the right upper abdomen. A clear fluid not distinctly smelling of urine was drawn off by exploratory puncture. The tumour was incised in the lumbar region and drained. The boy was quite well in a month, and the fistula closed four weeks later. An injury to the kidney was certain here. Some symptoms of intestinal obstruction occurring a few days after the injury were due in all probability to bruising of the bowel. The swelling was caused by hydronephrosis, as was ascertained at the operation. The most probable explanation was that the injury had produced a compatively large perirenal hæmorrhage, and that owing to subsequent organisation and shrinking, a narrowing of the ureter occurred. The author then reviews elaborately the literature of the subject. It is more difficult to decide the nature of cases of supposed traumatic hydronephrosis in which cure has occurred spontaneously or after drawing off a urinous fluid. Strictly speaking, only cases in which a considerable distension of the pelvis of the kidney can be proved by operation or necropsy, should be regarded as true traumatic hydronephrosis. Rapid disappearance of the swelling with increase in the urine is almost a certain clinical indication. Among reported cases the author has found seven certain, and ten not quite certain, cases of traumatic hydronephrosis. The hydronephrosis may be due to (1) severe injury, including tearing and stricture of the ureter, (2) extravasation about the ureter, and (3) a clot in the ureter. The author quotes a case in which a stone was dislodged by injury and became impacted, producing a secondary hydronephrosis. An injury may give rise to a movable kidney and this be followed by hydronephrosis. The diagnosis is based on the injury to the kidney and the clinical signs of hydronephrosis. It has to be distinguished from hæmatonephrosis, renal and perirenal hæmatoma, peri- and paranephritic suppuration, and traumatic pseudo-hydronephrosis. The date of development after the injury is important. The prognosis is best when the compression is due to a periureteral extravasation, or especially when the obstruction is due to clot inside the ureter. The treatment can only be operative, namely, puncture, incision, drainage, and extirpation of the sac. In uncomplicated cases delay should be allowed until the swelling remains stationary for some time, or is causing trouble by continual increase. Primary nephrectomy is contraindicated. Before nephrectomy is done the ureter should be laid bare in order, if possible, to deal directly with the obstruction.

(29) Excision of the Kidney and Ureter.

P. I. Postnikoff (*Vratch*, No. 12, 1894), records the case of a woman whose peritoneal cavity was opened on account of suspected hydronephrosis. The kidney was actually found distended, its glandular substance being almost entirely atrophied. The ureter was greatly dilated and its walls thickened, while the probing showed that its vesical end was blocked by calculi. The latter—fourteen in number—were extracted, after which the ureter was tied close to the bladder, and excised together with the kidney. For about forty-eight hours the patient suffered from obstinate vomiting causing alarming prostration, but, under the energetic use of stimulants, she gradually rallied, and ultimately made a complete recovery, the wound healing without any complications. During the few days immediately following the operation the daily quantity of urine varied from 200 to 400 c.c., but subsequently rose permanently to the standard. As regards the removal of a whole ureter, the case is believed by the author to be unique.

(30) Ruptured Ureter.

Page (*Annals of Surgery*, May, 1894) records the case of a boy, aged 5, who was run over by a light vehicle. There was no evidence of serious injury, so the patient was sent home. Two days later, however, his parents brought him to hospital, having noticed blood in his urine. The child complained of pain about the right iliac fossa. He remained well until about twenty days after the accident, when his condition became worse, and it was resolved to operate. The abdomen was opened, and there was found a soft fluctuant swelling, the size of a large Jaffa orange. This was opened and evacuated. The kidney was healthy, and it was not thought advisable to make a prolonged search for a possible rupture in the ureter. Four days after operation the dressings were found saturated, and of a distinctly urinous odour, there was distinct indication of septicity, and the temperature rose. As the child seemed to be failing it was deemed advisable to remove the right kidney. This was done, and the child improved, and the quantity of urine immediately began to increase, and the child made an excellent recovery.

MIDWIFERY AND DISEASES OF WOMEN.

(31) Post-partum Hæmorrhage.

Fehling (*Deutsche med. Wochenschrift*, June 7th, 1894) has published a paper on the pathology and treatment of hæmorrhage occurring directly after birth. Authorities, basing their opinion on the statistics of lying-in hospitals, are divided as to the relative frequency of bleeding, under the above circumstances, from uterine inertia, and of bleeding from lacerations. In fact, diagnosis is not always easy. The two factors may exist together. Sometimes hæmorrhage from a laceration may be confounded with uterine atony, as in sudden emptying of the uterus in spontaneous evolution, in hydramnion, and in placenta prævia. In these complications the blood may gush out suddenly. The distinction remains doubtful till the bleeding is checked by massage of the

uterus. Free hæmorrhage, as though a laceration existed, is seen after the expulsion of a four to six months' ovum. After Cæsarean section, where there can be no question of a lacerated cervix, hæmorrhages are known which may place the patient in great peril, yet are stopped by the tampon, friction of the fundus and other measures employed in cases of uterine inertia. In every case of *post-partum* hæmorrhage the obstetrician should do his best to diagnose the nature of the bleeding. When a case is doubtful, and the uterus has been made to contract by the usual rubbing, the best time to distinguish is when a contraction has just ceased. In atony the collected blood is suddenly driven out of the uterus; but, when there is a laceration, blood spurts or oozes out continuously. Vulvar and vaginal wounds are the most usual injuries after spontaneous and forceps labours. In turning and in breech cases lacerations of the cervix are more common. The search for such injuries should always be made; the cervix must be drawn down and its lips parted; under these circumstances, however, dilated vessels may begin to bleed. Hence laceration of the cervix has been reported more frequently than truth can sanction. Vulvar and vaginal wounds should be sewn up with catgut; but, when skilled assistance is not at hand, the obstetrician should not attempt to repair a torn cervix. It is sufficient to apply for a time an iodoform-gauze tampon.

(32) Tubercle of the Uterus.

Emanuel (*Zeitschr. f. Geburtshülfe u. Gynäk.*, vol. xxix, 1894) relates a case of tubercle of the cervix extending to the vagina but not involving the tubes; the uterus was removed entire through an abdominal incision, but the patient died of shock soon after the operation. The lungs were free from tubercle, but the spleen, liver, kidneys, peritoneum, and mesenteric glands were tuberculous. Emanuel concludes that the different forms of tubercle of the female genital tract depend on different causes. When the tubes are not involved but the most exposed parts of the tract—vagina and cervix—are tuberculous, the most frequent source of infection is coitus; the finger of a physician, or a sound or other instrument may also carry tubercle into the patient's system. Tubercle of the uterine cavity and tubal mucous membrane may also be due to infection in coitus; in the majority of cases however the disease is secondary. Tubercle affecting the serous coat of the Fallopian tube and not involving its canal nor any part of the uterus can hardly be primary in any case. Its source will most probably be a tuberculous ulcer of the neighbouring intestine.

(33) Myomectomy during Pregnancy.

Stavely (*New York Journ. of Gynec. and Obstet.*, June, 1894) tabulates 33 cases, including 2 previously unpublished in which Dr. Kelly of Baltimore operated. The maternal mortality was 8, or 24·25 per cent.; 2 deaths were due to hæmorrhage, 1 to long-standing aortic disease, and 1 to peritonitis; 3 died after abortion, and 1 sank from some unspecified cause; 24, or nearly 80 per cent., of the 33 have been reported since 1884. Eliminating cases operated upon before 1885, there remains a mortality of 16.66 per cent. Since 1889 17 cases have been reported, or over half the entire number, with a death-rate of 11.75 per cent. The fœtal mortality is 30.30 per cent., or 9 abortions and 1 miscarriage; 20 of the women were delivered at term of living children; 1 was prematurely delivered at the eighth month, nearly six months after the operation. In 3 cases in which the mothers died no statement is made concerning abortion. Sixteen myomata are reported as pedunculated; 4 of the patients (including the case of aortic disease) died after operation, 1 aborted, 1 died after giving birth to a stillborn child. In 15 cases, where the myoma was sessile, there were 6 abortions, and 4 patients died. Nine were operated upon during the last eight years with 2 deaths and 1 abortion; the abortion occurred in one of the fatal cases. Stavely considers that, with our present experience, and with the improvements which have acted so beneficially on modern surgery, myomectomy for pedunculated or sessile tumours during pregnancy is, in properly selected cases, comparatively safe and thoroughly justifiable.

(34) The Fats of Human Milk.

Ruppel (*Zeitschr. f. Biologie*, vol. xxxi, pt. i, 1894) has made a very careful analysis of the fatty constituents of woman's milk. The task is not easy, and he admits that there is extreme difficulty in eliminating the higher acids. He concludes that human milk is relatively poor in volatile fatty acids. The fixed oils consist of nearly 50 per cent. of oleic acid. Of the fixed solid oils, myristolic and palmitolic prevail over stearoleic acid.

(35) Fœtus in Utero Forty Days after Term.

Tarnier (*Journal des Sages-Femmes*, May 1st, 1894) delivered a lecture in April on a woman in her second pregnancy. The last period was on June 15th to 17th, 1893. Hence term would fall on March 20th to 24th, 1894. Delivery did not occur till April 27th, nearly forty days after term. Tarnier had known a pregnancy to last nine months and fifteen days. In this case it may be suggested that the patient became pregnant not just after the June period, but just before the period was due in July. But starting from July 14th would make the date of delivery thirteen days over term. Evidence was against impregnation later than July. The uterus was not nearly as large as at normal term, blood-stained amniotic fluid came away, in fact, the fœtus had been dead for some time. On April 27th the patient was delivered. The hairy scalp, pushed forward in front of the collapsed cranial vault, presented and felt at first like a very small fœtal head. The true head, and after it the body, were soon delivered. The fœtus was macerated, not putrid. It weighed nearly 2½ pounds, but was over 13½ inches in length. It had clearly lost weight through maceration. The average weight of a six months' child is just under 2 pounds and 9-10ths, but its length a little over 11½ inches. The exact date of this child's death could not be determined from its condition at birth. The placenta was in a state of fibro-fatty degeneration.

(36) Delivery in Uterus Duplex.

Von Dittel (*Centralbl. f. Gynäk.*, No. 25, 1894) observed this case. The patient was a healthy primipara. The last period occurred on April 15th, 1892. Pains set in on January 10th, 1893, at 6 A.M. The pelvis was normal. The vagina was found to be double, having a perfect septum. The right vagina led to a perfect portio vaginalis with an os externum which admitted the tip of the finger. The left led to a dilating os, with protruding membranes and breech presentation. The septum was completely torn through as the breech descended, excepting at the vulva and a strip which joined the remains of the septum at the vulva. It was proposed to tie and divide this strip, when it became stretched and was torn asunder. At 10 P.M. on January 10th the labour ended, after manual assistance. The torn ends of the strip of septum required ligature, the placenta followed rapidly, and there was no fever in childbed. The child was a living male, over 18 inches long and 5¾ lbs. in weight. Fourteen days after delivery, a crest was found to represent anteriorly and posteriorly the attachment of the septum complete before labour; the lowest part and the remains of the strip, which gave trouble during delivery, still existed. The bodies of the uteri seemed quite separate. The left or puerperal uterus was anteflexed and as big as a man's fist; the right was stretched and as large as a fig. Three months later the left uterus had not undergone complete involution, and the right lay more backwards.

THERAPEUTICS.

(37) Inunctions of Guaiacol and Creasote in Fever.

V. P. Kravkoff (*Vratch*, No. 16, 1894) has tried inunctions of guaiacol and beechwood creasote in two cases of enteric fever and one of phthisis. In 5 of his 13 experiments, guaiacol, and in 8 creasote, was employed, the former being always used pure, the latter either pure or in equal parts of alcoholic solution, or in a mixture with *vodka* (20 drops to ʒij of brandy), or in the form of a vaseline salve (20 drops to ʒj). Twenty drops of one or other of these substances were applied on each occasion except once, when the dose was 30 drops. The substances were invariably rubbed into the abdomen, the frictions being made with the forefinger and continued for two or three

minutes, after which the abdomen was covered with a warm compress. The results were as follows: (1) The temperature always fell rapidly, becoming normal in 12 cases about two hours after the inunction, and keeping at the normal point from three to four hours, when creasote *in substantiâ* or in an alcoholic solution was used—from one to three hours, in the case of guaiacol; about one hour and a-half in that of the creasote salve; and less than one hour in that of the *vodka* solution. (2) The defervescence was usually accompanied by very profuse perspiration, and followed by retardation of the pulse and respiration. (3) Neither collapse, nor failure of the pulse, nor cerebral symptoms were ever observed. On the contrary, consciousness always brightened, the subjective state improved, and appetite was excited. (4) The only unpleasant accessory phenomena consisted in occasional vomiting in the two typhoid patients (one of whom could not generally tolerate many other strongly-smelling substances, such as camphor, naphthalin, etc.). On the whole, Kravkoff is satisfied with the results of his experiments.

(38) Chloroform.

Schmidt (*Münch. med. Woch.*, June 26th, 1894) recommends the use of chloroform prepared from salicylid chloroform (Anschütz). Salicylid is an anhydride of salicylic acid, and it forms with chloroform a crystalline body. By warming this compound a pure chloroform distills over. The author has used the chloroform so prepared in 166 cases. The chloroform was taken more easily and the narcosis was quieter. Even with a pure preparation chloroform is still a severe cardiac poison. In the 166 cases there was faintness in 6, and slight asphyxia in 2. Several times it was difficult to obtain full anæsthesia, but the author saw no reason for attributing this to the particular form of chloroform used. The after-effects were less severe; only in one-third of the cases was there any vomiting, and then occasionally only once. The author refers to ill-effects coming on a few days after ether anæsthesia. The drop method of administering chloroform was employed. The narcosis is said to be less dangerous when little chloroform is used. In long operations, lasting upwards of two hours, 50, 80, or 100 grammes of chloroform were employed. In deaths from chloroform it should be noted whether the death occurs at the beginning of the anæsthesia, when it cannot be put down to want of skill in giving the anæsthetic, or later during the operation, or only after severe loss of blood. The danger of the anæsthetic is often out of all proportion to the operation. The author considers the chloroform prepared as above to be the best, and that it constitutes an advance in anæsthesia.

(39) Statical Electricity in Eczema.

Doumer (*Arch. d'Electricité Médicale*, May, 1894) reports favourable results in eczema from the employment of the electric *souffle*. Of fifty cases forty-eight were completely and rapidly cured. The cases enumerated include both acute and chronic eczema, and the patients were of various ages. He advises the use of a machine capable of giving sparks 3 inches long, and an electrode with points for the breeze or brush discharge. Either the negative or the positive pole can be used, no difference in their action upon the complaint having been noticed.

(40) Chloral Hydrate in Hæmoptysis.

J. Pal (*Centralblatt f. die gesammte Therapie*, July, 1894), in the first place, refers to the two extremely old measures advocated in cases of hæmoptysis, namely, bleeding and ligaturing of the extremities, the latter procedure having been recommended by Hippocrates. The object is to relieve the venous circulation, while permitting the arterial flow. Several times at the onset of a hæmoptysis the author thus ligatured the four extremities below the axillæ and above the knees respectively, in this way obtaining good results. However, their application can only be extended over about half an hour, and unless the bandages are very carefully and gradually loosened there is a possibility of the thrombus in the lung being detached during the increased venous flow. The author therefore tried chloral hydrate, which he expected to produce the same therapeutic result, without the attendant mechanical disadvantages. Fifteen patients were thus treated, the heart in each having previously been declared sound. The drug was injected *per rectum* in doses of from 15 to 25 grains, and an effect was always produced within half to three-quarters of an hour. Several times repeated doses were given, and as a prophylactic the drug also seemed to be valuable. Several cases are described, and further research in this direction is recommended.

PATHOLOGY.

(41) Influence on the Development of the Embryo of the Injection of Blood into the Albumen of the Egg.

Ch. Féré (*Comptes Rendus Hebdomaires des Séances de la Société de Biologie*, June 1st, 1894) reports the results of three different sets of experiments undertaken to determine the influence of foreign blood introduced into the egg on the development of the embryo. In all eggs of the same age were taken, placed in the incubator after treatment, and opened after the lapse of seventy-two hours. Experiment I: (*a*) 12 control eggs; (*b*) 12 eggs injected with ½ cm. serum from blood of a rabbit which had died of fowl cholera; (*c*) 12 eggs injected with the same quantity of normal blood. Results: Development normal in 83.33 per cent of (*a*), 55 per cent. of (*c*), and 16.66 per cent. only of (*b*). Experiment II: (*a*) 6 control eggs; (*b*) 6 eggs injected with ½ cm. of serum from the blood of an imbecile otherwise healthy; (*c*) 6 eggs injected with the same quantity of serum from a patient with chronic rheumatism; (*d*) 6 eggs injected with the same quantity of serum from a patient with well developed secondary syphilis. Results: 83.33 per cent. normally developed embryos in (*a*), (*b*), (*c*), and 50 per cent. only in (*d*). Experiment III: In this series the whole of the blood was injected together with a solution of potassium oxalate to prevent coagulation. Syphilitic blood was again employed. (*a*) 12 control eggs; (*b*) 12 received a solution of potassium oxalate only; (*c*) 12 a mixture of 1 cm. normal blood with a similar quantity of solution of potassium oxalate; (*d*) 12 1 cm. of blood from syphilitic patient and solution of potassium oxalate. Results again showed 83.33 per cent. normally developed embryos in (*a*), 58.33 per cent. in (*b*) and (*c*), and 25 per cent. only in (*d*).

(42) Tuberculous Endocarditis.

A patient suffering from tuberculosis, under the care of Mouisset, of Lyons, died of acute endocarditis. Portions of the endocardial lesion were inoculated into a guinea-pig by Courmont, who reports (*Lyon Méd.*, May 27th and June 10th, 1894) that the animal became tuberculous; it presented enlargement of the glands in relation with the point of inoculation in the thigh, and commencing tubercle in the lungs. Courmont concludes that the endocarditis in the patient was tuberculous.

(43) Preservation of Organised Sediments in the Urine.

Bohland (*Centralbl. f. inn. Med.*, May 19th, 1894) recommends the following method. The deposit is obtained by standing or by means of the centrifugal machine. The supernatant fluid is poured off, and the deposit washed with saline solution and transferred to Müller's fluid, which is renewed every three or four days. After a fortnight the Müller's fluid is drained off, and the after-hardening completed in absolute alcohol. Epithelium, leucocytes, and casts are readily recognised. If examined as soon as taken out of Müller's fluid the formed elements appear yellow, and hyaline casts are thus easily seen. Alcohol alone, chromic or picric acid, are unsuitable for hardening. The sediment can be stained. A drop of the deposit in alcohol is put on a coverglass, and a thin film obtained. This is allowed to evaporate, and is then stained with Ehrlich's neutrophile mixture. The author's preparations lasted only a few weeks, but the value of the hardening method for class purposes is obvious. Mononucleated leucocytes were found in parenchymatous and interstitial nephritis as Senator pointed out, very few polynucleated cells being seen. The author has stained deposits with Weigert's fibrin stain, but he could never demonstrate fibrin in the casts.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(44) Dry Gangrene of Nervous Origin.
Panas (*Bull. de l'Acad. de Méd.*, June 8th, 1894) read a communication on a case of dry gangrene. The patient, aged 35, was of nervous temperament; the father gouty, and died of heart disease, aged 50; the mother hysterical; the brothers and sisters also showed signs of extreme nervousness. Careful examination revealed no trace of syphilis, diabetes, albuminuria, or alcoholism. Six years since the patient began to experience lancinating pains in the upper limbs, which disappeared at the end of three months, to give place to similar pains in the lower, with the appearance of some scattered red patches on the left leg. This continued two months, and then there was freedom from pain until November, 1893, when the same pains recurred in the left leg, with cutaneous venosity. Two phlyctenulæ appeared, one at the tip of the big toe, which soon healed, the second in the first interdigital space, which became the seat of a black gangrenous patch, which proceeded to invade the neighbouring toes. The gangrene spread, involving both dorsal and plantar surfaces of foot, and amputation was performed in the upper third of the leg with perfectly satisfactory results from the surgical point of view, cicatrisation being complete in twenty days. But the pain, so far from being ameliorated, became much worse and resisted all treatment. Hypodermic injections of morphine, antipyrin, chloral, potassium bromide, bromidia, sulphonal, electric currents, and baths of oxygen and carbonic acid were all tried in turn. Finally, salicylate of soda was tried in doses of 3 grammes a day, and to this the pain yielded to a large extent; the patient's state being so much ameliorated that he could undertake a voyage. But he still continues to experience some twinges both in the amputated and other limbs. A noteworthy fact at the amputation was the absence of arterial hæmorrhage, only the posterior tibial demanding a ligature. On the other hand the veins were very full and bled abundantly. Macroscopic examination showed arteries and deep veins obliterated and reduced in volume, but there was no trace of clot. Microscopic examination showed proliferation of endothelial sheaths, the elastic coat much folded, the muscular coat normal, the adventitia rather thickened. The nerves, especially the anterior tibial, showed an alteration in a large number of fibres both in longitudinal and horizontal sections. Diagnosis: endovasculitis, either of gouty origin or consecutive to nervous lesion.

(45) Hysterical Gangrene.
Ehrl (*Wien. klin. Woch.*, May 3rd, 1894) reports the following case in a girl, aged 18. Since her sixth year there had occurred regularly in the late autumn a reddening of small portions of the skin, followed by the formation of bullæ, which burst and healed. Three years ago the affection attacked the cheek, and was accompanied by anæsthesia of half the face. Two months before admission the skin affection recurred, but under a different form; small portions of the skin on the right cheek became blackish in colour and sloughed. Similar lesions occurred on the left arm. On admission, besides the scars, there were blackish sloughs on the back of the left hand. Three months later the patient again came under observation with localised gangrene of the skin, and on several subsequent occasions she had relapses. Later there was limitation of the visual fields and also hysterical aphonia. No organic cause could be found for the disease. The diagnosis of its hysterical nature was based on the anæsthesia, visual disturbance, aphonia, ovarian hyperæsthesia, etc., as well as the duration, recurrence, and changing character of the disease. There was no evidence that the lesions resulted from self-inflicted wounds. Subsequently a sister of this patient came under treatment with right hemianæsthesia. Similar patches of redness, followed by localised gangrene, also appeared on the left breast, and later on the cheeks, in this case.

(46) Primary Confusional Insanity.
In the *Arch. Gén. de Méd.*, May and June, 1894, Séglas contributes a clinical study of this disease (*confusion mentale primitive*). The symptoms are both mental and bodily. Among the former must be placed bewilderment, astonishment and hebetude, or the expression is inert and stupid. The patient is lost in his responses to questions and appears to be out of touch with persons and things round about him. He has difficulty in finding words for his ideas and in understanding what is said to him. His thoughts are slow, and there is difficulty in fixing his attention. He is distracted by persistent dreamings. He is in a state of doubt and uncertainty, and his perception and imagination are defective. The disease is not due to disturbances in the elementary sensations, but in the psychological interpretation of these sensations. The memory is weakened. Accurate recollections may, as it were, be forced upon him, but he is unable voluntarily to recall events. The same alteration takes place in regard to voluntary movements, which are hesitating, maladroit, etc. In slight cases this inability of action is greatly complained of. Sometimes intervals are present when the patient recognises the confusion in his ideas. Sometimes there are delusions of a melancholic type, which are changeable and incoherent. Hallucinations may be present. Sudden impulsiveness may occur, when violence either to himself or another may be done. The docility, however, is usually striking, especially to some people, who may thus manage the patient easily. In the bodily symptoms there is general weakness, exhaustion, and loss of flesh. The pupils may be unequal. The cataleptic state may supervene. Insomnia is almost constant. Two forms are recognised, the asthenic and hallucinatory. Sometimes the bodily symptoms predominate, and the forms may then be classed as cachectic, typhoid, and meningeal. The onset of the disease is usually rapid. It lasts on an average from four to six months. It may end in recovery, chronic dementia, or death. It is the only mental disease besides general paralysis which may cause death. The prognosis is worse than in mania or melancholia. The more complicated and changing the form the worse the prognosis. Slighter forms must be distinguished from melancholia. The physiognomy is quite different from mania. In early general paralysis there is no real confusion of ideas, but progressive dementia. Traumatism, physical and moral, infective disease, excesses, etc., are important occasional causes. Heredity is of less significance than usual. The bodily condition must be improved: alkaline bromides are to be avoided. If due to auto-intoxication, efforts at elimination should be made. Moral treatment is important. Confinement to an asylum should be delayed as long as possible.

(47) Thrombosis of the Superior Mesenteric Artery.
Councilman (*Boston Med. and Surg. Journ.*, April 26th, 1894) describes three cases of occlusion of the superior mesenteric artery by thrombi. In two, males aged 61 and 62 respectively, the occlusion was complete, and there was extensive infarction of the intestinal wall. In one cases there was a second thrombus lower down, and the mucous membrane of the portion of the intestine in relation with it was not only swollen by infarction, but presented areas of necrosis involving in places the whole thickness of the mucous membrane. The symptoms were abdominal pain and tenderness, and in one case diarrhœa. In both cases there was peritonitis. In the third case, a woman aged 85, the artery was not completely occluded, but a large thrombus on the anterior surface of the aorta extended into the artery and occluded the orifice almost completely: the intestines were enormously distended and somewhat congested. In this case abdominal pain, distension, and constipation were the prominent symptoms, and a diagnosis of obstruction was made: the temperature was subnormal until just before death. In one of the other cases, that in which diarrhœa did not occur, intestinal distension was also marked. In two cases the thrombi were in relation with calcification of the aorta, and in the other the heart was dilated and the aorta roughened.

P40 ▲

SURGERY.

(48) The Removal of Stone from the Bladder.

Forbes (Philadelphia *Medical News*, June 23rd, 1894) tabulates the results of experiments on 184 vesical calculi, made with the object of measuring their crushing resistance. An attempt has been made to deduce from this table a general law for such resistance of vesical calculi, considered under the heads of chemical composition, weight, size, and specific gravity, but owing to the great variation in the ages of the calculi since their removal from the bladder, and the consequent hardening or softening of the colloids due to atmospheric exposure, the author has hitherto found this object impracticable. It would seem, however, as one element of the law, that there is a marked decrease in the crushing resistance of vesical calculi relatively to their size and weight as they grow larger. It is anticipated that by the use of a recently devised lithotrite, having a measuring mechanism in its handle, the crushing resistance of a calculus will in future be recorded at the time of operation. The remaining portion of this valuable paper is taken up by a description of a new lithotrite designed and made by the author's son, who is an engineer. This lithotrite has some of the elements that are common to the Civiale, Thompson, and Bigelow instruments—namely, a pair of jaws capable of being separated and brought together, and a handle mechanism for their operation. The construction and general lines of it are, however, entirely original and widely different from any lithotrite that has been hitherto devised. The vesical end consists of a male blade sliding within a female blade, and held within the latter by means of a slightly angular undercut slot. This arrangement prevents the male blade rising out of the female when under a strain, so that the greater the strain the tighter the male blade is held within the female. The long axis of the shaft is straight from the handle to within about 2 inches of the crook or curve, where it rises at an angle of about 5 degrees until it meets the curve. Six important objects are thus accomplished: the instrument can be more easily introduced through the urethra, the strength of the female jaw is increased by giving it support higher up, a larger stone may be grasped with a relatively short female jaw, the metal of the female shaft is placed where it is most needed to give strength, lateral movement or twisting of the male jaw is prevented, and the angle between the long axis of the female blade and the long axis of the shaft is the same as if the shaft were straight all the way to the curve. The proximal or anterior surface of the female jaw is concave. This concavity prevents the calculus from slipping away when the power is applied, and tends also to direct it lower down, thereby placing it in a position where the instrument gains strength. The female shaft is elliptical and of uniform size from the handle up to within about three inches of the crook, where it begins to increase slightly in calibre until it reaches its maximum, which is at the crook. This affords great strength to the female shaft at the point where it is most needed, and at the same time places the extra metal within the bladder and the prostatic portion of the urethra only, where it is easily accommodated. The female is much larger than the male blade, so that all *débris* is expelled and impaction prevented, and the wall of the bladder is thus protected from being pinched or cut. The proximal or posterior surface of the male blade is in the form of a wedge of about 60 degrees in order to penetrate a calculus with the least power propelling it. It is traversed by two cross ridges, which prevent the stone from flying when broken. The handle or screw mechanism, which is described fully but in somewhat technical language, belongs to what is known as the interrupted-screw type. The instrument, the author states, has demonstrated its complete fitness in seven operations on the living subject. In the testing experiments on crushing resistance, it broke down 148 calculi, and on thirteen occasions was subjected to a pressure between the blades of 500 pounds. Most of the calculi were many years old, and much harder than any recently taken from a living subject.

(49) Anthrax in Man.

Müller (*Deut. med. Woch.*, June 14th and 21st, 1894) refers to different views in connection with local treatment. It is impossible to destroy the disease by excising the site of inoculation. In guinea-pigs amputation of a limb two or three hours after the foot has been inoculated cannot save the animal. By the time the injection is ended absorption must have commenced, as is shown by the rapid proliferation of the bacilli in the tissues. The disease produced by anthrax would appear to be largely due to a toxic action. It may, however, be difficult to find bacteria in the blood; when absorbed they may be deposited in parts where the circulation is slow, as in the liver, spleen, and marrow of bones. It has been shown with almost certainty that products may be isolated from anthrax cultures, which produce symptoms like those due to anthrax. Whether phagocytosis plays a part in human anthrax is undecided. The author's observations would lead to a negative conclusion. Different organs have different capabilities of dealing with anthrax. Thus, in rats the spleen seems to have the chief action, but in rabbits the liver. In man enlargement of the spleen is noted early. It must be the object of treatment to get the cells at the site of inoculation to arrest the dissemination of the bacteria and to protect the cells in the whole body against the poisoning. If excision of the inoculated part cannot arrest the disease, it might be thought that the anthrax bacilli and their products might be let out out by incision. The author concludes, however, that incision should not be practised. Anthrax is one of the most virulent of the blood parasites, and by incision there is the danger of a fresh invasion of the blood in the vessels thus laid open. The products at the site of inoculation are harmful to the individual if absorbed, but they are also destructive to the anthrax bacilli *in situ*. The line of treatment recommended by the author is the following: The affected part and adjacent joint are fixed to prevent dissemination. The limb is also elevated to assist the venous return, so that more arterial blood may come to the part. Mercurial ointment is applied to prevent secondary infection. Means are adopted to improve the circulation, such as alcohol in large doses and nutritious diet. All the cases, including severe ones, which have been thus treated in von Bramann's clinic since 1890 have recovered.

(50) Morton's Disease.

Bosc (*Arch. Gén. de Méd.*, July, 1894), begins a study of this metatarsal neuralgia. It is limited to the anterior part of the foot, and to the metatarsophalangeal joint, usually of the fourth toe. The disease consists in attacks of pain, generally localised to this joint, but at times radiating to adjacent parts. The attack begins suddenly, and the pain may be excruciating, the patient often feeling compelled to take off his boots. Walking is prevented, and the leg is flexed. The pain usually ceases rapidly on repose, but returns as soon as the foot is put the ground again. The attacks have a variable duration from a few hours to a whole day. They may only recur at long intervals, but occasionally every two or three days. The attacks need not be so severe as described above, the pain being more dull. In the less marked attacks the pain may only produce a slight giving of the leg. There may be vague pain during the intervals, and much cutaneous hyperæsthesia. At times the disease may really be termed chronic. The attacks of pain may react on the patient's nervous system; he may become depressed, and is haunted by fears of further attacks. There is absence of any local sign of disease. In the case related here by the author there was, however, some redness over the plantar surface of the metatarsophalangeal joint, and pressure here produced the pain. There was also marked hyperæsthesia.

MIDWIFERY AND DISEASES OF WOMEN.

(51) Antisepsis in Obstetric Practice.

Henrotay (*Archives de Tocol. et de Gynéc.*, June, 1894) and others have drawn up an important report on this subject, with a view to future legislation regarding midwives. Amongst other conclusions, they urge that puerperal infection is usually transmitted by contact of the genital tract of the patient with a virus conveyed by the hands, instruments, or linen. The

special germs (streptococci, staphylococci) as a rule come from some other puerperal patient, but may also be traced to cases of anthrax, erysipelas, or simple furunculus. The atmosphere, as an infecting agent, plays no part save in exceptional instances, where scrupulous antisepsis has been practised. Autoinfection is rare and of secondary importance; the report further shows that the term in question is not similarly defined by different authorities. Elevation of temperature in childbed is as a rule a sign of infection at the moment of delivery. When for twenty-four or more hours after delivery the temperature rises over 100.5°, the case requires serious attention. On the above opinions rules for treatment are laid down in the report. The minimum of requirements is set down as including (1) perfect cleanliness of all sheets, blankets, and utensils used for the patient; (2) disinfection of the hands of the physician or midwife and of all instruments before use; (3) disinfection of the external organs.

52) Cancer of Cervix in a Uterus Bicornis with Atresia Vaginæ and Pyometra.

ROSSA (*Centralbl. f. Gynäk.*, No. 18, 1894) describes this unusual complication observed in a single woman, aged 38, of weak mental capacity. She had borne five children, the youngest about twenty years earlier. The climacteric had occurred about fifteen years ago. During the last three months pelvic pain and difficult micturition had set in. The vagina was strictured in the middle. On October 21st, 1893, an exploratory abdominal incision was made. A dilated double uterus was discovered; the appendages were normal; the bladder, though emptied by the catheter before operation, reached an inch above the symphysis. Both the uterine cornua and the upper and obstructed portion of the vagina were full of pus. The vagina was punctured at the seat of stricture by means of a fine trocar. Nearly two pints of purulent fluid escaped, the dilated cornua collapsing as it flowed away. The abdominal wound was closed and the vagina drained. Symptoms of acute mania developed, and the patient died on the fifth day. At the necropsy acute meningitis and encephalitis with catarrhal pneumonia were detected. The left kidney and ureter were entirely wanting, the right kidney greatly dilated, its ureter obstructed at a point where it was crossed by the persistent right umbilical artery. The cervix was single, and the seat of an epitheliomatous outgrowth.

53) Glycerine Injections as an Oxytocic.

PELZER (*Centralbl. f. Gynäk.*, No. 26, 1894) read a communication on this subject at a recent meeting of the Cologne Obstetrical Society. He had collected 28 cases, including 19 in his own experience. Glycerine was used 18 times for induction of premature labour; in 15 of these cases the pelvis was narrowed, in 2 there was Bright's disease, and in 1 placenta prævia. To stimulate uterine action at term glycerine was injected in 7 cases of simple atony, in 2 of placenta prævia, and in 1 for some other complication. The pains came on after an average interval of two hours following the injection. Eight to ten hours elapsed before complete dilatation of the os, or a longer space of time in cases of contracted pelvis. Two of the mothers died, both from severe eclampsia; the fœtus was putrid in both cases. One child required craniotomy on account of its great size. Three children died from placenta prævia and strangulation by the funis. One, hardly 32 weeks old, died a quarter of an hour after birth. Only in one case could the violence of the pains be a possible cause of the death of the child. The glycerine had done its duty. Pelzer however, deprecates injudicious zeal about this method; 30 to 50 cubic centimetres, not 100 cubic centimetres, are sufficient for injection. The method is not suitable for cases of eclampsia and placenta prævia, except the lateral variety, where the placenta can be avoided.—Geuer (*ibid.*) read notes of 3 cases of induction of premature labour by injection of glycerine, in all of which both mother and child were saved. The first two mothers were over 32, with contracted pelves; craniotomy had been performed in previous labours. The third case was an instance of bad eclampsia; 40 grammes of glycerine were injected, the os being at the time uncontracted: there was œdema, with much albuminuria. Forty hours later a healthy living child was born.

54) Tuberculosis of the Placenta.

LEHMAN (*Berl. klin. Woch.*, June 25th, 1894) showed before the Berlin Medical Society two typical examples. He observes that an organ containing as much blood as the placenta ought to show the tuberculous lesion quite as readily as the liver and kidney do. In the second case the tuberculous foci were situated in the chorionic villi, that is in the fœtal portion of the placenta. The infant died ten days after birth without tubercle being actually found in the body. Such tuberculous lesions as occur in the bones and glands during childhood are better explained in this way than by aërial infection. The author has found placental tuberculosis in 2 out of 3 cases in which the mothers were affected with tuberculosis elsewhere. The changes in the placenta are so slight that they may easily be overlooked. The placenta should be cut in slices ½ centimetre thick, each part carefully examined and doubtful portions microscoped. Hirschfeld and Schmorl (EPITOME, June 6th, 1891, par. 505) found tubercle bacilli in the fœtal liver without obvious tuberculous lesions there in the case of a phthisical mother. In the first of the author's cases the tubercle, as might be expected, was found in the maternal portion of the placenta. The disease may spread to the fœtal portion either by direct extension or by rupture into the intravillous spaces. Tubercle bacilli may be found, though sparsely, in these placental lesions.

THERAPEUTICS.

55) Massage and the Blood.

J. K. MITCHELL (*Am. Journ. Med. Sciences*, May, 1894) describes the effect of massage on the number and hæmoglobin value of the red blood corpuscles. He examined the blood of thirty individuals before and after massage. The massage was mostly continued for at least an hour, and, if general massage is to be of service, he thinks it must be of a full hour's duration. Of the thirty persons whose blood was examined once or on several occasions, two were healthy, whilst the rest suffered from various forms of anæmia, malnutrition, nervous complaints, etc. A considerable increase in the number of red blood corpuscles was nearly always observed after massage, but the hæmoglobin was not usually increased to a corresponding extent. Considering that red blood corpuscles could not be formed so rapidly and in numbers sufficient to account for the increase observed after massage, Mitchell suggests that the massage may have the effect of bringing a number of red blood corpuscles into the circulation which, before the massage, had been resting in various parts of the body. It is further suggested that these additional blood corpuscles, brought into the circulation by the massage, may be of a different quality from the others, and poorer in hæmoglobin, and that this may explain why the hæmoglobin is usually not increased after massage to an extent corresponding to that of the increase in the number of corpuscles. This latter increase was observed to be independent of the nature of the disease from which the patient was suffering. Mitchell thinks that massage may be employed without danger in high grades of anæmia. The greatest increase in the number of corpuscles is observed about an hour after cessation of the massage. During his research Mitchell was astonished to find that the blood of patients apparently anæmic may often contain more than the number of red blood corpuscles in the c.mm. given as the average number in health by the textbooks.

56) Intubation in Pertussis.

TAUB (*Jahrbuch f. Kinderheilk.*, 37, 1), in view of Herff's discovery that in pertussis the interarytenoid region is principally affected and the most sensitive, directed his attention to improving this latter local condition. Two infants less than one year old were suffering from equally severe attacks, and the condition was most grave owing to the exhaustion produced by the frequent paroxysms. Under these circumstances intubation was frequently performed for periods of from four to six hours in one of the patients, this procedure invariably leading to an immediate attack of coughing, but subsequent relief and

cessation of symptoms. The other child died, intubation having been refused by the friends. Owing to the possibility of catarrhal pneumonia resulting from this treatment the author only recommends the measure in extreme cases.

(57) Massage in Infantile Convulsions.

Schumann (*Therap. Monatsh.*, March, 1894), after discussing the intestinal causes leading to eclampsia and convulsions in children, dwells on our inability to render much active and immediate assistance. Anæsthetics, purgatives, etc., are dealt with, and the author then describes how he has lately in the case of several children resorted to abdominal massage, which led to instantaneous relief. With or without an anæsthetic, according to the nature of the case, the child's abdomen should be rubbed for several minutes, when the passage of flatus and a thin stool will show the success of the treatment. The history should be inquired into first, and, when there is a probability of the presence of peritoneal irritation, the massage may be contraindicated.

(58) Pyoktanin in Visceral Cancer.

Maibaum, of Dorpat (*Meditzina*, No. 7, 1894), has come to the conclusion that when employed in cases of malignant disease of internal organs pyoktanin decidedly arrests the disintegration of these growths, improves digestion, and, on the whole, has a beneficial action on a system suffering from cancerous cachexia. He relates three cases of advanced carcinoma of the stomach, in which the drug was administered in 1gr. doses thrice daily (either internally, in pills, after meals: or, if not well tolerated, in the shape of rectal suppositories). In all three patients a striking amelioration was rapidly seen; nausea, vomiting, eructations, heartburn, and epigastric pain subsided, the appetite and sleep returned, and the general strength and bodily weight increased.

PATHOLOGY.

(59) Immunity.

Buchner (*Münch. med. Wochs.*, June 12th and 19th, 1894) discusses the advances in this subject. In connection with the exact causes of immunity, the great difference between natural and acquired immunity has been definitely established. Natural immunity seems to be brought about by the bactericidal action of a protective substance or alexin in the blood serum. This alexin differs from the antitoxin found in the serum of animals artificially made immune. Alexin acts upon the bacteria, and also upon the red cells, and even leucocytes belonging to animals of other species, whereas such bactericidal and globulicidal action is not possessed by antitoxin. Alexin is most easily decomposed, whereas antitoxin is a stable body. The effects of antitoxin are the same, whether coming from one animal or another, and only depend on the degree of acquired immunity possessed by the animal. The author contends that the serum of animals made immune contains both alexin and antitoxin. Thus a body can be extracted from the blood serum of an animal made immune and can be transferred to another. There are two explanations in regard to this body—namely, that it is a reactive product on the part of the tissues, or a modified product of the bacteria cell. The chief point, however, is that the living body is necessary for the production of this antagonism of the antitoxin against the cause of the disease. The author would limit the term immunity to the acquired form, and thus speak of specific immunity, including the immunity against the bacteria poison and of natural resistance. The action of tuberculin does not lie in any specific immunity, but in an increased natural resistance. In this respect he refers to the researches of Hueppe in relation to cholera, and those of Fraenkel and Rumpf (Epitome, December 9th, 1893, par. 475) in relation to the treatment of enteric fever by killed cultures. The author maintains that endeavours are being made in the protection against disease by increasing the natural resistance. He then quotes an experiment in which sterilised wheaten gum was introduced into the pleural cavity of a large rabbit. After it was killed the gum was found infiltrated with leucocytes and possessed of marked bactericidal powers against the B. coli communis. The leucocytes were destroyed by freezing, and yet the bactericidal powers remained. These powers were soon destroyed by heat. The author would attribute these powers to the presence of alexin, probably derived from the leucocytes. He looks upon the blood as the great antiseptic and disinfectant of the body, and draws attention to the importance of its investigation in diseased conditions.

(60) Acromegaly.

Arnold (*Centralbl. f. allgem. Pathol.*, June, 1894) gives an account of a case, with necropsy, in great detail, and attempts to elucidate its pathogenesis, including in his study all published cases since 1890. After giving the well-known features of prognathism in the lower jaw, hypertrophy of the tongue, enlargement of the hands and feet, including their phalanges, thickening of the skin, coarseness of the features, etc., the author details the changes in the skull, brain, and spinal cord. In the skull there is thickening, with excessive adhesion of the pericranium, enlargement of the frontal ridges and sinuses, and exostoses of the outer table. The base of the skull (within) shows no abnormalities except a considerable enlargement—which may also be irregular—of the pituitary fossa. All the bony tissues are more dense, and frequent enlargements may be found on the spinal column, sternum, clavicle, etc. Nervous system: Peripheral nerves show increase of interstitial tissue, scleroses in places, and fatty changes in others. The vessels of the nerves show hyaline degeneration. Many fibres with a very thin layer of myelin are present. In the spinal ganglia there is a thickening of the pericellular capsules and of the vessels, with consequent narrowing of their lumina. Some of the nerve cells show vacuolation. In the spinal cord the pia is thickened, the vessels show hyaline degeneration, the central canal is obliterated by the growth of a "gliomatous mass." Certain of the posterior roots of the cauda and lumbar cord are degenerated. There is also degeneration in the columns of Goll and the pyramidal tract. Brain: Meninges thickened and a focus or foci of softening found in each hemisphere. In the cervical sympathetic there is naked-eye enlargement. The tissue itself is sclerosed, and the cells show in general pigmentation and vacuolation. The thyroid is large and contains several colloid masses. The hypophysis is enlarged, measuring 4½ cm. (laterally) ×3½ (antero-posteriorly)×2 (vertically). Muscles, whether apparently hypertrophied or not, show all varieties of fibre degeneration. The nerve changes in the cord and brain he regards as secondary to vascular. The hypertrophy of the pituitary is considered as the cause of the affection, associating possibly with it the changes found in the pituitary, which, in the majority of clinical cases, consist in atrophy. The author thinks that the so-called "osteo-arthropathies," which are associated with or follow lung affections or syphilitic and vascular disease, should not be confounded with true acromegaly. The latter is an independent disease, and its characteristic nervous and muscular lesions are not present in the others. The author's researches tend to show that there is a growing importance in the relationship of pituitary and thyroid diseases to changes in the nerve centres, peripheral nerves, and their muscles, the exact relationship of which must be settled by future experiments.

(61) Bacteriological Examination of Blood and Tissues.

Inghilleri (*Centralb. für Bakteriol.*, May, 1894) gives a new rapid double staining method for the bacteriological examination of the blood and other tissues, including the study of phagocytosis and parasites of malaria, which he claims to excel not only in quickness but in precision. A coverglass preparation (by the usual methods), or a section prepared from the tissue, is placed in chloroform for 30 minutes, and afterwards stained in the following fluid:—1 p.c. solution of eosin in 70 p.c. alcohol, 40 parts; saturated aqueous solution of methylene blue, 60 parts, the specimens being gently warmed in this fluid for 2 to 3 minutes; after which they are ready for immediate observation (for example, blood, etc.), or after dehydrating, clearing, and mounting as usual.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(62) Chronic Rheumatism.

Sachabjin (*Deut. med. Woch.*, June 21st, 1894) first relates a case usually looked upon as chronic rheumatism. He then remarks that the term "rheumatism" has not as yet been exactly defined. Acute rheumatism is a well enough marked disease just like other infective processes, but the term "rheumatism" as applied above should not be retained. This disease differs in many respects from acute rheumatism. The involvement of many joints and the shifting character of the articular affection, the fever, and many of the complications are absent. The salicylates have little effect upon it. A few cases follow upon acute rheumatism, but then obvious relapses occur. In the other cases of chronic polyarthritis there is the anatomical and etiological diagnosis. The joints are mostly involved, but at times other tissues—thus, periostitis, myositis, neuritis may occur. As to etiology acute rheumatism, the gonorrhœal poison (polyarthritis gonorrhoica), syphilis, tuberculosis, gout, cold, slight traumatism, abuse of alcohol are among the many causes. It is mostly due to a combination of causes. In some case there appears to be a predisposition to gout and yet there are no characteristic features of it. The uncovered joints are mostly affected or those but slightly protected, such as the knees and ankles. The soft tissues about the joints are often involved. The prognosis depends on the possibility of removing the causes. In treatment the alkaline waters are recommended, especially when there is any predisposition to gout. Warm (and when not contraindicated hot) saline baths are extremely useful. Salicylates only relieve the pain. Compresses of carbolic acid (2 to 4 per cent.) are recommended, as well as subcutaneous injections of carbolic acid. If the muscles are affected massage is recommended: if the joints, blistering, massage, electricity, and compresses of carbolic acid, and if the periosteum, iodides in alkaline waters. Rest, blisters, etc., and later massage of the neighbouring parts are advised when the nerves are involved; electricity is uncertain. Saline baths are useful in all these conditions.

(63) Measles and Pregnancy.

S. Remy (*Arch. de Tocol. et de Gynéc.*, June, 1894) relates a case in which a pregnant woman, who had not had the disease in childhood, contracted measles during an epidemic after nursing two of her children through an attack of the disease. The attack in the mother, as in the children, was mild. On the evening of the second day of the eruption she had an attack of colic followed by copious action of the bowels. On the afternoon of the third day of the eruption she began to have labour pains, and in the evening the fœtus was expelled *en bloc* in the membranes. The infant lived for a few minutes. The mother made a good recovery, the lochia were not excessive, and involution of the uterus proceeded in a normal manner. The pregnancy had lasted five months and ten days (from the last menstruation). Remy observed that for the whole product of conception to be thus detached during the sixth month uninjured, and containing a living fœtus, is very unusual, and points to some special pathological process affecting the mucous membrane of the uterus. He suggests that measles may act upon the uterine mucous membrane as it does on that of the eyes, nose, pharynx, and bronchi, causing an inflammatory congestion similar to that which occurs in variola. The abortion occurred in his case at an earlier stage of the attack of measles than in most of the scanty number on record.

(64) Microcephaly.

A. Thomson (*Journ. of Anat. and Phys.*, July, 1894) describes two cases of microcephaly in which *post-mortem* examinations were made. Both patients survived to adult life, and in one there was old-standing hemiplegia. In both cases it seemed to be beyond doubt that the primary defect was in the brain itself, but the small size of the skull was a secondary consequence. It was probable that the arrested development might occur at different periods of embryonic life, so that there was an almost continuous series of transition forms, from the normal fully-developed human brain to the most extreme microcephaly. Further, there were cases which appeared to be transitions to other complicated malformations of the brain, so that microcephaly might be associated with encephalocele, porencephaly, and hydrocephalus, as also with deformities in other parts of the body. Though microcephaly was congenital it might at first escape observation and be noticed only when the continued growth of the face made the disproportionate smallness of the cranium evident. As was illustrated by one of the cases recorded, the microcephalic brain was predisposed to disease, and paralyses of cerebral origin were by no means uncommon. The subjects of this deformity were usually puny and the majority succumbed in early adult life to pulmonary phthisis. The condition was often hereditary.

(65) Rheumatic Angina.

Roos (*Berl. klin. Woch.*, June 18th and 25th, 1894) first relates cases showing the relation between rheumatism and this angina. In English writings this relation is generally recognised. Rheumatic angina may be a prodromal symptom of acute rheumatism. This latter disease is in all probability an infective process, and the author thinks that the actual cause of the disease may gain access through the faucial mucous membrane. Rheumatic angina is, however, said not to be very common. Pain on swallowing, swelling and redness of the fauces, especially of one or both tonsils, with or without suppuration, the occasional presence of a purulent deposit on the tonsils, and the relatively long duration of the affection are to be noted. Former rheumatism will assist in the diagnosis. This rheumatic angina will probably explain the presence of valvular lesions in some cases in which there is no history of rheumatism. Correct diagnosis is important, as the salicylates rapidly cut short the disease, and perhaps prevent the articular affection. Rheumatic angina cannot at present be distinguished from other forms of angina. Articular rheumatism may appear after the follicular form. It is possible that after certain anginas the infection may involve the joints (polyarthritis anginosa). This polyarthritis after angina sometimes differs from rheumatism by reacting badly to the salicylates, and by its long duration. In this it resembles the polyarthritis seen after scarlet fever and diphtheria. The author thinks that a number of these cases of polyarthritis after angina will resolve themselves into examples of infective processes when the etiology is better known. He refers to cases in which etiologically the disease should be looked upon as pyæmic, and yet no suppuration occurs in the affected joints. Here the micro-organisms may have lost their virulence (modified pyæmia). It appears strange that after suppuration in a tonsil a simple polyarthritis should occur. The author then refers to the researches of Sahli in respect to the causation of rheumatism by the staphylococcus (Epitome, October 22nd, 1892, par. 343). He concludes that either the angina preceding the polyarthritis is rheumatic, or that after certain forms of angina a pseudo-rheumatic affection may occur, with localisation in the joints or serous membranes. There is much to favour this latter view.

SURGERY.

(66) Intestinal Surgery.

Baracz (*Centralbl. f. Chir.*, No. 27, 1894) advocates the practice, under certain conditions of intestinal obstruction, of complete diversion of a portion or portions of intestine from the general tract, the ends of the diverted parts being closed by sutures. For instance, in a recorded case of successful resection of the cæcum and ascending colon the ileum was united to the transverse colon by entero-anastomosis, the terminal portion of each of the united pieces of gut being converted after the free and open end had been closed by sutures into a *cul-de-sac*. The author concludes his paper with the following statements: (1) the cæcum, when diverted from the rest of the intestinal tract, produces very little, if any, fæcal matter; (2) complete diversion of a portion of intestine is not attended with extra risk, as there is no fear, as has hitherto been supposed, of rupture from stagnation of fæces; (3) total diversion

202 ▲

of a portion of intestine is a justifiable procedure in cases of intestinal obstruction due to chronic invagination and inflammation of the walls of the intestine, or to malignant growth, when resection is contraindicated by extensive adhesions or the size of the tumour. It would be preferable to simple entero-anastomosis, as it would prevent the diseased portion of intestine being irritated by fæcal matter; partial diversion, by which the author means the formation of an artificial anus, would necessitate a second operation for the removal of a distressing condition; (4) Senn's method of establishing intestinal anastomosis is the best, and is attended with the least risk of perforation. As material for the discs or plates sliced turnip is to be preferred to decalcified bone; the vegetable disc can be more readily made and applied, and is less likely to cause profuse sloughing and perforation of the intestine.

(67) Traumatic Separation of the Epiphyses.

Tubby (*Annals of Surgery*, March, 1894) presents a collection of cases of epiphyseal separation in the lower limb. Among points in differential diagnosis it is noticeable that whereas intracapsular fracture of the upper end of the femur usually results from slight violence, separation follows great violence. The average age at which separation occurred in these cases was somewhat over 14 when the head of the femur is nearly all bone. Although this is a lesion within the capsule, yet, unlike fracture, it is incapable of impaction. Diagnosis is very obscure except in two points—namely (1) the age at which fracture occurs, (2) the fact that under the 20th year a weak spot exists in the neck at the epiphyseal line. Both in extracapsular fracture and in diastasis bruising is great and the soft parts are injured. They occur in young life; there is shortening with eversion. But in no instance of separation has there been any mention of fissuring of the great trochanter—a common occurrence in extracapsular fracture. The crepitus of fracture (if present) is very different from the "dummy" crepitus of diastasis. In fracture of the acetabulum we get a dorsal dislocation of the head of the femur not present in diastasis. The fixity of the limb and the permanency of reduction in dislocation should serve to tell this from diastasis. Separation of the epiphysis of the great trochanter alone is rare, but as a complication of extracapsular fracture is by no means uncommon. Generally from direct violence there is no shortening of the limb, and in rotating the thigh the trochanter either fails to follow the movements of the limb or describes a normal arc. Separation of the lower epiphysis of the femur occurred in a girl only once in 27 cases, and the average age was 13½. In no fewer than 13 out of 26 cases the cause was a wheel accident, a fact which should lead us to suspect the nature of the injury when occurring in boys of 12 to 16. It differs from dislocation of the knee (which is rare under 20) in that the relations of the condyles, patella, and tuberosities are not altered, and great difficulty is experienced in maintaining the reduction. In supracondyloid fracture of the femur the lower fragment is drawn back by the gastrocnemius, while the upper projects forwards, whereas the reverse frequently obtains in separation.

(68) Hæmatoma of the Sterno-Mastoid.

Gaudier (*Rev. d'Orthopédie*, July, 1894) reports two cases of hæmatoma of the sterno-mastoid in very young infants, to prove that this affection has not always an obstetric origin, but may be produced after birth. Whilst granting that in most instances the swelling is due either to forceps or to uterine pressure during delivery, he holds that it may occur some weeks or even months after birth in consequence of an external injury or of rupture of fibres of the sterno-mastoid caused by a violent effort. In each of the cases reported in this paper, the lesion, it is stated, was produced by struggling during vaccination. The symptoms, prognosis, and treatment are the same in both classes of cases, and complete recovery without deformity in each may be confidently anticipated.

(69) Compression of the Mammary Glands.

Verneuil (*Bull. et Mém. de la Soc. de Chir. de Paris*, June, 1894) advocates compression of the breast not only in cases of inflammation but also in cystic tumour. He has devised very light stays, made of perforated leather and laced behind. The pressure is easier to apply, more uniform, and more constant than when bandages are used. The patient herself places layers of wool, gradually increased in thickness, between the breast and the apparatus. Verneuil insists that operation is rarely needed in cystic disease of the breasts. He has treated by alkalies, arsenic, and compression two patients who had undergone amputation of one breast, and asked him to remove its fellow. In both cases the remaining breast was cured. He also cured by compression a bad case of hypertrophy of the breasts in a girl of 18, where amputation had been proposed.

(70) Examination of Urinary Calculi.

Moscheles (*Centralbl. f. inn. Med.*, July 7th, 1894) observes that, though one salt may preponderate, it does not preclude the existence of others. If they exist in layers, a portion from each such layer should be examined. A separation of uric acid, carbonates, phosphates, and oxalates must be effected. On treatment with hydrochloric acid a brisk development of gas shows the presence of carbonates. A further portion heated on platinum foil and leaving a considerable residue points to phosphates. Dissolved in nitric acid and treated with ammonic molybdate, the phosphates would give the characteristic reaction. To separate uric from oxalic acid it is best to treat a portion for some time with moderately concentrated soda solution. The alkaline solution is then filtered from phosphates, oxide of iron (if present), organic *débris*, etc., and evaporated to dryness. The cold residue is treated with dilute hydrochloric acid. The murexide test applied to the residue, if any, would show the presence of uric acid. The solution would then contain only phosphates and oxalates. It is evaporated down and extracted with dilute acetic acid. On the addition of calcic acetate, oxalic acid would be thrown down as calcic oxalate, whereas calcic phosphate would remain in solution.

(71) Perforation of the Vermiform Appendix.

Demoulin (*Arch. Gén. de Méd.*, June, 1894) relates the following case complicated by acute generalised peritonitis. A man, aged 17, was seized about one month previously with severe colic referred to the right iliac region, and lasting forty-eight hours. This recurred two days before admission. Forty-eight hours after admission symptoms of general peritonitis supervened, and the condition of the patient soon became desperate. There was vomiting and great abdominal distension and tenderness. Temperature 37° C., pulse 120. The peritonitis was diagnosed as being due to perforation of the vermiform appendix by Dutournier, and operation was decided upon. Demoulin opened the abdomen in the middle line, and found the cæcum of a dark reddish, or almost purplish colour, and covered with exudation. The vermiform appendix was resected. The small intestines were of a similar colour to the cæcum, and also covered with lymph, but apparently no pus was present. Drainage tubes were put in. The patient made a good and uninterrupted recovery. The appendix was 5 cm. long, and its walls thickened. The perforation was situated 1 cm. from the tip, and was as large as a pin's head. A coprolith of the size of a hemp seed was found. In collecting statistics of such cases the author finds the percentage of recoveries after operation to be about 33, yet he acknowledges this number to be too high, as many of the fatal cases are not put on record. He concludes that intervention should be adopted even in desperate cases of peritonitis due to perforation of the vermiform appendix, that median laparotomy should be done and the appendix resected if it can be found without too great difficulty, and that the operation should be performed as expeditiously as possible, and the peritoneal cavity drained.

MIDWIFERY AND DISEASES OF WOMEN.

(72) Pelvic Hæmatocele.

Hofmokl (*Wiener med. Woch.*, July 14th, 1894) treated surgically thirteen cases of hæmatocele, in a Vienna hospital, between May, 1888, and April, 1893; 12 recovered and 1 died of septic peritonitis. In 11 there had been previous

absence of menstruation for from three weeks to eleven months. In 2 the hæmatocele developed after abortion (1 twelve days, 1 ten weeks). In all but 4 of the 13 there was no fever. In 12 the hæmatocele was purely retro-uterine, in 1 anteuterine. In 6 cases the treatment was confined to puncture and aspiration; in 5 of these through the posterior fornix, in 1 through the symphysis. In 5 incision and drainage, in the remaining 2 laparotomy was practised. One of the laparotomies was the fatal case. The patient was 36, admitted after cessation of catamenia for two months, with severe abdominal pain, which had lasted a fortnight. There was metrorrhagia. The abdomen was tender, the patient anæmic, the temperature 102°. An exploratory incision was made, and a quantity of fœtid pus removed from the peritoneal cavity, the hæmatocele having suppurated. A drainage tube was inserted. The patient died on the fifth day.

(73) Palliative Treatment of Uterine Cancer.

BOLDT (*Archiv. of Gyn.*, June, 1894) speaking of cases where operation is impracticable as the malignant deposit cannot be removed entire, recommends as the best form of treatment curetting and subsequent cauterisation. Curetting and packing with pledgets saturated with chloride of zinc will also prove beneficial. If rigid antiseptic precautions be taken piercing of the uterus by the curette may do no harm. The uterus is first curetted, then the cavity is repeatedly sponged with a mixture of commercial acetic acid (1 drachm), glycerine (3 drachms), and carbolic acid (20 grains). Lastly the cavity is packed with absorbent wool.

(74) Puerperal Eclampsia.

DÖDERLEIN (*Munch. med. Woch.*, June 26th, 1894), first refers to the deficient knowledge of the causation of this disease, and to the want of success attending its treatment. There have hitherto been two lines of treatment, the medical and obstetrical. The morphine treatment can hardly be said to have been successful. Treatment by bleeding, along with infusion, hot baths, etc., has also been ineffectual. The question arises as to whether these cases should be treated with morphine, chloral hydrate, chloroform, and the labour left to itself, or whether delivery should be artificially hastened. If the conditions are favourable to the extraction of the child delivery should be completed, otherwise forced delivery may be a severe procedure. Dührssen showed that forced delivery under deep chloroform anæsthesia brought the convulsions to an end. If the cervix is dilated to about the size of a two-shilling piece extraction can be practised by the aid of a few incisions. Where, however, incisions would produce too great an injury, Dührssen recommends dilatation with the kolpeurynter. The treatment adopted by this author has yielded improved results. Owing, however, to the difficulty of carrying it out in practice, and to the risks of infection, Cæsarean section has been proposed. In 19 collected cases, of which details are given here, 8 died. Among these 1 succumbed to apoplexy, another to general tuberculosis, and 3 others were moribund on admission. In only one case did the eclampsia remain uninfluenced. Thus the operative treatment certainly has a favourable influence on the disease. In a primipara, aged 44, with a conjugate of 8·5 c.m. Cæsarean section was performed by the author with the best results. No further fits occurred after it.

(75) Anatomy of Fallopian Tubes.

MARY DIXON JONES (*American Journ. Obstet.*, June, 1894), has distinguished six layers of smooth, muscular tissue in the human Fallopian tube. The two main layers are the circular and longitudinal. They interlace, and the circular layer, which is the thicker, is nearest the canal of the tube. The inner surface of the tube is made up of submucous myxofibrous connective tissue, supplied with a broader longitudinal and a narrow circular layer of muscle. The mucosa has numerous folds which ramify, and are the result of alternate contractions and extensions of the two muscular layers of the submucous tissue. Outside the longitudinal muscular fibres of the tube wall is a layer of arteries and veins arranged as in the corresponding vascular tissue in the wall of the uterus. Two oblique layers of muscular fibre are interposed between these vessels and the investing peritoneum. Dixon Jones can find nothing on the mucous membrane of the Fallopian tubes of the human female, even by high powers of the microscope, that would justify the definition of glands.

(76) Post-mortem Cæsarean Section: Child Saved.

BACKER (*Centralbl. f. Gynäk.*, No. 24, 1894) states that last January a woman, aged 40 and in the last month of her eighth pregnancy, was admitted into hospital in a dying condition, with extreme dyspnœa owing to œdema of the lungs. Delirium set in, and then eclampsia, immediately followed by death. The abdominal wall was at once opened, blood flowing freely, and then the uterus was incised. The presentation was pelvic; the fœtus was seized by the foot and extracted. It was born in a state of algid asphyxia. After being swung fifty-six times, according to Schultze's method, it cried lustily. It was a female, 17 inches long and well developed. When the report was published, 108 days after birth, the child appeared to be doing well. From the moment when the operation was begun the mother showed no sign of life. The sphincter ani had yielded and liquid motion escaped during the fit which ended fatally. In 1891 a somewhat similar case occurred in the same hospital. The mother had just died of purulent meningitis. The fœtus was asphyxiated; it was swung 733 times, but could not be saved.

THERAPEUTICS.

(77) Serum Treatment of Anthrax.

EMMERICH (*Münch. med. Woch.*, July 10th, 1894) gives some account of his researches into this subject, along with Most, Scholl, and Isuboi. The author showed some years ago that anthrax bacilli in the tissues gave evidence of complete breaking up and destruction eleven hours after the injection of the erysipelas streptococcus. The bacillus of Friedländer and the B. pyocyaneus were subsequently proved to have a similar but less marked action. The author first details a case in which a rabbit suffering from severe anthrax was cured by the injection of a virulent culture of the erysipelas streptococcus. Experiments are then related which were made with the micro-organism from a case of facial erysipelas. It was obtained in pure culture, and inoculated into rabbits. The blood serum, freed by filtration from the streptococcus erysipelatis, was then used for purposes of treatment. Three rabbits were injected with this serum, one, four, and eleven and a-half hours respectively after being inoculated with anthrax. Two recovered completely, and the third pregnant lived twenty-four hours longer than the control animal. This serum treatment must be continued during five days. The serum of sheep's blood prepared in a similar fashion is even more efficient. Two experiments are recorded in which rabbits infected with anthrax were so treated with complete success, the control animals dying rapidly. The author concludes with the hope that this treatment may be successfully adopted in cases of severe intestinal and pulmonary anthrax in man.

(78) Sterilised Milk for Infants.

BUDIN AND CHAVANE (*Jl. d. Pract.*, July 18th) reported to the Académie de Médecine further experiments with sterilised milk as a food for infants. They administered the milk without dilution, because the addition of water very greatly decreased the nutritive value of the milk in proportion to its bulk, since the infant received a deficient quantity of fat, sugar, and salts. Chavane had found that when the milk was raised to a temperature of 100° C. the casein underwent certain modifications, which rendered its digestion much easier. The use of undiluted milk simplified very much the process of sterilisation and feeding; but it was not always possible to have recourse to it. If digestive disturbance existed it might be necessary to add lime water or Vichy water, or to give the infant pepsine. It was desirable to sterilise the milk daily, and to consume it within twenty-four hours. The sterilisation should be conducted in bottles containing only a sufficient quantity for one feeding. Milk thus treated did not acquire the peculiar

taste and appearance observed in sterilised milk kept for a long time. Tarnier, in the discussion of the paper, stated that milk which had been raised to a temperature of 100° C. appeared to be more easily digested than fresh milk; but that it could not be considered sterilised milk. Fournier stated that the experience at the Hôpital St. Louis with sterilised milk had been most satisfactory.

(79) Treatment of Cancer.

FABRE-DOMERGUE (*Presse Médicale*, July 14th, 1894) says that in cancer, whatever the primary cause may be, the cells composing the tumour divide in an abnormal direction. He thinks that if any means could be found by which the direction of cell division could be changed, we might apply this to influence the growth of cancer. D'Arsonval and R. Dubois observed colonies of bacteria which grew longer in the direction of a magnetic current in the circuit of which they were placed. Verworn placed a drop of water containing protozoa between galvanic poles, and found that these microbes grew with their longest axis parallel to the current. Hertwig has succeeded in altering the method of cell division by simple mechanical means (pressure). Fabre-Domergue proposes therefore a method of treating malignant tumours, based on these experiments, and suggests that an electric current be applied to the tumours in a direction so as to make the cells divide and grow in a direction away from the patient's body, the line of the current being perpendicular to the surface affected by the neoplasm.

(80) Treatment of Syphilitic Dyspepsia.

PASQUALE DE TULLIO (*Il Policlinico*, June 1st, 1894), after stating that three-fourths of the population (? of Naples) are infected with syphilis, proceeds to quote a number of recorded *post-mortem* observations of syphilitic lesions, mainly ulcerative, of the stomach. He points out that in certain cases of syphilis symptoms of gastric dyspepsia are prominent either soon after primary infection or at a later date. He finds that the free gastric acidity and proteolytic power are diminished in these cases. The exhibition of the green iodide of mercury gave excellent results. It had apparently not only a general but also a topical action upon the secreting structure of the stomach. The quantity given was about half a grain in divided doses during the day. In some of the cases the patient took as much as 30 grains before recovery was complete.

PATHOLOGY.

(81) Pathological Anatomy of Paralysis Agitans.

REDLICH (*Neurol. Centralbl.*, July, 1894) gives an account of the nerve lesions, based on a study of seven cases. He localises the disease in the spinal cord (posterior and lateral columns, especially the crossed pyramidal tract). The lesions comprise small insular spots and patches of perivascular sclerosis, with narrowing of the lumina of blood vessels. These areas of sclerosis increase and coalesce, causing destruction of nerve fibres in the tracts above mentioned. These changes are most prominent in the cervical and lumbar enlargements, and are regarded by the author as characteristic of the disease, and in no wise comparable to senility, "for, in cases of senile cords, such vascular conditions are not found." The expressionless face, monotone of speech, and the contracture of the back and trunk (producing the stooping attitude), are due to the bulbar and spinal area being respectively affected. These, therefore, have a pathologico-anatomical basis, but the tremor is regarded as having no such basis.

(82) Concurrent Infections in Pulmonary Tuberculosis.

MITCHELL PRUDDEN (*N. Y. Med. Journ.*, July 7th, 1894) states that when the tubercle bacillus and the streptococcus pyogenes are planted together in glycerine beef broth the latter grows abundantly, and the former not at all. Further, broth in which the streptococci had grown was sterilised, and it was found that in it the tubercle bacillus would not grow. The converse was also true; that is to say, the products of the tubercle bacillus inhibited the growth of the streptococcus; but their power was not so great since dilution to half removed it, whereas the streptococcus broth, even when diluted to four times its volume with fresh broth, did not permit the growth of the tubercle bacillus. Experiments on rabbits were made to ascertain what modifications, if any, were produced in lungs already the seat of tuberculous inflammation, by the introduction through the trachea of the streptococcus pyogenes. It was found in the first place that cultivations of the streptococcus injected alone produced as a rule a slight broncho-pneumonia, which quickly disappeared. In the second place, the effect of introducing tuberculous material alone was tested. It was found that tuberculous lesions could thus be induced, which varied from small foci resembling miliary tubercle on the one hand, to large consolidated tracts on the other, closely resembling extensive tuberculous broncho-pneumonia or acute phthisis in man, save for the rarity of the formation of cavities. It appeared also that the tubercle bacillus was capable, acting alone, of inducing in the rabbit not only the more characteristic tuberculous lesions of the lungs—cell proliferation, tissue formation, and cheesy degeneration—but also an exudative inflammation of varying intensity closely dependent upon the number of bacilli introduced into the lungs. Experiments were then made by introducing streptococcus pyogenes into the lungs of rabbits already the seat of experimental tuberculous broncho-pneumonia. The most conspicuous difference in the lungs after these two sets of experiments was the formation of cavities when the infection of the streptococcus was added to that of the tubercle bacillus. These cavities formed with great rapidity and presented a close resemblance to those observed in acute phthisis in man. Prudden is unable at present to state whether this rapid disintegration of tuberculous areas is brought about by the living streptococcus or by its products, but in the small number of cavities in lungs from experimental animals examined the streptococci were not discoverable beyond the fifth day. From a consideration of the literature of the subject Prudden concludes that an exudative pneumonia of varying extent and of extreme significance may occur in lungs which are the seat of a tuberculous inflammation as the result of a secondary infection with other germs. The germs most frequently concerned in this secondary infection are streptococcus pyogenes, micrococcus lanceolatus (the pneumococcus), and staphylococcus pyogenes. The exact frequency of this secondary infection and the relative significance of the different germs involved remain to be determined.

(83) Tabes going on to Dementia.

OPPENHEIM (*Centralb. für allgem. Pathol.*, July 1894) gives an account of a case presenting tabetic symptoms and passing on to dementia, in which the necropsy and study of the spinal cord revealed interesting lesions. The patient, a male, aged 40, had the prodromal symptoms of lightning pain, girdle sensation, disturbance of vision (temporary diplopia), and hemicrania. There was optic atrophy, and the knee-jerks were unequal: lost on the right side, present on the left. There was no muscular atrophy of the legs, but ataxy and Romberg's symptom were present; sensibility of arms good. The left half of the body showed complete analgesia, anæsthesia, and thermo-anæsthesia. After six years the patient showed signs of general paralysis, but died during an intercurrent attack of pneumonia. The spinal cord showed (*post mortem*) a glioma in the lower part of the cervical cord, and along the whole of the dorsal downwards to the lumbar enlargement. The growth involved the posterior commissure and posterior columns in the cervical region; in the dorsal region in addition there was involvement of the posterior cornua, the anterior commissure, and the parts nearest to the latter of the anterior cornua; at the level of the forth and fifth dorsal the whole cord-grey seemed involved; lower down the gliosis was limited more and more to one posterior cornu (the left), with destruction of Clarke's column on that side. The author attempts to explain the clinical symptoms according to the pathological lesions which were present, and with some measure of success. The value of these cases lies in the evidence they give as regards the conducting tracts and sensory areas in the spinal cord.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(84) Injury to the Brain.

Herhold (*Deut. med. Woch.*, June 14th, 1894) reports the two following cases. (1) A man, aged 24, received a blow on the head. He fell, but did not lose consciousness. During the second day after the injury, he suddenly lost the use of the left arm and leg. On admission on the next day a gaping wound was seen running from before backwards, and extending for a distance of 1 cm. on either side from the middle point of the coronal suture on the right side. A defect was felt in the bone about the size of a pea, and brain-like material came away from the wound. No fragments of bone, however, could be felt. There was absolute flaccid paralysis of the left arm, and paralysis with slight rigidity of the left leg. The tendon reflexes were slightly exaggerated, together with foot clonus on the left side. The superficial reflexes here were also diminished and sensation somewhat impaired. Four days later clonic convulsions supervened in the paralysed side, consciousness being preserved. The defect in the skull was enlarged with the chisel, and several small splinters, which were lying on the brain stripped of its dura mater, removed. Seventeen hours after the operation he began to move his left index finger. He continued steadily to improve, and six weeks after the accident he was discharged, the paralysis having quite disappeared. He was seen three weeks later, when he was quite well; there had been no recurrence of the fits since the operation. Primary trephining was not adopted, as no splinters could be felt, and there was no evidence of hæmorrhage from a large vessel. Primary trephining does not give such good results as secondary. The injury lay in front of the Rolandic area; the author thinks the paralysis due to œdema extending from a meningo-encephalitis over the uppermost frontal convolution. (2) A woman, aged 22, had a severe blow on the head, followed by unconsciousness lasting twenty minutes. When she woke up she had clonic spasm in the face and right arm. Depressed bone could be felt. On admission, there was almost complete paralysis of the right side. Tactile sensation as well as that of temperature and the muscular sense were impaired here. Signs of phthisis were present. A part of the wound lay over the Rolandic area. The depressed bone was removed with some difficulty. The next day the leg began to recover, and regained its full power in three days. Recovery of the arm was slower, and was incomplete even after four weeks. The pulmonary lesion was progressing. In this case primary trephining was had recourse to. Contusion of the brain substance must have occurred in the arm centre. The disturbed tactile and temperature sensation, as well as the impaired muscular sense, show, as in the first case, that the central convolutions are concerned not only in motion but also in sensation. Six weeks after the accident the second patient showed considerable improvement in her chest symptoms, and the right arm was nearly of equal strength to the left.

(85) Tubercle Bacilli in the Nasal Cavities of Healthy Men.

Strauss (*Bull. de l'Acad. de Méd.*, 3e série, tome 32, No. 27) describes some experiments made on patients and pupils connected with the Hospitals of La Charité and Laennec, with a view of proving that tubercle bacilli may lodge in the nasal cavities of persons presenting no suspicion of tuberculosis, and yet retain their virulence. Tampons of sterilised cotton wool were introduced into the nasal cavities of six healthy nurses living in the hospital, of seven healthy pupils making daily visits, and of three inmates suffering from chronic non-tuberculous affections, and afterwards shaken up in sterilised bouillon or water. This liquid was then injected into the peritoneal cavity of twenty-nine guinea-pigs. In seven cases the animals died of septicæmia or purulent peritonitis; in thirteen cases they remained apparently well and no definite lesion was discovered *post mortem:* in nine cases they died or being killed at the end of three to five weeks presented decided tuberculous lesions. Apparently, therefore, tubercle bacilli may enter the system through the nose, may while remaining in the nasal cavities fail to infect the individual, and yet may retain sufficient virulence to prove infectious when inoculated into guinea-pigs. Strauss's observations also throw some light on the fact that the subjects of repeated epistaxis not infrequently become tuberculous.

(86) Free Hydrochloric Acid in the Stomach in Chlorosis.

Osswald (*Münch. med. Woch.*, July 3rd and 10th, 1894), of Riegel's Clinic, first draws attention to the discordant views on this subject. It is an important matter that similar diet should be used in these investigations. It is thus found that the amount of free hydrochloric acid present after Ewald's test breakfast is less than after Riegel's test meal; the former contains less albuminous material. For the former a percentage of above 15 to 25, and for the latter above 3, should be looked upon as hyperacidity. Apparently the amount of free HCl present would seem to vary with the district, owing, perhaps, to different diets. In his investigations the author estimated the amount of free acid by trituration with a 1 in 10 normal soda solution, phenolphthalein being the indicator. Digestion tests were not used, for it is mostly found that in the presence of free HCl the digestive powers are good. The author has made 84 investigations on 21 patients suffering from chlorosis, dividing them into those with slight and those with severe dyspeptic symptoms. There was no sufficient reason to think that gastric ulcer was present in any of these cases. In all instances free hydrochloric acid was found in excess. The motor power of the stomach seemed to be efficient. The author is not disposed to attach much significance to the question of gastric dilatation in chlorosis. In 5 cases Martin's test was applied for the purpose of finding out the total hydrochloric acid acidity. Attention is drawn to the difference then found between the total acidity estimated by the method aforesaid and the HCl acidity according to Martin's method. In regard to treatment, the author thinks that where iron has been given without result the alkaline treatment should be adopted. Often considerable improvement may thus be obtained, but it cannot always be said with certainty whether it is due to the alkalies. A mixed diet containing proteid matters should be used. The author concludes that the amount of hydrochloric acid present in the stomach contents in chlorosis is not diminished but very often increased (in 95 per cent. of the cases). The dyspepsia is not due to hypo- or anachlorhydria nor to motor insufficiency on the part of the stomach. Thus, any views which make chlorosis depend either entirely or in great measure upon the diminution of the free hydrochloric acid present in the stomach cannot be vindicated.

(87) Localisation of Lesions in the Cord.

Jas. Lloyd (*Jour. of Nerv. and Mental Dis.*, June, 1894) gives an account of two patients suffering from injury to the cord (with fracture of the spinal column). J. G., male, aged 55, fell from a scaffolding. Fracture of spinal column, followed by paralysis of arms and legs, and retention of urine, with (at first) anæsthesia below the waist. There was gradual atrophy of the scapulo-humeral muscles, and of all the arm and hand muscles. Marked fibrillary contraction in the wasting muscles, with increase of myotatic irritability. No head drop. Legs paretic, contractured, no atrophy; excessive knee-jerk and ankle-clonus. Sensory: Thermo-anæsthesia and analgesia on both sides of the body, from the clavicles downwards, and including all the limb surfaces as well, except the front half of the palm. The second case was one of injury in the cervico-dorsal region with phenomena similar to the above. The whole of the leg below the trochanter is anæsthetic to heat, including an area in the front of the chest covering its middle third. The rest of the chest area, the whole abdominal, shoulder, and upper limb area is analgesic. An attempt is made to explain the distribution of these sensory phenomena in accordance with the discoveries of Golgi and Cajal on the sensory tracts in the cord, and in harmony with the experimental results of Horsley and Gotch (published in the British Medical Journal, Croonian

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Lecture, 1890); also to show the increasing clinical value of these in determining spinal localisation which has yielded such good practical fruit in the hands of Thorburn and others.

SURGERY.

(88) Recurrent Dislocation of the Shoulder.

At a meeting of the Académie de Médecine (*Sem. Méd.*, April 4th, 1894), Ricard presented a communication on this subject. According to him the recurrence of a certain number of dislocations of the shoulder is due to the relaxation of the capsular ligament of the joint, and as a result of the primary dislocation the capsule remains depressed in the form of a *cul-de-sac*, so that when the part is moved the humeral head leaves the glenoid cavity and lodges in the *cul-de-sac*. In order to obviate this inconvenience the author has adopted suturing of the sac, an operation which has been successful in two cases. In order to make sure of the consolidation of the sutured capsule it was necessary to fix the arm in an immovable position for a considerable time; in one of the cases the arm was kept fixed for thirty-eight days, and in the other thirty-one days. After releasing the limb from the immovable position in each case it was kept in a sling for a week, and then gradual use of the limb was allowed. Ricard condemns the practice of manipulating injured joints so as to prevent stiffness and preserve their movements. He says that it is inflammation and not immobility which causes ankylosis, and that artificial movement is likely to increase the inflammatory process, and hence to be one of the surest means of producing ankylosis. On this account he recommends immobility in the treatment of injured joints.

(89) Persistent Urethral Discharges.

Fuller (*Journ. Cut. and Gen.-urin. Diseases*, June and July, 1894) gives the histories of 22 cases of persistent urethral discharge. From a study of these cases he concludes that seminal vesiculitis is the cause of chronic urethral discharge in a certain percentage of cases, and that in some of these cases the vesiculi is is tuberculous in character. He says it is most important to differentiate between the simple inflammatory and the tuberculous cases, owing to the difference in the prognosis and treatment. In the simple inflammatory cases the prognosis is good unless the patient is of an advanced age. The treatment advised in simple cases consists of stripping the vesicles, thereby squeezing out into the urethra their inflammatory contents, by means of the forefinger introduced into the rectum. This treatment should be employed once in every five or seven days, a long interval being allowed to elapse between the sittings should signs of acute inflammation appear as the result of the manipulations. The duration of the treatment will be a month or six weeks for subacute cases, and many months, or possibly a year, in very chronic ones. The duration of the treatment depends largely on the chronicity of the case. At the commencement of the treatment the parts are usually very tender, indurated, and distended. If the case progresses favourably these symptoms gradually diminish, and finally disappear as resolution takes place. The urethral discharge usually entirely disappears before the seminal vesicles have returned to their normal condition. In tuberculous cases the tenderness in connection with the vesicles is not likely to be so great as, and the induration more than, in simple inflammations. In this form of inflammation the parts resent the manipulations, unless, indeed, they be most gentle, and even then it is a question if this form of treatment is beneficial. If the tuberculous condition is not diagnosed at first the manner in which the vesicles when so involved resent the ordinary manipulations by becoming more tender and indurated, thus aggravating the urethral symptoms, speedily renders the correct diagnosis apparent. Many of the tuberculous cases become quiescent under internal medications and hygienic measures.

(90) Jejunostomy.

E. Hahn (*Deut. med. Woch.*, July 5th, 1894) observes that the fistula must be made high up in the small intestine, otherwise death will occur from inanition. He then refers to the recorded cases of jejunostomy, especially by Maydl. The author thinks that the making of a fistula in the duodenum, as has been proposed, is undesirable owing to the difficulty in the operation and to the impossibility of the patient feeding himself. The author then gives details of five cases in which he has performed jejunostomy. Case I. A man, aged 69, suffering from gastric carcinoma, recovered from the operation, but died a fortnight later with increasing weakness. Case II. A patient with œsophageal carcinoma improved after the operation. Nine weeks later the fistula closed, and feeding took place exclusively by the mouth. Case III. A man, also with malignant disease of the œsophagus, died four days after the operation of increasing inanition. Case IV. A girl, aged 19, attempted suicide by means of strong acid. Nearly two months later only a fine œsophageal bougie could be passed. As the sounding was followed by some bleeding, jejunostomy was performed. She made a good recovery. The fistula closed about a month after the operation. She was in good condition some three years later. Case V. A girl, aged 23, also drank sulphuric acid. About three weeks later an obstruction was found about 30 cm. from the mouth. There was great wasting. Jejunostomy was done a fortnight later, but the patient died some eight days afterwards. The indications for the operation are, according to the author, the following: (1) corrosion of the stomach and œsophagus when a fatal result is to be feared, as in the above cases; (2) carcinoma involving the cardia and lower end of the œsophagus when gastrostomy is impossible; and (3) carcinoma of the pylorus where no other operation is possible. The incision should not be too small, so that the commencement of the jejunum may easily be found. If the nutrition of the patient permit of it, the intestine need not be opened for several days, otherwise this must be done at once or after twenty-four hours.

(91) Tuberculous Iritis.

Vignes (*Rec. d'Ophtal.*, April, 1894) calls attention to the phenomena of inflammation in the iris preceding the formation of tuberculous nodules in that structure. The period of duration of this inflammation he distinguishes clinically as that of tuberculous iritis from the period of nodular growth of tubercle in the iris. This premonitory inflammation may precede the formation of nodules many weeks; its method of onset is very insidious, its evolution is torpid, there is very little inflammatory appearance, but a large number of dense synechiæ are present. The absence of pathognomonic signs makes the diagnosis very difficult. It may undergo spontaneous cure without the formation of nodules; this tendency towards cure depends on individual resistance, and especially on resistance of the iris itself. This power of resistance, as has been demonstrated on animals, is very great, and has probably more to do with spontaneous cure of the disease than attenuation of the bacillus or its toxins.

(92) Persistent Œdema and Elephantiasis following Extirpation of Lymphatic Glands.

Riedel (*Arch. f. klin. Chirurgie*, vol. 47, Pts. 3 and 4) mentions how rarely cases have been published in which persistent œdema or elephantiasis has been noticed after extirpation of lymphatic glands. These results of the operation, he thinks, are not really very rare, for he has himself observed them in three cases. The first was that of a boy, aged 12, where œdema of the whole arm and hand was the result apparently of removal of lymphatic glands from the axilla three years previously. The second patient was a strong-looking man, aged 30. Some years previously he had contracted a soft chancre, and suppuration about the left inguinal glands followed. Since then the glands had always remained tender, and became swollen after much walking or after any excoriation of the glans penis; suppuration in both groins followed on one such occasion, and the sinus openings refused to heal. Riedel excised the inguinal glands, and found them studded with minute abscesses about the size of millet seeds. After the operation the wounds healed well by granulation, but, when seen about two years later, the patient was found to have some degree of elephantiasis of the skin of both thighs and the lower part of the trunk; he had also enlargement of the glands in the right axilla. The

third patient was a strong-looking man, aged 30. A soft chancre, acquired three-quarters of a year previously, had given rise to suppuration in the left groin, and the sinuses would not heal. Riedel excised the left inguinal glands, and about half a year later an elephantiasis of the skin of the thigh developed itself. In both the second and the third cases the development of the elephantiasis was associated with repeated erysipelas-like attacks. Riedel declares himself uncertain about the advisability of complete extirpation of the inguinal glands in similar cases.

MIDWIFERY AND DISEASES OF WOMEN.

(93) Supravaginal Hysterectomy.

Léonté (*Revue de Chirurgie*, June 10th, 1894) has successfully performed this operation twenty-six times in Bucharest. For a few days before the operation the vagina is washed out with a sublimate lotion and the uterine cavity with carbolic, a tampon of iodoform gauze being finally applied to the vagina. The fibroid uterus being drawn out of the abdomen the edges of the abdominal wound are closed above it. A pressure forceps is applied to the broad ligament on each side, externally to the ovary. Then an anterior flap is dissected off the uterus, running from one to the opposite broad ligament, about an inch above the vaginal attachment of the uterus. A posterior flap is then dissected as its fellow, but, if this be impossible, owing to the relations with the rectum, the anterior flap will serve to cover the uterine stump. Each broad ligament is now secured with interlocking silk ligatures. A large pressure forceps must be placed along the uterine attachment of the broad ligament to prevent hæmorrhage from the tumour, and then the ligament is divided between the forceps and the ligature. When both ligaments are thus divided there is a pedicle of uterine tissue. A stout blunt needle armed with double thick silk, is passed through this pedicle about a quarter of an inch above the vaginal insertion of the pedicle; the silks are then crossed and their ends tied on each side. The pedicle is divided above this ligature, being cut obliquely, anteriorly, and posteriorly. The uterine canal lies at the bottom of this bivalve cone. The mucosa is scraped away or excised, and cauterised with a 10 per cent. chloride of zinc solution. The raw surfaces of the flaps are united by a continuous catgut suture. The edges of the serous surfaces of the flaps are carefully sewn over the stump. The raw surfaces of the broad ligaments are also closed by suture. Then the abdominal wound is closed. An iodoform gauze tampon is placed in the vagina. Léonté has never drained in any of the twenty-six cases. The appendages are always removed.

(94) Vulvitis Pruriginosa.

Sänger (*Centralbl. f. Gynäk.*, No. 7, 1894) believes that this disease arises from the most varied causes, not excluding auto-intoxication of intestinal origin, most frequent in the subjects of chronic constipation. In most cases of vulvitis pruriginosa direct local treatment proves successful: in others it is of no avail, and the patient's health is so impaired by the constant irritation that operative measures are needed. Sänger believes that the removal of the clitoris and its prepuce is justifiable, especially in old subjects, provided that the extremities of the nerves of that organ have, in consequence of the disease, lost their special sensitiveness. Indeed, in old women, and whenever the disease is extensive, the vulvar structure should be entirely dissected off; so extreme a measure is not needed in younger subjects, or in cases where the pruritus does not extend over a large area.

(95) Abdominal Section and Subsequent Pregnancies.

Kleinwächter (*Wiener med. Presse*, July 1st, 1894), in an article on aseptic gynæcology and obstetrics, states that he once removed an abdominal tumour from a young woman with perfect ease; twelve days after the operation she was practically well. She had already twice borne a child to term. Within four months after the operation she once more became pregnant. Without any apparent cause she aborted at the fourth month. Three years later she aborted at the second month. Shortly afterwards Kleinwächter examined her. The fundus was fixed forward and to the right. Next year, when he saw her again, she was seven months pregnant. She afterwards gave birth to a living child at term. He concludes that the adhesions, which fixed the uterus and caused abortion, had become absorbed or, more likely, so stretched and torn that pregnancy was at length able to proceed to term. A similar afterhistory has been reported as following ventro-fixation of the uterus.

(96) Primary Cancer of Fallopian Tube.

Sänger (*Centralbl. f. Gynäk.*, No. 27, 1894), in a discussion on a case of this rare disease, which was ten years ago not believed to exist, observed that since the publication of undoubted cases by Martin, Kaltenbach, Doran, and himself, other records of undoubted instances of primary cancer of the tube have been brought forward by Routier, Smyly, Wynter, and Westermark. Zweifel's case, upon which the discussion was held, will shortly be published in full.

(97) Microscopic Examination of Pus during Operations on Appendages.

Wertheim (*Volkmann's Sammlung klin. Vorträge*, No. 100, May, 1894) states that Schauta has carried out this practice for three years. A competent bacteriologist is present at the operation, and the pus can be examined for bacilli within three minutes. When the result is negative the microscopist goes on examining till the appendages have been completely removed, as the object of his research refers to the question of closing the wound. When the pus proves free from germs, or only contains gonococci, the abdominal wound is closed; but drainage is always employed when streptococci, staphylococci, or any cocci except gonococci, are detected. These septic cocci imply communication with the intestine or other cavities, often too minute to be detected.

(98) Diseases of Sucklings caused by Galactophoritis.

Damourette (*Thèse de Paris: Rev. des Sci. Méd.*, July 15, 1894), has collected observations of the disorders from which infants suffer when the mother or nurse has galactophoritis. First comes diphtherioid stomatitis, usually mild, and not lasting over a week. Frequent and always serious are retro-pharyngeal abscesses; they are difficult to diagnose. Some twenty interesting cases of gastro-intestinal disorders are noted; they are classified as acute dyspepsia, acute gastro-enteritis, and infantile cholera. Careful examination of the nipples and the milk often explains the appearance of these troubles. Superficial, that is not cutaneous, multiple abscesses, are often due to a slight abrasion. But deep multiple abscesses occur, and show a more generalised infection; they are always serious. From the cause in question Damourette has traced submaxillary abscess, otitis media and externa, dacryocystitis, and purulent ophthalmia. They greatly vary in severity, and are usually mild. In one case acute septicæmia without disturbance of the alimentary tract was observed. Infantile ecthyma is often due to galactophoritis in the nurse. Broncho-pneumonia occurs as a secondary result, following intestinal mischief caused by the disease in the nurse's breast.

THERAPEUTICS.

(99) Glycosuria from Taking Thyroid Extract.

W. Dale James (*Brit. Journ. Derm.*, June) reports the case of a medical man, aged 45, and an "old psoriatic," who had taken thyroid extract before Christmas without any effect on the disease, probably owing to the small doses swallowed one Burroughs, Wellcome and Co. tabloid twice a day. On March 22nd, 1894, he began taking four tabloids daily, and at the end of a week complained greatly of depression, with frequent flushings and palpitations. The nervous symptoms increased, and the patient felt and looked a very old man. Before another week elapsed his thirst became unquenchable; the quantity of urine greatly increased, the breathing became embarrassed, the pulse rose to 132 per minute, and the smell of acetone was detected in the breath. On April 4th the urine had a specific gravity of 1032, and sugar was freely found by all tests. The thyroid treatment was at once stopped, and antidiabetic diet adopted. The quantity of sugar decreased daily, and on April 13th none

could be detected. The general condition steadily improved, and on April 30th the patient was quite well, except for the psoriasis, which had not improved. Polyuria following the administration of thyroid has been noted more than once, but, as far as the author has been able to ascertain, this is the first case in which glycosuria has been caused by the treatment.

(100) Chlorate of Sodium in Cancer of the Stomach.

Brissaud (*Gaz. Méd. de Strasbourg*, May 1st) was led by observing the effect of chlorate of potassium in epitheliomatous growths of the mucous membrane of the upper digestive tract to try the effect of chlorate of sodium, which is much more soluble, in cancer of the stomach. The results were so remarkable that Brissaud thinks it well to anticipate the suggestion of an erroneous diagnosis. In most of his cases, in addition to the classical symptoms, there was a well-defined tumour in the gastric region. After giving chlorate of sodium in daily doses of 12, 14, and 16 grammes for about six weeks, melæna and hæmatemesis ceased entirely, cachexia disappeared, and the tumour could no longer be felt. Brissaud does not claim to be able to cure all cancers, but he affirms that there are certain forms which are curable by means of chlorate of sodium. Such are particularly those epitheliomata in which there is no extension of the disease to the liver or other parts, and no complication of the nature of thrombosis or phlebitis. Chlorate of sodium is less poisonous than chlorate of potassium, and is readily eliminated. The daily dose is from 8 to 16 grammes (2 to 4 drachms). Brissaud begins by giving from 8 to 10 grammes in the twenty-fours, and if the vomiting and hæmatemesis do not cease he increases the dose till these symptoms are controlled. He gives the drug mixed with 100 grammes of water in teaspoonfuls. The only contra-indication is the presence of albuminuria, even to a slight extent. More than 16 grammes should never be given in the twenty-four hours for fear of bulbar accidents. Brissaud suggests that chlorate of sodium may also with advantage be substituted for chlorate of potassium in the treatment of stomatitis, etc.

(101) Treatment of Icterus Gravis.

Arnozan (*Arch. Clin. de Bordeaux*, June, 1894) ascribes the failure of therapeutics in cases of primary icterus gravis to ignorance of its pathology as well as to the gravity of the affection. The discovery of the microbic origin of this disease has indicated the antiseptic method of treatment, and of the success of this method he narrates the following case as an example: An apparently healthy man, aged 42, felt exhausted after a long walk in the rain on November 12th, 1893. On November 20th he began to suffer from headache and shivering, and next day he vomited and became jaundiced. The jaundice increased, and on November 24th he appeared drowsy. On the following night he became delirious; liver apparently enlarged. On November 28th the delirium gave place to a condition of partial stupor, though the patient appeared to understand and answer when sharply addressed: apparent diminution in size of liver; cutaneous ecchymoses. On November 29th the liver seemed to have still further decreased in size; patient's general condition appeared better, except for the onset of broncho-pneumonia. Next day there was again nocturnal delirium, but not of so violent a character. On December 4th general condition better; the jaundice began to diminish, and the liver appeared of normal size. On December 14th the jaundice had practically disappeared; patient very feeble. The temperature was not much raised until the onset of the lung affection on November 29th, and from that date the lung affection seemed to take the chief place in the illness. The delirium did not absolutely cease until the end of the third week. The excretion of urea was diminished, and at one time there was some albuminuria. Arnozan thinks that the lung affection was not primary, and that the proper diagnosis was icterus gravis, phosphorus poisoning being as far as possible excluded. The treatment employed was a milk diet with naphthol β, sulphate of quinine, and charcoal, each in daily doses of 1 gramme 20 centigrammes, divided into eight *cachets*. Morning and evening the patient received a subcutaneous injection of 1 centigramme of carbolic acid diluted in $\frac{1}{2}$ c.c. of distilled water. As tonics and stimulants the patient had wine, tea with rum, and, especially after the onset of the broncho-pneumonia, bark, and acetate of ammonia. As contraindications to the injections of carbolic acid are mentioned coma, excessive debility, hypothermia, and marked tendency to cutaneous hæmorrhages. The medicines were gradually discontinued as the patient improved.

PATHOLOGY.

(102) Artificial Variation of the Cholera Vibrio.

In a third memoir on cholera and vibrios (*Annales de l'Institut Pasteur*, May, 1894) Metchnikoff presents some valuable facts throwing light on this difficult and involved chapter of bacteriology, and promises, in a shortly forthcoming memoir, to deal with the hitherto undetermined factor which co-operates with the comma bacillus to produce a case of cholera in any given individual. In the present memoir he insists that neither the degree of virulence nor constancy of form can be insisted on in the diagnosis of the comma bacillus. In examination of cultures from cholera dejecta or infected water two types tend to present themselves: (1) Short curved bacilli, the comma of Koch; (2) long fine filamentous bacilli, sometimes straight, sometimes spiral. Sanarelli's memoir establishes the first type as occurring in a case of cholera at Angers and in the water of St. Cloud and Gennevilliers; the second in the cholera of Courbevoie and water of Versailles. Generally it is the first type which is found in cholera dejecta, but in the Paris epidemic of 1889 and in the Courbevoie and Massowah cases the second prevailed. Ivanoff's anomalous bacillus isolated in Koch's laboratory from the dejecta of a typhoid patient belongs to the second type, and in the light of his researches is accepted by Metchnikoff as a genuine cholera bacillus. In spite of the persistence in the character of these two types Metchnikoff maintains that they are not distinct varieties, and that one may be artificially produced from the other. First, if the long bacillus of Massowah or Courbevoie is injected into the peritoneum, or passed through the digestive tube, of a vaccinated guinea-pig, the subsequent cultures consist of the short stumpy form. Secondly, in old cultures of the short variety, long filaments are found which reassume the short form in fresh cultures on agar. These modifications are only temporary, but experiments on the Angers bacillus prove that permanent modifications may be obtained. The bacillus in question was obtained from an isolated, but typical and well-authenticated, case of Asiatic cholera occurring in Angers in 1889 in an immigrant from Nantes. It was of the short type, and of extraordinary virulence; $\frac{1}{1000}$ of a culture of 17 hours on the inclined surface of a tube of agar 1.5 cm. in diameter and 12 cm. in length sufficed to kill a guinea-pig in twenty-four hours by peritoneal injection. Both the qualities of virulence and shape underwent permanent modification: 113 days later $\frac{1}{4}$ of a recent culture on agar was not mortal for a guinea-pig, and 242 days from its isolation $\frac{2}{3}$ of a recent culture was equally powerless. Thus in eight months its virulence fell from an extraordinary degree to below the average. The form was more constant, but yielded to special methods of culture. Grown in peptonised water 1 per cent. at 36° C., it became elongated as the fluid evaporated, and in an agar culture made on the twenty-fifth day mixed colonies were found of the two varieties: while after forty-three days at the same temperature agar cultures of the long variety exclusively were obtained. This variety was stable, and was perpetuated in culture made on widely different media. The involution forms of the two varieties were also different. Stumpy, rounded, and barrel-shaped forms predominated in the primitive race, long spirals in the artificial. The artificial characters also persisted after passage through a guinea-pig. These facts Metchnikoff holds as sufficient to prove the constancy of variations acquired under the influence of external conditions on one hand and the great variability of the cholera vibrio on the other. Another vibrio from a case of cholera at Brest was not so amenable to the conditions imposed, but an equal degree of polymorphism was exhibited by one isolated from a case at Rome.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(103) Lead Poisoning.

Anker, of Oppenheim's Poliklinik, relates in the *Berl. klin. Woch.*, June 18th, 1894, a case probably of hereditary origin. He first cites reasons why a toxicopathic as well as a neuropathic predisposition should exist. A girl, aged 8, had a blow on the back of the head when 3 years old, since which time the mind had developed imperfectly. When she was first seen both feet were in the equino-varus position. Of the extensors on the front of the right leg only the tibialis anticus and extensor longus pollicis showed a trace of power. The patient could extend the toes of the left foot slightly; the tibialis anticus was intact. Plantar flexion was unaffected. Six months later the paralysis had extended to the arms, the muscles supplied by the radial nerve being involved. There was wasting of the affected muscles. The slight spasm and patellar clonus noticed in the legs on the first occasion had disappeared. Four months later there was considerable improvement in the muscles of the hands. No lead was found in the urine by Salkowski. The symptoms corresponded to those seen in lead palsy. It was localised in the extensors, the supinator longus and triceps escaping. The muscles showed the reaction of degeneration, and sensation was intact. The paralysis was flaccid, except for the slightly increased reflexes, etc., seen in the legs at first. The pathogeny of lead palsy is still in dispute. The paralysis here resembled that of a multiple neuritis such as is seen in alcoholic poisoning. The absence of pain and sensation disturbances, the preserved tendon reflexes, although the paralysis was of the flaccid type, and the absence of tenderness over the nerves were in favour of a cord lesion. The course of the disease was against infantile paralysis; the lesion took six months to develop. Subacute poliomyelitis is extremely rare in children. The knee-jerks are usually lost in infantile paralysis. All possible chances of direct poisoning by lead being excluded, the disease was thought very probably to be of hereditary origin. The father was a type-setter, and had frequently suffered from lead colic.

(104) Poisoning by Potassic Chlorate.

Markwald (*Centralbl. f. inn. Med.*, July 14th, 1894) relates a case in a man, aged 53. A 3 per cent. solution was ordered for the purpose of gargling every two hours. On the next day the tonsillitis was subsiding, and he was feeling fairly well. During the following night he had severe pain in the stomach and lower abdomen, vomiting, and diarrhœa. Four hours later severe collapse was present, the vomiting and pain continuing. The pulse was small and rapid. The urine passed shortly afterwards was of a deep brown colour. It contained hæmoglobin, but no red blood cells. Besides a granular deposit the urine also contained fairly abundant hyaline casts covered with granules, and in addition renal epithelium. On the second day the colour was deeper, but in the course of the next few days it became clear and no more casts were found. The author says that the blood also showed the characteristic changes seen in hæmoglobinæmia. Some jaundice was noted on the second day, which lasted four days. The patient steadily recovered, and in about twelve days was perfectly well. He had used the gargle more frequently than directed, and had also roughly made the solution for himself. It was calculated that he had used 17 g. of the salt in about 3 litres of water. He was not aware of having swallowed any. The author thinks that there must have been some idiosyncrasy present, and it was ascertained that the patient had previously had unpleasant symptoms after the use of potassic chlorate gargle. As regards treatment, the collapse must be warded off and large quantities of fluid given by the mouth to flush the kidneys. Eventually venesection and the infusion of saline solution may be necessary.

(105) Diabetes.

Unschuld (*Berl. klin. Woch.*, July 9th, 1894) draws attention to some of the less noticed symptoms in early diabetes. He quotes a number of illustrative cases in which the disease was masked by the presence of dyspeptic symptoms, nervous symptoms classed as neurasthenia, etc. Sometimes diabetes may quite accidentally be discovered. Here marked thirst and abundant urine were mostly absent. Frequently cramp in the calves is complained of, a symptom at present but little recognised. During the past eight years the author has found it in as many as 26 per cent. of his cases. In 1891 he found it 33 times among 109 cases. It most often occurs in the morning, but sometimes at night. If such cramps occur and the patient complains of weariness and weakness, the urine should be at once examined for sugar. These cramps may be present in all forms of diabetes, except in the acute disease occurring in young subjects. Massage and attempts at walking generally relieve the cramp. The cause is obscure: perhaps it is due to the diabetic toxins. The recognition of these cramps may lead to the early diagnosis of diabetes.

(106) Inflammation of the Middle Ear in Infants.

Hartmann (*Deut. med. Woch.*, 1894, No. 26) has made a special study of the ears of infants in Koch's Institute for Infectious Diseases at Berlin. He finds that disease of the tympanum can nearly always be recognised by examination during life, and that it is found in more than 75 per cent. of infants during life, that is, in about the same proportion in which it has been found *post mortem*. Very various microbes have been found in the pus from the middle ear. The symptoms of the ear disease consist in restlessness, fever, and loss of weight, but sometimes there are no symptoms. Inflammation of the middle ear is very often associated with broncho-pneumonia, and it is probable that both conditions may be caused by aspiration of deleterious substances at birth. Death may be due to gradual wasting from the ear disease, or may be caused by a secondary infection of the cerebral meninges or by septicæmia. In the case of one infant, Kosser found a pure culture of the bacillus pyocaneus in the pus on the pia mater and in the blood of the heart, and the same bacillus, associated with Fraenkel's diplococci, in the ear and the lungs. When all symptoms are absent no special treatment need be adopted, but when one or more symptoms are present the pus must be let out by paracentesis of the membrana tympani. This can certainly give relief, and must be repeated if necessary. The air douche has several times been employed to hasten recovery. If the ear has not been examined the fever due to ear disease might sometimes have been falsely laid to the charge of a lung affection.

SURGERY.

(107) Pseudo-diverticulum of Duodenum.

Pilcher (*Annals of Surgery*, July, 1894), after referring to several recorded cases of this rare condition, relates the case of a boy, aged 17, whose health had been good up to twelve weeks before admission to hospital. There was at first pain in the abdomen with tympanites and constipation: irregular chills and fever followed, with emaciation and diffuse tenderness over the whole abdomen; finally a more severe pain, with a manifest tumour, tender to touch, developed in the right inguinal region. On admission he was emaciated and anæmic: abdomen flat and somewhat tender. Recti muscles rigid, but no discernible tumour. For some five days temperature and pulse, which had been up, steadily declined to normal. Then the temperature showed a daily evening rise, and a dimly outlined tumour could be felt below the umbilicus, to the right of the margin of the rectus muscle. The abdomen was opened and normal looking intestines and peritoneum came into view. Pushing the small intestine to the left, and the ascending colon to the right, there was exposed behind the peritoneum, lying in front of the lumbar vertebræ and over the great vessels, and projecting forward into the abdominal cavity, a flattened irregularly heart-shaped tumour, whose base was lost under the transverse colon above, while its apex overhung the brim of the pelvis below, where it was adherent on the right side to the last portion of the ileum and the adjacent

portion of the cæcum. Palpation elicited fluctuation in the tumour, and while being thus examined it gave way, and some puriform fluid escaped. The opening thus made was enlarged, and an ounce of brown puriform fluid escaped on the sponges. The cavity did or had recently communicated with the intestine, and all its relations pointed to the duodenum as the origin of the abscess. The cavity was irrigated out, and two drainage tubes inserted, and every precaution taken to protect the general peritoneal cavity. The patient rallied well from the operation, and an abundant bilious discharge from the drainage tubes began at once to appear; milk also, after being swallowed, would quickly escape from the tubes. In spite of all care, however, the patient died on the third day from peritonitis. *Post-mortem* dissection showed the tumour to be formed of a thick-walled sac, its cavity holding about six ounces, broadening at its upper part, across the posterior surface of which part was traceable a band of normal mucous membrane, continuous at either lateral angle with the proper intestinal canal. All ingesta transmitted by the stomach together with the bile, were discharged into this diverticulum, and from it had exit on the other side into the jejunum. The innermost layer of the sac wall was composed of purely inflammatory connective tissue, except along the portion of mucous membrane mentioned above, which was of the intestinal type.

(108) Surgery of the Pancreas.

Nimier (*Rev. de Chir.*, July, 1894) points out that the good results obtained from establishing a fistula between the dilated bile duct and the small intestine suggest the possibility of dealing successfully with obstruction and dilatation of the pancreatic duct by an analogous procedure. Reference is made to a case recorded by Weir of cancerous obstruction of the pancreatic duct, in which it was found that there would not have been any difficulty in fixing the dilated canal to the duodenum. This record shows that cases may occur of dilatation of the pancreatic duct, in which, as the structure of the gland remains in a healthy condition, it would be possible, with good prospects of ultimate success, to establish a communication between the pancreas and the small intestine. The chief difficulty at present is the impossibility of diagnosing with certainty obstructive dilatation of the pancreatic duct. The presence of fat in the stools, though suggestive of such a morbid condition, cannot prove more than failure of the duodenal digestion due to disturbance of the biliary or pancreatic digestion. The author anticipates that future clinical investigation will enable physicians to diagnose with certainty obstruction of the duct, so that even if a swelling cannot be made out, the surgeon may confidently practise laparotomy, not as an exploratory measure, but as the first stage of an operation having for its aim the formation of a fistula between the dilated duct and the small intestine. The best way of doing this, he holds, would be to use Murphy's button, which has recently been advocated by Terrier as suitable in all attempts to establish visceral anastomosis. It may be found advisable sooner or later to take advantage of the close connection between the pancreas and the duodenum to establish a direct fistula between these two organs, either by opening the intestine at first, and then puncturing the gland in the direction of the dilated duct, or by opening this first and passing a drainage tube from the cyst into the duodenum.

(109) Incision for Appendicitis.

McBurney (*Annals of Surgery*, July, 1894) describes a new method of operating in certain cases of appendicitis which promises a more perfect result, as regards the strength of the abdominal wall, than is usually observed. The incision in the skin is an oblique one, crossing a line drawn from the anterior iliac spine to the umbilicus nearly at a right angle, about 1 inch from the iliac spine, and is so situated that its upper third lies above that line. The section of the external oblique muscle and aponeurosis should correspond, great care being taken to separate these tissues in the same line, not cutting any fibres across. The edges of the wound in the external oblique are strongly pulled apart with retractors, displaying a considerable expanse of the internal oblique muscle, the fibres of which cross somewhat obliquely. These fibres and those of the transversalis muscle can then be separated with a blunt instrument in a line parallel to their course. The edges of this deeper wound are next separated with blunt retractors, thus exposing well the transversalis fascia, which is then divided in the same line. Last of all the section of the peritoneum is made. Two sets of retractors must be used, one holding open the superficial wound from side to side, the other separating the edges of the deeper wound from above downward. The muscular and tendinous fibres being separated and not divided, muscular action will rather approximate than draw apart the edges of the wound. There is scarcely any hæmorrhage, except during incision of the skin. The transversalis fascia can easily be completely sutured, and there is but little pain after the operation. The operation takes more time than the usual one, and more assistance is necessary. It does not appear to be suitable for cases accompanied by suppuration about the appendix, nor in non-suppurative cases which require a large intra-abdominal dissection during operation. The author has performed this operation on four patients in the intervals between attacks of recurrent appendicitis.

(110) Trephining for Jacksonian Epilepsy.

Cunningham (*N. Y. Med. Journ.*, July 7th, 1894) reports a case of Jacksonian epilepsy following an injury to the left side of the head, and an operation for the elevation of depressed bone. The fits, which were observed very carefully, began in one of two ways: usually with numbness and tingling of the right hand; sometimes with a sensation of cramp in the epigastric region. Complete and definite information was obtained regarding the time and sequence of the various motor-sensory phenomena. It was concluded that the probable lesion was meningeal thickening, with adhesion of the membranes together and to the cerebral cortex, its chief seat being about the genu of the Rolandic fissure. In an operation performed in January, 1894, by the author and Johnston the genu was exposed by applying an inch-and-a-quarter trephine. The orifice in the bone was enlarged forwards and downwards, and all the roughened bone which was formerly adherent to the dura removed. The thickened dura was then opened over the fissure of Rolando. On inspection much dural thickening with adhesion of the membranes was found over the postcentral, the precentral, and the posterior tip of the second frontal convolution. A like state of affairs was present beneath the site of the old cicatrix, 1 inch behind and 3¼ inches above the left external angular process, and also a small adhesion over the lower extremity of the anterior cerebral convolution; these were separated, and parts of the thickened dura were removed. The patient, who made a good recovery from the effects of the operation, had one slight fit on the following day, which however was not repeated. The author, who has had the patient under observation since the operation, regards this case as an excellent example of successful surgical interference for cerebral lesion.

MIDWIFERY AND DISEASES OF WOMEN.

(111) Craniotomy v. Cæsarean Section in Country Practice.

Dolder (*Volkmann's Sammlung klin. Vortrage*, No. 99, May, 1894) contributes a monograph entitled "The Position of the Country Practitioner in respect to Perforation and Cæsarean Section." The conditions of country practice entirely forbid the latter, notwithstanding the superior education and ability of the present generation of country doctors and the spread of antiseptics. Recent statistics are valuable in this respect, Dolder taking the highest and the lowest records of mortality from trustworthy sources.

	Hospitals.	Country Practice.
	Per cent.	Per cent.
Maternal mortality, perforation	6.60 to 0.0	10.9 to 6.66
Maternal mortality, Cæsarean section ...	12.94 to 8.0	50 and over
Fœtal mortality, Cæsarean section	6.80 to 0.0	Quite uncertain

These statistics must be remembered by the country practitioner lest he substitute "matricide" for "infanticide." Perforation is in principle bloodless; the child diminished in size is drawn through two natural channels, the os and the vagina. The country doctor can take all the necessary antiseptic precautions even in the most miserable cottage. On the other hand, in Cæsarean section, a large wound is made in the abdominal walls and another through the uterus, admitting septic elements which at their minimum may do grave injury. The *technique* of perforation is well taught and easily learnt at medical schools; Cæsarean section is not justifiable save when the operator has already a fair personal experience of less difficult abdominal surgery. Perforation can be done by the country doctor, who is usually well experienced in obstetrics, without assistants. Cæsarean section requires at least two experienced surgeons to assist the operator. With usual antiseptic precautions, as employed after ordinary labour, a craniotomy case does well enough. The after-treatment of Cæsarean section involves constant skilled attention; in short, it is an operation for hospitals, nursing homes, and private houses within hail of the specialist. The country practitioner, when he has perforated, has, however, duties to the patient over and above after-treatment in childbed. He should endeavour to save the next child by induction of premature labour. Should that be impracticable or unsuccessful, then it is time to think of Cæsarean section in an ensuing pregnancy, and for that operation it is his duty to send her up to town.

(112) Effect of Deficient Liquor Amnii on Fœtus.

Jaggard, of Chicago (*New York Journal of Gynecology and Obstetrics*, July, 1894) has a note on oligohydramnion. A woman, aged 32, suffered from this affection in her fourth pregnancy. In the course of the first few months she was obliged to work hard, nursing her husband, who had fever; her cellar was at the same time inundated. She was delivered at term. Labour began about half-past six in the evening; the uterine tumour was small, and half an hour later the cervix was effaced and the os dilated to the size of a dollar. The child presented by the breech. No waters came away at any stage of the labour. At half-past eight on the same evening the child was spontaneously delivered. The child, greatly malformed, lived for an hour. The scanty and tough amnion was folded closely around the body, and required incision in order to permit the escape of the fœtus; the amniotic cavity contained a fluid ounce of thick viscid gelatinous substance. Childbed was normal. The child had imperforate anus, congenital dislocation of the heads of both femurs, talipes varus of both feet, absence of the left sterno-mastoid, absence of the rectum, left kidney, and ureter, and a cystic right kidney. The urinary bladder was greatly hypertrophied, containing 23 cm. of fluid; the urethra was completely obstructed at the triangular ligament. Jaggard then noted how oligohydramnion in the earliest period of development implied a contracted amnion, which pressed on the head of the fœtus and caused cyclopic or other deformity, or pressed on the other extremity, producing phocomelus, sirenomelius, etc. Later on oligohydramnion is the chief factor in the determination of fœto-amniotic bands. Further still in pregnancy the fœtal body becomes deformed by pressure of the uterine walls. Jaggard's case and two others recorded by Straussmann seem to indicate that oligohydramnion late in pregnancy is caused by absent or defective fœtal kidneys. In hydramnion with uni-ovular twins, the kidneys of the children are hypertrophied. Gusserow believes that the liquor amnii is normally derived in part from the fœtal kidneys.

(113) Multiple Cæsarean Section.

Guéniot (*Union Médicale*, July 5th, 1894) exhibited recently at a meeting of the Académie de Médecine two rachitic women on each of whom he had performed Cæsarean section twice. One, E. R., was a dwarf little over 3 ft. 8 in. high; the conjugate diameter of the pelvis hardly exceeded an inch and a half. In the other, J. N., the pelvis was about equally deformed. The second pregnancy was almost coincident in both. The first section occurred in J. N. on January 14th, 1891, in E. R. on December 17th, 1892. J. N.'s child, a girl, is now living and healthy. E. R.'s, also a girl, was exhibited when 6 weeks old, as showing evidence of congenital rickets. The second Cæsarean section was performed on J. N. on May 21st, 1894, on E. R. on May 28th. Both infants were males, and were alive on July 3rd. E. R.'s baby, like its sister, had congenital rickets. Guéniot objects to Porro's operation, and to ligature of the tubes. In 1891 he performed section on a woman badly afflicted with mollities. He left uterus and appendages alone; the child lived. The bone disease never progressed. On June 13th, 1893, he delivered the mother by aid of symphysiotomy, and saved her and her child.

(114) Cavernous Angioma of Ovary.

Marckwald (*Virchow's Archiv*, vol. cxxxvii, part 1, July, 1894) discovered this rare condition in making a necropsy. The patient was a girl aged 22, who died of widely-disseminated tubercle affecting the lungs, larynx, kidneys, liver, small intestine, and numerous lymphatic glands. The appendages were held back by false bands and adherent to the uterus posteriorly, but no part of the genital tract appeared to be tuberculous. The left ovary was healthy. The right was as big as a walnut and firm in consistence. A papillary cyst of the size of a pea lay on its surface. On section the ovary was found to be rather vascular, but the middle, to the extent of half the ovary, was taken up by a new growth full of blood. On careful examination the growth proved to be a conglomeration of new-formed blood vessels—in fact, a cavernous angioma. This disease does not seem to develop to a great extent in the ovary. Only two cases have been previously recorded. One, described by Orth and Stamm, was in a child, and both ovaries were affected by the new growth. The first case, Marckwald admits, is described by J. F. Payne in the *Transactions* of the Pathological Society of London, vol. xx, 1869. Both ovaries were involved, and there was also a growth in the uterus. The patient died, it must be noted, from uterine hæmorrhage, and before death the liver was found to be much enlarged. At the necropsy cavernous angiomata were seen disseminated over the liver, and the suprarenal bodies, as well as the ovaries and uterus, were involved.

THERAPEUTICS.

(115) Treatment of Enteric Fever with Killed Cultures of B. Pyocyaneus.

Kraus and Buswell (*Wien. klin. Woch.*, July 12th, 1894) begin a study of this subject. They first refer to researches into the rendering of various animals immune against the typhoid poison, to the investigations of Stern (Epitome, October 15th, 1892, par. 340) into the bactericidal action of human blood serum after enteric fever, and to the treatment of the disease in man by killed cultures, as practised by Fraenkel and Rumpf (Epitome, December 9th, 1893, par. 475). The authors did not make use of thymus extract cultures, but of bouillon culture heated to between 60° and 80° C. for twenty minutes. These higher temperatures were used, as one animal injected with an apparently sterilised culture died of the pyocyaneus infection. They look upon Rumpf's investigations as especially forming the basis of the bacteriological treatment. Enteric fever in man is not a simple infection, but a middle form between infection and intoxication. The being proof against the typhoid poison is the first thing, immunity against the infection the second. Experiments seem to point to an antagonism between the pyocyaneus products and the typhoid bacillus in the body. Three guinea-pigs were inoculated with ½ c.cm. sterilised pyocyaneus culture, and a week later with 3 c.cm. virulent typhoid culture. The three control animals died within twelve hours, whereas the others not only lived but were active and lively on the next day. The action really lies in an increase in the natural resistance. Toxalbumins are destroyed at 70° C., and the poisonous toxins have little significance in this relation. The bacterial protein, however, preserves its powers even after being heated to 120°; it constitutes the most important part of sterilised bacterial fluids. The authors believe that the real object to be aimed at in the injection of the bacterial protein is to make the inflammatory and febrile reaction more marked.

(116) Trional.

DEUSCHLE (*Columbus Med. Journ.*, March, 1894) has tried trional extensively in his wards, and finds that it operates more satisfactorily and has fewer objectionable features than any other hypnotic. He gives various cases of insomnia in mental disease, etc., in which he has tried trional with success in doses of 15 and 20 grains. Doses of 25 and 30 grains sometimes produce drowsiness on the following morning; so, also, on one occasion did a dose of 20 grains. The administration of trional in 15-grain doses thrice daily was followed by good results in cases of mania and maniacal excitement, in some of which other sedative drugs had been tried with a less good result. Deuschle has not noticed any impairment of digestion or disturbance of circulation or respiration after trional. Its greater solubility probably accounts for its action being more rapid than that of sulphonal; its effect was produced in ten to thirty minutes. Like sulphonal it is almost tasteless, and may be given in hot soup, coffee, etc., but preferably in a little whisky or wine to which sufficient hot water has been added to effect solution.

(117) Thyroid Extract in Cachexia Thyreopriva.

ANGERER (*Münch. med. Woch.*, July 10th, 1894) relates the following case in a man aged 40, cured by the thyroid treatment. A large goitre affecting the right side was removed. Shortly after his discharge considerable mental change was observed. A year later he was readmitted with a hernia. He lay in bed almost as if stupefied, taking no part or interest in things going on round about him. His memory was weak. He could not make a simple calculation. The thyroid gland was quite atrophied, and could not be felt even on the left side. The fingers were thickened, especially the terminal phalanges. The patient was fed on raw thyroids, and rapidly showed great improvement. The pulse rate and the amount of urine were both increased. He complained of some passing headache, especially when the thyroid was given too rapidly, or in too large doses. The improvement was maintained four months later. The author refers to five similar cases reported by Kocher, and one by Leichtenstein.

(118) Bromoform in Whooping-Cough.

H. B. CARPENTER (*Philadelphia Polyclinic*, June 16th) has used bromoform in several cases of whooping-cough with good results, but in others it seemed to have little effect. He says the good effect of the drug is, partly at least, due to its acting as a local anæsthetic upon the pharyngo-laryngeal mucous membrane. It moderates the violence of the paroxysms, and diminishes their frequency, often stopping the vomiting in twenty-four hours, and in many cases it shortens the duration of the disease. Bad effects have rarely been seen, and never from small doses. Large doses have made the child stupid and drowsy, and sometimes narcosis has been produced, but the patient was easily revived. The symptoms of poisoning have been pallor, staggering, dilatation of the pupil, coma, heart failure, and collapse. The remedy is given in 1 to 5-drop doses three or four times daily—a child of 1 year receiving 1 to 2 drops three times a day; a child from 2 to 4 years of age, 2 to 4 drops three or four times a day; and a child from 5 to 8, 4 to 5 drops four times a day, according to the number and frequency of the attacks. Bromoform is usually given dropped on sugar or in water; care must be taken that the pearly drops floating about in the water are swallowed. The drug is not, however, easy to drop, and if the attendant cannot be trusted to drop it, it may be given in the following manner: ℞ Bromoform ♏xlviij, alcohol ʒiv, tr. cardam. co. ad. ʒiij—1 drachm of this mixture to be given thrice daily in water. If the administration of bromoform be discontinued too soon, relapses may occur. Three illustrative cases are given in detail.

PATHOLOGY.

(119) Toxicity of the Blood Serum in Puerperal Eclampsia.

CHAMBRELENT (*Arch. Clin. de Bordeaux*, June, 1894) says that Bouchard is the author of the theory that eclampsia is due to the retention of toxic products, which the kidneys and other excretory organs cannot eliminate. It was Bouchard who showed that the toxicity of the urine is diminished in cases of eclampsia. He ascertained the quantity of healthy human urine which must be injected to kill rabbits of different weights, and found that, on the average, 45 grammes would kill one kilogramme of rabbit. If the urine of eclamptic women be of the normal dilution, much more will be required to kill the same weight of rabbit. Rummo, of Sienna, in 1889 showed that, whereas it required about 10 c.c. of blood serum from healthy persons to cause death when injected into rabbits, it only required 3 or 4 c.c. of blood serum derived from eclamptics. Chambrelent began his experiments in 1892 at the suggestion of Tarnier, and, without knowing of Rummo's work, arrived at similar conclusions, namely, that it required 3 or 4 c.c. of blood serum derived from an eclamptic woman to kill a kilogramme of rabbit. These experiments confirm, therefore, the theory of auto-intoxication as suggested by Bouchard. Chambrelent suggests that the toxicity of the blood, when ascertained, may enable one to arrive at a prognosis in cases of puerperal eclampsia. An eclamptic woman seemed likely to recover, but the toxicity of her blood serum was found to be very great, and the real gravity of the case was confirmed by her death. The amount of albumen in the urine is not a good sign of the gravity of a case. Chambrelent saw an eclamptic woman recover, although there were 18 grammes of albumen in a litre of her urine; in this case the toxicity of the blood serum was not much increased, and a favourable prognosis had therefore been given. The question of prognosis for the fœtus is more difficult. Chambrelent's experiments seem to show that it requires about 10 c.c. of blood serum, obtained from children just born of healthy mothers, to kill one kilogramme of rabbit. In one case of eclampsia the fœtal blood seemed to be still more toxic than the maternal, whereas in another case it was apparently less toxic. Moussous found lesions like those of nephritis in the kidneys of a child born of an eclamptic mother. Chambrelent says it would be interesting to ascertain if there are not hepatic lesions in the children similar to those found in the livers of their eclamptic mothers, lesions described by Pilliet. He mentions that in some cases the death of the fœtus may be due to the old and recent hæmorrhages often found in placentæ from women with eclampsia or albuminuria.

(120) Leech Extract and Thrombosis.

SAHLI (*Centralbl. f. inn. Med.*, June 2nd, 1894) first refers to the fact that in the head of the leech a substance is formed which hinders the coagulation of blood. The author has investigated with Eguet the formation of thrombi in animals previously treated with intravenous injections of an extract of this substance. The introduction of a foreign body into the vessel was adopted as the only reliable method of inducing coagulation, a bristle being passed for this purpose into the external jugular vein through the external maxillary vein. In ten minutes a thrombus was formed upon it. A hot infusion of one leech's head in 5 c.cm. of water was used; this prevented clotting in 20 to 25 c.cm. of rabbit's blood for at least eight days. Fifteen to twenty minutes after the bristle was introduced the infusion was injected into the jugular vein of the same side. A bristle was then passed into the vein on the opposite side and the animal killed in twenty to forty minutes. No thrombus was found on this bristle. It was ascertained experimentally that the infusion of one leech's head would actually suffice for 50 to 60 c.cm. of the calculated amount of blood. The duration of the preventive effect is limited. The experiments seemed to give strong proof as to the relation of thrombosis and coagulation. As regards the therapeutical application of these principles nothing can definitely be said at present. The infusion is not poisonous: twice or thrice the required amount can be injected into rabbits without injury. It must be ascertained whether large quantities would reduce the blood pressure as peptone does. One weighty objection lies in the large amount required, namely, not less than 80 to 90 leeches for a man. Further investigations are being made.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(121) Cor Adiposum.

Schott (*Deut. med. Woch.*, July 5th and 12th, 1894) observes that, although there are no certain signs of this condition, there are several symptoms, such as the general state of the patient, the condition of the heart sounds, rhythm, etc., which make the diagnosis very probable. Often this fatty deposit in and about the heart cannot be distinguished from fatty degeneration. The author gives some account of the physical and dietetic treatment of the disease. The object of the dietetic measures is to diminish the amount of fat. There is no means of making collections of fat disappear from certain parts of the body. The fat round about the heart disappears last in starving animals. Thus the improvement in the patient's condition cannot be brought about in this way. Purgative measures are harmful, and the doubtful effects of iodides are often further obscured by other symptoms produced by them. If anæmia, diabetes, gout, and especially arterio-sclerosis, be present, dietetic treatment must be adopted with great caution. Any considerable loss of weight must be carefully guarded against. Patients who have lost weight in consequence of treatment by mineral waters and dietetic restrictions may develop signs of cardiac weakness. As regards limitation of fluids, the amount of alcoholic beverages must be lessened. It is probable that the loss of weight which may occur when fluids are diminished is really due to the impaired appetite. The author's method of treatment consists in methodical exercises, bath treatment, etc. He thinks his treatment may be carried out with benefit, and without the risks attending other methods recommended. He quotes cases to show that unpleasant symptoms may be removed without the patient losing weight. It is only when the heart has gained strength and is not to be distinguished from a normal heart that any thinning treatment should be adopted. Any rise of temperature is also a contraindication to it. Moderate exercise in the fresh air, which may be increased later, is useful, but overexertion may produce unpleasant symptoms. Mental overexcitement must be avoided. Dietetic treatment should be used judiciously. He concludes that (1) the reducing treatment should be adopted cautiously and only in young individuals; (2) too rapid loss of weight must be avoided; (3) general diseases, senile manifestations, are at least at first a contraindication to the reducing treatment; (4) the fatty heart may often be treated successfully without loss of weight; and (5) the dietetic mechanical treatment is the best.

(122) Poisoning by Terchloride of Gold.

Stevenson (*Guy's Hosp. Rep.*, vol. 50) records a case of poisoning by terchloride of gold, the only known instance in this country. A boy (age not stated) was brought into hospital in a state of collapse; three hours earlier he had been given a glass tube picked out of a dust heap by his sister, containing a yellow substance. The boy broke the tube, and sucked the contents, and presumably he either swallowed or wasted 12 grains. Immediately the boy was sick and felt ill, and it was noticed that the first vomited stuff was black in colour. The last meal had been six hours previously. On the mother's return she found the boy vomiting violently, and as this continued she brought him to the hospital, where he was seen three hours after taking the poison. He was then collapsed, with closed eyes, pallid features, and face and extremities cold. The lips, tongue, teeth, and inner side of the right cheek were stained of a purplish black hue; the fauces were injected, but not stained; pulse 130, very feeble. Immediately after admission the bowels acted, and a second time very shortly afterwards, but the character of the motions was not observed; the child was conscious throughout. White of egg in milk was given frequently, but was always rejected within five minutes. The patient was placed in bed between hot blankets, hot bottles were applied to the feet, and 10 minims of brandy were injected subcutaneously. He was admitted at 2 A.M., and the diarrhœa continued. At 10 A.M. it was noted that the stomach had continued to reject everything until this hour. The boy appeared to be in pain, and was tender over the epigastrium; abdomen retracted but supple; vomited matters free from blood, but contained blackish shreds; the motions were thin and watery, brownish in colour, containing numerous pellets of mucus, no blood. Circulation and respiration were normal; the boy was very thirsty. The mouth was carefully examined; both lips were darkened for about half an inch over each side of the mesial line at the junction of the mucous and cutaneous parts of the lips. The outer part of the lips and the angles of the mouth were not stained; the tongue was white on the dorsum, but about a quarter of an inch from the edge on each side there was a longitudinal brown line of thin staining; on the right inner gum just behind the posterior tooth and extending partly up the ramus of the jaw on the buccal surface for about an inch was a dark stain; on the teeth at their junction with the gums was a discoloured line; none of the stained parts were tender to the touch; the colour of the stains was for the most part a very dark (black) purple. The palmar surfaces of the fingers and thumbs and of one palm were stained of a lighter purple; around the nails the stains were purple black; these stains were quite characteristic of reduced gold. The urine was normal in colour, and contained no albumen; traces of gold were detected in the earlier vomit and in the fæces, but not in the urine. At 5 P.M. vomiting and diarrhœa ceased, and next day the child had fairly recovered, and no constitutional symptoms supervened.

(123) Chylous Ascites.

Weiss (*Centralbl. f. inn. Med.*, July 21st, 1894) observes that this disease may be due either to rupture of the thoracic duct, to pressure from without, or to obstruction from within (congenital stricture, stone). He reports the case of a man, aged 36, whose illness commenced some six months previously with loss of appetite, occasional vomiting, and colic. The abdomen began to swell four months later. On admission there was great wasting, and the abdomen contained much fluid. The liver could not be felt, and the urine contained no albumen. As treatment with calomel, diuretin, etc., was unsuccessful, paracentesis was performed, and over two litres of a milky fluid withdrawn. Besides a few red cells the microscope showed numerous cells of about the size of ordinary leucocytes, but containing numerous granules. The fluid, specific gravity 1017, contained 1.3 per cent. of albumen, consisting of a serum albumen and a small quantity of serum globulin. A large amount of neutral fat was present, as well as salts of the blood serum. After a temporary improvement fluid again collected in the abdomen. Clear fluid was also present in both pleural cavities. There were no tubercle bacilli in the sputum. After a second tapping the calomel treatment seemed to produce some improvement, but this lasted only for a short time. The chylous ascites was attributed to a deep-seated malignant growth, the exact site of which could not be determined. There was no sufficient evidence of gastric carcinoma. The patient died some six weeks after admission. At the necropsy an infiltrating carcinoma of the stomach was found, with secondary deposits in the retroperitoneal and mesenteric glands, which produced compression of the lowest part of the thoracic duct and the receptaculum chyli. There was, also, great dilatation and carcinomatous infiltration of the lymph vessels of the intestine and diaphragm.

SURGERY.

(124) Total Extirpation of the Larynx.

Virchow (*Berl. klin. Woch.*, July 30th, 1894) recently showed specimens from 2 cases of carcinoma of the larynx cured by operation: (1) From a man operated on by J. Wolff two years and a-half ago (Epitome, June 25th, 1892, par 564). The region of the larynx and the neighbouring glands were quite free from any return growth. The uvula, soft palate, and base of the tongue were intact. Below these was the defect left by the removal of the larynx. Two elongated swellings corresponded to the tonsils. The anterior wall was covered with a smooth skin-like surface. In place of the larynx one could see into a funnel-shaped space

19 cm. long by 2 cm. broad on the anterior wall of the œsophagus. From this a small sinus 3 cm. long passed to the external wound (4 cm. long by 1 cm. broad). Downwards from the above-named space an opening as large as the tip of the little finger was found in the trachea, which latter was closed above. A mass of new growth was present in the right lung, and another breaking down mass in the right thigh. Both these metastases contained similar carcinomatous elements, and doubtful protozoa were found in some cells. The mass in the lung looked like an implantation, and had in all probability been there a long time. (2) From a case operated on by Thiersch in 1880, the patient dying of pneumonia four years and a-half later. Here no carcinoma could be found. The removed larynx was also shown from each case. Virchow points out that these specimens should increase the favourable opinion as regards the operation.—Wolff (*ibid*.) gave some further clinical details of his case. The patient remained well until March 1894, when the swelling appeared in the thigh. Two months later death occurred from cachexia. The author observes that his is the only case living over one and a-half years without local recurrence, in which death was due to metastases. Four patients died of local recurrence between four years and a-half and thirty-two months; three patients lived four years and a-half to six years, and then died of intercurrent disease; three patients, free from recurrence for twenty to twenty-two months, also died of intercurrent disease. The only case on record of metastases occurred in a patient who lived only four months, but here there was also local return. Not many fewer than 200 cases have had the whole larynx removed for carcinoma, and the author recapitulates the duration of life in the various sets of statistics given. He concludes by summing up the points which serve to show the unmistakable value of the operation.

(125) Surgery of the Spinal Cord.

Goldscheider, of Leyden's clinic, discusses this subject (*Deut. med. Woch.*, July 19th and 26th, 1894) from the neurologist's standpoint. He first draws attention to the fact that improved methods have greatly lessened the risks of operation. (1) Paralysis in fractured spine. In the majority of cases the permanent narrowing of the canal does not appear to be the real cause of the paralysis. Even if it were, the difficulty of dealing with the deformity would be great. The diagnosis of the cause of the compression is not at all easy. In fresh cases concussion of the cord may give rise to complete paraplegia with paralysis of the rectum and bladder, that is, similar symptoms may exist as in tearing of the cord. In the latter case no operative procedure can be of any service. From the morbid anatomy it would appear that operation is not indicated in recent cases (within the first fortnight) except in fracture of the arches, which is uncommon. This view is borne out by the analysis of results. It becomes a question of how long one should wait. Between compression and degeneration there is no sure distinction, except by long observation of the case. Of fifty-nine late operations fifteen died (some having shown temporary improvement), twenty-three remained unchanged, sixteen were improved, and five were cured. It cannot always be said whether the improvement is directly due to operation. The author analyses the recorded cases. Success has been chiefly obtained when the cauda equina has been pressed upon or the arches fractured. Lauenstein's rule that operation is indicated when symptoms of bladder and rectum paralysis have been resisted for eight weeks cannot be acted upon. (2) Paralysis due to vertebral caries. Bony compression is rare; that by purulent exudation or fungous granulations more common. Compression myelitis is, according to some, really due to œdema of the cord, which can last a long time without irreparable damage being done. After a brilliant commencement (Macewen's cases) subsequent results have been far from encouraging. The author discusses the causes of the want of success. Orthopædic treatment, which the author thinks still in its infancy, offers greater chances than the operative. (3) Tumours. Details are given of ten recorded cases of operation in occult tumours of the spinal cord. If to these be added obvious tumours, the number amounts to twenty-four, and six of these were considerably improved or cured. The author would look upon these results as comparatively satisfactory. If the tumour is intramedullary it cannot be removed. Diagnosis is difficult. Spinal cord tumours are mostly such as do not recur. The author then speaks of lumbar puncture as suggested by Quincke in hydrocephalus; this may be useful in some cases of cerebral tumour with compression. Perhaps division of posterior nerve roots in severe neuralgia may be of value. On the whole operative treatment in spinal cord diseases does not unfortunately offer a very favourable prospect, but the author thinks that disappointments will be less frequent when strict indications are followed.

(126) Spontaneous Cure of Traumatic Detachment of the Retina.

Armaignac (*Rec. d'Ophtal.*, May, 1894) relates a case in which a child had been struck in the left eye by a wooden arrow. There was a wound of the cornea through which some vitreous was protruding; the pupil was dilated and fixed; the lens was displaced slightly downwards, and the vitreous contained blood. A fortnight after the vitreous was clear, but there was an extensive detachment of the retina to the nasal side. Pilocarpin was ordered to be dropped into the eye, and it was intended to aspirate the subretinal fluid later. When the patient was seen six weeks after, however, the retina had become attached again; the pupil remained dilated and inactive, and a complete examination revealed no trace of the previous detachment except a mass of pigment. The vision had become almost normal again.

(127) Hypertrophy of Prostate.

Meyer (*Annals of Surgery*, July, 1894) describes a case in which he ligatured the internal iliac arteries (Bier's method) for hypertrophied prostate in a man, aged 55, who had had marked urinary trouble for over four years, and whose urine was purulent. Twelve hours after operation the patient passed urine voluntarily for the first time within six months. There was marked atony of the bladder, yet continuous retention never set in again. The prostate became smaller, and the length of the urethra was reduced from 23½ to 21½ centimetres in six months.—Fremont-Smith (*ibid.*) reports an aggravated case of hypertrophy of the prostate which yielded to treatment by castration as suggested by J. William White. During the week following operation the patient was catheterised twice daily; at the end of that period he was able to pass his urine, and the catheter was used twice a week, only to determine the quantity of residual urine. He now had no fever; appetite returned, and weight increased. Instead of retention, or residual urine of not less than six ounces, he had no retention, and no return of acute cystitis. The residual quantity gradually diminished, and fifteen weeks after operation the patient was well.

MIDWIFERY AND DISEASES OF WOMEN.

(128) Operations on Uterus and Ovaries in Pregnancy.

Everke (*Centralbl. f. Gynäk.*, No. 24, 1894), in a monograph on some Cæsarean sections in his own practice, adds some cases of ovarian and uterine tumours in which operations were undertaken during pregnancy. In two cases he enucleated myomata. The first patient was in the fourth month of pregnancy; the tumour was of the size of two fists. Abortion occurred two hours after the operation. The second was three months' pregnant. The tumour was as big as a child's head; the patient recovered without fever. Four weeks later abortion occurred, during an attack of gastro-enteritis, with high temperature. In both cases the sac left after enucleation was sewn to the abdominal walls. In two cases of ovariotomy the first was pregnant two months, and gestation continued to term; the second, five months pregnant, was spontaneously delivered eight hours after the operation. Both recovered. In two successful cases ovariotomy was undertaken after delivery. On one occasion Everke observed spontaneous reposition of a large ovarian tumour during labour. In one patient in the fourth month of pregnancy a cancerous growth of the size of a crown piece was excised from cervix without abortion ensuing.

(129) Relaxation of Sacro-iliac Synchondrosis.

Richard Braun (*Centralbl. f. Gynäk.*, No. 28, 1894) describes a case of this condition. The patient did hard work in an inn during her first pregnancy. She applied for relief after suffering for a fortnight from pains on the right of the sacral region. On careful exploration the right sacro-iliac synchondrosis was found to be loose. This lesion was easiest to detect when the patient was made to walk; she walked with the legs apart, swinging from side to side. Distinct crepitation was repeatedly detected. The affected joint could not be conveniently explored by bimanual palpation. There was no loosening of the symphysis pubis. Gustavus Braun, in the discussion, said that he also had carefully examined the case, finding that the loosened joint was becoming firmer. Had not the defect begun to mend because the cause (the pregnancy) had passed away? Richard Braun observed that the symphyses of the pelvic bones were always movable in pregnancy; this condition was best marked in young (not older) multiparæ. The mobility was less in primiparæ. Yet in very young primiparæ, especially when of fair complexion, the mobility may be marked. It is least in elderly primiparæ. He had found the symphyses as movable in young primiparæ as when symphysiotomy has been performed.

(130) Cause of Early Death after Operations on the Internal Organs.

Thiercelin and Jayle (*Bull. de la Soc. Anat. de Paris*, May-June, 1894) describe the necropsies made on 7 cases of abdominal section (5 removal of appendages, 1 ovarian cyst, 1 abdominal hysterectomy) which had died, 6 within three days and 1 within six days after the operation. In 5, including the case which lived six days, there was distinct acute fatty degeneration of the liver. In the remaining 2, where the lesion could not be detected by the naked eye, cloudy swelling of the hepatic cells was discovered on microscopical examination. It is expressly indicated that in none of the 7 cases did suppurative peritonitis exist. Thiercelin and Jayle then examined the liver from a case of death from hæmorrhage six hours after operation for a ruptured extrauterine fœtal cyst. The liver was absolutely free from fatty changes. But in the liver of a child that died a week after an operation for congenital dislocation of the hip, acute fatty changes were discovered. The same condition was seen in the liver of a man dead from septicæmia due to phlegmonous inflammation of the larynx. Other evidence is brought forward to show that in all the above cases the liver is infected by streptococci. Cirrhosis, etc., predispose greatly to this infection after laparotomy.

(131) Removal of Tuberculous Appendages, followed by Tuberculous Meningitis.

Binaud (*Gazette Méd. de Paris*, July 7th, 1894) relates a case which was under the care of Demons, of Bordeaux. The patient was a housemaid, aged 26, subject for a few months to pelvic pains, very acute at the outset, and also to severe headaches. Double pyosalpinx was diagnosed; no period had been seen for several months. On May 5th, 1892, Demons removed the appendages. Careful microscopical examination showed that the Fallopian tubes were infiltrated with tubercle. A drain of iodoform gauze was left in the lower extremity of the wound for four days. From May 7th the patient seemed quite well till May 26th, when vomiting, anorexia, and rise of temperature occurred. Symptoms of tuberculous meningitis slowly developed. On June 2nd there was left hemiplegia, and the right side of the face was paralysed. Next day the patient was comatose. After temporary improvement, she died on June 8th. The base of the brain was covered with greenish exudation, and tuberculous deposit was found along the vessels of the pia mater. The lungs and other viscera were free from tubercle, but the abdominal wound and an omental adhesion to its lower angle were infected.

(132) Myoma and Vaginal Hysterectomy.

Ruge (*Centralbl. f. Gynäk.*, No. 28, 1894) exhibited, in May, at a meeting of the Berlin Obstetrical Society, a uterus which he had removed through the vagina. It was regularly distended by a submucous myoma, and measured over eleven inches in circumference. He noted that, by aid of *morcellement*, a uterus much larger than the present specimen could be removed through the vagina, and that this operation was the best of all the more serious and radical procedures undertaken for fibroid disease of the uterus.

(133) Enterocele Vaginalis complicating Prolapse of Posterior Vaginal Wall.

Eberhart (*Centralbl. f. Gynäk.*, No. 24, 1894) operated last November on a very thin subject, aged 46. She had been delivered five times, first in 1878 with forceps; then in March, 1880, spontaneously; thirdly, in July, 1881, where there was transverse presentation and placenta prævia; next in 1882, normally. The fifth labour was on May 1st, 1885, where the forceps was used and the placenta was adherent. In the ensuing winter something began to bulge from the vulva, more at the period than at other times. After meals and defæcation it was very large. By November, 1883, it had become irreducible. Eberhart examined the patient under chloroform. As she began to struggle a hernial mass as big as a fist projected from the vulvar cleft. Pessaries had proved useless. At the operation a large oval flap was dissected off the posterior vaginal wall, when Douglas's pouch was laid open. The parts were drawn down and a large piece of peritoneum excised; the parts were then united with interrupted sutures. Douglas's pouch was found to extend over 3 inches below the level of the os externum. The connective tissue around the front of the rectum was dissected away, and the lower part of the wound in the vagina below the peritoneum was closed with catgut. The patient was much exhausted for three days after the operation. When seen on January 21st she seemed very well. Cascara was ordered to prevent accumulation of scybala in the rectum.

THERAPEUTICS.

(134) Treatment of Diphtheria.

Weibgen (*Deut. med. Wock.*, July 19th, 1894) describes the treatment pursued in Hahn's clinic since 1880. During the past few years it has been customary to apply an ice collar, and to order hourly gargling with a 4 per cent. solution of potassic chlorate, or, if much fœtor is present, with a ¼ per thousand solution of potassic permanganate. If garling is impossible a spray is used. In nasal diphtheria the nose is syringed out with boracic acid (2 per cent.) or the above named permanganate solution; if bleeding occurs the nostril is plugged. In mixed infections it is said that large rectal injections (boracic acid 2 per cent.) are useful. If signs of laryngeal obstruction are present on admission it has not always been found necessary to do tracheotomy, as these symptoms may subside under the use of steam. If, however, the dyspnœa is urgent, and the child weak and somnolent with retraction of the soft parts, a low tracheotomy is performed at once. Pneumonia is not a contraindication to tracheotomy but marked sepsis is, the dyspnœa here being often due to the infection. The cannula is removed about the fifth or sixth day. If, owing to paralysis, the food gets into the larynx, the cannula is put in again. Sometimes it has been found necessary to feed the patient with a tube. The number of recoveries has steadily increased from 46 per cent. in 1880 to 63 per cent. in 1893 among the non-tracheotomised, and from 20·5 to 40 per cent. among the tracheotomised. The earlier in the disease the child was admitted the better the prognosis. Sixty-five cases have been treated with the specific serum; of these, 72 per cent. of the non tracheotomised and 44 per cent of the tracheotomised recovered. The epidemic, however, was of a mild type, and the author says that similar good results have been obtained in previous years in like epidemics. A definite conclusion upon the serum treatment cannot be given until larger numbers are forthcoming, and until the treatment has been in use over longer periods of time (see Epitome, May 5th, 1894, par. 365).

(135) Hypnotics in Mental Disease.

Hans Evensen (*Norsk Magazin for Lægevidenskaben*, No. 5, May, 1894) reports his experience of various recently introduced hypnotics in the treatment of insane patients. *Sulphonal.* — Experiments made on 31 men and 45 women, the dose being from 1 to 1.5 gramme, showed that this drug was sure in its

effect, but its prolonged use is apt to cause serious disturbances in the general condition, apathy and motor disorders. Evensen finds it useful especially in acute cases of excitement, mania, and alcoholism, in which it may be combined with opium if necessary. Its special advantage in the treatment of insane patients is the persistence of the sedative effect produced by its systematic employment. Its action, however, must be carefully watched, and in order to avoid poisoning it is best to alternate it with some other hypnotic, preferably chloralamide. *Trional* and *tetronal* act in much the same way as sulphonal; the dose in each case was 1 gramme. *Amylene hydrate*, in a dose of 2 to 5 grammes, is a mild though somewhat uncertain sedative, producing peaceful sleep; it is especially useful in cases of cerebral anæmia. *Paraldehyde* (dose 2 to 8 grammes) is harmless when used only for a short time; its habitual employment may cause prostration and nervous disorders. *Chloralamide* was used in 26 women and 19 men (dose 2 grammes): it acts less powerfully on the circulation than chloral, but does not so frequently cause headache, vertigo, and vomiting; it is a hypnotic which, though not very certain in its action, may be given to quiet patients. The author has observed no ill-effect from the drug in general paralysis; it acts well in senile dementia, but is useless in cases where excitement is a prominent feature. *Somnal* (dose 2 to 6 grammes) is very uncertain. It may be employed in cases of chronic mania and in quiet melancholics, but it is useless in acute mania; it seldom causes any secondary effects. On the whole this drug is considered by the author to be superfluous. *Hyoscine* was tried in 44 women and 32 men, and acted rapidly and well. It is indicated when it is absolutely necessary to make the patient sleep for part of the night; it can be employed in excitement of all kinds. Injected subcutaneously (preferably between the shoulders if the patient is violent) it will in half an hour induce sleep lasting five hours. In a strength of 3 per cent. it has no effect; in a strength of 20 per cent. it gives repose but not sleep. It acts rather less well in men than in women, or when the injections are given in the morning. The use of this drug may be combined with that of sulphonal; it has no influence on the evolution of the disease, and has no effect when given by the mouth. The prolonged use of it brings on cachexia. The effect of hyoscine being very powerful the patient must always be carefully watched, but as long as the dose does not exceed 1 milligramme there is no danger. *Duboisine* resembles hyoscine in its action, but is somewhat milder, and as a rule is sufficiently sedative in its action. Sometimes, however, it causes hallucinations of sight. The dose is 1 milligramme.

(136) Mercurial Inunction.

Cathelineau, of Fournier's Clinic (*Arch. gén. de Méd.*, July, 1894), begins a study of the mode of penetration of mercury when applied by inunction. The value of the treatment is unquestionable, and various views have been put forward to account for it. The effects have been attributed to (1) the passing of the drug through the skin; (2) the formation of soluble and absorbable compounds; (3) the penetration of mercurial vapour formed in the follicles and sebaceous glands; and (4) inhalation of the volatilised mercury. Volatilisation of mercury is possible even in the solid state and the diffusive power of the vapour is great. A patient subjected to this inunction lives in an atmosphere of mercury. The author says that patients living in a ward among other patients who are being treated by mercury show the presence of mercury in the urine. Papers of ammoniacal nitrate of silver left in such rooms also indicate the presence of mercury. These facts explain the good results obtained by putting patients in closed rooms saturated with mercurial vapour. Mercurial inunction is used in severe cases. It should be washed off with the aid of soap on the following day. The author shows by experiments that the amount of mercury passing off in vapour is greater from hyd. c. creta than from mercurial ointments, whether made up with vaseline, lanoline, etc. He also found that the amount of mercury present in the urine of those subjected to inunction was greater than that given off by the mercurial preparation, hence the lungs are not the only route by which the mercury is absorbed.

(137) Treatment by Erysipelas Serum.

Emmerich (*Münch. med. Woch.*, 1894, Nos. 29, 30, and 31) concludes his researches along with Most, Scholl, and Isuboi (Epitome, July 28th, 1894, par. 77). He says that it is possible to treat successfully malignant growths, lupus, tuberculosis, syphilis, by the erysipelas serum. He gives some details of recorded cases, showing the beneficial action of erysipelas on malignant disease. Experiments are related to show the action of this serum on tuberculosis in animals. It hinders the development of the tuberculous process as seen in the anterior chamber of the eye. His experiments would lead him to think that tuberculosis in man could be thus brought to a standstill, or by long-continued treatment even cured. The author, along with Popoff, has found no such results with the products of other micro-organisms. Erysipelas has also marked healing effects on diphtheria, and illustrative cases are given. The author obtains his serum from sheep inoculated with the erysipelas streptococcus. It is filtered free from the micro-organisms. Caution is needed in the use of the serum, to find out how much may be given without doing harm. Basing his arguments on experiment, and the results obtained by the action of erysipelas itself on certain diseases, the author advocates the treatment with this serum.

PATHOLOGY.

(138) Infection of Fresh Wounds.

Schimmelbusch (*Deut. med. Woch.*, July 12th, 1894) relates his investigations into the taking up of bacteria by fresh bleeding wounds. Amputation of a limb several centimetres above such an infected wound even after a short time is unable to ward off the fatal event. He refers to Nissen's experiments with reference to anthrax in this respect. Animals were inoculated by the author along with Ricker with pure anthrax cultures or anthrax containing tissue. Anthrax was found by means of cultivation experiments in the internal organs when the animal was killed even as early as half an hour after the infection. The author further made some 80 experiments with saprophytic micro-organisms. In the shortest possible time these micro-organisms could be demonstrated in the internal organs. Five minutes after the infection of a wound in the thigh of a rabbit with b. pyocyaneus, these micro-organisms were found in the organs. Large portions of the organs in question must be taken and cut up into the smallest pieces. The rapid taking up of micro-organisms explains the uselessness of amputation in cases of anthrax of the extremities in mice. This resorption may be compared to the phenomena seen in fat embolism. It is of no importance in case of saprophytes, and of little moment in that of pyogenic micro-organisms which do not settle down in the blood, but in the case of septic diseases like anthrax, etc., it means the death of the individual.

(139) The Cortical Cells in Insanity.

In a paper contributed to the *Ungarisches Archiv für Medizin*, 1894, Nagy gives a short account of changes in the cell bodies (nerve corpuscles) of the brain in certain kinds of insanity. The whole material comprises 3 cases of general paralysis, 1 of epileptic psychosis, 1 of paranoia, 1 of vesania acuta, and 1 of acute mania. The method used was that of magenta red as used by Nissl, and the conclusions—which seem to be rather bold and hasty, based on such a small number of cases—are somewhat vague. The actual facts elicited are: (1) Cloudy swelling of Nissl's rods (within the cell body) and excessive staining of the cell body. These are among the early changes found. (2) Breaking up of these rods into granules, and a different staining of the cell body to that recorded before. (3) In many (*sic*) of the cases the nuclei are free from change. These lesions are more pronounced in the frontal than in other parts of the cortex. He states also that "excessive pigmentation accompanies the changes occurring in paranoia" (based on 1 case), and that in vesania acuta (1 or 2 cases) vacuolation occurs in the cell body (not the nucleus). In chronic cases (*sic*) the nucleus stains more deeply than usual.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(140) The Dietetic Significance of Iron.

Kobert (*Deut. med. Woch.*, July 12th and 19th, 1894) first discusses the amount of iron excreted daily by the adult, which amounts to about 1 mg. to 3 kg. of body weight. He estimates the total daily need at 50 mg. An account is then given of the iron containing articles of diet. (1) Vegetable food stuffs: These may suffice for the wants of the normal individual, but, according to the author, it is very improbable that in diseases of the blood the formation of hæmoglobin can take place as readily by means of vegetable as of animal food stuffs. (2) Animal food stuffs: Of these the most important are milk, eggs, liver, and blood. As regards milk, it has been proved that the albuminous iron-containing constituents are with difficulty decomposed by the digestive juices. The supply of necessary iron in disease can be provided by milk only in the rarest cases. The iron combination in egg yolk is called hæmatogen, and is unquestionably the source of the hæmoglobin in the developing chick. It has been shown that even by the consumption of thirty-nine eggs the iron contained in the urine was not increased. Liver substance, free from blood, also contains iron in the form of a very stable compound called hepatin. This must not be confounded with the pathological product found in the liver in certain diseases. The author next gives an account of the use of the iron combinations of the blood in the treatment of blood diseases. He believes that preparations which contain blood in a form between hæmoglobin and hæmatin are absorbed and can be used in the formation of hæmoglobin. An account is given of hæmogallol and hæmol, two substances obtained by the action of reducing agents upon the blood. These are the only preparations of this kind suitable for practical use. Their powers of being absorbed can be fully demonstrated. (3) Artificial products: These have been prepared with sugar, mannite, dextrin, albumen, etc. Among the albuminous combinations is ferratin (Epitome, December 2nd, 1893, par. 461). The author maintains that this product can be decomposed by the stomach, and that ferratin and hepatin are not identical.

(141) Helminthiasis in the Sick.

A. K. Sander (*St. Petersburg Inaugural Dissertation*, 1894, No. 96) has examined fæces for ova of intestinal worms from 1,000 patients admitted successively to the medical wards of the Nikolaievsky Voiennyi Hospital in St. Petersburg, from March, 1893, till February, 1894. Of the number, 935 were active soldiers, aged from 20 to 26; 20 retired soldiers, aged from 60 to 80; 34 labourers, aged from 25 to 40; and 11 pupils, aged from 15 to 19. Only 1 patient applied on account of helminthiasis. Of the remainder, 225 were suffering from diseases of the bronchi and larynx, 122 from epidemic influenza, 111 from pleurisy, 101 from acute gastro-intestinal disturbances, 38 from chronic, 89 from scurvy, 81 from anæmia, 22 from nervous debility, etc. Of the 1,000 cases, 401 were febrile, 599 non-febrile. In as many as 252 (25.2 per cent.) patients the ova were found. Trichocephalus dispar proved to be the most frequent species. It was present in 146; then followed ascaris lumbricoides, 94; bothriocephalus latus, 35; tæniæ, 5; and oxyuris vermicularis, 4. The following are the principal conclusions drawn by the author from his researches: (1) As far as Russia is concerned, intestinal worms occur in the sick about as frequently as in the healthy [compare similar statistical inquiries carried out by Kessler, Baranowski, and Gretchaninoff (*London Medical Recorder*, 1890, p. 294), S. S. Gruzdeff, and Tokarsky (*Provincial Medical Journal*, 1892, p. 606), etc.] (2) Among inhabitants of towns they are met with less frequently than amongst persons who live in the country (20 per cent. against 23 per cent.). (3) In soldiers the parasites seem to be more common than amongst the civil population. (4) Most frequently they are detected in patients with anæmia or scurvy, and lowered constitutional states. (5) As K. E. Wagner (*Vratch*, No. 49, 1893, p. 1319) pointed out, trichocephalus dispar tends to cause constipation; ascarides set up diarrhœa; while bothriocephalus latus frequently induces either diarrhœa or constipation alternating with diarrhœa. (6) Trichocephalus and ascarides are especially common in Russian Poland, while bothriocephalus is most frequent in the Northern and West Northern Governments (St. Petersburg, Baltic Provinces, Arkhangelsk, etc.). Following V. A. Manassein's teaching, Sander considers the subject of such practical importance that he urges the necessity of a microscopical examination of fæces for the ova in every individual case of disease.

(142) The Human Cardiogram.

Ferrari (*Gazz. degli Ospitali*, June 28th, 1894) has made some observations on the human cardiogram, with the view of comparing its characteristics with those obtained experimentally in animals. He has especially directed his attention to ascertaining the indication of the closure of the aortic semilunar valves. To find this simultaneous tracings are taken over the heart and the carotid. The point is then marked on the cardiogram, where the carotid tracing indicates the commencement of the dicrotic wave. This point will indicate the closure of the semilunar valves, because it is admitted that the dicrotic wave follows immediately on the closure of these. The tracings thus marked indicate that the aortic semilunar valves close at the highest part of the descending line of the cardiogram. It can hardly be true therefore, as Landois states, that the so-called arterial crotism which precedes the descending line of the cardiogram is an indication of the closure of the semilunar valves. Tracings seem to show rather that these crotisms indicate changes in the mass of the heart, due to complementary or secondary contractions. Another point brought out is the activity of the diastole. Tracings taken from the same individual under varying conditions indicate such modifications of the diastolic portion as can only be explained by assuming a varying activity of the cardiac muscle in the act of diastole.

(143) Tympanitic Resonance.

Simon (*Rev. de Méd.*, July, 1894) discusses the pathogeny of this resonance over the hepatised lung in apical pneumonia. This subclavicular tympanitic resonance is not so well recognised as that which is present when the lower lobe is solid; yet it is more frequent than is usually believed, and may be brought out on deeper percussion. It is generally attributed to the vibration of resonant columns of air in the large bronchi, trachea, and larynx, but this will not explain all cases. Various other explanations have been offered. The author thinks that it originates in intact and relaxed lobules of the diseased portion of the lung or in the neighbouring relaxed lobules of the remaining healthy parts of the lung.

(144) Congenital Tuberculosis.

Lehmann (*Berl. klin. Woch.*, July 9th, 1894) relates a further case. A phthisical woman, aged 40, gave birth to a child and died three days later from tuberculous meningitis. The child died twenty four hours after birth. In its liver, spleen, and lungs nodules were found exactly resembling tubercle. Tubercle bacilli were also present in large numbers. The tuberculous lesion was more advanced in the mesenteric and bronchial glands. The placenta was unfortunately not examined. The tuberculous affection was assuredly intrauterine in origin. The question as to whether the generalised tuberculosis was disseminated from the glands which contained the oldest lesion or whether it was a new infection from the mother, could not be decided. A direct passing over of tubercle bacilli from the mother's to the infant's blood does not appear probable. The rupture of a tuberculous focus in the placenta into the fœtal circulation is possible. (Epitome, July 21st, 1894, par. 54.)

SURGERY.

(145) Internal Herniotomy.

Neuber (*Centralblatt für Chirurgie*, No. 28, 1894) reports a case of strangulated inguinal hernia treated by laparotomy. As the hernia was a very large one, and about one-fourth of the intestines, together with most of the omentum, was

outside the abdominal cavity, it was anticipated that there would be much difficulty in reducing the distended intestinal loops by the ordinary operation. In order to avoid this difficulty the author decided on exposing and dividing the constricting ring by way of the abdomen, and on reducing the hernia by traction on the contents of the sac from within. The abdominal wall having been divided by an oblique incision extending from the external ring towards the antero-superior spine of the ileum, the anterior wall of the inguinal canal was incised, and the neck of the hernial sac exposed. The contents of the abdominal cavity were then protected by aseptic gauze, and the neck of the sac was divided. By slight traction on the protruded intestine and omentum, together with compression of the scrotum, the hernia was readily and quickly reduced. Before closing the abdominal wound the author resected the neck of the sac, and diminished by stretching the extent of internal ring. The external wound healed by primary intention, and the patient, a man aged 32, made a speedy recovery. Many advantages are claimed for this operation in cases of very large hernia. The neck of the sac being freely exposed there is much less risk, in division of the stricture, of wounding the intestine. Any doubt as to whether the hernia be direct or oblique may be thus removed, and danger of wounding the epigastric artery avoided, as this vessel is freely exposed, so that its relation to the neck of the sac may be easily made out. The contents of the sac slip back readily after division of the structure, and no force beyond slight traction from within and slight pressure on the scrotum is needed to effect reduction. It it be found necessary to resect a portion of the strangulated intestine on account of gangrene, it would be easier to perform this operation by an abdominal wound than by the external wound of ordinary herniotomy. In a case of reduction *en masse*, and in the rarer event of an inguino-properitoneal hernia, the abdominal incision would enable the surgeon to make a sure diagnosis, and to relieve the strangulation effectually by incision of the intra-abdominal hernial sac. In conclusion the author refers to a recent paper by Mikuliez, in which laparotomy is held to be indicated in cases of strangulated hernia in which there is good reason to suspect gangrene of the protruded intestine.

(146) Surgery of the Spine.

WYETH (*Annals of Surgery*, August, 1894) gives a report of six operations on the spinal cord for the relief of paraplegia. The *technique* he prefers is a free incision just over the spines, division of the attachments close to the bones with dull scissors or the elevator, strong retraction, and iodoform gauze packing to contract and arrest bleeding. When well exposed, the laminæ are gnawed away in bits first by the round *rongeur*, and then an opening is effected by the more rapid-cutting fenestrated *rongeur*, When exposed in full length of the injured region, and all bleeding stopped, the dura is carefully punctured with the scalpel, and, as the first few drops of cerebro-spinal fluid escape, the grooved director is inserted and the dura split open in the middle line. This membrane should be closed by a careful continuous catgut suture. The muscles are sutured by subcutaneous catgut sutures, and the skin incision closed by silkworm, leaving a wick of iodoform gauze running from the dura out of the lower angle of the wound for drainage. Dry dressing over all. Each of these cases healed without suppuration. Wyeth concludes that the operation offers no great difficulty or danger; that paraplegia justifies exploration, and this should be done early in all cases where no improvement is observed. The degenerative changes, which occur from compression which has not divided the cord, add to the urgency of early interference.

(147) Extraction of the Lens in High Degrees of Myopia.

VACHER (*Rec. d'Ophtal.*, May, 1894) gives the results of his treatment of progressive myopia of high degree by removal of the lens. The cases were twenty-one in number; before operation there was myopia of 14 D or more in all but three patients, in whom the lens was becoming cataractous; in all of them there was complaint of pain, headache, inability to see to read or work, and photopsiæ. The visual acuteness after the operation remained stationary, or improved somewhat, but the myopia showed no tendency to increase, while in the other myopic eye of the same patient, which had not been operated on, it still progressed slowly. On the contrary, careful examination of the refraction at intervals showed that extraction of the lens tended to favour or provoke a slight decrease in refraction of the eye in addition to that produced by the removal of the lens itself.

(148) Divided Vas Deferens.

WELLER VAN HOOK, of Chicago (Philadelphia *Med. News*, June 30th, 1894), describes a new operation for reunion of the divided vas deferens. The operation was done on a large dog, in the following manner: A wound three-fourths of an inch long was made over the left spermatic cord just below the inguinal ring. The duct was drawn out and transversely divided with scissors, retraction of the cut ends being prevented by forceps. A tight ligature was next applied, one-fourth of an inch from the end of the proximal portion, and with a very fine sharp pointed scissors a longitudinal incision was made about a quarter of an inch above the ligature. This incision penetrated to the lumen of the tube, and was about one-third of an inch long. Next, the distal portion of the duct was prepared for implantation into the proximal. This was done by trimming with fine scissors so as to make the free extremity conical in shape, and making an incision one-eighth of an inch long in the conical end. Two fine needles armed with a single thread were then passed from within outward through the wall of this portion of the vas deferens, thus securing it in the grasp of a loop of thread. The needles were then passed into the slit in the upper part of the duct, and their points being carried carefully upwards within the tube for half an inch, the needles were pushed through the wall from within outward emerging side by side. The conical lower end is now drawn into the upper by traction on the sutures, which are then tied, the vas deferens returned, and the wound closed. Six weeks after the dog was killed, when the reunion was found to be complete, without any sign of stricture. The author suggests that this method may be used in man when the vas deferens has been divided, or where it is necessary to remove a portion in operations for tumours of the cord.

MIDWIFERY AND DISEASES OF WOMEN.

(149) The Forceps in Delivery.

SCHMID (*Archiv f. Gynäk.*, vol. xlvii, Part I, 1894) publishes important statistics from the Bâle Lying-in Hospital. Out of 2,926 women confined between May, 1887, and the end of December, 1893, 156 (5.33 per cent.) were delivered with forceps; 83.3 per cent. were primiparæ. In only 13 cases was the head arrested high in the pelvis. Presentation in the second cranial position more frequently required the forceps than the first position, whilst still more often instrumental aid was necessary in frontal and brow presentations. The medium loss of blood after delivery was 591 grammes, the maximum being but little higher. In 132 cases (84 per cent.) the perineum was injured, and was sewn up at once, union by first intention occurring in 92 per cent. In 7 cases the os was widened by incision. The total maternal mortality was 1.28 per cent., but not one woman died from the results of the application of the forceps. In 118 of the 156 cases there was no rise of temperature in childbed. The infantile mortality was 10.2 per cent., 5.7 per cent. being lost through the result of the application of instruments; 131 were discharged alive. Schmid strongly favours the use of forceps. It is as a rule neither dangerous to mother or child. The flooding is due to atony of the uterus, and is seldom due to injury by the instrument. Injuries to the perineum should be sewn up whether they bleed or not, and the wounded surfaces have a natural tendency to unite. Feeble pains and consequent prolongation of the labour are indications for the use of the forceps when the head is in a proper position for its application, and the second stage has lasted over two hours and a-half. In no case should over four hours be allowed to elapse. The long forceps should only be used by experienced hands, and for the safe delivery of the child when its life is endangered.

(150) Puerperal Fever and Influenza.

Lefour (*Rép. Univ. d'Obstét. et de Gynéc.*, July 25th, 1894) discussed the question of diagnosis before a meeting of the Obstetrical Society of Bordeaux. He believed in Labadie-Lagrave's principle of examining the blood. If streptococci were detected septicæmia existed, whilst if severe fever set in during childbed when no streptococci could be found, the rise of temperature was due to influenza. Oui objected that septicæmia was not always due to the streptococcus: the bacterium coli might play a great part in infection. Rivière stated that he had made researches in the bacteriological laboratory. The results had been most irregular. No micro-organism was found in the blood of a woman who was clearly suffering from puerperal fever, and not from influenza. In other cases he found the streptococcus: in others, again, the staphylococcus. André Moussous noted that in influenza secondary infection was very frequent, especially in childbed. Hence Labadie-Lagrave's rule was hardly to be trusted. Coyne was of the same opinion. He quoted the authority of Bouchard, who found all kinds of micro-organisms in pure influenza.

(151) Umbilical Fistula Due to Extra-uterine Pregnancy.

Orakhovatz (Bulgarian *Meditzina*, No. 2, 1894) reports the case of a healthy, childless peasant woman, who had begun to menstruate at 16, and married at 19, who came to the Lovetch Hospital on account of an umbilical fistula which had existed thirteen years, and discharged a very offensive pus. A probe penetrated to a depth of 10 centimetres, passing downwards, slightly backwards and a little to the right. The sinus proved to be very narrow at its beginning between the cutaneous folds of the navel, but gradually grew wider on its downward course, the probe ultimately striking against a roughened and roundish bony sequestrum, 5 or 6 centimetres in diameter, embedded in tissues about the end of the canal. Sounding invariably caused free bleeding. There was also present a movable and uneven oblong swelling, commencing from the navel and descending along the middle line down to a point within 4 or 5 centimetres of the pubes, at which level the tumour deviated backwards to disappear in the depth of the abdominal cavity. The lower division felt distinctly indurated; the broadest diameter of the accessible portion was 8 centimetres. The uterus and ovaries, as well as all the other organs, were normal. The patient had enjoyed excellent health until the age of 17, when one day while reaping she was suddenly seized with intense abdominal and lumbar pain, which became constant. At the same time her abdomen began slowly to enlarge, while menstruation, which had previously been quite regular, ceased. About the end of a twelvemonth—during which period her condition had been almost stationary—the pain became localised mainly in the umbilical region, where there formed an abscess which burst spontaneously, a great quantity of pus and blood escaping. Since then all pains vanished and menstruation reappeared, but the purulent discharge from the navel had persisted, except for occasional intermissions varying from a few days to a few weeks. The author feels certain that the fistula resulted from suppuration of an extrauterine ovum with consecutive adhesion to the anterior abdominal wall. His proposal to remove the remnants by abdominal section was rejected.

(152) True Cystic Myoma.

Brens (*Centralbl. f. die med. Wissenschaften*, No. 29, 1894), describes two cases in which myomata contained primary cysts with distinct epithelial linings, the cystic cavities being no mere result of œdema, hæmorrhage, or the breaking down of tissue. One of these tumours was removed from a woman, aged 46; it weighed 7½ lbs., and contained nearly 12 pints of fluid, thick and greyish. It was a myoma full of cysts of all sizes, lined with ciliated epithelium. The second was a cystic myoma of the broad ligament in a woman, aged 51. It was full of cysts lined with ciliated epithelium: one communicated with the uterine cavity through a kind of duct, and each cyst was connected in a similar manner with neighbouring cysts. Brens believes that in both cases the cysts were patent portions of Gartner's duct. The patency had stimulated the growth of the neighbouring myomata. In the second case the myoma might have originally developed between the folds of the broad ligament, or might have arisen in the uterus and become detached.

THERAPEUTICS.

(153) The Treatment of Diphtheria.

Smirnow (*Berl. klin. Woch.*, July 23rd, 1894) describes his investigations into the treatment of diphtheria by antitoxins not obtained through the agency of immune animals. He first refers to the recent researches into the serum treatment of diphtheria and tetanus. On the ground of the change from toxin to antitoxin being a chemical one, he has endeavoured to induce, by oxidation or reduction processes, properties in the serum of healthy or diseased animals like those possessed by immune animals. Positive results were obtained only by electrolysis. By exposing 100 c.cm. of dog's serum to a current of 120 to 140 milliampères from three to four hours, the author obtained a serum which, when injected into animals, produced a rise of temperature. The change produced in the serum is due to an alteration in the albumen. Many animals were infected with diphtheria, etc., and then treated with this simple electrolysed serum. They all died, however, notwithstanding that a high temperature was produced. The author then took ordinary serum, or its constituents, and inoculated it with diphtheria culture. After some time toxins were produced. A globulin culture was also made, but in this no toxins were developed. The serum or serum albumen cultures were then electrolysed, and it became evident that the toxins could then be converted into antitoxins. Animals were inoculated with diphtheria, and then treated with the antitoxins thus obtained. Some of the experiments were not successful, but it was thought that a more powerful antitoxin could be obtained. It was found out that electrolysis of a bouillon diphtheria culture also converted the toxins into antitoxins. After a certain time a colour reaction is developed in the electrolysed fluid, and at this time the electrolysis should cease. Some successful experiments are then recorded where the antitoxins from this electrolysed bouillon were used instead of those from electrolysed serum or serum albumen. It was found that a single large dose administered subcutaneously was more efficient than divided doses. The antitoxins were harmless to the animals, and preserved their properties for a long time.

(154) Parachlorphenol.

Szmublo of Warsaw (*Gazeta Lekarska*, No. 12, 1894), tried parachlorphenol in 26 cases of disease of the nose or throat, 10 of hypertrophied turbinated bodies, 2 of rhinoscleroma, 4 chronic granular posterior pharyngitis, 1 epithelioma of the left vocal cord, and 5 laryngeal tuberculosis (ulcers with infiltrations). In the tuberculous patients the parts were painted with a 25 to 50 per cent. solution, whilst in all the others the drug was employed undiluted. The results obtained by the author differ greatly from those recently published by N. P. Simanovsky, of St. Petersburg. They are as follows: (1) The drug does not possess the analgesic properties of phenol, while its disgusting odour and taste constitute serious objections to its employment as a local application in pharyngeal and laryngeal cases; (2) the paintings destroy the epithelial lining, and give rise to violent local reaction, which is frequently followed by suppuration, and occasionally by contraction of hypertrophied tissues, with its consequences. On the whole, as far as non-tuberculous cases are concerned, parachlorphenol is much inferior to chromic acid, not to speak of galvano-cauterisation: (3) in laryngeal tuberculosis the drug causes local œdema, as well as a prolonged and acute pain (even after previous cocainisation), the patients losing appetite and becoming weak and nervous. Hence in such cases it is, if not altogether useless, greatly inferior to lactic or carbolic acid, or menthol.

(155) Dangers of Cocaine.

R. W. Haynes (Philadelphia *Med. News*, July 7th) says the medical literature of the past year abounds in recommenda-

tions of cocaine for all sorts of disease from nasal catarrh to melancholia, and with little reference to the likelihood of the formation of the habit. As a protest against what appears to him to be a grave error in the estimation of the harmlessness of this "terribly seductive" drug, he records some cases which have come under his own notice. 1. A physician, an opium eater for years, began with cocaine gr. $\frac{1}{2}$ hypodermically to see what effect it would produce. Flushing of the face, dilatation of the pupil, and general stimulation followed. The effect was so agreeable that the drug was continued, but the dose was gradually increased until 5 and even 10 grains in the 24 hours were taken. The usual neurasthenic symptoms soon appeared, with delusions of persecution and hallucinations of sight and hearing; loss of memory, muscular inco-ordination, and aphasia followed. Twice overdoses were taken, which caused alarming dyspnœa, hardly perceptible pulse, extreme mydriasis, pinched skin, and drenching perspiration, accompanied by loss of muscular power. 2. A druggist commenced the use of a 4 per cent. solution of cocaine as a nasal spray to deplete the erectile tissue, and gradually increased the amount until 7 grains were used at a single sitting. Loss of appetite, sleeplessness, headache, constipation, and loss of flesh followed; muscular inco-ordination, hebetude, and enuresis then came on. 3. A medical man first used a 4 per cent. spray for the relief of chronic rhinitis, but continued its use for the stimulation it produced. After a time, however, he found that it greatly weakened his mental powers. 4. A child, $2\frac{1}{2}$ years old, received at the hands of an experienced surgeon a urethral injection of gr. $\frac{1}{2}$ of cocaine to facilitate the introduction of a sound. In a few minutes clonic convulsions with wandering delirium set in, with the usual train of symptoms of acute poisoning, ending in death in three days. 5. A friend of the author had 4 grains injected into the gums before the extraction of teeth. He died of convulsions within an hour, probably, Haynes surmises, from the drug entering the circulation immediately. The author states that the cocaine habit is acquired with much greater facility and insidiousness than the morphine habit. He thinks the remedy for cocaine poisoning is full doses of morphine, which acted well in two of his cases.

(156) Djamboe.

Hugel (*Münch. med. Woch.* July 17th. 1894) describes the use of this drug (leaves and cortex). Although small doses (0.5 g.) are efficient, large ones (0.30 g.) may be given without ill effects. It finds its chief use in the diarrhœa of children. In several hundreds of cases of gastro-enteritis in children the diarrhœa and vomiting rapidly improved. In five cases of severe gastro-enteritis in the adult, accompanied by vomiting, diarrhœa, low temperature and cramps, a few doses of calomel followed by djamboe produced rapid improvement. In about twenty-five cases of diarrhœa in phthisis it was used with beneficial results. In two similar cases, however, it was without effect, and in two others it only acted when combined with opium. An infusion is more suitable for children, and a fluid extract for phthisical adults.

(157) The Thyroid Treatment.

Reinhold (*Münch. med. Woch.*, July 31st, 1894) observes that the value of this treatment has been shown in the mental affections due to myxœdema. He discusses its value in insane people with goitres, giving details of 6 such cases. In 5 out of the 6 cases the diminution in the size of the goitre was striking. A similar diminution was also observed in a nurse with a goitre, who, seeing the good results, submitted to the thyroid treatment. The psychopathic changes in the above 6 cases suggested a relation with the treatment, but it could not be established with certainty. Thus the improvement noted in a case of mania may have been only one of the variations seen in this condition. None of the patients showed any unpleasant symptoms under the treatment. In one patient some wasting was noted.

PATHOLOGY.

(158) Cryptogenic Inflammation of the Urinary Organs.

Posner and Lewin (*Berl. klin. Woch.*, August 6th, 1894) observe that most purulent inflammations of the urinary passages are due to micro-organisms introduced from without by the catheter. There are cases, however, in which there cannot have been any such cause. The micro-organisms, especially the B. coli communis, have been then supposed to gain access from the rectum. The authors have experimented on animals by closing the rectum, so that stagnation might occur, and then shortly afterwards have tied the urethra. Here micro-organisms were found in the urine, whereas in simple ligature the urine remained sterile. The question arose whether the micro-organisms had passed from the distended rectum to the distended bladder. This might be the case, especially if the rectal obstruction gave rise to peritonitis. The authors think, however, from their experiments that this is not the usual way. They have shown the presence of the B. coli communis not only in the bladder, but also in the kidneys, whereas the fluid between the rectum and the bladder was sterile. The intestinal bacteria may be taken up by the blood and excreted through the kidneys. Injections of the B. prodigiosus were made into the rectum of an animal, and the micro-organisms were found in the bile, blood, kidney juices, and urine. If normal conditions prevail in the urinary passages, they are excreted without injury to the bladder mucous membrane. Infection may, however, also occur from neighbouring parts.

(159) The Action of the Liver on Poisons.

Fagabi (*Giornale Internazionale delle Scienze Mediche*, July, 1894) describes a series of experiments he has performed with the object of testing the power of the liver to reduce or render inactive vegetable and animal poisons. The older experiments are related which pointed to certain properties possessed by the liver in this direction. The author's investigations were mainly carried on with solutions of curare and the virus of diphtheria, which were allowed to reach the liver by various channels, and also intimately mixed with liver substance finely divided. No antiseptic power was revealed in the latter experiment, but the former showed a slight diminution of toxicity. Hence the author concludes that, though certain neutralising properties are possessed by the liver as regards certain poisons, these are probably identical with those inherent in other tissues, this power being probably an elimination rather than a transformation.

(160) The Etiology of Carcinoma.

M. van Niessen, of Wiesbaden (*Centralbl. f. d. med. Wissenschaften*, No. 21, 1894), who has been engaged for several years in an experimental research on the reaction of the cells of the human body, more particularly the leucocytes, to pathogenic micro-organisms, recently, when examining the blood and cellular tissue in a case of cancer of the uterus, discovered what he looks upon as a new organism. In the blood, which was received with strict precautions into a test tube directly from the wound by which the uterus was removed *per vaginam*, there developed after a week, along with various other micro-organisms, a dark green, round mould about equal to a large pea in diameter and having a somewhat raised border of lighter tint. Microscopic examination and cultivation of this mould, which was of a species previously unknown to the author, showed a mycete intermediate between the mould and the yeast fungi, according to its degree of evolution. This fungus grew in remarkable luxuriance in the human blood, in sterile diabetic urine, and in water; in the first of these media it very quickly developed its characteristic organs of fecundation. Comparison of the three cultures, kept in a condition of the strictest sterilisation, showed such differences in their mode of development—particularly as regards the one grown in water—that it was difficult to believe that they were of the same species. Full descriptive details and illustrations are reserved for a fuller communication. In the meantime the author thinks it sufficient to state that the cell groups of the fungi bear a striking resemblance to the epithelial cell nests of carcinoma. Van Niessen expresses the belief that the new species of fungus which he claims to have discovered is the immediate cause of cancer. He proposes to call it, on account of its close relation to *Cladosporium herbarum*, "Cladosporium cancerogenes" or "Canceromyces."

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(161) Physio-pathology of Chlorosis.

Murri (*Policlinico*, No. 12, 1894) says that very many children are potentially chlorotic; that is to say, they have blood of low specific gravity, owing to defective nutrition of the red corpuscles, and blood vessels which are very readily distensible, giving rise to great instability of intravascular pressure. At the same time, these may appear during their childhood nothing more than a little anæmic. At the onset of puberty, however, when there occurs abnormal stimulation of the utero-ovarian functions, leading to disturbances in the normal blood distribution, or when other psychical stimuli may bring about the same results, chlorosis is extremely likely to be produced. The action of cold on the chlorotic has been studied by the author, who has noted the effect of cold baths on such patients, studying in this respect the alteration in number of the red corpuscles, the presence and the amount of urobilin in the urine. He has found that during the bath the number of red corpuscles increases, but that this increase is only temporary, passing after a few hours into an actual decrease, which may persist for a period varying between a few hours and two or three days. Even walking, after a few days of rest in bed, gives rise to a similar diminution of the number of the red corpuscles, which may also persist for some days; the exact explanation of this occurrence is not forthcoming. One thing is certain, namely, that the action of cold causes the blood to circulate in the abdominal viscera rather than in those of the head and chest. It may also well be supposed that such an alteration in the distribution of the blood, as well as the increased time taken in passing through the visceral vascular system, may influence the chemical conditions of the circulating fluid, and that this may be at least one of the causes of the destruction of corpuscles. Such a view is in consonance with the fact that in a potentially chlorotic subject such occurrences as fatigue, cold, agitation, suppression of menses, etc., may either provoke or aggravate chlorosis. It would appear necessary, moreover, to consider these modifications of the blood distribution as due to disturbances of the central vasomotor nerve system, which is notably unstable in such patients.

(162) Enteralgia.

Heinrich Stein (*Centralbl. f. die ges. Therapie*, August, 1894) advocates with Bamberger the use of the term "enteralgia" for those cases of intestinal colic depending on a functional disturbance or neurosis, confining the term to those conditions in which the nerves only are affected. Enteralgia is met with in so-called cases of nervous diarrhœa, in the affection formerly termed "enteritis membranacea," but now held to be a functional disturbance; in toxæmia, the result of lead, etc.; in gout and malaria. The pain itself usually comes on spasmodically, without apparent cause, and is of variable duration. Its character and the description given vary, but it is usually referred to the umbilical area, and the abdominal wall is retracted. The treatment is often difficult; drastic purgatives should not, however, be given, but a condition of rest should rather be aimed at. Constipation should be counteracted by enemata, oils, or small doses of calomel, and a quiet state of the bowel may be produced by means of high temperatures, strong electric currents, alcohol, opiates, chloral, or atropine. The general condition of irritability requires bromides and tonic treatment.

(163) Early Syphilitic Glycosuria.

M. A. Tchistiakoff (*Vratch*, Nos. 4 and 5, 1894) describes in detail an instance of glycosuria occurring in the early stage of syphilis, and rapidly disappearing under the influence of the usual antisyphilitic treatment. Reviewing similar cases recorded in literature (Seegen, Servantie, etc.), he comes to the conclusion that in the course of the secondary incubation stage of syphilis there may sometimes develop glycosuria of a benign nature which is characterised by the following clinical features: (*a*) the daily amount of sugar in the urine remains scanty; (*b*) the daily quantity of the urine does not undergo any considerable increase; (*c*) beyond the presence of sugar, the composition of the urine does not show any marked deviation from the normal standard; (*d*) increase of thirst and appetite and emaciation occur within fairly moderate limits; and (*e*) the disturbance is of a more or less fleeting nature, and may subside spontaneously after the eruption of initial cutaneous syphilis. The glycosuria seems to constitute a manifestation and result of a perverted tissue metabolism arising in the earlier period of syphilis.

(164) Œsophagitis Gangrænosa.

Pietriewicz of Baku (*Gazeta Lekarska*, No. 24, 1894, p. 641) describes the case of a labourer, aged 25, who consulted him on the tenth day after having swallowed by mistake a teaspoonful of a 25 per cent. solution of caustic soda. The man complained of severe pain about the throat and breast, and of having gradually become unable to swallow even fluids. Examination failed to detect anything abnormal, beyond intense congestion of the throat and white films over the soft palate, tonsils, and posterior pharyngeal wall. Accordingly a glycerine solution of tannin, with cocaine, was prescribed, to paint the throat. On the next day the man stated that after a second painting he had coughed out a "bowel," with the result that deglutition at once became easy. The "bowel" produced by him proved to be the mucous membrane of the gullet, detached as a whole in the form of a cylinder, 22 centimetres long, from 2½ to 3½ broad, and from 1 to 2 millimetres in thickness. The lower end of the cast showed a slight funnel-shaped dilatation, while the upper one terminated in long tongue-like shreds. Notwithstanding the patient's declaration that he was "quite well," the author sent him to a local hospital, suggesting an early gastrotomy as the only means of preventing starvation from consecutive cicatricial narrowing of the gullet. The surgeons, however, declined to operate (the reasons are not stated). Several weeks after the expulsion of the cast the introduction of an œsophageal bougie became very difficult. About six months after the accident the man died from exhaustion. No necropsy was allowed. The author believes that in his case, as in Puech's (*Journal of Laryngology*, March, 1891, p. 116) the corrosive fluid gave rise to purulent inflammation of the submucous cellular tissue, undermining the whole mucous membrane, and causing necrosis and detachment.

(165) The Ulnar Phenomenon.

Cramer (*Münch. med. Woch.*, July 24th, 1894), gives an account of the morbid anatomy of a case of general paralysis, in which there was marked analgesia of the trunk of the ulnar nerve on the left side, whereas the reflex was present on the right. He has previously shown that this ulnar symptom is absent in the great majority of general paralytics, and mostly present in other insane persons, so that he would look upon it as of some diagnostic value. The ulnar nerves, as well as the spinal cord and brain, were carefully examined in the above-named case, and yet no changes were found to explain the phenomenon. The spinal meninges and extrapial roots were also intact. The author thinks that the exact localisation of ulnar analgesia is rarely possible, but that it is more likely to be due to the general widespread changes found in the nervous system.

SURGERY.

(166) Resection of the Cardiac End of the Stomach.

Levy (*Centralbl. f. Chir.*, No. 31, 1894) describes an operation he has recently devised, with the help of Fehleisen, for resection of the boundary between the œsophagus and the stomach. Such an operation, he holds, is rendered justifiable in cases of malignant disease by the success that has attended resection of the pyloric end and of large portions of the anterior wall of the stomach. The indications for such treatment are regarded as more urgent in cancerous stenosis at the cardiac end than for a like condition at the pylorus. In the latter the patient may be relieved by establishing a communication between the stomach and small intestine or by forming a gastric fistula; whilst

in the former, if the disease be allowed to take its course, nothing can be done to alleviate the consequences of its rapid and extensive growth. There, are however, anatomical difficulties in uniting the cardiac end, which at first sight would seem very serious. It might be necessary to divide both vagi nerves, and the connection of this portion of the stomach with other important structures is very extensive and close. In considering the difficulties the author points out that the fibres of the vagi as they pass into the abdomen with the œsophagus may be divided without any danger to life, and states that by investigation on the human cadaver and on dogs he has proved the possibility of isolating the cardiac end of the stomach to such an extent that it may be cut away and the divided end of the œsophagus be stitched to the margins of the gastric wound. In the operation here proposed a rectangular incision is made through the abdominal wall, one limb running in the middle line from the ensiform appendage to the umbilicus, the other carried from the lower end of this through the whole breadth of the rectus muscle on the right side. The left half of the smaller omentum is separated from the stomach and the left coronary artery and vein are divided between two ligatures. After separation of the cardiac end of the stomach from the structures behind, the lower part of the œsophagus is isolated by dividing the serous membrane round this tube with scissors, exposing the anterior part of the œsophageal foramen in the diaphragm, and tying all visible vessels, mostly branches of the phrenic artery, at this part. At this stage there is a risk of wounding the pleura. The intestine being carefully protected by gauze, the posterior wall of the œsophagus beyond the disease is stitched to a healthy portion of the stomach, and then the cardiac end of the stomach is divided by a succession of strokes, the cut edges of the anterior and posterior walls being stitched together after each stroke of the knife or scissors beyond the orifice left for the attachment of the œsophagus. This tube is now divided in a similar way, each portion as it is cut being stitched to the opening in the stomach. If the œsophagus be not fixed before it is completely divided, it will retract and disappear above the foramen. The sutures are not carried parallel with the long axis of the œsophagus, but obliquely through its coats.

(167) A Case of Cervical Rib.

J. Kertész, of Buda-Pesth (*Sebészet*, No. 3, 1894), reports a case of cervical rib. The outgrowth was on the left side of the neck and could be felt one inch above the middle of the clavicle as an immovable bony protuberance which could be followed back to the spinal column. It was about half an inch in breadth. The subclavian artery ran above, the plexus in front of the rib. On making pressure on the space between the anterior extremity of the rib and the clavicle, sharp shooting pain was felt radiating down the arm to the elbow. The arteries of the left upper limb were perfectly normal and the movements of the head were not interfered with. Kertész has found records of 17 cases of cervical rib. In every case the rib was connected with the seventh cervical vertebra. Some of these were complicated with aneurysm of the subclavian with or without obliteration of the arteries supplying the upper limb. In some cases there were neuralgic pains in the forearm and fingers; in some the abnormal ribs were situated on both sides of the neck; in a few cases the rib was movable. In four of the cases the rib was removed on account of its giving rise to some of the symptoms just mentioned. In Kertész's case there were no symptoms calling for operation.

(168) Malignant Stenosis.

Homans (*Ann. of Surgery*, June, 1894) relates a remarkable case of malignant stenosis of the sigmoid flexure of the colon, with an enormous collection of fruit stones above the stricture, relieved by colotomy. The patient, a Dane, aged 27, when in Denmark ate a large quantity of dried cherries and prunes. He was in the habit of swallowing many of the stones, and they passed through the rectum until 1882. In the latter part of that year he began to feel sick with cramps in his bowels and excessive rumblings. Cathartics gave him no relief, but rather increased his sufferings. In 1883 he came to the United States, and he said that he had eaten no cherries since his arrival. His abdominal pains continued, and his bowels were constipated. He gradually got worse, especially at night, and in 1890 he had vomiting, at one time throwing up thirteen rounded black masses like cherry stones. This gave him relief for a few weeks. In 1893 he came to hospital, and on examination a flat saucer-like swelling was found in the right iliac region. Drachm doses of Epsom salts only produced pain and nausea, but did not reduce the size of the tumour. On April 6th, 1893, the abdomen was opened, and the greatly hypertrophied sigmoid flexure presented. In the left central portion of the pelvis a hard flattened tumour surrounded the sigmoid flexure and upper part of the rectum with its mesentery. Resection of the intestine being impossible, the sigmoid flexure was brought out through the wound, and a glass rod passed under to keep the bowel outside the abdomen. No stitches were used, but the whole was dressed aseptically, and the patient recovered well from the operation. There was some pain, relieved by morphine, and on April 8th the gut was opened, and the patient did not feel the incision in the least. A few blackened cherry stones and some fæcal matter came away at once, and on April 9th more cherry stones were found at each dressing, and some prune stones, by the passage of which the pain was much relieved. During the next two days more stones passed, until the number reached 120 cherry stones and 70 prune stones which had come out of the artificial anus. All the stones were passed in four days, and none came afterwards. The man improved rapidly in health and strength and weight, and left hospital on May 5th well and strong. On April 16th, 1894, he was hearty and hale, and beyond the inconvenience of the artificial anus was never better, having gained 27 lbs. in weight.

(169) Conjunctival Autoplasty in Fistula of the Cornea.

Bourgeois (*Rec. d'Ophtal.*, March, 1894) recommends the treatment of obstinate fistula of the cornea by the transplantation of a flap of conjunctiva which is nourished by an undivided pedicle. This can be done either by gliding or torsion, and differs from the operation of transplantation of a flap from elsewhere in the greater vitality of the flap with the pedicle. The surface of the cornea to be covered is first revived with a sharp curette, the flap is dissected up, and fixed in its new position by sutures passed through the conjunctiva of the limbus. By this method of closing cicatrices the author has succeeded in saving several eyes which were on the way towards atrophy and enucleation.

MIDWIFERY AND DISEASES OF WOMEN.

(170) Spontaneous Intrauterine Laceration of Cord.

Funke (*Centralbl. f. Gynäk.*, No. 31, 1894) observed a remarkable case in Freund's wards at Strassburg in April, 1894. The patient had been three times married, but bore no child till December 1891, when craniotomy was necessary. Her last period before the second pregnancy was on September 10th, 1893. On April 6th, 1894, she was suddenly drenched by an escape of liquor amnii. The fœtal movements were distinct. After admission more fluid escaped; the patient had a rigor, then the fœtal heart sounds were found to be very slow and feeble. At 5 A.M. on April 7th a long cord was detected hanging from the vulva, after micturition. It was over 9 inches long, and was clearly the umbilical cord; no bleeding occurred from the free end, which was lacerated. The cord was cut off at the level of the internal os, and then attempts were made to induce labour. At 7 P.M. a kolpeurynter was introduced into the cervix, and left there four hours. The breech presented. At a quarter past 12 a dead child was born, 2 lbs. in weight, and over 18 inches long. It was slightly fœtid. The cord had been torn off at the umbilicus; the abdominal cavity was not thereby opened. No blood was found in the peritoneum, nor was there evidence of old or recent hæmorrhage from the umbilicus externally. Half an hour later the placenta came away spontaneously; it was not, however, complete, so chloroform was given, and some adherent tissue removed. Childbed was normal after the first day, except that the breasts became enormously swollen. The remaining piece of cord which

hung from the placenta, together with the portion already cut off, measured over 18 inches. The laceration could not have been due to any external violence, criminal attempts, or clumsy midwifery. The sudden escape, on two occasions, of liquor amnii may have played a part in the intrauterine laceration of the cord. Funke, however, admits that the cause of the injury in this case remains undetermined.

(171) Placenta Prævia in Abortion at Fifth Month.

Keiffer (*Archives de Tocol. et de Gynéc.*, July, 1894) attended a patient who had borne a child about seven years previously after suffering from uncontrollable vomiting. She now consulted him for atonic dyspepsia. Great benefit resulted from the use of the curette, and the patient conceived. In the second and third months there were attacks of uterine pain, with slight hæmorrhage. All went well for two months longer, when suddenly abortion took place. The pains were very strong, flooding occurred, then the fœtus was expelled, and severe hæmorrhage set in. Great trouble followed; the placenta was found firmly adherent to the inferior segment, coming down close to the internal os anteriorly and to the right. The temperature rose, and a rigor occurred on the evening of the second day. On the third there was dangerous flooding, which pushed out the gauze vaginal and uterine tampons inserted to check it. The patient was put under chloroform, and the placenta detached with a sharp curette, hot water injections being needed to check the free hæmorrhage which took place during the process. Finally the fingers were used to complete the detachment of all the placental tissue; this manœuvre encouraged uterine contraction. A tampon was inserted after irrigation. The patient was very weak and anæmic, but made a good recovery.

(172) Ligation of the Base of the Broad Ligaments per Vaginam for Fibroids of the Uterus.

A. H. Goelet (*Amer. Med. Surg. Bull.*, June 1st) has found this operation very successful for the control of uterine hæmorrhage and the reduction of fibroid growths. In his opinion it should be performed instead of hysterectomy when the latter operation involves too serious a risk, and as a preliminary step in view of avoiding the necessity for the more dangerous operation. When extensive attachments, which would afford additional nutrition, have not been formed, considerable reduction has resulted even in growths of large size. When the operation has been done for smaller growths the result has been still more satisfactory. In some instances complete atrophy has taken place. This result, as well as the arrest of uterine bleeding, is accounted for by the fact that the interference with the blood and nerve supply caused by the ligation of the base of the broad ligaments brings about a diminished nutrition of the uterus and growths. It is estimated that the uterine arteries furnish the uterus with two-thirds of its blood supply, and it is reasonable to expect that a marked effect will be produced on that organ and growths arising from its walls if this is suddenly cut off. The only danger in the operation is the risk of including the ureters in the ligatures, as they pass down behind the uterine arteries only half an inch from the cervix, and are consequently in the field of operation. Goelet suggests, as a preliminary step to eliminate this risk, that bougies be passed into the ureters through the bladder. He admits, however, that a careful operator accustomed to work in this region may easily avoid the ureters. As regards the operative procedure, Goelet, instead of tying each artery only in one place on a level with the internal os, applies a second, and often a third, ligature to the artery on each side as it ascends along the side of the uterus. The result of this is to cut off the compensating blood supply from the ovarian artery to the lower part of the uterus. Goelet gives all the credit of priority to Dr. Martin, of Chicago, who has recently suggested and popularised the operation and perfected its *technique*, but states that he first ligated the uterine artery *per vaginam* on one side in January, 1889, in the case of a large fibroid the size of a seven months' pregnancy, with the view of diminishing the size of the growth by reducing the blood supply. The artery on the other side was not tied, because the position of the tumour made it inaccessible. Six months later the tumour was one-third smaller, and was giving no inconvenience.

(173) Anatomical Results of Symphysiotomy.

Carbonelli recently communicated to the Medical Academy of Turin (*Rif. Med.*, June 11th, 1894) the results of an examination which he had had an opportunity of making of the pelvis of a woman on whom symphysiotomy had been performed, and who died unexpectedly on the forty-second day after delivery. He found that the cartilaginous surfaces of the pubic symphysis were not in contact but were about 1 centimetre apart. The posterior pubic and the subpubic ligaments were united, and were some 3 millimetres in thickness. The results of the examination showed that the cartilage remains unaffected by the process of repair. The closure of the breach is effected by proliferation of the connective tissue in the periosteum and in the ligaments. Carbonelli proposes thoroughly to investigate the structure of the cicatricial callus after symphysiotomy by experiments on animals.

(174) Myoma and Cancer of the Body of the Uterus.

Malthe (*Centralbl. f. Gynäk.*, No. 26, 1894) records two cases of this complication. In both cases the tumour was too large to allow of vaginal hysterectomy, so the uterus was extirpated entire through an abdominal incision. He facilitated and made safer subsequent proceedings by dissecting off the vault of the vagina from below upwards; the flaps thus formed were then sewn together below the vaginal part of the cervix. The uterus was next removed, protected from the vagina, whilst the wounded surfaces below were protected from uterine secretion.

THERAPEUTICS.

(175) Petroleum and Pyoktanin in Diphtheria.

M. Gottlieb (*Vratch*, No. 23, 1894, p. 670), emphatically endorses the statements of Kostenko (Epitome, 1894, vol. i, par. 116), as to the brilliant effects of kerosene in diphtheria. He resorted to the paintings (four times daily) in five consecutive cases in which he had previously tried various other methods with most disappointing results. In every one a rapid recovery ensued. Petroleum is thought to cure partly by destroying the bacilli, partly by dissolving the false membranes. The latter property seems to be very marked, since even on the first application the swab becomes coated with disintegrated and blood-stained deposits. Nothing of the kind was ever observed after painting with a 1 per cent. solution of pyoktanin, which the writer tried in all the five cases, repeating the procedure three or four times daily for the first three or four days of the treatment. In one of the cases pyoktanin even aggravated the local lesions, the isolated deposits abruptly becoming confluent and much thicker.

(176) Chloralose.

C. Flemming (*Practitioner*, July, 1894) states that chloralose given to a healthy man soon produces an irresistible desire to sleep. The sleep produced is calm and refreshing, but the subject can be easily awakened, quickly going to sleep again. During the sleep there is no dreaming, and on waking there is no unpleasant sensation. There is no alteration in arterial pressure, even after large doses. There is no loss of reflexes: experimenters say that they are exaggerated, and that this is due to direct excitability of corresponding centres, and not to depression of inhibitory centres. Temperature is lowered from one-fifth to three-quarters of a degree. The excretion of urea and chlorides is said to be increased. Chloralose may be given in doses of from 2 to 6 grains in milk or cachets; 12 to 20 grains may be given, but these would be heroic doses. The drug produces sleep in from twenty to sixty minutes, according to the idiosyncrasy of the patient and the size of the dose. Sleep lasts from four to ten hours, or sometimes longer. When long sleep is wanted it is better to divide the dose. Even after long use, in Flemming's experience it produces no unpleasant effects, such as diarrhœa, constipation, dyspepsia, or even headache or giddiness, though after large

doses slight tremor and vertigo are recorded. Flemming, from his clinical experience of the drug extending over a period of eleven months and including a considerable variety of cases (particulars of which are given), comes to the following conclusions: Benefit may be expected from the drug in all forms of functional sleeplessness, in the insomnia of psychical excitement, of hysteria, of neurasthenia and overwork, of functional cardiac irritability, and in attacks of epilepsy and somnambulism. The use of chloralose may enable us to separate objective from subjective pain, and so help, for instance, in the differential diagnosis of some forms of hysteria. "Chloralose (says the author) will avail nothing in the insomnia of alcoholic excitement, multiple neuritis, or cerebral hæmorrhage, or the sleeplessness due to any painful organic lesion or peripheral irritation." In the early stages of Bright's disease, Flemming thinks that chloral hydrate, owing to its effect on the blood pressure, would probably be more efficient.

(177) Tannigen.

Meyer (*Deut. med. Woch.*, August 2nd, 1894) has sought to obtain a derivative of tannic acid which is unacted on by the stomach. In tannigen two acetyl and three hydroxyl groups are present. It is a yellowish-grey soluble powder, with no smell or taste. It is also readily taken up by sodic phosphate, borax, chalk, etc. In animals it produces no change in the appetite. Some of it can be found in the fæces, even when small doses have been given. It may be injected subcutaneously (5 per cent. borax solution). Müller has tried tannigen chiefly in diarrhœa. In most cases 2 to 5 dcg. thrice daily sufficed, but 3 to 4 g. could be given in the day without ill effects. In chronic diarrhœa improvement was soon noticed. In some phthisical patients the effect only lasted while the drug was being administered. It has been taken for weeks without any ill effects, or without the patient's getting accustomed to its action. Its value in acute diarrhœa is more doubtful. In the diarrhœa of infants it appeared in some cases to be given without effect. This is not surprising, as this disease must be treated otherwise than by astringents. It should be tried in subacute cases. It was also used in chronic inflammation of the nose and throat. Tannigen has advantages, as it is tasteless and does not harm the stomach.

(178) Malakin.

Aurelio Germani (*Gaz. d. Ospedali*, July 24th) confirms the statements of Jaquet and others as to the good effects of malakin (see Epitome, December 2nd, 1893, par. 460) in cases of articular rheumatism. He gives particulars of eight such cases in which he used it with satisfactory results. He also found it act fairly well as an analgesic in some cases of neuralgia, especially when associated with anæmia, but its effects were inferior to those of antipyrin and phenacetin. In two cases of pneumonia with high temperature the antipyretic effect of malakin was marked. From his clinical experience (which, as has been seen, is not very extensive) Germani comes to the following conclusions: (1) Malakin is really a good antirheumatic remedy. (2) It is an excellent complement of the salicin preparations, being free from the drawbacks attending the use of these drugs, so that it can be given without inconvenience to women and children, or to patients with a special idiosyncrasy as regards the salicylates. (3) It has genuine antipyretic properties, though less powerful than those of antipyrin or antifebrin. (4) As an antineuralgic malakin is inferior to those in ordinary use, although in specially sensitive patients it has certain advantages.

(179) Antipyrin as a Vesical Analgesic.

Vigneron (*Concours Méd.*, August 11th) has found intravesical injections of antipyrin an excellent remedy for pain in the bladder in many cases of cystitis. It is important that the bladder should not be in a condition of over-distension. Before washing out the viscus an injection of 10 to 20 grammes of a 1 in 25 solution of antipyrin is made into it; this is left in the bladder for about ten minutes, so as to allow time for the drug to be absorbed. When the bladder is distended the practitioner should, in order not to prolong the operation, content himself with injecting, after washing out the viscus, from 60 to 120 grammes or more of a 1 in 100 or 1 in 200 solution of antipyrin, and leaving it in the bladder. Vigneron states that the drug is quite harmless in the bladder even when the use of it is prolonged for months. When left in the bladder the remedy makes the painful contractions cease; it also acts as an antiseptic.

PATHOLOGY.

(180) Hypertrophy of the Pituitary Body and Myxœdema.

Kr. Gron (*Norsk Magazin for Lægevidenskaben*, August, 1894) reports a case of myxœdema in a woman, aged 62. The patient died, after the disease had lasted five years, in a mental condition bordering on dementia. At the *post-mortem* examination the isthmus of the thyroid was found almost entirely atrophied, while the lobes were reduced to mere remnants. Under the microscope the remains of the gland were found densely infiltrated with round cells, and only slight traces of the original gland substance could be discovered. The pituitary body was hypertrophied, and was as large as a walnut, completely filling the sella turcica. The author particularly insists on the simultaneous hypertrophy of the thyroid and the pituitary body, and on the basis of recorded cases he shows that the same coincidence exists in the two allied diseases, myxœdema and acromegaly. The results of experiment are, he maintains, favourable to this view, but he admits that clinical experience does not absolutely lend support to it.

(181) Experimental Typhoid Fever produced by the Typhoid Toxin.

Sanarelli (*Ann. de l'Inst. Pasteur*, April, 1894) gives the results of his researches on the action of the toxin produced by Eberth's bacillus. He finds that both anatomical lesions and symptoms are the same, whether resulting from infection by the microbe or intoxication by its products. The toxin was thus prepared. A very virulent culture was obtained by passing the microbe through a series of guinea-pigs, and two flasks of glycerine bouillon inoculated with the peritoneal exudation of guinea-pigs killed in a few hours by this virus. The flasks were kept at 37° for about a month, and then sterilised and left at ordinary temperature for eight months, at the end of which they were hermetically closed and left to macerate for some days at 60° C. The liquid formed two layers, of which the upper was perfectly clear: this was decanted from the lower with great care, and its toxic power on animals tested. Rabbits, mice guinea-pigs, and a monkey were used. Summing up the results of his experiments, the author concludes: (1) Eberth's bacillus, having penetrated the organism, fabricates a toxin which acts on the nervous system, and brings about death by collapse; (2) in addition to general toxic effects this toxin acts peculiarly on the mucous membranes, especially of the intestine, and thus brings about the familiar lesions; (3) all these anatomical alterations produced by the toxin, and independently of the virus, are accompanied by symptoms presenting very close analogies with those of human typhoid; (4) in experimental, as in human typhoid, Eberth's bacillus is not found in the intestinal contents; this fact militates against the idea that the disease is a process infectious in origin localised in the intestine; (5) this absence of Eberth's bacillus in the intestine is to be explained by two circumstances—first, because typhoid fever is an infection of the lymphatic system only; secondly, because directly the poison begins to act on the intestinal walls the B. coli becomes pathogenic, and increases so enormously as to assimilate all other forms; (6) given the grave toxic anatomical alteration of the intestinal mucous membrane, the B. coli constitutes the first cause of the secondary infections and localisations so frequent in the disease; (7) if the animal is partially vaccinated, B. coli emigrating from the intestine produces only local effects; (8) animals vaccinated against Eberth's bacillus are also vaccinated against the B. coli, which, therefore, tends to disappear from the intestine, being probably destroyed by the epithelial cells of the mucous membrane, which thus act towards it like all other phagocyte cells of the vaccinated organism.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(182) Diagnosis of Pyloric Tumours.

Rosenheim, of Senator's Clinic (*Deut. med. Woch.*, July 26th, 1894), first refers to the restoration of the motor (but not chemical) functions of the stomach after pylorectomy, and he illustrates it from two cases operated on by Hahn three and a-half years and three months ago respectively. In the diagnosis the symptoms due to pyloric obstruction are noted. Rare tumours not directly at the orifice may cause obstruction by spasm. Palpation will decide the position. The tumour may be displaced to the right, more often to the right and downwards, but sometimes to the right and upwards. The author quotes another of his cases in which Hahn found an hour-glass contraction due to malignant disease. Gastro-enterostomy was performed. The author then discusses at some length the question of adhesions to the liver and pancreas as shown by the movement of the tumour. This is obviously a most important matter in the question of operative treatment. Tumours of the stomach, intestine, and omentum can often be prevented from ascending during expiration if they are fixed with the hand at the height of inspiration. The author, however, cites a case in which this movement could not be arrested, and yet at the operation by Hahn no adhesions to the liver were found. There were adhesions to the pancreas and gastro-jejunostomy was performed. If the movement of the tumour upwards is very free, the latter may disappear behind the liver edge. Examination should be made in the knee-elbow position. Pyloric tumours move to some extent with the liver when they have been developed in a normally-placed organ. They can be more readily diagnosed in women in whom displacement of the stomach occurs more frequently. Often the presence of a tumour is not necessary for diagnosis. In one case a tumour could not be felt even under the anæsthetic, yet a malignant ulcerating surface the size of a two-mark piece was found at the operation. The patient died of hæmorrhage from a stitch-hole in the stomach. The author thinks that, although palliative treatment can improve the condition of the patient, yet in future operative treatment will be the chief one in the majority of these cases.

(183) A New Symptom of Cancer.

G. Bogdan (*Bull. de la Soc. des Méd. et des Naturalistes de Jassy*, 1894, 1) relates the case of a woman, aged 48, who suffered from cancer of the stomach. The disease had gone through a prolonged period of latency. The patient presented on each cheek a patch of wine-red discoloration formed by the dilatation of the superficial venules; the stain showed out sharply against the pale yellow of the surrounding skin. On the strength of this symptom alone Bogdan was able to make a diagnosis of probable cancer at a time when there was yet no other manifest sign of that affection. He looks upon such superficial varicosities on the cheeks as a valuable help to the early recognition of certain cancers; he has seen it in about two-thirds of the cases of cancer which have come under his observation. He says it is particularly frequent in cases of epithelioma of the stomach and uterus, but less common in malignant disease of other organs.

(184) Bruit de Diable.

Verstraeten (*Centralbl. f. inn. Med.*, August 11th, 1894) says that his researches in determining the lower margin by auscultation, have shown that (1) heart murmurs are not conducted through the liver substance, but only the heart sounds; (2) in certain stomach diseases accompanied by hæmorrhages a systolic arterial murmur may be heard a little to the left of the middle line; and (3) a marked venous murmur (*bruit de diable*) is present in the epigastrium in some anæmiæ. This venous murmur is best heard midway between the navel and ensiform cartilage, about ½ to 1 cm. to the right of the middle line. It is a continuous, blowing, often musical, wavy murmur, and is influenced by respiration and the heart's action. It is mostly heard in anæmic women with chronic stomach disease, diarrhœa, phthisis, etc. The author has never heard it in cirrhosis of the liver. It is sometimes difficult to make out. It is inconstant. The site corresponds to the vena cava, and compression of the cava causes it to disappear. A quickening of the blood stream accentuates it. It is a frequent symptom, and the author thinks its clinical value should not be under-estimated.

(185) Transitory Blindness in Uræmia.

Max Rothmann (*Berl klin. Woch.*, July 23rd, 1894) remarks that acute blindness is one of the most uncommon symptoms of uræmia. In rare cases it may be the only symptom. It is mostly bilateral. The ophthalmoscopic examination is usually negative. Sometimes the arteries appear narrow, or albuminuric retinitis is present. If it lasts long optic atrophy may ensue. If the pupil reaction to light remains, the prognosis is good. The localisation of the disease is disputed. Temporary œdema of the papilla, a lesion between the corpora quadrigemina and the locality where the perception of light is effected, passing œdema in the visual cortical centres are among the views advanced. The author refers to the identical sudden loss of sight after hæmorrhage, in which changes have been found in the optic nerve. He then records a case in which granular kidneys were found after death, and in which the patient was seized a couple of months previously with sudden and temporary blindness affecting first the left and then the right eye. It subsequently recurred in the left eye. Death was due to phthisis. The fibres of the optic nerves were healthy, but the sheath was thickened, as well as the vessels in the nerves. Although the case is not absolutely typical, the author thinks the amaurosis of uræmic origin. In the right eye the light reflex disappeared, and returned as the sight improved. Here the blindness was due to a temporary œdema of the optic sheath, without permanent change in the nerve fibres. Thus the pupil reaction can be maintained, though the lesion is peripheral. The author concludes that (1) with severe nephritis blindness may occur with or without other uræmic symptoms, and is due to œdema of the optic sheath; (2) the light reaction may be preserved, lessened, or abolished, without making this compression theory impossible; (3) the prognosis of the lost reflex is not absolutely bad; and (4) after the return of sight the nerve fibres may be intact or degenerate only in the periphery.

(186) Male Hysteria associated with Moral Insanity.

De Santis (*Il Policlinico*, June, 1894) reports two cases in which the above-mentioned phenomena presented themselves, making them the occasion of the following reflections. True moral insanity cannot be in any case the result of hysteria. Given the fact of the association of hysteria with insanity, one should consider that the symptoms of the two maladies proceed and coexist side by side, it being very difficult to assert that there exists between the two diseases a true fusion, resulting in a species of hybridisation. The study of numerous cases is opposed to this conception of hybridism, suggesting rather a simple association of symptoms, in the sense suggested by Charcot. Psychical diseases may be conceived of as so many successive differentiations of hereditary neurosis—differentiations determined in a measure by the action of surroundings, and perhaps also by special hereditary predispositions, which latter may have needed an occasional stimulation to render them manifest.

SURGERY.

(187) Methods of Controlling Hæmorrhage in Amputation of the Upper Extremity.

Keen (*Amer. Journ. Med. Sci.*, June, 1894) reports one case of amputation of the entire upper extremity, including the scapula and clavicle, and four cases of removal of the arm at the shoulder-joint. This paper has especial reference to methods of controlling hæmorrhage. In cases of simple amputation at the shoulder-joint, the axilla not being involved, the best method of compressing the vessels in the axilla is that devised by Wyeth, in which a piece of elastic tubing is wound tightly round the axilla and shoulder above two stout pins passed through the limb in front of and behind the joint. Elastic compression

of the vessels, the author holds, is by far the most secure method in all amputations. In the limbs they can be secured very readily by the ordinary Esmarch methods, but at the hip and the shoulder the difficulty has always been to retain the elastic tubing in place. The only object of the pins is to prevent this tubing from slipping. In cases in which the axilla is invaded so high that Wyeth's pins cannot be used, the author would practise Delpech's method of cutting down on the axillary artery through the pectoral muscles, and applying a preliminary ligature to this vessel. The advantages of this procedure are: (1) that it gives us wide access to the axilla, especially to its apex, where the vessels lie; (2) the surgeon can determine with ease how far and how great is the invasion of the axilla. The author has practised this method with success in one case, and the ease with which the operation was done and the paucity of the hæmorrhage during its performance have led him to think very highly of it. In removal of the whole of the upper extremity with the scapula, Berger's operation, in which a portion of the clavicle is resected and the subclavian artery and vein are divided between double ligatures before the flaps are made, is commended as by far the preferable method. In the author's case the patient was out of bed eight days after the operation. The frequency of recurrence of malignant disease after articulation at the shoulder, and the low mortality after removal of the scapula with the upper limb, have led Keen to agree with Berger that in all cases of malignant disease of the upper end of the humerus, or even of its lower end when it is already diffused, the surgeon should perform the latter and more radical operation.

(188) Renal Aneurysm.

E. Hahn (*Deut. med. Woch.*, August 9th, 1894) reports a case in a woman, aged 49. About two months previously she noticed a swelling beneath the left costal arch. Since then she suffered from loss of appetite, dyspeptic symptoms, and wasting, with occasional attacks of pain. A smooth elastic tumour, about the size of a fœtal head, was felt, extending from the ribs to a hand's breadth below the navel. It appeared fixed in the renal region, and could be moved to and fro from this point. The urine presented no abnormality. The arteries were slightly degenerate. The diagnosis lay between hydronephrosis and a soft, solid, renal tumour. After two weeks and a half the kidney was first explored from the side (extraperitoneally). Two-thirds of it could be felt apparently healthy. Exploratory puncture of the tumour occasionally gave pure blood. On an attempt being made to free the lower part of the kidney a profuse hæmorrhage occurred, necessitating plugging. Then it was attempted to deal with the tumour by the transperitoneal method. The tumour and kidney were eventually liberated from their bed. The kidney was ligatured about the pelvis, and the whole mass separated. The subsequent course of the case was very satisfactory. The aneurysm in this case was separate from the kidney, but they were enclosed in one capsule. The lower third of the kidney was flattened. A branch of the renal artery could be traced into the aneurysmal sac. If the aneurysm were on the trunk of the artery it would be quite separate from the kidney. If (as here) a large branch was involved, a common capsule would exist, and the kidney substance would be pressed on, though in itself intact. The author has collected five such cases. He refers to the difficulty of diagnosis. If a tumour developed rapidly after an injury or severe exertion in a patient with arteriosclerosis, but without marked cachexia, it should suggest renal aneurysm. Rupture into the pelvis of the kidney would produce hæmaturia. Recovery can only take place by operation.

(189) Treatment of Ciliary Blepharitis.

Essad (*Rec. d'Ophtal*, April, 1894), after trying the usual treatment by calomel, boracic acid, red oxide of mercury ointment, cauterisation by nitrate of silver, tincture of iodine, and oil of cade with only partial success, has found the following treatment most satisfactory. The condition of the lachrymal apparatus is first examined, and if necessary rectified. Then a solution of corrosive sublimate—10 centig. in 10 g. of glycerine—is given to the patient to paint on the roots of the lashes every day, care being taken that it does not come into contact with the conjunctiva. Two or three times a week he himself uses a solution of corrosive sublimate—50 centig. in 15 g. of glycerine—and paints it on the roots of the lashes after removing the crusts and diseased lashes; the excess of the fluid is removed with dry absorbent wool. If the fluid comes into contact with the conjunctiva, it is at once washed freely with warm water. The author has had success with this method in all forms of blepharitis.

(190) Hernia in the Linea Alba.

Lenhoff of Litten's Poliklinik, describes (*Berl. klin. Woch.*, July 30th, 1894) a thrill to be obtained in these epigastric herniæ similar to the hydatid thrill. He first calls attention to the symptoms, and the importance of not confounding this hernia with other diseases. It may simulate catarrh of the stomach and gastric dilatation. There is frequently pain after food, nausea, vomiting, wasting, constipation or perhaps alternating diarrhœa. The hernia is mostly present midway between the umbilicus and the ensiform cartilage. It may be so small as to be felt only in certain positions of the body. Palpation is painful. For a short time it may be replaced, when the defect in the linea alba can be felt. Patients are generally over 30. Whether the contents are gut or omentum makes little difference, as the treatment is the same. If the fingers are placed on the hernia, and the patient makes a few successive coughs, a sensation is obtained as if fluid were being driven up against the fingers. The author records two cases in which this thrill was obtained. It has been present in all the cases examined by him. It occurs also in herniæ in other situations.

MIDWIFERY AND DISEASES OF WOMEN.

(191) Puerperal Acute Atrophy of Liver.

Schreiber (*Centralbl. f. Gynäk.*, No. 21, 1894) describes a case which occurred in Pavloff's wards in the Odessa Maternity. The patient was a soldier's wife, aged 22, in her second pregnancy. She was admitted in labour, in the eighth month. She was a stout and muscular woman, but intensely jaundiced and apathetic: the jaundice seemed to have begun five days previously. Labour only lasted seven hours, the cervix presenting. The child was alive, and the placenta and membranes followed five minutes after its expulsion. The patient complained of great tenderness in the region of the liver. The area of hepatic dulness was distinctly diminished, the spleen enlarged. The urine was acid, dark brown, very frothy when shaken, and contained bile, but no albumen. The patient died on the fourth day after delivery. The secretion of urine had diminished steadily till complete anuria set in for twenty-four hours before death. The temperature for two days ranged between 99° and 100°; on the third it began to rise very high, and six hours before the patient's decease it was above 106°. There was evidence of old pulmonary tubercle. The liver was in size one-third less than normal; microscopic sections showed all the characteristics of acute yellow atrophy. The uterus had contracted well, its muscular tissue was tinged yellow, the cavity contained clot, and there were lacerations in the cervix.

(192) Accidental Hæmorrhage in Labour.

Bué, of Lille (*Archives de Tocologie et de Gynéc.*, July, 1894) describes two cases of premature detachment of the normally situated placenta. The first patient was in her fourth labour at term. She was admitted into a lying-in hospital seven hours after the pains had commenced. She was very anæmic, with a small and rapid pulse. Though a large fœtal head presented the uterus still extended very high; the membranes had not broken, but there was not any feeling of liquor amnii; the uterine wall was tense but contracted occasionally; in fact, it was not in a tetanic condition. There had been little flooding though the patient was admitted with the vagina inefficiently plugged. The membranes being ruptured, some red fluid escaped and the forceps were applied. A large fœtus, dead about twenty-four hours, was delivered with great difficulty. It weighed over 10 lbs. Great masses of clot with liquid blood were delivered by introduction of the hand into the uterus. The cord (which had not twisted itself round the fœtus) measured over 20 inches, the

placenta 1 lb. 5 ozs. Hot water was injected into the uterus and ergot given. The uterus soon began to contract. Bué thinks that the cause of detachment is obscure in this case; the size of the fœtus probably played a share in this complication. The second patient was a primipara, aged 19, pregnant since September, 1893. At the fifth month anasarca was observed. Labour pains set in on April 23rd, 1894, and syncope occurred very suddenly, with absolute suppression of urine. The uterus was large and tense, so that the outline of the fœtus could not be felt. The membranes had broken; the head presented well. The child was delivered, dead, spontaneously, but profuse hæmorrhage followed, over a pint of blood escaping. The syncopic condition increased. A totally detached placenta, with 2 lbs. of clot, were removed from the uterine cavity. The placenta weighed nearly 14 ozs., the child nearly 4 lbs. Ether, caffeine, and ergotine were injected hypodermically. Hot water was thrown up into the uterine cavity. Blood still escaped so the cavity was plugged, then the hæmorrhage ceased. Over 4 pints of blood were lost altogether. Artificial serum was injected into the gluteal region, then the pulse improved. Next day there was high temperature; some sloughy fragments were removed by the curette. Albuminuria was marked for some time, but the patient made a good recovery.

(193) Hæmatoma of Vulva after Delivery.

Goldberg (*Centralbl. f. Gynäk.*, No. 30 1894) notes that, according to Winckel's statistics, this complication occurs only once in 1,600 labours. A patient, aged 20, was delivered of her first child at term. Labour was protracted owing to rigidity of the os uteri. The head did not lie long in the pelvic outlet. At the end of three days delivery occurred without instruments; the physician left when the placenta had come away spontaneously. A few hours later he was sent for; the patient had been seized with giddiness and a swelling had developed. Goldberg saw her ten hours after delivery. She was in a state of great excitement, lying on her back and suffering from severe pain in the vulva. A very tender dark-blue fluctuating swelling, as large as a child's head, had developed on the site of the left labium majus, distending the perineum. It reached for a considerable distance up the vagina, but being so tender its limits could not be accurately defined. The uterus was well contracted. The hæmatoma was evidently due to the rupture of some submucous vessels from pressure of the fœtal head. As the hæmorrhage seemed to have ceased and the patient's surroundings were very insanitary, the hæmatoma was not incised. Ice was applied to its surface, with antiseptic dressings. On the fourth day the swelling burst and the blood escaped. There was no rise of temperature during childbed. Two months later, the patient having thoroughly recovered, no trace of the complication remained except a fistulous tract an inch deep opening on the surface of the perineum.—Chevaleff (*Répert. Univ. d'Obstét. et de Gynéc.*, July 25th, 1894) states that a woman, aged 33, was admitted into hospital with a swelling which had developed immediately after delivery. This swelling was as large as a fist, and occupied the left labium majus, the corresponding half of the vestibule, the perineum below, and the pubes above. The diagnosis was hæmatoma of the vulva through rupture of a vessel superficial to the pelvic fascia. The swelling was left alone for a week, ice, etc., being applied to its surface. Then a small incision was made at a point corresponding to the middle third of the labium. The tumour slowly emptied itself, and there was no hæmorrhage. Recovery was perfect.

(194) Mucous Polypus and Racemose Sarcoma of Cervix.

Ozenne (*Revue Obstét. et Gynéc.*, June, 1894) observed, in a multiparous woman, aged 48, the presence of a malignant racemose tumour, of the type which Pernice found to be made up of embryonic striated muscular fibre. The patient, in March, 1893, noticed an abundant discharge between periods; it was turbid, not viscous, and faint in odour. In August she was examined, and a polypoid tumour, of the size of a man's thumb, was found projecting from the os externum. Its pedicle had a broad attachment to the inner aspect of the interior lip of the cervix, over half an inch above the os. At first it was taken for a mucous polypus, but its appearance was different, and the condition of neighbouring parts indicated malignancy. The tumour was reddish-blue, bearing soft lobules; its pedicle was surrounded by prominent vesicular bodies, which extended to the posterior lip of the cervix. There was in the right fornix an ill-circumscribed deposit. The uterus appeared to be of normal volume and movable. The patient was in weak health. As the tumour was clearly malignant, and as there was deposit beyond the limits of the uterus, hysterectomy was not considered justifiable. The curette was used several times with benefit, but by May, 1894, the lower part of the uterus was destroyed, and the vagina invaded. The treatment kept the patient clean; her health had grown very weak, but she felt little pain.

THERAPEUTICS.

(195) Digitoxin.

Masius (*Acad. de Méd. de Belgique*, July, 1894; *Presse Méd.*, August 25th) says that digitoxin, when given to patients suffering from cardiac affections, causes cyanosis and dyspnœa to disappear, and restores regularity, force, and volume to the pulse. These effects manifest themselves between the twelfth and twenty-fourth hour following the administration of the drug. At the end of twenty-four hours marked diuresis occurs, the amount of urine discharged sometimes amounting to four litres in the day. The gastric derangement caused by digitoxin is trifling. The author has tried the drug in 26 cases. Six times he has, after the administration of doses varying from 3 to 4½ milligrammes, seen vomiting occur, but this soon ceased when the drug was discontinued. The digitoxin is better tolerated when given in black coffee with sugar. The remedy may usefully be prescribed in certain acute diseases, such as pneumonia and typhoid fever. In patients suffering from the former affection, it after some hours brings about a reduction of temperature, and has a very favourable action on the pulse. It is equally efficacious in typhoid.

(196) Iodoform in Tuberculous Phthisis.

A. Foxwell (*Birmingham Med. Rev.*, July, 1894) has had considerable experience of iodoform in the treatment of tuberculous phthisis during the last eight years, and on the whole he considers it the most satisfactory of all the antiseptic drugs which have been used in tuberculosis. He has examined his out-patient casebooks for 1886, 1887, and 1888, but of the many instances in which iodoform was used as the main treatment he could only collect 46 where the notes were kept with sufficient persistency to make them worthy of record. Of these, 12 were much improved, 15 improved, 11 remained the same, and 8 grew worse; that is, 59 per cent. improved and 17 per cent. grew worse. Of the 12 who much improved, 6 had reached the third stage, but only 2 of these had both lungs attacked, and only 1 among the earlier cases was so affected. Of the 15 who improved, 11 had reached the third stage, and 7 had both lungs involved. Of those who grew worse, 5 had both lungs attacked, and 3 of these had reached the third stage. Of the 11 who remained stationary, 7 had reached the third stage, and 5 had both lungs diseased. From these statistics it appears that the advanced cases did as well as the early ones. This the author thinks to be due mainly to the favourable nature of the advanced cases, these being mostly cases of localised cavitation or those in which considerable fibrosis had occurred. The unfavourable advanced cases doubtless felt themselves too ill to stand the exhaustion of out-patient attendance. The usual prescription was one 1-grain pill, to be taken six times daily. The dose never exceeded that amount, and was occasionally less, the average being 5 grains daily. In three cases only were any symptoms of poisoning detected, and these were merely of a mild gastric nature. The author also tried the drug in conjunction with oil and tonics, and compared both classes of cases with those in which oil and tonics alone were used. The conclusion he arrived at after a three years' trial was that iodoform given by itself gave better results than any other drug or combination of drugs he had tried or seen tried. It soothed the nervous system

of erethic subjects; it very greatly lessened cough and expectoration; it powerfully increased nutrition, the patients often becoming quite plump under its continued use; finally there was as great, if not greater, improvement in the physical signs than the author had seen accomplished by any other mode of treatment, except that of climate and hygiene. Foxwell has since used iodoform for the cure of phthisis in some private patients, and in some hospital in-patients; and his later experience fully bears out his previous impressions. As regards mode of administration, the author believes it to be always safe to begin with 2 grs. t. d. s. If the patient has difficulty in steadily taking this small dose it is useless to persevere any further with the drug. "Having satisfied yourself," says the author, "by three or four days' treatment that the daily dose of 6 grains can be well borne, order it to be increased by 2 grains every other day till 30 grains are reached. Keep the patient to this daily dose for at least three months, and at a somewhat lower level (should all signs of activity have vanished for three months longer." If the patient does not strongly object, he always advises its continuance for a year. Foxwell has usually limited himself to a maximum dose of 30 grains a day.

(197) Traction on the Tongue in Hysteria.

Th. Balade (*Gaz. des Hôp. de Toulouse*, July 28th) has in two cases made very violent hysterical attacks cease by traction on the tongue, the organ being drawn with some force out of the mouth, and kept in that position for some minutes. This procedure was successful when every other treatment had failed.

(198) Ferratin.

Germain Sée (*Presse Méd.*, August 25th, 1894), in a communication to the Académie de Médecine, states that even after prolonged use ferratin (see Epitome, February 17th, 1894, par. 136, and June 16th, 1894, par. 483) causes neither gastric nor intestinal derangement in men or animals. It acts as a slight astringent without causing injurious stimulation, and it never causes the development of H_2S as the result of putrefaction in the intestine. Its local effect on the gastro-intestinal tract shows itself constantly in restoration of appetite and improvement in the quality of the stools. It is absorbed slowly, but animals weighing from 5 to 7 kilos. have had to take from 5 to 20 litres of milk in order to absorb the same quantity of iron as could be conveyed in 0.1 gramme to 0·2 gramme of ferratin. The dosage should be so regulated that the intestine shall always contain an excess of ferratin which the organism can use according to its needs. There is no reason to fear the accumulation of an excess of iron in the organs; absorption and elimination appear spontaneously to balance each other. Ferratin is therefore, in the first place, an alimentary substance, and can be employed in men apparently healthy or in children and chlorotic subjects, as the curative action is not interfered with by injurious secondary effects, as is often the case when ordinary ferruginous preparations are used. The dose of ferratin is from 5 centigrammes to 1½ gramme two or three times a day. Each dose contains about 7 per cent. of iron.

(199) Tolysal.

Bothe (*Münch. med. Woch.*, August 7th, 1894) relates his experience with this agent as an anodyne. It is a derivative of tolypyrin. The author has used it in the insane, in the headache of the neurasthenical and hysterical, as also in that of organic brain disease. In neurasthenical headache he has found it very useful, and often when antipyrin was without effect. In such cases, with headache during the day and sleeplessness at night, it was very efficient. The hysterical headache was sometimes influenced and sometimes not. In one case of true migraine it promptly cut short the attack, but in another case it was useless. In the headache of organic brain disease, of bone disease, or of old rheumatism, it was without effect. In the insomnia of the insane, without excitement, it was also of service. The dose is from 1½ to 2g., mostly the latter, 1g. being generally insufficient. It has a disagreeable taste, but is readily taken in hot soup or beer. In the empty stomach it may produce nausea. Vertigo was sometimes noted, but it does not occur if the recumbent position is maintained. The author says that tolysal is deserving of further investigation.

PATHOLOGY.

(200) Experimental Typhoid Fever.

Sanarelli publishes a third memoir on this subject (*Ann. Inst. Pasteur*, June, 1894) in which he argues strongly that his researches tend to prove that human typhoid fever is not a primarily intestinal affection. He insists first on the tolerance of the intestinal mucous membrane which may exceptionally be exhibited, especially in the case of relapses, where only the patches which escaped in the first attack suffer. This intestinal tolerance may be obtained experimentally without in any way altering the vulnerability of the organism generally to the virus. A quantity of sterilised culture of Eberth's bacillus sufficient to vaccinate the animals was injected by degrees into the stomachs of guinea-pigs, the necessary quantity being determined by simultaneous subcutaneous injection in other animals till these were fully vaccinated. The animals so treated were then inoculated with virus together with others to serve as controls. They died in the same time as these, but exhibited no abdominal symptoms, the meteorism, tenderness and pain present in the latter being absent. *Post mortem*, while in the control animals abundant peritoneal exudation was found with typical intestinal lesions, in the others there was no fluid, and the intestines were perfectly normal with their mucous membrane intact. But, at the same time, the other mucous membranes were found congested, which goes to show, according to the author, that the immunity of the intestine results from the habituation of the cells which have eliminated the first poison. A similar immunity was obtained by the injection of putrid beef broth. As in vaccination by subcutaneous injection, the microbes, together with B. coli, tend to disappear from the intestines thus immunised; but on inoculation B. coli again becomes numerous and virulent, as in ordinary cases, although the intestinal walls have perfect immunity. Investigating the nature of immunity against typhoid, the author criticises and rejects the experiments tending to prove that the serum of immune individuals possesses bactericidal or antitoxic properties. First, as to bactericidal power: Animals vaccinated in ordinary way were inoculated with virus. The first was killed after two days, and cultures made from the peritoneum were fatal to guinea-pigs in twelve to sixteen hours; cultures from the second, killed after three days, were fatal in ten to twelve hours; cultures from the third, killed after four days, were fatal in eight hours, the usual intestinal lesions following with marked intensity. Therefore in animals vaccinated against typhoid fever, so far from their serum being bactericidal, Eberth's bacillus flourishes and progressively augments in virulence. Secondly, as to antitoxic properties: Vaccinated animals were found to be even more vulnerable to the toxin than unvaccinated, the hypothermia being more marked and regularly progressive. Further, guinea-pigs and mice were inoculated with toxin mixed with serum of vaccinated animals. With the exception of two mice (notoriously uncertain in reaction), they all died in the ordinary way. On the other hand, the activity of the phagocytes of vaccinated animals is found to be enormously increased. As stated, no peritoneal effusion is found, but the intestines are covered with a thin sticky layer, which the microscope shows to consist exclusively of leucocytes and endocellular microbes. The author concludes that B. coli and Eberth's bacillus must be considered as distinct varieties. Finally, the author claims that the biological process of human typhoid is to be explained by the knowledge gained by experiment. The earliest symptoms are *malaise*, fatigue, pains in the head and limbs; the intestinal symptoms only appear when absorption begins. The hyperthermia is a measure of the reaction of the organism to the poison, and if the bacillus of Eberth could fabricate its poison with the same intensity as the cholera vibrio in the human organism the disease would be rapid and apyretic as in the animals experimented upon.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(201) Fever and Erythema from Intestinal Toxæmia.

In two cases, at Montpellier, Bosc observed (*Rev. de Med.*, August, 1894) the association of a bacillus closely resembling the bacillus coli, with a general pyrexial disease characterised by a polymorphous erythema and obstinate constipation. In both cases the patients were young adults, and one died. The fever was irregular, and its exacerbations coincided with aggravations of the skin eruption. After a prodromal period marked mainly by symptoms of digestive disturbance, the disease developed rapidly, the earliest symptoms being rigors, vomiting, prostration, and the appearance of the eruption. In the fatal case death was preceded by coma and subnormal temperature. The duration of the disease was long and its course irregular. Every exacerbation was accompanied or probably determined by an increase in the constipation, and relief of the constipation was followed by relief of all the symptoms. The eruption was at first only a slight papular erythema; later outbreaks resembled the rash of measles or of scarlet fever, and finally the condition resembled erysipelas. As each outbreak of eruption subsided desquamation ensued. Except on the hands and feet the desquamation was fine. The hair also fell out. Beyond great prostration no nervous symptoms were noticed, and the intelligence was unaffected until, in the fatal case, coma developed. In the fatal case the onset of symptoms was preceded by the formation and discharge into the rectum of a prostatic abscess, in the other case by obstinate constipation. The symptoms appeared to be produced by the absorption of the chemical products of the bacillus: it was not found in the blood. Experimental injections of recent cultivations produced death by septicæmia, whereas old cultivations which contained the soluble products of the bacillus in large quantities produced fever and erythema.

(202) General Paralysis.

Sacki (*Münch. med. Woch.*, July 31st, 1894) discusses this disease as it occurs about puberty. There are only some 17 of such cases exactly recorded. The author relates a case in a girl, aged 15, who had developed well both physically and mentally up to 2½ years before coming under observation. At that time she became forgetful, inattentive, irritable, and suffered from slight headache. Some months ago she had an attack in which she lost her speech, consciousness being maintained. Two months later there was another similar attack, and since then her speech remained affected. Menstruation had not appeared. When she was first seen her pupils were irregular and did not react to light. There was no tremor. The gait was straddling and the knee-jerks exaggerated. There was no paresis. The speech was characteristic, and the writing uncertain and shady, letters and words being omitted. The memory was defective, and she could only calculate simple figures slowly. Iodide of potassium and mercurial inunction were tried without effect. Congenital mental weakness could be excluded. In an adult the case would certainly be classed as general paralysis. The absence of pressure symptoms were against chronic hydrocephalus or cerebral tumour. There were no local symptoms pointing to tumour. The diagnosis from cerebral syphilis (late hereditary syphilis) was not so easy, but here the disease began with mental weakness. Perhaps congenital syphilis formed here an etiological basis for paralytic dementia. The disease in children corresponds to the demented form of adults. Large ideas are rarely seen, depressed mental conditions at times. The disease lasts longer than in adults. It begins about 13 to 15 years, with the development of puberty. Physical development is nearly always interfered with, and menstruation does not appear. Mental and bodily overstrain, excesses, etc., do not play any part here. The two factors are heredity and syphilis, but it must be remembered in regard to syphilis that the number of cases on record is small.

(203) The Diagnostic Value of the Diazo Reaction.

Nissen (*Jahrb. f. Kinderheilkunde*, Bd. xxxviii, H. 2 and 3) made search for this reaction in 462 children under treatment for various diseases, in order to ascertain whether it possessed any diagnostic value. He found that it was present constantly in measles, typhoid fever, and miliary tuberculosis. It was present occasionally in chronic and croupous pneumonia, in pleurisy and pleuro-pneumonia, in laryngitis, diphtheria, erysipelas, and caries of the ribs; it was frequent in tuberculous meningitis, and was present during the first two days of scarlatina in about half the cases. He thinks the presence of the reaction in a doubtful case should decide the diagnosis as between measles and German measles; in the majority of cases, it appeared either a day or two before or at the same time as the eruption, but occasionally was not noticed until the second or third day. With regard to typhoid fever, he considers that the observation of the reaction may be of use in the diagnoses of slight cases in which the symptoms are not very clear. If, in a case presenting symptoms resembling typhoid fever, the diazo reaction has not appeared by the end of the first week, or at least the beginning of the second, it is probable that the case is not one of typhoid fever, or at the most a very mild form of typhoid. During typhoid fever the reaction continues to be obtained so long as the temperature remains high or fluctuating. In a case of chronic lung disease in which the question of tuberculosis arises, Nissen considers that the persistent presence of the reaction is in favour of the diagnosis of tuberculosis, and that the more constant its presence the more acute and extensive the tuberculous process in progress. He also considers that it is of value in the diagnosis of meningitis. When the diagnosis lies between meningitis and typhoid fever, the presence of the reaction is evidence in favour of the latter disease. When typhoid fever and other exanthematous diseases can be excluded, the presence of the reaction is in favour of the meningitis being due to tuberculosis, and the prognosis therefore is bad. The absence of the reaction in a case resembling meningitis does not exclude some form of that disease, but should be considered to be a favourable element in the prognosis.

(204) The Vagus and the Secretion of Acid by the Stomach.

Leubuscher and Schafer (*Centralbl. f. inn. Med.*, August 18th, 1894) first refer to the investigations of Pawlow and Schumova in this subject. Their views were subsequently confirmed by Krehl, who showed that after section of both vagi below the recurrent laryngeal nerves, the animals wasted, lost their appetite, and died. No free hydrochloric acid was found in the stomach, and the gastric juice possessed little digestive action. The authors have themselves experimented on rabbits and dogs. In the former no effect upon the secretion of acid was apparent, but these animals are hardly as suitable as dogs for this investigation. The general symptoms presented by the dogs corresponded to those seen by Krehl. No distinct effect upon the secretion could however be made out. The different degree of acidity which was noted in the peripheral and central portions of the stomach contents is best explained by the paralysis of the stomach wall due to the division of the vagi.

SURGERY.

(205) Grafting of the Ureters into the Urethra, and Regeneration of the Urinary Bladder.

The bladder is subject to a variety of diseases which render it unfitted as a reservoir of urine, and Gluck and Zeller (*Langenbeck's Archiv.* Bd. xxvi, 1881) endeavoured to meet the needs of such a case in one of three ways: (1) By suturing the extremities of the ureters to a wound in the abdominal walls; (2) by implanting them in the rectum; (3) by connecting them with the urethra. The first method, which they demonstrated to be possible in animals, is objectionable in man by reason of the double urinary fistula, and the impos-

sibility of adapting any receptacle to the orifices, or preventing the irritating effects of the urine on the constantly wetted skin. The second method, though unsuccessful in the hands of the above observers, was demonstrated to be practicable, though not very satisfactory, by Bardenheuer (*Die Drainirung der Peritonealhohle*) and Novaro (*Boll. della Soc. tra i cultori delle Scienze Med.*, 1887). The third method was demonstrated to be possible on the cadaver by Gluck and Zeller, but they did not try it in the living subject. Several surgeons have demonstrated the possibility of connecting the ureters to the urethra in the case of extroversion of the bladder, although such an operation is no longer considered desirable, better results being obtainable in these cases by plastic surgery. Adolfo Schwarz, in a preliminary investigation on the surgery of this region, demonstrated (*Lo Sperimentale*, xlv, fasc. 5): (1) that it is quite possible to remove the bladder, leaving the portion immediately surrounding the ureters; and (2) that from this portion, from the neck, and perhaps from the commencement of the urethra, under suitable conditions, a new organ may be generated, having all the functions of the original bladder. Having ascertained this fact, he extended his observations, and in a new paper (*Rif. Med.*, July 3rd, 4th, 5th, 1894) he has shown the possibility of applying it to practical surgery. Using largish bitches, which are more suitable than dogs by reason of the simple course of their urethra, he has succeeded in so grafting the ureters into the urethra, after removing the bladder, that the animal recovers from the operation without the least interference with its renal functions. His results go further, for, after allowing the animals to live for some months, he has found, on killing them, that the inner end of the urethra has so expanded and hypertrophied that it forms an organ which fulfils all the functions of a reservoir for urine. For the *technique* of the operation reference must be made to the full paper, but it is briefly as follows: The animal being profoundly narcotised by morphine, an incision is made in the linea alba, immediately above the symphysis pubis, each layer of the abdominal walls, and finally the peritoneum, being divided separately. The bladder is then emptied by compression, and the vesico-umbilical, and two lateral, ligaments are divided, after isolation of a good length of the ureters. These are next divided as close as possible to the bladder, and withdrawn from the wound, after which the bladder, with its cervix, and as much as possible of the urethra, are pulled forwards. The bladder is now separated from the commencement of the urethra, and a short length of gum-elastic catheter is passed through the lumen of the urethra to the outside. This tube is destined to remain *in situ* for three or four days, and allows a free passage for the urine. The ureters are then implanted separately into the ureter through two separate incisions on the right and left upper portions of its wall, being held in position by specially arranged stitches. The next stage of the operation is to close the open end of the ureter, so as to prevent the escape of urine into the abdominal cavity. This is done by a Lembert's suture, the urethra, with the ingrafted ureters, being returned into the abdomen, and the wound closed layer by layer. No external dressing is applied, but the catheter is cut off short externally, and fixed in position by one or two sutures. The animal is also prevented from touching the wound for the first three or four days—in fact, until the catheter is withdrawn. As the result of the operation there is complete incontinence for several days, but after about a fortnight the animal begins to make voluntary attempts to micturate, and as time goes on acquires a considerable power of retaining urine. The animals thus operated upon for the most part made a complete recovery, and when at length they were killed they were almost completely continent. The *post-mortem* examination revealed the fact that a new organ had developed, possessing all the characteristics of the original bladder, and capable of fulfilling all its functions. A sphincter is also provided to the new bladder as a result of a hyperplasia of the striped muscular fibres of the upper part of the urethra; in fact, the new bladder is almost indistinguishable histologically from the organ removed. The author promises an extended paper on the subject, describing the results in the case of male animals, etc., in an early number of the *Rivista Veneta di Scienze mediche*.

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(206) The Operative Treatment of Gastric Ulcer.

Küster (*Centralbl. f. Chirurgie*, No. 30, 1894), reports a case of successful operative interference for profuse and repeated bleeding from an ulcer of the stomach. The patient, a woman, aged 21 years, after over-exertion in lifting a heavy body in 1889, suffered much from abdominal pain and vomiting, and subsequently lost flesh. In 1891 she was treated for dilatation of the stomach and floating kidney on the right side. Nephrorrhaphy was performed but gave only temporary relief. In October, 1892, there occurred severe and frequently repeated attacks of bleeding from the stomach, by which the patient was much pulled down. In August, 1893, laparotomy was practised and the stomach exposed. After this organ, which was much dilated, had been opened, a large and deep ulcer with undermined edges, at the bottom of which a cherrystone could be seen, was found on the posterior wall near the pylorus. The surface of this ulcer, which adhered very closely to the pancreas, was then burnt with the thermo-cautery, and, as the opening into the duodenum was so small that it could not be found, gastro-jejunostomy was performed, the opening between the stomach and intestine being about 2½ inches in width. The patient made a good recovery, and, when last seen, was able to work and to take her usual food. There had been no return of the bleeding. The author draws the following conclusions from this case: (1) The hæmorrhage from a gastric ulcer may be arrested by a single application of the actual cautery; (2) that in cases of gastric ulcer situated near the pylorus, gastro-enterostomy is preferable to pyloroplasty, as the latter will not prevent the bad results of cicatricial contraction and stenosis; (3) that a wide anastomotic opening between the stomach and intestine so far from being disadvantageous, will ensure the patient against the risks of subsequent constriction along the line of sutures.

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(207) Venous Tumour of the Diploe.

Pilcher (*Annals of Surgery*, August, 1894) reports a case differing from the case of venous tumour of the cranial vault treated by Martin in 1885 in that his tumour did not communicate directly with the longitudinal sinus, but was essentially a huge venous cavern, into which numerous diploic veins of ordinary size opened. The patient was aged 15, when five years old fell and struck violently upon the top of her head. Within a few days a small soft swelling appeared at the site of the injury. No pain, but gradual increase in size. At the end of five years it was lanced, and some clotted blood evacuated. It immediately refilled. It was repeatedly lanced with a like result until she came under the care of Pilcher in March, 1894, when the tumour was laid open antero-posteriorly by a free incision, and proved to be a large adventitious blood space.

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(208) Excision of the Bladder for Epithelioma.

Weir (*Med. Rec.*, August 11th, 1894) reports a case of external resection of the bladder walls for epithelioma. The patient was a man, aged 55, who had suffered in the course of eighteen months from several recurrent attacks of hæmaturia. About ten months before he came under the author's notice two tumours had been removed from the bladder by suprapubic cystotomy. On examination, there was found in the abdominal wall, just above the symphysis, in the cicatrix of the previous operation and at its upper part, a tumour the size of a walnut, elevated above the surrounding skin and reddened on its surface, with an indurated area about 2 inches in diameter surrounding its base. A cystoscopic examination revealed a tumour on the postero-superior wall of the bladder. There were some enlarged glands in each groin. After the bladder had been elevated by a rectal bag and distended by 6 ounces of Thiersch's solution two curved vertical incisions were made in the abdominal wall above the symphysis. These enclosed the growth, which was readily separated from the muscle, and was found eventually to be attached to the summit of the bladder. The peritoneum was then peeled off from the posterior wall of the bladder

down to the prostate, and on each side as far as the seminal vesicles. The whole exposed portion of the bladder was excised, including a papillomatous growth in its centre as large as a walnut, as well as the growth rising out from the summit of the bladder. The section of the bladder walls passed at least from one-half to three quarters of an inch beyond the growths in every direction. The bladder was sewn without difficulty from the bottom with interrupted catgut sutures, which were purposely passed through all its coats, and, in one or two places on its summit, with silkworm gut, introduced only through the muscular coat for additional support. A small opening was left towards the pubes, through which was passed a double rubber-tube drain. The wound in the abdominal wall was packed with iodoform gauze and its upper end united by silkworm-gut sutures. Sterilised dressings were applied. The patient did well after the operation, the wound being quite healed at the end of the eighth week, when he was able to hold his water for three or four hours. The capacity of the bladder was from 4 to 5 ounces. About two weeks after the first operation the glands in each groin were extirpated. Reference is made to another case in which the author performed a similar operation for removal of an epitheliomatous growth from the posterior wall of the bladder. The patient did well for a time, but was attacked by fatal erysipelas, and died seven weeks after the operation.

MIDWIFERY AND DISEASES OF WOMEN.

(209) Perforation of Uterus by Curette: Prolapse of Intestine: Recovery after Operation.

Alberti, of Potsdam (*Centralbl. f. Gynäk.*, No. 21, 1894), states that a practitioner used the curette after retention of fœtid membranes in abortion. The patient, aged 32, had borne five children. In drawing down what he thought was relics of decidua he found that it was a coil of intestine. He applied the tampon around the gut, and sent the patient into a hospital. Alberti, three hours after the perforation had occurred, performed abdominal section. There was a rent about an inch long in the right cornu uteri. A coil of small intestine filled the rent, was held tight by the os internum, whence it had to be liberated by a hernia knife. The strangulated intestine was over six and a half inches long distended, hyperæmic, and very dark at the line of constriction. The uterus was very soft, and exceedingly thin around the perforation. It was closed with four Lembert sutures. The patient made a good recovery. Four weeks later free metrorrhagia set in, and the curette was used again. Six weeks afterwards it was once more employed, and iodine applied. This occurred at the end of 1892. The patient is now in good health; she has not conceived since her illness.

(210) Puerperal Infection from the Intestine.

Dumont (*Archives de Tocol. et de Gynéc.*, July, 1894), in a paper on "puerperal pseudo-infection of intestinal origin due to the bacterium coli commune," says this form of infection arises from changes in the intestinal mucous membrane inflamed through compression by the gravid uterus or through retention of fæces irritating the coats of the bowel. These changes allow the bacterium coli to pass into the peritoneum, setting up infection, which is intestinal and not, strictly speaking, puerperal in origin. The symptoms usually appear about a week after delivery, the patient doing well at first, but being troubled with obstinate constipation. The temperature and pulse rise very high, the face looks pinched, the tongue is rough, the breath fœtid. The mental condition remains normal, and even the appetite may be good. There is tenderness over the cæcum, transverse colon, and sigmoid flexure. Sometimes a flabby mass can be felt touching the uterus, but separable from that organ. The uterus and fornices feel free on palpation, as in many cases of true puerperal infection. The result is very uncertain. At least the course of the disease is different from that of enteric fever. In mild cases the symptoms disappear after the action of a purge; in other instances the patient dies within a fortnight; in others again she may remain ill for over six weeks and yet recover. The usual sequelæ of infections have been known to follow, such as phlegmasia dolens, arthritis, ulcerative endocarditis, and salpingitis. An important complication, observed by two obstetricians, is paralysis, caused by central myelitis; this explains the great frequency of paralysis of the intestine, which involves further retention of the irritating scybala and greatly aggravates the disease. Dumont believes in the prophylactic treatment of this kind of infection. The bowels should not be allowed to become constipated during pregnancy. Laxatives and enemata during childbed are imperative from the first. Seven cases of intestinal infection are described.

(211) Hæmorrhagic Infarcts in Uterus.

Popoff (*Archiv f. Gynäk.*, vol. xlvii, No. 1, 1894) shows that not only is this condition very rare, but that it can occur only under a complication of circumstances. He quotes Herxheimer's case, in which a woman died with extensive thromboses, etc., after suffering from chronic hæmorrhagic granular nephritis. Not only were there infarcts in the lung and hæmorrhage under the dura mater, but there was also embolism of the right internal iliac artery and of the main branches of the left. In consequence the bladder, vagina, perineum, lower part of the rectum, and the cervix uteri itself were already sloughy. They were full of infarcts. Yet, though the uterine arteries were blocked, the body of the uterus, supplied by the unobliterated ovarian arteries, was free from infarcts. Popoff describes a similar case in which a woman died of chronic Bright's disease, morbus cordis, and cerebral embolism and softening. There were infarcts in the lungs and anasarca. Both uterine arteries were blocked. A perfectly annular infarct involved all the layers of the cervix; this was due to the well-known distribution of the secondary branches of the uterine artery. The body of the uterus was free from infarcts, as in Herxheimer's case.

(212) The Heart and Uterine Fibroids.

Hennig (*Festschrift der Gesellsch. f. Geburtsh. u. Gynäk.*, 1894) has analysed the history of four patients who were subject to fibroids and were further troubled with palpitations, determination of blood to the head, dyspnœa, and pains in the chest. In two cases the tumour was removed and the cardiac symptoms disappeared entirely. In the other two patients those symptoms disappeared spontaneously when the fibroids ceased to grow. In one of the latter the heart was distinctly hypertrophied, whilst in the remaining three there was no evidence of organic cardiac disease.

(213) Changes in the Milk and Colostrum in Diseases of Pregnant Women.

H. Ludwig (*Archiv f. Gynäk.*, Bd. 46, Heft 2), who has investigated the changes in the milk and colostrum that take place in intercurrent diseases during pregnancy, states that in tuberculosis the proportion of fat in the milk is greatly increased while the other constituents remain about normal in amount. In albuminuria there is diminution of albuminoids and of sugar. After serious losses of blood there is a decrease in the amount of solid constituents, fat, and sugar. In high fever there is a diminution in the quantity of fat and solid constituents. The milk of syphilitic women is poorer than that of healthy women in solid element, fat, and sugar; the proportion of albumen varies.

THERAPEUTICS.

(214) Antitoxin Treatment of Tetanus.

Giusti and Bonaiuti record (*Berl. klin. Woch.*, September 3rd, 1894) a case of tetanus which recovered under injections of serum of immunised animals. The patient was a man, aged 22, who was injured in a railway accident. He sustained an extensive incised wound of the face and several other small wounds of the same part, as well as a comminuted fracture of the leg. The wounds, which were full of earth, were treated with antiseptics. The accident happened on January 6th, and on January 28th the first symptoms of tetanus were noticed (arms and neck). The patient grew worse rapidly, in spite of treatment by chloral and steam baths, and on January 30th the tetanic attacks occurred very frequently, and

lasted twenty-five to thirty minutes. During the attacks there was opisthotonos, and the legs were involved. On February 1st he was seen by Tizzoni, who advised resort to the treatment by serum; 40 c.c. of serum from an immunised horse were at once injected, and six and a half hours later, as no improvement had taken place, 20 c.c. more. Thereafter the patient became quieter, and from time to time slept a little. During the next day he grew worse. The temperature, which had risen to 104.5° in the evening of the first day of the injections, but had fallen in the morning, rose again to 103.4°, and the tetanic seizures continued. He was therefore given an injection of 20 c.c. of the serum of an immunised dog (also provided by Tizzoni and Cattani) late on the night of February 2nd. On the following morning the improvement in the patient's condition was very marked. The tetanic seizures had not recurred, and he was able to take and retain food which previously had been rejected. In the morning an injection of 10 c.c. of the dog's serum was given, and in the evening half a gramme of the dried alcoholic precipitate from the horse's serum. In the early morning of February 4th there was a recurrence of the tetanic seizures in a slight degree: in the morning and evening he received half a grain of the dried serum precipitate (horse). His condition continued to improve. On February 5th he received half a gramme of the dried serum precipitate in the morning, and in the evening 10 c.c. of the dog's serum. This was repeated night and morning on February 6th, 7th, and 8th, but no symptoms of tetanus were noticed after February 5th. The authors describe the case as one of "very severe tetanus," and point out that improvement was noticeable twenty-four hours after the beginning of the treatment by injection, and was well marked and permanent forty-eight hours after. The first symptoms of recovery were that the patient could rest and felt better; then vomiting ceased and the tetanic attacks became rarer, slighter, and less extensive; lastly, the irregularity of the pulse, the fever, and the rigidity of the abdominal muscles disappeared. The period of recovery occupied five days. The patient had altogether 60 c.c. of horse serum, 2 grammes of the dried precipitate (equivalent to 20 c.c.), and 110 c.c. of dog's serum. The patient had a slight urticaria, and at two points of injection of the dried precipitate (which was dissolved in water before injection) small abscesses formed, which, after incision and disinfection, healed quickly.

(215) Gallanol in Psoriasis.

F. H. Barendt (*Liverpool Med. Chir. Journal*, July, 1894) reports his experience of gallanol (see Epitome, December 16th, 1893, par. 497) in the treatment of psoriasis. All the cases in which he used it were either in children or in young adults, and in all the disease was moderate in intensity, that is to say, the efflorescences were not crowded together but of the guttate type. On the other hand, the eruption was generally universal. In none of the cases did the author notice any untoward symptom whatever, either local or general. As a rule, he used benzoated lard as the vehicle, and he ordered the gallanol to be dissolved in the heated vehicle, not mixed, as the ingredient is better dispersed through it. As regards strength, he commenced with 2 per cent., increasing it up to 12½ per cent., that is to say, 60 grains to the ounce of benzoated lard. For patches of psoriasis, he considers liquor gutta-percha, *British Pharmacopœia*, a preferable vehicle; in that the gallanol is in the proportion of ℥j ad ℥j. The chloroform evaporates, and leaves a pellicle of gutta-percha containing the medicament in contact with the eruption. This application is best worked into the patch by means of a stencil brush. The duration of treatment was on the average six weeks. During this period no internal treatment was employed. The following local measures were used: Green soap was used, ointment fashion, at night: it was well rubbed into the eruption, the hand, if necessary, being moistened with water to facilitate friction. In the case of the scalp and face, Hebra's spiritus saponis alkalinus was used. By means of a piece of moistened flannel sprinkled with this lotion the affected parts were well rubbed for five minutes. Then the parts were thoroughly douched with hot water, and dry rubbed. In cases in which the scales on the scalp were thick, liquor potassæ was painted on at the time of the visit, and the green soap applied over night. The following day a hot bath was taken, and after two or three nights of the green soap treatment and warm baths, the efflorescences were fairly free from scales. The ointment was then rubbed well in at night time, and every fourth night a hot bath was taken. If the patient complained of discomfort of the greasy application—a discomfort which was rarely noted—a dusting powder of equal parts of Venetian talc, oxide, and zinc and starch, was thoroughly dredged over the surface and in the folds of the linen. As improvement appeared the hot bath and green soap were used once a week, but the gallanol was increased. When the eruption had faded the gallanol ointment was stopped, and salicylic acid, 2 per cent., or β napthol, 2 per cent. in benzoated lard, was ordered to be rubbed into the skin thrice a week, for their antiseptic and antiparasitic action. Arsenic was now prescribed for its alterative action, and the patient kept under treatment for some time. The results of the treatment in all these cases appear to have been satisfactory.

(216) Sea Air in Disease in Children.

Leroux (*Jl. Clin. et Thér. Inf.*, August 16th, 1894) argues that sea air should not be indiscriminately advised for children. He considers that it is apt to have an injurious effect in cases of heart disease and hereditary syphilis. It is of use in anæmia except in rheumatic or neurotic patients. As a rule it is of advantage in lymphatic children, but not in those who are highly irritable or liable to inflammatory complications. Scrofulous children suffering from chronic inflammatory complications, chronic conjunctivitis or otorrhœa, hypertrophy of the tonsils, or chronic cutaneous affections should be sent to the seaside unless it is known that they are liable to acute inflammatory exacerbations. On the other hand, weeping eczema, acute impetigo, pruriginous skin affections, and acute painful ear disease are contraindications. Children suffering from chronic tuberculosis of bones or glands do well at the seaside, unless there is copious suppuration. Pulmonary tuberculosis is always a contraindication, and the propriety of sending children with enlarged abdominal or thoracic glands is very open to question. As a rule lupus does not do well. Rickets, if the children are sent at an early stage of the disease, is cured by continuous residence at the seaside for a year or more.

PATHOLOGY.

(217) The Attenuating Power of Sea Water.

Pinna (*Rif. Med.*, July 24th, 1894) has made investigations with regard to the effects of sea water on cultures of the bacillus anthracis, and some observations of the same nature on other pathogenic micro-organisms, such as the typhoid bacillus and the staphylococcus pyogenes aureus. The method adopted was either to mix the microbe with the sea water, and after a definite time to use the mixture for purposes of inoculation, comparing the results produced on animals with those produced by the same quantity of culture similarly diluted with distilled water; or else the microbes were grown in media prepared with sea water in place of ordinary distilled water, and any differences either in the mode of growth or in the pathogenic power as compared with the normal noted. By one or other of these methods it was ascertained: (1) That sea water begins to exercise an attenuating action after three hours or thereabouts; (2) that this action goes on increasing for from ten to twenty-eight days, at the end of which time the virulence of the microbes is entirely destroyed, although their powers of growth are not abolished: (3) that this attenuating action takes place quite independently of the action of light on the organisms, and that it is possessed by sea water taken from all depths; (4) that the further one recedes from the shore, the smaller is the number of microbes found in the water: (5) as a practical point, it is important that water used to sprinkle the roads during the summer should be drawn from a point well away from any drainage outfall, etc., for although the action of sea water is slowly attenuating, a considerable time is necessary before this action can be complete.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(218) Uræmic Insanity consecutive to Traumatic Stricture.

Cullerre (*Arch. de Neurologie*, July, 1894) reports the case of a man, aged 36, of good general health, but a heavy drinker, who was admitted to the asylum at La Roche suffering from delirium tremens. After twenty-four hours the case was diagnosed to be one of acute melancholia of alcoholic origin, with accesses of violent delirium and panophobic hallucinations, dangerous to his neighbours. There was marked tremor of hands, face, and tongue. His condition improved, and he was discharged in a state of depression without delirium. Three weeks later he was readmitted, certificated as suffering from delirium tremens. It was ascertained that he had not touched alcohol in the interval, but had had several accesses of violence, during which he escaped from the house, and wandered about the village in his shirt. The diagnosis was made of a second attack of acute melancholia, with panophobic hallucinations. The gaze was stupid and immobile, his condition almost cataleptic, and described as though petrified in an attitude of fear. Urine was passed into his trousers. The general health and appetite were good. On December 5th it was noticed that the prepuce was inflamed, the bladder distended, and the legs œdematous. An obstruction midway in the urethra prevented the passage of a sound or fine bougie. A history was then obtained that nine years previously he had fallen astride a table; the accident was followed by hæmorrhage, and later by difficult micturition. There was no sugar or albumen in the urine. The bladder trouble continuing, the viscus was punctured with a Dieulafoy aspirator, 540 grammes of urine being withdrawn. The mental agitation and confusion were profound. Three days later internal urethrotomy was performed, and the following day, although delirium continued, the patient was quieter. As the urinary condition improved, the delirium subsided, and, although some mental confusion with ideas of persecution remained, he was discharged in three months able to resume work. The question is discussed whether the case should be considered one of alcoholism or urinary poisoning. The absence of albumen is not incompatible with the latter. The outbreak had occurred when he had become comparatively sober, and the relapse after some weeks' absolute abstinence. The type of mania was not considered to be the alcoholic; the cataleptic character and extreme hebetude were especially unlike this. The urinary trouble might have persisted some long time without producing these results had not the nervous system been previously weakened by alcohol. In alcoholism two orders of mental troubles occur: (1) those arising immediately from intoxication; (2) those resulting from a tetanic predisposition aroused by alcohol in doses too small to produce its specific effects. The same thing may be said to occur in uræmia, and the case is probably of this variety. Thus, though improvement followed removal of the cause, there was no perfect cure, and three months later the patient still presented a slight hebetude and ideas of persecution.

(219) Atresia of Digestive Tracts.

N. F. Miller (*Bolnitchnaia Gazeta Botkina*, No. 18, 1894, p. 475), having carefully studied the registers of the great Moscow Lying-in and Foundlings' Home (*Vospitatelnyi Dom*), with their 75,000 necropsies on infants, was able to collect 36 (or 1 in 2,100) cases of congenital atresia of the digestive tracts. Of the number, 21 occurred in boys and 15 in girls. In 11 cases the occlusion was situated in the ileum, in 8 in the rectum, in 7 in the duodenum, in 5 in the jejunum, in 3 in the œsophagus, and in 2 in the colon. In a majority of the cases there were present distinct signs of intrauterine peritonitis. The latter condition is thought to be generally the commonest cause of the atresias in the newborn.

(220) Postnasal Growths of Tuberculous Nature.

Lermoyez (*Sem. Méd.*, July 25th) calls attention to what he considers to be a hitherto undescribed variety of postnasal growths. Last year he had under observation two children who, after the removal of adenoid vegetations under normal circumstances, wasted rapidly. More recently he has seen a girl who had suffered from similar growths since infancy, in whom the removal of the vegetations was the starting point of pulmonary tuberculosis, which ran a subacute course. In this case, infection by the instruments used being excluded, there remained only two possible explanations of the occurrence: either the operation had rekindled a latent pulmonary tuberculosis, or else there were tuberculous foci in the vegetations themselves, and the operation had been the means of bringing about an autoinfection. The latter hypothesis was supported by a further case, that of a boy suffering from complete obstruction of the nose caused by abundant adenoid vegetations. These were removed; recurrence, however, speedily took place, and the child began to show signs of cachexia. A second operation was performed, when microscopic examination proved that the supposed vegetations were composed of young fully organised tuberculous tissue, in which no sign of degenerative change could be discovered: the condition, in short, was one of tuberculosis of the pharyngeal tonsil, infection having taken place from within outwards by the blood vessels. Such cases, the author admits, are extremely rare, but they are sufficient to show that a tuberculous variety of adenoid vegetations really exists. There is, so far as the author knows, no way of making a diagnosis except by removing a piece of growth for microscopic examination; but inasmuch as this method may, like an incomplete operation, be the starting point of infection, it is better not to have recourse to it. The possibility of such a condition should always be borne in mind when one has to deal with a case presenting the usual signs of adenoid vegetations in which there is a family history of tubercle. Operative treatment to be successful must be thorough; the *serre-nœud* or the galvano-caustic loop might with advantage be used in such cases. Medical treatment must not be neglected. Lermoyez recommends a course of "intensive chloride of sodium medication" as in the surgical tuberculosis of children. In the discussion which followed, Marfan suggested that the facts reported by Lermoyez might equally well be explained by supposing that the patients were the subjects of latent pulmonary tuberculosis, and that sputum containing bacilli was the vehicle of infection, especially after operation. Chantemesse pointed out that one is not justified in pronouncing a tuberculosis to be endogenetic merely because the lesions are deep seated; in Lermoyez's cases, therefore, the disease might have been exogenetic in spite of the microscopic appearances. Lermoyez, in reply, claimed to have shown that there is a tuberculous variety of postnasal growths which simulates ordinary adenoid vegetations, and which, whatever may be its origin, may be the starting point of general tuberculous infection.

SURGERY.

(221) Sciatica.

J. Schreiber (*St. Petersburg Med. Woch.*, August 25th, 1894), in a paper read at the International Congress at Rome, says that during the past fifteen years a considerable number of patients have been treated by him for (so-called) sciatica. A certain proportion of these cases, he says, suffered from true sciatica (ischias), but in a considerable number the symptoms of disease were due to rheumatic processes affecting the muscles tendons, fasciæ, and ligaments in the neighbourhood of the hip joint. He records three cases from the latter series. The first case was an Italian in whom ischias was diagnosed. After five weeks of ordinary mechanical treatment no improvement had been observed. This led Schreiber to make further physical examination, when he found a swelling in connection with the bone forming the margin of the great sciatic foramen of the affected side. The patient also said that some years previously he had suffered from syphilis. Syphilitic inflammation of the bone, which pressed upon the great sciatic nerve, was then diagnosed. Antisyphilitic treatment was adopted,

and the patient soon recovered. The second case was a patient, aged 36, who suffered from lancinating pain along the sciatic nerve, extending from the pelvis to the knee. Ischias was diagnosed, and the mechanical treatment carried out for six weeks. No improvement followed, and on further examination distinct signs of tabes dorsalis were discovered. The third patient was a man, aged 62, who had been treated for twelve years for sciatica without good result. On close examination he was found to be suffering from rheumatism, which involved the muscles on the inner side of the thigh and the structures around the right hip-joint. Mechano-gymnastic treatment was employed, and in four weeks complete recovery had taken place. Schreiber concludes that a large number of the cases of sciatica which are successfully treated are not neuralgias but rheumatic processes. Both classes of sufferers are cured by electrical and hydropathic treatment, but more certainly by mechano-therapeutic measures. If electro and hydro-therapeutics fail, mechano-therapeutic measures generally succeed. If in the severe cases of old standing and due to rheumatic conditions massage does no good, rational gymnastic treatment must be adopted.

(222) Hydatid Disease.

J. Ross (*Austral. Med. Gaz.*, July 15th, 1894), in a paper read at the Rome Congress gives an account of twenty-one cases of hydatid disease. The liver cases—thirteen in number—he divides into three sets: (1) Those springing from the posterior, superior, or antero-superior aspect, 8 cases; (2) from the inferior aspect, 4 cases; (3) intrahepatic, 1 case. The remaining cases comprised 3 pulmonary cases, 3 abdominal cysts, and 2 cases in which the cysts occupied muscles. Eleven cases were operated upon by Volkmann's method, namely, 3 cysts on the superior aspect of the liver, 4 on the inferior aspect, 1 intrahepatic cyst, 2 pulmonary, and 1 abdominal cyst. Of these one, a girl aged 14, died twenty-two months after operation. The cyst sprang from the posterior aspect of the bladder. The patient improved after operation, but was discharged with a fistula. An abscess formed in eighteen months, an operation was refused, but four months afterwards was permitted, when a large pelvic abscess was opened, but the patient died of exhaustion. No communication was found between the fistula and abscess. In two cases in which the cyst was situated on the superior aspect of the liver the pleural cavity was opened, and the cyst opened by going through the diaphragm. Three made rapid recoveries. In one pleural case a portion of lung had to be excised in order to reach the cyst. In one case in which pieces of hydatid cyst were expectorated physical examination failed to reveal the location of the cyst. Exploratory thoracotomy was performed, and a cyst found in the mediastinum. Being inoperable the wound was closed. As a result the patient lost all symptoms of hydatids. In several cases symptoms were present which were due to nerve pressure by the cyst. Whenever a cyst was located on the convexity of the liver nerve pressure symptoms were noticed, and sometimes they were the only symptoms complained of by the patient. The author advises that the adventitious cyst should be removed whenever possible, as this hastens recovery and prevents complications. Cysts on the convexity of the liver are best operated upon through the diaphragm. Volkmann's method is recommended to the general practitioner, since skilled assistance is not required.

(223) Extirpation of a Primary Sarcoma of the Liver.

J. Israel (*Deut. med. Woch.*, August 23rd, 1894) reports a case in which the patient, aged 15 years, died of numerous metastases three months after the operation. When seen by the author the child was wasted. The abdomen was distended by a tumour, the upper border of which reached the costal margin in the right anterior axillary line. In the middle line it extended from 5 cm. above the pubic symphysis to within 4 cm. of the ensiform cartilage. On the left side it reached the mammary line. It hardly moved with respiration. Between the costal margin and the tumour there was a narrow band of resonance. It could not be determined with certainty whether the tumour was of hepatic or renal origin. At the operation, however, the kidney was healthy. The tumour was found to spring from the right lobe of the liver, and there were no adhesions, except below, to the omentum. It was removed from right to left by the cautery knife. The hæmorrhage was arrested by pressure with gauze. At one place a vein as big as the little finger was divided, and the bleeding could not be stopped by compression. India-rubber tubing, 4 mm. in thickness, was passed round the liver above the line of separation. When this tubing was removed the liver was compressed by the assistant between the fingers and thumbs, and three stout silk ligatures were passed through and round the cut surface. The cauterised surface was then firmly covered with iodoform gauze, one end of which was brought out of the wound. The patient improved, and was up about a month after the operation. About a week later there was evidence of a secondary deposit with pressure in the vertebral column. At the necropsy many secondary growths were found. The liver was greatly enlarged and seamed with nodules of growth. The amputation wound in the liver, formerly about 15 cm., had contracted to 4.5 cm. The tumour removed during life weighed 1,225 g., and was proved to be an angio-sarcoma. The author would look upon the results obtained by operation in 14 cases of hepatic tumour as encouraging. Six of these were syphilitic, and 2 of these 6 died. He then discusses the various methods of treating the liver wound. A single operation, either with the extraperitoneal treatment of the liver wound or with the use of the tampon, is the best. The former is more desirable, but not always practicable. Elsberg's method of fastening the tampon with stitches provides the greatest security against hæmorrhage. The simple packing, as practised above, is not so certain, but secondary bleeding can then readily be recognised. Where constriction by tubing is possible the knife is preferable to the cautery as the large vessels can be surrounded or tied.

(224) Sterilisation of Catgut.

Eastmann (*Annals of Surgery*, July,) says that heat sterilisation is more desirable and more efficient than chemical action, and from a series of experiments he concludes: (1) That catgut can be rendered sterile by heating in olive oil to a temperature of 212° F. for three hours; (2) the method is reliable cheap, and rapid; (3) the quality is not impaired, and gut so treated is more satisfactory as to strength and smoothness than if subjected to the ether-alcohol-bichloride process; (4) a temperature higher than 212° F. is not necessary for sterilising, and injures the gut.—Répin (*Ann. de l'Institut Pasteur*, March, 1894) gives the following method: (1) Remove all the fat by means of ether or carbon bisulphide and twist it into a rounded form. (2) Thoroughly dry it in an incubator, the temperature of which is gradually raised to 110° C. (3) Immediately after this proceed to the process of sterilisation. Place it in a small quantity of absolute alcohol in a strong receiver, which is then to be hermetically closed and put into an autoclave. The temperature of the whole is then to be raised to 120° and maintained at this point for an hour, after which the sterilisation will be complete and the catgut ready for use.

MIDWIFERY AND DISEASES OF WOMEN.

(225) Erythema after Three Successive Deliveries.

Gaertig (*Centralb. f. Gynäk.*, No. 30, 1894) records three labours in the same patient, all followed by severe erythema, though antiseptic precautions were taken. No intrauterine injections were used. The first confinement, when the patient was 26, occurred on April 14th, 1891. There was breech presentation. Much *post-partum* hæmorrhage followed, and the placenta adhered, and had to be detached under chloroform. On the third day an erythematous rash set in, first appearing on the abdomen and spreading over the extremities. Itching was intolerable. There was neither sore throat nor albuminuria, nor fever. On November 2nd, 1892, the patient was again confined; very severe flooding followed, and the placenta had to be detached as before. Next night the rash appeared again, with high temperature, but no sore throat nor albuminuria. The eruption became severe

over the whole body, vesicles developed at some points, and recovery was slow: the patient had become very anæmic from the flooding. On February 16th, 1894, the third delivery occurred. Pregnancy had been normal as before. A large, healthy, male child was delivered; there was the same *post-partum* hæmorrhage and adherent placenta. On February 18th erythema appeared, and, as before, on the abdomen. It spread to the legs and arms. The patient recovered at the end of nine days. On this occasion there was no fever. Gaertig insists that both erysipelas and scarlet fever must be excluded even in the second attack where alone fever occurred.

(226) Rupture of Uterus in Practice.

Labusquière (*Ann. de Gynéc. et d'Obstét.*, August, 1894), at the end of a general review of the subject, concludes that the most prudent course for the practitioner to pursue is to deliver by the natural passages whenever that is possible, by any obstetrical manœuvre or operation whatever, without violence. When such means are impossible without the exercise of a considerable degree of force, the practitioner should open the abdominal cavity even if he has never done so before. The risks of inexperience in such an eventuality are not so great as the dangers of violent attempts at extraction through the vagina. When the abdomen has been opened, the placenta and fœtus must be removed, and the peritoneal cavity well cleaned. Should the uterine wound be healthy and not too extensive, it may be united by sutures, but when there is a wide rent or whenever the uterus is extensively infected, that organ should be removed. Merz, in his valuable statistics recently published, has proved what are the true indications for drainage, and how it is best carried out.

(227) Extrauterine Pregnancy: Elimination of the Fœtus per Rectum.

T. Spannochi (*Raccoglitore Medico*, July 30th, 1894) reports the following case of extrauterine pregnancy, remarkable for the mode of its termination. A robust woman, without trace of disease of any kind, four months after a perfectly healthy labour, began to complain of pains in the hypogastrium. The symptoms pointed to an extrauterine pregnancy, probably in the left Fallopian tube. A month later the sac ruptured, and the fœtus was discharged into the abdominal cavity. Reactive peritonitis around the foreign body came on; then followed suppuration and perforation of the intestine with discharge of pus. Owing to the continuous contractions caused by the presence of the foreign body the intestine became dilated and prolapsed; finally, after twenty-eight days, the fœtus came away through the anus. After a considerable time complete recovery took place.

(228) Eleven Months' Pregnancy: Spontaneous Delivery.

Resnikoff (*Centralbl. f. Gynäk*, No. 24, 1894) had a remarkable case of protracted pregnancy under his observation throughout its duration. The patient was a fairly nourished rather anæmic woman. At the end of 1891 Resnikoff delivered her at term, with the aid of forceps, of her first child. The forceps were used, and the pelvis was found to be rather narrow. He recommended induction of labour about two weeks before term at the next pregnancy. On January 11th, 1893, the period was seen for the last time. Early in pregnancy she was troubled with nausea and vomiting. At the beginning of March Resnikoff examined her, and found her over six weeks pregnant. The movements of the child were noticed in the fifth month. Early in October the patient consulted Resnikoff about the date of term, and he fixed it, on Naegele's principle, for October 18th. She objected to induction of premature labour. For nearly two months he saw no more of her, and was astonished to find, when she called on December 14th, 1893, that she was still pregnant. It transpired that distinct pains had been felt from October 18th to the 20th. They subsided, and she felt well for some time, but two days before this visit fœtal movements, which had continued very distinct up till then, ceased altogether. The os admitted the finger; the child was clearly dead. During the next four days slight pains were felt. In the night of December 18th the pains became very strong, and on the evening of the 19th she was spontaneously delivered of a macerated male fœtus. During this labour no liquor amnii escaped, nor could the patient remember when that phenomenon had occurred. The placenta was strongly adherent, and some fragments being left behind, there was high temperature, with fœtid lochia, but after appropriate treatment the patient recovered.

THERAPEUTICS.

(229) Apocynum Cannabinum as a Cardiokinetic and Diuretic.

The drug has been known for some years in America as an emetic and cathartic, and has also been employed to some extent as a remedy against dropsy. Examined by Schmiedeberg in 1883 it was found to contain an amorphous substance, apocynin, and a glucoside, apocyneine, the first soluble in alcohol, not in water, the second soluble easily in water. The physiological action of a 10 per cent. tincture has been investigated independently by Brandford and Murray, who considered its effects as somewhat similar to those of strophanthus. The latter found that it reduced the frequency of the rapid heart, strengthened its beats, relieved cyanosis, and acted as a good diuretic. Petteruti and Somma (*Il Policlinico*, Nos. 10-14, May to July, 1894) have used the root in two forms: an infusion with water and a tincture. The decoction had a strength of 1 to 3 in 150, that of the tincture being 1 in 10. The results obtained in the two cases were as follows: The action of the decoction is exercised chiefly on the stomach and intestines, promoting first catharsis, and secondly emesis. These effects followed, in the cases quoted, the administration of a decoction of from 1 to 2 grammes of the root in 150 grammes of water, divided into two or three doses in the day. This emeto-cathartic action is manifest either on the first, second, or third day. When it is delayed there are also effects on the urine and heart, namely, increased diuresis, acceleration of the heart beat, and arrhythmia, sometimes also a strengthening of the heart's action. Under these conditions the authors have observed diminution and final disappearance of œdema, and relief of dyspnœa. The decoction is not, therefore, the best form to use in the case of uncompensated valvular lesions on account of the emeto-cathartic action, which is only exceptionally absent. The tincture was free from gastro-intestinal irritant effects, even when large doses were employed. These effects, therefore, are probably due to some substance which is soluble in boiling water, but insoluble in alcohol. On the other hand, marked cardiokinetic effects were obtained from the tincture when employed in doses of 60 to 90 minims daily. It is probable, therefore, that the effects of the decoction are due to the presence of apocynum, those of the tincture to that of apocynin (Schmiedeberg). A marked effect of the tincture is the production of diuresis, which is never accompanied with albuminuria. In fact, when albumen has been present, it has disappeared after a course of the tincture. Apocynum acts, therefore, as a diuretic without irritating the renal epithelium, by virtue of its action on the circulation. Sphygmographic tracings show also a considerable increase in the force of the pulse, the rapidity of which is sometimes markedly diminished. Change in rapidity is not, however, a constant effect, and sometimes the slowing is accompanied by irregularity in the rhythm, due in all probability to a stimulation of the cardiac branches of the vagus. Finally, apocynum appears to increase the arterial tension, but not constantly. On the whole, therefore, the tincture of apocynum is likely to prove useful in cases of imperfect compensation of valvular lesions, either reducing or even completely curing the œdema and dyspnœa, which are the indications of such a condition. It has the advantage over the other cardiac drugs that it does not irritate the primæ viæ, and that it may be used without danger for a long time.

(230) The Properties of a True Antipyretic.

B. W. Richardson (*Asclepiad*, No. 41, vol. xi) says the substance to be used medicinally for the purpose of reducing temperature must have three qualities: (1) It must be antiseptic; (2) it must be volatile; (3) it must have the slightest solubility in blood. If it be not antiseptic, it is negative in its action as a suppressor of heat. If it be not volatile

it accumulates in the blood and tissues, acts then as a foreign body toxic in its nature, and itself causes secondary symptoms which are mischievous and unnecessary, taxing active eliminative organs, like the kidney, to an undue degree. If it be very soluble in the blood and in the fluids of the tissues, it is the more objectionable on account of its fixation and slow elimination. The value of *ammonia* as a medicine rests largely on its possession of the three qualities that have been enumerated. It is a splendid antiseptic, and it is volatile, but it is too soluble, and too powerful a solvent. Given in sufficient doses to check the animal fire, it dissolves the red corpuscles, prevents the free absorption of oxygen from that effect, and by its presence in the blood also tends to prevent oxidation. *Chloroform* is a splendid antiseptic; it is volatile; and, feebly soluble in blood, it does not produce any fixed toxic symptoms, nor tax the eliminatory organs, unless it be pushed to anæsthesia. The author has used it for over forty years as an antipyretic, and with much satisfaction, but the difficulties of its correct administration have stood much in the way. *Hydrate of chloral* is more manageable. It is an antiseptic; it turns into chloroform and sodium formate in the body, so that it is both volatile and eliminative, and, unless it is pushed too far, it is not toxic. In his first observations made on it immediately after Liebreich's discovery of its narcotic effects, Richardson discovered its remarkable power of reducing animal temperature, and pointed out that when it kills by a large dose the mode of death is by reduction of the body temperature. Since then he has employed it regularly as an antipyretic, and the results he has witnessed from its use surpass all others. "It is without doubt" (concludes the author) "when correctly administered an admirable remedy for pyrexia, and in enteric fever it is, I believe, the best."

(231) Injections of Sulphate of Spartein as a Preliminary to Chloroform Anæsthesia.

In a communication to the Société de Biologie (*Sem. Méd.*, August 11th), Langlois and Maurange gave the results of researches made by them on this subject. Dastre and Morat had recommended the use of atropine combined with morphine for the prevention of the cardiac failure which sometimes occurs during chloroformisation, the inhibitory action of the pneumogastric nerves on the heart being in this manner lessened. According to the authors, the same object may be attained by the combination of sulphate of spartein with morphine. Manometric tracings from a rabbit showed the difference at the beginning of chloroform anæsthesia when the animal was under the influence of spartein and when it was in its natural state. In the former case respiratory disturbance is caused by the contact of the chloroform with the nasal mucous membrane, but the heart speedily regains its natural rhythm. The diminution of the excitability of the vagus is not very marked after weak doses (3 centigrammes) of spartein; still it is already perceptible. In the dog, besides the regularity of the cardiac tracings, the authors noted the persistence of the arterial pressure, which keeps at a height of about 10° during profound narcosis. Langlois and Maurange have already employed the method referred to 120 times on the human subject. From 3 to 4 centigrammes of spartein and 1 centigramme of morphine are injected fifteen minutes before the administration of chloroform is begun. In many of these cases the patients suffered from heart disease or had to undergo prolonged operations such as laparotomy, herniotomy, reduction of dislocations; in all of them the heart beats continued full and perfectly regular.

(232) The Effects of Chloroform on the Organism, especially on the Kidneys.

Alessandri (*Il Policlinico*, June 15th, 1894) draws attention to the fact that in most cases the effects of chloroform on the kidneys are practically *nil*. In patients with renal affections, however, this condition of perfect safety cannot be said to exist, and the author urges very strongly the necessity of carefully observing the urinary secretion for one or two days after the administration of chloroform. When renal lesions are actually in existence chloroform should either be avoided, or at least given with the greatest caution, and prolonged or repeated anæsthesias are inadmissible.

PATHOLOGY.

(233) Transmission of Human Cancer to Animals.

In a communication to the Société de Biologie, Boinet (*Sem. Méd.*, June 13th, 1894) presented a report of researches made by him on this subject. He made, with the necessary antiseptic precautions, sixty inoculations on animals (rats, guinea-pigs, rabbits) of various malignant tumours (scirrhus, encephaloid of breast, epithelioma of lip, umbilicus, penis, and uterus, lymphosarcoma of testicle). The results were as follows: In a series of 40 intraperitoneal inoculations, made chiefly in rats, generalisation of the cancer took place only in one case. A month after the intraperitoneal inclusion of a fragment of cancer of the penis from a man, a large rat was seized with complete paraplegia and marked diminution of sensibility. Eight days later the animal died, and on *post-mortem* examination two fragments of the tumour which had been inoculated were found in the peritoneum, and some small nodules on the surface of the liver. Moreover, two cancerous masses as large as cherrystones had developed above the tendinous centre of the diaphragm: they were adherent to the bodies of the dorsal vertebræ, which were secondarily invaded to such an extent as to produce marked deformity of the spinal column. Compression of the cord with consecutive paraplegia had been the result. Histological examination showed that these secondary nodules contained cancerous cells similar to those in the growth which had been inoculated. In a series of 15 subcutaneous inoculations, the results were uniformly negative, the inoculated fragments being absorbed. Subcutaneous injection (in a rabbit) of the juice of the lymphosarcoma of the testicle, however, caused the development of a cancerous nodule as large as a haricot bean at the point of inoculation. Injection of the same material into the pleura of an old rat caused the formation of a large cancerous nodule in the corresponding part of the lung. From these facts Boinet draws the conclusion that human cancer is transmissible to animals. The inoculations are best made into the deep parts of the peritoneal cavity, under the liver or in the neighbourhood of the tendinous centre of the diaphragm. In none of Boinet's experiments did a positive result follow inoculations made into the thickness of glands (breast, testis) or into mucous membranes near to the natural orifices. Cancer of the breast of a bitch was inoculated without effect in the peritoneum and subcutaneous cellular tissue of rats, rabbits, and guinea-pigs.

(234) Some Biological Properties of the Glanders Bacillus.

Bonome (*Rif. Med.*, July 23rd, 1894) has investigated the distribution of this bacillus and its powers of resistance. He has come to the following conclusions:—(1) It is diffused not only by means of the exudations from the organs or tissues of affected animals, but also in the urine and milk. (2) The bacilli may pass from a mother to a fœtus through a perfectly normal placenta as well as through one presenting patches of hæmorrhages. (3) It is distinctly sensitive to the action of drying. If this takes place at a temperature between 25° and 30° in the absence of other organic substances all virulence is lost, and it ceases to develop if the drying process has gone longer than ten days. (4) If the drying is imperfect, as in an old cultivation on agar, the virulence is retained for several weeks. In distilled sterile water the bacillus dies out in five or six days. (5) It offers a relatively great resistance to heat. (6) Cadaverin in the proportion of 1 in 40,000 to 1 in 60,000 causes the bacilli to grow in the form of long filaments, and destroys all pathogenic powers. These phenomena are not transmitted to subcultures on normal media. (7) In the serum from a horse which has been affected with glanders the bacillus does not vegetate, assuming a kind of resting form. (8) In normal ox serum the bacillus presents almost the same phenomena, and this serum, filtered after a prolonged contact with the bacilli, possesses curative powers against the disease in certain animals. (9) Dog's serum, collected during treatment with mallein, is not suitable for the growth of the glanders bacillus. This may explain the protective powers of mallein against the disease in this animal.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(235) Circular Neurasthenia.

Oddo (*Rev. de Méd.*, July, 1894) relates a case of an alternating form of neurasthenia. On alternate days the patient presented symptoms of cerebral neurasthenia—intellectual inaptitude, incapacity to fix the attention, difficulty in expressing ideas, some amnesia, indifference to pleasures or business affairs, anxiety, and somnolence. He also had sensations of heat and cold, sweating, dyspeptic symptoms. On the intervening days there was overactive cerebration. The author then discusses the diagnosis. At first it was thought to be malaria, on account of the shivering and sweating. The temperature was never raised nor the spleen enlarged, and the interval did not represent a period of normal health. The chief feature in the case was the psychical condition. It was not an example of the *folie circulaire*. Sollier described a case characterised by periods of depression and excitement. The development of the disease is slow, the phases becoming well marked later. In the author's case the intervals were very regular, only the intensity varying. The stage of depression began in the evening, and the different period of each phase was regularly repeated. The author strongly believes in the reality of this disease described by Sollier and himself.

(236) Examination of Internal Organs.

Benderskv (*Wien. med. Woch.*, September 1st, 1894) discusses his method of auscultatory percussion as applied to determine the limits of the thoracic and abdominal organs. He says that in respect to the stomach it gives the best results. A soft stethoscope is placed over the organ to be examined. When the lower limit of the stomach is reached, the percussion note is either but faintly or not at all heard. Lower the note of the colon can be made out, and it is said that it is possible to ascertain the width of the transverse colon, and thus to recognise when it is dilated. The upper limit of the stomach can only be relatively determined. In some cases the boundaries found for the liver and spleen have been ascertained to be correct after death. Fluid in the abdomen has been found to extend one and a-half to two fingers' breadth higher than was indicated by ordinary percussion, and in the same way the cardiac dulness has been made out to be larger. Renal percussion may also thus give more accurate results. The author concludes that the boundaries, especially of the abdominal organs, and particularly of the stomach and parts of the intestine, can thus be satisfactorily ascertained. The method is specially useful if the observer be slightly deaf. The number of cases in which gastric dilatation has been incorrectly diagnosed will be diminished by this method of examination. The author describes and figures a collective stethoscope capable of being used by a number of observers at the same time.

(237) Ophthalmoscopic Changes in Epilepsy and General Paralysis of the Insane.

Oliver (*Univ. Med. Mag.*, March, 1894) gives the results of a series of observations on this subject, based on nearly two hundred cases, with the control of results by microscopic examination of the retina and disc *post mortem*. In epilepsy these changes are "a chronic retinitis and a chronic perivascular inflammation associated with incipient degeneration of the optic nerve." These indications are slight and not often definite. On the other hand, the changes in general paralysis are so positive and persistent in their characteristic aspects and so distinctly correlated to the intensity of the malady as to be very striking in this disease, and in a measure able also to indicate the intensity of the affection. The chief neural and retinal lesions are most accentuated in the second and third stages of general paralysis, and they correspond in character with the cortical lesions which are simultaneously exhibited. These consist of (*a*) dilatation of the vessels, with thickening and infiltration of their coats, and at their entrance into or exit from the centre of the disc the vessels are distended and covered with leucocytes in every stage of diapedesis. Coextensive with this vascular change is a change in the nerve cells; these latter, as well as their processes, become granular and degenerate, and the cells of Deiters proliferate. The nerve fibres also undergo degeneration, and the author points out not only the value of these ocular changes, which can be recognised by the ophthalmoscope, but the reason for the retinal changes corresponding in nature to the cortical changes, namely, that—as shown by the researches of Hatschek—the retina of vertebrates is a direct outgrowth from the brain of the embryo, and therefore subject to a parallel series of morbid lesions, the value of which for diagnostic purposes is therefore considerable.

(238) Cervical Lordosis with Laryngeal Pressure Ulcers.

Koschier, of Stoerck's clinic, reports (*Wien. klin. Woch.*, August 30th, 1894) three cases of lordosis of the cervical spine with pressure ulcers over the cricoid cartilage and laryngeal stenosis. In all three cases the lordosis was compensatory. Case I. A man, aged 65, had suffered for four weeks with difficult breathing and more recently with difficulty of swallowing. In the region of the larynx there was a bulging of the post-pharyngeal wall forward. There was much swelling of the arytenoid region extending into the arytenoepiglottic folds, but no ulceration could be seen. The vocal cords were fixed. Tracheotomy had to be performed. Death occurred from deglutition pneumonia some twelve days later. Corresponding to a defect in the posterior pharyngeal wall there was an ulcer on the hinder surface of the posterior laryngeal wall. The cricoid cartilage was to some extent necrotic. Case II. A man, aged 52, died from pulmonary tuberculosis. The ulcer on the posterior pharyngeal wall was partly gangrenous, and an ulcer similar to the above was found on the laryngeal wall. During life there had been no difficulty in swallowing. Case III. In a man, aged 60, a considerable swelling was found on the posterior pharyngeal wall so as to make it impossible to see the interior of the larynx. Tracheotomy had to be performed. Three weeks later the patient died of purulent bronchitis. The spinal curvature was very sharp and the lower border of the fourth vertebra very prominent. The aryteno-epiglottic folds were greatly swollen and the entrance to the larynx much narrowed. An ulcer was found on a level with the cricoid cartilage, which latter was to some extent necrotic.

(239) Acetone in the Stomach Contents.

Savelieff (*Berl. klin. Woch.*, August 13th, 1894) has examined the stomach contents for acetone in a number of healthy and diseased conditions in Senator's clinic. The iodoform reaction was the test used. The author first examined the food stuffs serving for the test meal for acetone with negative results. In 3 cases of gastritis, 2 of gastric ulcer, 7 of dilated stomach, 1 of gastric carcinoma, 2 of neurasthenic dyspepsia, and 1 of phthisical dyspepsia no trace of acetone was found. The author's results agree with those of Penzoldt, but are in opposition to those of von Jaksch and Lorenz.

SURGERY.

(240) Suppuration of the Frontal Sinus.

Luc (*Arch. Internat. de Laryng. de Rhinol. et d'Otol.*, July-August, 1894), describes three cases in which he operated by the external method. The first was one of chronic empyema with granulations of the right frontal sinus and ethmoidal cells. The first opening and curetting were insufficient, and the suppuration continued. Luc then made an opening on a much larger scale, removing the whole of the anterior wall of the sinus and obliterating the cavity. Suppuration persisted in the ethmoidal cells, causing regret that the ethmoidal cells had not been freely opened from the frontal opening at the time of the operation. The second case was of similar nature, but had made its way into the orbit, causing considerable swelling of the upper eyelid. The condition had apparently arisen three weeks previously as the result of a typhoid attack, but the aspect of the bone and granulations indicated that it was of old standing, and that the feverish attack was probably due to the

frontal suppuration. The sinus was laid freely open, and a wide passage was made through the ethmoidal cells into the nose. The wound was drained by a large tube in the nose, and closed externally in a fortnight. The third case was an acute one, affecting the right frontal sinus in a young girl. The sinus and ethmoidal cells were opened. Drainage was carried out by means of an intranasal tube, and external healing took place immediately, recovery being complete in a few days. Luc recognises two forms—acute and chronic—either of which may be accompanied by frontal pain, or else latent, and characterised by purulent nasal discharge emanating from the middle meatus. It often co-exists with suppuration in the ethmoid cells or the antrum of Highmore. Transillumination is only of value when it shows positive opacity, and is infinitely less valuable in this than in antral disease. Frontal empyema may be diagnosed almost with certainty when immediately after an irrigation of the antrum pus reappears in the middle meatus. Even if this arises from the ethmoid cells the best method of treating these is to open the frontal sinus, as opening them from below is dangerous both to the brain and to the orbit. Attempts to treat by irrigation through the natural passages is justifiable only in very recent cases. The opening into the sinus should be made immediately above the root of the nose, and by means of a gouge and mallet, and it should be large in old cases with extensive granulations. If the whole anterior wall is to be removed a punch forceps may be employed. In every case a large opening should be made through the ethmoid cells. When once drainage is made secure by the nasal opening, the external wound may be sutured. Granulations are scraped away, and the surface swabbed with chloride of zinc of the strength of 1 in 3.

(241) Excision of the Wrist-Joint.

Miller (*Edin. Med. Journ.*, August, 1894) describes a method of excising the wrist, devised by Heron Watson some years ago, which is not very widely known. The procedure is as follows: The knife is entered about one inch and a half above the styloid process of the ulna, towards the palmar aspect, and carried down to the metatarsal bone of the little finger, and a short distance along it. An incision about 3 inches in length is thus made down to the bone. The lower end of the ulna is then cleared and fully an inch of it removed. The carpus is then exposed and removed piece by piece, the trapezium only being left. The ends of the metatarsal bones can then be dealt with by gouge or saw, being turned out of the wound if necessary. Next the end of the radius is turned out, which can be done quite easily, and sawn off. Last of all the trapezium is examined and, if diseased, removed. Each step of this operation, it is stated, is very easy, and, after removal of the necessary amount of diseased bone, very few vessels require to be ligatured. During the last six years Miller has excised the wrist by this method ten times. In one of these cases subsequent amputation was necessary; in another amputation was advised, but not submitted to; in three more cases the disease returned, necessitating scraping: while in the remaining half of the cases the disease did not return, and a useful hand was obtained. The advantages of this operation, it is held, in conclusion, are these: (1) Only one incision is necessary. (2) Drainage is very efficient, the wound being on the side of the hand which is the lower in the position in which the hand is usually carried. (3) The resulting cicatrix is hardly visible, and therefore the appearance of the hand is fairly natural after recovery. (4) The operation is very easy of performance.

(242) Catheterisation of Arteries.

Severeanu, of Bucharest (*Progrès Méd.*, August 11th) says that in many cases in which he has amputated limbs for gangrene sloughing of the stump has occurred, with the result that healing took place by second intention, or a second amputation had to be performed higher up. This has especially been the case in the lower limb after amputation of the foot. It occurred to the author, therefore, that it might be useful to restore the perviousness of the plugged arteries by passing a catheter into them. He put this idea into execution for the first time in the case of a man between 50 and 60 years of age, on whom he operated for gangrene of the foot due to weakness of the heart's action. Arterial pulsation could only be felt high up in the thigh; the gangrene had invaded the leg, and was spreading upwards. Amputation was performed at the seat of election; what slight bleeding there was during the operation was little more than capillary oozing: there was no arterial jet. The author had provided himself with gum elastic catheters (Nos. 1, 2, and 3, Charrière's scale) thoroughly asepticised by means of alcohol and carbolic acid. These he passed for their whole length into the lumen of the divided arteries, moving them up and down in the vessels. Soon a little blood escaped by the side of the catheter; on withdrawing the instrument the force of the blood stream expelled some cylindrical plugs having the form and size of the several arteries concerned, and the local circulation was re-established. The arteries were then tied. The tissues of the stump soon acquired a healthier colour, and healing took place by first intention. Since then Severeanu has had recourse to the same procedure whenever, in amputating for gangrene, he has found plugging of the arteries. As a rule the catheter passes completely into the vessel. In some cases, however, it has been found impossible to introduce it owing to adhesions formed between the coagulum and the vessel wall; in these circumstances partial or complete gangrene of the stump is frequent.

(243) The Operative Treatment of Hæmorrhoids.

Trinkler (*Centralbl. f. Chir.*, No. 30, 1894) describes a method he has practised with much success in the operative treatment of internal piles. He dilates the anus, and then treats the swellings by ligature and the application of the actual cautery. The final step, to which he attaches great importance, is free division of the internal sphincter. This practice, he states, is in accordance with the important rule in surgery that wounded parts ought to be kept at rest. Moreover, it allows a strict antiseptic treatment, as it enables the patient to tolerate, without suffering any pain, the presence of a large plug of iodoform gauze in the rectum. Incision of the sphincter is very beneficial in cases of hæmorrhoids complicated by prolapsus ani. The patient is no longer able to force down the rectal mucous membrane, and the rest afforded to the lower part of the rectum by this operation helps to restore the normal circulation of the bowel and anus, and favours involution of the hypertrophied circular and longitudinal muscular fibres.

MIDWIFERY AND DISEASES OF WOMEN.

(244) Aseptic Midwifery without Internal Disinfection.

Mermann (*Centralbl. f. Gynäk.*, No. 33, 1894) discusses aseptic as distinguished from antiseptic delivery. He brings forward statistics of 300 labours in the Mannheim Lying-in Hospital from December 1892 to February 1894. In no case, not even before or after operative interference, were antiseptics introduced into the internal organs. Unless the labour was far advanced, each patient was examined internally. Not one mother was lost: one, it is true, had phthisis, and was transferred to a general hospital where she died. In no case did any severe infectious disorder occur. Mermann, adding the above to previous statistics, can show a series of 1,200 labours without one instance of fatal infection. Two deaths are included, but in one—the case of phthisis just noted—death was not due to the labour, the second was a case of rupture of the uterus. Mermann shows that antiseptic midwifery cannot claim such favourable results.

(245) Hysterectomy in Diseases of the Uterine Appendages.

Baldy (*Ann. of Gyn. and Pediatry*, July, 1894) has made researches to determine whether after removal of the ovaries the uterus, if left *in situ*, serves any useful purpose. He was able to convince himself that in such cases the womb is perfectly useless, its true function in the organism being to contain the embryo. The uterus does not serve as a support to the vagina, which is held up by the broad ligaments, which are divided in double ovariotomy. Moreover, the whole uterus can be removed and the cervix left intact, so that the connections between the vagina and

the neck of the womb are not interfered with. There is, further, the fact that after a double ovariotomy the patients are often not completely cured, but for month after month complain of pain, metrorrhagia, discharge of muco-pus, etc., whilst, on the other hand, cases in which hysterectomy is performed on account of symptoms persisting after ovariotomy, are always cured. The author gives details of four cases in point. Hysterectomy does not increase the mortality above that which follows double ovariotomy, and, moreover, the presence of the uterus is a danger to the patient. It is often attacked by metritis, and it may become the seat of malignant or tuberculous disease. Twenty per cent. of cases of pyosalpinx are of tuberculous character, and in such cases the uterus is easily infected. It is, therefore, safer in many cases —though not necessarily in all—to remove the uterus at the same time as the appendages. In the discussion which followed, Krug expressed his agreement with Baldy. He said it was now fully established that the persistence of symptoms was due to the presence of the inflamed uterus, the original seat and primary cause of all the lesions. Hysterectomy should, therefore, be performed in all cases in which removal of the adnexa on both sides was necessary. Hanks also said that he had found that in his own cases the persistence of symptoms after double ovariotomy was due to the uterus having been left behind. Hysterectomy made more perfect drainage possible, was followed by steadier convalescence, and ended in a complete cure. The operation should, however, be reserved for serious conditions such as the following: Old pyosalpinx complicated by purulent or chronic catarrhal endometritis: puerperal salpingitis or ovaritis, accompanied by puerperal endometritis; and salpingo-ovaritis, with tough adhesions and retroverted uterus. On the other hand, Byford held that hysterectomy was preferable only when it was a better operative procedure than simple extirpation of the appendages, and when the uterus could not be cured without removal. Cushing laid stress on the difficulties and dangers of the operation: Gordon thought the removal of a healthy and normally-placed uterus useless; Wathen and Mc E. Emmet were opposed to hysterectomy in the absence of definite indications. Gill Wylie thought the uterus should be removed with the adnexa in cases of malignant disease, obstinate uterine inflammation, sepsis, and fibroma, and, as a general rule, in patients over 35. In the great majority of other cases, bilateral removal of the adnexa was sufficient, and was not generally followed by the reappearance of painful symptoms.

(246) Suckling and Sterilised Milk.

Budin (*Nouv. Archives d'Obstét. et de Gynéc.*, August 25th, 1894) has observed, for more than a year, the effects of sterilised milk employed with or without suckling. The results are excellent; the sterilising is effected by placing a bottle of milk in a water bath raised to boiling point. The milk is immediately taken, and never left in the half-empty bottle. As Chavanne has shown, the temperature of 212° changes the caseine so as to render it highly digestible. This sterilised milk is of great service in cases of (1) infants who cannot bear the milk of any wet nurse; (2) infants whose mothers can suckle but have not enough milk; (3) infants with hereditary syphilis whose mothers cannot suckle; and (4) cases of congenital malformations of the mouth preventing suction. It is useless to add water to the milk.

(247) Fibroid Disease and the Uterine Muscular Tissue.

Kleinwächter (*Frauenarzt*, September, 1894) maintains that the researches of Rösger have at length thrown light on a subject hitherto very obscure, the arrangement and development of the muscular tissue of the uterus. They confirm a theory established by Kleinwächter himself ten years ago, relating to the development of fibroids. The embryonic cells of the united Müller's duct are the common origin of the walls of the uterine vessels and of the muscle cells of the uterine walls, and the development of these two elements proceeds simultaneously. The action of the muscular fibres of the uterine walls is directly designed to influence the blood supply. Kleinwächter dwells on the importance of Rösger's researches, but notes that he himself has already shown that myomata are originally developed from the muscular coat of uterine arteries, a change not hard to understand when he demonstrated the close relation between the muscle cells of the vessels and those of the uterine walls. Rösger also discovered that, from the first, the embryonic cells of Müller's duct separated into two layers, the outer being the muscular and vascular tissue above described, the inner the subepithelial mucous tissue, more properly termed "decidual tissue."

THERAPEUTICS.

(248) Chloralose in the Treatment of Night Sweats.

J. Sacaze, in a former paper on chloralose (*Sem. Méd.*, 1893, Annexes p. lxx), called attention to the fact that in several cases of pulmonary phthisis in the third stage, in which chloralose was given for insomnia, not only was sleep produced, but the night sweats, which had previously been very profuse, entirely ceased. This effect persisted during the whole time the drug was administered, the sweats returning as abundantly as before whenever it was discontinued. Since then Sacaze has continued his observations on this point, and reports that, with rare exceptions, phthisical patients have experienced great relief, both as regards insomnia and as regards night sweating. In certain other chronic affection of the lungs —chronic bronchitis, fœtid bronchitis, dilatation of bronchi—which are sometimes accompanied with profuse sweating, almost identical results have been obtained. The author, however, thinks it would be rash to conclude that chloralose would be as efficacious in all cases of abnormal secretion of the sweat glands, whether due to nervous disorder, to administration of pilocarpin, or to other causes. He does not attempt any explanation of the mechanism by which chloralose stops sweating in the class of cases referred to. He thinks that possibly some modification of the infective processes going on in the lungs may play some part in the effect. As a rule, small doses of chloralose were used. The administration was begun with cachets of 50 centigrammes, one of which was taken when the patient wished to go to sleep, the dose being repeated in half an hour if no effect was produced, and twice afterwards at the same interval of time, making a total of four cachets if necessary. In some few cases four doses of 10 centigrammes were given in the same night. In such cases of exceptionally obstinate insomnia the author suggests that cachets containing 5 centigrammes of chloralose with 15 to 20 centigrammes of sulphonal should be given; such a combination, he says, would have the same effect both as regards the production of sleep and the suppression of sweats. When febrile attacks occur in the evening a small quantity of sulphate of quinine may advantageously be added to the chloralose. He thinks the small doses advantageous not only as preventing any undesirable secondary effects, but as making it possible to continue the administration for several days. Sometimes the improvement continues, although the patient may have taken only a few doses.

(249) Cactus Grandiflorus in Heart Disease.

A. V. Mikhailoff (*Kharkov Jurnal Meditziny i Hyhieny*, No. 2, 1894) relates two cases of Graves's disease, three of cardiac organic affections, and two of chronic parenchymatous nephritis, in which he used fluid extract and tincture of cactus. The former was given in doses of 5, and the latter in doses of from 10 to 45, drops thrice daily. He found that (1) the administration rapidly induced a rise of arterial tension which, however, was but very slight, and disappeared shortly after discontinuing the drug; (2) in cases of Graves's disease the secretion of urine increased, while in patients with renal disease it remained unaltered; (3) cardiac palpitation and dyspnœa quickly subsided, this effect being especially pronounced in exophthalmic goitre; (4) to secure a marked and permanent improvement a prolonged administration of the remedy in gradually increasing doses seems to be necessary.

(250) Tizzoni's Antitoxin.

Hübener (*Deut. med. Woch.*, August 16th, 1894) says that according to Behring's investigations serum must have a very high immunity value for

the cure of tetanus. Tizzoni and Cattani's serum is said to possess a value equal to 1 in 100 million. In the laboratories of these Italian observers, however, rabbits have been used, and these animals are known to have a much less marked susceptibility to the tetanus poison. The author has investigated, according to Ehrlich's method, the immunity value of the Tizzoni serum as supplied by Merck. The powder is soluble in ten times its quantity of water, a clear opalescent solution resulting. The immunity equivalent is set down as 1 in 100 millions. The tetanus poison used by the author in this investigation was the toxin prepared by Brieger, the minimum fatal dose of which is 0.4 μ. He found the immunity value of the serum in question 30 million as against 100 million. The following conclusions are drawn: Tizzoni serum, instead of being ten times stronger than Behring's, is really three or four times weaker, and it would not suffice for the cure of severe or late cases of tetanus, as doses of 200 to 400 c.cm. would be needed. This insufficient curative value also accords with the results obtained by Beck. These experiments would show that this serum, as supplied by Merck, does not possess the value in experiments on animals attributed to it, and that it cannot cure severe or late cases of tetanus in man.

(251) Spermin.

O. J. Bogusz of Moscow (*Vratch*, 1894, Nos. 22 and 25) has devised a cheap and easy method of preparing spermin and its salts. As materials may be used either testicles, ovaries, and pancreas from mammals, or hard and soft roes from fishes, or cod-liver oil (especially the white kinds, which, according to the author's researches, contain spermin in larger quantity than brown or yellow ones). The best and cheapest material is afforded by the roes obtained during the spawning time, when the proportion of spermin attains its maximum. When the spawns or milts are employed, the expenses of preparation do not extend to 4 or 5 *kopeikas* (about 1d.) per 1 grain of sulphate of spermin; in the case of glands from mammals the price rises to 7 or 8 *kopeikas*. The writer promises to publish the details of his method at an early date.

(252) Some Bad Effects of Chloralose.

Touvenaint (*Journ. des Practiciens*, May 19th, 1894) reported to the Paris Société de Thérapeutique the following cases illustrating the ill-effects sometimes produced by chloralose. (1) A diabetic patient, aged 60, took at 10 P.M. a cachet containing 20 centigrammes of chloralose, and quickly fell asleep. Two hours later he awoke in a stupid drunken state: a repetition of the dose was again followed by sleep. Three hours later the patient suffered from *malaise*, general tremor, incoherent speech, inability to move, nausea, difficulty of swallowing liquids, and deafness. These phenomena were almost immediately followed by dilatation of the pupils, coldness of the skin, extreme slowness of pulse, torpor, and involuntary passage of urine and fæces. Enemata of black coffee, injections of caffeine and ether, and sharp stimulation of the skin by blisters and friction were necessary to restore the patient. (2) A woman, aged 35, suffering from painful uterine fibroma with insomnia, had exactly the same symptoms after taking two cachets of chloralose each containing 20 centigrammes. In the former of these cases Touvenaint was at first inclined to attribute the toxic phenomena to the constitutional condition of the patient, but the identity of the symptoms in the two cases led him to conclude that they were the effect of the chloralose. Bardet said that such accidents following the use of chloralose were becoming not uncommon. He thought at first that this was to be attributed to a defective manner of preparation of the drug. He believed now that this had nothing to do with them, and he cited the case of a woman who, after taking chloralose on one occasion had experienced symptoms similar to those described, and a year later the same drug had produced exactly the same effect.

(253) Hypodermic Injections of Pilocarpin in Meniere's Disease.

These cases were treated by Labit, in Moure's clinic at Bordeaux (*Rev. de Laryngol., d'Otol., et de Rhin.*, September 1st, 1894) and occurred in a governess, aged 68, a stoker, aged 49, and a female cook, aged 28. The first had previously been affected with sclerotic catarrh of both middle ears; the others were quite free from any aural disease of the kind, but were, from the nature of their occupations, exposed to extreme heat. In all there were the typical symptoms, noises, vertigo, nausea, or vomiting, and deafness to osseal as well as aërial sound vibrations. In the second case one ear only was affected. The first received fifteen injections of from a quarter to a whole centigramme (about $\frac{1}{5}$ to $\frac{1}{2}$ of a grain), the second thirteen of from a half to two centigrammes (about $\frac{1}{2}$ to $\frac{1}{2}$ grain), and the third eight of from a quarter to one and a-half centigramme (about $\frac{1}{5}$ to $\frac{1}{2}$ grain) continued and increased. In all the cases the vertigo disappeared, the noises diminished, and the hearing was to a certain extent restored. The writer compares the absorption produced to that observed in pleural and peritoneal effusions under the action of pilocarpin. Success depends upon the correctness of the diagnosis and the early adoption of the treatment.

PATHOLOGY.

(254) Transmissibility of Cylindrical Epithelioma.

H. Morau (*Arch. de Méd., Expér. et d'Anat. Pathol.*, September, 1894) has made researches on this subject. He used for the purpose a white mouse having in the right axilla a tumour of the size of a small hazel nut, which was shown by microscopic examination to be a cylindrical epithelioma. A fragment of this growth removed with the usual antiseptic precautions was inoculated under the skin of the axilla in white mice of different stocks. The results of these experiments were positive, as was shown by the formation at the seat of inoculation or in some other part of the animal's body, of small hard nodules which proved to be cylindrical epitheliomata. The author concludes that in white mice tumours of the kind referred to can be engrafted on animals of the same species. Further experiments led the author to the following conclusions: Heredity plays a considerable part in the development of cylindrical epithelioma in the white mouse by preparing the soil for the growth. Pregnancy hastens their evolution. They may become generalised, and generalisation is hastened by injury of any kind. In proportion as they develop in new organisms, they become less inoculable and less virulent. When not ulcerated they contain no bacteria, but when they do ulcerate, all the micro-organisms of suppuration are found in them.

(255) Avian Diphtheria and Angina in Man.

Loir and Duclaux (*Ann. de l'Inst. Pasteur*, August 25th, 1894) state that the rearing of fowls has been almost abandoned in Tunis owing to the enormous mortality caused by a disease characterised by the formation of false membranes in the throat. Experiments made in the Bacteriological Institute of Tunis showed that the disease was due to a small bacillus present not only in the false membrane but in all the organs and tissues, and quite different from the true bacillus of human diphtheria (Klebs-Loeffler). The bacillus has rounded extremities and is mobile; on gelatine it gives a creamy-white streak, on agar-agar a greyish-white streak (at 39° C.); on potatoes at ordinary temperatures an abundant yellowish-white growth. In bouillon at 35° to 40° C. it grows rapidly, and renders the liquid turbid, yielding finally a viscous whitish deposit. In stab cultures it gives a small whitish growth. It is both aërobic and anaërobic. It is easily stained by ordinary methods but not by Gram's. It is killed by a temperature of 60° C. Heated to 55° C. for half an hour its virulence is attenuated, and it can be used for vaccinating fowls. Among persons attending to fowls in Tunis a large number of cases presenting symptoms of diphtheria occur. Loir and Duclaux have made a bacteriological examination of six such cases, and in one, a child suffering from severe angina, with false membranes, which were neither very thick nor very adherent, they found the bacillus which they had observed in fowls. The child resided at a farm at which the fowls had been suffering from diphtheria for six months.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(256) The Tendo Achillis Phenomenon.

Ziehen (*Dent. med. Woch.*, August 23rd, 1894) concludes a discussion on this subject based on a large number of cases. He has found that out of 188 general paralytics this tendo Achillis or ankle-jerk was normal only in 57. An inequality between the two sides was very common. The gradual diminution and disappearance was actually observed. Sometimes the loss of this tendon reflex was an early symptom. The knee-jerk is not always absent at the same time. Thus in 23 cases the knee-jerk was present, and yet the ankle-jerk was lost on one or both sides. The loss of the ankle-jerk is very uncommon in functional psychoses or neurasthenia, and the author does not believe that it is often absent in health. Once the jerk unquestionably reappeared under vigorous mercurial inunction. Foot-clonus is very common in general paralysis, but is of no diagnostic significance. A one sided or double sided weakening of the ankle jerk is strongly in favour of general paralysis as against functional psychoses. It will not serve to distinguish general paralysis from senile dementia, cerebral syphilis, or chronic alcoholism. In senile dementia it was altered in 30 cases. In secondary or congenital imbecility it may point to congenital syphilis as a cause. Foot-clonus and unequal ankle-jerks are more common in hysteria than in epilepsy, the increase being on the side of the hemianæsthesia. In chronic alcoholism, dimished or absent ankle-jerk was commoner than foot clonus. Absent ankle-jerk on one or both sides is very uncommon in functional psychoses or neurasthenia, being present without doubt only in four cases. The author concludes that the ankle-jerk is quite as important as the knee-jerk, that absolute indications are as rarely given by it as by the knee-jerk, that absence on one or both sides is of the greatest importance, and that the loss of it in a mental case points with great probability to general paralysis or syphilis of the central nervous system, or in a less degree to senile dementia or alcoholism. Peripheral complications, such as sciatica, etc., must be excluded.

(257) Paralysis of the Abductors of the Vocal Cords in the Course of Tertiary Syphilis.

Four years after the primary infection the patient was seized with simultaneous right-sided paralysis of the face, arm, and leg, with loss of speech. Four months later he came under the observation of Bouhy and Mendel (*Arch. Internat. de Laryngol.*, etc., July, August, 1894). The hemiplegia had diminished, but he had recently developed a paralysis of the right oculomotor. He spoke in a somewhat hoarse falsetto voice, and suffered from dyspnœa on exertion. On laryngoscopic examination the cords were found to remain immobile on inspiration; they moved very slightly on phonation, and were imperfectly stretched. The palate and tongue were unaffected. There was emotional cerebral disturbance. No evidence of pressure on the recurrents was found. The seat of the disease was diagnosed as in the bulbar or circumbulbar region—probably syphilitic pachymeningitis.

(258) Influence of Erysipelas on Cholera.

N. A. Blagoveshtchensky (*Meditzinskoie Obozrenie*, No. 15, 1894) has observed four consecutive cases of Asiatic cholera which became complicated by erysipelas. In all of them the appearance of the latter disease abruptly changed the clinical aspect of the primary disease, the diarrhœa and cramp immediately ceasing, etc. All the four patients made good recoveries. The author feels justified in concluding: (1) The erysipelatoid process shortens the course of Asiatic cholera. (2) The subnormal temperature of the latter at once gives place to a high febrile one peculiar to erysipelas. (3) Anuria disappears on the second or third day of the complication, while apathy even vanished within twenty-four hours. (4) The general condition, sleep, and appetite steadily improve.

(259) Hystero-epilepsy due to Ascarides.

S. N. Koneff (*Meditzinskaia Beseda*, No. 12, 1894) relates at length a case of severe reflex neurosis due to intestinal parasites. The patient—a peasant lad, aged 18—came under his observation with "fits," recurring with increasing frequency and severity. They had commenced in 1885, at first occurring twice or thrice a year. At the time of admission the fits occurred several times weekly, the seizures lasting from one to two and a-half minutes and mostly recurring successively twice or thrice with intervals varying from five to ten minutes. The fits consisted in exceedingly violent clonic convulsions, accompanied by loss of consciousness, insensibility of the pupil, trismus, etc. They were ushered in by globus hystericus or epigastric pain, or sometimes vomiting, and invariably made their appearance shortly after a meal. After the attacks the patient always remained in a drowsy state for one or two hours, coming round but very slowly and looking extremely weak. The administration of KBr (in increasing daily doses of from 20 to 80 grains during a month) and a subsequent course of laxatives (Carlsbad salt, rhubarb, etc.) did not produce the slightest effect either on the frequency or on the severity of the fits. Ultimately, having elicited the fact that the lad had voided "a worm" five years previously, the author tried santonin (1 grain three times daily for three days), with the result that seven ascarides were expelled, after which all the symptoms described "vanished as if by magic," and never recurred up to the patient's discharge five and a-half months later.

SURGERY.

(260) A New Operation for the Removal of Enlarged Cervical Glands.

Dollinger (*Centralbl. f. Chir.*, No. 36, 1894) describes an operation for the subcutaneous extirpation of tuberculous lymph glands in the neck and submaxillary region. The posterior half of the scalp having been shaved, and the whole of the scalp and the skin of the affected side of the neck carefully disinfected, an incision is made commencing behind the external ear, and carried in a curved line with the convexity backwards and downwards towards the middle line of the neck behind. The skin and superficial fascia are divided, and the anterior and lower flap is undermined by finger and elevator until the enlarged glands are reached; these, if they have not broken down or contracted firm adhesions with surrounding soft parts, may now be readily detached by the elevator and drawn through the wound. The skin forming the lower flap is so yielding, especially in women and children, that it is possible by this operation, the author asserts, to reach glands situated near the chin, and even those in the supraclavicular region. The wound, when made under strict antiseptic precautions heals quickly, and the scar is hidden by the new growth of hair.

(261) Parotid Tumours.

Mandowsky (*Aerzt. Praktiker*, Nos. 32 and 33, 1894) relates a case of unusual parotid tumour, under the care of Professor Schüller. The patient was a woman, aged 23. The tumour had existed for nine years, but had recently increased in size. On examination, a swelling as large as a pigeon's egg was found situated just below the lobule of the right ear. It was adherent to the surrounding tissues, soft and elastic on palpation, and at its lower margin was a second smaller tumour. The general health of the patient was good and there were no signs of any previous chronic inflammatory processes. After removal the tumour was found to have, microscopically, the structure of a gumma. On further inquiry, it was found that the patient's father had suffered in his early years from syphilis, and on this account it was decided that the tumour was a manifestation of congenital syphilis. According to the author, surgical literature contains few, if any, records of similar cases. In No. 33 the same author describes an operation which Schüller performed for the removal of an extensive malignant tumour of the parotid gland. The patient was a woman, aged 48, who for two years had suffered from a swelling which, at the time of operation, occupied the right

parotid region, extending backwards to the sterno-mastoid, downwards into the neck, and on its deep surface it filled up the retro-maxillary fossa. Over a portion of its surface the skin was involved, being of a bluish-red colour. The facial nerve of the affected side was involved in the growth. The swelling was diagnosed as a carcinoma of the parotid gland. The tumour was separated from its connections by making a long incision anterior to it, slightly convex posteriorly, and a similar incision behind, which, above and below, was prolonged into the first incision. This incision was also prolonged upwards and backwards to the region of the mastoid process. As the tissues were divided, the various blood vessels were cut through and at once ligatured; then by a deep dissection the whole tumour was set free and removed, along with the portion of skin included between the first two incisions. After all hæmorrhage had been stopped, the wound was closed, and in three weeks had quite healed. Paralysis of the facial nerve necessarily followed.

(262) Appendicitis Obliterans.

SENN (Reprint from the *Journal of the American Medical Association*) directs the attention of the profession to a pathologically and anatomically well defined form of appendicitis that has hitherto not been separately described. The characters of this morbid condition which is called "appendicitis obliterans" are described in the following conclusions:—(1) Appendicitis obliterans is a comparatively frequent form of relapsing inflammation of the appendix vermiformis; (2) it is characterised by progressive obliteration of the lumen of the appendix, by the gradual disappearance of the epithelial lining and glandular tissue, and the production of granulation tissue from the submucous connective tissue which, by transformation into cicatricial tissue, starves out remnants of glandular tissue, and finally results in obliteration; (3) the obliterating process manifests a progressive tendency, and may finally result in complete destruction of all glandular tissue and obliteration of the entire lumen; (4) the incipient pathological changes occur either in the mucous membrane of the appendix, in the form of simple ulceration, or as an interstitial process following lymphatic infection; (5) the most constant symptoms which attend this form of appendicitis are relapsing acute exacerbations of short duration, moderate swelling at the seat of disease, and persistence of tenderness in the region of the appendix during the intermissions; (6) the process of obliteration may begin at the distal or proximal end, or at any place between, or it may commence simultaneously, or in succession at different points; (7) obliteration at the proximal side gives rise to retention of septic material, which finds an outlet through the lymphatics, and gives rise to non-suppurative lymphangitis and lymphadenitis; (8) circumscribed plastic peritonitis is an almost constant concomitant of appendicitis obliterans, and hastens the process of obliteration; (9) complete obliteration of the lumen of the appendix results in a spontaneous and permanent cure; and (10) in view of the prolonged suffering incident to a spontaneous cure by progressive obliteration, and the possible dangers attending it, a radical operation is indicated, and should be resorted to as soon as a positive diagnosis can be made.

(263) Cataract Dislocated into the Anterior Chamber and Consecutive Glaucoma.

CIRINCIONE (*Rif. Med.*, July 25th, 1894) reports a case of this kind presenting certain peculiarities. The patient, a man, aged 31, had normal vision in the right eye, but the left eye was sightless, presented no red reflex, showing instead a reflex as from a grey, compact choroid, without signs of vascularisation. The lower two-thirds of the anterior chamber were occupied by a greyish lenticular body, partly occluding the pupil, but freely movable in the anterior chamber. The pupil was large, and did not react to light, but became constricted when the normal eye was uncovered; the vitreous appeared almost entirely absent: the tension was normal. The explanation of the condition appears to have been that there had been a plastic choroiditis, which had disorganised the membranes of the eye, filling the posterior chamber with a mass of exudation. This would have impaired the nutrition of the lens, which became cataractous, and was eventually dislocated by the giving way of the zonule of Zinn. An operation being refused, eserin was ordered to prevent dislocation backwards of the lens matter. In two months the patient returned, in great pain, with well-marked glaucoma. The lower border of the lens had become displaced behind the iris, the upper edge still remaining free and in front. After failure to extract it with a Weber's loop, the cataract passing through the loop, it was at length removed with a Critchett's spoon, and the patient made an uninterrupted recovery. The author finds it difficult to explain the cause of the glaucoma, as the lens did not by any means hinder the free circulation of fluids between the anterior and posterior chambers.

(264) Revolver Wound of Skull.

THIS case, reported by Schwarz (*Arch. de Laryngol.*, etc., July-August, 1894) was one of attempted suicide by means of two shots in the right fronto-temporal region. No apertures of exit were found. There was complete consciousness, paralysis of the right abducens nerve, blindness of the right eye, and copious epistaxis. The man left the hospital in eleven days in good condition, but with a continuance of the ocular abnormalities. Six months later he returned, having had severe epistaxes at long intervals, and having become extremely anæmic. A severe epistaxis occurred, being most marked from the left nostril. The left external carotid was tied, and for some days there was no hæmorrhage. It returned, however, most severely from the right nostril, and the right external carotid was ligatured. Two days later epistaxis returned as severely as ever. Schwartz felt sure the blood came from the internal carotid artery, and determined to explore the cavity of the nose, which he exposed by Ollier's operation of turning the nose down. He was then able to pass his index finger into both sphenoidal sinuses, which communicated, where he found clots of blood. He plugged the sinuses with iodoform gauze, which he left for a fortnight. He then removed the plugs, and in less than another fortnight dismissed the patient free from his trouble. He made a good recovery.

MIDWIFERY AND DISEASES OF WOMEN.

(265) Symphysiotomy in Private Practice.

WALLICH (*Ann. de Gynéc. et d'Obstet.*, August, 1894) publishes a case which he thinks shows the feasibility of the operation without special apparatus or skilled assistants. The patient, a 5-para, aged 32, was rather below the medium height, and stout, with no history or physical signs of rickets. Her first pregnancy ended at term with a labour of twelve hours and delivery of a living child weighing 1,750 grammes; her second with a miscarriage at two months and a half; her third with full term spontaneous delivery of a living child weighing 2,250 gr. after two hours and a half labour; her fourth with delivery, by high forceps operation of a living child weighing 3,300 grammes after forty-eight hours, labour. The present labour began on August 25th, 1893, proceeded very slowly on the 26th, the dilatation having reached the size of a 5-franc piece at 7 A.M. of the 27th, when the membranes ruptured, the amniotic fluid being greenish and the head still above the brim, and showing no tendency to descend. At 11 A.M. Wallich was summoned, and found the patient very excited, but the pains still vigorous, and the fœtal heart-sounds good. The fœtus was large, and presenting by the vertex with Naegele obliquity. The anterior aspect of the sacrum was accessible, but the fœtal parts prevented the promontory being reached. While waiting for completion of dilatation the necessary instruments were sent for. At 2 P.M., dilatation being complete, the patient was placed in the obstetrical position on a chest of drawers. Two other practitioners, a midwife, and the husband assisted, the latter holding one of the legs. The usual antiseptic precautions being observed and the patient having been anæsthetised, forceps were applied, though the head was still above the brim; but the operator, finding the first attempts did not promote descent, proceeded at once to the operation of symphysiotomy. Leaving the forceps in position, he divided the cartilage and subpubic ligament, separated the pubic bones 4 cm., and again attempted to extract; but as the head still resisted he

increased the separation to 5½ cm., when the head descended readily. The bones were approximated, while extraction was made through the soft parts. The child was living, and weighed 3 810 grammes. After extraction of the placenta and administration of an intra-uterine injection the wound, which had meanwhile been stuffed with iodoform gauze, was sutured, and the pelvis encircled with a girdle of plaster-of-paris held together by a strap. The patient was left on the chest of drawers for the night, and removed to her bed the following day, when she was also able to pass urine spontaneously. Scrupulous cleanliness and antisepsis were observed throughout, the wound being dressed twice daily, and the external genitals douched after every micturition and action of the bowels. The deep stitches were removed on the eighth and the superficial on the ninth day; the plaster-of-paris belt was removed on the thirteenth day, and on the twentieth the patient was able to get up, and walked without pain. She had been able to suckle her child from the first, and six weeks after the operation both were flourishing. The sacro-subpubic diameter was found to be 10.7 cm., the promontory being very high. The fœtal head measurements were—biparietal, 9.4 c.m., bitemporal, 18.2; suboccipito-bregmatic, 9.9; suboccipito-frontal, 11.6; occipito-frontal, 12.1; occipito-mental, 14. The indications for the operation were the attitude (Naegele obliquity) and volume of the head and the contraction of the pelvis. Persistence in the attempts with forceps it is thought would certainly have injured the child's skull.

(266) Premature Detachment of Normally-Situated Placenta.

O. von Weiss (*Archiv f. Gynäk.*, Bd. 46, Heft 2) has made researches on this point in 8 cases in which the premature detachment of the placenta was not caused by injury, by shortness or rigidity of the umbilical cord, etc. The essential symptom is due to internal hæmorrhage, and the condition is one of the greatest danger. Of 106 women in whom premature detachment of the placenta took place, 54 died; of 107 children, all but 6 perished. Although surgical interference on the whole is not brilliantly successful, its results are nevertheless better than those of expectant treatment, the mortality of the latter method being 74 per cent., as against 30 per cent. after surgical intervention. The author's researches dealt with the uterus, the placenta, the kidneys, and the liver. In no case was there any evidence of previous or active syphilis; in 5 cases, however, there was nephritis, and von Weiss thinks it probable that it is owing to exudative and degenerative changes of the decidua dependent on the kidney affection that premature detachment of the placenta can take place. In 2 cases a real myometritis with marked atony of the uterus existed. The author thinks that in such cases Cæsarean section should be performed.

(267) Chloroform and Forceps.

Alexander (*New Zealand Med. Jour.*, July 1st, 1894), of Wellington, believes that the question how soon the forceps should be used, and whether chloroform is needed when it is applied remains unsettled. The custom of the country has much influence, so that the medical attendant is not altogether responsible for the frequency of the employment of the forceps. Thus in Wellington, New Zealand, where Alexander practises, the patient insists on complete narcosis, so that as the pains generally disappear after the loss of consciousness, the forceps is required. Between January, 1892, and May, 1894, Alexander attended 170 labours. In 65 chloroform was used and the forceps applied. Chloroform was given in 8 cases where that instrument was not used, whilst the forceps was used in 2 cases without chloroform. There were 9 stillborn children (none forceps cases), 1 version for placenta prævia, and 1 craniotomy. No maternal deaths occurred. Thus the forceps was used in over 39 per cent. of the cases. The patients were saved a great deal of pain, and as they were not exhausted they made good recoveries.

(268) Lactation: Atrophy of Uterus.

Engström (*Centralb. f. Gynäk.*, No. 38, 1894) believes that the simple general anæmia, which is common in lactation, especially when carried too far, accounts sufficiently for the over-involution of the uterus, practically atrophy. He does not believe in a special trophoneurotic action of the act of suckling on the pelvic organs. That function does not set up contraction of the uterine fibres, and consequent absorption of its tissues.

THERAPEUTICS.

(269) The Treatment of Diphtheria.

Feige (*Therap. Monatshefte*, July, 1894) gives an account of an epidemic of diphtheria, which broke out in his practice. The cases were very severe in nature, and various circumstances rendered a careful treatment with repeated local applications (pyoktanin) impossible. The author at first resorted to various measures, but with little success, and of the first 21 cases 11 succumbed. Hereafter he employed liquor ferri perchloridi, which only required an application twice in the day, and this was the only treatment adopted during the onset in the remaining 37 cases. Of these patients only one died—a boy who was affected with severe glandular inflammation. In no case, however, not even the latter, did the affection spread to the larynx. As regards the painting of the tonsils, an accidental contact with healthy mucous membrane does no harm, but may render the area less susceptible, and thus check the spread of the malady. Unusually the patient vomits once, thereby ejecting some of the liquid which may have run down the œsophagus. Three to four applications, sometimes even one, seemed to check the virulence of the disease. This treatment was usually followed by the internal administration of chlorate of potash in 3 to 4 per cent. solution. An extension to the nose was disregarded. In view of the remarkable success achieved by the author, he regards perchloride of iron, used as described, as almost a specific.

(270) The Pathology and Treatment of Uræmia.

Hughes and Carter (*Amer. Jl. Med. Sci.*, Sept.) publish the conclusions of a research with regard to the toxic element in uræmia. They found that the injection of blood serum and urine from cases of Bright's disease, in which uræmia had not been a symptom, did not produce uræmia, but a certain degree of nephritis was discovered if the dogs were killed. If blood serum or dropsical effusion from a case suffering from uræmia were injected, symptoms were produced in the dog so definite, so uniform, so closely analogous with the symptoms of human uræmia that it could not be doubted that they were due to uræmia artificially produced. In the kidneys of such dogs there was found a uniform and constant condition, a more advanced form of the disorder observed after the introduction of serum from cases of Bright's disease without uræmia. It was apparently a form of glomerulo-nephritis. Later experiments showed that healthy human serum produced nephritis in dogs of the same type as that produced by the serum or urine of Bright's disease without uræmia, so that the authors conclude that the substance producing nephritis is constantly present in human serum. Experiments on rabbits showed that it was present in dog serum, but not in horse serum; and the authors suggest that its formation may be prevented by a vegetable diet. The facts point to the digestive tract being the seat of origin of the poisonous substance. As to the nature of the poison, the authors are only able to state that its power of producing uræmia is destroyed, or very much lessened by a moderate degree of heat, and that it is not readily dialysable, that is to say, the fluid obtained by dialysis was capable of producing some nephritis, but not uræmia. With regard to treatment, the authors point out that severe nervous symptoms are least likely to occur in those cases in which diarrhœa exists; they suggest, therefore, the advisability of the administration of purgatives, preferring those of vegetable origin, since calomel is very liable to produce mercurial salivation. Since the perspiration of uræmic patients frequently contains large quantities of urea, it is possible that other excrementitious substances may also be excreted by this channel. If pilocarpin be given to encourage perspiration, its effects must be watched with great care. The authors prefer the hot pack. The hot air bath is not free from danger, especially in pyrexial cases, and they mention one case in which fatal hyper-

pyrexia followed its use. As the poison is contained in serous effusions as well as in the blood, and as reabsorption of these effusions may cause the entrance of enough of the poison into the blood to induce uræmia, they counsel strongly early resort to tapping. Free venesection, they say, "cannot be too highly recommended." Its good effect is best seen in grave cases. Marked dyspnœa is the most urgent indication, but cerebral symptoms also call for it. A weak pulse does not forbid it, as the pulse may strengthen while the blood is flowing. The quantity withdrawn must depend upon the special character of the case, and the effect produced; probably from 20 to 40 ounces. In some cases venesection appears to abort a threatened attack. Venesection may be supplemented by transfusion of normal saline solution. The injection of the fluid into the subcutaneous tissues, whence it is very rapidly absorbed, in the great majority of cases yields as good results as intravenous injection.

(271) Bismuth Loretin.

Blum and Barwald (*Münch. med Woch.*, September 4th, 1894), state that the antiseptic action of loretin depends upon the gradual separation of iodine, which in the nascent state has considerable antiseptic action. Loretin forms salts with metals, and in these new bodies this property of the separation of nascent hydrogen is in some cases retained. This holds good with bismuth loretin, which possesses also the astringent properties of bismuth. The salt, even in large doses, does not produce symptoms of poisoning in animals, but after its internal administration iodine appears in the urine. As an application to chronic ulcers and specific lesions of the skin it was found extremely useful. Healing took place rapidly, and frequent dressings were found unnecessary. It was also found useful in weeping eczema, including eczema of the scalp. It was used in powder, ointment (10 per cent.), and paste. As an internal remedy in doses of 7½ grains it was found useful in the diarrhœa of phthisis.

(272) Spermin in Cholera.

A. W. Poehl (*Vratch*, No. 32, 1894) strongly recommends a fair trial of spermin injections in Asiatic cholera, which method has recently been employed with the best results in three consecutive cases at the Semenovsky Alexandrovsky Voennyi Hospital in St. Petersburg. The beneficial effects are attributed to (1) a direct influence of spermin on the cholera vibrio (Epitome, January 7th, 1893, par. 21), and (2) spermin increasing intraorganic oxidation ("tissue respiration") and thus promoting the destruction and elimination of leucomaines absorbed from the intestines (Epitome, September 3rd, 1892, par. 214). The use of spermin is mainly indicated in initial stages of the disease. In advanced cases a favourable result can be expected only in the absence of a profound renal failure. While suggesting clinical experiments with the substance in cholera cases, Poehl offers the necessary supply of his spermin ("spermin Poehl") gratuitously to every investigator willing to try it. (Address: Professor A. W. Poehl, Vasilievsky Ostrov, St. Petersburg.)

(273) Nephritis from β-Naphthol Inunction.

Max Baatz (*Centralbl. f. inn. Med.*, September 5th, 1894) first refers to the experimental evidence concerning naphthol nephritis, and also to the cases already recorded. He then relates the following cases in two brothers, aged respectively 6 and 8 years, who were treated for scabies with a 2 per cent. β-naphthol ointment. Six inunctions were made, and in this way 4 g. might have been absorbed by the elder boy, and 3 g. by the younger. There was no albuminuria in either case, before or at the termination of the treatment. About three weeks later both boys were admitted with nephritis. In Case 1 there was swelling of the legs and scrotum, albuminous urine, and an impetiginous eruption on the face and extremities. There were also signs of a small pleural effusion. The boy gradually recovered and was discharged well. In Case 2 there were pains in the loins swelling of the legs, abdomen, and scrotum; cough, and an impetiginous eruption on the legs. The urine contained albumen and large blood casts. In addition there were signs of bronchitis and broncho-pneumonia. The boy steadily got worse, and died a few days later. The kidneys felt hard, and the substance was engorged. There was marked cloudiness and dulling of the epithelium in the convoluted tubes. The β naphthol was undoubtedly the cause of the nephritis. The death in the second case was accelerated or caused by the broncho pneumonia. The author warns against the use of β-naphthol, at least in cases where other remedies are available.

PATHOLOGY.

(274) The Nerves in Pseudo-Hypertrophic Paralysis.

Von Babes (*La Roumaine Médicale*, August, 1894) describes a new appearance (pathological) of the nerve terminations in this disease. Peripheral nerve terminations normally end in free blunt points or arborizations, and the recent discoveries with the Golgi method had served to emphasise this distinction. The author, in the course of examination of nerve endings in muscle and connective tissue, came across appearances which seem to differ essentially from the idea that nerve filaments necessarily have terminations in the strictest sense. In two cases—one of so-called primary juvenile muscular atrophy, and the other of infantile pseudo-hypertrophic paralysis — the following were found. One specimen of the pseudo-hypertrophic gastrocnemius with its connective tissue (fascia) was studied with Ranvier-Löwitt's gold chloride method, which stains the neuro muscular end plates. A remarkable change was observed; the motor fibre going to the muscle was in the first place remarkably thinned and attenuated, though preserving its myelin sheath, the latter being poor in cells and therefore presumably not undergoing degeneration. Its termination, where it abutted against the muscle fibre, was by a small conical enlargement, pale, and either simple or giving rise to a few very short and extremely fine filaments, which radiated from it star-wise. The terminal plate was thus of small size (atrophied or non-developed) and much simplified. [This appearance is indeed like those described by Ramon y Cajal in the growing points of the motor fibres of the spinal cord of the chick—"points d'accroisement"—in which case it would serve to show that the muscular nerve ending is yet in a very rudimentary condition in the disease.] Other specimens showed not only the atrophied (diminished) condition of the end plate, but the presence of small fusiform cells about this region, such as had been shown to be present in the experimental degeneration (Wallerian) induced in the nerve terminations by sections of the nerve trunk. This would seem to indicate that a veritable process of degeneration (dissolution) was going on. In two specimens (prepared by the isolation and teasing method) a single thick medullated fibre (4μ diameter) has been seen to divide, the two branches sweeping round in semicircular fashion to reunite into a distinct ring—a condition never observed before. From each segment of this ring or loop a fine medullated branch was given off, which, after winding spirally round the parent branch for some distance, left it to end freely; one of these shortly after ending in contact with a muscle fibre, the myelin sheath stopping short just before. The other fibre passed into the connective tissue, ending freely in an oval termination, within which the fibres formed a knot or swelling, and a number of sinuous twists without losing its continuity. This, the author thinks, is comparable to a sensory termination of the nerve; in any case, it is not motor. This double termination of a single medullated fibre, namely, by a motor and a sensory ending in the muscular tissue, the author is inclined to look upon as possibly normal, and which had before been overlooked owing to the extent and size of the nerve loop which gives rise to it. If confirmed, his conclusions would seem to show that the pathological conditions underlying the nerve ends in juvenile muscular atrophy and pseudo-hypertrophy are of the non-developmental type, that is (1) a defective development of the motor ending and of the fibre which gives rise to it, and (2) a degeneration (dissolution) of the already formed end plate, the two appearances being apparently distinct; while, on the other hand, the subdivision of a single muscular nerve into a sensory and a motor filament lands us in a new region of nerve function altogether.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(275) The Urine in Infantile Tetany.

Oddo and Sarles (*La Méd. Inf.*, September 15th, 1894) relate a case of tetany in a child, aged 18 months, which commenced with retention of urine and general anasarca. The urine did not contain any albumen, and the bladder contained a large quantity of urine. They attribute the anasarca to the retention of urine, which, it has been shown experimentally in the dog, is capable, by raising the pressure in the ureters and kidneys, of producing a diminution of the urinary secretion, and thus causing hydræmia. They attribute the retention to spasm of the sphincters. The urine contained indican, which, it is known, has origin in abnormal intestinal fermentations. This observation, therefore, gives support to the view that tetany is due to absorption of poisons from the gastro-intestinal tract. Further, the urine contained an excessive quantity of phosphates, the proportion of the earthy phosphates to the acid phosphates being much in excess of the normal. A similar inversion of the ordinary relation of the two classes of phosphates has been observed in hysteria, to which tetany is by some thought to be related, and also in epilepsy, neurasthenia, and some other nervous diseases. The authors think that their own observations and those of Ewald on the toxicity of the urine and of the vomit in tetany point to the gastro-intestinal tract being the seat of origin of the disorder, and that, therefore, treatment should be directed to this tract. They recommend careful feeding, repeated purgatives, and intestinal antisepsis.

(276) An Unusual Epidemic.

Müller (*Münch. med. Woch.*, October 2nd, 1894) reports an epidemic of an exanthem limited to places situated on the banks of the Oder or its tributaries. It appeared after the river had overflowed its banks and especially affected young people engaged in agriculture. The onset was mostly quite sudden, with shivering. Severe headache and pains in the neck, loins, and limbs followed. Pain in the epigastrium was constant, and was occasionally accompanied by vomiting. The patients were dull and heavy as in enteric fever. The conjunctiva was injected. The throat was sore and the glands in the neck fairly constantly swollen. The spleen and often the liver were enlarged. The urine mostly contained no abnormal constituents, but occasionally albumen, casts, and red and white cells were present in it. The temperature during the first week was mostly about 39° C., but often higher. A rash much resembling that of measles appeared about the fourth or fifth day in the region of the clavicles, spreading thence over the trunk. It was at times preceded by a fleeting erythema over the chest. The face was often spared. The rash was sometimes hæmorrhagic. There was no mottling of the skin. The rash disappeared in three to five days. Herpes was frequently noted. In nearly all cases the temperature fell, occasionally by crisis, with the appearance of the rash. The pulse during the height of the disease was from 90 to 120, occasionally 140. The tongue was thickly coated during the first few days and often dry. At times a secondary fever was noted. The patients were prostrated after the attack, and convalescence was slow. In a few cases a fine desquamation occurred. The author gives details of some typical cases.

(277) Glycosuria caused by Nasal Obstruction.

Bayer of Brussels (*Rev. de Laryngologie*, etc., October 1st) reports a case in which he thinks nasal obstruction was responsible for the production of glycosuria. The patient was a man, aged 45, who complained of general *malaise*, buzzing in the ears, headache, and inaptitude for mental exertion. He soon began to suffer from thirst and polyuria; he lost appetite and became so weak that he could hardly stand. His throat was dry and his nose almost completely blocked owing to a chronic catarrhal hypertrophic condition of the mucous membrane. On examination of the urine it was found to contain sugar in considerable amount. The ordinary remedies for the constitutional state were given, and the nasal obstruction was treated at the same time. After three sittings nose breathing was re-established, and the sugar had markedly diminished, and in proportion as the nasal channels were cleared the glycosuria abated. In a few weeks there was no trace of sugar, and the patient was well and hearty. Some months later nasal respiration again became embarrassed in consequence of a cold, and sugar re-appeared in the urine; cure of the nose trouble was again followed by cure of the glycosuria. The author asks whether the production of glycosuria is to be explained by the deprivation of the oxygen required for the combustion of the glucose which was the result of the nasal obstruction; or whether it is an effect of a reflex action on the nerve centres, particularly the bulb, expressing itself by nervous and vasomotor disturbances. Without altogether excluding the former hypothesis, he is inclined to assign the predominating share in the production of the glycosuria to a reflex action on the nerve centres which control the circulation and the gastro-intestinal and hepatic secretions, giving rise to trophic disturbances in other parts of the economy.

(278) Pseudo-Tabes.

Weisz (*Wien. med. Woch.* September 8th and 15th, 1894) first refers to the hydrotherapeutic treatment of tabes. He thinks that the cautious use of cold water treatment may be valuable. He reports the following case of pseudo-tabes in a man, aged 44, who had been thought to be suffering from locomotor ataxy. The disease apparently dated from a severe chilling, after which the patient's legs became weak, and eventually he could not walk. Nine months later there was no improvement, and he had sharp pains in his legs and arms. Fifteen months afterwards he had a course of baths, and then some improvement was noted. When seen by the author he had to be wheeled about in a chair. He complained of pricking sensations and numbness in the hands and feet. Romberg's symptom was present, and when he tried to walk the legs were wide apart. The patellar and plantar reflexes were entirely absent. The pupil reaction was normal. For two years the sight had been failing. There was no anæsthesia and no disturbance of the rectum and bladder functions. The author thought it a case of multiple neuritis probably of alcoholic origin. Later the recovery was complete, even the patellar knee-jerk returning. In the history it was found out that the pains were worse at the beginning, before the paralytic symptoms appeared. The author draws attention to the value of warm sulphur springs and hot mud baths in certain forms of neuritis, especially in the chronic stage. He thinks that the patient referred to was cured by hot mud baths.

SURGERY.

(279) Surgery of the Ureter.

Fenger (*Ann. of Surgery*, September, 1894), in a paper read at the last annual meeting of the American Surgical Congress, deals with the operative treatment of injuries and structure of the ureter. In cases of accidental wound and subcutaneous rupture of this duct it would be advisable, he thinks, when and as soon as the diagnosis can be made, or when a peri-ureteral cavity containing extravasated urine has been opened by a lumbar incision, to look for the seat of rupture, and, if practicable, to restore the continuity of the canal. Catheterisation of the ureters for purposes of diagnosis is fairly practicable in the female, but can be practised in males only after suprapubic cystotomy—an operation which is held to be justifiable in selected cases as its dangers have recently been much diminished. Though catheterisation of the ureter from the bladder has been successfully practised as a curative measure for the evacuation of hydro- or pyonephrosis, it is more difficult and more uncertain than nephrotomy, and the attempt to find and remedy the stenosis of the ureter from the renal pelvis. Though dilatation of the female ureter by elastic catheters or bougies has been successfully practised, it should be remembered that continuous catheterisation of this duct from the

bladder, a fistula, or when the canal is implanted, can in most instances be tolerated only for a limited time, and is likely to excite ureteritis. Ureterolithotomy by the extraperitoneal method is a safe operation, and the wound heals without producing stenosis. Intraperitoneal ureterotomy should be done only when it is impossible to reach the ureter without opening the abdominal cavity, and should be completed by careful suturing, by covering the stitches by a peritoneal or omental flap, and by drainage. Laparotomy may be performed with the object of making out the situation of a stone, but when the diagnosis has been made the abdomen should be closed and external uretero-lithotomy practised. In valve formation or stricture of the ureter, causing pyo- or hydronephrosis, or a permanent renal fistula, nephrotomy should be followed by exploration of the ureter from the kidney to the bladder by a long flexible silver probe or an elastic bougie. If the pelvic orifice of the ureter cannot be found from the renal wound, it should be sought for by opening the pelvis or by incising the ureter. A longitudinal incision, ½ inch to 1 inch in length, can be made in the posterior wall of the pelvis, while the kidney is lifted upon and against the last rib. This procedure, however, may be found impracticable unless the pelvis is dilated. In a case of stricture of the ureter the author would practise a plastic operation consisting in longitudinal division of the stricture and transverse union of the longitudinal wound. The ureter may be exposed by a continuation of the oblique incision for lumbar nephrotomy to the middle of Poupart's ligament. This incision will give access to the upper three-fourths of the duct and down to within 2 or 3 inches of the bladder. This vesical portion may be reached by partial osteoplastic resection of the sacrum. Uretero-uterine fistula can be treated successfully by plastic closure of the vagina or nephrectomy. Implantation of the ureter into the bladder, which has already been successfully performed, is regarded as the operation of the future in such cases. Ureterovaginal fistulæ and congenital urethral or vaginal terminations of the ureter should be treated by a vaginal plastic operation for displacement of the proximal end of the ureter into the bladder. If this attempt fail, and the kidney is not infected, extra- or transperitoneal implantation into the bladder should be done, and, as a last resort, nephrectomy. Complete transverse wounds of the upper end of the ureter should be treated by implantation of the ureter into the pelvis of the kidney, and similar wounds near the bladder by implantation into this viscus either by splitting the ureter or by invagination. The best method of treating a complete transverse wound in the continuity of the ureter is that of lateral transplantation, in which, after ligature of the vesical end of the divided duct, the renal end is inserted into the vesical portion through a longitudinal incision in the wall of the latter. Loss of substance of the ureter too extensive to permit of this method, or too high up to permit of implantation into the bladder, may be treated by implantation on the skin or into the bowel. Implantation into the bowel, however, is objectionable on account of the infection which is almost certain to follow sooner or later. Implantation on the skin in the lumbar region or the abdominal wall may have to be followed by secondary nephrectomy, which, however, is much less dangerous than the primary operation. Implantation into the rectum should not be resorted to when implantation in the bladder is possible.

(280) Hydatid Cyst in a Hernial Sac.

ELLIOT SMITH reports the following case of hydatid cyst (*Australian Med. Gazette*, July 15th, 1894). In a male subject, aged 85, who was dissected, there was found a hard movable lump as big as a walnut in the right groin just below the external abdominal ring. The funicular process of the processus vaginalis was patent on both sides, a canal about as large as the two distal segments of a finger extending from the peritoneal sac through each inguinal canal. The left funicular process was empty, but the right contained a small hard spherical body about ⅝ inch in diameter, quite free and unattached. On section the walls were from ⅛ to ¼ inch in thickness, and consisted of a number of dense fibrous concentric layers enclosing a central cavity, which was filled with yellow semi-translucent material, such as is found in hydatid cysts which have been dead for some time. There was no other sign of hydatids in the abdominal viscera, but in the lateral aspect of the pelvis a mass was found which was hard and calcareous on its peritoneal surface, and of putty-like consistence deeper. In this mass the remains of daughter cysts could be distinguished, and at its margin was a small cyst the size of a pea, with thick walls enclosing the convoluted remains of the endocyst. According to the author, only one other case in which a hydatid cyst formed the contents of a hernial sac has been recorded. Cases in which cysts lie free in the peritoneal cavity are very uncommon. These cysts probably always develop in the subserous tissues of some abdominal viscus, or in the omentum; and later separate themselves from the surface of the organ in which they were embedded, and finally become detached and lie free in the serous cavity. From the characters of the cyst in this case, the great thickness of the endocyst, the small size of the cyst, and the character of its contents, it is evident that the cyst must have been dead for some time: that it had lived for a considerable period is shown by the thickness and strata of the endocyst. The small size of the cyst compared with its great age points to a low state of nutrition, which occurs in omental hydatids, especially those which are pedunculated. From these considerations Smith concludes that the hydatid in the hernial sac originally came from the omentum.

(281) Wounds of the Liver.

ZEIDLER (*Deut. med Woch.*, September 13th, 1894), observes that the diagnosis of ruptures of the liver is not easy. Such symptoms as local and radiating pains, icterus, enlarged and tender liver arise late, and yet the danger lies within the first twenty-four hours in the majority of cases. External local measures cannot arrest the hæmorrhage. Although it may not be possible to diagnose the injury to the liver, laparotomy is indicated here as in the wounds of other viscera. If there be an actual wound of the abdominal wall it is easier to decide whether the liver has been wounded. The author then details three cases of wounds of the liver in patients aged 18, 16, and 28 respectively, the first being a rupture without external wound. In the first case there were symptoms of shock and irritation of the peritoneum; in the second severe symptoms of internal hæmorrhage; and in the third no marked symptoms. In the first two cases there was a large quantity of blood free in the peritoneal cavity, whereas in the third there was less. The hæmorrhage from the liver was arrested by the tampon in one case and by Paquelin's cautery in the other two. They all made good recoveries. It is striking that small wounds in the liver can produce so much hæmorrhage. The tendency to spontaneous arrest of the hæmorrhage is slight. Suture of the liver, Paquelin's cautery and the tampon are the methods available. Paquelin's cautery can hardly arrest hæmorrhage from large vessels in deep wounds of the liver: here the suture may be used. The blood pressure in the liver vessels is low, hence arrest of hæmorrhage can surely be obtained by the tampon. The wound in the liver where the tampon is used also remains better under observation.

MIDWIFERY AND DISEASES OF WOMEN.

(282) Intraparenchymatous Injections of Alcohol in Inoperable Cancer of the Uterus.

F. VULLIET, of Geneva (*Sem. Méd.*, July 11th) has obtained excellent results in cases of uterine cancer beyond operation by means of injections of absolute alcohol made into the substance of the tumour. This mode of treatment was recommended in 1892 by H. Schultz (see EPITOME, ii, 1892, par. 136), but Vulliet claims to have employed it independently since 1891. The treatment, according to the author, is indicated under the following conditions: When the disease has spread so far that its complete removal by hysterectomy is impossible; in cases in which suspicious infiltrations are present after hysterectomy; in cases of recurrence of the disease after operation; and when a uterine tumour presents nothing definitely cancerous, but

is nevertheless suspicious. In the last case injections of alcohol may be made all round the seat of disease after removal of the suspected tissues. Vulliet's procedure, which differs from that of Schultz, is as follows: The vagina, the cervix, and the surface of the tumour are washed first with a solution of soda, next with one of corrosive sublimate (1 in 1,000). After careful drying of the parts with tampons of cotton-wool, the patient is placed in the genu-pectoral position, and a speculum is introduced through which the injections are made. The operator should have at hand three or four Pravaz's syringes filled with absolute alcohol. The first injection should be made into the centre of the tumour. If the disease is scirrhus the needle at once strikes hard tissue; if it is encephaloid it first strikes friable tissue, in which case it must be made to penetrate until resisting tissue is reached, and then only must the piston be pressed. If the prick causes slight hæmorrhage the injection should not be made until the bleeding has stopped, otherwise the alcohol will be washed away by the blood. From 3 to 7 drops should be injected at a time, and the instrument is left in position for a certain time, during which injections are made in the same manner with the other syringes, which are also left in position. The first syringe is then withdrawn and thrust into another part of the tumour, where a few drops of alcohol are injected, the instrument being again left in position as before, and so on. In this manner from 9 to 12 injections are made at one sitting, proceeding from the centre of the tumour to its circumference. The last injection should be made all round the tumour in a zone of tissue to all appearance perfectly healthy. These injections, as a rule, are well borne, the patients being able to get up and walk home directly afterwards. In the case of faint-hearted or exhausted patients, who cannot bear more than one or two injections at a time, the sittings must be more numerous or chloroform must be used. The effect of the injections, according to the author, is quickly shown by the diminution, and then by the more or less complete stoppage, of the foul-smelling discharge and bleeding. At the same time local examination will show progressive hardening of the granulations, and healing of the ulcerated surfaces. The alcohol appears to produce in the tumour and surrounding surfaces a sort of artificial cirrhosis which retards the evolution of the growth, and consequently lengthens to a greater or less extent the period of survival. The ischæmia brought about by this cirrhotic transformation seems to play an important part in the action of the remedy. The results of the treatment described are, according to the author, very superior to those of curetting. These injections are usually sufficient by themselves for the palliative treatment of inoperable uterine cancer. In cases in which a layer of fungosities is present on the surface of the growth which do not disappear under the influence of the injections, it may be necessary to combine curetting with the injections; the fungosities should first be removed with a blunt curette, and the raw surface should then be cauterised with chloride of zinc or the thermo-cautery.

(283) Fibroids and Conception. Pregnancy and Labour.

Hofmeier (*Zeitschr. f. Geburtsh. u. Gynäk.*, vol. xxx, 1894), in a very complete and well-tabulated essay, denies that fibroid disease of the uterus has any direct influence in causing sterility. Statistics do not show that, as has been alleged, subserous myoma predisposes considerably to sterility, whilst polypi and myoma of the cervix have little influence in that direction; nor can it be shown that fibroids promote fertility. These tumours seldom begin to appear till late in sexual life, so that if the patient is barren or a multipara the causes of her sterility or fecundity must have influenced her long before the development of her fibroid. The alleged frequency of this disease in elderly virgins is based on a fallacy. It is the local affection which the most readily drives a spinster to the gynæcologist, whilst middle-aged married women trouble less about small and slow-growing abdominal swellings. Women with fibroids who marry late in sexual life are fairly fertile, though Hofmeier can hardly make out cause and effect in this fact. Fibroids by no means strongly predispose to abortion. It seems that this accident happens only when the uterine cavity is rendered unfit to bear through the size and relations of the tumour; nor does fibroid greatly interfere with the uterine contractions during labour. The best time for hysterectomy is not immediately after delivery, but a few weeks or months later.

(284) Coils and Knots on the Funis.

Loviot (*Nouvelles Archives d'Obstét. et de Gynéc.*, August 25th, 1894) dwells on the absence or presence of knots on the cord after coils have been disengaged from the fœtus during labour. The usual practice is to slip the cord over the head during expulsion, as often as there are coils. If this manœuvre fails, the coils are slipped back over the shoulders and trunk. The latter practice has been recommended as routine treatment. It is easily demonstrable that when a fœtus passes into a loop of the cord a knot will be formed if the fœtus goes completely through the loop. On the other hand, when the fœtus is in the loop—that is to say, when there is a coil round the fœtus—the loop is undone when pulled backwards in the direction whence it came; then there is no knot formed. Hence the obstetrician must pull the coil backwards, in order to undo it. Nevertheless, the direction in which the fœtus has entered the loop is not always to be diagnosed. The feet and breech might have entered first, and the body turning, the head presents. Should the loop be then slipped over the head, a knot will be formed. The chance, however, that the head has presented from the first is very great (95 in 1,000), and in an exceptional case of the kind just noted the knot would not necessarily do harm. The fœtus would not be killed unless the cord were very short and constantly dragged upon; indeed, knots formed before labour seldom kill. In the case of a short cord, the formation of a knot would certainly aggravate the evil: it would interfere with external rotation, and might detach the placenta prematurely or invert the uterus. Knots, however, are usually associated with long cords. The chances of any danger from disengaging a coil are, therefore, trifling.

(285) The Kidney of Pregnancy.

Trantenroth (*Zeitschr. f. Geburtsh. u. Gynäk.*, vol. xxx, pt. 1, 1894) finds that in about half the cases of pregnancy in healthy women, primiparæ or otherwise, a trifling amount of albuminuria is to be detected in the second half of pregnancy. In a minority of cases this symptom is not due to renal changes, in the majority it represents a special morbid condition, best termed "the kidney of pregnancy." As a rule this condition involves no symptoms besides changes in the kidney. Eclampsia and œdema are rare. The pregnancy kidney never changes into the kidney of any chronic form of nephritis. There is no true nephritis of pregnancy. Albuminuria is the rule during labour, especially in primiparæ, and casts (usually hyaline) are to be found in almost a third of the cases. In the albuminuria of pregnancy casts are much rarer. The albuminuria of labour is most marked during the period of dilatation, and disappears rapidly during childbed, except when there is fever. Later on, towards the second week, albuminuria usually indicates catarrh of the lower part of the urinary tract. The albuminuria of pregnancy and labour does not render chloroform dangerous. Renal disease existing before pregnancy is greatly aggravated by that condition, often ending in death of the ovum and abortion, after which the disease abates more or less. The causes of pregnancy kidney are the increase of intra-abdominal pressure, changes in the nutrition of the kidney brought about by the altered condition of the blood and, in special cases, obstruction of the left ovarian vein which joins the left renal, and compression of the ureter by the fœtal head. The last two causes apply to the kidney of labour (*Geburtsniere*), where also septic changes from pieces of fœtal appendages play a part. The degree of the changes which make up the kidney of pregnancy depends on the resisting power of that organ in the individual patient.

THERAPEUTICS.

(286) Ether Narcosis.

Poppert (*Deut. med. Woch.*, September 13th, 1894) draws attention to the dangers of ether when the remote deaths are taken into account. Ether was adopted as the usual anæsthetic by

the author in the Giessen clinic after a death from chloroform. Later a death in all probability due to ether occurred in a man, aged 46. The operation consisted in laying open an abscess between the coils of intestine in a hernial sac. An hour afterwards rapidly-increasing dyspnœa supervened, and an hour later death. The direct cause of death was found at the necropsy to be œdema of the lungs. Although some peritonitis was present, there was nothing to necessitate a fatal issue. The author then gives short details of 7 published cases of death from ether. He draws special attention to pulmonary œdema as being the cause of death. This œdema can be produced experimentally in animals, and is due to the toxic action of the ether. Ether must be held responsible for the bronchopneumonia occurring after its administration. Late deaths must not be left out of consideration in ether statistics. The author refers to 8 such cases. If these late deaths are added to Gurlt's statistics, it would make the proportion of deaths 1 in 1,167 for ether and 1 in 2,647 for chloroform administrations. The author concludes that statistics hitherto given have not established the superiority of ether over chloroform. Senger (*ibid.*) speaks of the danger of cerebral hæmorrhage in arterio-sclerotic subjects during ether narcosis. He draws attention to the fact that the brain has not been examined in some ether deaths. He records a case in a woman, aged 56, operated upon for a sarcoma of the chest wall. The excitement stage was pronounced. Later the patient became pale, and the pulse at the wrist could not be felt. After artificial respiration, the patient became better, and the operation was finished under chloroform. When she came round, hemiplegia including the face was present. Recovery took place from the hemiplegia, and only a trace of it persisted two years later. The danger of cerebral hæmorrhage is greater with ether than chloroform. In old people with marked arterio-sclerosis, chloroform must be preferred to ether.

(287) Trional in Delirium Tremens.

RUSSELL BELLAMY (*N. Y. Med. Jl.*, July 21st, 1894) found that trional controlled the delirium of delirium tremens with greater rapidity and safety than other hypnotics. The drug was employed in 29 cases, in which the patients were so delirious that forcible restraint was necessary when first admitted to hospital. Treatment was commenced by giving a calomel purge and 20 grains of trional mixed in water with 10 minims of tincture of capsicum; if the condition permitted, a very hot bath was given and its temperature gradually lowered. The patient was then placed in bed and restrained. If after thirty minutes the delirium showed no sign of abatement, 10 grains of trional were given, and if necessary 20 grains more in another hour. As a rule, sleep followed when 50 grains had thus been administered, and the pulse and respiration were stimulated. This stimulating action was attributed to the methylic and ethylic elements in the composition of the drug. The drug, which can be administered either as a mixture with water, in capsules, or dry on the tongue, was always well borne by the stomach, and in one case was rapidly absorbed when administered by the rectum. In all the cases forced feeding, in small quantities often repeated—milk, eggs, and soup—was resorted to.

(288) Chloralose.

LÉON L'HOEST (*Ann. de la Soc. Méd. Chir. de Liége*, July, 1894) has tried chloralose in doses of 20 centigrammes in a large number of persons suffering from insomnia, and failure has hitherto been exceptional. Sleep has usually been peaceful without dreams, and has lasted from six to eight hours, the patients awaking easily without heaviness or headache. These results led him to employ chloralose in the insane women of the Hospice Sainte Agathe. He first used it in melancholics and neurasthenics not suffering from excitement but simply from insomnia. The result was almost the same as in patients of sound mind, doses of from 20 to 30 centigrammes usually inducing sleep. He next tried the drug in cases in which excitement was pronounced. The results were "absolutely favourable;" the drug given during the day to an excited patient generally quieted her, without, however, necessarily inducing sleep, which came on only after large doses, or in patients peculiarly sensitive to its action. In this series of cases, which numbered 16, the author never observed digestive disturbance, disorder of the pulse or modification of arterial tension follow the administration of chloralose. The doses averaged from 25 to 60 centigrammes, the maximum being 1 gramme, which was never exceeded. The cases, of which full details are given, included 2 of general paralysis with paroxysmal excitement, 5 of mania—acute, chronic, periodic—or maniacal excitement, 1 of violent dementia, 2 of epileptic insanity, 3 of idiocy with excitement, 1 of senile dementia with hallucinations, and 1 of choreic insanity. In some few cases the drug failed owing, the author believes, to insufficiency of dose. In one case in which the patient suffered from hallucinations, these ceased altogether during the administration of chloralose, coming on again when the drug was discontinued. In another case violent choreic movements were made to cease by a dose of 80 centigrammes of chloralose. L'Hoest finds it advantageous to give chloralose in a liquid vehicle after having first dissolved it in a little tepid water; sometimes the bitterness of the drug was disguised by giving it in solid food. It is well to make the patient at the same time take some simple infusion to facilitate the assimilation of the drug. The author in his experiments had chiefly in view the soothing of cerebral excitement rather than the simple induction of sleep. He thinks his results sufficient to show that chloralose is not only an excellent hypnotic, but that as a sedative it is as efficacious as duboisin, without the drawbacks of that substance.

(289) Perchloride of Mercury in Whooping-Cough.

RAUBITSCHEK (*Therap. Monatsh.*, April, 1894), knowing the want of success attending the usual treatment of whooping-cough, determined in the case of his own three children to resort to a novel procedure. He thoroughly saturated a cotton-wool tampon with a 0.1 per cent. solution of perchloride of mercury, introduced it into the mouth, pressed it against the base of the tongue, thus allowing the fluid to trickle downwards over the epiglottis, and finally withdrew it, at the same time swabbing the tonsils, uvula, and soft palate. This procedure was carried out daily, or every other day, according to the severity of the case, and was attended with the best results, not only in the three cases referred to, but also in fourteen other children since similarly treated. An improvement was noticeable on the second or third day, and all the patients were either cured or relieved within eight or fourteen days. One case appeared to be arrested during development by five applications of the solution. The author considers any poisonous effects to be impossible.

PATHOLOGY.

(290) Inoculability of Cancer.

GRATIA has presented a report to the Belgian Academy of Medicine (*Sem. Méd.*, October 3rd) on a series of experiments made by him with the co-operation of Liénaux, of the State Veterinary School, relative to the inoculability of cancer. They used both the grafting and the inoculating methods. They grafted fresh cancer in the skin, peritoneum, and wall of the stomach. Except in one case they always obtained immediate union. For the inoculations they employed fresh cancer juice, got by scraping or pounding of primary or secondary tumours. This juice, either pure or diluted with sterilised bouillon, was injected in doses of ½ to ½ a cubic centimetre or more. As sites of inoculation the organs which are most commonly attacked by cancer were chosen by preference. The results of all the attempts of the author to transmit cancer from dog to dog, whether by grafting or by inoculation, were uniformly negative. They were led to conclude that in the experimental conditions under which they worked, cancer did not appear to be inoculable, even in individuals of the same species. From the facts at present known they draw the following conclusions: (1) The parasitic nature of cancer has not been conclusively demonstrated; (2) The contagiousness, direct or indirect, of the disease is not proved; at most the possibility of the transplantation of cancer by grafting may be admitted, and that chiefly in persons with a special predisposition, such as those already suffering from cancer.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(291) Paludal Neurasthenia.

Triantaphyllides, of Batoum (*Sem. Méd.*, October 3rd), states that among the manifestations of malarial poisoning there is one bearing a resemblance to neurasthenia which has hitherto escaped notice. It is seen in persons who present no other sign of chronic paludism (enlargement of spleen or liver, anæmia, etc.) During the last four and a-half years the author has seen some fifty examples of the condition, and its malarial origin has been established by the discovery of typical hæmatozoa, as also by its amenability to treatment by quinine. In its slightest form paludal neurasthenia expresses itself merely as a state of mental apathy or psychical *malaise*. In a higher degree of development it may be accompanied by nearly all the psychical, vasomotor, and other disturbances characteristic of ordinary neurasthenia. Insomnia, digestive disorder, and headache are, however, less constant in the paludal than in the ordinary form. Spinal hyperæsthesia is not well marked, but umbilical hyperæsthesia is rarely wanting, sharp pain being caused in the majority of sufferers by pressure in the umbilical region on the left side. The affection generally comes on by degrees, and is preceded by vague nervous disturbances which occur paroxysmally, till after a time the neurasthenic condition becomes permanent. In recent cases a cure can as a rule speedily be effected by hypodermic injections (1 in 4) of hydrochlorate of quinine in doses of 60 centigrammes to 1 gramme. In cases of relapse a large number of injections is required. In inveterate cases sulphate of cinchonine, given by the mouth or hypodermically, or sulphate of cinchonidin, together with tonic measures, wet packing, and especially sea bathing, has often been successful in the author's hands.

(292) Acute Anterior Poliomyelitis.

Von Kahlden (*Centrabl. f. allg. Pathologie*, September 14th, 1894) reviews recent writings on the morbid anatomy of this disease, with special reference to its parenchymatous or interstitial origin. In three of Rissler's cases death occurred from six to eight days after the onset. Here there was advanced degeneration of ganglion cells, but very little change in the interstitial tissue. Rissler concludes that Charcot's view that the primary lesion is in the ganglion cells is the correct one. Two other cases in which death occurred after seven weeks and eight years respectively are reported by the same writer. From his own three cases, all of some years' standing, the author also adopts Charcot's view, as neither the destruction of ganglion cells in groups nor yet the relatively very slight disappearance of nerve fibres was to be explained by a primary interstitial lesion. In two cases of old amputation the author also saw this atrophy of ganglion cells in groups. He records an investigation into two further cases of what he terms "atypical poliomyelitis." Goldscheider concludes from his case that some irritant having established itself in the vessel wall led to marked vascular dilatation and endothelial overgrowth, which spread to the neuroglia. The author points out that Goldscheider here uses the term "inflammation" in quite a new sense. Dauber, from an examination of a case of five days' standing, maintains the interstitial origin of the disease. The author would class this case, as well as Redlich's, as atypical. Siemerling maintains that in his two cases of ten days and eight months' standing the disease was an acute myelitis, the anterior horns being chiefly involved. The interstitial change along with the vascular lesions showed, according to this writer, that the supporting tissue was the chief seat of the disease. The author thinks that the value of quite recent cases has been overestimated in settling this question. It is then often open to doubt whether the disease is really poliomyelitis, or they may be atypical cases. Slighter cases should be used to determine the starting point of the disease. The author attaches overwhelming importance to the disappearance of ganglion cells in groups. He maintains that any lesion affecting these cells secondarily through their blood supply must be diffuse. There is no evidence why a non-corpuscular irritant circulating in the blood should involve not only the spinal cord alone, but so small a part of it as the anterior horns. The rapid onset of the disease is not explained by a secondary affection of the ganglion cells. The author refers to the intact condition of many nerve fibrils in this relation. He maintains that in his own and other reported cases the changes in the interstitial tissue do not need the assumption of an interstitial origin for anterior poliomyelitis.

(293) Urticaria Pigmentosa.

Afzelius (*Hygiea*, May, 1894) publishes the first case of this affection observed in Sweden. The patient was a girl, aged 6 months. When the child was 3 months old the mother noticed red, slightly itching, elevations on various parts of its body, especially after the bath. After a time light brown spots were noticed. Both the child and its parents were healthy. No history of urticaria or syphilis. Scattered over the body and extremities were very numerous pigmented non-desquamating, spots, irregular but mostly round in shape and varying in size, the largest being about the size of a threepenny bit. They were most numerous on the upper part of the back and the back of the right leg, also on the scalp. On the face were several spots. The hands and feet were free. The colour varied considerably; some were reddish, others yellow, of the same colour as xanthelasma spots; the majority had a light-brown tint. The larger spots were hairy on the surface. They did not disappear on pressure. Most of them were level with the normal skin, but there were also some pigmented papules. There was scarcely any itching. On rubbing the spots with the finger they became raised and red. All over the skin surface a factitious urticaria could be easily produced; also on the spots themselves, where a distinct white line appeared on the surface of the pigmented spot. The child was seen about a year later; it was still in good health, and normally developed. Some new spots had appeared, especially on the legs. The old spots had become distinctly darker; some of them were almost of a black-brown colour. The author has collected thirty-nine cases of this affection, of which fifteen occurred in England.

SURGERY.

(294) Painful Peritoneal Adhesions.

Nicaise (*Rev. de Chir.*, August, 1894) states that the use of antiseptic methods and the consequent development of antiseptic surgery have made surgeons better acquainted with peritoneal adhesions, and have led to the rational treatment by operation. These adhesions may give trouble by disturbing the functions of implicated organs, and by exciting pain. The painful sensations vary in character and intensity in different cases. They may be caused by displacement of the organs to which the adhesive bands are attached, or by compression of the intestinal canal. The pains in the latter condition are often very severe, and of a similar nature to those of hepatic and renal colic. The diagnosis of peritoneal adhesions is often very difficult; in some cases their existence can be assumed only by a process of exclusion, whilst in others certainty as to their presence or absence cannot be attained except by an exploratory laparotomy. The author is of opinion, however, that a diagnosis may be made in many cases by close inquiry concerning such details as the previous occurrence of abdominal inflammation; the seat of the pain, and the relation of such seat to that of old inflammatory attacks; the time when the pain comes on with regard to the taking of food: and, in females, to the periods of menstruation. As many peritoneal adhesions become longer and thinner, and have a tendency to disappear, there should be no hurry in having recourse to operative treatment. When, however, they cause very severe and frequently renewed pain, although the compression of an abdominal belt or bandage or massage may give relief, the only method of dealing effectually with such trouble is the performance of laparotomy and the destruction of the adhesions. The cure that may be thus effected will be complete and perma-

nent; but, it is pointed out, as laparotomy is a serious operation unless practised under very strict antiseptic conditions, it ought not to be applied in cases of peritoneal adhesions unless these cause intolerable pain.

(295) Appendicitis.

At the meeting of the American Association of Obstetricians and Gynæcologists, held at Toronto on September 19th, 20th, 20th, and 21st (Philadelphia *Med. News*, October 6th), W. G. McDonald, of Albany, presented a paper embodying the results of a clinical study of 84 cases. He thinks that out of the great mass of literature on the subject three important landmarks are established: (1) That for all practical purposes all inflammatory processes in the right iliac fossa arise from the appendix. (2) That practically the appendix is always intraperitoneal, and that any operation undertaken for appendicitis that does not involve the entering of the peritoneum is false in its surgical conception. (3) That idiopathic peritonitis does not occur. That many cases diagnosticated as such are really cases of perforating appendicitis. The author classified the varieties as (1) acute perforating, fulminating appendicitis with general peritonitis. (2) Acute suppurating appendicitis with local plastic peritonitis and abscess. (3) Subacute appendicitis, variously termed catarrhal, chronic, relapsing or obliterating appendicitis, or appendicular colic. The perforation occurs very much earlier than is commonly believed. Acute suppurative appendicitis with local peritonitis presents the most favourable field for operation during the attack. The removal of the appendix is to be undertaken with great circumspection when it lies in the walls of an abscess cavity. The third group of cases does not require operation during the first attack, but if repeated attacks occur, operation during quiescence is demanded. Operative results in these cases are most favourable.

(296) Cancer of the Kidney.

Alm (*Hygiea*, May, 1894) publishes the following case: A man, aged 39, had for six or seven years been subject to recurrent attacks of hæmaturia, at first only a few times yearly, but during the last three years oftener. The attacks came on independently of exertion or any other cause, and were not, as a rule, preceded or followed by any pain. Between the attacks the urine had been normal, but it had during the last years shown a trace of albumen. Only once, a few years ago, had he passed a small stone, the size of a pin's head. No tenesmus, not even during the attacks. Three years ago a hardening began to be felt under the right costal margin, and this has gradually increased in size until a year ago, since which time the patient thinks it has increased more rapidly. The tumour has never been tender, but on examination there has been slight pain. As the attacks of hæmaturia have become more frequent, the patient's general health has been reduced. The tumour, which could be felt midway between the costal margin and Poupart's ligament, was hard and almost round, the size of a man's fist. It was freely movable, and could be pushed up so that its upper part disappeared under the costal margin. Its surface was somewhat uneven. The ascending colon ran obliquely across it. Nephrectomy was performed, as the left kidney was found normal, and no metastases were detected in the peritoneal cavity. The patient made an uninterrupted recovery. On examination the tumour was found to be a primary carcinoma. That the hæmaturia from the first, six or seven years ago, was caused by the malignant new growth the author believes for the following reasons: There had never been any symptoms of stone or disease of the bladder. All the symptoms pointed to the kidney being the cause of the bleeding. Only once a very small stone had passed, but too small and smooth to cause hæmaturia; in the extirpated kidney there was no concretion found, and in the left none could be felt. Although cases of hæmaturia occur when on laparotomy nothing pathological can be detected, when as in this case a malignant tumour appears after a few years' time, is it rash (the author asks) to conclude that this has been the cause of the hæmaturia from the first?

(297) Congenital Dislocation of Hip.

Bradford (*Ann. of Surg.*, August, 1894), from a general review of the literature of the subject and from his own experience, comes to the following conclusions: (1) That the methods of treatment by traction, or by mechanical means, crutches, splints, recumbent traction, with or without tenotomy, do not effect a cure; (2) correction by means of forcible reduction without incision can be applicable in but few cases, and is not reliable; (3) that the method of operative reduction offers the best prospect of a cure. The method at present, however, involves risks, and is not certain in its results, but it is to be expected that further experience will give greater precision and more certain results, as no inherent difficulties lie in the way of operation; that the condition of the shortening of the muscles, the shortened condition of the anterior bands of the capsular ligament, forms an important obstacle to complete reduction, and that these fibres should be thoroughly divided, and this is best done, according to the author, from in front rather than from behind.—Myers (*ibid.*) discusses the same subject. Of 113 cases of which he has notes, in none was there pronounced flexion or adduction; 31 per cent. suffered from pain at times, especially during periods of very rapid growth. The attacks of pain were generally recurrent, and these cases seemed to show a considerable amount of shortening. The author thinks it improbable that the true reposition can be made without an open operation, since the originally shallow acetabulum is generally still further filled up, and the hour-glass form of the capsule would itself prevent replacement. By conservative treatment a great deal can be accomplished for these cases in some instances. In view of the good results already obtained by operation, and the even more promising character of the latest reports, we may, the author thinks, undertake the treatment of these cases with the assurance that we can benefit them very materially in a comparatively short time.

MIDWIFERY AND DISEASES OF WOMEN.

(298) Cancer of the Pregnant Uterus.

Hernandez (*Archives d'Obstét. et de Gynéc.*, September, 1894) concludes, on the strength of personal experience and statistics, that the following rules should guide us: (1) In any case where cancer is detected in pregnancy the uterus and appendages should be removed at once if possible, whatever be the stage of gestation. (2) The surgeon should be careful to prevent all contamination of the operation wound by cancerous products and to remove the whole new growth. (3) Having isolated the new growth by a few sutures, he should, in a case in the first three months of pregnancy, perform vaginal hysterectomy; after the fourth month Mackenrodt's abdominal hysterectomy will be called for. Before the middle of the seventh month the uterus is to be removed at once, although the child may be alive. If the child be viable, Cæsarean section must first be performed, the uterus being removed afterwards. (4) When the cancer is too advanced to allow of its removal, the surest way to save the child must be considered. (5) Early diagnosis can alone ensure anything like a definite cure, hence it is our duty to look out for uterine cancer in pregnant women. In conclusion, in order that we may learn how far a permanent cure is possible, all cases should be accurately recorded. The state of the operation cicatrix should be reported when death occurs after recovery from the operation.

(299) Treatment of Distension of the Fallopian Tubes.

At the meeting of the American Association of Obstetricians and Gynæcologists, held at Toronto on September 19th, 20th, and 21st (Philadelphia *Med. News*, October 6th), Frank. A. Glasgow, of St. Louis, read a paper which was intended to bring before the profession a method of curing tubal distension by means of intrauterine treatment in contradistinction to cœliotomy and removal. By this means the uterine ends of the tubes are made more patulous, and a discharge takes place from the tube through the uterus. The author called attention to the fact that the tubes, so far as his observation goes, are always pervious at the outer extremity of the cornu; hence, when removing them, we must always clamp them before cutting. The obstruction

must be within the uterine wall, probably in the endometrium; hence gonorrhœal inflammation is not an adhesive inflammation, and therefore it does not follow that the tubes have a true atresia following this inflammation. His opinion was that the closure is due to a swelling of the endometrium, and hence a closure at the uterine end takes place. When this inflammation and swelling are overcome by pressure and antisepsis the tubes become patulous again. The intra-abdominal pressure will cause fluid in any pendant portion of the tube to ascend into the uterus. The foregoing procedure can be carried out in three different ways: (1) By gradually packing with gauze without anæsthesia. (2) By rapid dilatation of the cervix and packing with gauze after curetting. This is done under anæsthesia. (3) The author's own method of dilating by means of antiseptic or sterilised elm-bark tents. These tents are small strips of elm bark, made just long enough to enter the cervix completely and not press on the fundus. They should be kept in an alcoholic solution or mercuric chloride (1 to 4,000), and have a short string attached, by means of which they may be withdrawn. They are partially broken in a number of places for the purpose of making them more pliable. They may be dipped into glycerine or water just before introduction. These tents may be used when it would be impossible to pack with gauze. He had treated twenty or more cases during the past year, and did not recall one in which he did not get some discharge from the tent. All the cases were either cured or very much benefited.

(300) Kraurosis Vulvæ.

Martin (*Volkmann's Samm. klin. Vorträge*, No. 102, 1894) describes three new cases of this atrophic affection of the vulva. All the eight patients under his care complained of pain, with itching, gnawing, and burning sensations about the vulva. He could not accurately determine whether the itching was due to the atrophy of the tissues or to the inflammatory process with which kraurosis begins. All suffered from dysuria. A special feature was an extremely uncomfortable feeling of tension, set up by any movement, as well as during bearing-down efforts in defæcation and micturition. Coitus caused absolute pain. When the disease was advanced fissures developed. The pain then became constant, and greatly affected the patient's health. Hence early treatment is called for. Poultices, narcotic ointments, caustics, and baths do little good. Excision of the diseased tissues is necessary; the healthy skin beyond their limit must be cut into, and the operator should dissect up the affected layers until soft tissue is reached, toughness representing disease. The edges of the wound are united by sutures. In six of Martin's eight cases this operation was performed. Four have been thoroughly cured: one seems to have been lost sight of. The sixth, one of the three new cases, was complicated with carcinoma; the operation was performed only three months before Martin published this paper.

(301) The Significance and Etiology of the Premature Discharge of Meconium.

E. Rossa (*Archiv f. Gynäk.*, Bd. 46, Heft 2) states that it is commonly believed that the escape of meconium before term is a sure sign that the fœtus is in danger of asphyxia, and is therefore an indication for the hastening of delivery. The author's personal investigations have led him to doubt the correctness of this teaching. In a large number of cases the escape of meconium has no significance of the kind generally attached to it. The cause of the phenomenon is simply increased intestinal peristalsis, which may, indeed, be due to asphyxia, but may also be due to other less well-defined causes. Among these the principal are diseases of the mother, and particularly gastro-intestinal disorders.

(302) Primary Cancer of Fallopian Tube.

Tuffier (*Ann. de Gynéc. et d'Obstet.*, September, 1894) describes another example of this disease, only recognised within the last eight or ten years. The patient was aged 55. She had borne two children, the youngest when 25 years old. Menstruation began at 18, and ended at 51, in 1888. In May, 1892, metrorrhagia and hypogastric pains set in. As they continued she entered the Hôpital Beaujon, and was placed in Anger's wards in July, 1892. The right iliac fossa was filled with a solid mass, which pushed the uterus forwards and fixed it firmly against the symphysis. Retro-uterine hæmatocele, probably due to a new growth, was diagnosed, and abdominal section was performed on July 8th, 1892. A mass of the size of a small fœtal head was removed. It consisted of the right Fallopian tube. The uterus and left tube were normal, the left ovary sclero-cystic. The patient was examined five months later; no trace of recurrence or metastasis could be detected. The tube, pear-shaped, was found full of serum and clots. Its walls were thin, and it contained a villous tumour. This growth was mounted on a pedicle a centimetre broad, attached to the walls somewhat inferiorly, and to the inner side of the middle of its course. At the point of attachment of the pedicle the tumour substance perforated the tube wall so that a tubercle as big as a pea projected on the outer surface of the tube. The villous mass was an epithelioma, allied to cylindroma: the stroma was very young connective tissue.

THERAPEUTICS.

(303) Lactophenin.

Roth (*Wien. klin. Woch.*, September 13th, 1894) discusses the use of this drug (*see* Epitome, February 17th, 1894, par. 139) in acute rheumatism. It has hitherto been chiefly used as an antipyretic, hypnotic, and antineuralgic. The author draws attention to the occasional failure of the salicylates in acute rheumatism, and to the dangers at times attending the use of antipyrin, antifebrin, and even sulphonal. He has noticed after lactophenin a temporary feeling of weight and heat in the epigastrium which has disappeared on further use. Occasionally there has been some cyanosis, but without other symptoms. The dose given has been from 5 g. to 1 g., and this may be increased up to 6 g. in the day. He refers to the use of this drug in enteric fever by v. Jaksch (Epitome, April 28th, 1894, par. 347). Lactophenin has also been used in pneumonia, influenza, erysipelas, acute febrile tuberculous affections, scarlatina, sepsis, and acute and chronic rheumatism, but the number of cases of acute rheumatism is small. The author gives details of 8 cases of this disease, and refers to 20 more in which he has used lactophenin with good results. He concludes (1) that the pain and swelling disappear generally within twenty-four to forty-eight hours; (2) that the temperature continues low; and (3) that no unpleasant by-effects were observed, notwithstanding large doses. He has also found lactophenin useful in some cases of chorea and in the pains of locomotor ataxy. Lactophenin is worthy of being placed along with the salicylates as an anti-rheumatic.

(304) Menthol in Diphtheria.

F. Kastorsky (*Vratch*, No. 24, 1894) reports 37 cases of diphtheria (in 3 adults and 34 children) treated and cured by painting with a 10 per cent. alcoholic solution of menthol. The paintings (by means of a piece of cotton wool) were usually carried out three times daily. In some cases, however, a single free application was followed by complete disappearance of false membranes within two days. A marked improvement in the patient's general condition was invariably noticed from the beginning of the treatment. The same simple method was successfully practised by the author in numerous cases of anginas of various forms, and by Trütovsky in a group of cases of scarlatinal diphtheria. The paintings are said to be painless and quite harmless.

(305) A New Pill Coating.

Waldstein (New York *Med. Journal*, September 8th, 1894), says it has long been considered desirable to reach the intestines, especially the upper tract, by medicines which, taken by the mouth, would pass the stomach without being dissolved. Unna, of Hamburg, made experiments with keratin, but with this, as well as with coatings of salol proposed by Dieterich, shellac, etc., Waldstein is dissatisfied. After many trials he has succeeded in obtaining a coating which answers the required purposes; it is made from a mixture of shellac and salol dissolved in alcohol. In order to determine the behaviour of pills coated in this manner, he has given methylene blue in the

pills, and has found by washing out the stomach that they remained undissolved there, whereas after taking them the fæces and urine became coloured. Small doses of intestinal carthartics acted more promptly when administered in this way than in the usual manner. Waldstein proposes, by administering antiseptic remedies in this way, to give them a thorough trial in some cases of eczema and urticaria, etc., due, he thinks, to intoxication from ptomaines formed in the intestinal canal.

(306) Treatment of Seborrhœic Eczema in Children.

FEULARD (*Jour. des Prat.*, September 19th, 1894) observes that attention must be given in the first place to the diet, which should be limited to milk, with the addition, in older children, of eggs. In the local treatment the first step is the removal of crusts, which may be effected by using warm coal-tar lotions, preceded, if necessary, by poultices. After the crusts have been removed he uses gauze compresses soaked in a solution of resorcin (6 in 1,000). These are kept constantly applied to the scalp by day, and are applied frequently to the face. By night an ointment is used, consisting of 1 part of balsam of Peru to 30 parts of vaseline. Later he uses fine starch powder, or a powder consisting of equal parts of starch and carbonate of bismuth. Recovery is rapid if the instructions as to diet are strictly observed and the dressings used with regularity.

(307) Amylene Hydrate.

HARMACK AND MEYER (*Zeitschr. f. klin. Med.*, vol. xxiv, 3 and 4, 1894) have arrived at the following results after careful investigation of the physiological properties possessed by amylene hydrate. Like alcohol, it first excites and then successively paralyses all the nerve centres. In graminivorous animals quiet sleep is produced, whereas in carnivora the symptoms of excitement and intoxication are more pronounced. The fatal doses were found to be 15 to 30 grains per kilogramme weight of animal. A very marked diminution of temperature is produced, intensifying the danger to life. Muscular spasms produced by poisons such as santonin and picrotoxin are delayed or alleviated. The excretion of urea is diminished, and finally it cannot be employed subcutaneously, owing to the severe pain produced.

(308) Duboisin as a Hypnotic.

P. S. SKÜRIDIN (*Vratch*, 1894, No. 21) used hypodermic injections of duboisin in 21 cases of sleeplessness in the insane, the dose varying from $\frac{1}{150}$ to $\frac{1}{75}$ grain, and the grand total of injections amounting to 360. In 153 (42 per cent.) cases the duration of induced sleep exceeded six hours, while in 126 (35 per cent.) it oscillated between four and six hours, and in 62 (18 per cent.) was under four hours. In 19 (5 per cent.) the drug failed altogether. The writer comes to the following conclusion: (1) Duboisin will occupy a prominent place amongst hypnotics for the insane; (2) the best results may be expected in epilepsy, periodical insanity, and acute mania and mental confusion; (3) the hypnotic effect is a secondary phenomenon, developing consecutively to the subsidence of a motor or muscular excitement. Hence the drug proves most useful in insomnia caused by intense motor excitation. In sleeplessness depending upon illusions, hallucinations, or organic brain disease, but unaccompanied by distinct motor disturbances, the remedy remains inefficacious; (4) the drug is free from accessory ill effects.

PATHOLOGY.

(309) The Diphtheria Bacillus.

ABEL (*Deut. med. Woch.*, August 30th, 1894), refers to the fact that diphtheria bacilli may be found in the throat and nasal secretion after the end of the disease, and when the patient is apparently well. The period during which such patients can convey the disease lasts only a short time, corresponding apparently at most to five weeks. The author, however, reports a case in which these bacilli were found sixty-five days after the disappearance of the membrane from the throat. There was at this time a fibrinous exudation in the nose, from which they could be cultivated and experimented with. It has been shown that the nasal mucous membrane is a good cultivation soil for the diphtheria bacillus. This case was an example of a fibrinous rhinitis upon a diphtherial basis. Nasal diphtheria is a rare disease, with fœtid nasal discharge and severe symptoms. Fibrinous rhinitis is also an acute process, but the pharynx escapes, and the temperature and general condition remain undisturbed. It appears in most cases to be a mild form of diphtheria, but it is not always so, for other micro organisms may excite it. Patients suffering from it are not suspected, and may thus convey the disease to others. The author thinks that diphtheria patients should not be discharged until a bacteriological examination has proved the absence of diphtheria bacilli. Experiments show that the bacilli cultivated from fibrinous rhinitis are virulent. The author records such a case in a boy, aged 9 years, in which colonies of virulent diphtheria bacilli were found along with the strepto- and staphylococcus. The boy had not suffered from diphtheria, but his mother had just recovered from it. The bacilli disappeared when the membrane did. The author refers to another similar case, also proved to be due to the diphtheria bacillus.

(310) Contagiousness of Cancer.

At the eighth meeting of the French Congress of Surgery held at Lyons, October 9th to 13th (*Sem. Méd.*, 10th), Guelliot of Reims presented a communication embodying the results of an inquiry as to the contagiousness of cancer begun in 1891. The number of cases collected by him in which cancer appeared to have been communicated by contagion was forty. In the author's opinion, his facts show: (1) That cancerous affections are unequally distributed in adjoining districts, and that neither heredity nor consanguinity is adequate to account for this. (2) That there are real cancer houses, the dwellers in which, though having no link of blood relationship between them, are successively or simultaneously attacked by malignant tumours. (3) That cases of cancer attacking two persons living together are relatively frequent. Of 100 such cases, published and unpublished, in 85 the persons attacked were man and wife; in 8 they were medical practitioners who had been specially engaged in the treatment of cases of malignant disease. According to the author, these facts tend to show that cancer is transmitted, directly or indirectly, and that it runs its course as an infectious disease with an average incubation of from a few months to two years, a primary lesion, then generalisation. In discussing the paper, Delore of Lyons stated that cancer seemed to him capable of being transmitted by pregnancy. Fifteen years ago, at the Congress of Blois, he had brought forward a case in point.

(311) Bacteriology of Healthy Conjunctiva.

S. LACHOWICZ (*Przeglad Lekarski*, May 5th, 12th, 19th, and 26th 1894) has bacteriologically examined the conjunctival secretion from 63 healthy eyes in 32 healthy persons, and found bacteria in 19 (31 per cent.) eyes in 15 persons. Cocci were met with more frequently than rod-shaped microbes. As to the species, there were present in 4 persons staphylococcus pyogenes albus (in 2, in both eyes); in 2, micrococcus candicans; 1, streptococcus pyogenes; 2, yellow sarcina; 2, micrococcus coronatus; 1, bacillus sporiferus; 1, B. fluorescens putridus; 1, B. xerosis conjunctivæ. In one case one eye proved to contain simultaneously two species (staphylococcus pyogenes albus and micrococcus cereus albus); in another person one eye was inhabited by micrococcus candicans, the other by bacillus xerosis conjunctivæ. To determine the effects of microbes penetrating into the healthy eye, the author made a series of experiments on himself. After repeated examinations had shown that his eyes were free from bacteria, he proceeded to introduce microbes in pure cultivation, the following species being successively inoculated: M. candicans, B. sporiferus, B. fluorescens putridus, staphylococcus pyogenes albus, M. coronatus, and M. cereus albus. In each instance the conjunctival secretion was subsequently subjected to repeated bacteriological examinations 2, 5, and 25 minutes, and 1 and 24 hours after the inoculations. It was thus proved that (1) the inoculation did not give rise to any subjective or objective phenomena whatever; and (2) that the bacteria disappeared completely from the eye within 24 hours after the inoculation.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(312) Referred Headache and Faceache.

Head (*Brain*. Autumn, 1894) discusses the pain and tenderness produced by visceral disease on the surface of the head and neck. In a previous paper (*ibid.*, 1893) he had described similar phenomena at a lower level. He considers that the locality of pain is instructive only when the area of tenderness with which it is usually associated is known. In determining the areas of any particular organ of the head the method adopted was (1) to exclude all pain and tenderness in the thorax and abdomen; (2) to note the presence or absence of general states, for example, anæmia; (3) to exclude disturbances of other organs than the one under investigation; (4) to note the effect of treatment directed to remove the initial visceral lesion. Converse precautions were taken when determining the relation of pain and tenderness in the head and neck to disturbances of thoracic and abdominal organs. The author seeks to establish that each organ in the head—nose, eye, ear, teeth, tongue, salivary and other glands, tonsils, larynx, and the brain itself—stands in relation to one or more areas on the surface to which pain is referred, and over which the skin may become tender. Herpetic eruptions correspond fairly with the areas of tenderness, but more often several areas are involved. These areas do not as a rule overlap, and this is especially true of the head, less true of the neck. The accompanying table shows the points of maximum tenderness and pain in the several areas. The phrases used by patients in describing the seat of pain are worthy of note:—Fronto-nasal: "aching over middle of forehead." Mid-orbital: "at the back of eye" or "over the middle of the eyebrow," also "aching of the eye," and sometimes "soreness over the front of the hair." Fronto-temporal: "over the forehead" (if bilateral) or "over the temple." Temporal: "in the temple," or if bilateral, "shoots through from temple to temple." Vertical: "on the top of the head." Parietal: hand placed over parietal eminence. Hyoid: "earache" and pain "just behind the jaw." Superior laryngeal: pain "in the throat" and difficulty in swallowing. Inferior laryngeal: "something in the throat" (globus); stimulation over the tender area causes "tickling in the throat," and frequently produces cough. Naso-labial: "upper lip swollen and tender, and nose sore." Sterno-mastoid: aching "over the neck and back of the head," or "stiff neck." The head areas to which viscera refer pain (in association with referred pain in parts of the trunk) are briefly as follows:—Lung: fronto-nasal, mid-orbital, fronto-temporal and temporal. Heart: mid-orbital, fronto-temporal, and temporal. Stomach: fronto-nasal, vertical, temporal, parietal. Liver: fronto-nasal, vertical, occipital. Upper part of small intestine: vertical and parietal. Intestine also to occipital. Ovaries or testes: occipital.

Area.	Area from.	Reference From:
Fronto-nasal	Over orbital ridge, ½-inch from middle line	Cornea and anterior chamber, upper nose, upper incisors
Mid-orbital	(1) Eyelid just below centre of eyebrow. (2) Front of hairy scalp	Hypermetropia, hypermetropic astigmatism (accommodation spasm)
Fronto-temporal	Behind fronto-nasal and ½-inch above orbital ridge	Iritis, glaucoma, thoracic viscera
Temporal	In temporal fossa, just above upper border of zygoma	Glaucoma, second upper bicuspid, upper gastric area of chest (vomiting)
Vertical	Vertically above ear	Posterior part of eye, increased tension of middle ear, hepatic and gastric disturbances
Parietal	Parietal eminence	Ear (with other areas), stomach
Occipital	Just above occipital protuberance	Abdomen, back of tongue (rarely)
Maxillary	Under eye	Bicuspids and hard palate, iritis and T.
Mandibular	In front of tragus	Last two upper molars
Hyoid	(1) Behind and below angle of lower jaw. (2) In external auditory meatus	Ears, tonsils, tongue, teeth (lower molars)
Superior laryngeal	In front of sterno-mastoid at level of pomum Adami	Lower wisdom teeth, back of tongue
Inferior laryngeal	In front of sterno-mastoid, at level of cricoid	Larynx (vocal cords and below)
Naso-labial	Between angle of nose and angle of mouth	Respiratory part of the nose, upper canine and first bicuspid
Mental	Over lower jaw, below angle of mouth	Anterior part of tongue, lower incisors, canine, and first bicuspid
Sterno-mastoid	(1) Posterior edge of insertion of sterno-mastoid into skull. (2) Supraclavicular fossa	Thoracic organs
Sterno-nuchal	Over the shoulder-joint	Thoracic and abdominal disturbances

(313) Early Visceral Disease in Syphilis.

Lasch (*Berl. klin. Woch.*, October 1st, 1894) points out the incorrectness of identifying visceral with gummatous syphilis. He describes early syphilitic jaundice occurring at a time when the early skin lesions are present. This jaundice is further distinguished from simple icterus by its sudden appearance without previous gastric symptoms and by the absence of other causes. It lasts three weeks to three months. Mercurial treatment brings about rapid improvement. The explanation of this early jaundice is difficult. It has been attributed to the pressure of enlarged glands in the portal fissure, to the presence of a similar process in the mucous membrane of the biliary passages as is seen in the skin, to a non-gummatous affection of the liver itself, to the action of syphilitic toxins, etc. The author records three cases occurring in patients aged 19, 26, and 26 years respectively. In two of these there was a marked maculo-papular syphilide present, and in the third a similar eruption had just disappeared. Lasch gives details of forty-six recorded cases of this disease. The significance of this early syphilitic icterus lies in its treatment by mercury. The author maintains that a rational mercurial treatment could not produce such a jaundice.

(314) Glio-sarcoma of the Cerebellum.

P. de Michele (*Annali di Neurologia*, fasc. iii, iv, and v, 1894) has a paper on this subject, and comes to the following conclusions: Glio-sarcomata may sometimes in their course present the clinical characters of a chronic inflammatory process. The symptoms resemble those caused by multiple foci, as in syphilis or tuberculosis of the nervous centres, rather than those of true neoplasms. Both their clinical course and their histological structure are suggestive of a probable infective origin. The destructive processes in the trapezoidal body, and especially in its horizontal branch, are not followed by degenerative changes in the pedunculer fasciculi, at least in the superior and middle peduncles. The most important signs for the diagnosis of the seat of processes taking place in the inferior worm of the cerebellum are: (1) lateral curvature of the spine; (2) progressively increasing weakness ending in paralysis of the limbs; (3) general malnutrition; (4) the unconscious utterance of shrieks. These clinical phenomena are, the author holds, in accord with the results of experimental research.

SURGERY.

(315) Operative Treatment of Subcortical Brain Tumours.

Vierordt (*Fortschritte der Medicin*, No. 13, 1894) reports a case of subcortical tubercle of the brain, which was successfully removed by Czerny. A man, aged 21, began to suffer from unilateral convulsions, commencing in the left leg and then affecting the left arm. Slight spastic paresis developed. The convulsions became more extensive; the left side was affected first, then the right side, and unconsciousness followed. Percussion of the skull was not painful, and the optic discs were normal. He was trephined in Frankfort eighteen months after the onset of symptoms, but the surface of the brain was normal. The convulsions and hemiparesis increased after the operation, and slight stupor and optic neuritis

developed. Vierordt diagnosed tumour of the centrum ovale. The first operation had shown that it was not cortical. Further, the lesion had given rise to complete hemiparesis, whilst marked general pressure symptoms (distinct optic neuritis and stupor) had been long absent. Not much importance could be attached to this point, but there was some probability that the tumour had not then been very extensive, and had been situated at a point where the fibres for the leg, arm, and face ran close together. There were also signs of cortical irritation, and hence a diagnosis of subcortical tumour in the centrum ovale was made. Two and a-half years after the onset of symptoms a second operation was performed and a large subcortical tumour the size of an apple was removed (weight 175 grammes). Considerable improvement followed. The stupor and optic neuritis disappeared, and fifteen months after the operation the patient's general condition was good and he presented no signs of mental affection. When a gross lesion of the cortex has been diagnosed in unilateral epilepsy and the skull trephined, if no lesion is observable, stimulation of the cortex by electricity has been recommended and the removal of the locality giving rise to the initial spasm advised. But before this is done Vierordt urges that the brain should be carefully explored for subcortical tumour or abscess.

(316) Radical Cure of Hernia.

At the meeting of the American Association of Obstetricians and Gynæcologists held at Toronto on September 19th, 20th, and 21st (Philadelphia *Med. News*, October 6th), C. A. L. Reed, of Cincinnati, gave an account of what he claimed to be "a new operation for the radical cure of inguinal and femoral hernia." The operation is performed as follows: The incision in inguinal hernia is made from a point 2 inches above Poupart's ligament midway between the anterior superior spinous process of the ilium and the spine of the pubes, obliquely downward and inward as nearly as possible consistent with the access of the inguinal canal to a point at the base of the scrotum. The dissection is then carried into both scrotal and pelvic cavities. The protruding viscus is then reduced, and carefully inspected after being brought out above. The sac is next carefully dissected from its scrotal connections and reversed by invagination. It is then opened by two incisions, one toward the pubes, the other toward the ilium, being thus converted into an anterior and a posterior flap. The cord is now dissected loose and placed in the canal, denuded of its peritoneum at its outer angle. The internal ring is closed by several interrupted sutures of animal or buried silk, these sutures being applied beneath the peritoneal flaps formed by splitting the sac, care being taken that in the closure of the ring undue pressure shall not be brought to bear upon the cord. The posterior peritoneal flap is now excised, the stump being ligated should there be any necessity for doing so. The anterior flap is carried across the now obliterated internal ring, and stitched by interrupted sutures to the posterior parietal peritoneum. The external ring is then closed by passing a number of sutures through its pillars externally to the cord, which is now fixed in the internal (pubic) angle of the outlet of the canal. The incision into the abdomen is closed by interrupted figure-of-eight sutures, the internal loop embracing the peritoneum, the aponeurosis of the transversalis and of both oblique muscles, and the external loop embracing the superficial fasciæ, fat, and skin. These sutures should not be more than three-quarters of an inch apart. The incision into the scrotum may be closed in the ordinary way. Drainage should not be employed except in the presence of marked oozing or obvious infection.

(317) Epithelioma of the Lip in a Child.

I. S. Batashoff (*Meditzinskoie Obozrenie*, No. 14, 1893) reports a case of epithelioma in a girl 13 years old. The child, who was healthy and well nourished, and came of a healthy family, applied on account of a rapidly-growing lump in her lower lip, which had been first noticed a month previously. The tumour, which was of the size of a large pea, was situated in the thickness of the lip, a little to the left of the middle line; it was of uniformly hard consistence, and had very indistinct boundaries. It was slightly tender, but otherwise caused no discomfort. The submaxillary lymphatic glands on both sides were somewhat enlarged, but painless and freely movable. There was no history of traumatism or family predisposition to malignant disease. The only noteworthy etiological fact was that the girl was residing in a notorious cancerous locality. [The writer practises in Taloshnya, Novotorshsk District, Tver Government. Of 404 cases admitted to a local Zemskaia hospital in 1891, as many as 23, or 5.7 per cent., were cases of cancer. On the other hand, in an adjacent district of the Tula Government, the total number of cancer cases admitted to a similar hospital during the last five years was less than 10.] Taking into consideration this fact, together with the consistence, rapid growth, and diffuse character of the tumour, the author diagnosed a cancer, and excised it without any delay. The microscope showed that he had to deal with a typical, rapidly-growing epithelioma. The wound quickly healed. No recurrence had taken place up to the date of report (seven months after the operation).

(318) The Incision in Abdominal Surgery.

At the meeting of the American Association of Obstetricians and Gynæcologists held at Toronto, September 19th, 20th, and 21st (Philadelphia *Med. News*, October 6th), J. H. Carstens gave a summary of his results in abdominal surgery, and formulated the following conclusions: (1) With a small, narrow-bladed sharp knife make a clean incision of the necessary length through the skin, and with another sweep or two cut through the linea alba, muscle, etc. Lift the peritoneum with the fingers, open it, and enlarge the incision. The use of the forceps or the grooved director to lift the tissues is unnecessary. (2) In closing the abdominal incision use animal ligature, kangaroo tendon and catgut. First, carefully bring together the peritoneum in a running stitch, then the transversalis fascia, and the rectus, if the incision is through this muscle; next carefully bring together, edge to edge, the tendinous insertion of the oblique muscles. The fat and loose cellular tissue above can be brought together in one or two tiers, according to thickness. Bring the skin together carefully with Marcy's cobbler stitch, thus burying all sutures. (3) Then seal with collodion, and if everything connected with the operation has been carefully aseptic, absolute primary union will take place, and the different layers of the abdominal wall will have been brought together as near as possible as they were in the first place, and no hernia will result. (4) In cases of extensive umbilical, ventral, or other hernia it is best to bring the peritoneum together with an over-and-over stitch of kangaroo tendon or catgut; to make a flap-splitting operation of the ring, bring together with silkworm gut or silver wire, buried, and then the fat and skin are united with the buried animal suture.

MIDWIFERY AND DISEASES OF WOMEN.

(319) Moribund Women at Term: How to Save the Fœtus.

Audebert (*Nouvelles Arch. d'Obstét. et de Gynéc.*, August 25th, 1894) reports the case of a woman, aged 33, who was brought into hospital dying from hæmorrhage. She had received numerous wounds from a billhook, the left elbow and wrist were almost severed, and the lung was certainly wounded. She was a 3-para and pregnant, almost at term; the sounds of the fœtal heart were audible, though feeble. Admitted at 3.30 P.M., she at once underwent amputation through the left elbow-joint. At 5 P.M., as she was sinking fast, Audebert thought it right to deliver at once. He gradually got his hand into the uterus, passing the fingers one by one through the os; there was much resistance. The cervix at the time was patulous, but not effaced. The dilatation could not be effected under eight minutes. Whilst an assistant performed version by external manipulation Audebert ruptured the membranes, and brought down the legs; delivery of the breech proved more difficult. The arms slipped up, the cervix caught the body below the axillary level, and it was difficult to bring down the arms. The head was delivered directly afterwards. The turning took five minutes, the entire operative delivery twelve minutes. Unfortunately the child was lost, though the heart still beat feebly when it was delivered. The mother died five minutes later. The

child was very big. Audebert cannot, after the above experience, prefer forced delivery to Cæsarean section in cases of moribund women where an attempt is made to save the child. He had acted on that preference because, when he read a case of *post-mortem* Cæsarean section, some obstetricians insisted that as long as the mother was alive forced labour was preferable to section because it was less dangerous to the mother and as quick or quicker to perform. But Audebert noted that it was presumed the mother was moribund, nor was forced delivery evidently the safer; uterine rupture was quite possible. As to the second argument, it was false. It was based on the theory that the inferior uterine segment was relaxed in a dying subject. He found that, on the contrary, it contracted strongly to the last. Hence delivery took twelve minutes, while Cæsarean section could have been done in five minutes, and the child might have lived. In reply to objections, Audebert stated that the use of the forceps would not have hastened forced delivery; the introduction of its second blade would have been very difficult owing to the contraction of the uterus.

(320) Hysterectomy for Rupture of Uterus. R. Braun von Fernwald (*Wiener klin. Wochensch.*, August 23rd, 1894) describes two cases with full details. In the first case the presentation was transverse, decapitation was practised, and the head and body of the fœtus delivered. There was much flooding, and a rupture of the uterus up to the peritoneal coat was detected. The tampon was applied but bleeding continued: then it was removed and reapplied, and bimanual pressure practised for several hours. As the patient was worse than ever, the abdomen was opened, the uterus turned out and the elastic ligature applied, after removal of the tampon. A litre of sterilised salt solution was poured into the peritoneal cavity. The parietes were closed by a single row of sutures, and the uterus then amputated, the laceration was situated in the stump. The patient recovered, after some trouble with flatulence. In the second case, the uterus was lacerated in an attempt to turn. When the abdominal cavity was opened, a laceration of the lower segment of the uterus was discovered. It was over six inches long, and extended into the left broad ligament which bled freely. The head and shoulders of the dead fœtus lay in the peritoneal cavity. A median incision was made into the uterus and the child delivered, during which process the laceration was extended. A little clot was found in the peritoneum, but the left broad ligament was distended with blood. The elastic ligature was quickly applied to the uterus, but the bleeding continued. The lacerated broad ligament was therefore united by sutures passed as deeply as possible. It was, in fact, sewn to the sheath of the psoas, a fixed point against which the bleeding vessels were thus compressed. Without this precaution sewing up of the broad ligament often proves useless to arrest hæmorrhage. A strip of iodoform gauze was passed into the inner aspect of the laceration and brought out of the vagina. The uterus was amputated and the vagina plugged. During recovery convulsions occurred; they ceased on removal of the vaginal tampon, and were therefore attributed to compression of the ureter.

(321) Treatment of Eclampsia. Liebl (New York *Medical Record*, September 22nd, 1894), writing on the nephritis of pregnancy, says that in the presence of eclampsia the functions of the skin, being under our control, can be promptly called into action; as a rapid and energetic diaphoretic he prefers the hypodermic injection of ½ grain to ¼ grain of pilocarpin. To control the convulsions is of paramount importance; the reflex excitability of the spinal cord can best be overcome by inhalation of chloroform or nitrite of amyl, morphine given hypodermically, or enemata of chloral. Where there is reason to apprehend recurrence, chloral acts favourably as a prophylactic; hot baths at 100° to 110° F. also serve a good purpose. Only plethoric cases require venesection. After or between the convulsions the internal administration of infusion of digitalis, combined with alkalies, and even the fluid extract of jaborandi, will be of excellent service in favouring the elimination of the solid and watery constituents of urine. Veratrum has also proved an efficient cardiac sedative. Judgment is needed as to hastening delivery. Too active interference may prove dangerous, provoking reflex convulsive seizures.

(322) Treatment of Pelvic Abscess. Vogel (*Wien. med. Woch.*, No. 39, 1894) writes on the treatment of solitary pelvic abscess by incision through the vagina. A simple puncture suffices when the abscess cavity is already cut off by pathological processes from the peritoneal cavity, as in extraperitoneal abscess (parametritis), encapsuled intraperitoneal abscess (pyocele retro-uterina), or adhesive pyosalpinx. When the abscess wall, on incision, appears separate from the vagina, so that the cavity may not be safely cut off from the peritoneal cavity, the edges of the sac should be fixed to the vaginal wound by pressure forceps. These instruments may safely be removed in eighteen or twenty-four hours; the sac by that time will be adherent to the vagina. Hæmorrhage can be checked by pressure forceps, or, if from the interior of the sac, by a gauze tampon. The after-treatment of an opened abscess is of the simplest. A T-drain and usually a strip of iodoform gauze are passed into the abscess cavity. The gauze is taken out within thirty-six hours; the T-drain is retained for about a fortnight, and only changed when the pus does not freely escape or smells fœtid. The cavity is washed out once or twice with Condy's fluid. Great care is taken by Vogel lest the vaginal incision should close too soon. For several weeks, especially when the patient insists on walking about, the fistulous orifice should be dilated with the finger. A spring wire drainage tube, wrapped up in gauze, is an excellent contrivance in the late stage of treatment. It is superior to rubber tubing, as it counteracts the tendency of the wall of the fistulous orifice to contract. Vogel maintains that in making the incision the operator had best trust to his sense of touch. Specula and other instruments passed into the vagina do not always allow him to detect the prominent part of the abscess, whilst they hinder the delicate movements of the hand and increase the risk of wounding neighbouring organs.

(323) Extrauterine Pregnancy at Tenth Month: Placenta Inserted on Intestine. Houzel (*Annales de Gynéc. et d'Obstét.*, September, 1894) describes a case in which the period was last seen on May 1st, 1892. A violent attack of hypogastric pain, with dysuria, set in early in November. On February 10th, spurious labour set in and lasted four days; a decidua appears to have been passed. On March 15th, she remained undelivered and still felt pain; there was fever, but no diarrhœa. The sound passed 3 inches into the empty uterus. The outline of the child could be very distinctly seen through the parietes. On March 18th, 1893, abdominal section was performed. The peritoneum was of a singular green tint. The fœtus, slightly macerated, lay immediately underneath; its head was deeply engaged in the left iliac fossa, and much deformed from pressure. It had developed in the left tube, and the sac had evidently ruptured during the previous November. The placenta had become attached to the small intestines, and was still free from any retrograde change. The fœtus was removed, and the cavity which it had occupied was filled with iodoform gauze. On March 28th the placenta began to separate. There was some constitutional disturbance. On April 5th the last piece came away, and convalescence was thenceforth rapid. The drainage tube was removed at the end of April; the orifice of its track closed in a few days.

THERAPEUTICS.

(324) The Treatment of Epilepsy. Moeli (*Therap. Monatsh.*, September, 1894) refers to the fleeting and temporary effects obtained by the bromides in some cases of epilepsy, and he discusses the use of large doses, such as 12 g. in the day. Other agents, such as arsenic, coffee, etc., have been added in order to increase tolerance of the bromides. Remedies such as naphthol have been used to prevent the accumulation of decomposing or toxic products in the intestine. In those not tolerant of large doses of the bromides substitutes have to be found. The

author has for some three years made use of atropine for periods of six to eight weeks while the bromides have been omitted. With moderate doses of atropine no ill effects have been observed. Of 260 epileptics, only 33 were really available for this treatment. In returning to moderate doses of bromides after the atropine course, it was observed that in one-third of the cases the number of fits became fewer. In 5 cases there were no fits during two, four, to six months, a result never obtained during the previous bromide treatment. In 5 cases the value of the bromides seemed less than on former occasions. Curves are appended of 11 cases to show the effects of this intermittent treatment. It must be remembered that if the bromides be omitted and no drugs given, sometimes a more marked effect is observed when the bromides are resumed, so that the increased action cannot always be attributed to the atropine. The good effects obtained by Flechsig with the opium and bromide treatment appear to be much better than those given above. A recent publication from Flechsig's clinic still, however, leaves the question in some doubt.

(325) Picrate of Ammonium in Malaria.

S. P. Popoff, of Vernyi, Siberia (*Proceedings of the Omsk Medical Society*, 1894, No. 5) warmly recommends picrate of ammonium internally in intermittent fever. He tried the remedy (dose not stated) in 42 successive cases (mostly of quotidian fever); of the number, 37 were recent, and all ended in recovery, the paroxysms ceasing on an average in four days. Of the 5 inveterate cases 2 were also cured, but in 3 the remedy failed. In 5 other cases antipyrin, and in 6 methylene blue, were tried, the results being disappointing (4 and 5 failures respectively).

(326) Treatment of Hydrophobia.

Dulles, of Philadelphia, states his views on this subject (*Therap. Gaz.*, July 16th, 1894). After a short historical sketch of the methods of treatment in the past he mentions the drugs in which he has the most faith. These are: (1) Cannabis indica, 15 minims of tincture, or ½ grain of the extract every half-hour until drowsiness occurs; (2) Hyoscine hydrobomate, $\frac{1}{150}$ grain hypodermically every half-hour; (3) Sulphonal or trional, 20 grains every half-hour; (4) Morphine injection followed by chloroform inhalation. No forcible attempts at feeding or medication should be made. Fluid may be supplied by rectal enemata or by immersion in baths. No mention is made of the Pasteur treatment. In the differential diagnosis alcoholism, mania, rheumatism, and hysteria are to be especially remembered. The same author, in the *Medical News*, June 16th, 1894, publishes a report on 78 cases of hydrophobia gathered from various sources during the last six years. Of these 18 were under 10 years, 16 between 10 and 16, 8 between 17 and 31, 34 between 35 and 57, 2 age uncertain. An analysis of the cases, with a view of showing whether bites near the centre of the nervous system are more dangerous or more likely to have a short incubation period, than those more remote, demonstrates that no such relation exists. No one can predict the length of the incubation from a consideration of the seat of the bite or the age of the patient. So far from reducing the death-rate or the prevalence of hydrophobia, Dulles believes that the Pasteur treatment has increased both (the latter by mental suggestion), and Pasteur's figures to the contrary are adversely criticised.

(327) Cocaine as a Means of Stopping the Secretion of Milk.

E. Casoli (*Gazzetta degli Ospedali*, September 20th) reports a further case illustrating the use of cocaine as a means of stopping the secretion of milk. A woman, whose child had died immediately after birth, was troubled by very profuse secretion of milk on the third day. A 5 per cent. solution of hydrochlorate of cocaine in a fluid composed of equal parts of water and glycerine was painted twice over both breasts on the fourth day: on the fifth the secretion was markedly diminished; on the sixth, after a few more applications of the same solution, the secretion entirely ceased.

(328) Methylene Blue in Noma.

G. F. Kostuerin (*Vratch*. No. 32. 1894, p. 893) relates two cases of noma, in which, after all the usual measures (actual cautery, perchloride of iron, thymol, iodoform, etc.) had failed, he resorted to hourly painting the parts with a 25 or 30 per cent. aqueous solution of methylene blue. In a few hours fetor disappeared and sloughs began to fall off, while later on cicatrisation set in. One of the patients ultimately died from exhaustion, but the other recovered.

PATHOLOGY.

(329) Phloridzin Glycosuria.

P. A. Levene (*Journ. of Physiol.*, October 15th), in order to solve more exactly the problem of the part played by the kidneys in the formation of glycosuria, undertook a series of experiments upon the action of phloridzin on dogs. In all cases the substance was administered hypodermically. The author began by giving phloridzin, and repeating the operation of tying the blood vessels of the kidney. He estimated the sugar in the blood of the carotid artery before and after the operation. The separation of the proteids of the blood was effected by a saturated solution of sodium sulphate. To 80 c.c. of a saturated solution of sodium sulphate was added directly from the blood vessel about 20 grammes of blood. A few drops of acetic acid were added, and the mixture was heated until all the proteids were coagulated. The mass was then filtered, the precipitate washed with a hot saturated solution of sodium sulphate, and the washing and filtrate were tested for proteids and albumoses; they were usually absent. The sugar was then determined by the usual volumetric method with Fehling's solution. Summing up the results of his experiments and comparing them with those found for spontaneous diabetes, the author finds by experiment with phloridzin an almost constant decrease of the general amount of proteids, and a varied relation between the serum albumen and the serum globulin. The former is usually decreased in quantity, the latter increased. These results tend to show increased decomposition of proteids in the body. The ethereal extract (containing fat, cholesterin, and lecithin) is in most cases increased, which again agrees with spontaneous diabetes. As regards sugar, the author, like other observers, frequently found some decrease of it in the blood. This, however, was by no means constant, and there were also cases of increase of sugar. The fluctuation in the amount of sugar in either direction was in most cases very slight. The general analysis of the blood seems to show that phloridzin glycosuria does not originate simply in the extraction of sugar from the blood, but that more profound changes in the tissues take place, and that these changes confirm the views of those who see the source of sugar in phloridzin glycosuria in the decomposition of proteids. The absence of hyperglycæmia may be explained by the supposition that the organism has not lost its ability to rid itself of the superabundance of sugar, on the one hand by its elimination through the kidneys, and on the other by its increased decomposition. There are two views as to the origin of phloridzin glycosuria. Some think it the result of a simple elimination of sugar by the kidneys, others see in it an excessive formation of sugar. The first base their view on the slight decrease of sugar in the blood after the injection of phloridzin, and on the fact that after extirpation of the kidneys the quantity of the blood is, in some cases, somewhat increased. But no one has succeeded in establishing a fixed relation between the quantity of sugar in the blood and the sugar eliminated. Furthermore, the author obtained a decrease of sugar in the blood in some cases when the phloridzin was injected after ligation of the renal vessels. Finally, as demonstrated by Cornevin, the phloridzin greatly increases the quantity of sugar eliminated by the milk; consequently, this poison does not affect the kidneys only. As to the second view, that there is an increased production of sugar, and that more especially by the kidneys, the author contributes the facts that the venous blood of the kidneys in phloridzin glycosuria contains in some cases more sugar than the arterial, and that the quantity of sugar in the kidney tissue itself increases after the injection of phloridzin. Finally, the composition of the blood in phloridzin glycosuria testifies to the decomposition of proteids rather than to the mere elimination of sugar.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(330) Intestinal Obstruction in Children.

Monti (*All. Wien. med. Zeit.*, Nos. 35, 36, 1894), after discussing the causes and general symptoms of intestinal obstruction in children, and accepting in the main the views of Leichtenstern, gives the following points as those which are of value in forming an opinion as to the site of the obstruction: (1) In the lower part of the colon the first symptom of acute obstruction is painful colic, and the region of the abdomen in which the colic is first felt may afford some indication of the part of the colon obstructed. Vomiting does not occur until the colic has lasted for some hours or days; it is at first bile-stained, then becomes foul, and finally faeculent. Collapse sets in late; gaseous distension of the intestine begins in the colon, and at first it may be possible to make out that it is limited to the region occupied by the colon (flanks and epigastrium), but later the ileum also becomes distended, and the tympanites may reach a very high degree. In incomplete obstruction the symptoms are the same, but develop more slowly. Action of the bowels may occur, and be attended by temporary relief, especially of the tympanites. If the rectum be incompletely obstructed, constipation alternates with attacks of painful tenesmus, followed by the passage of small scybala. Circular constriction of the rectum causes the motions to be of small calibre. (2) Acute obstruction in the lower part of the ileum is attended with frequent attacks of painful colic, starting in the ileo-cæcal region. Each paroxysm of colic induces an attack of vomiting, the vomited matter being at first the contents of the stomach, but later fæcal. Collapse sets in early. The distension of the abdomen is most marked at first in the umbilical and hypogastric regions, but in time becomes general; it is not notably diminished by vomiting. At first several fæcal stools may be passed, but after a few days there is complete constipation. The quantity of urine is diminished after the first few hours or days, and there may eventually be suppression. When the obstruction is incomplete the colic may be as severe, and the movements of the coils of intestines perceptible. The degree of distension may vary greatly in a very short time, and this independently of the passage of a stool. The constipation, after lasting some days, may be succeeded by copious foul diarrhœa. (3) Acute obstruction in the duodenum or jejunum causes severe colicky pain, starting about the umbilicus and radiating towards the stomach. Vomiting comes on early, and is violent; the vomited matter is at first bile-stained, later it becomes foul smelling. Gaseous distension is slight, and is limited to the epigastrium. It may be very much diminished by vomiting, but collects again. The bowels may at first act spontaneously or after enema, but eventually there is complete constipation. Suppression of urine is established early. When the obstruction is not complete, the symptoms are similar but less severe. The colic is painful, and the vomiting, either in relation with the colic or independently, very frequent. The quantity of urine is diminished. There is no distension of the abdomen, and diarrhœa alternates with constipation. Monti considers that if a case is seen early much may be learnt as to the probable seat of the obstruction by observing the way in which the tympanites develops.

(331) Bulbar Palsy and Motor Aphasia after Influenza.

Stembo (*St. Petersb. med. Woch.*, No. 19) reports two cases. In one case speech became difficult, fluids imbibed returned through the nostrils, saliva accumulated in the mouth, and there was dysphagia. Movement of the lips and enunciation of the labials were alike impaired. The tongue was small, tremulous on protrusion, and furrowed longitudinally. The uvula was deflected to the right. The left posterior crico-arytenoid muscle was paralysed, affecting also the left vocal cord. The voice was hoarse and nasal. The muscles affected showed diminished electric, but heightened muscular, irritability. The second case occurred in a woman, eight months pregnant, some time after influenza. There was paresis of the right upper extremity, inability to speak, although the patient heard and understood what was said. The face was distorted, the mouth drawn to the left, the protruded tongue deviated to the right, and the uvula to the left. The voice was hoarse. An ulcer was found in the inter-arytenoid space, with paralysis of the left vocal cord. There was dulled sensibility on the right side of the face and in the right upper extremity. The tendon reflexes were somewhat increased, the cutaneous reflexes were normal. The patient gradually improved, and the faculty of speech returned. In Case I the bulbar lesion was ascribed to the influence of toxins engendered during influenza; in Case II probably a hæmorrhage took place into the lower portion of the ascending frontal convolution, whilst the laryngeal symptoms were ascribed to the local ulcer.

(332) Differential Diagnosis between Pulmonary Syphilis and Pulmonary Tuberculosis.

Rendu (*Internat. klin. Rundschau*, viii Jahrg, No. 27), at a recent clinical lecture, presented an old woman who had for a long time been emaciated and cachectic, but without fever. The symptoms were ill-defined: some pain, stiffness of the limbs, without marked weakness or paresthesiæ, dyspnœa on exertion, and for a short time a dry cough without expectoration. The respiratory and auscultatory phenomena were found normal anteriorly, but behind there was dulness over the right apex, with roughened, prolonged expiration. There was a loud, rough, systolic murmur, together with a softer and more superficial one, but no symptom of cardiac insufficiency. The arteries were apparently healthy, the liver normal in size, and there was no albuminuria. There was a diffuse and characteristic syphilitic melanodermia, and iritis of two years' standing, nocturnal bone pains, and headache. Her only previous illness had been measles. It was pointed out that against tuberculosis was (1) the long duration, (2) the absence of expectoration, of *râles*, and of concomitant symptoms. Syphilis does not usually attack the apices, although cases of this occurrence are recorded. Syphilis and tuberculosis may occur in association, and tuberculosis may attack a lung previously syphilitic. From the absence of a history of acute pneumonia an indurating pneumonia could here be excluded. The attack of measles was not considered an adequate cause. As there were no other etiological factors, the changes in the heart and lungs were probably syphilitic. Great improvement followed the exhibition of mercury and iodide of potassium.

SURGERY.

(333) Experimental Section of the Fifth Nerve.

D'Antona (*Il Policlinico*, No. 13, 1894) relates his investigations on the section of this nerve as it emerges from the pons. He first draws attention to the vulnerability of the fifth nerve owing to anatomical peculiarities and to the consequent frequency of obstinate neuralgia. Hence the importance of the consequences of abolition of function due to its division is obvious. The difficulty in dividing it lies in the risk of injuring other structures. The author has succeeded in dividing the nerve in five out of seven dogs at its exit from the pons. All results tend to show that division of the ophthalmic branch gives rise to severe trophic eye lesions. It has been believed that division above the ganglion either postpones or abolishes such trophic changes, and hence such division has been attempted in man (Horsley). The author's experiments have led to the opposite results, as in all five cases trophic disturbances soon appeared. He distinguishes two effects, namely, the destructive changes in the tissues supplied by the divided nerve and the infective or secondary effects. If the nutritional changes have been absent, this must be due to collateral anastomosis. No trophic disturbances are noted in cases of trigeminal neuralgia. In the author's experiments the diminished resistance of the cornea was specially noted, the first branch of the fifth being, so to speak, a terminal nerve of the eye alone. Tissues deprived of their trophic supply are damaged more easily by unaccustomed pressure, as in bed-

sores. In the eye minute lesions are thus not readily repaired or become an easy prey to micro-organisms. The only authentic case known to the author of absence of trophic changes after section of the first branch is that reported by Krause. Trophic impairment makes slight injuries, otherwise harmless, efficient. Certain individuals are so strongly constituted that, notwithstanding the impaired nutrition, they may escape these results if the tissues are protected from all injuries.

(334) Restoration of Intestinal Continuity without Mechanical Devices.

At the meeting of the American Association of Obstetricians and Gynæcologists recently held at Toronto (Philadelphia *Med. News*, October 13th), W. E. B. Davis read a paper on this subject, the purpose of which was to show that mechanical devices can in a great proportion of cases be better dispensed with by the surgeon who has had much experience in intestinal work, either on the lower animals or on the human intestine. Still there is a place in anastomotic work for bone plates, catgut plates, and other devices of this sort, and the Murphy button, but the experienced surgeon will find the field of their application very limited. The Murphy button is a valuable device for cholecystenterostomy, and is superior to anything yet suggested for that purpose. The end-to-end operation or circular enterorrhaphy is a dangerous procedure, from the fact that injury to the mesenteric border is liable to produce sloughing. Besides, any stitch method in the end-to-end operation requires so much time that it should be objected to usually on that account. The Murphy button can be used very satisfactorily for this purpose, and where end-to-end operation is to be resorted to. The author is of the opinion that this device should be used unless the surgeon is an expert in intestinal suturing. The operation of Abbe is a plausible one, but is not so reliable as the one which has proved satisfactory in the experimental work of the author. The incision is not made so long as in the case of Abbe, and is about 3 inches in length. In the case of gastro-enterostomy the intestine and stomach are both brought into the wound, and the incision 3 inches in length made in both. Interrupted sutures are taken through coats of the bowel and stomach around the entire length of the incisions, and are tied on the inside, the last stitch being tied on the outside and turned in. A continuous outside safety stitch is then taken through the peritoneal and muscular walls. In bringing the small intestine together the same procedure is followed, the interrupted through-and-through stitch of large silk being taken instead of an overhand stitch, as recommended by Abbe, and only one row of outside sutures, which may be interrupted or continuous, preferably the latter. This operation can be done very quickly, and is more reliable than the various ones with mechanical aids to anastomosis. Particularly is this method of operating valuable in cases of simple stricture of the bowel, and there will be a great many of these cases now, inasmuch as there are more operations done on the intestines.

(335) Rapid Dilatation in Urethral Stricture.

Morotti deals with this subject in a paper reprinted from the *Proceedings* of the Lombard Medical Society of Milan. His method is to introduce a filiform guide through the stricture, to which he immediately adds a No. 29 (Bazy = 14 Charrière scale) rigid metallic olivary sound, and at the same sitting passes a No. 31. The next day he repeats No. 31, and passes Nos. 34, 35, and 36, if there is much resistance, up to No. 39. This is followed by the usual treatment by gradual progressive dilatation with metallic instruments. By this combination of methods Morotti got results more satisfactory than his best expectations, so that since he has never had recourse to urethrotomy except for very old or very narrow strictures. The time taken in the rapid dilatation varied from eight to twelve days. The cases most suitable are those due to chronic gonorrhœal processes, superficial ulceration, slight traumatic lesions, and those strictures not very old and only moderately resistant.

(336) Treatment of Diffuse Purulent Peritonitis.

Herhold (*Deut. med. Woch.*, September 27th, 1894) relates two cases in which recovery ensued after incision and drainage. (1) A patient, aged 54, was admitted with a strangulated hernia. An empty hernial sac was found on the right side and a piece of omentum and intestine on the left. After the intestine slipped back into the omentum discoloured and ill-smelling fluid escaped. The condition of the patient did not improve, and six days later the abdomen was opened along the outer edge of the left rectus muscle; 300 c.cm. of stinking pus escaped. The intestines were felt to be glued together. The patient recovered. (2) A boy, aged 8, was admitted with signs of peritonitis with effusion. Later he became desperately ill. The abdomen was incised and drained, 250 c.cm. of stinking pus escaping. The finger introduced into the wound felt coils of intestine glued together. Rapid improvement and ultimate recovery ensued. The cause of the peritonitis was not clear in either case. The author then gives the statistics of published cases of diffuse purulent peritonitis treated by incision. In the Berlin Charité 25 such cases have occurred, and of these 5 recovered, but the hopeless nature of the cases accounts for this small number: in 2 the peritonitis was due to perforation in enteric fever, in 9 to long-continued obstruction, in 4 to perforating intestinal ulcers, in 1 to a perforating gastric ulcer, and in 9 no cause was known. Purulent peritonitis which is part of a general sepsis is hopeless.

MIDWIFERY AND DISEASES OF WOMEN.

(337) Echinococcus of the Ovary.

Schultze (*Festschrift zur Feier des fünfzigjährigen Jubiläums der Gesellsch. f. Geburts. u. Gynäk. in Berlin*, 1894) has collected previous records, and believes that Chemnitz and Generali's cases are true examples of hydatid disease of the ovary. In 1893 he operated on a third case. He admits that it cannot be proved that the disease originated in the ovary. The patient was 32 years of age; her abdomen began to enlarge in 1888; in 1890 echinococcus of the peritoneum was diagnosed. In the autumn of 1893 Schultze detected an ovarian tumour, the uterus being free. The abdomen was tapped, but, though the fluid had the characters of that which is found in hydatid cysts, no hooklets could be discovered. On November 11th he operated. Thirty hydatid cysts were removed, some with great difficulty; there was free hæmorrhage, and other cysts proved irremovable. The largest tumour of all was 6 inches in diameter; over it ran the right tube, obstructed at the ostium. This tumour was nowhere adherent; it consisted of the ovary, and was nowhere adherent. Its lowest part projected into Douglas's pouch, whence it was lifted without difficulty. The pedicle was normal, and easily transfixed and divided. The left ovary and tube were healthy. The under surface of the liver and the kidneys seemed free from hydatids. The operation lasted over two hours, and saline water was injected into the subcutaneous tissue in the infraclavicular region whilst the abdominal wound was being sutured. The pulse continued to be very rapid for several days, and there was obstruction on the third day, relieved by a dose of magnesia. The patient left the hospital on the thirty-first day in good health; the hydatids which could not be removed could be clearly felt. The greater part of the removed ovary consisted of a cyst, the lining of which was freely beset with scolices. It contained three daughter cysts, the largest 3½ inches in diameter. The mesosalpinx was unaffected, and the parovarian tubes ran into the hilum of the ovary, represented by thickened tissue on the surface of the hydatid. In fact, the hydatid had developed, not in the broad ligament, but in the ovary itself.

(338) Kraurosis Vulvæ.

At the meeting of the American Association of Obstetricians and Gynæcologists recently held at Toronto (Philadelphia *Med. News*, October 13th), C. A. L. Reed, of Cincinnati, reported six cases of this condition. The first changes obvious to the naked eye consist of small vascular areas around the introitus vaginæ. These areas are not elevated as if seats of merely inflammatory engorgement, but are slightly depressed relatively to the adjacent epithelial surfaces. They are exquisitely tender to the touch, and efforts at sexual intercourse are generally

agonising and futile. About this same time inspection will reveal a narrowing of the vaginal orifice, associated with diminished elasticity of the structures. The cutaneous or muco-cutaneous surfaces will now be observed to have lost a certain proportion of their pigment, giving them a more or less translucent appearance, which increases until it becomes so transparent that the larger capillaries and minute ecchymoses may be readily discerned beneath it. The skin thus affected becomes tense, effacing in a greater or less degree all the normal folds of the vulva and narrowing the vaginal orifice until, in the case of a multipara, "incredulity may be excused when the patient states that she has borne children." Knowledge relative to progressive cutaneous atrophy of the vulva is too nebulous to justify final conclusions. That which seems to be conclusively demonstrated may be summarised as follows: (1) Progressive cutaneous atrophy of the vulva is a distinct disease; (2) it is of very rare occurrence; (3) it is essentially inflammatory in character, differing from other inflammations of the skin in the marked progressive atrophy which succeeds the stage of hyperæmia and infiltration; (4) it is limited in its manifestations to the vulva; (5) it is manifestly not of syphilitic origin; (6) its etiology is so obscure as to suggest a primary causal lesion in the trophic nerve supply of the vulva; (7) the affected areas may be successfully excised.

(339) Removal of Appendages: Fatal Hæmoptysis.

Quénu (*Gazette Médicale de Paris*, June 2nd, 1894) operated on a virgin, aged 27, who had been sickly from childhood. Last autumn, when she suffered from leucorrhœa, etc., Quénu, finding no severe lesions, used the curette and kept her at rest two months. She became worse, and an operation was performed on March 9th. The tubes were found fixed by adhesions, tuberous, yellowish, and caseating. The patient did well till the third day, when she had violent hæmoptysis and died. The sputum was used for inoculation; pneumococcic infection resulted. Each tube contained a great cystic pouch and numerous secondary cysts. In all these cysts the contents were granular without giant cells. In the walls of the cysts Metchnikoff discovered large cells, round pigmented bodies presenting the type of hæmatozoa. Bodies of the same kind were found in the lungs, but not in the blood.

(340) Dystocia from Tumour in Fœtus.

Massen (*Annales de Gynéc. et d'Obstet.*, September, 1894) describes a case in which the mother was in her sixth labour. The presentation was occipito-posterior; the child was expelled easily as far as the umbilicus. In order to deliver the pelvis, which stuck fast, it was necessary to give anæsthetics, and to pull very hard. Each gluteal region was the seat of a large congenital myxosarcoma; the circumference of the pelvis at the level of the two tumours was nearly 16 inches. The child died soon after delivery. Krassovsky, in a discussion on this case before the Obstetrical Society of St. Petersburg, referred to a remarkable case of large gluteal tumour in a fœtus. The feet presented at the beginning of labour. One foot was drawn down but delivery was not effected, and the mother was left unaided for some time. The foot receded into the uterus, and shortly afterwards labour ended spontaneously. The descent of the tumour had drawn the foot into the pelvic cavity.

(341) Hernia of Uterus: Pregnancy: Spontaneous Premature Delivery.

Rosanoff (*Annales de Gynéc. et d'Obstét.*, September, 1894) read notes of this case at a meeting of the Moscow Surgical Society. A woman, aged 45, presented herself at a hospital for relief; she had a large right inguinal hernia. It had existed for five years, and was at first reducible. A tough tender body lay in the hernial swelling. For eleven months the rupture had been irreducible, and for six it had steadily increased in size. When the patient was admitted it hung down as low as the knee: it contained a large pyriform body with something hard inside it, which moved. The cervix uteri was very high in the pelvis, and the body was not in its normal position. The patient had borne twelve children, three since the development of the hernia. At the end of the sixth month amniotic fluid escaped in great quantity: then the outline of the fœtus could clearly be felt in the sac; the uterine contractions were also observed, looking like waves passing from above downwards. The fœtus was rapidly delivered without any action of the abdominal muscles; it was born dead. Next day the uterus was reduced. Three months later a radical operation was successfully performed; the left (*sic*) appendages, being adherent to the sac, were removed. The patient was exhibited. Solovieff related a case of a large umbilical hernia in a virgin, aged 67. It contained a cystic ovary.

THERAPEUTICS.

(342) Treatment of Leukoplakia.

S. Rosenberg (*Deut. med. Woch.*, September 13th) reports the following case: A man, aged 42, who had suffered twenty years before from a primary sore on the penis without sequelæ, had for seven years been the subject of leukoplakia of the tongue. Small, painful, shallow ulcers frequently formed on its upper surface, and in healing left bluish shining scars. The whole dorsum of the tongue was covered with whitish patches and was marked with fissures crossing each other in various directions. Abstinence from smoking had no effect, nor were mouth washes of resorcin, pencillings with lactic acid, or the application of iodoform or methylene blue of any effect. Finally, Rosenberg tried pencilling with a 20 per cent. solution of iodide of potassium. The effect was "wonderful." The application was followed by an intense burning sensation, which ceased in about half an hour, when the ulcer became painless. Further pencillings brought about healing in a few days. Such control has this application over the process that the patient by daily pencilling of his tongue can keep it entirely free from ulcers. He can smoke and take pungent substances without the slightest inconvenience. The author thinks that the case just related justifies a trial of the method in analogous cases.—Leistikow (*Monatshefte für prak. Derm.*, Bd. xix, No. 7, October 1st) says that during the last three years he has obtained very good results in numerous cases of leukoplakia from the use of a concentrated solution of resorcin in spirit. In all these cases there were signs of present or past syphilis, but treatment with mercury and iodide of pottssium had no effect on the condition. In the case of leukoplakia of the tongue and mouth, the difficulty always has been to find a means of keeping the remedy employed in sufficiently prolonged contact with the mucous membrane to be useful. The author now uses a thick paste, which dries on the part and penetrates deeply into the substance of the mucous membrane. The following is the formula: R: terræ siliceæ, grs. 22½; resorcin, grs. 45; adipis. ʒj. By means of small pledgets of cotton wool twisted loosely around a pointed piece of wood this paste is applied several times a day, particularly after meals and immediately before going to bed. In from eight to fourteen days the opaline patches are seen to have shrunk and the mucous membrane itself is thin and has a rosy appearance. In this condition, however, the membrane is still very sensitive, so that smoking and the use of pungent condiments must be forbidden, and the mouth must be freely washed out with a solution of boric acid in water. The hyperæmia of the patches to which resorcin has been applied can be quickly subdued by the application of balsam of Peru. By the application of the latter substance three or four times a day *restitutio ad integrum* is brought about.

(343) Diuretin.

Panowski (*Zeitschr. f. klin. Med.*, vol. xxiv. 3 and 4, 1894) has investigated the action of diuretin with the view of determining whether the renal activity was intensified or whether the vasomotor system became affected. Fifty cases were submitted to most careful investigation, with the following results: A tonic action is exerted on the cardiac muscle, the area of cardiac dulness diminishing even before any improvement of the œdema has become noticeable. In this respect it resembles caffeine, but cannot compete with digitalis. In the vessels a considerable increase of pressure is noticeable, and is regarded by the author as attributable to a stimulation of the nerve centre. The diuresis is very marked, but in the author's opinion,

is the result of the increased pressure in the vasomotor system. He recommends it as a diuretic in valvular lesions after digitalis has failed, when the effects of diuretin may be surprising. Of greater importance is its action in affections of the cardiac muscle, where he has seen remarkable results after digitalis, camphor, and caffeine had given no relief. In renal affections the good effects were not so marked, but diuretin is held by the author to be preferable to digitalis when there is slowness of the pulse as a forerunner of uræmia. In the other œdematous conditions it is not to be recommended. The drug is best given in powders of 15 grains four to six times daily, or can be given in solution, when the effects will be first noticeable between the second and sixth day.

(344) The Treatment of Goitre by Thyroid Feeding.

P. Bruns (*Deut. med. Woch.*, October 11th, 1894) has tried thyroid feeding in cases of goitre, especially in young people. Cystic goitre, of course, is not amenable to this treatment. Of 12 cases goitre disappeared either entirely or in great measure in 9. In 4 cases completely cured the thyroid was enlarged in all its parts, the one half being about the size of a hen's egg. In one case there was stridor with difficulty of breathing, which also disappeared. In a boy, aged 14, a goitre as big as the fist diminished in four weeks, so that the circumference of the neck became less by 7 cm. In a man, aged 40, a right-sided goitre of about the same size, and present for six years, caused displacement of the trachea, and increasing difficulty of breathing. It disappeared after four weeks' treatment. In three patients, aged 23 to 37 years, the results were negative. The treatment lasted six weeks in one case and fourteen days in the other two. Strumectomy showed in one case a hyperplastic goitre with small cysts, and in another abundant colloid material. In only one case did the treatment give rise to unpleasant symptoms—namely, headache, anorexia, frequency of pulse, and loss of weight. This occurred after 46 g. were taken, distributed over fourteen days. The author concludes that thyroid feeding exercises a specific effect on many goitres, causing their rapid diminution or disappearance. He refers to Reinhold's cases (Epitome, August 15th, 1894, par. 157). The numbers are still much too small to permit of conclusions, but it is desirable to know what kinds of goitre can be thus treated. Provisionally it would appear to be the relatively recent non-cystic goitre, especially if occurring in young people.

PATHOLOGY.

(345) On a Streptothrix Found in a Case of Cerebral Abscess and Suppurating Renal Infarct.

Salbazes and Rivière (*Presse Méd.*, September 22nd, 1894) have a communication on this subject. Streptothrix is one of the hyphomycetes of the genus oosporon, and has the character of a true mycelium without dissepiment, whose filaments, deprived of sheath, are limited by a delicate membrane. Actinomyces is one of the best known of the class. The case here described was that of a man, aged 32, admitted under Professor Vergely, of Bordeaux, with the following symptoms: Taken suddenly ill December 5th, with a convulsion; took to bed December 16th; became drowsy, had much headache, vomiting, obstinate constipation, and wasting; aphasic on December 26th; pupils contracted, no squint, temperature normal; paralysis and anæsthesia of right upper and lower limbs, with some rigidity of leg; reflexes abolished; no sugar or albumen in urine: no disease of ear or nose. Tuberculous meningitis was diagnosed. The man died on December 27th, at 1 P.M.; there was no meningitis; the left cerebral hemisphere was very œdematous, rather soft, and contained in the centrum ovale, towards the prefrontal region, an abscess (size of small mandarin) filled with greenish pus. No tubercle was discovered; there was a small abscess at the apex of one lung, and a purulent infarct in the right kidney. No nasal, aural, or cardiac disease. Examination of the pus from the brain and kidney disclosed a filamentous, branched fungus, without dissepiment, and belonging to the genus streptothrix. No trace of this organism was found in the lungs. The bronchial glands were not examined. Inasmuch as several other organisms were present as well as the streptothrix, it is difficult to know its exact pathogenic properties; for the same reason pure cultivations were hard to secure, and only lived to the second generation. The parasite differs from actinomyces (1) by the absence of grains in the pus: (2) by the delicacy of the mycelium, which has no tendency to form masses; (3) by its abundance in the purulent foci.

(346) Cachexia Strumipriva.

Maragliano (*Gaz. degli Ospedali*, October 20th, 1894), observes that a diminution of the red cells and a certain degree of leucocytosis have been found in this condition. Others maintain that there is no real alteration in the blood, and that the thyroid gland has no hæmatogenic functions. Albertoni and Tizzoni find that the blood has a diminished power of fixing oxygen. It is probable that this diminished fixing power is due to alteration in the pulmonary epithelium seen after thyroidectomy. Sciolla has examined in the author's clinic the blood of dogs before and after thyroidectomy. He found very slight diminution in the red cells and augmentation in the white, a diminished density of the blood, an increased amount of water, and a smaller residue. There was no noteworthy change in the serum. The dogs, however, lost their appetite, and had very severe convulsions, so that these alterations in the blood might be secondary. It is unnecessary to assume that the thyroid is a hæmatopoietic gland to account for these changes. The blood, like all other tissues, suffers from the intoxication due to the absence of the thyroid gland. Sciolla concludes that extirpation of the thyroid always leads to the death of the dogs, this occurring after tetaniform convulsions. Previous extirpation of the spleen does not prevent it. A relation seemed to exist between the sexual organs and the thyroid gland. After the extirpation of these organs the cachexia was modified considerably, and this was even more marked if the spleen had previously been extirpated. In 15 or 20 hours the dogs died comatose.

(347) Etiology of Syphilis.

M. van Niessen, of Wiesbaden, in a paper read to the Society of Physicians of Wiesbaden, July 7th, 1894, draws attention to a discovery made by himself, which he considers justifies the belief that syphilis is a mycosis. Using six cases of fresh syphilis as yet untreated, he found during the microscopic and cultivatory examination of the blood, urine, and tissues, the spores and their derivative forms, of a species of penicillium in all cases in the blood and twice in the urine. Having described experimental methods he speaks of the elements found as motionless, so enormously numerous as to give the blood a sealing-wax red aspect, and consisting mostly of two concentric discs of a more or less intense ruby red colour, with a pale green halo. He frequently found pale green fragments, and derivatives of fungus membranes without regular structure. These bodies disappear with the commencement of treatment and the resolution of the exanthem, but multiply visibly outside the body in suitable culture media. In the colourless plasma discs, which were developed from the red blood corpuscles, he observed very minute, lively moving organisms of the forms of diplococci, beans, and swarm spores. These were only visible by the highest magnifying power. The leucocytes often contain living and motionless ingesta, that is to say, the fungus elements before mentioned, and shortly after present a pale, copper-coloured appearance of their plasma, with retracted nucleo-plasm and contracted nucleus, whilst the blood serum acquires a fawn colour. In two cases this fungus developed in the blood after eight to fourteen days, with closely interwoven network and ripening fructification organs. Van Niessen from these appearances was led to think that the same process might be at the root of the causation of syphilis. To settle this he experimented again (the case of a child, 4 months old and infected from its mother), and in the subcutaneous cellular tissue he found besides leucocytes numberless lively-moving organisms inside and outside the cells and a close network of mould, in part with ripening fructification organs. In three further cases, amongst them one of syphilitic tabes, van Niessen has seen the same fungus elements.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(348) Hydatid of the Lung.

Vespa (*Il Policlinico*, October 1st, 1894) relates a case in a boy, aged 14. The illness apparently began two years previously with cough and occasional fever, and later there was pain in the left side and wasting. A day before admission he began to cough up purulent and fœtid expectoration. He was discharged much improved, but readmitted some thirteen months later. At this time there was flattening below the left clavicle, impaired percussion over the upper part of the left chest, both in front and behind, harsh breathing and *râles* behind, and bronchial breathing with metallic phenomena in front. The disease was thought to be phthisis, but no tubercle bacilli were found in the sputum. A bit of hydatid membrane was at length coughed up. He was made to inhale 20 to 30 c.c.m. of ether from a Siegle's inhaler twice a day. He was discharged greatly improved. The author then discusses the geographical distribution of this disease. The base of the right lung is most often affected; it mostly occurs between the ages of 20 and 40. The diagnosis in early stages is difficult. Exploratory puncture may possibly clear up the case. Later it is recognised more easily. The presence of hooklets or membrane in the expectoration, or in the contents of the cavity is diagnostic. Hæmoptysis, frequently present, was absent in this case. The localisation of the disease here, and the general state of the patient with night sweats, wasting, etc., pointed to tuberculosis. A sense of great depression is noted in these cases. Hydatid of the lung is a serious disease. Simple puncture has not been very encouraging. Incision has given good results; it is indicated where the cyst is near the surface. Pneumotomy with proper precautions is not really dangerous, and has yielded good results in severe cases. Suppuration of the cyst is a further indication for incision. The good results obtained by the use of ether in the above-named case where the disease was located in the upper lobe, were beyond doubt.

(349) Uræmic Pericarditis.

Beco (*Centralbl. f. allg. Pathol.*, October 23rd, 1894) discusses the etiology of this disease. A patient, aged 38, with anasarca and albuminuria, developed pericarditis three days before death. At the necropsy large white kidneys and sero-fibrinous pericarditis, with abundant lymph, were found. Cultivation experiments from the pericardial exudation were absolutely negative, thus agreeing with Banti's two cases. From the spleen a pure culture of B. coli communis was obtained, this micro-organism having made its way into the tissues during life. Thus the pericarditis here would be a toxic one, yet in infective diseases there may occur serious inflammations owing to the presence of toxic products excreted by micro-organisms in the neighbourhood. The author then records experiments in which both ureters were tied in rabbits. A pericarditis appeared in every case, although no irritant was applied to the pericardium. The animals lived four to six days. In no case were micro-organisms found by culture from the pericardial exudation. Thus an aseptic or uræmic pericarditis may be set up without micro organisms being present. The author, however, does not hold that micro-organisms cannot play a part in this disease.

(350) Epistaxis.

E. Baumgarten, of Buda-Pesth (*Revue Internationale de Rhinologie, d'Otologie et de Laryngologie*, August 10th, 1894) records 250 cases, and his conclusions as to treatment. He finds the following changes in the vessels as occasional causes: (1) Traumatism, (2) erosion, (3) increased tension, (4) want of elasticity, (5) permeability of vessel walls. Singly or combined these produced epistaxis (*a*) at a seat of predilection in a healthy person, (*b*) following on a nasal affection, (*c*) because of a diathesis. The seats of predilection (points of Kisselbach) are most often in front where the cartilaginous septum joins the membranous part (columna nasi). Having once bled, these points remain as places of less resistance; other regions seldom bleed. Of the 250 cases, 150 were males, 100 females. The age of puberty showed the greatest liability—66 males and 33 females respectively. At 40 the number of cases in men showed a notable decrease; not so in women, probably owing to the menopause. At ages over 50 in men arterio-sclerosis is mainly responsible. The right side bled in 101 cases, the left in 93, both in 56. In 234 cases out of the whole number tiny varicose vessels or erosions gave forth the stream, the arteries only 11 times. The cartilaginous septum was the most frequent seat of the bleeding—219 times altogether. The nostril seldom presented any other alteration except the bleeding point. In treatment the aim is not only to stop the bleeding, but to prevent recurrence. This is done by replacing a weakened point with a healthy cicatrix. (1) If a patient is not bleeding, but has recently done so, search the inside of the nose with a strong light, and on the fore part of the septum mostly several small red vessels will be seen, indicating the affected spot. If bloody crusts obscure these, gently remove them, and then thoroughly cauterise and destroy the points with a galvanic cautery or a chromic acid crystal on a silver probe. (2) If the patient be bleeding, wash out the nostril with hot water, dilate it, and introduce a large tampon of carbolised wool in front, then compress the ala upon it with the finger. Remove the plug shortly to see the bleeding spot, then reapply a second tampon. Again remove, and cauterisation will usuall be easy. (3) Where the blood traverses the tampon, or flows into the pharynx, wash out with hot water, and pack the whole nasal fossa through a speculum with strips of iodoform gauze, a finger's breadth in width. When needful to remove, soften them with hot water, and gently draw them out. If there be no further bleeding, cauterise as above. If there be bleeding again pack with strips; but this is seldom necessary. Bellocq's method is far inferior, both in efficacy and comfort to the patient.

(351) Glycosuria Complicating Appendicitis.

Leidy (Philadelphia *Med. News*, September 28th, 1894) reports three cases of appendicitis in which glycosuria occurred. In the first case, the patient had suffered from the usual symptoms of appendicitis. On examination of the right iliac fossa an irregular indurated swelling was found, with a sinus opening in the groin. On introducing a probe into the sinus, a hard foreign body was felt. The urine was pale; it had a specific gravity of 1032, and contained 2½ per cent. of sugar. After the application of poultices to the iliac region, a hard mass three-eighths of an inch in diameter escaped from the mouth of the sinus. It was found to consist of inspissated fæces. The symptoms subsided and recovery occurred. The sugar in the urine gradually diminished, and in six months entirely disappeared. Four years later the patient was in good health and the urine contained no sugar. The second case was one of appendicitis, which recovered under medical treatment. The urine had a specific gravity of 1028, and contained a considerable amount of sugar. The after-history of the patient could not be obtained. In the third case, at the onset of the attack the urine had a specific gravity of 1032, and contained sugar. The symptoms of appendicitis subsided under medical treatment and during convalescence. Sugar disappeared from the urine, to recur in varying quantities. For four weeks sugar was found in the urine only on one occasion. The author regards these cases as examples of reflex glycosuria, and believes the condition to be rare in appendicitis.

SURGERY.

(352) Intrathoracic Œsophagotomy.

Potarca (reprint from *La Roumanie Médicale*, 1894) describes an operation for intrathoracic œsophagotomy in the posterior mediastinum which he has performed on the dead subject. The body being turned over on the belly, a vertical incision, between 5 and 6 inches in length, the middle of which corresponds to the fourth dorsal spine, is made midway between the internal border of the scapula and the spines of the dorsal vertebræ. The following structures are divided in succession: the aponeurosis of the trapezius, and at the lower part of the wound some of its muscular fibres,

the aponeurosis and lower fibres of the rhomboideus major, the aponeurosis between the two serrati postici muscles; then, after separation of the sacro-lumbales, from the longissimus dorsi, the transversalis colli. The third, fourth, and fifth ribs having been thus exposed, a piece of bone about an inch in length, is removed from each, the internal section of each rib being close to the transverse process of the corresponding vertebra. The pleura is now carefully stripped from the inner fragments of the ribs, and the front of the spine, and the vena azygos major exposed, in front of which will be seen the œsophagus at a depth of 4 inches from the wound in the skin. The author has extracted from the œsophagus by this deep wound a foreign body previously introduced for this purpose, and succeeded in closing the wound in the œsophageal walls by six sutures.

(353) Splenectomy.

CECI, of Genoa (*Il Policlinico*, August 15th, 1894) reports two successful cases of splenectomy. The mortality for all cases is 51.6 per cent., but ranges in different types from 91.4 per cent. in cases of splenic hypertrophy with leukæmia, to 11.5 per cent. in essential idiopathic hypertrophy with ectopia. These percentages are deduced from a series of 145 reported splenectomies. Ceci's first case was that of a girl, aged 16, admitted to hospital on April 20th, 1893. She had malarial fever (quotidian) at 7, and from that time the belly had slowly enlarged. The febrile attacks were preceded by more or less copious epistaxis. Iron, arsenic, quinine, did more harm than good. The tumour caused great pain. The lymphatic glands were slightly swollen. She was sallow and anæmic, the belly much distended by a large splenic tumour, which followed the movements of the diaphragm, and occupied the whole left superior and part of the inferior quadrant of the abdomen, and extended into the right lower iliac region. It was painful on movement. Examination of the blood showed (April 27th) red corpuscles 4 200 000, white corpuscles 12,120. Urine: no albumen, sugar, or bile pigment. As no improvement took place, Ceci removed the spleen by a median incision on May 30th, 1893. The operation lasted about two hours, and no appreciable amount of blood was lost. The spleen, minus blood, weighed 1.8 kg., and measured 27 cm. long, 17 broad, 10 thick, and 68 cm. at greatest circumference. Notwithstanding pretty severe vomiting for the first, second, and third days, and an attack of left pleuro pneumonia on the fifth day, the patient completely recovered, and the wound healed by first intention. She was kept in hospital until July for observation. In August the pallor was replaced by ruddy skin and rosy mucous membrane; she could perform the usual domestic duties without difficulty: the breasts developed normally: a few small glands in the neck, axilla, and groin, as before operation; slight swelling of right tonsil; thyroid normal and *timbre* of voice unchanged. Interrogated closely she confessed to slight pain in the lower epiphysis of the femur, especially on the right side, but the bones were of normal size, and not tender. In autumn, 1893, her condition remained unchanged, and examination of the blood then showed red corpuscles 3,875,000, white 11,000. The second case was a child, aged 13 years, suffering from essential idiopathic splenic hypertrophy, lasting two years and a half, and attributed to a fall on the belly. Her symptoms were similar to those of the first case. She was operated on March 23rd, 1893; after operation she had severe vomiting, and subsequently a subdiaphragmatic abscess and empyema, but she recovered and was discharged cured, and on returning to show herself in October, 1893, exhibited no trace of vicarious hypertrophy in other lymphatic tissues, and was in good general health

(354) Why Patients Recover from Tuberculosis of the Peritoneum after Operation.

AT the Congress of the American Association of Obstetricians and Gynæcologists, recently held at Toronto (Philadelphia *Med. News*, October 13th), R. T. Morris, of New York, stated that he had been experimenting with a view to determine the reason for the cure of tuberculosis of the peritoneum after operation, it being a well-known fact that more than 80 per cent. of these cases recover as a result of simply exposing the peritoneal cavity to the air. The author collected fluid from the abdominal cavity of patients with tuberculosis of the peritoneum, placed it in an incubator for forty-eight hours, and developed the bacteria of putrefaction which would ordinarily enter in such fluid exposed to the air. From this fluid Eiloart then isolated a toxalbumin, the product of the growth of putrefactive bacteria in this peritoneal fluid. The toxalbumin employed to destroy tubercle bacilli in culture tubes destroyed them very promptly. A control experiment, which was not yet completed, was in progress for determining if these bacteria were absolutely dead. However, enough had been proved to show that tuberculosis of the peritoneum recovers after operation because putrefactive bacteria produce a toxalbumin in the fluid which is fatal to tubercle bacilli in the peritoneum. The reason why it is more effective in curing cases of tuberculosis of the peritoneum than tuberculosis of the knee-joint is because the anatomy of the peritoneum is such that any toxic agent absorbed by the lymphatics of the peritoneum is brought into close contact with the entire structure; whereas, in the knee-joint, the lymphatics are fewer and with more definite channels.

(355) Diverticulum of the Œsophagus.

KÖNIG (*Berl. klin. Woch.*, October 15th, 1894) describes two cases in patients, aged 50 and 62 respectively, in which such a diverticulum was successfully removed. The sac in both cases sprang from near the lower limit of the pharynx. In one case it lay on the right side between the trachea and œsophagus, covered in by a goitre, and was as big as a man's fist. In the other case it had a very exceptional position as it lay on the left side of the vertebral column, and then passed in front of that column between the œsophagus and trachea. There was a goitre of moderate size in this patient. A rounded flat swelling in the neck was present in the first case, extending down to the clavicle and lifting up the sterno-mastoid muscle. The swelling grew larger after food, and could be emptied with a characteristic noise. In the second case it pushed the neck, including the trachea, forwards, but it could also be emptied. In both dysphagia was present. Food could be got into the stomach when the sac was full, but at length this became impossible, owing to the size of the sac. A part of the contents was forced out after a meal, but the greater part had to be pressed out. No sound could be passed into the stomach. There was great wasting in both cases. The author then gives details of the operation. The enucleation of the sac was fairly easily effected by the fingers. The neck of the sac in both instances was about as thick as the thumb. Precautions were taken to protect the wound from the contents of the sac. Two sets of sutures, one through the mucous membrane, the other through the outer wall, were used while the neck of the sac was gradually divided from below upwards. Only nutrient enemata were given during the first four days.

MIDWIFERY AND DISEASES OF WOMEN.

(356) Old Primiparæ.

BIDDER (*Berichte aus der Universitäts Frauenklinik zu Dorpat*, 1894) has published a monograph on this subject. He finds that primiparæ over 40 are common in Dorpat, and from his own observations he notes no special anomalies in pregnancy. It seems, however, that kidney complications and eclampsia are relatively frequent. Abnormal presentations are not more common than in younger mothers. The duration of labour is distinctly longer, but only in the first stage. Operative interference, especially forceps, is frequently needed. Ruptured perineum is not more frequent than in primiparæ; the same applies to complications in childbed. Severe puerperal diseases and mortality from the same are not more common, nor is the mortality amongst the children of old primiparæ specially high. In fact, the old theory that old primiparæ run great risks is a mere piece of *a priori* reasoning.

(357) The Forceps and Meddlesome Midwifery.

ARON (*Progrès Médical*, September 1st, 1894) reports on 216 labours, out of which the forceps was used in 156 and turning undertaken in 15, without

any accident, thanks to antiseptic precautions; 5 induced labours and 3 craniotomies and cephalotripsies were performed without any consequent complication. Aron goes so far as to assert that involution is more perfect and puerperal fever less to be feared after instrumental and artificial than after spontaneous delivery. Charpentier strongly combated this theory and insisted that the application of the forceps only an hour and a-half after complete dilatation and turning, commenced when the cervix is still retracted, are hasty, meddlesome proceedings.

(358) Excretion of Earthy Salts in Mollities.

Neumann (*Archiv f. Gynäk.*, vol. xlvii, Part II, 1894) examined the urine and fæces of a woman, aged 37, who was attacked with mollities ossium, which as usual made progress during pregnancy, though the child was delivered without instruments. After labour the patient was well fed and well housed; for two weeks she was kept on a milk diet in order to allow of a free supply of calcium and phosphoric acid. The bone disease, it appears, was in consequence arrested, the bones of the extremities becoming firm again. Neumann discovered that the excretion of calcium by the kidneys in the progressive stage of mollities was much the same as in health. During the second stage, that of osseous regeneration and recovery, less calcium escaped through the kidneys, but rather more in the fæces. A slight relative loss of magnesium occurred during the progressive stage; on the other hand, that salt was eliminated in less than the normal amount during the second stage. The normal relation of calcium to magnesium in the excreta (1 to 3) was altered, the latter earth diminishing in amount. The loss of phosphoric acid during the progressive stage was found to be marked and continuous, and that compound was as evidently retained during recovery.

(359) Bacteriological Examination during Abdominal Section.

C. B. Penrose (*International Med. Mag.*, August, 1894) has adopted this practice with success. Cover-glass examinations of the suspected material are made, and are fixed in the flame of a spirit lamp, and then stained with carbol-fuchsin. The microscopic examination is made with a Leitz $\frac{1}{12}$ oil immersion lens. Penrose neither irrigates nor uses the drainage tube, unless the microscope shows these contents to be septic. The presence of gonococci in small numbers does not necessitate drainage. Penrose recently operated in two cases of tubo-ovarian abscess, caused by sepsis at labour. In each case the abscess was ruptured during removal, and the pelvis filled with pus. In the first the pus was found to be sterile, and the abdomen was closed without irrigation or drainage. In the second the pus contained streptococcus staphylococcus, and bacillus coli communis. The pelvis, in consequence, was well washed out and drained. Both patients recovered without peritonitis or sepsis, though the convalescence of the first was very much easier than that of the second.

(360) Torsion of Pedicle in Chronic Disease of Uterine Appendages.

Hartmann and Reymond (*Annales de Gynéc. et d'Obstét.*, September, 1894) add a case of this kind to the two recorded by Bland Sutton and Delbet. In the cases already published, however, the tube alone was twisted: in Hartmann and Reymond's the ovary was involved. The patient was a multipara, subject to pelvic pains for six months, with dysuria and painful defæcation. A tumour was detected rising above the pubes. The authors diagnosed double salpingitis, and, a few weeks later, the pains suddenly increased in intensity and the swelling in size. Abdominal section was performed. A big red tumour was exposed, adherent to omentum and to small intestine and to the sigmoid flexure. The pedicle was twisted three times, according to the drawing in the paper. It sprang from the left side of the uterus; that organ was itself rotated half a turn. The opposite, or right appendages, were cystic, and Hartmann removed them. The left appendages consisted of a tubo-ovarian cyst full of blood. The patient made a good recovery.

(361) Disadvantage of Ovariotomy in Childbed.

Grassow (*Centralbl. f. Gynäk.*, No. 43, 1894) recently exhibited at a German medical society a parovarian cyst which had contained 25 pints of fluid. The patient had gone to the end of her eleventh pregnancy. The tumour caused a marked distortion of the child's skull. Fourteen days after delivery ovariotomy was performed. The bulky uterus, in imperfect involution, gave great trouble to the operator. The base of the cyst, being sessile, was with difficulty detached; the pedicle required very careful ligature, or rather suture. Grassow concludes that, whatever may be said for ovariotomy during pregnancy, it is not right, save when urgent symptoms appear, to perform that operation after delivery till involution is complete.

THERAPEUTICS.

(362) The Antitoxin Treatment of Diphtheria.

Schippers (*Weekblad van het Nederlandsch Tydschrift voor Geneeskunde*, October 27th) records a case of acute diphtheria cured by a single injection of Behring's serum No. II. The patient was a boy, aged 5 years, and the symptoms were very severe. The tonsils, the uvula, and the entire surface of the posterior wall of the pharynx, were covered with membranes. The voice was entirely lost: stridor was so loud that it could be heard outside the front door. The lungs were unaffected. Temperature 100° F., the pulse full, somewhat accelerated. An operation seemed to be the last resource, but, as the author a few days before had obtained from Berlin a single dose of serum, the injection was decided upon, although the case seemed hopeless for the experiment. The serum was injected in the right hypochondrium. The treatment which was being pursued before the injection (quinine and sesquichloride of iron, the application of ice, and inhalation of steam) was continued. The following morning a decided improvement was observable. The false membranes had nearly entirely disappeared. The voice was still hoarse, but the stridor was greatly diminished. By the third day after the injection the alarming symptoms had entirely subsided, the temperature was normal, and the appetite had returned. In the case of another child of the same family, for whom no serum was available at the date of report, the membranes were extending with alarming rapidity over all the organs of respiration.

(363) Local Treatment of Faucial Diphtheria.

Loeffler (*Deut. med. Woch.*, October 18th, 1894) emphasises the importance of local treatment based on a bacteriological study such as he has followed out in a large number of cases. Many antiseptic solutions kill diphtheria bacilli in a few seconds. Equal parts of turpentine and alcohol were found much more efficient when carbolic acid (2 per cent.) was added to them. Ferric perchloride kills the diphtheria bacillus very rapidly. The author uses the following application: Alcohol (60), toluol (36), and liq. ferri perchlor. (4). Fully developed diphtheria cultures were killed in five seconds. If a dose of virulent diphtheria bacilli was introduced beneath the skin of a guinea-pig, and followed by $\frac{1}{20}$ c.cm. of the above mixture, the animal did not become ill, and even after an interval of one to four hours it was saved. This remedy was used in an epidemic of diphtheria. Among 71 patients treated out of hospital, not 1 died. Of 30 hospital patients, 5 died; in 4 of these the disease had already extended into the larynx and nose, and the fifth died of gangrenous pneumonia. The general condition of the patients soon improved. Complications were rare. As long as any membrane remains a further application is made. The remedy should be vigorously used at least every four hours. When decomposition processes are present in the throat the chloride is converted into sulphate, and is inefficient. Menthol was found a useful addition (10 g. to 100 g. of the remedy). Creolin (2 to 3 per cent.) and cresol were found useful substitutes for the iron, but they are inferior in bactericidal properties. The author has also tried the addition of pyoktanin with good effect. In all cases of genuine diphtheria the iron mixture should be used, but where decomposition processes are going on the other solution, specially that containing cresol, should be tried.—Goldschmidt (*Rev. de Méd.*, October, 1894) speaks very highly of the internal use of the perchloride of iron in small and frequent

doses. He has used this method of treatment for thirteen years, and has never lost a case where the larynx was intact.

(364) "Fat-Milk" Infants' Food.

GÄRTNER recommends (*Allg Wien. med. Zeit.*, October 13th, 1894) freshly "separated" diluted cow's cream as an infant's food. Good cow's milk is treated with an equal quantity of water, and placed in a centrifugal "separator." The fluid which runs from the "cream tap" contains all the cream of the original milk except about 0.1 or 0.2 per cent., half the proteids, and half the milk sugar. This gives a very close imitation of human milk, with the exception that the milk sugar is much too low. Escherich gives (*ibid*) the following comparative table of analyses :

	Casein.	Fat.	Sugar.
Gärtner's "fat milk" ...	1.76 ...	3.0 ...	2.4
Human milk	1.82 ...	3.94 ...	6.23
Diluted cow's milk ...	1.76 ...	1.81 ...	2.4

Gärtner urges that the "fat-milk" has the further advantage that the process of centrifugalising removes the grosser impurities, hair, etc.

(365) Lysidin.

GRAWITZ, of Gerhardt's Clinic (*Deut. med Woch.*, October 1st, 1894), has used this remedy in gout. It has a much more powerful solvent action on uric acid than piperazin. He records two cases of characteristic gout in which lysidin gave the best results. The drug was given in doses varying from 1 g. to 5 g. in the day, with occasional intermissions. An elaborate investigation was made at the same time into the metabolism in these cases, the intake and the output being carefully estimated. It was found that there was no increase in the excretion of uric acid. In the first case the drug was omitted for some days, and the pains returned, but the patient rapidly improved again as soon as the lysidin was resumed. In the second case tophi were seen to disappear under the treatment. In a case of genuine rheumatism the drug was without effect.

(366) Electrical Treatment of Exophthalmic Goitre.

BORDIER (*Archives d'Electricité Médicale*, October, 1894), contributes a paper on the treatment of exophthalmic goitre by the induction coil, and reports two cases much benefited. The applications, by Vigouroux's method, were: (1) To the facial nerve (upper branch) and to the orbicularis palpebarum for half a minute each side; (2) to the neck between the hyoid bone and the anterior border of the sterno-mastoid, the electrode pressed deeply over the carotid artery, duration one and a-half minute on each side; (3) over the thyroid swelling by an electrode of larger surface for five minutes; (4) over the precordium for three minutes. The thyroid muscles were also made to contract a few times during the sitting. Treatment repeated three times a week. Indifferent electrode applied to the nape of the neck throughout. The results were decidedly favourable. The same journal also contains a paper by Déliage on the use of the continuous current in exophthalmic goitre.

(367) Electricity in Migraine.

LABBÉ (*Arch. d'Electricité Médicale*, October, 1894) reports a successful case. The patient, a cook, aged 45, had severe attacks for eight years, with increasing frequency. For over a year they had been of almost daily occurrence, causing her to abandon her calling. Many drugs had been administered. The menstrual function was regular. Treatment by insulation and the electrostatic brush discharge directed upon the face and head was continued, with occasional interruptions, from August until the following March. Each application lasted ten minutes, and the total number was thirty-eight. From the commencement the attacks were controlled, and the patient still remained quite free from migraine four months after treatment had been discontinued.

PATHOLOGY.

(368) The Spinal Cord in Divers' Palsy.

ONLY two cases of necropsy of the bodies of persons who have died of divers' palsy, or caisson disease, are recorded. Sharples has examined one case in which the spinal cord was studied microscopically (*Journ. of Nerv. and Mental Dis.*, October, 1894). The case is that of a man who had been a diver in deep water. For two weeks he had been diving to the depth of 210 feet, protected by the ordinary diving suit and helmet, and often remaining under water for thirty minutes. The last time he reappeared he complained of sharp pain in the arms and legs and became almost unconscious. On recovering consciousness (two hours after) he complained of neuralgic and shooting pains down his arms to his fingers, much increased on movement. The arms and legs became paralysed; so were the bladder and rectum; and there was complete anæsthesia from the neck downwards. In a fortnight he developed a bronchitis; incontinence of urine persisted, with cystitis; bedsores began to form about the sacrum, trochanters, and elbows. Shortly before death he became febrile, with delirium (probably septic, and secondary to the bedsores), dying with a temperature of 104°. The cord was seen to be normal externally, but on slicing it (previous to placing in Müller's fluid) spots of extreme creamy softness were noted within it. Microscopic examination showed tract lesions, which were practically limited to the cervical and upper dorsal cord. These consisted of softenings and degeneration in the columns of Burdach of both sides, and less markedly in the columns of Goll. These were most obvious in the cervical region, but yet less in the dorsal portion of the cord. A few diffuse spots of softening were found also in the lateral columns (not restricted to any one definite tract), and one series of softened spots in "the right anterior cornu of the cord," which is constant through the length of the cord, varying in size at different levels." Some of the blood vessels were excessively dilated, and a few showed slight (incipient) hæmorrhages. The writer thinks that the considerable pressure and changes of pressure (atmospheric) to which divers are subject in some way bring about hæmorrhages into the spinal cord, as a result of which inflammatory and secondary softening occur. This accounts for the scattered nature of the foci of disease, but why the cervical and upper dorsal cord suffer most has yet to be explained. The first rise of temperature marks the onset of a more severe spinal lesion (myelitis) than before, and the bladder and trophic troubles are the natural outcome of the spinal mischief.

(369) Basedow's Disease and the Thyroid Gland.

EULENBURG (*Deut. med. Woch.*, October 4th, 1894) first refers to the disturbed functions caused by the absence of the thyroid gland. The objections to the thyroid theory of Basedow's disease are that (1) enlargement of the thyroid may be absent; (2) the palpitation or exophthalmos may be present long before the goitre; and (3) large goitres may exist without symptoms of Basedow's disease. On the other hand, a slight enlargement can escape notice, or the enlargement may take place into the deeper tissues, and changes may thus exist in the gland without being appreciated. The objections concern the mechanical rather than the chemico-toxic theory of the part played by the thyroid gland. Moebius drew attention to the contrast between the symptoms of Basedow's disease and myxœdema, and the latter has been known to follow on the former. The chemical theory of the normal functions of the thyroid supposes the destruction of some baneful substances in the blood by the healthy gland, or more probably the production of a substance by the gland very important or absolutely necessary to life. Since the thyroid cannot be stimulated to secretion through its nerves (as shown by Hürthle), it would appear that the state of the blood must supply the necessary stimulus. Basedow's disease may be due to a progressive increase in the thyroid secretion. The quantitative changes in the blood in this disease are seen in the greatly increased vascularity of the thyroid gland, whereas qualitative changes, also influencing secretion, are illustrated by the disease occurring in chloro-anæmia, after acute infective diseases, etc. Ligature of the bile ducts has been shown to lead to an increase in the thyroid secretion. Toxic products are found in the blood in Basedow's disease. The secretion of the thyroid may also be more rapidly absorbed. The therapeutic test of the thyroid origin of this disease, whether by the improvement in the quality of the blood or by the lessening of the secreting surface of the gland by extirpation, must not be over-estimated.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(370) Summer Diarrhœa and the Sterilisation of Milk.

A. Baginsky, in a paper on summer diarrhœa, milk food, and milk sterilisation (*Berl. klin. Woch.*, Nos. 43 and 44, 1894), points out that warm weather may operate in at least three ways: (1) At high temperatures the growth of bacteria, in themselves harmless, may be so much encouraged that their very numbers and bulk, so to say, may make them injurious or may render the amount of their products so large that they produce symptoms of intestinal irritation. Examples of such products are lactic, formic, acetic, and butyric acids. Changes of this character may begin in the milk before ingestion and continue within the intestinal canal. (2) The microbes, the growth of which is stimulated by the warm weather, may be in themselves poisonous or they may produce soluble poisons in such quantity that even a small quantity of the milk containing them may produce poisous symptoms. (3) The milk itself may be germ free, but the child may take into its mouth in other ways, from the air or the articles which it uses, so large a number of microbes that the milk becomes affected with these special fermentations after ingestion. Sterilisation will be most effectual against conditions coming within the category (1), of little effect against (2), and of none against (3). Baginsky mentions experiments of his own and others with regard to the action on milk of microbes found in the stools of children suffering from diarrhœa. Such stools contain a large number of micro-organisms (bacilli, cocci, and torulæ), which all possess the property of breaking up the albuminous bodies. He believes that the summer diarrhœa of infants, and particularly cholera nostras infantum, is to be attributed to certain saprogenic bacteria, which have the power of forming from the albumens of milk poisonous proteids. Their action, longer continued, leads to the production of ptomaines and other decomposition products (indol, phenol, etc.), ammonia and sulphuretted hydrogen being liberated throughout the whole process. Flügge's observations are quoted, which tend to prove that "sterilisation" of milk as ordinarily performed is ineffectual to kill all the microbes present, and that these growing subsequently produce poisonous proteids. Baginsky accepts the view that many forms of diarrhœa may be produced in this way. In particular he contends that the typical summer diarrhœa which produces so high a mortality among the children of great towns is due to the absorption from the intestinal canal of bodies produced by the action of microbes on the milk before ingestion or upon the unassimilated remnants in the intestinal canal. The pathology of the summer diarrhœa of infants would thus be analogous to that of Asiatic cholera. In reality prolonged "sterilisation" does no more to free milk from microbes than boiling for five to ten minutes. An important point is that the heating should be followed by rapid cooling and that the milk should afterwards be kept in a cool place. The good practical results obtained by Soxhlet's method of sterilisation depend, to some extent at least, on the fact that the milk is sterilised in separate bottles, one for each meal, which are kept closed from the air until given to the child. In this way the danger of subsequent contamination by microbes in the air—a very real one in towns—is obviated. The same precaution prevents the contamination of the milk by imperfectly-cleansed feeding bottles, etc. As to the chemical changes produced in milk by the process of sterilisation, Baginsky states, on the strength of experiments made by himself and of recent chemical analyses made for him by Sommerfeld, that they consist in an alteration of the behaviour of the casein to the rennet ferment, and to hydrochloric acid, with a diminution of its solubility in artificial gastric juice, a splitting up of the organic bodies (lucethin, nuclein) containing phosphorus and a similar destruction of milk sugar.

(371) Torticollis and Lumbago.

Robin and Londe (*Rev. de Méd.*, October, 1894) draw attention to an acute articular form of these diseases of apparently rheumatic origin. In articular lumbago the pain is deep-seated and provoked by movements. In walking the patient often stoops, with the object of relaxing the articulations of the apophyses. The muscles producing this altered position would appear not to be involved in the disease, but contract to protect the diseased structures. Immobilisation of the lower part of the vertebral column is found. The pain on pressure is localised to definite parts corresponding to the joints. Sometimes the disease affects one side, causing a lateral inclination. The duration of the disease is from eight to ten days. For the diagnosis it is sufficient to recognise the painful intervertebral points. It is difficult to say whether the articulations between the vertebræ or between the processes are involved. In the articular form of torticollis rotation of the head occurs, but the pain on pressure is more marked on the opposite side, supposing the apophyses on one side only are affected. The position is due to its being one of least pain. The authors discuss the diagnosis from true torticollis and Pott's disease. Sometimes the nerves may be involved as they pass out of the intervertebral foramina. This torticollis may be followed by acute rheumatism. The authors would assign cold as a cause. The articulations between the occipital bone, atlas, and axis are spared, owing to being deeply placed. There is no known morbid anatomy, for obvious reasons. The treatment is medicinal and mechanical. Jaborandi is strongly recommended by the authors if there are no contraindications. Salicylates may be useful. Massage may be employed in the more chronic cases. Fixing the parts is not indicated unless in severe cases. The authors give details of illustrative cases.

(372) A New and Distinguishing Sign of Lateat Aneurysm of the Aorta.

This sign, according to W. C. Glasgow (*New York Med. Journ.*, September 15th, 1894), is the presence of a systolic sound in the brachial artery, synchronous with the cardiac systole, and sometimes accompanied by an arterial murmur. When this sound can be heard, and aortic regurgitation can be excluded, a positive diagnosis of aneurysm can be made, even in the absence of all other signs or symptoms. The sound is due to the rapid tension of the walls of the only partially-filled artery, due to the sudden impact of blood at the heart's systole. In pure aortic regurgitation the sign is always present: in two out of six of the reported cases of aneurysm, the diagnosis was made from this sign alone four months before the appearance of the recognised physical signs. In all six cases the systolic sound in the brachial artery was present; five were intrathoracic aneurysms and one abdominal.

(373) Fabism.

In a communication to the XI International Medical Congress, Montano described a disease produced by the *vicia faba*, the noxious material being contained in the flowers and fruit. It is conveyed either by the atmosphere impregnated with the exhalation, or by eating the seeds. The disease is not rare, and appears mostly in April or May. There is an individual, or even family, predisposition. One attack does not protect. The symptoms consist in prostration, headache, vertigo, tinnitus, and pain in the abdomen. In severe cases there may be somnolence, or even coma and convulsions, particularly in children. The skin may have a yellow colour. Thirst, anorexia, nausea, and vomiting, is noted in all severe cases. The temperature may even be raised. The urine may contain hæmoglobin or albumen. The disease varies in severity, and lasts only a few days. In very grave cases death may follow in one or two days. These cases occur in children. The disease is probably due to some volatile alkaloid or toxin, but the nature of it is unknown. The diagnosis is not difficult if the cause be kept in mind. Avoidance of the cause is most important.

SURGERY.

(374) Surgery of the Stomach.

E. Hahn (*Deut. med. Woch.*, October 25th, 1894) has lately performed 15 gastro-enterostomies and 4 resections of the stomach. All the former survived.

but of the latter I died, a most extensive resection having been done. The author has also operated on a woman with severe and long-continued pain in the region of the stomach. Five strong adhesions between the stomach and colon were divided, and the patient was well afterwards. Hahn records a case of pylorectomy for carcinoma, performed in July, 1893. The patient returned in eight months with signs of pyloric obstruction, and numerous adhesions were then divided. He seemed to improve, but it was soon found necessary to do a gastro-enterostomy. The patient died some six months later, of recurrence. The author also records a case of pylorectomy for extensive carcinoma (proved by the microscope), done three years and a-half ago, the patient remaining free from recurrence. In cases of extensive resection of the stomach it is undesirable to attempt to unite the stomach and duodenum, but a gastro-jejunostomy should be done after sewing up the stomach and duodenum. The author no longer uses his clamps, as they may produce gangrene, and make the bleeding later more difficult to control. He makes the opening in the stomach in gastro enterostomy as near the pylorus as can wisely be done. The intestine should be opened near the attachment of the mesentery. Hahn regards as very important the washing out the stomach soon after the operation, that is, in twelve to twenty-four hours. He refers to a case in which gastro-enterostomy was done some seven years before death, due to independent causes. The tumour was thought to be carcinoma, but unfortunately no necropsy was performed. He recommends Woelfler's method of gastro-enterostomy, with a few modifications.

(375) Extirpation of Spina Bifida.

Broca (*Sem. Méd.*, October 17th, 1894) reported at the recent Congress of French Surgeons at Lyons ten cases of removal of spina bifida in infants. In seven of these cases the patients recovered from the operation, and in the remaining three cases death resulted from infection. The later results, however, in most of the cases of supposed recovery have not been satisfactory. One only of the seven patients who survived was known to be quite well at the end of twelve months, three had not been seen for some time, and three others when last seen were suffering from hydrocephalus, which affection is often associated with spina bifida, and, in the author's opinion, is the main cause of failure after the operative treatment of the latter condition. In one of the cases in which hydrocephalus followed the removal of spina bifida the author trephined, and drained the ventricles with a fatal result at the end of twenty-four hours. The results of surgical treatment of hydrocephalus are, it is stated, very discouraging. Of two other cases in which the ventricles were drained, death followed after an interval of three weeks; and in the other, although the child survived, there was no improvement. The author holds that operative treatment is contraindicated in cases of spina bifida in which the tumour is covered by normal skin so long as there is no risk of rupture, and also in cases in which rapid increase of the swelling indicates hydrorachis, which condition always leads to incurable hydrocephalus. The only cases of spina bifida, therefore, in which an operation is indicated are those in which the swelling has ruptured or is on the point of doing so.

(376) Relations of Renal Insufficiency to Surgical Operations.

At the meeting of the American Association of Obstetricians and Gynæcologists, lately held at Toronto (Philadelphia *Med. News*, October 13th), C. C. Frederick reported observations based on nearly three hundred operations in the Buffalo Women's Hospital, supplemented by the experience of several prominent operators. By renal insufficiency is meant any condition of the urine which shows deficient elimination of waste products, whether from functional inactivity or disease of the kidneys. Whether renal insufficiency is a contraindication to operation depends on the consideration of three factors: (1) The amount and nature of the insufficiency; (2) the character of the lesions for which operation is proposed; (3) the causal relation which the patient's disease holds to the renal insufficiency. Every patient's urine before operation should be collected for twenty-four hours, except when operation is urgent, as in ruptured ectopic pregnancy, for example. In examination of the urine the important fact to ascertain is whether the kidneys are crippled, or in full or nearly normal functional activity. Women with chronic endometritis are especially liable to functional insufficiency. Most gynæcological patients who are run down physically present the same condition. A knowledge of the state of the patient's kidneys is of value to the operator and the anæsthetist. Renal insufficiency renders the patient more liable to shock from operation and a slower convalescence.

(377) Complicated Depressed Fracture of the Skull.

Seydel (*Münch. med. Woch.*, September 28th, 1894) relates the case of a man who fell from a fourth storey on to his head. There was no loss of consciousness whatever. There was marked motor paralysis and anæsthesia on the right side. The depression in the left parietal bone, 1 to 3 cm. wide and a finger's breadth from the sagittal suture, extended from the coronal to the lambdoid sutures. Brain substance, splinters of bone, etc., were present in the wound. The opening in the bone had to be enlarged. After removing some splinters, two tears were found in the longitudinal sinus. Free bleeding occurred, but it was easily arrested by compression with iodoform gauze. By the third day the brain bulged into the opening. The anæsthesia had disappeared and there was some recovery of power. Later a plastic operation had to be done to prevent hernia cerebri. Some seven months after the accident the patient was discharged well. There was still a very slight weakness in the right arm and leg. Cerebral pulsation could be felt in one place at the site of the injury. It is remarkable that so serious an injury should have caused no loss of consciousness. The removal of large portions of the skull has no ill effect. The seriousness of injury to the longitudinal sinus has been overestimated. Compression with iodoform gauze has, in the author's experience, always controlled the hæmorrhage even where other measures have failed. There is no danger of the entry of air into the sinus. Cerebral œdema may appear about the third and fourth day in such cases as the above. The paralysis was not due to injury to the cerebral substance in the Rolandic area, but to œdema there.

(378) Acute Retro-Pharyngeal Abscess.

Belliard (*Rev. de Laryngologie*, etc., September 1st, 1894) describes a case of the nature of an "adenophlegmon" excited by gingivitis accompanying the eruption of a molar tooth. He opened it through the mouth, and recommends this method on account of its simplicity and safety, holding that the supposed dangers from hæmorrhage, septic infection, and entrance of pus into the air passages are exaggerated. The administration of chloroform is indispensable when external opening is practised, and he holds that there is at least a chance of danger in chloroforming a child who already breathes with difficulty.

MIDWIFERY AND DISEASES OF WOMEN.

(379) Artificial Anus after Removal of Appendages: Enterorrhaphy.

Gangolphe (*Lyon Médical*, September 16th, 1894), reports the following case. In the spring of 1893 a woman underwent abdominal section for phlegmon of the broad ligaments; ventral hernia followed. Three months later another operation was performed for suppurating salpingo-oöphoritis. A fortnight afterwards an abscess formed, and was opened, fæces escaping freely. Rochet incised the integuments, exposing a cavity into which four ends of intestine opened. An incomplete enterorrhaphy was alone feasible. When Gangolphe examined the patient there was a prominent mass, as big as a man's fist, above the umbilicus, formed of intestines, peritoneum, and everted intestinal mucous membrane. There were two orifices, fæces issuing only from the uppermost. Gangolphe freely excised the cicatricial tissue, and drawing the mass outwards he found that the perforated coil of intestine was adherent over a wide area to the coil which had been sewn up at the previous operation; a silk thread was discovered in the line of union. He dissected off the adherent coil and sutured the two

ends. The dissected surface was touched with the thermocautery. Then a drainage tube being applied the abdominal walls were closed by suture. The patient was completely cured. Gangolphe lays stress on the free excision of the cicatricial tissue, otherwise the intestinal adhesions could not have been sufficiently exposed to allow either of diagnosis or the precise lesion or its remedy. It appears that the intestine was not wounded at any of the earlier operations, the artificial anus developing from subsequent inflammation.

(380) Malignant Disease of the Decidua after Hydatid Mole.

KLIEN (*Archiv f. Gynäk.*, vol. xlvii. part 2nd, 1894) relates a case of malignant change in decidual relics in the uterus after labour, a disease which has been frequently detected of late years. The patient was 27. The period was last seen in November, 1892. On January 26th, 1893, severe flooding set in; on March 3rd a large vesicular mole was expelled, and flooding and pain continued for some time. The curette was used on May 15th; left parametritis followed. In September the patient became very ill, the uterus being universally enlarged, and deciduoma malignum was diagnosed. It was complicated with left parametritis and disease of the left appendages. She was admitted into hospital very ill with rigors, and died of hæmorrhage on November 7th. A remarkable pathological complication was discovered. There was angio-sarcoma of the vagina, with secondary deposits in the uterus and both lungs. The uterus contained a mass of new growth, which was described by the pathologist as "deciduo-sarcoma uteri giganto-cellulare."

(381) Suppuration of a Rudimentary Second Vagina during Labour.

SÄNGER (*Centralbl. f. Gynäk.*, No. 38, 1894) states that a woman, aged 26, was delivered in July, 1893, of her first child, which was stillborn. Labour was spontaneous. Nephritis occurred during pregnancy. There was fever for a fortnight, and a fluctuating body was felt on the right side of the pelvis; it was taken for a parametric abscess, and laid open. A quantity of discoloured fœtid pus escaped. The cavity diminished in size, but a fistula remained which discharged pus, and during the period blood. About nine months after labour the patient came under Saenger's care. About 1 inch below the reflexion of the vagina on to the right side of the cervix was a fistulous orifice with indurated walls. The cervix was dilated with tents; the fistulous tract was then found not to communicate with it. The fistulous orifice was widened by means of a Paquelin's cautery. The forefinger could be introduced into a spacious cavity passing upwards as high as the level of the os internum, and downwards nearly to the vulvar cleft. At the uppermost extremity a tuberculous eminence could be felt. This was cauterised and the cavity closed by a plastic operation: its entire mucous membrane had to be dissected away. That membrane bore stratified pavement epithelium. It therefore represented not a patent Gaertner's duct, but a rudimentary vagina.

(382) Cystic Tumour of Uterus.

MANOURY, of Chartres (*Répert. Univ. d'Obstét. et de Gynéc.*, August 25th, 1894), observed this condition in a girl of 18. She was subject to menorrhagia. The uterus reached as high as the umbilicus. Removal of the ovaries was projected; when the abdomen was opened the tumour was found to be well pedunculated, and it was thought advisable to remove it. A multilocular cystic cavity was discovered in the substance of the muscular tissue of the uterus. The secondary cavities varied in size, some being as large as a fœtal head, some not larger than an almond.

(383) Coiling of the Funis Round Fœtus.

BRUTTAN (*Berichte aus der Universitäts Frauenklinik zu Dorpat*, 1894) has seen a number of cases of this condition, for at Dorpat it is unusually common. Indeed it is seen in 1: 3.49 labours. It coincides, as theory and practice would lead us to suppose, with the fact that in Esthonian women the cord is often very long (average 22½ inches). Stillborn children are not more frequent in these cases than in those where the fœtus is unencumbered by coils of funis. The danger to the child in head presentations, with coiled funis, is limited to cases where the head is impacted. The danger in any case is almost certainly due to the risk of compression of the cord between the child and the maternal passages, or between two parts of the child. Direct strangulation of the child through coiling of the cord round the neck is extremely rare; in head presentations it is almost peculiar to multiparæ. In primiparæ about every ninth child with funis coiled round its body is lost from pressure on the cord. In multiparæ the chief harm is limited to a greater number of children born asphyxiated.

THERAPEUTICS.

(384) External Application of Guaiacol in Fever.

S. T. BARTOSZEWICZ of Professor Lomikovsky's clinic, in Kharkov (*Yujno-Rüsskaia Meditzinskaia Gazeta*, Nos 23 and 24, 1894) has used guaiacol externally in 12 febrile cases (4 phthisis, 2 pleurisy, 2 typhoid, 1 pneumonia, 1 peliosis rheumatica, 1 intermittent), the number of experiments amounting to 65. At first he rubbed the drug with soft flannel into this or that cutaneous area, about five square decimetres in extent. In spite of his using only gentle pressure, the application always gave rise to local dermatitis, with superficial ulcers and scurfing. This complication led him to abandon the frictions in favour of a novel method devised by himself. A piece of linen, 3 square decimetres in size, soaked with 25 or 30 drops of pure guaiacol, was applied to the forehead, back of the neck, or upper part of the chest, then covered with wax paper, fixed by a bandage, and left *in situ* for one or two hours. It was found that such compresses had exactly the same antipyretic effects as the inunction, while they caused no cutaneous irritation beyond slight redness. The principal results of the clinical research may be summarised as follows: (1) Guaiacol is an excellent antipyretic; of 65 cases, only in 5 the results were *nil*, and only in 9 the temperature subsequently rose up to the primary height. The maximum effects (2·5° to 3° C.) occurred in phthisis, the depression in a majority of cases varying between 1·2 and 1·5° C. (2) The drug does not give rise to collapse even in phthisical subjects with large cavities. In these patients, however, the application is almost invariably followed, in from two to four hours, by perspiration and rigors; (3) compresses are the best mode of application; (4) chemically pure crystalline guaiacol should be preferred to the ordinary fluid preparation, since it allows a better dosage, and does not irritate the skin, even when rubbed in.

(385) The Treatment of Furunculosis.

VAN HOORN (*Monatsh. f. prakt. Derm.*, Bd. xix, No. 1, July 1st, 1894) treats furunculosis as follows: He first washes the whole of the patient's body with potash soap and tepid water; then he asepticises the boils and the surrounding parts with a 1 in 1,000 sublimate solution, afterwards covering them with a mercurial and phenol plaster, which is changed every day. If the furuncles burst, the contents are squeezed out and the cavity washed with sublimate. The results are excellent. If there was no fluctuation in the furuncles, absorption takes place very quickly. If there was fluctuation, absorption is rare, but the disease does not spread; the boil opens and rapidly cicatrises. During the treatment no further boils develop. — Loewenberg (*Bull. Méd.*, quoted by Brocq, *Journ. Cut. and Gen. Urin. Dis.*, October, 1894) recommends the use of the actual cautery for the abortive treatment of boil. For this purpose he employs galvano-cautery irons ending in fine platinum points about a centimetre long and a millimetre in diameter. As soon as a furuncle shows its presence by a red areola surrounding a hair and by special sensitiveness to touch, he introduces the platinum point, brought to a white heat, into the centre of the areola, causing it to penetrate deep enough to act upon the whole length of the hair follicle, in the supposed course of which it is made to enter. The incandescent point is left for an instant in position and then withdrawn. When the furuncle has already begun to form we may still attempt to abort it; but we must in this case prolong the cautery so as completely to carbonise the small drop of pus which has already been pro-

duced. Brocq points out that French dermatologists have for a long time had recourse to the actual cautery applied by means of finely-pointed thermo-cautery tips, or, better still, with the electro-cautery, for the treatment of rebellious acnes, especially where there are large lesions on the face and trunk. In this way they not only succeed in curing the lesions more rapidly, but arrest the formation of new ones. It would seem as if the inoculable germs which produce acne are thus destroyed.

(386) Sheep's Thyroid in Graves's Disease.

J. Voisin (*Sem. Méd.*, October 24th) recently communicated to the Société Médicale des Hôpitaux the case of a woman, aged 32, suffering from Graves's disease, to whom he prescribed 6 to 8 grammes of sheep's thyroid to be taken every day in two doses before meals. After a fortnight of this treatment very marked improvement was observed; the heart beats had become regular, and had fallen from 150 to 100 per minute; the œdema of the lower limbs had disappeared: the enlargement of the thyroid and the exophthalmos had also appreciably diminished. The patient continued to take daily some fragments of thyroid, taking care to suspend the treatment for ten days every three weeks. The improvement had been maintained, and at the date of report the woman had no symptoms of the disease beyond trifling swelling of the neck and slight exophthalmos. Dreyfus-Brisac said that the thyroid treatment should not be employed in all persons suffering from Graves's disease. In all the cases which had come under his notice that method of treatment had aggravated the symptoms. Béclère's experience had been similar.

(387) Parachlorphenol as a Disinfectant of Tuberculous Sputa.

A. Spengler (*Sem. Méd.*, October 31st) recommends a 2 per cent. solution of parachlorphenol as an effective disinfectant of the sputa of phthisical patients. He has satisfied himself by experiments that the substance destroys the tubercle bacillus. Having injected 1 c.c. of an emulsion of tuberculous sputa, prepared in some cases with water and in others with a 2 per cent. solution of parachlorphenol, into the peritoneal cavity of guinea-pigs, and having killed the animals after a time, he found that those inoculated with disinfected sputum showed no trace of bacillary infection, while the controls presented clear evidence of infection.

(388) Saline Injections in Cholera.

H. Williams (*Boston Med. and Surg. Journ.*, October, 1894) records a successful case of saline subcutaneous injection in collapse from cholera. The patient, a man, aged 56, was returning home from treatment elsewhere for threatening pulmonary tuberculosis. Incurring a chill during intense heat slight diarrhœa ensued. He arrived home July 30th, and that night the diarrhœa became worse, with cramps of the legs and abdomen, vomiting and profuse watery dejections. Subcutaneous injections of morph. sulphate, strychnine nit., and brandy proving of no avail, it was decided to inject a saline solution. The patient was now fast passing into a moribund state, the skin bathed in cold sweat, the face and nose pinched and drawn, the legs mottled, respiration hardly perceptible, and pulse not to be felt. A quart of a solution containing 15 grains of sod. bicarb. and 30 grains of sod. chlorid. at 105° was slowly injected under the skin of the abdomen with a reversed aspirator. Immediate improvement resulted, the radial pulse became perceptible, respiration more rapid and full, the body surface warmer. Six days after the patient was nearly well.

(389) Biniodide of Mercury.

P. K. Bolshesolsky (*Proceedings of the Arkhangelsk Medical Society*, 1894, vol. ii, p. 19) strongly recommends biniodide of mercury as an antiseptic in obstetrical and surgical practice. A 1 to 10,000 solution is quite sufficient for all purposes. In normal obstetrical cases the external genitals alone should be washed with the lotion, while in the presence of endometritis free intrauterine irrigations are necessary as well. As the author's extensive experience has shown, the solution affords a valuable means not only of protecting the parturient woman from septic infection, but even of cutting short incipient septic processes. In surgical practice he used the biniodide for washing out the abdominal cavity (in laparotomy), pleura (empyema), cerebral meninges (traumatic injuries), and synovial membranes (suppurative arthritis). Although he always used the solution very freely, he never saw any untoward effects, and hence considers the drug "decidedly harmless." Bolshesolsky's favourable opinion of the biniodide is shared by many Arkhangelsk practitioners, as may be gathered, from the fact that the Society, after hearing his paper, took appropriate measures for placing the solution within the reach of all local midwives.

PATHOLOGY.

(390) Etiology of Acute Retropharyngeal Abscess in Young Children and Sucklings.

H. Koplick, of New York (*Centralbl. für Bakteriologie*, September 26th, 1894) has made researches as to the causation of this complaint. He has met with 60 cases during seven years. He excludes from consideration tuberculous abscesses and septic abscesses following acute exanthems. He notes the disease as one suddenly attacking children previously in perfect health. There may certainly have been a sore throat which has passed unnoticed. The infant suddenly refuses the breast; next its voice is noticed to be of a snuffling, metallic tone. Inspection now reveals a median or lateral swelling pushing forward the posterior pharyngeal wall; or nothing may be visible, but palpation reveals a swelling or fluctuation about the level of the epiglottis, or yet deeper. Swallowing may be made difficult or impossible thereby; sometimes even the breathing is disturbed. Three methods were used for obtaining the pus: (1) Incision by way of the mouth; (2) aspiration through the mouth; (3) a lateral opening in the neck. The utmost antiseptic precautions were taken; but in any case the first method could not be entirely freed from objection. Sterilised test tubes received the pus. A streptococcus was invariably found: only once was bacterium lactis aërogenes present, no doubt accidentally. A definitely composed bouillon was found best for differentiating the streptococci. Four species were made out, and, after Lingelsheim, classed as long streptococcus *a* of the pharynx, long ditto *b*; short *a* and short *b*. All gave the bouillon an acid reaction after varying times. All took a blue stain well, and formed more or less long and intricate cocci chains. No very decided reaction followed the injection of each species into rabbits and mice. Hence Koplick concludes that the streptococci are mild in character, two especially—short *b* and long *b*—being non-pathogenic.

(391) A Study of the Temperature Sense.

This subject is investigated by Riley in the *Journ. of Nerv. and Mental Disease* (September, 1894) with the following results. In thirty subjects examined the results are fairly constant, and show that those parts of the body which are most sensitive to heat are likewise most sensitive to cold. The order of sensitiveness was as follows: (1) abdomen; (2) inside of thighs, chest; (3) inside of arms, outside of thighs, soles of the feet; (4) front of neck, palm of hand, inside of forearm and of leg. The soles of the feet are more sensitive than the palms of the hands; the latter and the back of the hand are about equally sensitive. The least sensitive were (5) the forehead, and the outer sides of the arms and legs. Comparative experiments on five persons and careful observation of Goldscheider's "cold spots" showed that (*contra* Goldscheider) the relative sensitiveness of area to heat or cold is not dependent on the relative number of cutaneous cold spots, but that in these parts there was a superabundance of "very cold" spots, as compared with medium cold spots, that is, a difference in the degree of sensitiveness of the temperature spots. After eliminating all fallacies, the reaction times for heat and cold are shown to be equal or to be slower than the tactile reaction time. Changes of temperature below 5° C. or above 60° C. cause pain in addition to sensations of cold or heat when applied to any part of the body. The author's work goes to prove the great extent to which the peripheral nerve organs have got specialised in the human body, and forms (together with Goldscheider's work) another contribution to the physiology of peripheral sense differentiation.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(392) Migraine.

Claus (*La Flandre Méd.*, Nos. 7, 10, 16, 1894) distinguishes three forms of this disease, which he calls simple, ophthalmic, and ophthalmoplegic. The first includes those cases in which there are headache (hemicrania), nausea, vomiting, and various other disturbances, more or less severe, which go to make up the familiar picture of "sick" or "bilious" headache. The ophthalmic form is characterised by scintillating scotomata, and may follow on or alternate with the first; it may be accompanied by hemianopsia, sensory and motor disturbance. While admitting a possible relationship, the author does not believe in Féré's view that this form of migraine is a species of epilepsy. The ophthalmoplegic form is marked by intense headache, much more hemicranial in character than in the other cases, and which terminates "as by enchantment" with the appearance of paralysis of the third nerve in a marked degree, and occurring on the same side as the pain. This paralysis may last from a few days to some weeks. The writer discusses fairly fully the various theories as to causation, and strongly supports the opinion that migraine is due to auto-intoxication. He also lays stress on chlorosis as a strongly predisposing cause. For treatment he recommends, first, as prophylactic, the avoidance of fatigue, hunger, mental strain, chill, constipation, etc.: advising rest after meals, and a carefully selected diet. Cases are quoted where a complete change of employment appeared to remove the tendency, and reference is made to the importance of correcting errors of refraction. In the way of drugs, stress is laid on such as meet a constitutional condition as gout, and iron is strongly recommended for reasons given above. For actual attacks, caffeine, antipyrin, and phenacetin are given the first place; a large dose of antipyrin as soon as possible is advised, combined, it may be, with 8 to 15 minims of tr. digitalis. Claus considers "migrainin" and other recent drugs as too uncertain. As may be expected, salicylates are often of great benefit. Bromides are indicated in the second and third forms. Cold douching is said to be of importance.

(393) Embolism of the Abdominal Aorta.

Dehio (*Münch. med. Woch.*, October 23rd, 1894) reports a case in a man, aged 27, who had suffered from valvular disease for some seven years. He was suddenly seized with severe pain in the epigastrium, coldness of the extremities, and swelling and loss of power in the left leg. He improved, but three weeks later sudden pain in the abdomen again appeared, with paraplegia. On admission the skin of the legs was blue, sensation in them diminished, and pulsation in the posterior tibials absent. There was a loud systolic mitral murmur. He vomited a large quantity of bluish-red fluid, and died some four hours after admission. At the necropsy the mitral orifice was found stenosed and incompetent. The peritoneum over the intestine was of a reddish-violet colour, and a hæmorrhagic exudation was present in the peritoneal cavity. An old clot was found in the otherwise healthy abdominal aorta extending from the renal artery to the inferior mesenteric. It did not fill the vessel completely, but the space between it and the vessel wall was occupied by fresh clot. Below it there were two other thrombi, the latter of which extended into the iliacs. There was an old embolic clot in the left popliteal artery. The emboli were derived from the heart. The first symptoms were due to a partial obstruction of the aorta. Constipation was noted until the complete obstruction supervened. It is difficult to explain the paraplegia and loss of sensation. The author is inclined to think them due to the cutting off the blood supply to the muscles and nerves.

(394) Polyuria in Chronic Pulmonary Tuberculosis.

Robin (*Arch. Gén. de Méd.*, June, 1894), who has studied this question, concludes that in general the quantity of urine is slightly increased in the first stages of chronic pulmonary tuberculosis, in the second stage is normal, and in the last stage is mostly diminished. About 20 per cent. of patients in each stage depart from the rule, and exhibit a more or less marked polyuria. Polyuria is relatively more frequent in young adults than in the aged. In the first stage of tuberculosis it may present the characteristics of phosphaturia, or there may simply be an increase of urinary water without increased solid constituents. Exaggerated azoturia due to denutrition is very rare. Polyuria of the later stages of phthisis is usually related with mixed nephritis, tuberculous nephritis, or amyloid kidney degeneration. Phosphaturia and essential polyuria predispose to tuberculosis. There is also a true pretuberculous polyuria, sometimes phosphatic, sometimes simple, apparently associated with renal congestion, and on this tuberculosis rapidly supervenes. This form may be regarded as the first manifestation of the struggle of the organism with the bacilli and their toxins. Oliguria depends on accidents, fever, sweating, diarrhœa, etc., and in these cases a milk diet is useful. Rectal injections of hydrogen sulphide are beneficial.

(395) Actinomycosis and Myxœdema.

Köhler (*Berl. klin. Woch.*, October 8th, 1894) relates the following exceptional case of myxœdema in a woman, aged 48. In addition to the characteristic symptoms of the disease, the whole of the front of the neck was occupied by a dense thickening of the skin, so that no thyroid gland could be felt. A large breaking-down gumma was present in the sterno-mastoid muscle. Antisyphilitic treatment had not only a remarkable effect on the indurated skin, but the symptoms of myxœdema also improved considerably. The patient died later of cerebral syphilis. The author records another case in a girl, aged 25, also with symptoms of myxœdema. On the side of the neck there was a swelling extending from the cricoid cartilage upwards. In places it presented a bluish-red livid appearance, looking like scrofulodermia. It had been treated elsewhere on several occasions, but unsuccessfully. Characteristic granules of the actinomyces were found in the pus. The affected skin was removed, and the thyroid was seen to have been partly destroyed, only one-half of the gland remaining. The diseased tissues were scraped away. Not only was the local lesion thus cured, but the symptoms of myxœdema were greatly improved. The author thinks that the actinomyces, in destroying the gland, had also caused the myxœdema. By the operation the fungus was removed. The gland, only partially disabled, recovered its function. The specific thyroid treatment was unnecessary. The disease was apparently a primary cutaneous actinomycosis, and was easily traceable to the patient's occupation.

SURGERY.

(396) Neuralgia of Inferior Dental treated by Resection of the Nerve.

Rafin (*Sem. Méd.*, October 10th, 1894) reported at the recent Congress of French Surgeons a case of neuralgia of the inferior dental nerve in a man, aged 52, who in his infancy had been wounded on the right side of the chin over the mental foramen. The neuralgic pains, which had commenced five years before the patient was first seen by the author, were limited for a time to the seat of emergence of the inferior dental nerve, and afterwards gradually attacked the rest of the face on the right side. Medicinal treatment having failed to give relief, the surgeon who first treated the case divided the frontal and infra-orbital nerves, and, at the same time, the inferior dental nerve at the dental foramen. This operation was followed by complete anæsthesia, but after an interval of three months the pain returned in the lower jaw, the skin supplied by the supra- and infraorbital nerves still remaining insensitive. The author, in January last, practised resection of the inferior dental on the right side from the mental foramen to the masseter muscle, and stretched the central end of the divided nerve. The patient ceased to suffer, and from the date of the operation to that of the publication of this report—an interval of eight months—remained quite free from pain. Allusion was made to two important points in this case: the occurrence of an injury over the lower jaw forty years before the first attack of neuralgia in this region; and the failure

of division of the inferior dental nerve at the dental foramen, an operation which, though possessing the advantage of leaving no visible cicatrix is one that is really "done in the dark," and is very likely to be followed by regeneration of the divided nerve.

(397) The Cause of Thirst following Abdominal Section.

Eugene Boise, at the meeting of the American Association of Obstetricians and Gynæcologists recently held at Toronto (Philadelphia *Med. News*, October 13th) read a paper in which, after referring to the generally accepted proposition that thirst is a sensation indicating that the tissues of the body are in want of more water, he argued that the sensation as felt in the mouth and throat is reflex, and that the real point from which the sensation arises is in the abdominal viscera; that from these the sensation is conveyed to the consciousness by fibres of the sympathetic system of nerves; that while ordinary thirst is caused by the withdrawal of water from the tissues to refill the veins depleted by excessive perspiration or otherwise, the thirst following abdominal section is caused by the withdrawal of water from the abdominal viscera to fill veins partially collapsed by reason of diminished blood supply because of contraction of the arteries of the viscera. He briefly stated those physiological facts which are universally accepted, or have been experimentally proved, on which the theory is based: (1) Thirst is a sensation indicating that the tissues need more water. (2) The sensation felt in the throat is reflex. (3) The origin of the sensation is believed by leading physiologists to lie in the sympathetic system of nerves, because (*a*) no cerebro spinal nerves can be found which convey the sensation to the consciousness and (*b*) nutrition is presided over by the sympathetic system, and thirst is a disturbance of nutrition. (4) The origin of the sensation is probably from the abdominal organs, because (*a*) these are so rich in sympathetic fibres, and (*b*) introduction of water into the stomach so instantaneously allays thirst. (5) The sensation invariably follows the withdrawal of any considerable amount of fluid from the body; the withdrawal of such fluid causes proportionate collapse of veins and capillaries. (6) Capillaries tend to remain at normal tension, and when suddenly collapsed in any degree attempt to regain that tension by taking water from the surrounding tissues. (7) Irritation of sympathetic nerves causes contraction of the arterioles supplied by such nerves. (8) Sudden contraction of the arterioles supplying any organ is followed by lessened tension in the capillaries and small veins of that organ (9) Abdominal section invariably causes direct and reflex irritation of the abdominal sympathetic nerves. (10) Such irritation causes contraction in some degree of the arterioles of the abdominal viscera, with consequent lessened tension in their capillaries, and compensatory withdrawal of water from their tissues. And is it not probable that such circulatory disturbances give rise to the sensation of thirst?

(398) Surgery of the Stomach.

V. Beck (*Deut. med. Woch.*, September 27th, 1894) reports the two following cases: (1) A man, aged 17, was stabbed in the upper and left part of the abdomen, and was admitted shortly afterwards suffering from acute anæmia. The abdomen was distended, and there was hiccough and occasional vomiting of blood. The lesion was thought to be a wound of the stomach and liver, with severe hæmorrhage. Before the operation the patient was transfused with saline solution. A rent 2.5 cm. long and 6 cm. deep was found on the under surface of the liver. Deep sutures arrested the hæmorrhage at once. A wound in the stomach 2.5 cm. long was also sewn up, and the abdomen washed out with 0.6 per cent. salt solution. The patient made a good recovery. The author speaks highly of the value of transfusion, and he thinks it much superior to subcutaneous infusion. (2) A man, aged 32, had on two previous occasions swallowed foreign bodies (penknives, etc.), and nothing was known of what became of them. On this occasion he had swallowed three penknives. For the first few days there were no symptoms; then pain, loss of appetite, vomiting of blood appeared. Something could be distinctly felt in the stomach through the abdominal wall, and the stomach sound struck against a hard body. The stomach was opened, and three knives, measuring 11, 9, and 8 cm. in length, removed. Six weeks after his discharge he again appeared, having swallowed two knives. He was anxious that an operation should prove fatal. He was, however, treated by the so-called expectant method, food with abundant solid residue being given. In eight days time the penknife was found in the stool, and seven days later the second knife appeared. He made a good recovery.

(399) Operative Treatment of Old Fracture of the Lower Extremity of the Radius.

Hennequin (*Rev. de Chir.*, September, 1894) reports two cases which, in his opinion, fully justify the performance of osteotomy of the radius in instances of deformity of the lower extremity of this bone after fracture. This operation, which has seldom been performed in such cases, ought, it is held, to occupy a more prominent position in surgical practice. It is a question not of dealing with a simple deformity, but of removing functional disturbance, which may extend to complete uselessness of the hand. The correction of the shortening which results from over-riding of the lower fragment, a constant cause of loss of power and of dexterity in the hand in consequence of the deviation it produces in the flexor and extensor tendons, and the correction of inclination towards the antibrachial axis of the upper extremity of the fragments, the fibrous union of which to the external border of the ulna is the cause of complete or partial loss of the movements of pronation and supination, are both sufficient indications of an operation which may be easily performed, and presents but very little danger.

MIDWIFERY AND DISEASES OF WOMEN.

(400) Puerperal Eclampsia.

Geuer (*Centralbl. f. Gynäk.*, 42, 1894) publishes a report of cases occurring in the Cologne Maternity. In 5,000 labours there were 50 cases of eclampsia; 26 did not have fits till after admission; 42 of the patients were primiparæ. In 5 cases there was twin labour. The eclampsia appeared in 6 cases during pregnancy, in 7 not till childbed, and in 37 during labour; 3 out of the 6 cases where the fits occurred during pregnancy passed through normal labour and childbed, in the fourth convulsions occurred during birth, in the fifth during childbed as well. The fits ceased entirely after delivery in 18 cases and steadily diminished in 10. Twelve mothers died, 10 from eclampsia, 1 from nephritis, and 1 from sepsis. At the necropsies, acute yellow atrophy of the liver was detected in 1 case and extensive subcutaneous hæmorrhages in another. The greatest number of fits in any of the fatal cases was 50, in any of the survivors 17. Out of the 55 children in the 50 labours, 16 were born dead (5 putrid); 13, including 10 premature, died within the first few days after birth; of the 3 not premature, 1 had hydrocephalus, 1 congenital stricture of the œsophagus, and 1 atelectasis. In 34 labours the resources of art were employed: 1 Cæsarean section on a dying patient; 2 induced premature labours; 3 extractions (breech cases); 2 turnings (transverse presentations); and 26 forceps. Geuer advocates speedy artificial delivery, cautious administration of morphine, diaphoresis, and quiet. Pilocarpin is useless, chloroform not always safe.

(401) Scalding Steam as a Uterine Hæmostatic.

Zacharin (*Répertoire Universel d'Obstét. et de Gynéc.*, October 25th, 1894) has employed with success this method, already suggested a few years since by Sneguireff. The uterus is dilated without chloroform. The curette is then used, though not in all cases. A fenestrated sound is next passed into the uterine cavity. It contains a metal tube of small calibre, which is in communication with an apparatus which gives off steam at about 212°. The cauterising and hæmostatic action is complete within a minute's application. A dirty-coloured fluid, like a meat infusion, escapes from the tube after the steam is turned off. The patient feels no pain during the above process; she cannot even indicate at what moment the steam is turned on. Zacharin has experimented on the uterus after death. He finds that the effect of a minute's application of the steam is to cover the uterine mucosa with a thin

albuminous pellicle. If fœtor be present the steam destroys it. In the living subject all hæmorrhage ceases, and the part becomes insensitive.

(402) Retroversion of the Gravid Uterus. Tarnier (*Journal des Sages-Femmes*, October 16th, 1894), teaches that, as a rule, it is best to keep a pregnant woman with retroversion at rest. The urine should be drawn off with the catheter several times a day. The bladder, being thus kept constantly empty, no longer presses on the uterus, which can rise up to its right position. In a clinical lecture Tarnier described an exceptional case. There was clearly retroversion, but no retention; in fact, the patient felt sharp pains, and constantly kept on passing urine. She was put under chloroform, and the uterus was reduced by the operator's two fingers passed into the vagina. Abortion was thus averted.

(403) Ovariotomy in a Morphine Taker. Ricketts (*American Jour. of Obstet.*, September, 1894) reports the following case. The patient was 47, and single; menstruation had ceased three years previously, but for six months occasional shows of blood had been observed. For three months she had suffered from severe abdominal pain, and hypodermic injections of morphine had been administered almost daily. The abdomen was very tense, and the legs swollen. Abdominal section was performed, and an ovarian cyst discovered. There were universal parietal adhesions from recent peritonitis; the pedicle was short. The peritoneal cavity was flushed, as some of the contents of the cyst had escaped into the abdomen. No morphine was given after the operation, although the patient had taken it daily for several months. She began to eat on the third or fourth day, and had will power enough to get along without morphine.

(404) Conception in the Puerperium. Gruber (*Der Frauenarzt*, July, 1894) had under his care last year a woman, aged 38, who had borne seven children. She aborted, at about the fourth month, on March 20th, 1893. At the end of July she consulted Gruber, stating that she had not seen a period since the miscarriage. Her abdomen had grown larger, and on the night before the visit she felt the movements of the child. On examination pregnancy advanced to the fourth month was diagnosed. On December 2nd the patient gave birth to a fully-developed female child. Hence, Gruber observes, this was clearly a case of conception during the puerperium.

(405) The Physiology of Twin Pregnancy. Hellin (*Centralbl. f. Gynäk.*, No. 43, 1894), has made some biological researches into this question. Twins and triplets in naturally uniparous animals are, as a rule, the effect of simultaneous rupture of several follicles. This accident is the result of an unusually large number of ova in the ovary. This explains why the mothers of twins are usually very prolific. Multiparity and twin-bearing tendencies are only variations of the same principle. Two-yelk twin pregnancy is atavistic.

(406) Cæsarean Section after Death. Geuer (*Centralbl. f. Gynäk.*, No. 42, 1894) states that a woman who had borne five children was brought into a lying-in hospital dying from heart disease. She was deeply cyanosed, and died two hours after admission. Directly the movements of the heart ceased, Cæsarean section was performed rapidly. The child, which weighed under four pounds, was born asphyxiated, but was resuscitated. On the fifth day it died of pure debility.

(407) Multiple Abscess in Infants Put Out to Nurse. E. Périer (*Rev. d'Obstét. et de Gynéc.*, June, 1894) recommends that in cases of this troublesome affection the child should be kept scrupulously clean. The cause of the abscess is ill-nourishment, dirt, or debility from internal disease, and this must be taken into account. Any part threatening to suppurate must be washed with a 4 per cent. solution of boracic acid; when an abscess has developed it should be incised, and its cavity washed out with the same solution.

THERAPEUTICS.

(408) The Antitoxin Treatment of Diphtheria. Kossel, of Koch's Institute (*Deut. med. Wock.*, October 25th, 1894) remarks that the diphtheria bacillus belongs to the eminently toxic bacteria. The diphtheria poison is obtained by inoculating bouillon-containing flasks with diphtheria culture, and in three weeks' time killing the micro-organisms by adding 0·5 per cent. phenol, or 0·3 per cent. tricresol. The clear fluid which separates out contains the diphtheria poison. If animals are injected with increasing doses of such poison, their blood is found to possess immunity-giving properties. Blood is then withdrawn, and its immunising power ascertained by mixing diphtheria poison with it. Behring and Ehrlich call normal serum such a serum that 0·1 c.c. will suffice to render inert ten times the fatal dose of the diphtheria poison, thus 1 c.c. of the normal serum contains 1 immunity unit. Therefore a serum of which 0·01 suffices, represents 10 times the normal serum; 500 such immunity units are necessary to cure a child with diphtheria. The clinical picture of diphtheria varies greatly, so that the diagnosis should be made by bacteriological examination. If the process has extended to the bronchi and lungs, the serum treatment is too late. When complications, including secondary infections, are present the antitoxin cannot cure with certainty, and if the poison has long been present in the body the prognosis is also doubtful. Yet the most desperate cases should be treated, as the antitoxin cannot do harm. The mortality in the Koch's Institute has permanently fallen to 16 per cent. Children treated on the first and second days have never died. Every fresh case of true diphtheria can undoubtedly be cured by a sufficient quantity of the antitoxin. Under the treatment the membrane loosens and the improvement in the general condition is marked. In fresh cases thus treated there is little fear of subsequent paralysis, and the author has never seen extension to a hitherto intact larynx. Meister Lucius and Brüning have taken over the manufacture of this antitoxin under the direction of Behring and Ehrlich. They supply flasks containing respectively 600, 1,000, and 1,500 to 1,600 immunity units. For protection against diphtheria a quarter of flask No. 1 is only needed, but the author would not trust to such immunity lasting over two or three weeks.—W. Koerte (*Deut. med. Woch.*, November 8th) reports on a series of cases of diphtheria treated with Behring's serum, in the Urban Hospital of Berlin, between January 20th and October 27th of the present year. The total number of children treated was 132. Of these, 11 were still in hospital at the date of report. Of the remaining 121, 81, or 66·9 per cent., were cured and 40, or 33·1 per cent., died. The average results during the period from June, 1890, to December 31st, 1893, showed 54·9 per cent. of cures and 45·1 per cent. of deaths. Thus the serum treatment had diminished the mortality by 12 per cent. Besides the 121 cases referred to, 106 cases had been treated without serum during a period when none was procurable, with 46·2 per cent. of recoveries and 53·8 per cent. of deaths. The mortality in the same epidemic was, therefore, 20·7 per cent. higher in cases not treated with serum than in those treated with it. Of the 121 cases, 43 were severe, and of these 41·8 per cent. recovered and 58·2 per cent. died. Of 47 moderately severe, 70·2 per cent. recovered and 29·8 per cent. died. Of 31 slight cases, 96·7 per cent. recovered and 3·3 per cent. died. Of 15 children under the age of 2 years, 8 recovered and 7 died. In 42 cases tracheotomy was performed with 47·6 per cent. of recoveries and 52·4 per cent. of deaths, as against 22·5 per cent. of recoveries and 77·5 per cent. of deaths in former years, showing a result of 25 per cent. more recoveries with the serum treatment after tracheotomy. Of 8 children under the age of 2 who were tracheotomised and treated with serum, 3 recovered and 5 died. Of 108 children of the same age tracheotomised before the introduction of the serum, 10 recovered and 98 died. It was found that the earlier in the course of the disease the serum was injected the better were the results. Of 37 severe and moderately severe cases in which the serum was injected within the first three days of the illness, only 8 died. The results of injections made after the third day were less favourable. The larger the initial

doses the better the results. No injurious effects were noticed; urticaria occurred only in 9 cases. No influence on the temperature or on the local foci of the disease was observed in severe or moderately severe cases; on the other hand, a markedly favourable effect on the general condition was often seen in severe cases. The experiments, so far, are, in Koerte's opinion, favourable. More extensive clinical observations, especially in cases treated early, are, however, necessary to determine the value of the remedy. It must be tested in a large number of severe cases in different epidemics and in different places.—Damieno (*Rif. Med.*, October 30th) reports a case of diphtheria in Massei's clinic at Naples, which was successfully treated with antitoxin. The patient was a boy, aged 2 years, with well-marked naso-pharyngeal diphtheria; he had been ill six days; the temperature varied from 102° to 103° F., the throat and posterior nares were covered with false membrane, and there was albumen in the urine. The child was very drowsy and in a state of marked prostration. Bacteriologically the case was proved to be one of mixed infection with the diphtheria bacillus and streptococcus. An injection of 6 c.c. of Behring's No. 1 serum was given. A second injection was given the next day; this was at once followed by striking improvement both in the general symptoms and the local conditions, and complete recovery took place in a few days. Damieno also records (*ibid.*, November 3rd) a case of laryngeal diphtheria in a girl, aged 5, in whom, urgent dyspnœa having come on suddenly, intubation was performed by Massei. Immediately after an injection of 8 c.c. of Behring's serum No. 1 was given. Forty-three hours after the intubation the child's breathing was so easy that the tube was dispensed with. Rapid recovery took place. The bacteriological examination in this case does not appear to have been conclusive, but clinically the case was one of diphtheria. And there could be no doubt as to the very favourable effect of the serum on the after-course of the disease after intubation.

(109) Serum Treatment of Cholera.

Freymuth (*Deut. med. Woch.*, October 25th, 1894) has treated three cases of undoubted cholera by the injection of serum obtained from patients who had recently passed through an attack of the disease. Of these three cases, two recovered. In the fatal case, death was due to a mixed infection, as the bacteriological examination showed. In one case particularly the patient rapidly improved after the injection. The numbers are, of course, too small to base conclusions upon. The serum was used in doses of 10, 30, or even 50 c.c. It was shown to protect guinea-pigs against injections of virulent cholera bouillon. The treatment is easily carried out, and is without danger. The serum should be taken from those who have had a severe attack of cholera.

PATHOLOGY.

(110) Tuberculosis of the Human Placenta in Relation to Congenital Tuberculosis.

Schmorl and Kockel (*Beiträge zur path. Anat.*, vol. xvi, Part II) recall that when Birch-Hirschfeld and Schmorl narrated their case of congenital tuberculosis in the year 1891, the exact way in which the tubercle bacilli passed from the maternal to the fœtal organism was not understood. Lehmann's observation has recently shown that in acute miliary tuberculosis during pregnancy the placenta may be affected with tubercle as well as the other organs. It seemed probable that the placenta may occasionally be affected in cases of chronic pulmonary as well as acute miliary tuberculosis, for at necropsies on cases of advanced pulmonary tuberculosis it is not very unusual to find circumscribed tuberculous foci in organs other than the lungs, such as the liver, spleen, or kidneys. Gärtner, moreover, has experimentally demonstrated that in pregnant animals with pulmonary tuberculosis the fœtus is not so very rarely infected with tubercle bacilli. The present authors in the course of one year have observed three cases bearing on the subject: (1) A woman, aged 26, in whom a necropsy revealed acute general miliary tuberculosis; she was in the eighth month of pregnancy, and was brought to the hospital in an unconscious condition. Cæsarean section was performed during the agony of death, but the child died after two hours. (2) A woman, aged 25, who died during pregnancy with acute miliary tuberculosis. (3) A pregnant woman, aged 33, with chronic laryngeal and pulmonary tuberculosis, who died suddenly of profuse hæmoptysis. Cæsarean section was performed soon after death, but the child was found already dead. In all three cases was placental tubercle found, but only very little in No. 3, and less in the placenta than in other organs in the other two cases. The tubercle bacilli were probably in all three cases carried to the placenta in the circulating blood; but in No. 2, where there was also tuberculous peritonitis, the bacilli, though less likely, might also have been carried from the peritoneum into the uterus by the Fallopian tubes. In cases of acute miliary tuberculosis the bacilli circulating in the blood must be equally distributed to all organs; and the only way to explain why in Cases 1 and 2 less tubercle was found in the placenta than in the other organs is to suppose that the placenta is more resistent than other organs to the bacillus. In all three cases tubercle bacilli were found in the fœtal placental villi, but only in Case 2 were any bacilli found in the body of the fœtus; even in this case there were no macroscopic changes, but bacilli could be detected by the microscope in the liver, and a lymph gland in the neighbourhood of the liver. The authors think that the reason why only few bacilli had passed into the fœtal circulation is to be found in the changes produced in the vessels of the tuberculous villi. These changes, consisting in the closure of vessels by the formation of hyaline thrombi and the overgrowth of the endothelium, to some extent form a barrier hindering the spread of tubercle to the fœtal circulation.

(111) The Relationship of the Infracortical Ganglia in Epilepsy.

Wieting (*Oesterr.-Ungar. Centralb. f. d. med. Wissen.*, No. 18, 1894), on stimulating the lenticular and caudate nuclei (animal species not stated), found that the motor effects never lasted beyond the application of the stimulus; also, that a typical epileptic fit was only produced when the current was of such strength as to spread to the cortex, and never appeared if the cortex had been removed. Excitation of the optic thalami and corpora quadrigemina gave similarly negative results. Some authors have considered that the continuance of bilateral convulsions after ablation of the motor cortex from one hemisphere is proof of independent action in infracortical centres. Wieting maintains that the incorrectness of this view is evidenced by the fact that bilateral removal of the cortex wholly prevents the occurrence of a fit.

(112) Anthrax in Man.

Lewin (*Centralbl f. Bakt.*, October 20th and 27th, 1894) first refers to previous researches into the distribution of anthrax bacilli in the tissues. He has himself investigated nine cases. In one the malignant pustule only was examined, in another the pustule and the internal organs, and in the remaining seven the internal organs alone. In the pustules sometimes the bacilli were found in the cells, and at other times free in the tissue. The author thinks that the relation between the bacilli and the cells is not a constant one. Such inconstancy is against phagocytosis being the chief defence of the tissues against the micro-organisms. In animals phagocytosis is also not constant. In the liver the bacilli are at times very numerous, but they may be absent. They may be found like streptococci in the endothelial cells of the liver capillaries. In the spleen the bacilli are always present, but vary in numbers. The evidence of phagocytosis was here also variable. In the mesenteric glands the anthrax bacilli are always present, and in larger numbers than in the spleen. In the intestinal infiltrations they are abundantly present, but are rarely taken up by the cells. The muscularis seems to be an insuperable barrier to their further spread. In the kidneys the bacilli may be abundant or sparse. In one case the author could not find them here. They lie free in the vessels, rarely within the endothelium of the glomerular capillaries. They may make their way through the vessel wall, and thus get into the glomerular space, and so appear in the urine.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(413) Scarlatiniform Rash: Periarthritis.

Rocaz (*Arch. Clin. de Bordeaux*, October, 1894) records the case of a child, aged 1 year, who was brought to hospital suffering from a rash resembling that of scarlatina, and pharyngitis and tonsillitis. There was a high temperature. The face was pale, and the child appeared very ill. Two days later the eruption had completely disappeared, but the inflammation of the throat persisted. Two days later, again, the throat had got well, but the fever persisted. After two days more the eruption reappeared, and lasted three days. The fever still persisted, and a fortnight after the commencement of the illness both the elbows were found swollen, red, hot, and painful. After a week, distinct fluctuation was obtained on both sides in the neighbourhood of the olecranon. Incisions were made, giving exit to pus, which contained streptococci in large numbers. The abscesses did not communicate with the joints. From the time of the operation the patient made a rapid recovery. Rocaz expresses the opinion that the rash was due, not to scarlet fever, but to septicæmia, and that the whole illness, including the affection in the neighbourhood of the joints, was due to the infection by streptococci, the primary lesion being the angina, which afforded a point of entrance for the streptococci.

(414) Skin Disease following Shock.

Welander (*Hygiea*, April, 1894) reports the following case: A man, aged 24, who had never had a day's illness, and of healthy stock, was on board a steam launch which capsized, and was only saved with difficulty. On being pulled out of the water he was seized with violent trembling, and since the accident similar fits have recurred on the slightest provocation, often lasting an hour, and the patient's disposition has entirely changed, becoming nervous and irritable. A month after the accident he noticed a white spot on his left hand, and since then similar spots have developed on various parts of his body, so that when seen (eighteen months after the accident) they were pretty generally distributed. They were of varying size and shape, had a symmetrical distribution, and in some parts—for instance, the arms—they were surrounded by healthy skin; in other parts, as the scrotum, popliteal spaces, and neck, the surrounding skin was almost blackish-brown. The hair covering the patches was white; on other parts black. There was no itching, insensibility, or infiltration. The affection was undoubtedly vitiligo. A year after the accident the patient began to feel an intense irritation over a circumscribed patch on the right leg. Soon after, characteristic changes were noticed over this patch; the surface was raised, infiltrated, and intensely itching; the middle part was covered with strongly-marked furrows running in all directions; these, as well as the other parts, were desquamating, the scales being small, white, and adherent. There was no trace of "weeping." Some brownish papules were scattered irregularly over the surface, and around it: they were independent of the follicles. The patch was 12 cm. by 6 cm. in size, and surrounded by vitiligo spots and blackish-brown blotches, which, according to the patient's statement, had only developed lately. A patch of similar character was also present over the sacral region. The above characters agree in every detail with the description of "neurodermite chronique circonscrite" of Brocq and Jacquet (lichen simplex chronicus of Vidal). Thirdly, the patient presented distinct signs of a past and present lichen ruber planus; yellowish-red, hard, flat, glistening papules of polygonal shape, and dark pigmented stains on various parts of the body. Here the itching followed the development of the papules, never preceding it, as was the case with the patch on the leg. The last affection improved under arsenic, but the "neurodermite circonscrite" remained stationary.

(415) Deaf-Mutism.

Sigismund Szenes (*Internat. klin. Rundschau*, September 23rd) gives some statistics on this subject, after an examination of 124 deaf and dumb scholars whom he had seen during 1891-92. In 27 of these the etiology was unknown, but of the remaining 97, 42 were congenital and 55 acquired cases. The causes of the acquired deaf-dumbness are given, and include contagious and nervous diseases; scarlet fever, measles, and small-pox are examples of the former, and convulsions, meningitis, and encephalitis of the latter class. Rickets, erysipelas, otorrhœa, falls, and concussions of the brain are also mentioned as causes. With reference to the question of birth, it was found that 22 were first-born children. In 4 cases the scholars had brothers and sisters who were deaf and dumb; of these, one boy and one girl had one, and another boy and girl had two brothers and sisters thus affected. On analysing the cases the author finds that deaf-dumbness is extremely seldom found when there is only one child in the family, and that it is most frequently found in first-born children. As to the employment of the parents, most of them were civil officials and country people, while a few were artisans, such as joiners, shoemakers, tailors, barbers, and so on. In each case not only did the author examine the ears with a speculum, but he tested them by other means, as for instance, Politzer's acoumeter, high and low pitched tuning forks, speaking directly into the ear and clapping the hands close to the ear. Eczema of the auricle, wax in the ear, foreign bodies, otorrhœa, polypus, atrophy and cicatrices of the tympanic membrane were the chief abnormal conditions found.

(416) Pressure Palsy from Walking upon Stilts.

Bergonié and Bordier (*Arch. d'Electricité Médicale*, September, 1894) report a case of paralysis from pressure on the right anterior tibial nerve, just below the division of the external popliteal nerve into its anterior tibial and peroneal branches. The tibialis anticus and the extensors of the toes and the great toe were the muscles affected. The peronei had escaped. The patient lived in the marshy districts near Bordeaux, where the use of stilts is common, and walked several miles daily upon them. The stilt was buckled round the upper part of the leg by a stout leathern strap, and beneath the strap he wore a pad of leather. It was this pad which had compressed the nerve. On the left side the pad fitted better, and the nerve had escaped injury.

SURGERY.

(417) Faulty Union of Fracture near the Upper End of the Humerus.

Lejars (*Rev. de Chir.*, August, 1894), reports two cases in which he operated with success for the relief of deformity of the shoulder and impaired function of the upper limb, caused by fracture near the head of the humerus. Detachment of the superior humeral epiphysis and certain fractures of the surgical neck are apt to produce a special deformity of the shoulder, due to overriding upwards and onwards of the lower fragment, which, as it results in flattening of the shoulder, in deviation of the long axis of the limb, and of a subcoracoid swelling, may simulate dislocation. The prompt reduction of this deformity in recent cases is absolutely necessary if the proper functions of the injured limb are to be preserved. Although reduction in most cases is attended with extreme difficulty, the surgeon must effect it by any means, even, if need be, exposing the seat of fracture, and practising direct coaptation of the fragments. In an instance of exuberant callus resulting from detachment of the upper epiphysis or of a fracture consolidated in the above-mentioned condition of deformity, the only means of doing good would be to expose the callus, separate the fragments, resecting the extremity of the lower one if necessary, to place these ends in contact, and, if there be any tendency to separation, to join them together by an osseous or simply a periosteal suture. This would be a rational method, as such practice has, as the author shows by original and collected reports, been attended with success, and alone enables the surgeon to obtain not only a restoration of natural form, but also complete restoration of function.

(418) "Fixed Abscesses" in Otology.

H. COLLADON (*Revue Médicale de la Suisse Romande*, October 20th, 1894) contributes a paper presented to the Eleventh International Medical Congress at Rome. The author says credit is due to Szenes, of Buda-Pesth, as having been the first to draw attention to a secondary diffuse external otitis occurring as a complication in a certain percentage of cases of acute suppurative otitis media, and to its probable curative action on the otorrhœa. Dennert, of Berlin, and others had observed the same phenomenon, and corroborated the fact of its derivative action on the primary malady. Fochier, of Lyons, drawing inspiration from Nature's procedure, conceived the idea of artificially producing "fixed abscesses" (see EPITOME, March 12th, 1892, par. 233). In 1889-90 the author noted this mode of resolution in some cases of otorrhœa furnished by the severe influenza epidemic, but did not see the relation in its true light. In 1893, however, he saw 7 cases, of which 3 were due to influenza, 2 to cold, 1 to measles, 1 to traumatism (fall into water from a height). In all the external otitis was unilateral, in one case being repeated. No external agency could have induced the complication, yet the author believes that it is not spontaneous, but due to the action of the agents which are used to combat the otorrhœa. In abscesses artificially produced by simple irritants (ether, caffeine) he finds microbic pus, but where the irritant is also antiseptic (turpentine), amicrobic. Turpentine he finds very painful in action, and difficult to control in results. He prefers thymol in absolute alcohol, strength 5 per cent. The subcutaneous tissue of the auditory canal is the chosen seat, and the doses of this remedy must be slowly increased from 2 gr. to 4 gr. or more in 200 gr. of water. A good plan is to alternate the thymol injections with instillations of sublimate (½ to 1 per cent.). Neither should be injected more than twice a day. The patient should be forewarned of the pain caused by this treatment, and of its transitory nature. The incubation period of the artificial external otitis is from four to six days, its duration two to four days. Its treatment is purely expectant. Acute suppurative otitis media, after the acme has passed, yields the chief indication for its use, especially dragging cases. No otorrhœa should be allowed to last unchanged more than two to three weeks before trying this method. The author is not so sure of its use in chronic cases, but in two instances a flow of caseous fœtid pus became first amicrobic, then ceased. Complications of chronic otorrhœa, neoplasms of the tympanic cavity, and bony lesions do not constitute indications. In periostitis it may be useful, as in one case of the author's, but, owing to its being a painful treatment, Wilde's incision is preferable. The author regards as analogous those painful infiltrations of the cellular tissue which declare themselves at the external ear after cauterisation of the tympanic mucous membrane, and which in their short duration perfectly reproduce the semblance of an external critical otitis.

(419) Intestinal Obstruction following Operations in which the Peritoneal Cavity is Opened.

AT the Congress of the American Association of Obstetricians and Gynæcologists recently held at Toronto (Philadelphia *Med. News*, October 13th) Rohé said that obstruction of the bowels causes between 1 and 2 per cent. of the deaths following ovariotomy and other operations involving opening of the peritoneal cavity. Spencer Wells lost 11 out of his first series of 1,000 cases of ovariotomy from this cause. Fritsch places his mortality from ileus after laparotomy at 1.6 per cent. Klotz has reported 31 cases of intestinal obstruction, with 5 deaths due to this complication in a series of 421 abdominal sections and 148 vaginal extirpations of the uterus. The author has seen a case in which the small intestine was doubled upon itself, and so firmly adherent that the gut was entirely impervious. Similar cases have been reported by Skutsch and Tuttle. Joseph Price quotes an interesting case from Louis, in which an adherent ovarian cyst emptied by the trocar so dragged upon the bowels as to cause obstruction. Volvulus sometimes occurs after abdominal section, but probably only after some previous adhesion or constriction of the bowel. Two cases reported by Nieberding illustrate this. The symptoms of intestinal obstruction after laparotomy are essentially the same as those of primary obstruction. Klotz has had much success in treating acute obstruction following abdominal section by the following method: As soon as symptoms indicating obstruction appear he washes out the stomach with from 4 to 6 quarts of warm salt solution. Should this fail to relieve the symptoms he repeats the procedure, and then passes into the stomach through a tube a large dose (1½ to 2 ounces) of castor oil. In all cases so treated the active peristaltic movements set up caused passage of flatus and fæces within ten hours. Evidently it is only in cases of fresh and friable adhesions that this method can be successful. Rectal injections of water or air may at times be curative when the obstruction is due to intussusception, volvulus, or soft adhesions of the lower portion of the intestine, but when the obstruction is due to cords or bands they can manifestly be of no avail.

(420) A New Form of Catheter for Use in Suprapubic Cystotomy.

ENGLISCH (*Wien. med. Woch.*, No. 43, 1894) describes an instrument devised for overcoming two accidents that may occur during the performance of suprapubic cystotomy. In cases in which there is much vesical irritability the bladder as soon as it is opened may discharge most of its fluid contents, and sink behind the symphysis, whence it cannot be elevated by a sound or catheter without risk of lacerating its walls. In most cases in which cystotomy is indicated the urine is decomposed and infected, and, although the bladder itself may be washed out and its contents purified in some cases, it is impossible to disinfect any foul urine that might descend from the kidney in the course of the operation. Hence there is always a risk of the external wound being infected when the bladder is opened and its fluid contents discharged. The instrument described by the author is a curved catheter with a wide opening extending along the concavity of its curve, through which a continuous stream of some disinfectant solution can be passed during the operation. Any foul urine or secretion from the bladder or urinary passages may thus be washed away, and the raw surfaces of the wound in the abdominal wall rendered quite clean. By this instrument the danger of overdistension and consequent rupture of the bladder may be prevented. The author states that, according to his experience, the use of the rectal bag is unnecessary in suprapubic cystotomy.

MIDWIFERY AND DISEASES OF WOMEN.

(421) Pelvic Hæmatocele.

CONDAMIN (*Lyon Médical*, November 4th, 1894) believes that extrauterine pregnancy is almost the sole cause of pelvic hæmatocele. The rupture of a tubal gestation cyst is far from invariably accompanied by the "cataclysms" and uncontrollable hæmorrhage in which many authorities believe. Many such accidents have no symptoms, others give rise to small hæmatoceles, and only a few involve free loss of blood. Hæmorrhages consecutive to ruptured tubal cysts in the first months of pregnancy cease spontaneously; operative measures are contraindicated at first, excepting when the rupture occurs after the fourth month, which Condamin believes is exceptional. The surgeon must wait till the collection of blood has become well encysted, and the anæmic patient stronger. The best operation then is vaginal puncture and incision, with or without removal of diseased appendages. Abdominal section should be rejected in the majority of cases as more serious and less efficacious, as involving prolonged treatment, and as inducing grave complications in the future. Condamin describes three cases where the vaginal treatment was successfully employed. In one a piece of placenta, in two the fœtus was removed with the clots; in all more or less of the involved appendage was removed.

(422) The Origin of Supernumerary Ovaries.

RUPPOLT (*Archiv f. Gynäk.*, vol. xlvii. Part 3, 1894) states that Prochownick operated last spring on a woman, aged 29, who had suffered for six months from severe bearing-down pains in the rectum; a tumour could be felt to the right and in front of the uterus. There

was no history of any pelvic inflammation. Abdominal section was performed. The right appendages were removed, including the tumour, which was a dermoid cyst, bearing follicles in its wall. It adhered strongly to omentum, and the tube was almost twisted off in the middle, so that the tumour and the fimbriated end of the tube were only connected with the tube by a mere membranous cord. On the proximal side of this cord was the remaining part of the ovary. Ruppolt believes that the torsion of the Fallopian tube occurred in fœtal life, owing to peritonitis. Although in several cases of alleged supernumerary ovary the tube and mesosalpinx were in a normal condition, intrauterine torsion of the tube and ovary has already been described by well-known pathologists.

(423) Mollities Ossium in a Girl, aged 15. Péron and Meslay (*Bulletins de la Société Anatomique de Paris*, vol. viii, pt. 15, 1894) publish a highly important memoir on a young girl who was feeble in childhood, and began to suffer from pains in the legs when 13. Eight months later, in February, 1892, genu valgum was discovered and double osteotomy performed. After recovery the arms became heavy and painful. In November, 1892, kypho-scoliosis appeared, and increased rapidly in three months. A few months later the deformities became very multiple, the thorax distorted, the fingers drumstick-shaped. There appeared to be no evidence of any atrophic nerve disease. It must especially be noted that the pelvis appeared normal when the girl was first examined in November, 1892. The pains increased; on March 28th, 1893, the right femur was broken as the nurse was lifting up the patient. In May the patient had angina, and the left thigh was broken in moving her to an isolation ward. Œdema of the legs set in. In January, 1894, deformity became extreme, the lower jaw was involved, and respiration was diaphragmatic and very laboured. By February the long bones of the upper extremities were becoming strongly curved, and death from bronchitis with fever seemed imminent. Yet when the case was communicated to the Anatomical Society of Paris in July the girl's general health had decidedly improved.

(424) Tuberculosis at Delivery: Fœtus Infected.

F. Lehmann (*Berl. klin. Woch.*, July 9th, 1894) observed this case in Gusserow's wards. The mother, aged 40, was admitted in labour at term, and in a few hours gave birth to a male child. She had long been phthisical, but there was no clinical evidence at the time of delivery of meningitis or of disseminated tubercle. Next day, however, distinct stiffness of the muscles of the nape, with paralysis of the sixth nerve, set in, and on the third day the patient died. The lungs showed old tuberculous disease and miliary deposits were disseminated over their substance. There was widespread meningitis. No naked-eye appearances of tubercle could be detected in the uterus and surface of the placenta, but a few tuberculous nodules were found in the omentum. The child died when twenty-four hours old. There was serous effusion into the pleuræ and pericardium, ecchymoses on the latter, and a tuberculous deposit in the walls of the left ventricle. The valves were healthy. The lungs, and the bronchial, mediastinal, hepatic, mesenteric, and lumbar lymphatic glands were tuberculous, as was the left kidney. The peritoneum, right kidney, suprarenal glands, brain, and meninges appeared normal.

(425) Rupture of Uterus and Vagina.

Dohrn (*Centralbl. f. Gynäk.*, No. 11, 1894) relates how a woman, aged 41, in her eleventh labour, was driven in a sledge over eighteen miles to Königsberg last December. The presentation was transverse, and the uterus had been ruptured during an attempt at turning. The child was extracted, but not the placenta. She arrived in an exhausted condition, anæmic, and with distended abdomen. The funis hung out of the vulva, whence blood trickled rather freely. The vulva was at once cleansed by washing with a 5 per cent. solution of carbolic acid. A 1 in 1,000 solution of sublimate was used to swab the vagina, which was afterwards irrigated with boracic acid lotion. Then, on exploration, a large rent was found in the cervix, extending into the left vaginal fornix. In the rent were coils of intestine and the placenta, which was extracted. After reduction of the bowel, over 6 yards of iodoform gauze 3 inches wide were passed into the vagina. A binder was firmly fastened round the abdomen. The patient at once began to recover. On the sixth day the tampon was removed. A little lochial secretion had trickled through it, but it was free from smell. On the fourth week the patient had an attack of pneumonia, from which she recovered. The uterus became fixed and dextroverted. According to Merz, 7 out of 15 cases of ruptured uterus treated by the tampon recovered.

THERAPEUTICS.

(426) The Serum Treatment of Diphtheria. In a discussion at the Munich Bezirksverein (*Münch. med. Woch.*, November 6th, 1894) Buchner observed that this serum, experimented with in various laboratories, had yielded excellent results, yet, to prevent disappointment, caution is needed in drawing conclusions from the clinical experience. The antitoxin has great resisting powers against light, heat, etc. Von Ranke first referred to clinical investigations made in December, 1893, with a serum obtained from Behring. Of 8 severe cases so treated 7 died, and after death a form of lobular pneumonia was found. At first it was not quite obvious whether this pneumonia was to be connected with the treatment. In September and October, 1894, Aronson's serum was used. Among 9 cases 3 died. In 1 case of severe septic diphtheria the serum produced no effect. In 2 severe cases no change was noted, perhaps because the serum was not used in sufficient quantities; 1 severe and 4 medium cases recovered; another slight case recovered without intubation. The author's impressions of this serum were favourable. Von Ranke then tried Behring's serum again. In 12 cases of severe diphtheria there was only 1 death, and that from the most severe septic form of the disease. The numbers are too small to base conclusions upon, but the investigations will be actively continued. The mortality from diphtheria has hitherto been terribly high. Seitz dealt with the preventive inoculation; 2 c.cm. of Behring serum No. 1 were used for this purpose. The duration of the protection conferred is not long. Septic diphtheria and other complications are no contra-indication to the use of the serum, but such processes cannot be expected to be influenced by it. Renal complications, paralysis, and laryngeal stenosis are rarer with the serum treatment. — Oppenheimer (*ibid.*) October 23rd, 1894) records a case of septic diphtheria in a boy, aged 4½ years, treated without success with Behring's antitoxin. On the fifth day of the disease there was some dirty grey membrane on both tonsils, and the urine contained albumen. Six Pravaz syringefuls of Behring's antitoxin No. II were injected on that day. During the next few days the albuminuria increased. The general condition of the child underwent very little improvement until the fourteenth day, when the membrane had disappeared. The glands in the neck were much swollen and beginning to fluctuate. Quite suddenly death took place from cardiac paralysis. The author observes that not every case of diphtheria can be cured by the antitoxin, especially the most dreaded septic form. The antitoxin certainly did no harm. A sister of the above-named patient, aged 2½ years, who was injected with half a syringeful of the antitoxin, had not shown any signs of the disease.

(427) Mechanism of Death under the Influence of Cocaine.

Maurel, of Toulouse, recently presented to the Paris Academy of Medicine (*Sem. Méd.*, November 14th), a report embodying the results of some experiments on the toxic properties of cocaine. They showed that under the influence of that alkaloid the leucocytes undergo changes: they become spherical, rigid, increase in size, and no longer adhere to the walls of the vessels. On the other hand, as the capillaries contract under the influence of cocaine, thromboses and embolisms, particularly pulmonary embolisms, capable of causing fatal accidents may be produced. These changes in the leucocytes are seen even after small doses of cocaine, of a strength of 1 in 10; this explains the serious accidents which sometimes follow the administration of concentrated solutions of cocaine even in small doses. Pulmonary embolism being the accident more particularly to

be feared in cocaine poisoning, it was *a priori* probable that intra-arterial injections made in the direction of an unimportant viscus would be much less dangerous than intravenous injections. Maurel's experiments have shown that this hypothesis rests on a solid foundation; he was able to make injections of 5 grammes 10 centigrammes of cocaine per kilo. of body weight into the femoral artery of a rabbit without causing death. Maurel does not wish to be understood as teaching that the toxic action of cocaine is confined to its effect on the leucocytes; on the contrary, he thinks that it produces several other effects, in the front rank of which must be placed contraction of the small vessels.

(428) Pharyngotherapy.

HELLER (*Münch. med. Woch.*, October 30th, 1894), advocates this treatment in many of the infective diseases. It consists in washing out the nose and nasopharynx with water which has been previously boiled, or with sterilised saline solution. This is done with a caoutchouc bag, having a suitable nozzle. Two or three injections are given on each side. If the fluid is injected very gently and slowly, as it always should be, there is no danger of damage to the ears. The author believes that most of the infective diseases are inhalation diseases, the first localisation being in the upper air passages from which the generalisation occurs. The diseases in which the author, during many years, has found this treatment useful are diphtheria, whooping-cough, scarlet fever, measles, variola, even typhoid fever and acute rheumatism, etc. He contends that it has a distinct expectorant effect.

(429) Coal Tar in Dermatological Practice

LEO LEISTIKOW (*Monatsh. f. prakt. Derm.*, Band xix, No. 8, 1894) has used coal tar very extensively for several years in the treatment of diseases of the skin, and prefers it in many respects to other species of tar. In his out-patient practice he generally uses it diluted with equal parts of spirit. Comparative experiments—such as the application of coal tar in this form to one part of the skin while the oleum fagi, rusci or cadinum was applied to other parts—has convinced him that the former is much superior as an antipruritic remedy. The objections to the use of coal tar in private practice have hitherto been its penetrating smell, its thick consistence, and the black stain which it makes; the difficulty has been to remove these drawbacks without impairing the therapeutic efficiency of the tar. The author has found it impossible to do so in the form of pastes and ointments, but he has found the following tincture unobjectionable: R Ol. lithanthracis, 3 parts; spiritus (95° C.), 2 parts; æther. sulphuric. 1 part. When applied to the skin with a brush this dries quickly, and can easily be removed when required by means of a little olive oil. Leistikow has used this tincture in 200 cases, and has seen tar folliculitis only twelve times, and tar poisoning (evidenced by deep black discoloration of the urine) twice. The effect was in the majority of cases very satisfactory. The tincture was a much more powerful antipruritic than other preparations of tar, more energetic, more penetrating, and more lasting in its effect, so that relapse was less common. It is not, however, adapted for cases in which the whole skin is involved; in these it should be applied only to the worst places. The tincture is indicated: (1) In dry forms of eczema of the hairy scalp, breast, belly, back, nuchal region, genitals, extremities, and navel; on the face, as it is apt to cause tar erythema, it should not be used in patients who are going about; (2) in psoriasis, especially in patches on the scalp, elbow, and knee; here a combination of it with 2 per cent. chrysarobin is of special advantage; (3) in Hebra's prurigo; (4) in trichophytic affections.

(430) Malakin in Acute Articular Rheumatism.

MONTAGNON (*Sem. Méd.*, November 3rd) gives his experience of malakin in this disease. Under its influence diuresis is increased. It very distinctly facilitates the elimination of uric acid, and has no noxious action on the organism, for the quantities of urea and phosphoric acid are maintained. Even with very large doses of malakin he had not had any toxic accidents. Moreover, this substance distinctly lowers the temperature, and produces neither buzzings in the ears nor digestive troubles. The dose to prescribe is from 1½ drachm in the twenty-four hours; as much as 2½ drachms may be reached without danger, provided care be taken that the doses are duly divided.

(431) The Action of Tetanus Antitoxin.

S. FEDOROFF, of Moscow (*Centrabl. f. Bakt.*, September 26th, 1894), gives the results of some experiments undertaken by him to determine whether tetanus antitoxin is directly destructive to the tetanus poison, or merely indirectly protects the organism against its action. The author obtained his antitoxin from the blood serum of a highly protected dog, by dialysis in distilled water, and drying *in vacuo* at 28° to 30° C. His tetanus poison was obtained in a similar manner. He then fixed, by numerous experiments on white mice and rats, the smallest protective dose of antitoxin, and the smallest fatal dose of tetanus poison under certain conditions, which he defines. Three series of experiments were undertaken, and a further series for the purpose of eliminating the element of natural immunity. The author found that unprepared animals injected with a mixture of poison and antitoxin which had stood *in vitro* for one hour at room temperature all died unless the ratio of antitoxin to poison was 2 to 1, or a higher ratio. He also found that animals previously prepared by antitoxin injections survived the injection of the above-named mixture in varying strengths, when the said mixture had been exposed to room temperature for periods varying from 24 hours to a quarter of an hour. But four of these same animals died from the injection of the same quantity of poison alone, even when 50 mg. of antitoxin was simultaneously injected. From these data, given in detail, Fedoroff claims that the action of tetanus antitoxin is truly a destructive one, at any rate *in vitro*.

PATHOLOGY.

(432) Staphylococci and Acute Rheumatism.

SACAZE (*Arch. Gén. de Médecine*, November, 1894) points out that in many cases of acute articular rheumatism it is possible to find, or obtain a history of, some lesion which may allow these organisms to pass into the circulation. This lesion may be some injury or an acute tonsillitis of marked severity. He brings forward several cases in support of his theory, and also quotes the researches of Saint-Germain, who found joint effusion as the result of the intravenous injection of cultures of staphylococci of feeble virulence. In the fluid in these cases no organisms were found, as is frequently the case in acute rheumatism. On the other hand, Bouchard and Charrin are quoted as having found large numbers of staphylococci in the serous effusion from the joints of patients suffering from rheumatism.

(433) The Action of Lymph on Pathogenic Microbes.

PAGANO (*Rif. Med.*, September 7th, 1894) draws attention to the fact that while the bactericidal properties, etc., of most of the humours of the body have been fully investigated, those of lymph have received practically no attention at the hand of bacteriologists. In a preliminary communication he draws a comparison between the bactericidal properties of blood and lymph from the same animal, obtaining the lymph from the thoracic duct of a fasting animal according to the method of Buchner and his pupils. The organisms employed were the B. typhosus, anthracis, and the cholera spirillum, a definite quantity of a broth culture of these organisms being introduced into tubes containing equal amounts of serum and lymph drawn with antiseptic precautions 24 hours before. After careful mixing to distribute the organisms, plate cultivations were made immediately and at stated intervals, and these showed in every case that while the serum was distinctly bactericidal, the lymph was not only not bactericidal, but afforded an excellent medium for bacterial development. In all cases the plates made from the lymph tubes after a few hours were considerably richer in colonies than those taken from the same tubes at the commencement, while the reverse was the case with the serum tubes. These results have an important bearing on the modern theories of immunity, and the author is now engaged in amplifying his researches in this connection.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(134) Physical Signs of Acute Pericarditis.

Josserand, of Lyons (*Sem. Méd.*, November 3rd), remarks that the friction sound in pericarditis is often in arrear of the anatomical evolution of the disease, not being present until a longer or shorter period has elapsed. The following is, in his opinion, an early sign of real value. When, in the course of an acute articular rheumatism, comparative auscultation is made at the cardiac base in the aortic and pulmonary areas, it sometimes happens that the second sound in the pulmonary area is found to be more intense, louder, and more metallic; the opposite is the case in chronic aortitis, in which the sound is more marked on the right side of the sternum than on the left. Sometimes even this difference is appreciable by the hand, which perceives an exaggeration of the diastolic closure shock of the pulmonary sigmoid valves. The existence of this sign should cause one to search carefully for a friction sound, which will then often be discovered when a superficial auscultation would have allowed it to escape notice; if not present, its more or less early appearance may be predicted. This noisiness of the second sound is early and usually transitory; it precedes the friction sound by from one to three days, and with few exceptions is replaced by it. It is a sign proper to the initial congestive period, like the fine crepitation of pneumonia. Its anatomical explanation is, Josserand thinks, that the heart muscle at the base of the pulmonary artery is rendered congested, turgescent, more dense, and perhaps covered with fibrinous lymph, and thus amplifies to the ear the neighbouring sigmoid sounds. This sign is important, first in diagnosis, to enable one to decide between a friction sound and an anæmic murmur or extracardiac sound, as it permits one to decide in favour of the friction sound; secondly, as a sign that the heart is affected, with localisation and intensity difficult to state precisely. It indicates the necessity for early revulsive medication.

(135) Traumatic Pneumonia.

Mongour (*Arch. Clin. de Bordeaux*, October, 1894) relates two cases in which pneumonia ensued upon injuries to the chest. In one case a labourer, aged 44, who had already suffered three attacks of pneumonia—the first at the age of 21, the last in July, 1894—was seized with difficulty in breathing a few hours after receiving a blow from a joist on the back of the right chest. When admitted to the hospital on the third day after the accident there was dulness and bronchial breathing at the right base—that is, in the neighbourhood of the region struck. He complained also of severe pain in the right side, though no traces of contusion could be found. On the next day there were found crepitant *râles*, bronchophony, and ægophony, with marked dulness at the right base. On the next day expectoration began, the sputum being viscous and tenacious. It contained the pneumococcus in large numbers and a few streptococci. About a week later, when convalescence was fully established, the proportion of micro-organisms was reversed. In the second case, a cavalry soldier struck the right side of his chest in mounting. Examination made immediately did not reveal any serious injury; but in the course of the evening he began to experience severe pain in the right side, which was the beginning of an attack of pleuro-pneumonia. Mongour refers to another case, recorded by André Petit, in which the patient had a typical attack of lobar pneumonia, commencing in the neighbourhood of a contusion of the chest. In this case also the sputum contained the pneumococci. In Mongour's two cases, as he points out, the disease did not run quite a typical course, though in the one first mentioned the temperature fell by crisis.

(136) The Relation between Rickets and Laryngeal Spasm.

Out of 1,600 rickety children observed by J. Comby in a Paris dispensary (*La Pediatr.*, April 20th, 1894) only one-tenth had convulsions, whilst Henoch attributes two-thirds of the cases of glottic spasm to rickets. Although rickets is so common in Paris, glottic spasm is very rare, and the author believes there is a relation of cause and effect between rickets and laryngeal spasm. Still less is this so with dentition (even when delayed and perverted by rickets). Among 70,000 children seen during eleven years, Comby never saw convulsions of purely dental origin, and never had occasion to lance the gums. Craniotabes, sometimes assumed as a cause of gastric spasm, if looked for is found with "extraordinary frequency," and in cases where there has never been any convulsion or glottic spasm. The bond that unites the two morbid states (rickets and convulsions) is dyspepsia (dilatation of the stomach, diarrhœa, constipation, etc.) with autointoxication, from which arise all these nervous disorders, and in great part even rickets itself.

(137) The Diagnosis of Tumour of the Spinal Cord.

Pfeiffer (*Neurol. Centralbl.*, November 15th) reports the case of a man, aged 48, who for five years had suffered from pain radiating from the spine at the level of the left sixth rib. The pain at first was intermittent: later it became continuous. There had been transient bladder disturbance. Antisyphilitic treatment had given no relief. Tenderness over the sixth and seventh dorsal spines was noted. Reflexes were exaggerated in the lower limbs: some trailing of the left foot was observed: on the right side patellar and ankle clonus could be elicited. All modes of sensibility were retained. Severe pains occurred along the course of the left sixth rib, and occasionally there were lancinating pains in the legs and girdle sensation. Tumour of the spinal cord was considered to be the most probable condition; surgical exploration accordingly was made, but no tumour was discovered. The extramedullary posterior root of the fifth, sixth, and seventh dorsal nerves was divided, and both the sixth dorsal spinal ganglia were excised. The pains subsequently were less frequent and less severe, but total paralysis of the legs and complete anæsthesia below the level of the umbilicus soon developed, and death took place two months after the operation from cystitis and bedsore. The necropsy showed myelitis in the mid-dorsal region, with ascending and descending degeneration. The sixth spinal ganglia exhibited slight inflammatory thickening.

SURGERY.

(138) Laparotomy in Tuberculous Peritonitis.

Frees, of the Giessen Gynæcological Clinic (*Deut. med. Woch.*, 1894, Nos. 45 and 46) mentions the fact that operation statistics of tuberculous peritonitis show a great preponderance of women, whereas pathological registers disclose a predominance of men. The effusive form is usually looked upon as more favourable than the adhesive or obliterating. The author gives short details of 18 cases of tuberculous peritonitis with effusion treated by abdominal section. Nodules were found in all the cases on the visceral and parietal peritoneum. Twice the peritonitis appeared to start from the Fallopian tubes, but these were not removed, as the process was so very generalised; one of these operated on in 1889 is still living. In 3 others the clinical course, etc., made the same origin probable. In one of these cases the appendages on one side were removed, in another those on both sides, and in a third a right pyosalpinx with caseous contents as well as an ovarian tumour apparently of the same nature; two of these are still living. As regards the operative procedure, as small as possible an incision is made in the linea alba, a digital exploration carried out, and the fluid evacuated. Some were drained for the first two days, but no difference was noted from those not so drained. In no case was death due to the operation. Of the 18 cases, 6 were completely cured. The longest period since the laparotomy is five years and a-quarter. In this case a second laparotomy had to be done nine months later. In another case the wound burst open and closed again after two months. This patient has been well for four years. The author mentions the different theories, mostly unsatisfactory, to account for recovery; he would attribute it to a variety of factors.

(439) Operation for Congenital Dislocation of the Patella.

Bajardi describes (*Archiv. di Ortoped.*, Ann. xi, vol. iv) the case of a child, aged 4, operated on for imperforate anus when 2 days old. As soon as he began to walk it was noticed that he fell down unusually often, and especially when stooping to pick anything up, or when going up or downstairs. When the left knee was flexed beyond a certain point the patella would slip with a jerk to the outside of the knee. Both knee-joints presented a marked flattening of their anterior surfaces. The right patella was only slightly movable laterally, and it was impossible to move it into the median patellar fossa. The left patella could be easily moved beyond the external margin of the external condyle, which was flatter than normal. There was no sign of genu valgum, and no history of injury. The dislocation could be produced at will and without pain. The chief causes of the dislocation were (1) looseness of the internal capsular ligament, (2) flattening and outward inclination of the anterior surface of the external condyle, (3) partial atrophy of the vastus internus, allowing exaggerated action of the vastus externus. As the dislocation could be prevented, even when the knee was flexed, by pinching up the internal lateral ligament, Bajardi operated on the knee on November 25th, 1892, excised a semilunar piece of the internal capsular ligament, and sutured the cut edges, thus shortening the ligament. A month after the operation the boy could walk without inconvenience, and the dislocation has never recurred since. Bajardi has collected thirty-four other cases, and from a study of these he believes that congenital dislocation of the patella is generally due to anatomical deficiencies or abnormalities in the osseous or soft parts of the knee-joint. In many cases the symptoms are so slight that the patient does not seek surgical advice; in others they get gradually better as the patient grows older. More severe cases, from the difficulty and insecurity of their walking, come into the surgeon's hands. A good kneecap suffices in many cases. The operative treatment must depend chiefly on the nature of the individual case and the particular cause of the dislocation.

(440) Laryngectomy by a New Method.

Swain (*N. Y. Med. Journ.*, October 13th, 1894) referring to recently recorded cases in which, after removal of the larynx, the open end of the trachea was stitched to the skin, and the communication between the air passage and the mouth thus shut off, states that the results of such procedure have been better than those of the older method of laryngectomy. The danger to life from inspiration-pneumonia is much reduced by the shutting off of the mouth. The patients can swallow with the greatest ease. In three at least of the cases a voice useful and fully as satisfactory as any produced by an artificial larynx was obtained, and the patients were able to speak without incurring the trouble and risk of the constant presence of a foreign body in the neck. A recent case is reported in this paper, in which Carmatt, after total removal of the larynx for epithelioma, closed the large wound by continuous suture, except at one part of the middle line of the neck, to which the trachea, which two weeks before the operation had been opened for the relief of extreme dyspnœa, was carefully stitched. The patient, a man aged 42, made a good recovery; and, when the last observation was made by the author, he was perfectly well, and the wound was quite healed. Although words were not then clearly spoken, the author was able to understand short sentences, and single words very satisfactorily with his back turned, and at a distance of several feet from the patient. No clear explanation is given of the manner in which the capacity for speech has been preserved in this and other cases in which the communication between the lungs and the mouth was completely closed by this new method of laryngectomy.

(441) Thyroid Abscess.

True inflammations of the normal thyroid gland are rare, but in the goitrous gland the disease is more common. Ransohoff (*Annals of Surgery*, vol. xx, No. 4) relates two cases in which thyroidectomy was performed. One of these presented a very interesting feature in the relation of the goitre to Graves's disease, which, though ameliorated since the final operation, still exists. When first seen there were no evidences thereof, other than the goitre, which was distinctly limited to the left lobe. After suppuration had greatly increased the size of the gland, and continued for many months, undoubted Basedow's disease supervened. It was believed to be a case of surgical origin, and until the extirpation of the diseased half of the gland the symptoms were considered to be due to mechanical irritation of the sympathetic and recurrent nerves.

(442) Treatment of Fracture of the Clavicle by Suture.

Routier (*Rev. d'Orthopédie*, No. 6, 1894), is strongly in favour of suturing in certain cases of fracture of the leg, with the aim either of facilitating reduction which cannot be effected by ordinary means, or of maintaining reduction when it would be otherwise impossible or difficult to keep the fragments in good position. In cases of simple fracture of the clavicle, on the other hand, he would in general trust to bandaging, as a slight deformity due to a moderate deposit of callus would be less objectionable than the scar left after the application of the suture. The author would not hesitate, however, to treat fracture of the clavicle by an open operation in any case in which there might be a risk of much subsequent swelling and serious deformity; and, also, whenever it might be found impossible by ordinary means to overcome such displacement as would not only be unsightly, but also influence very seriously the innervation of the upper extremity. Exposure of the seat of fracture under such circumstances would enable the surgeon to place the broken surfaces in apposition, the application of a suture not being necessary unless it be found difficult to keep the fragments in place. A case is reported of fractured clavicle with extreme deformity due to over-riding of the fragments in a female patient, aged 22, which was successfully treated by exposure of the seat of injury, removal of a detached fragment of bone, and suturing of the two main fragments of the broken clavicle. Three weeks after the operation there was perfect union. The linear cicatrix was small and hardly perceptible, the shoulders were symmetrical, and the patient seemed to be free from the least trace of deformity.

MIDWIFERY AND DISEASES OF WOMEN.

(443) Tuberculosis of the Fallopian Tube.

Penrose and Beyer (*Amer. Journ. Med. Sci.*, November, 1894) report 5 cases found in a series of 25 abdominal sections for pelvic inflammatory trouble—a large percentage. All the 5 patients had been sterile, though 4 were married. In this respect these histories differ from those of ordinary cases of non-tuberculous salpingitis, where, in the great majority, there is a history of at least one child or miscarriage before the disease reaches such a stage as to render the woman sterile. In 3 no tuberculous lesion could be found elsewhere, in the fourth it was not certain that the lungs were not involved, and in the fifth the tubal disease was, it appears, secondary to tuberculous disease of the hip. There was nothing in the symptoms presented by any of the cases to indicate that tuberculosis of the tubes or of the peritoneum existed, nor was anything elicited by a bimanual examination of the pelvis to allow of diagnosis other than that of adherent tubes and ovaries. The account of the beginning of the disease was too vague in all the cases to allow it to be determined with any degree of accuracy. In no case could it be ascertained whether the tuberculosis began in a healthy tube or followed an attack of salpingitis. The disease assumes several forms when it attacks the tubes; they are well described by the authors, who conclude on the evidence of their own, and Whitridge Williams's researches, that primary tuberculosis of the female organs must be more frequent than modern statistics indicate.

(444) Triplet Pregnancy: Fœtus Papyraceus.

Charles, of Liége (*Journ. d'Accouch.*, October 21st, 1894), describes a case of triplet pregnancy, where two of the fœtuses died at the fourth month, and were expelled at term with a fully-developed child. The mother was a married primipara, who was delivered at term of a living male child, weighing 7 lbs., and measuring nearly 20 inches.

The uterus did not contract well, and, as flooding set in, the placenta was extracted manually three-quarters of an hour after the birth of the child. A second placenta was found, it was adherent. In detaching it two small fœtuses were withdrawn, each attached by a separate and very thin cord to a single placenta, about 4½ inches in diameter. It was grey in colour, and tough; it bore two chorionic pouches for the two blighted ova. The placenta of the living fœtus weighed a little over a pound: it measured nearly 6 inches in width, and over 1 inch in thickness. The insertion of the cord was velamentous. The two undeveloped fœtuses were completely mummified. One was 5 inches long, the other a little shorter. The case shows, it is pointed out by the author, that in triplet pregnancy two fœtuses connected with one placenta can die early during gestation without damaging either the third fœtus or its placenta.

(445) Microbes in the Female Urethra.

Gawronsky (*Münch. med. Woch.*, No. 11, 1894), made cultivations of secretion from the female urethra, gathered by means of a sterilised speculum and a platinum needle. In 15 out of 62 cases bacteria were found, in 3 the streptococcus pyogenes, in 8 the staphylococcus pyogenes aureus, in 1 the S. pyogenes albus, in 2 the bacillus coli communis, and 1 in Gessner's bacterium tholoideum. Amongst the negative cases were 10 where the patients had peri- or parametritis, 6 prolapse, 3 pregnancy, and 1 gonorrhœa.

(446) Cæsarean Section Performed by Mistake.

Loviot (*Répert. Univ. d'Obstét. et de Gynéc.*, September 25th, 1894), early this year examined, with the patient's consent, a wet nurse, suspected of being pregnant. He recognised pregnancy at the third month. A few months later he heard that his patient did not believe that she was pregnant, and that she had been admitted into a hospital, where an operation was performed. A live infant was discovered. On making inquiries, Loviot found that abdominal section had really been undertaken. The surgeon and also the obstetrician of the hospital gave evidence as to the patient's statement that in her capacity of wet nurse she had not menstruated, and could not be pregnant. Relying too readily on the patient's assertions, an operation was performed, with the result as above stated.

(447) Decidnosarcoma of Uterus.

Menge (*Zeitschrift f. Geburtshülfe u. Gynäk.*, Vol. xxx, Part 2, 1894) relates a case in an exhaustive monograph on malignant degeneration of decidual relics after gestation. In December, 1892, a woman, aged 35, was delivered at the six month of a big hydatid mole. Sharp metrorrhagia set in six months later, and on dilating the uterus a hemispherical mass of the size of a bean was detected in the anterior uterine wall. It was removed by the curette. On August 3rd, 1893, fresh hæmorrhage occurred. After plugging and the use of the curette, some soft masses were removed. They were (microscopically) cancerous, the epithelial elements being of the decidua cell type. Deciduosarcoma was diagnosed, and on August 11th Menge performed vaginal hysterectomy. The operation was very difficult, there were metastatic deposit in the vaginal vault, and it was impossible to draw out the diseased parts without fouling the peritoneum: hence there was subsequent high temperature and convalescence protracted to two months. On November 21st, 1893, or three months and a-half after the operation, small metastatic deposits were detected in the vaginal wall close to the vulvar orifice. They grew very rapidly, sloughing and causing fœtor and œdema of the labia. The patient died six months after the operation, and thirteen after the expulsion of the hydatid mole. Menge related a second and somewhat similar case of malignant changes in the uterus. The patient was 18, and, like the first, was delivered of a hydatid mole at the sixth month, at the end of September, 1893, with much flooding and subsequent fever. On November 4th she returned to hospital; the uterus was found enlarged, and two hard bodies, as big as hazel nuts, were discovered in the uterine wall. They were scraped out with the curette, and appeared very suspicious in character, so that the patient was advised to return if any metrorrhagia or other local symptom occurred.

(448) Fatal Metrorrhagia in Purpura.

Resnikoff (*Gazette Hebdomadaire Médicale de la Russie Méridionale*, 1894, 15) observed this condition in a girl, aged 15, with no hereditary history. Diffuse ecchymoses and petechiæ appeared for eighteen months: then bad attacks of epistaxis took place and continued for several months till the period was first established. Clots were discharged for a week. For three months the epistaxis ceased, and at the end of that time recurred. The second period was seen nine months after the first, and proved fatal. For the first week the show was slight: during the second clots were passed and symptoms of acute anæmia set in. Notwithstanding the application of hæmostatics, the patient died of the hæmorrhage on the nineteenth day.

THERAPEUTICS.

(449) Cure of General Peritonitis by Medical Treatment.

L. Revilliod (*Revue Médicale de la Suisse Romande*, October 20th, 1894) gives details of six grave cases of peritonitis in order to show that recourse need not necessarily be had to surgery in its treatment. Whilst not denying that surgery has its applications in this disease, he insists strongly that there is a danger at the present time of underrating the value of purely medical treatment. The four first cases were instances of peritonitis of intestinal origin; the fifth case was a tuberculous one of acute onset, becoming chronic, with ascites and caseous masses; the sixth was a case of peritonitis following after scarlet fever. All were very severe cases, especially the last. The author wishes to note in particular the diagnostic and prognostic value of the quantity of urea eliminated, a quantity which reaches the highest figures when the disease is at its most acute stage, and the patient on peremptory diet. This hyperformation of urea indicates the intestinal origin of the peritonitis, and the intensity of the inflammatory process, and signifies, also, that the organism is defending itself by setting in action the depurative function of the liver, which retains and destroys septic and phlogogenic substances in their passage. The therapeutic measures usually adopted were as follows: Either total abstention from all alimentation by the mouth, or water given by spoonfuls when tolerated. This could be continued several days. Leeches, two or three in number, were applied at first to the most sensitive parts of the abdomen, and were sustained in their action by Neapolitan ointment, thin poultices, soothing fomentations, whose warmth favours the action of the phagocytes: lastly, by calomel in small doses. In some cases, instead of the Neapolitan ointment, an ichthyol pomade composed of soft soap and ichthyol, equal parts, was applied in a thin layer, except at the most painful spots, where small fly blisters were placed. Internally Rivière's potion was given: a glass of iced water, containing 10 to 20 drops of laudanum, taken in spoonfuls at intervals varying with the distress. If this was vomited, a small enema of tepid water with 10 drops of laudanum was substituted. Revilliod, as a result of his experience with these remedies, thinks that no case is so severe as to be despaired of.

(450) Cantharidinate of Potassium.

Petteruti (*Il Policlinico*, November 1st, 1894) tried this method of treatment in phthisis in 1891, when it was advocated by Liebreich, but with unsatisfactory results. Recently, however, the author has seen three cases then treated by him. At that time large quantities of urobilin were found in the urine after the treatment. The appetite and nutrition were improved, and the expectoration became more abundant and fluid. There was no alteration in the temperature. Albuminuria was noted on only two occasions, and then the dose had exceeded 0.0002. The author gives details of the present condition of these three patients. Two of the cases are completely cured, and the third is so much better as to simulate a cure. An improvement lasting over three years cannot be looked upon as a temporary one, such as may sometimes be seen in phthisis.

(351) Treatment of Whooping-Cough.

Rehn (*Münch. med. Woch.*, November 13th, 1894) recommends a new preparation of antipyrin in this affection. If antipyrin is added to mandelic acid a crystalline body (antipyrin mandelate) separates out. The remedy was tried in some fifty to sixty cases of whooping-cough in children of various ages. The effects of the drug were chiefly estimated by the number of paroxysms, and charts are appended to show the gradual decrease in their frequency. In several cases the drug was intermitted, when the attacks of cough became as frequent as before. In only two cases did it appear to have no effect. In the stage of decline the author has often noted the disappearance of the cough within a week. The improved appetite and disappearance of the vomiting are very probably due to the sedative action on the stomach. The duration of the disease was, on an average, three weeks in medium and three to five weeks in severe cases. For infants under a year, 0.05 to 0.10 g., and for children between 3 and 5 years, 0.25 to 0.50g. can be given. No unpleasant symptoms were noted.

(352) Lactophenin.

Strauss (*Therap. Monatsh.*, September, 1894) relates his investigations into the antipyretic action of lactophenin in 25 cases. The dose used varied from 0.5 to 1 g., but never exceeded 3 g. in the day. In 7 cases of enteric fever of medium severity no unpleasant effects, particularly as regards the pulse or respiration, were noted. The sedative action was not as constantly observed as it appears to have been in v. Jaksch's cases (Epitome, April 28th, 1894. par. 347). The antipyretic effect was well marked. The author would look upon lactophenin in enteric fever as a useful substitute for the ideal hydrotherapeutic treatment. In 4 out of 5 cases of facial erysipelas the temperature soon fell; in the remaining severe case other antipyretics also failed. In 2 cases of diphtheria, 1 septic in character, the temperature fell some 2° C. within five hours. Lactophenin produced no antipyretic effect in 1 of 2 cases of scarlet fever. In 3 cases of acute pneumonia the antifebrile action was obvious. In 5 cases of phthisis with fever the temperature fell, with profuse sweating, but without unpleasant symptoms. The action of lactophenin was here compared with that of other antipyretics. The author gives details of one case of pneumonia and another of enteric fever, in which a rash appeared which was in all probability due to the drug.

(353) Treatment of Empyema in Tuberculous Patients.

Bäumler (*Deut. med. Woch.*, 1894, Nos. 37 and 38) formulates the following general rules for the treatment of empyema, with or without pneumothorax, in tuberculous patients: (1) If an exploratory puncture show that there are pus micrococci in the exudation, radical treatment is best, preferably thoracotomy with resection of ribs, an exception being made in cases where before the development of the empyema the patients already appeared to be in a hopeless condition. (2) When only a few tubercle bacilli can be found in the exudation, or no microbes at all, as is often the case when the exudation is chronic in its development, or has become chronic, it is best to aspirate some of the exuded fluid according as symptoms of compression render it advisable. One will then be able to find out what power of expansion there is still in the compressed lung, and to what extent it is injured by tubercle; the crepitation sometimes heard over freshly-expanded lung must not, however, be mistaken for crepitation due to tubercle. If the lung seems well able to expand, and 1,000 cubic centimetres or more of the fluid can be aspirated without inducing unpleasant symptoms such as violent coughing, cyanosis, a small frequent pulse, or pains in the chest: if the compressed lung appear not much diseased, and the other lung appear quite or nearly sound, then, when the patient's condition has improved after the partial aspiration, one may proceed to thoracotomy and to resection of ribs even, if it be necessary, later on. (3) If in the case of an extensive chronic empyema aspiration show that the compressed lung can expand very little, or hardly at all: if the general condition of the patient be tolerable: if the empyema be stationary and the symptoms dependent only on the mechanical interference with the respiration and circulation, palliative treatment by occasional partial aspiration is sometimes preferable to the radical method. If, however, after repeated aspiration there be found a distinct tendency to contraction on the diseased side of the thorax, an attempt can then be made to get the pleural cavity to granulate up. This may be attempted by the slow aspiration drainage method of Playfair and Bülau, followed when advisable by thoracotomy and resection of ribs.

PATHOLOGY.

(354) The Tetanus Bacillus.

Vincenzi (*Rif. Med.*, September 4th-5th, 1894) has made the following contribution to our knowledge of this subject. Starting from four cultures of the bacillus, from distinct sources, he happened to get certain specimens which grew well aërobically. These appeared to be identical, both to the naked eye and in respect of their virulence, with the specimens of the bacillus grown in absence of air, and are the first recorded instances in which an observer has succeeded in growing the bacillus of tetanus save in a medium almost free from oxygen. The author proceeds to describe at some length the morphological characteristics of these bacilli, which closely resemble those already known. The establishment of the possibility that the tetanus bacillus is capable of growth in presence of the air helps to explain its presence and development in earth, where it is usually found in Nature, and obviates the necessity for any elaborate theory to account for this apparent anomaly. —Grixoni (*ibid.*, September 10th, 1894) gives the following provisional conclusions from a research which he has not as yet had an opportunity of completing: (1) The tetanus bacillus can be obtained direct from earth by aërobic cultivation. (2) Under these conditions, it produces no toxin and is not pathogenic. It acquires virulence, however, as soon as it is returned to a medium free from oxygen. (3) The methods which have seemed to show that the bacillus multiplies anaërobically in the earth, and is therefore toxic, are not trustworthy, and the conclusions drawn from them are incorrect. (4) a negative result of the inoculation with earth does not allow one either to affirm or deny the presence of tetanus bacilli. (5) An association with other special microbes is always, according to the author's finding, necessary in order that the bacillus may acquire the power of growing aërobically. A mixed infection is not a frequent accident, but a constant necessity. Probably the most frequent auxiliary bacillus is the B. coli communis; (6) The ease with which tetanus supervenes on inoculation with infected fæces probably depends on the constant presence in them of the above-mentioned microbe. For the facts on which these conclusions are based the reader must refer to the complete paper.

(355) Virulence of the Pus in Salpingitis.

Boinet (*Sém. Méd.*, November 3rd) communicates the results of bacteriological and experimental researches on this subject. Pus from a salpingitis presented to immediate examination streptococci. Its injection in a dose of several cubic centimetres into the abdominal cavity of rabbits, rats, etc., was followed by no result. Part of the same pus placed in tubes of agar, gelatine, and broth developed colonies of streptococci on the second day, and herewith acquired such virulence that its injection into the peritoneum of the animals set up a violent and rapidly fatal peritonitis. At the necropsy of the animals a quantity of thick yellowish serous liquid flowed away containing innumerable streptococci. The peritoneum was red, vascularised, and covered in places with false purulent membranes. The rapid increase in virulence of these streptococci was confirmed by the fact that one of the guinea-pigs which had so rapidly succumbed had received fifteen days before in its abdominal cavity 2 cubic centimetres of pus from another salpingitis without effect. The conclusion is that the pus of a salpingitis may be injected directly without results, but in a few hours may acquire a great virulence under favourable conditions. From this point of view serosanguinolent operative effusions may be compared and likened to veritable broth cultures and accordingly drainage should be practised after operations.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(456) Puerperal Polyneuritis.

Lunz (*Deut. med. Woch.*, November 22nd, 1894) refers to the recorded cases of this disease, especially by Moebius (Epitome, January 21st, 1893, par. 52), and reports the following case. About three weeks after delivery, a woman, aged 24, had some difficulty in swallowing, diplopia, and vertigo. Two or three days later there was numbness in the right hand, then in the left arm and hand. Fluids came back through the nose. About a month later when seen by the author she had diplopia, some weakness of both abducens nerves, slight paralysis of the left facial nerve and of the lower branches of the right facial. There was paralysis in both arms and less so in the legs. Sensation was but very slightly affected. The knee-jerks were absent. Reaction to galvanism and faradism was lessened but not qualitatively altered. During the next fortnight the condition got worse. Attacks of dyspnœa supervened. Then the disease came to a standstill and the patient began gradually to improve, the ultimate recovery being complete. At first there was some difficulty in distinguishing the disease from a cerebral lesion, or even from a poliomyelitis and polioencephalitis. The resemblance to diphtheritic paralysis was striking, but there was no evidence whatever of diphtheria. The question arises as to whether the neuritis is of an infective nature, or whether it can occur after normal delivery. The author believes that local infection plays the chief part in the disease. Puerperal polyneuritis may be divided up as follows: (1) The greater number belong to the pyæmic and septic group. (2) Some cases occurring during or after pregnancy must be looked upon as cachectic. (3) There is a third group neither due to the above named infection nor to cachexia. Here the labour acts as a predisposing factor to the penetration of the actual causes setting up the neuritis. The general anæmia, the psychical effects of pregnancy and labour, and the overloading of the blood with effete products due to the regressive metamorphosis, must be considered here. Thus puerperal polyneuritis does not consist of a single type. The author thinks it more common than is generally believed.

(457) The Urine in General Paralysis of the Insane.

Klippel and Serveaux (*Archiv. de Neurol.*, November, 1894) refer to the conflicting dicta of various writers on this subject and give the results of their own analyses of the urine of patients in the second stage of general paralysis. In most of their cases there was slight polyuria, the urine was pale, feebly acid, of low specific gravity, and contained excess of mucus. As a rule urea was below the normal, sometimes much below. Uric acid varied much: occasionally it was augmented; when diminished it still was abnormally high in proportion to the urea. Phosphoric acid was always reduced in amount, the decrease being greater than that of the urea; most often the earthy phosphates exceeded the alkaline. The chlorides were nearly always considerably increased. Albumen was relatively frequent but never in large amount. Acetone was tested for ten times and only once was absent. Control analyses of six normal urines showed the presence of acetone in four. Indican often was found in notable quantity. Peptones were discovered in three of five analyses.

(458) Estimation of Hydrochloric Acid in the Stomach Contents.

Mierzynski (*Centralbl. f. inn. Med.*, November 17th, 1894) describes a method which he believes to be well adapted for general use. The only apparatus required is Wagner's azotometer. The stomach contents—5, 10, to 20 c.cm.—are suitably treated with barium carbonate, which latter is thus converted into barium chloride. To this chloride a slight excess of ammonium monochromate is added. The resulting barium chromate is treated with hydrogen peroxide and dilute sulphuric acid. The amount of oxygen is measured. Corrections are made by means of a table for atmospheric pressure and temperature. One atom of oxygen equals half a molecule of hydrochloric acid. This gas volumetric estimation of the barium chloride formed requires much less time than the analysis by weight.

(459) Dysphemia (Stammering).

This subject is discussed from the neurological standpoint by Coxwell (*Intercolon. Quart. Journ. of Med.*, etc., 1894). After showing that the stammerer is never amnesic, and that the trouble of utterance is aggravated by ill health, nervousness, etc., he states that the fault lies in a paralysis of some part of the articulatory or phonatory mechanism *plus* excessive activity or even spasm of other parts. It is different from affections like writer's cramp, which are brought on by overuse of the organ; dysphemia does not result from overuse. Singing, from its rhythm and continuous flow, is easier to the stammerer than ordinary speech, which changes rapidly in time and rate of flow. The author locates it in Broca's centre, and postulates two conditions to explain it, namely, *(a)* a want of power (paresis) in some of the articulatory nerve mechanisms of that centre, and *(b)* a want of accurate regulation of that centre owing to defective control of it by higher centres. Hence the treatment is twofold, namely, generally tonic, and specially gymnastic. Generally tonic: Regulated outdoor exercise, shower baths, and nerve tonics (quinine, strychnine, phosphorus, or Fellowes's syrup). Vocal gymnastic: Daily practice in uttering the simple vowel sounds, at first slowly and then more rapidly, and after good proficiency is attained to add consonants. The patient should next practise reading aloud daily, mastering every difficulty only by slow and assiduous practice. Simple narrative reading should precede dialogue. Patience and steady practice (including vocal or singing exercises) should be combined, but always stopping short of actual fatigue. The author states that he has cured many in this way, the treatment taking several months.

SURGERY.

(460) Removal of the Gasserian Ganglion.

Richardson and Watton (*Boston Med. and Surg. Journ.*, November 1st) report a case of successful removal of the Gasserian ganglion. The patient was a woman, aged 63, who had suffered from severe facial neuralgia for about fifteen years. In 1891 Richardson had operated extracranially upon the second and third divisions of the fifth nerve on the left side by avulsion at their foramina of exit. Immediate healing followed, with complete relief of pain, but in the course of eighteen months the pain and spasms returned, and became unbearable. The left Gasserian ganglion was removed in August last by the lateral or so-called Krause-Hartley method. The operation was a very difficult one, chiefly on account of hæmorrhage, both arterial and venous, which could be controlled only by temporary gauze packing. The dura mater was so thin and soft that it was torn to shreds when separated from the bone in the middle cranial fossa. The patient made a good recovery. On the sixth day, when the stitches were removed, there was solid primary union. Two weeks after the operation there was numbness in the distribution of the branches of the fifth nerve, including the forehead and conjunctiva. There was slight hazine s of the left cornea (which had existed before the operation) and moderate injection of the conjunctival vessels of the left eye. The patient had had no pain since the operation. Peripheral operations for facial neuralgia, the authors state, are almost invariably followed by recurrence of pain. In many cases of deep operation the pain has not returned, or its recurrence has been controlled by medical treatment; but in others, thus far few in number, the neuralgia has recurred with its original violence. For such removal of the Gasserian ganglion remains as a last resource. In considering what operation should be performed at first the authors point out that removal of the Gasserian ganglion has not yet had time enough to show its results, though, perhaps, sufficient to give more brilliant promise than the others. If it should prove to be like the others, temporary only, it is evident, they hold, that the greatest relief will be found in resorting successively to the peripheral, the deep, and the extracranial methods. Hitherto

the mortality from removal of the ganglion has been 6 deaths out 40 cases. No instance of recurrence of the neuralgia after this operation has yet been recorded. There is but little risk of ocular injury, and only one case has been recorded of absolute loss of the eye. A consideration of the objections made by Rose to Horsley's lateral method shows that the difficulty of operation and the danger of hæmorrhage are met with in the operation practised by the former surgeon, as well as on the lateral operation. The removal of bone and the consequent disfigurement are inconsiderable objections to the latter method in comparison to the severity of the symptoms for which the operation is undertaken. The danger of the double opening in the dura mater in Horsley's operation, under antiseptic precautions and in a fair field of operation, would seem counterbalanced by the dangers from curetting and removing the ganglion in pieces without a clear view of a region filled with vital structures. The injury to the brain is hardly likely to extend beyond the speech centres, which experience has proved will bear a great amount of pressure, and even laceration, with only temporary impairment of function. The danger of injury to the closely-lying internal carotid is common to both operations, but probably lessened in the lateral operation on account of the better view of the parts. Among the advantages of the lateral operation may be mentioned the facts that the mobility of the jaw is retained; that the zygoma need not be removed; that the ganglion can be perfectly exposed and removed, including its root, on emerging from the pons; that the danger, however great, of injury to important contiguous structures is minimised; and, lastly, that the danger of sepsis from the pharynx is avoided.

(461) The Surgical Uses of Albumen Preparations.

SCHLEICH (*Therap. Monatshefte*, November, 1894) advocates the occlusion of wounds, etc., with albumen products. As proved experimentally, these serve as excellent local stimulants to the nutrition, and increase the circulation of leucocytes. Sterilised, dried, and pulverised serum obtained from oxen can be applied even to extensive surfaces, and will form an adherent scab. Iodoform can be added, and with these preparations a dressing can often be dispensed with after 24 to 48 hours. Naturally all hæmorrhage must first be arrested. Not only is dried serum applicable to recent wounds, but also to ulcerating surfaces after previous preparation. In order to rapidly and effectually destroy necrotic material, the author recommends nuclein acid, which, unlike ordinary caustics, only affects disintegrating but not healthy cells. For this purpose it should be applied in strengths of 2 to 3 per cent., mixed with a serum paste or ointment. As just stated, serum can also be used in the form of a paste, to which various substances as oxide of zinc, chrysarobin, ichthyol. etc., can be added. The author employs the latter with preference in cases of eczema, and if there is much weeping the paste alone or together with the serum powder, when applied frequently, will effect a cure. A most useful application is a mercurial paste, and this manner of administering the drug is preferred by the author. In practice the author surrounds the part to be treated with a ring of paste prepared from wax, starch, gum, etc., which serves to retain a piece of antiseptic gauze over the wound. When the part requires a reapplication of the serum preparation, the central portion of gauze is cut out and a new piece fixed to the existing ring. Thus bandages, etc., are dispensed with, and the objections to collodium are overcome.

(462) Treatment of Artificial Anus.

CHAPUT (*Archiv. Gén. de Méd.*, September and October) records 35 cases of artificial anus and stercoral fistulæ which he has treated. After an exhaustive survey of these cases he has formulated the following conclusions concerning the treatment of this class of cases: He says that artificial anus can be treated by four different methods: (1) By the application of enterotomy, followed by obliteration of the fistula. (*a*) Enterotomy is indicated when the cases are uncomplicated and the aperture is easily accessible, together with a thin and long partition. When the spur is long and thin it is advisable to adopt Richelot's method—that is, section between two pairs of forceps and immediate suture. If, however, the spur is long and somewhat thickened, it is better to make the suture between two long pairs of forceps, which are allowed to remain in position. Enterotomy is contraindicated when the spur is very thick or inaccessible, or when the aperture is closed by the mechanism of angular wounds. (*b*) After destruction of the spur, the stercoral fistula is closed. Small fistulæ are closed by lateral enterorrhaphy, during which operation the margins of the fistula are freely separated from their surroundings, and then united with two tiers of sutures, the peritoneum being opened or not according to the requirements of each individual case. In the case of large fistulæ lateral enterorrhaphy may be employed, but the peritoneum should not be opened. (2) Resection: Resection is as a general rule contraindicated, but when in the course of a lateral enterorrhaphy the intestine is easily friable and is largely lacerated, it is necessary to resect the two ends and reunite them by appropriate sutures. (3) Longitudinal enterorrhaphy: When enterotomy is for some reason contraindicated, it is sometimes advisable to employ longitudinal enterorrhaphy without resection. This operation is done by making a circular incision in the skin around the artificial anus, and opening the peritoneal cavity. The two ends are drawn out, a longitudinal slit is made in each, and then the margins of the slits of the same side are sewn together with sutures. This operation is indicated when in the course of a lateral enterorrhaphy considerable constriction is met with just below the lower end. When the intestine is very friable it is contraindicated. (4) Entero-anastomosis: Entero-anastomosis, followed by ligature of the two ends between the point of anastomosis and the stercoral aperture, is a simple, easy, and benign operation. It is indicated when the intestine is very friable at the seat of the artificial anus, or when there is a considerable constriction of the bowel in the neighbourhood of the external aperture, and also when the inferior end is obliterated at the level of the artificial anus.

MIDWIFERY AND DISEASES OF WOMEN.

(463) Degenerative Changes in the Mammary Gland.

TEMESVÁRY (*Wiener med. Woch.*, December 1st, 1894) finds that complete absence of the secreting function in the breast, when it occurs after every labour in a healthy subject (agalactia), is almost invariably an inherited infirmity. It depends on arrested or otherwise abnormal development, atrophy or fatty degeneration, involving the glandular tissue. In very young mothers the imperfectly developed glands sometimes fail to secrete, whilst at subsequent labours they yield plenty of milk. Temesváry has observed a case where a woman, not a primipara, suffered from complete agalactia after labour. It happened that in a previous childbed she had suffered from inflammation of both breasts. The abscess on each side had been unskilfully opened so as to cut across the ducts.—Duclert (*Journal de l'Anat. et de la Physiologie*, September-October, 1894) notes that he has already proved in his *Histologie de la Sécrétion du Lait* (1893) that in the days immediately before and after delivery, the glandular epithelium during this colostrum-secreting period undergoes a typical colloid degeneration. He now finds that in inflammation of the breast a similar degeneration is produced by the staphylococcus aureus. This microbe must be well diluted or not very active to produce colloid degeneration of the epithelium. Otherwise the cellular elements are rapidly destroyed by the severity of the inflammatory process. The colloid corpuscles produced by an inflamed breast are very like colostrum cells in appearance, but they are much larger.

(464) Salt Baths in Osteomalacia.

Z. PELEZAR (*Sem. Méd.*, October 31st) has had excellent results from the use of salt baths in the treatment of osteomalacia. He tried the method in eight women suffering from the disease in a fairly advanced stage. They were multiparæ, aged from 25 to 46, in whom the disease had commenced after confinement, and had lasted from two to eight years. The diagnosis was fully established by the mode of onset, the

chronic course, the pains, the deformities of the skeleton, and the other symptoms such as hyperæsthesia of the skin, exaggerated reflexes, paresis of the lower limbs without sign of spinal or cerebral lesion. In all the cases the treatment consisted solely in the use of baths containing from 6 to 16 kilogrammes of chloride of sodium, according to the constitution of the patient; the temperature of the bath was from 34° to 37° C. (94° to 100° F.), the woman staying in it from 15 to 30 minutes. The baths were repeated every day, or at longer intervals, according to the tolerance of the patient. In addition to the baths lime water was given in milk. Although in none of the cases were the hygienic surroundings quite satisfactory, the effect of the treatment was very marked. Relief was experienced even after the first few baths; after twenty or so pain ceased, and the power of movement was recovered. In from four to eight weeks the improvement was very great; in some cases even the bony deformities had partly disappeared. The author, in view of the comparatively small number of cases, hesitates to affirm that the treatment has effected a complete cure. He attributes the good effects of the baths to the improvement of nutrition and the stimulus given to metabolism by the baths.

(465) Can Ovarian Dermoids be Diagnosed?

Guinard (*Union Méd.*, November 29th, 1894) denies that there is any one pathognomic symptom of dermoid cyst of the ovary. Three signs, on the other hand, when they occur in the same patient, almost assuredly indicate this disease. These signs are pain, slow growth, and consequent small bulk of the tumour, and relative youth of the patient. Tillaux and himself have both found that these three signs are reliable. Exploratory puncture is absolutely unjustifiable. Should the tumour be dermoid, puncture is specially dangerous, as the contents of a dermoid cyst are highly irritating to the peritoneum. Guinard admits that there is one source of fallacy in his test for dermoid of the ovary. The pain may be due to torsion of the pedicle of an ordinary ovarian cyst, and as torsion checks the growth of the tumour and may occur in a young subject, diagnosis in the simplest-looking case must be reserved.

(466) Uncontrollable Vomiting of Pregnancy.

Bonnet (*Revue Obstet. et Gynéc.*, May, 1894), relates a case where the patient was 22, and single. Her first pregnancy went on to term; but, in the second, labour was induced at the fourth month in consequence of hyperemesis. During the early part of the third pregnancy vomiting became very severe, lasting a month, and reducing her to an alarming extent. When just over six weeks pregnant, a laminaria tent was introduced; on January 14th, 1890, the vagina was plugged with iodoform gauze. For twenty-four hours the vomiting ceased. Next day the tent was removed, and the sickness returned. On January 17th two tents were introduced as high as possible. The vomiting again stopped, returning when the tents were taken out. Then five tents were progressively introduced, and left in place for three days. The sickness stopped, and did not return. The uteras showed no signs of contracting throughout the course of the above treatment. The patient took food well and grew stout. Seven and a-half months later she was delivered of a healthy child at term.

(467) Traumatic Hæmatothorax: Danger of Schultze's Artificial Respiration.

Gebhard (*Zeitschrift f. Geburtsh. u. Gynäk.*, vol. xxx, part 2, 1894) makes note of a breech case where the physician was inexperienced and hastened delivery. The extraction of the breech and the bringing down of the arms was difficult. The child was born asphyxiated. It was made to breathe after half an hour had been spent in compression of the thorax, Schultze's swinging method of restoring animation, and stimulation of the skin. Respiration was, however, gasping and irregular, and the infant died three hours after birth. Three drachms of dark fluid blood were found in the right pleural cavity. More blood lay behind the right pleura, detaching it from the six upper ribs. Immediately over the head of the second rib was a small hole in the pleura. The second intercostal vein was found torn across at this point. There was no trace of fracture of the rib or of damage to its joint. Gebhard does not think that the vein was torn during delivery; he believes, from a demonstration made on a dead fœtus, that when the child is swung, after Schultze's method, the scapula is pressed against the heads of the upper ribs, so that a too violent swing may tear the attached pleura, and even, as in this case, damage the adjacent intercostal vein.

THERAPEUTICS.

(468) External Application of Guaiacol.

Bosc (*Lyon Médical*, November 18th) speaks of the treatment and possible cure of acute pulmonary tuberculosis by this method. He first refers to the antipyretic action of guaiacol used in this way in tuberculosis, and cites the cases recorded by Courmont in which recovery apparently ensued. He then relates in full the following remarkable case of acute pulmonary tuberculosis in a woman, aged 33. A year previously she was found to have slight physical signs at both apices, and tubercle bacilli were present in the sputum. On admission, there was much anæmia, prostration, wasting, and slight diarrhœa; the pulse was 120 to 130, and the temperature fluctuating. The abnormal physical signs in the chest, however, were slight. During the next few days there was blood-stained sputum, and the condition of the patient grew worse. There was great dyspnœa. By way of trial 2 g. of guaiacol (guaiacol and sweet almond oil, āā) were applied to the back of the hands. By the next morning the temperature had fallen 3° C., and the patient's general condition was improved. The dyspnœa as well as the cough and expectoration were less. A further application of guaiacol was made. The improvement continued. A fortnight later the patient was much better and able to get up. She had gained flesh and her appetite was excellent. The temperature remained low and there was no cough. The rapid improvement was remarkable. The effect on the temperature and general condition was marked and lasting. The author does not think that there can be any doubt about the diagnosis nor yet any question of coincidence in this or in Courmont's cases. Alarming symptoms in the shape of low temperature, copious sweating, tendency to collapse, have been related as a result of this guaiacol treatment. It is well not to exceed 1 or 2 g. for each application. The author then discusses its mode of action.

(469) Electricity in the Treatment of Skin Disease.

Oudin (*Ann. de Derm. et de Syph.*, August - September, 1894) has since October, 1892, tried the effects of currents of great frequency and high tension without other treatment of any kind in various affections of the skin, with results which he considers most encouraging. In eczema, acute and chronic, in psoriasis, in pruritus, in alopecia areata the beneficial effects were not only rapid but to a large extent permanent. Oudin thinks that in electricity applied in this manner we have a valuable addition to the therapeutics of the skin. He points out that there is no reason why other methods should not be used in combination with it. The currents are absolutely harmless, and are perfectly well borne by the most sensitive and timid patients.

(470) "Salaktol" in Diphtheria.

Walle (*Deut. med. Zeit.*, November 15th) introduces to notice "salaktol," a new remedy for diphtheria, which he has used with striking success. The remedy consists of a combination of hydrogen peroxide with sodic salicylate and sodic lactate. In a series of 52 cases, including every variety of the disease, and occurring in patients of every age and of both sexes, not a single one ended unfavourably. These cases included 26 children of ages from 6 months to 16 years, 19 women and girls aged 18 to 38, and 7 men aged 19 to 62. Some of these cases were simple from the onset onwards, others were grave, with much œdematous swelling, whilst others, again, were complicated with scarlet fever. The treatment consisted in careful and systematic pencillings of the affected parts of the throat with "salaktol" every three hours

(every two hours in severe cases), in the use of the remedy as a gargle meanwhile, and tablespoonful doses of it taken after each pencilling. In little children, the very timid or greatly prostrated, and patients with narrow throats, the pencillings were omitted in favour of "salaktol" inhalations every two hours, conducted for a quarter of an hour each time, with the needful rests. Febrifuges, such as antipyrin, antifebrin, etc., were only given in addition in exceptional cases where the temperature remained obstinately at a high level. Owing to the rapid disinfectant, loosening, and solvent action of "salaktol" on the diphtheritic membranes these remedies were rarely required. The temperature quickly fell, with speedy disappearance of the swelling and concomitant symptoms, headache, backache, pains in the neck and limbs, etc. Moreover, no sequelæ were observed, no paralysis, no nephritis, no transference to a neighbouring organ. The author claims that the very first pencilling improves the throat conditions, and in many cases the patient was nearly well in two or three days. Details of 5 cases are given showing its rapid healing action.

(471) The Feeding of Infants.

Biedert (*Berl. klin. Woch.*, October 29th, 1894) holds that there is no antagonism between the chemico-physical principles of infant feeding and the bacteriological considerations treated of by Heubner. Cow casein is difficult of digestion, and the undigested remains serve as a soil for the growth of micro-organisms. The amount excreted in the stools is no exact measure of the digestion of food. In children fed with cow's milk the work of digestion is increased, and the residue in the stools may be only moderately increased. Intestinal antisepsis chiefly depends on a satisfactory digestion and absorption of the intestinal contents. The stools of those fed with cow's milk differ from the soft, yellow stools of the breast-fed. The author has seen differences between the stools of the latter and of those fed on sterilised milk. The chief site of the pathological processes in the deranged digestion lies in the cæcum and large intestine, hence the value of local treatment (washing out). Breast-fed children may thrive and yet have thin diarrhœal stools, even containing mucus, but this is not so with those fed on cow's milk. Biedert has long advocated the boiling and subsequent cooling of the milk. He refers to some of the advantages of Soxhlet's apparatus. A quarter of an hour's boiling does not suffice for sterilisation. He then refers to the presence of micro-organisms in the saliva, stomach, and intestine, yet he believes in as perfect a sterilisation as possible of the milk. He speaks of the value of the addition of cream to the milk. He has found that Loeflund's half-peptonised milk approaches very nearly to human milk, but unfortunately it cannot be effectually sterilised. Human casein and cow's casein have been shown chemically to be two different bodies.

(472) A Reflex of the Buccal Mucous Membrane Excited by Sulphuric Ether.

Soulier (*Sem. Méd.*, November 3rd) calls attention to the possibility of combating acute pulmonary œdema by pouring a few drops of ether into the mouth, which provokes a pulmonary reflex which has as its result the expression of the contents of the lung. He tried this procedure in the case of a man in a state of agonising asphyxia. He placed a teaspoonful of ether in the mouth and it set up an abundant expectoration, but unfortunately six hours after the patient was dead.

PATHOLOGY.

(473) Subnormal Temperatures of the Body.

Janssen (*Deutsches Archiv für klin. Med.*, Bd. liii) gives a detailed account of the various causes which may produce a subnormal temperature, basing his review on the records of 400 cases at the Kiel Medical Clinic, and on cases reported in medical literature. A very low temperature may occur: (1) After the direct withdrawal of heat from the body, as in cases of exposure, of unconscious or drunken persons in a very cold atmosphere, or after immersion in very cold water. 2. After the loss of great quantities of fluids from the body, as in severe diarrhœa, enteritis, cholera, or profuse hæmorrhage. (3) In conditions of cachexia and inanition, such as cancer of various parts of the alimentary canal, severe forms of diabetes, pernicious anæmia; during convalescence from febrile affections, and in many chronic mental diseases. (4) In grave circulatory disturbances, as in cardiac failure. (5) In various diseases of the central nervous system, in tuberculous meningitis, at the onset of cerebral hæmorrhage and embolism, in some cases of brain tumour, and in general paralysis of the insane. (6) After irritation of sensory nerves, as in intestinal strangulation, in renal and gall stone colic, internal perforations of the intestines, etc., and after surgical operations. (7) In extensive skin affections, such as sclerodermia and extensive burns. (8) After fevers, when the temperature may long remain subnormal; or in the course of certain fevers, as in pyæmia. (9) In cases of poisoning by phosphorus, atropine, morphine, carbolic acid, and in alcoholic intoxication; also in the autointoxication of uræmia, and in diabetic coma. In some healthy persons subnormal temperatures are occasionally observed without any apparent cause. Numerous examples of very low temperatures in the above-mentioned diseases are given in the original, and Janssen concludes that subnormal temperatures occur much more frequently than is generally supposed, and that a depression under 33° C. (91.4° F.) is by no means rare. The facts brought forward by the author also show that low temperatures *per se* are not grave prognostic indications. Very low temperatures may occur without any symptoms of collapse, and in severe collapse the temperature may be normal. Subnormal temperatures are unfavourable prognostic indications, especially when they occur and persist in cachectic patients.

(474) Typhoid Septicæmia and Pseudo-Typhoid Infection.

Cases occur which in their course and chief symptoms closely resemble typhoid, but which on minute pathological examination show an absence not only of the ordinary typhoid characteristics, but also of any other signs which could lead to a certain diagnosis as to the nature of the affection. Banti (*Rif. Med.*, September 6th, 1894) describes some cases of this nature of which the following notes will give the chief characteristics. The first case was exposed to typhoid infection, and shortly after she became ill with headache, loss of appetite, and afterwards fever. She had the typical typhoid facies, with dry tongue, slight delirium, subsultus tendinum, etc., but all through the course of the affection there was a complete absence of diarrhœa, cutaneous rash, meteorism, and enlargement of the spleen. The case terminated fatally after the third week. The *post-mortem* examination showed a complete absence of enlarged follicles in the intestines, a single minute ulcer in the end of the duodenum, a small spleen, a normal liver and mesenteric glands. The kidneys were slightly enlarged, and showed cloudy swelling of their epithelium. The blood and juices of the organs yielded typical cultures of the typhoid bacillus. The reason for the absence of the usual pathological signs of typhoid in the above case is difficult to find, but the author suggests that perhaps the body became infected through the small ulcer found in the jejunum, giving the infection a septicæmic character, and preventing the usual lesion of the intestinal lymphatic apparatus. The cases of pseudo-typhoid described in the same paper all occurred in one household, the members of which were affected one after the other with an affection clinically almost impossible to distinguish from true typhoid. The only symptom failing was the usual petechial rash. One case ended fatally, and on examination showed a complete absence of bacilli from the blood or exudations. The spleen was much enlarged, also the intestinal solitary glands. Typical typhoid ulceration was wanting, but there was an extensive intense enteritis. This group of cases would be extremely difficult, if not impossible, during life to differentiate from cases of true typhoid, unless one insists on the presence of a rash as a sign of this disease; yet the pathological examination excluded the possibility of considering them as such. The author prefers to group them under the heading "pseudo-typhoid."

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(475) Syphilis Simulating Amyotrophic Lateral Sclerosis.

Ballet (*Sem. Méd.*, November 21st) discusses the following case: A managed 34, of gay and sprightly but unstable temperament, as shown by the vicissitudes of his life before he came under notice in the summer of 1893, met with a severe disappointment, after which he became soured and sullen, lost flesh, and himself complained of general weakness. On September 2nd he was acting, and at the moment of retiring experienced a sort of weakness followed shortly by difficulty of speech and paresis of the right extremities, particularly the lower limb. Eight days after the arm became entirely paralysed, attacks of numbness having preceded this event. From September 20th to the 30th the left limbs were being rendered powerless, the leg being affected first as on the right side. At the same time the difficulty in articulation was increased. On October 16th the patient lay motionless in the dorsal decubitus; the orbicularis oris and muscles supplied by the cervico-facial nerve paralysed. Closing of the lips was difficult and incomplete; the saliva flowed from the mouth. The tongue moved with difficulty and could not be protruded beyond the edge of the teeth. Velum palati paralysed; deglution of liquids only possible. Articulation of words reduced to an unintelligible grumbling. Voice raucous hoarse, and bitonal, and on attempts at swallowing terrible suffocative attacks ensued with cyanosis and impending asphyxia. The upper extremities almost completely paralysed, the right more than the left. The patient could not help himself to food or wipe his nose. The forearms were semiflexed on the arms, the hands slightly flexed on the forearm, and the fingers from their position recalling the "claw" hand. The lower extremities equally paralysed again most markedly on the right side. The patient could not remove his legs in bed nor raise them, he was totally unable to stand. The oleceranon and wrist reflexes, also the patellar, were remarkably exaggerated. Much atrophy existed in the four limbs. In the hands the thenar and hypothenar eminences had nearly disappeared, the interossei were much wasted. In the forearm the flexors especially were concerned and in the shoulder the deltoid and supraspinatus. In the legs the triceps femoris and calf muscles were most atrophied. There was no wasting of the tongue muscles although paralysed. There were no sensory symptoms and no paralysis of the sphincters. It was elicited that in 1883 the patient had been treated for sores, which appeared to be specific, also again in 1890 for laryngeal symptoms. Therefore on October 20th mercurial frictions were ordered, and iodide of potassium. On November 15th the articulation had so improved that whole sentences were intelligible, but speech was still somewhat explosive. Swallowing performed more easily. The atrophy of the muscles was apparently arrested and the patient could raise himself in bed without help. On January 10th the treatment was suspended. Speech was now still more easy and there was no longer muscular atrophy visible to the naked eye. The patient could walk a little with assistance. There was still present, although improved, a high degree of emotional sensibility, the patient laughing and crying without the slightest cause. Discussing the diagnosis, the author inclined to regard the case as one of pseudo-bulbar paralysis, a little anomalous, in a syphilitic patient. The absence of sensory troubles, the very exaggerated tendon reflexes, and especially the emotional symptoms excluded a polyneuritis of specific nature. Amyotrophic lateral sclerosis was a disease of slow onset and progressive nature, therefore to be set aside. A bulbo-myelitis destroying strands of fibres in the anterior pyramids and extending to the nuclei of the bulb and cells of the anterior cornua would theoretically produce the symptoms, but the process was too diffuse to make an entirely motor affection likely, and in the recorded cases the symptoms were quite unlike those here presented. Moreover, the rapid improvement of the symptoms was against this diagnosis. Brissaud's researches connect spasmodic tears and laughter with lesions of the central grey nuclei in the neighbourhood of certain fasciculi of the internal capsule, and this emotional sensibility is a frequent factor in cases of pseudo-bulbar paralysis. Relying on these facts and the peculiar onset of the disease in this patient Ballet thought the symptoms were due to a double central focus of disease near these nuclei and appearing first on the left side then on the right.

(476) Acromegaly.

Such a case is elaborately recorded by Pershing (*Journ. of Nerv. and Mental Diseases*, November, 1894) and the proposed line of treatment based on the pathology of this affection indicated. The patient was a woman, aged 42; father and brothers healthy; phthisis on mother's side. Her illness began at the age of 28, with failing vision, associated with menstrual irregularities, a lack of physical endurance, and headache, which gradually got worse. The joints, lower jaw, and extremities then began to hypertrophy slowly, and continued for some years till they assumed the characteristic enormous proportions. At 32 there was total loss of vision in the right eye. At 35 the gums began to recede from the teeth, and three years later, on account of pain in the jaws, fifteen teeth were extracted. It now was apparent that the lower jaw projected beyond the upper. For the past five or six years there had been attacks of palpitation with dyspnœa, and at times very profuse sweatings. The whole physiognomy was characteristic: enlarged thickened nose and lips, elongated lower jaw, large and puffy eyelids, spade-like hands with thick sausage-like fingers, feet broad and thickened, disappearance of hair from the pubes and axillæ while flourishing elsewhere, speech slow and drawling with high-pitched voice, etc. Temperature was 97.8° F.; excessive sensibility to cold; muscular power diminished, mental power somewhat dulled, and the patient at times rather irritable. Weakness increased, with headache and pain in the lower limbs; the bladder and rectum were gradually lost control of, and the patient passed through an apathetic state into coma, ending in death. The writer refers to the published cases of acromegaly, with necropsies—eighteen in all—known to medical science. Fifteen out of these showed disease or destruction of the pituitary body, while the most careful clinical investigation has shown (according to Marie) that the remaining three were cases of hypertropic osteo-arthropathy of pulmonary origin, and simulating true acromegaly only in certain features. The conclusion is that the trophic disturbances are due to the destructive lesion of the pituitary body, and the etiology of these is explained from the results of the recent researches of Andriezen on the function of this gland in the earliest vertebrates; for example, that while being connected with the respiratory water vascular stream which irrigated the cerebral ventricles and central canal, the pituitary gland furnished some substance necessary for the proper nutrition of the nerve tissues, which is now furnished directly as the same observer pointed out, through the blood and lymph. Pershing seems to think that the most hopeful treatment of acromegaly is the administration of pituitary bodies from the lower animals, which he regrets he was too late in trying in the above case.

SURGERY.

(477) Resection of the Trigeminus.

D'Antona (*Il Policlinico*, November 15th, 1894), first refers to the experimental evidence in regard to the trophic lesions following section of this nerve, and especially its ophthalmic branch. (Epitome, November 3rd, 1894, par. 333). He then records two cases of neuralgia involving the two lower branches operated upon with success. (1) A woman, aged 25, commenced to have neuralgia in 1886. At first the pain came on in paroxysms, but later it was continuous. Other methods of treatment had been tried in vain. The third branch of the fifth nerve was laid bare by a modification of Rose's method, and traced up to the foramen ovale. A small piece of bone was then removed with the trephine. The inferior part of the ganglion corresponding to the two lower branches of the nerve was cut away. Nearly two years afterwards the

patient was in the best of health, and there was only a little anæsthesia above and below the zygoma. (2) A woman, aged 40, had suffered from neuralgia for fifteen years; worse during the past five years. Other treatment was unavailing. After the trephine was applied there was some smart bleeding, so that after plugging the wound it was decided to postpone the continuation of the operation. After 48 hours 2 cm. of the third branch were resected. Some suppuration followed, but the patient made a good recovery, and was free from neuralgia 15 months after the operation. Very distinct changes were found in the part of the ganglion removed from the first case, namely, diminution of the ganglion cells in number, and also deformity in shape, the connective tissue element being increased. The author figures a modification of Rose's trephine to facilitate its application.

(478) Stricture of the Œsophagus.

MEYER (*Amer. Jour. Med. Sci.*, October, 1894), discussing the treatment of stricture of the œsophagus, says that there are now three useful and reliable methods of operation at the surgeon's disposal. These are the methods of von Hacker, Witzel, and Ssabanejew-Frank. Of these, those of von Hacker and Witzel are well-known. Ssabanejew-Frank's operation is performed as follows; An oblique incision is made pretty close to and parallel with the left costal cartilages. The muscles should be bluntly separated according to the direction of their fibres. After dividing the peritoneum, the stomach is drawn forward, and a cone of about one to one and a half inch high of the anterior wall of the stomach from near the fundus held outside and in front of the wound with the help of one or two silk slings. The edges of the incised peritoneum are now stitched to the stomach around the base of this cone. Thus the peritoneal sac is at once closed. Frank also advises to stitch the divided muscles to the stomach in order to strengthen and remove tension from the first row of sutures. A second incision is now made above the border of the ribs three-quarters to one inch long, and about one and a quarter to one and a half inch apart from the first one. It only penetrates the skin. The interposed bridge of skin is bluntly undermined and the stomach cone pulled underneath it and out of the upper wound with the help of the silk slings. The wound of the abdominal wall is closed and the stomach incised with the knife for about one-half inch (very readily done between the two slings), and stitched to the skin. Ssabanejew has done this operation four times. In all the cases regurgitation through the fistula so produced was prevented. Frank also has reported four cases, every one of which was successful as far as the working of the fistula was concerned. He explains the favourable mechanical effect of the operation as follows: "The external opening of the fistula is raised; only if the stomach be filled to a great extent does the level of its contents reach the line which corresponds with the external opening." In all Frank's cases the fistula closed absolutely watertight at all times without the use of a special apparatus. Witzel's operation, according to Meyer, prevents leakage with absolute certainty, and if von Hacker's or Ssabanejew-Frank's operation be carried out properly, they give rise to the same favourable result. On this account it is advised that gastrostomy should be resorted to early in cases that will sooner or later require this operation. In cases of burn of the œsophagus, primary gastrostomy and timely dilatation of the contracting scar will most probably prevent conditions which at present generally confront the surgeon in this class of cases, and are sometimes incurable. For this class of case Witzel's method is the best, since, when the tube has been removed the oblique canal will close spontaneously, and hence no secondary operation will be needed. In cases of cancer of the œsophagus the author advises that a gastric fistula should be established as soon as the weight of the patient commences to diminish. In advanced cases, where the patient is very weak, von Hacker's operation should be performed, cocaine being used if requisite.

(479) Urogenital Tuberculosis.

PORTER (*Annals of Surgery*, vol. xx, No. 4) reports a case of this in a man aged 53. The condition was secondary to a pulmonary tuberculosis, the infection probably being carried by the blood stream. The author believes that urogenital tuberculosis most frequently begins in the epididymis or the prostato-vesical region, and is usually secondary, rarely primary. Secondary infection occurs by the blood or lymph channels, or from neighbouring organs or tissues. Hereditary infection is probably more frequent than is generally supposed. Tuberculosis of the urethra alone is exceedingly rare, and primary urogenital infection by way of the blood and lymph channels is not impossible but it is rare.

MIDWIFERY AND DISEASES OF WOMEN.

(480) Two Pregnancies in a Patient with a Large Fibroid.

REMY (*Arch. de Tocol. et de Gyn.*, October, 1894) reports the case of a primipara who entered the maternity at Nancy at term in her first pregnancy. The abdomen was filled by two oval tumours separated by a vertical groove over 2 inches wide, running from the epigastrium to the pubes. The left tumour grew harder on palpation; it measured 10½ inches vertically, the right tumour being a trifle smaller. A fœtus could be felt in the left tumour. The cervix was displaced somewhat forwards, the lower segment occupied by the fœtal head. On April 29th, 1881, labour set in. During a pain both tumours could be felt contracting, the left most distinctly. The membranes burst during dilatation, a little green fluid escaped, the fœtal heart sounds could be heard. At the end of eleven hours dilatation was complete. Half an hour later the head was still deeply engaged, and the heart sounds had ceased. The forceps was put on, and a dead fœtus weighing 7 lbs. 11 ozs. extracted. Involution proceeded fairly. In February, 1883, the patient again became pregnant. The fibroma on the right presented the same appearance as before; in the middle of pregnancy, when it was still larger than the uterus, it rested on the brim. Hence the uterus was pushed up and the finger had to be passed far up above and behind the pubes in order to reach the cervix. It was expected that, after a certain time, the fibroid would cease to push up the uterus, the latter in turn pushing up the fibroid and replacing it in the brim of the pelvis. This occurred in September; the cervix was then easily accessible and in its normal place. On December 12th, 1883, the patient entered the maternity, at term; the abdomen was extremely distended and the tumour was as big as the uterus. The head occupied the lower segment, but was high up. At 5 P.M. labour set in. The pains were strong; at 8 P.M. the cervix was effaced, at 1 A.M. the waters broke, and the child was safely delivered alive. No flooding followed.

(481) Cancer of Ovary Communicating with Cæcum.

BRÖSE (*Centralbl. f. Gynäk.*, No. 39, 1894) reports the following case. The patient was 48, an ovarian tumour was detected, and there was suspicion of malignancy. At the operation the tumour was found closely connected with the cæcum and the subserous connective tissue around it. The growth was lifted up out of the pelvis, to allow of better inspection of its relations, but it was ruptured as it was being drawn up. A quantity of fæces mixed with clot escaped from its interior. The cancerous growth had extended, after adhesion, to the tissues of the cæcum, and ulceration had followed. The fæces which had escaped into the pelvis were carefully removed, the pelvic cavity stuffed with iodoform gauze and the end of the gauze left dependent from the abdominal wound. A large piece of the cæcum around the cancerous portion was excised and an artificial anus was formed. In the course of this proceeding the lymphatics of the mesocolon were found to be infected. The patient recovered from the operation, and the closure of the artificial anus was contemplated.

(482) Laceration of Recto-Vaginal Septum in Labour: Perineum Intact.

BAUDRY (*Annales de Gynéc. et d'Obstét.*, July, 1894) reports the case of a primipara, aged 27, who was delivered at term, labour beginning at 10 o'clock one evening, the vertex presenting in the first position. At 3 P.M. next day the membranes broke, the head descended to the vulva and the patient suddenly felt a desire

to defæcate. The midwife recommended her simply to bear down. Then a hand was seen to project from the anus. The head was delivered and the hand easily disengaged from the wound which it had made. There was no trouble about the placenta, and but little blood escaped after delivery. Baudry washed out the vagina with sublimate lotion and then examined the parts. The vulva and perineum were intact. The anus formed a firm, dark blue protrusion. There was a wide triangular rent in the posterior vaginal wall; the apex, to the left, lay within an inch of the cervix. The base was formed by the tearing off of the vagina, so to speak, from the vulvar ring; three fingers could be passed into it. The rectal side of the wound was much smaller and circular, admitting only one finger. It now transpired that ten months previously an abscess had formed in the recto-vaginal septum and burst spontaneously. The rent was through the cicatrix of this abscess. The apical part of the laceration was closed at once with five carbolised silk sutures. The deepest were hard to introduce, but were passed with Emmet's perineal needle. The base was closed with sutures passed through the perineum. The rectal side of the wound was not sutured. On the seventh day the sutures were removed. A fistulous tract remained in the lower part of the wound; it was cauterised several times and closed entirely within four months.

(483) Vaginal Hysterectomy for Carcinoma.

At the recent congress of the Italian Obstetric and Gynæcological Society *Rif. Med.*, October 31st) Mangiagalli showed with numerous figures how the mortality in hysterectomy has gradually lessened from 25 per cent. (Bruner) to 3.3 per cent. (Kaltenbach), and how there is no great difference in mortality between hysterectomy and high amputation at the neck. The author prefers hysterectomy, and would not limit his cases to those where there is complete mobility of the cancerous uterus. He would leave the uterine annexa unless disease justified their removal. From a study of his statistics, Mangiagalli concludes that the mortality of vaginal hysterectomy for cancer of the body is superior to that of hysterectomy for cancer of the neck; that the most important prognostic element in cancer of the neck is the spreading of the process to the vagina or parametrium; compared with this the effect of the method of operation is slight in prognosis. No case should be regarded as cured until a certain number of years (varying from two to five, according to different authors) have elapsed. The author concludes that vaginal hysterectomy for carcinoma is a highly beneficial operation.

(484) Undeveloped Right Half of Genito-Urinary Tract in Adult.

Paul Delagénière (*Annales de Gynéc.*, November, 1894) discovered a remarkable arrest of development in a woman, aged 34, during an abdominal section. The uterus instead of having a well-marked right border was quite flat on the right side. The right tube, ovary, and kidney were all wanting. The left kidney was hypertrophied. The peritoneum was reflected directly from the uterus on to the cæcum those parts being in direct contact. The anterior layer of this fold was reflected on to the parietes and joined the lower border of the great omentum to the right. The omentum and this layer seemed continuous. The malformations represented atrophy (*sic*) of the right Wolffian body.

THERAPEUTICS.

(485) Tizzoni's Antitoxin in Tetanus.

Bauer (*Wiener klin. Woch.*, November 8th) reports the case of a labourer, aged 26, who was admitted into hospital at 8 P.M. on July 12th. Eight days previously the sole of the right foot had been wounded by the entrance of a splinter. The injury was dressed at the time. On July 11th he first experienced tugging pains in the masticatory muscles. On the 12th he became unable to swallow, and cramps of the neck muscles appeared. He was a middle-sized, powerfully muscular man, with moderate adipose tissue. On admission, temperature 36.8° C., pulse 78, respiration 30; complains of thirst; pupils contracted, equal, and reacting promptly. Head strongly bent backwards, and drawn to the left. Unable to separate jaws widely; tonic contraction of masseters; tongue clean, moist, freely movable. A triangular, funnel-shaped wound of right sole, with pent-up pus, the skin around infiltrated and painful. Œdema of the dorsum of both feet. The wound was probed, enlarged, and cleansed, much ichorous pus draining away. Iodoform gauze introduced, and bandage applied. July 13th passed a quiet night. At 8 A.M. convulsions appeared. Head bent back and rotated to the left, and rigidly fixed. Upper part of trunk rigid, legs extended. The eye muscles, masseters, and neck muscles all tonically contracted. Mouth could be opened 1 cm. with difficulty. Lips and angle of mouth drawn down on both sides, giving a sardonic expression. All the trunk muscles rigidly contracted except shoulder and anus. Arms strongly flexed at the elbows, and knees at an obtuse angle. Articulations of hand, and fingers also flexed. Face and neck covered with beads of perspiration. The tendon reflexes much increased, the slightest touch eliciting convulsions. Temperature 36.8° C., pulse 84, soft, tension diminished. Urine examined, no albumen, no sugar. At 10 A.M. an enema of chloral hydrate, 30 grains, was given, producing immediately a diminution of reflex irritability and some desire for sleep. At 4 P.M. the rigidity of upper extremity was more marked, eyes remain closed, expression more rigid. Tonic contraction of all the facial and neck muscles; arms abducted and strongly flexed. Since 10 A.M. ten attacks of convulsions occurred. Occasionally minor attacks occurred, which increased in intensity till the patient's head was jerked to the middle of his bed, and his feet shot right out of it. Much cyanosis during these and cries of pain. Pulse 90, respiration 60, chiefly abdominal. Urine clear at first, becoming turbid with phosphatic deposit, ammoniacal odour, no albumen nor nucleo-albumen. At 5 P.M. 2.25 grammes of Tizzoni's original antitoxin were injected, but at 6 P.M. five general convulsions of greater intensity occurred, followed by feebler attacks affecting chiefly the upper thorax. At 12.15 A.M. of July 14th 30 grains more chloral were given by enema, but notwithstanding three violent convulsions followed. Examination of the urine after the antitoxin injection gave the nucleo-albumen reaction. At 1.30 A.M. patient died in a severe attack, probably owing to spasm of the diaphragm. At the necropsy the thyroid was found enlarged, the right lobe cystic, the left colloid. Both lungs much distended, full of blood and soddened, with scattered slight hæmorrhages in their substance. A copious frothy fluid exuded from the bronchi, which in the lower lobes were dilated, and contained a tenacious mucus. Heart of normal size, right ventricle flaccid, left contracted, openings and valves normal, heart muscle pallid, reddish grey, rotten. Pleura and pericardium ecchymosed. Liver enlarged, somewhat congested. Spleen enlarged, soft; the pulp dark red and shreddy. Kidneys large, flaccid, congested: surfaces studded with clusters of venules. On section, cortex swollen and granular, pyramids dark red. Cerebral membranes congested, otherwise unaltered, brain cortex reddish violet, the medullary substance soddened and interspersed with very numerous puncta cruenta, the ventricles contracted. The author, in summing up, comments on the severe character of the case, and expresses a doubt whether the hitherto successfully treated cases have not been of a more chronic character.

(486) External Use of Guaiacol as an Antipyretic.

Brill, of Unverricht's clinic (*Centralbl. f. inn. Med.*, November 24th, 1894) first refers to the unpleasant symptoms which have been noted after the external application of guaiacol. He has used the remedy in 4 cases of pneumonia, 5 of enteric, 4 of phthisis, 1 of bronchitis, and two of rheumatism; 1 c.cm. was first applied, and if without result 1.5 to 2 c.cm.; more than 3 c.cm. was never used. Smaller doses are without ill effects, but they cannot bring down the temperature. By increasing the dose, the unpleasant symptoms appear, and thus the value of the results obtained may be very doubtful. These unpleasant symptoms are profuse sweating, feeling of weakness, and even collapse. These results were such as to make him give up the use of guaiacol as an antipyretic. He then investigated the antineuralgic action of the drug. In 22 suitable cases, mostly of rheumatic pains, the external application of guaiacol was distinctly useful. The

painful parts were painted with guaiacol as rapidly as possible to prevent evaporation; it was then rubbed in, and the parts covered with gutta-percha. No unpleasant effect on the skin was noted. The antipyretic effect of guaiacol is due to its absorption through the skin and its action on the heat centres. The author concludes that guaiacol applied externally in doses of 1.5 to 3 c.cm. acts energetically as an antipyretic, but its use as such is not to be recommended, owing to unpleasant bye-effects. In doses of 0.75 to 1.5 it has an antineuralgic action in the most varied diseases, and is without unpleasant consequences.

(487) Effects of Sea Air.

LINDEMANN (*Therap. Monatshefte*, November, 1894) gives various observations made both during a long stay at Heligoland and in the course of an ocean voyage. The most marked effect as observed in individuals accustomed to town or country air is produced on the circulation, which tested by the sphygmograph showed a slower pulse, as also higher and steeper curves. This as well as the deeper and longer inspirations the author ascribes to the stimulating properties possessed by sea air, on account of its mechanical admixture with salt and the greater force of the wind; the skin temperature is also more permanently reduced by sea than land air. As regards sea sickness, its effects are also to retard the pulse, but at the same time very much to lower its force. However, these effects rapidly pass off, and the author's sphygmographic charts show the condition of the pulse in a healthy individual before embarking, during an attack of sea sickness and afterwards, as also the continued improvement for some weeks after landing.

PATHOLOGY.

(488) The Pathological Anatomy of Paralysis Agitans.

REDLICH (*Jahr. f. Psych.*, Bd. xii, p. 385, and *Centralbl. f. allgemeine Pathologie*, November 4th, 1894) records the results of the pathological examination of the nervous system in seven cases of paralysis agitans. The spinal cord was most affected. Small patches of sclerosis were found, chiefly in the posterior columns of the cord; similar but less extensive patches were found in the lateral columns; whilst in the anterior columns they were slight or absent. The median and ventral parts of the posterior columns, near the posterior commissure, were generally most affected. All the changes were most marked in the lumbar and cervical enlargements. In the cervical region there was almost always a more or less extensive diffuse sclerosis in the columns of Goll. The sclerotic patches originated from the vessels, and were of the nature of perivascular sclerosis. Through the confluence of several small patches, where the vessels were close together, a large sclerotic patch was produced. In the parts most affected it appeared as if the nerve fibres had gradually atrophied through the increase of the interstitial tissue. The vascular changes were of the nature of endo- or periarteritis, with extension of the inflammatory process into the surrounding parts. In the grey matter the vessels were thickened, but there were no changes around them. In almost all cases the ganglion cells of the anterior horns and of Clarke's columns were pigmented. Changes similar to those found by Redlich have also been recorded in ten cases recently published by various authors. Hence Redlich regards paralysis agitans as a disease having a definite pathological anatomy. Some of the minor changes described must be looked upon as senile. The vessels of the cord in old persons frequently show pathological changes, but these never reach such a high degree as in paralysis agitans, and perivascular sclerosis is absent or only minimal.

(489) The Pituitary Body and the Nerve Elements therein.

IN a research on this subject by Berkley (*Johns Hopkins Hospital Reports*, 1894), a number of interesting questions in physiology and pathology are opened up. Using the hypophysis of the adult dog, the organ was studied with the aid of Golgi's method. The nerve fibres entering the anterior or glandular lobe can be seen passing into the glandular substance in company with the blood vessels; these fibres ultimately divide into fibrils, which end in free bulb-like points abutting against the glandular follicles exactly as in other secreting gland structures, the whole arrangement being very similar to the adrenal gland. No nerve cells are to be found in the substance of the anterior lobe. The posterior lobe contains both nerve-cell elements and other (ependymal) structures which are remarkably shown by the Golgi method. Interspersed with these are a few glandular follicles, which the author thinks are offshoots from the anterior lobe, and derived from the same parent buccal epithelium. The epithelial cells which remain (unmodified) in the posterior lobe are at the periphery in a layer, about three or four deep, and nearly continuous all round, apparently an enclosing sustentacular structure supporting the nerve elements proper which are lodged within. These latter comprised scattered cells, some of spindle form, as shown by Andriezen (BRITISH MEDICAL JOURNAL, January, 1894) by the use of the Golgi method, while others are rounded and pear-shaped, or irregular in outline. Towards the mid-region of the lobe three fusiform nerve cells form a group, which is especially distinct behind the position of the infundibular duct. The author also confirms the conclusions of Andriezen "that the pituitary in amphioxus and ammocoetes is of three-fold structure, namely, a subneural glandular organ; a duct lined by ciliated epithelium, which affords a communication between the buccal and neural cavities, and a group of nerve cells around and at the back of the upper opening where the duct widens into the ventricular cavity," and adds the curious confirmation that essentially the same structures should be preserved in so high a vertebrate as the dog. With the Golgi method the author finds the presence of both the stellate and the mossy types of neuroglia cells, while he finds the fusiform nerve cells have processes which, through a connection with the peculiar neuro-epithelial cells (on the periphery of the duct and posterior lobe), had at one time the function of testing the water entering the infundibular canal. Indeed, their peripheral expansions are not unlike those of the mitral cells in the olfactory bulb, and suggest a similar functions to the osphradial ganglia of molluscs, as was pointed out by Andriezen. The author also gives grounds for recognising the distinction between these sensitive elements and the secretory fibres, and concludes that in one of the higher vertebrates (the dog) at any rate the pituitary gland retains its twofold *rôle*; the secretory *rôle*, perhaps modified but still active, the nervous (special sensitive) function lying quiescent, though still indicating their ancestral activity in their tuft-like terminations, which resemble the mitral cells of the olfactory bulbs. The author's researches go to confirm the importance of the pituitary body in the life-history of the vertebrate, and to show its close connection both as a secretory and a sensory stricture with the central nervous system, while its connection with an oxygen-bearing water vascular stream passing through the nervous tube of ancestral vertebrata shows that its secretion has an important bearing on the metabolism and assimilation of oxygen by the brain and nervous system generally, a conclusion with which the recent researches of Vassale and Sacchi (*vide* EPITOME, BRITISH MEDICAL JOURNAL, June 23rd, 1894, par. 504) agree.

(490) Rapid Detection of the Typhoid Bacillus.

LYONNET (*Sem. Méd.*, November 3rd) gives the following: An ordinary culture bouillon is taken and decolorised with animal black, and 1 per cent. of phenic acid and 20 per cent. of lactose is added, with a small quantity of Congo red. Owing to the phenic acid only the typhoid bacillus and bacterium coli are able to grow in it. If the typhoid bacillus be present, the milk sugar does not ferment; the bouillon becomes cloudy but remains red. If the coli bacillus be present, the bouillon becomes cloudy, the milk sugar undergoes fermentation, and lactic acid is formed, which changes the colour of the bouillon from red to violet. Hence, if the broth remains clear, neither the typhoid nor coli bacillus is present. If the broth becomes turbid but remains red it is probably due to the presence of the typhoid bacillus. Lastly, if the broth becomes turbid but at the same time is changed to a violet colour, the presence of the coli bacillus may be inferred.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(491) Arthritis Complicating Acute Pneumonia.

Meunier, of Hanot's Clinic (*Arch. Gén. de Méd.*, November, 1894), reports the following case in a man aged 60. On the fourth day of the disease his knee became swollen and painful. On admission on the twentieth day he still had slight signs of the past pneumonia. The swollen joint was punctured with a fine needle, and a dirty yellowish liquid obtained. This liquid, examined bacteriologically, showed not only the pneumococcus, but also the streptococcus. The joint was laid open by an incision on either side, washed out, and scraped. Notwithstanding this the patient continued to lose ground. Amputation was recommended, but declined by the patient, who then left the hospital. A mouse inoculated with a drop of the fluid from the joint soon died of a pneumococcus infection. Bouillon was also inoculated, and after the pneumococcus had perished the streptococcus was found. The author then refers to the recorded cases of this complication of acute pneumonia. A mono-arthritis is the most common, and the shoulder and knee joints are most often affected. Œdema over the joint is frequent. The lesions are strictly limited to the joint, and the prognosis, after incision and washing out, is favourable, if it be a pure pneumococcus infection. But it is also possible to have a mixed infection, as in the above-named case, and then the prognosis is more serious. Hence the importance of a bacteriological examination.

(492) The Urine in Chronic Arsenical Poisoning.

In a paper read before the Boston Society for Medical Observation (*Boston Med. and Surg. Journ.*, November 8th and 15th), W. B. Hills records the results of 260 analyses of urine for arsenic, representing 180 cases. Of these, in 135, or 75 per cent., arsenic was found; but it is not claimed that in all these cases there were symptoms of arsenical poisoning; in many cases Hills says that doubtless the presence of arsenic was a mere coincidence. He is convinced that there are sources of accidental poisoning which have hitherto escaped observation. The discovery of the coexistence of copper in one case—it was not looked for in others—suggests Paris green as one such source sometimes, and presumably in some article of food. He points out, however, that it is possible that in the free use of Paris green in the garden and field we have a hitherto unrecognised source of poisoning; the soil in many localities is, doubtless, impregnated with the poison. Another possible source is coal; and, if arsenic is a constituent of coal, there can be no doubt that it must be liberated during the process of combustion. The suggestion has also been made that illuminating gas might contain some arsenic, and Hills strongly recommends further investigation in both these directions as likely to lead to important results. The quantity of arsenic eliminated daily by the kidneys is very small, as a rule less than 0.01 milligramme per litre of urine: it is not surprising, therefore, that the time required for its elimination should be great; in several of his own cases about eighty days elapsed before the arsenic had completely disappeared from the urine. Amongst the more important complications of this form of poisoning is albuminuria, with hyperæmia of the kidney; his attention was not directed to this point in the early stages of his investigation, but in 70 cases a complete chemical and microscopical examination of the urine was made, with the result that in 23 there was no renal complication, whilst in 47 there was evidence of renal hyperæmia. Hills concludes from his own observation that when the system has absorbed such an amount of arsenic that the quantity eliminated with the urine daily is relatively large (0.03 to 0.05 milligramme per litre) there appear sooner or later evidences of renal hyperæmia, and that the kidneys are not apparently, as a rule, susceptible to arsenic, when the latter is present in the urine in quantities below 0.02 milligramme per litre. In the discussion which followed the reading of the paper, E. S. Wood confirmed the views of the author from his own experience in several important particulars, and gave two instances in which the hot air coming from the furnace and the coal dust of the furnace were found to be highly charged with arsenic, a statement confirmed by the next speaker, Davenport, who instanced as other sources of arsenic poisoning the ordinary silk coat-sleeve lining, the ordinary brown paper carpet lining, and the common black cambric furniture lining; in fact, according to him, the sources of arsenic were almost innumerable, and he wondered that poisoning was not more common. Putnam dealt with the subject from the clinical side, and threw out the suggestion that in paralysis from neuritis owning this cause treatment by arsenic might be beneficial. Bolles narrated very fully the case of a child whose urine had almost without intermission during five years contained arsenic, notwithstanding the most strenuous efforts to remove him from every possible source of the poison. Considering the rarity of domestic poisoning by arsenic in this country at the present time, we cannot but feel that in the furnace, as the chief distinguishing feature in the home life of the two countries, a very real source of the danger has been found.

(493) Malarial Pseudo-tuberculosis.

Charles Duba (*Journ. de Méd.*, November 10th, 1894) describes this condition as not infrequent in malarial countries. It attacks persons who for some considerable period have been affected with ague, and begins with marked weakness, depression, loss of appetite, and emaciation. A dry hacking cough, together with dyspnœa and irregular temperature, especially towards night, supervenes. Hæmoptysis sometimes occurs. Physical examination shows evidence of apical consolidation. Examination of the sputa, however, does not show the presence of tubercle bacilli. The cases recover under the influence of quinine and arsenic, provided the cachexia be not too advanced. The explanation of this condition, which may so easily be mistaken for true tuberculosis, seems to be that a local pneumonic process is started at the apices by an accumulation of pigments in the circulating blood.

SURGERY.

(494) Laminectomy for Fractured Spine.

The following case (*Weekblad von het Nederlandsch Tydschrift voor Geneeskunde*, November 17th) was treated in the clinic of the late Professor Salzer. About four years ago a house painter, doing some work on a high building, lost his footing, but in his fall grasped a ledge which projected some way lower down. Rescued from his perilous position, he did not seem at first to have suffered any serious injury, and was able to continue his occupation for some time, his only complaint being of pain in the back. The symptoms, however, gradually became worse, and finally he lost the use of both legs. After admission he was treated for three months by rest and extension, combined with massage and electricity to the lower extremities, without any good results. Compression of the cord was diagnosed and operative treatment decided on. There was a projection at the level of the tenth dorsal vertebra, on each side of which fluctuation was perceptible. The operation was performed in two stages with an interval of eight days. The first consisted in the opening of the abscesses. The incision extended from the sixth to the twelfth vertebra. After cleansing the openings with sublimate (1 in 3,000), the long muscles of the back were kept apart by tampons of iodoform gauze. The second stage began by the removal of the arch of the tenth vertebra, and afterwards those of the ninth, eighth, and seventh, especial care being taken for the preservation of the periosteum. The consistence of the exposed dura mater, however, being absolutely normal and the pulsation of the cerebro-spinal fluid distinctly visible, it was clear that the injury had to be sought in the other direction. The removal of the arches of the eleventh and twelfth vertebræ disclosed a dislocation of the spine, the part of the column situated above the fracture having been pushed over the part situated below it. This had caused a narrowing of the spinal canal, and a

flattening and compression of its contents. Notwithstanding the removal of six vertebral arches and the fragments of the fractured vertebral body not having been restored to their relative position, the spinal column, either by the renovation of connective tissue or perhaps by bone regeneration, was now capable of sustaining the trunk without any supporting apparatus. The patient could again move freely about and perform some light work. In order to lighten the strain on the spinal column he was, however, advised to wear a corset permanently.

(495) The Treatment of Hydatid Disease.

Gabdner (*Australian Med. Journ.*, August 20th, 1894) sums up a paper on the Present Position of the Treatment of Hydatid Disease in Australia in the following conclusions: Tapping is contra-indicated in almost all hydatids on account of the risk of death from shock, and of such treatment rendering the conditions less favourable for the success of major and radical operations. Radical operation by incision and immediate removal of the parasite is indicated in the following cases: (1) In all hydatids of the external surface of the body the sac should be dissected out like a tumour, and the wound closed, except in cases where scarring is of importance, as in the breast and neck. In these a small opening may be made, the contents removed, and the wound in the cyst sewn up or drained. (2) In all unruptured hydatids of the lung, a radical operation should immediately be performed on account of the great risk accompanying spontaneous rupture, which is frequently caused by the removal of even a hypodermic-syringeful of fluid. (3) In all cases of spontaneously ruptured hydatids of the lung in which the patient has escaped the risk of flooding of the lungs and of blocking of the glottis with membrane, the surgeon may wait, but if a suppurating and freely secreting cavity be left, portions of one or more ribs should be excised, and the cavity drained at the lowest point. (4) All hydatids of the abdomen should be subjected to some radical operation, whether suppurating or not. Of the operations for abdominal hydatids in which drainage is required the best is Volkmann's, with iodoform gauze plugging, for the practitioner who cannot obtain skilled assistance. When such assistance can be obtained, the author would recommend stitching the cyst to the parietal peritoneum all round, then emptying the cyst and fixing it to the peritoneum and muscles, and douching until all the contents are removed. Of the operations for abdominal hydatids in which drainage forms no part of the treatment, the author thinks that complete removal of the fibrous sac can be done in rare cases, especially when the cyst is attached to the omentum. In Bond's operation, in which the cyst is closed by sutures and dropped into the abdominal cavity, after it has been opened the author would fix the sac to the peritoneum on each side by one stitch, if the cyst can be brought up to the abdominal wound. Whenever the cyst cannot be brought up to the external wound, it must be emptied and all fluid removed; then the hole in the sac should be carefully sewn up, and the cyst dropped into the abdomen. (5) Tapping may very rarely be indicated in cases of doubtful diagnosis, to be followed by immediate operation if characteristic fluid be obtained.

(496) Hereditary Ocular Syphilis.

Galezowski (*Sem. Méd.*, November 21st) remarks that the number of congenital ocular affections due to syphilis is great, and arranges them under four district groups: (1) Malformations of the protective organs of the eye, of the orbit, and of the lachrymal ducts. These affections are very rare, and their syphilitic origin can be shown by the simultaneous existence of lesions in the choroid and iris. Caries of bone and dental alterations denote the same origin. (2) Paralysis of the motor nerves of the eye, ptosis, nystagmus, etc. These are frequent in very young children, and depend on cerebral causes or are produced in the train of the infectious fevers, of traumatisms, etc. Here, in the absence of very clear symptoms, the cerebro-spinal system must be carefully examined for indications of syphilis. Brissaud teaches that in cerebro-spinal syphilis—a late affection of early infancy—one meets, among other lesions, a monocular ptosis or nystagmus, with diminution of central visual acuity, convergent or divergent strabismus, etc. (3) Arrest of development, micro-ophthalmia, astigmatism, etc. The arrest of development, not infrequently met with in the infant's eye, must be attributed in great measure to hereditary syphilis. In several such cases Galezowski has met with the choroido-retinal changes characteristic of syphilis. He is especially struck with the fact that astigmatism is frequently caused by syphilis. (4) Inflammatory alterations of the external and internal tunics of the eye. That interstitial keratitis is due to syphilis no one now doubts. It is often complicated with pigmentary retinitis; and, with reference to congenital pigmentary retinitis, it is not due, as maintained by some, to consanguinity of parents, but is the result of congenital or acquired syphilis. It should always be treated by energetic mercurial inunctions.

(497) The Thorough Extirpation of Mammary Cancer.

Halstead (*Johns Hopkins Hospital Reports*, vol. iv, No. 6. 1894) is an advocate of very thorough removal of parts adjacent to a cancerous breast when it is amputated. He lays down the following rule: The pectoralis major muscle, entire or all except its clavicular portion, should be excised in every case of cancer of the breast, because the operator is enabled thereby to remove in one piece all of the suspected tissues. The suspected tissues should be removed in one piece, first, lest the wound become infected by the division of tissues invaded by the disease or of lymphatic vessels containing cancer cells, and, secondly, because shreds or pieces of cancerous tissue might readily be overlooked in a piecemeal extirpation. Halstead claims excellent results: 76 operations (complete and incomplete) for breast cancer have been performed in the Johns Hopkins Hospital, and not one death resulted from the operation; 26 of the operations were incomplete. Of the 50 which were complete, local recurrence occurred only in 3, or in 6 per cent.—the lowest known record. The disability produced by the operation was as a rule slight.

MIDWIFERY AND DISEASES OF WOMEN.

(498) Neglected Shoulder Presentation.

Oui (*Nouvelles Archives d'Obstét. et de Gynéc.*, August 25th, 1894) was called in to a woman where the left shoulder presented. It was deeply engaged, the arm prolapsed, and the fœtus dead. Version was impracticable. As the rotation was complete the neck could not be reached, so decapitation or spondylotomy was impossible. He amputated the arm, which was bulky and in the way. With Dubois's scissors, the most suitable instrument at hand, he divided half a dozen ribs, but could not pull out the heart and lungs. Then he opened the diaphragm and pulled out the liver and intestines; he next divided the vertebral column. He had no crochet at hand; it seemed dangerous for him, considering the state of the uterus, to perform forcible version, so he effected forced evolution with the finger. The fœtus weighed, without including the liver and intestines already removed, a little over 8 pounds.

(499) Treatment of Vesico-Vaginal Fistula.

Bond, of Leicester (*Annals of Surgery*, October, 1894), says that certain severe cases of vesico-vaginal fistula are best treated by operating from within the bladder through a suprapubic opening. The most suitable kind of cases for treatment by this method are those in which extensive cicatricial contraction has occurred. In such cases the vaginal roof is often tightly stretched across the pelvis and the neck of the uterus cannot be drawn down. If under these conditions the fistula be extensive and situated high up near the uterus, considerable advantage is gained by adopting the suprapubic method. The operation is performed in the following manner: The bladder is first injected, the finger of an assistant blocking the fistulous opening, or, if this is impossible, a sound is passed into the bladder through the fistulous opening and then a vertical incision is made above the pubes, which is carried down to the bladder, the cavity of the viscus being opened after the peritoneum has been drawn out of the way. The walls of the bladder are now held apart and the cavity opened out with three metal retractors, and by these means and the upward pressure of the bladder by the

assistant's finger in the vagina the fistula and the field of operation can be brought well within reach. The thin cicatricial junction of the two mucous membranes is now incised all round and two flaps of vesical mucous membrane are raised, one on either side of the rent, with their edges turned inward towards the bladder, and are sutured with catgut on a doubly-curved needle, such as is used for cleft palate suture. At this stage also the rectangular knives and long forceps are useful, and care must be taken at the angles to extend the separation of the mucous membrane beyond the actual limits of the fistula. A few silver wire sutures are afterwards used to draw the edges of the vaginal mucous membrane together, these having been already freshened on their vesical surface by the operation within the bladder. It is very important in the after-treatment to avoid the occurrence of cystitis, and to effect this the author advises continuous irrigation of the bladder, day and night, with boracic solution. The reasons given why the suprapubic method offers a surer means of closing the fistulous opening in bad cases are, first, because the vesical flaps when raised and turned inward have their surfaces opposed to the current of urine flowing through the fistula, and are thus more tightly closed by its pressure, unlike the flaps formed by the vaginal mucous membrane. The vesical flap is, in fact, the valuable agent in closing the opening, and it is in proportion to the care taken to thoroughly free and separate these that success depends, even in operating through the vagina; secondly, the suprapubic opening especially when combined with the urethral drain and constant irrigation, ensures complete drainage, that is, the absence of all tension within the bladder.

(500) Cholera and Pregnancy.

Schütz (*Centralbl. f. Gynäk.*, No. 45, 1894) has published a complete report on the influence of cholera on menstruation, pregnancy, labour, and childbed in the annual report of the Hamburg State Infirmary. He treated 2,500 adult females during the epidemic. Uterine hæmorrhage occurred in one third of the cases; hence the relation between the cholera and the patient's catamenia was not easy to determine. The bleeding set in during the crampy stage, the non-gravid, like the gravid, uterus being stimulated by the poison, so that it contracts whilst the endometrium bleeds. Convalescence in non-pregnant patients was slow, and attended by amenorrhœa. Out of 115 pregnant cholera cases 28 were discharged pregnant and 25 died pregnant; 22 left after labour, 40 dying. The mortality of the mother and the tendency to abortion are greater the later in pregnancy the patient is attacked. Next to natural small-pox no disease so surely provokes interruption of pregnancy. Cholera is very deadly to the fœtus at any stage. Labour was usually protracted on account of weak pains; flooding was not remarkably frequent in the Hamburg cases. Septic affections are commoner in the puerperium. In half the cases milk was freely secreted, including two women who were very ill, and both died. Nine women were admitted with cholera commencing in childbed. The mortality was 44 per cent. After the second week, the patients having gained strength, they seemed to resist cholera as well as the average of other women neither pregnant nor in childbed.

(501) Duplicity of Ureters in a Female Subject.

Morestin (*Bull. de la Soc. Anat. de Paris*, July-October, 1894) describes and figures a case where the ureters were completely double from kidney to bladder on each side. The kidneys seemed normal. On each side the pelvis was double, a ureter springing from each half pelvis, placed vertically one above the other. The pair of ureters on each side ran to the bladder united by cellular tissue but nowhere fused. The posterior both opened into the bladder at the normal point, the two orifices marking the limits of the base of the trigone. The anterior right and left ureters opened on each of the two lines forming the sides of that triangular area. The left opened lower down much nearer to the beginning of the urethra than the right. All four orifices were valvular and perfectly patent. Only two equally complete cases have been recorded. The genito-urinary tract showed no sign of disease. The parts were taken from a female subject in the dissection room. The cause of death is not stated.

THERAPEUTICS.

(502) Intravenous Sublimate Injections in Syphilis.

Blaschko (*Berl. klin. Woch.*, November 5th) has treated a number of patients by this method introduced by Baccelli (Epitome, April 7th, 1894, par. 283). He uses rather a stronger solution than Baccelli, namely, sublimat. 0·3, sodii chlor. 0·6, aq. destil. 100. The first injection consists of a quarter, the second of half a syringe (containing 2 c.cm.); later 1 or even two syringefuls are given daily. In a course of thirty to thirty-six injections only 1½ to 2 cgr. of sublimate are thus given. Lately the author has used even stronger solutions than the above. The treatment is usually only available for in-patients. It may not be possible in fat people whose veins are not visible. Clotting takes place if the needle pierces through the vein or passes by it, and then a hard painful aseptic periphlebitis ensues. The needle should be very fine and sharp, and must be washed out with alcohol and kept in vaseline. The strictest cleanliness must be practised. The author has never seen hæmoglobinuria after this treatment, and only once a temporary albuminuria. Urine passed one hour afterwards was always found to contain mercury. No mercurial depôt is formed in the body, as occurs in some other methods of mercurial treatment. The author's cases were mostly of early syphilis. A therapeutic effect was always obtained if the treatment was continued long enough. The author has already observed four relapses. The advantages of the method are its painlessness (if the vein is entered), the small amount of mercury given, the exact dosage of the drug, all of which is utilised, and the absence of unpleasant results. It appears to be inferior to inunction and subcutaneous injection in its permanent effects. This mild treatment is suited to cases where it is desirable to avoid large quantities of mercury. Baccelli's method shows how little mercury suffices to cause the disappearance of syphilitic manifestations, and it also inaugurates the intravenous method of treatment.

(503) Formic Aldehyde in Ringworm.

Pottevin (*Ann. de Derm. et de Syph.*, July, 1894) has made trial of formic aldehyde for a year past in the Hôpital des Enfants Malades and in the School of Ringworm Children in the Hôpital St. Louis. His method of treating ringworm was as follows: The hair having been cut short and the scalp having been carefully cleansed with soap, a compress of cotton wool soaked in a 2 per cent. solution of formic aldehyde is applied to the diseased parts, or, better still, over the whole scalp. The whole is then covered over with an india-rubber cap or with a piece of oiled silk kept in place by a bandage. This compress is left on for twenty-four hours; then, after an interval of twenty-four hours, a fresh application is made in the same way, and so on. The dressing is suspended or applied weaker if there is any sign of irritation of the scalp. The 2 per cent. solution is generally well borne, but occasionally it is necessary to use 1 per cent. The author has never been able, even in the case of patients who bear the ordinary application, to use 3 per cent. The treatment is in no way dangerous, and Pottevin has been able to continue it for three months without causing any unpleasant symptoms. In almost all cases the remedy failed to effect a cure. The author seems to have had just sufficient success to encourage him not to abandon the experiments.

(504) Treatment of Favus.

F. Zinsser (*Archiv für Derm. u. Syph.*, xxix Bd., 1., Heft, 1894), reports the results of some experiments made by him in Lesser's Clinic at Bern on the treatment of favus by heat. Experiments with the favus fungus proved that exposure to a temperature of 50° C. (122° F.) killed it in from four to eighteen hours. His clinical experiments were made on four cases. He first applied the heat by means of Leiter's coils placed over compresses wrung out of carbolic acid or sublimate solution. Finding the Leiter's coils inconvenient, however, he devised a special apparatus, consisting of a double system of tin tubes, so arranged as to lie close to the head from the vertex to the edge of the hairy scalp, whereby a uniform degree of heat could be applied

to the whole surface. This helmet was applied to the head over compresses wrung out of sublimate gauze; over the coils was placed a thick layer of cotton wool so as to retain the heat. The water in the kettle was at a temperature of 65° to 69° C. (about 150° to 157° F.), and in its passage through the tubes cooled down to 50° to 51° C. (122° to 124° F.) The heat apparatus is kept on uninterruptedly for twelve hours out of the twenty-four for a week or ten days. In three cases the result of the treatment was perfect and permanent cure. The fourth was an exceptionally severe case, and was an unfavourable one for treatment, as the hair was abnormally thick, bristly, and deep set in the skin. The author points out that patients speedily become accustomed to the treatment: if the delivery and return pipes are of sufficient length they can readily move about, and the children so treated are able to play in bed. When a sufficiently high temperature can be applied to the head to kill the fungi in the hair and in the follicles, it is possible to effect a radical cure in from eight to fourteen days. The author suggests that by the use of salicylic acid or potash in the compresses the epithelium may be thinned so that the heat shall more readily reach the seat of the fungus: the greatest obstacle to the treatment is, he believes, the slight heat-conducting power of the hair.

(505) Dangers of Naphthol as an Application to the Skin.

BAATZ (*Sem. Med.*, October 24th, 1894) has seen acute nephritis follow friction with on ointment containing 2 per cent. of naphthol beta in two brothers, aged 6 and 8 respectively. The remedy was applied for scabies. This was cured, but three weeks afterwards albuminuria with œdema of the lower limbs came on. One of the boys died, and the diagnosis of nephritis was verified by *post-mortem* examination. In neither case had albuminuria previously existed, nor was there any history of an affection which could have been the starting point of nephritis. The author therefore warns against the use of naphthol beta as a remedy for scabies, in spite of the powerful curative effect which it has on that disease.

PATHOLOGY.

(506) Infective Embryonal Pathology.

HAS embryonal tissue in contact with a certain virus the same strength of resistance as the tissue of an adult? What becomes of the micro-organisms which pass through the placenta and come in contact with the tissues of the embryo? Does the egg not receive the bacilli with the spermatozoid, or are the tissues of the embryo resistent to the development of the bacillus? In order to investigate this subject, Maffucci (*Annals of Surgery*, October, 1894, vol. xx, No. 4) chose the eggs of the hen, and inoculated them with different microbes and studied them at different brood periods. At different periods of the brood period he also inoculated the albumen which encloses the embryo. The albumen which has been fecundated and bred is very favourable to the development of a certain series of pathogenic micro-organisms, but the albumen which has not been bred does not have this power. The reception of the microbes from the albumen by the embryo does not happen by the vascular layer, but by the allantoid bladder, and therefore the inoculated microbes penetrate to the tissue of the embryo only by the tenth day. The microbes inoculated were anthrax bacilli, spores of cholera of fowls, pneumococcus of Friedländer, fowl tuberculosis, tuberculosis of mammalia, and the toxic products of the fowl tuberculosis, and that of the mammalia. Of the organs of the embryo the most interesting was the liver. At the same time Maffucci studied the infected embryos, which had been kept in life for a long time, in order to observe in what manner the microbes absorbed in embryonal life would behave in the life out of the egg, and the following results were obtained: (1) The albumen, fecundated and brooded, taken from the eggs at different brood periods, is a favourable medium for the growth of the above-named microbes; but the same fecundated and brooded albumen does not induce the growth of these microbes in the living embryo. (2) The microbes in the tissues of the living embryo do not multiply. (3) Microbes in the tissues of the embryo, which kill the control animal, do not affect the embryo. (4) The microbes can be destroyed or attenuated in the tissues of the embryo, but not in the surrounding albumen. (9) When the embryo has destroyed the bacillus of the fowl tuberculosis, it is born marasmic, and with this form, after a long time, can die without tuberculosis in the organs. (10) The same effect of marasmus can be obtained by inoculating into the eggs dead bacilli of the fowl tuberculosis. (12) The destruction of the virus by the embryo does not make it refractory against the same infection when it was inoculated a long time after hatching (fowl cholera). (16) Whilst all these changes happen in the tissues of the embryo, the rest of the microbes remaining in the albumen retain their pathogenic power. (17) The attenuation of the virus (fowl cholera) appears on the eighteenth day of the brooding time. Maffucci next studied the reaction in the embryo of the rabbit with the virus of tuberculosis. He inoculated buck coneys by the jugular vein with tuberculosis and examined the semen. It was difficult to detect the tubercle bacillus here in the first few days, but from the twenty-fifth day up to three months numbers of bacilli were found, and sea-hogs inoculated with this semen became tuberculous. After detailing a most interesting series of experiments, the author concludes that the fœtuses of mothers grown tuberculous during pregnancy can contain the bacillus after four hours from the inoculation of the jugular vein of the mother. The placenta is not tuberculous, but the organs of the fœtuses of mothers grown tuberculous can render sea-hogs tuberculous in the first forty-eight hours after the inoculation, and those sea-hogs not rendered tuberculous in this way mostly died of marasmus, as if they had been inoculated with dead bacilli. The rabbits born from tuberculous mothers do not present tubercles until the sixth month after their birth, but after this time they can contain tubercles in the liver and lungs, but without bacilli visible to us. The young from a tuberculous father present three months after birth tubercles, but no visible bacilli. The liver is the great protector from infections, and the living embryo can destroy, attenuate, or accumulate pathogenic microbes and develop them later in life.

(507) Lesions of the Stomach.

HAYEM (*Sem. Méd.*, October 27th), discussing this subject, says that, in his opinion, acute parenchymatous gastritis is a process beginning in the glandular elements, and in the pure form is independent of any leucocytic infiltration. The portion of the stomach first affected seems to be the cardiac, and thence the lesion spreads, with the result that the pyloric portion becomes completely changed, losing its distinctive character, and finally being indistinguishable from the cardiac end. He maintains that there are no special cells for the secretion of hydrochloric acid, and in support of this he points out that in the stomach of the newborn child the parietal cells are well developed, although gastric digestion is carried on without any hydrochloric acid being present. Again, he has found no increase of parietal cells in the adult stomach in cases of hypersecretion of this acid, but that in these cases the increase in amount of hydrochloric acid seemed to correspond with the transformation of pyloric into peptic glands, or, in other words, with the disappearance of the alkaline pyloric secretion. The debated question of the presence or absence of hydrochloric acid in cancer of the stomach has, according to the author, lost all interest. The state of digestion, he says, depends in cancer, as in any other gastric condition, on the condition of the gastric mucous membrane. Cancer is developed most frequently in hypopeptic or apeptic cases, and it is in such that free hydrochioric acid is absent, while histological examination of the stomach shows "atrophic gastritis." On the other hand, a hyperpeptic condition may exceptionally be found in persons suffering from gastric cancer. In such cases one would expect to find a different anatomical condition, and in such a case he quotes Lion as having found well-marked parenchymatous gastritis. Gastric ulcer, on the other hand, is most frequent in hyperpeptic cases, and the dominant lesion is a form of gastritis more or less parenchymatous in nature. The pathogenesis of gastric ulcer, however, is a very much more variable question than that of malignant disease.

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